



# GENERAL CATALOGUE



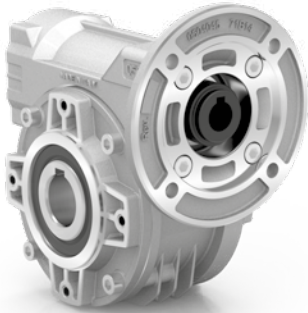
Gearboxes Made in Italy **2023**



# In this catalogue

## Rightangle-gear

Worm gearboxes

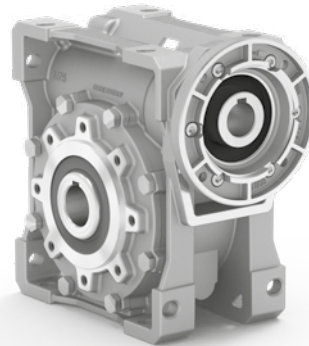


21÷978Nm

Paragraph **1**

## M Square gear

Square worm gearboxes

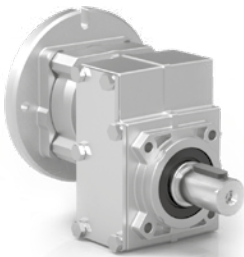


21÷1550Nm

Paragraph **2**

## One step-gear

One step gearboxes

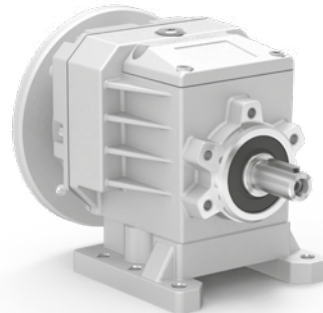


20÷110Nm

Paragraph **4**

## Coaxial-gear

Aluminum gearboxes



70÷520Nm

Paragraph **5**

## Compact-gear

Shaft mounted gearboxes

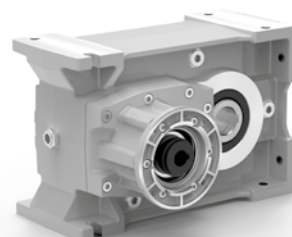


60÷2100Nm

Paragraph **7**

## Cube-gear

Parallel shaft gearboxes



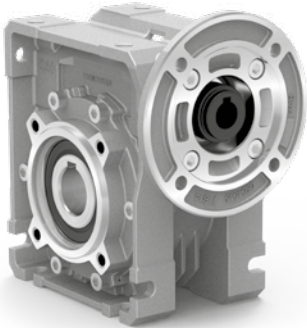
380÷2100Nm

Paragraph **8**

# In this catalogue

## Q Square gear

Square worm gearboxes



147÷978Nm

Paragraph 3

Paragraph 1

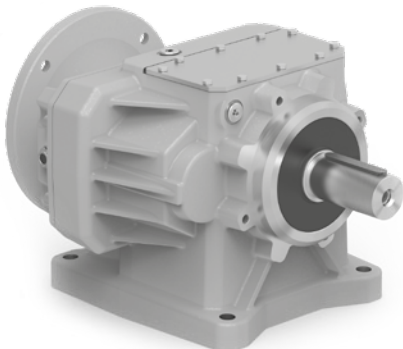
Paragraph 2

Paragraph 3

Paragraph 4

## Coaxial-gear

Cast iron gearboxes



675÷4600Nm

Paragraph 6

Paragraph 5

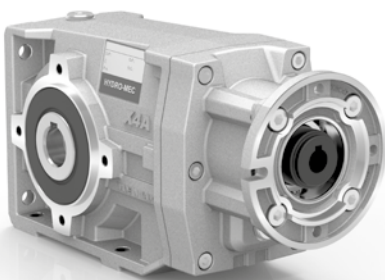
Paragraph 6

Paragraph 7

Paragraph 8

## Angletech-gear

Helical bevel gearboxes



50÷4600Nm

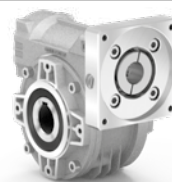
Paragraph 9

Paragraph 9

Paragraph B

Paragraph M

## Brushless motor flanges



Paragraph B

## Aluminum electric motors



Paragraph M

# Worm gearboxes

## A modular and compact product

### Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing.

No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

### Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

### Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

### Bronze alloy worm gears.

CuSn12Ni (C91700) Nickel bronze worm gears are centrifugally cast onto an iron hub for maximum strength and superior life. Removable hollow shaft with key for safe torque transmissions.

### Over-size bearing

For radial load capability and maximum hollow output shaft diameter.

### Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

### Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

### Premium, high temperature

Nitrile® output seals

### Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

### Painting

Cast iron gearboxes are painted RAL 7046

### Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

oil free



vent free





# Specific type datasheet on page...

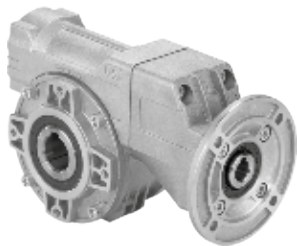
On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi / Tipen / Types / Tipos →

| 1-5         | 1-7         | 1-9         | 1-11         | 1-13         | 1-15         | 1-17         |
|-------------|-------------|-------------|--------------|--------------|--------------|--------------|
| 030<br>21Nm | 045<br>41Nm | 050<br>72Nm | 063<br>147Nm | 63A<br>191Nm | 085<br>347Nm | 110<br>651Nm |

On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi / Tipen / Types / Tipos →

| 1-19        | 1-21        | 1-23         | 1-25         | 1-27         | 1-29         |
|-------------|-------------|--------------|--------------|--------------|--------------|
| P45<br>55Nm | P50<br>88Nm | P63<br>187Nm | P6A<br>218Nm | P85<br>440Nm | P10<br>803Nm |

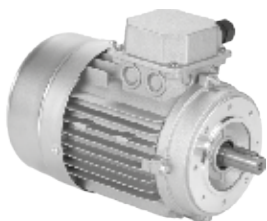
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|-------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 303<br>35Nm | 453<br>69Nm | 503<br>109Nm | 633<br>230Nm | 634<br>265Nm | 6A3<br>290Nm | 6A4<br>304Nm | 854<br>518Nm | 115<br>978Nm |

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Types / Tipi / Tipen / Types / Tipos →

| M-1        |            |            |            |            |                |      |              |              |              |  |
|------------|------------|------------|------------|------------|----------------|------|--------------|--------------|--------------|--|
| 56A<br>56B | 63A<br>63B | 71A<br>71B | 80A<br>80B | 90S<br>90L | 100LA<br>100LB | 112M | 132S<br>132M | 160M<br>160L | 180M<br>180L |  |

Type - Tipo - Typ  
Type - Tipo

Size - Grandezza  
Grösse - Taille  
Tamaño

Mounting - Montaggio - Montage Fixation  
Fixation - Tipo de montaje

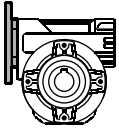
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**045**

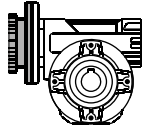
**PA**

**Worm gearboxes**

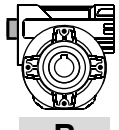
Riduttori a vite senza fine  
Schneckengetriebe  
Reducteurs a vis sans fin  
Reductores de corona sin fin



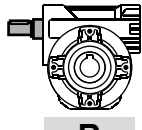
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**M**

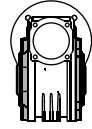


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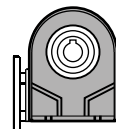


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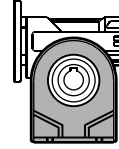
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045  
050  
063  
63A  
085  
110**



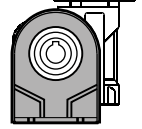
**FB**



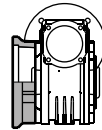
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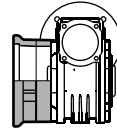
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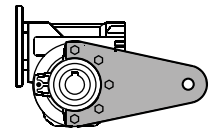


**FC**



**FL**

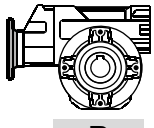
**F1  
F2  
F3  
F4**



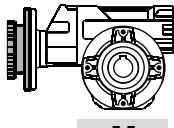
**BR**

**Worm gearboxes with primary reduction**

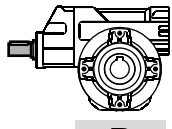
Riduttori a vite senza fine con precoppia  
Schneckengetriebe mit Stirradstufe am Eintrieb  
Reducteurs a vis sans fin avec pré-réduction  
Reductores corona sin fin con prerreductora de engranajes



**P**

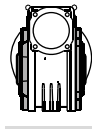


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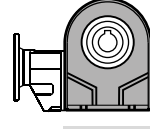


**R**

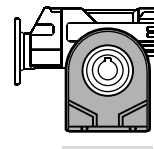
**P45  
P50  
P63  
P6A  
P85  
P10**



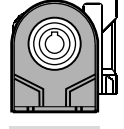
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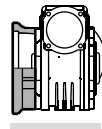
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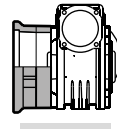
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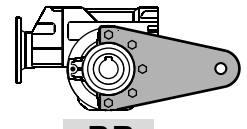


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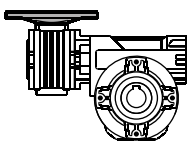
**F1  
F2  
F3  
F4**



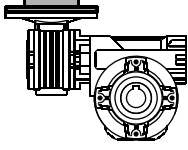
**BR**

**Combined worm gearboxes**

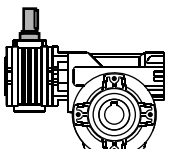
Riduttori a vite senza fine combinati  
Schneckengetriebekombinationen  
Reducteurs a double train de vis sans fin  
Reductores combinados corona sin fin



**P**

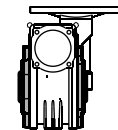


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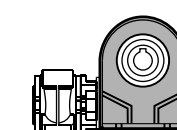


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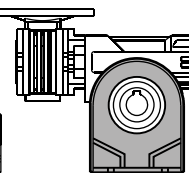
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503  
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634  
6A3  
6A4  
854  
115**



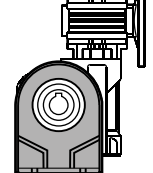
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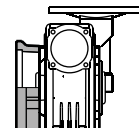
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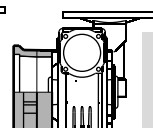
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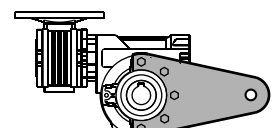


**FC**



**FL**

**F1  
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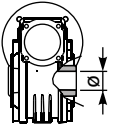
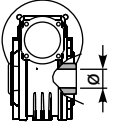
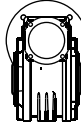

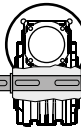
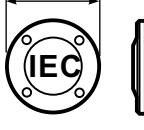
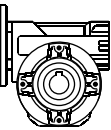
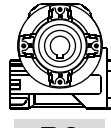
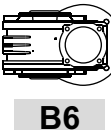
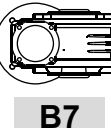

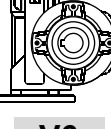
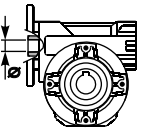










**BR**



On request we can deliver our products according to the ATEX  
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
Sur demande nos produits peuvent se conformer à la réglementation ATEX  
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

| Ratio<br>Rapporto<br>Untersetzung<br>Reduction<br>Relación   | Hub<br>Mozzo corona<br>Hohlwelle<br>Arbre creux<br>Nucleo corona  | Output shaft<br>Albero lento<br>Abtriebswelle<br>Arbre de sortie<br>Eje salida  | Motor size<br>Grandezza motore<br>Motor Grösse<br>Grandeur moteur<br>Tamaño motor  | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Posición de montaje  | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Mountin position<br>Esecuzione montaggio<br>Einbaulage<br>Ejecución de montaje<br>Posición de montaje  | Terminal box position<br>Posizione morsettieria<br>Klemmkastenlage<br>Position boîte a bornes<br>Posición caja de bornes  |
|--|---|---|--|---|--|--|---|
| <b>10</b>  | <b>C</b>  | <b>Ø</b>  | <b>-Q</b>  | <b>B3</b>   | <b>ST</b>  | <b>---</b>   |   |
| See technical data table<br>Vedi tabella dati tecnici.<br>Technisches Datenblatt beachten<br>Voir tableau données techniques<br>Ver tabla datos técnicos | <br><b>STANDARD</b><br><b>C</b><br>030 ⇨ Ø14<br>045 ⇨ Ø18<br>050 ⇨ Ø25<br>063 ⇨ Ø25<br>63A ⇨ Ø28<br>085 ⇨ Ø35<br>110 ⇨ Ø42<br><br><b>I</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox<br><br><b>SPECIAL SERIES</b><br><b>SERIE SPECIALE</b><br><b>S</b><br>045 ⇨ Ø19<br>050 ⇨ Ø24<br><br><b>X</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox<br><br><br><b>INCH</b><br><b>U</b><br>045 ⇨ Ø0.750"<br>050 ⇨ Ø1.000"<br>063 ⇨ Ø1.125"<br>085 ⇨ Ø1.500"<br><br><b>Z</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox | <br><b>Ø</b><br><br><b>S</b><br><br><b>D</b> | <br><b>-M</b><br>without flange<br>Senza flangia<br><br><b>B5</b><br><br><b>-A=56 (Ø120)</b><br><b>-B=63 (Ø140)</b><br><b>-C=71 (Ø160)</b><br><b>-D=80 (Ø200)</b><br><b>-E=90 (Ø200)</b><br><b>-F=100 (Ø250)</b><br><b>-G=132 (Ø300)</b><br><br><b>B14</b><br><br><b>-O=56 (Ø80)</b><br><b>-P=63 (Ø90)</b><br><b>-Q=71 (Ø105)</b><br><b>-R=80 (Ø120)</b><br><b>-T=90 (Ø140)</b><br><b>-U=100 (Ø160)</b><br><b>-V=132 (Ø200)</b><br><br><b>Brushless</b><br><b>BA=40/63-M5</b><br><b>BB=50/70-M5</b><br><b>BC=60/75-M5</b><br><b>BD=70/90-M6</b><br><b>BE=80/100-M6</b><br><b>BF=95/115-M8</b><br><b>BG=110/145-M8</b><br><b>BH=130/165-M8</b><br><br><b>-0=Type R</b><br><b>-S=Type R</b><br>S series | <br><b>B3</b><br><br><b>B8</b><br><br><b>B6</b><br><br><b>B7</b><br><br><b>V5</b><br><br><b>V6</b> | <br><b>ST</b><br><b>Standard bore *<br/>Kit R standard</b><br><b>Foro standard *<br/>Kit R standard</b><br><br><b>Input bore without<br/>Reduction Bushing</b><br><b>-O = 9mm</b><br><b>-P = 11mm</b><br><b>-Q = 14mm</b><br><b>-R = 19mm</b><br><b>-T = 24mm</b><br><b>-U = 28mm</b><br><b>-V = 38mm</b><br><br><b>COUPLING</b><br><b>STANDARD (IEC)</b><br><br><b>-A = 9mm</b><br><b>-B = 11mm</b><br><b>-C = 14mm</b><br><b>-D = 19mm</b><br><b>-E = 24mm</b><br><b>-F = 28mm</b><br><br><b>BRUSHLESS*</b><br><br><b>-1 = 9mm</b><br><b>-2 = 11mm</b><br><b>-3 = 14mm</b><br><b>-4 = 19mm</b><br><b>-5 = 22mm</b><br><b>-6 = 24mm</b><br><br>Ready for input coupling<br>Predisposto per giunto<br><br><b>-0</b><br><b>Type B</b><br>Tipo B<br><br><b>-0</b><br><b>Type R</b><br>Tipo R | <b>Only for combined units<br/>See technical data table</b><br><br>Solo per i riduttori combinati<br>Vedi tabella dati tecnici.<br><br>Ausführungen für Getriebekombinationen it<br><br>Uniquement pour combinés.<br>Voir tableau données techniques<br><br>Sólo para combinados<br>ver tabla datos técnicos | <b>With Type M specify terminal box position</b><br>Con tipo M specificare posizione morsettieria<br><br><b>A</b><br><br><b>B</b><br><b>STANDARD</b><br><br><b>C</b><br><br><b>D</b> |

\* With reduction bushing where applicable  
Con bussola di riduzione dove prevista

1

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

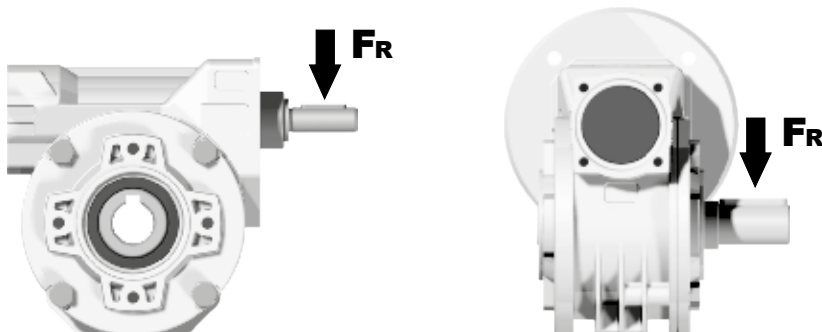
|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotação                        | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translación | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

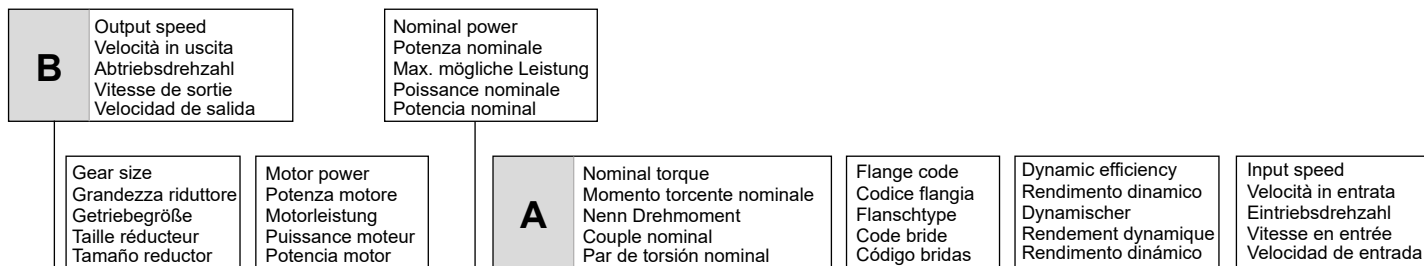
**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.



**045** Rightangle - Gear  
**41Nm**

Rating - Aluminum WORM GEARBOXES



QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|--------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                          |                      |             |
| 200   | 7            | 0.37                            | 14                                | 2.2                    | 0.80                              | 30                                 | B                          |    | B-C                         | B-C |    | 80                       | 2.2                  | 01          |
| 140   | 10           | 0.37                            | 20                                | 1.5                    | 0.57                              | 30                                 | B                          |    | B-C                         | B-C |    | 79                       | 2.2                  | 02          |
| 100   | 14           | 0.37                            | 27                                | 1.1                    | 0.41                              | 30                                 | B                          |    | B-C                         | B-C |    | 77                       | 2.4                  | 03          |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Nominal module  
Modulo nominale  
Nenn modul  
Module nominale  
Módulo nominal

Notes  
Note  
Anmerkungen  
Note  
Notas

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |         |          |
|--|---------------------|--|---------|----------|
|  |                     | <2 h                                       | 2 - 8 h | 8 - 16 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.9  | 1       | 1.25     |
|  | Moderate / Moderato | 1  | 1.25    | 1.5      |
|  | Heavy / Forte       | 1.25                                       | 1.5     | 1.75     |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1.25                                       | 1.5     | 1.75     |
|  | Moderate / Moderato | 1.5  | 1.75    | 2        |
|  | Heavy / Forte       | 1.75                                       | 2       | 2.25     |

|           |  |
|-----------|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccolla di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción   |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccolla<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible tambien sin casquillo                                 |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 280   | <b>5</b>     | 0.18                            | 5                                 | 3.3                    | <b>0.60</b>                       | 17                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 82                              | 1.26                     | 09              |
| 200   | <b>7</b>     | 0.18                            | 7                                 | 2.4                    | <b>0.44</b>                       | 17                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 80                              | 1.44                     | 01              |
| 140   | <b>10</b>    | 0.18                            | 10                                | 1.8                    | <b>0.32</b>                       | 17                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 78                              | 1.44                     | 02              |
| 93  | <b>15</b>    | 0.18                            | 13                                | 1.4                    | <b>0.25</b>                       | 19                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 73                              | 1.44                     | 03              |
| 70  | <b>20</b>    | 0.18                            | 17                                | 1.1                    | <b>0.20</b>                       | 19                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 70                              | 1.09                     | 04              |
| 47  | <b>30</b>    | 0.12                            | 15                                | 1.4                    | <b>0.17</b>                       | 21                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 62                              | 1.44                     | 05              |
| 35  | <b>40</b>    | 0.12                            | 19                                | 1.1                    | <b>0.13</b>                       | 20                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 57                              | 1.09                     | 06              |
| 23  | <b>61</b>    | 0.09                            | 19                                | 1.1                    | <b>0.10</b>                       | 20                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 50                              | 0.72                     | 07              |
| 17.5  | <b>80</b>    | 0.06                            | 16                                | 1.0                    | <b>0.06</b>                       | 16                                 | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 0.56                     | 08              |
| 14  | <b>100</b>   | 0.06*                           | 16                                | 0.5                    | <b>0.03</b>                       | 8                                  | <b>B</b>                   |    | <b>B-C</b>                  |    | 40                              | 0.45                     | 10              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit 030 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

#### LUBRICATION 030 Oil Quantity 0.03 Lt.

**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**I** Il riduttore tipo 030 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.  
Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe 030 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

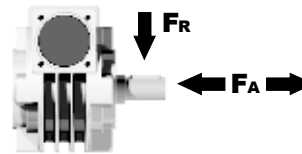
**F** Le réducteur de type 030 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 030 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### RADIAL AND AXIAL LOADS

##### Output shaft

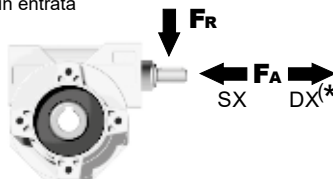
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 120       | 600       |
| 150                           | 140       | 700       |
| 100                           | 160       | 800       |
| 75                            | 180       | 900       |
| 50                            | 200       | 1000      |
| 25                            | 250       | 1250      |
| 15                            | 280       | 1400      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

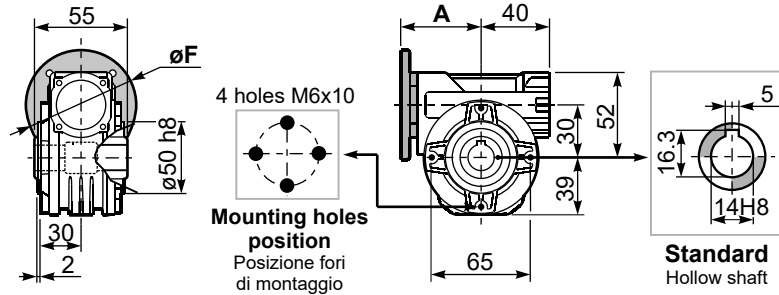
tab. 2



**P030FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **1.05 kg**

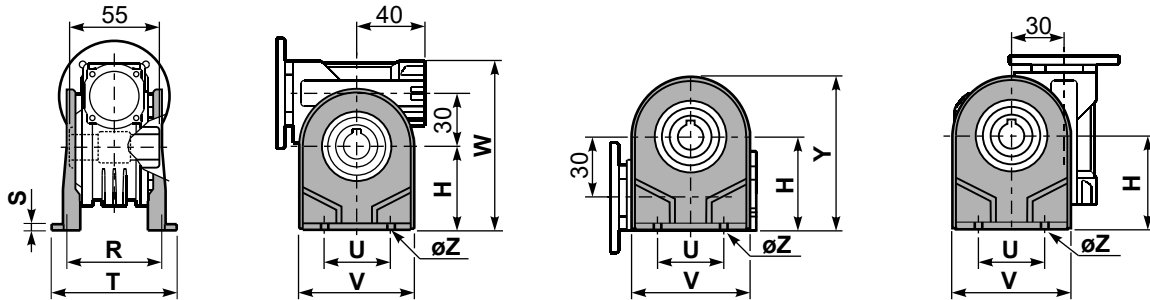
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



**P030PA...** Feet  
Piedini

**P030PB...** Feet  
Piedini

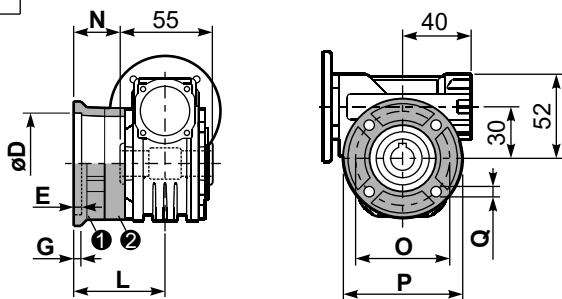
**P030PV...** Feet  
Piedini



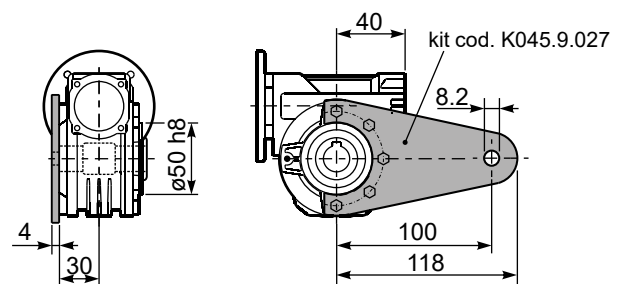
|               | H  | R  | S | T  | U  | V  | Y  | W   | øZ   | kit code    |
|---------------|----|----|---|----|----|----|----|-----|------|-------------|
| type <b>B</b> | 55 | 66 | 3 | 87 | 50 | 90 | 94 | 107 | ø6.5 | K030.9.022  |
| type <b>S</b> | 52 | 66 | 3 | 87 | 52 | 90 | 91 | 104 | ø6.5 | KS030.9.023 |

**P030FC...** Output flange  
Flangia uscita

**P030BR...** Reaction arm  
Braccio di reazione

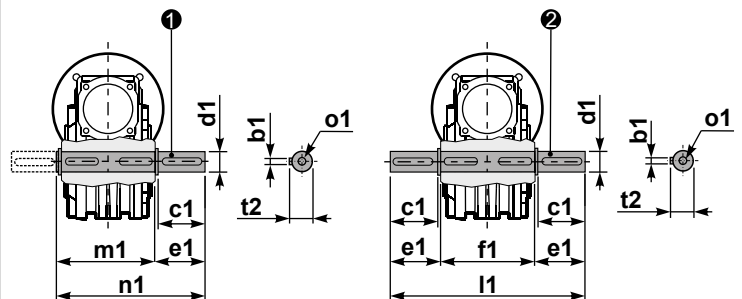


| type <b>B</b> | øD                                     | E   | G   | L    | N    | O  | P   | Q   | kit code             |
|---------------|--|-----|-----|------|------|----|-----|-----|----------------------|
| <b>FC</b>     | 50 <sup>+0.15</sup> / <sub>+0.05</sub> | 6   | 6   | 50.5 | 23   | 68 | 80  | 7   | ① K030.9.010<br>② -  |
| <b>FL</b>     | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 6   | 6   | 55.5 | 28   | 87 | 110 | 8.5 | ① K045.9.010<br>② -  |
| type <b>S</b> | øD                                     | E   | G   | L    | N    | O  | P   | Q   | kit code             |
| <b>F1</b>     | 40 <sup>+0.15</sup> / <sub>+0.10</sub> | 3.5 | 5.5 | 49   | 21.5 | 56 | 80  | 6.5 | ① KS030.9.012<br>② - |



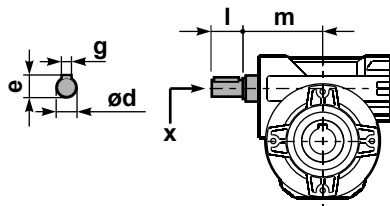
**P030.....S...** Single Shaft  
Albero lento semplice

**P030.....D...** Double Shaft  
Albero lento bisp.



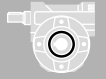
① kit cod. K030.5.028 type **B**      ② kit cod. K030.5.029 type **B**

**R030FB...** Input shaft  
Albero in entrata



| type          | ød   | e    | g | l  | m  | x | kit code         |
|---------------|------|------|---|----|----|---|------------------|
| type <b>B</b> | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type <b>S</b> | -    | -    | - | -  | -  | - | -                |

| type          | b1 | c1 | d1                                       | e1   | f1 | l1  | m1 | n1   | t2 | o1    |
|---------------|----|----|--|------|----|-----|----|------|----|-------|
| type <b>B</b> | 5  | 25 | 14 <sup>-0.005</sup> / <sub>-0.020</sub> | 35.5 | 55 | 126 | 59 | 94.5 | 16 | M5x14 |
| type <b>S</b> | -  | -  | -  | -    | -  | -   | -  | -    | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
| 200   | <b>7</b>     | 0.37                            | 14                                | 2.2                    | <b>0.80</b>                       | <b>30</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 80                              | 2.2                      | 01              |
| 140   | <b>10</b>    | 0.37                            | 20                                | 1.5                    | <b>0.57</b>                       | <b>30</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 79                              | 2.2                      | 02              |
| 100   | <b>14</b>    | 0.37                            | 27                                | 1.1                    | <b>0.41</b>                       | <b>30</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 77                              | 2.4                      | 03              |
| 67  | <b>21</b>    | 0.37                            | 36                                | 1.2                    | <b>0.43</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 67                              | 1.6                      | 04              |
| 50  | <b>28</b>    | 0.25                            | 31                                | 1.3                    | <b>0.33</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 65                              | 2.5                      | 05              |
| 38  | <b>37</b>    | 0.25                            | 40                                | 1.0                    | <b>0.26</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 63                              | 1.8                      | 06              |
| 30  | <b>46</b>    | 0.25                            | 46                                | 0.9                    | <b>0.22</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 59                              | 1.5                      | 07              |
| 23  | <b>60</b>    | 0.18                            | 41                                | 1.0                    | <b>0.18</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 56                              | 1.2                      | 08              |
| 20  | <b>70</b>    | 0.12                            | 31                                | 1.0                    | <b>0.12</b>                       | <b>30</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 54                              | 1.0                      | 09              |
| 13.7  | <b>102</b>   | 0.09                            | 31                                | 1.0                    | <b>0.09</b>                       | <b>29</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 49                              | 0.72                     | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **045** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **045** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.  
Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **045** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **045** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **045** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 045 Oil Quantity 0.09 Lt.

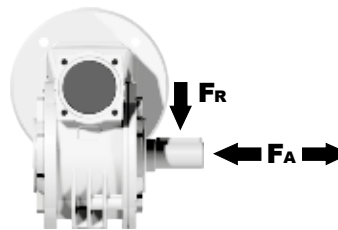
SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

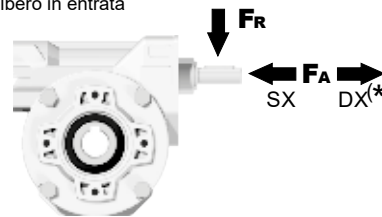
#### RADIAL AND AXIAL LOADS

Output shaft  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>200</b>                    | 180       | 900       |
| <b>150</b>                    | 200       | 1000      |
| <b>100</b>                    | 220       | 1100      |
| <b>75</b>                     | 240       | 1200      |
| <b>50</b>                     | 260       | 1400      |
| <b>25</b>                     | 300       | 1800      |
| <b>15</b>                     | 400       | 2000      |

Input shaft  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 42        | 210       |

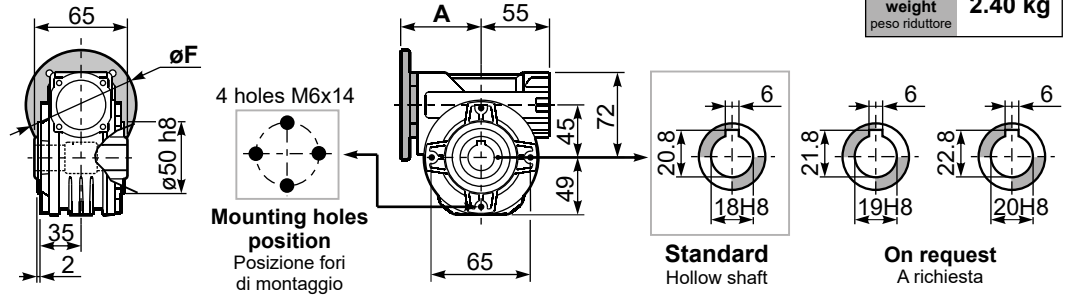
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**P045FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **2.40 kg**

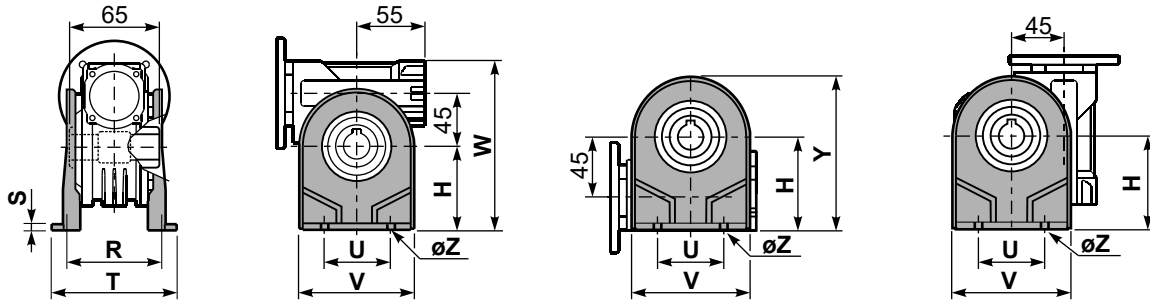
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



**P045PA...** Feet  
Piedini

**P045PB...** Feet  
Piedini

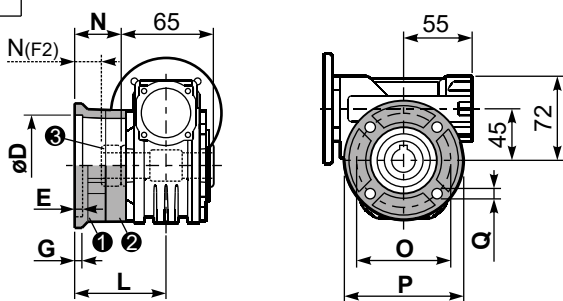
**P045PV...** Feet  
Piedini



|        | H  | R  | S | T   | U  | V  | Y   | W   | øZ    | kit code    |
|--------|----|----|---|-----|----|----|-----|-----|-------|-------------|
| type B | 72 | 81 | 3 | 100 | 52 | 98 | 121 | 144 | ø10.5 | K045.9.022  |
| type S | 71 | 84 | 8 | 100 | 70 | 90 | 120 | 143 | ø8    | KS045.9.023 |

**P045FC...** Output flange  
Flangia uscita

**P045BR...** Reaction arm  
Braccio di reazione



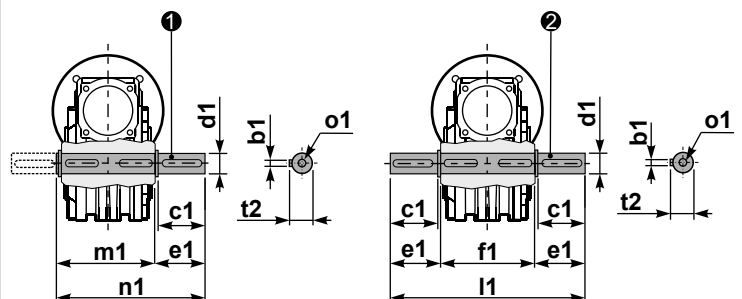
| type B    | øD                                     | E | G | L    | N  | O  | P   | Q   | kit code                     |
|-----------|--|---|---|------|----|----|-----|-----|------------------------------|
| <b>FC</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 60.5 | 28 | 87 | 110 | 8.5 | 1 K045.9.010<br>2 -          |
| <b>FL</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 90.5 | 58 | 87 | 110 | 8.5 | 1 K045.9.010<br>2 K045.0.200 |

| type S    | øD                                     | E | G  | L    | N  | O   | P   | Q   | kit code                      |
|-----------|--|---|----|------|----|-----|-----|-----|-------------------------------|
| <b>F1</b> | 95 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 73.5 | 41 | 115 | 140 | 9   | 1 KS045.9.013<br>2 -          |
| <b>F2</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9  | 60.5 | 19 | 87  | 110 | 8.5 | 1 KS045.9.010<br>2 S045.0.204 |
| <b>F3</b> | 80 <sup>+0.15</sup> / <sub>+0.10</sub> | 3 | 8  | 51.5 | 19 | 100 | 120 | 9   | 1 KS045.9.014<br>2 -          |

**P045.....S...** Single Shaft  
Albero lento semplice

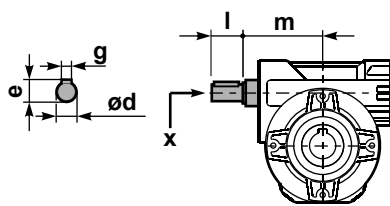
**P045.....D...** Double Shaft  
Albero lento bisp.



1 kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S

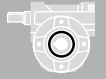
2 kit cod. K045.5.029 type B

**R045FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x | kit code                  |
|--------|-------|------|---|----|----|---|---------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | 1 K045.5.006 PAM71<br>2 - |
| type S | -     | -    | - | -  | -  | - | 1 -<br>2 -                |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> / <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> / <sub>-0.020</sub> | 58.8 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    | Available B14 motor flanges |     |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|-----------------------------|-----|----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -O                          | -P  | -Q | -R |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 56                          | 63  | 71 | 80 |                                 |                          |                 |
| 200   | 7            | 0.75                            | 29                                | 1.9                    | 1.5                               | 57                                 | B                          | B  |    |                             | B-C | B  |    | 82                              | 2.5                      | 01              |
| 140   | 10           | 0.75                            | 41                                | 1.5                    | 1.1                               | 62                                 | B                          | B  |    |                             | B-C | B  |    | 80                              | 2.4                      | 02              |
| 100   | 14           | 0.75                            | 57                                | 1.2                    | 0.90                              | 68                                 | B                          | B  |    |                             | B-C | B  |    | 79                              | 2.6                      | 03              |
| 78  | 18           | 0.55                            | 51                                | 1.2                    | 0.67                              | 62                                 | B                          | B  |    |                             | B-C | B  |    | 75                              | 2.0                      | 04              |
| 54  | 26           | 0.55                            | 67                                | 1.0                    | 0.54                              | 66                                 | B                          | B  |    |                             | B-C | B  |    | 69                              | 2.7                      | 05              |
| 47  | 30           | 0.55                            | 79                                | 0.9                    | 0.50                              | 72                                 | B                          | B  |    |                             | B-C | B  |    | 70                              | 2.5                      | 12              |
| 39  | 36           | 0.37                            | 63                                | 1.2                    | 0.43                              | 72                                 | B                          |    |    | B-C                         | B-C |    |    | 69                              | 2.1                      | 06              |
| 33  | 43           | 0.37                            | 72                                | 1.0                    | 0.35                              | 68                                 | B                          |    |    | B-C                         | B-C |    |    | 66                              | 1.8                      | 07              |
| 28  | 50           | 0.25                            | 53                                | 1.2                    | 0.31                              | 66                                 | B                          |    |    | B-C                         | B-C |    |    | 62                              | 1.5                      | 13              |
| 23  | 60           | 0.25                            | 59                                | 1.0                    | 0.26                              | 62                                 | B                          |    |    | B-C                         | B-C |    |    | 58                              | 1.3                      | 08              |
| 21  | 68           | 0.25                            | 66                                | 0.9                    | 0.22                              | 58                                 | B                          |    |    | B-C                         | B-C |    |    | 57                              | 1.2                      | 09              |
| 17.5  | 80           | 0.18                            | 53                                | 1.1                    | 0.19                              | 57                                 | B                          |    |    | B-C                         | B-C |    |    | 54                              | 1.0                      | 10              |
| 14  | 100          | 0.12                            | 41                                | 1.3                    | 0.15                              | 51                                 | B                          |    |    | B-C                         | B-C |    |    | 50                              | 0.8                      | 11              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit 050 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 050 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.  
Vedi tab.1 per oli e quantità consigliati.  
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe 050 mit synthetischem Öl befüllt.  
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 050 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 050 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 050 Oil Quantity 0.14 Lt.

SHELL Omala S4 WE 320

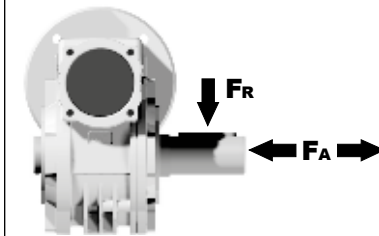
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

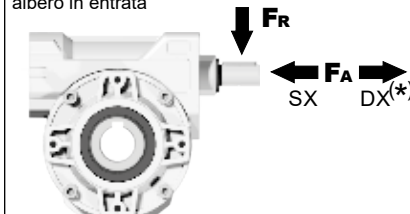
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 240       | 1200      |
| 150                           | 280       | 1400      |
| 100                           | 300       | 1500      |
| 75                            | 340       | 1700      |
| 50                            | 380       | 1900      |
| 25                            | 480       | 2500      |
| 15                            | 560       | 2800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 76        | 380       |

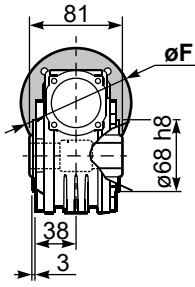
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

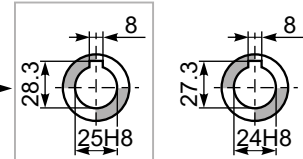
**P050FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **3.00 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 78.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 76   |
| <b>80B5</b>  | K050.4.043 | 200 | 76.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 76   |
| <b>63B14</b> | K050.4.047 | 90  | 78.5 |
| <b>71B14</b> | K050.4.045 | 105 | 76   |
| <b>80B14</b> | K050.4.046 | 120 | 76.5 |

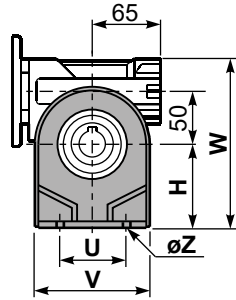
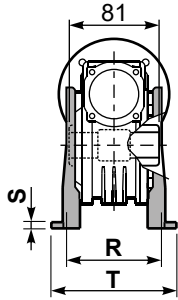


4 holes M6x9  
Mounting holes position  
Posizione fori di montaggio

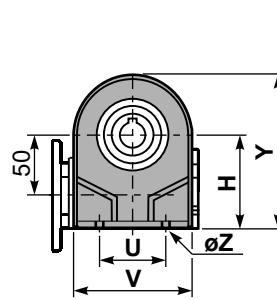


**Standard** Hollow shaft  
**On request "type S"** A richiesta "tipo S"

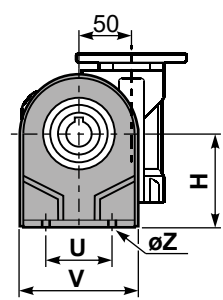
**P050PA...** Feet  
Piedini



**P050PB...** Feet  
Piedini

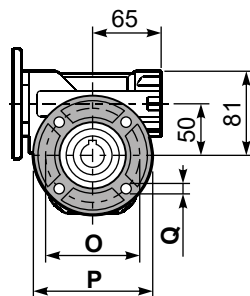
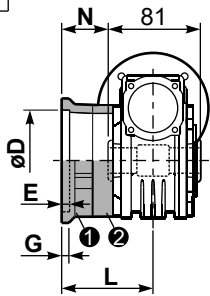


**P050PV...** Feet  
Piedini



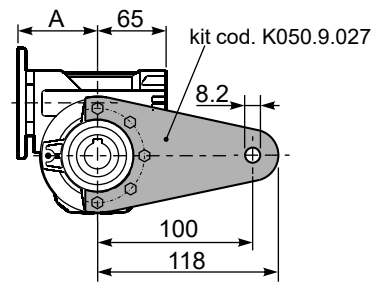
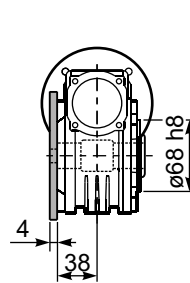
|        | H  | R    | S   | T   | U  | V   | Y     | W   | øZ    | kit code    |
|--------|----|------|-----|-----|----|-----|-------|-----|-------|-------------|
| type B | 82 | 98.5 | 3.5 | 123 | 63 | 113 | 138.5 | 163 | ø10.5 | K050.9.022  |
| type S | 85 | 96   | 10  | 114 | 85 | 110 | 139.5 | 166 | ø10   | KS050.9.023 |

**P050FC...** Output flange  
Flangia uscita



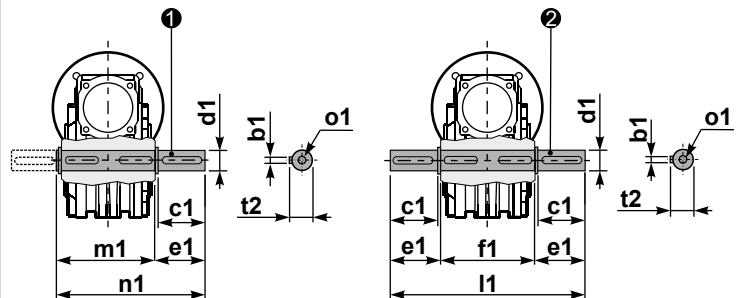
| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|------|------------------------------|
| <b>FC</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 85    | 44.5 | 90  | 123 | 10.5 | 1 K050.9.010<br>2 -          |
| <b>FL</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 114.5 | 74   | 90  | 123 | 10.5 | 1 K050.9.010<br>2 K050.0.200 |
| type S    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
| <b>F1</b> | 110 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 83.5  | 43   | 130 | 160 | 10   | 1 KS050.9.012<br>2 -         |
| <b>F2</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 76.5  | 36   | 90  | 123 | 10.5 | 1 KS050.9.014<br>2 -         |
| <b>F3</b> | 95 <sup>+0.035</sup> / <sub>0</sub>     | 4 | 10 | 66.5  | 26   | 115 | 140 | 10   | 1 KS050.9.013<br>2 -         |

**P050BR...** Reaction arm  
Braccio di reazione



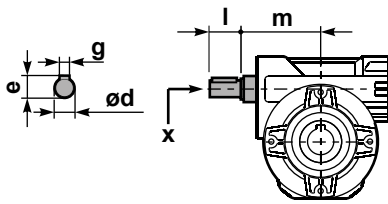
**P050.....S...** Single Shaft  
Albero lento semplice

**P050.....D...** Double Shaft  
Albero lento bisp.



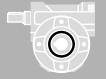
1 kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S  
2 kit cod. K050.5.029 type B

**R050FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m    | x     | kit code                                   |
|--------|-------|----|---|----|------|-------|--|
| type B | 16 h6 | 18 | 5 | 30 | 74.5 | M6x16 | 1 K050.5.006 PAM71<br>2 K050.5.007 PAM80   |
| type S | 14 h6 | 16 | 5 | 30 | 74.5 | M5x10 | 1 KS050.5.008 PAM71<br>2 KS050.5.009 PAM80 |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1   | n1  | t2 | o1    |
|--------|----|----|--|------|----|-----|------|-----|----|-------|
| type B | 8  | 52 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| type S | 8  | 50 | 24 <sup>-0.005</sup> / <sub>-0.020</sub> | 68.8 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |          |          | Available B14 motor flanges |            |            | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----------|----------|-----------------------------|------------|------------|---------------------------------|----------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D       | -E       | -Q                          | -R         | -T         |                                 |                      |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80       | 90       | 71                          | 80         | 90         |                                 |                      |                 |    |
| 200   | 7            | 1.8                             | 71                                | 1.8                    | 3.2                               | 125                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 83                   | 3.1             | 01 |
| 140   | 10           | 1.8                             | 99                                | 1.4                    | 2.4                               | 134                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 81                   | 3.1             | 02 |
| 93  | 15           | 1.5                             | 121                               | 1.1                    | 1.7                               | 138                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 79                   | 3.1             | 03 |
| 74  | 19           | 1.1                             | 111                               | 1.2                    | 1.4                               | 138                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 78                   | 2.6             | 04 |
| 58  | 24           | 1.1                             | 135                               | 1.0                    | 1.2                               | 142                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 75                   | 2.0             | 05 |
| 47  | 30           | 1.1                             | 167                               | 0.9                    | 0.96                              | 146                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 74                   | 3.2             | 06 |
| 39  | 36           | 0.75                            | 125                               | 1.2                    | 0.88                              | 147                                |                            | <b>B</b> | <b>B</b> |          |                             | <b>B-C</b> | <b>B-C</b> |                                 | 68                   | 2.7             | 07 |
| 35  | 40           | 0.75                            | 135                               | 1.0                    | 0.78                              | 140                                |                            | <b>B</b> | <b>B</b> | <b>B</b> |                             | <b>B-C</b> | <b>B-C</b> |                                 | 66                   | 2.5             | 13 |
| 31  | 45           | 0.55                            | 111                               | 1.2                    | 0.67                              | 135                                | <b>B</b>                   | <b>B</b> |          |          |                             | <b>B-C</b> | <b>C</b>   |                                 | 66                   | 2.1             | 08 |
| 23  | 60           | 0.55                            | 140                               | 0.9                    | 0.51                              | 130                                | <b>B</b>                   | <b>B</b> |          |          |                             | <b>B-C</b> | <b>C</b>   |                                 | 62                   | 1.6             | 12 |
| 21  | 67           | 0.55                            | 151                               | 0.8                    | 0.45                              | 124                                | <b>B</b>                   | <b>B</b> |          |          |                             | <b>B-C</b> | <b>C</b>   |                                 | 60                   | 1.5             | 09 |
| 17.5  | 80           | 0.37                            | 115                               | 1.0                    | 0.38                              | 119                                | <b>B</b>                   | <b>B</b> |          |          |                             | <b>B-C</b> | <b>C</b>   |                                 | 57                   | 1.3             | 10 |
| 14.9  | 94           | 0.37                            | 123                               | 1.0                    | 0.36                              | 119                                | <b>B</b>                   | <b>B</b> |          |          |                             | <b>B-C</b> | <b>C</b>   |                                 | 52                   | 1.1             | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **063** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **063** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **063** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **063** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **063** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 063 Oil Quantity 0.40 Lt.

**SHELL** Omala S4 WE 320

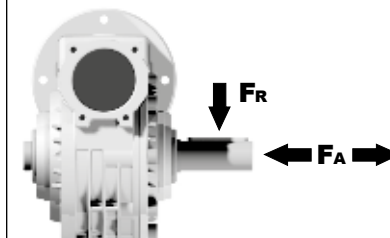
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

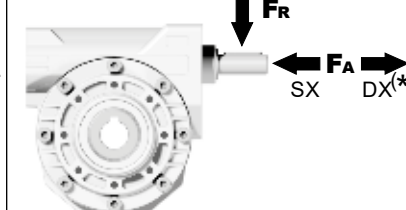
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 360       | 1800      |
| 150                           | 400       | 2000      |
| 100                           | 460       | 2300      |
| 75                            | 500       | 2500      |
| 50                            | 600       | 3000      |
| 25                            | 700       | 3800      |
| 15                            | 800       | 4000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 90        | 450       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

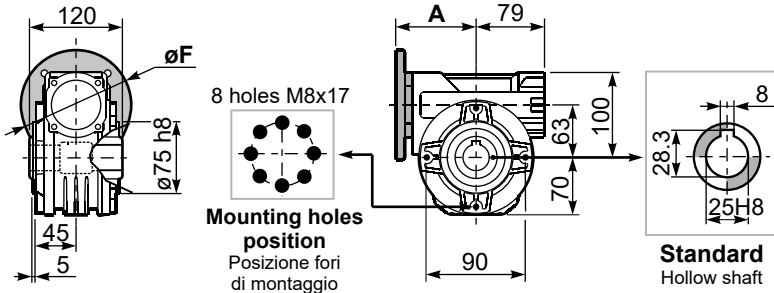
tab. 2



**P063FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **6.00 kg**

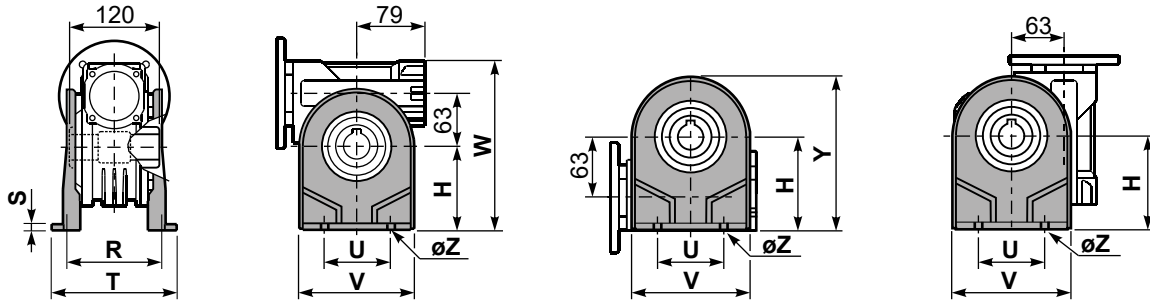
| M. flanges     | Kit code   | øF  | A    |
|----------------|------------|-----|------|
| <b>63B5</b>    | K063.4.041 | 140 | 99.5 |
| <b>71B5</b>    | K063.4.042 | 160 | 97.5 |
| <b>80/90B5</b> | K063.4.043 | 200 | 99.5 |
| <b>71B14</b>   | K063.4.047 | 105 | 97.5 |
| <b>80B14</b>   | K063.4.046 | 120 | 99.5 |
| <b>90B14</b>   | K063.4.041 | 140 | 99.5 |



**P063PA...** Feet  
Piedini

**P063PB...** Feet  
Piedini

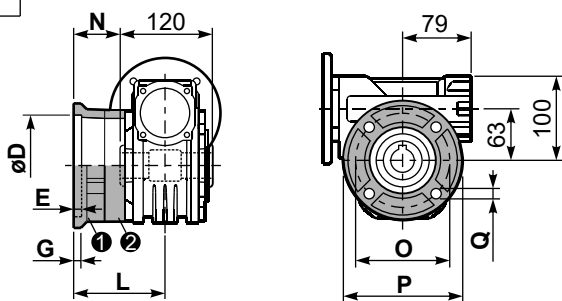
**P063PV...** Feet  
Piedini



|        | H   | R   | S | T   | U  | V   | Y   | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|----|-----|-----|-----|-------|------------|
| type B | 100 | 111 | 4 | 144 | 95 | 133 | 170 | 200 | ø10.5 | K063.9.022 |
| type S | -   | -   | - | -   | -  | -   | -   | -   | -     | -          |

**P063FC...** Output flange  
Flangia uscita

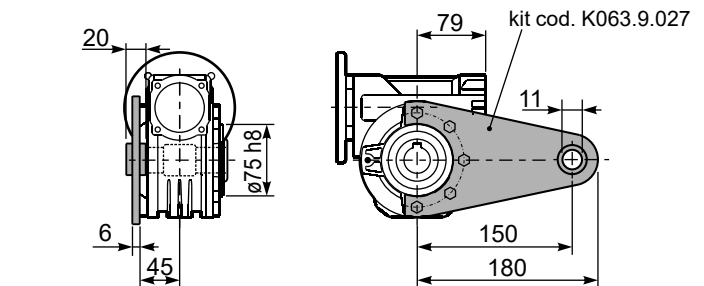
**P063BR...** Reaction arm  
Braccio di reazione



| type B    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-----|----|-----|-----|----|------------------------------|
| <b>FC</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 86  | 26 | 150 | 175 | 11 | ① K063.9.010<br>② -          |
| <b>FL</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① K063.9.010<br>② K063.0.200 |

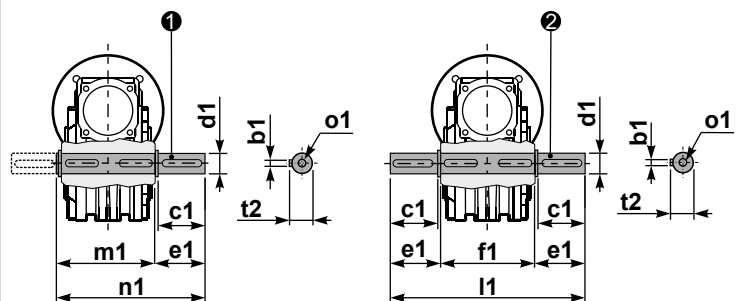
  

| type S    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|-----------|---|---|----|-----|----|-----|-----|----|----------------------|
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 102 | 42 | 165 | 200 | 13 | ① KS070.9.013<br>② - |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① KS063.9.013<br>② - |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 82  | 22 | 130 | 160 | 10 | ① KS063.9.011<br>② - |



**P063.....S...** Single Shaft  
Albero lento semplice

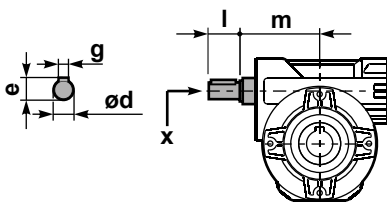
**P063.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K063.5.028 type B

② kit cod. K063.5.029 type B

**R063FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x     | kit code                                   |
|--------|-------|------|---|----|----|-------|--|
| type B | 18 h6 | 20.5 | 6 | 45 | 93 | M6x16 | ① K063.5.006 PAM80<br>② K063.5.007 PAM90   |
| type S | 19 h6 | 21.5 | 6 | 40 | 93 | M8x20 | ① KS063.5.008 PAM80<br>② KS063.5.009 PAM90 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |          |    | Available B14 motor flanges |            |            | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----------|----|-----------------------------|------------|------------|---------------------------------|--------------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D       | -E | -Q                          | -R         | -T         |                                 |                          |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80       | 90 | 71                          | 80         | 90         |                                 |                          |                 |    |
| 200   | <b>7</b>     | 1.8                             | 71                                | 2.3                    | <b>4.1</b>                        | <b>162</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 83                       | 3.1             | 01 |
| 140   | <b>10</b>    | 1.8                             | 99                                | 1.7                    | <b>3.1</b>                        | <b>173</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 81                       | 3.1             | 02 |
| 93  | <b>15</b>    | 1.5                             | 121                               | 1.5                    | <b>2.2</b>                        | <b>178</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 79                       | 3.1             | 03 |
| 74  | <b>19</b>    | 1.5                             | 152                               | 1.2                    | <b>1.8</b>                        | <b>178</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 78                       | 2.6             | 04 |
| 58  | <b>24</b>    | 1.5                             | 184                               | 1.0                    | <b>1.5</b>                        | <b>185</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 75                       | 2.0             | 05 |
| 47  | <b>30</b>    | 1.5                             | 227                               | 0.8                    | <b>1.3</b>                        | <b>189</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 74                       | 3.2             | 06 |
| 39  | <b>36</b>    | 1.1                             | 184                               | 1.0                    | <b>1.1</b>                        | <b>191</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 68                       | 2.7             | 07 |
| 35  | <b>40</b>    | 1.1                             | 198                               | 0.9                    | <b>1.0</b>                        | <b>181</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 66                       | 2.5             | 13 |
| 31  | <b>45</b>    | 0.75                            | 152                               | 1.2                    | <b>0.86</b>                       | <b>175</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 66                       | 2.1             | 08 |
| 23  | <b>60</b>    | 0.55                            | 140                               | 1.2                    | <b>0.66</b>                       | <b>168</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 62                       | 1.6             | 12 |
| 21  | <b>67</b>    | 0.55                            | 151                               | 1.1                    | <b>0.58</b>                       | <b>159</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 60                       | 1.5             | 09 |
| 17.5  | <b>80</b>    | 0.37                            | 115                               | 1.3                    | <b>0.49</b>                       | <b>153</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 57                       | 1.3             | 10 |
| 14.9  | <b>94</b>    | 0.37                            | 123                               | 1.1                    | <b>0.39</b>                       | <b>130</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 52                       | 1.1             | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **63A** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **63A** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **63A** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **63A** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **63A** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 63A Oil Quantity 0.40 Lt.

**SHELL** Omala S4 WE 320

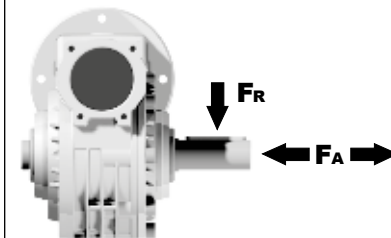
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

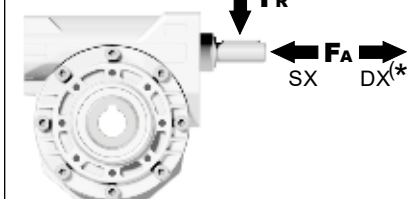
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 360       | 1800      |
| 150                           | 400       | 2000      |
| 100                           | 460       | 2300      |
| 75                            | 500       | 2500      |
| 50                            | 600       | 3000      |
| 25                            | 700       | 3800      |
| 15                            | 800       | 4000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 90        | 450       |

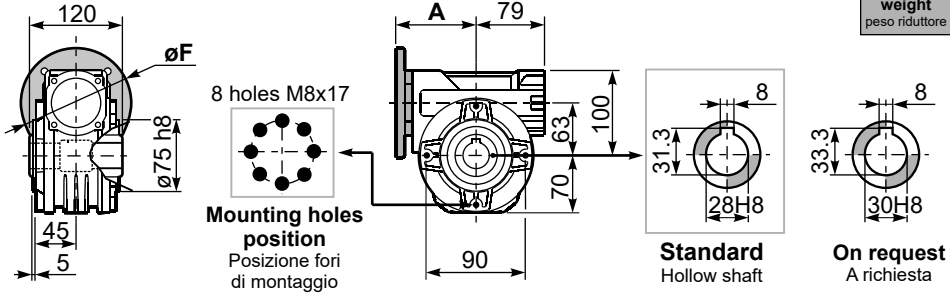
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P63AFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **6.00 kg**

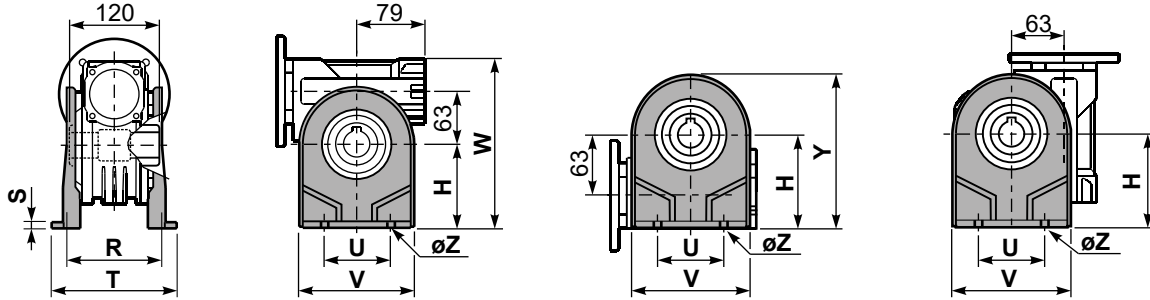
| M. flanges     | Kit code   | øF  | A    |
|----------------|------------|-----|------|
| <b>63B5</b>    | K063.4.041 | 140 | 99.5 |
| <b>71B5</b>    | K063.4.042 | 160 | 97.5 |
| <b>80/90B5</b> | K063.4.043 | 200 | 99.5 |
| <b>71B14</b>   | K063.4.047 | 105 | 97.5 |
| <b>80B14</b>   | K063.4.046 | 120 | 99.5 |
| <b>90B14</b>   | K063.4.041 | 140 | 99.5 |



**P63APA...** Feet  
Piedini

**P63APB...** Feet  
Piedini

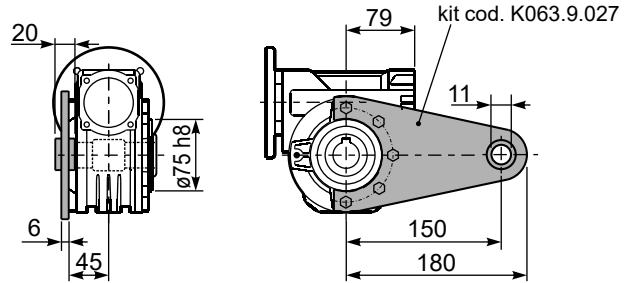
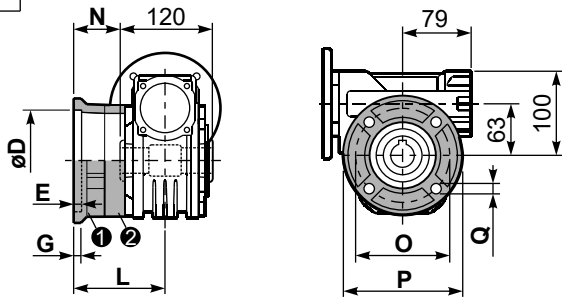
**P63APV...** Feet  
Piedini



|        | H   | R   | S  | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|----|-----|-----|-----|-----|-----|-----|------------|
| type B | 115 | 115 | 12 | 142 | 120 | 156 | 185 | 215 | ø11 | K070.9.022 |
| type S | -   | -   | -  | -   | -   | -   | -   | -   | -   | -          |

**P63AFC...** Output flange  
Flangia uscita

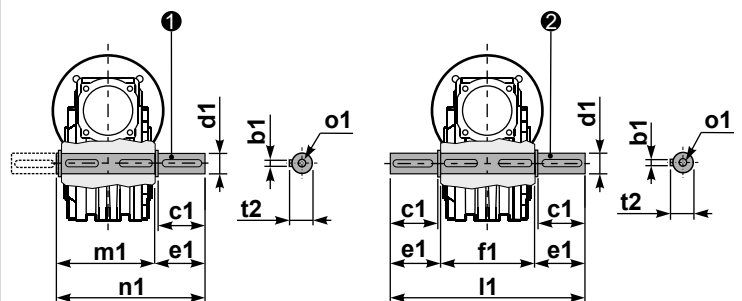
**P63ABR...** Reaction arm  
Braccio di reazione



| type B    | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|------|------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 85   | 25   | 165 | 200 | 13 | ① K070.9.010<br>② -          |
| <b>FL</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | ① K070.9.010<br>② K070.0.200 |
| type S    | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | ① KS070.9.014<br>② -         |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 116  | 56   | 150 | 175 | 11 | ① KS063.9.013<br>② -         |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 13.5 | 84.5 | 24.5 | 130 | 160 | 11 | ① KS070.9.011<br>② -         |

**P63A...S** Single Shaft  
Albero lento semplice

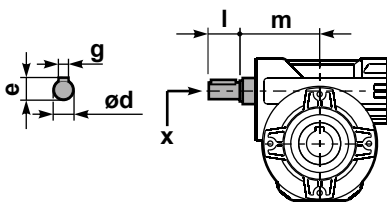
**P63A...D** Double Shaft  
Albero lento bisp.



① kit cod. K070.5.028 type B

② kit cod. K070.5.029 type B

**R63AFB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x     | kit code                                   |
|--------|-------|------|---|----|----|-------|--|
| type B | 18 h6 | 20.5 | 6 | 45 | 93 | M6x16 | ① K063.5.006 PAM80<br>② K063.5.007 PAM90   |
| type S | 19 h6 | 21.5 | 6 | 40 | 93 | M8x20 | ① KS063.5.008 PAM80<br>② KS063.5.009 PAM90 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-----|-------|-----|----|-------|
| type B | 8  | 60 | 28 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.5 | 120 | 247 | 127.5 | 191 | 31 | M8x20 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----------------------------|----|------------|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -R                          | -T | -U         |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                          |                      |             |    |
| 200   | 7            | 4.0                             | 168                               | 1.5                    | 6.1                               | 257                                |                            | B  | B  |            |                             | B  | B          |                          | 88                   | 4.23        | 01 |
| 140   | 10           | 4.0                             | 218                               | 1.3                    | 5.2                               | 284                                |                            | B  | B  |            |                             | B  | B          |                          | 80                   | 4.2         | 02 |
| 100   | 14           | 3.0                             | 223                               | 1.4                    | 4.1                               | 305                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 4.5         | 03 |
| 70  | 20           | 2.2                             | 237                               | 1.2                    | 2.7                               | 294                                |                            | B  | B  |            |                             | B  | B          |                          | 79                   | 3.4         | 04 |
| 64  | 22           | 2.2                             | 258                               | 1.1                    | 2.5                               | 294                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 3.1         | 05 |
| 50  | 28           | 2.2                             | 315                               | 1.1                    | 2.4                               | 347                                |                            | B  | B  |            |                             | B  | B          |                          | 75                   | 4.7         | 06 |
| 37  | 38           | 1.5                             | 276                               | 1.2                    | 1.8                               | 336                                | B                          | B  |    |            |                             | B  | B          |                          | 71                   | 3.5         | 07 |
| 30  | 46           | 1.5                             | 320                               | 1.0                    | 1.5                               | 326                                | B                          | B  |    |            |                             | B  | B          |                          | 68                   | 3.1         | 08 |
| 27  | 52           | 1.1                             | 258                               | 1.1                    | 1.2                               | 289                                | B                          | B  |    |            |                             | B  | B          |                          | 66                   | 2.7         | 09 |
| 21  | 67           | 1.1                             | 327                               | 0.9                    | 0.97                              | 289                                | B                          | B  |    |            |                             | B  | B          |                          | 65                   | 2.1         | 10 |
| 18.9  | 74           | 0.75                            | 220                               | 1.2                    | 0.91                              | 268                                | B                          | B  |    |            |                             | B  | B          |                          | 58                   | 1.9         | 11 |
| 14.6  | 96           | 0.55                            | 191                               | 1.3                    | 0.70                              | 242                                | B                          | B  |    |            |                             | B  | B          |                          | 53                   | 1.5         | 12 |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **085** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **085** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **085** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **085** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **085** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 085 Oil Quantity 1.20 Lt.

**SHELL** Omala S4 WE 320

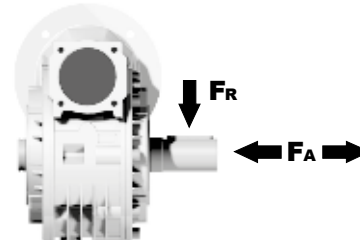
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

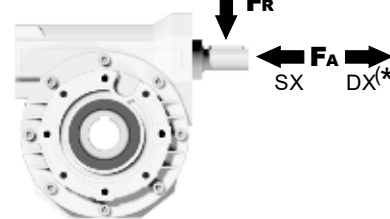
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 500       | 2500      |
| 150                           | 580       | 2900      |
| 100                           | 600       | 3000      |
| 75                            | 700       | 3500      |
| 50                            | 800       | 4000      |
| 25                            | 1000      | 5000      |
| 15                            | 1160      | 5800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 130       | 650       |

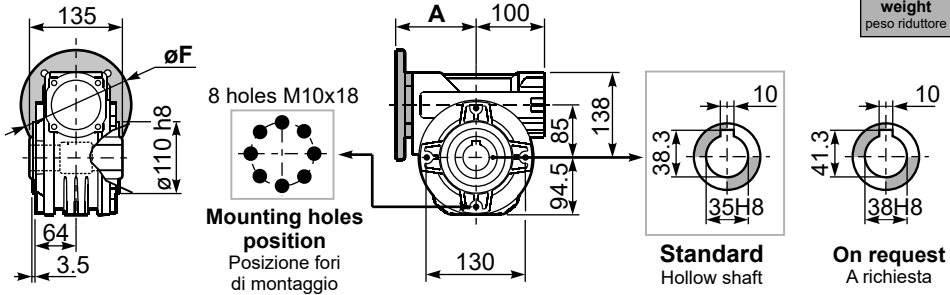
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**P085FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **11.00 kg**

| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 116.5 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 118.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 127.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 118.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 118.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 127.5 |



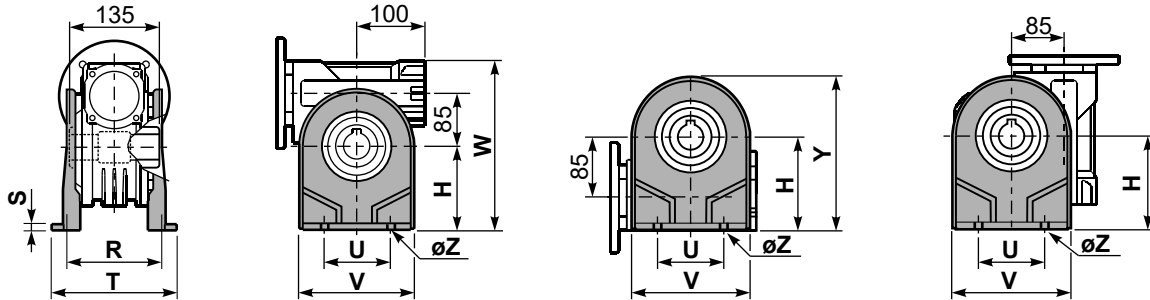
**Standard**  
Hollow shaft

**On request**  
A richiesta

**P085PA...** Feet  
Piedini

**P085PB...** Feet  
Piedini

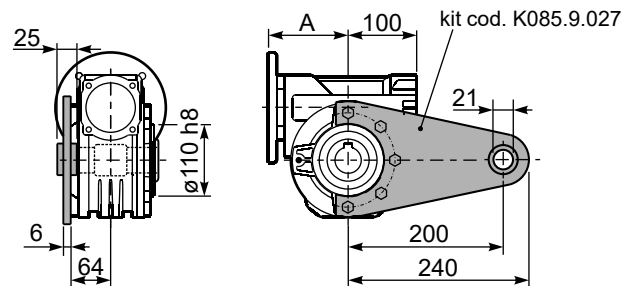
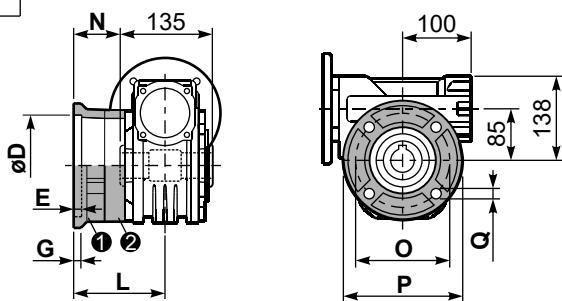
**P085PV...** Feet  
Piedini



|        | H   | R   | S | T   | U   | V   | Y     | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|-----|-----|-------|-----|-------|------------|
| type B | 142 | 145 | 5 | 182 | 140 | 180 | 236.5 | 280 | ø10.5 | K085.9.022 |
| type S | -   | -   | - | -   | -   | -   | -     | -   | -     | -          |

**P085FC...** Output flange  
Flangia uscita

**P085BR...** Reaction arm  
Braccio di reazione



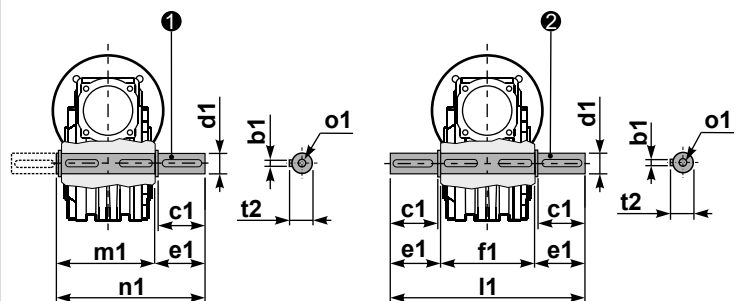
| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13 | ① K085.9.010<br>② -          |
| <b>FL</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13 | ① K085.9.010<br>② K085.0.201 |

| type S    | øD                                      | E | G  | L     | N  | O   | P   | Q    | kit code             |
|-----------|---|---|----|-------|----|-----|-----|------|----------------------|
| <b>F1</b> | 130 H7                                  | 5 | 13 | 117.5 | 50 | 165 | 200 | 11.5 | ① KS085.9.012<br>② - |
| <b>F2</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 15 | 147.5 | 80 | 180 | 205 | 12.5 | ① KS085.9.013<br>② - |
| <b>F4</b> | 130 H7                                  | 5 | 13 | 106.5 | 39 | 165 | 200 | 13   | ① KS085.9.015<br>② - |

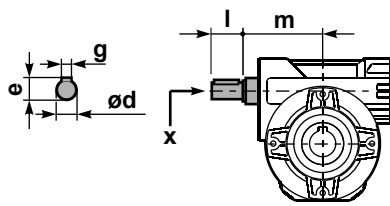
**P085.....S...** Single Shaft  
Albero lento semplice

**P085.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B    ② kit cod. K085.5.029 type B

**R085FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m   | x     | kit code                                    |
|--------|-------|----|---|----|-----|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 112 | M8x20 | ① K085.5.007 PAM90<br>② K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 112 | M8x20 | ① KS085.5.009 PAM90<br>② KS085.5.011 PAM100 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                          |                      |             |    |
| 200   | 7            | 7.5                             | 315                               | 1.5                    | 11.5                              | 483                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 88                   | 5.5         | 01 |
| 140   | 10           | 7.5                             | 440                               | 1.2                    | 9.0                               | 525                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 86                   | 5.4         | 02 |
| 88  | 16           | 5.5                             | 492                               | 1.1                    | 6.0                               | 536                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 5.3         | 03 |
| 70  | 20           | 4.0                             | 447                               | 1.2                    | 4.9                               | 546                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 4.5         | 04 |
| 61  | 23           | 3.0                             | 377                               | 1.4                    | 4.1                               | 515                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 80                   | 3.9         | 05 |
| 47  | 30           | 3.0                             | 467                               | 1.4                    | 4.2                               | 651                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 76                   | 5.6         | 06 |
| 37  | 38           | 3.0                             | 583                               | 1.1                    | 3.3                               | 641                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 75                   | 4.7         | 07 |
| 31  | 45           | 2.2                             | 493                               | 1.2                    | 2.7                               | 599                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 73                   | 4.0         | 08 |
| 26  | 53           | 2.2                             | 557                               | 1.1                    | 2.5                               | 620                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 70                   | 3.5         | 09 |
| 22  | 64           | 1.5                             | 452                               | 1.2                    | 1.8                               | 536                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 69                   | 2.9         | 10 |
| 16.7  | 84           | 1.1                             | 410                               | 1.2                    | 1.3                               | 494                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 65                   | 2.2         | 11 |
| 14.1  | 99           | 1.1                             | 446                               | 1.1                    | 1.2                               | 483                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 60                   | 1.9         | 12 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit 110 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 110 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße 110 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 110 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

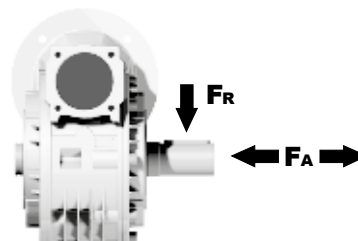
**E** El reductor tamaño 110 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |                 |         |        |
|-----------------------|---------|---------|-----------------|---------|--------|
|                       |         |         |                 |         |        |
| 1.90 LT               | 1.35 LT | 1.35 LT | 2.00LT          | 2.00 LT | 2.00LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |        |

For all details on lubrication and plugs check our website [www.enigearboxes.com](#) tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

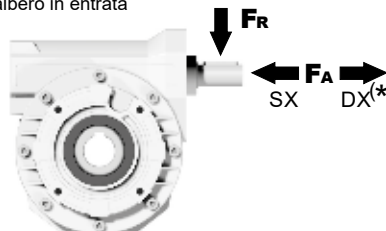
### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 600       | 2900      |
| 150                           | 700       | 3300      |
| 100                           | 750       | 3600      |
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15                            | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 228       | 1140      |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

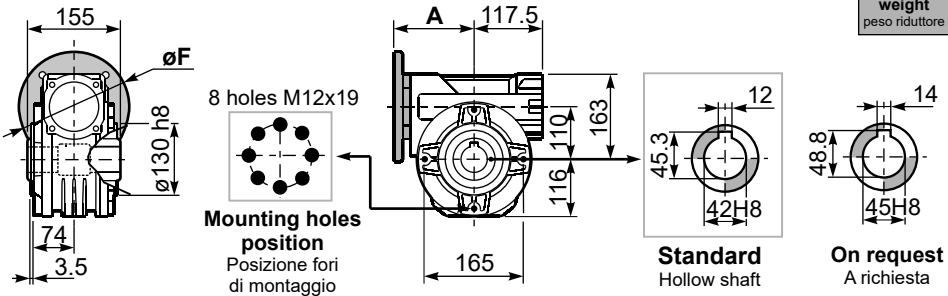
tab. 2



**P110FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **35.00 kg**

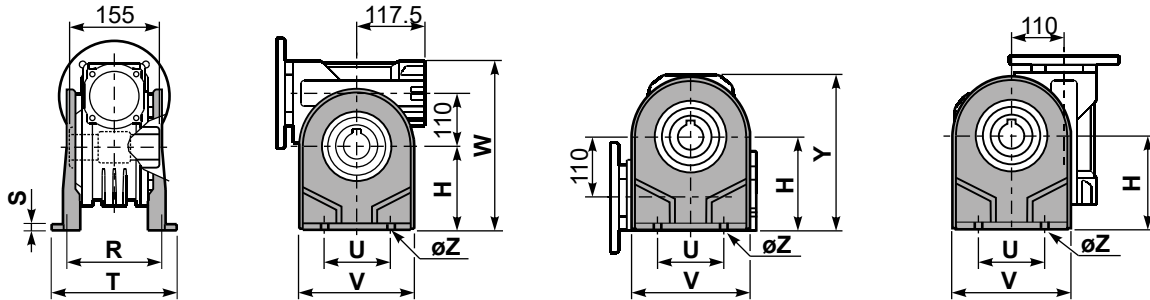
| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 136 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 138 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 147 |
| <b>132B5</b>      | -          | 300 | 187 |
|                   |            |     |     |
| <b>80B14</b>      | K085.4.046 | 120 | 138 |
| <b>90B14</b>      | K085.4.045 | 140 | 138 |
| <b>100/112B14</b> | K023.4.041 | 160 | 136 |
| <b>132B14</b>     | -          | 200 | 187 |



**P110PA...** Feet  
Piedini

**P110PB...** Feet  
Piedini

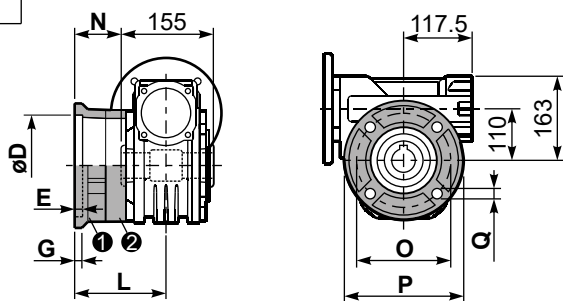
**P110PV...** Feet  
Piedini



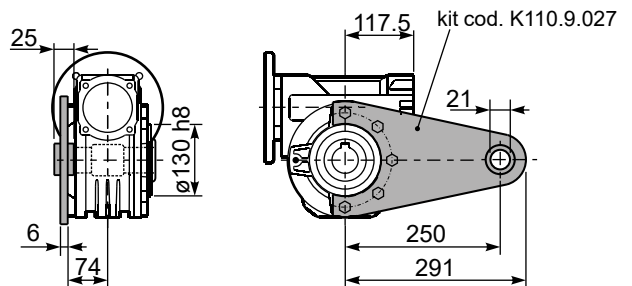
|        | H   | R   | S | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|---|-----|-----|-----|-----|-----|-----|------------|
| type B | 170 | 180 | 8 | 224 | 200 | 240 | 286 | 333 | ø13 | K110.9.022 |
| type S | -   | -   | - | -   | -   | -   | -   | -   | -   | -          |

**P110FC...** Output flange  
Flangia uscita

**P110BR...** Reaction arm  
Braccio di reazione

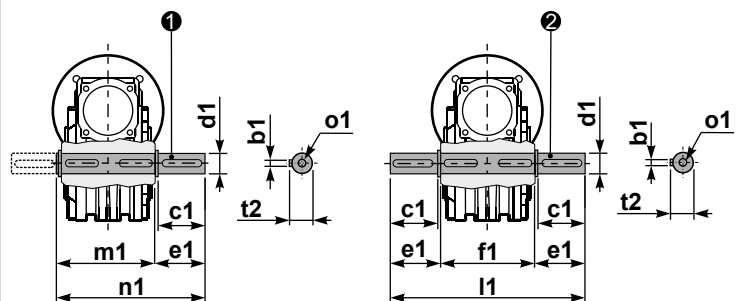


| type B    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
|-----------|---|----|------|-------|------|-----|-----|----|----------------------|
| <b>FC</b> | 170 <sup>+0.083</sup> / <sub>-0.043</sub> | 11 | 16.5 | 131.5 | 54   | 230 | 270 | 13 | ① K110.9.010<br>② -  |
| <b>FL</b> | 170 <sup>+0.083</sup> / <sub>-0.043</sub> | 11 | 16.5 | 179.5 | 102  | 230 | 270 | 13 | ① K110.9.011<br>② -  |
| type S    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
| <b>F1</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 150   | 72.5 | 215 | 250 | 15 | ① KS110.9.014<br>② - |
| <b>F3</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 130   | 52.5 | 215 | 250 | 15 | ① KS110.9.013<br>② - |



**P110.....S...** Single Shaft  
Albero lento semplice

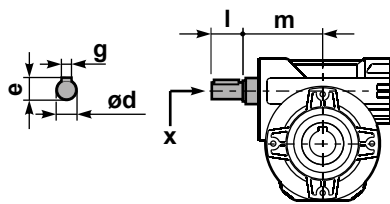
**P110.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K110.5.028 type B

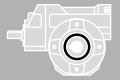
② kit cod. K110.5.029 type B

**R110FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m     | x     | kit code                                    |
|--------|-------|----|---|----|-------|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 131.5 | M8x20 | ① K085.5.007 PAM90<br>② K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 131.5 | M8x20 | ① KS085.5.009 PAM90<br>② KS085.5.011 PAM100 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> / <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available<br>B5 motor flanges |    |    | Available<br>B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|-------------------------------|----|----|--------------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                            | -B | -C | -P                             | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                            | 63 | 71 | 63                             | 71 |                                 |                          |                 |
| 47  | <b>30.1</b>  | 0.25                            | 38                                | 1.4                    | <b>0.36</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 74                              | 2.2                      | 01              |
| 33  | <b>43.0</b>  | 0.25                            | 53                                | 1.0                    | <b>0.26</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 72                              | 2.2                      | 02              |
| 23  | <b>60.2</b>  | 0.25                            | 62                                | 0.9                    | <b>0.22</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 60                              | 2.4                      | 03              |
| 15.5  | <b>90.3</b>  | 0.12                            | 42                                | 1.3                    | <b>0.16</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 57                              | 1.6                      | 04              |
| 11.6  | <b>120</b>   | 0.12                            | 52                                | 1.1                    | <b>0.13</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 53                              | 2.5                      | 05              |
| 8.8   | <b>159</b>   | 0.12                            | 64                                | 0.9                    | <b>0.10</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 49                              | 1.8                      | 06              |
| 7.1   | <b>198</b>   | 0.12*                           | 55                                | <0.8                   | <b>0.09</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 47                              | 1.5                      | 07              |
| 5.4   | <b>258</b>   | 0.12*                           | 55                                | <0.8                   | <b>0.07</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 45                              | 1.2                      | 08              |
| 4.7   | <b>301</b>   | 0.12*                           | 39                                | <0.8                   | <b>0.05</b>                       | <b>39</b>                          |                               |    |    | <b>C</b>                       |    | 40                              | 1.0                      | 09              |
| 3.2   | <b>439</b>   | 0.12*                           | 39                                | <0.8                   | <b>0.04</b>                       | <b>39</b>                          |                               |    |    | <b>C</b>                       |    | 36                              | 0.72                     | 10              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **P45** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P45** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P45** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P45** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P45** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P45 Oil

Common lubrication 0.17 l (A + B).



**SHELL** Omala S4 WE 320

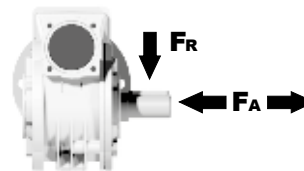
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

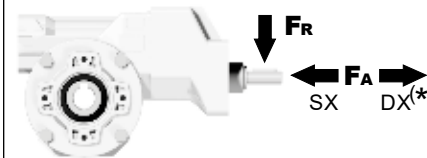
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| 75                            | 240          | 1200         |
| 50                            | 260          | 1400         |
| 25                            | 300          | 1800         |
| 15-6                          | 400          | 2000         |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| 1400                          | 44           | 220          |

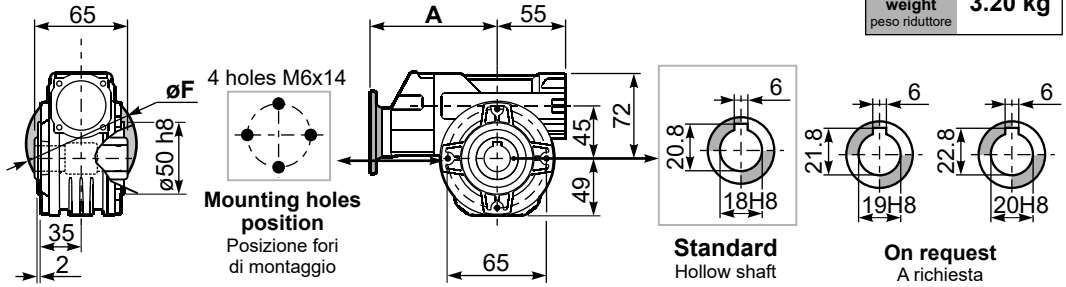
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**PP45FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **3.20 kg**

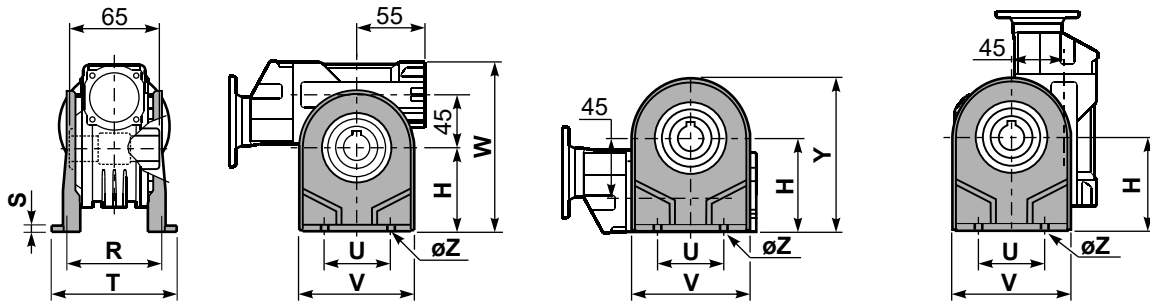
| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>56B5</b>  | K050.4.046 | 120 | 137.5 |
| <b>63B5</b>  | K050.4.041 | 138 | 139.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 137   |
| <b>63B14</b> | K050.4.047 | 90  | 139.5 |
| <b>71B14</b> | K050.4.045 | 105 | 137   |



**PP45PA...** Feet  
Piedini

**PP45PB...** Feet  
Piedini

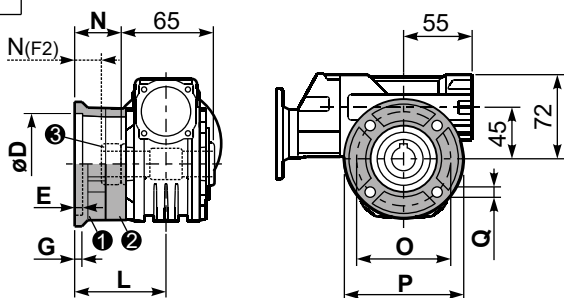
**PP45PV...** Feet  
Piedini



|        | H  | R  | S | T   | U  | V  | Y   | W   | øZ    | kit code    |
|--------|----|----|---|-----|----|----|-----|-----|-------|-------------|
| type B | 72 | 81 | 3 | 100 | 52 | 98 | 121 | 144 | ø10.5 | K045.9.022  |
| type S | 71 | 84 | 8 | 100 | 70 | 90 | 120 | 143 | ø8    | KS045.9.023 |

**PP45FC...** Output flange  
Flangia uscita

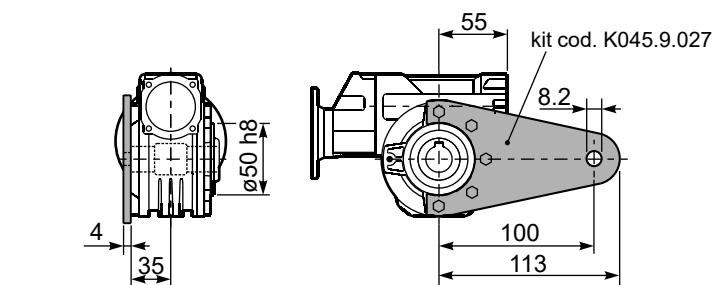
**PP45BR...** Reaction arm  
Braccio di reazione



| type B    | øD                                     | E | G | L    | N  | O  | P   | Q   | kit code                     |
|-----------|--|---|---|------|----|----|-----|-----|------------------------------|
| <b>FC</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 60.5 | 28 | 87 | 110 | 8.5 | ① K045.9.010<br>② -          |
| <b>FL</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 90.5 | 58 | 87 | 110 | 8.5 | ① K045.9.010<br>② K045.0.200 |

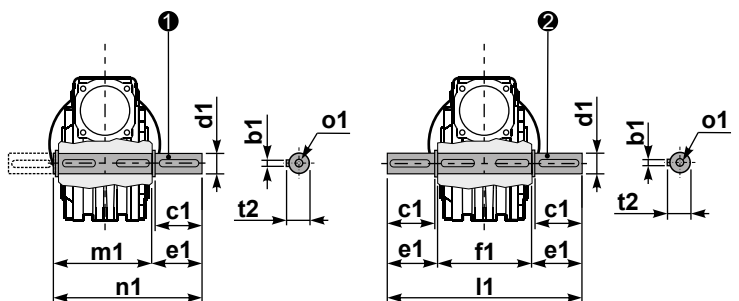
  

| type S    | øD                                     | E | G  | L    | N  | O   | P   | Q   | kit code                      |
|-----------|--|---|----|------|----|-----|-----|-----|-------------------------------|
| <b>F1</b> | 95 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 73.5 | 41 | 115 | 140 | 9   | ① KS045.9.013<br>② -          |
| <b>F2</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9  | 60.5 | 19 | 87  | 110 | 8.5 | ① KS045.9.010<br>② S045.0.204 |
| <b>F3</b> | 80 <sup>+0.03</sup> / <sub>+0.00</sub> | 3 | 8  | 51.5 | 19 | 100 | 120 | 9   | ① KS045.9.014<br>② -          |



**PP45....S...** Single Shaft  
Albero lento semplice

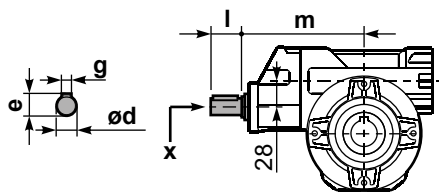
**PP45....D...** Double Shaft  
Albero lento bisp.



① kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S

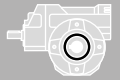
② kit cod. K045.5.029 type B

**RP45FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m   | x     |
|--------|-------|----|---|----|-----|-------|
| type B | 14 h6 | 16 | 5 | 25 | 131 | M5x13 |
| type S | -     | -  | - | -  | -   | -     |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> / <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> / <sub>-0.020</sub> | 58.8 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -C | -P                          | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 71 | 63                          | 71 |                                 |                          |                 |
| 47  | <b>30.1</b>  | 0.37                            | 58                                | 1.3                    | <b>0.49</b>                       | 77                                 |                            |    |    | <b>C</b>                    |    | 76                              | 2.5                      | 01              |
| 33  | <b>43.0</b>  | 0.25                            | 55                                | 1.4                    | <b>0.35</b>                       | 77                                 |                            |    |    | <b>C</b>                    |    | 75                              | 2.4                      | 02              |
| 23  | <b>60.2</b>  | 0.25                            | 71                                | 1.1                    | <b>0.27</b>                       | 77                                 |                            |    |    | <b>C</b>                    |    | 69                              | 2.6                      | 03              |
| 18.1  | <b>77.4</b>  | 0.25                            | 81                                | 1.1                    | <b>0.27</b>                       | 88                                 |                            |    |    | <b>C</b>                    |    | 61                              | 2.0                      | 04              |
| 12.5  | <b>112</b>   | 0.18                            | 84                                | 1.1                    | <b>0.19</b>                       | 88                                 |                            |    |    | <b>C</b>                    |    | 61                              | 2.7                      | 05              |
| 9.0   | <b>155</b>   | 0.12                            | 71                                | 1.2                    | <b>0.15</b>                       | 88                                 |                            |    |    | <b>C</b>                    |    | 56                              | 2.1                      | 06              |
| 7.6   | <b>185</b>   | 0.12                            | 74                                | 1.0                    | <b>0.12</b>                       | 77                                 |                            |    |    | <b>C</b>                    |    | 49                              | 1.8                      | 07              |
| 5.4   | <b>258</b>   | 0.12*                           | 77                                | <0.8                   | <b>0.09</b>                       | 77                                 |                            |    |    | <b>C</b>                    |    | 47                              | 1.3                      | 08              |
| 4.8   | <b>292</b>   | 0.12*                           | 66                                | <0.8                   | <b>0.08</b>                       | 66                                 |                            |    |    | <b>C</b>                    |    | 44                              | 1.2                      | 09              |
| 4.1   | <b>344</b>   | 0.12*                           | 44                                | <0.8                   | <b>0.05</b>                       | 44                                 |                            |    |    | <b>C</b>                    |    | 40                              | 1.0                      | 10              |
| 3.3   | <b>430</b>   | 0.12*                           | 44                                | <0.8                   | <b>0.04</b>                       | 44                                 |                            |    |    | <b>C</b>                    |    | 36                              | 0.8                      | 11              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **P50** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P50** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P50** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P50** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P50** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P50 Oil** Common lubrication 0.26 l (A + B).

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

**For all details on lubrication and plugs check our website** **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 340       | 1700      |
| 50                            | 380       | 1900      |
| 25                            | 480       | 2500      |
| 15-6                          | 560       | 2800      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 44        | 220       |

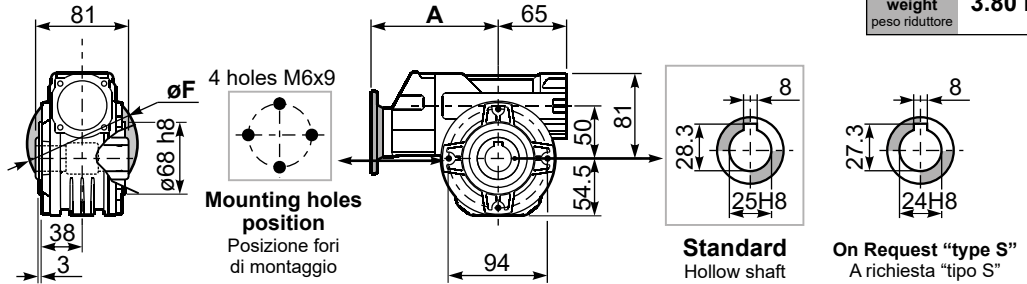
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PP50**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **3.80 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 56B5       | K050.4.046 | 120 | 142   |
| 63B5       | K050.4.041 | 138 | 144   |
| 71B5       | K050.4.042 | 160 | 141.5 |
| 63B14      | K050.4.047 | 90  | 144   |
| 71B14      | K050.4.045 | 105 | 141.5 |



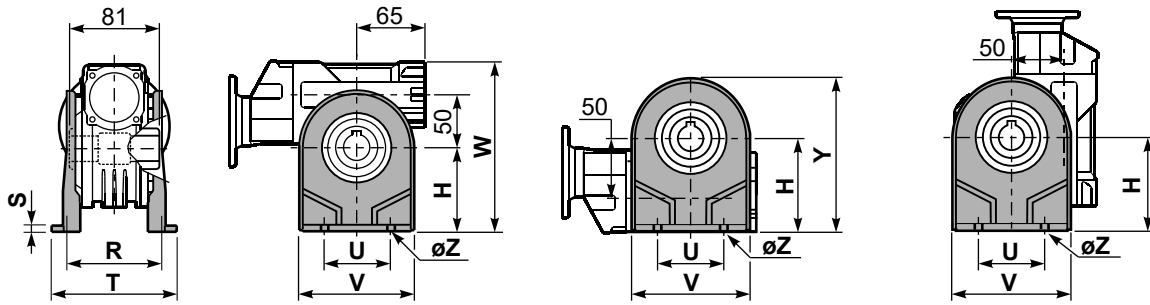
Standard  
Hollow shaft

On Request "type S"  
A richiesta "tipo S"

PP50**PA**... Feet  
Piedini

PP50**PB**... Feet  
Piedini

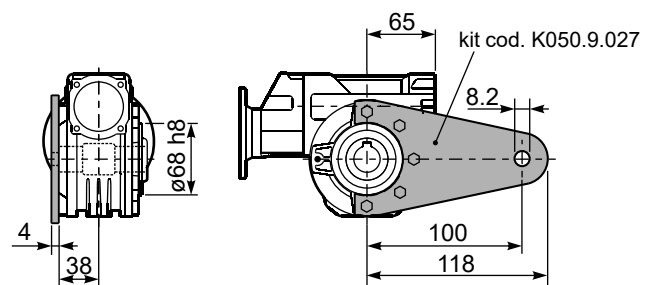
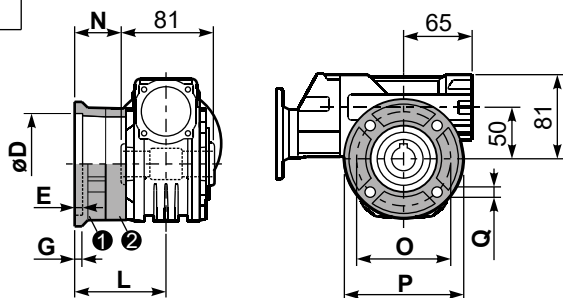
PP50**PV**... Feet  
Piedini



|        | H  | R    | S   | T   | U  | V   | Y     | W   | øZ    | kit code    |
|--------|----|------|-----|-----|----|-----|-------|-----|-------|-------------|
| type B | 82 | 98.5 | 3.5 | 123 | 63 | 113 | 138.5 | 163 | ø10.5 | K050.9.022  |
| type S | 85 | 96   | 10  | 114 | 85 | 110 | 139.5 | 166 | ø10   | KS050.9.023 |

PP50**FC**... Output flange  
Flangia uscita

PP50**BR**... Reaction arm  
Braccio di reazione



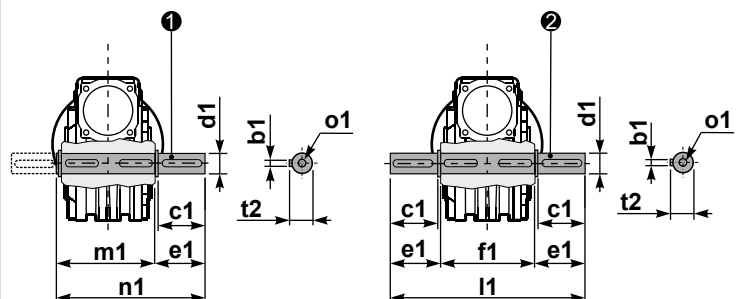
| type B | øD                                     | E | G  | L     | N    | O  | P   | Q    | kit code                     |
|--------|--|---|----|-------|------|----|-----|------|------------------------------|
| FC     | 70 <sup>+0.20</sup> / <sub>+0.15</sub> | 9 | 12 | 85    | 44.5 | 90 | 123 | 10.5 | ① K050.9.010<br>② -          |
| FL     | 70 <sup>+0.20</sup> / <sub>+0.15</sub> | 9 | 12 | 114.5 | 74   | 90 | 123 | 10.5 | ① K050.9.010<br>② K050.0.200 |

| type S | øD                                      | E | G  | L    | N  | O   | P   | Q    | kit code             |
|--------|---|---|----|------|----|-----|-----|------|----------------------|
| F1     | 110 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 83.5 | 43 | 130 | 160 | 10   | ① KS050.9.012<br>② - |
| F2     | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 76.5 | 36 | 90  | 123 | 10.5 | ① KS050.9.014<br>② - |
| F3     | 95 <sup>+0.035</sup> / <sub>0</sub>     | 4 | 10 | 66.5 | 26 | 115 | 140 | 10   | ① KS050.9.013<br>② - |

PP50.....**S**... Single Shaft  
Albero lento semplice

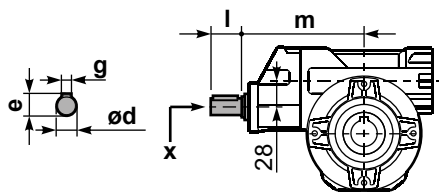
PP50.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S

② kit cod. K050.5.029 type B

RP50**FB**... Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m     | x     |
|--------|-------|----|---|----|-------|-------|
| type B | 14 h6 | 16 | 5 | 25 | 135.5 | M5x13 |
| type S | -     | -  | - | -  | -     | -     |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1   | n1  | t2 | o1    |
|--------|----|----|--|------|----|-----|------|-----|----|-------|
| type B | 8  | 52 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| type S | 8  | 50 | 24 <sup>-0.005</sup> / <sub>-0.020</sub> | 68.8 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

|                  | Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|------------------|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|----|---------------------------------|--------------------------|-----------------|
|                  |   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -P                          | -Q | -R | -T |                                 |                          |                 |
|                  |   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 63                          | 71 | 80 | 90 |                                 |                          |                 |
| IEC 90 - 80 - 71 | 47  | <b>29.9</b>  | 0.75                            | 113                               | 1.5                    | <b>1.1</b>                        | <b>165</b>                         |                            |    |    |    |                             | C  | C  |    | 74                              | 2.6                      | 01              |
|                  | 37  | <b>37.7</b>  | 0.75                            | 141                               | 1.2                    | <b>0.88</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  | C  |    | 73                              | 2.0                      | 02              |
|                  | 30  | <b>47.1</b>  | 0.75                            | 169                               | 1.1                    | <b>0.83</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 70                              | 3.2                      | 03              |
|                  | 25  | <b>56.6</b>  | 0.55                            | 136                               | 1.4                    | <b>0.76</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 64                              | 2.7                      | 04              |
|                  | 19.8  | <b>70.7</b>  | 0.55                            | 164                               | 1.1                    | <b>0.63</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 62                              | 2.1                      | 05              |
|                  | 15.9  | <b>87.8</b>  | 0.37                            | 162                               | 1.2                    | <b>0.43</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 73                              | 2.6                      | 06              |
|                  | 12.6  | <b>111.0</b> | 0.37                            | 199                               | 0.9                    | <b>0.35</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 71                              | 2.0                      | 07              |
| IEC 71 - 63      | 10.1  | <b>139</b>   | 0.37                            | 234                               | 0.8                    | <b>0.30</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  |    |    | 67                              | 3.2                      | 08              |
|                  | 8.4   | <b>166</b>   | 0.25                            | 173                               | 1.1                    | <b>0.27</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  |    |    | 61                              | 2.7                      | 09              |
|                  | 6.7   | <b>208</b>   | 0.18                            | 151                               | 1.1                    | <b>0.20</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 59                              | 2.1                      | 10              |
|                  | 4.5   | <b>310</b>   | 0.12                            | 129                               | 1.3                    | <b>0.15</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 51                              | 1.5                      | 11              |
|                  | 3.8   | <b>370</b>   | 0.12                            | 145                               | 1.1                    | <b>0.14</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 48                              | 1.3                      | 12              |
|                  | 3.2   | <b>434</b>   | 0.12                            | 149                               | 0.9                    | <b>0.11</b>                       | <b>138</b>                         |                            |    |    |    |                             | C  |    |    | 42                              | 1.1                      | 13              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **P63** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P63** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

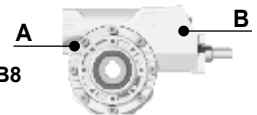
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P63** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P63** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P63** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P63 Oil

For B3-V5-V6 separate lubrication for A ( 0.40 l ) B ( 0.08 l ) , for B6-B7-B8 common lubrication 0.38 l ( A + B ).



**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website

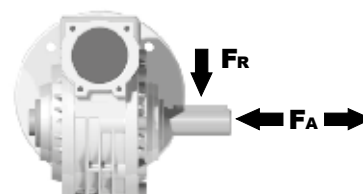
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

#### RADIAL AND AXIAL LOADS

##### Output shaft

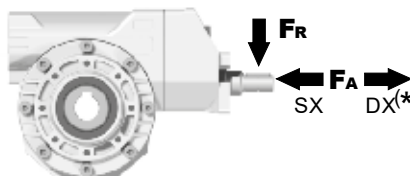
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 500       | 2500      |
| 50                            | 600       | 3000      |
| 25                            | 700       | 3800      |
| 15-6                          | 800       | 4000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 61        | 305       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

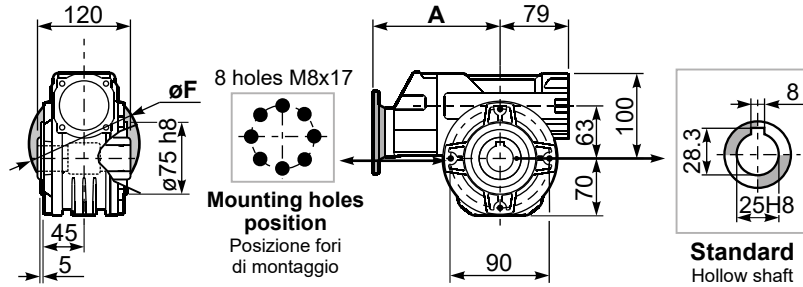
tab. 2



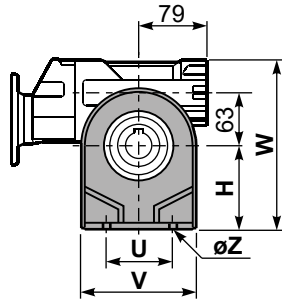
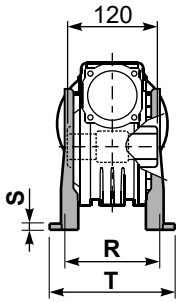
PP63**FB**... Basic wormbox  
Riduttore base

|                |             |             |
|----------------|-------------|-------------|
| Gearbox weight | 29.9+111    | 139+434     |
| peso riduttore | <b>7.30</b> | <b>7.80</b> |
|                | <b>Kg</b>   | <b>Kg</b>   |

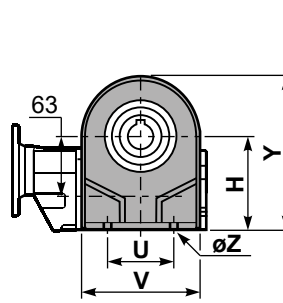
| M.flange | Kit code   | øF         | A     |
|----------|------------|------------|-------|
| 71B5     | K063.4.042 | 160        | 176.5 |
| 80/90B5  | K063.4.043 | 200        | 178.5 |
| 71B14    | K063.4.047 | 105        | 176.5 |
| 80B14    | K063.4.046 | 120        | 178.5 |
| 90B14    | K063.4.041 | 140        | 178.5 |
| <hr/>    |            |            |       |
| 139+434  | 63B5       | K050.4.041 | 138   |
|          | 71B5       | K050.4.042 | 160   |
|          | 63B14      | K050.4.047 | 90    |
|          | 71B14      | K050.4.045 | 105   |



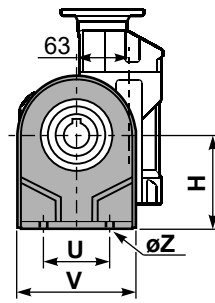
PP63**PA**... Feet  
Piedini



PP63**PB**... Feet  
Piedini

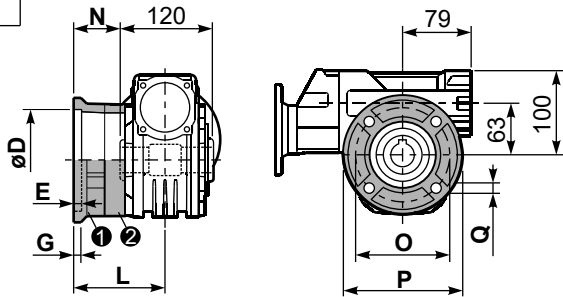


PP63**PV**... Feet  
Piedini



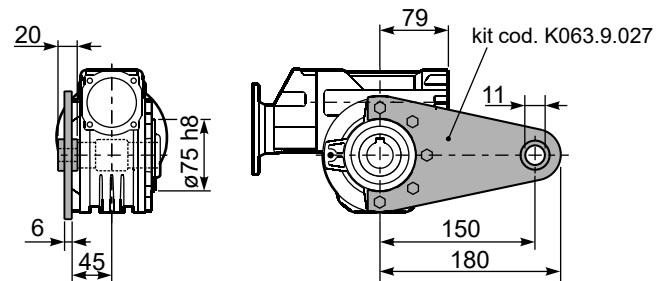
|        | H   | R   | S | T   | U  | V   | Y   | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|----|-----|-----|-----|-------|------------|
| type B | 100 | 111 | 4 | 144 | 95 | 133 | 170 | 200 | ø10.5 | K063.9.022 |
| type S | -   | -   | - | -   | -  | -   | -   | -   | -     | -          |

PP63**FC**... Output flange  
Flangia uscita



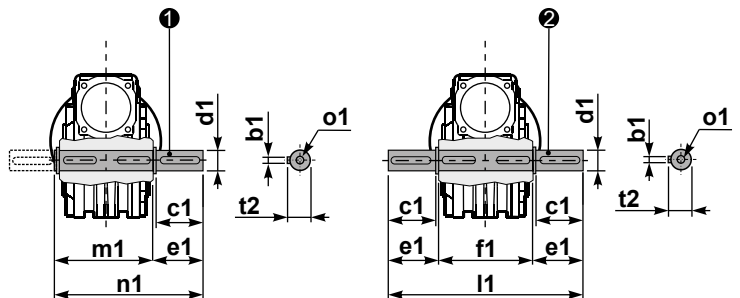
| type B | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|--------|---|---|----|-----|----|-----|-----|----|------------------------------|
| FC     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 86  | 26 | 150 | 175 | 11 | ① K063.9.010<br>② -          |
| FL     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① K063.9.010<br>② K063.0.200 |
| <hr/>  |   |   |    |     |    |     |     |    |                              |
| type S | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
| F1     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 102 | 42 | 165 | 200 | 13 | ① KS070.9.013<br>② -         |
| F2     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① KS063.9.013<br>② -         |
| F3     | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 82  | 22 | 130 | 160 | 10 | ① KS063.9.011<br>② -         |

PP63**BR**... Reaction arm  
Braccio di reazione



PP63.....**S**... Single Shaft  
Albero lento semplice

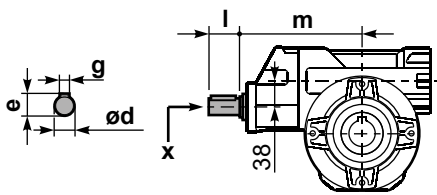
PP63.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K063.5.028 type B

② kit cod. K063.5.029 type B

RP63**FB**... Input shaft  
Albero in entrata



|          | ød    | e    | g | l  | m     | x     |           |
|----------|-------|------|---|----|-------|-------|-----------|
| 29.9+111 | 19 h6 | 21.5 | 6 | 35 | 169.4 | M6x16 | C40.5.062 |
| 139+434  | 14 h6 | 16   | 5 | 25 | 154.2 | M5x13 | C35.5.061 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

|                  | Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i | Motor power<br>P <sub>IM</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|------------------|--|------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|----|--------------------------|----------------------|-------------|
|                  |  |            |  |  |                        |  |   | -B                         | -C | -D | -E | -P                          | -Q | -R | -T |                          |                      |             |
|                  |  |            |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 63                          | 71 | 80 | 90 |                          |                      |             |
| IEC 90 - 80 - 71 | 47   | 29.9       | 0.75                                   | 113                                      | 1.6                    | 1.20                                     | 182                                       |                            |    |    |    | C                           | C  |    | 74 | 2.6                      | 01                   |             |
|                  | 37   | 37.7       | 0.75                                   | 141                                      | 1.3                    | 0.97                                     | 182                                       |                            |    |    |    | C                           | C  |    | 73 | 2.0                      | 02                   |             |
|                  | 30   | 47.1       | 0.75                                   | 169                                      | 1.2                    | 0.91                                     | 206                                       |                            |    |    |    | C                           | C  |    | 70 | 3.2                      | 03                   |             |
|                  | 25   | 56.6       | 0.75                                   | 185                                      | 1.1                    | 0.83                                     | 206                                       |                            |    |    |    | C                           | C  |    | 64 | 2.7                      | 04                   |             |
|                  | 19.8   | 70.7       | 0.55                                   | 162                                      | 1.3                    | 0.70                                     | 206                                       |                            |    |    |    | C                           | C  |    | 61 | 2.1                      | 05                   |             |
|                  | 15.9   | 87.8       | 0.37                                   | 160                                      | 1.4                    | 0.51                                     | 218                                       |                            |    |    |    | C                           | C  |    | 72 | 2.6                      | 06                   |             |
|                  | 12.6   | 111.0      | 0.37                                   | 196                                      | 1.1                    | 0.41                                     | 218                                       |                            |    |    |    | C                           | C  |    | 70 | 2.0                      | 07                   |             |
| IEC 71 - 63      | 10.1   | 139        | 0.37                                   | 231                                      | 0.9                    | 0.35                                     | 218                                       |                            |    |    |    | C                           |    |    | 66 | 3.2                      | 08                   |             |
|                  | 8.4  | 166        | 0.25                                   | 170                                      | 1.3                    | 0.32                                     | 218                                       |                            |    |    |    | C                           |    |    | 60 | 2.7                      | 09                   |             |
|                  | 6.7  | 208        | 0.25                                   | 195                                      | 1.0                    | 0.25                                     | 194                                       |                            |    |    |    | C                           |    |    | 55 | 2.1                      | 10                   |             |
|                  | 4.5  | 310        | 0.18                                   | 194                                      | 1.0                    | 0.18                                     | 194                                       |                            |    |    |    | C                           |    |    | 51 | 1.5                      | 11                   |             |
|                  | 3.8  | 370        | 0.18                                   | 213                                      | 0.9                    | 0.16                                     | 194                                       |                            |    |    |    | C                           |    |    | 47 | 1.3                      | 12                   |             |
|                  | 3.2  | 434        | 0.18*                                  | 143                                      | <0.8                   | 0.11                                     | 143                                       |                            |    |    |    | C                           |    |    | 42 | 1.1                      | 13                   |             |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M<sub>2R</sub>  
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M<sub>2R</sub>

**EN** Unit P6A is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo P6A viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

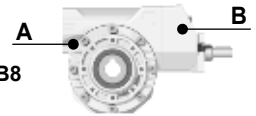
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe P6A mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type P6A est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño P6A se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P6A Oil

For B3-V5-V6 separate lubrication for A ( 0.40 l ) B ( 0.08 l ) , for B6-B7-B8 common lubrication 0.38 l ( A + B ).



SHELL Omala S4 WE 320

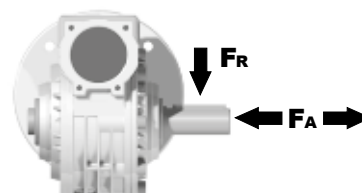
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

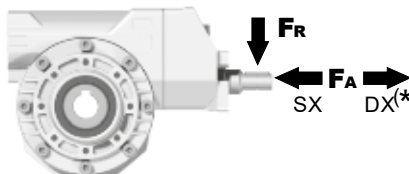
Albero di uscita



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|--|-----------|-----------|
| 75                                     | 500       | 2500      |
| 50                                     | 600       | 3000      |
| 25                                     | 700       | 3800      |
| 15-6                                   | 800       | 4000      |

##### Input shaft

albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|--|-----------|-----------|
| 1400                                   | 61        | 305       |

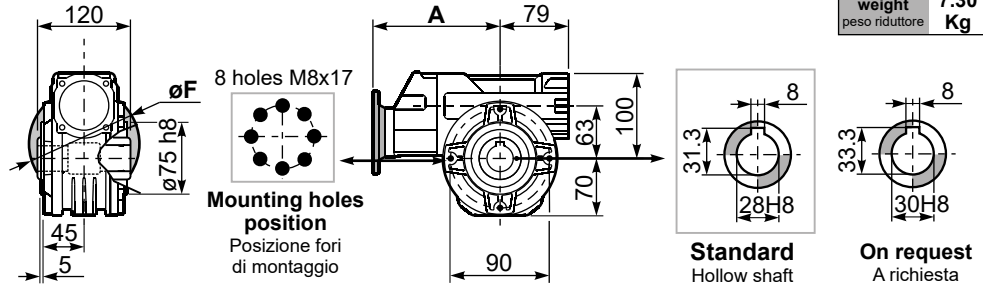
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

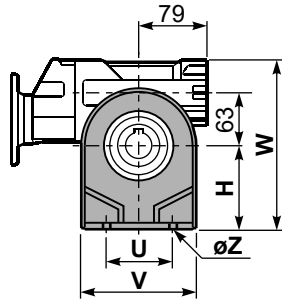
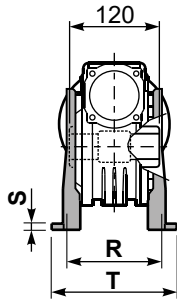
**PP6A<sup>FB</sup>...** Basic wormbox  
Riduttore base

|                                  |             |             |
|----------------------------------|-------------|-------------|
| Gearbox weight<br>peso riduttore | 29.9+111    | 139+434     |
|                                  | <b>7.30</b> | <b>7.80</b> |
|                                  | <b>Kg</b>   | <b>Kg</b>   |

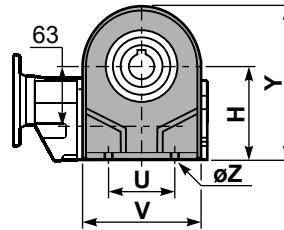
| M.flange | Kit code   | øF  | A     |
|----------|------------|-----|-------|
| 71B5     | K063.4.042 | 160 | 176.5 |
| 80/90B5  | K063.4.043 | 200 | 178.5 |
| 71B14    | K063.4.047 | 105 | 176.5 |
| 80B14    | K063.4.046 | 120 | 178.5 |
| 90B14    | K063.4.041 | 140 | 178.5 |
| <hr/>    |            |     |       |
| 139+434  |            |     |       |
| 63B5     | K050.4.041 | 138 | 162.5 |
| 71B5     | K050.4.042 | 160 | 160   |
| 63B14    | K050.4.047 | 90  | 162.5 |
| 71B14    | K050.4.045 | 105 | 160   |



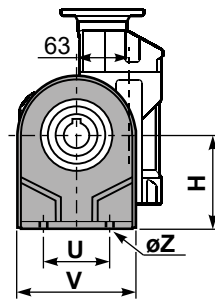
**PP6A<sup>PA</sup>...** Feet  
Piedini



**PP6A<sup>PB</sup>...** Feet  
Piedini

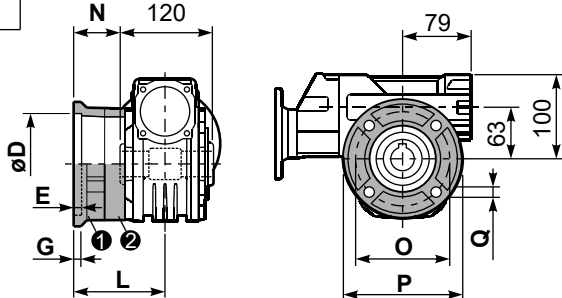


**PP6A<sup>PV</sup>...** Feet  
Piedini



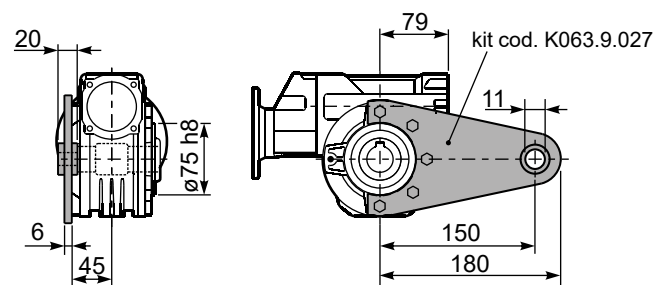
|        | H   | R   | S  | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|----|-----|-----|-----|-----|-----|-----|------------|
| type B | 115 | 115 | 12 | 142 | 120 | 156 | 185 | 215 | ø11 | K070.9.022 |
| type S | -   | -   | -  | -   | -   | -   | -   | -   | -   | -          |

**PP6A<sup>FC</sup>...** Output flange  
Flangia uscita



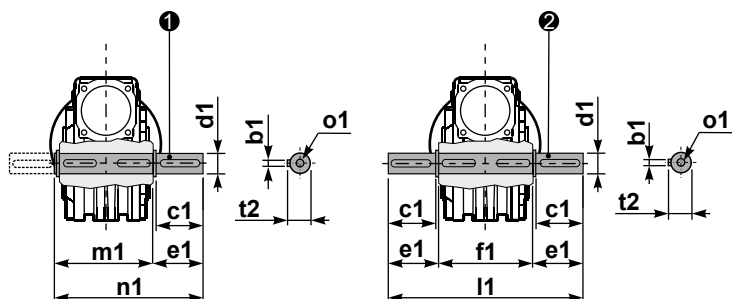
| type B | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
|--------|---|---|------|------|------|-----|-----|----|------------------------------|
| FC     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 85   | 25   | 165 | 200 | 13 | ① K070.9.010<br>② -          |
| FL     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | ① K070.9.010<br>② K070.0.200 |
| type S | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
| F1     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | ① KS070.9.014<br>② -         |
| F2     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 116  | 56   | 150 | 175 | 11 | ① KS063.9.013<br>② -         |
| F3     | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 13.5 | 84.5 | 24.5 | 130 | 160 | 11 | ① KS070.9.011<br>② -         |

**PP6A<sup>BR</sup>...** Reaction arm  
Braccio di reazione



**PP6A.....<sup>S</sup>...** Single Shaft  
Albero lento semplice

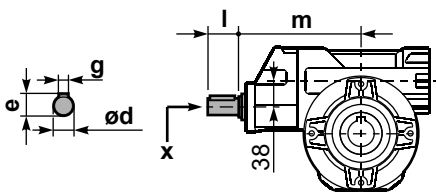
**PP6A.....<sup>D</sup>...** Double Shaft  
Albero lento bisp.



① kit cod. K070.5.028 type B

② kit cod. K070.5.029 type B

**R<sup>P6</sup>AFB...** Input shaft  
Albero in entrata



|          | ød    | e    | g | l  | m     | x     |           |
|----------|-------|------|---|----|-------|-------|-----------|
| 29.9+111 | 19 h6 | 21.5 | 6 | 35 | 169.4 | M6x16 | C40.5.062 |
| 139+434  | 14 h6 | 16   | 5 | 25 | 154.2 | M5x13 | C35.5.061 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-----|-------|-----|----|-------|
| type B | 8  | 60 | 28 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.5 | 120 | 247 | 127.5 | 191 | 31 | M8x20 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |          |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----------|----|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R       | -T |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80       | 90 |                                 |                      |             |
| 23.5  | <b>59.7</b>  | 1.1                             | 300                               | 1.4                    | <b>1.5</b>                        | <b>418</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 67                              | 3.5                  | 01          |
| 19.4  | <b>72.3</b>  | 1.1                             | 347                               | 1.2                    | <b>1.3</b>                        | <b>407</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 64                              | 3.1                  | 02          |
| 17.1  | <b>81.7</b>  | 1.1                             | 374                               | 1.1                    | <b>1.2</b>                        | <b>418</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 61                              | 2.7                  | 03          |
| 13.3  | <b>105</b>   | 0.75                            | 323                               | 1.2                    | <b>0.89</b>                       | <b>385</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 60                              | 2.1                  | 04          |
| 8.0   | <b>176</b>   | 0.55                            | 415                               | 1.1                    | <b>0.58</b>                       | <b>440</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 63                              | 3.5                  | 05          |
| 6.6   | <b>213</b>   | 0.37                            | 322                               | 1.3                    | <b>0.47</b>                       | <b>407</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 60                              | 3.1                  | 06          |
| 5.8   | <b>240</b>   | 0.37                            | 321                               | 1.3                    | <b>0.48</b>                       | <b>418</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 53                              | 2.7                  | 07          |
| 4.3   | <b>328</b>   | 0.37                            | 438                               | 1.0                    | <b>0.35</b>                       | <b>418</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 53                              | 2.7                  | 08          |
| 3.3   | <b>422</b>   | 0.25                            | 374                               | 1.0                    | <b>0.26</b>                       | <b>385</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 52                              | 2.1                  | 09          |
| 3.0   | <b>466</b>   | 0.25                            | 358                               | 0.9                    | <b>0.23</b>                       | <b>330</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 45                              | 1.9                  | 10          |
| 2.3   | <b>605</b>   | 0.18                            | 297                               | 1.1                    | <b>0.20</b>                       | <b>330</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 40                              | 1.5                  | 11          |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **P85** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P85** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

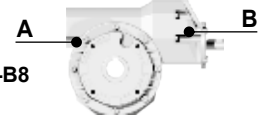
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P85** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P85** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P85** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P85 Oil

For B3-V5-V6 separate lubrication for A ( 1.20 l ) B ( 0.14 l ) , for B6-B7-B8 common lubrication 0.90 l ( A + B ).



**SHELL** Omala S4 WE 320

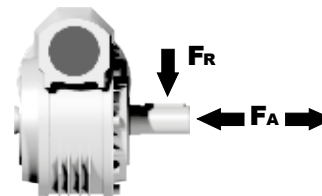
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

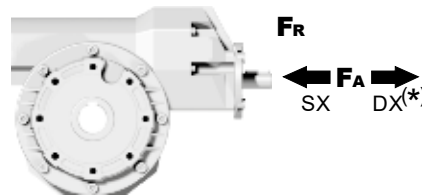
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>75</b>                     | 700       | 3500      |
| <b>50</b>                     | 800       | 4000      |
| <b>25</b>                     | 1000      | 5000      |
| <b>15-6</b>                   | 1160      | 5800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 108       | 540       |

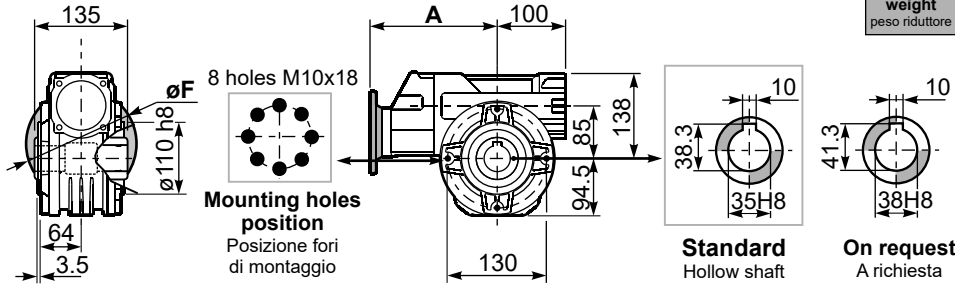
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

PP85**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **19.30 kg**

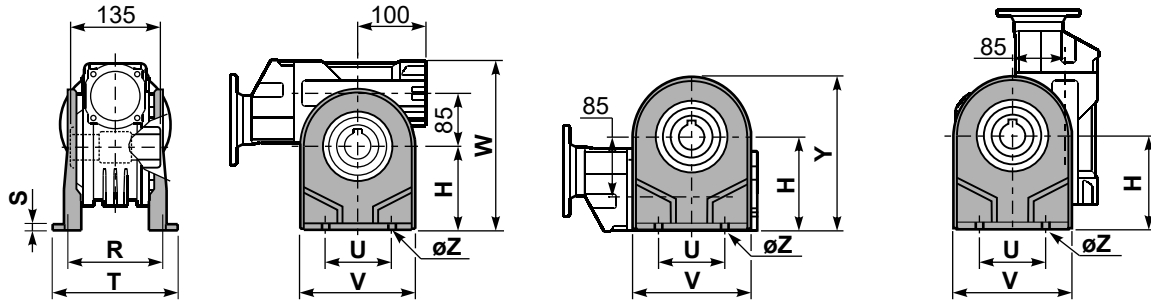
| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 195.2 |
| 71B5       | K063.4.042 | 160 | 193.2 |
| 80/90B5    | K063.4.043 | 200 | 195.2 |
| 71B14      | K063.4.047 | 105 | 193.2 |
| 80B14      | K063.4.046 | 120 | 195.2 |
| 90B14      | K063.4.041 | 140 | 195.2 |



PP85**PA**... Feet  
Piedini

PP85**PB**... Feet  
Piedini

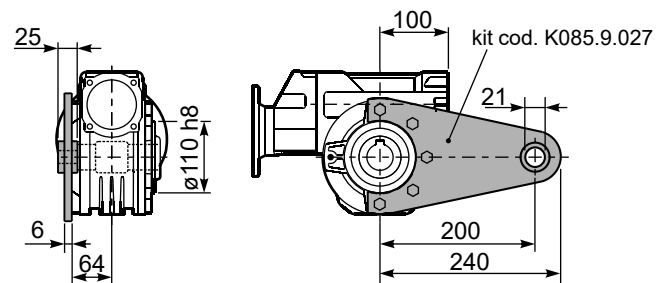
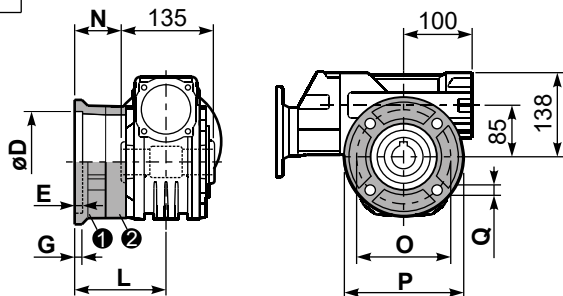
PP85**PV**... Feet  
Piedini



|        | H   | R   | S | T   | U   | V   | Y     | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|-----|-----|-------|-----|-------|------------|
| type B | 142 | 145 | 5 | 182 | 140 | 180 | 236.5 | 280 | ø10.5 | K085.9.022 |
| type S | -   | -   | - | -   | -   | -   | -     | -   | -     | -          |

PP85**FC**... Output flange  
Flangia uscita

PP85**BR**... Reaction arm  
Braccio di reazione



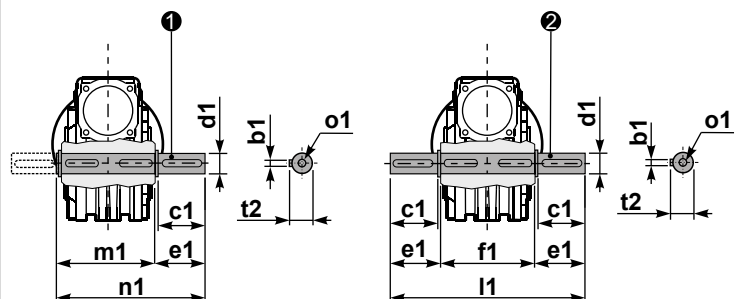
| type B | øD                                      | E | G  | L     | N    | O   | P   | Q  | kit code                     |
|--------|---|---|----|-------|------|-----|-----|----|------------------------------|
| FC     | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13 | ① K085.9.010<br>② -          |
| FL     | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13 | ① K085.9.010<br>② K085.0.201 |

| type S | øD                                      | E | G  | L     | N  | O   | P   | Q    | kit code             |
|--------|---|---|----|-------|----|-----|-----|------|----------------------|
| F1     | 130 <sup>+0.04</sup> / <sub>+0.00</sub> | 5 | 13 | 117.5 | 50 | 165 | 200 | 11.5 | ① KS085.9.012<br>② - |
| F2     | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 15 | 147.5 | 80 | 180 | 205 | 12.5 | ① KS085.9.013<br>② - |
| F4     | 130 <sup>+0.04</sup> / <sub>+0.00</sub> | 5 | 13 | 106.5 | 39 | 165 | 200 | 13   | ① KS085.9.015<br>② - |

PP85.....**S**... Single Shaft  
Albero lento semplice

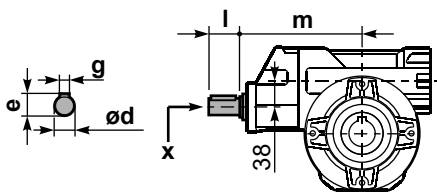
PP85.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B

② kit cod. K085.5.029 type B

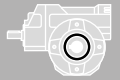
RP85**FB**... Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m     | x     |
|--------|-------|------|---|----|-------|-------|
| type B | 19 h6 | 21.5 | 6 | 35 | 187.5 | M6x16 |
| type S | -     | -    | - | -  | -     | -     |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |          |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R       | -T |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80       | 90 |                                 |                          |                 |
| 16.8  | <b>83.2</b>  | 1.5                             | 587                               | 1.1                    | <b>1.7</b>                        | <b>660</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 69                              | 3.5                      | 01              |
| 13.9  | <b>100.5</b> | 1.5                             | 699                               | 0.8                    | <b>1.3</b>                        | <b>594</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 68                              | 2.9                      | 02              |
| 10.6  | <b>132</b>   | 1.1                             | 634                               | 0.9                    | <b>0.95</b>                       | <b>550</b>                         |                            |    |    |    | <b>C</b>                    | <b>C</b> |    | 64                              | 2.2                      | 03              |
| 8.0   | <b>176</b>   | 0.75                            | 666                               | 1.2                    | <b>0.90</b>                       | <b>803</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 74                              | 4.7                      | 04              |
| 6.7   | <b>208</b>   | 0.75                            | 766                               | 0.9                    | <b>0.65</b>                       | <b>660</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 72                              | 4.0                      | 05              |
| 5.7   | <b>245</b>   | 0.55                            | 634                               | 1.0                    | <b>0.57</b>                       | <b>660</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 69                              | 3.5                      | 06              |
| 4.7   | <b>296</b>   | 0.55                            | 755                               | 0.8                    | <b>0.43</b>                       | <b>594</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 68                              | 2.9                      | 07              |
| 4.2   | <b>334</b>   | 0.55                            | 865                               | 0.8                    | <b>0.42</b>                       | <b>660</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 69                              | 3.5                      | 08              |
| 3.5   | <b>403</b>   | 0.37                            | 692                               | 0.9                    | <b>0.32</b>                       | <b>594</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 68                              | 2.9                      | 09              |
| 2.6   | <b>529</b>   | 0.25                            | 577                               | 1.0                    | <b>0.24</b>                       | <b>550</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 64                              | 2.2                      | 10              |
| 2.2   | <b>624</b>   | 0.25                            | 628                               | 0.8                    | <b>0.21</b>                       | <b>528</b>                         | <b>B</b>                   |    |    |    | <b>C</b>                    | <b>C</b> |    | 59                              | 1.9                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **P10** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. Primary reduction unit is supplied with closed plugs and lubricated for life with synthetic oil. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P10** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. La precoppia è fornita con tappi chiusi e lubrificata a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **P10** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Die Stirnradvorstufe ist Lebensdauer geschmiert und wird mit synthetischem Öl geliefert. Die Stirnradvorstufe ist komplett geschlossen ohne Füllschrauben. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P10** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le précouple est fourni lubrifié à vie avec de l'huile synthétique et avec des bouchons fermés. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

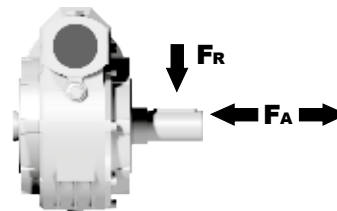
**E** El reductor tamaño **P10** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                              |              |              |                        |             |             |
|------------------------------|--------------|--------------|------------------------|-------------|-------------|
|                              |              |              |                        |             |             |
| <b>B3</b>                    | <b>B6</b>    | <b>B7</b>    | <b>B8</b>              | <b>V5</b>   | <b>V6</b>   |
| 1.9/0.14 LT                  | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT            | 2.0/0.14 LT | 2.0/0.14 LT |
| <b>SHELL</b> Omala S2 GX 460 |              |              | <b>ENI</b> Blasias 460 |             |             |

For all details on lubrication and plugs check our website [www.igus.com](#) **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

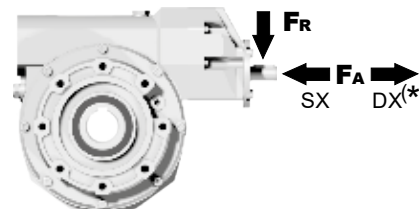
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15-6                          | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 150       | 760       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

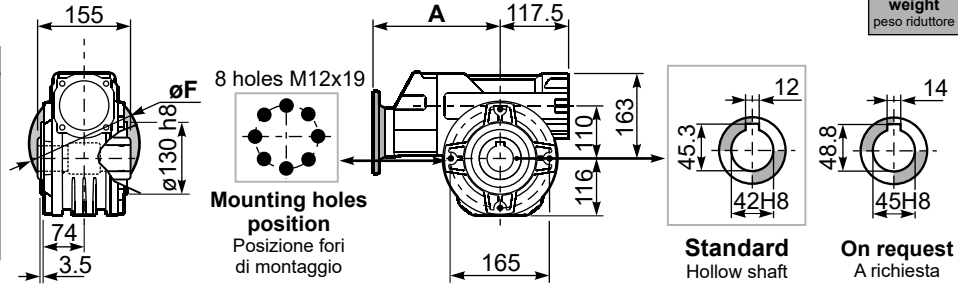
**tab. 2**



**PP10FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **41.00 kg**

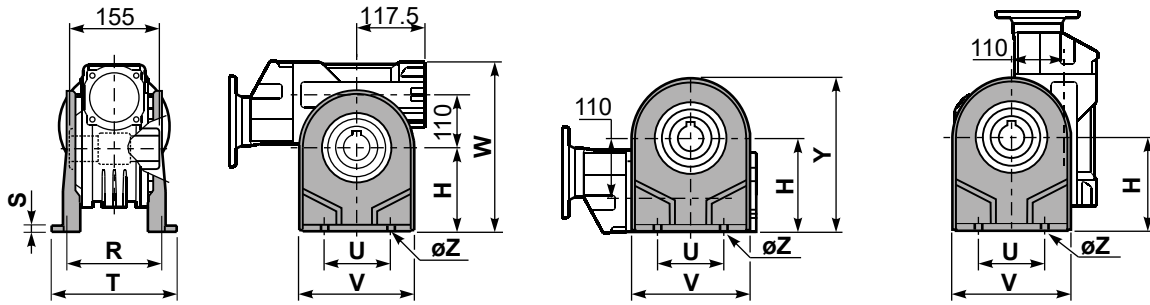
| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 214.7 |
| <b>71B5</b>    | K063.4.042 | 160 | 212.7 |
| <b>80/90B5</b> | K063.4.043 | 200 | 214.7 |
| <b>71B14</b>   | K063.4.047 | 105 | 212.7 |
| <b>80B14</b>   | K063.4.046 | 120 | 214.7 |
| <b>90B14</b>   | K063.4.041 | 140 | 214.7 |



**PP10PA...** Feet  
Piedini

**PP10PB...** Feet  
Piedini

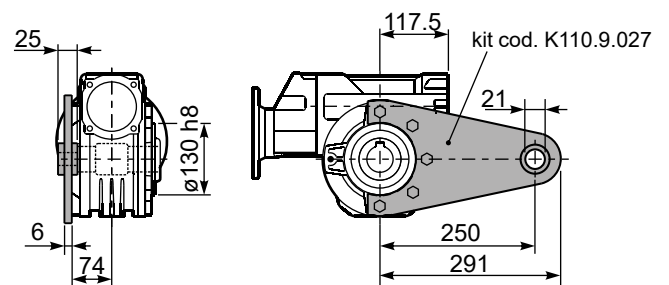
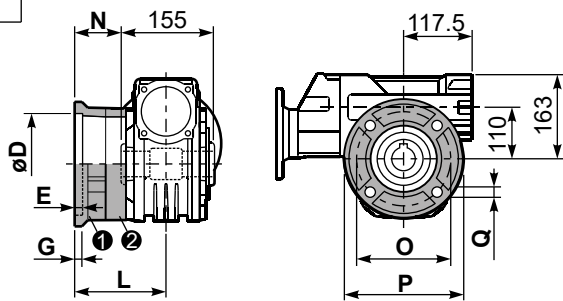
**PP10PV...** Feet  
Piedini



|        | H   | R   | S | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|---|-----|-----|-----|-----|-----|-----|------------|
| type B | 170 | 180 | 8 | 224 | 200 | 240 | 286 | 333 | ø13 | K110.9.022 |
| type S | -   | -   | - | -   | -   | -   | -   | -   | -   | -          |

**PP10FC...** Output flange  
Flangia uscita

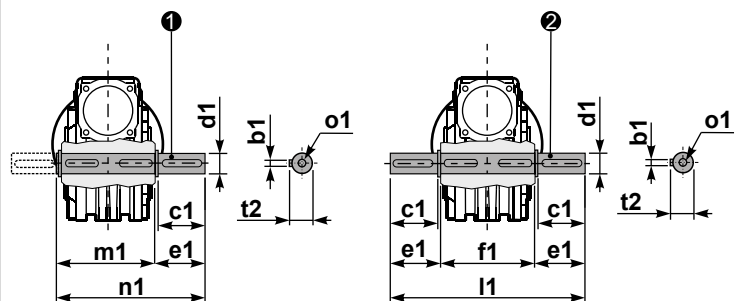
**PP10BR...** Reaction arm  
Braccio di reazione



| type B    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
|-----------|---|----|------|-------|------|-----|-----|----|----------------------|
| <b>FC</b> | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 131.5 | 54   | 230 | 270 | 13 | ① K110.9.010<br>② -  |
| <b>FL</b> | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 179.5 | 102  | 230 | 270 | 13 | ① K110.9.011<br>② -  |
| type S    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
| <b>F1</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 150   | 72.5 | 215 | 250 | 15 | ① KS110.9.014<br>② - |
| <b>F3</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 130   | 52.5 | 215 | 250 | 15 | ① KS110.9.013<br>② - |

**PP10....S...** Single Shaft  
Albero lento semplice

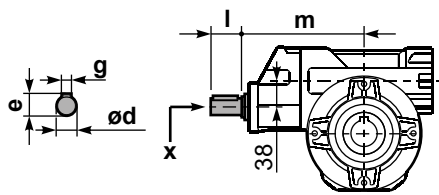
**PP10....D...** Double Shaft  
Albero lento bisp.



① kit cod. K110.5.028 type B

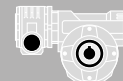
② kit cod. K110.5.029 type B

**RP10FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m   | x     |
|--------|-------|------|---|----|-----|-------|
| type B | 19 h6 | 21.5 | 6 | 35 | 205 | M6x16 |
| type S | -     | -    | - | -  | -   | -     |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> / <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 9.3   | <b>150</b>   | 0.06                            | 29                                | 1.2                    | <b>0.07</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 1.44                     | 01              |
| 6.7   | <b>210</b>   | 0.06                            | 39                                | 0.9                    | <b>0.05</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 45                              | 1.44                     | 02              |
| 4.7   | <b>300</b>   | 0.06                            | 44                                | 0.8                    | <b>0.05</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 1.44                     | 03              |
| 3.1   | <b>450</b>   | 0.06*                           | 35                                | <0.8                   | <b>0.03</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 33                              | 1.44                     | 04              |
| 2.3   | <b>600</b>   | 0.06*                           | 35                                | <0.8                   | <b>0.03</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 1.44                     | 05              |
| 1.6   | <b>900</b>   | 0.06*                           | 35                                | <0.8                   | <b>0.02</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.44                     | 06              |
| 1.2   | <b>1200</b>  | 0.06*                           | 35                                | <0.8                   | <b>0.02</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 1.44                     | 07              |
| 0.8   | <b>1830</b>  | 0.06*                           | 35                                | <0.8                   | <b>0.01</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 24                              | 1.44                     | 08              |
| 0.6   | <b>2400</b>  | 0.06*                           | 35                                | <0.8                   | <b>0.01</b>                       | <b>35</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 22                              | 1.44                     | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **303** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **303** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **303** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **303** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **303** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 303 Oil** 0.03 Lt. 0.03 Lt.

**Quantity 0.03/0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 300       | 1800      |
| 15                            | 400       | 2000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

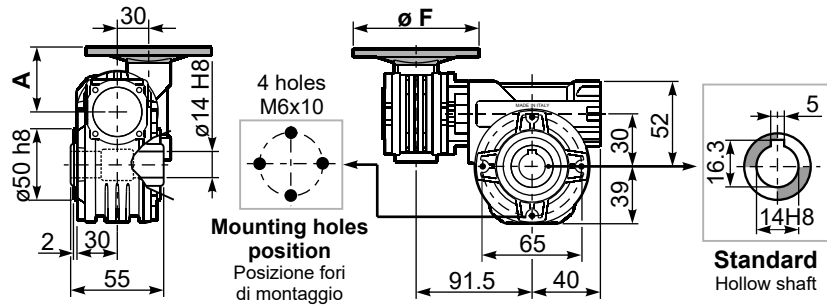
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P303FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **2.15 kg**

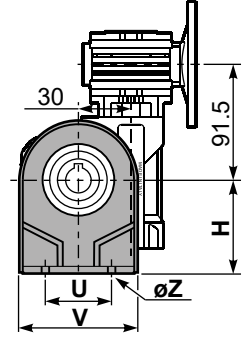
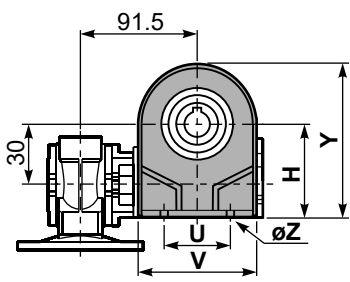
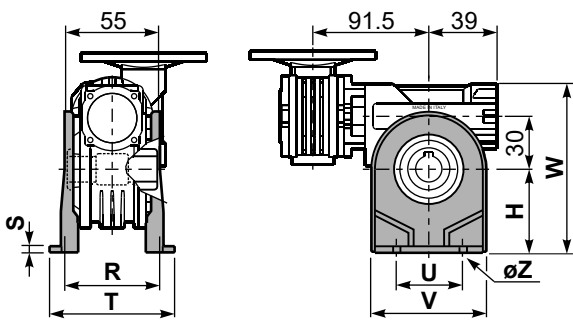
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



**P303PA...** Feet  
Piedini

**P303PB...** Feet  
Piedini

**P303PV...** Feet  
Piedini

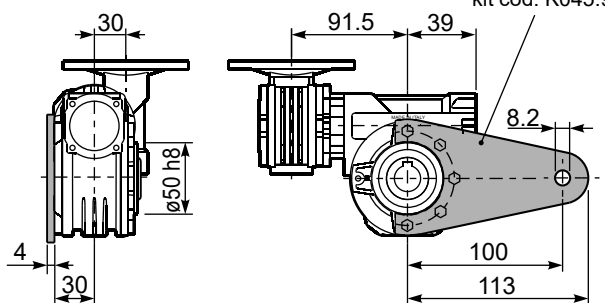
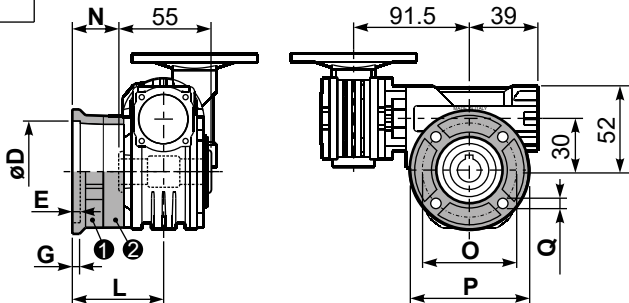


|               | H  | R  | S | T  | U  | V  | Y  | W   | øZ   | kit code    |
|---------------|----|----|---|----|----|----|----|-----|------|-------------|
| type <b>B</b> | 55 | 66 | 3 | 87 | 50 | 90 | 94 | 107 | ø6.5 | K030.9.022  |
| type <b>S</b> | 52 | 66 | 3 | 87 | 52 | 90 | 91 | 104 | ø6.5 | KS030.9.023 |

**P303FC...** Output flange  
Flangia uscita

**P303BR...** Reaction arm  
Braccio di reazione

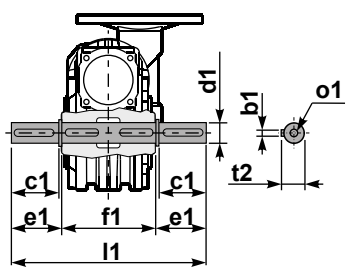
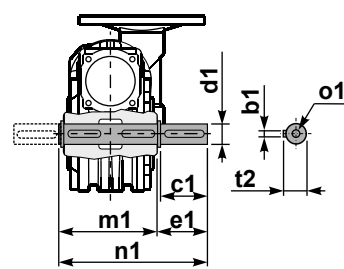
kit cod. K045.9.027



| type      | øD                                     | E   | G   | L    | N    | O  | P   | Q   | kit code             |
|-----------|--|-----|-----|------|------|----|-----|-----|----------------------|
| <b>FC</b> | 50 <sup>+0.15</sup> / <sub>+0.05</sub> | 6   | 6   | 50.5 | 23   | 68 | 80  | 7   | ① K030.9.010<br>② -  |
| <b>FL</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 6   | 6   | 55.5 | 28   | 87 | 110 | 8.5 | ① K045.9.010<br>② -  |
| type      | øD                                     | E   | G   | L    | N    | O  | P   | Q   | kit code             |
| <b>F1</b> | 40 <sup>+0.15</sup> / <sub>+0.10</sub> | 3.5 | 5.5 | 49   | 21.5 | 56 | 80  | 6.5 | ① KS030.9.012<br>② - |

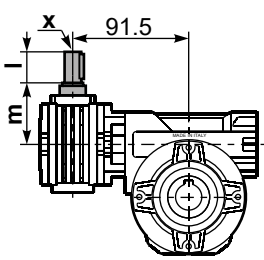
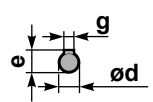
**P303....S...** Single Shaft  
Albero lento semplice

**P303....D...** Double Shaft  
Albero lento bisp.



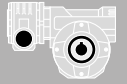
① kit cod. K030.5.028 type B      ② kit cod. K030.5.029 type B

**R303FB...** Input shaft  
Albero in entrata



|               | ød   | e    | g | l  | m  | x | kit code         |
|---------------|------|------|---|----|----|---|------------------|
| type <b>B</b> | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type <b>S</b> | -    | -    | - | -  | -  | - | -                |

|               | b1 | c1 | d1                                       | e1   | f1 | l1  | m1 | n1   | t2   | o1    |
|---------------|----|----|--|------|----|-----|----|------|------|-------|
| type <b>B</b> | 5  | 25 | 14 <sup>-0.005</sup> / <sub>-0.020</sub> | 35.5 | 55 | 126 | 59 | 94.5 | 15.8 | M5x14 |
| type <b>S</b> | -  | -  | -  | -    | -  | -   | -  | -    | -    | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 10.0  | <b>140</b>   | 0.12                            | 57                                | 1.2                    | <b>0.14</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 50                              | 2.2                      | 01              |
| 7.0   | <b>200</b>   | 0.12                            | 79                                | 0.9                    | <b>0.11</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 2.2                      | 02              |
| 5.0   | <b>280</b>   | 0.06                            | 52                                | 1.3                    | <b>0.08</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 45                              | 2.4                      | 03              |
| 3.3   | <b>420</b>   | 0.06                            | 62                                | 1.1                    | <b>0.07</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 1.6                      | 04              |
| 2.5   | <b>560</b>   | 0.06                            | 76                                | 0.9                    | <b>0.05</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 33                              | 2.5                      | 05              |
| 1.9   | <b>740</b>   | 0.06                            | 91                                | 0.8                    | <b>0.05</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 1.8                      | 06              |
| 1.5   | <b>920</b>   | 0.06*                           | 69                                | <0.8                   | <b>0.04</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.5                      | 07              |
| 1.3   | <b>1120</b>  | 0.06*                           | 69                                | <0.8                   | <b>0.03</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 2.5                      | 08              |
| 0.9   | <b>1480</b>  | 0.06*                           | 69                                | <0.8                   | <b>0.03</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 24                              | 1.8                      | 09              |
| 0.8   | <b>1840</b>  | 0.06*                           | 69                                | <0.8                   | <b>0.02</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 22                              | 1.5                      | 10              |
| 0.6   | <b>2400</b>  | 0.06*                           | 69                                | <0.8                   | <b>0.02</b>                       | <b>69</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 21                              | 1.2                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit 453 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 453 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe 453 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 453 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 453 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 453 Oil** 0.09 Lt. 0.03 Lt.

**Quantity 0.09/0.03 Lt.**

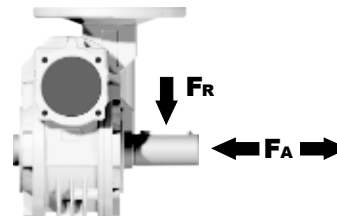
**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

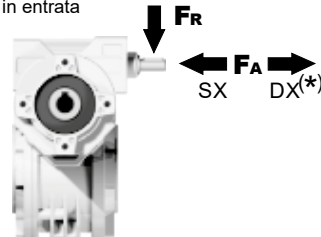
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>25</b>                     | 300          | 1800         |
| <b>15</b>                     | 400          | 2000         |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>1400</b>                   | 20           | 100          |

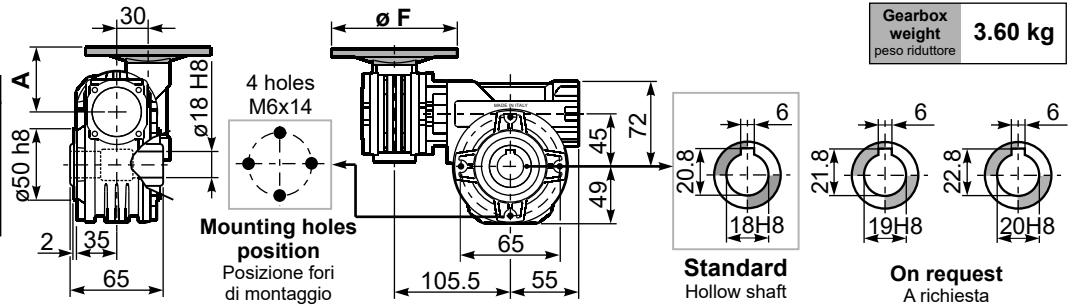
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

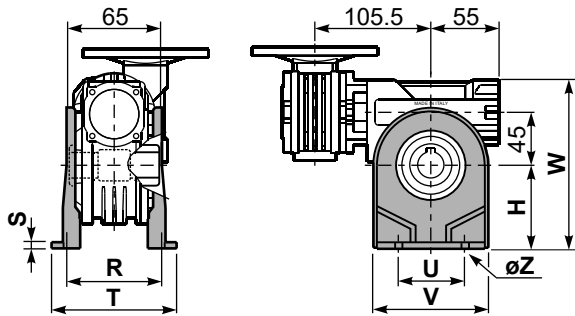
3D dimensions on the Web

**P453FB...** Basic wormbox  
Riduttore base

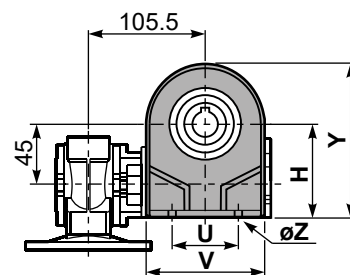
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



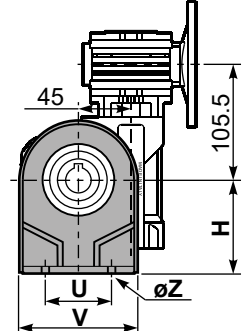
**P453PA...** Feet  
Piedini



**P453PB...** Feet  
Piedini

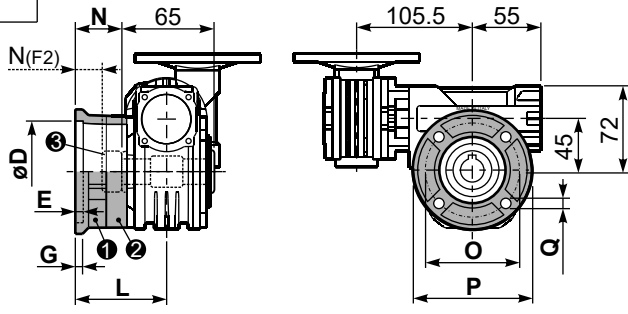


**P453PV...** Feet  
Piedini



|        | H  | R  | S | T   | U  | V  | Y   | W   | øZ    | kit code    |
|--------|----|----|---|-----|----|----|-----|-----|-------|-------------|
| type B | 72 | 81 | 3 | 100 | 52 | 98 | 121 | 144 | ø10.5 | K045.9.022  |
| type S | 71 | 84 | 8 | 100 | 70 | 90 | 120 | 143 | ø8    | KS045.9.023 |

**P453FC...** Output flange  
Flangia uscita

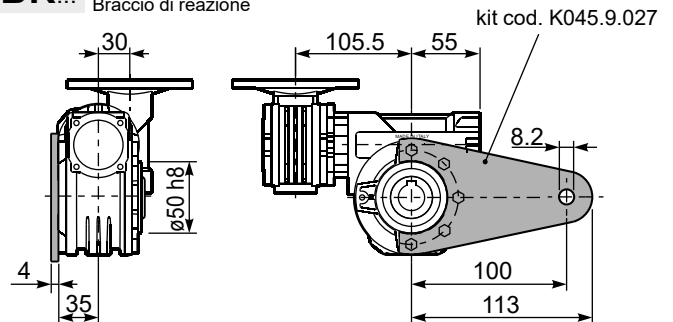


| type B    | øD                                     | E | G | L    | N  | O  | P   | Q   | kit code                     |
|-----------|--|---|---|------|----|----|-----|-----|------------------------------|
| <b>FC</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 60.5 | 28 | 87 | 110 | 8.5 | ① K045.9.010<br>② -          |
| <b>FL</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9 | 90.5 | 58 | 87 | 110 | 8.5 | ① K045.9.010<br>② K045.0.200 |

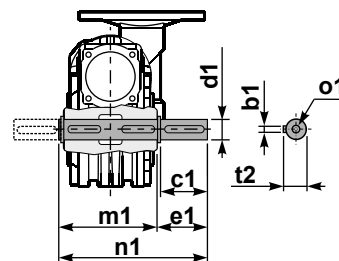
  

| type S    | øD                                     | E | G  | L    | N  | O   | P   | Q   | kit code                      |
|-----------|--|---|----|------|----|-----|-----|-----|-------------------------------|
| <b>F1</b> | 95 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 73.5 | 41 | 115 | 140 | 9   | ① KS045.9.013<br>② -          |
| <b>F2</b> | 60 <sup>+0.15</sup> / <sub>+0.05</sub> | 9 | 9  | 60.5 | 19 | 87  | 110 | 8.5 | ① KS045.9.010<br>② S045.0.204 |
| <b>F3</b> | 80 <sup>+0.030</sup> / <sub>0</sub>    | 3 | 8  | 51.5 | 19 | 100 | 120 | 9   | ① KS045.9.014<br>② -          |

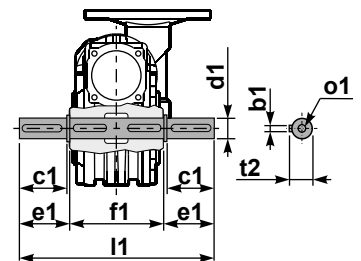
**P453BR...** Reaction arm  
Braccio di reazione



**P453.....S...** Single Shaft  
Albero lento semplice



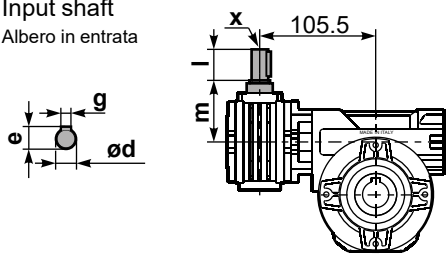
**P453.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S

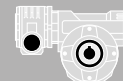
② kit cod. K045.5.029 type B

**R453FB...** Input shaft  
Albero in entrata



|        | ød   | e    | g | l  | m  | x | kit code                  |
|--------|------|------|---|----|----|---|---------------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | ① K030.5.006 PAM63<br>② - |
| type S | -    | -    | - | -  | -  | - | ① -<br>② -                |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> / <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> / <sub>-0.020</sub> | 58.5 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                      |             |
| 5.6   | <b>252</b>   | 0.12                            | 97                                | 1.1                    | <b>0.14</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 47                              | 2.1                  | 01          |
| 3.9   | <b>360</b>   | 0.12                            | 124                               | 0.9                    | <b>0.11</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 42                              | 2.1                  | 02          |
| 2.6   | <b>540</b>   | 0.09                            | 129                               | 0.8                    | <b>0.08</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 39                              | 2.1                  | 03          |
| 1.9   | <b>720</b>   | 0.06                            | 106                               | 1.0                    | <b>0.06</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 2.1                  | 04          |
| 1.6   | <b>860</b>   | 0.06                            | 113                               | 1.0                    | <b>0.06</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 32                              | 1.8                  | 05          |
| 1.2   | <b>1200</b>  | 0.06                            | 133                               | 0.8                    | <b>0.05</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.3                  | 06          |
| 1.0   | <b>1440</b>  | 0.06*                           | 109                               | <0.8                   | <b>0.04</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 2.1                  | 07          |
| 0.8   | <b>1720</b>  | 0.06*                           | 109                               | <0.8                   | <b>0.04</b>                       | <b>109</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 25                              | 1.8                  | 08          |
| 0.6   | <b>2400</b>  | 0.06*                           | 109                               | <0.8                   | <b>0.03</b>                       | <b>104</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 21                              | 1.3                  | 09          |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit 503 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 503 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe 503 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 503 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 503 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 503 Oil** 0.14 Lt. 0.03 Lt.

**Quantity 0.14/0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 480       | 2500      |
| 15                            | 560       | 2800      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

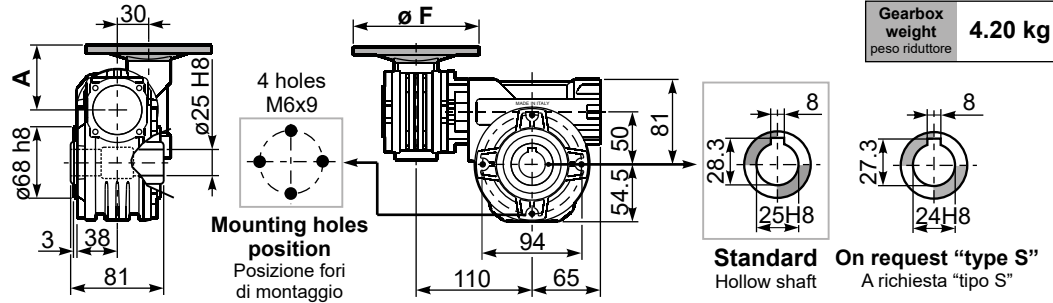
tab. 2



**P503FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **4.20 kg**

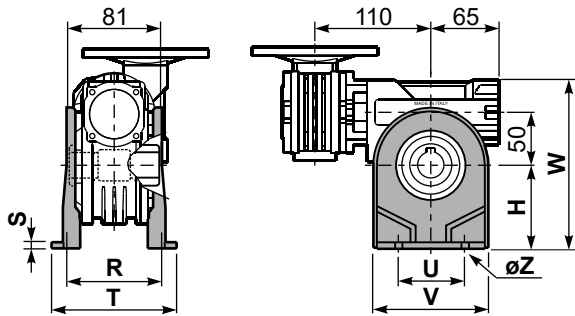
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



**P503PA...** Feet  
Piedini

**P503PB...** Feet  
Piedini

**P503PV...** Feet  
Piedini

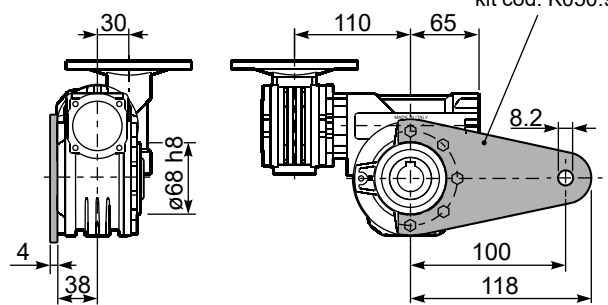
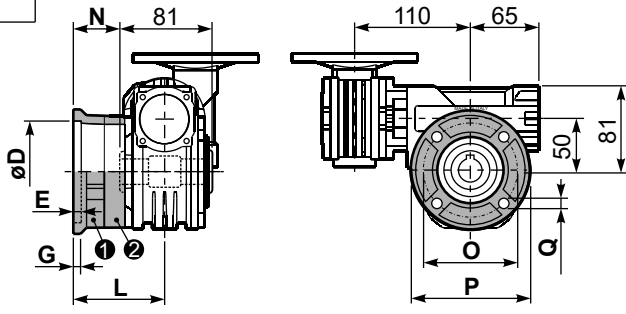


|        | H  | R    | S   | T   | U  | V   | Y     | W   | øZ    | kit code    |
|--------|----|------|-----|-----|----|-----|-------|-----|-------|-------------|
| type B | 82 | 98.5 | 3.5 | 123 | 63 | 113 | 138.5 | 163 | ø10.5 | K050.9.022  |
| type S | 85 | 96   | 10  | 114 | 85 | 110 | 139.5 | 166 | ø10   | KS050.9.023 |

**P503FC...** Output flange  
Flangia uscita

**P503BR...** Reaction arm  
Braccio di reazione

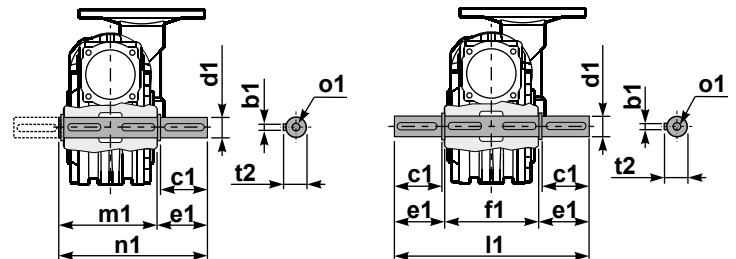
kit cod. K050.9.027



| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|------|------------------------------|
| <b>FC</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 85    | 44.5 | 90  | 123 | 10.5 | Ⓚ K050.9.010<br>Ⓛ -          |
| <b>FL</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 114.5 | 74   | 90  | 123 | 10.5 | Ⓚ K050.9.010<br>Ⓛ K050.0.200 |
| type S    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
| <b>F1</b> | 110 <sup>+0.20</sup> / <sub>+0.15</sub> | 4 | 11 | 83.5  | 43   | 130 | 160 | 10   | Ⓚ KS050.9.012<br>Ⓛ -         |
| <b>F2</b> | 70 <sup>+0.20</sup> / <sub>+0.15</sub>  | 9 | 12 | 76.5  | 36   | 90  | 123 | 10.5 | Ⓚ KS050.9.014<br>Ⓛ -         |
| <b>F3</b> | 95 <sup>+0.035</sup> / <sub>0</sub>     | 4 | 10 | 66.5  | 26   | 115 | 140 | 10   | Ⓚ KS050.9.013<br>Ⓛ -         |

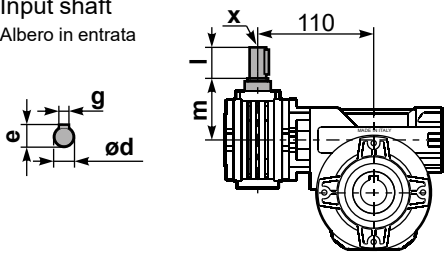
**P503....S...** Single Shaft  
Albero lento semplice

**P503....D...** Double Shaft  
Albero lento bisp.



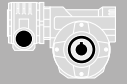
Ⓚ kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S  
Ⓛ kit cod. K050.5.029 type B

**R503FB...** Input shaft  
Albero in entrata



|        | ød   | e    | g | l  | m  | x | kit code                  |
|--------|------|------|---|----|----|---|---------------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | Ⓚ K030.5.006 PAM63<br>Ⓛ - |
| type S | -    | -    | - | -  | -  | - | -                         |

|        | b1 | c1 | d1                                       | e1   | f1 | l1  | m1   | n1  | t2 | o1    |
|--------|----|----|--|------|----|-----|------|-----|----|-------|
| type B | 8  | 52 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| type S | 8  | 50 | 24 <sup>-0.005</sup> / <sub>-0.020</sub> | 68.5 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.18                            | 142                               | 1.6                    | <b>0.29</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 181                               | 1.3                    | <b>0.23</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 41                              | 2.7                      | 02              |
| 2.6   | <b>540</b>   | 0.12                            | 164                               | 1.4                    | <b>0.17</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 37                              | 2.7                      | 03              |
| 1.9   | <b>720</b>   | 0.12                            | 200                               | 1.1                    | <b>0.14</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 34                              | 2.7                      | 04              |
| 1.3   | <b>1080</b>  | 0.12                            | 265                               | 0.9                    | <b>0.10</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 2.7                      | 05              |
| 1.0   | <b>1440</b>  | 0.12*                           | 230                               | <0.8                   | <b>0.09</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 2.7                      | 06              |
| 0.5   | <b>2745</b>  | 0.12*                           | 230                               | <0.8                   | <b>0.05</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 23                              | 2.1                      | 07              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **633** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **633** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **633** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **633** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **633** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 633 Oil 0.40 Lt. Quantity 0.40/0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 20        | 100       |

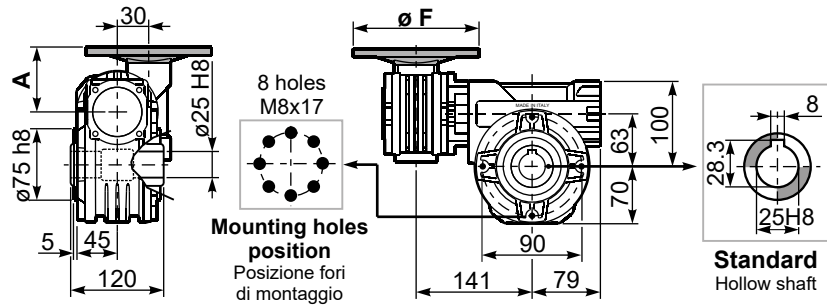
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P633FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **7.50 kg**

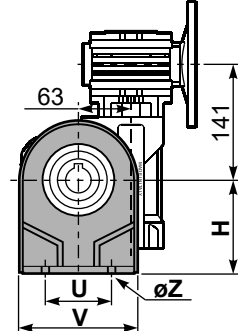
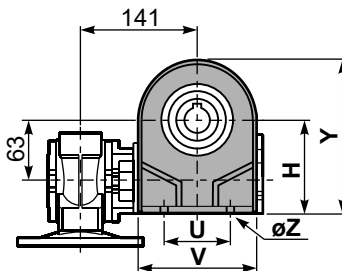
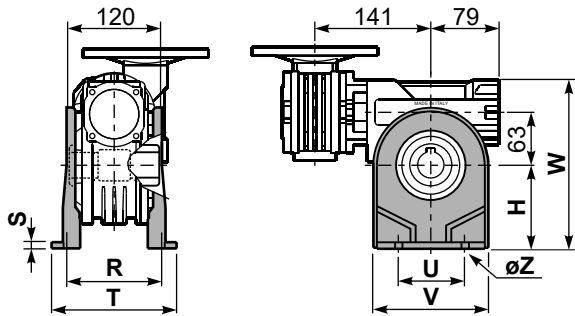
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



**P633PA...** Feet  
Piedini

**P633PB...** Feet  
Piedini

**P633PV...** Feet  
Piedini

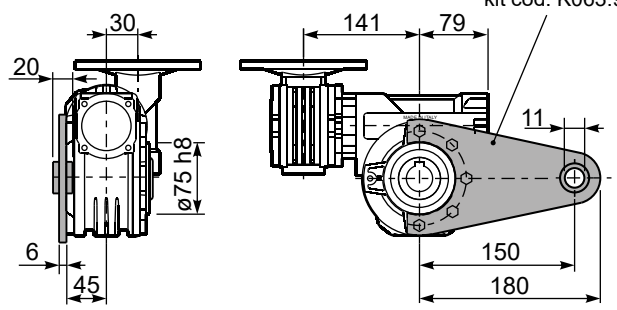
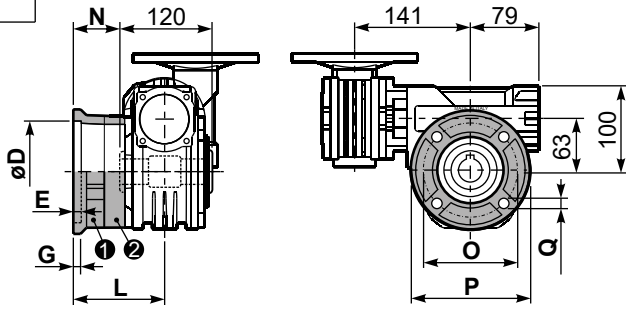


|        | H   | R   | S | T   | U  | V   | Y   | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|----|-----|-----|-----|-------|------------|
| type B | 100 | 111 | 4 | 144 | 95 | 133 | 170 | 200 | ø10.5 | K063.9.022 |
| type S | -   | -   | - | -   | -  | -   | -   | -   | -     | -          |

**P633FC...** Output flange  
Flangia uscita

**P633BR...** Reaction arm  
Braccio di reazione

kit cod. K063.9.027



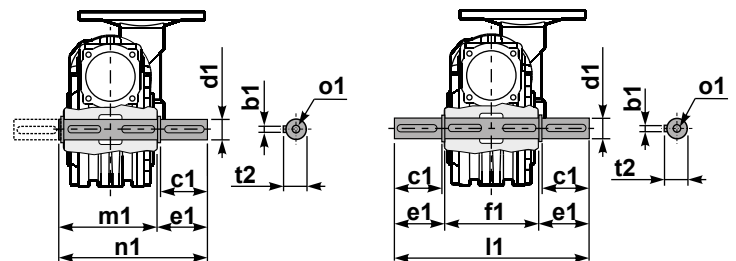
| type B    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-----|----|-----|-----|----|------------------------------|
| <b>FC</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 86  | 26 | 150 | 175 | 11 | ① K063.9.010<br>② -          |
| <b>FL</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① K063.9.010<br>② K063.0.200 |

| type S    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|-----------|---|---|----|-----|----|-----|-----|----|----------------------|
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 102 | 42 | 165 | 200 | 13 | ① KS070.9.013<br>② - |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① KS063.9.013<br>② - |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 82  | 22 | 130 | 160 | 10 | ① KS063.9.011<br>② - |

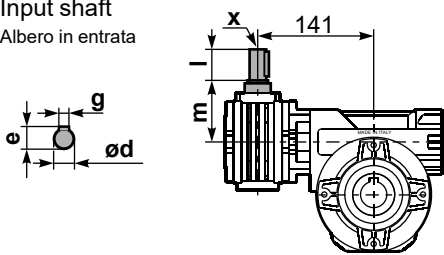
**P633.....S...** Single Shaft  
Albero lento semplice

**P633.....D...** Double Shaft  
Albero lento bisp.



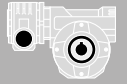
① kit cod. K063.5.028 type B    ② kit cod. K063.5.029 type B

**R633FB...** Input shaft  
Albero in entrata



|        | ød   | e    | g | l  | m  | x | kit code                  |
|--------|------|------|---|----|----|---|---------------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | ① K030.5.006 PAM63<br>② - |
| type S | -    | -    | - | -  | -  | - | -                         |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.25                            | 198                               | 1.3                    | <b>0.33</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 186                               | 1.4                    | <b>0.26</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 42                              | 2.7                      | 02              |
| 2.8   | <b>504</b>   | 0.18                            | 241                               | 1.1                    | <b>0.20</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 39                              | 2.7                      | 03              |
| 1.9   | <b>756</b>   | 0.12                            | 204                               | 1.3                    | <b>0.16</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 2.7                      | 04              |
| 1.4   | <b>1008</b>  | 0.12                            | 256                               | 1.0                    | <b>0.12</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 31                              | 2.7                      | 05              |
| 1.1   | <b>1332</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.10</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 2.7                      | 06              |
| 0.8   | <b>1656</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.08</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 2.7                      | 07              |
| 0.6   | <b>2160</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.07</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                              | 2.7                      | 08              |
| 0.6   | <b>2520</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.06</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 2.7                      | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **634** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **634** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **634** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **634** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **634** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 634 Oil**  $0.40$  Lt.   
**Quantity 0.40/0.09 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 42        | 210       |

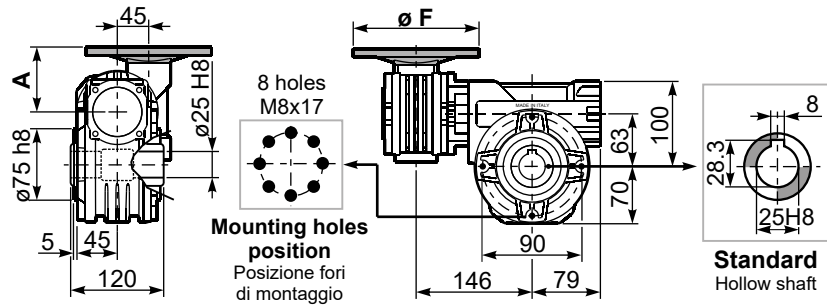
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**P634FB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **8.90 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



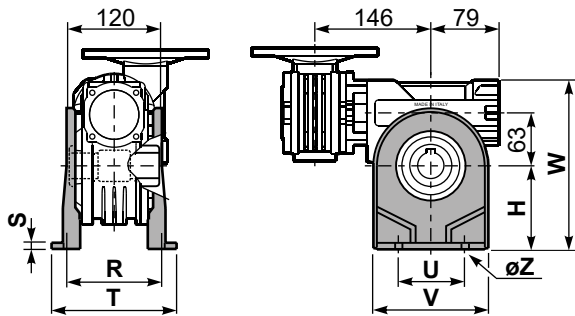
8 holes  
M8x17  
Mounting holes  
position  
Posizione fori  
di montaggio

Standard  
Hollow shaft

**P634PA...** Feet  
Piedini

**P634PB...** Feet  
Piedini

**P634PV...** Feet  
Piedini

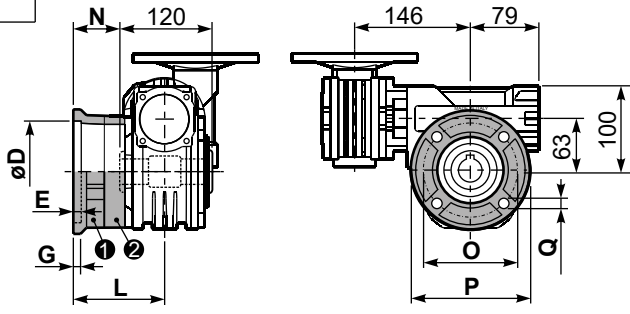


|        | H   | R   | S | T   | U  | V   | Y   | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|----|-----|-----|-----|-------|------------|
| type B | 100 | 111 | 4 | 144 | 95 | 133 | 170 | 200 | ø10.5 | K063.9.022 |
| type S | -   | -   | - | -   | -  | -   | -   | -   | -     | -          |

**P634FC...** Output flange  
Flangia uscita

**P634BR...** Reaction arm  
Braccio di reazione

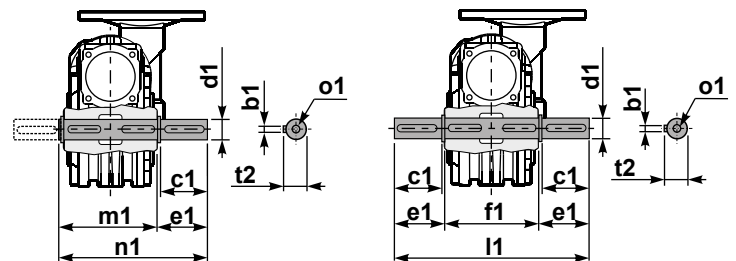
kit cod. K063.9.027



| type B    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-----|----|-----|-----|----|------------------------------|
| <b>FC</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 86  | 26 | 150 | 175 | 11 | ① K063.9.010<br>② -          |
| <b>FL</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① K063.9.010<br>② K063.0.200 |
| type S    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 102 | 42 | 165 | 200 | 13 | ① KS070.9.013<br>② -         |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 116 | 56 | 150 | 175 | 11 | ① KS063.9.013<br>② -         |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 82  | 22 | 130 | 160 | 10 | ① KS063.9.011<br>② -         |

**P634.....S...** Single Shaft  
Albero lento semplice

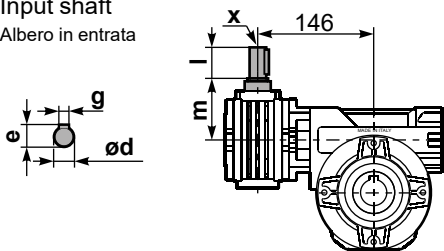
**P634.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K063.5.028 type B

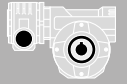
② kit cod. K063.5.029 type B

**R634FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x | kit code             |
|--------|-------|------|---|----|----|---|----------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① ② K045.5.006 PAM71 |
| type S | -     | -    | - | -  | -  | - | ① ② -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.18                            | 142                               | 2.0                    | <b>0.37</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 181                               | 1.6                    | <b>0.29</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 41                              | 2.7                      | 02              |
| 2.6   | <b>540</b>   | 0.18                            | 245                               | 1.2                    | <b>0.21</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 37                              | 2.7                      | 03              |
| 1.9   | <b>720</b>   | 0.12                            | 200                               | 1.4                    | <b>0.17</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 34                              | 2.7                      | 04              |
| 1.3   | <b>1080</b>  | 0.12                            | 265                               | 1.1                    | <b>0.13</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 2.7                      | 05              |
| 1.0   | <b>1440</b>  | 0.12                            | 318                               | 0.9                    | <b>0.11</b>                       | <b>290</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 2.7                      | 06              |
| 0.5   | <b>2745</b>  | 0.12*                           | 242                               | <0.8                   | <b>0.06</b>                       | <b>242</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 23                              | 2.1                      | 07              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **6A3** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **6A3** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **6A3** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **6A3** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **6A3** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 6A3 Oil** 0.40 Lt. 0.03 Lt.

**Quantity 0.40/0.03 Lt.**

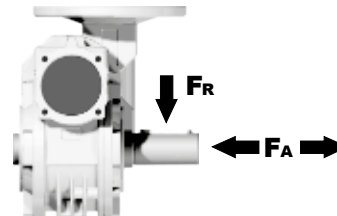
**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

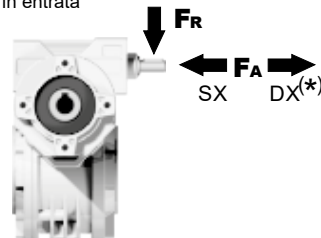
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 20        | 100       |

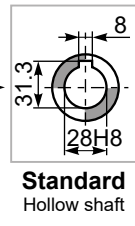
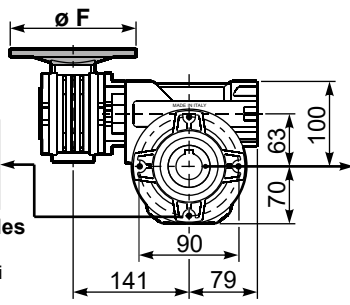
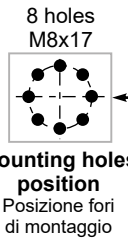
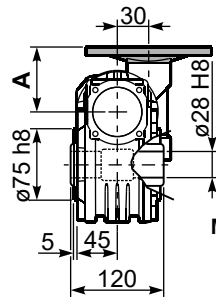
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

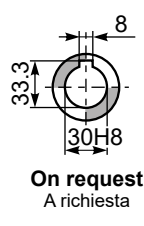


**P6A3FB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



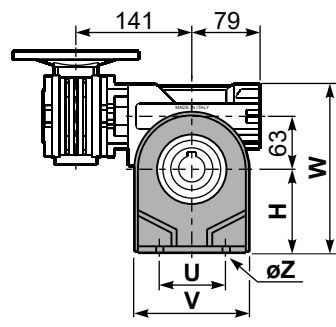
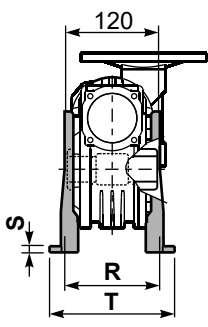
Gearbox weight **8.90 kg**  
peso riduttore



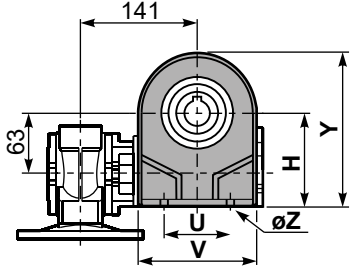
**Standard**  
Hollow shaft

**On request**  
A richiesta

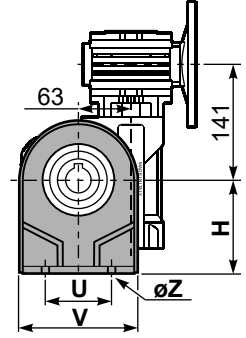
**P6A3PA...** Feet  
Piedini



**P6A3PB...** Feet  
Piedini

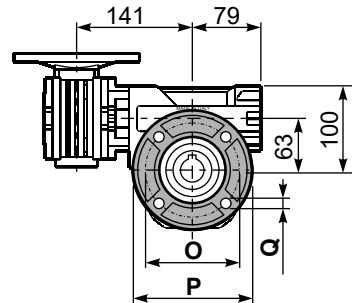
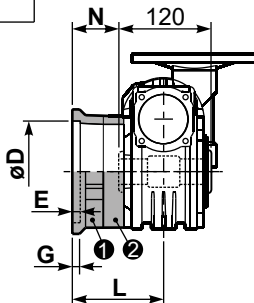


**P6A3PV...** Feet  
Piedini



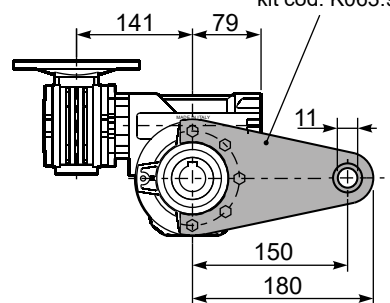
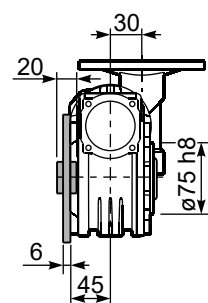
|        | H   | R   | S  | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|----|-----|-----|-----|-----|-----|-----|------------|
| type B | 115 | 115 | 12 | 142 | 120 | 156 | 185 | 215 | ø11 | K070.9.022 |
| type S | -   | -   | -  | -   | -   | -   | -   | -   | -   | -          |

**P6A3FC...** Output flange  
Flangia uscita

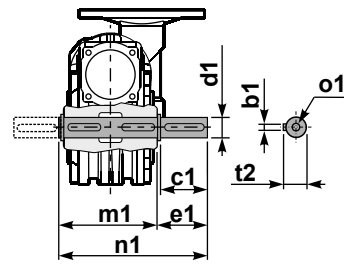


| type B    | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|------|------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 85   | 25   | 165 | 200 | 13 | 1 K070.9.010<br>2 -          |
| <b>FL</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | 1 K070.9.010<br>2 K070.0.200 |
| type S    | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | 1 KS070.9.014<br>2 -         |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 116  | 56   | 150 | 175 | 11 | 1 KS063.9.013<br>2 -         |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 13.5 | 84.5 | 24.5 | 130 | 160 | 11 | 1 KS070.9.011<br>2 -         |

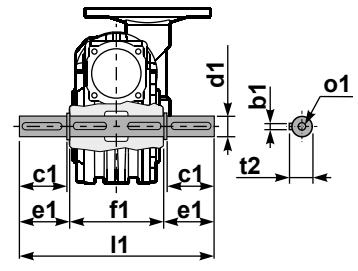
**P6A3BR...** Reaction arm  
Braccio di reazione



**P6A3....S...** Single Shaft  
Albero lento semplice

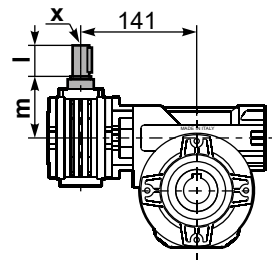
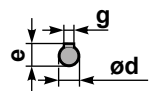


**P6A3....D...** Double Shaft  
Albero lento bisp.



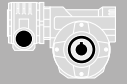
1 kit cod. K070.5.028 type B    2 kit cod. K070.5.029 type B

**R6A3FB...** Input shaft  
Albero in entrata



|        | ød   | e    | g | l  | m  | x | kit code                  |
|--------|------|------|---|----|----|---|---------------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | 1 K030.5.006 PAM63<br>2 - |
| type S | -    | -    | - | -  | -  | - | 1 -<br>2 -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-----|-------|-----|----|-------|
| type B | 8  | 60 | 28 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.5 | 120 | 247 | 127.5 | 191 | 31 | M8x20 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.25                            | 198                               | 1.5                    | <b>0.38</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.25                            | 258                               | 1.2                    | <b>0.29</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 42                              | 2.7                      | 02              |
| 2.8   | <b>504</b>   | 0.18                            | 241                               | 1.3                    | <b>0.23</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 39                              | 2.7                      | 03              |
| 1.9   | <b>756</b>   | 0.12                            | 204                               | 1.5                    | <b>0.18</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 2.7                      | 04              |
| 1.4   | <b>1008</b>  | 0.12                            | 256                               | 1.2                    | <b>0.14</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 31                              | 2.7                      | 05              |
| 1.1   | <b>1332</b>  | 0.12                            | 327                               | 0.9                    | <b>0.11</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 2.7                      | 06              |
| 0.8   | <b>1656</b>  | 0.12*                           | 304                               | <0.8                   | <b>0.10</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 2.7                      | 07              |
| 0.6   | <b>2160</b>  | 0.12*                           | 304                               | <0.8                   | <b>0.08</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                              | 2.7                      | 08              |
| 0.6   | <b>2520</b>  | 0.12*                           | 304                               | <0.8                   | <b>0.07</b>                       | <b>304</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 2.7                      | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **6A4** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **6A4** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **6A4** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **6A4** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **6A4** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**■ LUBRICATION 6A4 Oil** 0.40 Lt. 0.09 Lt.

**Quantity 0.40/0.09 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### ■ RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 700       | 3800      |
| 15                            | 800       | 4000      |

**Input shaft**  
albero in entrata

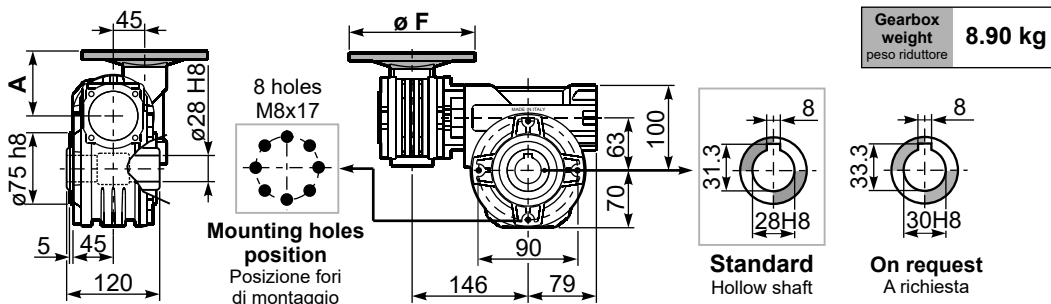
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 42        | 210       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

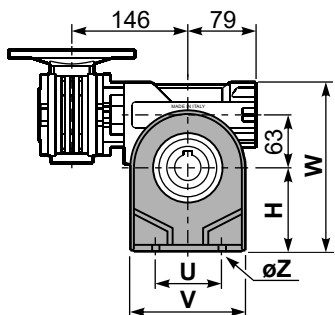
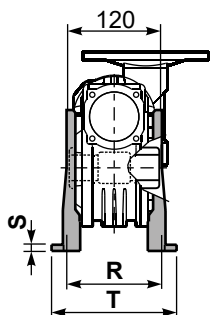
tab. 2

**P6A4FB...** Basic wormbox  
Riduttore base

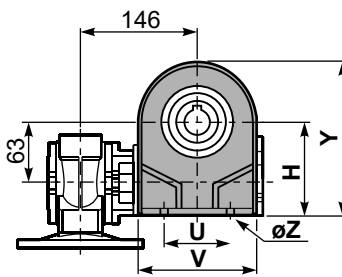
| M. flanges | Kit code   | øF  | A    |
|------------|------------|-----|------|
| 63B5       | K050.4.041 | 138 | 74   |
| 71B5       | K050.4.042 | 160 | 71.5 |
| 56B14      | KC40.4.049 | 80  | 71.5 |
| 63B14      | K050.4.047 | 90  | 74   |
| 71B14      | K050.4.045 | 105 | 71.5 |



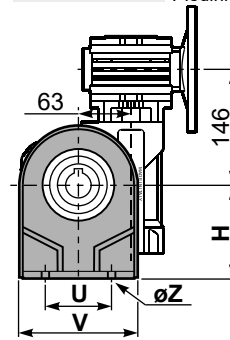
**P6A4PA...** Feet  
Piedini



**P6A4PB...** Feet  
Piedini

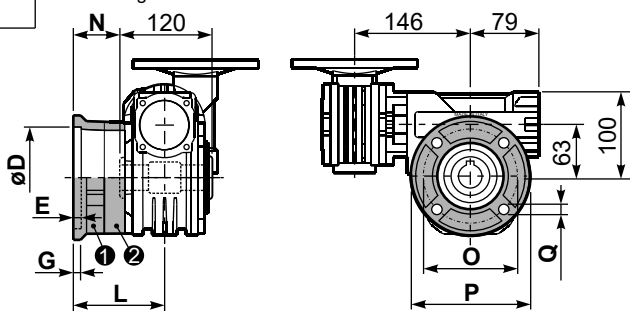


**P6A4PV...** Feet  
Piedini



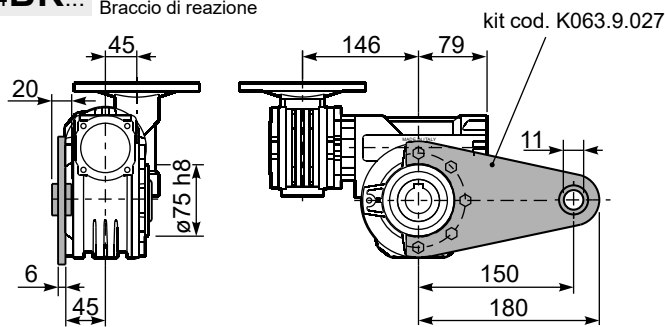
|        | H   | R   | S  | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|----|-----|-----|-----|-----|-----|-----|------------|
| type B | 115 | 115 | 12 | 142 | 120 | 156 | 185 | 215 | ø11 | K070.9.022 |
| type S | -   | -   | -  | -   | -   | -   | -   | -   | -   | -          |

**P6A4FC...** Output flange  
Flangia uscita

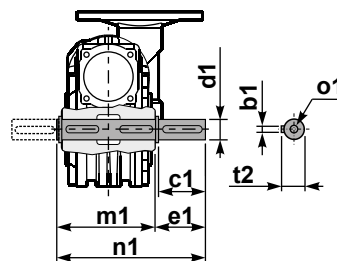


| type B | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
|--------|---|---|------|------|------|-----|-----|----|------------------------------|
| FC     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 85   | 25   | 165 | 200 | 13 | 1 K070.9.010<br>2 -          |
| FL     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | 1 K070.9.010<br>2 K070.0.200 |
| type S | øD                                      | E | G    | L    | N    | O   | P   | Q  | kit code                     |
| F1     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 111  | 51   | 165 | 200 | 13 | 1 KS070.9.014<br>2 -         |
| F2     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13   | 116  | 56   | 150 | 175 | 11 | 1 KS063.9.013<br>2 -         |
| F3     | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 13.5 | 84.5 | 24.5 | 130 | 160 | 11 | 1 KS070.9.011<br>2 -         |

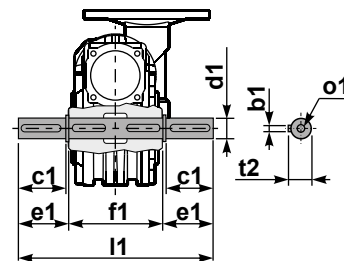
**P6A4BR...** Reaction arm  
Braccio di reazione



**P6A4.....S...** Single Shaft  
Albero lento semplice

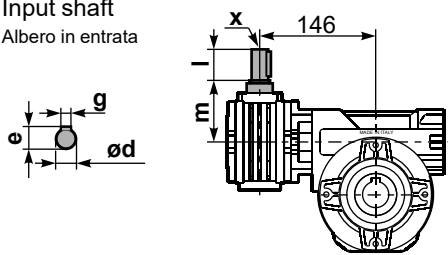


**P6A4.....D...** Double Shaft  
Albero lento bisp.



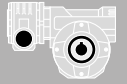
1 kit cod. K070.5.028 type B    2 kit cod. K070.5.029 type B

**R6A4FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x | kit code             |
|--------|-------|------|---|----|----|---|----------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | 1 2 K045.5.006 PAM71 |
| type S | -     | -    | - | -  | -  | - | 1 2 -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-----|-------|-----|----|-------|
| type B | 8  | 60 | 28 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.5 | 120 | 247 | 127.5 | 191 | 31 | M8x20 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|----------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                      |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                                 |                      |                 |
| 10  | <b>140</b>   | 0.37                            | 205                               | 1.8                    | <b>0.66</b>                       | <b>368</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 58                              | 4.5                  | 01              |
| 7.1   | <b>196</b>   | 0.37                            | 257                               | 1.4                    | <b>0.53</b>                       | <b>368</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 52                              | 4.7                  | 02              |
| 5.0   | <b>280</b>   | 0.37                            | 332                               | 1.6                    | <b>0.58</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 47                              | 4.7                  | 03              |
| 3.6   | <b>392</b>   | 0.37                            | 435                               | 1.2                    | <b>0.44</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 44                              | 4.7                  | 04              |
| 2.4   | <b>588</b>   | 0.25                            | 371                               | 1.4                    | <b>0.35</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                              | 4.7                  | 05              |
| 1.8   | <b>784</b>   | 0.25                            | 455                               | 1.1                    | <b>0.28</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 34                              | 4.7                  | 06              |
| 1.4   | <b>1036</b>  | 0.18                            | 420                               | 1.2                    | <b>0.22</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 4.7                  | 07              |
| 1.1   | <b>1288</b>  | 0.18                            | 474                               | 1.1                    | <b>0.20</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 4.7                  | 08              |
| 0.7   | <b>1960</b>  | 0.12                            | 449                               | 1.2                    | <b>0.14</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 4.7                  | 09              |
| 0.5   | <b>2856</b>  | 0.12                            | 584                               | 0.9                    | <b>0.11</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 4.7                  | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **854** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **854** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **854** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **854** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **854** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 854 Oil** 1.2 Lt.  0.09 Lt.

**Quantity 1.2/0.09 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 1000      | 5000      |
| 15                            | 1160      | 5800      |

**Input shaft**  
albero in entrata

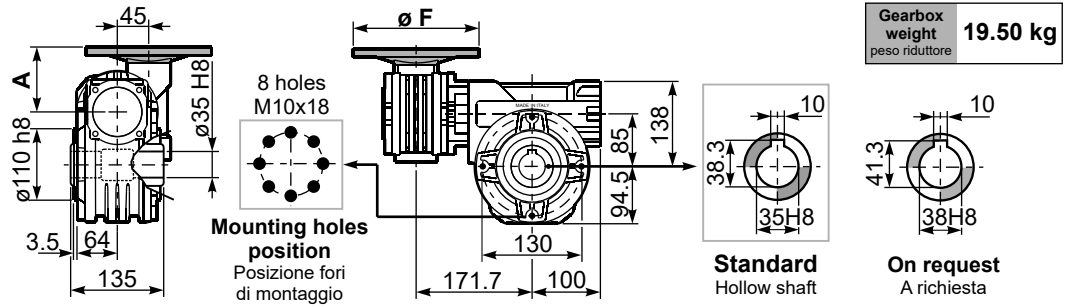
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 42        | 210       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

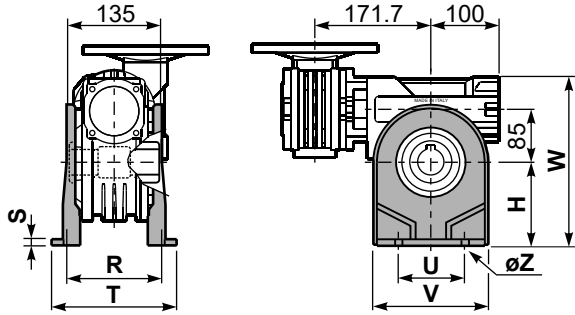
tab. 2

**P854FB...** Basic wormbox  
Riduttore base

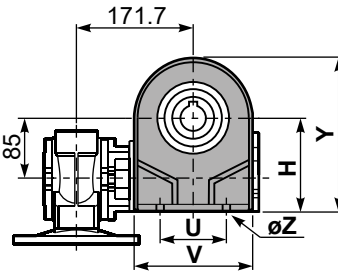
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



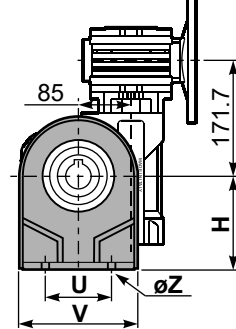
**P854PA...** Feet  
Piedini



**P854PB...** Feet  
Piedini

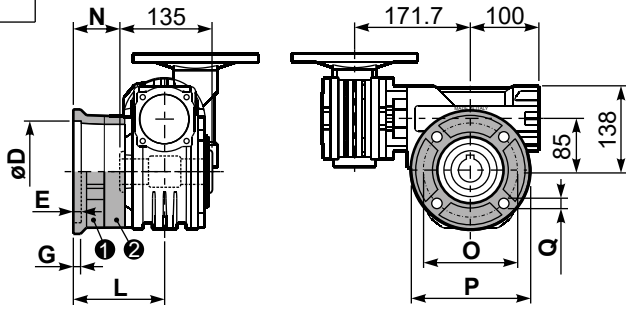


**P854PV...** Feet  
Piedini



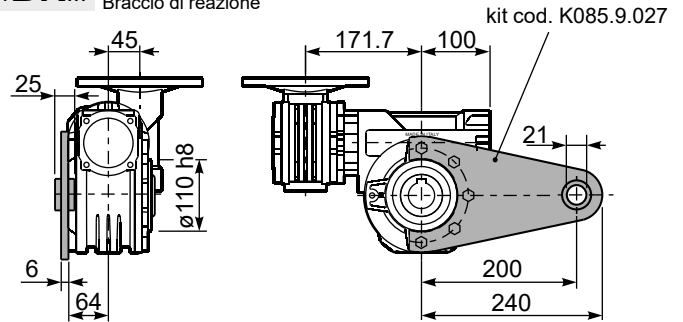
|        | H   | R   | S | T   | U   | V   | Y     | W   | øZ    | kit code   |
|--------|-----|-----|---|-----|-----|-----|-------|-----|-------|------------|
| type B | 142 | 145 | 5 | 182 | 140 | 180 | 236.5 | 280 | ø10.5 | K085.9.022 |
| type S | -   | -   | - | -   | -   | -   | -     | -   | -     | -          |

**P854FC...** Output flange  
Flangia uscita

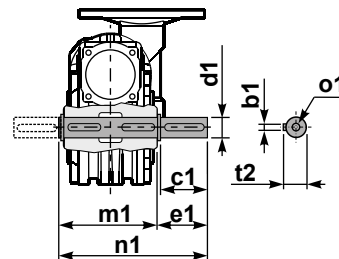


| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|------|------------------------------|
| <b>FC</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13   | ① K085.9.010<br>② -          |
| <b>FL</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13   | ① K085.9.010<br>② K085.0.201 |
| type S    | øD                                      | E | G  | L     | N    | O   | P   | Q    | kit code                     |
| <b>F1</b> | 130 <sup>+0.040</sup> / <sub>0</sub>    | 5 | 13 | 117.5 | 50   | 165 | 200 | 11.5 | ① KS085.9.012<br>② -         |
| <b>F2</b> | 152 <sup>+0.06</sup> / <sub>0</sub>     | 5 | 15 | 147.5 | 80   | 180 | 205 | 12.5 | ① KS085.9.013<br>② -         |
| <b>F4</b> | 130 <sup>+0.040</sup> / <sub>0</sub>    | 5 | 13 | 106.5 | 39   | 165 | 200 | 13   | ① KS085.9.015<br>② -         |

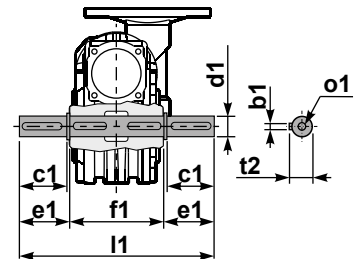
**P854BR...** Reaction arm  
Braccio di reazione



**P854.....S...** Single Shaft  
Albero lento semplice



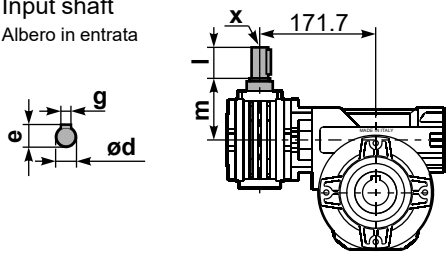
**P854.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B

② kit cod. K085.5.029 type B

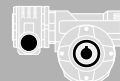
**R854FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x | kit code                  |
|--------|-------|------|---|----|----|---|---------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① K045.5.006 PAM71<br>② - |
| type S | -     | -    | - | -  | -  | - | -                         |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |    | Available B14 motor flanges |            |          |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----|-----------------------------|------------|----------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D | -O                          | -P         | -Q       | -R |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80 | 56                          | 63         | 71       | 80 |                                 |                          |                 |
| 6.7   | <b>210</b>   | 0.75                            | 591                               | 1.5                    | <b>1.1</b>                        | <b>863</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 55                              | 5.6                      | 01              |
| 4.7   | <b>300</b>   | 0.75                            | 752                               | 1.3                    | <b>0.97</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 49                              | 5.6                      | 02              |
| 3.3   | <b>420</b>   | 0.55                            | 741                               | 1.3                    | <b>0.73</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 47                              | 5.6                      | 03              |
| 2.6   | <b>540</b>   | 0.55                            | 851                               | 1.1                    | <b>0.63</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 42                              | 5.6                      | 04              |
| 1.8   | <b>780</b>   | 0.37                            | 748                               | 1.3                    | <b>0.48</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 38                              | 5.6                      | 05              |
| 1.3   | <b>1080</b>  | 0.37                            | 1009                              | 1.0                    | <b>0.36</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 37                              | 5.6                      | 06              |
| 1.1   | <b>1290</b>  | 0.25                            | 770                               | 1.3                    | <b>0.32</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 35                              | 5.6                      | 07              |
| 0.8   | <b>1800</b>  | 0.25                            | 921                               | 1.1                    | <b>0.27</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 30                              | 5.6                      | 08              |
| 0.7   | <b>2040</b>  | 0.18                            | 751                               | 1.3                    | <b>0.23</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 30                              | 5.6                      | 09              |
| 0.6   | <b>2400</b>  | 0.18                            | 825                               | 1.2                    | <b>0.21</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 28                              | 5.6                      | 10              |
| 0.5   | <b>3000</b>  | 0.18                            | 958                               | 1.0                    | <b>0.18</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | <b>B-C</b>                  | <b>B-C</b> |          |    | 26                              | 5.6                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione



**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit 115 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a type that are closed. Gearbox 050 is supplied lubricated for life. See tab.1 for oils and recommended quantity. In tab.2 there are radial loads and axial loads applicable to the gearbox.

**I** Il riduttore tipo 115 è fornito di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Il riduttore 050 è fornito lubrificato a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße 115 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Das Getriebe der Baugröße 050 ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 115 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le réducteur de type 050 est fourni lubrifié à vie avec de l'huile synthétique. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño 115 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. El reductor 050 se suministra lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

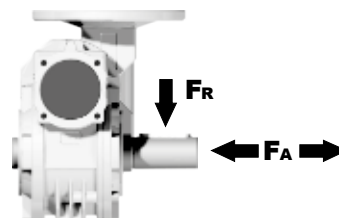
|                              |              |              |                        |             |             |
|------------------------------|--------------|--------------|------------------------|-------------|-------------|
|                              |              |              |                        |             |             |
| <b>B3</b>                    | <b>B6</b>    | <b>B7</b>    | <b>B8</b>              | <b>V5</b>   | <b>V6</b>   |
| 1.9/0.14 LT                  | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT            | 2.0/0.14 LT | 2.0/0.14 LT |
| <b>SHELL Omala S2 GX 460</b> |              |              | <b>ENI Blasias 460</b> |             |             |

For all details on lubrication and plugs check our website [www.enigearboxes.com](#) **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

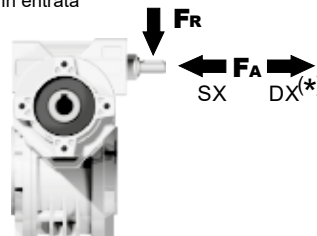
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>25</b>                     | 1200         | 6000         |
| <b>15</b>                     | 1400         | 7000         |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>1400</b>                   | 76           | 380          |

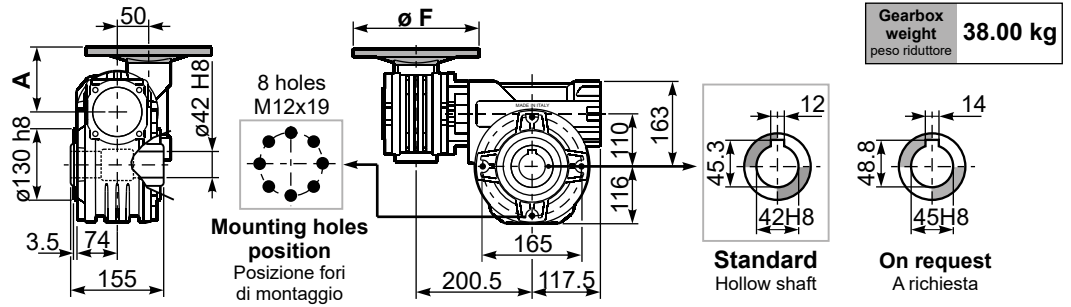
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

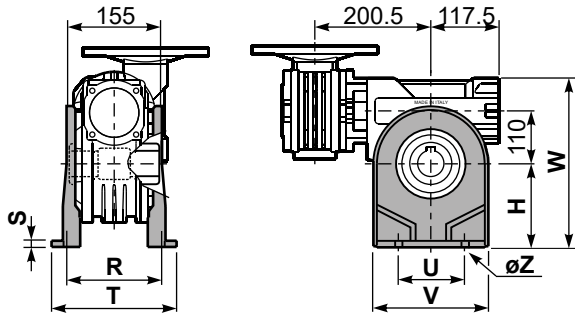


**P115FB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 78.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 76   |
| <b>80B5</b>  | K050.4.043 | 200 | 76.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 76   |
| <b>63B14</b> | K050.4.047 | 90  | 78.5 |
| <b>71B14</b> | K050.4.045 | 105 | 76   |
| <b>80B14</b> | K050.4.046 | 120 | 76.5 |

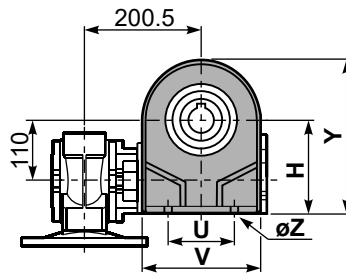


**P115PA...** Feet  
Piedini

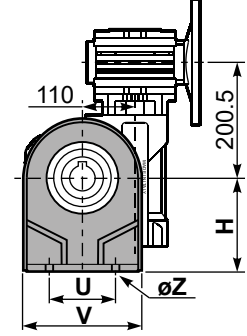


|        | H   | R   | S | T   | U   | V   | Y   | W   | øZ  | kit code   |
|--------|-----|-----|---|-----|-----|-----|-----|-----|-----|------------|
| type B | 170 | 180 | 8 | 224 | 200 | 240 | 286 | 333 | ø13 | K110.9.022 |
| type S | -   | -   | - | -   | -   | -   | -   | -   | -   | -          |

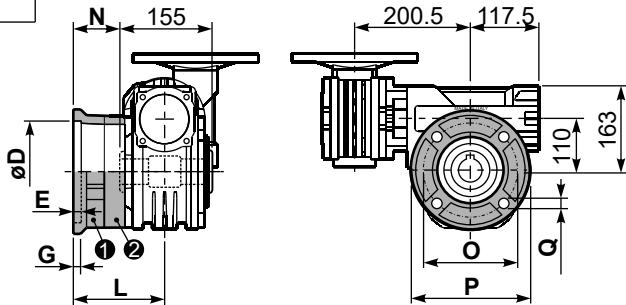
**P115PB...** Feet  
Piedini



**P115PV...** Feet  
Piedini

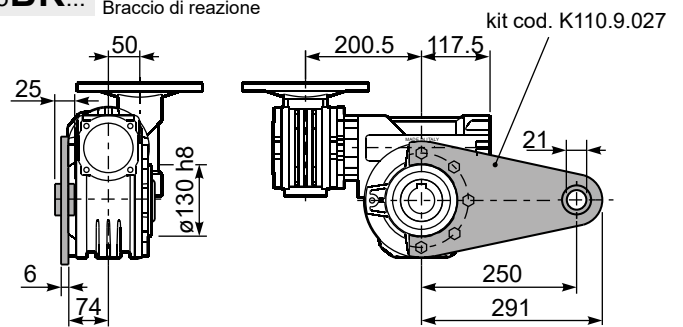


**P115FC...** Output flange  
Flangia uscita

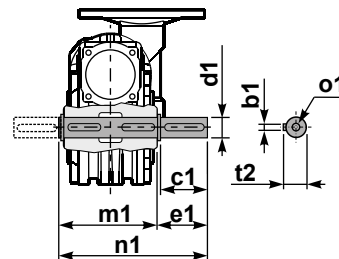


| type B    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
|-----------|---|----|------|-------|------|-----|-----|----|----------------------|
| <b>FC</b> | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 131.5 | 54   | 230 | 270 | 13 | ① K110.9.010<br>② -  |
| <b>FL</b> | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 179.5 | 102  | 230 | 270 | 13 | ① K110.9.011<br>② -  |
| type S    | øD  | E  | G    | L     | N    | O   | P   | Q  | kit code             |
| <b>F1</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 150   | 72.5 | 215 | 250 | 15 | ① KS110.9.014<br>② - |
| <b>F3</b> | 180 <sup>+0.040</sup> / <sub>0</sub>      | 5  | 18   | 130   | 52.5 | 215 | 250 | 15 | ① KS110.9.013<br>② - |

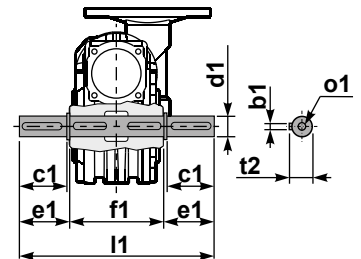
**P115BR...** Reaction arm  
Braccio di reazione



**P115....S...** Single Shaft  
Albero lento semplice



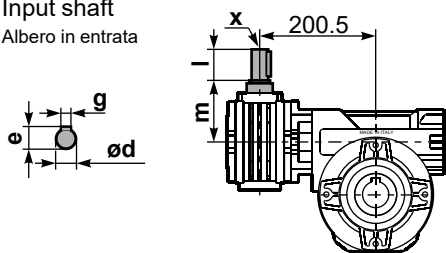
**P115....D...** Double Shaft  
Albero lento bisp.



① kit cod. K110.5.028 type B

② kit cod. K110.5.029 type B

**R115FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m    | x     | kit code                                   |
|--------|-------|----|---|----|------|-------|--|
| type B | 16 h6 | 18 | 5 | 30 | 74.5 | M6x16 | ① K050.5.006 PAM71<br>② K050.5.007 PAM80   |
| type S | 14 h6 | 16 | 5 | 30 | 74.5 | M5x10 | ① KS050.5.008 PAM71<br>② KS050.5.009 PAM80 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> / <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -      |

# M Square worm gearboxes

## A modular and compact product

### Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing.

No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

### Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

### Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

### Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

### Premium, high temperature

Nitrile® output seals

### Bronze alloy worm gears.

CuSn12Ni (C91700) Nickel bronze worm gears are centrifugally cast onto an iron hub for maximum strength and superior life. Removable hollow shaft with key for safe torque transmissions.

### Over-size bearing

For radial load capability and maximum hollow output shaft diameter.

### Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

### Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

### Painting

Cast iron gearboxes are painted RAL 7046

### Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

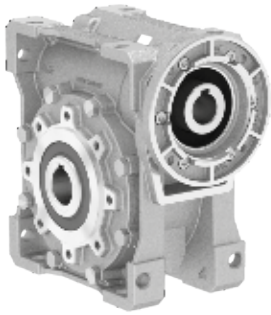
oil free



vent free



# Specific type datasheet on page...

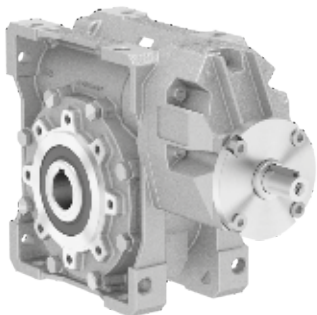


Types / Tipi /  
Tipen / Types /  
Tipos

On page / A pagina / Auf Seite / À la page / En la página

| 2-5  | 2-7  | 2-9  | 2-11  | 2-13  | 2-15  | 2-17  | 2-19   | 2-21   |
|------|------|------|-------|-------|-------|-------|--------|--------|
| M30  | M45  | M50  | M63   | M75   | M85   | M11   | M13    | M15    |
| 21Nm | 47Nm | 88Nm | 160Nm | 270Nm | 364Nm | 725Nm | 1050Nm | 1550Nm |

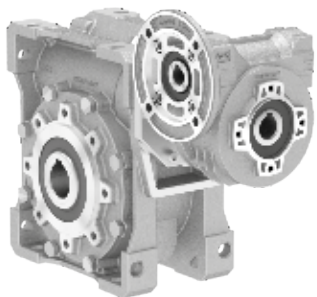
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Types / Tipi /  
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Tipos

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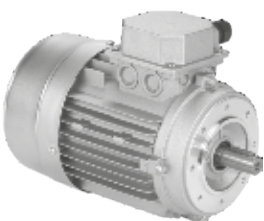
| 2-23 | 2-25 | 2-27  | 2-29  | 2-31  | 2-33  |
|------|------|-------|-------|-------|-------|
| P4M  | P5M  | P6M   | P7M   | P8M   | P1M   |
| 55Nm | 88Nm | 187Nm | 310Nm | 440Nm | 803Nm |



Types / Tipi /  
Tipen / Types /  
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| 2-35 | 2-37 | 2-39  | 2-41  | 2-43  | 2-45  | 2-47  | 2-49   |
|------|------|-------|-------|-------|-------|-------|--------|
| 33M  | 43M  | 53M   | 63M   | 64M   | 74M   | 84M   | 15M    |
| 38Nm | 72Nm | 138Nm | 270Nm | 290Nm | 420Nm | 596Nm | 1174Nm |



Types / Tipi  
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Tipos

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| M-1 |     |     |     |     |       |      |      |      |      |
|-----|-----|-----|-----|-----|-------|------|------|------|------|
| 56A | 63A | 71A | 80A | 90S | 100LA | 112M | 132S | 160M | 180M |
| 56B | 63B | 71B | 80B | 90L | 100LB |      | 132M | 160L | 180L |

Type - Tipo - Typ  
Type - Tipo

Size - Grandezza  
Größe - Taille  
Tamaño

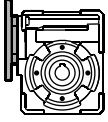
Mounting - Montaggio - Montage Fixation  
Fixation - Tipo de montaje

**P**

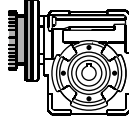
**M45**

**FC**

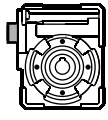
**Worm gearboxes**  
Riduttori a vite senza fine  
Schneckengetriebe  
Reducteurs a vis sans fin  
Reductores de corona sin fin



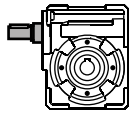
**P**



**M**

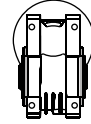


**B**

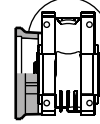


**R**

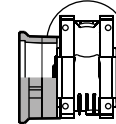
**M30**  
**M45**  
**M50**  
**M63**  
**M75**  
**M85**  
**M11**  
**M13**  
**M15**



**FB**

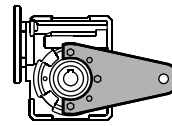


**FC**



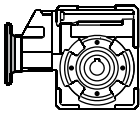
**FL**

**F1**  
**F2**  
**F3**  
**F4**

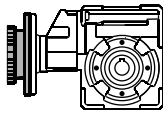


**BR**

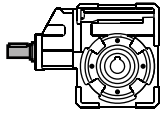
**Worm gearboxes with primary reduction**  
Riduttori a vite senza fine con precoppia  
Schneckengetriebe mit Stirradstufe am Eintrieb  
Reducteurs a vis sans fin avec pré-réduction  
Reductores corona sin fin con prereductora de engrajes



**P**

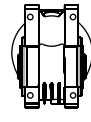


**M**

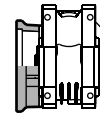


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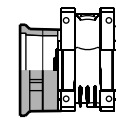
**P4M**  
**P5M**  
**P6M**  
**P7M**  
**P8M**  
**P1M**



**FB**

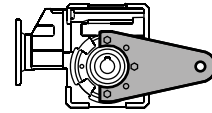


**FC**



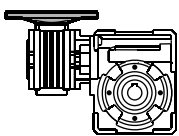
**FL**

**F1**  
**F2**  
**F3**  
**F4**

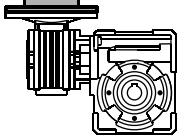


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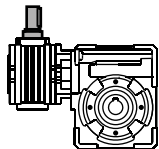
**Combined worm gearboxes**  
Riduttori a vite senza fine combinati  
Schneckengetriebekombinationen  
Reducteurs a double train de vis sans fin  
Reductores combinados corona sin fin



**P**

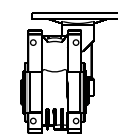


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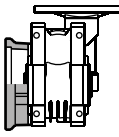


**R**

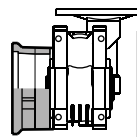
**33M**  
**43M**  
**53M**  
**63M**  
**64M**  
**74M**  
**84M**  
**15M**



**FB**

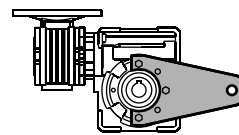


**FC**



**FL**

**F1**  
**F2**  
**F3**  
**F4**

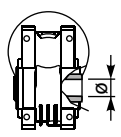
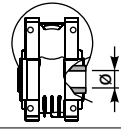
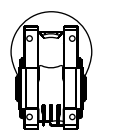
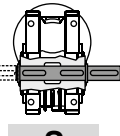
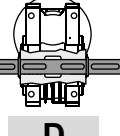
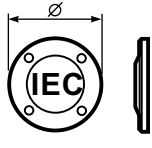
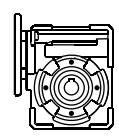
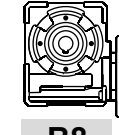
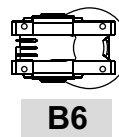
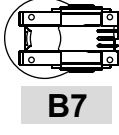
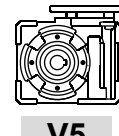
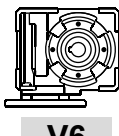
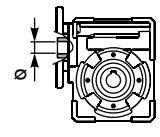
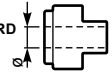
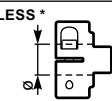


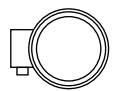
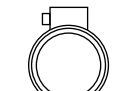
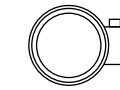
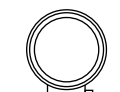


**BR**



On request we can deliver our products according to the ATEX  
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
Sur demande nos produits peuvent se conformer à la réglementation ATEX  
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

| Ratio<br>Rapporto<br>Untersetzung<br>Reduction<br>Relación   | Hub<br>Mozzo corona<br>Hohlwelle<br>Arbre creux<br>Nucleo corona  | Output shaft<br>Albero lento<br>Abtriebswelle<br>Arbre de sortie<br>Eje salida  | Motor size<br>Grandezza motore<br>Motor Grösse<br>Grandeur moteur<br>Tamaño motor  | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje  | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Mountin position<br>Esecuzione montaggio<br>Einbaulage<br>Exécution de montage<br>Posición de montaje  | Terminal box position<br>Posizione morsetteria<br>Klemmkastenlage<br>Position boîte a bornes<br>Posición caja de bornes  |
|--|---|---|--|---|--|--|--|
| <b>10</b>  | <b>C</b>  | <b>∅</b>  | <b>-Q</b>  | <b>B3</b>   | <b>ST</b>  | <b>---</b>   |  |
| See technical data table<br>Vedi tabella dati tecnici.<br>Technisches Datenblatt beachten<br>Voir tableau données techniques<br>Ver tabla datos técnicos | <br><b>STANDARD</b><br><b>C</b><br>M30 ⇨ ∅14<br>M45 ⇨ ∅18<br>M50 ⇨ ∅25<br>M63 ⇨ ∅25<br>M75 ⇨ ∅28<br>M85 ⇨ ∅35<br>M11 ⇨ ∅42<br>M13 ⇨ ∅45<br>M15 ⇨ ∅50<br><b>I</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox<br><b>SPECIAL SERIES:</b><br><b>SERIE SPECIALE:</b><br><b>S</b><br>M45 ⇨ ∅19<br>M50 ⇨ ∅24<br><b>X</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox<br><br><b>INCH</b><br><b>U</b><br>M45 ⇨ ∅0.750"<br>M50 ⇨ ∅1.000"<br>M63 ⇨ ∅1.125"<br>M85 ⇨ ∅1.500"<br><b>Z</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelstahlhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox | <br><b>∅</b><br><br><b>S</b><br><br><b>D</b> | <br><b>-M</b><br>without flange<br>Senza flangia<br><b>B5</b><br><b>-A=56 (∅120)</b><br><b>-B=63 (∅140)</b><br><b>-C=71 (∅160)</b><br><b>-D=80 (∅200)</b><br><b>-E=90 (∅200)</b><br><b>-F=100 (∅250)</b><br><b>-G=132 (∅300)</b><br><b>-H=160 (∅350)</b><br><b>B14</b><br><b>-O=56 (∅80)</b><br><b>-P=63 (∅90)</b><br><b>-Q=71 (∅105)</b><br><b>-R=80 (∅120)</b><br><b>-T=90 (∅140)</b><br><b>-U=100 (∅160)</b><br><b>-V=132 (∅200)</b><br><b>Brushless</b><br><b>BA=40/63-M5</b><br><b>BB=50/70-M5</b><br><b>BC=60/75-M5</b><br><b>BD=70/90-M6</b><br><b>BE=80/100-M6</b><br><b>BF=95/115-M8</b><br><b>BG=110/145-M8</b><br><b>BH=130/165-M8</b><br><b>-0=Type R</b><br><b>-S=Type R</b><br>S series | <br><b>B3</b><br><br><b>B8</b><br><br><b>B6</b><br><br><b>B7</b><br><br><b>V5</b><br><br><b>V6</b> | <br><b>ST</b><br><b>Standard bore *<br/>Kit R standard</b><br><b>Foro standard *<br/>Kit R standard</b><br><b>Input bore without<br/>Reduction Bushing</b><br><b>-O = 9mm</b><br><b>-P = 11mm</b><br><b>-Q = 14mm</b><br><b>-R = 19mm</b><br><b>-T = 24mm</b><br><b>-U = 28mm</b><br><b>-V = 38mm</b><br><b>COUPLING</b><br><b>STANDARD (IEC)</b><br><br><b>-A = 9mm</b><br><b>-B = 11mm</b><br><b>-C = 14mm</b><br><b>-D = 19mm</b><br><b>-E = 24mm</b><br><b>-F = 28mm</b><br><b>BRUSHLESS*</b><br><br><b>-1 = 9mm</b><br><b>-2 = 11mm</b><br><b>-3 = 14mm</b><br><b>-4 = 19mm</b><br><b>-5 = 22mm</b><br><b>-6 = 24mm</b><br><b>Ready for input coupling<br/>Predisposto per giunto</b><br><br><b>-0</b><br><b>Type B<br/>Tipo B</b><br><br><b>-0</b><br><b>Type R<br/>Tipo R</b> | <b>Only for combined units<br/>See technical data table</b><br>Solo per i riduttori combinati<br>Vedi tabella dati tecnici.<br>Ausführungen für Getriebekombinationen it<br>Uniquement pour combinés.<br>Voir tableau données techniques<br>Sólo para combinados<br>ver tabla datos técnicos | <b>With Type M specify terminal box position</b><br>Con tipo M specificare posizione morsetteria<br><br><b>A</b><br><br><b>B</b><br><b>STANDARD</b><br><br><b>C</b><br><br><b>D</b> |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

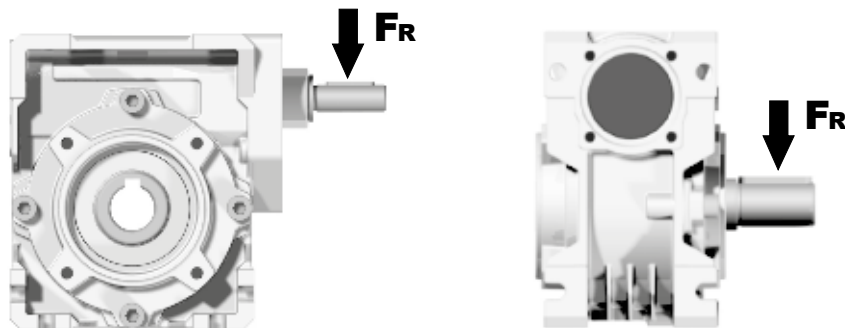
|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotação                        | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translación | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

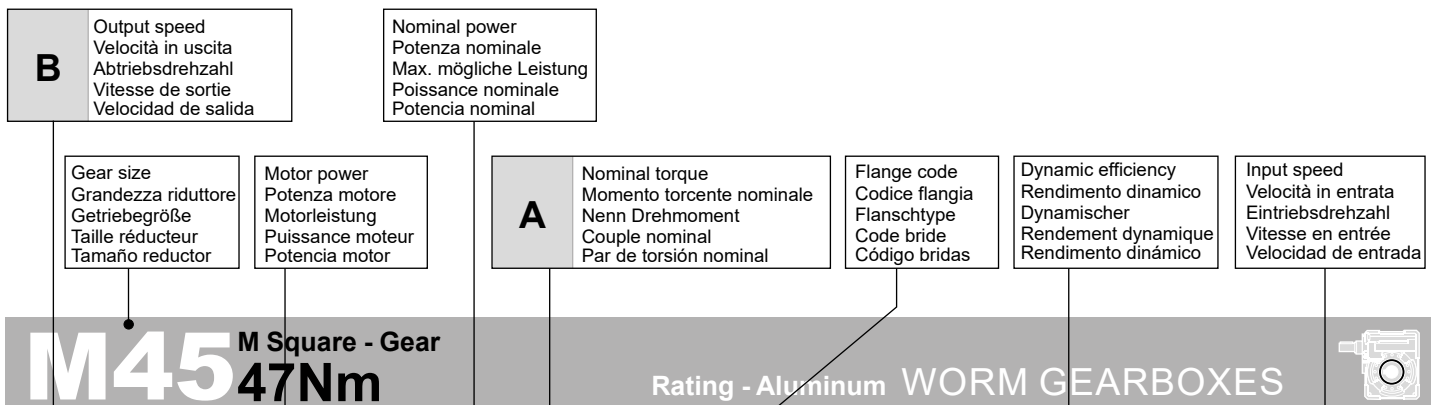
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.





QUICK SELECTION / Selezione veloce

| Output Speed<br>$n_2$ [min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$ [kW] | Output torque<br>$M_{2M}$ [Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$ [kW] | Nominal torque<br>$M_{2R}$ [Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|--|--------------|------------------------------|--------------------------------|------------------------|--------------------------------|---------------------------------|----------------------------|----|-----------------------------|-----|----|--------------------------|----------------------|-------------|
|  |              |                              |                                |                        |                                |                                 | -B                         | -C | -O                          | -P  | -Q |                          |                      |             |
|  |              |                              |                                |                        |                                |                                 | 63                         | 71 | 56                          | 63  | 71 |                          |                      |             |
| 200  | 7            | 0.37                         | 14                             | 2.9                    | 1.07                           | 41                              | B                          |    | B-C                         | B-C |    | 80                       | 2.2                  | 01          |
| 140  | 10           | 0.37                         | 20                             | 2.2                    | 0.82                           | 44                              | B                          |    | B-C                         | B-C |    | 79                       | 2.2                  | 02          |
| 100  | 14           | 0.37                         | 27                             | 1.6                    | 0.60                           | 44                              | B                          |    | B-C                         | B-C |    | 77                       | 2.4                  | 03          |



| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |         |          |
|--|---------------------|--|---------|----------|
|  |                     | <2 h                                       | 2 - 8 h | 8 - 16 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.9  | 1       | 1.25     |
|  | Moderate / Moderato | 1  | 1.25    | 1.5      |
|  | Heavy / Forte       | 1.25                                       | 1.5     | 1.75     |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1.25                                       | 1.5     | 1.75     |
|  | Moderate / Moderato | 1.5  | 1.75    | 2        |
|  | Heavy / Forte       | 1.75                                       | 2       | 2.25     |

|           |  |  |
|-----------|--|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccolla di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción   |  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |  |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccolla<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible también sin casquillo                                 |  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 280   | <b>5</b>     | 0.18                            | 5                                 | 3.8                    | <b>0.68</b>                       | <b>19</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 82                              | 1.26                     | 01              |
| 200   | <b>7</b>     | 0.18                            | 7                                 | 2.8                    | <b>0.50</b>                       | <b>19</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 80                              | 1.44                     | 02              |
| 140   | <b>10</b>    | 0.18                            | 10                                | 2.0                    | <b>0.36</b>                       | <b>19</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 78                              | 1.44                     | 03              |
| 93  | <b>15</b>    | 0.18                            | 13                                | 1.4                    | <b>0.25</b>                       | <b>19</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 73                              | 1.44                     | 04              |
| 70  | <b>20</b>    | 0.18                            | 17                                | 1.1                    | <b>0.20</b>                       | <b>19</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 70                              | 1.09                     | 05              |
| 47  | <b>30</b>    | 0.12                            | 15                                | 1.4                    | <b>0.17</b>                       | <b>21</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 62                              | 1.44                     | 06              |
| 35  | <b>40</b>    | 0.12                            | 19                                | 1.1                    | <b>0.13</b>                       | <b>20</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 57                              | 1.09                     | 07              |
| 23  | <b>61</b>    | 0.09                            | 19                                | 1.1                    | <b>0.10</b>                       | <b>20</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 50                              | 0.72                     | 08              |
| 17.5  | <b>80</b>    | 0.06                            | 16                                | 1.0                    | <b>0.06</b>                       | <b>16</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 0.56                     | 09              |
| 14  | <b>100</b>   | 0.06*                           | 16                                | 0.5                    | <b>0.03</b>                       | <b>8</b>                           | <b>B</b>                   |    | <b>B-C</b>                  |    | 40                              | 0.45                     | 10              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **M30** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M30** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **M30** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M30** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **M30** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION M30 Oil Quantity 0.03Lt.

**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website

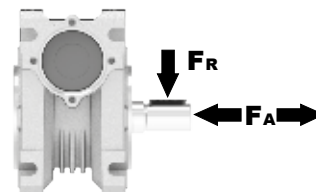
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

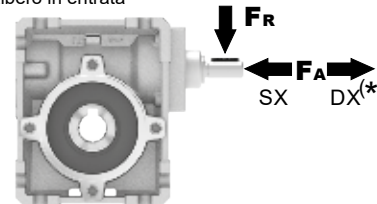
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 120       | 600       |
| 150                           | 140       | 700       |
| 100                           | 160       | 800       |
| 75                            | 180       | 900       |
| 50                            | 200       | 1000      |
| 25                            | 250       | 1250      |
| 15                            | 280       | 1400      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

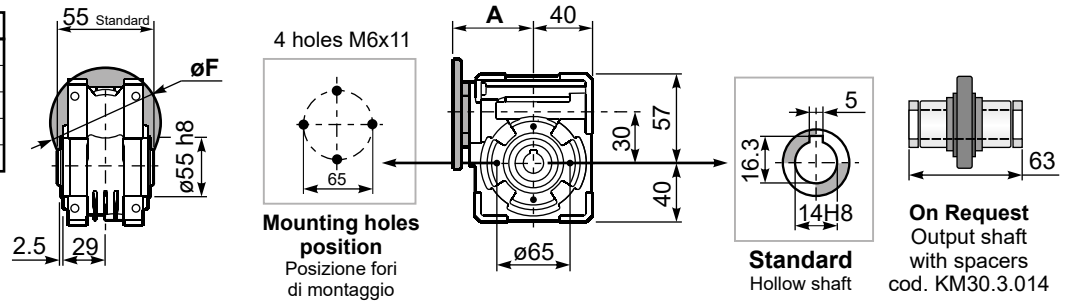
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

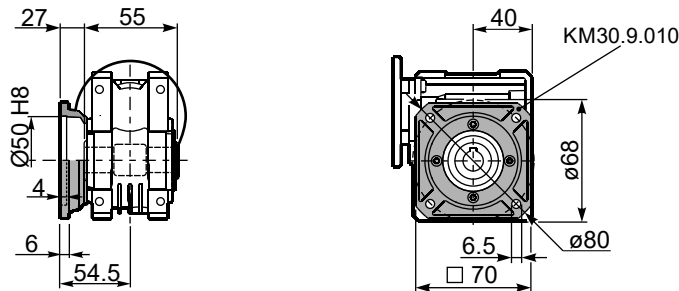
PM30**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **1.15 kg**

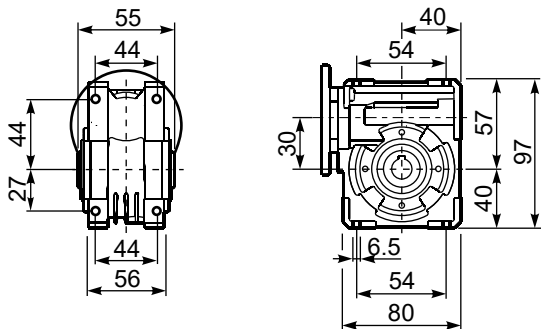
| M. flanges | Kit code   | øF  | A    |
|------------|------------|-----|------|
| 56B5       | K030.4.041 | 120 | 61.5 |
| 63B5       | K030.4.042 | 140 | 62.5 |
| 56B14      | K030.4.046 | 80  | 61.5 |
| 63B14      | K030.4.045 | 90  | 62.5 |



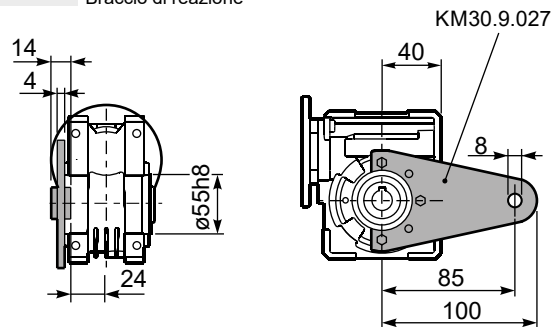
PM30**FC**... Square flange  
Flangia quadrata



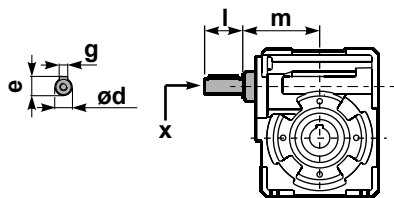
PM30**FB**... Feet  
Piedini



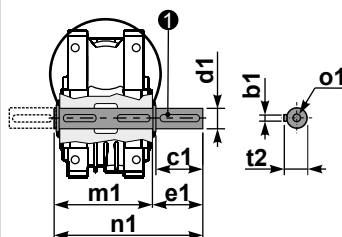
PM30**BR**... Reaction arm  
Braccio di reazione



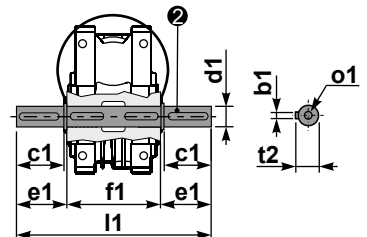
**RM30FB**... Input shaft  
Albero in entrata



PM30....**S**... Single Shaft  
Albero lento semplice



PM30....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K030.5.028 type B

② kit cod. K030.5.029 type B

|        | ød   | e    | g | l  | m  | x | kit code         |
|--------|------|------|---|----|----|---|------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type S | -    | -    | - | -  | -  | - | -                |

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1 | n1   | t2 | o1    |
|--------|----|----|--|------|----|-----|----|------|----|-------|
| type B | 5  | 25 | 14 <sup>-0.005</sup> <sub>-0.020</sub> | 35.5 | 55 | 126 | 59 | 94.5 | 16 | M5x14 |
| type S | -  | -  | -                                      | -    | -  | -   | -  | -    | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | <br>Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
| 200   | <b>7</b>     | 0.37                            | 14                                | 2.9                    | <b>1.07</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 80                              | 2.2                      | 01              |
| 140   | <b>10</b>    | 0.37                            | 20                                | 2.2                    | <b>0.82</b>                       | <b>44</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 79                              | 2.2                      | 02              |
| 100   | <b>14</b>    | 0.37                            | 27                                | 1.6                    | <b>0.60</b>                       | <b>44</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 77                              | 2.4                      | 03              |
| 67  | <b>21</b>    | 0.37                            | 36                                | 1.2                    | <b>0.44</b>                       | <b>42</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 67                              | 1.6                      | 04              |
| 50  | <b>28</b>    | 0.37                            | 46                                | 1.0                    | <b>0.38</b>                       | <b>47</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 65                              | 2.5                      | 05              |
| 38  | <b>37</b>    | 0.25                            | 40                                | 1.0                    | <b>0.26</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 63                              | 1.8                      | 06              |
| 30  | <b>46</b>    | 0.25                            | 46                                | 0.9                    | <b>0.22</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 59                              | 1.5                      | 07              |
| 23  | <b>60</b>    | 0.18                            | 41                                | 1.0                    | <b>0.18</b>                       | <b>41</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 56                              | 1.2                      | 08              |
| 20  | <b>70</b>    | 0.12                            | 31                                | 1.0                    | <b>0.12</b>                       | <b>30</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 54                              | 1.0                      | 09              |
| 13.7  | <b>102</b>   | 0.09                            | 31                                | 0.9                    | <b>0.09</b>                       | <b>29</b>                          | <b>B</b>                   |    | B-C                         | B-C |    | 49                              | 0.72                     | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **M45** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M45** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **M45** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M45** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **M45** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

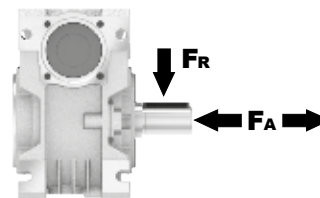
#### LUBRICATION M45 Oil Quantity 0.09 Lt.

**SHELL** Omala S4 WE 320      **ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

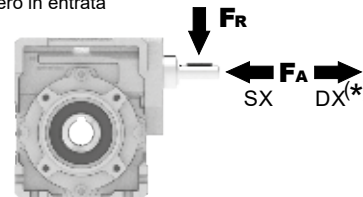
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>200</b>                    | 180       | 900       |
| <b>150</b>                    | 200       | 1000      |
| <b>100</b>                    | 220       | 1100      |
| <b>75</b>                     | 240       | 1200      |
| <b>50</b>                     | 260       | 1400      |
| <b>25</b>                     | 300       | 1800      |
| <b>15</b>                     | 400       | 2000      |

**Input shaft**  
albero in entrata



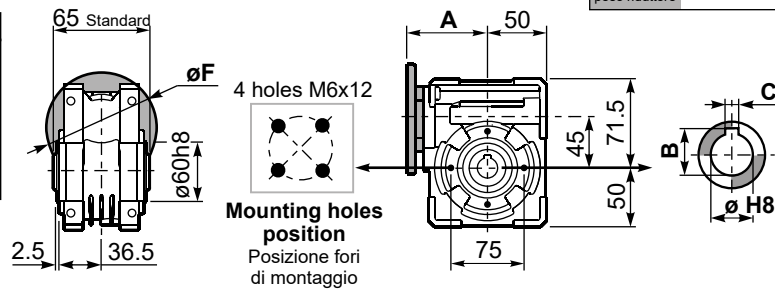
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 42        | 210       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**PM45FB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 80   |
| <b>71B5</b>  | K050.4.042 | 160 | 77.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 77.5 |
| <b>63B14</b> | K050.4.047 | 90  | 80   |
| <b>71B14</b> | K050.4.045 | 105 | 77.5 |

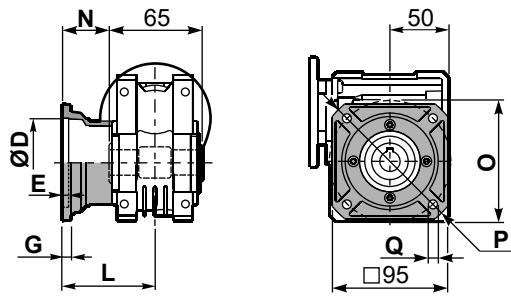


Gearbox weight  
peso riduttore **2.30 kg**

| ø H8                    | B    | C | *Spacer code |
|-------------------------|------|---|--------------|
| <b>18</b><br>Standard   | 20.8 | 6 | KM45.3.018   |
| <b>19</b><br>on request | 21.8 | 6 | KM45.3.019   |
| <b>20</b><br>on request | 22.8 | 6 | KM45.3.020   |

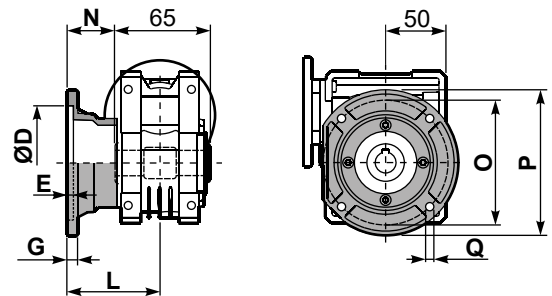
\*On Request  
output shaft with spacers

**PM45FC...** Square flange  
Flangia quadrata



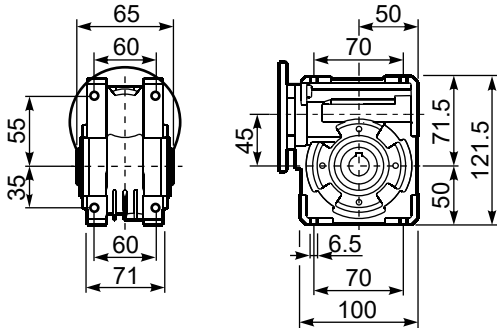
| type B    | øD    | E | G | L  | N    | O  | P   | Q | kit code   |
|-----------|-------|---|---|----|------|----|-----|---|------------|
| <b>FC</b> | 60 H8 | 4 | 7 | 67 | 34.5 | 75 | 110 | 9 | KM45.9.010 |
| <b>FL</b> | 60 H8 | 4 | 7 | 97 | 64.5 | 75 | 110 | 9 | KM45.9.011 |

**PM45F1...** Round flange  
Flangia rotonda

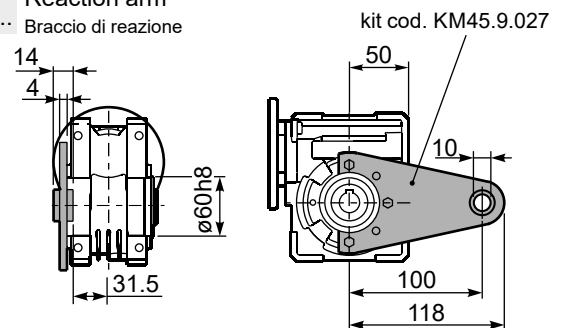


| type S    | øD   | E | G | L  | N    | O   | P   | Q   | kit code   |
|-----------|------|---|---|----|------|-----|-----|-----|------------|
| <b>F1</b> | 95H8 | 5 | 9 | 80 | 47.5 | 115 | 140 | 9.5 | KM45.9.012 |
| <b>F2</b> | -    | - | - | -  | -    | -   | -   | -   | -          |

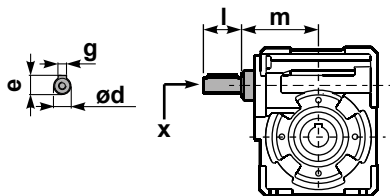
**PM45FB...** Feet  
Piedini



**PM45BR...** Reaction arm  
Braccio di reazione



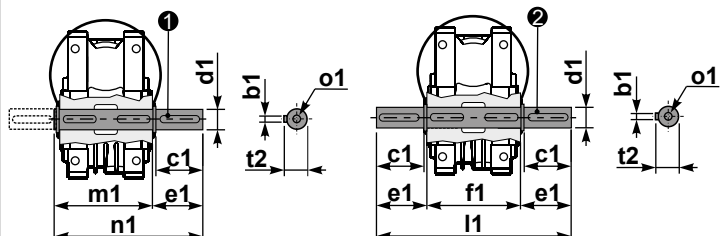
**RM45FB...** Input shaft  
Albero in entrata



|        | ød    | e    | g | l  | m  | x | kit code                         |
|--------|-------|------|---|----|----|---|----------------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 74 | - | ① K045.5.006 PAM71<br>② -<br>③ - |
| type S | -     | -    | - | -  | -  | - | ① -<br>② -<br>③ -                |

**PM45.....S...** Single Shaft  
Albero lento semplice

**PM45.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S  
② kit cod. K045.5.029 type B

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> <sub>-0.020</sub> | 58.5 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    | Available B14 motor flanges |     |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|-----------------------------|-----|----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -O                          | -P  | -Q | -R |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 56                          | 63  | 71 | 80 |                                 |                          |                 |
| 200   | 7            | 0.75                            | 29                                | 2.6                    | 1.92                              | 75                                 | B                          | B  |    |                             | B-C | B  |    | 82                              | 2.5                      | 01              |
| 140   | 10           | 0.75                            | 41                                | 1.9                    | 1.43                              | 78                                 | B                          | B  |    |                             | B-C | B  |    | 80                              | 2.4                      | 02              |
| 100   | 14           | 0.75                            | 57                                | 1.4                    | 1.05                              | 79                                 | B                          | B  |    |                             | B-C | B  |    | 79                              | 2.6                      | 03              |
| 78  | 18           | 0.75                            | 69                                | 1.1                    | 0.81                              | 75                                 | B                          | B  |    |                             | B-C | B  |    | 75                              | 2.0                      | 04              |
| 54  | 26           | 0.55                            | 67                                | 1.1                    | 0.58                              | 71                                 | B                          | B  |    |                             | B-C | B  |    | 69                              | 2.7                      | 05              |
| 47  | 30           | 0.55                            | 79                                | 1.1                    | 0.61                              | 88                                 | B                          | B  |    |                             | B-C | B  |    | 70                              | 2.5                      | 12              |
| 39  | 36           | 0.37                            | 63                                | 1.3                    | 0.48                              | 82                                 | B                          |    |    | B-C                         | B-C |    |    | 69                              | 2.1                      | 06              |
| 33  | 43           | 0.37                            | 72                                | 1.1                    | 0.42                              | 82                                 | B                          |    |    | B-C                         | B-C |    |    | 66                              | 1.8                      | 07              |
| 28  | 50           | 0.37                            | 78                                | 1.0                    | 0.36                              | 76                                 | B                          |    |    | B-C                         | B-C |    |    | 62                              | 1.5                      | 13              |
| 23  | 60           | 0.25                            | 59                                | 1.2                    | 0.30                              | 71                                 | B                          |    |    | B-C                         | B-C |    |    | 58                              | 1.3                      | 08              |
| 21  | 68           | 0.25                            | 66                                | 1.0                    | 0.25                              | 66                                 | B                          |    |    | B-C                         | B-C |    |    | 57                              | 1.2                      | 09              |
| 17.5  | 80           | 0.18                            | 53                                | 1.2                    | 0.22                              | 65                                 | B                          |    |    | B-C                         | B-C |    |    | 54                              | 1.0                      | 10              |
| 14  | 100          | 0.12                            | 41                                | 1.3                    | 0.16                              | 55                                 | B                          |    |    | B-C                         | B-C |    |    | 50                              | 0.8                      | 11              |

Motor Flanges Available  
Flange Motore Disponibili

B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **M50** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M50** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **M50** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M50** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **M50** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION M50 Oil Quantity 0.14 Lt.

**SHELL** Omala S4 WE 320

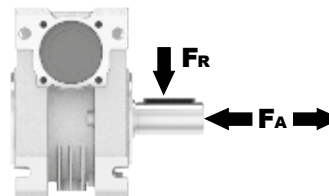
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

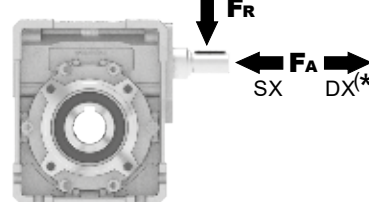
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 240       | 1200      |
| 150                           | 280       | 1400      |
| 100                           | 300       | 1500      |
| 75                            | 340       | 1700      |
| 50                            | 380       | 1900      |
| 25                            | 480       | 2500      |
| 15                            | 560       | 2800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 76        | 380       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

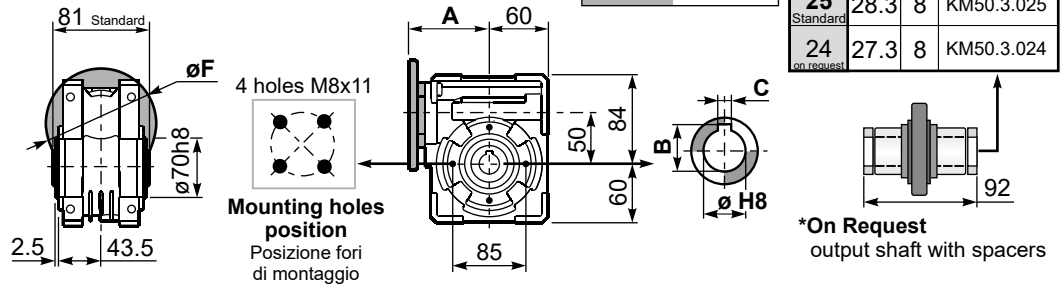


PM50**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **3.25 kg**

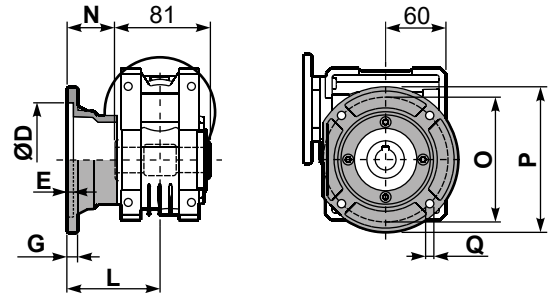
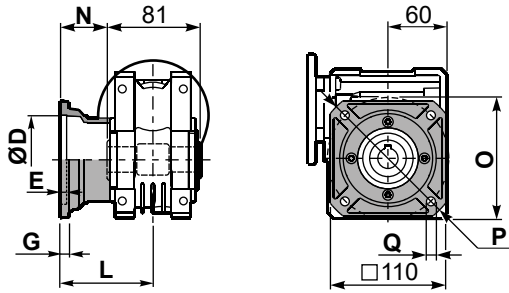
| ø H8             | B    | C | *Spacer code |
|------------------|------|---|--------------|
| 25<br>Standard   | 28.3 | 8 | KM50.3.025   |
| 24<br>on request | 27.3 | 8 | KM50.3.024   |

| M. flanges | Kit code   | øF  | A    |
|------------|------------|-----|------|
| 63B5       | K050.4.041 | 138 | 83.5 |
| 71B5       | K050.4.042 | 160 | 81   |
| 80B5       | K050.4.043 | 200 | 81.5 |
| 56B14      | KC40.4.049 | 80  | 81   |
| 63B14      | K050.4.047 | 90  | 83.5 |
| 71B14      | K050.4.045 | 105 | 81   |
| 80B14      | K050.4.046 | 120 | 81.5 |



PM50**FC**... Square flange  
Flangia quadrata

PM50**F1**... Round flange  
Flangia rotonda

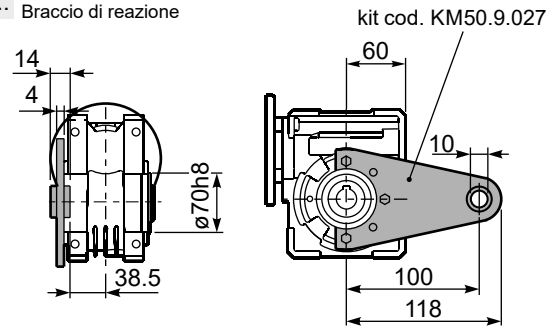
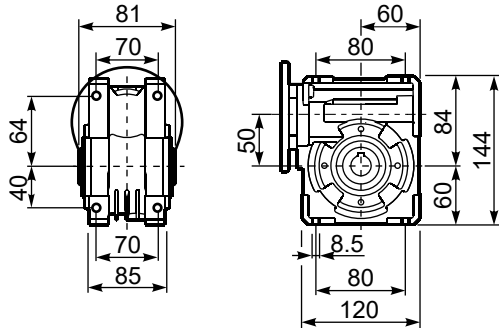


| type B | øD    | E | G | L   | N    | O  | P   | Q  | kit code   |
|--------|-------|---|---|-----|------|----|-----|----|------------|
| FC     | 70 H8 | 5 | 9 | 90  | 49.5 | 85 | 125 | 11 | KM50.9.010 |
| FL     | 70 H8 | 5 | 9 | 120 | 79.5 | 85 | 125 | 11 | KM50.9.011 |

| type S | øD     | E | G    | L  | N    | O   | P   | Q   | kit code   |
|--------|--------|---|------|----|------|-----|-----|-----|------------|
| F1     | 110 H8 | 5 | 10   | 89 | 48.5 | 130 | 160 | 9.5 | KM50.9.012 |
| F2     | 95 H8  | 5 | 14.5 | 72 | 31.5 | 115 | 140 | 11  | KM50.9.013 |

PM50**FB**... Feet  
Piedini

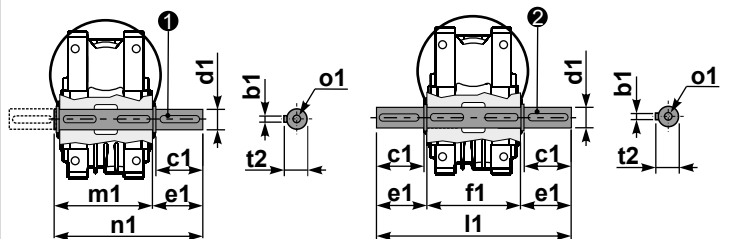
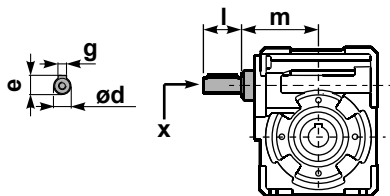
PM50**BR**... Reaction arm  
Braccio di reazione



RM50**FB**... Input shaft  
Albero in entrata

PM50.....**S**... Single Shaft  
Albero lento semplice

PM50.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S  
② kit cod. K050.5.029 type B

|        | ød    | e  | g | l  | m    | x     | kit code                                   |
|--------|-------|----|---|----|------|-------|--|
| type B | 16 h6 | 18 | 5 | 30 | 79.5 | M6x16 | ① K050.5.006 PAM71<br>② K050.5.007 PAM80   |
| type S | 14 h6 | 16 | 5 | 30 | 79.5 | M5x10 | ① KS050.5.008 PAM71<br>② KS050.5.009 PAM80 |

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1   | n1  | t2 | o1    |
|--------|----|----|--|------|----|-----|------|-----|----|-------|
| type B | 8  | 52 | 25 <sup>-0.005</sup> <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| type S | 8  | 50 | 24 <sup>-0.005</sup> <sub>-0.020</sub> | 68.8 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |          |    | Available B14 motor flanges |            |            | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----------|----|-----------------------------|------------|------------|---------------------------------|--------------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D       | -E | -Q                          | -R         | -T         |                                 |                          |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80       | 90 | 71                          | 80         | 90         |                                 |                          |                 |    |
| 200   | <b>7</b>     | 1.8                             | 71                                | 1.8                    | <b>3.2</b>                        | <b>128</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 83                       | 3.1             | 01 |
| 140   | <b>10</b>    | 1.8                             | 99                                | 1.3                    | <b>2.4</b>                        | <b>134</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 81                       | 3.1             | 02 |
| 93  | <b>15</b>    | 1.5                             | 121                               | 1.2                    | <b>1.8</b>                        | <b>148</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 79                       | 3.1             | 03 |
| 74  | <b>19</b>    | 1.5                             | 152                               | 1.0                    | <b>1.4</b>                        | <b>145</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 78                       | 2.6             | 04 |
| 58  | <b>24</b>    | 1.1                             | 135                               | 1.1                    | <b>1.2</b>                        | <b>142</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 75                       | 2.0             | 05 |
| 47  | <b>30</b>    | 1.1                             | 167                               | 1.0                    | <b>1.06</b>                       | <b>160</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 74                       | 3.2             | 06 |
| 39  | <b>36</b>    | 0.75                            | 125                               | 1.2                    | <b>0.88</b>                       | <b>147</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 68                       | 2.7             | 07 |
| 35  | <b>40</b>    | 0.75                            | 135                               | 1.1                    | <b>0.82</b>                       | <b>148</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 66                       | 2.5             | 13 |
| 31  | <b>45</b>    | 0.55                            | 111                               | 1.2                    | <b>0.67</b>                       | <b>135</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 66                       | 2.1             | 08 |
| 23  | <b>60</b>    | 0.55                            | 140                               | 1.0                    | <b>0.53</b>                       | <b>135</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 62                       | 1.6             | 12 |
| 21  | <b>67</b>    | 0.55                            | 151                               | 0.8                    | <b>0.45</b>                       | <b>124</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 60                       | 1.5             | 09 |
| 17.5  | <b>80</b>    | 0.37                            | 115                               | 1.1                    | <b>0.39</b>                       | <b>122</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 57                       | 1.3             | 10 |
| 14.9  | <b>94</b>    | 0.37                            | 123                               | 1.0                    | <b>0.36</b>                       | <b>119</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 52                       | 1.1             | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **M63** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M63** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **M63** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M63** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **M63** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION M63 Oil Quantity 0.30 Lt.

**SHELL** Omala S4 WE 320

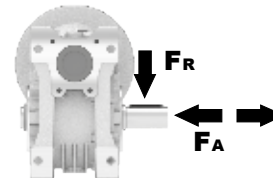
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

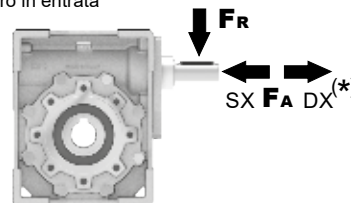
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>200</b>                    | 360          | 1800         |
| <b>150</b>                    | 400          | 2000         |
| <b>100</b>                    | 460          | 2300         |
| <b>75</b>                     | 500          | 2500         |
| <b>50</b>                     | 600          | 3000         |
| <b>25</b>                     | 700          | 3800         |
| <b>15</b>                     | 800          | 4000         |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| <b>1400</b>                   | 90           | 450          |

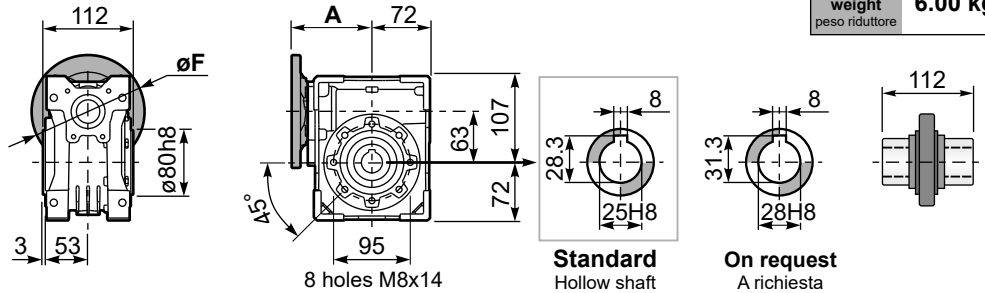
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

PM63**FB**... Basic wormbox  
Riduttore base

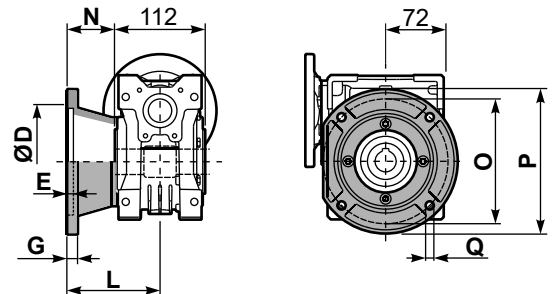
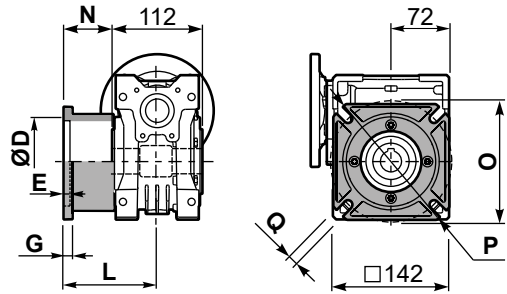
Gearbox weight  
peso riduttore **6.00 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 100.5 |
| 71B5       | K063.4.042 | 160 | 98.5  |
| 80/90B5    | K063.4.043 | 200 | 100.5 |
| 71B14      | K063.4.047 | 105 | 98.5  |
| 80B14      | K063.4.046 | 120 | 100.5 |
| 90B14      | K063.4.041 | 140 | 100.5 |



PM63**FC**... Square flange  
Flangia quadrata

PM63**F1**... Round flange  
Flangia rotonda



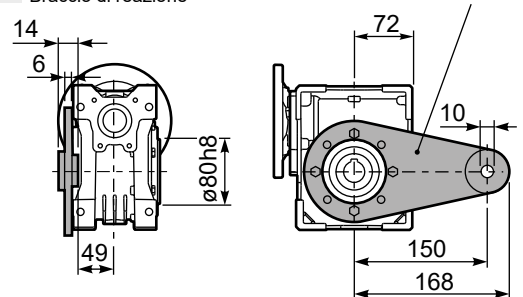
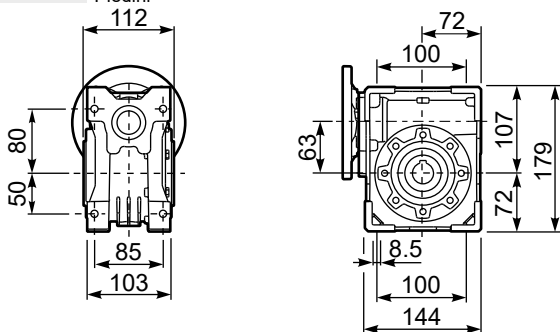
| type B | øD     | E | G  | L   | N  | O   | P   | Q  | kit code   |
|--------|--------|---|----|-----|----|-----|-----|----|------------|
| FC     | 115 H8 | 6 | 10 | 82  | 26 | 150 | 180 | 11 | KM63.9.010 |
| FL     | 115 H8 | 6 | 10 | 112 | 56 | 150 | 180 | 11 | KM63.9.011 |

| type S | øD     | E | G    | L    | N    | O   | P   | Q  | kit code   |
|--------|--------|---|------|------|------|-----|-----|----|------------|
| F1     | 130 H8 | 5 | 10   | 98   | 42   | 165 | 200 | 11 | KM63.9.012 |
| F2     | 130 H8 | 5 | 10   | 107  | 51   | 165 | 200 | 11 | KM63.9.013 |
| F3     | 110 H8 | 5 | 16.5 | 80.5 | 24.5 | 130 | 160 | 11 | KM63.9.014 |

PM63**FB**... Feet  
Piedini

PM63**BR**... Reaction arm  
Braccio di reazione

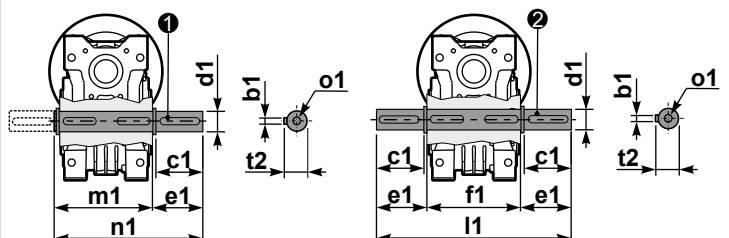
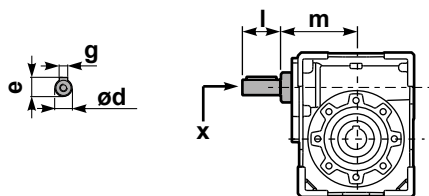
kit cod. KM63.9.027



**RM63FB**... Input shaft  
Albero in entrata

PM63...**S**... Single Shaft  
Albero lento semplice

PM63...**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM63.5.028 type B    ② kit cod. KM63.5.029 type B

|        | ød    | e    | g | l  | m  | x     | kit code                                   |
|--------|-------|------|---|----|----|-------|--|
| type B | 18 h6 | 20.5 | 6 | 45 | 94 | M6x16 | ① K063.5.006 PAM80<br>② K063.5.007 PAM90   |
| type S | 19 h6 | 21.5 | 6 | 40 | 94 | M8x20 | ① KS063.5.008 PAM80<br>② KS063.5.009 PAM90 |

|        | b1 | c1 | d1    | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|-------|------|-----|-----|-------|-----|----|--------|
| type B | 8  | 50 | 25 h6 | 53.5 | 112 | 219 | 119.5 | 173 | 28 | M10x23 |
| type S | -  | -  | -     | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----------------------------|----|------------|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -R                          | -T | -U         |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                          |                      |             |    |
| 200   | 7            | 4                               | 172                               | 1.1                    | 4.4                               | 190                                |                            | B  | B  |            |                             | B  | B          |                          | 90                   | 3.75        | 01 |
| 140   | 10           | 4                               | 240                               | 1.0                    | 3.8                               | 230                                |                            | B  | B  |            |                             | B  | B          |                          | 88                   | 3.75        | 02 |
| 93  | 15           | 3                               | 261                               | 1.0                    | 2.9                               | 250                                |                            | B  | B  |            |                             | B  | B          |                          | 85                   | 3.75        | 03 |
| 70  | 20           | 2.2                             | 249                               | 1.0                    | 2.2                               | 250                                |                            | B  | B  |            |                             | B  | B          |                          | 83                   | 3.00        | 04 |
| 56  | 25           | 1.5                             | 205                               | 1.2                    | 1.8                               | 250                                | B                          | B  |    |            |                             | B  |            |                          | 80                   | 2.41        | 05 |
| 45  | 31           | 1.5                             | 244                               | 1.1                    | 1.7                               | 270                                | B                          | B  |    |            |                             | B  |            |                          | 77                   | 3.75        | 06 |
| 35  | 40           | 1.5                             | 295                               | 0.9                    | 1.3                               | 255                                | B                          | B  |    |            |                             | B  |            |                          | 72                   | 3.10        | 07 |
| 28  | 50           | 0.75                            | 174                               | 1.3                    | 0.96                              | 223                                | B                          |    |    |            |                             |    |            |                          | 68                   | 2.41        | 08 |
| 23  | 60           | 0.75                            | 200                               | 1.1                    | 0.80                              | 213                                | B                          |    |    |            |                             |    |            |                          | 65                   | 2.10        | 09 |
| 17.5  | 80           | 0.55                            | 177                               | 1.1                    | 0.61                              | 195                                | B                          |    |    |            |                             |    |            |                          | 59                   | 1.53        | 10 |
| 14.0  | 100          | 0.55                            | 206                               | 0.8                    | 0.47                              | 175                                | B                          |    |    |            |                             |    |            |                          | 55                   | 1.23        | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit M75 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo M75 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe M75 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type M75 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño M75 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION M75 Oil Quantity 0.40 Lt.

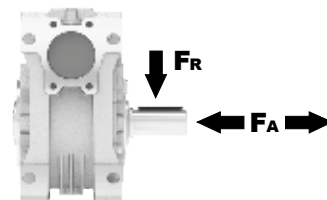
SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

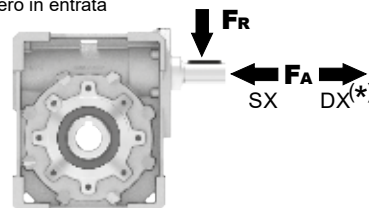
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 460       | 2300      |
| 150                           | 520       | 2600      |
| 100                           | 560       | 2800      |
| 75                            | 620       | 3100      |
| 50                            | 720       | 3600      |
| 25                            | 880       | 4400      |
| 15                            | 1000      | 5000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 125       | 630       |

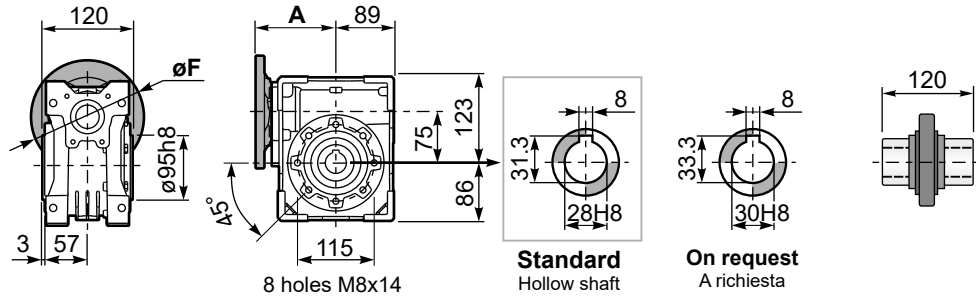
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

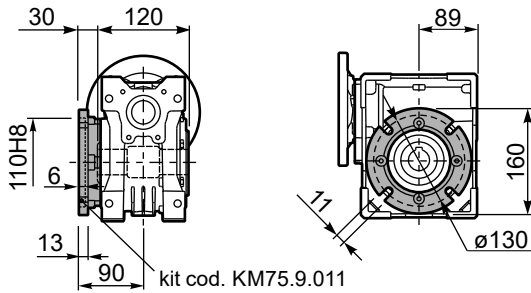
PM75**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **8.70 kg**

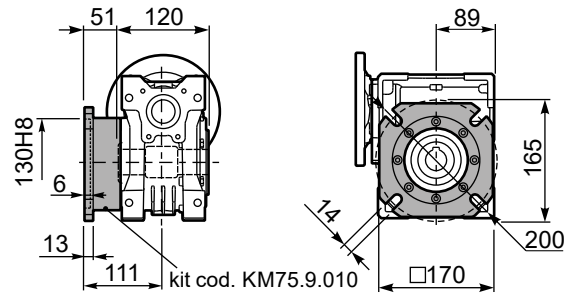
| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 114 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 116 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 125 |
| <b>80B14</b>      | K085.4.046 | 120 | 116 |
| <b>90B14</b>      | K085.4.045 | 140 | 116 |
| <b>100/112B14</b> | K085.4.047 | 160 | 125 |



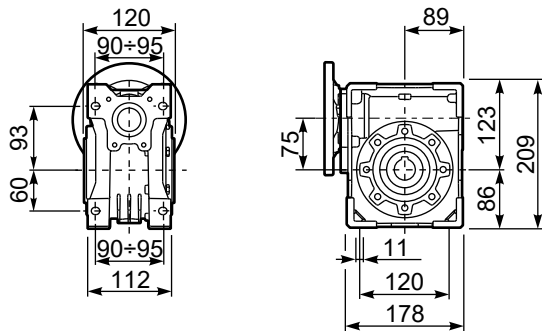
PM75**FC**... Round flange  
Flangia rotonda



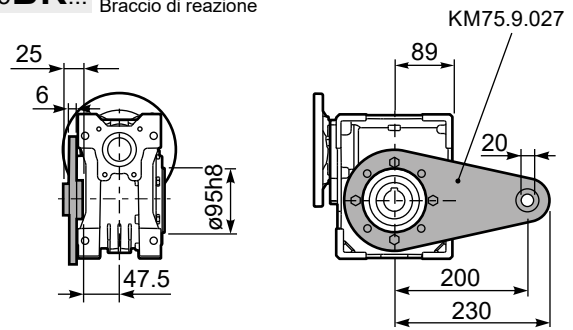
PM75**FL**... Square flange  
Flangia quadrata



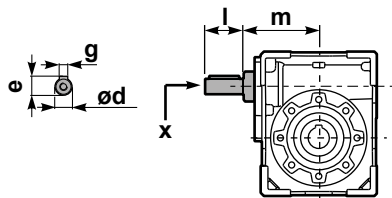
PM75**FB**... Feet  
Piedini



PM75**BR**... Reaction arm  
Braccio di reazione

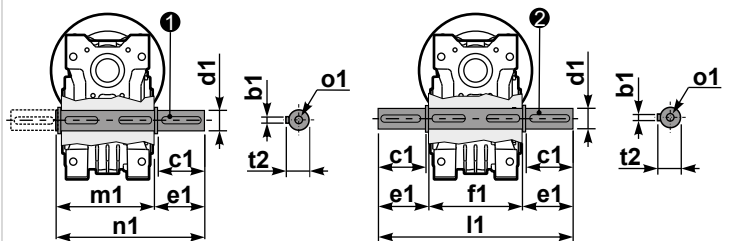


**RM75FB**... Input shaft  
Albero in entrata



PM75...**S**... Single Shaft  
Albero lento semplice

PM75...**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM75.5.028 Standard

② kit cod. KM75.5.029 Standard

|        | ød    | e    | g | l  | m     | x     | kit code  |
|--------|-------|------|---|----|-------|-------|---|
| type B | 25 h6 | 27.8 | 8 | 50 | 109.5 | M8x20 | KQ75.5.006 PAM80<br>K085.5.007 PAM90<br>K085.5.008 PAM100 |

|            | b1 | c1 | d1    | e1   | f1  | l1  | m1    | n1  | t2 | o1  |
|------------|----|----|-------|------|-----|-----|-------|-----|----|-----|
| Standard   | 8  | 60 | 28 h6 | 63.5 | 120 | 247 | 128.5 | 192 | 31 | M10 |
| On request | -  | -  | -     | -    | -   | -   | -     | -   | -  | -   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----------------------------|----|------------|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -R                          | -T | -U         |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                          |                      |             |    |
| 200   | 7            | 4.0                             | 168                               | 1.6                    | 6.4                               | 270                                |                            | B  | B  |            |                             | B  | B          |                          | 88                   | 4.23        | 01 |
| 140   | 10           | 4.0                             | 218                               | 1.4                    | 5.5                               | 298                                |                            | B  | B  |            |                             | B  | B          |                          | 80                   | 4.2         | 02 |
| 100   | 14           | 4.0                             | 298                               | 1.1                    | 4.3                               | 320                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 4.5         | 03 |
| 70  | 20           | 3.0                             | 323                               | 1.0                    | 2.9                               | 309                                |                            | B  | B  |            |                             | B  | B          |                          | 79                   | 3.4         | 04 |
| 64  | 22           | 2.2                             | 258                               | 1.2                    | 2.6                               | 309                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 3.1         | 05 |
| 50  | 28           | 2.2                             | 315                               | 1.2                    | 2.5                               | 364                                |                            | B  | B  | B          |                             | B  | B          |                          | 75                   | 4.7         | 06 |
| 37  | 38           | 1.5                             | 276                               | 1.3                    | 1.9                               | 353                                | B                          | B  |    |            |                             | B  | B          |                          | 71                   | 3.5         | 07 |
| 30  | 46           | 1.5                             | 320                               | 1.1                    | 1.6                               | 342                                | B                          | B  |    |            |                             | B  | B          |                          | 68                   | 3.1         | 08 |
| 27  | 52           | 1.1                             | 258                               | 1.2                    | 1.3                               | 303                                | B                          | B  |    |            |                             | B  | B          |                          | 66                   | 2.7         | 09 |
| 21  | 67           | 1.1                             | 327                               | 0.9                    | 1.02                              | 303                                | B                          | B  |    |            |                             | B  | B          |                          | 65                   | 2.1         | 10 |
| 18.9  | 74           | 0.75                            | 220                               | 1.3                    | 0.96                              | 281                                | B                          | B  |    |            |                             | B  | B          |                          | 58                   | 1.9         | 11 |
| 14.6  | 96           | 0.55                            | 191                               | 1.3                    | 0.73                              | 254                                | B                          | B  |    |            |                             | B  | B          |                          | 53                   | 1.5         | 12 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **M85** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M85** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **M85** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M85** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **M85** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION M85 Oil Quantity 1.20 Lt.

**SHELL** Omala S4 WE 320

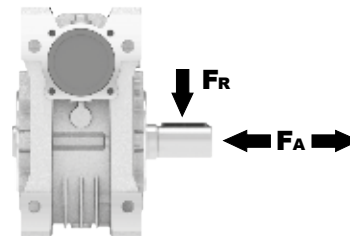
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

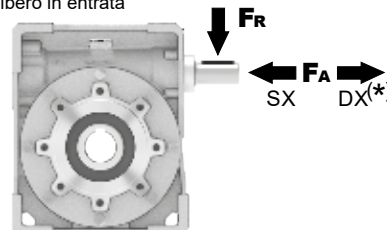
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 500       | 2500      |
| 150                           | 580       | 2900      |
| 100                           | 600       | 3000      |
| 75                            | 700       | 3500      |
| 50                            | 800       | 4000      |
| 25                            | 1000      | 5000      |
| 15                            | 1160      | 5800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 130       | 650       |

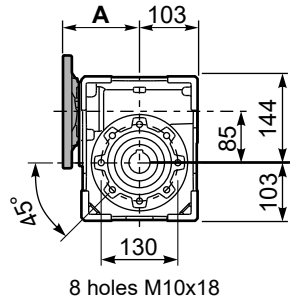
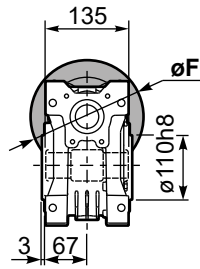
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2



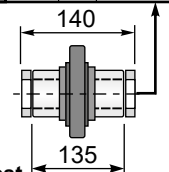
PM85**FB**... Basic wormbox  
Riduttore base

| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 116.5 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 118.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 127.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 118.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 118.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 127.5 |



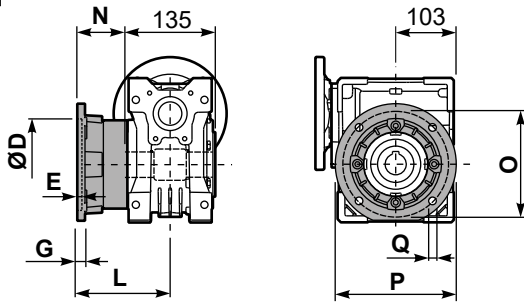
Gearbox weight  
peso riduttore **12.1 kg**

| ø H8                    | B    | C  | *Spacer code |
|-------------------------|------|----|--------------|
| <b>35</b><br>Standard   | 38.3 | 10 | KM85.3.035   |
| <b>38</b><br>on request | 41.3 | 10 | KM85.3.038   |



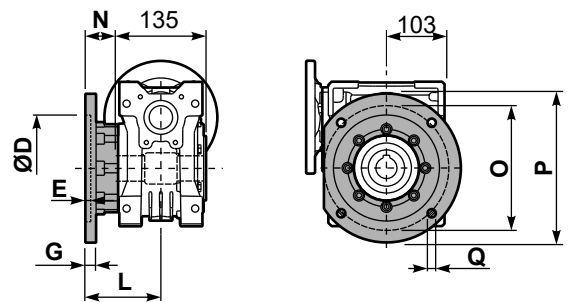
\*On Request  
output shaft with spacers

PM85**FC**... Output flange  
Flangia uscita



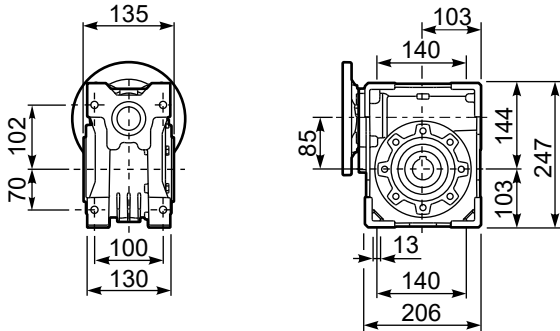
| type B    | øD     | E | G  | L   | N    | O   | P   | Q  | kit code   |
|-----------|--------|---|----|-----|------|-----|-----|----|------------|
| <b>FC</b> | 152 H8 | 5 | 16 | 111 | 43.5 | 176 | 205 | 13 | K085.9.010 |
| <b>FL</b> | 180 H8 | 6 | 18 | 122 | 54.5 | 215 | 250 | 14 | KM85.9.011 |

PM85**F1**... Output flange  
Flangia uscita

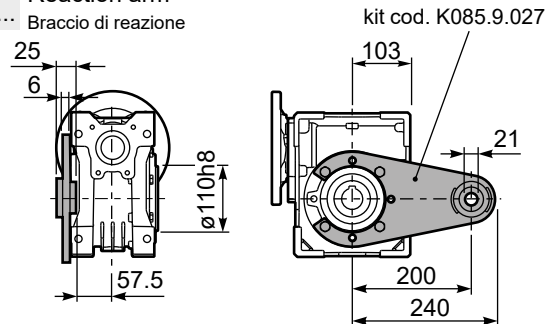


| type S    | øD     | E | G  | L     | N  | O   | P   | Q  | kit code                 |
|-----------|--------|---|----|-------|----|-----|-----|----|--------------------------|
| <b>F1</b> | 130 H8 | 5 | 13 | 109.5 | 42 | 165 | 200 | 13 | KS085.9.015              |
| <b>F2</b> | 152 H8 | 5 | 16 | 151.5 | 84 | 176 | 205 | 13 | K085.9.010<br>K085.0.201 |

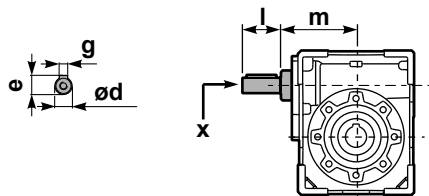
PM85**FB**... Feet  
Piedini



PM85**BR**... Reaction arm  
Braccio di reazione



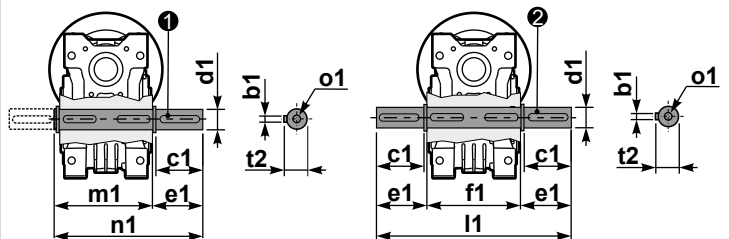
RM85**FB**... Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m   | x     | kit code                                    |
|--------|-------|----|---|----|-----|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 112 | M8x20 | ① K085.5.007 PAM90<br>② K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 112 | M8x20 | ① KS085.5.009 PAM90<br>② KS085.5.011 PAM100 |

PM85...**S**... Single Shaft  
Albero lento semplice

PM85...**D**... Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B

② kit cod. K085.5.029 type B

|        | b1 | c1 | d1                                     | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -                                      | -    | -   | -   | -   | -     | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                          |                      |             |    |
| 200   | 7            | 7.5                             | 315                               | 1.7                    | 13.0                              | 546                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 88                   | 5.5         | 01 |
| 140   | 10           | 7.5                             | 440                               | 1.4                    | 10.1                              | 595                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 86                   | 5.4         | 02 |
| 88  | 16           | 5.5                             | 492                               | 1.3                    | 7.3                               | 650                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 5.3         | 03 |
| 70  | 20           | 4.0                             | 447                               | 1.4                    | 5.7                               | 640                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 4.5         | 04 |
| 61  | 23           | 4.0                             | 502                               | 1.3                    | 5.3                               | 670                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 80                   | 3.9         | 05 |
| 47  | 30           | 4.0                             | 622                               | 1.2                    | 4.7                               | 725                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 76                   | 5.6         | 06 |
| 37  | 38           | 3.0                             | 583                               | 1.2                    | 3.6                               | 698                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 75                   | 4.7         | 07 |
| 31  | 45           | 2.2                             | 493                               | 1.3                    | 2.9                               | 650                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 73                   | 4.0         | 08 |
| 26  | 53           | 2.2                             | 557                               | 1.2                    | 2.6                               | 660                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 70                   | 3.5         | 09 |
| 22  | 64           | 1.5                             | 452                               | 1.4                    | 2.0                               | 612                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 69                   | 2.9         | 10 |
| 16.7  | 84           | 1.1                             | 410                               | 1.3                    | 1.4                               | 515                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 65                   | 2.2         | 11 |
| 14.1  | 99           | 1.1                             | 446                               | 1.1                    | 1.2                               | 483                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 60                   | 1.9         | 12 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit M11 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo M11 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße M11 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type M11 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants.  
S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

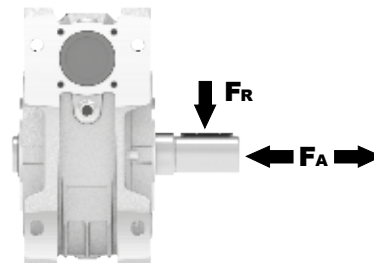
**E** El reductor tamaño M11 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8              | V5      | V6     |
|-----------------------|---------|---------|-----------------|---------|--------|
|                       |         |         |                 |         |        |
| 1.90 LT               | 1.35 LT | 1.35 LT | 2.00LT          | 2.00 LT | 2.00LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |        |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

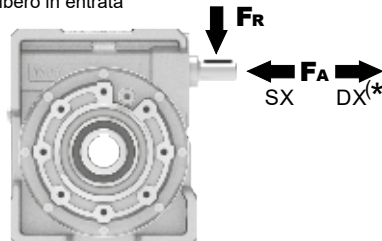
#### \*RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 600       | 2900      |
| 150                           | 700       | 3300      |
| 100                           | 750       | 3600      |
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15                            | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 228       | 1140      |

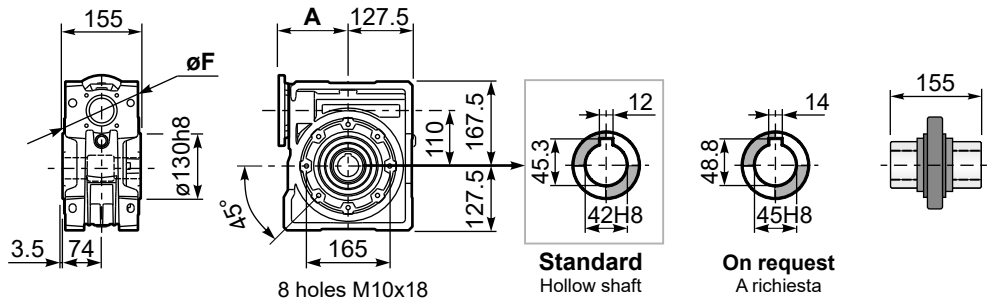
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**PM11FB...** Basic wormbox  
Riduttore base

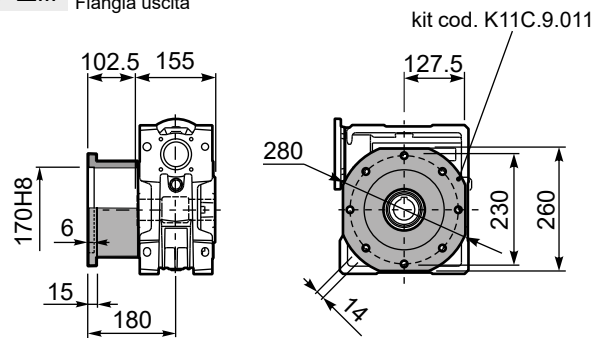
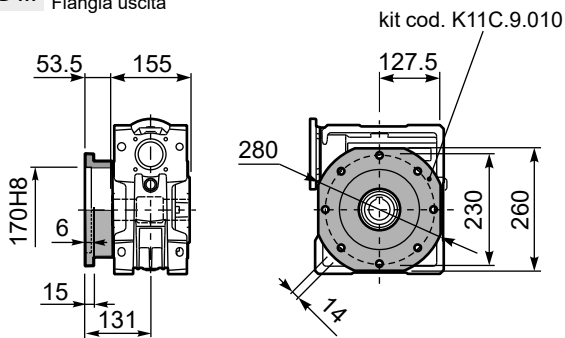
Gearbox weight  
peso riduttore **35.0 kg**

| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 136 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 138 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 147 |
| <b>132B5</b>      | -          | 300 | 187 |
| <b>80B14</b>      | K085.4.046 | 120 | 138 |
| <b>90B14</b>      | K085.4.045 | 140 | 138 |
| <b>100/112B14</b> | K023.4.041 | 160 | 136 |
| <b>132B14</b>     | -          | 200 | 187 |



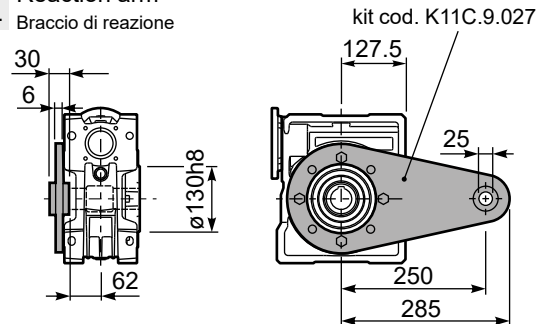
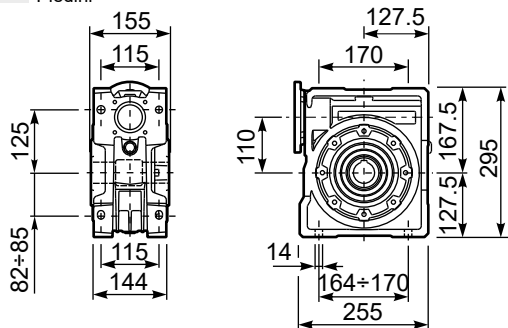
**PM11FC...** Output flange  
Flangia uscita

**PM11FL...** Output flange  
Flangia uscita



**PM11FB...** Feet  
Piedini

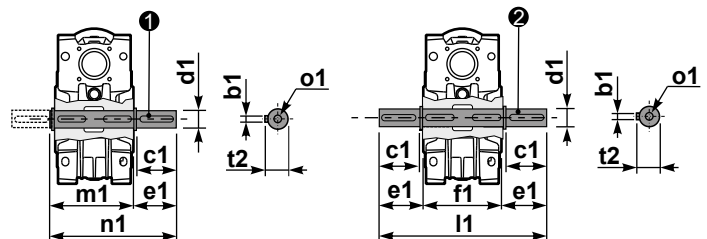
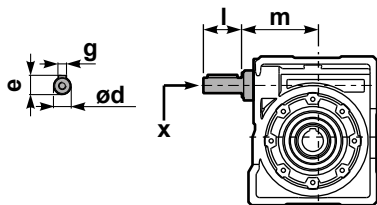
**PM11BR...** Reaction arm  
Braccio di reazione



**RM11FB...** Input shaft  
Albero in entrata

**PM11.....S...** Single Shaft  
Albero lento semplice

**PM11.....D...** Double Shaft  
Albero lento bisp.



① kit cod. K11C.5.028 type B      ② kit cod. K11C.5.029 type B

|        | ød    | e  | g | l  | m     | x     | kit code                                    |
|--------|-------|----|---|----|-------|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 131.5 | M8x20 | ① K085.5.007 PAM90<br>② K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 131.5 | M8x20 | ① KS085.5.009 PAM90<br>② KS085.5.011 PAM100 |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 80 | 42h6 | 84.5 | 155 | 324 | 164.5 | 249 | 45 | M16x28 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |            |     | B14 motor flanges not available |   |   |   | Dynamic efficiency<br><br>RD | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|------------|-----|---------------------------------|---|---|---|------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -E                         | -F         | -G  | -                               | - | - | - |                              |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 90                         | 100<br>112 | 132 | -                               | - | - | - |                              |                          |                 |
| 187   | <b>7.5</b>   | 7.5                             | 345                               | 2.1                    | <b>16.1</b>                       | <b>741</b>                         |                            |            |     |                                 |   |   |   | 90                           | 6.11                     | 01              |
| 140   | <b>10</b>    | 7.5                             | 455                               | 1.8                    | <b>13.5</b>                       | <b>820</b>                         |                            |            |     |                                 |   |   |   | 89                           | 6.45                     | 02              |
| 93  | <b>15</b>    | 7.5                             | 668                               | 1.4                    | <b>10.3</b>                       | <b>917</b>                         |                            |            |     |                                 |   |   |   | 87                           | 6.72                     | 03              |
| 70  | <b>20</b>    | 7.5                             | 870                               | 1.0                    | <b>7.8</b>                        | <b>905</b>                         |                            |            |     |                                 |   |   |   | 85                           | 5.24                     | 04              |
| 56  | <b>25</b>    | 5.5                             | 788                               | 1.2                    | <b>6.5</b>                        | <b>931</b>                         |                            |            |     |                                 |   |   |   | 84                           | 4.28                     | 05              |
| 46.7  | <b>30</b>    | 5.5                             | 900                               | 1.2                    | <b>6.4</b>                        | <b>1047</b>                        |                            |            |     |                                 |   |   |   | 80                           | 6.91                     | 06              |
| 35  | <b>40</b>    | 4.0                             | 851                               | 1.2                    | <b>4.9</b>                        | <b>1043</b>                        |                            |            |     |                                 |   |   |   | 78                           | 5.36                     | 07              |
| 28  | <b>50</b>    | 4.0                             | 1023                              | 0.9                    | <b>3.8</b>                        | <b>972</b>                         |                            |            |     |                                 |   |   |   | 75                           | 4.35                     | 08              |
| 23.3  | <b>60</b>    | 3.0                             | 896                               | 1.0                    | <b>3.1</b>                        | <b>928</b>                         |                            |            |     |                                 |   |   |   | 73                           | 3.65                     | 09              |
| 17.5  | <b>80</b>    | 2.2                             | 816                               | 1.0                    | <b>2.3</b>                        | <b>853</b>                         |                            |            |     |                                 |   |   |   | 68                           | 2.76                     | 10              |
| 14  | <b>100</b>   | 1.5                             | 655                               | 1.1                    | <b>1.7</b>                        | <b>742</b>                         |                            |            |     |                                 |   |   |   | 64                           | 2.23                     | 11              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **M13** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M13** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **M13** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M13** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

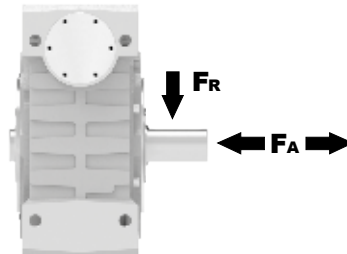
**E** El reductor tamaño **M13** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |           |           |                 |           |           |
|-----------------------|-----------|-----------|-----------------|-----------|-----------|
|                       |           |           |                 |           |           |
| <b>B3</b>             | <b>B6</b> | <b>B7</b> | <b>B8</b>       | <b>V5</b> | <b>V6</b> |
| 4.50 LT               | 3.50 LT   | 3.50 LT   | 3.30LT          | 4.50 LT   | 3.30LT    |
| SHELL Omala S2 GX 460 |           |           | ENI Blasias 460 |           |           |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

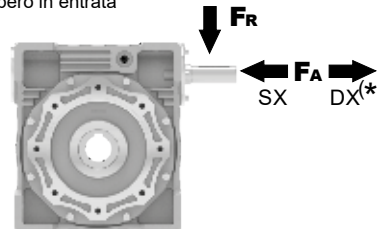
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>200</b>                    | 960       | 4800      |
| <b>150</b>                    | 1100      | 5500      |
| <b>100</b>                    | 1240      | 6200      |
| <b>75</b>                     | 1380      | 6900      |
| <b>50</b>                     | 1560      | 7800      |
| <b>25</b>                     | 2000      | 10000     |
| <b>15</b>                     | 2400      | 12000     |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 300       | 1500      |

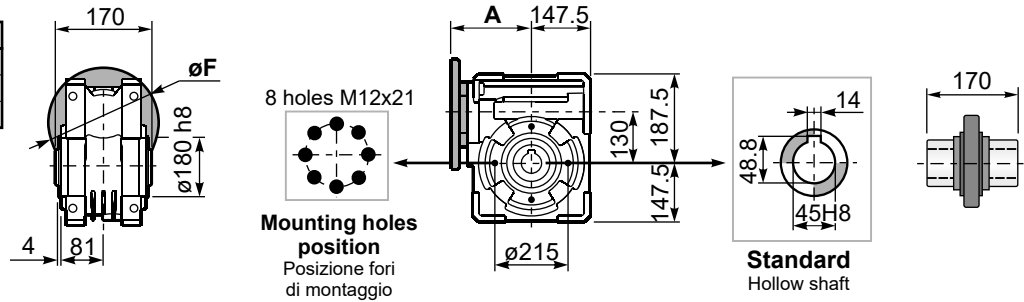
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

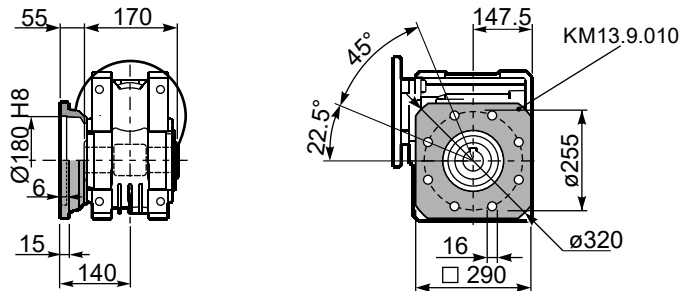
PM13**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **48.0 kg**

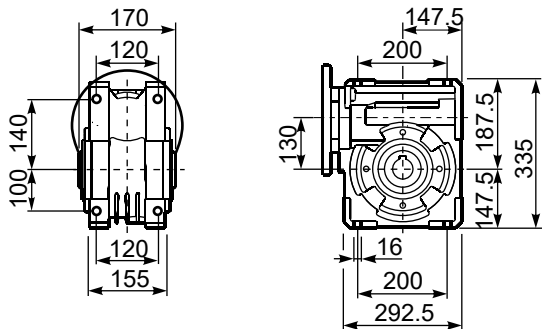
| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 90B5       | KM13.4.041 | 200 | 180 |
| 100/112B5  | KM13.4.042 | 250 | 180 |
| 132B5      | KM13.4.043 | 300 | 180 |



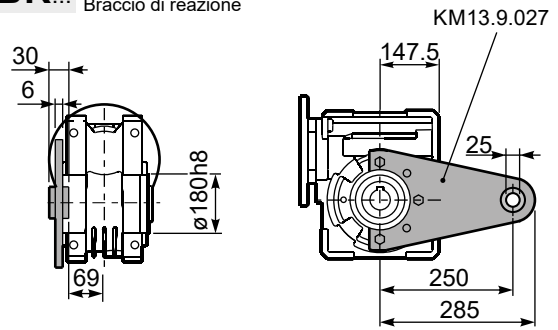
PM13**FC**... Square flange  
Flangia quadrata



PM13**FB**... Feet  
Piedini

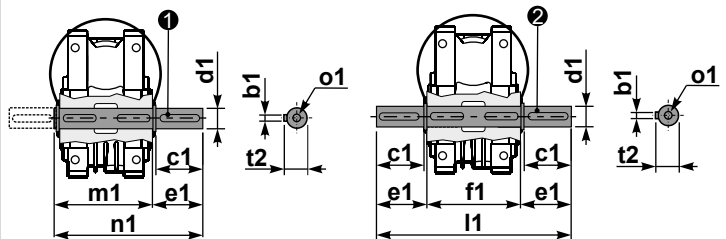


PM13**BR**... Reaction arm  
Braccio di reazione



PM13....**S**... Single Shaft  
Albero lento semplice

PM13....**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM13.5.028 type B

② kit cod. KM13.5.029 type B

|      | b1 | c1 | d1                                     | e1 | f1  | l1  | m1  | n1  | t2   | o1  |
|------|----|----|--|----|-----|-----|-----|-----|------|-----|
| type | 14 | 80 | 45 <sup>-0.005</sup> <sub>-0.020</sub> | 85 | 170 | 340 | 180 | 265 | 48.5 | M16 |
| type | -  | -  | -                                      | -  | -   | -   | -   | -   | -    | -   |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     |     | B14 motor flanges not available |   |   |   | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|-----|---------------------------------|---|---|---|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -F                         | -G  | -H  | -                               | - | - | - |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 100                        | 132 | 160 | -                               | - | - | - |                                 |                      |             |
| 187   | <b>7.5</b>   | 15                              | 698                               | 1.7                    | <b>25.8</b>                       | <b>1200</b>                        |                            |     |     |                                 |   |   |   | 91                              | 5.5                  | 01          |
| 140   | <b>10</b>    | 15                              | 921                               | 1.3                    | <b>20.2</b>                       | <b>1240</b>                        |                            |     |     |                                 |   |   |   | 90                              | 6.155                | 02          |
| 93  | <b>15</b>    | 11                              | 990                               | 1.3                    | <b>13.9</b>                       | <b>1250</b>                        |                            |     |     |                                 |   |   |   | 88                              | 5.5                  | 03          |
| 70  | <b>20</b>    | 11                              | 1291                              | 1.0                    | <b>11.1</b>                       | <b>1300</b>                        |                            |     |     |                                 |   |   |   | 86                              | 6.155                | 04          |
| 56  | <b>25</b>    | 9                               | 1289                              | 0.9                    | <b>8.4</b>                        | <b>1200</b>                        |                            |     |     |                                 |   |   |   | 84                              | 5                    | 05          |
| 46.7  | <b>30</b>    | 7.5                             | 1274                              | 0.9                    | <b>7.1</b>                        | <b>1200</b>                        |                            |     |     |                                 |   |   |   | 83                              | 4.193                | 06          |
| 35  | <b>40</b>    | 7.5                             | 1596                              | 1.0                    | <b>7.3</b>                        | <b>1550</b>                        |                            |     |     |                                 |   |   |   | 78                              | 6.155                | 07          |
| 28  | <b>50</b>    | 5.5                             | 1426                              | 1.0                    | <b>5.4</b>                        | <b>1400</b>                        |                            |     |     |                                 |   |   |   | 76                              | 5                    | 08          |
| 23.3  | <b>60</b>    | 4                               | 1195                              | 1.1                    | <b>4.2</b>                        | <b>1260</b>                        |                            |     |     |                                 |   |   |   | 73                              | 4.193                | 09          |
| 17.5  | <b>80</b>    | 3                               | 1113                              | 1.0                    | <b>3.1</b>                        | <b>1150</b>                        |                            |     |     |                                 |   |   |   | 68                              | 3.17                 | 10          |
| 14  | <b>100</b>   | 2.2                             | 960                               | 1.0                    | <b>2.3</b>                        | <b>1000</b>                        |                            |     |     |                                 |   |   |   | 64                              | 2.55                 | 11          |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **M15** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **M15** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **M15** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **M15** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

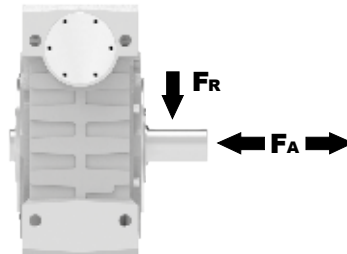
**E** El reductor tamaño **M15** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8              | V5      | V6      |
|-----------------------|---------|---------|-----------------|---------|---------|
|                       |         |         |                 |         |         |
| 7.00 LT               | 5.40 LT | 5.40 LT | 5.10 LT         | 7.00 LT | 5.10 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

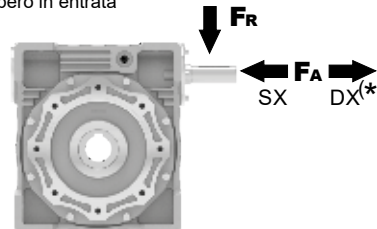
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>200</b>                    | 1300      | 6500      |
| <b>150</b>                    | 1440      | 7200      |
| <b>100</b>                    | 1640      | 8200      |
| <b>75</b>                     | 1800      | 9000      |
| <b>50</b>                     | 2120      | 10600     |
| <b>25</b>                     | 2700      | 13500     |
| <b>15</b>                     | 3300      | 16500     |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 400       | 2000      |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

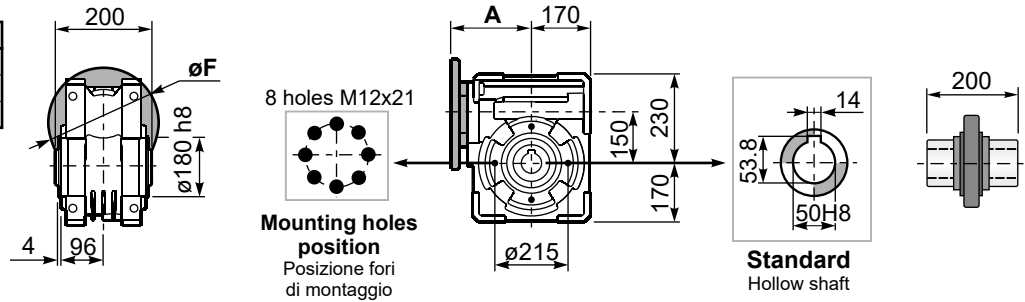
**tab. 2**



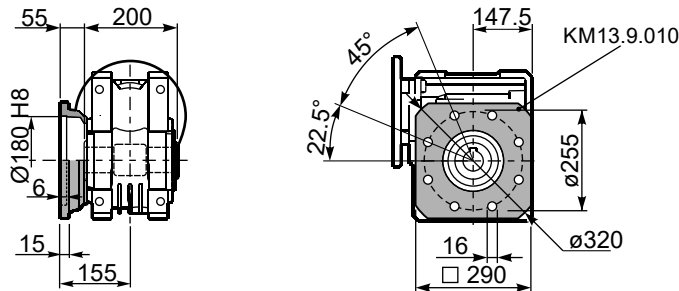
PM15**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **84.0 kg**

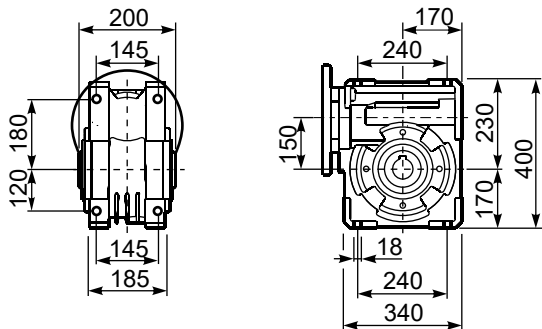
| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 100/112B5  | KM15.4.042 | 250 | 210 |
| 132B5      | KM15.4.043 | 300 | 210 |
| 160B5      | KM15.4.044 | 350 | 210 |



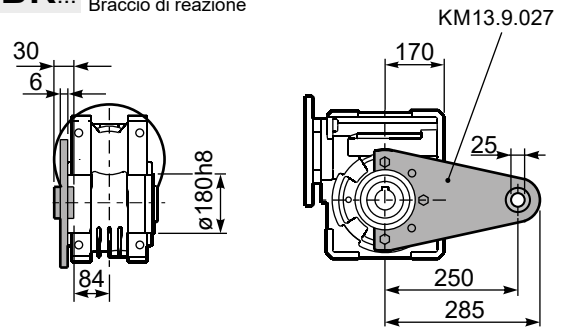
PM15**FC**... Square flange  
Flangia quadrata



PM15**FB**... Feet  
Piedini

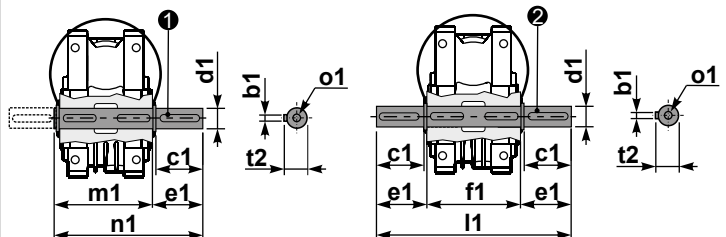


PM15**BR**... Reaction arm  
Braccio di reazione



PM15....**S**... Single Shaft  
Albero lento semplice

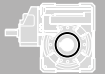
PM15....**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM15.5.028 type B

② kit cod. KM15.5.029 type B

|      | b1 | c1 | d1                                     | e1 | f1  | l1  | m1  | n1  | t2   | o1  |
|------|----|----|--|----|-----|-----|-----|-----|------|-----|
| type | 14 | 82 | 50 <sup>-0.005</sup> <sub>-0.020</sub> | 87 | 200 | 374 | 210 | 297 | 53.5 | M16 |
| type | -  | -  | -                                      | -  | -   | -   | -   | -   | -    | -   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available<br>B5 motor flanges |    |    | Available<br>B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|-------------------------------|----|----|--------------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                            | -B | -C | -P                             | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                            | 63 | 71 | 63                             | 71 |                                 |                          |                 |
| 47  | <b>30.1</b>  | 0.25                            | 38                                | 1.4                    | <b>0.36</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 74                              | 2.2                      | 01              |
| 33  | <b>43.0</b>  | 0.25                            | 53                                | 1.0                    | <b>0.26</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 72                              | 2.2                      | 02              |
| 23  | <b>60.2</b>  | 0.25                            | 62                                | 0.9                    | <b>0.22</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 60                              | 2.4                      | 03              |
| 15.5  | <b>90.3</b>  | 0.12                            | 42                                | 1.3                    | <b>0.16</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 57                              | 1.6                      | 04              |
| 11.6  | <b>120</b>   | 0.12                            | 52                                | 1.1                    | <b>0.13</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 53                              | 2.5                      | 05              |
| 8.8   | <b>159</b>   | 0.12                            | 64                                | 0.9                    | <b>0.10</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 49                              | 1.8                      | 06              |
| 7.1   | <b>198</b>   | 0.12*                           | 55                                | <0.8                   | <b>0.09</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 47                              | 1.5                      | 07              |
| 5.4   | <b>258</b>   | 0.12*                           | 55                                | <0.8                   | <b>0.07</b>                       | <b>55</b>                          |                               |    |    | <b>C</b>                       |    | 45                              | 1.2                      | 08              |
| 4.7   | <b>301</b>   | 0.12*                           | 39                                | <0.8                   | <b>0.05</b>                       | <b>39</b>                          |                               |    |    | <b>C</b>                       |    | 40                              | 1.0                      | 09              |
| 3.2   | <b>439</b>   | 0.12*                           | 39                                | <0.8                   | <b>0.04</b>                       | <b>39</b>                          |                               |    |    | <b>C</b>                       |    | 36                              | 0.72                     | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **P4M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P4M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P4M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P4M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P4M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P4M Oil**  
Common lubrication 0.17 l (A + B).

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 240       | 1200      |
| 50                            | 260       | 1400      |
| 25                            | 300       | 1800      |
| 15-6                          | 400       | 2000      |

**Input shaft**  
albero in entrata

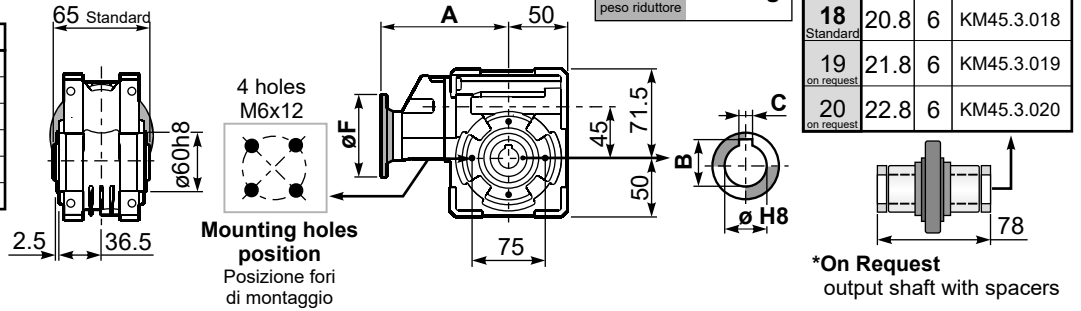
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 44        | 220       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

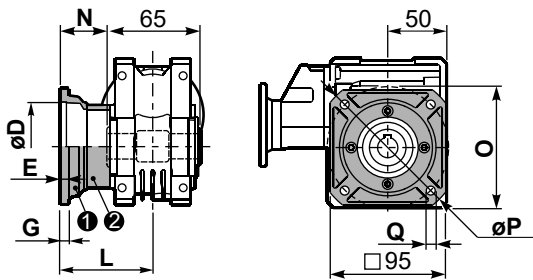
**tab. 2**

**PP4MFB...** Basic wormbox  
Riduttore base

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 56B5       | K050.4.046 | 120 | 143.5 |
| 63B5       | K050.4.041 | 138 | 145.5 |
| 71B5       | K050.4.042 | 160 | 143   |
| 63B14      | K050.4.047 | 90  | 145.5 |
| 71B14      | K050.4.045 | 105 | 143   |

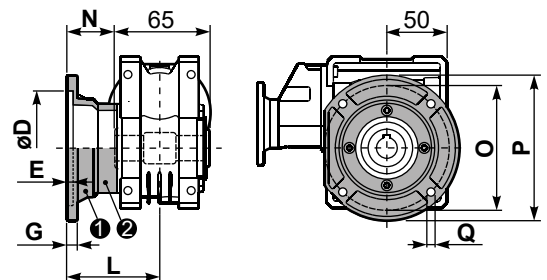


**PP4MFC...** Square flange  
Flangia quadrata



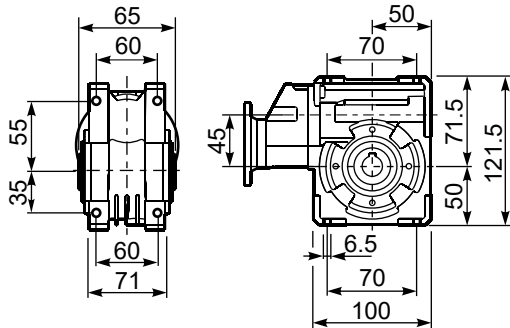
| type B | øD    | E | G | L  | N    | O  | P   | Q | kit code   |
|--------|-------|---|---|----|------|----|-----|---|------------|
| FC     | 60 H8 | 4 | 7 | 67 | 34.5 | 75 | 110 | 9 | KM45.9.010 |
| FL     | 60 H8 | 4 | 7 | 97 | 64.5 | 75 | 110 | 9 | KM45.9.011 |

**PP4MF1...** Round flange  
Flangia rotonda

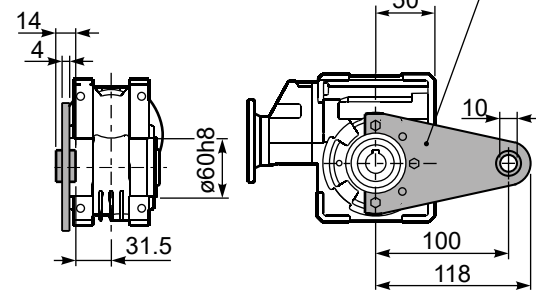


| type S | øD   | E | G | L  | N    | O   | P   | Q   | kit code   |
|--------|------|---|---|----|------|-----|-----|-----|------------|
| F1     | 95H8 | 5 | 9 | 80 | 47.5 | 115 | 140 | 9.5 | KM45.9.012 |
| F2     | -    | - | - | -  | -    | -   | -   | -   | -          |

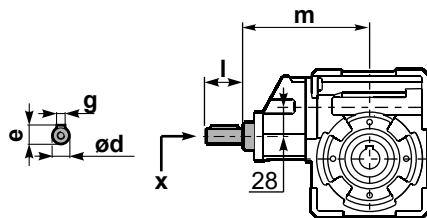
**PP4MFB...** Feet  
Piedini



**PP4MBR...** Reaction arm  
Braccio di reazione

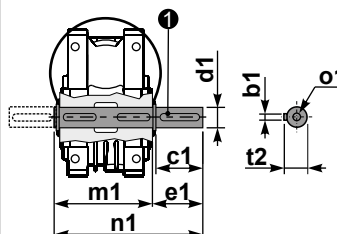


**RP4MFB...** Input shaft  
Albero in entrata

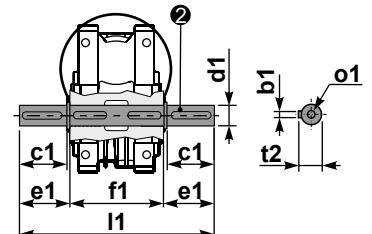


|        | ød    | e  | g | l  | m   | x     |           |
|--------|-------|----|---|----|-----|-------|-----------|
| type B | 14 h6 | 16 | 5 | 25 | 141 | M5x13 | C35.5.061 |
| type S | -     | -  | - | -  | -   | -     | -         |

**PP4M....S...** Single Shaft  
Albero lento semplice



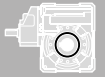
**PP4M....D...** Double Shaft  
Albero lento bisp.



① kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S

② kit cod. K045.5.029 type B

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> <sub>-0.020</sub> | 58.5 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available<br>B5 motor flanges |    |    | Available<br>B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|-------------------------------|----|----|--------------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                            | -B | -C | -P                             | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                            | 63 | 71 | 63                             | 71 |                                 |                          |                 |
| 47  | <b>30.1</b>  | 0.37                            | 58                                | 1.3                    | <b>0.49</b>                       | 77                                 |                               |    |    | <b>C</b>                       |    | 76                              | 2.5                      | 01              |
| 33  | <b>43.0</b>  | 0.25                            | 55                                | 1.4                    | <b>0.35</b>                       | 77                                 |                               |    |    | <b>C</b>                       |    | 75                              | 2.4                      | 02              |
| 23  | <b>60.2</b>  | 0.25                            | 71                                | 1.1                    | <b>0.27</b>                       | 77                                 |                               |    |    | <b>C</b>                       |    | 69                              | 2.6                      | 03              |
| 18.1  | <b>77.4</b>  | 0.25                            | 81                                | 1.1                    | <b>0.27</b>                       | 88                                 |                               |    |    | <b>C</b>                       |    | 61                              | 2.0                      | 04              |
| 12.5  | <b>112</b>   | 0.18                            | 84                                | 1.1                    | <b>0.19</b>                       | 88                                 |                               |    |    | <b>C</b>                       |    | 61                              | 2.7                      | 05              |
| 9.0   | <b>155</b>   | 0.12                            | 71                                | 1.2                    | <b>0.15</b>                       | 88                                 |                               |    |    | <b>C</b>                       |    | 56                              | 2.1                      | 06              |
| 7.6   | <b>185</b>   | 0.12                            | 74                                | 1.0                    | <b>0.12</b>                       | 77                                 |                               |    |    | <b>C</b>                       |    | 49                              | 1.8                      | 07              |
| 5.4   | <b>258</b>   | 0.12*                           | 77                                | <0.8                   | <b>0.09</b>                       | 77                                 |                               |    |    | <b>C</b>                       |    | 47                              | 1.3                      | 08              |
| 4.8   | <b>292</b>   | 0.12*                           | 66                                | <0.8                   | <b>0.08</b>                       | 66                                 |                               |    |    | <b>C</b>                       |    | 44                              | 1.2                      | 09              |
| 4.1   | <b>344</b>   | 0.12*                           | 44                                | <0.8                   | <b>0.05</b>                       | 44                                 |                               |    |    | <b>C</b>                       |    | 40                              | 1.0                      | 10              |
| 3.3   | <b>430</b>   | 0.12*                           | 44                                | <0.8                   | <b>0.04</b>                       | 44                                 |                               |    |    | <b>C</b>                       |    | 36                              | 0.8                      | 11              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **P5M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P5M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.  
Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P5M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P5M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P5M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P5M Oil** **A** **B**  
Common lubrication 0.26 l (A + B).

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**RADIAL AND AXIAL LOADS**

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| 75                            | 340          | 1700         |
| 50                            | 380          | 1900         |
| 25                            | 480          | 2500         |
| 15-6                          | 560          | 2800         |

**Input shaft**  
albero in entrata

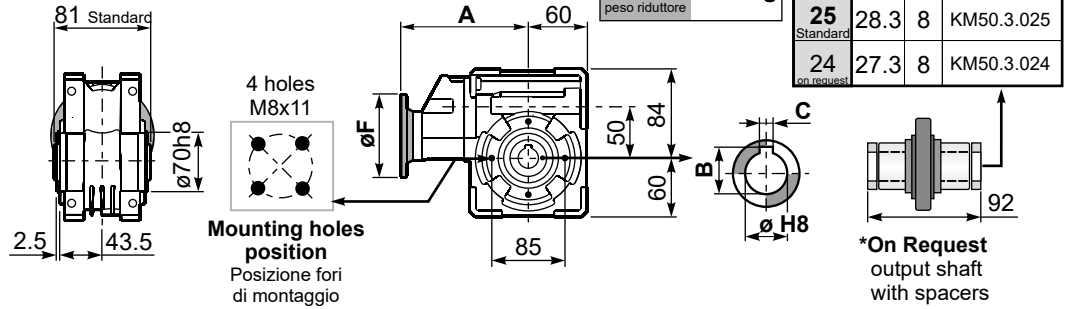
| $n_1$<br>[min <sup>-1</sup> ] | $F_A$<br>[N] | $F_R$<br>[N] |
|-------------------------------|--------------|--------------|
| 1400                          | 44           | 220          |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

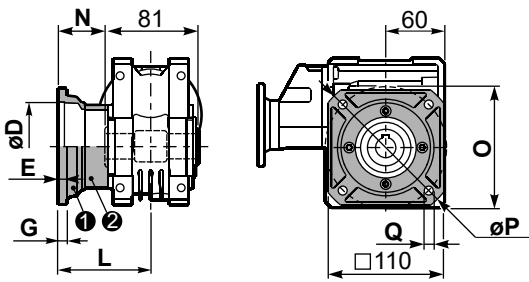
**tab. 2**

**PP5MFB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>56B5</b>  | K050.4.046 | 120 | 147   |
| <b>63B5</b>  | K050.4.041 | 138 | 149   |
| <b>71B5</b>  | K050.4.042 | 160 | 146.5 |
| <b>63B14</b> | K050.4.047 | 90  | 149   |
| <b>71B14</b> | K050.4.045 | 105 | 146.5 |

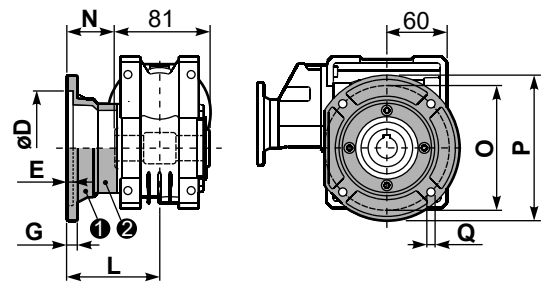


**PP5MFC...** Square flange  
Flangia quadrata



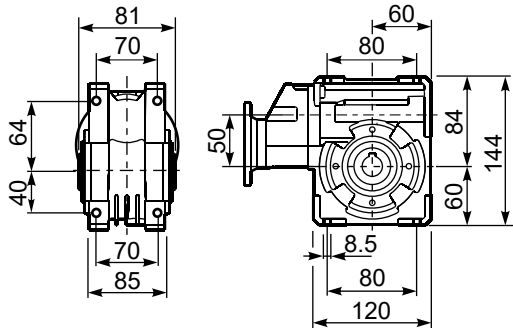
| type B    | øD    | E | G | L   | N    | O  | P   | Q  | kit code   |
|-----------|-------|---|---|-----|------|----|-----|----|------------|
| <b>FC</b> | 70 H8 | 5 | 9 | 90  | 49.5 | 85 | 125 | 11 | KM50.9.010 |
| <b>FL</b> | 70 H8 | 5 | 9 | 120 | 79.5 | 85 | 125 | 11 | KM50.9.011 |

**PP5MF1...** Round flange  
Flangia rotonda

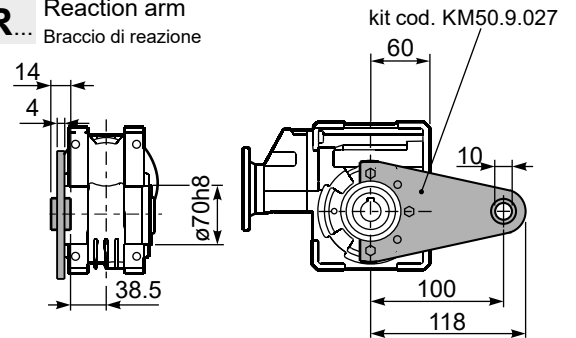


| type S    | øD     | E | G    | L  | N    | O   | P   | Q   | kit code   |
|-----------|--------|---|------|----|------|-----|-----|-----|------------|
| <b>F1</b> | 110 H8 | 5 | 10   | 89 | 69.5 | 130 | 160 | 9.5 | KM50.9.012 |
| <b>F2</b> | 95 H8  | 5 | 14.5 | 72 | 31.5 | 115 | 140 | 11  | KM50.9.013 |

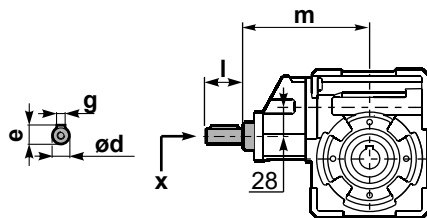
**PP5MFB...** Feet  
Piedini



**PP5MBR...** Reaction arm  
Braccio di reazione

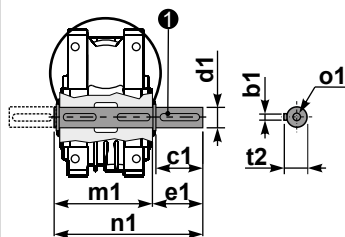


**RP5MFB...** Input shaft  
Albero in entrata

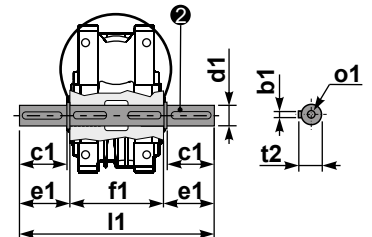


| type          | ød    | e  | g | l  | m     | x     | kit code  |
|---------------|-------|----|---|----|-------|-------|-----------|
| <b>type B</b> | 14 h6 | 16 | 5 | 25 | 140.5 | M5x13 | C35.5.061 |
| <b>type S</b> | -     | -  | - | -  | -     | -     | -         |

**PP5M....S...** Single Shaft  
Albero lento semplice



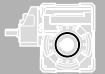
**PP5M....D...** Double Shaft  
Albero lento bisp.



① kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S

② kit cod. K050.5.029 type B

| type          | b1 | c1 | d1                                     | e1   | f1 | l1  | m1   | n1  | t2 | o1    |
|---------------|----|----|--|------|----|-----|------|-----|----|-------|
| <b>type B</b> | 8  | 52 | 25 <sup>-0.005</sup> <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| <b>type S</b> | 8  | 50 | 24 <sup>-0.005</sup> <sub>-0.020</sub> | 68.8 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

|                  | Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|------------------|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|----|---------------------------------|----------------------|-------------|
|                  |   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -P                          | -Q | -R | -T |                                 |                      |             |
|                  |   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 63                          | 71 | 80 | 90 |                                 |                      |             |
| IEC 90 - 80 - 71 | 47  | <b>29.9</b>  | 0.75                            | 113                               | 1.5                    | <b>1.1</b>                        | <b>165</b>                         |                            |    |    |    |                             | C  | C  |    | 74                              | 2.6                  | 01          |
|                  | 37  | <b>37.7</b>  | 0.75                            | 141                               | 1.2                    | <b>0.88</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  | C  |    | 73                              | 2.0                  | 02          |
|                  | 30  | <b>47.1</b>  | 0.75                            | 169                               | 1.1                    | <b>0.83</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 70                              | 3.2                  | 03          |
|                  | 25  | <b>56.6</b>  | 0.55                            | 136                               | 1.4                    | <b>0.76</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 64                              | 2.7                  | 04          |
|                  | 19.8  | <b>70.7</b>  | 0.55                            | 164                               | 1.1                    | <b>0.63</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 62                              | 2.1                  | 05          |
|                  | 15.9  | <b>87.8</b>  | 0.37                            | 162                               | 1.2                    | <b>0.43</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 73                              | 2.6                  | 06          |
|                  | 12.6  | <b>111.0</b> | 0.37                            | 199                               | 0.9                    | <b>0.35</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  | C  |    | 71                              | 2.0                  | 07          |
| IEC 71 - 63      | 10.1  | <b>139</b>   | 0.37                            | 234                               | 0.8                    | <b>0.30</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  |    |    | 67                              | 3.2                  | 08          |
|                  | 8.4   | <b>166</b>   | 0.25                            | 173                               | 1.1                    | <b>0.27</b>                       | <b>187</b>                         |                            |    |    |    |                             | C  |    |    | 61                              | 2.7                  | 09          |
|                  | 6.7   | <b>208</b>   | 0.18                            | 151                               | 1.1                    | <b>0.20</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 59                              | 2.1                  | 10          |
|                  | 4.5   | <b>310</b>   | 0.12                            | 129                               | 1.3                    | <b>0.15</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 51                              | 1.5                  | 11          |
|                  | 3.8   | <b>370</b>   | 0.12                            | 145                               | 1.1                    | <b>0.14</b>                       | <b>165</b>                         |                            |    |    |    |                             | C  |    |    | 48                              | 1.3                  | 12          |
|                  | 3.2   | <b>434</b>   | 0.12                            | 149                               | 0.9                    | <b>0.11</b>                       | <b>138</b>                         |                            |    |    |    |                             | C  |    |    | 42                              | 1.1                  | 13          |

Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **P6M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P6M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P6M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P6M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P6M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P6M Oil**

For B3-V5-V6 separate lubrication for A (0.30 l) B (0.08 l), for B6-B7-B8 common lubrication 0.35 l (A + B).

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>75</b>                     | 500       | 2500      |
| <b>50</b>                     | 600       | 3000      |
| <b>25</b>                     | 700       | 3800      |
| <b>15-6</b>                   | 800       | 4000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 61        | 305       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

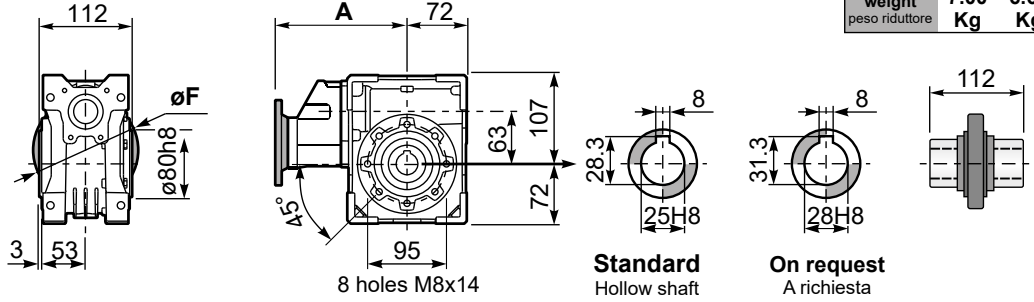
**tab. 2**



PP6M**FB**... Basic wormbox  
Riduttore base

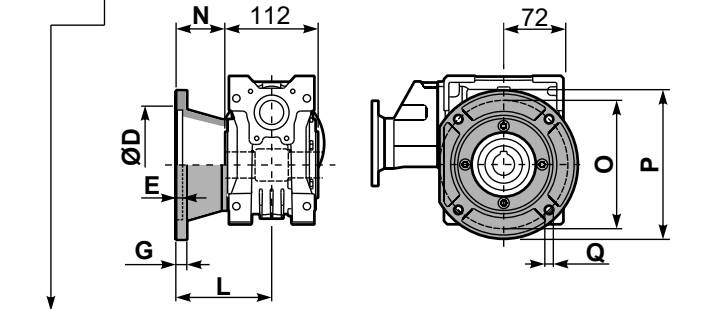
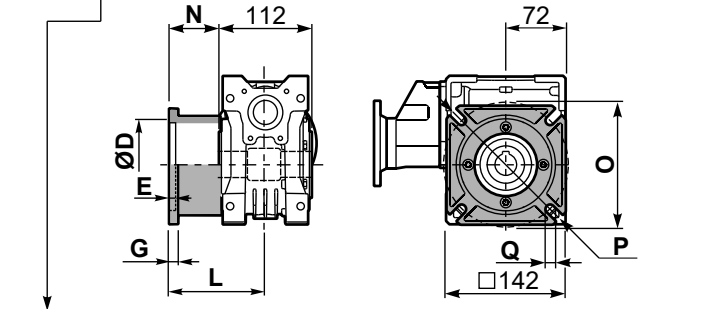
|                                  |          |         |
|----------------------------------|----------|---------|
| Gearbox weight<br>peso riduttore | 29.9+111 | 139+434 |
|                                  | 7.00 Kg  | 6.60 Kg |

| M.flange       | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| 71B5           | K063.4.042 | 160 | 177.5 |
| 80/90B5        | K063.4.043 | 200 | 179.5 |
| 71B14          | K063.4.047 | 105 | 177.5 |
| 80B14          | K063.4.046 | 120 | 179.5 |
| 90B14          | K063.4.041 | 140 | 179.5 |
| <b>139+434</b> |            |     |       |
| 63B5           | K050.4.041 | 138 | 163.5 |
| 71B5           | K050.4.042 | 160 | 161   |
| 63B14          | K050.4.047 | 90  | 163.5 |
| 71B14          | K050.4.045 | 105 | 161   |



PP6M**FC**... Output flange  
Flangia uscita

PP6M**F1**... Output flange  
Flangia uscita



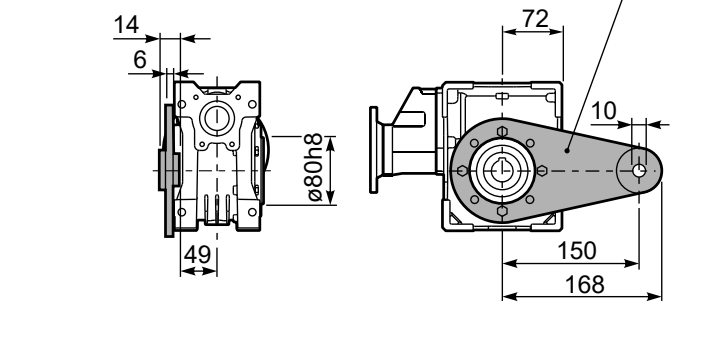
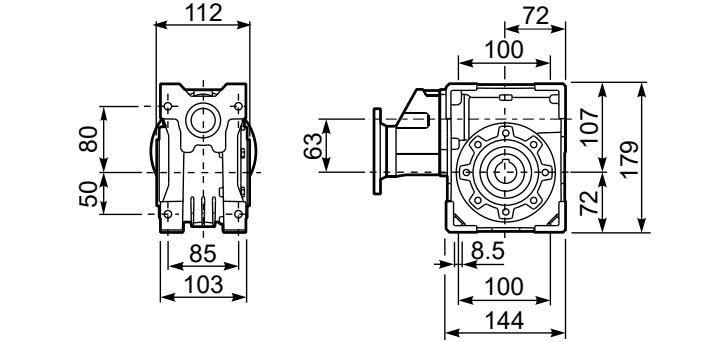
| type B | øD     | E | G  | L   | N  | O   | P   | Q  | kit code   |
|--------|--------|---|----|-----|----|-----|-----|----|------------|
| FC     | 115 H8 | 6 | 10 | 82  | 26 | 150 | 180 | 11 | KM63.9.010 |
| FL     | 115 H8 | 6 | 10 | 112 | 56 | 150 | 180 | 11 | KM63.9.011 |

| type S | øD     | E | G    | L    | N    | O   | P   | Q  | kit code   |
|--------|--------|---|------|------|------|-----|-----|----|------------|
| F1     | 130 H8 | 5 | 10   | 98   | 42   | 165 | 200 | 11 | KM63.9.012 |
| F2     | 130 H8 | 5 | 10   | 107  | 51   | 165 | 200 | 11 | KM63.9.013 |
| F3     | 110 H8 | 5 | 16.5 | 80.5 | 24.5 | 130 | 160 | 11 | KM63.9.014 |

PP6M**FB**... Feet  
Piedini

PP6M**BR**... Reaction arm  
Braccio di reazione

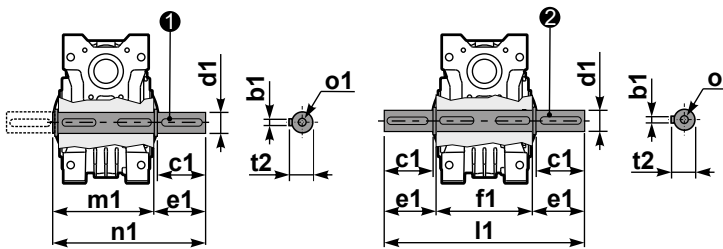
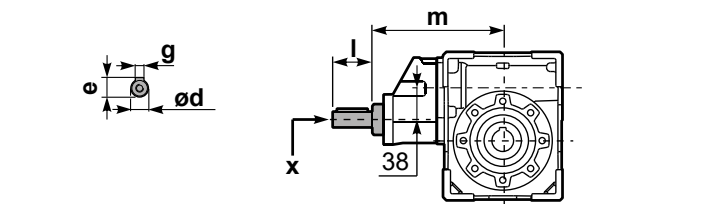
kit cod. KM63.9.027



RP6M**F**B... Input shaft  
Albero in entrata

PP6M...**S**... Single Shaft  
Albero lento semplice

PP6M...**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM63.5.028 type B      ② kit cod. KM63.5.029 type B

|          | ød    | e    | g | l  | m   | x     | kit code  |
|----------|-------|------|---|----|-----|-------|-----------|
| 29.9+111 | 19 h6 | 21.5 | 6 | 35 | 170 | M6x16 | C40.5.062 |
| 139+434  | 14 h6 | 16   | 5 | 25 | 155 | M5x13 | C35.5.061 |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 8  | 50 | 25h6 | 53.5 | 112 | 219 | 119.5 | 173 | 28 | M10x23 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i  | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|--|-------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|--------------------------|----------------------|-------------|
|  |             |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                          |                      |             |
|  |             |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                          |                      |             |
| 22   | <b>62.9</b> | 0.75                                   | 248                                      | 1.2                    | <b>0.87</b>                              | <b>286</b>                                |                            |    |    |    | C                           | C  |    | 77                       | 3.10                 | 01          |
| 18   | <b>78.5</b> | 0.75                                   | 293                                      | 1.0                    | <b>0.73</b>                              | <b>286</b>                                |                            |    |    |    | C                           | C  |    | 73                       | 2.41                 | 02          |
| 15   | <b>94.2</b> | 0.75                                   | 333                                      | 0.9                    | <b>0.70</b>                              | <b>310</b>                                |                            |    |    |    | C                           | C  |    | 69                       | 2.10                 | 03          |
| 11   | <b>126</b>  | 0.55                                   | 297                                      | 1.0                    | <b>0.55</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 63                       | 1.53                 | 04          |
| 9  | <b>157</b>  | 0.37                                   | 230                                      | 1.1                    | <b>0.41</b>                              | <b>252</b>                                | B                          |    |    |    | C                           | C  |    | 58                       | 1.23                 | 05          |
| 8  | <b>185</b>  | 0.37                                   | 257                                      | 1.2                    | <b>0.43</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 55                       | 3.10                 | 06          |
| 6  | <b>231</b>  | 0.25                                   | 193                                      | 1.5                    | <b>0.38</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 49                       | 2.41                 | 07          |
| 5  | <b>277</b>  | 0.25                                   | 222                                      | 1.3                    | <b>0.33</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 47                       | 2.10                 | 08          |
| 4  | <b>378</b>  | 0.18                                   | 200                                      | 1.5                    | <b>0.27</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 43                       | 2.10                 | 09          |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M<sub>2R</sub>  
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M<sub>2R</sub>

**EN** Unit P7M is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo P7M viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

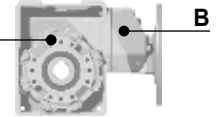
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe P7M mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type P7M est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño P7M se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P7M Oil

For B3-V5-V6 separate lubrication for A (0.40 l) B (0.14 l), for B6-B7-B8 common lubrication 0.65 l (A + B).



SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

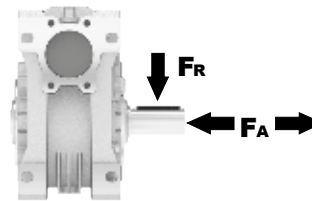
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

#### RADIAL AND AXIAL LOADS

##### Output shaft

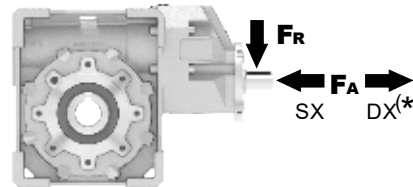
Albero di uscita



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|--|-----------|-----------|
| 75                                     | 620       | 3100      |
| 50                                     | 720       | 3600      |
| 25                                     | 880       | 4400      |
| 15-6                                   | 1000      | 5000      |

##### Input shaft

albero in entrata



| n<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|---------------------------|-----------|-----------|
| 1400                      | 108       | 540       |

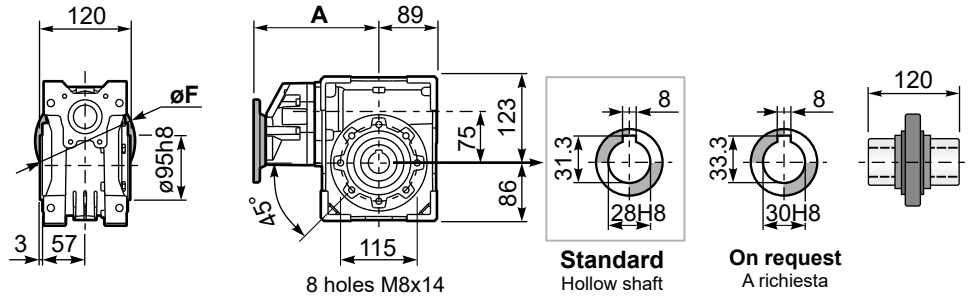
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

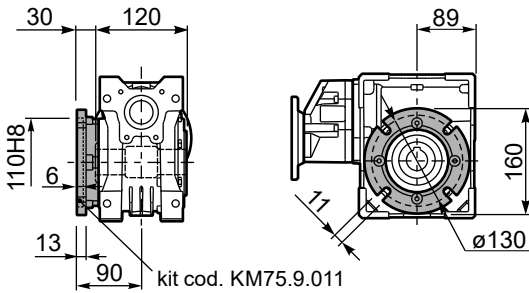
PP7M**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **9.90 kg**

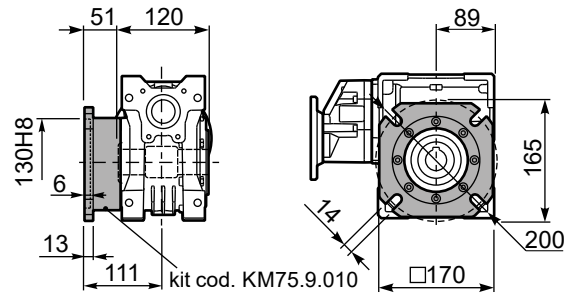
| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 192.7 |
| <b>71B5</b>    | K063.4.042 | 160 | 190.7 |
| <b>80/90B5</b> | K063.4.043 | 200 | 192.7 |
| <b>71B14</b>   | K063.4.047 | 105 | 190.7 |
| <b>80B14</b>   | K063.4.046 | 120 | 192.7 |
| <b>90B14</b>   | K063.4.041 | 140 | 192.7 |



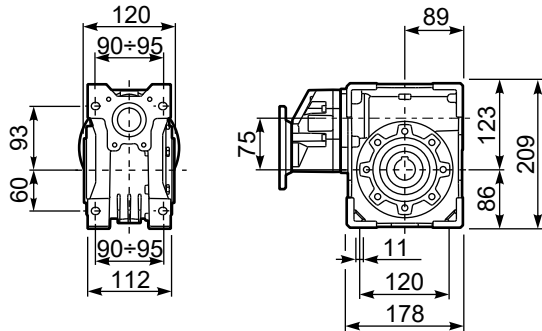
PP7M**FC**... Square flange  
Flangia quadrata



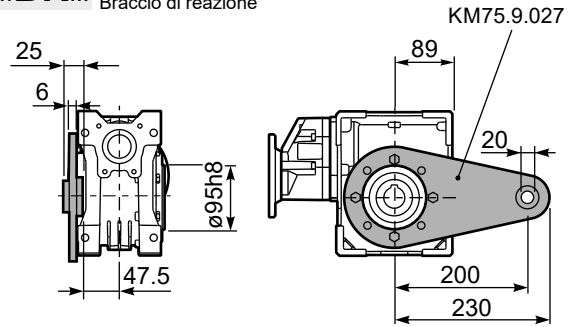
PP7M**FL**... Square flange  
Flangia quadrata



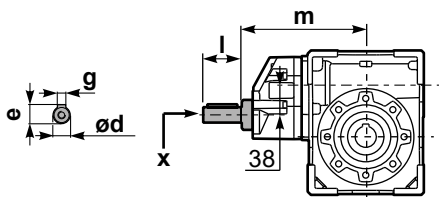
PP7M**FB**... Feet  
Piedini



PP7M**BR**... Reaction arm  
Braccio di reazione

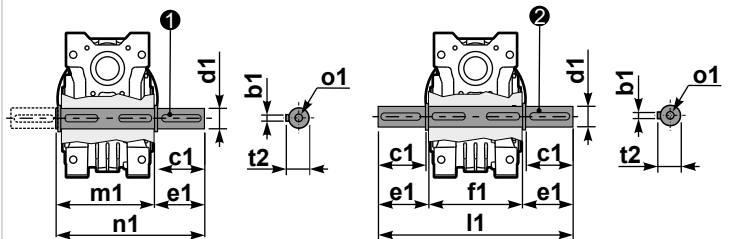


RP7M**FB**... Input shaft  
Albero in entrata



PP7M.....**S**... Single Shaft  
Albero lento semplice

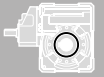
PP7M.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. KM75.5.028 Standard    ② kit cod. KM75.5.029 Standard

|        | ød    | e    | g | l  | m     | x     | kit code  |
|--------|-------|------|---|----|-------|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 185.5 | M6x16 | C40.5.062 |

|            | b1 | c1 | d1    | e1   | f1  | l1  | m1    | n1  | t2 | o1  |
|------------|----|----|-------|------|-----|-----|-------|-----|----|-----|
| Standard   | 8  | 60 | 28 h6 | 63.5 | 120 | 247 | 128.5 | 192 | 31 | M10 |
| On request | -  | -  | -     | -    | -   | -   | -     | -   | -  | -   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                                 |                      |             |
| 23.5  | <b>59.7</b>  | 1.1                             | 300                               | 1.4                    | <b>1.5</b>                        | <b>418</b>                         |                            |    |    |    | C                           | C  |    | 67                              | 3.5                  | 01          |
| 19.4  | <b>72.3</b>  | 1.1                             | 347                               | 1.2                    | <b>1.3</b>                        | <b>407</b>                         |                            |    |    |    | C                           | C  |    | 64                              | 3.1                  | 02          |
| 17.1  | <b>81.7</b>  | 1.1                             | 374                               | 1.1                    | <b>1.2</b>                        | <b>418</b>                         |                            |    |    |    | C                           | C  |    | 61                              | 2.7                  | 03          |
| 13.3  | <b>105</b>   | 0.75                            | 323                               | 1.2                    | <b>0.89</b>                       | <b>385</b>                         |                            |    |    |    | C                           | C  |    | 60                              | 2.1                  | 04          |
| 8.0   | <b>176</b>   | 0.55                            | 415                               | 1.1                    | <b>0.58</b>                       | <b>440</b>                         | B                          |    |    |    | C                           | C  |    | 63                              | 3.5                  | 05          |
| 6.6   | <b>213</b>   | 0.37                            | 322                               | 1.3                    | <b>0.47</b>                       | <b>407</b>                         | B                          |    |    |    | C                           | C  |    | 60                              | 3.1                  | 06          |
| 5.8   | <b>240</b>   | 0.37                            | 321                               | 1.3                    | <b>0.48</b>                       | <b>418</b>                         | B                          |    |    |    | C                           | C  |    | 53                              | 2.7                  | 07          |
| 4.3   | <b>328</b>   | 0.37                            | 438                               | 1.0                    | <b>0.35</b>                       | <b>418</b>                         | B                          |    |    |    | C                           | C  |    | 53                              | 2.7                  | 08          |
| 3.3   | <b>422</b>   | 0.25                            | 374                               | 1.0                    | <b>0.26</b>                       | <b>385</b>                         | B                          |    |    |    | C                           | C  |    | 52                              | 2.1                  | 09          |
| 3.0   | <b>466</b>   | 0.25                            | 358                               | 0.9                    | <b>0.23</b>                       | <b>330</b>                         | B                          |    |    |    | C                           | C  |    | 45                              | 1.9                  | 10          |
| 2.3   | <b>605</b>   | 0.18                            | 297                               | 1.1                    | <b>0.20</b>                       | <b>330</b>                         | B                          |    |    |    | C                           | C  |    | 40                              | 1.5                  | 11          |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **P8M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

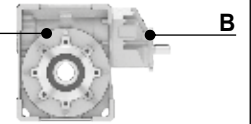
**I** Il riduttore tipo **P8M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P8M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P8M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P8M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P8M Oil**  
For B3-V5-V6 separate lubrication for A ( 1.20 l ) B ( 0.14 l ) , for B6-B7-B8 common lubrication 1.00 l ( A + B ).



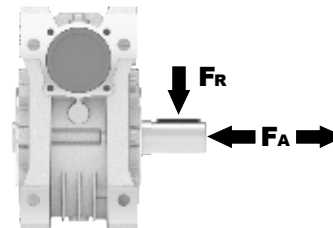
**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

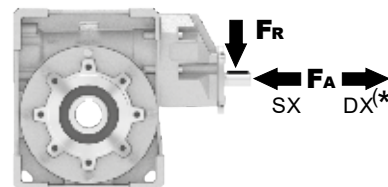
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 700       | 3500      |
| 50                            | 800       | 4000      |
| 25                            | 1000      | 5000      |
| 15-6                          | 1160      | 5800      |

**Input shaft**  
albero in entrata



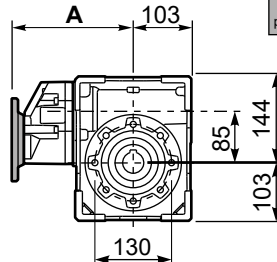
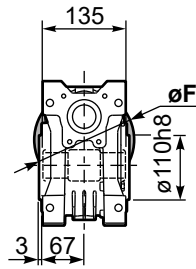
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 108       | 540       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

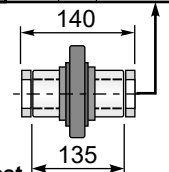
PP8M**FB**... Basic wormbox  
Riduttore base

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 195.2 |
| 71B5       | K063.4.042 | 160 | 193.2 |
| 80/90B5    | K063.4.043 | 200 | 195.2 |
| 71B14      | K063.4.047 | 105 | 193.2 |
| 80B14      | K063.4.046 | 120 | 195.2 |
| 90B14      | K063.4.041 | 140 | 195.2 |



Gearbox weight  
peso riduttore **12.3 kg**

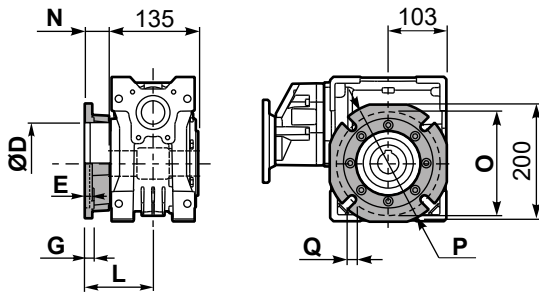
| ø H8             | B    | C  | *Spacer code |
|------------------|------|----|--------------|
| 35<br>Standard   | 38.3 | 10 | KM85.3.035   |
| 38<br>on request | 41.3 | 10 | KM85.3.038   |



8 holes M10x18

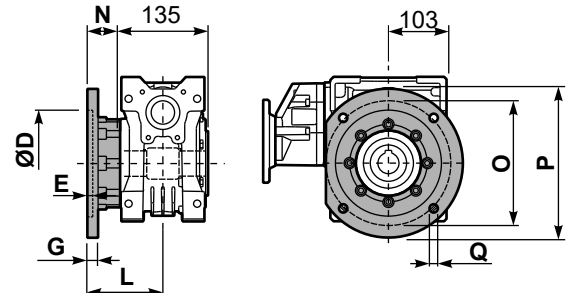
\*On Request  
output shaft with spacers

PP8M**FC**... Output flange  
Flangia uscita



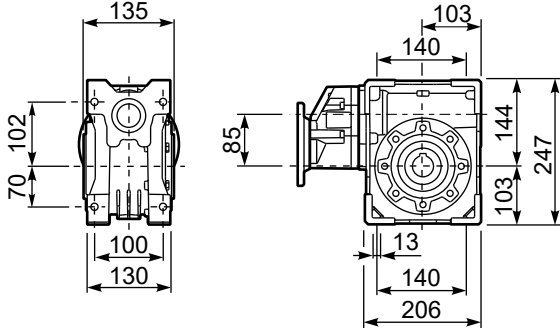
| type B | øD     | E | G  | L   | N    | O   | P   | Q  | kit code   |
|--------|--------|---|----|-----|------|-----|-----|----|------------|
| FC     | 152 H8 | 5 | 16 | 111 | 43.5 | 176 | 205 | 13 | K085.9.010 |
| FL     | 180 H8 | 6 | 18 | 122 | 54.5 | 215 | 250 | 14 | KM85.9.011 |

PP8M**F1**... Output flange  
Flangia uscita

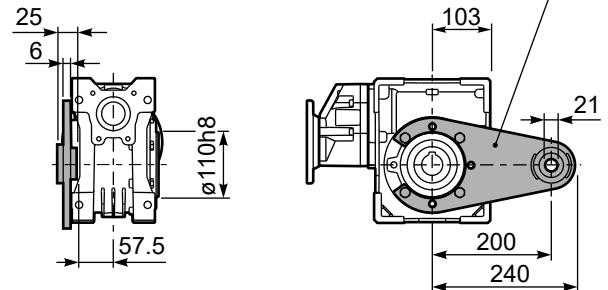


| type S | øD     | E | G  | L     | N  | O   | P   | Q  | kit code                 |
|--------|--------|---|----|-------|----|-----|-----|----|--------------------------|
| F1     | 130 H8 | 5 | 13 | 109.5 | 42 | 165 | 200 | 13 | KS085.9.015              |
| F2     | 152 H8 | 5 | 16 | 151.5 | 84 | 176 | 205 | 13 | K085.9.010<br>K085.0.201 |

PP8M**FB**... Feet  
Piedini

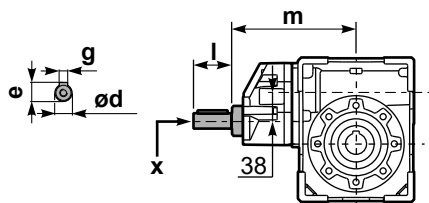


PP8M**BR**... Reaction arm  
Braccio di reazione



kit cod. K085.9.027

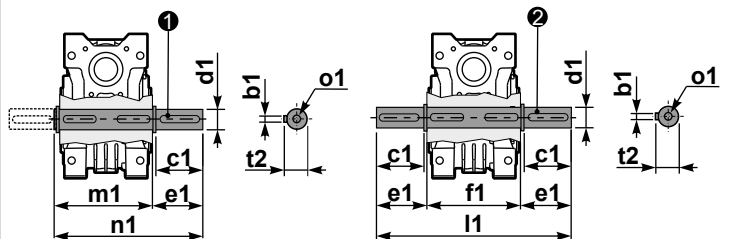
RP8M**FB**... Input shaft  
Albero in entrata



| type B | ød    | e    | g | l  | m   | x     |           |
|--------|-------|------|---|----|-----|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 186 | M6x16 | C40.5.062 |
| type S | -     | -    | - | -  | -   | -     | -         |

PP8M...**S**... Single Shaft  
Albero lento semplice

PP8M...**D**... Double Shaft  
Albero lento bisp.

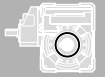


① kit cod. K085.5.028 type B

② kit cod. K085.5.029 type B

| type B | b1 | c1 | d1                                     | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -                                      | -    | -   | -   | -   | -     | -  | -      |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                                 |                          |                 |
| 16.8  | <b>83.2</b>  | 1.5                             | 587                               | 1.1                    | <b>1.7</b>                        | <b>660</b>                         |                            |    |    |    | C                           | C  |    | 69                              | 3.5                      | 01              |
| 13.9  | <b>100.5</b> | 1.5                             | 699                               | 0.8                    | <b>1.3</b>                        | <b>594</b>                         |                            |    |    |    | C                           | C  |    | 68                              | 2.9                      | 02              |
| 10.6  | <b>132</b>   | 1.1                             | 634                               | 0.9                    | <b>0.95</b>                       | <b>550</b>                         |                            |    |    |    | C                           | C  |    | 64                              | 2.2                      | 03              |
| 8.0   | <b>176</b>   | 0.75                            | 666                               | 1.2                    | <b>0.90</b>                       | <b>803</b>                         | B                          |    |    |    | C                           | C  |    | 74                              | 4.7                      | 04              |
| 6.7   | <b>208</b>   | 0.75                            | 766                               | 0.9                    | <b>0.65</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 72                              | 4.0                      | 05              |
| 5.7   | <b>245</b>   | 0.55                            | 634                               | 1.0                    | <b>0.57</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 69                              | 3.5                      | 06              |
| 4.7   | <b>296</b>   | 0.55                            | 755                               | 0.8                    | <b>0.43</b>                       | <b>594</b>                         | B                          |    |    |    | C                           | C  |    | 68                              | 2.9                      | 07              |
| 4.2   | <b>334</b>   | 0.55                            | 865                               | 0.8                    | <b>0.42</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 69                              | 3.5                      | 08              |
| 3.5   | <b>403</b>   | 0.37                            | 692                               | 0.9                    | <b>0.32</b>                       | <b>594</b>                         | B                          |    |    |    | C                           | C  |    | 68                              | 2.9                      | 09              |
| 2.6   | <b>529</b>   | 0.25                            | 577                               | 1.0                    | <b>0.24</b>                       | <b>550</b>                         | B                          |    |    |    | C                           | C  |    | 64                              | 2.2                      | 10              |
| 2.2   | <b>624</b>   | 0.25                            | 628                               | 0.8                    | <b>0.21</b>                       | <b>528</b>                         | B                          |    |    |    | C                           | C  |    | 59                              | 1.9                      | 11              |

Motor Flanges Available  
Flange Motore Disponibili

B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **P1M** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. Primary reduction unit is supplied with closed plugs and lubricated for life with synthetic oil. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P1M** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. La precoppia è fornita con tappi chiusi e lubrificata a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **P1M** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Die Stirnradvorstufe ist Lebensdauergeschmiert und wird mit synthetischem Öl geliefert. Die Stirnradvorstufe ist komplett geschlossen ohne Füllschrauben. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P1M** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le pré couple est fourni lubrifié à vie avec de l'huile synthétique et avec des bouchons fermés. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **P1M** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

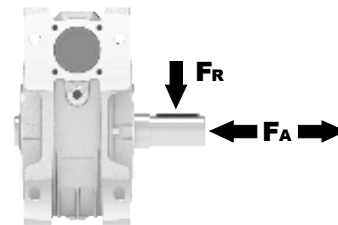
| B3                    | B6           | B7           | B8              | V5          | V6          |
|-----------------------|--------------|--------------|-----------------|-------------|-------------|
|                       |              |              |                 |             |             |
| 1.9/0.14LT            | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT     | 2.0/0.14 LT | 2.0/0.14 LT |
| SHELL Omala S2 GX 460 |              |              | ENI Blasias 460 |             |             |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

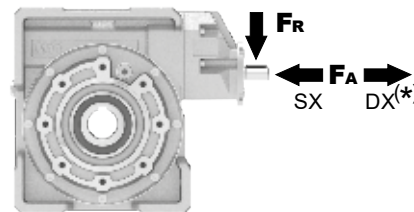
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15-6                          | 1400      | 7000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 150       | 760       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

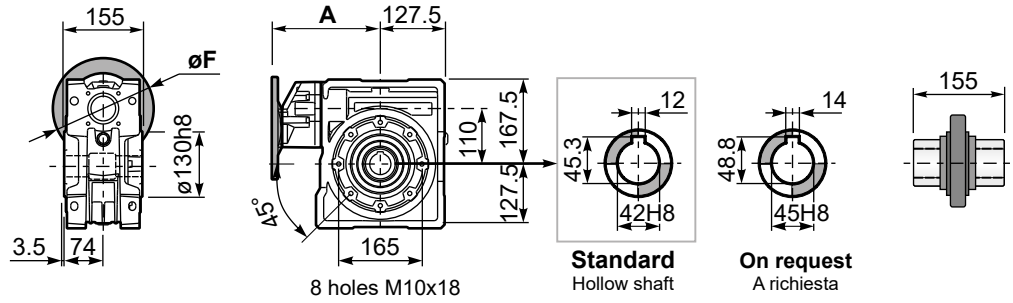
tab. 2



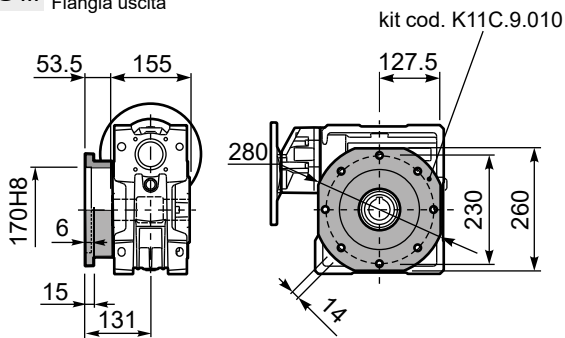
PP1M**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **37.3 kg**

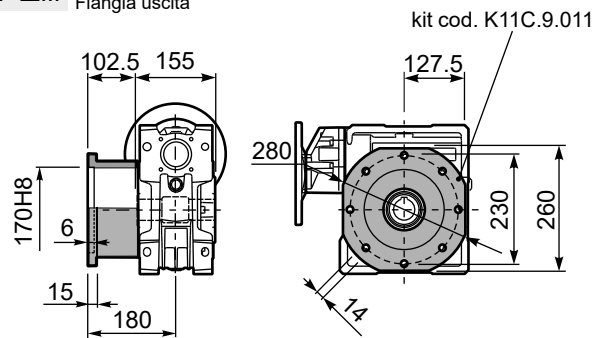
| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 214.7 |
| <b>71B5</b>    | K063.4.042 | 160 | 212.7 |
| <b>80/90B5</b> | K063.4.043 | 200 | 214.7 |
| <b>71B14</b>   | K063.4.047 | 105 | 212.7 |
| <b>80B14</b>   | K063.4.046 | 120 | 214.7 |
| <b>90B14</b>   | K063.4.041 | 140 | 214.7 |



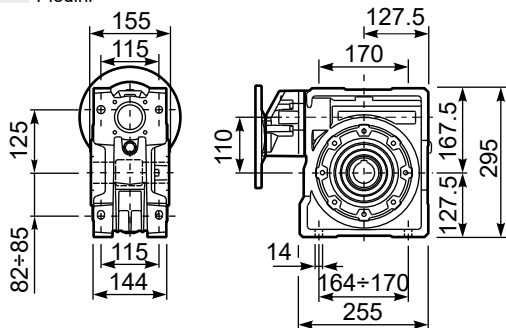
PP1M**FC**... Output flange  
Flangia uscita



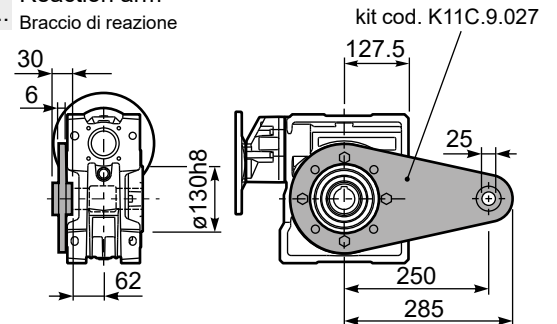
PP1M**FL**... Output flange  
Flangia uscita



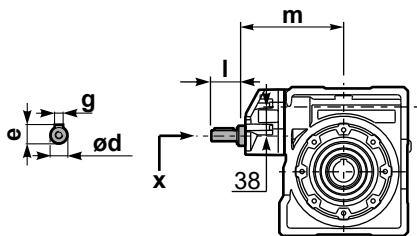
PP1M**FB**... Feet  
Piedini



PP1M**BR**... Reaction arm  
Braccio di reazione

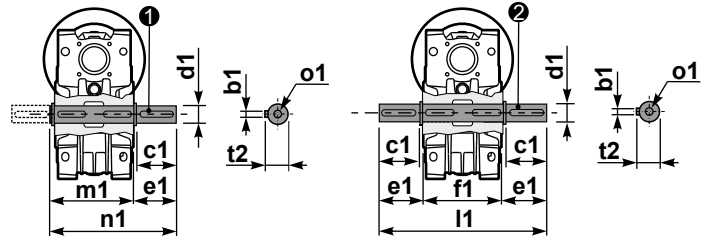


RP1M**FB**... Input shaft  
Albero in entrata



PP1M...**S**... Single Shaft  
Albero lento semplice

PP1M...**D**... Double Shaft  
Albero lento bisp.

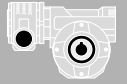


① kit cod. K11C.5.028 type B

② kit cod. K11C.5.029 type B

|        | ød    | e    | g | l  | m   | x     |           |
|--------|-------|------|---|----|-----|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 205 | M6x16 | C40.5.062 |
| type S | -     | -    | - | -  | -   | -     | -         |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 80 | 42h6 | 84.5 | 155 | 324 | 164.5 | 249 | 45 | M16x28 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 9.3   | <b>150</b>   | 0.06                            | 29                                | 1.3                    | <b>0.08</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 1.44                     | 01              |
| 6.7   | <b>210</b>   | 0.06                            | 39                                | 1.0                    | <b>0.06</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 45                              | 1.44                     | 02              |
| 4.7   | <b>300</b>   | 0.06                            | 44                                | 0.9                    | <b>0.05</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 1.44                     | 03              |
| 3.1   | <b>450</b>   | 0.06*                           | 38                                | <0.8                   | <b>0.04</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 33                              | 1.44                     | 04              |
| 2.3   | <b>600</b>   | 0.06*                           | 38                                | <0.8                   | <b>0.03</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 1.44                     | 05              |
| 1.6   | <b>900</b>   | 0.06*                           | 38                                | <0.8                   | <b>0.02</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.44                     | 06              |
| 1.2   | <b>1200</b>  | 0.06*                           | 38                                | <0.8                   | <b>0.02</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 1.44                     | 07              |
| 0.8   | <b>1830</b>  | 0.06*                           | 38                                | <0.8                   | <b>0.01</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 24                              | 1.44                     | 08              |
| 0.6   | <b>2400</b>  | 0.06*                           | 38                                | <0.8                   | <b>0.01</b>                       | <b>38</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 22                              | 1.44                     | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **33M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **33M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **33M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **33M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **33M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 33M Oil** 0.03 Lt.  
**Quantity 0.03/0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**RADIAL AND AXIAL LOADS**

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 300       | 1800      |
| <b>15</b>                     | 400       | 2000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 20        | 100       |

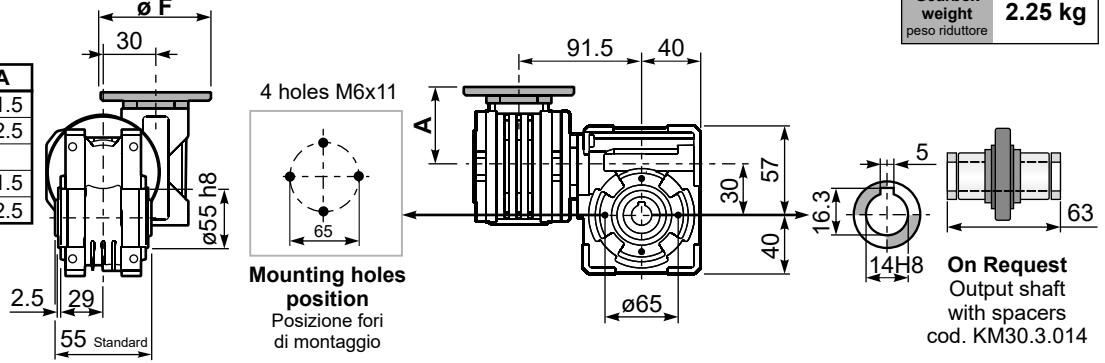
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

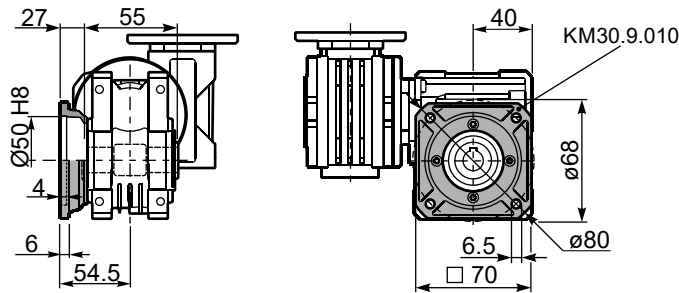
**P33MFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **2.25 kg**

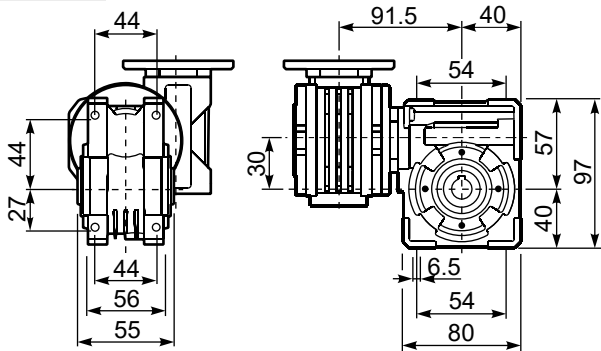
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



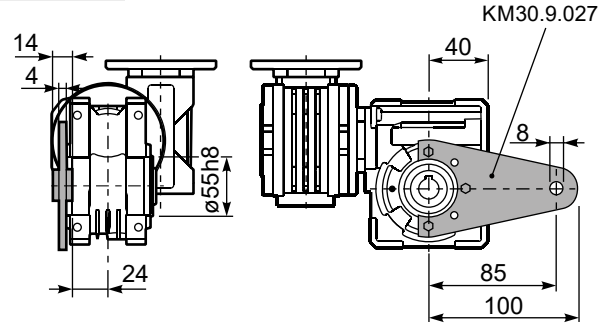
**P33MFC...** Square flange  
Flangia quadrata



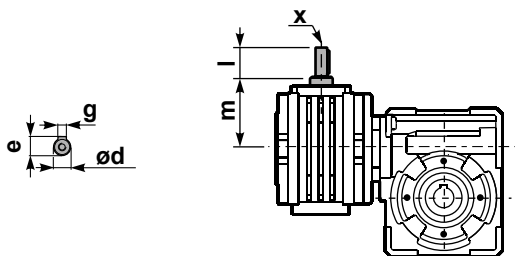
**P33MFB...** Feet  
Piedini



**P33MBR...** Reaction arm  
Braccio di reazione

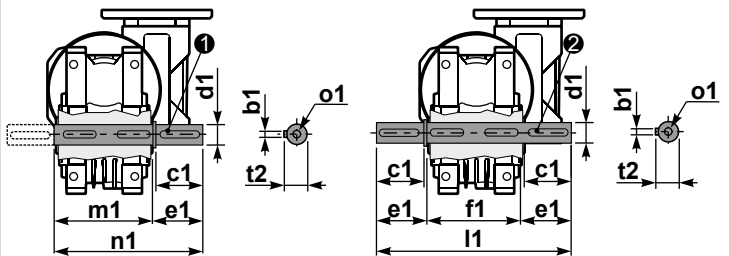


**R33MFB...** Input shaft  
Albero in entrata



**P33M.....S...** Single Shaft  
Albero lento semplice

**P33M.....D...** Double Shaft  
Albero lento bisp.

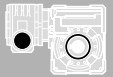


① kit cod. K030.5.028 type B

② kit cod. K030.5.029 type B

|        | ød   | e    | g | l  | m  | x | kit code         |
|--------|------|------|---|----|----|---|------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type S | -    | -    | - | -  | -  | - | -                |

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1 | n1   | t2 | o1    |
|--------|----|----|--|------|----|-----|----|------|----|-------|
| type B | 5  | 25 | 14 <sup>-0.005</sup> <sub>-0.020</sub> | 35.5 | 55 | 126 | 59 | 94.5 | 16 | M5x14 |
| type S | -  | -  | -                                      | -    | -  | -   | -  | -    | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
| 10.0  | <b>140</b>   | 0.12                            | 57                                | 1.3                    | <b>0.15</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 50                              | 2.2                      | 01              |
| 7.0   | <b>200</b>   | 0.12                            | 79                                | 0.9                    | <b>0.11</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 48                              | 2.2                      | 02              |
| 5.0   | <b>280</b>   | 0.09                            | 77                                | 0.9                    | <b>0.08</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 45                              | 2.4                      | 03              |
| 3.3   | <b>420</b>   | 0.06                            | 62                                | 1.2                    | <b>0.07</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 1.6                      | 04              |
| 2.5   | <b>560</b>   | 0.06                            | 76                                | 1.0                    | <b>0.06</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 33                              | 2.5                      | 05              |
| 1.9   | <b>740</b>   | 0.06                            | 91                                | 0.8                    | <b>0.05</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 1.8                      | 06              |
| 1.5   | <b>920</b>   | 0.06*                           | 72                                | <0.8                   | <b>0.04</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.5                      | 07              |
| 1.3   | <b>1120</b>  | 0.06*                           | 72                                | <0.8                   | <b>0.04</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 2.5                      | 08              |
| 0.9   | <b>1480</b>  | 0.06*                           | 72                                | <0.8                   | <b>0.03</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 24                              | 1.8                      | 09              |
| 0.8   | <b>1840</b>  | 0.06*                           | 72                                | <0.8                   | <b>0.03</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 22                              | 1.5                      | 10              |
| 0.6   | <b>2400</b>  | 0.06*                           | 72                                | <0.8                   | <b>0.02</b>                       | <b>72</b>                          | <b>B</b>                   |    | <b>B-C</b>                  |    | 21                              | 1.2                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **43M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **43M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **43M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **43M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **43M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 43M Oil**  
Quantity 0.09/0.03 Lt.

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 300       | 1800      |
| 15                            | 400       | 2000      |

**Input shaft**  
albero in entrata

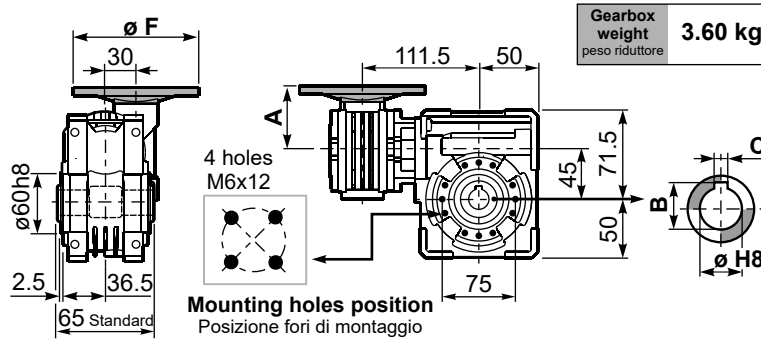
| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

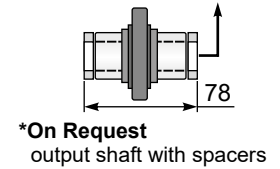
**P43MFB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |

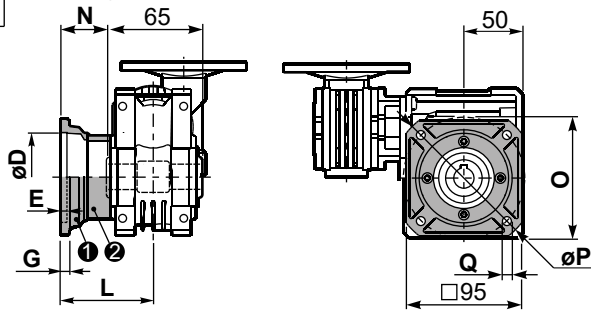


Gearbox weight  
peso riduttore **3.60 kg**

| ø H8                    | B    | C | *Spacer code |
|-------------------------|------|---|--------------|
| <b>18</b><br>Standard   | 20.8 | 6 | KM45.3.018   |
| <b>19</b><br>on request | 21.8 | 6 | KM45.3.019   |
| <b>20</b><br>on request | 22.8 | 6 | KM45.3.020   |

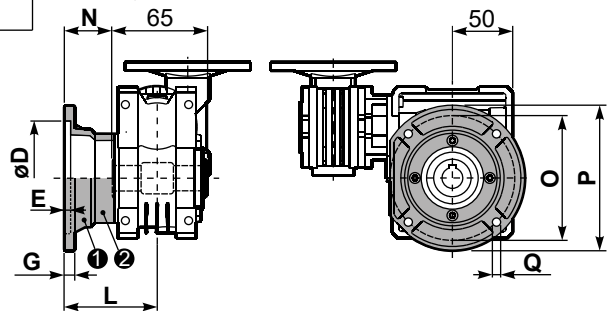


**P43MFC...** Square flange  
Flangia quadrata



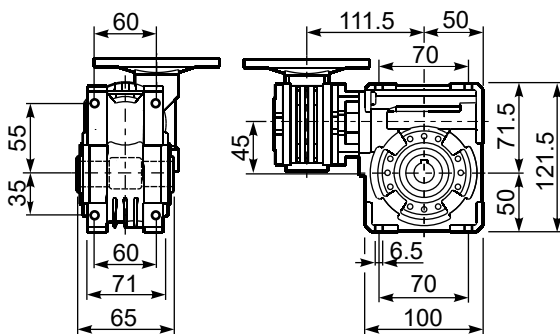
| type B    | øD    | E | G | L  | N    | O  | P   | Q | kit code   |
|-----------|-------|---|---|----|------|----|-----|---|------------|
| <b>FC</b> | 60 H8 | 4 | 7 | 67 | 34.5 | 75 | 110 | 9 | KM45.9.010 |
| <b>FL</b> | 60 H8 | 4 | 7 | 97 | 64.5 | 75 | 110 | 9 | KM45.9.011 |

**P43MF1...** Round flange  
Flangia rotonda

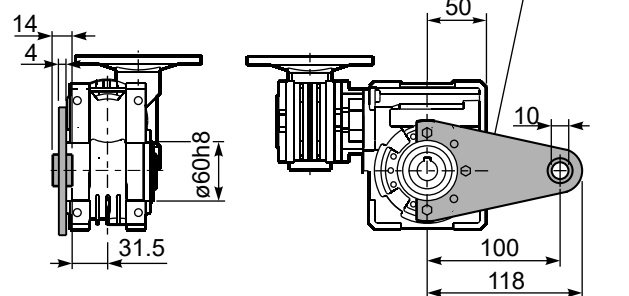


| type S    | øD   | E | G | L  | N    | O   | P   | Q   | kit code   |
|-----------|------|---|---|----|------|-----|-----|-----|------------|
| <b>F1</b> | 95H8 | 5 | 9 | 80 | 47.5 | 115 | 140 | 9.5 | KM45.9.012 |
| <b>F2</b> | -    | - | - | -  | -    | -   | -   | -   | -          |

**P43MFB...** Feet  
Piedini

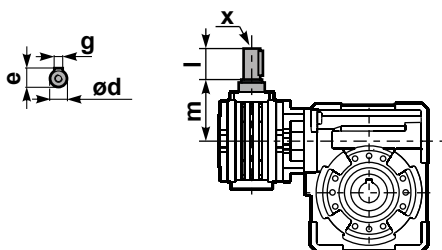


**P43MBR...** Reaction arm  
Braccio di reazione



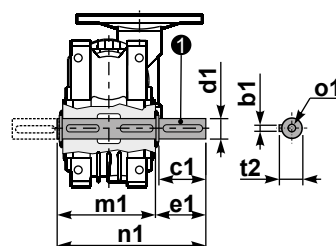
kit cod. KM45.9.027

**R43MFB...** Input shaft  
Albero in entrata



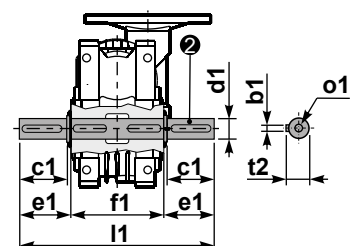
|        | ød   | e    | g | l  | m  | x | kit code         |
|--------|------|------|---|----|----|---|------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type S | -    | -    | - | -  | -  | - | -                |

**P43M....S...** Single Shaft  
Albero lento semplice



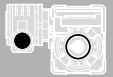
① kit cod. K045.5.028 type B  
kit cod. KS045.5.030 type S

**P43M....D...** Double Shaft  
Albero lento bisp.



② kit cod. K045.5.029 type B

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1 | n1    | t2   | o1    |
|--------|----|----|--|------|----|-----|----|-------|------|-------|
| type B | 6  | 32 | 18 <sup>-0.005</sup> <sub>-0.020</sub> | 43   | 65 | 151 | 70 | 113   | 20.5 | M6x18 |
| type S | 6  | 40 | 19 <sup>-0.005</sup> <sub>-0.020</sub> | 58.5 | -  | -   | 70 | 128.5 | 21.5 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.12                            | 97                                | 1.4                    | <b>0.17</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 47                              | 2.1                      | 01              |
| 3.9   | <b>360</b>   | 0.12                            | 124                               | 1.1                    | <b>0.13</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 42                              | 2.1                      | 02              |
| 2.6   | <b>540</b>   | 0.09                            | 129                               | 1.1                    | <b>0.10</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 39                              | 2.1                      | 03              |
| 1.9   | <b>720</b>   | 0.09                            | 159                               | 0.9                    | <b>0.08</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 36                              | 2.1                      | 04              |
| 1.6   | <b>860</b>   | 0.06                            | 113                               | 1.2                    | <b>0.07</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 32                              | 1.8                      | 05              |
| 1.2   | <b>1200</b>  | 0.06                            | 133                               | 1.0                    | <b>0.06</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 1.3                      | 06              |
| 1.0   | <b>1440</b>  | 0.06                            | 153                               | 0.9                    | <b>0.05</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 26                              | 2.1                      | 07              |
| 0.8   | <b>1720</b>  | 0.06                            | 176                               | 0.8                    | <b>0.05</b>                       | <b>138</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 25                              | 1.8                      | 08              |
| 0.6   | <b>2400</b>  | 0.06*                           | 132                               | <0.8                   | <b>0.04</b>                       | <b>132</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 21                              | 1.3                      | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **53M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **53M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **53M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **53M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **53M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 53M Oil**  
Quantity 0.14/0.03 Lt.

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 480       | 2500      |
| <b>15</b>                     | 560       | 2800      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 20        | 100       |

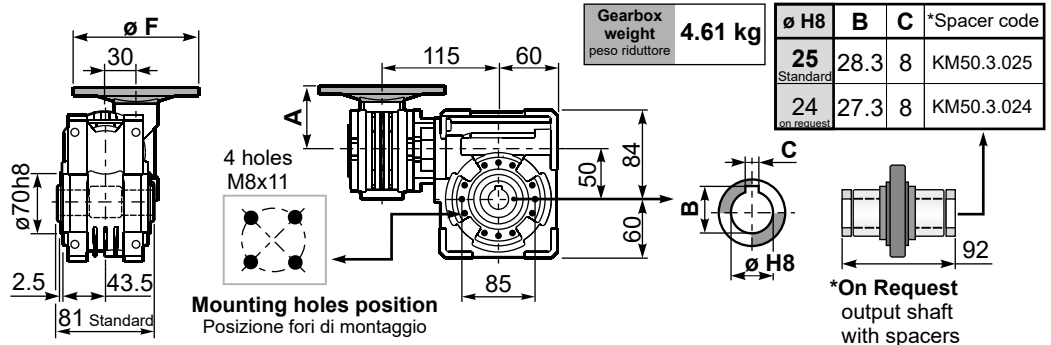
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

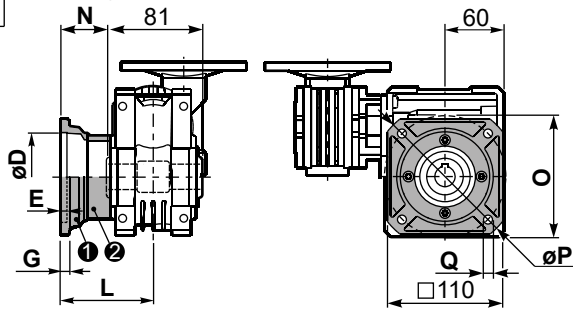


**P53MFB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |

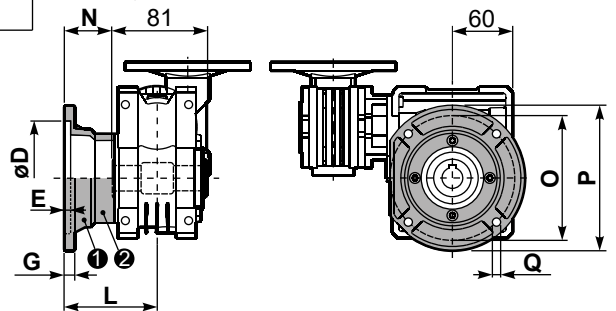


**P53MFC...** Square flange  
Flangia quadrata



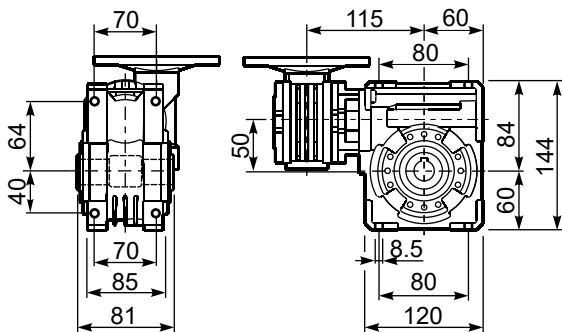
| type B    | øD    | E | G | L   | N    | O  | P   | Q  | kit code   |
|-----------|-------|---|---|-----|------|----|-----|----|------------|
| <b>FC</b> | 70 H8 | 5 | 9 | 90  | 49.5 | 85 | 125 | 11 | KM50.9.010 |
| <b>FL</b> | 70 H8 | 5 | 9 | 120 | 79.5 | 85 | 125 | 11 | KM50.9.011 |

**P53MF1...** Round flange  
Flangia rotonda

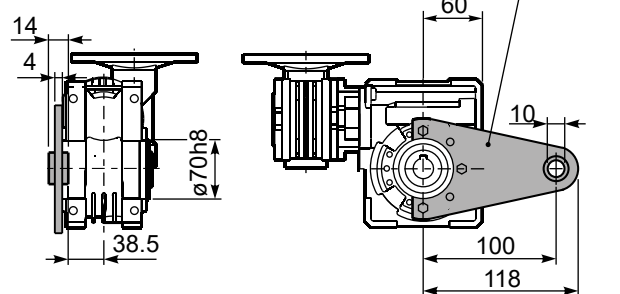


| type S    | øD     | E | G    | L  | N    | O   | P   | Q   | kit code   |
|-----------|--------|---|------|----|------|-----|-----|-----|------------|
| <b>F1</b> | 110 H8 | 5 | 10   | 89 | 48.5 | 130 | 160 | 9.5 | KM50.9.012 |
| <b>F2</b> | 95 H8  | 5 | 14.5 | 72 | 31.5 | 115 | 140 | 11  | KM50.9.013 |

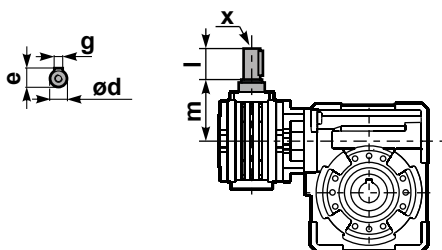
**P53MFB...** Feet  
Piedini



**P53MBR...** Reaction arm  
Braccio di reazione

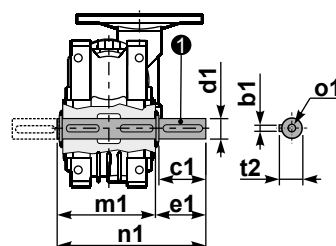


**R53MFB...** Input shaft  
Albero in entrata



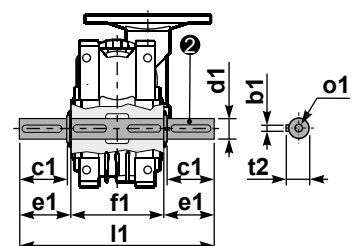
|        | ød   | e    | g | l  | m  | x | kit code         |
|--------|------|------|---|----|----|---|------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type S | -    | -    | - | -  | -  | - | -                |

**P53M.....S...** Single Shaft  
Albero lento semplice



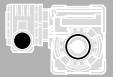
① kit cod. K050.5.028 type B  
kit cod. KS050.5.030 type S

**P53M.....D...** Double Shaft  
Albero lento bisp.



② kit cod. K050.5.029 type B

|        | b1 | c1 | d1                                     | e1   | f1 | l1  | m1   | n1  | t2 | ø1    |
|--------|----|----|--|------|----|-----|------|-----|----|-------|
| type B | 8  | 52 | 25 <sup>-0.005</sup> <sub>-0.020</sub> | 59.5 | 81 | 200 | 86.5 | 146 | 28 | M8x20 |
| type S | 8  | 50 | 24 <sup>-0.005</sup> <sub>-0.020</sub> | 68.8 | -  | -   | 86.5 | 155 | 27 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.18                            | 142                               | 1.9                    | <b>0.34</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 181                               | 1.5                    | <b>0.27</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 41                              | 2.7                      | 02              |
| 2.6   | <b>540</b>   | 0.18                            | 245                               | 1.1                    | <b>0.20</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 37                              | 2.7                      | 03              |
| 1.9   | <b>720</b>   | 0.12                            | 200                               | 1.3                    | <b>0.16</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 34                              | 2.7                      | 04              |
| 1.3   | <b>1080</b>  | 0.12                            | 265                               | 1.0                    | <b>0.12</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 2.7                      | 05              |
| 1.0   | <b>1440</b>  | 0.09                            | 239                               | 1.1                    | <b>0.10</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 2.7                      | 06              |
| 0.5   | <b>2745</b>  | 0.06                            | 258                               | 1.0                    | <b>0.06</b>                       | <b>270</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 23                              | 2.1                      | 07              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **63M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **63M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **63M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **63M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **63M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**0.30 Lt.**

**LUBRICATION 63M Oil**  
Quantity 0.30/0.03 Lt.

**0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
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### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 20        | 100       |

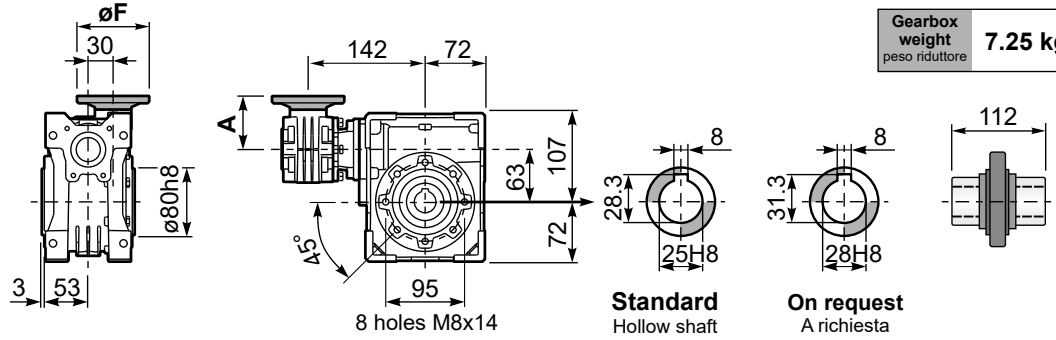
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P63MFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **7.25 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



**P63MFC...** Square flange  
Flangia quadrata

**P63MF1...** Round flange  
Flangia rotonda

| type B    | øD     | E | G  | L   | N  | O   | P   | Q  | kit code   |
|-----------|--------|---|----|-----|----|-----|-----|----|------------|
| <b>FC</b> | 115 H8 | 6 | 10 | 82  | 26 | 150 | 180 | 11 | KM63.9.010 |
| <b>FL</b> | 115 H8 | 6 | 10 | 112 | 56 | 150 | 180 | 11 | KM63.9.011 |

| type S    | øD     | E | G    | L    | N    | O   | P   | Q  | kit code   |
|-----------|--------|---|------|------|------|-----|-----|----|------------|
| <b>F1</b> | 130 H8 | 5 | 10   | 98   | 42   | 165 | 200 | 11 | KM63.9.012 |
| <b>F2</b> | 130 H8 | 5 | 10   | 107  | 51   | 165 | 200 | 11 | KM63.9.013 |
| <b>F3</b> | 110 H8 | 5 | 16.5 | 80.5 | 24.5 | 130 | 160 | 11 | KM63.9.014 |

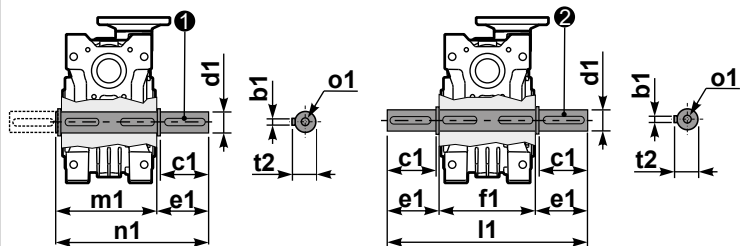
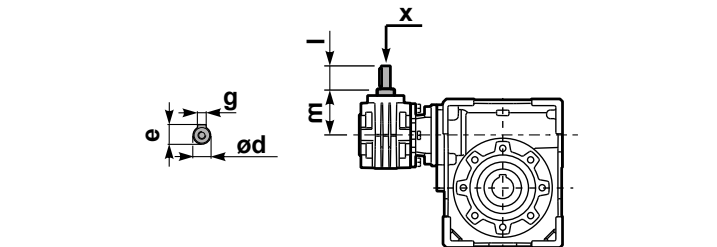
**P63MFB...** Feet  
Piedini

**P63MBR...** Reaction arm  
Braccio di reazione

**R63MFB...** Input shaft  
Albero in entrata

**P63M.....S...** Single Shaft  
Albero lento semplice

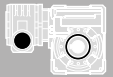
**P63M.....D...** Double Shaft  
Albero lento bisp.



① kit cod. KM63.5.028 type B      ② kit cod. KM63.5.029 type B

|        | ød   | e    | g | l  | m  | x | kit code         |
|--------|------|------|---|----|----|---|------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | K030.5.006 PAM63 |
| type S | -    | -    | - | -  | -  | - | -                |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 8  | 50 | 25h6 | 53.5 | 112 | 219 | 119.5 | 173 | 28 | M10x23 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>$[mm]$ | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                        |                 |
| 5.6   | <b>252</b>   | 0.25                            | 198                               | 1.5                    | <b>0.37</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                              | 2.7                    | 01              |
| 3.9   | <b>360</b>   | 0.25                            | 258                               | 1.1                    | <b>0.28</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 42                              | 2.7                    | 02              |
| 2.8   | <b>504</b>   | 0.18                            | 241                               | 1.2                    | <b>0.22</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 39                              | 2.7                    | 03              |
| 1.9   | <b>756</b>   | 0.18                            | 306                               | 0.9                    | <b>0.17</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 2.7                    | 04              |
| 1.4   | <b>1008</b>  | 0.12                            | 256                               | 1.1                    | <b>0.14</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 31                              | 2.7                    | 05              |
| 1.1   | <b>1332</b>  | 0.12                            | 327                               | 0.9                    | <b>0.11</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 2.7                    | 06              |
| 0.8   | <b>1656</b>  | 0.09                            | 285                               | 1.0                    | <b>0.09</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 2.7                    | 07              |
| 0.6   | <b>2160</b>  | 0.06                            | 230                               | 1.3                    | <b>0.08</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                              | 2.7                    | 08              |
| 0.6   | <b>2520</b>  | 0.06                            | 258                               | 1.1                    | <b>0.07</b>                       | <b>290</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 2.7                    | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **64M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **64M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **64M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **64M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **64M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 64M Oil**  
Quantity 0.30/0.09 Lt.

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 700       | 3800      |
| 15                            | 800       | 4000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 42        | 210       |

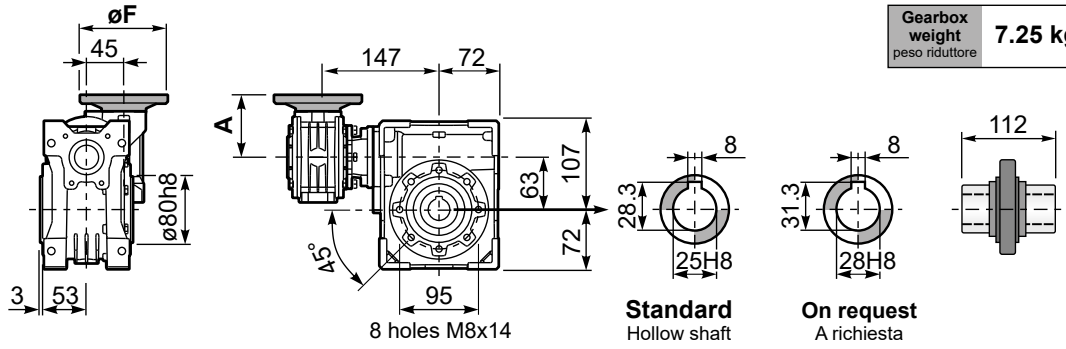
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P64MFB...** Basic wormbox  
Riduttore base

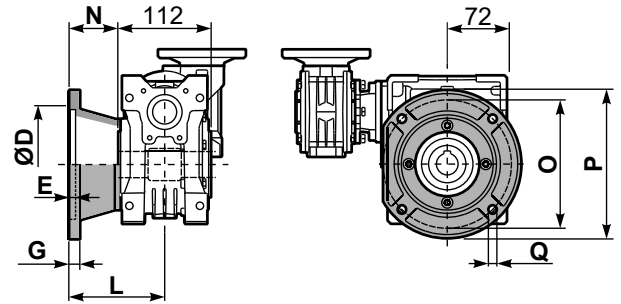
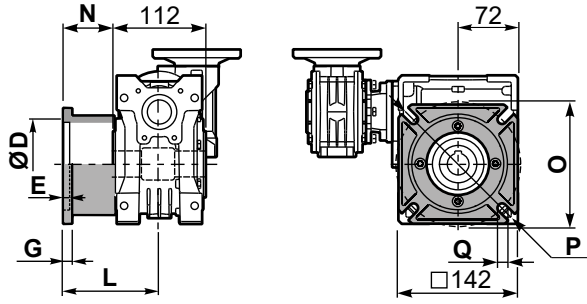
Gearbox weight  
peso riduttore **7.25 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



**P64MFC...** Square flange  
Flangia quadrata

**P64MF1...** Round flange  
Flangia rotonda



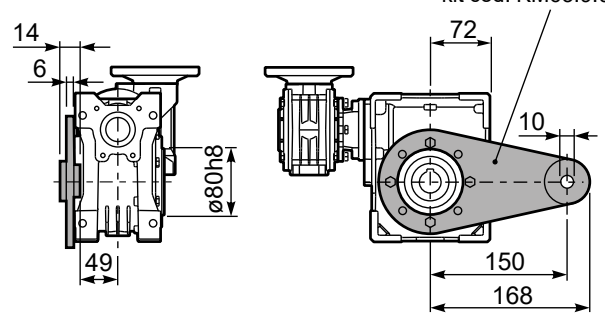
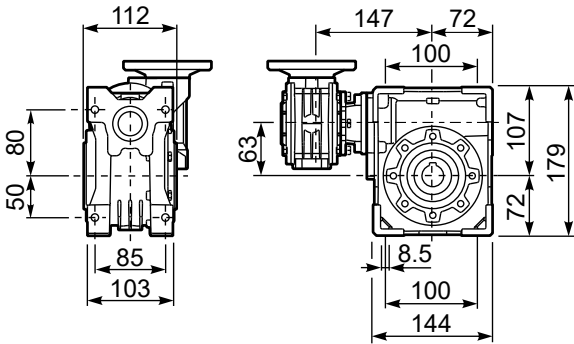
| type B    | øD     | E | G  | L   | N  | O   | P   | Q  | kit code   |
|-----------|--------|---|----|-----|----|-----|-----|----|------------|
| <b>FC</b> | 115 H8 | 6 | 10 | 82  | 26 | 150 | 180 | 11 | KM63.9.010 |
| <b>FL</b> | 115 H8 | 6 | 10 | 112 | 56 | 150 | 180 | 11 | KM63.9.011 |

| type S    | øD     | E | G    | L    | N    | O   | P   | Q  | kit code   |
|-----------|--------|---|------|------|------|-----|-----|----|------------|
| <b>F1</b> | 130 H8 | 5 | 10   | 98   | 42   | 165 | 200 | 11 | KM63.9.012 |
| <b>F2</b> | 130 H8 | 5 | 10   | 107  | 51   | 165 | 200 | 11 | KM63.9.013 |
| <b>F3</b> | 110 H8 | 5 | 16.5 | 80.5 | 24.5 | 130 | 160 | 11 | KM63.9.014 |

**P64MFB...** Feet  
Piedini

**P64MBR...** Reaction arm  
Braccio di reazione

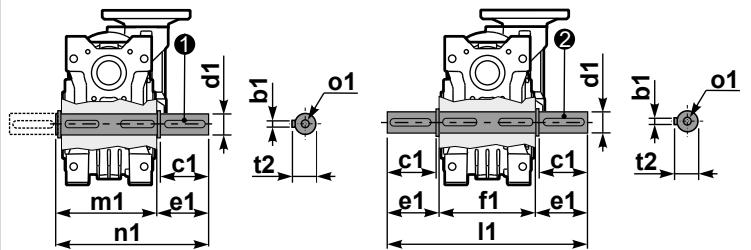
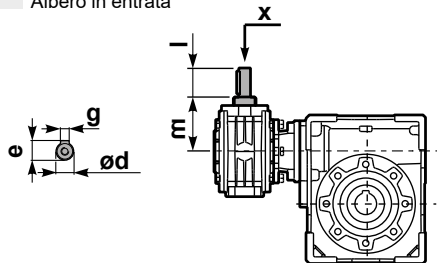
kit cod. KM63.9.027



**R64MFB...** Input shaft  
Albero in entrata

**P64M.....S...** Single Shaft  
Albero lento semplice

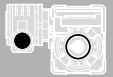
**P64M.....D...** Double Shaft  
Albero lento bisp.



① kit cod. KM63.5.028 type B      ② kit cod. KM63.5.029 type B

|        | ød    | e    | g | l  | m  | x | kit code         |
|--------|-------|------|---|----|----|---|------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | K045.5.006 PAM71 |
| type S | -     | -    | - | -  | -  | - | -                |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 8  | 50 | 25h6 | 53.5 | 112 | 219 | 119.5 | 173 | 28 | M10x23 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                                 |                          |                 |
| 5   | <b>280</b>   | 0.37                            | 403                               | 1.0                    | <b>0.39</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 57                              | 3.10                     | 01              |
| 3.5   | <b>400</b>   | 0.25                            | 314                               | 1.3                    | <b>0.33</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                              | 3.10                     | 02              |
| 2.5   | <b>560</b>   | 0.25                            | 420                               | 1.0                    | <b>0.25</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 44                              | 3.10                     | 03              |
| 1.7   | <b>840</b>   | 0.18                            | 423                               | 1.0                    | <b>0.18</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 41                              | 3.10                     | 04              |
| 1.3   | <b>1120</b>  | 0.12                            | 339                               | 1.2                    | <b>0.15</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                              | 3.10                     | 05              |
| 0.9   | <b>1480</b>  | 0.09                            | 336                               | 1.2                    | <b>0.11</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                              | 3.10                     | 06              |
| 0.8   | <b>1840</b>  | 0.09                            | 373                               | 1.1                    | <b>0.10</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 3.10                     | 07              |
| 0.6   | <b>2400</b>  | 0.09                            | 413                               | 1.0                    | <b>0.09</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 3.10                     | 08              |
| 0.5   | <b>2800</b>  | 0.06                            | 298                               | 1.4                    | <b>0.08</b>                       | <b>420</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                              | 3.10                     | 09              |
| 0.3   | <b>4080</b>  | 0.06                            | 250                               | 1.4                    | <b>0.09</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 15                              | 3.10                     | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **74M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **74M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **74M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **74M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **74M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**0.40 Lt.**

**■ LUBRICATION 74M Oil**  
Quantity 0.40/0.09 Lt.

**0.09 Lt.**

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### ■ RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 880       | 4400      |
| 15                            | 1000      | 5000      |

**Input shaft**  
albero in entrata

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 42        | 210       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

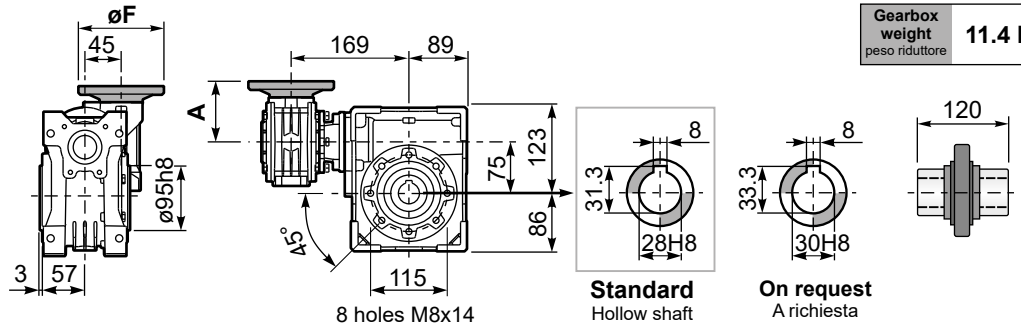
**tab. 2**



**P74MFB...** Basic wormbox  
Riduttore base

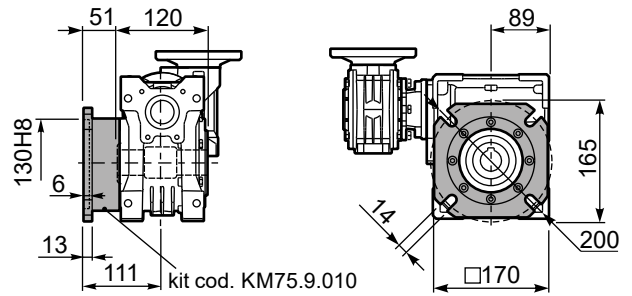
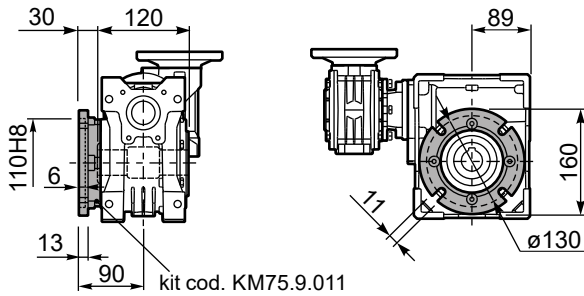
Gearbox weight  
peso riduttore **11.4 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



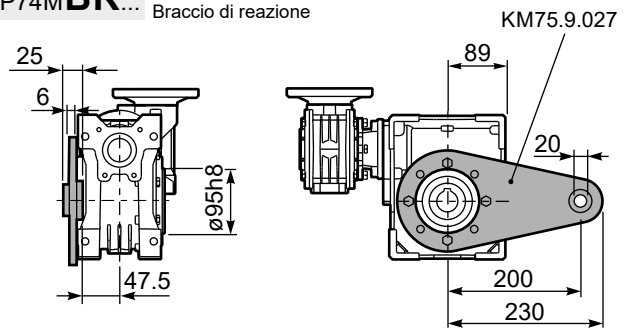
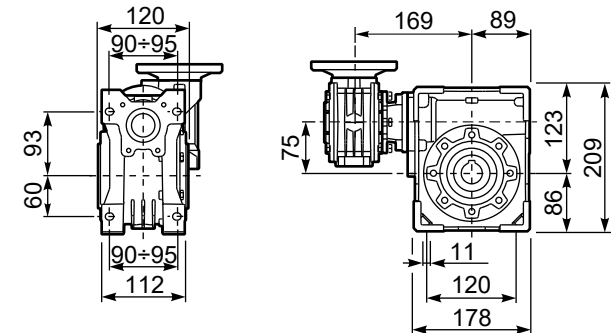
**P74MFC...** Round flange  
Flangia rotonda

**P74MFL...** Square flange  
Flangia quadrata



**P74MFB...** Feet  
Piedini

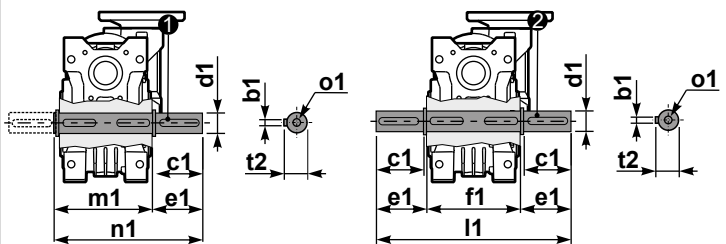
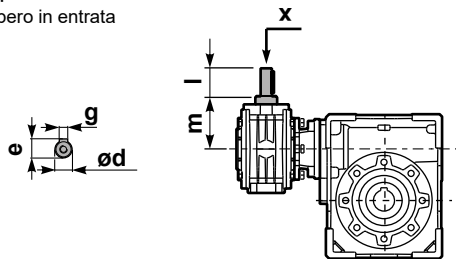
**P74MBR...** Reaction arm  
Braccio di reazione



**R74MFB...** Input shaft  
Albero in entrata

**P74M...S...** Single Shaft  
Albero lento semplice

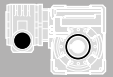
**P74M...D...** Double Shaft  
Albero lento bisp.



① kit cod. KM75.5.028 Standard    ② kit cod. KM75.5.029 Standard

|        | ød    | e    | g | l  | m  | x | kit code         |
|--------|-------|------|---|----|----|---|------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | K045.5.006 PAM71 |

|            | b1 | c1 | d1    | e1   | f1  | l1  | m1    | n1  | t2 | o1  |
|------------|----|----|-------|------|-----|-----|-------|-----|----|-----|
| Standard   | 8  | 60 | 28 h6 | 63.5 | 120 | 247 | 128.5 | 192 | 31 | M10 |
| On request | -  | -  | -     | -    | -   | -   | -     | -   | -  | -   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>$[mm]$ | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                        |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                                 |                        |                 |
| 10  | <b>140</b>   | 0.37                            | 205                               | 2.1                    | <b>0.76</b>                       | <b>423</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 58                              | 4.5                    | 01              |
| 7.1   | <b>196</b>   | 0.37                            | 257                               | 1.6                    | <b>0.61</b>                       | <b>423</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 52                              | 4.7                    | 02              |
| 5.0   | <b>280</b>   | 0.37                            | 332                               | 1.8                    | <b>0.66</b>                       | <b>596</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 47                              | 4.7                    | 03              |
| 3.6   | <b>392</b>   | 0.37                            | 435                               | 1.4                    | <b>0.51</b>                       | <b>596</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 44                              | 4.7                    | 04              |
| 2.4   | <b>588</b>   | 0.37                            | 549                               | 1.1                    | <b>0.40</b>                       | <b>596</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                              | 4.7                    | 05              |
| 1.8   | <b>784</b>   | 0.25                            | 455                               | 1.3                    | <b>0.33</b>                       | <b>596</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 34                              | 4.7                    | 06              |
| 1.4   | <b>1036</b>  | 0.25                            | 583                               | 1.0                    | <b>0.26</b>                       | <b>596</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 4.7                    | 07              |
| 1.1   | <b>1288</b>  | 0.18                            | 474                               | 1.2                    | <b>0.22</b>                       | <b>580</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 4.7                    | 08              |
| 0.7   | <b>1960</b>  | 0.12                            | 449                               | 1.2                    | <b>0.14</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 4.7                    | 09              |
| 0.5   | <b>2856</b>  | 0.12                            | 584                               | 0.9                    | <b>0.11</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 4.7                    | 10              |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **84M** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **84M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **84M** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **84M** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **84M** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 84M Oil**  
Quantity 1.20/0.09 Lt.

SHELL Omala S4 WE 320

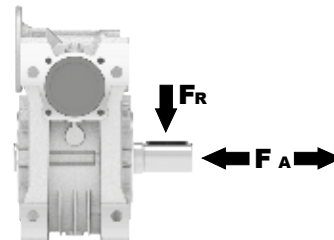
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

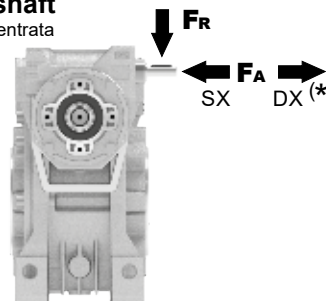
Albero di uscita



| $n$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-----------------------------|-----------|-----------|
| 25                          | 1000      | 5000      |
| 15                          | 1160      | 5800      |

##### Input shaft

albero in entrata



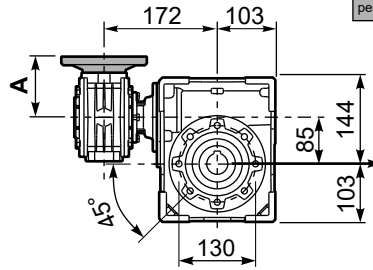
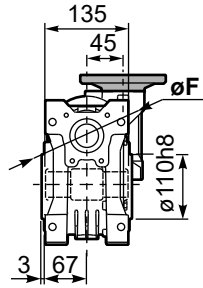
| $n$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-----------------------------|-----------|-----------|
| 1400                        | 42        | 210       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

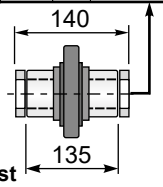
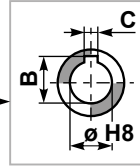
**P84MFB...** Basic wormbox  
Riduttore base

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



Gearbox weight  
peso riduttore **16.2 kg**

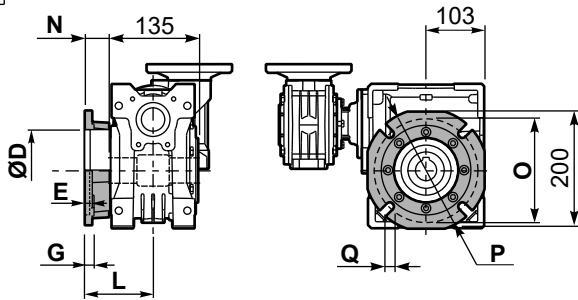
| ø H8                    | B    | C  | *Spacer code |
|-------------------------|------|----|--------------|
| <b>35</b><br>Standard   | 38.3 | 10 | KM85.3.035   |
| <b>38</b><br>on request | 41.3 | 10 | KM85.3.038   |



**\*On Request**  
output shaft with spacers

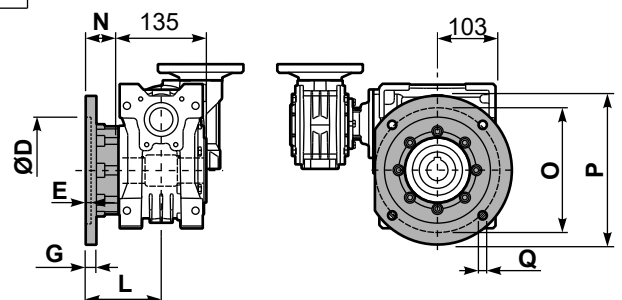
8 holes M10x18

**P84MFC...** Output flange  
Flangia uscita



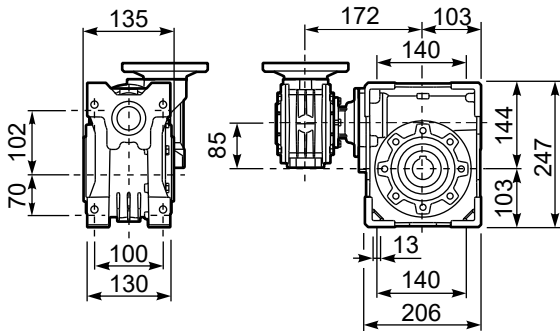
| type B    | øD     | E | G  | L   | N    | O   | P   | Q  | kit code   |
|-----------|--------|---|----|-----|------|-----|-----|----|------------|
| <b>FC</b> | 152 H8 | 5 | 16 | 111 | 43.5 | 176 | 205 | 13 | K085.9.010 |
| <b>FL</b> | 180 H8 | 6 | 18 | 122 | 54.5 | 215 | 250 | 14 | KM85.9.011 |

**P84MF1...** Output flange  
Flangia uscita

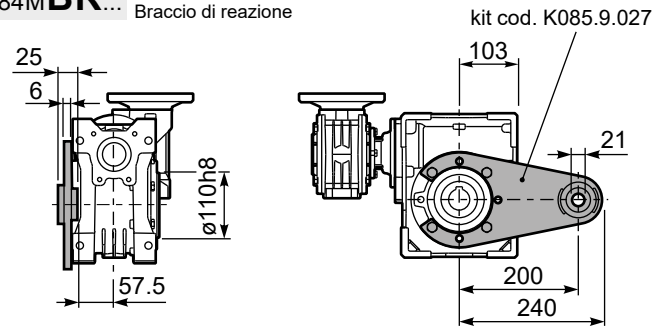


| type S    | øD     | E | G  | L     | N  | O   | P   | Q  | kit code                 |
|-----------|--------|---|----|-------|----|-----|-----|----|--------------------------|
| <b>F1</b> | 130 H8 | 5 | 13 | 109.5 | 42 | 165 | 200 | 13 | KS085.9.015              |
| <b>F2</b> | 152 H8 | 5 | 16 | 151.5 | 84 | 176 | 205 | 13 | K085.9.010<br>K085.0.201 |

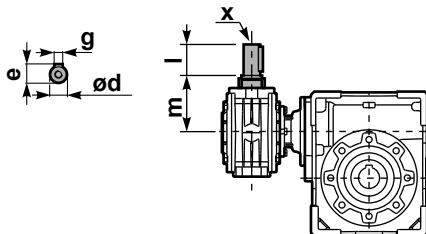
**P84MFB...** Feet  
Piedini



**P84MBR...** Reaction arm  
Braccio di reazione



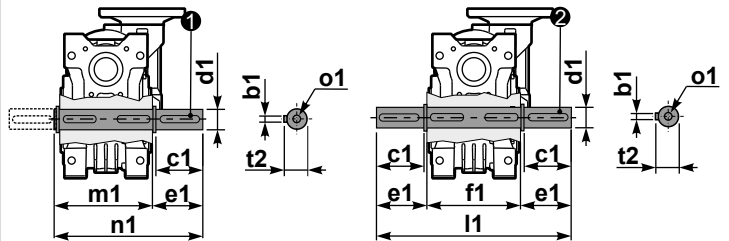
**R84MFB...** Input shaft  
Albero in entrata



| type          | ød    | e    | g | l  | m  | x | kit code           |
|---------------|-------|------|---|----|----|---|--------------------|
| <b>type B</b> | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① K045.5.006 PAM71 |
| <b>type S</b> | -     | -    | - | -  | -  | - | ② -                |

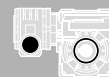
**P84M...S...** Single Shaft  
Albero lento semplice

**P84M...D...** Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B    ② kit cod. K085.5.029 type B

| type          | b1 | c1 | d1                                     | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|---------------|----|----|--|------|-----|-----|-----|-------|----|--------|
| <b>type B</b> | 10 | 60 | 35 <sup>-0.005</sup> <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| <b>type S</b> | -  | -  | -                                      | -    | -   | -   | -   | -     | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |    | Available B14 motor flanges |            |          |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----|-----------------------------|------------|----------|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D | -O                          | -P         | -Q       | -R |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80 | 56                          | 63         | 71       | 80 |                                 |                          |                 |
| 6.7   | <b>210</b>   | 0.75                            | 591                               | 1.8                    | <b>1.3</b>                        | <b>1036</b>                        | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 55                              | 5.6                      | 01              |
| 4.7   | <b>300</b>   | 0.75                            | 752                               | 1.6                    | <b>1.2</b>                        | <b>1174</b>                        | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 49                              | 5.6                      | 02              |
| 3.3   | <b>420</b>   | 0.75                            | 1010                              | 1.2                    | <b>0.87</b>                       | <b>1174</b>                        | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 47                              | 5.6                      | 03              |
| 2.6   | <b>540</b>   | 0.55                            | 851                               | 1.4                    | <b>0.76</b>                       | <b>1174</b>                        | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 42                              | 5.6                      | 04              |
| 1.8   | <b>780</b>   | 0.55                            | 1112                              | 1.1                    | <b>0.58</b>                       | <b>1174</b>                        | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 38                              | 5.6                      | 05              |
| 1.3   | <b>1080</b>  | 0.37                            | 1009                              | 1.2                    | <b>0.43</b>                       | <b>1174</b>                        | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 37                              | 5.6                      | 06              |
| 1.1   | <b>1290</b>  | 0.37                            | 1140                              | 1.0                    | <b>0.38</b>                       | <b>1174</b>                        | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 35                              | 5.6                      | 07              |
| 0.8   | <b>1800</b>  | 0.25                            | 921                               | 1.3                    | <b>0.32</b>                       | <b>1174</b>                        | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 30                              | 5.6                      | 08              |
| 0.7   | <b>2040</b>  | 0.25                            | 1044                              | 1.1                    | <b>0.28</b>                       | <b>1174</b>                        | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 30                              | 5.6                      | 09              |
| 0.6   | <b>2400</b>  | 0.25                            | 1228                              | 1.0                    | <b>0.26</b>                       | <b>1174</b>                        | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 28                              | 5.6                      | 10              |
| 0.5   | <b>3000</b>  | 0.18                            | 958                               | 1.0                    | <b>0.18</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 26                              | 5.6                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **15M** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a type that are closed. Gearbox **050** is supplied lubricated for life. See tab.1 for oils and recommended quantity. In tab.2 there are radial loads and axial loads applicable to the gearbox.

**I** Il riduttore tipo **15M** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Il riduttore **050** è fornito lubrificato a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **15M** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Das Getriebe der Baugröße **050** ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **15M** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le réducteur de type **050** est fourni lubrifié à vie avec de l'huile synthétique. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

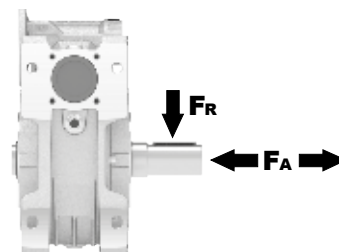
**E** El reductor tamaño **15M** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. El reductor **050** se suministra lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |              |              |                 |             |             |
|-----------------------|--------------|--------------|-----------------|-------------|-------------|
|                       |              |              |                 |             |             |
| <b>B3</b>             | <b>B6</b>    | <b>B7</b>    | <b>B8</b>       | <b>V5</b>   | <b>V6</b>   |
| 1.9/0.14LT            | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT     | 2.0/0.14 LT | 2.0/0.14 LT |
| SHELL Omala S2 GX 460 |              |              | ENI Blasias 460 |             |             |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

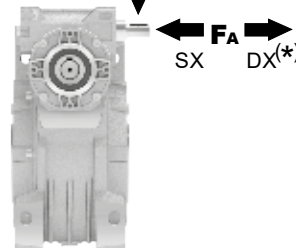
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 1200      | 6000      |
| <b>15</b>                     | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 76        | 380       |

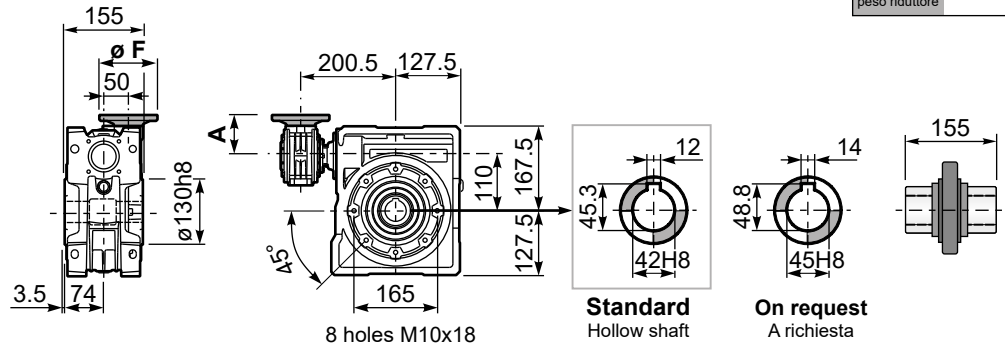
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

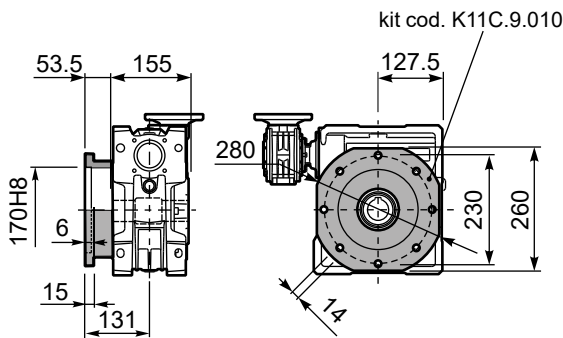
**P15MFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **38.8 kg**

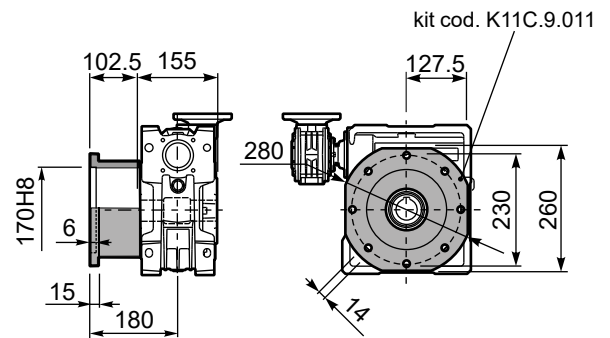
| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 78.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 76   |
| <b>80B5</b>  | K050.4.043 | 200 | 76.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 76   |
| <b>63B14</b> | K050.4.047 | 90  | 78.5 |
| <b>71B14</b> | K050.4.045 | 105 | 76   |
| <b>80B14</b> | K050.4.046 | 120 | 76.5 |



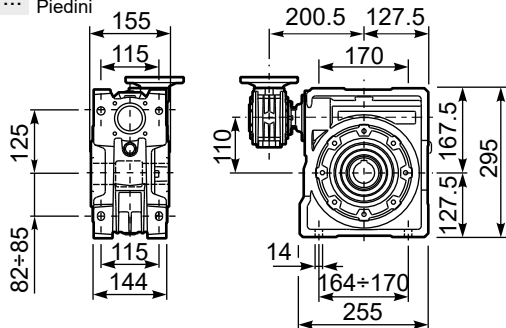
**P15MFC...** Output flange  
Flangia uscita



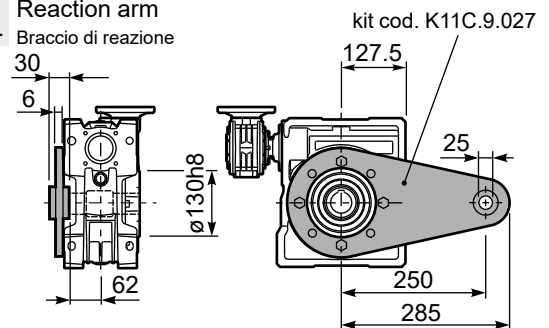
**P15MFL...** Output flange  
Flangia uscita



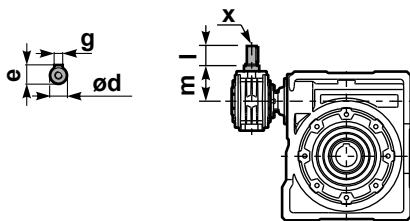
**P15MFB...** Feet  
Piedini



**P15MBR...** Reaction arm  
Braccio di reazione

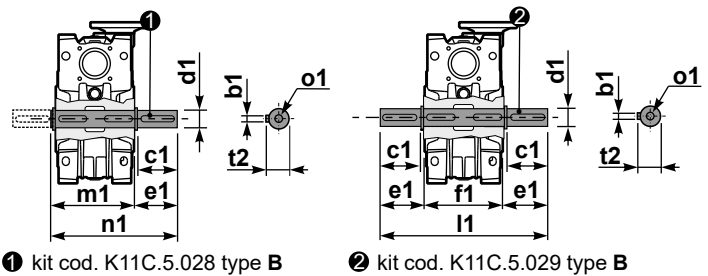


**R15MFB...** Input shaft  
Albero in entrata



**P15M.....S...** Single Shaft  
Albero lento semplice

**P15M.....D...** Double Shaft  
Albero lento bisp.



|        | ød    | e  | g | l  | m    | x     | kit code                                   |
|--------|-------|----|---|----|------|-------|--|
| type B | 16 h6 | 18 | 5 | 30 | 79.5 | M6x16 | ① K050.5.006 PAM71<br>② K050.5.007 PAM80   |
| type S | 14 h6 | 16 | 5 | 30 | 79.5 | M5x10 | ③ KS050.5.008 PAM71<br>④ KS050.5.009 PAM80 |

|        | b1 | c1 | d1   | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|------|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 80 | 42h6 | 84.5 | 155 | 324 | 164.5 | 249 | 45 | M16x28 |
| type S | -  | -  | -    | -    | -   | -   | -     | -   | -  | -      |



# Q Square worm gearboxes

## A modular and compact product

### Single-piece aluminum alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing.

No secondary finish required but readily accepts paint. Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing.

### Single piece alloy steel input shaft and worm shaft.

High helix angle worm is case-hardened (Rc 58-60), ground, teeth are profiled and radiused, for noise reduction and enhanced efficiency.

### Oversized bearings

Support positively-retained, high speed shaft for higher shock load capacity - ideal for frequent starting and reversing application. Premium, Nitrile® high temperature seals each end.

### Flange

Fully modular to IEC and compact integrated motor. NEMA C flange.

### Premium, high temperature

Nitrile® output seals

### Bronze alloy worm gears.

CuSn12Ni (C91700) Nickel bronze worm gears are centrifugally cast onto an iron hub for maximum strength and superior life. Removable hollow shaft with key for safe torque transmissions.

### Oversize bearing

For radial load capability and maximum hollow output shaft diameter.

### Standard hollow output shaft mounting

Reduces total drive envelope size, weight and cost. Single and double solid output shaft is available.

### Impregnated and machined bearing caps

With exterior machined surfaces enable a variety of mounting accessories. Extra-deep thread engagement provided for greater support strength. Zinc plated hardware.

### Painting

Cast iron gearboxes are painted RAL 7046

### Vent Free Design.

No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15°C to 130°C.

oil free



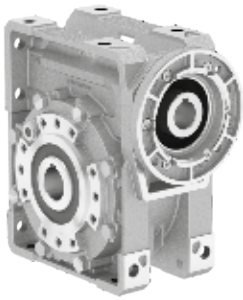
vent free





# Specific type datasheet on page...

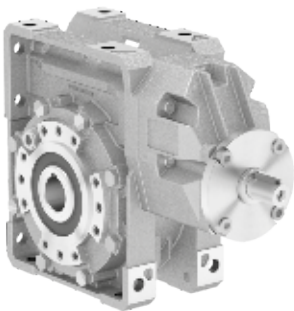
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Types / Tipi /  
Tipen / Types /  
Tipos →

| 3-5                 | 3-7                 | 3-9                 | 3-11                |
|---------------------|---------------------|---------------------|---------------------|
| <b>Q63</b><br>147Nm | <b>Q75</b><br>270Nm | <b>Q85</b><br>347Nm | <b>Q11</b><br>651Nm |

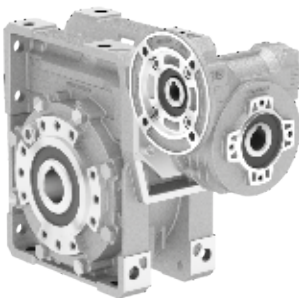
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Types / Tipi /  
Tipen / Types /  
Tipos →

| 3-13                | 3-15                | 3-17                | 3-19                |
|---------------------|---------------------|---------------------|---------------------|
| <b>P6Q</b><br>187Nm | <b>P7Q</b><br>310Nm | <b>P8Q</b><br>440Nm | <b>P1Q</b><br>803Nm |

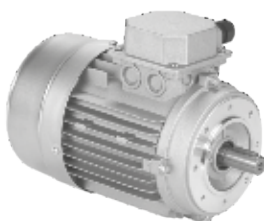
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Types / Tipi /  
Tipen / Types /  
Tipos →

| 3-21                | 3-23                | 3-25                | 3-27                | 3-29                |
|---------------------|---------------------|---------------------|---------------------|---------------------|
| <b>63Q</b><br>230Nm | <b>64Q</b><br>265Nm | <b>74Q</b><br>359Nm | <b>84Q</b><br>518Nm | <b>15Q</b><br>978Nm |

On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi  
Tipen / Types  
Tipos →

| M-1               |                   |                   |                   |                   |                       |             |                     |                     |                     |  |
|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|-------------|---------------------|---------------------|---------------------|--|
| <b>56A</b><br>56B | <b>63A</b><br>63B | <b>71A</b><br>71B | <b>80A</b><br>80B | <b>90S</b><br>90L | <b>100LA</b><br>100LB | <b>112M</b> | <b>132S</b><br>132M | <b>160M</b><br>160L | <b>180M</b><br>180L |  |

Type - Tipo - Typ  
Type - Tipo

Size - Grandezza  
Größe - Taille  
Tamaño

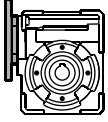
Mounting - Montaggio - Montage Fixation  
Fixation - Tipo de montaje

**P**

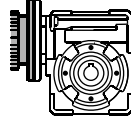
**Q63**

**FC**

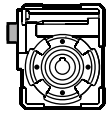
**Worm gearboxes**  
Riduttori a vite senza fine  
Schneckengetriebe  
Reducteurs a vis sans fin  
Reductores de corona sin fin



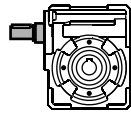
**P**



**M**

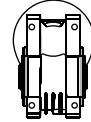


**B**

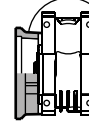


**R**

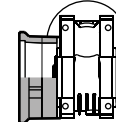
**Q63**  
**Q75**  
**Q85**  
**Q11**



**FB**

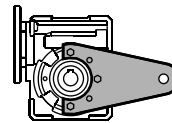


**FC**



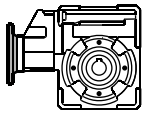
**FL**

**F1**  
**F2**  
**F3**  
**F4**

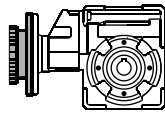


**BR**

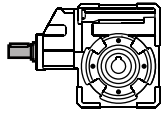
**Worm gearboxes with primary reduction**  
Riduttori a vite senza fine con precoppia  
Schneckengetriebe mit Stirradstufe am Eintrieb  
Reducteurs a vis sans fin avec pré-réduction  
Reductores corona sin fin con prerreductora de engrajes



**P**

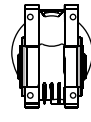


**M**

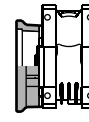


**R**

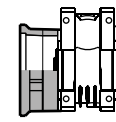
**P6Q**  
**P7Q**  
**P8Q**  
**P1Q**



**FB**

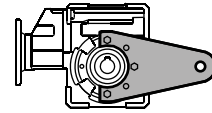


**FC**



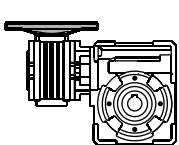
**FL**

**F1**  
**F2**  
**F3**  
**F4**

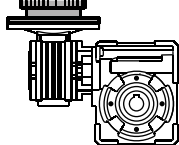


**BR**

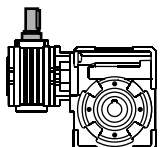
**Combined worm gearboxes**  
Riduttori a vite senza fine combinati  
Schneckengetriebekombinationen  
Reducteurs a double train de vis sans fin  
Reductores combinados corona sin fin



**P**

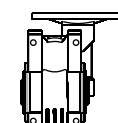


**M**

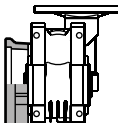


**R**

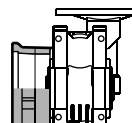
**63Q**  
**64Q**  
**74Q**  
**84Q**  
**15Q**



**FB**

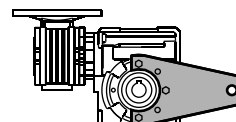


**FC**



**FL**

**F1**  
**F2**  
**F3**  
**F4**

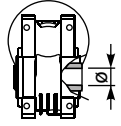
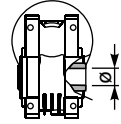
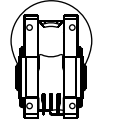
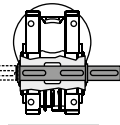
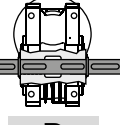
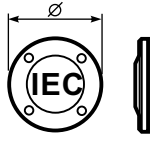
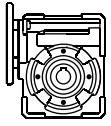
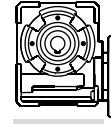
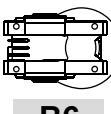
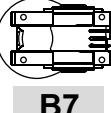
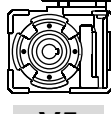
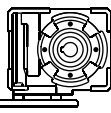
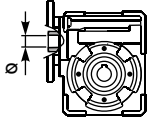
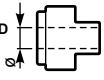
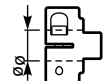


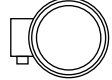
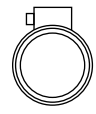

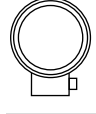


**BR**



On request we can deliver our products according to the ATEX  
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
Sur demande nos produits peuvent se conformer à la réglementation ATEX  
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

| Ratio<br>Rapporto<br>Untersetzung<br>Reduction<br>Relación   | Hub<br>Mozzo corona<br>Hohlwelle<br>Arbre creux<br>Nucleo corona   | Output shaft<br>Albero lento<br>Abtriebswelle<br>Arbre de sortie<br>Eje salida  | Motor size<br>Grandezza motore<br>Motor Grösse<br>Grandeur moteur<br>Tamaño motor  | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Posición de montaje  | Input bore<br>Foro entrada<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Mountin position<br>Esecuzione montaggio<br>Einbaulage<br>Exécution de montage<br>Posición de montaje  | Terminal box position<br>Posizione morsettera<br>Klemmkastenlage<br>Position boîte a bornes<br>Posición caja de bornes  |
|--|--|---|--|---|--|--|---|
| <b>10</b>  | <b>C</b>   | <b>∅</b>  | <b>-Q</b>  | <b>B3</b>   | <b>ST</b>  | <b>---</b>   |   |
| See technical data table<br>Vedi tabella dati tecnici.<br>Technisches Datenblatt beachten<br>Voir tableau données techniques<br>Ver tabla datos técnicos | <br><b>STANDARD</b><br><b>C</b><br>Q63 ⇨ ∅25<br>Q75 ⇨ ∅30<br>Q85 ⇨ ∅35<br>Q11 ⇨ ∅42<br><br><b>I</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox<br><br><br><b>INCH</b><br><b>U</b><br>Q63 ⇨ ∅1.125"<br>Q85 ⇨ ∅1.500"<br><br><b>Z</b><br>Stainless steel hub<br>Mozzo in acciaio Inox<br>Edelhohlwelle<br>Moyeu en acier Inox<br>Nucleo corona de acero Inox | <br><b>∅</b><br><br><br><b>S</b><br><br><br><b>D</b> | <br><b>-M</b><br>without flange<br>Senza flangia<br><br><b>B5</b><br><br><b>-A=56 (∅120)</b><br><b>-B=63 (∅140)</b><br><b>-C=71 (∅160)</b><br><b>-D=80 (∅200)</b><br><b>-E=90 (∅200)</b><br><b>-F=100 (∅250)</b><br><b>-G=132 (∅300)</b><br><b>-H=160 (∅350)</b><br><br><b>B14</b><br><br><b>-O=56 (∅80)</b><br><b>-P=63 (∅90)</b><br><b>-Q=71 (∅105)</b><br><b>-R=80 (∅120)</b><br><b>-T=90 (∅140)</b><br><b>-U=100 (∅160)</b><br><b>-V=132 (∅200)</b><br><br><b>Brushless</b><br><b>BB=50/70-M5</b><br><b>BC=60/75-M5</b><br><b>BD=70/90-M6</b><br><b>BE=80/100-M6</b><br><b>BF=95/115-M8</b><br><b>BG=110/145-M8</b><br><b>BH=130/165-M8</b><br><br><b>-0=Type R</b><br><b>-S=Type R</b><br>S series | <br><b>B3</b><br><br><br><b>B8</b><br><br><br><b>B6</b><br><br><br><b>B7</b><br><br><br><b>V5</b><br><br><br><b>V6</b> | <br><b>ST</b><br><b>Standard bore *<br/>Kit R standard</b><br><br><b>Foro standard *<br/>Kit R standard</b><br><br><b>Input bore<br/>without<br/>Reduction Bushing</b><br><b>-O = 9mm</b><br><b>-P = 11mm</b><br><b>-Q = 14mm</b><br><b>-R = 19mm</b><br><b>-T = 24mm</b><br><b>-U = 28mm</b><br><b>-V = 38mm</b><br><br><b>COUPLING</b><br><b>STANDARD (IEC)</b><br><br><b>-A = 9mm</b><br><b>-B = 11mm</b><br><b>-C = 14mm</b><br><b>-D = 19mm</b><br><b>-E = 24mm</b><br><b>-F = 28mm</b><br><br><b>BRUSHLESS *</b><br><br><b>-3 = 14mm</b><br><b>-4 = 19mm</b><br><b>-5 = 22mm</b><br><b>-6 = 24mm</b><br><br>Ready for input coupling<br>Predisposto per giunto<br><br><b>-0</b><br><b>Type B</b><br>Tipo B<br><br><br><b>-0</b><br><b>Type R</b><br>Tipo R | <b>Only for combined units<br/>See technical data table</b><br><br>Solo per i riduttori combinati<br>Vedi tabella dati tecnici.<br><br>Ausführungen für Getriebekombinationen it<br><br>Uniquement pour combinés.<br>Voir tableau données techniques<br><br>Sólo para combinados<br>ver tabla datos técnicos | <b>With Type M specify terminal box position</b><br>Con tipo M specificare posizione morsettera<br><br><br><b>A</b><br><br><br><b>B</b><br><b>STANDARD</b><br><br><br><b>C</b><br><br><br><b>D</b> |

\* With reduction bushing where applicable  
 Con bussola di riduzione dove prevista

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotação                        | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translación | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

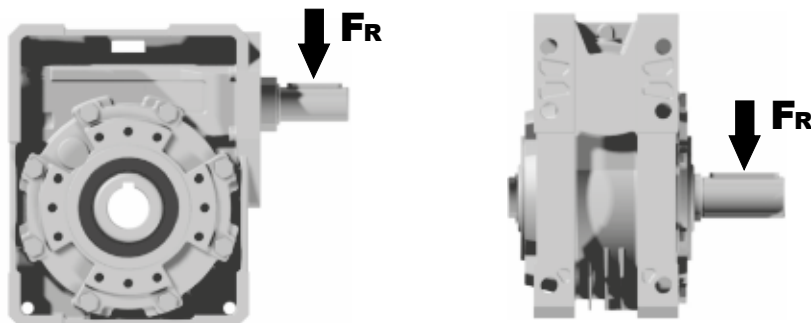
3

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

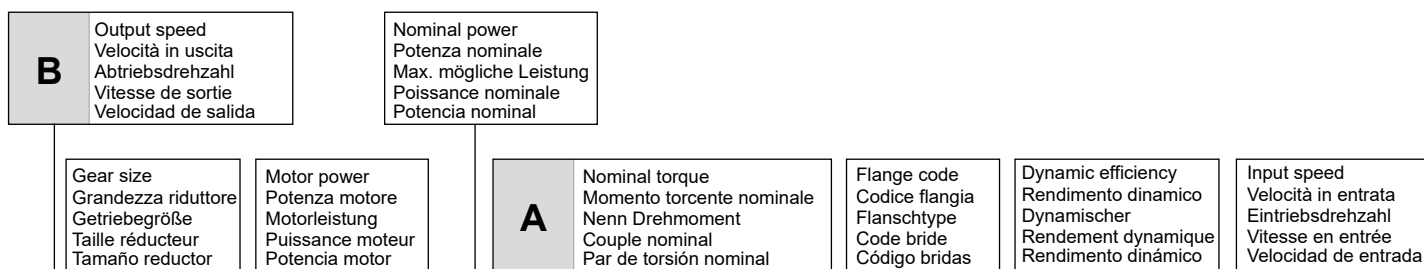
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor



**Q63** Q Square - Gear  
**147Nm**

Rating - Aluminum WORM GEARBOXES



QUICK SELECTION / Selezione veloce

| Output Speed<br>$n_2$ [min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$ [kW] | Output torque<br>$M_{2M}$ [Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$ [kW] | Nominal torque<br>$M_{2R}$ [Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |     |     | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|--|--------------|------------------------------|--------------------------------|------------------------|--------------------------------|---------------------------------|----------------------------|----|----|----|-----------------------------|-----|-----|--------------------------|----------------------|-------------|----|
|  |              |                              |                                |                        |                                |                                 | -B                         | -C | -D | -E | -Q                          | -R  | -T  |                          |                      |             |    |
|  |              |                              |                                |                        |                                |                                 | 63                         | 71 | 80 | 90 | 71                          | 80  | 90  |                          |                      |             |    |
| 200  | 7            | 1.8                          | 71                             | 1.8                    | 3.2                            | 125                             |                            | B  | B  |    |                             | B-C | B-C |                          | 83                   | 3.1         | 01 |
| 140  | 10           | 1.8                          | 99                             | 1.4                    | 2.4                            | 134                             |                            | B  | B  |    |                             | B-C | B-C |                          | 81                   | 3.1         | 02 |
| 93   | 15           | 1.5                          | 121                            | 1.1                    | 1.7                            | 138                             |                            | B  | B  |    |                             | B-C | B-C |                          | 79                   | 3.1         | 03 |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

Nominal module  
Modulo nominale  
Nenn modul  
Module nominale  
Módulo nominal

Notes  
Note  
Anmerkungen  
Note  
Notas

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |         |          |
|--|---------------------|--|---------|----------|
|  |                     | <2 h                                       | 2 - 8 h | 8 - 16 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.9  | 1       | 1.25     |
|  | Moderate / Moderato | 1  | 1.25    | 1.5      |
|  | Heavy / Forte       | 1.25                                       | 1.5     | 1.75     |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1.25                                       | 1.5     | 1.75     |
|  | Moderate / Moderato | 1.5  | 1.75    | 2        |
|  | Heavy / Forte       | 1.75                                       | 2       | 2.25     |

|           |  |
|-----------|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccola di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccola<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible también sin casquillo                                  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |          |    | Available B14 motor flanges |            |            | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----------|----|-----------------------------|------------|------------|---------------------------------|--------------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D       | -E | -Q                          | -R         | -T         |                                 |                          |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80       | 90 | 71                          | 80         | 90         |                                 |                          |                 |    |
| 200   | <b>7</b>     | 1.8                             | 71                                | 1.8                    | <b>3.2</b>                        | <b>125</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 83                       | 3.1             | 01 |
| 140   | <b>10</b>    | 1.8                             | 99                                | 1.4                    | <b>2.4</b>                        | <b>134</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 81                       | 3.1             | 02 |
| 93  | <b>15</b>    | 1.5                             | 121                               | 1.1                    | <b>1.7</b>                        | <b>138</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 79                       | 3.1             | 03 |
| 74  | <b>19</b>    | 1.1                             | 111                               | 1.2                    | <b>1.4</b>                        | <b>138</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 78                       | 2.6             | 04 |
| 58  | <b>24</b>    | 1.1                             | 135                               | 1.0                    | <b>1.2</b>                        | <b>142</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 75                       | 2.0             | 05 |
| 47  | <b>30</b>    | 1.1                             | 167                               | 0.9                    | <b>0.96</b>                       | <b>146</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 74                       | 3.2             | 06 |
| 39  | <b>36</b>    | 0.75                            | 125                               | 1.2                    | <b>0.88</b>                       | <b>147</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 68                       | 2.7             | 07 |
| 35  | <b>40</b>    | 0.75                            | 135                               | 1.0                    | <b>0.78</b>                       | <b>140</b>                         |                            | <b>B</b> | <b>B</b> |    |                             | <b>B-C</b> | <b>B-C</b> |                                 | 66                       | 2.5             | 13 |
| 31  | <b>45</b>    | 0.55                            | 111                               | 1.2                    | <b>0.67</b>                       | <b>135</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 66                       | 2.1             | 08 |
| 23  | <b>60</b>    | 0.55                            | 140                               | 0.9                    | <b>0.51</b>                       | <b>130</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 62                       | 1.6             | 12 |
| 21  | <b>67</b>    | 0.55                            | 151                               | 0.8                    | <b>0.45</b>                       | <b>124</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 60                       | 1.5             | 09 |
| 17.5  | <b>80</b>    | 0.37                            | 115                               | 1.0                    | <b>0.38</b>                       | <b>119</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 57                       | 1.3             | 10 |
| 14.9  | <b>94</b>    | 0.37                            | 123                               | 1.0                    | <b>0.36</b>                       | <b>119</b>                         | <b>B</b>                   | <b>B</b> |          |    |                             | <b>B-C</b> | <b>C</b>   |                                 | 52                       | 1.1             | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **Q63** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **Q63** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **Q63** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **Q63** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **Q63** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION Q63 Oil Quantity 0.30 Lt.

**SHELL** Omala S4 WE 320

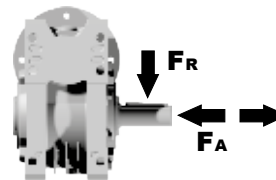
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

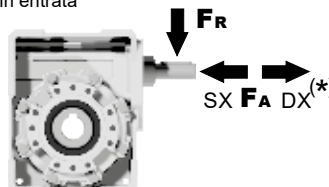
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>200</b>                    | 360       | 1800      |
| <b>150</b>                    | 400       | 2000      |
| <b>100</b>                    | 460       | 2300      |
| <b>75</b>                     | 500       | 2500      |
| <b>50</b>                     | 600       | 3000      |
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 90        | 450       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

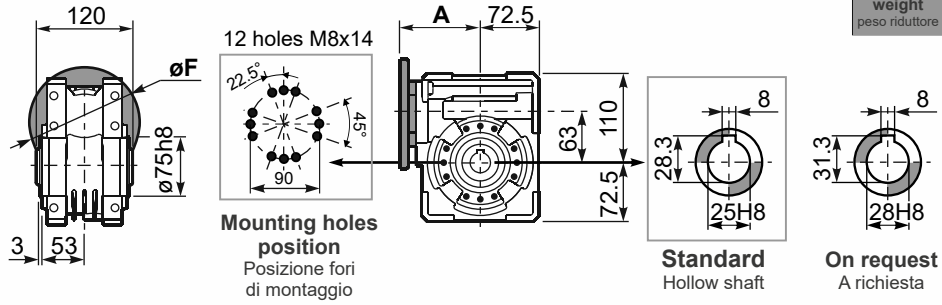


3D dimensions on the Web

PQ63**FB**... Basic wormbox  
Riduttore base

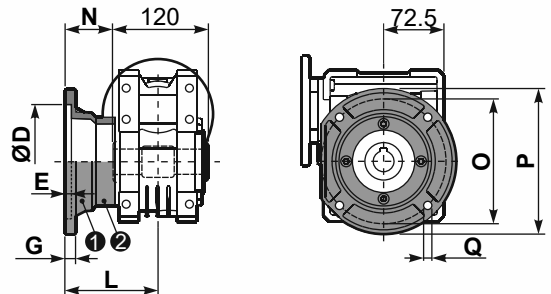
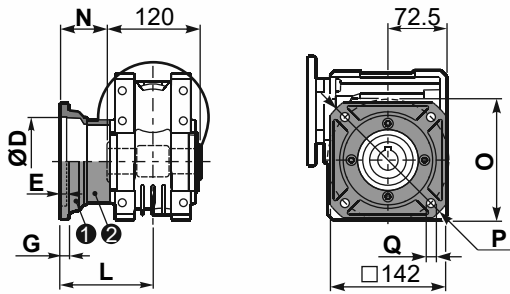
Gearbox weight  
peso riduttore **6.00 kg**

| M. flanges | Kit code   | øF  | A    |
|------------|------------|-----|------|
| 63B5       | K063.4.041 | 140 | 99.5 |
| 71B5       | K063.4.042 | 160 | 97.5 |
| 80/90B5    | K063.4.043 | 200 | 99.5 |
| 71B14      | K063.4.047 | 105 | 97.5 |
| 80B14      | K063.4.046 | 120 | 99.5 |
| 90B14      | K063.4.041 | 140 | 99.5 |



PQ63**FC**... Square flange  
Flangia quadrata

PQ63**F1**... Round flange  
Flangia rotonda

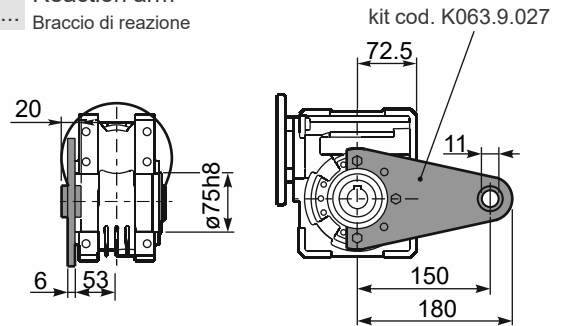
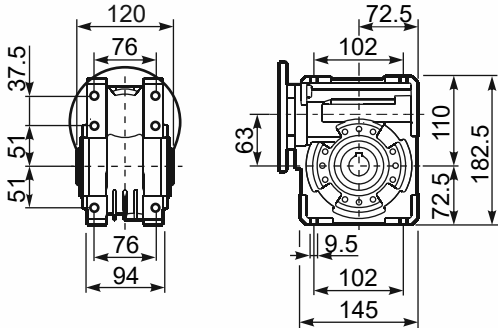


| type B | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|--------|---|---|----|-----|----|-----|-----|----|------------------------------|
| FC     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 86  | 26 | 150 | 180 | 11 | 1 KQ63.9.010<br>2 -          |
| FL     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 116 | 56 | 150 | 180 | 11 | 1 KQ63.9.010<br>2 K063.0.200 |

| type S | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|--------|---|---|----|-----|----|-----|-----|----|----------------------|
| F1     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 110 | 50 | 165 | 200 | 13 | 1 KS070.9.013<br>2 - |
| F2     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 124 | 64 | 150 | 175 | 11 | 1 KS063.9.013<br>2 - |
| F3     | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 90  | 30 | 130 | 160 | 10 | 1 KS063.9.011<br>2 - |

PQ63**FB**... Feet  
Piedini

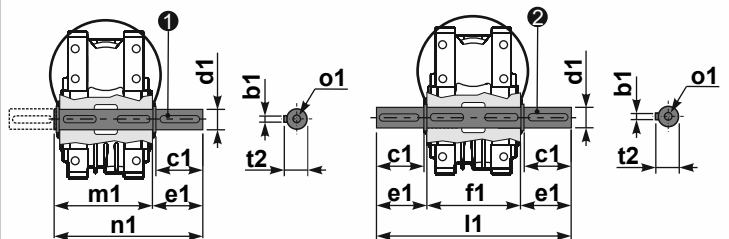
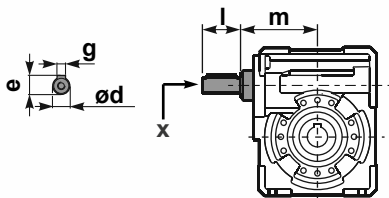
PQ63**BR**... Reaction arm  
Braccio di reazione



RQ63**FB**... Input shaft  
Albero in entrata

PQ63.....**S**... Single Shaft  
Albero lento semplice

PQ63.....**D**... Double Shaft  
Albero lento bisp.



1 kit cod. K063.5.028 type B

2 kit cod. K063.5.029 type B

|        | ød    | e    | g | l  | m  | x     | kit code                                   |
|--------|-------|------|---|----|----|-------|--|
| type B | 18 h6 | 20.5 | 6 | 45 | 93 | M6x16 | 1 K063.5.006 PAM80<br>2 K063.5.007 PAM90   |
| type S | 19 h6 | 21.5 | 6 | 40 | 93 | M8x20 | 1 KS063.5.008 PAM80<br>2 KS063.5.009 PAM90 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----------------------------|----|------------|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -R                          | -T | -U         |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                          |                      |             |    |
| 200   | 7            | 4                               | 172                               | 1.1                    | 4.4                               | 190                                |                            | B  | B  |            |                             | B  | B          |                          | 90                   | 3.75        | 01 |
| 140   | 10           | 4                               | 240                               | 1.0                    | 3.8                               | 230                                |                            | B  | B  |            |                             | B  | B          |                          | 88                   | 3.75        | 02 |
| 93  | 15           | 3                               | 261                               | 1.0                    | 2.9                               | 250                                |                            | B  | B  |            |                             | B  | B          |                          | 85                   | 3.75        | 03 |
| 70  | 20           | 2.2                             | 249                               | 1.0                    | 2.2                               | 250                                |                            | B  | B  |            |                             | B  | B          |                          | 83                   | 3.00        | 04 |
| 56  | 25           | 1.5                             | 205                               | 1.2                    | 1.8                               | 250                                | B                          | B  |    |            |                             | B  |            |                          | 80                   | 2.41        | 05 |
| 45  | 31           | 1.5                             | 244                               | 1.1                    | 1.7                               | 270                                | B                          | B  |    |            |                             | B  |            |                          | 77                   | 3.75        | 06 |
| 35  | 40           | 1.5                             | 295                               | 0.9                    | 1.3                               | 255                                | B                          | B  |    |            |                             | B  |            |                          | 72                   | 3.10        | 07 |
| 28  | 50           | 0.75                            | 174                               | 1.3                    | 0.95                              | 220                                | B                          |    |    |            |                             |    |            |                          | 68                   | 2.41        | 08 |
| 23  | 60           | 0.75                            | 200                               | 1.0                    | 0.75                              | 200                                | B                          |    |    |            |                             |    |            |                          | 65                   | 2.10        | 09 |
| 17.5  | 80           | 0.55                            | 177                               | 1.0                    | 0.56                              | 180                                | B                          |    |    |            |                             |    |            |                          | 59                   | 1.53        | 10 |
| 14.0  | 100          | 0.55*                           | 206                               | 0.7                    | 0.40                              | 150                                | B                          |    |    |            |                             |    |            |                          | 55                   | 1.23        | 11 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit Q75 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo Q75 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe Q75 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type Q75 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño Q75 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION Q75 Oil Quantity 0.40 Lt.

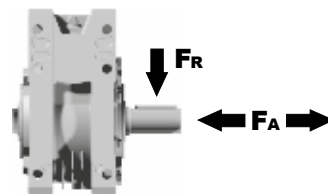
SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

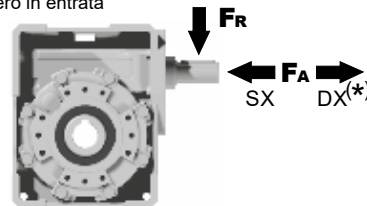
#### RADIAL AND AXIAL LOADS

Output shaft  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 460       | 2300      |
| 150                           | 520       | 2600      |
| 100                           | 560       | 2800      |
| 75                            | 620       | 3100      |
| 50                            | 720       | 3600      |
| 25                            | 880       | 4400      |
| 15                            | 1000      | 5000      |

Input shaft  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 125       | 630       |

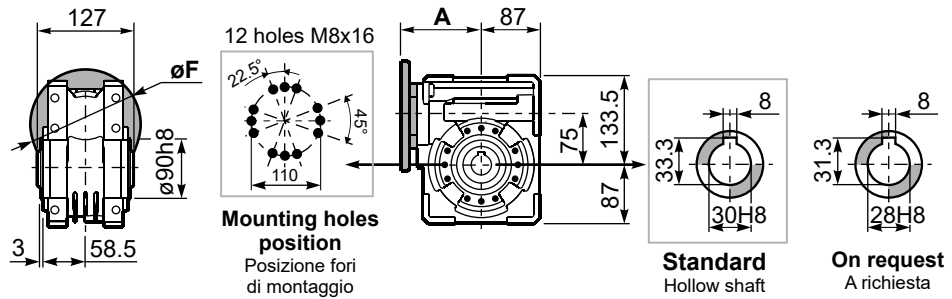
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

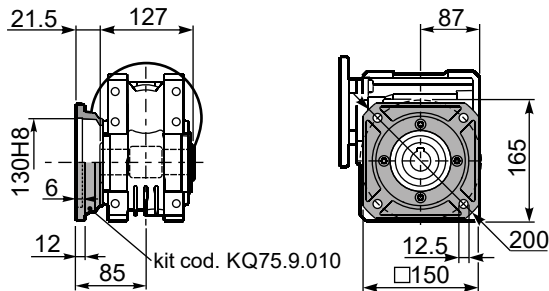
**PQ75FB...** Basic wormbox  
Riduttore base

Gearbox weight **8.70 kg**  
peso riduttore

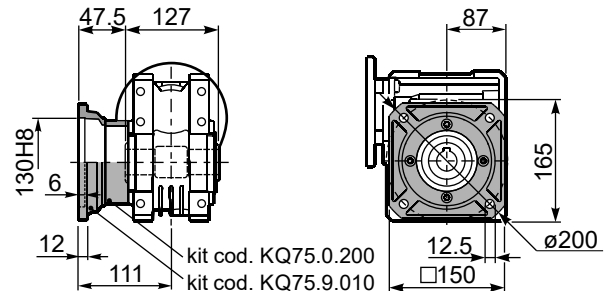
| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 114 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 116 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 125 |
| <b>80B14</b>      | K085.4.046 | 120 | 116 |
| <b>90B14</b>      | K085.4.045 | 140 | 116 |
| <b>100/112B14</b> | K085.4.047 | 160 | 125 |



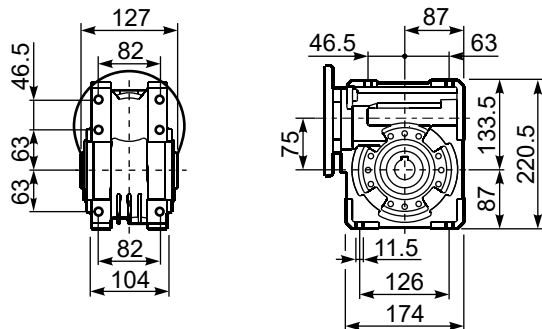
**PQ75FC...** Square flange  
Flangia quadrata



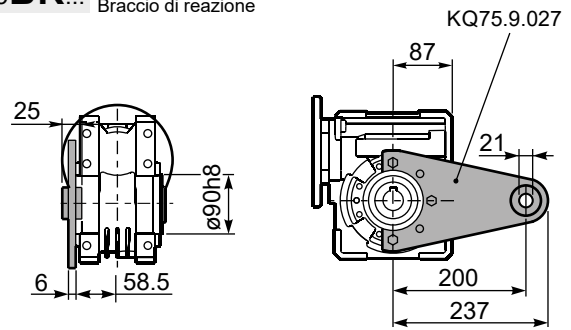
**PQ75FL...** Square flange  
Flangia quadrata



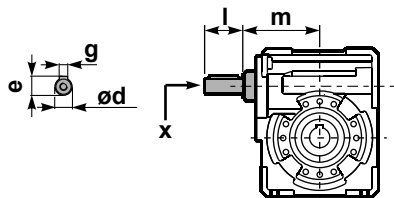
**PQ75FB...** Feet  
Piedini



**PQ75BR...** Reaction arm  
Braccio di reazione

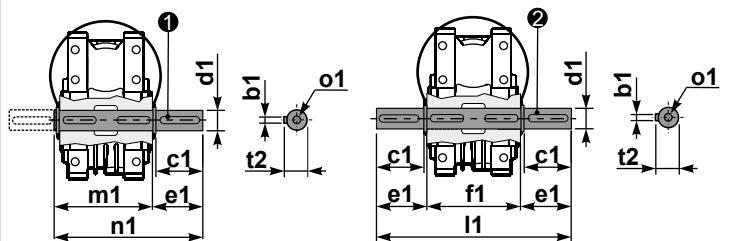


**RQ75FB...** Input shaft  
Albero in entrata



**PQ75....S...** Single Shaft  
Albero lento semplice

**PQ75....D...** Double Shaft  
Albero lento bisp.



① kit cod. KQ75.5.028 Standard  
kit cod. KQ75.5.026 On request

② kit cod. KQ75.5.029 Standard

|        | ød    | e    | g | l  | m     | x     | kit code  |
|--------|-------|------|---|----|-------|-------|---|
| type B | 25 h6 | 27.8 | 8 | 50 | 109.5 | M8x20 | KQ75.5.006 PAM80<br>K085.5.007 PAM90<br>K085.5.008 PAM100 |

|            | b1 | c1 | d1                                     | e1 | f1  | l1  | m1  | n1  | t2 | o1    |
|------------|----|----|--|----|-----|-----|-----|-----|----|-------|
| Standard   | 8  | 60 | 30 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | 127 | 255 | 134 | 199 | 33 | M8x20 |
| On request | 8  | 60 | 28 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | -   | -   | 134 | 199 | 31 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----------------------------|----|------------|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -R                          | -T | -U         |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                          |                      |             |    |
| 200   | 7            | 4.0                             | 168                               | 1.5                    | 6.1                               | 257                                |                            | B  | B  |            |                             | B  | B          |                          | 88                   | 4.23        | 01 |
| 140   | 10           | 4.0                             | 218                               | 1.3                    | 5.2                               | 284                                |                            | B  | B  |            |                             | B  | B          |                          | 80                   | 4.2         | 02 |
| 100   | 14           | 3.0                             | 223                               | 1.4                    | 4.1                               | 305                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 4.5         | 03 |
| 70  | 20           | 2.2                             | 237                               | 1.2                    | 2.7                               | 294                                |                            | B  | B  |            |                             | B  | B          |                          | 79                   | 3.4         | 04 |
| 64  | 22           | 2.2                             | 258                               | 1.1                    | 2.5                               | 294                                |                            | B  | B  |            |                             | B  | B          |                          | 78                   | 3.1         | 05 |
| 50  | 28           | 2.2                             | 315                               | 1.1                    | 2.4                               | 347                                |                            | B  | B  | B          |                             | B  | B          |                          | 75                   | 4.7         | 06 |
| 37  | 38           | 1.5                             | 276                               | 1.2                    | 1.8                               | 336                                | B                          | B  |    |            |                             | B  | B          |                          | 71                   | 3.5         | 07 |
| 30  | 46           | 1.5                             | 320                               | 1.0                    | 1.5                               | 326                                | B                          | B  |    |            |                             | B  | B          |                          | 68                   | 3.1         | 08 |
| 27  | 52           | 1.1                             | 258                               | 1.1                    | 1.2                               | 289                                | B                          | B  |    |            |                             | B  | B          |                          | 66                   | 2.7         | 09 |
| 21  | 67           | 1.1                             | 327                               | 0.9                    | 0.97                              | 289                                | B                          | B  |    |            |                             | B  | B          |                          | 65                   | 2.1         | 10 |
| 18.9  | 74           | 0.75                            | 220                               | 1.2                    | 0.91                              | 268                                | B                          | B  |    |            |                             | B  | B          |                          | 58                   | 1.9         | 11 |
| 14.6  | 96           | 0.55                            | 191                               | 1.3                    | 0.70                              | 242                                | B                          | B  |    |            |                             | B  | B          |                          | 53                   | 1.5         | 12 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit Q85 is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo Q85 viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe Q85 mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type Q85 est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño Q85 se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION Q85 Oil Quantity 1.20 Lt.

SHELL Omala S4 WE 320

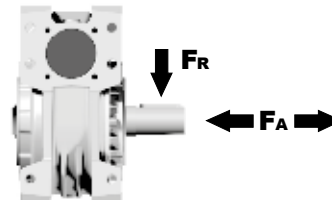
ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

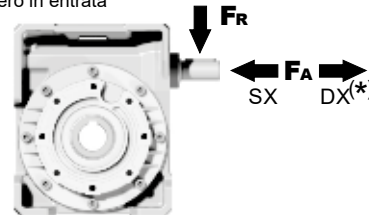
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 500       | 2500      |
| 150                           | 580       | 2900      |
| 100                           | 600       | 3000      |
| 75                            | 700       | 3500      |
| 50                            | 800       | 4000      |
| 25                            | 1000      | 5000      |
| 15                            | 1160      | 5800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 130       | 650       |

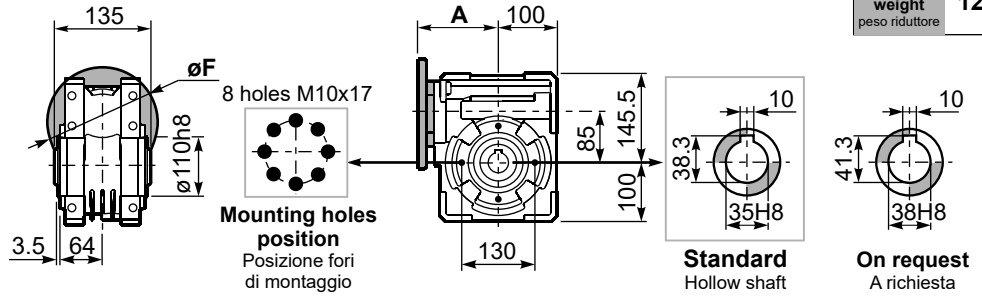
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PQ85**FB**... Basic wormbox  
Riduttore base

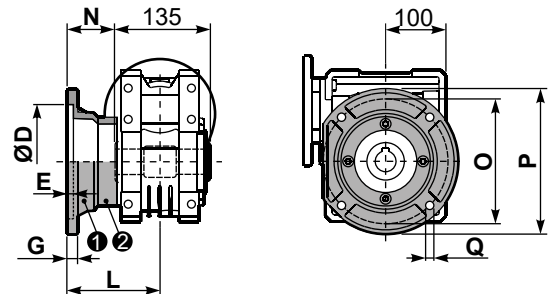
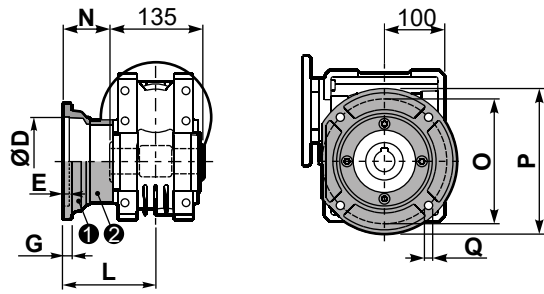
Gearbox weight  
peso riduttore **12.1 kg**

| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 116.5 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 118.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 127.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 118.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 118.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 127.5 |



PQ85**FC**... Output flange  
Flangia uscita

PQ85**F1**... Output flange  
Flangia uscita

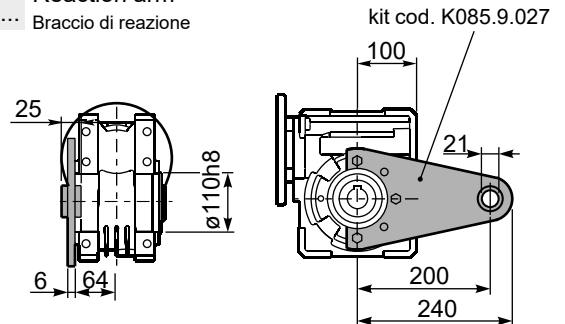
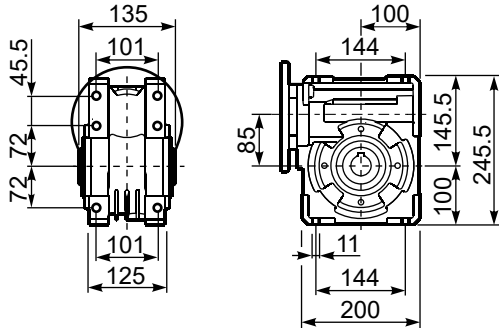


| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13 | ① K085.9.010<br>② -          |
| <b>FL</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13 | ① K085.9.010<br>② K085.0.201 |

| type S    | øD                                      | E | G  | L     | N  | O   | P   | Q    | kit code             |
|-----------|---|---|----|-------|----|-----|-----|------|----------------------|
| <b>F1</b> | 130 H7                                  | 5 | 13 | 117.5 | 50 | 165 | 200 | 11.5 | ① KS085.9.012<br>② - |
| <b>F2</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 15 | 147.5 | 80 | 180 | 205 | 12.5 | ① KS085.9.013<br>② - |
| <b>F4</b> | 130 H7                                  | 5 | 13 | 106.5 | 39 | 165 | 200 | 13   | ① KS085.9.015<br>② - |

PQ85**FB**... Feet  
Piedini

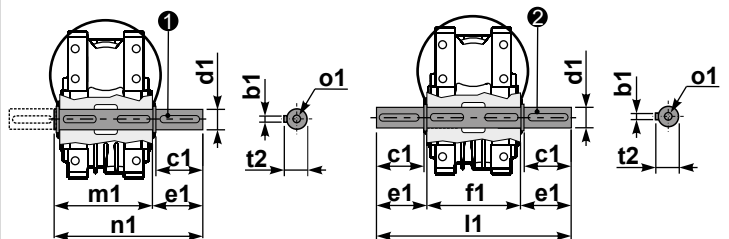
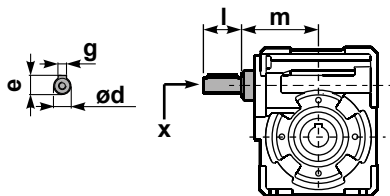
PQ85**BR**... Reaction arm  
Braccio di reazione



RQ85**FB**... Input shaft  
Albero in entrata

PQ85.....**S**... Single Shaft  
Albero lento semplice

PQ85.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. K085.5.028 type B      ② kit cod. K085.5.029 type B

|        | ød    | e  | g | l  | m   | x     | kit code                                    |
|--------|-------|----|---|----|-----|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 112 | M8x20 | ① K085.5.007 PAM90<br>② K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 112 | M8x20 | ① KS085.5.009 PAM90<br>② KS085.5.011 PAM100 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|--------------------------|----------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                          |                      |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                          |                      |             |    |
| 200   | 7            | 7.5                             | 315                               | 1.5                    | 11.5                              | 483                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 88                   | 5.5         | 01 |
| 140   | 10           | 7.5                             | 440                               | 1.2                    | 9.0                               | 525                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 86                   | 5.4         | 02 |
| 88  | 16           | 5.5                             | 492                               | 1.1                    | 6.0                               | 536                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 5.3         | 03 |
| 70  | 20           | 4.0                             | 447                               | 1.2                    | 4.9                               | 546                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 82                   | 4.5         | 04 |
| 61  | 23           | 3.0                             | 377                               | 1.4                    | 4.1                               | 515                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 80                   | 3.9         | 05 |
| 47  | 30           | 3.0                             | 467                               | 1.4                    | 4.2                               | 651                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 76                   | 5.6         | 06 |
| 37  | 38           | 3.0                             | 583                               | 1.1                    | 3.3                               | 641                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 75                   | 4.7         | 07 |
| 31  | 45           | 2.2                             | 493                               | 1.2                    | 2.7                               | 599                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 73                   | 4.0         | 08 |
| 26  | 53           | 2.2                             | 557                               | 1.1                    | 2.5                               | 620                                |                            | B  | B  |            |     |                             | B  | B          |     |                          | 70                   | 3.5         | 09 |
| 22  | 64           | 1.5                             | 452                               | 1.2                    | 1.8                               | 536                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 69                   | 2.9         | 10 |
| 16.7  | 84           | 1.1                             | 410                               | 1.2                    | 1.3                               | 494                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 65                   | 2.2         | 11 |
| 14.1  | 99           | 1.1                             | 446                               | 1.1                    | 1.2                               | 483                                | B                          | B  |    |            |     |                             | B  |            |     |                          | 60                   | 1.9         | 12 |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit Q11 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo Q11 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße Q11 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type Q11 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants.  
S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

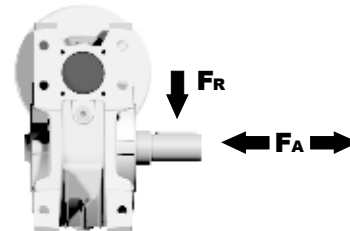
**E** El reductor tamaño Q11 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |                 |         |        |
|-----------------------|---------|---------|-----------------|---------|--------|
|                       |         |         |                 |         |        |
| 1.90 LT               | 1.35 LT | 1.35 LT | 2.00LT          | 2.00 LT | 2.00LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |        |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

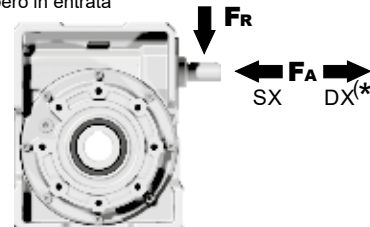
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 200                           | 600       | 2900      |
| 150                           | 700       | 3300      |
| 100                           | 750       | 3600      |
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15                            | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 228       | 1140      |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

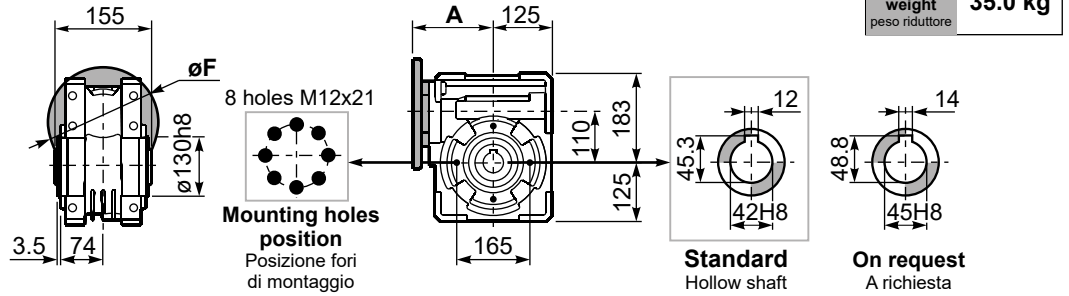
tab. 2



**PQ11FB...** Basic wormbox  
Riduttore base

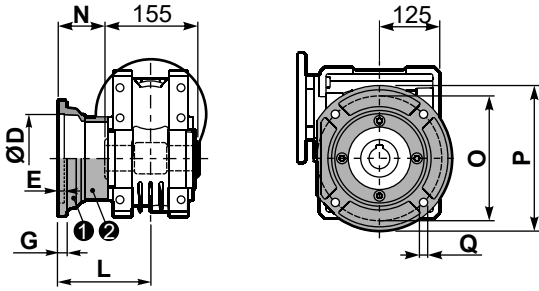
Gearbox weight  
peso riduttore **35.0 kg**

| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 71B5       | K023.4.041 | 160 | 136 |
| 80/90B5    | K023.4.042 | 200 | 138 |
| 100/112B5  | K023.4.043 | 250 | 147 |
| 132B5      | -          | 300 | 187 |
|            |            |     |     |
| 80B14      | K085.4.046 | 120 | 138 |
| 90B14      | K085.4.045 | 140 | 138 |
| 100/112B14 | K023.4.041 | 160 | 136 |
| 132B14     | -          | 200 | 187 |

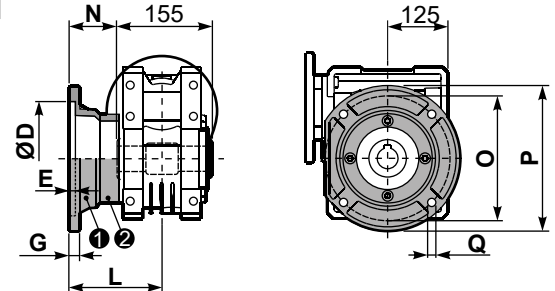


**PQ11FC...** Output flange  
Flangia uscita

**PQ11F1...** Output flange  
Flangia uscita

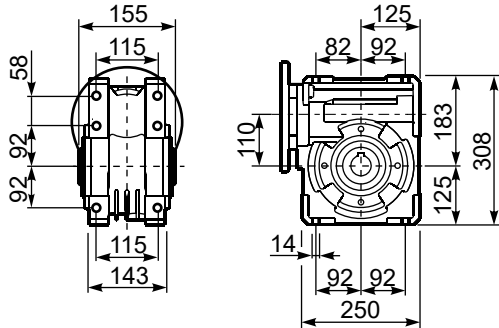


| type B | øD  | E  | G    | L     | N   | O   | P   | Q  | kit code            |
|--------|---|----|------|-------|-----|-----|-----|----|---------------------|
| FC     | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 131.5 | 54  | 230 | 270 | 13 | 1 K110.9.010<br>2 - |
| FL     | 170 <sup>+0.083</sup> / <sub>+0.043</sub> | 11 | 16.5 | 179.5 | 102 | 230 | 270 | 13 | 1 K110.9.011<br>2 - |



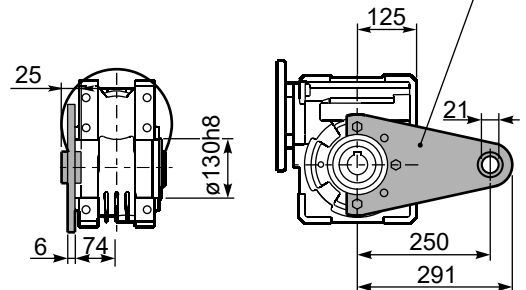
| type S | øD                                   | E | G  | L   | N    | O   | P   | Q  | kit code             |
|--------|--------------------------------------|---|----|-----|------|-----|-----|----|----------------------|
| F1     | 180 <sup>+0.040</sup> / <sub>0</sub> | 5 | 18 | 150 | 72.5 | 215 | 250 | 15 | 1 KS110.9.014<br>2 - |
| F3     | 180 <sup>+0.040</sup> / <sub>0</sub> | 5 | 18 | 130 | 52.5 | 215 | 250 | 15 | 1 KS110.9.013<br>2 - |

**PQ11FB...** Feet  
Piedini

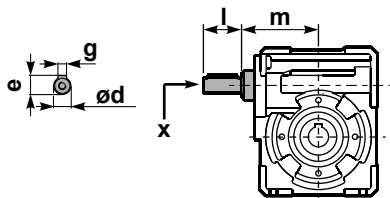


**PQ11BR...** Reaction arm  
Braccio di reazione

kit cod. K110.9.027



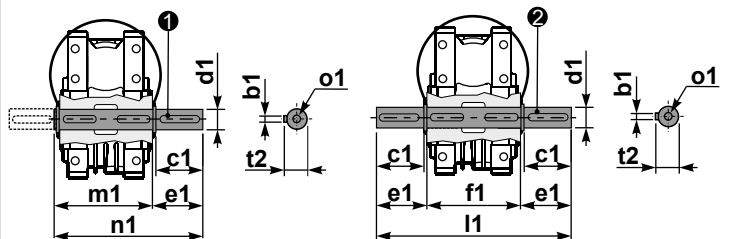
**RQ11FB...** Input shaft  
Albero in entrata



|        | ød    | e  | g | l  | m     | x     | kit code                                    |
|--------|-------|----|---|----|-------|-------|---|
| type B | 25 h6 | 28 | 8 | 50 | 131.5 | M8x20 | 1 K085.5.007 PAM90<br>2 K085.5.008 PAM100   |
| type S | 24 h6 | 27 | 8 | 50 | 131.5 | M8x20 | 1 KS085.5.009 PAM90<br>2 KS085.5.011 PAM100 |

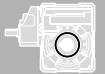
**PQ11.....S...** Single Shaft  
Albero lento semplice

**PQ11.....D...** Double Shaft  
Albero lento bisp.



1 kit cod. K110.5.028 type B    2 kit cod. K110.5.029 type B

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> / <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

|                  | Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|------------------|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|----|---------------------------------|----------------------|-------------|
|                  |   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -P                          | -Q | -R | -T |                                 |                      |             |
|                  |   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 63                          | 71 | 80 | 90 |                                 |                      |             |
| IEC 90 - 80 - 71 | 47  | <b>29.9</b>  | 0.75                            | 113                               | 1.5                    | 1.1                               | 165                                |                            |    |    |    |                             | C  | C  |    | 74                              | 2.6                  | 01          |
|                  | 37  | <b>37.7</b>  | 0.75                            | 141                               | 1.2                    | 0.88                              | 165                                |                            |    |    |    |                             | C  | C  |    | 73                              | 2.0                  | 02          |
|                  | 30  | <b>47.1</b>  | 0.75                            | 169                               | 1.1                    | 0.83                              | 187                                |                            |    |    |    |                             | C  | C  |    | 70                              | 3.2                  | 03          |
|                  | 25  | <b>56.6</b>  | 0.55                            | 136                               | 1.4                    | 0.76                              | 187                                |                            |    |    |    |                             | C  | C  |    | 64                              | 2.7                  | 04          |
|                  | 19.8  | <b>70.7</b>  | 0.55                            | 164                               | 1.1                    | 0.63                              | 187                                |                            |    |    |    |                             | C  | C  |    | 62                              | 2.1                  | 05          |
|                  | 15.9  | <b>87.8</b>  | 0.37                            | 162                               | 1.2                    | 0.43                              | 187                                |                            |    |    |    |                             | C  | C  |    | 73                              | 2.6                  | 06          |
|                  | 12.6  | <b>111.0</b> | 0.37                            | 199                               | 0.9                    | 0.35                              | 187                                |                            |    |    |    |                             | C  | C  |    | 71                              | 2.0                  | 07          |
| IEC 71 - 63      | 10.1  | <b>139</b>   | 0.37                            | 234                               | 0.8                    | 0.30                              | 187                                |                            |    |    |    |                             | C  |    |    | 67                              | 3.2                  | 08          |
|                  | 8.4   | <b>166</b>   | 0.25                            | 173                               | 1.1                    | 0.27                              | 187                                |                            |    |    |    |                             | C  |    |    | 61                              | 2.7                  | 09          |
|                  | 6.7   | <b>208</b>   | 0.18                            | 151                               | 1.1                    | 0.20                              | 165                                |                            |    |    |    |                             | C  |    |    | 59                              | 2.1                  | 10          |
|                  | 4.5   | <b>310</b>   | 0.12                            | 129                               | 1.3                    | 0.15                              | 165                                |                            |    |    |    |                             | C  |    |    | 51                              | 1.5                  | 11          |
|                  | 3.8   | <b>370</b>   | 0.12                            | 145                               | 1.1                    | 0.14                              | 165                                |                            |    |    |    |                             | C  |    |    | 48                              | 1.3                  | 12          |
|                  | 3.2   | <b>434</b>   | 0.12                            | 149                               | 0.9                    | 0.11                              | 138                                |                            |    |    |    |                             | C  |    |    | 42                              | 1.1                  | 13          |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **P6Q** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

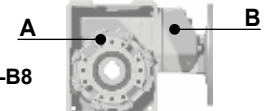
**I** Il riduttore tipo **P6Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P6Q** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P6Q** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P6Q** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION P6Q Oil**  
For B3-V5-V6 separate lubrication for A (0.30 l) B (0.08 l), for B6-B7-B8 common lubrication 0.35 l (A + B).



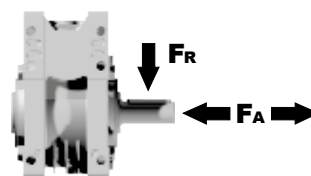
SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

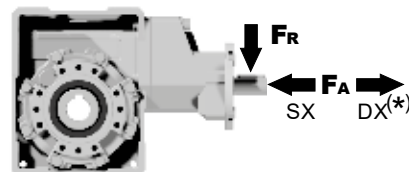
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 500       | 2500      |
| 50                            | 600       | 3000      |
| 25                            | 700       | 3800      |
| 15-6                          | 800       | 4000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 61        | 305       |

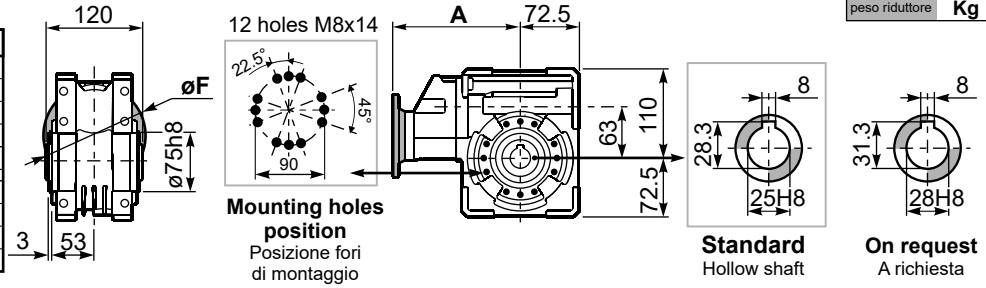
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**PP6QFB...** Basic wormbox  
Riduttore base

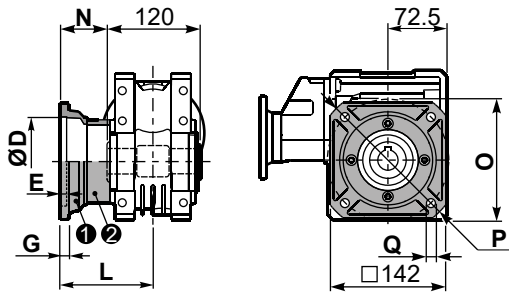
|                |          |         |
|----------------|----------|---------|
| Gearbox weight | 29.9+111 | 139+434 |
| peso riduttore | 7.05 Kg  | 6.60 Kg |

| M.flange | Kit code   | øF  | A     |
|----------|------------|-----|-------|
| 71B5     | K063.4.042 | 160 | 176.5 |
| 80/90B5  | K063.4.043 | 200 | 178.5 |
| 71B14    | K063.4.047 | 105 | 176.5 |
| 80B14    | K063.4.046 | 120 | 178.5 |
| 90B14    | K063.4.041 | 140 | 178.5 |
| <hr/>    |            |     |       |
| 63B5     | K050.4.041 | 138 | 162.5 |
| 71B5     | K050.4.042 | 160 | 160   |
| 63B14    | K050.4.047 | 90  | 162.5 |
| 71B14    | K050.4.045 | 105 | 160   |

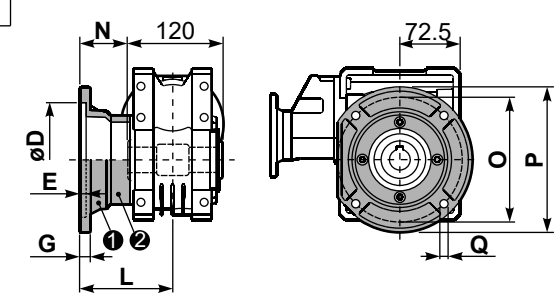


**PP6QFC...** Output flange  
Flangia uscita

**PP6QF1...** Output flange  
Flangia uscita



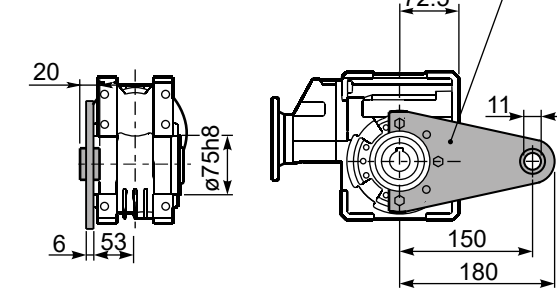
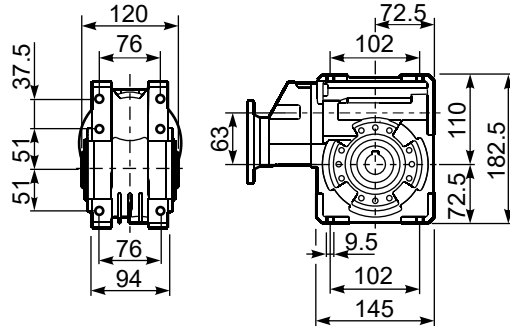
| type B | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|--------|---|---|----|-----|----|-----|-----|----|------------------------------|
| FC     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 86  | 26 | 150 | 180 | 11 | 1 KQ63.9.010<br>2 -          |
| FL     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 116 | 56 | 150 | 180 | 11 | 1 KQ63.9.010<br>2 K063.0.200 |



| type S | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|--------|---|---|----|-----|----|-----|-----|----|----------------------|
| F1     | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 110 | 50 | 165 | 200 | 13 | 1 KS070.9.013<br>2 - |
| F2     | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 124 | 64 | 150 | 175 | 11 | 1 KS063.9.013<br>2 - |
| F3     | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 90  | 30 | 130 | 160 | 10 | 1 KS063.9.011<br>2 - |

**PP6QFB...** Feet  
Piedini

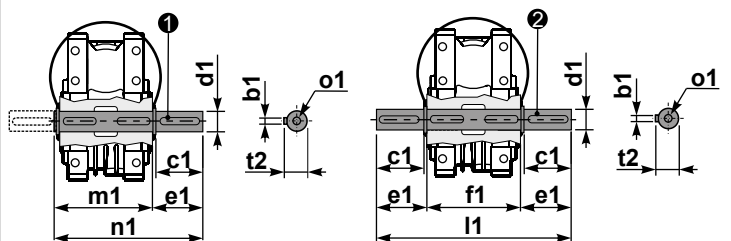
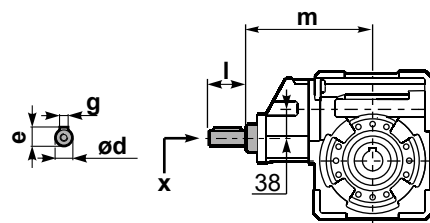
**PP6QBR...** Reaction arm  
Braccio di reazione



**RP6QFB...** Input shaft  
Albero in entrata

**PP6Q...S...** Single Shaft  
Albero lento semplice

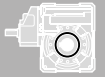
**PP6Q...D...** Double Shaft  
Albero lento bisp.



1 kit cod. K063.5.028 type B      2 kit cod. K063.5.029 type B

|          | ød    | e    | g | l  | m   | x     |           |
|----------|-------|------|---|----|-----|-------|-----------|
| 29.9+111 | 19 h6 | 21.5 | 6 | 35 | 169 | M6x16 | C40.5.062 |
| 139+434  | 14 h6 | 16   | 5 | 25 | 154 | M5x13 | C35.5.061 |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i  | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|--|-------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|--------------------------|----------------------|-------------|
|  |             |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                          |                      |             |
|  |             |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                          |                      |             |
| 22   | <b>62.9</b> | 0.75                                   | 248                                      | 1.2                    | <b>0.87</b>                              | <b>286</b>                                |                            |    |    |    | C                           | C  |    | 77                       | 3.10                 | 01          |
| 18   | <b>78.5</b> | 0.75                                   | 293                                      | 1.0                    | <b>0.73</b>                              | <b>286</b>                                |                            |    |    |    | C                           | C  |    | 73                       | 2.41                 | 02          |
| 15   | <b>94.2</b> | 0.75                                   | 333                                      | 0.9                    | <b>0.70</b>                              | <b>310</b>                                |                            |    |    |    | C                           | C  |    | 69                       | 2.10                 | 03          |
| 11   | <b>126</b>  | 0.55                                   | 297                                      | 1.0                    | <b>0.55</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 63                       | 1.53                 | 04          |
| 9  | <b>157</b>  | 0.37                                   | 230                                      | 1.1                    | <b>0.41</b>                              | <b>252</b>                                | B                          |    |    |    | C                           | C  |    | 58                       | 1.23                 | 05          |
| 8  | <b>185</b>  | 0.37                                   | 257                                      | 1.2                    | <b>0.43</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 55                       | 3.10                 | 06          |
| 6  | <b>231</b>  | 0.25                                   | 193                                      | 1.5                    | <b>0.38</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 49                       | 2.41                 | 07          |
| 5  | <b>277</b>  | 0.25                                   | 222                                      | 1.3                    | <b>0.33</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 47                       | 2.10                 | 08          |
| 4  | <b>378</b>  | 0.18                                   | 200                                      | 1.5                    | <b>0.27</b>                              | <b>296</b>                                | B                          |    |    |    | C                           | C  |    | 43                       | 2.10                 | 09          |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque M<sub>2R</sub>  
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente M<sub>2R</sub>

**EN** Unit P7Q is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo P7Q viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

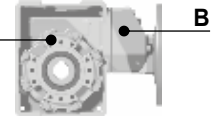
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe P7Q mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type P7Q est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño P7Q se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P7Q Oil

For B3-V5-V6 separate lubrication for A (0.40 l) B (0.14 l), for B6-B7-B8 common lubrication 0.65 l (A + B).



SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

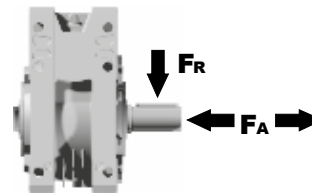
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

#### RADIAL AND AXIAL LOADS

##### Output shaft

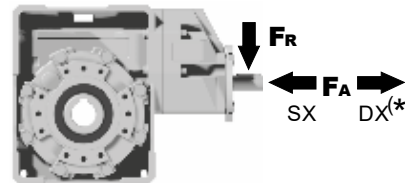
Albero di uscita



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|--|-----------|-----------|
| 75                                     | 620       | 3100      |
| 50                                     | 720       | 3600      |
| 25                                     | 880       | 4400      |
| 15-6                                   | 1000      | 5000      |

##### Input shaft

albero in entrata



| n<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|---------------------------|-----------|-----------|
| 1400                      | 108       | 540       |

\*Strong axial loads in the DX direction are not allowed.

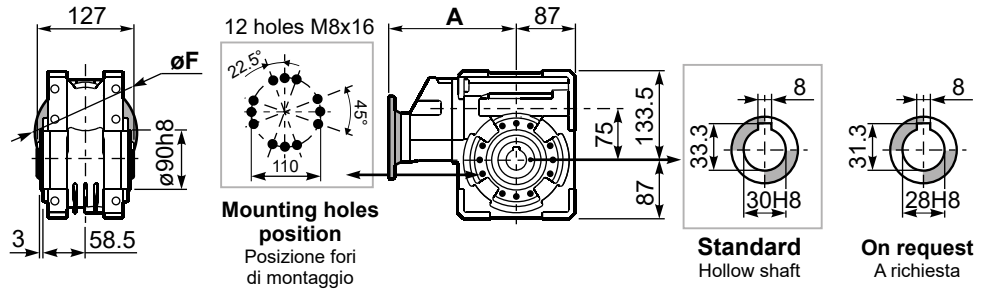
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

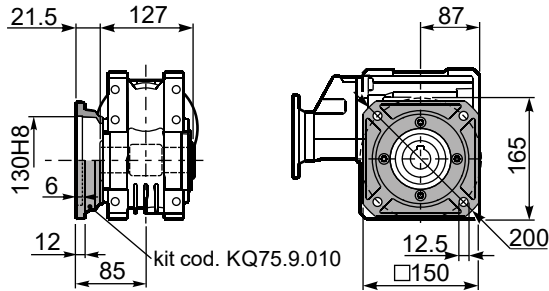
PP7Q**FB**... Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **9.90 kg**

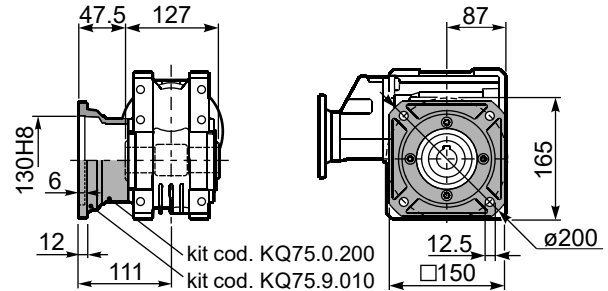
| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 192.7 |
| 71B5       | K063.4.042 | 160 | 190.7 |
| 80/90B5    | K063.4.043 | 200 | 192.7 |
| 71B14      | K063.4.047 | 105 | 190.7 |
| 80B14      | K063.4.046 | 120 | 192.7 |
| 90B14      | K063.4.041 | 140 | 192.7 |



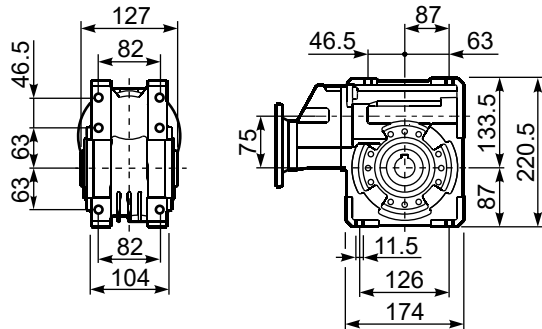
PP7Q**FC**... Square flange  
Flangia quadrata



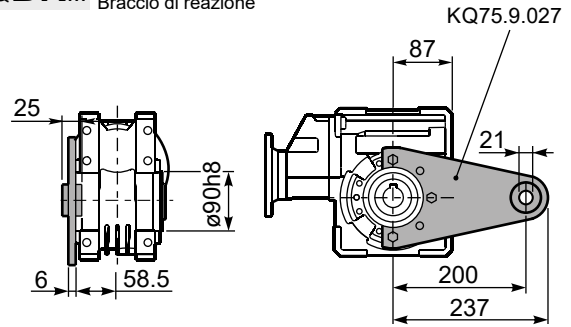
PP7Q**FL**... Square flange  
Flangia quadrata



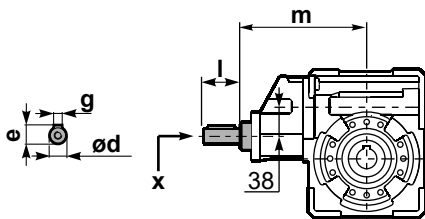
PP7Q**FB**... Feet  
Piedini



PP7Q**BR**... Reaction arm  
Braccio di reazione

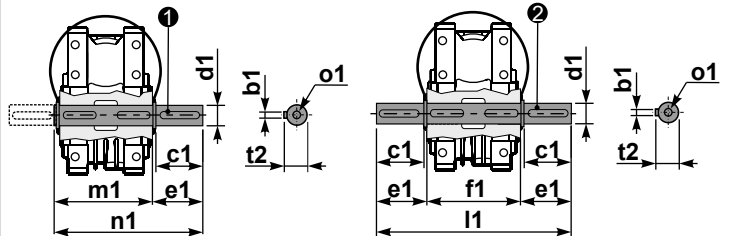


RP7Q**FB**... Input shaft  
Albero in entrata



PP7Q.....**S**... Single Shaft  
Albero lento semplice

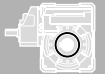
PP7Q.....**D**... Double Shaft  
Albero lento bisp.



① kit cod. KQ75.5.028 Standard    ② kit cod. KQ75.5.029 Standard  
kit cod. KQ75.5.026 On request

|        | ød    | e    | g | l  | m     | x     |           |
|--------|-------|------|---|----|-------|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 185.5 | M6x16 | C40.5.062 |
| type S | -     | -    | - | -  | -     | -     |           |

|            | b1 | c1 | d1                                     | e1 | f1  | l1  | m1  | n1  | t2 | o1    |
|------------|----|----|--|----|-----|-----|-----|-----|----|-------|
| Standard   | 8  | 60 | 30 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | 127 | 255 | 134 | 199 | 33 | M8x20 |
| On request | 8  | 50 | 28 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | -   | -   | 134 | 199 | 31 | M8x20 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                                 |                      |             |
| 23.5  | <b>59.7</b>  | 1.1                             | 300                               | 1.4                    | <b>1.5</b>                        | <b>418</b>                         |                            |    |    |    | C                           | C  |    | 67                              | 3.5                  | 01          |
| 19.4  | <b>72.3</b>  | 1.1                             | 347                               | 1.2                    | <b>1.3</b>                        | <b>407</b>                         |                            |    |    |    | C                           | C  |    | 64                              | 3.1                  | 02          |
| 17.1  | <b>81.7</b>  | 1.1                             | 374                               | 1.1                    | <b>1.2</b>                        | <b>418</b>                         |                            |    |    |    | C                           | C  |    | 61                              | 2.7                  | 03          |
| 13.3  | <b>105</b>   | 0.75                            | 323                               | 1.2                    | <b>0.89</b>                       | <b>385</b>                         |                            |    |    |    | C                           | C  |    | 60                              | 2.1                  | 04          |
| 8.0   | <b>176</b>   | 0.55                            | 415                               | 1.1                    | <b>0.58</b>                       | <b>440</b>                         | B                          |    |    |    | C                           | C  |    | 63                              | 3.5                  | 05          |
| 6.6   | <b>213</b>   | 0.37                            | 322                               | 1.3                    | <b>0.47</b>                       | <b>407</b>                         | B                          |    |    |    | C                           | C  |    | 60                              | 3.1                  | 06          |
| 5.8   | <b>240</b>   | 0.37                            | 321                               | 1.3                    | <b>0.48</b>                       | <b>418</b>                         | B                          |    |    |    | C                           | C  |    | 53                              | 2.7                  | 07          |
| 4.3   | <b>328</b>   | 0.37                            | 438                               | 1.0                    | <b>0.35</b>                       | <b>418</b>                         | B                          |    |    |    | C                           | C  |    | 53                              | 2.7                  | 08          |
| 3.3   | <b>422</b>   | 0.25                            | 374                               | 1.0                    | <b>0.26</b>                       | <b>385</b>                         | B                          |    |    |    | C                           | C  |    | 52                              | 2.1                  | 09          |
| 3.0   | <b>466</b>   | 0.25                            | 358                               | 0.9                    | <b>0.23</b>                       | <b>330</b>                         | B                          |    |    |    | C                           | C  |    | 45                              | 1.9                  | 10          |
| 2.3   | <b>605</b>   | 0.18                            | 297                               | 1.1                    | <b>0.20</b>                       | <b>330</b>                         | B                          |    |    |    | C                           | C  |    | 40                              | 1.5                  | 11          |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **P8Q** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P8Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

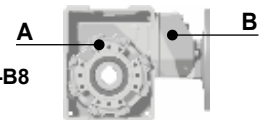
**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **P8Q** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P8Q** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **P8Q** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION P8Q Oil

For B3-V5-V6 separate lubrication for A ( 1.20 l ) B ( 0.14 l ) , for B6-B7-B8 common lubrication 1.00 l ( A + B ).



**SHELL** Omala S4 WE 320

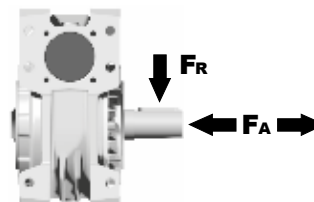
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

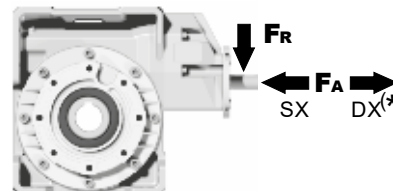
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>75</b>                     | 700       | 3500      |
| <b>50</b>                     | 800       | 4000      |
| <b>25</b>                     | 1000      | 5000      |
| <b>15-6</b>                   | 1160      | 5800      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 108       | 540       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

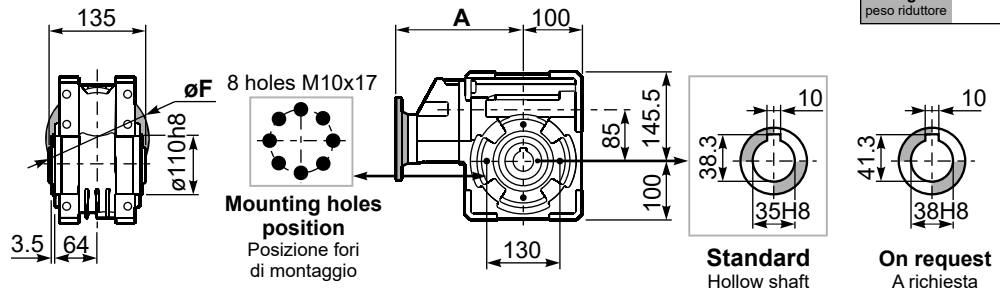
tab. 2



**PP8QFB...** Basic wormbox  
Riduttore base

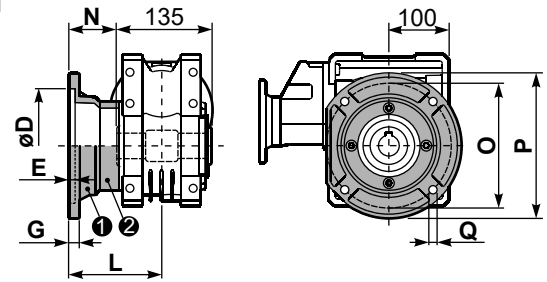
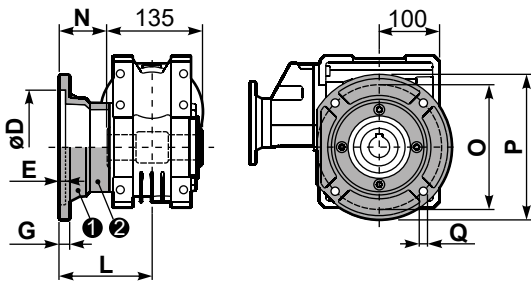
Gearbox weight  
peso riduttore **12.3 kg**

| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 195.2 |
| <b>71B5</b>    | K063.4.042 | 160 | 193.2 |
| <b>80/90B5</b> | K063.4.043 | 200 | 195.2 |
| <b>71B14</b>   | K063.4.047 | 105 | 193.2 |
| <b>80B14</b>   | K063.4.046 | 120 | 195.2 |
| <b>90B14</b>   | K063.4.041 | 140 | 195.2 |



**PP8QFC...** Output flange  
Flangia uscita

**PP8QF1...** Output flange  
Flangia uscita



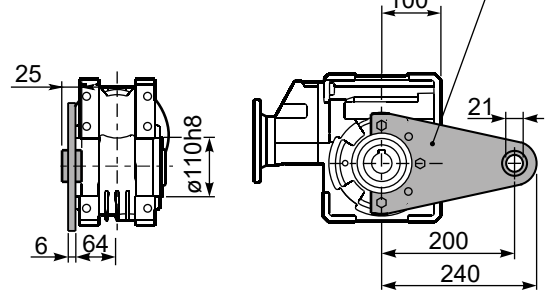
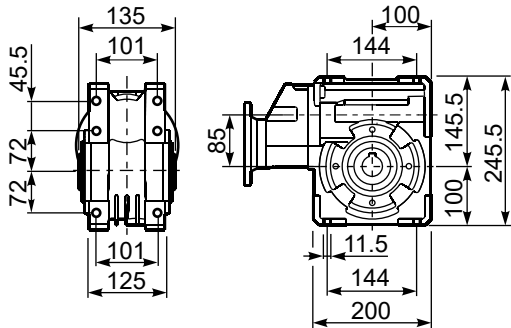
| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13 | 1 K085.9.010<br>2 -          |
| <b>FL</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13 | 1 K085.9.010<br>2 K085.0.201 |

| type S    | øD                                      | E | G  | L     | N  | O   | P   | Q    | kit code             |
|-----------|---|---|----|-------|----|-----|-----|------|----------------------|
| <b>F1</b> | 130 <sup>+0.04</sup> / <sub>+0.00</sub> | 5 | 13 | 117.5 | 50 | 165 | 200 | 11.5 | 1 KS085.9.012<br>2 - |
| <b>F2</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 15 | 147.5 | 80 | 180 | 205 | 12.5 | 1 KS085.9.013<br>2 - |
| <b>F4</b> | 130 <sup>+0.04</sup> / <sub>+0.00</sub> | 5 | 13 | 106.5 | 39 | 165 | 200 | 13   | 1 KS085.9.015<br>2 - |

**PP8QFB...** Feet  
Piedini

**PP8QBR...** Reaction arm  
Braccio di reazione

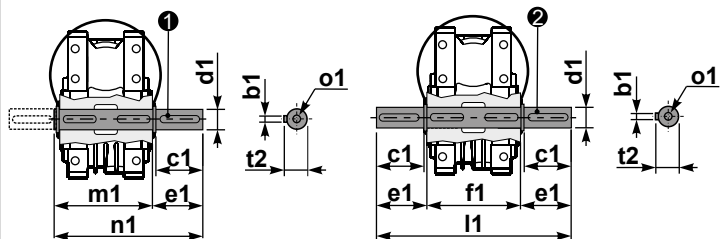
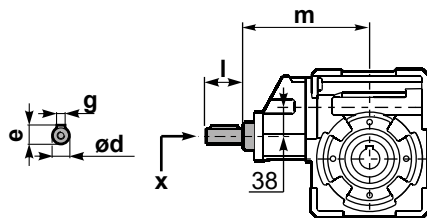
kit cod. K085.9.027



**RP8QFB...** Input shaft  
Albero in entrata

**PP8Q...S...** Single Shaft  
Albero lento semplice

**PP8Q...D...** Double Shaft  
Albero lento bisp.

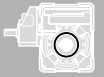


1 kit cod. K085.5.028 type B

2 kit cod. K085.5.029 type B

|        | ød    | e    | g | l  | m   | x     |           |
|--------|-------|------|---|----|-----|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 186 | M6x16 | C40.5.062 |
| type S | -     | -    | - | -  | -   | -     | -         |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                                 |                          |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                                 |                          |                 |
| 16.8  | <b>83.2</b>  | 1.5                             | 587                               | 1.1                    | <b>1.7</b>                        | <b>660</b>                         |                            |    |    |    | C                           | C  |    | 69                              | 3.5                      | 01              |
| 13.9  | <b>100.5</b> | 1.5                             | 699                               | 0.8                    | <b>1.3</b>                        | <b>594</b>                         |                            |    |    |    | C                           | C  |    | 68                              | 2.9                      | 02              |
| 10.6  | <b>132</b>   | 1.1                             | 634                               | 0.9                    | <b>0.95</b>                       | <b>550</b>                         |                            |    |    |    | C                           | C  |    | 64                              | 2.2                      | 03              |
| 8.0   | <b>176</b>   | 0.75                            | 666                               | 1.2                    | <b>0.90</b>                       | <b>803</b>                         | B                          |    |    |    | C                           | C  |    | 74                              | 4.7                      | 04              |
| 6.7   | <b>208</b>   | 0.75                            | 766                               | 0.9                    | <b>0.65</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 72                              | 4.0                      | 05              |
| 5.7   | <b>245</b>   | 0.55                            | 634                               | 1.0                    | <b>0.57</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 69                              | 3.5                      | 06              |
| 4.7   | <b>296</b>   | 0.55                            | 755                               | 0.8                    | <b>0.43</b>                       | <b>594</b>                         | B                          |    |    |    | C                           | C  |    | 68                              | 2.9                      | 07              |
| 4.2   | <b>334</b>   | 0.55                            | 865                               | 0.8                    | <b>0.42</b>                       | <b>660</b>                         | B                          |    |    |    | C                           | C  |    | 69                              | 3.5                      | 08              |
| 3.5   | <b>403</b>   | 0.37                            | 692                               | 0.9                    | <b>0.32</b>                       | <b>594</b>                         | B                          |    |    |    | C                           | C  |    | 68                              | 2.9                      | 09              |
| 2.6   | <b>529</b>   | 0.25                            | 577                               | 1.0                    | <b>0.24</b>                       | <b>550</b>                         | B                          |    |    |    | C                           | C  |    | 64                              | 2.2                      | 10              |
| 2.2   | <b>624</b>   | 0.25                            | 628                               | 0.8                    | <b>0.21</b>                       | <b>528</b>                         | B                          |    |    |    | C                           | C  |    | 59                              | 1.9                      | 11              |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **P1Q** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. Primary reduction unit is supplied with closed plugs and lubricated for life with synthetic oil. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **P1Q** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. La precoppia è fornita con tappi chiusi e lubrificata a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **P1Q** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Die Stirnradvorstufe ist Lebensdauer geschmiert und wird mit synthetischem Öl geliefert. Die Stirnradvorstufe ist komplett geschlossen ohne Füllschrauben. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **P1Q** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le pré couple est fourni lubrifié à vie avec de l'huile synthétique et avec des bouchons fermés. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **P1Q** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

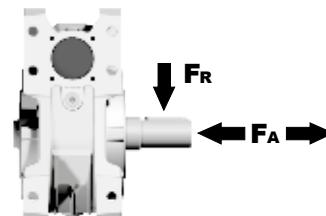
| B3                    | B6           | B7           | B8              | V5          | V6          |
|-----------------------|--------------|--------------|-----------------|-------------|-------------|
|                       |              |              |                 |             |             |
| 1.9/0.14LT            | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT     | 2.0/0.14 LT | 2.0/0.14 LT |
| SHELL Omala S2 GX 460 |              |              | ENI Blasias 460 |             |             |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

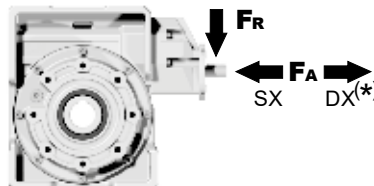
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 75                            | 800       | 4000      |
| 50                            | 920       | 4600      |
| 25                            | 1200      | 6000      |
| 15-6                          | 1400      | 7000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 150       | 760       |

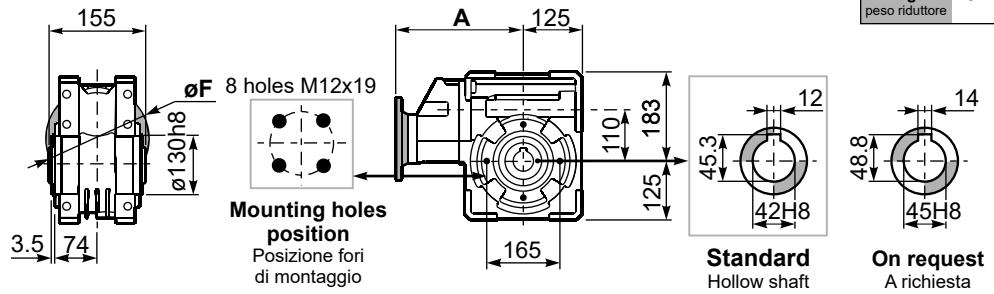
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

PP1Q**FB**... Basic wormbox  
Riduttore base

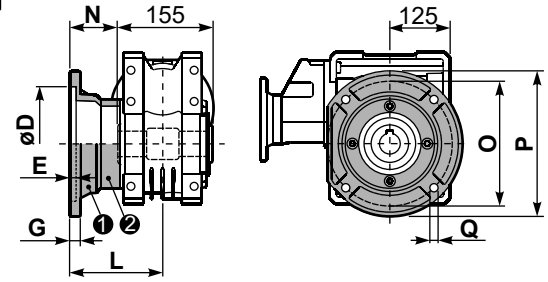
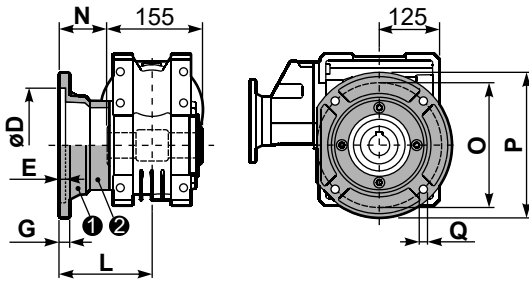
Gearbox weight  
peso riduttore **37.3 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 214.7 |
| 71B5       | K063.4.042 | 160 | 212.7 |
| 80/90B5    | K063.4.043 | 200 | 214.7 |
| 71B14      | K063.4.047 | 105 | 212.7 |
| 80B14      | K063.4.046 | 120 | 214.7 |
| 90B14      | K063.4.041 | 140 | 214.7 |



PP1Q**FC**... Output flange  
Flangia uscita

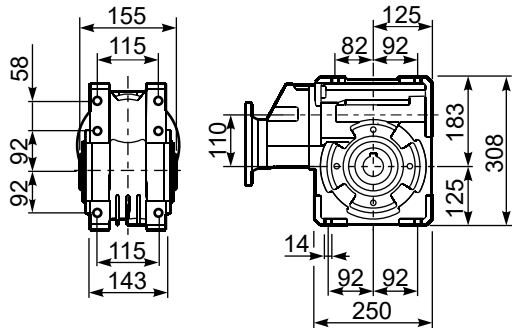
PP1Q**F1**... Output flange  
Flangia uscita



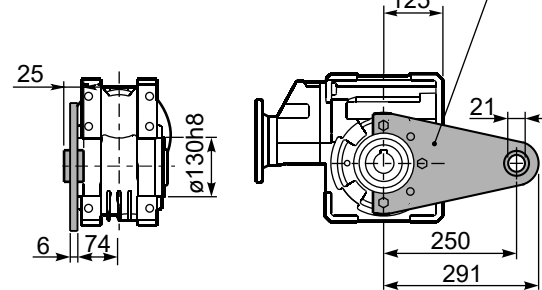
| type B | øD  | E  | G    | L     | N   | O   | P   | Q  | kit code            |
|--------|---|----|------|-------|-----|-----|-----|----|---------------------|
| FC     | 170 <sup>+0.083</sup> / <sub>-0.043</sub> | 11 | 16.5 | 131.5 | 54  | 230 | 270 | 13 | 1 K110.9.010<br>2 - |
| FL     | 170 <sup>+0.083</sup> / <sub>-0.043</sub> | 11 | 16.5 | 179.5 | 102 | 230 | 270 | 13 | 1 K110.9.011<br>2 - |

| type S | øD                                   | E | G  | L   | N    | O   | P   | Q  | kit code             |
|--------|--------------------------------------|---|----|-----|------|-----|-----|----|----------------------|
| F1     | 180 <sup>+0.040</sup> / <sub>0</sub> | 5 | 18 | 150 | 72.5 | 215 | 250 | 15 | 1 KS110.9.014<br>2 - |
| F3     | 180 <sup>+0.040</sup> / <sub>0</sub> | 5 | 18 | 130 | 52.5 | 215 | 250 | 15 | 1 KS110.9.013<br>2 - |

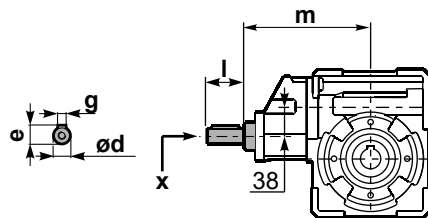
PP1Q**FB**... Feet  
Piedini



PP1Q**BR**... Reaction arm  
Braccio di reazione

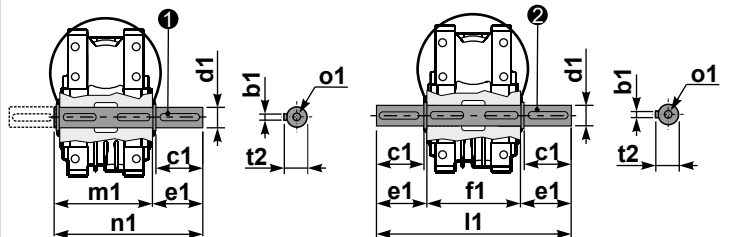


RP1Q**FB**... Input shaft  
Albero in entrata



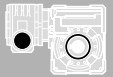
PP1Q.....**S**... Single Shaft  
Albero lento semplice

PP1Q.....**D**... Double Shaft  
Albero lento bisp.



|        | ød    | e    | g | l  | m   | x     |           |
|--------|-------|------|---|----|-----|-------|-----------|
| type B | 19 h6 | 21.5 | 6 | 35 | 205 | M6x16 | C40.5.062 |
| type S | -     | -    | - | -  | -   | -     | -         |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> / <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -  | -    | -   | -   | -     | -   | -  | -      |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>$[mm]$ | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|---------------------------------|------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -A                         | -B | -O                          | -P |                                 |                        |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 56                         | 63 | 56                          | 63 |                                 |                        |                 |
| 5.6   | <b>252</b>   | 0.18                            | 142                               | 1.6                    | <b>0.29</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 46                              | 2.7                    | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 181                               | 1.3                    | <b>0.23</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 41                              | 2.7                    | 02              |
| 2.6   | <b>540</b>   | 0.12                            | 164                               | 1.4                    | <b>0.17</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 37                              | 2.7                    | 03              |
| 1.9   | <b>720</b>   | 0.12                            | 200                               | 1.1                    | <b>0.14</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 34                              | 2.7                    | 04              |
| 1.3   | <b>1080</b>  | 0.12                            | 265                               | 0.9                    | <b>0.10</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 30                              | 2.7                    | 05              |
| 1.0   | <b>1440</b>  | 0.12*                           | 230                               | <0.8                   | <b>0.09</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 27                              | 2.7                    | 06              |
| 0.5   | <b>2745</b>  | 0.12*                           | 230                               | <0.8                   | <b>0.05</b>                       | <b>230</b>                         | <b>B</b>                   |    | <b>B-C</b>                  |    | 23                              | 2.1                    | 07              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **63Q** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **63Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **63Q** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **63Q** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **63Q** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**0.30 Lt.**

**LUBRICATION 63Q Oil**  
Quantity 0.30/0.03 Lt.

**0.03 Lt.**

|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

**Input shaft**  
albero in entrata

| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 700       | 3800      |
| 15                            | 800       | 4000      |

| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 20        | 100       |

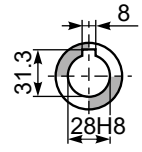
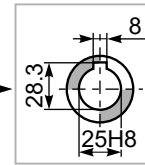
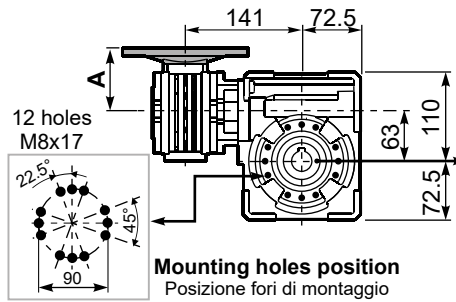
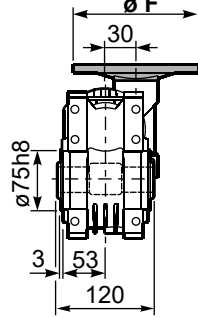
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P63QFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **7.25 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>56B5</b>  | K030.4.041 | 120 | 61.5 |
| <b>63B5</b>  | K030.4.042 | 140 | 62.5 |
| <b>56B14</b> | K030.4.046 | 80  | 61.5 |
| <b>63B14</b> | K030.4.045 | 90  | 62.5 |



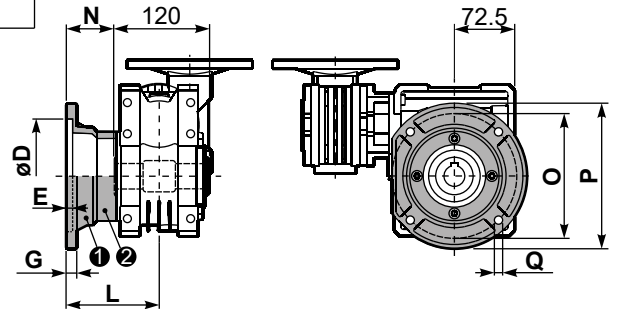
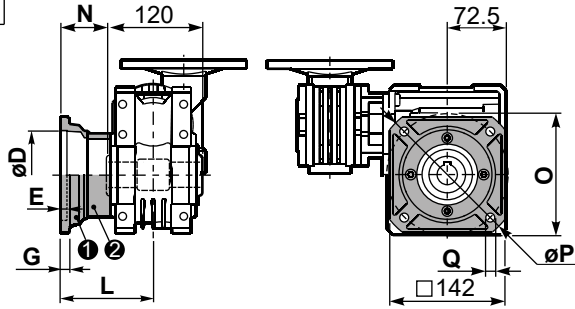
**Mounting holes position**  
Posizione fori di montaggio

**Standard**  
Hollow shaft

**On Request**  
A richiesta

**P63QFC...** Square flange  
Flangia quadrata

**P63QF1...** Round flange  
Flangia rotonda



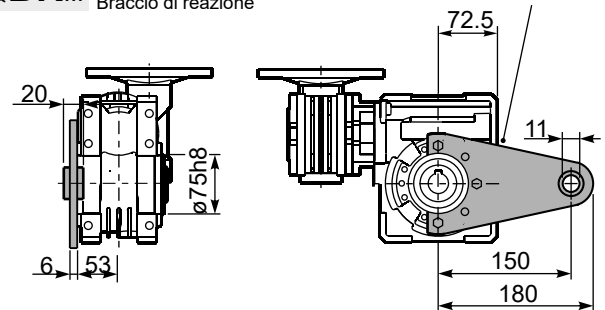
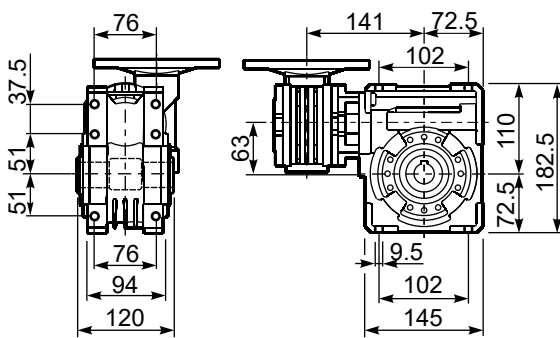
| type B    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-----|----|-----|-----|----|------------------------------|
| <b>FC</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 86  | 26 | 150 | 180 | 11 | ① KQ63.9.010<br>② -          |
| <b>FL</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 116 | 56 | 150 | 180 | 11 | ① KQ63.9.010<br>② K063.0.200 |

| type S    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|-----------|---|---|----|-----|----|-----|-----|----|----------------------|
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 110 | 50 | 165 | 200 | 13 | ① KS070.9.013<br>② - |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 124 | 64 | 150 | 175 | 11 | ① KS063.9.013<br>② - |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 90  | 30 | 130 | 160 | 10 | ① KS063.9.011<br>② - |

**P63QFB...** Feet  
Piedini

**P63QBR...** Reaction arm  
Braccio di reazione

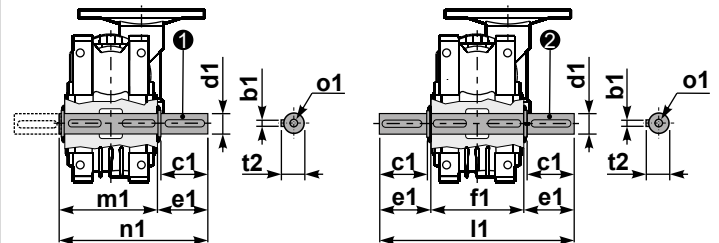
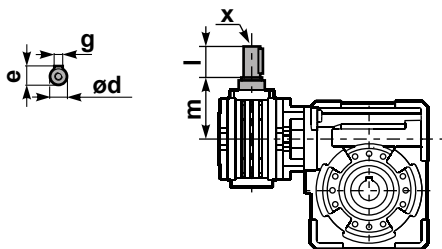
kit cod. K063.9.027



**R63QFB...** Input shaft  
Albero in entrata

**P63Q.....S...** Single Shaft  
Albero lento semplice

**P63Q.....D...** Double Shaft  
Albero lento bisp.

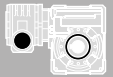


① kit cod. K063.5.028 type B

② kit cod. K063.5.029 type B

|        | ød   | e    | g | l  | m  | x | kit code                  |
|--------|------|------|---|----|----|---|---------------------------|
| type B | 9 h6 | 10.2 | 3 | 20 | 58 | - | ① K030.5.006 PAM63<br>② - |
| type S | -    | -    | - | -  | -  | - | ① -<br>② -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br><br>[mm] | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|---------------------------------|--------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                                 |                          |                 |
| 5.6   | <b>252</b>   | 0.25                            | 198                               | 1.3                    | <b>0.33</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                              | 2.7                      | 01              |
| 3.9   | <b>360</b>   | 0.18                            | 186                               | 1.4                    | <b>0.26</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 42                              | 2.7                      | 02              |
| 2.8   | <b>504</b>   | 0.18                            | 241                               | 1.1                    | <b>0.20</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 39                              | 2.7                      | 03              |
| 1.9   | <b>756</b>   | 0.12                            | 204                               | 1.3                    | <b>0.16</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                              | 2.7                      | 04              |
| 1.4   | <b>1008</b>  | 0.12                            | 256                               | 1.0                    | <b>0.12</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 31                              | 2.7                      | 05              |
| 1.1   | <b>1332</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.10</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                              | 2.7                      | 06              |
| 0.8   | <b>1656</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.08</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                              | 2.7                      | 07              |
| 0.6   | <b>2160</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.07</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                              | 2.7                      | 08              |
| 0.6   | <b>2520</b>  | 0.12*                           | 265                               | <0.8                   | <b>0.06</b>                       | <b>265</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                              | 2.7                      | 09              |

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **64Q** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **64Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **64Q** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **64Q** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **64Q** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 64Q Oil**  
Quantity 0.30/0.09 Lt.

0.30 Lt. 0.09 Lt.

**SHELL** Omala S4 WE 320

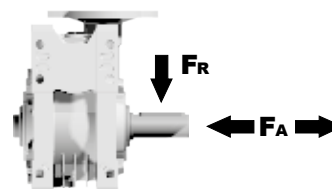
**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

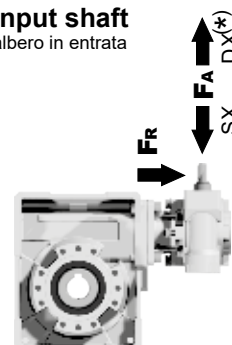
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 700       | 3800      |
| <b>15</b>                     | 800       | 4000      |

##### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 42        | 210       |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

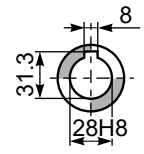
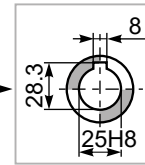
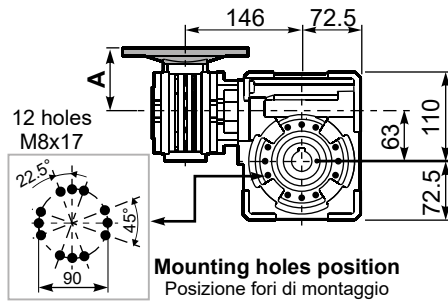
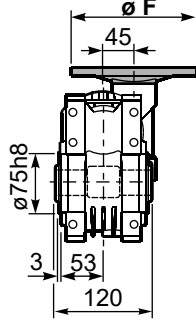
tab. 2



**P64QFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **7.25 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |

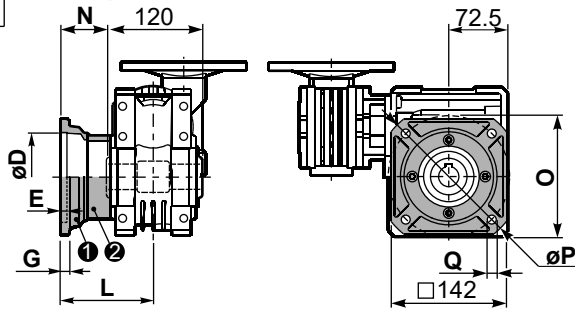


**Mounting holes position**  
Posizione fori di montaggio

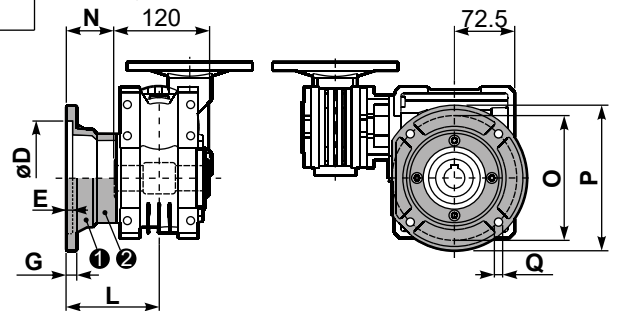
**Standard**  
Hollow shaft

**On Request**  
A richiesta

**P64QFC...** Square flange  
Flangia quadrata



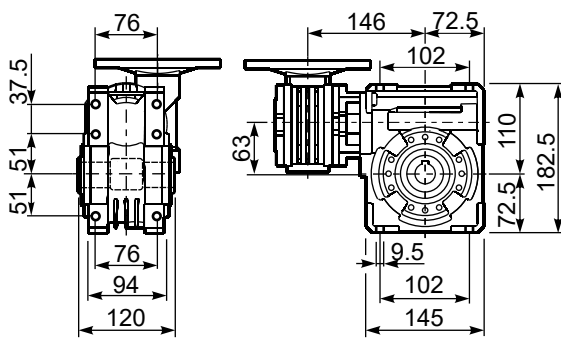
**P64QF1...** Round flange  
Flangia rotonda



| type B    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-----|----|-----|-----|----|------------------------------|
| <b>FC</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 86  | 26 | 150 | 180 | 11 | ① KQ63.9.010<br>② -          |
| <b>FL</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 6 | 12 | 116 | 56 | 150 | 180 | 11 | ① KQ63.9.010<br>② K063.0.200 |

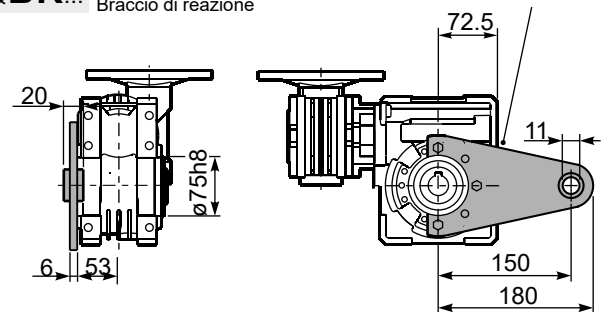
| type S    | øD                                      | E | G  | L   | N  | O   | P   | Q  | kit code             |
|-----------|---|---|----|-----|----|-----|-----|----|----------------------|
| <b>F1</b> | 130 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 110 | 50 | 165 | 200 | 13 | ① KS070.9.013<br>② - |
| <b>F2</b> | 115 <sup>+0.20</sup> / <sub>+0.15</sub> | 7 | 13 | 124 | 64 | 150 | 175 | 11 | ① KS063.9.013<br>② - |
| <b>F3</b> | 110 <sup>+0.035</sup> / <sub>0</sub>    | 5 | 11 | 90  | 30 | 130 | 160 | 10 | ① KS063.9.011<br>② - |

**P64QFB...** Feet  
Piedi

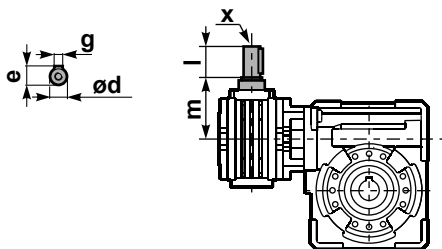


**P64QBR...** Reaction arm  
Braccio di reazione

kit cod. K063.9.027

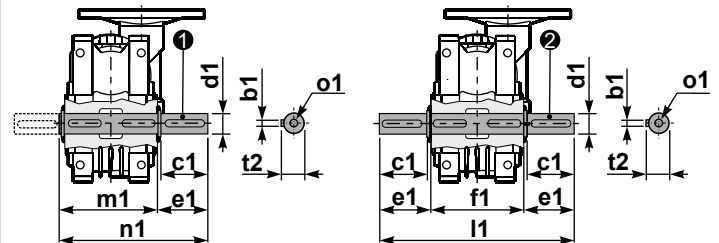


**R64QFB...** Input shaft  
Albero in entrata



**P64Q....S...** Single Shaft  
Albero lento semplice

**P64Q....D...** Double Shaft  
Albero lento bisp.

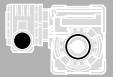


① kit cod. K063.5.028 type B

② kit cod. K063.5.029 type B

|        | ød    | e    | g | l  | m  | x | kit code                  |
|--------|-------|------|---|----|----|---|---------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① K045.5.006 PAM71<br>② - |
| type S | -     | -    | - | -  | -  | - | ① -<br>② -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1    | m1    | n1  | t2 | o1    |
|--------|----|----|--|------|-----|-------|-------|-----|----|-------|
| type B | 8  | 60 | 25 <sup>-0.005</sup> / <sub>-0.020</sub> | 63.2 | 120 | 246.4 | 126.8 | 190 | 28 | M8x20 |
| type S | -  | -  | -  | -    | -   | -     | -     | -   | -  | -     |



## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|--------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                          |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                          |                      |             |
| 5   | <b>280</b>   | 0.37                            | 403                               | 0.9                    | <b>0.33</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 57                       | 3.10                 | 01          |
| 3.5   | <b>400</b>   | 0.25                            | 314                               | 1.1                    | <b>0.29</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 46                       | 3.10                 | 02          |
| 2.5   | <b>560</b>   | 0.25                            | 420                               | 0.9                    | <b>0.21</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 44                       | 3.10                 | 03          |
| 1.7   | <b>840</b>   | 0.18                            | 423                               | 0.8                    | <b>0.15</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 41                       | 3.10                 | 04          |
| 1.3   | <b>1120</b>  | 0.12                            | 339                               | 1.1                    | <b>0.13</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                       | 3.10                 | 05          |
| 0.9   | <b>1480</b>  | 0.09                            | 336                               | 1.1                    | <b>0.10</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                       | 3.10                 | 06          |
| 0.8   | <b>1840</b>  | 0.09                            | 373                               | 1.0                    | <b>0.09</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                       | 3.10                 | 07          |
| 0.6   | <b>2400</b>  | 0.06                            | 275                               | 1.3                    | <b>0.08</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                       | 3.10                 | 08          |
| 0.5   | <b>2800</b>  | 0.06                            | 298                               | 1.2                    | <b>0.07</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 26                       | 3.10                 | 09          |
| 0.3   | <b>4080</b>  | 0.06                            | 250                               | 1.4                    | <b>0.09</b>                       | <b>359</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 15                       | 3.10                 | 10          |

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit 74Q is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 74Q viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe 74Q mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 74Q est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 74Q se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**LUBRICATION 74Q Oil**  
Quantity 0.40/0.09 Lt.

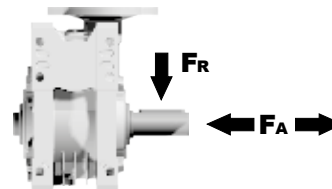
SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web **tab. 1**

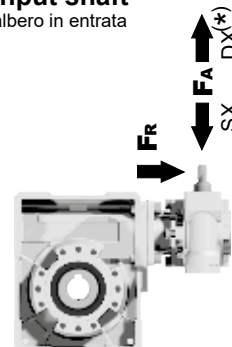
## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 25                            | 880       | 4400      |
| 15                            | 1000      | 5000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 42        | 210       |

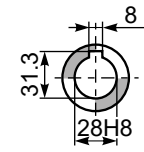
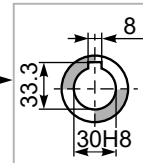
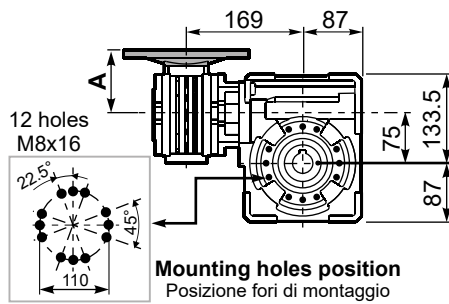
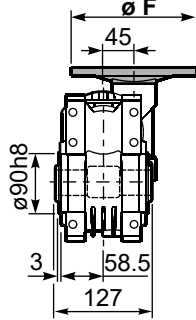
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

**P74QFB...** Basic wormbox  
Riduttore base

Gearbox weight  
peso riduttore **11.4 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



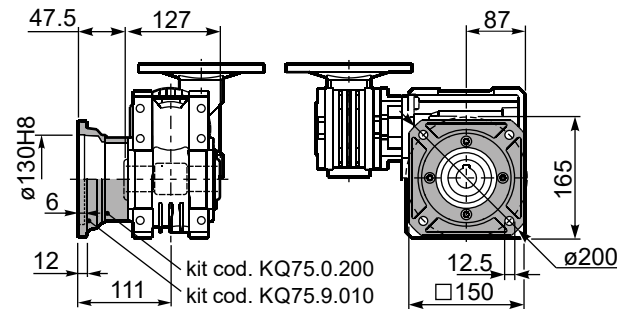
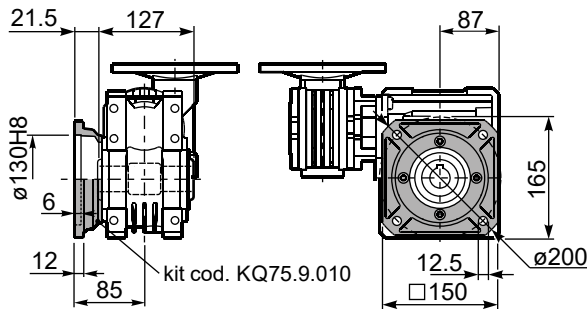
**Mounting holes position**  
Posizione fori di montaggio

**Standard**  
Hollow shaft

**On request**  
A richiesta

**P74QFC...** Square flange  
Flangia quadrata

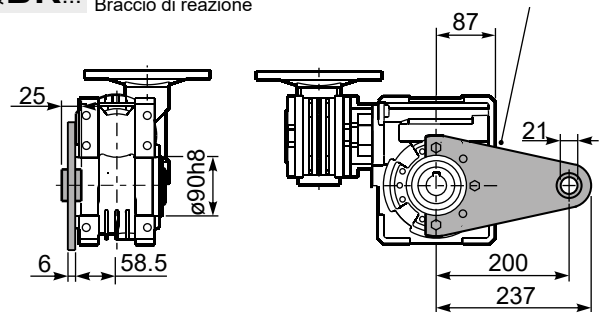
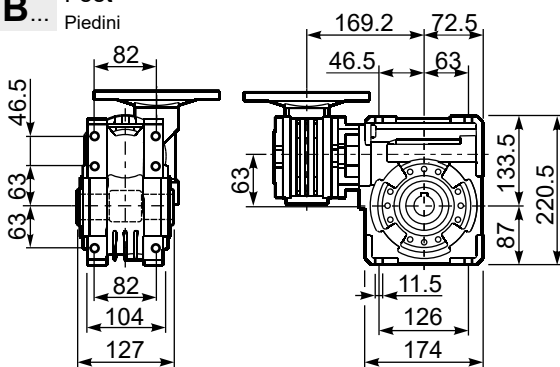
**P74QFL...** Square flange  
Flangia quadrata



**P74QFB...** Feet  
Piedini

**P74QBR...** Reaction arm  
Braccio di reazione

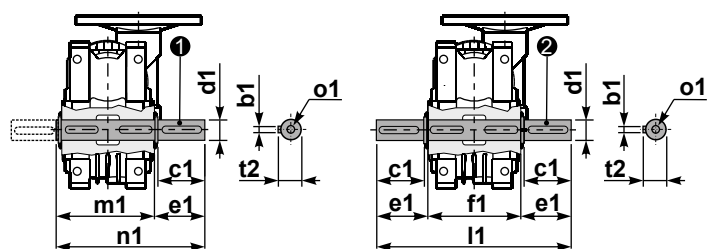
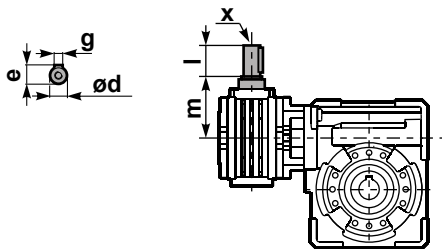
kit cod. KQ75.9.027



**R74QFB...** Input shaft  
Albero in entrata

**P74Q.....S...** Single Shaft  
Albero lento semplice

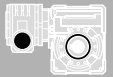
**P74Q.....D...** Double Shaft  
Albero lento bisp.



① kit cod. KQ75.5.028 Standard    ② kit cod. KQ75.5.029 Standard  
kit cod. KQ75.5.026 On request

|        | ød    | e    | g | l  | m  | x | kit code                  |
|--------|-------|------|---|----|----|---|---------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① K045.5.006 PAM71<br>② - |
| type S | -     | -    | - | -  | -  | - | ① -<br>② -                |

|            | b1 | c1 | d1                                     | e1 | f1  | l1  | m1  | n1  | t2 | o1    |
|------------|----|----|--|----|-----|-----|-----|-----|----|-------|
| Standard   | 8  | 60 | 30 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | 127 | 255 | 134 | 199 | 33 | M8x20 |
| On request | 8  | 60 | 28 <sup>-0.005</sup> <sub>-0.020</sub> | 65 | -   | -   | 134 | 199 | 31 | M8x20 |



### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |     |    | Dynamic efficiency<br>RD | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|-----|----|--------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P  | -Q |                          |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63  | 71 |                          |                      |             |
| 10  | <b>140</b>   | 0.37                            | 205                               | 1.8                    | <b>0.66</b>                       | <b>368</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 58                       | 4.5                  | 01          |
| 7.1   | <b>196</b>   | 0.37                            | 257                               | 1.4                    | <b>0.53</b>                       | <b>368</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 52                       | 4.7                  | 02          |
| 5.0   | <b>280</b>   | 0.37                            | 332                               | 1.6                    | <b>0.58</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 47                       | 4.7                  | 03          |
| 3.6   | <b>392</b>   | 0.37                            | 435                               | 1.2                    | <b>0.44</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 44                       | 4.7                  | 04          |
| 2.4   | <b>588</b>   | 0.25                            | 371                               | 1.4                    | <b>0.35</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 37                       | 4.7                  | 05          |
| 1.8   | <b>784</b>   | 0.25                            | 455                               | 1.1                    | <b>0.28</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 34                       | 4.7                  | 06          |
| 1.4   | <b>1036</b>  | 0.18                            | 420                               | 1.2                    | <b>0.22</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 33                       | 4.7                  | 07          |
| 1.1   | <b>1288</b>  | 0.18                            | 474                               | 1.1                    | <b>0.20</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 30                       | 4.7                  | 08          |
| 0.7   | <b>1960</b>  | 0.12                            | 449                               | 1.2                    | <b>0.14</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 28                       | 4.7                  | 09          |
| 0.5   | <b>2856</b>  | 0.12                            | 584                               | 0.9                    | <b>0.11</b>                       | <b>518</b>                         | <b>B</b>                   |    | B-C                         | B-C |    | 25                       | 4.7                  | 10          |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **84Q** is supplied with synthetic oil, providing "long life" lubrication. For mounting position V5-V6 please contact us. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **84Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Für die Lebensdauerschmierung ist das Getriebe der Größe **84Q** mit synthetischem Öl befüllt. Bei Einbaulage V5 oder V6 bitten wir um Rücksprache. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **84Q** est fourni lubrifié à vie avec de l'huile synthétique. Concernant les positions V5.V6, contactez notre service d'assistance technique. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **84Q** se suministra, lubricado de por vida con aceite sintético. Para las posiciones V5 y V6 contactar con nuestro servicio técnico. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

**1.20 Lt.**

**• LUBRICATION 84Q Oil**  
Quantity 1.20/0.09 Lt.

**0.09 Lt.**

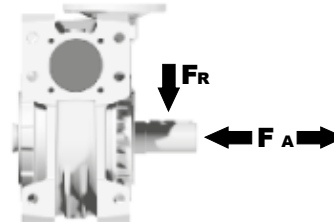
|                              |                           |
|------------------------------|---------------------------|
| <b>SHELL</b> Omala S4 WE 320 | <b>ENI</b> Telium VSF 320 |
|------------------------------|---------------------------|

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

#### Output shaft

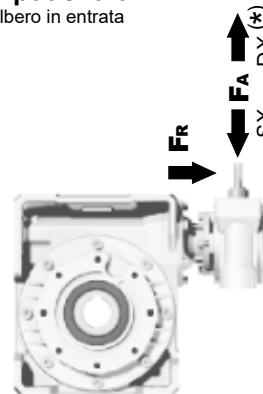
Albero di uscita



| $n$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-----------------------------|-----------|-----------|
| <b>25</b>                   | 1000      | 5000      |
| <b>15</b>                   | 1160      | 5800      |

#### Input shaft

albero in entrata



| $n$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-----------------------------|-----------|-----------|
| <b>1400</b>                 | 42        | 210       |

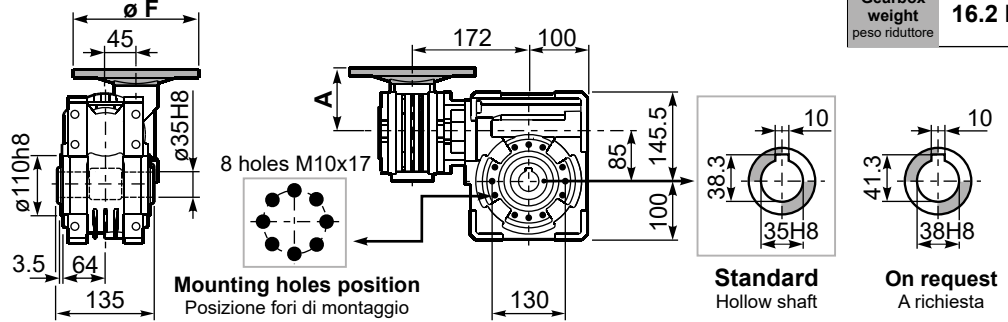
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**P84QFB...** Basic wormbox  
Riduttore base

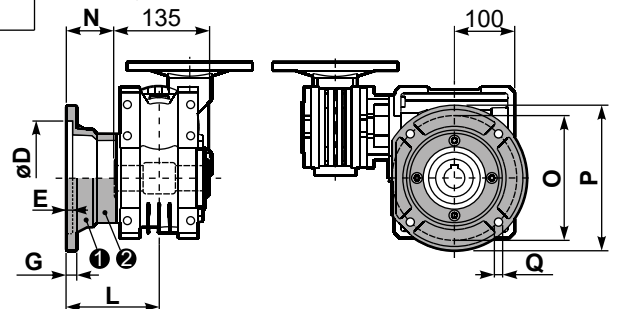
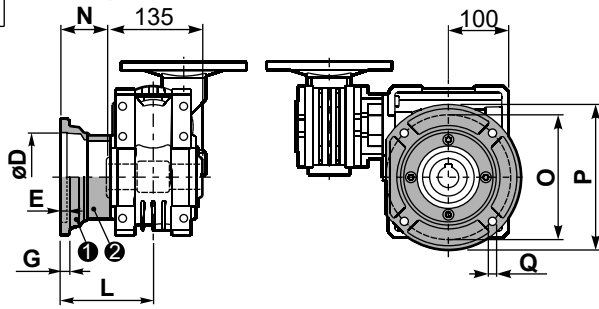
Gearbox weight  
peso riduttore **16.2 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 74   |
| <b>71B5</b>  | K050.4.042 | 160 | 71.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 71.5 |
| <b>63B14</b> | K050.4.047 | 90  | 74   |
| <b>71B14</b> | K050.4.045 | 105 | 71.5 |



**P84QFC...** Output flange  
Flangia uscita

**P84QF1...** Output flange  
Flangia uscita



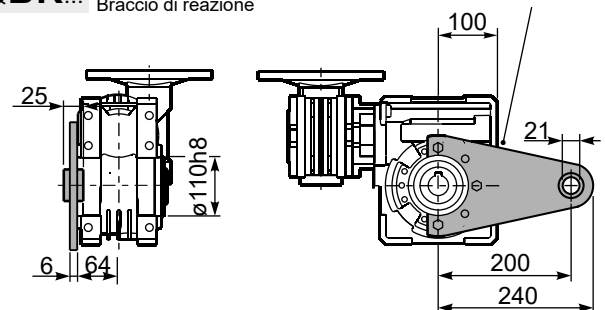
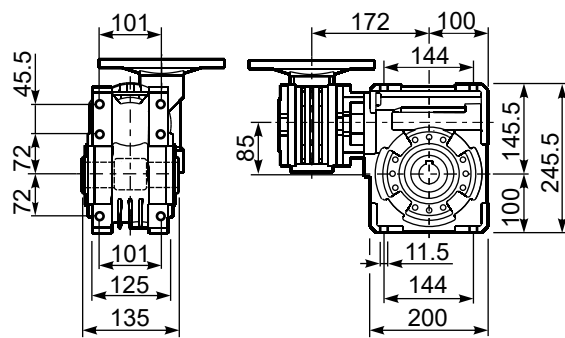
| type B    | øD                                      | E | G  | L     | N    | O   | P   | Q  | kit code                     |
|-----------|---|---|----|-------|------|-----|-----|----|------------------------------|
| <b>FC</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 108   | 40.5 | 176 | 205 | 13 | ① K085.9.010<br>② -          |
| <b>FL</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 16 | 148.5 | 81   | 176 | 205 | 13 | ① K085.9.010<br>② K085.0.201 |

| type S    | øD                                      | E | G  | L     | N  | O   | P   | Q    | kit code             |
|-----------|---|---|----|-------|----|-----|-----|------|----------------------|
| <b>F1</b> | 130 H7                                  | 5 | 13 | 117.5 | 50 | 165 | 200 | 11.5 | ① KS085.9.012<br>② - |
| <b>F2</b> | 152 <sup>+0.06</sup> / <sub>+0.00</sub> | 5 | 15 | 147.5 | 80 | 180 | 205 | 12.5 | ① KS085.9.013<br>② - |
| <b>F4</b> | 130 H7                                  | 5 | 13 | 106.5 | 39 | 165 | 200 | 13   | ① KS085.9.015<br>② - |

**P84QFB...** Feet  
Piedi

**P84QBR...** Reaction arm  
Braccio di reazione

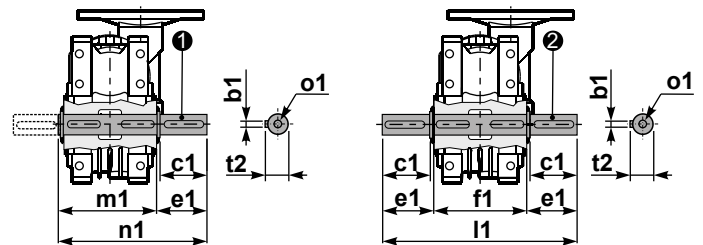
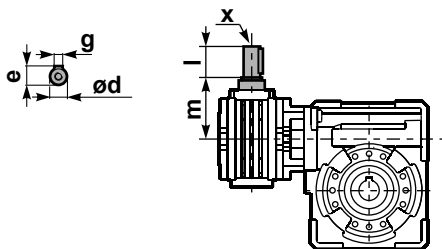
kit cod. K085.9.027



**R84QFB...** Input shaft  
Albero in entrata

**P84Q.....S...** Single Shaft  
Albero lento semplice

**P84Q.....D...** Double Shaft  
Albero lento bisp.

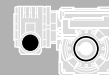


① kit cod. K085.5.028 type B    ② kit cod. K085.5.029 type B

|        | ød    | e    | g | l  | m  | x | kit code                  |
|--------|-------|------|---|----|----|---|---------------------------|
| type B | 11 h6 | 12.5 | 4 | 30 | 68 | - | ① K045.5.006 PAM71<br>② - |
| type S | -     | -    | - | -  | -  | - | ① -<br>② -                |

|        | b1 | c1 | d1                                       | e1   | f1  | l1  | m1  | n1    | t2 | o1     |
|--------|----|----|--|------|-----|-----|-----|-------|----|--------|
| type B | 10 | 60 | 35 <sup>-0.005</sup> / <sub>-0.020</sub> | 73.5 | 135 | 282 | 141 | 214.5 | 38 | M10x23 |
| type S | -  | -  | -  | -    | -   | -   | -   | -     | -  | -      |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |          |    | Available B14 motor flanges |            |          |    | Dynamic efficiency<br><b>RD</b> | Tooth Module<br>[mm] | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----------|----|-----------------------------|------------|----------|----|---------------------------------|----------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C       | -D | -O                          | -P         | -Q       | -R |                                 |                      |             |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71       | 80 | 56                          | 63         | 71       | 80 |                                 |                      |             |
| 6.7   | <b>210</b>   | 0.75                            | 591                               | 1.5                    | <b>1.1</b>                        | <b>863</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 55                              | 5.6                  | 01          |
| 4.7   | <b>300</b>   | 0.75                            | 752                               | 1.3                    | <b>0.97</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 49                              | 5.6                  | 02          |
| 3.3   | <b>420</b>   | 0.55                            | 741                               | 1.3                    | <b>0.73</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 47                              | 5.6                  | 03          |
| 2.6   | <b>540</b>   | 0.55                            | 851                               | 1.1                    | <b>0.63</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 42                              | 5.6                  | 04          |
| 1.8   | <b>780</b>   | 0.37                            | 748                               | 1.3                    | <b>0.48</b>                       | <b>978</b>                         | <b>B</b>                   | <b>B</b> |    |                             | <b>B-C</b> | <b>B</b> |    | 38                              | 5.6                  | 05          |
| 1.3   | <b>1080</b>  | 0.37                            | 1009                              | 1.0                    | <b>0.36</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 37                              | 5.6                  | 06          |
| 1.1   | <b>1290</b>  | 0.25                            | 770                               | 1.3                    | <b>0.32</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 35                              | 5.6                  | 07          |
| 0.8   | <b>1800</b>  | 0.25                            | 921                               | 1.1                    | <b>0.27</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 30                              | 5.6                  | 08          |
| 0.7   | <b>2040</b>  | 0.18                            | 751                               | 1.3                    | <b>0.23</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 30                              | 5.6                  | 09          |
| 0.6   | <b>2400</b>  | 0.18                            | 825                               | 1.2                    | <b>0.21</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 28                              | 5.6                  | 10          |
| 0.5   | <b>3000</b>  | 0.18                            | 958                               | 1.0                    | <b>0.18</b>                       | <b>978</b>                         | <b>B</b>                   |          |    | B-C                         | B-C        |          |    | 26                              | 5.6                  | 11          |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione



**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **15Q** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a type that are closed. Gearbox **050** is supplied lubricated for life. See tab.1 for oils and recommended quantity. In tab.2 there are radial loads and axial loads applicable to the gearbox.

**I** Il riduttore tipo **15Q** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Il riduttore **050** è fornito lubrificato a vita con olio sintetico. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **15Q** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. Das Getriebe der Baugröße **050** ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **15Q** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Le réducteur de type **050** est fourni lubrifié à vie avec de l'huile synthétique. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

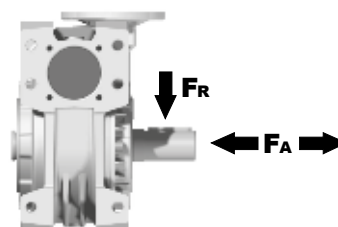
**E** El reductor tamaño **15Q** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. El reductor **050** se suministra lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |              |              |                 |             |             |
|-----------------------|--------------|--------------|-----------------|-------------|-------------|
|                       |              |              |                 |             |             |
| <b>B3</b>             | <b>B6</b>    | <b>B7</b>    | <b>B8</b>       | <b>V5</b>   | <b>V6</b>   |
| 1.9/0.14LT            | 1.35/0.14 LT | 1.35/0.14 LT | 2.0/0.14 LT     | 2.0/0.14 LT | 2.0/0.14 LT |
| SHELL Omala S2 GX 460 |              |              | ENI Blasias 460 |             |             |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

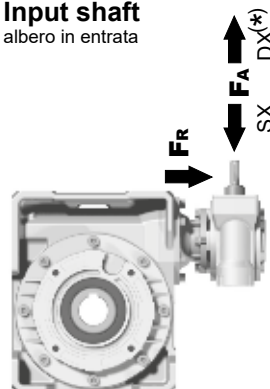
#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita



| $n_2$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>25</b>                     | 1200      | 6000      |
| <b>15</b>                     | 1400      | 7000      |

**Input shaft**  
albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| <b>1400</b>                   | 76        | 380       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

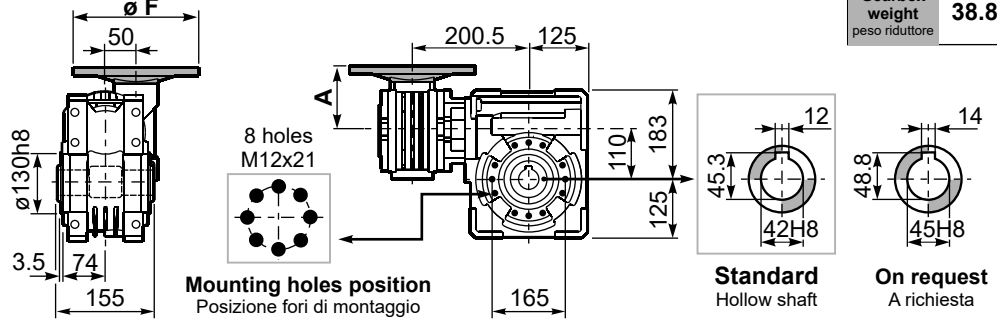
**tab. 2**



**P15QFB...** Basic wormbox  
Riduttore base

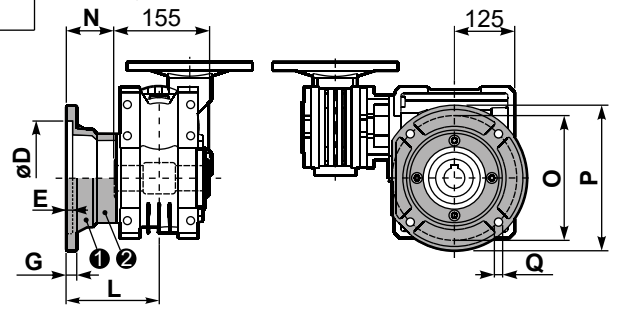
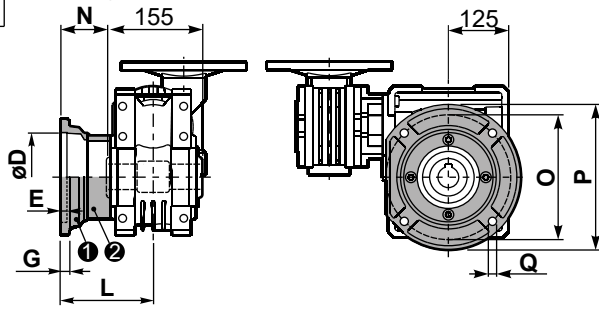
Gearbox weight  
peso riduttore **38.8 kg**

| M. flanges   | Kit code   | øF  | A    |
|--------------|------------|-----|------|
| <b>63B5</b>  | K050.4.041 | 138 | 78.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 76   |
| <b>80B5</b>  | K050.4.043 | 200 | 76.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 76   |
| <b>63B14</b> | K050.4.047 | 90  | 78.5 |
| <b>71B14</b> | K050.4.045 | 105 | 76   |
| <b>80B14</b> | K050.4.046 | 120 | 76.5 |



**P15QFC...** Output flange  
Flangia uscita

**P15QF1...** Output flange  
Flangia uscita



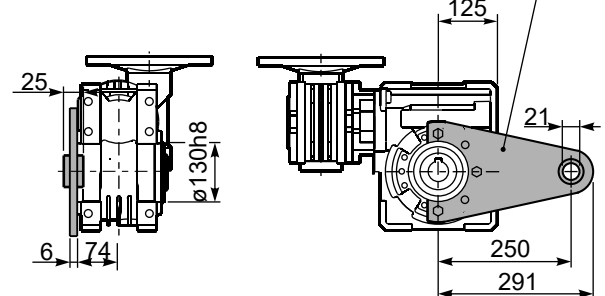
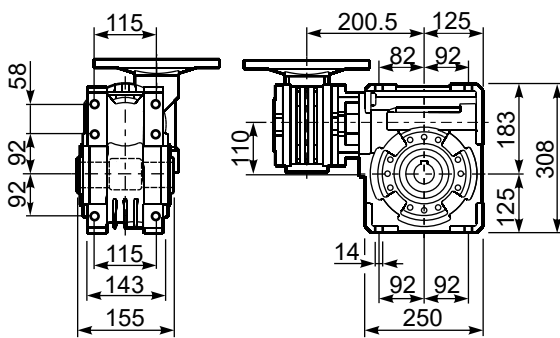
| type B    | øD                                      | E  | G    | L     | N   | O   | P   | Q  | kit code            |
|-----------|---|----|------|-------|-----|-----|-----|----|---------------------|
| <b>FC</b> | 170 <sup>+0.083</sup> <sub>+0.043</sub> | 11 | 16.5 | 131.5 | 54  | 230 | 270 | 13 | ① K110.9.010<br>② - |
| <b>FL</b> | 170 <sup>+0.083</sup> <sub>+0.043</sub> | 11 | 16.5 | 179.5 | 102 | 230 | 270 | 13 | ① K110.9.011<br>② - |

| type S    | øD                                 | E | G  | L   | N    | O   | P   | Q  | kit code             |
|-----------|------------------------------------|---|----|-----|------|-----|-----|----|----------------------|
| <b>F1</b> | 180 <sup>+0.040</sup> <sub>0</sub> | 5 | 18 | 150 | 72.5 | 215 | 250 | 15 | ① KS110.9.014<br>② - |
| <b>F3</b> | 180 <sup>+0.040</sup> <sub>0</sub> | 5 | 18 | 130 | 52.5 | 215 | 250 | 15 | ① KS110.9.013<br>② - |

**P15QFB...** Feet  
Piedini

**P15QBR...** Reaction arm  
Braccio di reazione

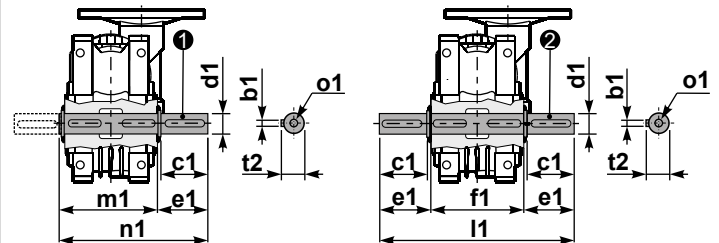
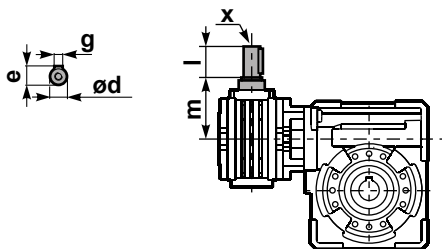
kit cod. K110.9.027



**R15QFB...** Input shaft  
Albero in entrata

**P15Q....S...** Single Shaft  
Albero lento semplice

**P15Q....D...** Double Shaft  
Albero lento bisp.



① kit cod. K110.5.028 type B    ② kit cod. K110.5.029 type B

|        | ød    | e  | g | l  | m    | x     | kit code                                   |
|--------|-------|----|---|----|------|-------|--|
| type B | 16 h6 | 18 | 5 | 30 | 79.5 | M6x16 | ① K050.5.006 PAM71<br>② K050.5.007 PAM80   |
| type S | 14 h6 | 16 | 5 | 30 | 79.5 | M5x10 | ① KS050.5.008 PAM71<br>② KS050.5.009 PAM80 |

|        | b1 | c1 | d1                                     | e1   | f1  | l1  | m1    | n1  | t2 | o1     |
|--------|----|----|--|------|-----|-----|-------|-----|----|--------|
| type B | 12 | 75 | 42 <sup>-0.005</sup> <sub>-0.020</sub> | 96.5 | 155 | 348 | 163.5 | 260 | 45 | M12x32 |
| type S | -  | -  | -                                      | -    | -   | -   | -     | -   | -  | -      |

# Aluminum one step gearboxes

A modular and compact product

4

## Alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

## Flange

Fully modular to IEC and Compact integrated motor. NEMA C flange

## Gears

Hardened and ground gears.

## Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

## Output shaft

With well proportioned bearings

## Feet

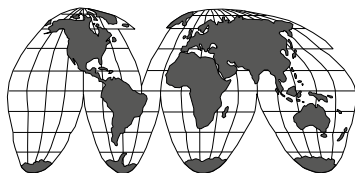
Removable feet.

## Single-piece aluminum alloy housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

Ideal for use as first step with wormgearboxes.

Lubricated for life with synthetic oil with operative range from -15° to +130°C



World wide sales network.



# Specific type datasheet on page...

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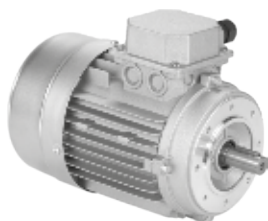


Types / Tipi  
Tipen / Types  
Tipos



| 4-5          | 4-7          | 4-9          | 4-11          |
|--------------|--------------|--------------|---------------|
| 211A<br>20Nm | 311A<br>30Nm | 411A<br>38Nm | 511A<br>110Nm |

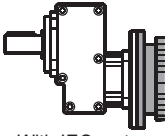
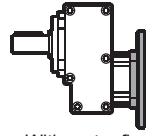
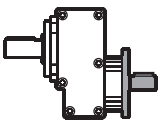
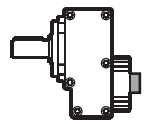
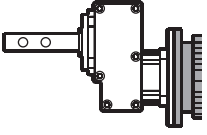
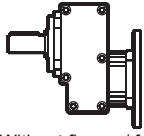
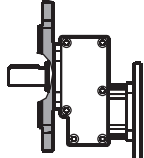
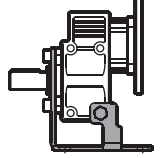
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Types / Tipi  
Tipen / Types  
Tipos



| M-1        |            |            |            |            |                |      |              |              |              |  |
|------------|------------|------------|------------|------------|----------------|------|--------------|--------------|--------------|--|
| 56A<br>56B | 63A<br>63B | 71A<br>71B | 80A<br>80B | 90S<br>90L | 100LA<br>100LB | 112M | 132S<br>132M | 160M<br>160L | 180M<br>180L |  |

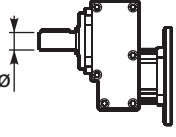
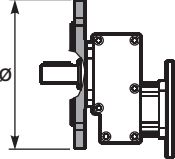





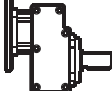
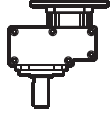
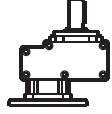




| Type - Tipo - Typ<br>Type - Tipo   | Size - Grandezza - Grösse<br>Taille - Tamaño   | Mounting - Montaggio<br>Montage - Fixation<br>Tipo de montaje  | Ratio - Rapporto<br>Untersetzung<br>Reduction<br>Relación  |
|--|--|--|--|
| <b>P</b>   | <b>311A</b>  | <b>-F</b>  | <b>2.84</b>  |
| <p><b>Aluminum one step gear</b><br/>Riduttori in alluminio a uno stadio</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <br/>                     With IEC motor<br/><b>M</b> </div> <div style="text-align: center;"> <br/>                     With motor flange<br/><b>P</b> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;"> <br/>                     With male input shaft<br/><b>R</b> </div> <div style="text-align: center;"> <br/>                     Modular Base<br/><b>B</b> </div> </div> <div style="border: 1px solid black; padding: 10px; margin-top: 20px; text-align: center;"> <p><b>Special output shaft</b><br/>Albero uscita speciale</p>  <p><b>Only on request for Q.ty</b><br/>A richiesta per quantità</p> </div> | <p><b>1</b> Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> <p><b>211A</b><br/><b>311A</b><br/><b>411A</b><br/><b>511A</b></p> </div> | <div style="text-align: center; margin-top: 20px;"> <br/>                     Without flange / feet<br/><b>-N</b> </div> <div style="text-align: center; margin-top: 20px;"> <br/>                     Output flange mounted<br/><b>-F</b> </div> <div style="text-align: center; margin-top: 20px;"> <br/>                     Mounted feet<br/><b>H1</b> </div> | <p><b>See technical data table</b></p> <p>Vedi tabelle dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p> |

4



On request we can deliver our products according to the ATEX  
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
 Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
 Sur demande nos produits peuvent se conformer à la réglementation ATEX  
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

| Output shaft<br>Albero uscita<br>Abtriebswelle<br>Arbre de sortie<br>Eje en salida   | Output flange<br>Flangia uscita<br>Ausgangsflansch<br>Bride de sortie<br>Brida en salida   | Motor size - Grandezza motore<br>Motor Größe<br>Motor Grösse<br>Grandeur moteur - Tamaño motor   | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje   | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada                | Terminal box position<br>Posizione morsetteria<br>Klemmkastenlage<br>Position boîte à bornes<br>Posizione caja de bornes   |
|--|--|--|--|---|--|
| <p style="text-align: center;"><b>S</b></p>  <p>→ STANDARD</p> <p>211A</p> <p><b>S</b> → <b>∅14</b></p> <p>311A</p> <p><b>S</b> → <b>∅14</b></p> <p><b>C</b> ⇒ <b>∅19</b></p> <p><b>E</b> ⇒ <b>∅24</b></p> <p>411A</p> <p><b>S</b> ⇒ <b>∅14</b></p> <p><b>C</b> ⇒ <b>∅19</b></p> <p><b>E</b> ⇒ <b>∅24</b></p> <p><b>G</b> ⇒ <b>∅28</b></p> <p>511A</p> <p><b>C</b> ⇒ <b>∅19</b></p> <p><b>E</b> ⇒ <b>∅24</b></p> <p><b>G</b> ⇒ <b>∅28</b></p> | <p style="text-align: center;"><b>2</b></p>  <p><b>N</b> Senza flangia<br/>Without flange</p> <p>211A</p> <p><b>I</b> ⇒ <b>∅105</b><br/>Flangia integrata<br/>Integrated flange</p> <p>311A</p> <p><b>1</b> ⇒ <b>∅120</b></p> <p><b>2</b> ⇒ <b>∅140</b></p> <p><b>3</b> ⇒ <b>∅160</b></p> <p><b>4</b> ⇒ <b>∅200</b></p> <p>411A</p> <p><b>1</b> ⇒ <b>∅120</b></p> <p><b>2</b> ⇒ <b>∅140</b></p> <p><b>3</b> ⇒ <b>∅160</b></p> <p><b>4</b> ⇒ <b>∅200</b></p> <p><b>5</b> ⇒ <b>∅250</b></p> | <p style="text-align: center;"><b>-C</b></p> <p>Flange<br/>Flangia</p>  <p>B5</p> <p><b>-A</b>=56 (∅120)</p> <p><b>-B</b>=63 (∅140)</p> <p><b>-C</b>=71 (∅160)</p> <p><b>-D</b>=80 (∅200)</p> <p><b>-E</b>=90 (∅200)</p> <p><b>-F</b>=100+112 (∅250)</p> <p><b>-G</b>=132 (∅300)</p> <p>Without flange<br/>Senza flangia</p>  <p>211A<br/>311A</p> <p><b>-Z</b> ⇒ <b>∅9</b> (IEC56)</p> <p><b>-0</b> ⇒ <b>∅11</b> (IEC63)</p> <p><b>-1</b> ⇒ <b>∅14</b> (IEC71)</p> <p>411A</p> <p><b>-1</b> ⇒ <b>∅14</b> (IEC71)</p> <p><b>-2</b> ⇒ <b>∅19</b> (IEC80)</p> <p><b>-3</b> ⇒ <b>∅24</b> (IEC90)</p> <p>511A</p> <p><b>-2</b> ⇒ <b>∅19</b> (IEC80)</p> <p><b>-3</b> ⇒ <b>∅24</b> (IEC90)</p> <p><b>-4</b> ⇒ <b>∅28</b> (IEC100)</p> | <p style="text-align: center;"><b>B3</b></p>  <p><b>B3</b></p> <p>STANDARD</p>  <p><b>B6</b></p>  <p><b>B7</b></p>  <p><b>B8</b></p>  <p><b>V5</b></p>  <p><b>V6</b></p> | <p style="text-align: center;"><b>ST</b></p> <p><b>ST</b></p> <p>standard bore</p> <p>foro standard</p> | <p>With Type M specify terminal box position</p> <p>Con tipo M specificare posizione morsettieria</p>  <p><b>A</b></p>  <p><b>B</b></p> <p>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

Lifting / sollevamento / hubantriebe / levage / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / drehung / rotation / rotação

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / linearbewegung / translation / translación

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

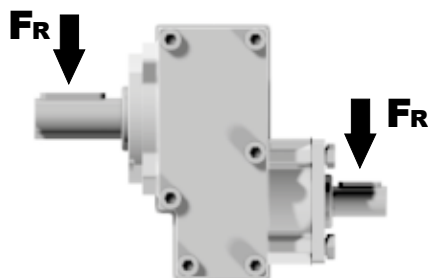
$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

4

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.



How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor

**B** Output speed  
Velocità in uscita  
Abtriebsdrehzahl  
Vitesse de sortie  
Velocidad de salida

Nominal power  
Potenza nominale  
Max. mögliche Leistung  
Poissance nominale  
Potencia nominal

**A** Nominal torque  
Momento torcente nominale  
Nenn Drehmoment  
Couple nominal  
Par de torsión nominal

Flange code  
Codice flangia  
Flanschtype  
Code bride  
Código bridas

Input speed  
Velocità in entrata  
Eintriebsdrehzahl  
Vitesse en entrée  
Velocidad de entrada

Gear size  
Grandezza riduttore  
Getriebegröße  
Taille réducteur  
Tamaño reductor

Motor power  
Potenza motore  
Motorleistung  
Puissance moteur  
Potencia motor

# 311A

## One step 30Nm

Rating - Aluminum ONE STEP GEARBOXES

| QUICK SELECTION / Selezione veloce                     |            |  |  |                        |  |   | input speed (n <sub>1</sub> ) = 1400 min <sup>-1</sup> |    |                             |    |    |              |                 |            |
|--|------------|--|--|------------------------|--|---|--|----|-----------------------------|----|----|--------------|-----------------|------------|
| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges                             |    | Available B14 motor flanges |    |    | Output Shaft |                 |            |
|  |            |  |  |                        |  |   | -B   | -C | -O                          | -P | -Q |              |                 | Notes code |
| 892  | 1.57       | 0.37                                   | 3.9                                      | 3.3                    | 1.24                                     | 13  | 63   | 71 | C                           | C  |    | 2844         | standard<br>ø14 | 01         |
| 493  | 2.84       | 0.37                                   | 7.0                                      | 3.3                    | 1.21                                     | 23  |  |    | C                           | C  |    | 1954         |                 | 02         |
| 426  | 3.29       | 0.37                                   | 8.1                                      | 3.2                    | 1.18                                     | 26  |  |    | C                           | C  |    | 1756         |                 | 03         |
| 362  | 3.87       | 0.37                                   | 9.6                                      | 2.9                    | 1.08                                     | 28  |  |    | C                           | C  |    | 1558         |                 | 04         |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

Output shaft diam.  
Diam. albero uscita  
Durchmesser abtriebswelle  
Diametre arbre lent  
Diametro eje de salida

Notes  
Note  
Anmerkungen  
Note  
Notas

| fs   |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

|           |  |  |
|-----------|--|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccia di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción   |  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |  |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccia<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible tambien sin casquillo                                   |  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i  | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br>Ø | Ratios code |
|--|-------------|--|--|------------------------|--|---|----------------------------|----|-----------------------------|----|----|-------------------|-------------|
|  |             |  |  |                        |  |   | -B                         | -C | -O                          | -P | -Q |                   |             |
| 682  | <b>2.05</b> | 0.37                                   | 5  | 2.0                    | <b>0.73</b>                              | <b>10</b>                                 |                            |    | C                           | C  |    | 1939              | 01          |
| 595  | <b>2.35</b> | 0.37                                   | 6  | 2.1                    | <b>0.76</b>                              | <b>12</b>                                 |                            |    | C                           | C  |    | 1740              | 02          |
| 500  | <b>2.80</b> | 0.37                                   | 7  | 2.0                    | <b>0.75</b>                              | <b>14</b>                                 |                            |    | C                           | C  |    | 1542              | 03          |
| 414  | <b>3.38</b> | 0.37                                   | 8  | 2.0                    | <b>0.75</b>                              | <b>17</b>                                 |                            |    | C                           | C  |    | 1344              | 04          |
| 298  | <b>4.70</b> | 0.37                                   | 12                                       | 1.7                    | <b>0.64</b>                              | <b>20</b>                                 |                            |    | C                           | C  |    | 1047              | 05          |
| 225  | <b>6.22</b> | 0.37                                   | 15                                       | 1.5                    | <b>0.55</b>                              | <b>23</b>                                 |                            |    | C                           | C  |    | 956               | 06          |
| 169  | <b>8.29</b> | 0.37                                   | 20                                       | 1.0                    | <b>0.36</b>                              | <b>20</b>                                 |                            |    | C                           | C  |    | 758               | 07          |
| 142  | <b>9.83</b> | 0.25                                   | 16                                       | 1.0                    | <b>0.24</b>                              | <b>16</b>                                 |                            |    | C                           | C  |    | 659               | 08          |

The dynamic efficiency is **0.98** for all ratios

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **211A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **211A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **211A** ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **211A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **211A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 211A Oil Quantity 0.05 Lt.

**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

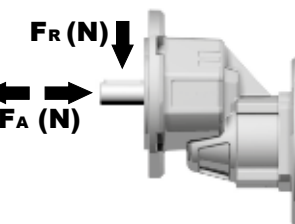
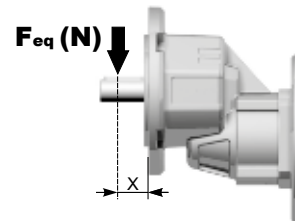
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

Albero di uscita

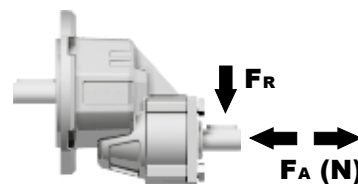
$$F_{eq} = F_R \cdot \frac{34.5}{X+19.5}$$



| n <sub>2</sub> | FA  | FR  |
|----------------|-----|-----|
| <b>700</b>     | 101 | 504 |
| <b>600</b>     | 120 | 600 |
| <b>400</b>     | 138 | 696 |
| <b>300</b>     | 151 | 756 |
| <b>200</b>     | 175 | 876 |
| <b>140</b>     | 192 | 960 |

##### Input shaft

albero in entrata



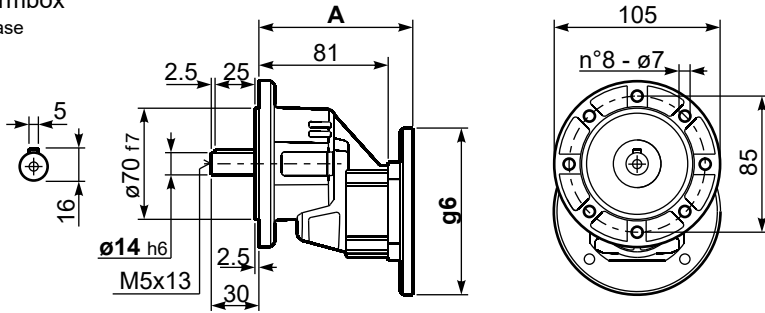
| n <sub>1</sub> | FA  | FR  |
|----------------|-----|-----|
| <b>1400</b>    | 168 | 840 |
| <b>900</b>     | 192 | 960 |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

**P211A-F...** Basic wormbox  
Riduttore base

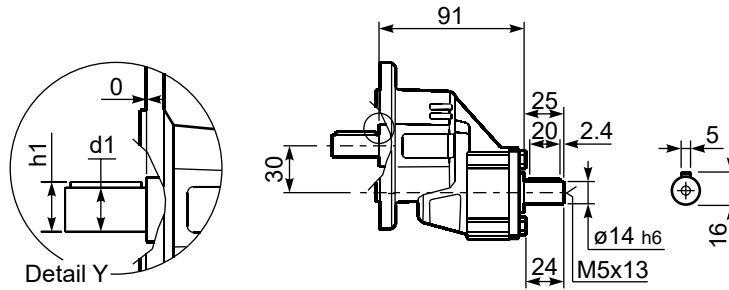
Gearbox weight  
peso riduttore **1.40 kg**



| B5 Motor Flanges | A    | g6  | kit code   |
|------------------|------|-----|------------|
| 63 B5            | 99.5 | 138 | K050.4.041 |
| 71 B5            | 97   | 160 | K050.4.042 |

| B14 Motor Flanges | A    | g6  | kit code   |
|-------------------|------|-----|------------|
| 56 B14            | 97   | 80  | KC40.4.049 |
| 63 B14            | 99.5 | 90  | K050.4.047 |
| 71 B14            | 97   | 105 | K050.4.045 |

**R211A-F...** Basic wormbox  
Riduttore base



\*Available output shaft / Albero di uscita

|          | Shaft - d1          | p1 | h1 | x     |
|----------|---------------------|----|----|-------|
| Standard | $\phi 14 \times 30$ | 5  | 16 | M5x13 |



### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code                                 |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|----|------------------|---|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P | -Q |                  |   |    |
| 891   | <b>1.57</b>  | 0.37                            | 4                                 | 3.3                    | 1.2                               | 13                                 |                            |    | C                           | C  |    | 2844             | standard<br>ø14<br>On request<br>ø19<br>ø24 | 01 |
| 493   | <b>2.84</b>  | 0.37                            | 7                                 | 3.3                    | 1.2                               | 23                                 |                            |    | C                           | C  |    | 1954             |   | 02 |
| 425   | <b>3.29</b>  | 0.37                            | 8                                 | 3.2                    | 1.2                               | 26                                 |                            |    | C                           | C  |    | 1756             |   | 03 |
| 362   | <b>3.87</b>  | 0.37                            | 10                                | 2.9                    | 1.1                               | 28                                 |                            |    | C                           | C  |    | 1558             |   | 04 |
| 303   | <b>4.62</b>  | 0.37                            | 11                                | 2.6                    | 0.97                              | 30                                 |                            |    | C                           | C  |    | 1360             |   | 05 |
| 222   | <b>6.30</b>  | 0.37                            | 16                                | 2.2                    | 0.83                              | 35                                 |                            |    | C                           | C  |    | 1063             |   | 06 |
| 170   | <b>8.22</b>  | 0.37                            | 20                                | 1.9                    | 0.69                              | 38                                 |                            |    | C                           | C  |    | 974              |   | 07 |
| 129   | <b>10.86</b> | 0.37                            | 27                                | 1.0                    | 0.39                              | 28                                 |                            |    | C                           | C  |    | 776              |   | 08 |

The dynamic efficiency is **0.98** for all ratios

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

4

**EN** Unit **311A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **311A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **311A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **311A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **311A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### LUBRICATION 311A Oil Quantity 0.10 Lt.

**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website

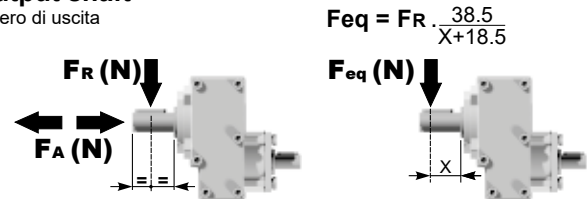
tab. 1

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

#### Output shaft

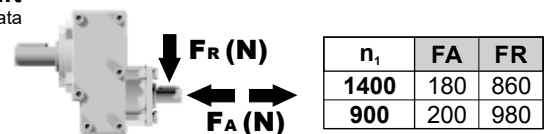
Albero di uscita



| $n_2$ | FA  | FR  | $n_2$ | FA  | FR  | $n_2$ | FA  | FR   |
|-------|-----|-----|-------|-----|-----|-------|-----|------|
| 700   | 120 | 640 | 400   | 160 | 800 | 200   | 200 | 1020 |
| 600   | 140 | 700 | 300   | 175 | 880 | 140   | 225 | 1120 |

#### Input shaft

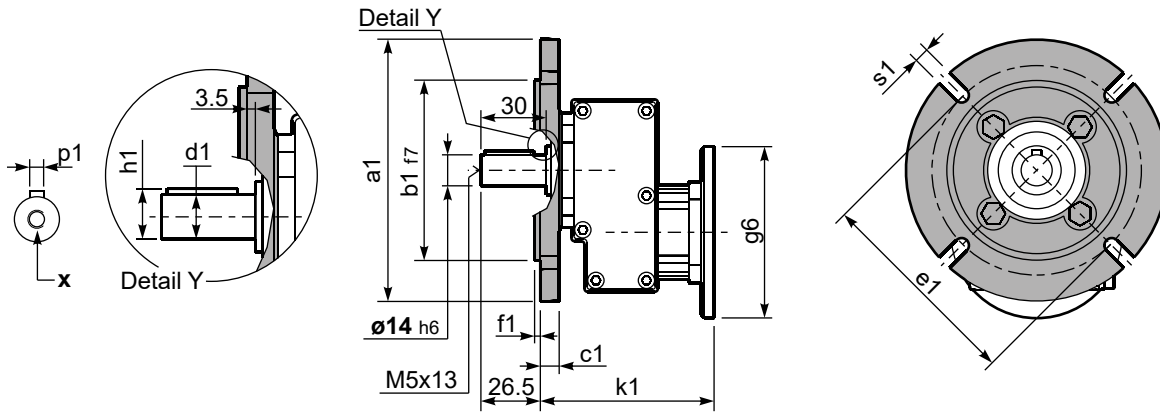
Albero in entrata



tab. 2

**P311-F...** Output flange  
flange di uscita

Gearbox weight **2.50 kg**  
peso riduttore



**\*Available output shaft / Alberi di uscita**

|                           | Shaft - d1         | p1     | h1         | x              |
|---------------------------|--------------------|--------|------------|----------------|
| Standard                  | ∅ 14x30            | 5      | 16         | M5x13          |
| On request<br>A richiesta | ∅ 19x40<br>∅ 24x40 | 6<br>8 | 21.5<br>27 | M6x16<br>M6x16 |

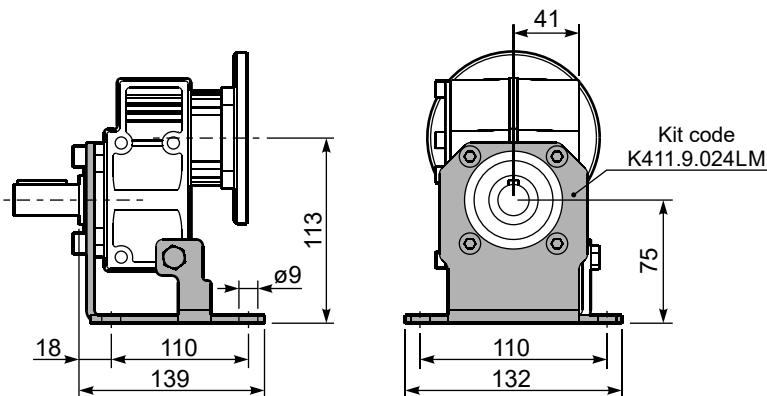
**Available output flanges / flange di uscita**

| a1 ∅ | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 11.5 | 100 | 3   | 9* | KC30.9.010 |
| 140  | 95  | 11.5 | 115 | 3   | 9  | KC30.9.011 |
| 160  | 110 | 11.5 | 130 | 3.5 | 9  | KC30.9.012 |
| 200  | 130 | 11.5 | 165 | 3.5 | 11 | KC30.9.013 |

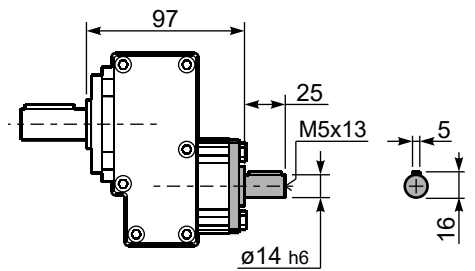
\*Holes position  
posizione fori



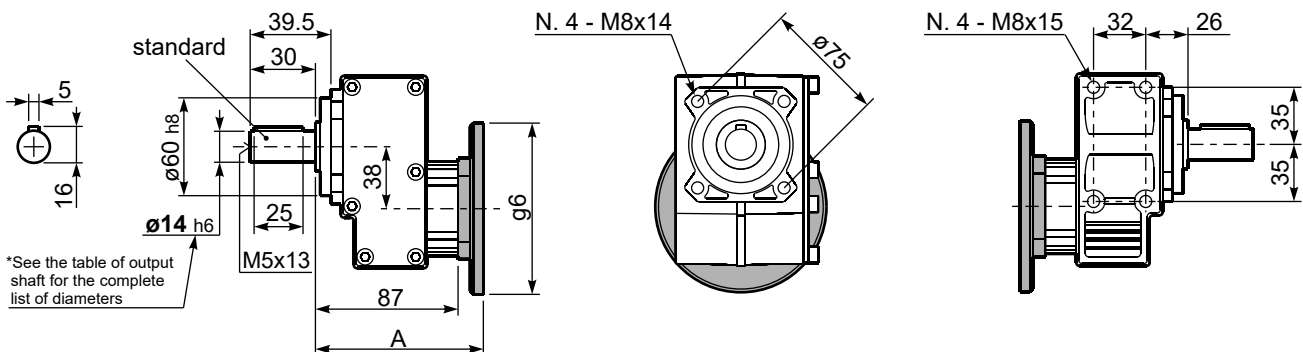
**P311-H1...** With feet  
Con piedini



**R311-N...** Input Shaft  
Albero in entrata



**P311-N...** Basic gearbox  
Riduttore base



| B14 Motor Flanges | A     | g6  | k1    | kit code   |
|-------------------|-------|-----|-------|------------|
| 56 B14            | 103   | 80  | 106.5 | KC40.4.049 |
| 63 B14            | 105.5 | 90  | 109   | K050.4.047 |
| 71 B14            | 103   | 105 | 106.5 | K050.4.045 |

| B5 Motor Flanges | A     | g6  | k1    | kit code   |
|------------------|-------|-----|-------|------------|
| 63 B5            | 105.5 | 138 | 109   | K050.4.041 |
| 71 B5            | 103   | 160 | 106.5 | K050.4.042 |



### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code                                     |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|---|----|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |   |    |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |   |    |
| 891   | <b>1.57</b>  | 1.5                             | 16                                | 1.3                    | <b>1.9</b>                        | <b>20</b>                          | B                          |    |    |    | C                           | C  |    | 2844             | standard<br>ø19<br><br>On request<br>ø14<br>ø24 | 01 |
| 493   | <b>2.84</b>  | 1.5                             | 28                                | 1.2                    | <b>1.8</b>                        | <b>35</b>                          | B                          |    |    |    | C                           | C  |    | 1954             |   | 02 |
| 425   | <b>3.29</b>  | 1.5                             | 33                                | 1.2                    | <b>1.7</b>                        | <b>38</b>                          | B                          |    |    |    | C                           | C  |    | 1756             |   | 03 |
| 362   | <b>3.87</b>  | 1.5                             | 39                                | 1.0                    | <b>1.5</b>                        | <b>40</b>                          | B                          |    |    |    | C                           | C  |    | 1558             |   | 04 |
| 303   | <b>4.62</b>  | 1.5                             | 46                                | 1.0                    | <b>1.5</b>                        | <b>47</b>                          | B                          |    |    |    | C                           | C  |    | 1360             |   | 05 |
| 222   | <b>6.30</b>  | 1.1                             | 46                                | 1.0                    | <b>1.1</b>                        | <b>46</b>                          | B                          |    |    |    | C                           | C  |    | 1063             |   | 06 |
| 170   | <b>8.22</b>  | 0.55                            | 30                                | 1.3                    | <b>0.69</b>                       | <b>38</b>                          | B                          |    |    |    | C                           | C  |    | 974              |   | 07 |
| 129   | <b>10.86</b> | 0.37                            | 27                                | 1.0                    | <b>0.39</b>                       | <b>28</b>                          | B                          |    |    |    | C                           | C  |    | 776              |   | 08 |

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available  
Flange Motore Disponibili

B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

4

**EN** Unit **411A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **411A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **411A** ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **411A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **411A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### LUBRICATION 411A Oil Quantity 0.10 Lt.

**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website

tab. 1

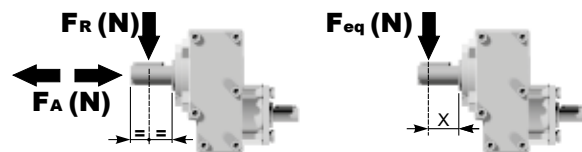
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

#### Output shaft

Albero di uscita

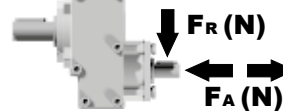
$$F_{eq} = F_R \cdot \frac{40}{X+20}$$



| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA  | FR   |
|-------|-----|------|-------|-----|------|-------|-----|------|
| 700   | 182 | 910  | 400   | 230 | 1150 | 200   | 290 | 1450 |
| 600   | 200 | 1000 | 300   | 250 | 1250 | 140   | 320 | 1600 |

#### Input shaft

Albero in entrata



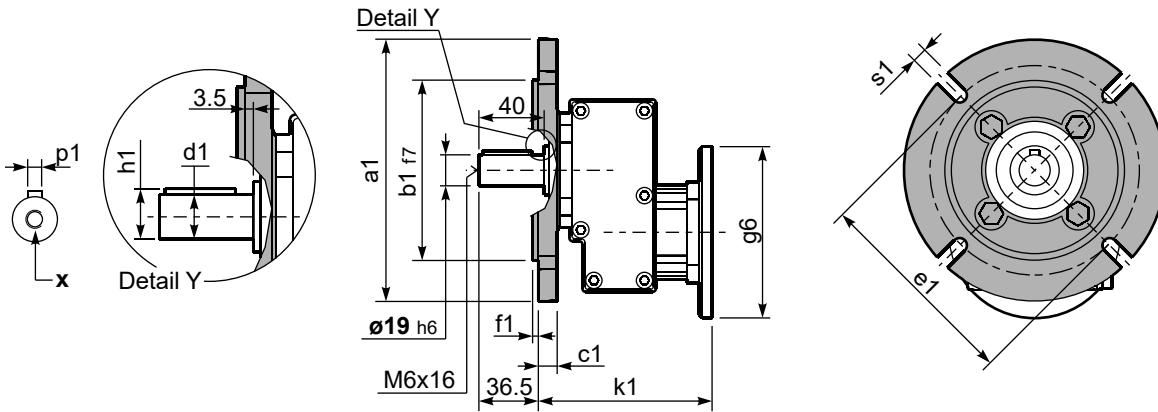
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 240 | 1200 |
| 900   | 280 | 1400 |

tab. 2



**P411-F...** Output flange  
flange di uscita

Gearbox weight  
peso riduttore **3.20 kg**



**\*Available output shaft / Alberi di uscita**

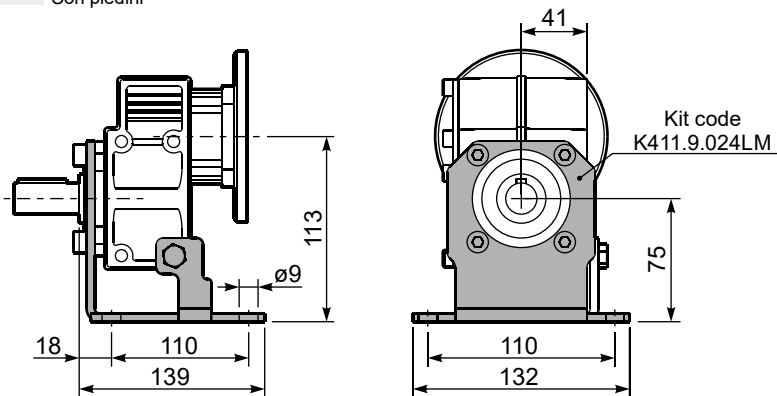
|                           | Shaft - d1         | p1     | h1       | x              |
|---------------------------|--------------------|--------|----------|----------------|
| Standard                  | ø 19x40            | 6      | 21.5     | M6x16          |
| On request<br>A richiesta | ø 14x30<br>ø 24x40 | 5<br>8 | 16<br>27 | M5x13<br>M6x16 |

**Available output flanges / flange di uscita**

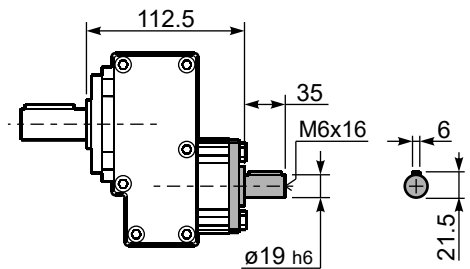
| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 11.5 | 100 | 3   | 9* | KC30.9.010 |
| 140  | 95  | 11.5 | 115 | 3   | 9  | KC30.9.011 |
| 160  | 110 | 11.5 | 130 | 3.5 | 9  | KC30.9.012 |
| 200  | 130 | 11.5 | 165 | 3.5 | 11 | KC30.9.013 |

\*Holes position  
posizione fori

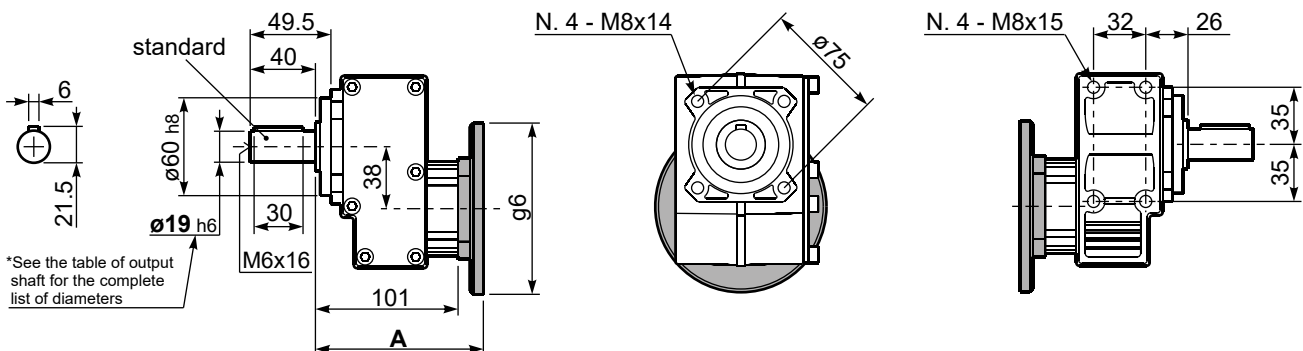
**P411-H1...** With feet  
Con piedini



**R411-N...** Input Shaft  
Albero in entrata



**P411-N...** Basic gearbox  
Riduttore base



| B5 Motor Flanges | A     | g6  | k1  | kit code   |
|------------------|-------|-----|-----|------------|
| 63 B5            | 121.5 | 140 | 125 | K063.4.041 |
| 71 B5            | 119.5 | 160 | 123 | K063.4.042 |
| 80/90 B5         | 121.5 | 200 | 125 | K063.4.043 |

| B14 Motor Flanges | A     | g6  | k1  | kit code   |
|-------------------|-------|-----|-----|------------|
| 71 B14            | 119.5 | 105 | 123 | K063.4.047 |
| 80 B14            | 121.5 | 120 | 125 | K063.4.046 |
| 90 B14            | 121.5 | 140 | 125 | K063.4.041 |



**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |                 |                   |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|-----------------|-------------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |                 |                   |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |                 |                   |    |
| 1077  | <b>1.30</b>  | 4                               | 34                                | 1.2                    | 4.6                               | 40                                 | B                          |    |    |            |     |                             |    |            |     |                  | 3039        | standard<br>ø28 | 01                |    |
| 571   | <b>2.45</b>  | 4                               | 64                                | 1.1                    | 4.3                               | 70                                 | B                          |    |    |            |     |                             |    |            |     |                  | 2049        |                 | 02                |    |
| 423   | <b>3.31</b>  | 4                               | 87                                | 1.0                    | 4.1                               | 90                                 | B                          |    |    |            |     |                             |    |            |     |                  | 1653        |                 | 03                |    |
| 325   | <b>4.31</b>  | 4                               | 113                               | 1.0                    | 3.8                               | 110                                | B                          |    |    |            |     |                             |    |            |     |                  | 1356        |                 | 04                |    |
| 266   | <b>5.27</b>  | 3                               | 104                               | 1.1                    | 3.1                               | 110                                | B                          |    |    |            |     |                             |    |            |     |                  | 1158        |                 | On request<br>ø24 | 05 |
| 184   | <b>7.63</b>  | 2.2                             | 111                               | 1.0                    | 2.2                               | 110                                | B                          |    |    |            |     |                             |    |            |     |                  | 861         |                 | 06                |    |
| 133   | <b>10.50</b> | 1.1                             | 77                                | 1.0                    | 1.1                               | 80                                 | B                          |    |    |            |     |                             |    |            |     |                  | 663         |                 | 07                |    |

The dynamic efficiency is **0.98** for all ratios

  Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

4

**EN** Unit **511A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **511A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **511A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **511A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **511A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### LUBRICATION 511A Oil Quantity 0.29 Lt.

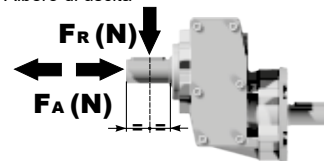
**SHELL** Omala S4 WE 320     **ENI** Telium VSF 320

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

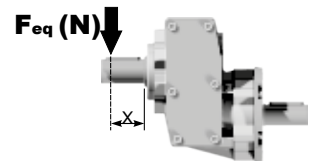
### RADIAL AND AXIAL LOADS

#### Output shaft

Albero di uscita



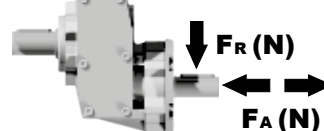
$$F_{eq} = FR \frac{47.5}{X+22.5}$$



| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA  | FR   |
|-------|-----|------|-------|-----|------|-------|-----|------|
| 700   | 294 | 1470 | 400   | 370 | 1850 | 200   | 460 | 2300 |
| 600   | 320 | 1600 | 300   | 400 | 2000 | 140   | 510 | 2550 |

#### Input shaft

Albero in entrata

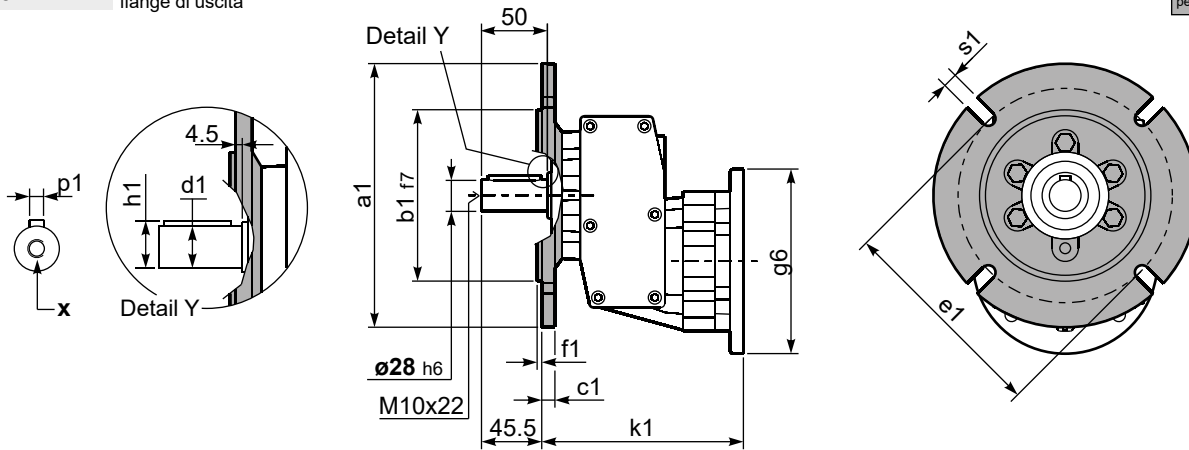


| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |

tab. 2

**P511-F...** Output flanges  
flange di uscita

Gearbox weight  
peso riduttore **5.00 kg**



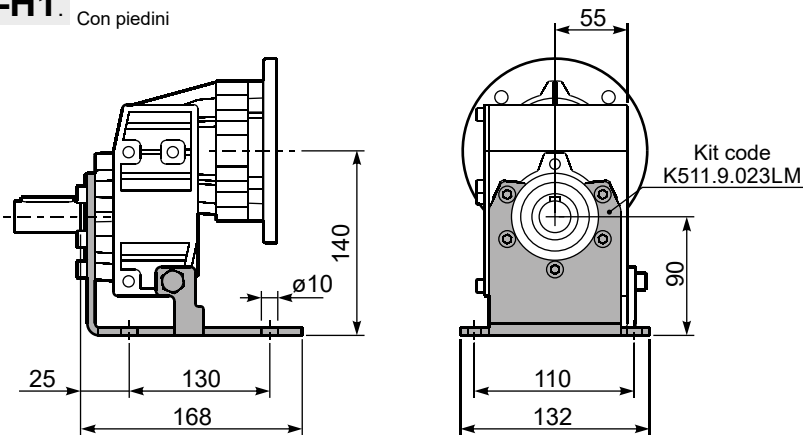
**\*Available output shaft / Alberi di uscita**

|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 28x50    | 8  | 31 | M10x22 |
| On request<br>A richiesta | ø 24x50    | 8  | 27 | M8x19  |

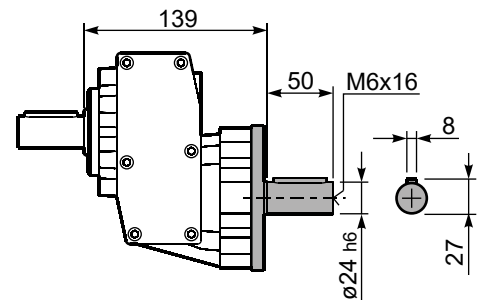
**Available output flanges / flange di uscita**

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 10   | 100 | 3   | 7  | KC40.9.010 |
| 140  | 95  | 10   | 115 | 3   | 9  | KC40.9.011 |
| 160  | 110 | 10   | 130 | 3.5 | 9  | KC40.9.012 |
| 200  | 130 | 11   | 165 | 3.5 | 11 | KC40.9.013 |
| 250  | 180 | 11.5 | 215 | 3.5 | 14 | KC40.9.014 |

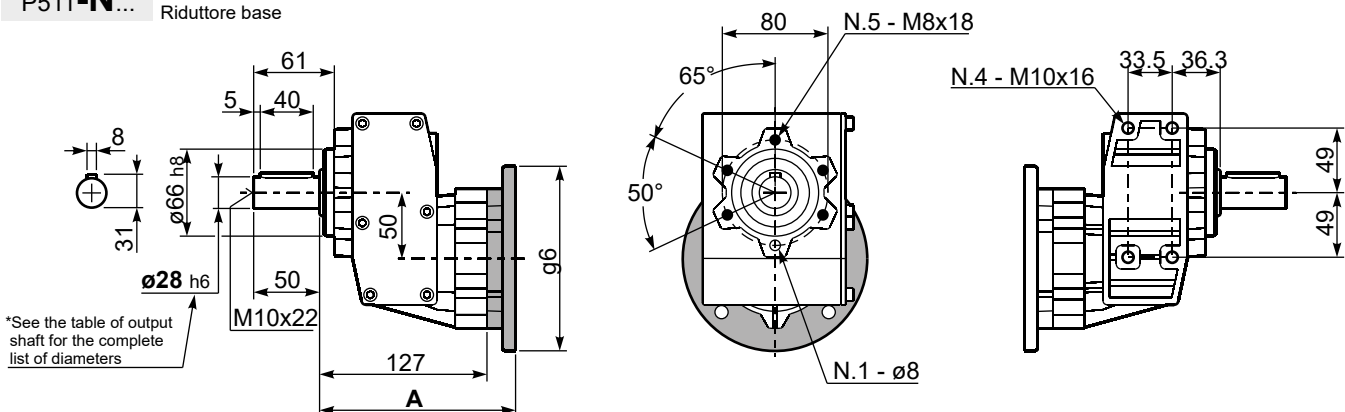
**P511A-H1.** With feet  
Con piedini



**R511A-N...** Input Shaft  
Albero in entrata



**P511-N...** Basic gearbox  
Riduttore base



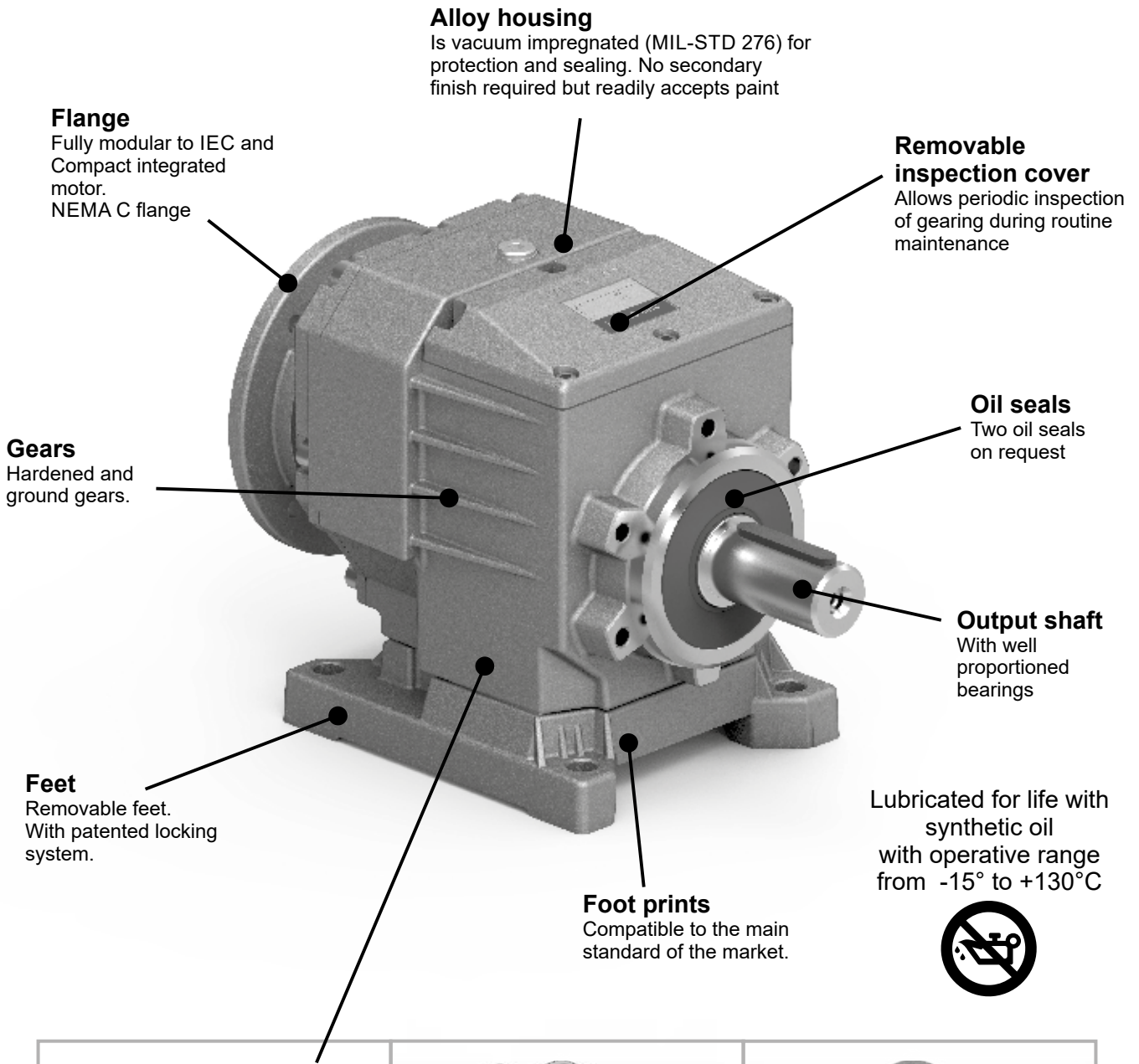
\*See the table of output shaft for the complete list of diameters

| B5 Motor Flanges | A     | g6  | k1  | kit code   |
|------------------|-------|-----|-----|------------|
| 71 B5            | 145.5 | 160 | 150 | K023.4.041 |
| 80/90 B5         | 147.5 | 200 | 152 | K023.4.042 |
| 100/112 B5       | 156.5 | 250 | 161 | K023.4.043 |
| 132 B5           | 177.5 | 300 | 179 | KC51.4.043 |

| B14 Motor Flanges | A     | g6  | k1  | kit code   |
|-------------------|-------|-----|-----|------------|
| 80 B14            | 147.5 | 120 | 152 | K085.4.046 |
| 90 B14            | 147.5 | 140 | 152 | K085.4.045 |
| 100/112 B14       | 156.5 | 160 | 161 | K085.4.047 |
| 132 B14           | 177.5 | 200 | 179 | KC51.4.041 |

# Aluminum in line gearboxes

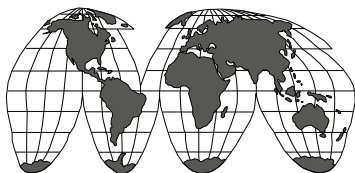
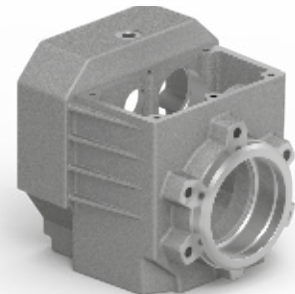
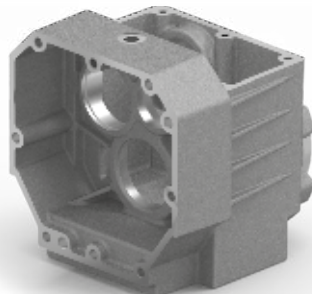
## A modular and compact product



5

### Single-piece aluminum alloy housing

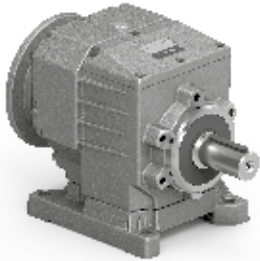
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing



World wide sales network.

# Specific type datasheet on page...

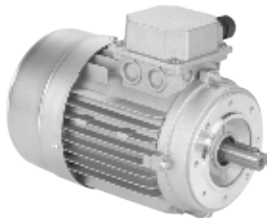
On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi  
Tipen / Types  
Tipos

| 5-5          | 5-7           | 5-9           | 5-11          | 5-13          | 5-15          | 5-17          | 5-19          | 5-21          |
|--------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 202A<br>70Nm | 302A<br>120Nm | 412A<br>175Nm | 413A<br>175Nm | 452A<br>300Nm | 512A<br>360Nm | 513A<br>360Nm | 612A<br>530Nm | 613A<br>530Nm |

On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi  
Tipen / Types  
Tipos

| M-1        |            |            |            |            |                |      |              |              |              |
|------------|------------|------------|------------|------------|----------------|------|--------------|--------------|--------------|
| 56A<br>56B | 63A<br>63B | 71A<br>71B | 80A<br>80B | 90S<br>90L | 100LA<br>100LB | 112M | 132S<br>132M | 160M<br>160L | 180M<br>180L |

Type - Tipo - Typ  
Type - Tipo

Size - Grandezza - Grösse  
Taille - Tamaño

Mounting - Montaggio  
Montage - Fixation  
Tipo de montaje

Ratio - Rapporto  
Untersetzung - Reduction  
Relación

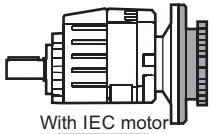
**P**

**412A**

**-F**

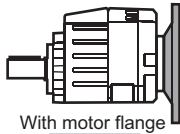
**7.33**

Aluminum coaxial gear boxes  
Riduttori coassiali in alluminio



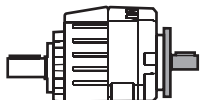
With IEC motor

**M**



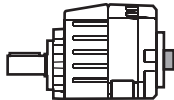
With motor flange

**P**



With male input shaft

**R**



Modular base

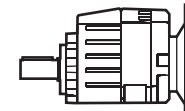
**B**

**2** Stages  
Riduzioni  
Stufen  
Trains  
Etapas

**3** Stages  
Riduzioni  
Stufen  
Trains  
Etapas

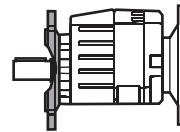
**202A**  
**302A**  
**412A**  
**452A**  
**512A**  
**612A**

**413A**  
**513A**  
**613A**



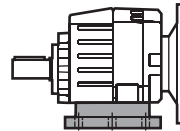
Without flange / feet

**-N**



Output flange mounted

**-F**



Mounted feet

**B..**

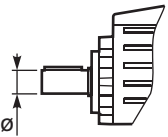
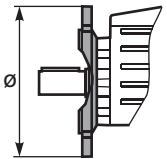




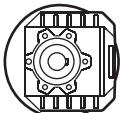
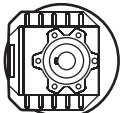
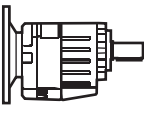
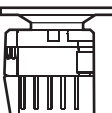

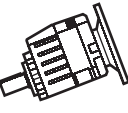
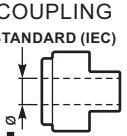

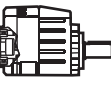




| Feet / piedini |                  | G  | H   | R       | L     | L1 | S |
|----------------|------------------|----|-----|---------|-------|----|---|
| Feet Code      | Market reference |    |     |         |       |    |   |
| B1             | 112              | 18 | 85  | 110     | 87    | 50 |   |
| B2             | 212/3            | 18 | 100 | 130     | 107.5 |    |   |
| S1             | 17               | 18 | 75  | 110     | 90+20 |    |   |
| S2             | 27               | 25 | 90  | 110     | 130   |    |   |
| M1             | 42/3             | 25 | 80  | 110+120 | 85    |    |   |
| L4             | 04               | 13 | 80  | 105     |       |    |   |
| L5             | 05               | 16 | 100 | 125     |       |    |   |

You see feet code in the chart of the dimensions  
Vedi codice piede nella tabella delle dimensioni



On request we can deliver our products according to the ATEX  
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
Sur demande nos produits peuvent se conformer à la réglementation ATEX  
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.



| Output shaft<br>Albero uscita<br>Abtriebswelle<br>Arbre de sortie<br>Eje en salida   | Output flange<br>Flangia uscita<br>Ausgangsflansch<br>Bride de sortie<br>Brida en salida | Motor size - Grandezza motore<br>Motor Grösse<br>Grandeur moteur - Tamaño motor | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montage | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada | Terminal box position<br>Posizione morsettiere<br>Klemmkastenlage<br>Position boîte à bornes<br>Posición caja de bornes |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
|--|--|---|--|--|---|------|----------------|----------------|----------------|-----------------------|----------------|----------------|-----------|----------------|----------------|----------------|----------------|-----------------------|-------------------|----------------|----------------|----------------|-----------------------|----------------|-----------|----------------|----------------|-----------------------|----------------|----------------|---|-----------|-----------------|------------------------|-----------------|-----------------|-----------|-----------------|------------------------|-----------------|-----------------|-----------------|-------------------|-----------------|------------------------|-----------------|-----------|-----------------|-----------------|------------------------|---|---|--|---|
| <p><b>V</b></p>  <p>→ STANDARD</p> <table border="1"> <tr><td>202A</td></tr> <tr><td><b>S</b> ⇒ Ø14</td></tr> <tr><td><b>B</b> ⇒ <b>Ø16</b></td></tr> <tr><td><b>D</b> ⇒ Ø20</td></tr> <tr><td><b>V</b> ⇒ Ø25</td></tr> </table> <table border="1"> <tr><td>302A</td></tr> <tr><td><b>S</b> ⇒ Ø14</td></tr> <tr><td><b>B</b> ⇒ Ø16</td></tr> <tr><td><b>C</b> ⇒ Ø19</td></tr> <tr><td><b>D</b> ⇒ <b>Ø20</b></td></tr> <tr><td><b>E</b> ⇒ Ø24</td></tr> <tr><td><b>V</b> ⇒ Ø25</td></tr> </table> <table border="1"> <tr><td>412A 413A</td></tr> <tr><td><b>B</b> ⇒ Ø16</td></tr> <tr><td><b>C</b> ⇒ Ø19</td></tr> <tr><td><b>D</b> ⇒ Ø20</td></tr> <tr><td><b>E</b> ⇒ Ø24</td></tr> <tr><td><b>V</b> ⇒ <b>Ø25</b></td></tr> </table> <table border="1"> <tr><td>452A<br/>512A 513A</td></tr> <tr><td><b>E</b> ⇒ Ø24</td></tr> <tr><td><b>V</b> ⇒ Ø25</td></tr> <tr><td><b>G</b> ⇒ Ø28</td></tr> <tr><td><b>H</b> ⇒ <b>Ø30</b></td></tr> <tr><td><b>I</b> ⇒ Ø35</td></tr> </table> <table border="1"> <tr><td>612A 613A</td></tr> <tr><td><b>G</b> ⇒ Ø28</td></tr> <tr><td><b>H</b> ⇒ Ø30</td></tr> <tr><td><b>I</b> ⇒ <b>Ø35</b></td></tr> <tr><td><b>L</b> ⇒ Ø38</td></tr> <tr><td><b>M</b> ⇒ Ø40</td></tr> </table> | 202A   | <b>S</b> ⇒ Ø14  | <b>B</b> ⇒ <b>Ø16</b>  | <b>D</b> ⇒ Ø20   | <b>V</b> ⇒ Ø25  | 302A | <b>S</b> ⇒ Ø14 | <b>B</b> ⇒ Ø16 | <b>C</b> ⇒ Ø19 | <b>D</b> ⇒ <b>Ø20</b> | <b>E</b> ⇒ Ø24 | <b>V</b> ⇒ Ø25 | 412A 413A | <b>B</b> ⇒ Ø16 | <b>C</b> ⇒ Ø19 | <b>D</b> ⇒ Ø20 | <b>E</b> ⇒ Ø24 | <b>V</b> ⇒ <b>Ø25</b> | 452A<br>512A 513A | <b>E</b> ⇒ Ø24 | <b>V</b> ⇒ Ø25 | <b>G</b> ⇒ Ø28 | <b>H</b> ⇒ <b>Ø30</b> | <b>I</b> ⇒ Ø35 | 612A 613A | <b>G</b> ⇒ Ø28 | <b>H</b> ⇒ Ø30 | <b>I</b> ⇒ <b>Ø35</b> | <b>L</b> ⇒ Ø38 | <b>M</b> ⇒ Ø40 | <p><b>2</b></p>  <p><b>N</b> Senza flangia<br/>Without flange</p> <table border="1"> <tr><td>202A 302A</td></tr> <tr><td><b>1</b> ⇒ Ø120</td></tr> <tr><td><b>2</b> ⇒ <b>Ø140</b></td></tr> <tr><td><b>3</b> ⇒ Ø160</td></tr> <tr><td><b>4</b> ⇒ Ø200</td></tr> </table> <table border="1"> <tr><td>412A 413A</td></tr> <tr><td><b>1</b> ⇒ Ø120</td></tr> <tr><td><b>2</b> ⇒ <b>Ø140</b></td></tr> <tr><td><b>3</b> ⇒ Ø160</td></tr> <tr><td><b>4</b> ⇒ Ø200</td></tr> <tr><td><b>5</b> ⇒ Ø250</td></tr> </table> <table border="1"> <tr><td>452A<br/>512A 513A</td></tr> <tr><td><b>3</b> ⇒ Ø160</td></tr> <tr><td><b>4</b> ⇒ <b>Ø200</b></td></tr> <tr><td><b>5</b> ⇒ Ø250</td></tr> </table> <table border="1"> <tr><td>612A 613A</td></tr> <tr><td><b>3</b> ⇒ Ø160</td></tr> <tr><td><b>4</b> ⇒ Ø200</td></tr> <tr><td><b>5</b> ⇒ <b>Ø250</b></td></tr> </table> | 202A 302A | <b>1</b> ⇒ Ø120 | <b>2</b> ⇒ <b>Ø140</b> | <b>3</b> ⇒ Ø160 | <b>4</b> ⇒ Ø200 | 412A 413A | <b>1</b> ⇒ Ø120 | <b>2</b> ⇒ <b>Ø140</b> | <b>3</b> ⇒ Ø160 | <b>4</b> ⇒ Ø200 | <b>5</b> ⇒ Ø250 | 452A<br>512A 513A | <b>3</b> ⇒ Ø160 | <b>4</b> ⇒ <b>Ø200</b> | <b>5</b> ⇒ Ø250 | 612A 613A | <b>3</b> ⇒ Ø160 | <b>4</b> ⇒ Ø200 | <b>5</b> ⇒ <b>Ø250</b> | <p><b>-C</b></p> <p>Flange<br/>Flangia</p>  <p><b>B5</b></p> <ul style="list-style-type: none"> <li>-A=56 (Ø120)</li> <li>-B=63 (Ø140)</li> <li>-C=71 (Ø160)</li> <li>-D=80 (Ø200)</li> <li>-E=90 (Ø200)</li> <li>-F=100 (Ø250)</li> <li>-G=132 (Ø300)</li> </ul> <p>Type R<br/>Tipo R</p>  <p>202A 413A</p> <ul style="list-style-type: none"> <li>-1 ⇒ Ø14</li> </ul> <p>302A 412A<br/>513A 613A</p> <ul style="list-style-type: none"> <li>-2 ⇒ Ø19</li> </ul> <p>452A 512A<br/>612A</p> <ul style="list-style-type: none"> <li>-3 ⇒ Ø24</li> </ul> <p>Without flange<br/>Senza flangia</p>  <p><b>B14</b></p> <ul style="list-style-type: none"> <li>-O=56 (Ø80)</li> <li>-P=63 (Ø90)</li> <li>-Q=71 (Ø105)</li> <li>-R=80 (Ø120)</li> <li>-T=90 (Ø140)</li> <li>-U=100 (Ø160)</li> <li>-V=132 (Ø200)</li> </ul> <p>With coupling</p> <p>202A 413A</p> <ul style="list-style-type: none"> <li>-M ⇒ With coupling</li> </ul> <p><b>B7</b></p> <ul style="list-style-type: none"> <li>-Z ⇒ Ø9 (IEC56)</li> <li>-0 ⇒ Ø11 (IEC63)</li> <li>-1 ⇒ Ø14 (IEC71)</li> </ul> <p>302A 412A<br/>513A 613A</p> <ul style="list-style-type: none"> <li>-1 ⇒ Ø14 (IEC71)</li> <li>-2 ⇒ Ø19 (IEC80)</li> <li>-3 ⇒ Ø24 (IEC90)</li> </ul> <p>452A 512A<br/>612A</p> <ul style="list-style-type: none"> <li>-2 ⇒ Ø19 (IEC80)</li> <li>-3 ⇒ Ø24 (IEC90)</li> <li>-4 ⇒ Ø28 (IEC100)</li> </ul> <p><b>Brushless</b></p> <ul style="list-style-type: none"> <li>BB=50/70-M5</li> <li>BC=60/75-M5</li> <li>BD=70/90-M6</li> <li>BE=80/100-M6</li> <li>BF=95/115-M8</li> <li>BG=110/145-M8</li> <li>BH=130/165-M8</li> </ul> | <p><b>B3</b></p>  <p><b>B3</b><br/>STANDARD</p>  <p><b>B6</b></p>  <p><b>B7</b></p>  <p><b>B8</b></p>  <p><b>V5</b></p>  <p><b>V6</b></p>  <p><b>V8</b></p> | <p><b>ST</b></p> <p><b>ST</b><br/>standard bore<br/>foro standard</p> <p>COUPLING<br/>STANDARD (IEC)</p>  <ul style="list-style-type: none"> <li>-A = 9mm</li> <li>-B = 11mm</li> <li>-C = 14mm</li> <li>-D = 19mm</li> <li>-E = 24mm</li> <li>-F = 28mm</li> </ul> <p>BRUSHLESS *</p>  <ul style="list-style-type: none"> <li>-2 = 11mm</li> <li>-3 = 14mm</li> <li>-4 = 19mm</li> <li>-5 = 22mm</li> <li>-6 = 24mm</li> </ul> <p><b>-0</b><br/>Ready for input coupling<br/>Predisposto per giunto</p>  <p>* With reduction bushing where applicable<br/>Con bussola di riduzione dove prevista</p> | <p>With Type M specify terminal box position<br/>Con tipo M specificare posizione morsettiere</p>  <p><b>A</b></p>  <p><b>B</b><br/>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |
| 202A   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>S</b> ⇒ Ø14   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>B</b> ⇒ <b>Ø16</b>  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>D</b> ⇒ Ø20   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>V</b> ⇒ Ø25   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 302A   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>S</b> ⇒ Ø14   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>B</b> ⇒ Ø16   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>C</b> ⇒ Ø19   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>D</b> ⇒ <b>Ø20</b>  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>E</b> ⇒ Ø24   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>V</b> ⇒ Ø25   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 412A 413A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>B</b> ⇒ Ø16   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>C</b> ⇒ Ø19   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>D</b> ⇒ Ø20   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>E</b> ⇒ Ø24   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>V</b> ⇒ <b>Ø25</b>  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 452A<br>512A 513A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>E</b> ⇒ Ø24   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>V</b> ⇒ Ø25   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>G</b> ⇒ Ø28   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>H</b> ⇒ <b>Ø30</b>  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>I</b> ⇒ Ø35   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 612A 613A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>G</b> ⇒ Ø28   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>H</b> ⇒ Ø30   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>I</b> ⇒ <b>Ø35</b>  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>L</b> ⇒ Ø38   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>M</b> ⇒ Ø40   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 202A 302A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>1</b> ⇒ Ø120  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>2</b> ⇒ <b>Ø140</b>   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>3</b> ⇒ Ø160  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>4</b> ⇒ Ø200  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 412A 413A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>1</b> ⇒ Ø120  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>2</b> ⇒ <b>Ø140</b>   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>3</b> ⇒ Ø160  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>4</b> ⇒ Ø200  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>5</b> ⇒ Ø250  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 452A<br>512A 513A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>3</b> ⇒ Ø160  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>4</b> ⇒ <b>Ø200</b>   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>5</b> ⇒ Ø250  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| 612A 613A  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>3</b> ⇒ Ø160  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>4</b> ⇒ Ø200  |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |
| <b>5</b> ⇒ <b>Ø250</b>   |  |   |  |  |   |      |                |                |                |                       |                |                |           |                |                |                |                |                       |                   |                |                |                |                       |                |           |                |                |                       |                |                |   |           |                 |                        |                 |                 |           |                 |                        |                 |                 |                 |                   |                 |                        |                 |           |                 |                 |                        |   |   |  |   |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotacion                       | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translacion | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

5

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

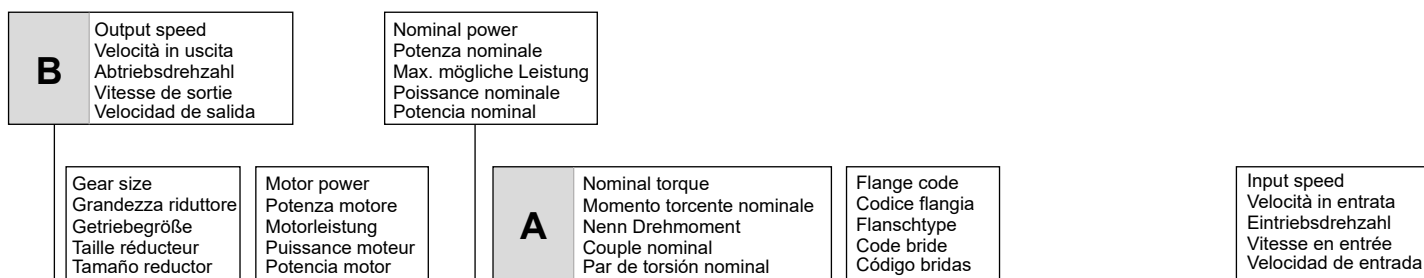
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor



**412A**

**Coaxial - Gear  
160Nm**

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    |    | Output Shaft |  |            |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|----|--------------|--|------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T | -U |              |  | Ratio code |
| 398   | <b>3.52</b>  | 3                               | 69                                | 1.2                    | 3.5                               | 80                                 | B                          |    |    |    | C                           | C  |    |    | 2821         |  | 01         |
| 320   | <b>4.37</b>  | 3                               | 86                                | 1.0                    | 3.1                               | 90                                 | B                          |    |    |    | C                           | C  |    |    | 2818         |  | 02         |
| 252   | <b>5.55</b>  | 3                               | 109                               | 0.9                    | 2.8                               | 100                                | B                          |    |    |    | C                           | C  |    |    | 2813         |  | 03         |
| 220   | <b>6.36</b>  | 2.2                             | 92                                | 1.0                    | 2.3                               | 95                                 | B                          |    |    |    | C                           | C  |    |    | 1921         |  | 04         |
| 191   | <b>7.33</b>  | 2.2                             | 106                               | 1.1                    | 2.5                               | 120                                | B                          |    |    |    | C                           | C  |    |    | 2812         |  | 05         |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Output shaft diam.  
Diam. albero uscita  
Durchmesser abtriebswelle  
Diametre arbre lent  
Diametro eje de salida

Notes  
Note  
Anmerkungen  
Note  
Notas

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
|  |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

|           |  |  |
|-----------|--|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccia di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción   |  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |  |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccia<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible tambien sin casquillo                                   |  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |     | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code<br> |
|--|--------------|--|--|------------------------|--|---|----------------------------|-----|-----------------------------|----|----|------------------|-----------------|
|  |              |  |  |                        |  |   | -B                         | -C  | -O                          | -P | -Q |                  |                 |
|  |              |  |  |                        |  |   | 63                         | 71* | 56                          | 63 | 71 |                  |                 |
| 407  | <b>3.44</b>  | 0.55**                                 | 12                                       | 2.0                    | 1.1                                      | 25  |                            |     | C                           | C  |    | 2821             | 01              |
| 327  | <b>4.28</b>  | 0.55**                                 | 15                                       | 1.9                    | 1.1                                      | 30  |                            |     | C                           | C  |    | 2818             | 02              |
| 257  | <b>5.45</b>  | 0.55**                                 | 20                                       | 2.0                    | 1.1                                      | 40  |                            |     | C                           | C  |    | 2815             | 03              |
| 225  | <b>6.23</b>  | 0.55**                                 | 23                                       | 2.0                    | 1.1                                      | 45  |                            |     | C                           | C  |    | 1921             | 04              |
| 194  | <b>7.20</b>  | 0.55**                                 | 26                                       | 1.9                    | 1.1                                      | 50  |                            |     | C                           | C  |    | 2812             | 05              |
| 181  | <b>7.74</b>  | 0.55**                                 | 28                                       | 1.8                    | <b>0.99</b>                              | 50  |                            |     | C                           | C  |    | 1918             | 06              |
| 142  | <b>9.85</b>  | 0.55**                                 | 36                                       | 1.7                    | <b>0.93</b>                              | 60  |                            |     | C                           | C  |    | 1915             | 07              |
| 123  | <b>11.42</b> | 0.55**                                 | 41                                       | 1.5                    | <b>0.80</b>                              | 60  |                            |     | C                           | C  |    | 1715             | 08              |
| 107  | <b>13.03</b> | 0.55**                                 | 47                                       | 1.3                    | <b>0.70</b>                              | 60  |                            |     | C                           | C  |    | 1912             | 09              |
| 93   | <b>15.10</b> | 0.37                                   | 37                                       | 1.6                    | <b>0.61</b>                              | 60  |                            |     | C                           | C  |    | 1712             | 10              |
| 86   | <b>16.20</b> | 0.37                                   | 39                                       | 1.5                    | <b>0.57</b>                              | 60  |                            |     | C                           | C  |    | 1910             | 11              |
| 75   | <b>18.78</b> | 0.37                                   | 45                                       | 1.3                    | <b>0.49</b>                              | 60  |                            |     | C                           | C  |    | 1710             | 12              |
| 66   | <b>21.15</b> | 0.37                                   | 51                                       | 1.2                    | <b>0.43</b>                              | 60  |                            |     | C                           | C  |    | 1312             | 13              |
| 64   | <b>21.84</b> | 0.37                                   | 53                                       | 1.1                    | <b>0.42</b>                              | 60  |                            |     | C                           | C  |    | 1015             | 14              |
| 53   | <b>26.31</b> | 0.37                                   | 64                                       | 0.9                    | <b>0.35</b>                              | 60  |                            |     | C                           | C  |    | 1310             | 15              |
| 48.5   | <b>28.88</b> | 0.37                                   | 70                                       | 1.0                    | <b>0.37</b>                              | 70  |                            |     | C                           | C  |    | 1012             | 16              |
| 39   | <b>35.91</b> | 0.37                                   | 87                                       | 0.8                    | <b>0.30</b>                              | 70  |                            |     | C                           | C  |    | 1010             | 17              |
| 37.1   | <b>37.69</b> | 0.25                                   | 62                                       | 1.1                    | <b>0.28</b>                              | 70  |                            |     | C                           | C  |    | 912              | 18              |
| 29.9   | <b>46.87</b> | 0.25                                   | 77                                       | 0.9                    | <b>0.23</b>                              | 70  |                            |     | C                           | C  |    | 910              | 19              |
| 28.1   | <b>49.76</b> | 0.25                                   | 81                                       | 0.9                    | <b>0.21</b>                              | 70  |                            |     | C                           | C  |    | 712              | 20              |
| 22.6   | <b>61.89</b> | 0.18                                   | 77                                       | 0.9                    | <b>0.17</b>                              | 70  |                            |     | C                           | C  |    | 710              | 21              |

\*\* Concerning a reduced dimensions electric motor. \* Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14 Riferito a motore con grandezza ridotta \* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

**A) Motor Flanges Available** Flange Motore Disponibili **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione **C) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione **D) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **202A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **202A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **202A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **202A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **202A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### LUBRICATION 202A Oil Quantity 0.15 Lt.

**SHELL** Omala S4 WE 320 **AGIP** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{35.7}{X+20.7}$

| n <sub>2</sub> | FA  | FR  | n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA  | FR   |
|----------------|-----|-----|----------------|-----|------|----------------|-----|------|
| 300            | 140 | 700 | 140            | 246 | 1320 | 70             | 340 | 1700 |
| 250            | 151 | 756 | 120            | 270 | 1350 | 40             | 380 | 1900 |
| 200            | 185 | 924 | 85             | 300 | 1500 | 15             | -   | -    |

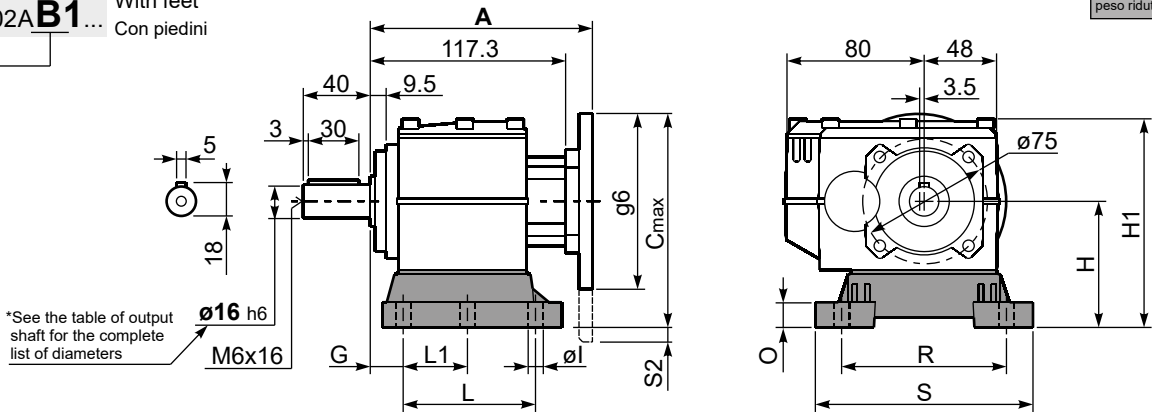
**Input shaft**  
Albero in entrata

| n <sub>1</sub> | FA  | FR  |
|----------------|-----|-----|
| 1400           | 140 | 700 |
| 900            | 160 | 800 |
| 500            | 190 | 950 |

**tab. 2**

Gearbox weight **3.3 kg**  
 With flange  
 peso riduttore **3.7 Kg**  
 With feet

P202A **B1**... With feet  
 Con piedini



\*See the table of output shaft for the complete list of diameters

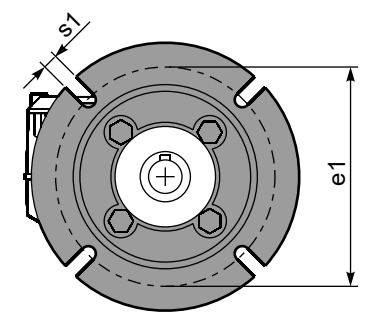
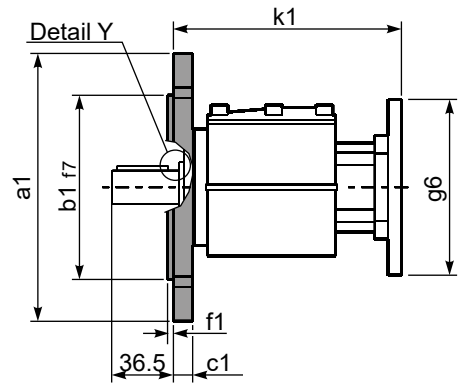
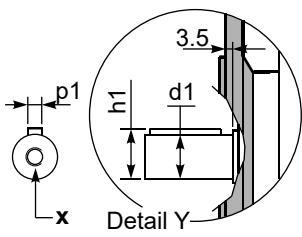
| Feet Code | Market reference | G  | H   | R   | L     | L1 | S   | H1  | O  | Ø1 | S2 only with motor flange | B5 max. Flange | kit code     |
|-----------|------------------|----|-----|-----|-------|----|-----|-----|----|----|---------------------------|----------------|--------------|
| B1        | 112              | 18 | 85  | 110 | 87    | 50 | 130 | 133 | 15 | 9  | -                         | -              | KC30.9.022   |
| B2        | 212/3            | 18 | 100 | 130 | 107.5 | 60 | 155 | 145 | 5  | 11 | -                         | -              | KC30.9.023LM |
| S1        | 17-32            | 18 | 75  | 110 | 110   | 50 | 130 | 123 | 15 | 9  | -                         | 63B5           | KC30.9.024   |

Other feet are available, see our web site  
 Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types  
 Tipi più diffusi

P202A-**F**... Output flanges  
 flange di uscita



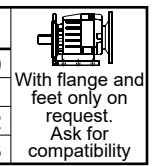
\*Available output shaft / Albero di uscita

|                           | Shaft - d1 | p1 | h1   | x     |
|---------------------------|------------|----|------|-------|
| Standard                  | Ø 16x40    | 5  | 18   | M6x16 |
| On request<br>A richiesta | Ø 14x30    | 5  | 16   | M6x16 |
|                           | Ø 20x40    | 6  | 22.5 | M8x19 |
|                           | Ø 25x50    | 8  | 28   | M8x19 |

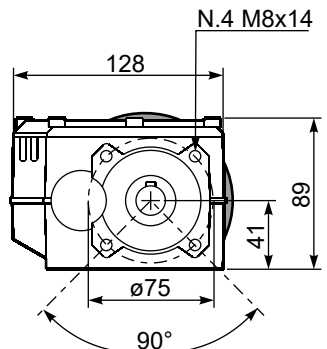
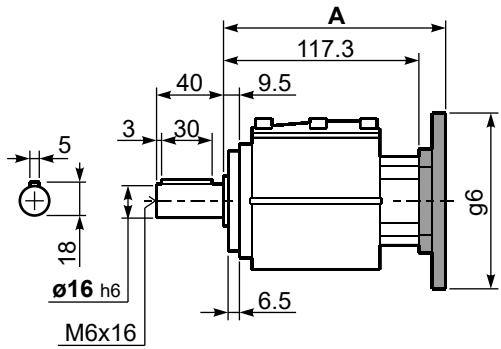
Available output flanges / flange di uscita

| a1 Ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 11.5 | 100 | 3   | 9* | KC30.9.010 |
| 140  | 95  | 11.5 | 115 | 3   | 9  | KC30.9.011 |
| 160  | 110 | 11.5 | 130 | 3.5 | 9  | KC30.9.012 |
| 200  | 130 | 11.5 | 165 | 3.5 | 11 | KC30.9.013 |

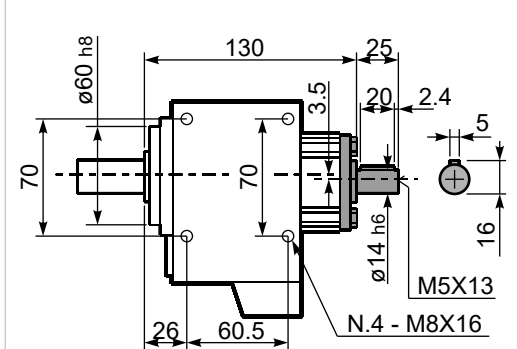
\* Holes position  
 Posizione fori



P202A-**N**... Basic gearbox  
 Riduttore base



R202A-**N**... Input Shaft  
 Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|------------------|-------|------------------|-----|-------|------------|
| 63 B5            | 135.8 | 170              | 140 | 139.3 | K050.4.041 |
| 71 B5            | 133.3 | 180              | 160 | 136.8 | K050.4.042 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|-------------------|-------|------------------|-----|-------|------------|
| 56 B14            | 133.3 | 139              | 80  | 136.8 | KC40.4.049 |
| 63 B14            | 135.8 | 146              | 90  | 139.3 | K050.4.047 |
| 71 B14            | 133.3 | 152.5            | 105 | 136.8 | K050.4.045 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     |     |     | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|-----|-----|-----------------------------|----|----|------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -B                         | -C  | -D  | -E  | -Q                          | -R | -T |                  |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 63                         | 71* | 80* | 90* | 71                          | 80 | 90 |                  |                 |
| 407   | <b>3.44</b>  | 1.5                             | 34                                | 1.0                    | 1.6                               | 35                                 | B                          |     |     |     | C                           | C  |    | 2821             | 01              |
| 327   | <b>4.28</b>  | 1.5                             | 42                                | 1.0                    | 1.4                               | 40                                 | B                          |     |     |     | C                           | C  |    | 2818             | 02              |
| 257   | <b>5.45</b>  | 1.5                             | 53                                | 1.0                    | 1.5                               | 52                                 | B                          |     |     |     | C                           | C  |    | 2815             | 03              |
| 225   | <b>6.23</b>  | 1.5                             | 61                                | 1.1                    | 1.7                               | 70                                 | B                          |     |     |     | C                           | C  |    | 1921             | 04              |
| 194   | <b>7.20</b>  | 1.5                             | 71                                | 1.0                    | 1.5                               | 70                                 | B                          |     |     |     | C                           | C  |    | 2812             | 05              |
| 181   | <b>7.74</b>  | 1.5                             | 76                                | 1.1                    | 1.6                               | 80                                 | B                          |     |     |     | C                           | C  |    | 1918             | 06              |
| 142   | <b>9.85</b>  | 1.5                             | 97                                | 1.0                    | 1.5                               | 95                                 | B                          |     |     |     | C                           | C  |    | 1915             | 07              |
| 123   | <b>11.42</b> | 1.5                             | 112                               | 1.0                    | 1.5                               | 115                                | B                          |     |     |     | C                           | C  |    | 1715             | 08              |
| 107   | <b>13.03</b> | 1.1                             | 93                                | 1.2                    | 1.3                               | 114                                | B                          |     |     |     | C                           | C  |    | 1912             | 09              |
| 93  | <b>15.10</b> | 1.1                             | 108                               | 1.1                    | 1.2                               | 114                                | B                          |     |     |     | C                           | C  |    | 1712             | 10              |
| 86  | <b>16.20</b> | 0.75                            | 80                                | 1.3                    | 1.0                               | 107                                | B                          |     |     |     | C                           | C  |    | 1910             | 11              |
| 75  | <b>18.78</b> | 0.75                            | 92                                | 1.2                    | 0.87                              | 107                                | B                          |     |     |     | C                           | C  |    | 1710             | 12              |
| 66  | <b>21.15</b> | 0.75                            | 104                               | 1.1                    | 0.82                              | 114                                | B                          |     |     |     | C                           | C  |    | 1312             | 13              |
| 64  | <b>21.84</b> | 0.75                            | 107                               | 1.1                    | 0.83                              | 119                                | B                          |     |     |     | C                           | C  |    | 1015             | 14              |
| 53  | <b>26.31</b> | 0.55                            | 95                                | 1.1                    | 0.62                              | 107                                | B                          |     |     |     | C                           | C  |    | 1310             | 15              |
| 48.5  | <b>28.88</b> | 0.55                            | 105                               | 1.1                    | 0.60                              | 114                                | B                          |     |     |     | C                           | C  |    | 1012             | 16              |
| 39  | <b>35.91</b> | 0.37                            | 87                                | 1.2                    | 0.46                              | 107                                | B                          |     |     |     | C                           | C  |    | 1010             | 17              |
| 37.1  | <b>37.69</b> | 0.37                            | 91                                | 1.1                    | 0.41                              | 102                                | B                          |     |     |     | C                           | C  |    | 912              | 18              |
| 29.9  | <b>46.87</b> | 0.37                            | 113                               | 0.9                    | 0.35                              | 107                                | B                          |     |     |     | C                           | C  |    | 910              | 19              |
| 28.1  | <b>49.76</b> | 0.25                            | 81                                | 1.2                    | 0.31                              | 101                                | B                          |     |     |     | C                           | C  |    | 712              | 20              |
| 22.6  | <b>61.89</b> | 0.25                            | 101                               | 1.1                    | 0.26                              | 107                                | B                          |     |     |     | C                           | C  |    | 710              | 21              |

The dynamic efficiency is **0.96** for all ratios

\*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14  
\* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**C) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**D) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **302A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **302A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **302A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **302A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **302A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION 302A Oil Quantity 0.15 Lt.

**SHELL** Omala S4 WE 320

**AGIP** Telium VSF 320

For all details on lubrication and plugs check our website

tab. 1

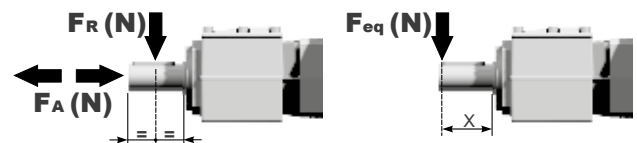
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

##### Output shaft

Albero di uscita

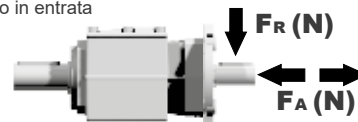
$$F_{eq} = F_R \cdot \frac{35.7}{X+20.7}$$



| $n_2$ | FA  | FR  | $n_2$ | FA  | FR   | $n_2$ | FA  | FR   |
|-------|-----|-----|-------|-----|------|-------|-----|------|
| 300   | 140 | 700 | 140   | 246 | 1320 | 70    | 340 | 1700 |
| 250   | 151 | 756 | 120   | 270 | 1350 | 40    | 380 | 1900 |
| 200   | 185 | 924 | 85    | 300 | 1500 | 15    | -   | -    |

##### Input shaft

Albero in entrata



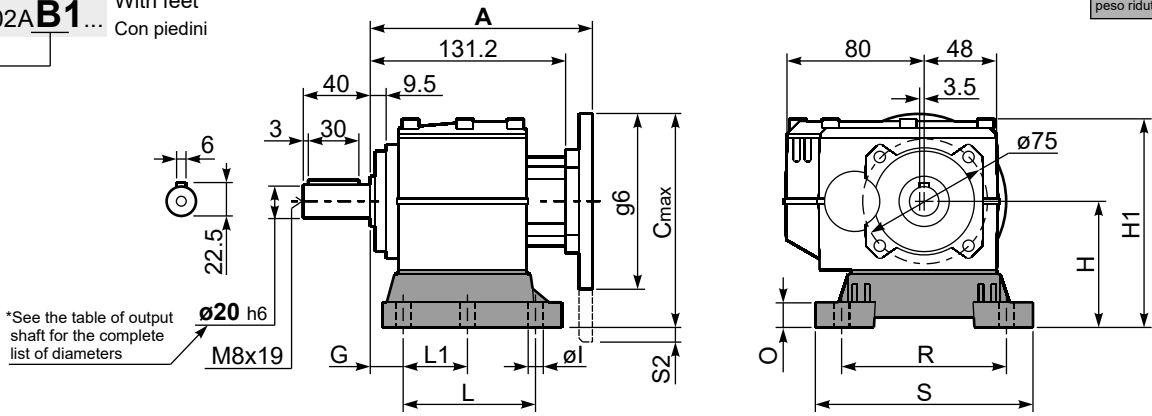
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 226 | 1130 |
| 900   | 264 | 1320 |
| 500   | 322 | 1610 |

tab. 2



Gearbox weight **3.5 kg**  
 With flange  
 peso riduttore **4.0 Kg**  
 With feet

P302A **B1**...  
 With feet  
 Con piedini



\*See the table of output shaft for the complete list of diameters

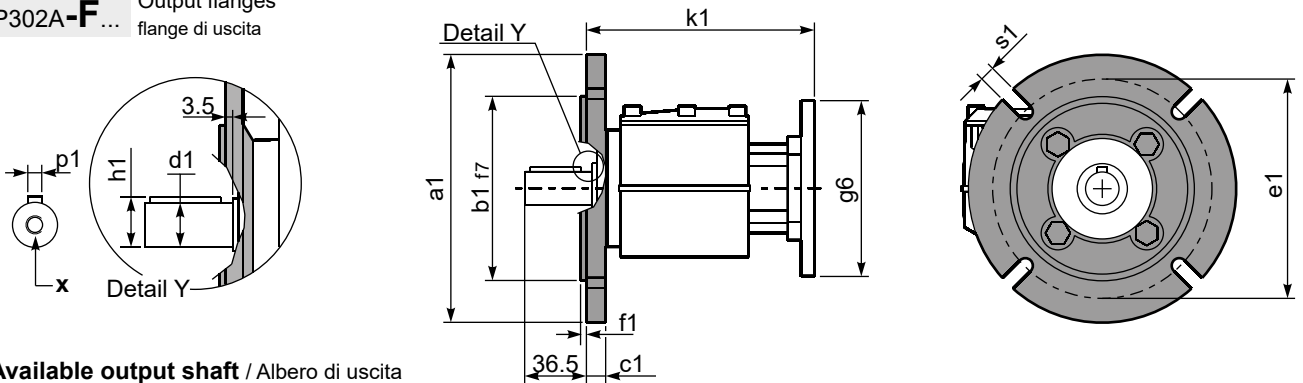
| Feet Code | Market reference | G  | H   | R   | L     | L1 | S   | H1  | O  | ø1 | S2 only with motor flange | B5 max. Flange | kit code     |
|-----------|------------------|----|-----|-----|-------|----|-----|-----|----|----|---------------------------|----------------|--------------|
| B1        | 112              | 18 | 85  | 110 | 87    | 50 | 130 | 133 | 15 | 9  | 15 80/90B5                | -              | KC30.9.022   |
| B2        | 212/3            | 18 | 100 | 130 | 107.5 | 60 | 155 | 145 | 5  | 11 | 3.5 80/90B5               | -              | KC30.9.023LM |
| S1        | 17-32            | 18 | 75  | 110 | 110   | 50 | 130 | 123 | 15 | 9  | 5 71B5                    | 71B5           | KC30.9.024   |

Other feet are available, see our web site  
 Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types  
 Tipi più diffusi

P302A-**F**...  
 Output flanges  
 flange di uscita



\*Available output shaft / Albero di uscita

|                           | Shaft - d1 | p1 | h1   | x     |
|---------------------------|------------|----|------|-------|
| Standard                  | ø 20x40    | 6  | 22.5 | M8x19 |
| On request<br>A richiesta | ø 14x30    | 5  | 16   | M6x16 |
|                           | ø 16x40    | 5  | 18   | M6x16 |
|                           | ø 19x40    | 6  | 21.5 | M6x16 |
|                           | ø 24x50    | 8  | 27   | M8x19 |
|                           | ø 25x50    | 8  | 28   | M8x19 |

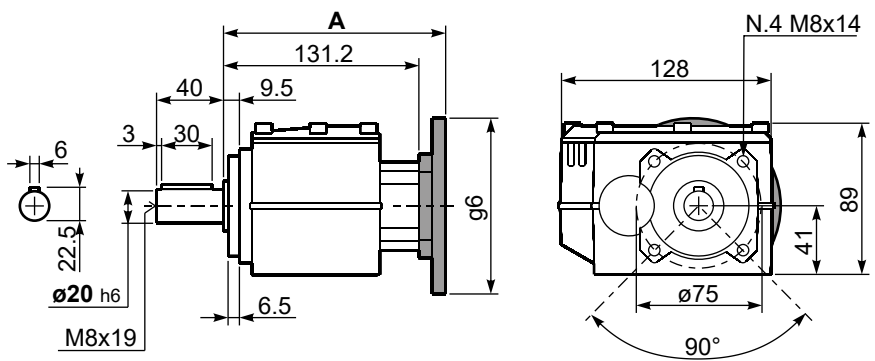
Available output flanges / flange di uscita

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 11.5 | 100 | 3   | 9* | KC30.9.010 |
| 140  | 95  | 11.5 | 115 | 3   | 9  | KC30.9.011 |
| 160  | 110 | 11.5 | 130 | 3.5 | 9  | KC30.9.012 |
| 200  | 130 | 11.5 | 165 | 3.5 | 11 | KC30.9.013 |

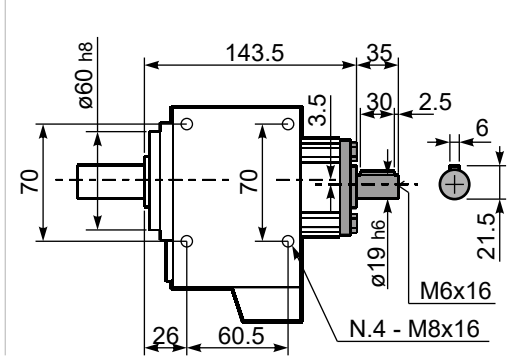
\* Holes position  
 Posizione fori

With flange and feet only on request. Ask for compatibility

P302A-**N**...  
 Basic gearbox  
 Riduttore base



R302A-**N**...  
 Input Shaft  
 Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|------------------|-------|------------------|-----|-------|------------|
| 63 B5            | 151.7 | 170              | 140 | 155.2 | K063.4.041 |
| 71 B5            | 149.7 | 180              | 160 | 153.2 | K063.4.042 |
| 80/90 B5         | 151.7 | 200              | 200 | 155.2 | K063.4.043 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|-------------------|-------|------------------|-----|-------|------------|
| 71 B14            | 149.7 | 152.5            | 105 | 153.2 | K063.4.047 |
| 80 B14            | 151.7 | 160              | 120 | 155.2 | K063.4.046 |
| 90 B14            | 151.7 | 170              | 140 | 155.2 | K063.4.041 |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |     |     |      | Available B14 motor flanges |    |    |    | Output Shaft |            |             |
|--|------------|--|--|------------------------|--|---|----------------------------|----|-----|-----|------|-----------------------------|----|----|----|--------------|------------|-------------|
|  |            |  |  |                        |  |   | -B                         | -C | -D  | -E  | -F   | -Q                          | -R | -T | -U |              |            | Ratios code |
|  |            |  |  |                        |  |   | 63                         | 71 | 80* | 90* | 100* | 112                         | 71 | 80 | 90 | 100          | 112        |             |
| 398  | 3.52       | 3                                      | 68                                       | 1.2                    | 3.5                                      | 80  | B                          |    |     |     |      | C                           | C  |    |    | 2821         |            | 01          |
| 321  | 4.37       | 3                                      | 84                                       | 1.1                    | 3.1                                      | 90  | B                          |    |     |     |      | C                           | C  |    |    | 2818         |            | 02          |
| 252  | 5.56       | 3                                      | 107                                      | 0.9                    | 2.7                                      | 100                                       | B                          |    |     |     |      | C                           | C  |    |    | 2813         |            | 03          |
| 220  | 6.36       | 2.2                                    | 90                                       | 1.2                    | 2.5                                      | 105                                       | B                          |    |     |     |      | C                           | C  |    |    | 1921         |            | 04          |
| 191  | 7.33       | 2.2                                    | 104                                      | 1.2                    | 2.5                                      | 120                                       | B                          |    |     |     |      | C                           | C  |    |    | 2812         |            | 05          |
| 177  | 7.89       | 2.2                                    | 112                                      | 1.2                    | 2.5                                      | 130                                       | B                          |    |     |     |      | C                           | C  |    |    | 1918         |            | 06          |
| 139  | 10.06      | 2.2                                    | 143                                      | 1.2                    | 2.5                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1913         |            | 08          |
| 120  | 11.66      | 2.2                                    | 166                                      | 1.0                    | 2.2                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1713         | standard   | 09          |
| 106  | 13.26      | 1.5                                    | 130                                      | 1.3                    | 1.9                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1912         | ø25        | 10          |
| 102  | 13.68      | 1.5                                    | 134                                      | 1.2                    | 1.8                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1513         |            | 25          |
| 91   | 15.37      | 1.5                                    | 151                                      | 1.1                    | 1.6                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1712         | ø16        | 11          |
| 86   | 16.33      | 1.5                                    | 160                                      | 1.0                    | 1.5                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1313         | ø19        | 26          |
| 78   | 18.04      | 1.5                                    | 177                                      | 0.9                    | 1.4                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1512         | ø20        | 23          |
| 65   | 21.54      | 1.1                                    | 154                                      | 1.1                    | 1.2                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1312         | ø24        | 14          |
| 63   | 22.29      | 1.1                                    | 160                                      | 1.0                    | 1.1                                      | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1013         | On request | 15          |
| 53   | 26.31      | 0.75                                   | 129                                      | 1.2                    | 0.90                                     | 155                                       | B                          |    |     |     |      | C                           | C  |    |    | 1310         |            | 16          |
| 47.6   | 29.40      | 0.75                                   | 144                                      | 1.1                    | 0.86                                     | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 1012         |            | 17          |
| 39   | 35.91      | 0.55                                   | 130                                      | 1.2                    | 0.66                                     | 155                                       | B                          |    |     |     |      | C                           | C  |    |    | 1010         |            | 18          |
| 36.5   | 38.37      | 0.55                                   | 139                                      | 1.2                    | 0.66                                     | 165                                       | B                          |    |     |     |      | C                           | C  |    |    | 912          |            | 19          |
| 29.9   | 46.87      | 0.55                                   | 170                                      | 0.9                    | 0.51                                     | 155                                       | B                          |    |     |     |      | C                           | C  |    |    | 910          |            | 20          |
| 27.6   | 50.67      | 0.37                                   | 123                                      | 1.1                    | 0.41                                     | 137                                       | B                          |    |     |     |      | C                           | C  |    |    | 712          |            | 21          |
| 22.6   | 61.89      | 0.37                                   | 150                                      | 1.0                    | 0.38                                     | 155                                       | B                          |    |     |     |      | C                           | C  |    |    | 710          |            | 22          |

The dynamic efficiency is **0.96** for all ratios

\*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14  
\* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **412A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **412A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **412A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **412A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **412A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |  |
|-----------------------|--|---------|---------|--------------------|---------|-----|--|
|                       |  |         |         |                    |         |     |  |
| B3                    | B6   | B7      | B8      | V5                 | V6      | V8  |  |
| 0.25 LT               | 0.35 LT  | 0.40 LT | 0.45 LT | 0.40 LT            | 0.50 LT | Ask |  |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |  |

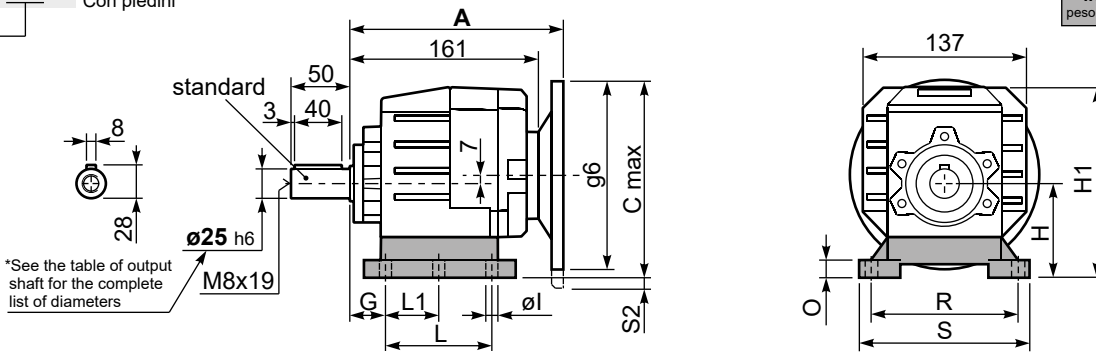
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |     |      |                |     |                                      |                |     |      |  |
|---|-----|------|----------------|-----|--------------------------------------|----------------|-----|------|--|
| <b>Output shaft</b><br>Albero di uscita |     |      |                |     | $F_{eq} = F_R \cdot \frac{46}{X+21}$ |                |     |      |  |
|   |     |      |                |     |                                      |                |     |      |  |
| n <sub>2</sub>                          | FA  | FR   | n <sub>2</sub> | FA  | FR                                   | n <sub>2</sub> | FA  | FR   |  |
| 300                                     | 310 | 1550 | 140            | 406 | 2030                                 | 70             | 540 | 2700 |  |
| 250                                     | 330 | 1650 | 120            | 448 | 2240                                 | 40             | 600 | 3000 |  |
| 200                                     | 360 | 1800 | 85             | 480 | 2400                                 | 15             | 600 | 3000 |  |
| <b>Input shaft</b><br>Albero in entrata |     |      |                |     |                                      |                |     |      |  |
| n <sub>1</sub>                          | FA  | FR   |                |     |                                      |                |     |      |  |
| 1400                                    | 240 | 1200 |                |     |                                      |                |     |      |  |
| 900                                     | 280 | 1400 |                |     |                                      |                |     |      |  |
| 500                                     | 340 | 1700 |                |     |                                      |                |     |      |  |

**tab. 2**

P412A **B1** ... With feet  
Con piedini

Gearbox weight **5.7 kg**  
peso riduttore With feet **5.9 Kg**



Feet / piedini

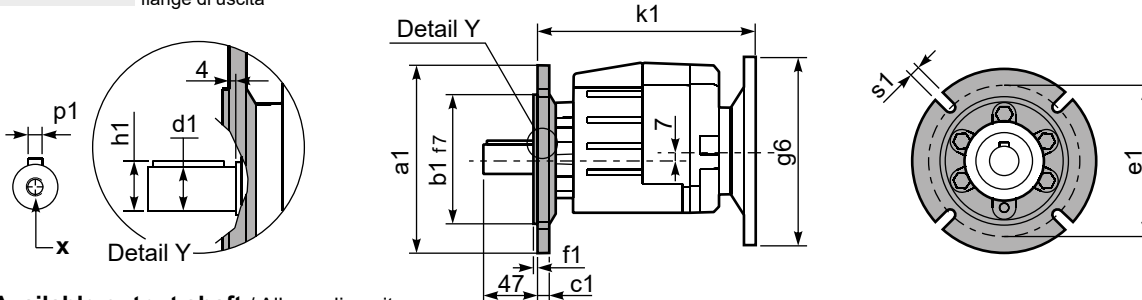
| Feet Code | Market reference | G  | H   | R       | L      | L1 | S   | H1    | O  | øl | S2 only with motor flange  | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|--------|----|-----|-------|----|----|----------------------------|----------------|------------|
| B1        | 112              | 18 | 85  | 110     | 87     | 50 | 130 | 167.5 | 15 | -  | 8/33 80/90B5<br>100/112B5  | -              | KC35.9.021 |
| B2        | 212/3            | 18 | 100 | 130     | 107.5  | 60 | 155 | 182.5 | 17 | 11 | 18 100/112B5               | -              | KC40.9.025 |
| S1        | 17               | 18 | 75  | 110     | 90±110 | 50 | 145 | 155.5 | 15 | 9  | 18/43 80/90B5<br>100/112B5 | -              | KC40.9.022 |
| S2        | 27               | 25 | 90  | 110     | 130    | -  | 145 | 172.5 | 20 | 9  | 3/28 80/90B5<br>100/112B5  | -              | KC40.9.024 |
| H2        | 022-223          | 25 | 100 | 110     | 115    | -  | 145 | 182.5 | 20 | 9  | 18 100/112B5               | -              | KC40.9.026 |
| M1        | 42/3             | 25 | 80  | 110±120 | 85     | -  | 145 | 162.5 | 15 | 9  | 13/38 80/90B5<br>100/112B5 | -              | KC40.9.023 |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P412A-**F** ... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

|                           | Shaft - d1 | p1 | h1   | x     |
|---------------------------|------------|----|------|-------|
| Standard                  | ø 25x50    | 8  | 28   | M8x19 |
| On request<br>A richiesta | ø 16x40    | 5  | 18   | M6x16 |
|                           | ø 19x40    | 6  | 21.5 | M6x16 |
|                           | ø 20x40    | 6  | 22.5 | M8x19 |
|                           | ø 24x50    | 8  | 27   | M8x19 |

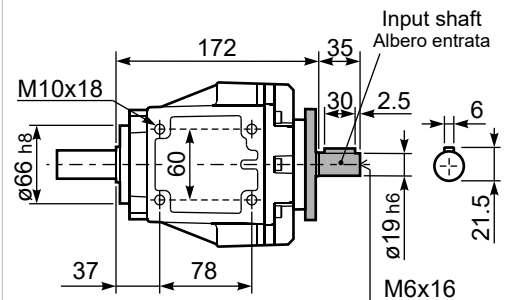
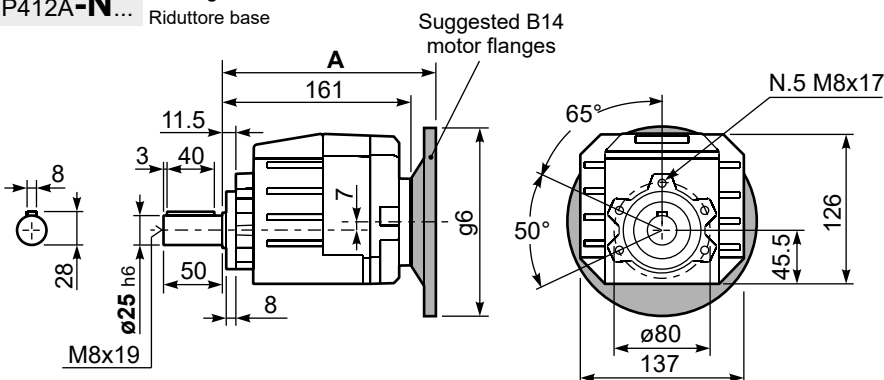
Available output flanges / flange di uscita

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 10   | 100 | 3   | 7  | KC40.9.010 |
| 140  | 95  | 10   | 115 | 3   | 9  | KC40.9.011 |
| 160  | 110 | 10   | 130 | 3.5 | 9  | KC40.9.012 |
| 200  | 130 | 10   | 165 | 3.5 | 11 | KC40.9.013 |
| 250  | 180 | 11.5 | 215 | 3.5 | 14 | KC40.9.014 |

With flange and feet only on request. Ask for compatibility

P412A-**N** ... Basic gearbox  
Riduttore base

R412A-**N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|------------------|-------|------------------|-----|-------|------------|
| 63 B5            | 181.5 | 177              | 140 | 185.5 | K063.4.041 |
| 71 B5            | 179.5 | 187              | 160 | 183.5 | K063.4.042 |
| 80/90 B5         | 181.5 | 207              | 200 | 185.5 | K063.4.043 |
| 100/112 B5       | 196.5 | 232              | 250 | 200.5 | KC40.4.043 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|-------------------|-------|------------------|-----|-------|------------|
| 71 B14            | 179.5 | 159.5            | 105 | 183.5 | K063.4.047 |
| 80 B14            | 181.5 | 167              | 120 | 185.5 | K063.4.046 |
| 90 B14            | 181.5 | 177              | 140 | 185.5 | K063.4.041 |
| 100/112 B14       | 196.5 | 187              | 160 | 200.5 | KC40.4.041 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|----|-----------------------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P | -Q |                                   |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 56                          | 63 | 71 |                                   |                 |
| 36.5  | <b>38.40</b>  | 0.37                            | 91                                | 1.8                    | <b>0.67</b>                       | <b>165</b>                         |                            |    | C                           | C  |    | 171713                            | 02              |
| 32.0  | <b>43.69</b>  | 0.37                            | 104                               | 1.6                    | <b>0.59</b>                       | <b>165</b>                         |                            |    | C                           | C  |    | 191712                            | 03              |
| 27.6  | <b>50.64</b>  | 0.37                            | 120                               | 1.4                    | <b>0.51</b>                       | <b>165</b>                         |                            |    | C                           | C  |    | 171712                            | 04              |
| 26.2  | <b>53.36</b>  | 0.37                            | 127                               | 1.3                    | <b>0.47</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 191710                            | 05              |
| 22.9  | <b>61.21</b>  | 0.37                            | 145                               | 1.2                    | <b>0.43</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 191312                            | 06              |
| 22.6  | <b>61.85</b>  | 0.37                            | 147                               | 1.1                    | <b>0.40</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 171710                            | 07              |
| 19.7  | <b>70.95</b>  | 0.37                            | 168                               | 1.0                    | <b>0.37</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 131712                            | 08              |
| 19.1  | <b>73.43</b>  | 0.37                            | 174                               | 1.0                    | <b>0.37</b>                       | <b>175</b>                         |                            |    | C                           | C  |    | 101713                            | 09              |
| 18.7  | <b>74.77</b>  | 0.37                            | 177                               | 0.9                    | <b>0.33</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 191310                            | 10              |
| 16.2  | <b>86.66</b>  | 0.25                            | 139                               | 1.2                    | <b>0.29</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 131710                            | 11              |
| 14.5  | <b>96.85</b>  | 0.25                            | 155                               | 1.1                    | <b>0.27</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 101712                            | 12              |
| 13.6  | <b>102.89</b> | 0.25                            | 165                               | 1.1                    | <b>0.27</b>                       | <b>175</b>                         |                            |    | C                           | C  |    | 101313                            | 13              |
| 11.1  | <b>126.40</b> | 0.18                            | 155                               | 1.1                    | <b>0.21</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 91712                             | 17              |
| 10.3  | <b>135.69</b> | 0.18                            | 166                               | 1.0                    | <b>0.20</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 101312                            | 15              |
| 8.4   | <b>165.74</b> | 0.12                            | 131                               | 1.2                    | <b>0.15</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 101310                            | 16              |
| 7.9   | <b>177.09</b> | 0.12                            | 140                               | 1.2                    | <b>0.15</b>                       | <b>170</b>                         |                            |    | C                           | C  |    | 91312                             | 18              |
| 6.5   | <b>216.31</b> | 0.09                            | 136                               | 1.2                    | <b>0.12</b>                       | <b>160</b>                         |                            |    | C                           | C  |    | 91310                             | 19              |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **413A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **413A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.  
Vedi tab.1 per oli e quantità consigliati.  
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **413A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **413A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **413A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|-----|
|                       |  |         |         |                    |         |     |     |
| 0.30 LT               | 0.35 LT  | 0.45 LT | 0.45 LT | 0.45 LT            | 0.55 LT | Ask | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |     |

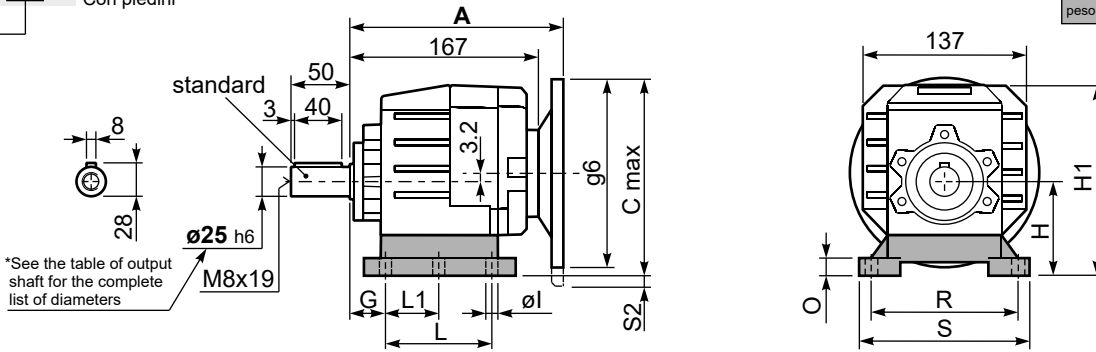
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |     |      |       |     |                                     |       |     |      |  |
|---|-----|------|-------|-----|-------------------------------------|-------|-----|------|--|
| <b>Output shaft</b><br>Albero di uscita |     |      |       |     | $F_{eq} = FR \cdot \frac{46}{X+21}$ |       |     |      |  |
|   |     |      |       |     |                                     |       |     |      |  |
| $n_2$                                   | FA  | FR   | $n_2$ | FA  | FR                                  | $n_2$ | FA  | FR   |  |
| 300                                     | 310 | 1550 | 140   | 406 | 2030                                | 70    | 540 | 2700 |  |
| 250                                     | 330 | 1650 | 120   | 448 | 2240                                | 40    | 600 | 3000 |  |
| 200                                     | 360 | 1800 | 85    | 480 | 2400                                | 15    | 600 | 3000 |  |
| <b>Input shaft</b><br>Albero in entrata |     |      |       |     |                                     |       |     |      |  |
| $n_1$                                   | FA  | FR   |       |     |                                     |       |     |      |  |
| 1400                                    | 140 | 700  |       |     |                                     |       |     |      |  |
| 900                                     | 160 | 800  |       |     |                                     |       |     |      |  |
| 500                                     | 190 | 950  |       |     |                                     |       |     |      |  |

**tab. 2**

P413A **B1** ... With feet  
Con piedini

Gearbox weight **6.1 kg**  
peso riduttore With flange  
With feet **6.3 kg**



**Feet / piedini**

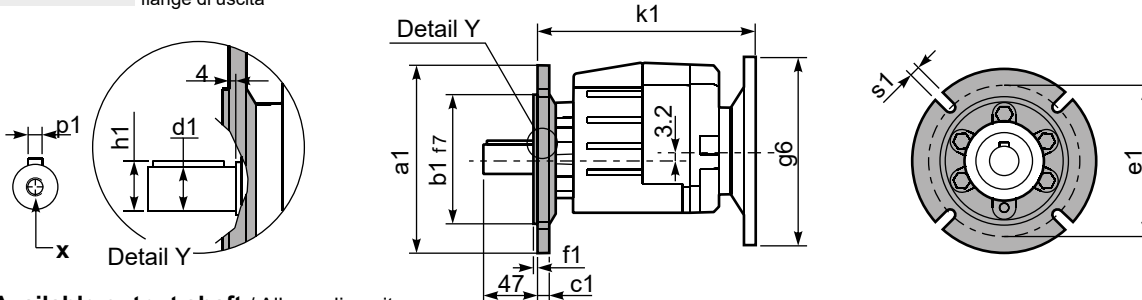
| Feet Code | Market reference | G  | H   | R       | L      | L1 | S   | H1    | O  | øl | S2 only with motor flange | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|--------|----|-----|-------|----|----|---------------------------|----------------|------------|
| B1        | 112              | 18 | 85  | 110     | 87     | 50 | 130 | 167.5 | 15 | -  | -                         | -              | KC35.9.021 |
| B2        | 212/3            | 18 | 100 | 130     | 107.5  | 60 | 155 | 182.5 | 17 | 11 | -                         | -              | KC40.9.025 |
| S1        | 17               | 18 | 75  | 110     | 90±110 | 50 | 145 | 155.5 | 15 | 9  | 2 80/90B5                 | -              | KC40.9.022 |
| S2        | 27               | 25 | 90  | 110     | 130    | -  | 145 | 172.5 | 20 | 9  | -                         | -              | KC40.9.024 |
| H2        | 022-223          | 25 | 100 | 110     | 115    | -  | 145 | 182.5 | 20 | 9  | -                         | -              | KC40.9.026 |
| M1        | 42/3             | 25 | 80  | 110±120 | 85     | -  | 145 | 162.5 | 15 | 9  | -                         | -              | KC40.9.023 |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P413A **-F** ... Output flanges  
flange di uscita



**\*Available output shaft / Albero di uscita**

|                           | Shaft - d1 | p1 | h1   | x     |
|---------------------------|------------|----|------|-------|
| Standard                  | ø 25x50    | 8  | 28   | M8x19 |
| On request<br>A richiesta | ø 16x40    | 5  | 18   | M6x16 |
|                           | ø 19x40    | 6  | 21.5 | M6x16 |
|                           | ø 20x40    | 6  | 22.5 | M8x19 |
|                           | ø 24x50    | 8  | 27   | M8x19 |

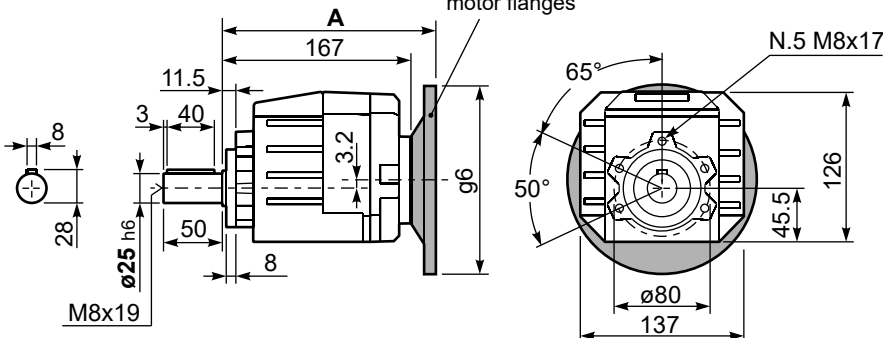
**Available output flanges / flange di uscita**

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 120  | 80  | 10   | 100 | 3   | 7  | KC40.9.010 |
| 140  | 95  | 10   | 115 | 3   | 9  | KC40.9.011 |
| 160  | 110 | 10   | 130 | 3.5 | 9  | KC40.9.012 |
| 200  | 130 | 10   | 165 | 3.5 | 11 | KC40.9.013 |
| 250  | 180 | 11.5 | 215 | 3.5 | 14 | KC40.9.014 |

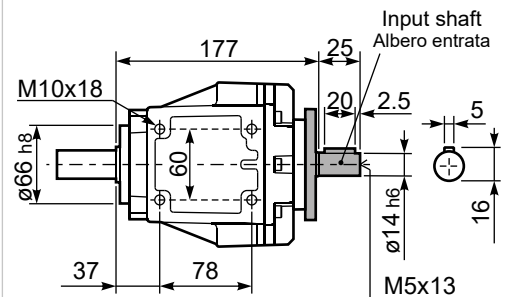
With flange and feet only on request. Ask for compatibility

P413A **-N** ... Basic gearbox  
Riduttore base

Suggested B14 motor flanges



R413A **-N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|------------------|-------|------------------|-----|-------|------------|
| 63 B5            | 185.5 | 173.2            | 140 | 189.5 | K050.4.041 |
| 71 B5            | 183   | 183.2            | 160 | 187   | K050.4.042 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   |
|-------------------|-------|------------------|-----|-------|------------|
| 56 B14            | 183   | 143.2            | 80  | 187   | KC40.4.049 |
| 63 B14            | 185.5 | 148.2            | 90  | 189.5 | K050.4.047 |
| 71 B14            | 183   | 155.7            | 105 | 187   | K050.4.045 |





#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |      |     | Available B14 motor flanges |    |    |     | Output Shaft<br> | Ratios code |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|------|-----|-----------------------------|----|----|-----|------------------|-------------|
|  |              |  |  |                        |  |   | -C                         | -D | -E | -F   | -G  | -R                          | -T | -U | -V  |                  |             |
|  |              |  |  |                        |  |   | 71                         | 80 | 90 | 100* | 112 | 132*                        | 80 | 90 | 100 |                  |             |
| 388  | <b>3.61</b>  | 4                                      | 93                                       | 1.6                    | <b>6.3</b>                               | <b>150</b>                                | B                          |    |    |      |     |                             |    |    |     | 3018             | 01          |
| 331  | <b>4.23</b>  | 4                                      | 108                                      | 1.6                    | <b>6.1</b>                               | <b>170</b>                                | B                          |    |    |      |     |                             |    |    |     | 3016             | 02          |
| 279  | <b>5.01</b>  | 4                                      | 129                                      | 1.6                    | <b>6.1</b>                               | <b>200</b>                                | B                          |    |    |      |     |                             |    |    |     | 3014             | 03          |
| 231  | <b>6.07</b>  | 4                                      | 156                                      | 1.6                    | <b>6.3</b>                               | <b>250</b>                                | B                          |    |    |      |     |                             |    |    |     | 3012             | 04          |
| 206  | <b>6.81</b>  | 4                                      | 175                                      | 1.6                    | <b>6.2</b>                               | <b>277</b>                                | B                          |    |    |      |     |                             |    |    |     | 2018             | 05          |
| 176  | <b>7.96</b>  | 4                                      | 204                                      | 1.5                    | <b>5.8</b>                               | <b>300</b>                                | B                          |    |    |      |     |                             |    |    |     | 2016             | 06          |
| 148  | <b>9.45</b>  | 4                                      | 242                                      | 1.3                    | <b>4.9</b>                               | <b>304</b>                                | B                          |    |    |      |     |                             |    |    |     | 2014             | 07          |
| 122  | <b>11.43</b> | 4                                      | 293                                      | 1.0                    | <b>4.0</b>                               | <b>300</b>                                | B                          |    |    |      |     |                             |    |    |     | 2012             | 08          |
| 99   | <b>14.21</b> | 3                                      | 274                                      | 1.0                    | <b>2.8</b>                               | <b>265</b>                                | B                          |    |    |      |     |                             |    |    |     | 2010             | 09          |
| 84   | <b>16.62</b> | 3                                      | 321                                      | 0.9                    | <b>2.8</b>                               | <b>304</b>                                | B                          |    |    |      |     |                             |    |    |     | 1314             | 10          |
| 70   | <b>20.10</b> | 2.2                                    | 286                                      | 1.0                    | <b>2.3</b>                               | <b>300</b>                                | B                          |    |    |      |     |                             |    |    |     | 1312             | 11          |
| 56   | <b>24.98</b> | 1.85                                   | 302                                      | 0.9                    | <b>1.6</b>                               | <b>265</b>                                | B                          |    |    |      |     |                             |    |    |     | 1310             | 12          |
| 47.6   | <b>29.41</b> | 1.5                                    | 288                                      | 1.1                    | <b>1.6</b>                               | <b>304</b>                                | B                          |    |    |      |     |                             |    |    |     | 814              | 13          |
| 39.3   | <b>35.58</b> | 1.5                                    | 349                                      | 0.9                    | <b>1.3</b>                               | <b>300</b>                                | B                          |    |    |      |     |                             |    |    |     | 812              | 14          |
| 34.6   | <b>40.50</b> | 1.1                                    | 290                                      | 1.0                    | <b>1.1</b>                               | <b>290</b>                                | B                          |    |    |      |     |                             |    |    |     | 614              | 15          |
| 31.7   | <b>44.23</b> | 1.1                                    | 316                                      | 0.8                    | <b>0.92</b>                              | <b>265</b>                                | B                          |    |    |      |     |                             |    |    |     | 810              | 16          |
| 28.6   | <b>49.00</b> | 0.75                                   | 240                                      | 1.2                    | <b>0.93</b>                              | <b>300</b>                                | B                          |    |    |      |     |                             |    |    |     | 612              | 17          |
| 23.0   | <b>60.90</b> | 0.75                                   | 299                                      | 0.9                    | <b>0.66</b>                              | <b>265</b>                                | B                          |    |    |      |     |                             |    |    |     | 610              | 18          |

The dynamic efficiency is **0.96** for all ratios

\*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14

\* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **452A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **452A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **452A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **452A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **452A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |                     |         |         |     |
|-----------------------|---|---------|---------------------|---------|---------|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                     |         |         |     |
|                       |   |         |                     |         |         |     |
| B3                    | B6  | B7      | B8                  | V5      | V6      | V8  |
| 0.31 LT               | 0.31 LT   | 0.31 LT | 0.31 LT             | 0.31 LT | 0.31 LT | Ask |
| SHELL Omala S4 WE 320 |   |         | AGIP Telium VSF 320 |         |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

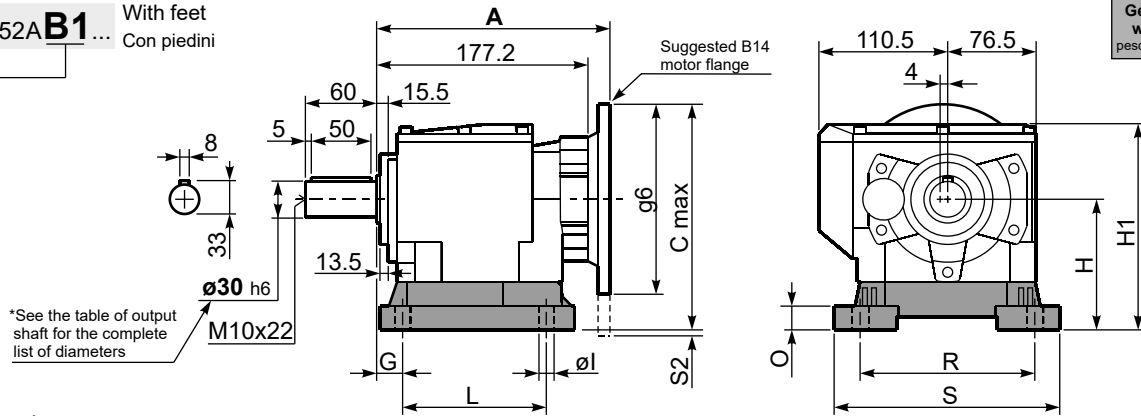
| RADIAL AND AXIAL LOADS              |     |      |                |     |                                 |                |     |      |                |     |      |
|-------------------------------------|-----|------|----------------|-----|---------------------------------|----------------|-----|------|----------------|-----|------|
| Output shaft / Albero di uscita     |     |      |                |     | Input shaft / Albero in entrata |                |     |      |                |     |      |
|                                     |     |      |                |     |                                 |                |     |      |                |     |      |
| $F_{eq} = FR \cdot \frac{51}{X+21}$ |     |      |                |     |                                 |                |     |      |                |     |      |
| n <sub>2</sub>                      | FA  | FR   | n <sub>2</sub> | FA  | FR                              | n <sub>2</sub> | FA  | FR   | n <sub>1</sub> | FA  | FR   |
| 300                                 | 415 | 2070 | 140            | 540 | 2700                            | 70             | 700 | 3510 | 1400           | 400 | 2000 |
| 250                                 | 430 | 2160 | 120            | 560 | 2790                            | 40             | 810 | 4050 | 900            | 440 | 2200 |
| 200                                 | 470 | 2340 | 85             | 630 | 3150                            | 15             | 900 | 4500 | 500            | 440 | 2200 |

**tab. 2**



**P452A B1** ... With feet  
Con piedini

**Gearbox weight** With flange **8.7 kg**  
**peso riduttore** With feet **8.9 Kg**



\*See the table of output shaft for the complete list of diameters

**Feet / piedini**

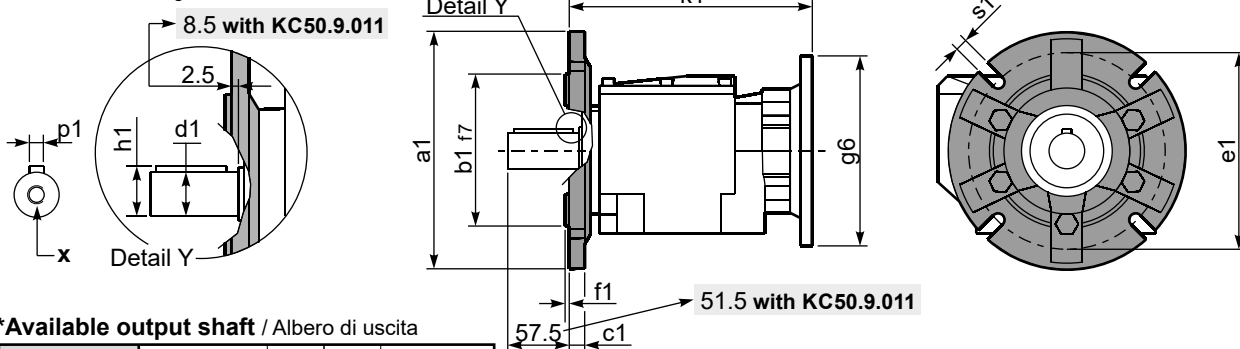
| Feet Code | Market reference | G  | H   | R       | L     | S   | H1  | O  | Øl   | S2 only with motor flange | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|-------|-----|-----|----|------|---------------------------|----------------|------------|
| B3        | 312/3            | 18 | 110 | 160     | 130   | 190 | 173 | 20 | 11   | 15 100/112B5<br>40 132B5  | -              | KC50.9.024 |
| B4        | 30/35            | 20 | 130 | 180     | 149.5 | 216 | 193 | 18 | 14   | 20 132B5                  | -              | KC60.9.024 |
| S4        | 47-57            | 30 | 115 | 135     | 165   | 170 | 178 | 24 | 13.5 | -                         | 80/90B5        | KC50.9.022 |
| H3        | 023-233          | 30 | 130 | 135     | 135   | 185 | 193 | 25 | 14   | 20 132B5                  | -              | KC50.9.025 |
| M2        | 52/3             | 30 | 110 | 135-150 | 100   | 190 | 173 | 18 | 11   | 15 100/112B5<br>40 132B5  | -              | KC50.9.023 |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

**P452A-F** ... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

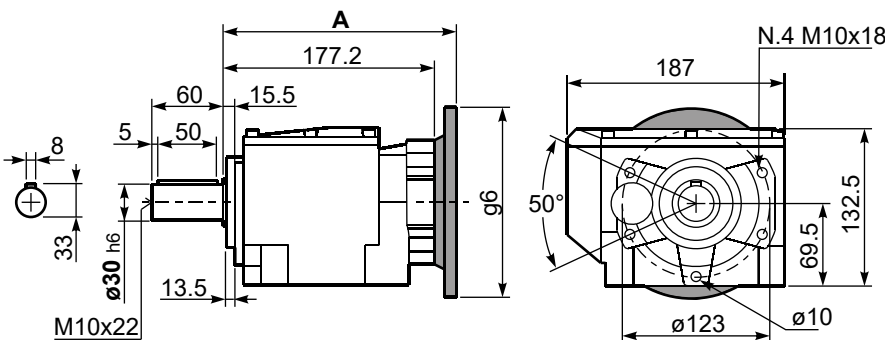
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | Ø 30x60    | 8  | 33 | M10x22 |
| On request<br>A richiesta | Ø 24x50    | 8  | 27 | M8x19  |
|                           | Ø 25x50    | 8  | 28 | M8x19  |
|                           | Ø 28x60    | 8  | 31 | M8x19  |
|                           | Ø 35x60    | 10 | 38 | M10x22 |

Available output flanges / flange di uscita

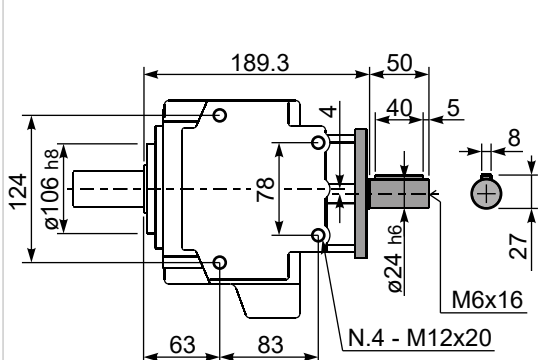
| a1  | Ø   | b1   | c1  | e1  | f1 | s1 | kit code   |
|-----|-----|------|-----|-----|----|----|------------|
| 160 | 110 | 14   | 130 | 3.5 | 11 | 11 | KC50.9.011 |
| 200 | 130 | 13   | 165 | 3.5 | 11 | 11 | KC50.9.012 |
| 250 | 180 | 15.5 | 215 | 4   | 14 | 14 | KC50.9.013 |

With flange and feet only on request.  
Ask for compatibility

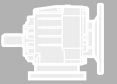
**P452A-N** ... Basic gearbox  
Riduttore base



**R452A-N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 | B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 |
|------------------|-------|------------------|-----|-------|------------|--------------------|-------------------|-------|------------------|-----|-------|------------|--------------------|
| 71 B5            | 195.7 | 222              | 160 | 198.2 | K023.4.041 | 204.2              | 80 B14            | 197.7 | 202              | 120 | 200.2 | K085.4.046 | 206.2              |
| 80/90 B5         | 197.7 | 242              | 200 | 200.2 | K023.4.042 | 206.2              | 90 B14            | 197.7 | 212              | 140 | 200.2 | K085.4.045 | 206.2              |
| 100/112 B5       | 206.7 | 267              | 250 | 209.2 | K023.4.043 | 215.2              | 100/112 B14       | 206.7 | 222              | 160 | 209.2 | K085.4.047 | 215.2              |
| 132 B5           | 227.7 | 292              | 300 | 227.2 | KC51.4.043 | 233.2              | 132 B14           | 227.7 | 242              | 200 | 227.2 | KC51.4.041 | 233.2              |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |             |      | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|-------------|------|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F          | -G   | -R                          | -T | -U         | -V  |                  |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100*<br>112 | 132* | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 388   | <b>3.61</b>  | 5.5                             | 127                               | 1.2                    | 6.6                               | 155                                | B                          |    |    |             |      |                             |    |            |     |                  | 3018        | 01 |
| 331   | <b>4.23</b>  | 5.5                             | 148                               | 1.2                    | 6.5                               | 180                                | B                          |    |    |             |      |                             |    |            |     |                  | 3016        | 02 |
| 279   | <b>5.01</b>  | 5.5                             | 176                               | 1.2                    | 6.4                               | 210                                | B                          |    |    |             |      |                             |    |            |     |                  | 3014        | 03 |
| 231   | <b>6.07</b>  | 5.5                             | 213                               | 1.2                    | 6.4                               | 255                                | B                          |    |    |             |      |                             |    |            |     |                  | 3012        | 04 |
| 206   | <b>6.81</b>  | 5.5                             | 239                               | 1.3                    | 6.7                               | 300                                | B                          |    |    |             |      |                             |    |            |     |                  | 2018        | 05 |
| 176   | <b>7.96</b>  | 5.5                             | 279                               | 1.2                    | 6.4                               | 335                                | B                          |    |    |             |      |                             |    |            |     |                  | 2016        | 07 |
| 148   | <b>9.45</b>  | 5.5                             | 331                               | 1.1                    | 5.8                               | 360                                | B                          |    |    |             |      |                             |    |            |     |                  | 2014        | 08 |
| 122   | <b>11.43</b> | 4                               | 293                               | 1.1                    | 4.4                               | 330                                | B                          |    |    |             |      |                             |    |            |     |                  | 2012        | 09 |
| 100   | <b>14.00</b> | 3                               | 270                               | 1.3                    | 3.9                               | 360                                | B                          |    |    |             |      |                             |    |            |     |                  | 1316        | 21 |
| 84  | <b>16.62</b> | 3                               | 321                               | 1.1                    | 3.3                               | 360                                | B                          |    |    |             |      |                             |    |            |     |                  | 1314        | 11 |
| 70  | <b>20.10</b> | 2.2                             | 286                               | 1.2                    | 2.5                               | 330                                | B                          |    |    |             |      |                             |    |            |     |                  | 1312        | 12 |
| 57  | <b>24.61</b> | 2.2                             | 350                               | 0.9                    | 2.0                               | 330                                | B                          |    |    |             |      |                             |    |            |     |                  | 1112        | 20 |
| 47.6  | <b>29.41</b> | 1.5                             | 288                               | 1.2                    | 1.9                               | 360                                | B                          |    |    |             |      |                             |    |            |     |                  | 814         | 14 |
| 39.3  | <b>35.58</b> | 1.5                             | 349                               | 0.9                    | 1.4                               | 330                                | B                          |    |    |             |      |                             |    |            |     |                  | 812         | 15 |
| 34.6  | <b>40.50</b> | 1.1                             | 290                               | 1.1                    | 1.2                               | 320                                | B                          |    |    |             |      |                             |    |            |     |                  | 614         | 16 |
| 31.7  | <b>44.23</b> | 1.1                             | 316                               | 0.8                    | 0.88                              | 255                                | B                          |    |    |             |      |                             |    |            |     |                  | 810         | 17 |
| 28.6  | <b>49.00</b> | 1.1                             | 351                               | 0.9                    | 1.0                               | 330                                | B                          |    |    |             |      |                             |    |            |     |                  | 612         | 18 |
| 23.0  | <b>60.90</b> | 0.75                            | 299                               | 0.8                    | 0.64                              | 255                                | B                          |    |    |             |      |                             |    |            |     |                  | 610         | 19 |

The dynamic efficiency is **0.96** for all ratios

\*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14  
 \* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

- Motor Flanges Available**  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **512A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **512A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **512A** ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **512A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **512A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|
|                       |  |         |         |                    |         |     |
| 0.70 LT               | 0.80 LT  | 1.15 LT | 1.20 LT | 1.15 LT            | 1.25 LT | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
 Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{54}{X+24}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 460 | 2300 | 140   | 600 | 3000 | 70    | 780  | 3900 |
| 250   | 480 | 2400 | 120   | 620 | 3100 | 40    | 900  | 4500 |
| 200   | 520 | 2600 | 85    | 700 | 3500 | 15    | 1000 | 5000 |

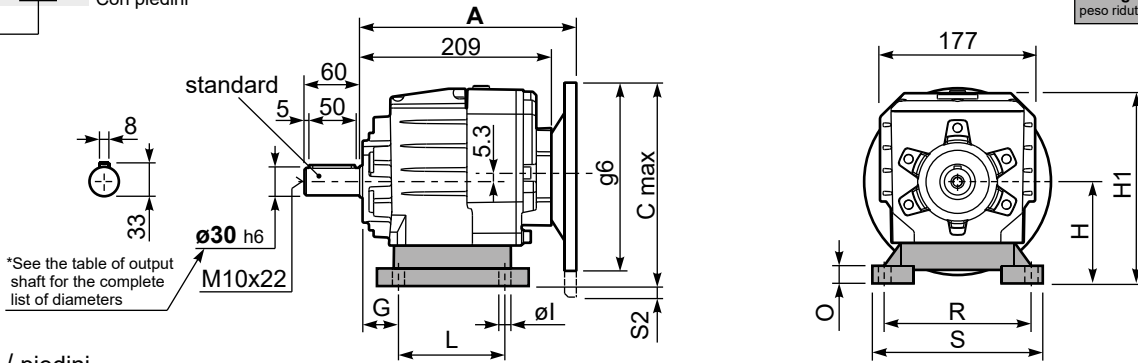
**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

tab. 2

P512A **B1** ... With feet  
Con piedini

Gearbox weight **11.7 kg**  
peso riduttore With feet **11.9 Kg**



Feet / piedini

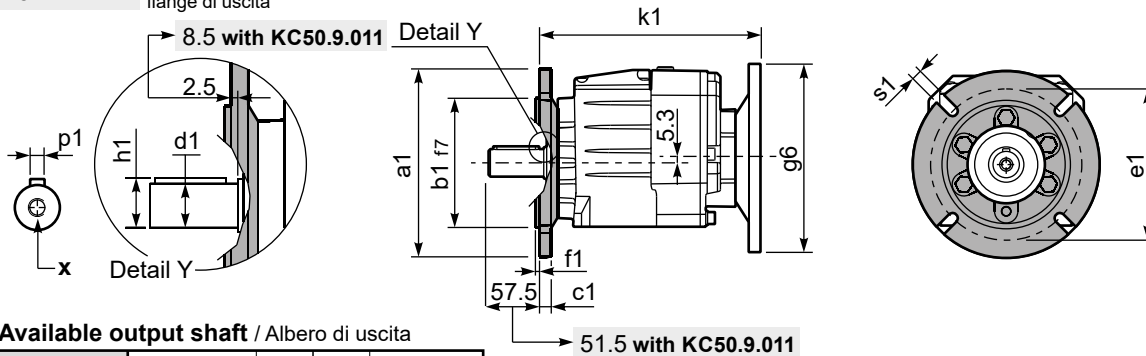
| Feet Code | Market reference | G  | H   | R       | L     | S   | H1  | O  | øl | S2 only with motor flange | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|-------|-----|-----|----|----|---------------------------|----------------|------------|
| B3        | 312/3            | 18 | 110 | 160     | 130   | 190 | 211 | 20 | 11 | 10 100/112B5<br>35 132B5  | -              | KC50.9.024 |
| B4        | 30/35            | 20 | 130 | 180     | 149.5 | 216 | 231 | 18 | 14 | 15 132B5                  | -              | KC60.9.024 |
| S4        | 47-57            | 30 | 115 | 135     | 165   | 170 | 216 | 25 | 14 | 5 100/112B5<br>30 132B5   | -              | KC50.9.022 |
| H3        | 023-233          | 30 | 130 | 135     | 135   | 185 | 231 | 25 | 14 | 15 132B5                  | -              | KC50.9.025 |
| M2        | 52/3             | 30 | 110 | 135-150 | 100   | 190 | 211 | 18 | 11 | 10 100/112B5<br>35 132B5  | -              | KC50.9.023 |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P512A-**F** ... Output flanges  
flange di uscita



\*Available output shaft / Alberi di uscita

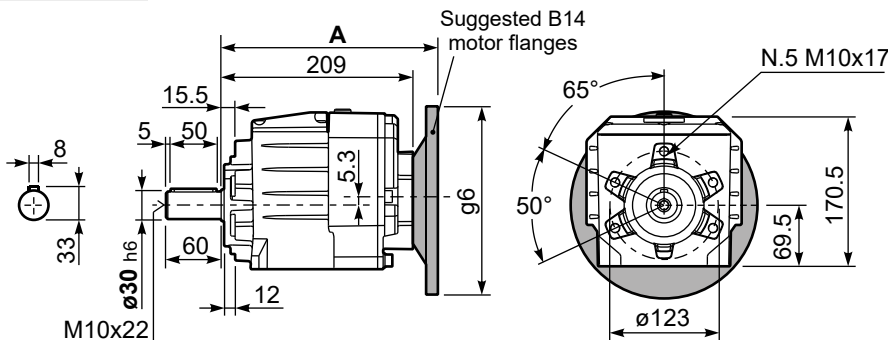
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 30x60    | 8  | 33 | M10x22 |
| On request<br>A richiesta | ø 24x50    | 8  | 27 | M8x19  |
|                           | ø 25x50    | 8  | 28 | M8x19  |
|                           | ø 28x60    | 8  | 31 | M8x19  |
|                           | ø 35x60    | 10 | 38 | M10x22 |

Available output flanges / flange di uscita

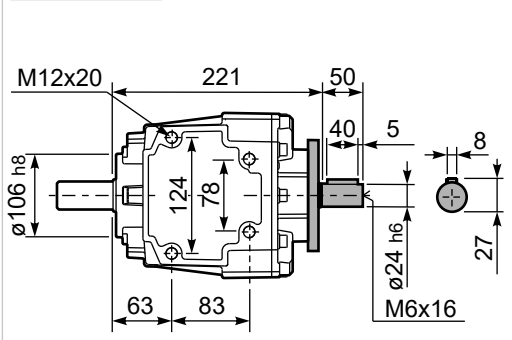
| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 160  | 110 | 14   | 130 | 3.5 | 11 | KC50.9.011 |
| 200  | 130 | 13   | 165 | 3.5 | 11 | KC50.9.012 |
| 250  | 180 | 15.5 | 215 | 4   | 14 | KC50.9.013 |

With flange and feet only on request.  
Ask for compatibility

P512A-**N** ... Basic gearbox  
Riduttore base



**R512A-N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1  | kit code   | k1 with KC50.9.011 | B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1  | kit code   | k1 with KC50.9.011 |
|------------------|-------|------------------|-----|-----|------------|--------------------|-------------------|-------|------------------|-----|-----|------------|--------------------|
| 71 B5            | 227.5 | 215.3            | 160 | 230 | K023.4.041 | 236                | 80 B14            | 229.5 | 195.3            | 120 | 232 | K085.4.046 | 238                |
| 80/90 B5         | 229.5 | 235.3            | 200 | 232 | K023.4.042 | 238                | 90 B14            | 229.5 | 205.3            | 140 | 232 | K085.4.045 | 238                |
| 100/112 B5       | 238.5 | 260.3            | 250 | 241 | K023.4.043 | 247                | 100/112 B14       | 238.5 | 215.3            | 160 | 241 | K085.4.047 | 247                |
| 132 B5           | 259.5 | 285.3            | 300 | 259 | KC51.4.043 | 265                | 132 B14           | 259.5 | 235.3            | 200 | 259 | KC51.4.041 | 265                |



**QUICK SELECTION / Selezione veloce** input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft | Ratios code |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|--------------|-------------|
|  |               |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |              |             |
|  |               |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |              |             |
| 35.2   | <b>39.79</b>  | 1.5                                    | 382                                      | 0.9                    | 1.4                                      | 360                                       | B                          |    |    |    | C                           | C  |    | 191316       | 01          |
| 29.6   | <b>47.22</b>  | 1.1                                    | 331                                      | 1.1                    | 1.2                                      | 360                                       | B                          |    |    |    | C                           | C  |    | 191314       | 02          |
| 25.6   | <b>54.73</b>  | 1.1                                    | 384                                      | 0.9                    | 1.0                                      | 360                                       | B                          |    |    |    | C                           | C  |    | 171314       | 03          |
| 21.1   | <b>66.22</b>  | 0.75                                   | 318                                      | 1.0                    | 0.78                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 171312       | 04          |
| 18.3   | <b>76.69</b>  | 0.75                                   | 369                                      | 1.0                    | 0.73                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 131314       | 05          |
| 16.7   | <b>83.59</b>  | 0.55                                   | 297                                      | 1.2                    | 0.67                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 190814       | 06          |
| 15.1   | <b>92.78</b>  | 0.55                                   | 329                                      | 1.0                    | 0.55                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 131312       | 07          |
| 13.4   | <b>104.68</b> | 0.55                                   | 371                                      | 1.0                    | 0.54                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 101314       | 08          |
| 11.9   | <b>117.22</b> | 0.37                                   | 278                                      | 1.2                    | 0.44                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 170812       | 09          |
| 11.1   | <b>126.65</b> | 0.37                                   | 300                                      | 1.1                    | 0.41                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 101312       | 10          |
| 10.2   | <b>136.62</b> | 0.37                                   | 324                                      | 1.1                    | 0.41                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 91314        | 11          |
| 8.5  | <b>165.29</b> | 0.25                                   | 264                                      | 1.2                    | 0.31                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 91312        | 12          |
| 7.8  | <b>180.40</b> | 0.25                                   | 289                                      | 1.2                    | 0.31                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 71314        | 13          |
| 6.4  | <b>218.26</b> | 0.25                                   | 349                                      | 0.9                    | 0.24                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 71312        | 14          |
| 5.8  | <b>241.82</b> | 0.25                                   | 387                                      | 0.9                    | 0.23                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 90814        | 15          |
| 4.8  | <b>292.57</b> | 0.18                                   | 358                                      | 0.9                    | 0.18                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 90812        | 16          |
| 4.4  | <b>319.32</b> | 0.18                                   | 391                                      | 0.9                    | 0.18                                     | 360                                       | B                          |    |    |    | C                           | C  |    | 70814        | 17          |
| 3.6  | <b>386.33</b> | 0.12                                   | 305                                      | 1.1                    | 0.13                                     | 330                                       | B                          |    |    |    | C                           | C  |    | 70812        | 18          |
| 2.9  | <b>480.16</b> | 0.12                                   | 380                                      | 0.7                    | 0.08                                     | 255                                       | B                          |    |    |    | C                           | C  |    | 70810        | 19          |

The dynamic efficiency is **0.94** for all ratios

  Motor Flanges Available Flange Motore Disponibili  
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione  
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione  
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **513A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **513A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **513A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **513A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **513A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|-----|
|                       |  |         |         |                    |         |     |     |
| 1.00 LT               | 0.90 LT  | 1.25 LT | 1.15 LT | 1.45 LT            | 1.40 LT | Ask | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |     |

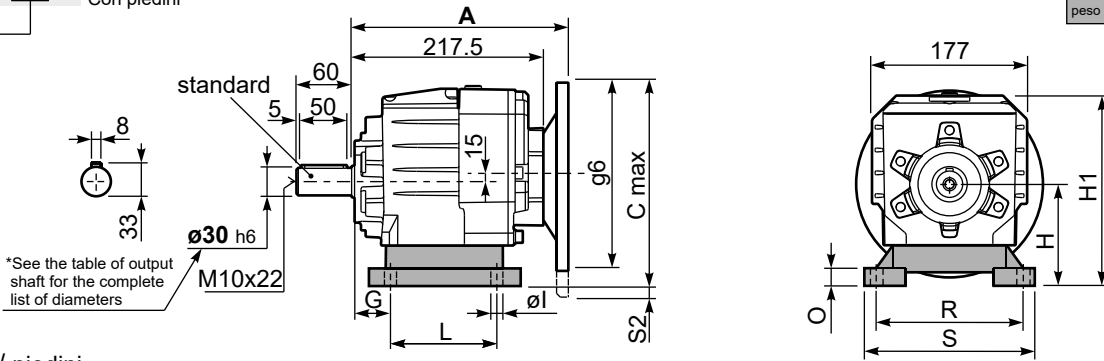
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |     |      |                |     |                                      |                |      |      |                |    |    |
|---|-----|------|----------------|-----|--------------------------------------|----------------|------|------|----------------|----|----|
| <b>Output shaft</b><br>Albero di uscita |     |      |                |     | $F_{eq} = F_R \cdot \frac{54}{X+24}$ |                |      |      |                |    |    |
|   |     |      |                |     |                                      |                |      |      |                |    |    |
| n <sub>2</sub>                          | FA  | FR   | n <sub>2</sub> | FA  | FR                                   | n <sub>2</sub> | FA   | FR   | n <sub>2</sub> | FA | FR |
| 300                                     | 460 | 2300 | 140            | 600 | 3000                                 | 70             | 780  | 3900 |                |    |    |
| 250                                     | 480 | 2400 | 120            | 620 | 3100                                 | 40             | 900  | 4500 |                |    |    |
| 200                                     | 520 | 2600 | 85             | 700 | 3500                                 | 15             | 1000 | 5000 |                |    |    |
| <b>Input shaft</b><br>Albero di entrata |     |      |                |     |                                      |                |      |      |                |    |    |
| n <sub>1</sub>                          | FA  | FR   | n <sub>1</sub> | FA  | FR                                   | n <sub>1</sub> | FA   | FR   | n <sub>1</sub> | FA | FR |
| 1400                                    | 400 | 2000 | 900            | 440 | 2200                                 | 500            | 440  | 2200 |                |    |    |

**tab. 2**

P513A **B1** ... With feet  
Con piedini

Gearbox weight **11.9 kg**  
peso riduttore With feet **12.1 Kg**



Feet / piedini

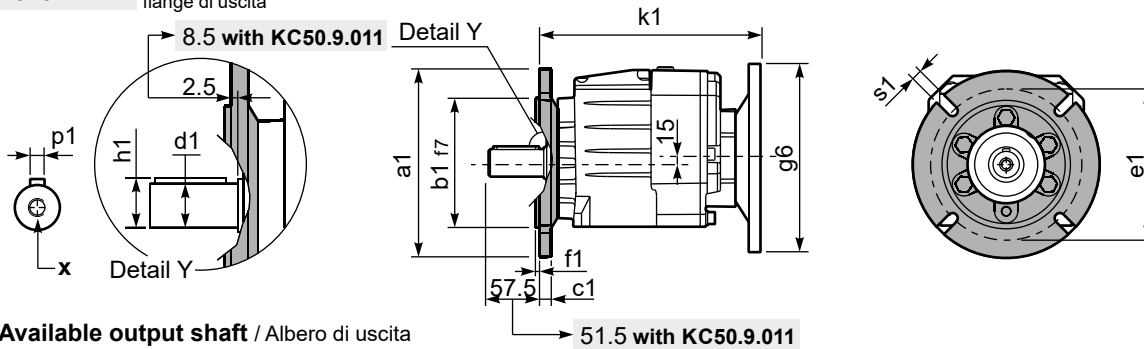
| Feet Code | Market reference | G  | H   | R       | L     | S   | H1  | O  | øl | S2 only with motor flange | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|---------|-------|-----|-----|----|----|---------------------------|----------------|------------|
| B3        | 312/3            | 18 | 110 | 160     | 130   | 190 | 211 | 20 | 11 | -                         | -              | KC50.9.024 |
| B4        | 30/35            | 20 | 130 | 180     | 149.5 | 216 | 231 | 18 | 14 | -                         | -              | KC60.9.024 |
| S4        | 47-57            | 30 | 115 | 135     | 165   | 170 | 216 | 25 | 14 | -                         | -              | KC50.9.022 |
| H3        | 023-233          | 30 | 130 | 135     | 135   | 185 | 231 | 25 | 14 | -                         | -              | KC50.9.025 |
| M2        | 52/3             | 30 | 110 | 135-150 | 100   | 190 | 211 | 18 | 11 | -                         | -              | KC50.9.023 |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P513A-**F** ... Output flanges  
flange di uscita



\*Available output shaft / Alberi di uscita

|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 30x60    | 8  | 33 | M10x22 |
| On request<br>A richiesta | ø 24x50    | 8  | 27 | M8x19  |
|                           | ø 25x50    | 8  | 28 | M8x19  |
|                           | ø 28x60    | 8  | 31 | M8x19  |
|                           | ø 35x60    | 10 | 38 | M10x22 |

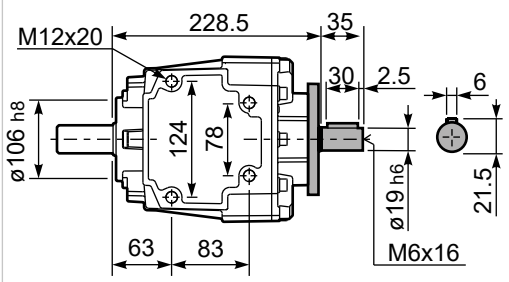
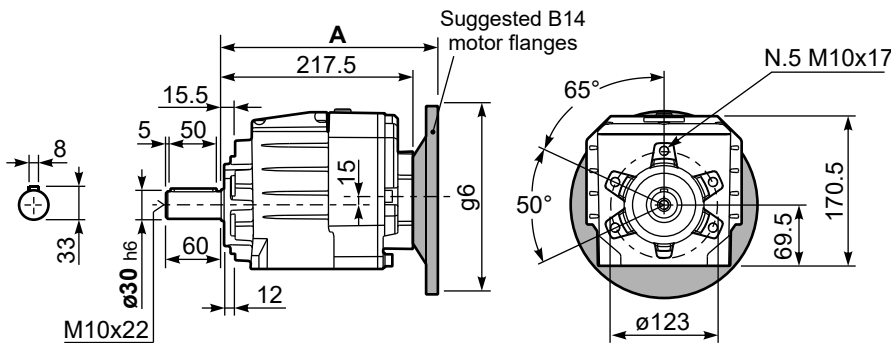
Available output flanges / flange di uscita

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 160  | 110 | 14   | 130 | 3.5 | 11 | KC50.9.011 |
| 200  | 130 | 13   | 165 | 3.5 | 11 | KC50.9.012 |
| 250  | 180 | 15.5 | 215 | 4   | 14 | KC50.9.013 |

With flange and feet only on request. Ask for compatibility

P513A-**N** ... Basic gearbox  
Riduttore base

**R513A-N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 |
|------------------|-----|------------------|-----|-------|------------|--------------------|
| 63 B5            | 238 | 215              | 140 | 240.5 | K063.4.041 | 246.5              |
| 71 B5            | 236 | 225              | 160 | 238.5 | K063.4.042 | 244.5              |
| 80/90 B5         | 238 | 245              | 200 | 240.5 | K063.4.043 | 246.5              |

| B14 Motor Flanges | A   | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 |
|-------------------|-----|------------------|-----|-------|------------|--------------------|
| 71 B14            | 236 | 197.5            | 105 | 238.5 | K063.4.047 | 244.5              |
| 80 B14            | 238 | 205              | 120 | 240.5 | K063.4.046 | 246.5              |
| 90 B14            | 238 | 215              | 140 | 240.5 | K063.4.041 | 246.5              |





#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |            |      | Available B14 motor flanges |    |            |     | Output Shaft |      |                 |    |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|------------|------|-----------------------------|----|------------|-----|--------------|------|-----------------|----|
|  |              |  |  |                        |  |   | -C                         | -D | -E | -F         | -G   | -R                          | -T | -U         | -V  |              |      | Ratios code     |    |
|  |              |  |  |                        |  |   | 71                         | 80 | 90 | 100<br>112 | 132* | 80                          | 90 | 100<br>112 | 132 |              |      |                 |    |
| 388  | <b>3.61</b>  | 7.5                                    | 171                                      | 1.1                    | <b>8.0</b>                               | <b>190</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 3018 |                 | 01 |
| 331  | <b>4.23</b>  | 7.5                                    | 200                                      | 1.1                    | <b>8.3</b>                               | <b>230</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 3016 |                 | 02 |
| 279  | <b>5.01</b>  | 7.5                                    | 238                                      | 1.1                    | <b>7.9</b>                               | <b>260</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 3014 |                 | 03 |
| 231  | <b>6.07</b>  | 7.5                                    | 288                                      | 1.1                    | <b>7.8</b>                               | <b>310</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 3012 |                 | 04 |
| 206  | <b>6.81</b>  | 7.5                                    | 323                                      | 1.1                    | <b>7.9</b>                               | <b>350</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 2018 |                 | 05 |
| 176  | <b>7.96</b>  | 7.5                                    | 378                                      | 1.0                    | <b>7.1</b>                               | <b>370</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 2016 |                 | 07 |
| 148  | <b>9.45</b>  | 5.5                                    | 331                                      | 1.2                    | <b>6.6</b>                               | <b>410</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 2014 | <b>standard</b> | 08 |
| 122  | <b>11.43</b> | 5.5                                    | 401                                      | 1.1                    | <b>5.7</b>                               | <b>425</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 2012 | <b>ø35</b>      | 09 |
| 100  | <b>14.00</b> | 4                                      | 359                                      | 1.2                    | <b>4.7</b>                               | <b>435</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 1316 |                 | 10 |
| 84   | <b>16.62</b> | 4                                      | 426                                      | 1.2                    | <b>4.7</b>                               | <b>515</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 1314 | ø28             | 11 |
| 70   | <b>20.10</b> | 4                                      | 515                                      | 1.0                    | <b>4.0</b>                               | <b>530</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 1312 | ø30             | 12 |
| 57   | <b>24.61</b> | 3                                      | 475                                      | 1.1                    | <b>3.3</b>                               | <b>530</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 1112 | ø38             | 20 |
| 47.6   | <b>29.41</b> | 2.2                                    | 418                                      | 1.1                    | <b>2.3</b>                               | <b>450</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 814  | ø40             | 14 |
| 39.3   | <b>35.58</b> | 2.2                                    | 506                                      | 1.0                    | <b>2.3</b>                               | <b>530</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 812  | On request      | 15 |
| 34.6   | <b>40.50</b> | 1.1                                    | 290                                      | 1.1                    | <b>1.2</b>                               | <b>320</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 614  |                 | 16 |
| 31.7   | <b>44.23</b> | 1.5                                    | 433                                      | 0.9                    | <b>1.4</b>                               | <b>410</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 810  |                 | 17 |
| 28.6   | <b>49.00</b> | 1.1                                    | 351                                      | 1.1                    | <b>1.2</b>                               | <b>400</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 612  |                 | 18 |
| 23.0   | <b>60.90</b> | 1.1                                    | 436                                      | 0.9                    | <b>1.0</b>                               | <b>410</b>                                | B                          |    |    |            |      |                             |    |            |     |              | 610  |                 | 19 |

The dynamic efficiency is **0.96** for all ratios

\*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14  
\* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**C** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**D** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **612A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **612A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.  
Vedi tab.1 per oli e quantità consigliati.  
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **612A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.  
In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **612A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **612A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |  |
|-----------------------|--|---------|---------|--------------------|---------|-----|--|
|                       |  |         |         |                    |         |     |  |
| 0.80 LT               | 1.00 LT  | 1.20 LT | 1.20 LT | 1.30 LT            | 1.35 LT | Ask |  |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |  |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{60.5}{X+25.5}$

$F_R$  (N)       $F_{eq}$  (N)

| n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA   | FR   |
|----------------|-----|------|----------------|-----|------|----------------|------|------|
| 300            | 560 | 2800 | 140            | 740 | 3700 | 70             | 890  | 4200 |
| 250            | 600 | 3000 | 120            | 760 | 3800 | 40             | 1160 | 5800 |
| 200            | 640 | 3200 | 85             | 840 | 4000 | 15             | 1300 | 6500 |

**Input shaft**  
Albero in entrata

$F_R$  (N)       $F_A$  (N)

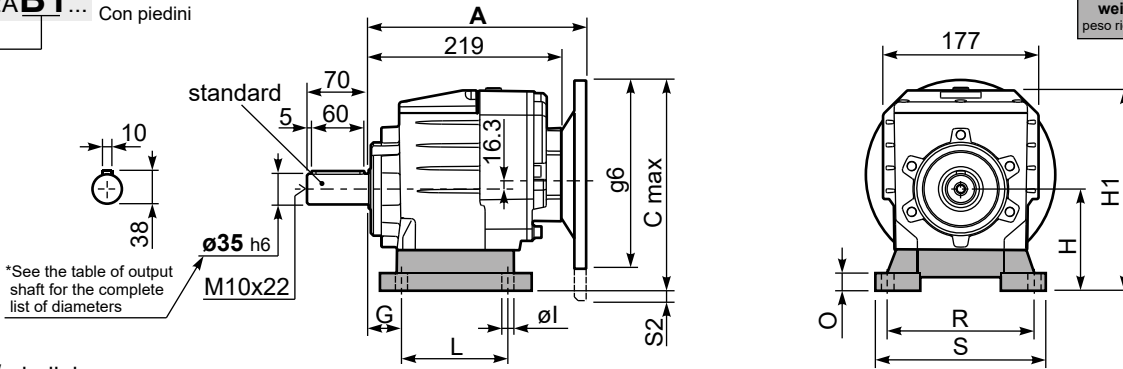
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 450 | 2250 |
| 900            | 500 | 2500 |
| 500            | 600 | 3000 |

**tab. 2**



P612A **B1** ... With feet  
Con piedini

**Gearbox weight** With flange **14.1 kg**  
**peso riduttore** With feet **14.5 kg**



**Feet / piedini**

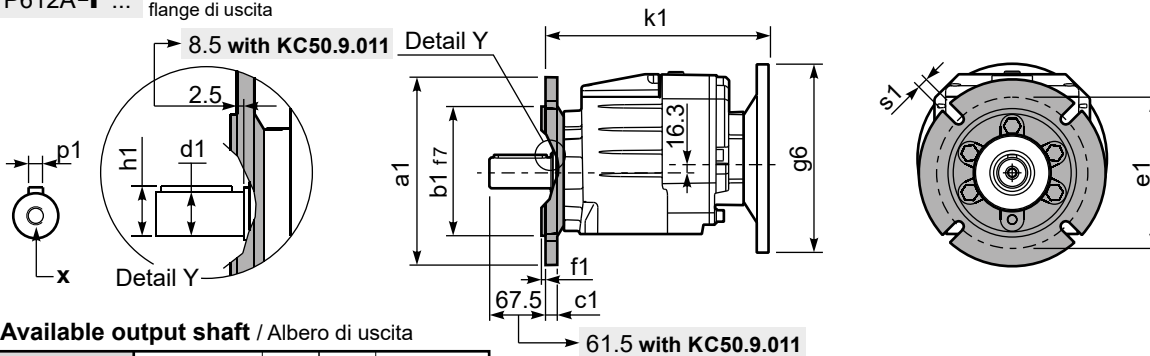
| Feet Code | Market reference | G  | H   | R       | L     | S   | H1  | O  | øl | S2 only with motor flange | B5 max. Flange | kit code     |
|-----------|------------------|----|-----|---------|-------|-----|-----|----|----|---------------------------|----------------|--------------|
| <b>B4</b> | 412/3            | 20 | 130 | 180     | 149.5 | 216 | 242 | 18 | 14 | -                         | -              | KC60.9.024   |
| <b>S4</b> | 47-57            | 30 | 115 | 135     | 165   | 170 | 227 | 25 | 14 | 13 132B5                  | -              | KC50.9.022   |
| <b>M3</b> | 62/3             | 35 | 120 | 170-185 | 110   | 230 | 232 | 20 | 14 | 8 132B5                   | -              | KC60.9.023   |
| <b>S7</b> | 77               | 35 | 140 | 170     | 205   | 204 | 252 | 8  | 14 | -                         | -              | KC60.9.029LM |
| <b>H4</b> | 024-243          | 35 | 155 | 170     | 150   | 225 | 267 | 30 | 14 | -                         | -              | KC60.9.025   |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P612A-**F** ... Output flanges  
flange di uscita



\*Available output shaft / Alberi di uscita

|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 35x70    | 10 | 38 | M10x22 |
| On request<br>A richiesta | ø 28x60    | 8  | 31 | M8x20  |
|                           | ø 30x60    | 8  | 33 | M10x22 |
|                           | ø 38x70    | 10 | 41 | M10x25 |
|                           | ø 40x80    | 12 | 43 | M12x28 |

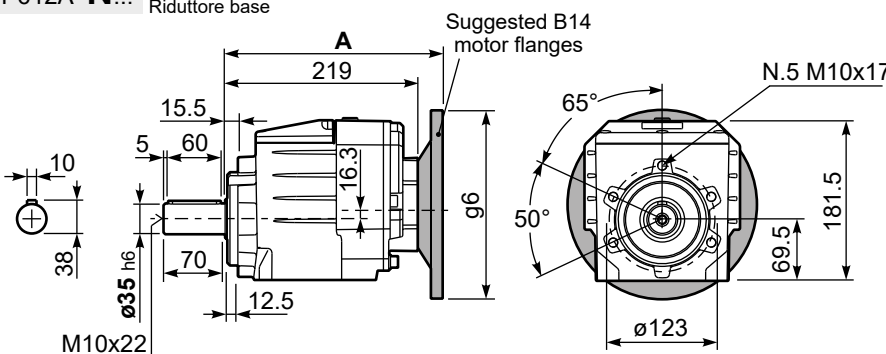
Available output flanges / flange di uscita

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 160  | 110 | 14   | 130 | 3.5 | 11 | KC50.9.011 |
| 200  | 130 | 13   | 165 | 3.5 | 11 | KC50.9.012 |
| 250  | 180 | 15.5 | 215 | 4   | 14 | KC50.9.013 |

With flange and feet only on request.  
Ask for compatibility

P612A-**N** ... Basic gearbox  
Riduttore base

**R612A-N** ... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1  | kit code   | k1 with KC50.9.011 | B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1  | kit code   | k1 with KC50.9.011 |
|------------------|-------|------------------|-----|-----|------------|--------------------|-------------------|-------|------------------|-----|-----|------------|--------------------|
| 71 B5            | 237.5 | 251.3            | 160 | 240 | K023.4.041 | 246                | 80 B14            | 239.5 | 231.3            | 120 | 242 | K085.4.046 | 248                |
| 80/90 B5         | 239.5 | 271.3            | 200 | 242 | K023.4.042 | 248                | 90 B14            | 239.5 | 241.3            | 140 | 242 | K085.4.045 | 248                |
| 100/112 B5       | 248.5 | 296.3            | 250 | 251 | K023.4.043 | 257                | 100/112 B14       | 248.5 | 251.3            | 160 | 251 | K085.4.047 | 257                |
| 132 B5           | 269.5 | 321.3            | 300 | 269 | KC51.4.043 | 275                | 132 B14           | 269.5 | 271.3            | 200 | 269 | KC51.4.041 | 275                |



#### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|  |               |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|  |               |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 35.2   | <b>39.79</b>  | 1.5                                    | 382                                      | 1.1                    | 1.7                                      | 434                                       | B                          |    |    |    | C                           | C  |    | 191316           | 05          |
| 29.6   | <b>47.22</b>  | 1.5                                    | 453                                      | 1.1                    | 1.7                                      | 515                                       | B                          |    |    |    | C                           | C  |    | 191314           | 06          |
| 25.6   | <b>54.73</b>  | 1.5                                    | 525                                      | 1.0                    | 1.5                                      | 515                                       | B                          |    |    |    | C                           | C  |    | 171314           | 07          |
| 24.5   | <b>57.13</b>  | 1.5                                    | 548                                      | 1.0                    | 1.4                                      | 530                                       | B                          |    |    |    | C                           | C  |    | 191312           | 08          |
| 21.1   | <b>66.22</b>  | 1.1                                    | 464                                      | 1.1                    | 1.2                                      | 530                                       | B                          |    |    |    | C                           | C  |    | 171312           | 09          |
| 19.7   | <b>71.01</b>  | 1.1                                    | 498                                      | 0.9                    | 0.96                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 191310           | 10          |
| 18.3   | <b>76.69</b>  | 1.1                                    | 538                                      | 1.0                    | 1.0                                      | 515                                       | B                          |    |    |    | C                           | C  |    | 131314           | 11          |
| 17.0   | <b>82.30</b>  | 0.75                                   | 396                                      | 1.1                    | 0.82                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 171310           | 12          |
| 16.7   | <b>83.59</b>  | 0.75                                   | 402                                      | 1.1                    | 0.82                                     | 440                                       | B                          |    |    |    | C                           | C  |    | 190814           | 13          |
| 15.1   | <b>92.78</b>  | 0.75                                   | 446                                      | 1.2                    | 0.89                                     | 530                                       | B                          |    |    |    | C                           | C  |    | 131312           | 14          |
| 13.4   | <b>104.68</b> | 0.75                                   | 503                                      | 1.0                    | 0.77                                     | 515                                       | B                          |    |    |    | C                           | C  |    | 101314           | 15          |
| 11.9   | <b>117.22</b> | 0.75                                   | 564                                      | 0.9                    | 0.71                                     | 530                                       | B                          |    |    |    | C                           | C  |    | 170812           | 16          |
| 11.1   | <b>126.65</b> | 0.55                                   | 449                                      | 1.2                    | 0.65                                     | 530                                       | B                          |    |    |    | C                           | C  |    | 101312           | 17          |
| 10.3   | <b>135.74</b> | 0.55                                   | 482                                      | 0.9                    | 0.51                                     | 440                                       | B                          |    |    |    | C                           | C  |    | 130814           | 18          |
| 9.6  | <b>145.68</b> | 0.37                                   | 346                                      | 1.3                    | 0.47                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 170810           | 19          |
| 8.9  | <b>157.40</b> | 0.37                                   | 373                                      | 1.2                    | 0.43                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 101310           | 20          |
| 8.5  | <b>165.29</b> | 0.37                                   | 392                                      | 1.3                    | 0.50                                     | 525                                       | B                          |    |    |    | C                           | C  |    | 91312            | 21          |
| 7.6  | <b>185.29</b> | 0.37                                   | 439                                      | 1.0                    | 0.37                                     | 440                                       | B                          |    |    |    | C                           | C  |    | 100814           | 22          |
| 6.8  | <b>205.43</b> | 0.37                                   | 487                                      | 0.9                    | 0.33                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 91310            | 23          |
| 6.2  | <b>224.18</b> | 0.37                                   | 532                                      | 1.0                    | 0.37                                     | 530                                       | B                          |    |    |    | C                           | C  |    | 100812           | 24          |
| 5.8  | <b>241.82</b> | 0.25                                   | 387                                      | 1.1                    | 0.28                                     | 440                                       | B                          |    |    |    | C                           | C  |    | 90814            | 25          |
| 5.0  | <b>278.62</b> | 0.25                                   | 446                                      | 1.0                    | 0.24                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 100810           | 26          |
| 4.8  | <b>292.57</b> | 0.25                                   | 468                                      | 1.1                    | 0.28                                     | 530                                       | B                          |    |    |    | C                           | C  |    | 90812            | 27          |
| 3.9  | <b>363.63</b> | 0.18                                   | 445                                      | 1.0                    | 0.19                                     | 435                                       | B                          |    |    |    | C                           | C  |    | 90810            | 28          |

The dynamic efficiency is **0.94** for all ratios

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **613A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **613A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **613A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **613A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **613A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|
|                       |  |         |         |                    |         |     |
| 1.05 LT               | 1.10 LT  | 1.25 LT | 1.25 LT | 1.35 LT            | 1.50 LT | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |

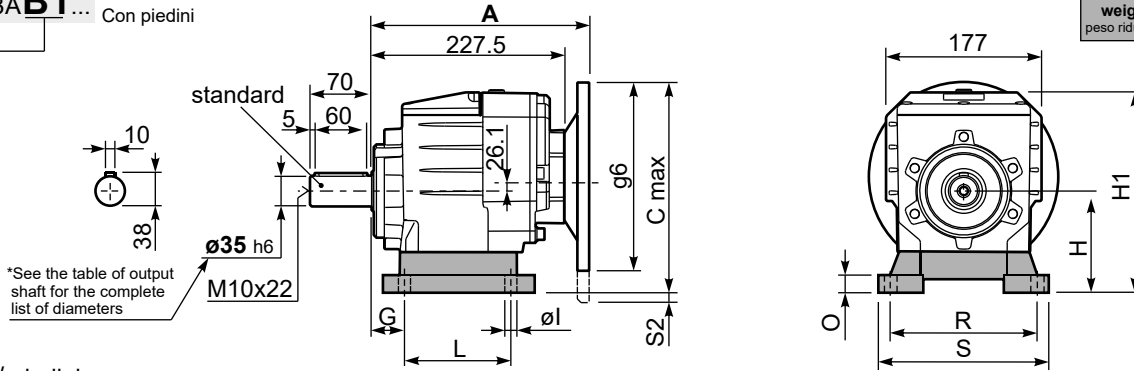
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |     |      |  |     |      |                |      |      |
|---|-----|------|--|-----|------|----------------|------|------|
| <b>Output shaft</b><br>Albero di uscita |     |      | $F_{eq} = F_R \cdot \frac{60.5}{X+25.5}$ |     |      |                |      |      |
|   |     |      |  |     |      |                |      |      |
| n <sub>2</sub>                          | FA  | FR   | n <sub>2</sub>                           | FA  | FR   | n <sub>2</sub> | FA   | FR   |
| 300                                     | 560 | 2800 | 140                                      | 740 | 3700 | 70             | 890  | 4200 |
| 250                                     | 600 | 3000 | 120                                      | 760 | 3800 | 40             | 1160 | 5800 |
| 200                                     | 640 | 3200 | 85                                       | 840 | 4000 | 15             | 1300 | 6500 |
| <b>Input shaft</b><br>Albero in entrata |     |      |  |     |      |                |      |      |
| n <sub>1</sub>                          | FA  | FR   |  |     |      |                |      |      |
| 1400                                    | 400 | 2000 |  |     |      |                |      |      |
| 900                                     | 440 | 2200 |  |     |      |                |      |      |
| 500                                     | 440 | 2200 |  |     |      |                |      |      |

**tab. 2**

P613A **B1** ... With feet  
Con piedini

**Gearbox weight** With flange **14.3 kg**  
**peso riduttore** With feet **14.7 Kg**



**Feet / piedini**

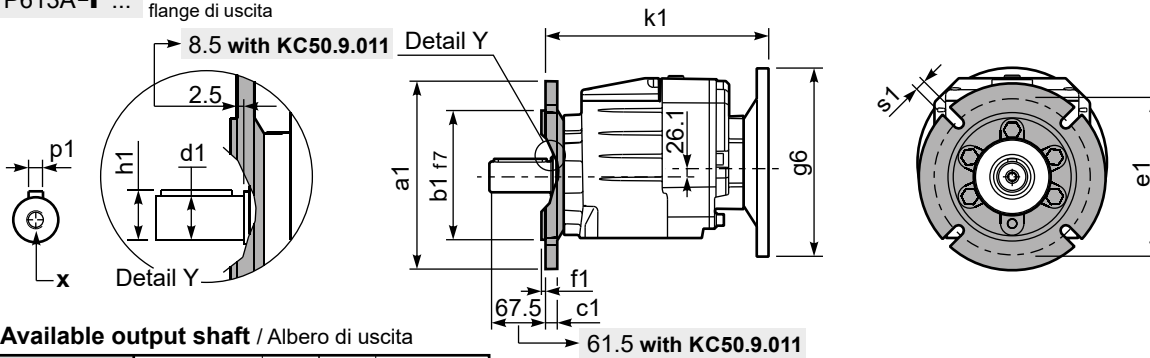
| Feet Code | Market reference | G  | H   | R       | L     | S   | H1  | O  | øl | S2 only with motor flange | B5 max. Flange | kit code     |
|-----------|------------------|----|-----|---------|-------|-----|-----|----|----|---------------------------|----------------|--------------|
| <b>B4</b> | 412/3            | 20 | 130 | 180     | 149.5 | 216 | 242 | 18 | 14 | -                         | -              | KC60.9.024   |
| <b>S4</b> | 47-57            | 30 | 115 | 135     | 165   | 170 | 227 | 25 | 14 | 13 132B5                  | -              | KC50.9.022   |
| <b>M3</b> | 62/3             | 35 | 120 | 170-185 | 110   | 230 | 232 | 20 | 14 | 8 132B5                   | -              | KC60.9.023   |
| <b>S7</b> | 77               | 35 | 140 | 170     | 205   | 204 | 252 | 8  | 14 | -                         | -              | KC60.9.029LM |
| <b>H4</b> | 024-243          | 35 | 155 | 170     | 150   | 225 | 267 | 30 | 14 | -                         | -              | KC60.9.025   |

Other feet are available, see our web site  
Sono disponibili altri piedini, consulta il nostro sito web

**A see on page bottom**

Most popular types  
Tipi più diffusi

P613A-**F** ... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 35x70    | 10 | 38 | M10x22 |
| On request<br>A richiesta | ø 28x60    | 8  | 31 | M8x20  |
|                           | ø 30x60    | 8  | 33 | M10x22 |
|                           | ø 38x70    | 10 | 41 | M10x25 |
|                           | ø 40x80    | 12 | 43 | M12x28 |

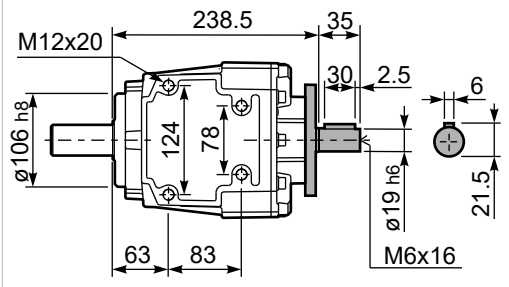
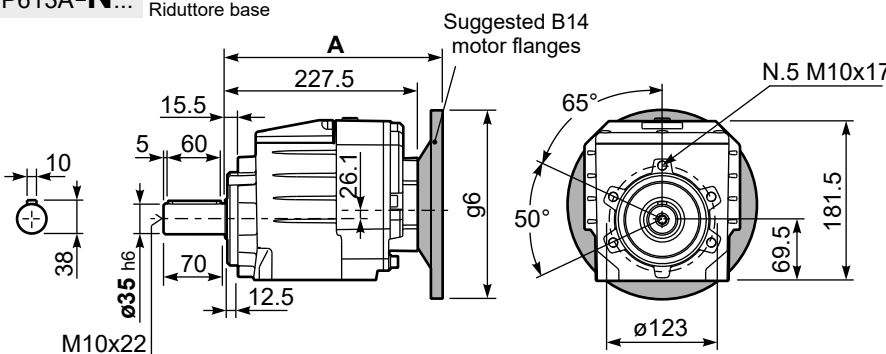
Available output flanges / flange di uscita

| a1 ø | b1  | c1   | e1  | f1  | s1 | kit code   |
|------|-----|------|-----|-----|----|------------|
| 160  | 110 | 14   | 130 | 3.5 | 11 | KC50.9.011 |
| 200  | 130 | 13   | 165 | 3.5 | 11 | KC50.9.012 |
| 250  | 180 | 15.5 | 215 | 4   | 14 | KC50.9.013 |

With flange and feet only on request.  
Ask for compatibility

P613A-**N** ... Basic gearbox  
Riduttore base

**R613A-N** ... Input Shaft  
Albero in entrata

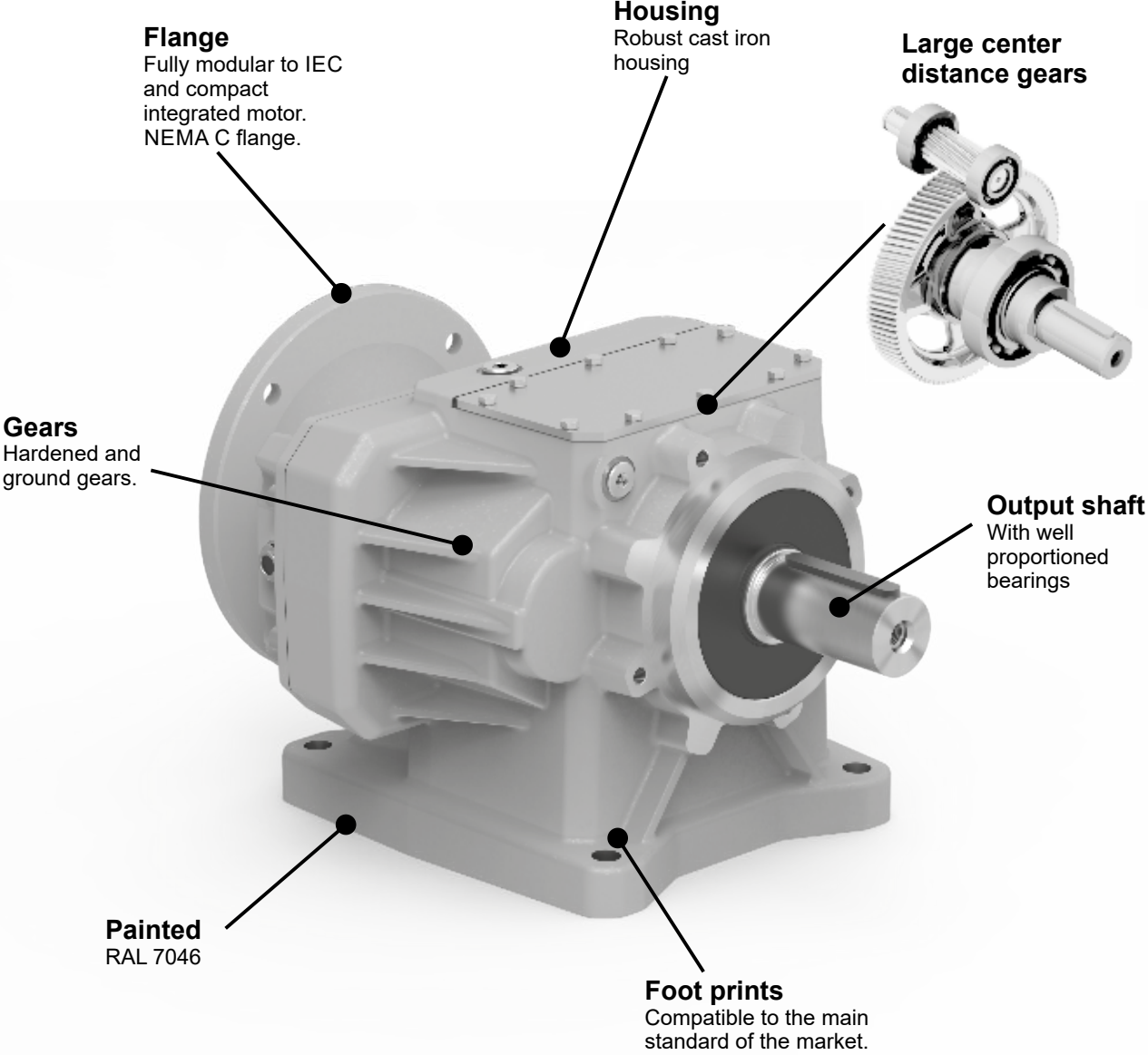


| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 |
|------------------|-----|------------------|-----|-------|------------|--------------------|
| 63 B5            | 248 | 251.1            | 140 | 250.5 | K063.4.041 | 256.5              |
| 71 B5            | 246 | 261.1            | 160 | 248.5 | K063.4.042 | 254.5              |
| 80/90 B5         | 248 | 281.1            | 200 | 250.5 | K063.4.043 | 256.5              |

| B14 Motor Flanges | A   | C <sub>max</sub> | g6  | k1    | kit code   | k1 with KC50.9.011 |
|-------------------|-----|------------------|-----|-------|------------|--------------------|
| 71 B14            | 246 | 233.6            | 105 | 248.5 | K063.4.047 | 254.5              |
| 80 B14            | 248 | 241.1            | 120 | 250.5 | K063.4.046 | 256.5              |
| 90 B14            | 248 | 251.1            | 140 | 250.5 | K063.4.041 | 256.5              |

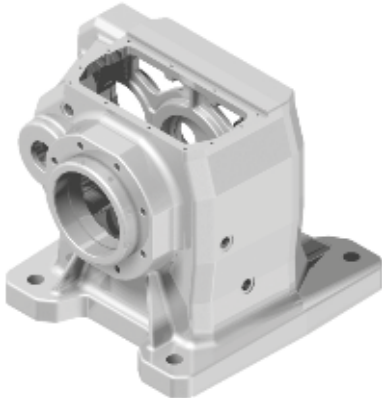
# Cast iron in line gearboxes

A modular and compact product



## Single-piece Cast Iron housing

with high tensile strength. Precision machined for alignment of bearings and gearing

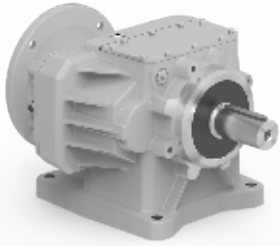


World wide sales network.

# Specific type datasheet on page...

On page / A pagina / Auf Seite / À la page / En la página

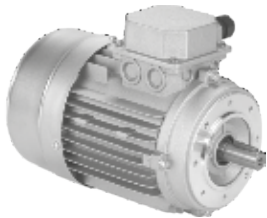
2 and 3 Stages



Types / Tipi  
Tipen / Types  
Tipos

| 6-5                  | 6-7                  | 6-9                  | 6-11                 | 6-13                  | 6-15                  | 6-17                  | 6-19                  | 6-21                  | 6-23                  |
|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <b>712C</b><br>675Nm | <b>713C</b><br>675Nm | <b>812C</b><br>900Nm | <b>813C</b><br>900Nm | <b>862C</b><br>1600Nm | <b>863C</b><br>1800Nm | <b>1002</b><br>2900Nm | <b>1003</b><br>3000Nm | <b>1102</b><br>4500Nm | <b>1103</b><br>4600Nm |

On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi  
Tipen / Types  
Tipos

| M-1                      |                          |                          |                          |                          |                              |             |                            |                            |                            |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|-------------|----------------------------|----------------------------|----------------------------|
| <b>56A</b><br><b>56B</b> | <b>63A</b><br><b>63B</b> | <b>71A</b><br><b>71B</b> | <b>80A</b><br><b>80B</b> | <b>90S</b><br><b>90L</b> | <b>100LA</b><br><b>100LB</b> | <b>112M</b> | <b>132S</b><br><b>132M</b> | <b>160M</b><br><b>160L</b> | <b>180M</b><br><b>180L</b> |

Type - Tipo - Typ  
Type - Tipo

Size - Grandezza - Grösse  
Taille - Tamaño

Mounting - Montaggio  
Montage - Fixation  
Tipo de montaje

Ratio - Rapporto  
Untersetzung  
Reduction  
Relación

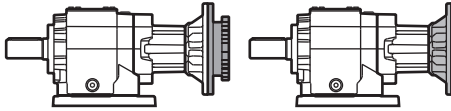
**P**

**712C**

**-F**

**6.57**

Cast iron coaxial gear boxes  
Riduttori coassiali in Ghisa

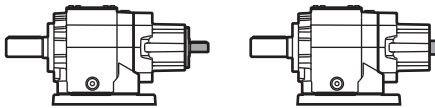


With IEC motor

**M**

With motor flange

**P**



With male input shaft

**R**

Modular base

**B**

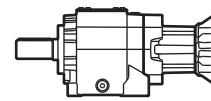
Not available for:  
862C, 1002, 1102,  
1003, 1103.

2 Stages  
Riduzioni  
Stufen  
Trains  
Etapas

**712C**  
**812C**  
**862C**  
**1002**  
**1102**

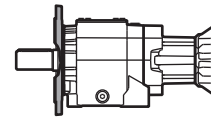
3 Stages  
Riduzioni  
Stufen  
Trains  
Etapas

**713C**  
**813C**  
**863C**  
**1003**  
**1103**

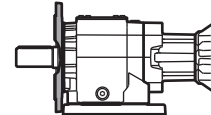


Without flange / feet

**-N**



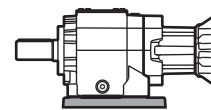
without feet  
712/3C - 812/3C



with integrated feet  
862/3C - 1002/3 - 1102/3

Output flange mounted

**-F**



Mounted feet

**B..**

Feet / piedini

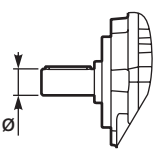
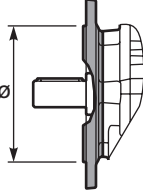



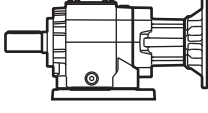
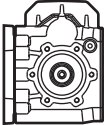
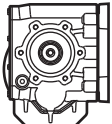
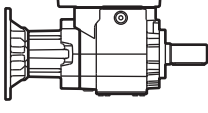
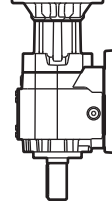
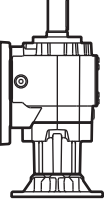
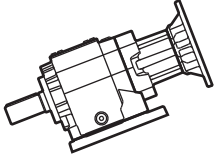




| Feet Code | Market reference | G  | H   | R   | L |
|-----------|------------------|----|-----|-----|---|
| B1        | 112              | 18 | 85  | 110 |   |
| B2        | 212/3            | 18 | 100 | 130 |   |
| S1        | 17               | 18 | 75  | 110 |   |
| S2        | 27               | 25 | 90  |     |   |
| M1        | 42/3             | 25 | 80  |     |   |
| L4        | 04               | 13 | 80  |     |   |
| L5        | 05               | 16 | 100 |     |   |

You see feet code in the chart of the dimensions  
Vedi codice piede nella tabella delle dimensioni



On request we can deliver our products according to the ATEX  
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
Sur demande nos produits peuvent se conformer à la réglementation ATEX  
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.



| Output shaft<br>Albero uscita<br>Abtriebswelle<br>Arbre de sortie<br>Eje en salida   | Output flange<br>Flangia uscita<br>Ausgangsflansch<br>Bride de sortie<br>Brida en salida | Motor size - Grandezza motore<br>Motor Grösse<br>Grandeur moteur - Tamaño motor | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada | Terminal box position<br>Posizione morsettieria<br>Klemmkastenlage<br>Position boîte à bornes<br>Posición caja de bornes |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
|--|--|---|--|--|--|-----------------------|-----------|-----------------------|-----------------------|-----------|-----------------------|-----------|-----------------------|--|-----------|------------------------|------------------------|-----------|------------------------|------------------------|------------------------|-----------|------------------------|------------------------|------------------------|-----------|------------------------|------------------------|------------------------|-----------|------------------------|------------------------|--|-----------|------------------------|----------------|------------------------|----------------|------------------------|-----------|------------------------|-----------|--------------------------------|--------------------------------|--------------------------------|----------------|--------------------------------|--------------------------------|---------------------------------|---|---|--|
| <p style="text-align: center;"><b>I</b></p>  <p>→ STANDARD</p> <table border="1"> <tr><td>712C 713C</td></tr> <tr><td><b>I</b> → <b>ø35</b></td></tr> <tr><td><b>L</b> → <b>ø38</b></td></tr> <tr><td>812C 813C</td></tr> <tr><td><b>M</b> → <b>ø40</b></td></tr> <tr><td><b>N</b> → <b>ø45</b></td></tr> <tr><td>862C 863C</td></tr> <tr><td><b>P</b> → <b>ø50</b></td></tr> <tr><td><b>J</b> → <b>ø60</b></td></tr> <tr><td>1002 1003</td></tr> <tr><td><b>J</b> → <b>ø60</b></td></tr> <tr><td>1102 1103</td></tr> <tr><td><b>A</b> → <b>ø70</b></td></tr> </table> | 712C 713C  | <b>I</b> → <b>ø35</b>   | <b>L</b> → <b>ø38</b>  | 812C 813C  | <b>M</b> → <b>ø40</b>  | <b>N</b> → <b>ø45</b> | 862C 863C | <b>P</b> → <b>ø50</b> | <b>J</b> → <b>ø60</b> | 1002 1003 | <b>J</b> → <b>ø60</b> | 1102 1103 | <b>A</b> → <b>ø70</b> | <p style="text-align: center;"><b>4</b></p>  <p>→ STANDARD</p> <p><b>N</b> Senza flangia<br/>Without flange</p> <table border="1"> <tr><td>712C 713C</td></tr> <tr><td><b>4</b> → <b>ø200</b></td></tr> <tr><td><b>5</b> → <b>ø250</b></td></tr> <tr><td>812C 813C</td></tr> <tr><td><b>5</b> → <b>ø250</b></td></tr> <tr><td><b>6</b> → <b>ø300</b></td></tr> <tr><td><b>7</b> → <b>ø350</b></td></tr> <tr><td>862C 863C</td></tr> <tr><td><b>6</b> → <b>ø300</b></td></tr> <tr><td><b>7</b> → <b>ø350</b></td></tr> <tr><td><b>8</b> → <b>ø450</b></td></tr> <tr><td>1002 1003</td></tr> <tr><td><b>6</b> → <b>ø300</b></td></tr> <tr><td><b>7</b> → <b>ø350</b></td></tr> <tr><td><b>8</b> → <b>ø450</b></td></tr> <tr><td>1102 1103</td></tr> <tr><td><b>7</b> → <b>ø350</b></td></tr> <tr><td><b>8</b> → <b>ø450</b></td></tr> </table> | 712C 713C | <b>4</b> → <b>ø200</b> | <b>5</b> → <b>ø250</b> | 812C 813C | <b>5</b> → <b>ø250</b> | <b>6</b> → <b>ø300</b> | <b>7</b> → <b>ø350</b> | 862C 863C | <b>6</b> → <b>ø300</b> | <b>7</b> → <b>ø350</b> | <b>8</b> → <b>ø450</b> | 1002 1003 | <b>6</b> → <b>ø300</b> | <b>7</b> → <b>ø350</b> | <b>8</b> → <b>ø450</b> | 1102 1103 | <b>7</b> → <b>ø350</b> | <b>8</b> → <b>ø450</b> | <p style="text-align: center;"><b>-F</b></p> <p>Flange<br/>Flangia</p>  <p><b>B5</b></p> <ul style="list-style-type: none"> <li>-A=56 (ø120)</li> <li>-B=63 (ø140)</li> <li>-C=71 (ø160)</li> <li>-D=80 (ø200)</li> <li>-E=90 (ø200)</li> <li>-F=100+112 (ø250)</li> <li>-G=132 (ø300)</li> <li>-H=160 (ø350)</li> <li>-I=180 (ø350)</li> <li>-L=200 (ø400)</li> <li>CA=225 (ø450)</li> </ul> <p><b>B14</b></p> <ul style="list-style-type: none"> <li>-O=56 (ø80)</li> <li>-P=63 (ø90)</li> <li>-Q=71 (ø105)</li> <li>-R=80 (ø120)</li> <li>-T=90 (ø140)</li> <li>-U=100+112 (ø160)</li> <li>-V=132 (ø200)</li> </ul> <p>Type R<br/>Tipo R</p>  <table border="1"> <tr><td>713C 813C</td></tr> <tr><td><b>-2</b> → <b>ø19</b></td></tr> <tr><td>712C 812C 863C</td></tr> <tr><td><b>-3</b> → <b>ø24</b></td></tr> <tr><td>862C 1003 1103</td></tr> <tr><td><b>-4</b> → <b>ø28</b></td></tr> <tr><td>1002 1102</td></tr> <tr><td><b>-6</b> → <b>ø42</b></td></tr> </table> <p>Without flange<br/>Senza flangia</p>  <p><b>-M</b> → With coupling</p> <table border="1"> <tr><td>713C 813C</td></tr> <tr><td><b>-1</b> → <b>ø14</b> (IEC71)</td></tr> <tr><td><b>-2</b> → <b>ø19</b> (IEC80)</td></tr> <tr><td><b>-3</b> → <b>ø24</b> (IEC90)</td></tr> <tr><td>712C 812C 863C</td></tr> <tr><td><b>-2</b> → <b>ø19</b> (IEC80)</td></tr> <tr><td><b>-3</b> → <b>ø24</b> (IEC90)</td></tr> <tr><td><b>-4</b> → <b>ø28</b> (IEC100)</td></tr> </table> | 713C 813C | <b>-2</b> → <b>ø19</b> | 712C 812C 863C | <b>-3</b> → <b>ø24</b> | 862C 1003 1103 | <b>-4</b> → <b>ø28</b> | 1002 1102 | <b>-6</b> → <b>ø42</b> | 713C 813C | <b>-1</b> → <b>ø14</b> (IEC71) | <b>-2</b> → <b>ø19</b> (IEC80) | <b>-3</b> → <b>ø24</b> (IEC90) | 712C 812C 863C | <b>-2</b> → <b>ø19</b> (IEC80) | <b>-3</b> → <b>ø24</b> (IEC90) | <b>-4</b> → <b>ø28</b> (IEC100) | <p style="text-align: center;"><b>B3</b></p>  <p><b>B3</b><br/>STANDARD</p>  <p><b>B6</b></p>  <p><b>B7</b></p>  <p><b>B8</b></p>  <p><b>V5</b></p>  <p><b>V6</b></p>  <p><b>V8</b></p> | <p style="text-align: center;"><b>ST</b></p> <p><b>ST</b><br/>standard bore<br/>foro standard</p> | <p>With Type M specify terminal box position<br/>Con tipo M specificare posizione morsettieria</p>  <p><b>A</b></p>  <p><b>B</b><br/>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |
| 712C 713C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>I</b> → <b>ø35</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>L</b> → <b>ø38</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 812C 813C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>M</b> → <b>ø40</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>N</b> → <b>ø45</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 862C 863C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>P</b> → <b>ø50</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>J</b> → <b>ø60</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 1002 1003  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>J</b> → <b>ø60</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 1102 1103  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>A</b> → <b>ø70</b>  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 712C 713C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>4</b> → <b>ø200</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>5</b> → <b>ø250</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 812C 813C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>5</b> → <b>ø250</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>6</b> → <b>ø300</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>7</b> → <b>ø350</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 862C 863C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>6</b> → <b>ø300</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>7</b> → <b>ø350</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>8</b> → <b>ø450</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 1002 1003  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>6</b> → <b>ø300</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>7</b> → <b>ø350</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>8</b> → <b>ø450</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 1102 1103  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>7</b> → <b>ø350</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>8</b> → <b>ø450</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 713C 813C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-2</b> → <b>ø19</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 712C 812C 863C   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-3</b> → <b>ø24</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 862C 1003 1103   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-4</b> → <b>ø28</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 1002 1102  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-6</b> → <b>ø42</b>   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 713C 813C  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-1</b> → <b>ø14</b> (IEC71)   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-2</b> → <b>ø19</b> (IEC80)   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-3</b> → <b>ø24</b> (IEC90)   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| 712C 812C 863C   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-2</b> → <b>ø19</b> (IEC80)   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-3</b> → <b>ø24</b> (IEC90)   |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |
| <b>-4</b> → <b>ø28</b> (IEC100)  |  |   |  |  |  |                       |           |                       |                       |           |                       |           |                       |  |           |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |                        |           |                        |                        |  |           |                        |                |                        |                |                        |           |                        |           |                                |                                |                                |                |                                |                                |                                 |   |   |  |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

Lifting / sollevamento / hubantriebe / levage / elevación

$$P \text{ [KW]} = \frac{M \text{ [Kg]} \cdot g \text{ [9.81]} \cdot v \text{ [m / s]}}{1000}$$

Rotation / rotazione / drehung / rotation / rotação

$$P \text{ [KW]} = \frac{M \text{ [Nm]} \cdot n \text{ [rpm]}}{9550}$$

Linear movement / traslazione / linearbewegung / translation / translación

$$P \text{ [KW]} = \frac{F \text{ [N]} \cdot v \text{ [m / s]}}{1000}$$

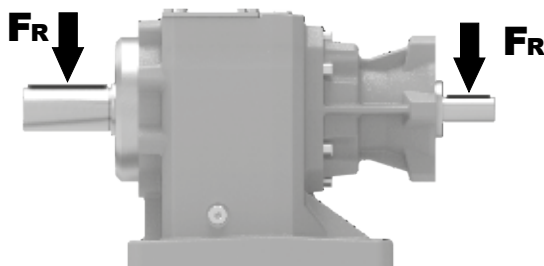
**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

$$M \text{ [Nm]} = \frac{9550 \cdot P \text{ [KW]}}{n \text{ [rpm]}}$$

$$M \text{ [lb in]} = \frac{63030 \cdot P \text{ [HP]}}{n \text{ [rpm]}}$$

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

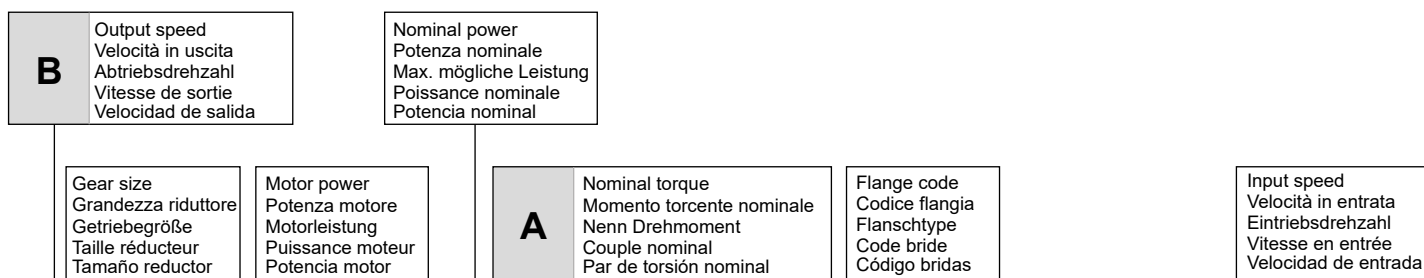
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$   | $F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor



**712C**

**Coaxial - Gear  
675Nm**

Rating - Cast Iron COAXIAL GEARBOXES



**QUICK SELECTION / Selezione veloce**

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |     |     | Available B14 motor flanges |    |    |     | Output Shaft<br> | Notes<br>Note<br>Anmerkungen<br>Note<br>Notas |      |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----|-----|-----------------------------|----|----|-----|------------------|---|------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -D                         | -E | -F  | -G  | -R                          | -T | -U | -V  |                  |   |      |    |
| 364.3   | <b>3.84</b>  | 9                               | 227                               | 1.5                    | <b>13.91</b>                      | <b>350</b>                         | 80                         | 90 | 100 | 112 | 132                         | 80 | 90 | 100 | 112              | 132   | 3317 | 01 |
| 257.5   | <b>5.44</b>  | 9                               | 321                               | 1.1                    | <b>10.11</b>                      | <b>360</b>                         |                            |    |     |     |                             |    |    |     |                  |   | 3313 | 02 |
| 233.3   | <b>6.00</b>  | 9                               | 354                               | 1.1                    | <b>9.67</b>                       | <b>380</b>                         |                            |    |     |     |                             |    |    |     |                  |   | 3312 | 03 |
| 187.5   | <b>7.47</b>  | 9                               | 440                               | 1.0                    | <b>8.59</b>                       | <b>420</b>                         |                            |    |     |     |                             |    |    |     |                  |   | 3310 | 04 |
| 165.1   | <b>8.48</b>  | 9                               | 500                               | 1.0                    | <b>8.64</b>                       | <b>480</b>                         |                            |    |     |     |                             |    |    |     |                  |   | 2513 | 05 |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Output shaft diam.  
Diam. albero uscita  
Durchmesser abtriebswelle  
Diametre arbre lent  
Diametro eje de salida

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
|  |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

|           |  |  |
|-----------|--|--|
| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |  |
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccia di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción   |  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-sockel<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |  |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccia<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible tambien sin casquillo                                   |  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |            |     | Available B14 motor flanges |    |            |      | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|------------|-----|-----------------------------|----|------------|------|-----------------------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -D                         | -E | -F         | -G  | -R                          | -T | -U         | -V   |                                   |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 80                         | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132  |                                   |                 |    |
| 364.3   | <b>3.84</b>  | 9                               | 227                               | 1.5                    | <b>13.91</b>                      | <b>350</b>                         |                            |    |            |     |                             |    |            | 3317 | standard<br>$\varnothing 35$      | 01              |    |
| 257.5   | <b>5.44</b>  | 9                               | 321                               | 1.1                    | <b>10.11</b>                      | <b>360</b>                         |                            |    |            |     |                             |    |            | 3313 |                                   | 02              |    |
| 233.3   | <b>6.00</b>  | 9                               | 354                               | 1.1                    | <b>9.67</b>                       | <b>380</b>                         |                            |    |            |     |                             |    |            | 3312 |                                   | 03              |    |
| 187.5   | <b>7.47</b>  | 9                               | 440                               | 1.0                    | <b>8.59</b>                       | <b>420</b>                         |                            |    |            |     |                             |    |            | 3310 |                                   | 04              |    |
| 165.1   | <b>8.48</b>  | 9                               | 500                               | 1.0                    | <b>8.64</b>                       | <b>480</b>                         |                            |    |            |     |                             |    |            | 2513 |                                   | 05              |    |
| 149.6   | <b>9.36</b>  | 7.5                             | 444                               | 1.1                    | <b>8.16</b>                       | <b>500</b>                         |                            |    |            |     |                             |    |            | 2512 |                                   | 06              |    |
| 120.2   | <b>11.65</b> | 7.5                             | 553                               | 1.1                    | <b>8.00</b>                       | <b>610</b>                         |                            |    |            |     |                             |    |            | 2510 |                                   | 07              |    |
| 97.3  | <b>14.39</b> | 5.5                             | 504                               | 1.2                    | <b>6.69</b>                       | <b>630</b>                         |                            |    |            |     |                             |    |            | 1713 |                                   | 08              |    |
| 88.1  | <b>15.88</b> | 5.5                             | 557                               | 1.2                    | <b>6.35</b>                       | <b>660</b>                         |                            |    |            |     |                             |    |            | 1712 |                                   | 09              |    |
| 70.8  | <b>19.76</b> | 5.5                             | 693                               | 1.0                    | <b>5.22</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 1710 |                                   | On request      | 10 |
| 63.4  | <b>22.08</b> | 4                               | 566                               | 1.2                    | <b>4.67</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 1213 |                                   | 11              |    |
| 57.4  | <b>24.38</b> | 4                               | 625                               | 1.1                    | <b>4.23</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 1212 |                                   | 12              |    |
| 46.2  | <b>30.33</b> | 3                               | 586                               | 1.2                    | <b>3.40</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 1210 |                                   | 13              |    |
| 41.2  | <b>34.00</b> | 3                               | 656                               | 1.0                    | <b>3.03</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 912  |                                   | 14              |    |
| 36.1  | <b>38.81</b> | 2.2                             | 552                               | 1.2                    | <b>2.66</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 812  |                                   | 15              |    |
| 33.1  | <b>42.31</b> | 2.2                             | 601                               | 1.1                    | <b>2.44</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 910  |                                   | 16              |    |
| 29.0  | <b>48.30</b> | 2.2                             | 687                               | 1.0                    | <b>2.13</b>                       | <b>675</b>                         |                            |    |            |     |                             |    |            | 810  |                                   | 17              |    |

The dynamic efficiency is **0.96** for all ratios

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **712C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **712C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **712C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **712C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **712C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |           |           |           |                    |           |           |
|-----------------------|-----------|-----------|-----------|--------------------|-----------|-----------|
|                       |           |           |           |                    |           |           |
| <b>B3</b>             | <b>B6</b> | <b>B7</b> | <b>B8</b> | <b>V5</b>          | <b>V6</b> | <b>V8</b> |
| 1.50 LT               | 2.30 LT   | 1.90 LT   | 1.70 LT   | 2.60 LT            | 2.00 LT   | Ask       |
| SHELL Omala S4 WE 320 |           |           |           | ENI Telium VSF 320 |           |           |

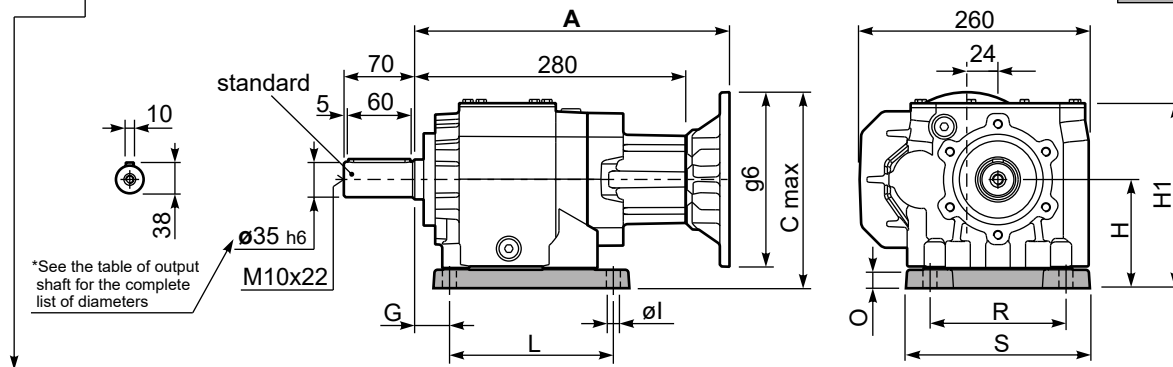
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |     |      |                                      |      |      |            |      |      |
|---|-----|------|--------------------------------------|------|------|------------|------|------|
| <b>Output shaft</b><br>Albero di uscita |     |      | $F_{eq} = F_R \cdot \frac{78}{X+38}$ |      |      |            |      |      |
|   |     |      |                                      |      |      |            |      |      |
| $n_2$                                   | FA  | FR   | $n_2$                                | FA   | FR   | $n_2$      | FA   | FR   |
| <b>300</b>                              | 680 | 3400 | <b>140</b>                           | 960  | 4800 | <b>70</b>  | 1300 | 6500 |
| <b>250</b>                              | 760 | 3800 | <b>120</b>                           | 1040 | 5200 | <b>40</b>  | 1460 | 7300 |
| <b>200</b>                              | 900 | 4500 | <b>85</b>                            | 1120 | 5600 | <b>15</b>  | 1800 | 9000 |
| <b>Input shaft</b><br>Albero in entrata |     |      |                                      |      |      |            |      |      |
| $n_1$                                   | FA  | FR   | $n_1$                                | FA   | FR   | $n_1$      | FA   | FR   |
| <b>1400</b>                             | 450 | 2250 | <b>900</b>                           | 500  | 2500 | <b>500</b> | 600  | 3000 |

**tab. 2**

P712C**S6**... With feet  
Con piedini

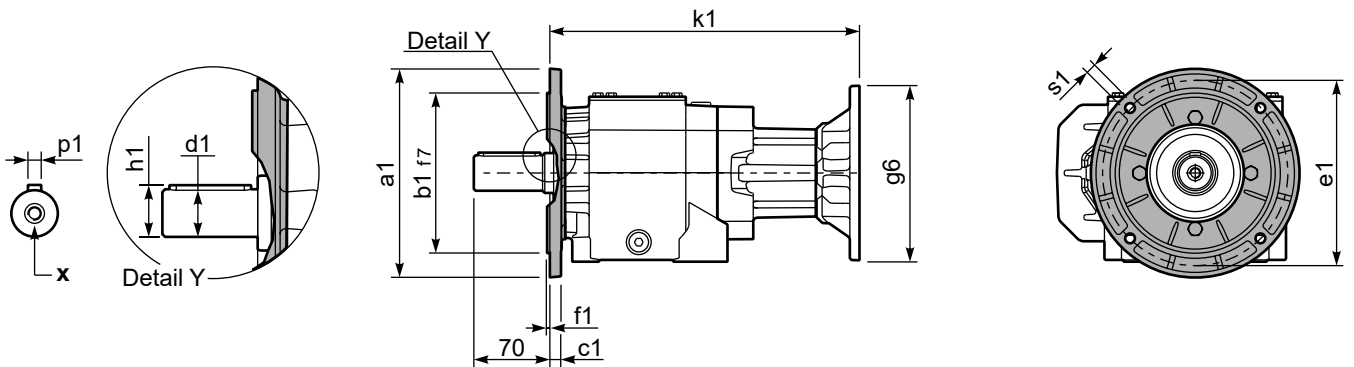
Gearbox weight **33.3 kg**  
peso riduttore With flange  
With feet **35.0 kg**



**Feet / piedini**

| Feet Code | Market reference | G    | H   | R   | L     | S   | H1  | O  | ø1 | B5 max. Flange | kit code   |
|-----------|------------------|------|-----|-----|-------|-----|-----|----|----|----------------|------------|
| B4        | 412/3            | 19.5 | 130 | 180 | 149.5 | 220 | 220 | 25 | 14 | -              | KC71.9.022 |
| S6        | 67               | 30   | 130 | 150 | 195   | 210 | 220 | 25 | 14 | -              | KC71.9.024 |

P712C-**F**... Output flanges  
flange di uscita



**\*Available output shaft / Albero di uscita**

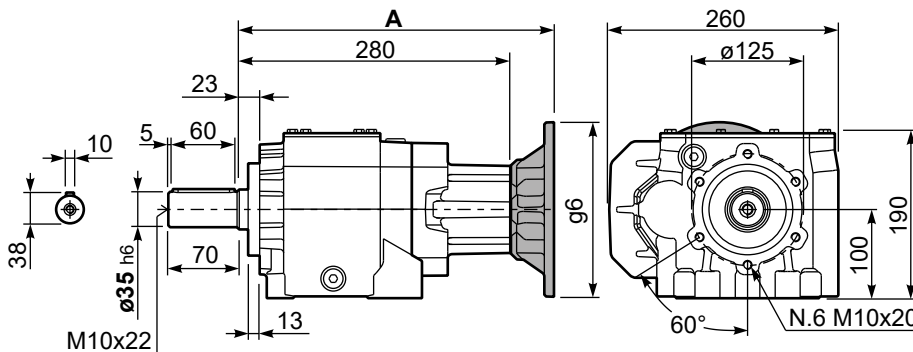
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 35x70    | 10 | 38 | M10x22 |
| On request<br>A richiesta | ø 38x70    | 10 | 41 | M10x25 |

**Available output flanges / flange di uscita**

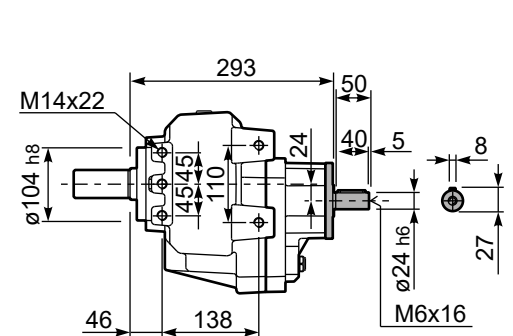
| a1 ø | b1  | c1 | e1  | f1  | s1 | kit code   |
|------|-----|----|-----|-----|----|------------|
| 200  | 130 | 11 | 165 | 3.5 | 11 | KC71.9.012 |
| 250  | 180 | 13 | 215 | 4   | 14 | KC81.9.013 |
| -    | -   | -  | -   | -   | -  | -          |

With flange and feet only on request. Ask for compatibility

P712C-**N**... Basic gearbox  
Riduttore base



**R712C-N**... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|------------------|-------|------------------|-----|-------|-------------|
| 80/90 B5         | 300.5 | 230              | 200 | 300.5 | K023.4.042  |
| 100/112 B5       | 309.5 | 255              | 250 | 309.5 | K023.4.043  |
| 132 B5           | 331   | 280              | 300 | 331   | KC51.4.043C |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|-------------------|-------|------------------|-----|-------|-------------|
| 80 B14            | 300.5 | 190              | 120 | 300.5 | K085.4.046  |
| 90 B14            | 300.5 | 200              | 140 | 300.5 | K085.4.045  |
| 100/112 B14       | 309.5 | 210              | 160 | 309.5 | K085.4.047  |
| 132 B14           | 331   | 230              | 200 | 331   | KC51.4.041C |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |                  | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|------------------|-----------------------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T               |                                   |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90               |                                   |                 |
| 22.3  | <b>62.76</b>  | 1.5                             | 603                               | 1.1                    | <b>1.68</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 191213                            | 01              |
| 20.2  | <b>69.28</b>  | 1.5                             | 665                               | 1.0                    | <b>1.52</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 191212                            | 02              |
| 19.2  | <b>72.75</b>  | 1.5                             | 698                               | 1.0                    | <b>1.45</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 171213                            | 03              |
| 17.4  | <b>80.29</b>  | 1.5                             | 771                               | 0.9                    | <b>1.31</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 171212                            | 04              |
| 16.4  | <b>85.39</b>  | 1.1                             | 599                               | 1.1                    | <b>1.23</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 151213                            | 05              |
| 14.9  | <b>94.25</b>  | 1.1                             | 661                               | 1.0                    | <b>1.12</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 151212                            | 06              |
| 13.7  | <b>101.92</b> | 1.1                             | 715                               | 0.9                    | <b>1.03</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  | standard         | 131213                            | 07              |
| 12.4  | <b>112.50</b> | 0.75                            | 541                               | 1.2                    | <b>0.94</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  | $\varnothing 35$ | 131212                            | 08              |
| 11.9  | <b>117.29</b> | 0.75                            | 564                               | 1.2                    | <b>0.90</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 151210                            | 09              |
| 10.1  | <b>139.13</b> | 0.75                            | 669                               | 1.0                    | <b>0.76</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  | On request       | 101213                            | 10              |
| 9.1   | <b>153.56</b> | 0.75                            | 739                               | 0.9                    | <b>0.69</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 101212                            | 11              |
| 7.7   | <b>181.57</b> | 0.55                            | 644                               | 1.0                    | <b>0.58</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 91213                             | 12              |
| 7.0   | <b>200.42</b> | 0.55                            | 711                               | 0.9                    | <b>0.53</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 91212                             | 13              |
| 5.6   | <b>249.41</b> | 0.37                            | 592                               | 1.1                    | <b>0.42</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 91210                             | 14              |
| 4.3   | <b>329.33</b> | 0.37                            | 781                               | 0.9                    | <b>0.32</b>                       | <b>675</b>                         | B                          |    |    |    | C                           | C  |                  | 71210                             | 15              |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **713C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **713C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **713C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **713C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **713C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                              |           |           |           |                           |           |           |
|------------------------------|-----------|-----------|-----------|---------------------------|-----------|-----------|
|                              |           |           |           |                           |           |           |
| <b>B3</b>                    | <b>B6</b> | <b>B7</b> | <b>B8</b> | <b>V5</b>                 | <b>V6</b> | <b>V8</b> |
| 1.60 LT                      | 2.20 LT   | 1.80 LT   | 1.70 LT   | 2.80 LT                   | 1.90 LT   | Ask       |
| <b>SHELL Omala S4 WE 320</b> |           |           |           | <b>ENI Telium VSF 320</b> |           |           |

For all details on lubrication and plugs check our website

Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{78}{X+38}$

| $n_2$      | FA  | FR   | $n_2$      | FA   | FR   | $n_2$     | FA   | FR   |
|------------|-----|------|------------|------|------|-----------|------|------|
| <b>300</b> | 680 | 3400 | <b>140</b> | 960  | 4800 | <b>70</b> | 1300 | 6500 |
| <b>250</b> | 760 | 3800 | <b>120</b> | 1040 | 5200 | <b>40</b> | 1460 | 7300 |
| <b>200</b> | 900 | 4500 | <b>85</b>  | 1120 | 5600 | <b>15</b> | 1800 | 9000 |

**Input shaft**  
Albero in entrata

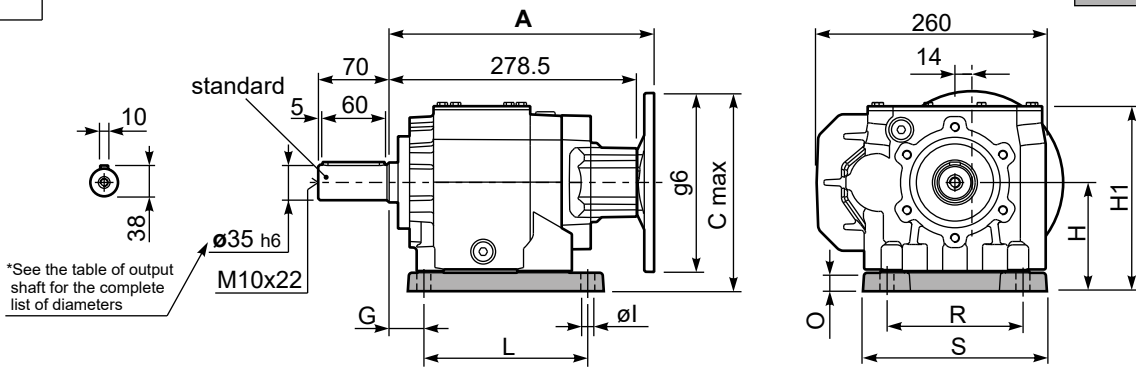
| $n_1$       | FA  | FR   |
|-------------|-----|------|
| <b>1400</b> | 400 | 2000 |
| <b>900</b>  | 440 | 2200 |
| <b>500</b>  | 440 | 2200 |

tab. 2



P713C**S6**... With feet  
Con piedini

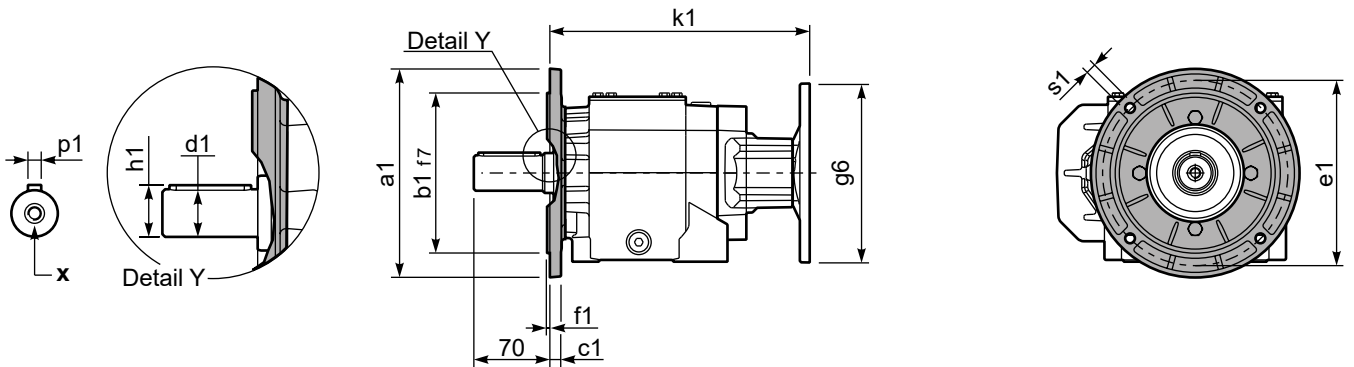
Gearbox weight **34.5 kg**  
peso riduttore With feet **36.2 kg**



**Feet / piedini**

| Feet Code | Market reference | G    | H   | R   | L     | S   | H1  | O  | øl | B5 max. Flange | kit code   |
|-----------|------------------|------|-----|-----|-------|-----|-----|----|----|----------------|------------|
| B4        | 412/3            | 19.5 | 130 | 180 | 149.5 | 220 | 220 | 25 | 14 | -              | KC71.9.022 |
| S6        | 67               | 30   | 130 | 150 | 195   | 210 | 220 | 25 | 14 | -              | KC71.9.024 |

P713C-**F**... Output flanges  
flange di uscita



**\*Available output shaft / Albero di uscita**

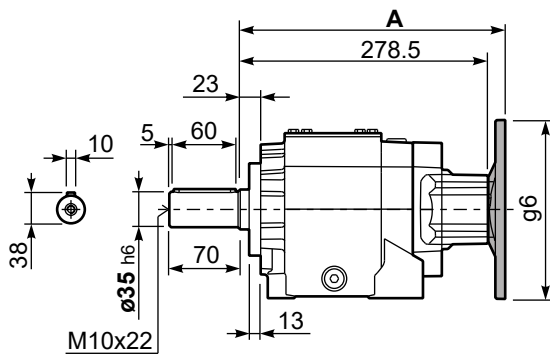
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 35x70    | 10 | 38 | M10x22 |
| On request<br>A richiesta | ø 38x70    | 10 | 41 | M10x25 |

**Available output flanges / flange di uscita**

| a1 ø | b1  | c1 | e1  | f1  | s1 | kit code   |
|------|-----|----|-----|-----|----|------------|
| 200  | 130 | 11 | 165 | 3.5 | 11 | KC71.9.012 |
| 250  | 180 | 13 | 215 | 4   | 14 | KC81.9.013 |
| -    | -   | -  | -   | -   | -  | -          |

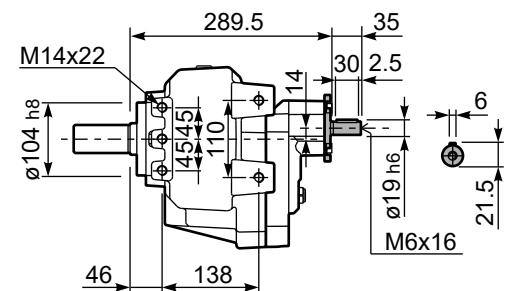
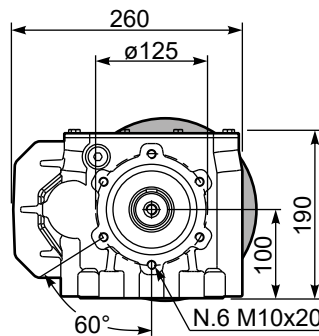
With flange and feet only on request. Ask for compatibility

P713C-**N**... Basic gearbox  
Riduttore base



| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|------------------|-----|------------------|-----|-----|------------|
| 63 B5            | 299 | 200              | 140 | 299 | K063.4.041 |
| 71 B5            | 297 | 210              | 160 | 297 | K063.4.042 |
| 80/90 B5         | 299 | 230              | 200 | 299 | K063.4.043 |

**R713C-N**... Input Shaft  
Albero in entrata



| B14 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|-------------------|-----|------------------|-----|-----|------------|
| 71 B14            | 297 | 182.5            | 105 | 297 | K063.4.047 |
| 80 B14            | 299 | 190              | 120 | 299 | K063.4.046 |
| 90 B14            | 299 | 200              | 140 | 299 | K063.4.041 |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |            |     | Available B14 motor flanges |    |            |      | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|------------|-----|-----------------------------|----|------------|------|-----------------------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -D                         | -E | -F         | -G  | -R                          | -T | -U         | -V   |                                   |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 80                         | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132  |                                   |                 |
| 364.3   | <b>3.84</b>  | 9                               | 227                               | 2.2                    | 19.47                             | 490                                |                            |    |            |     |                             |    |            | 3317 | standard<br>$\varnothing 40$      | 01              |
| 257.5   | <b>5.44</b>  | 9                               | 321                               | 1.6                    | 14.61                             | 520                                |                            |    |            |     |                             |    |            | 3313 |                                   | 02              |
| 233.3   | <b>6.00</b>  | 9                               | 354                               | 1.6                    | 14.00                             | 550                                |                            |    |            |     |                             |    |            | 3312 |                                   | 03              |
| 187.5   | <b>7.47</b>  | 9                               | 440                               | 1.4                    | 12.27                             | 600                                |                            |    |            |     |                             |    |            | 3310 |                                   | 04              |
| 165.1   | <b>8.48</b>  | 9                               | 500                               | 1.3                    | 11.43                             | 635                                |                            |    |            |     |                             |    |            | 2513 |                                   | 05              |
| 149.6   | <b>9.36</b>  | 9                               | 552                               | 1.2                    | 10.44                             | 640                                |                            |    |            |     |                             |    |            | 2512 |                                   | 06              |
| 120.2   | <b>11.65</b> | 9                               | 687                               | 1.0                    | 8.65                              | 660                                |                            |    |            |     |                             |    |            | 2510 |                                   | 07              |
| 97.3  | <b>14.39</b> | 7.5                             | 683                               | 1.1                    | 7.64                              | 720                                |                            |    |            |     |                             |    |            | 1713 |                                   | 08              |
| 88.1  | <b>15.88</b> | 7.5                             | 754                               | 1.0                    | 7.21                              | 750                                |                            |    |            |     |                             |    |            | 1712 |                                   | 09              |
| 70.8  | <b>19.76</b> | 7.5                             | 938                               | 0.9                    | 6.34                              | 820                                |                            |    |            |     |                             |    |            | 1710 |                                   | On request      |
| 63.4  | <b>22.08</b> | 5.5                             | 774                               | 1.1                    | 5.98                              | 865                                |                            |    |            |     |                             |    |            | 1213 |                                   | 11              |
| 57.4  | <b>24.38</b> | 5.5                             | 854                               | 1.0                    | 5.42                              | 865                                |                            |    |            |     |                             |    |            | 1212 |                                   | 12              |
| 46.2  | <b>30.33</b> | 4                               | 778                               | 1.1                    | 4.35                              | 865                                |                            |    |            |     |                             |    |            | 1210 |                                   | 13              |
| 41.2  | <b>34.00</b> | 4                               | 872                               | 1.0                    | 3.88                              | 865                                |                            |    |            |     |                             |    |            | 912  |                                   | 14              |
| 36.1  | <b>38.81</b> | 3                               | 749                               | 1.1                    | 3.33                              | 846                                |                            |    |            |     |                             |    |            | 812  |                                   | 15              |
| 33.1  | <b>42.31</b> | 3                               | 817                               | 1.1                    | 3.12                              | 865                                |                            |    |            |     |                             |    |            | 910  |                                   | 16              |
| 29.0  | <b>48.30</b> | 3                               | 932                               | 0.9                    | 2.73                              | 865                                |                            |    |            |     |                             |    |            | 810  |                                   | 17              |

The dynamic efficiency is **0.96** for all ratios

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **812C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **812C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **812C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **812C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **812C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                    |         |     |
|-----------------------|---------|---------|---------|--------------------|---------|-----|
|                       |         |         |         |                    |         |     |
| B3                    | B6      | B7      | B8      | V5                 | V6      | V8  |
| 1.50 LT               | 2.30 LT | 1.90 LT | 1.70 LT | 2.60 LT            | 2.00 LT | Ask |
| SHELL Omala S4 WE 320 |         |         |         | ENI Telium VSF 320 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{78}{X+38}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|-------|-------|------|-------|
| 300   | 1300 | 6500 | 140   | 1780 | 8900  | 70    | 2200 | 11000 |
| 250   | 1420 | 7100 | 120   | 1900 | 9500  | 40    | 2360 | 11800 |
| 200   | 1600 | 8000 | 85    | 2040 | 10200 | 15    | 2400 | 12000 |

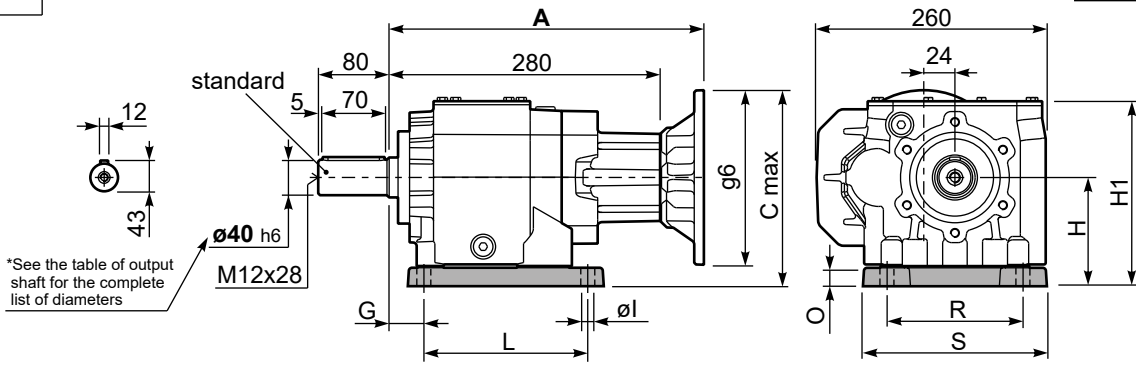
**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

**tab. 2**

P812C**S7**... With feet  
Con piedini

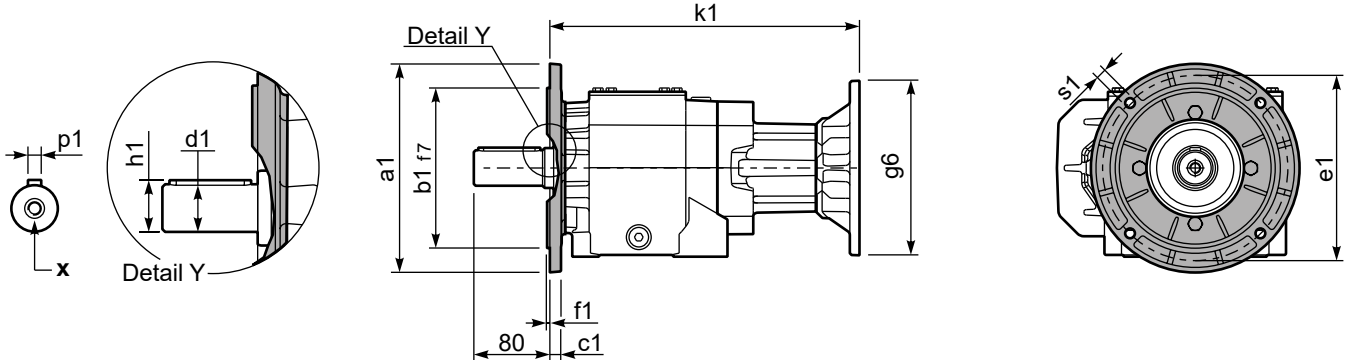
Gearbox weight **33.7 kg**  
peso riduttore With flange  
With feet **39.2 kg**



**Feet / piedini**

| Feet Code | Market reference | G  | H   | R   | L   | S   | H1    | O  | øI   | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|-----|-----|-----|-------|----|------|----------------|------------|
| B5        | 512/3            | 25 | 155 | 225 | 156 | 270 | 245.5 | 30 | 18   | -              | KC81.9.022 |
| S7        | 77               | 35 | 140 | 170 | 205 | 230 | 230.5 | 30 | 17.5 | -              | KC81.9.024 |

P812C-**F**... Output flanges  
flange di uscita



**\*Available output shaft / Albero di uscita**

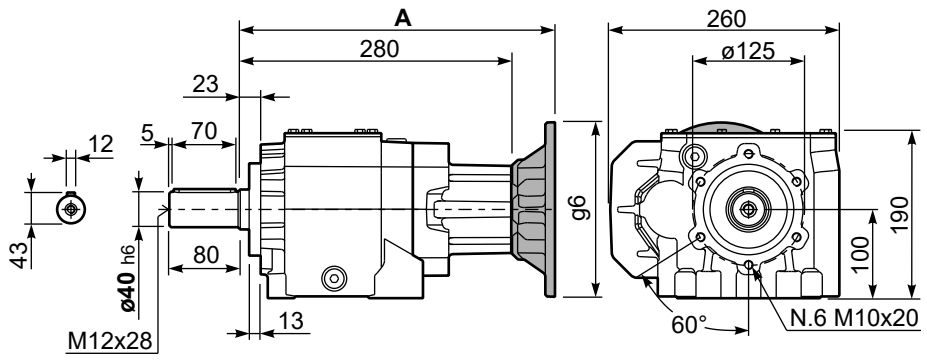
|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ø 40x80    | 12 | 43   | M12x28 |
| On request<br>A richiesta | ø 45x90    | 14 | 48.5 | M14x34 |

**Available output flanges / flange di uscita**

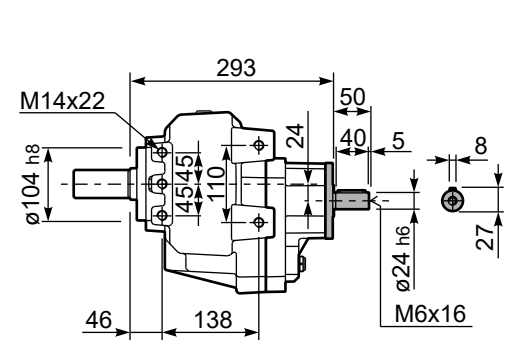
| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 4  | 14 | KC81.9.013 |
| 300  | 230 | 16 | 265 | 4  | 14 | KC81.9.014 |
| -    | -   | -  | -   | -  | -  | -          |

With flange and feet only on request. Ask for compatibility

P812C-**N**... Basic gearbox  
Riduttore base



**R812C-N**... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|------------------|-------|------------------|-----|-------|-------------|
| 80/90 B5         | 300.5 | 255              | 200 | 300.5 | K023.4.042  |
| 100/112 B5       | 309.5 | 280              | 250 | 309.5 | K023.4.043  |
| 132 B5           | 331   | 305              | 300 | 331   | KC51.4.043C |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|-------------------|-------|------------------|-----|-------|-------------|
| 80 B14            | 300.5 | 215              | 120 | 300.5 | K085.4.046  |
| 90 B14            | 300.5 | 225              | 140 | 300.5 | K085.4.045  |
| 100/112 B14       | 309.5 | 235              | 160 | 309.5 | K085.4.047  |
| 132 B14           | 331   | 255              | 200 | 331   | KC51.4.041C |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    |     | Available B14 motor flanges |    |    |    | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----|-----------------------------|----|----|----|-----------------------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -F  | -Q                          | -R | -T | -U |                                   |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 100 | 112                         | 71 | 80 | 90 |                                   |                 |
| 22.3  | <b>62.76</b>  | 2.2                             | 874                               | 1.0                    | <b>2.15</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 191213                            | 01              |
| 20.2  | <b>69.28</b>  | 2.2                             | 965                               | 0.9                    | <b>1.95</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 191212                            | 02              |
| 19.2  | <b>72.75</b>  | 1.5                             | 698                               | 1.2                    | <b>1.85</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 171213                            | 03              |
| 17.4  | <b>80.29</b>  | 1.5                             | 771                               | 1.1                    | <b>1.68</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 171212                            | 04              |
| 16.4  | <b>85.39</b>  | 1.5                             | 820                               | 1.1                    | <b>1.58</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 151213                            | 05              |
| 14.9  | <b>94.25</b>  | 1.5                             | 905                               | 1.0                    | <b>1.43</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 151212                            | 06              |
| 13.7  | <b>101.92</b> | 1.1                             | 715                               | 1.2                    | <b>1.32</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 131213                            | 07              |
| 12.4  | <b>112.50</b> | 1.1                             | 789                               | 1.1                    | <b>1.20</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 131212                            | 08              |
| 11.9  | <b>117.29</b> | 1.1                             | 822                               | 1.1                    | <b>1.15</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 151210                            | 09              |
| 10.1  | <b>139.13</b> | 1.1                             | 976                               | 0.9                    | <b>0.97</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 101213                            | 10              |
| 9.1   | <b>153.56</b> | 0.75                            | 739                               | 1.2                    | <b>0.88</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 101212                            | 11              |
| 7.7   | <b>181.57</b> | 0.75                            | 873                               | 1.0                    | <b>0.74</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 91213                             | 12              |
| 7.0   | <b>200.42</b> | 0.55                            | 711                               | 1.2                    | <b>0.67</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 91212                             | 13              |
| 5.6   | <b>249.41</b> | 0.55                            | 885                               | 1.0                    | <b>0.54</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 91210                             | 14              |
| 4.3   | <b>329.33</b> | 0.37                            | 781                               | 1.1                    | <b>0.41</b>                       | <b>865</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 71210                             | 15              |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili  
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione  
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione  
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **813C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **813C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **813C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **813C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **813C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|           |           |           |           |           |           |           |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|           |           |           |           |           |           |           |
| <b>B3</b> | <b>B6</b> | <b>B7</b> | <b>B8</b> | <b>V5</b> | <b>V6</b> | <b>V8</b> |
| 1.60 LT   | 2.20 LT   | 1.80 LT   | 1.70 LT   | 2.80 LT   | 1.90 LT   | Ask       |

**SHELL** Omala S4 WE 320      **ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
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#### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{78}{X+38}$

| $n_2$      | FA   | FR   | $n_2$      | FA   | FR    | $n_2$     | FA   | FR    |
|------------|------|------|------------|------|-------|-----------|------|-------|
| <b>300</b> | 1300 | 6500 | <b>140</b> | 1780 | 8900  | <b>70</b> | 2200 | 11000 |
| <b>250</b> | 1420 | 7100 | <b>120</b> | 1900 | 9500  | <b>40</b> | 2360 | 11800 |
| <b>200</b> | 1600 | 8000 | <b>85</b>  | 2040 | 10200 | <b>15</b> | 2400 | 12000 |

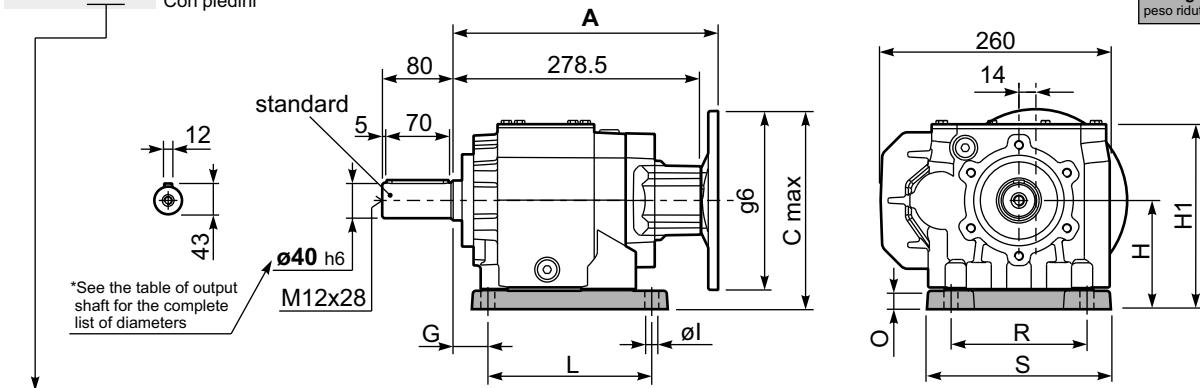
**Input shaft**  
Albero in entrata

| $n_1$       | FA  | FR   |
|-------------|-----|------|
| <b>1400</b> | 400 | 2000 |
| <b>900</b>  | 440 | 2200 |
| <b>500</b>  | 440 | 2200 |

tab. 2

P813C**S7**... With feet  
Con piedini

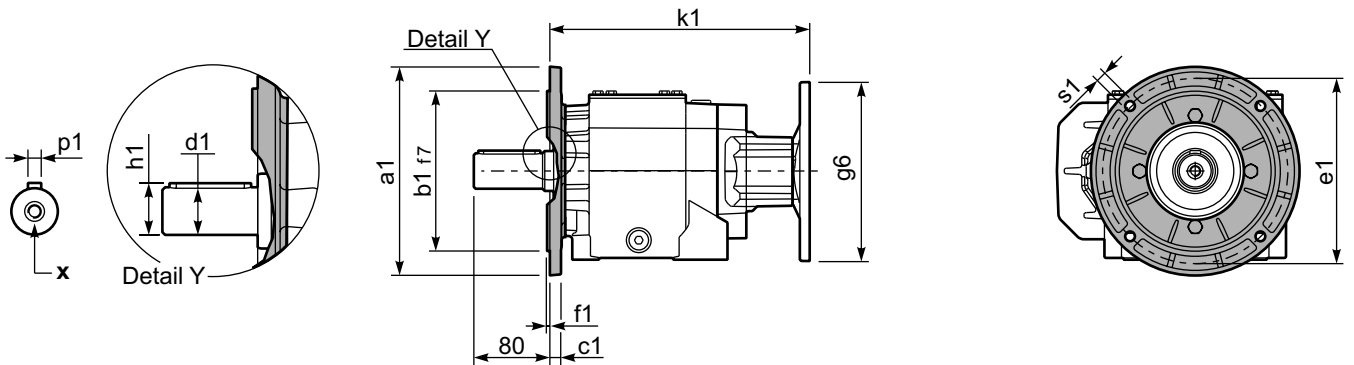
Gearbox weight **34.8 kg**  
peso riduttore With feet **40.3 kg**



Feet / piedini

| Feet Code | Market reference | G  | H   | R   | L   | S   | H1    | O  | øl   | B5 max. Flange | kit code   |
|-----------|------------------|----|-----|-----|-----|-----|-------|----|------|----------------|------------|
| B5        | 512/3            | 25 | 155 | 225 | 156 | 270 | 245.5 | 30 | 18   | -              | KC81.9.022 |
| S7        | 77               | 35 | 140 | 170 | 205 | 230 | 230.5 | 30 | 17.5 | -              | KC81.9.024 |

P813C-**F**... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ø 40x80    | 12 | 43   | M12x28 |
| On request<br>A richiesta | ø 45x90    | 14 | 48.5 | M14x34 |

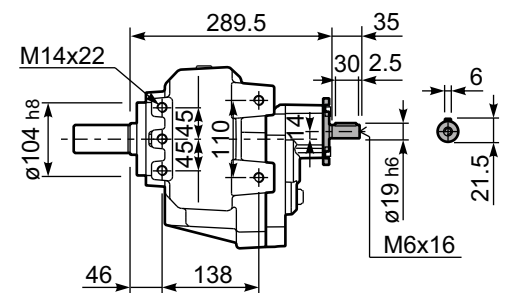
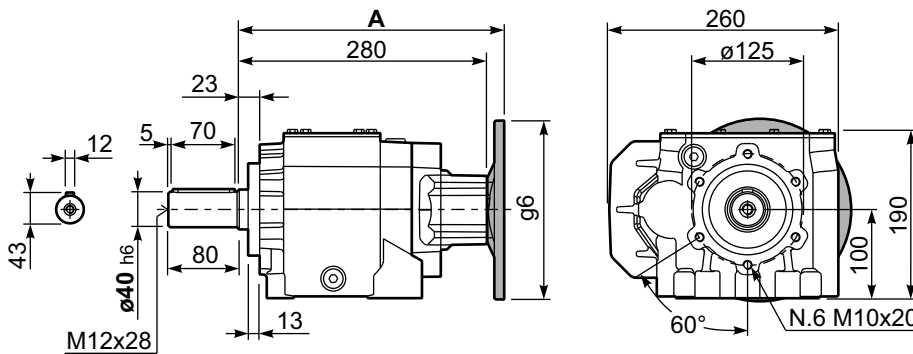
Available output flanges / flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 4  | 14 | KC81.9.013 |
| 300  | 230 | 16 | 265 | 4  | 14 | KC81.9.014 |
| -    | -   | -  | -   | -  | -  | -          |

With flange and feet only on request. Ask for compatibility

P813C-**N**... Basic gearbox  
Riduttore base

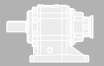
R813C-**N**... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|------------------|-----|------------------|-----|-----|------------|
| 63 B5            | 299 | 225              | 140 | 299 | K063.4.041 |
| 71 B5            | 297 | 235              | 160 | 297 | K063.4.042 |
| 80/90 B5         | 299 | 255              | 200 | 299 | K063.4.043 |
| 100/112 B5       | 314 | 280              | 250 | 314 | KC40.4.043 |

| B14 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|-------------------|-----|------------------|-----|-----|------------|
| 71 B14            | 297 | 207.5            | 105 | 297 | K063.4.047 |
| 80 B14            | 299 | 215              | 120 | 299 | K063.4.046 |
| 90 B14            | 299 | 225              | 140 | 299 | K063.4.041 |
| 100/112 B14       | 314 | 235              | 160 | 314 | KC40.4.041 |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |      | Output Shaft<br> | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|----------------------|------|------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -F                  | -G  | -H  | -I  | -U                   | -V   |                  |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 100<br>112          | 132 | 160 | 180 | 100<br>112           | 132  |                  |                 |
| 317   | 4.42         | 22                              | 611                               | 1.1                    | 24.2                              | 700                                |                     |     |     |     |                      | 3015 | 01               |                 |
| 264   | 5.30         | 22                              | 733                               | 1.0                    | 20.2                              | 700                                |                     |     |     |     |                      | 3013 | 02               |                 |
| 219   | 6.38         | 18.5                            | 742                               | 1.1                    | 19.1                              | 800                                |                     |     |     |     |                      | 3011 | 03               |                 |
| 168   | 8.33         | 15                              | 784                               | 1.0                    | 14.7                              | 800                                |                     |     |     |     |                      | 2015 | 04               |                 |
| 140   | 9.99         | 15                              | 940                               | 1.0                    | 13.8                              | 900                                |                     |     |     |     |                      | 2013 | 05               |                 |
| 124   | 11.26        | 15                              | 1060                              | 1.0                    | 14.9                              | 1100                               |                     |     |     |     |                      | 1615 | 06               |                 |
| 116   | 12.03        | 15                              | 1132                              | 1.1                    | 15.2                              | 1200                               |                     |     |     |     |                      | 2011 | 07               |                 |
| 104   | 13.50        | 15                              | 1271                              | 1.1                    | 15.8                              | 1400                               |                     |     |     |     |                      | 1613 | 08               |                 |
| 96  | 14.65        | 15                              | 1378                              | 1.1                    | 15.6                              | 1500                               |                     |     |     |     |                      | 1315 | 09               |                 |
| 86  | 16.26        | 15                              | 1531                              | 1.0                    | 14.1                              | 1500                               |                     |     |     |     |                      | 1611 | 10               |                 |
| 80  | 17.56        | 11                              | 1214                              | 1.2                    | 13.0                              | 1500                               |                     |     |     |     |                      | 1313 | 11               |                 |
| 65  | 21.50        | 11                              | 1486                              | 1.1                    | 11.4                              | 1600                               |                     |     |     |     |                      | 1113 | 12               |                 |
| 54  | 25.88        | 9                               | 1526                              | 1.0                    | 9.4                               | 1600                               |                     |     |     |     |                      | 1111 | 13               |                 |
| 45.0  | 31.09        | 7.5                             | 1475                              | 1.0                    | 7.2                               | 1460                               |                     |     |     |     |                      | 813  | 14               |                 |
| 37.4  | 37.43        | 5.5                             | 1312                              | 1.2                    | 6.5                               | 1600                               |                     |     |     |     |                      | 811  | 15               |                 |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **862C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **862C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **862C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **862C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **862C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| 3.10 LT               | 4.50 LT | 2.50 LT | 3.10 LT | 4.90 LT         | 4.20 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 1800 | 9000  | 140   | 2400 | 12000 | 70    | 3000 | 15000 |
| 250   | 2000 | 10000 | 120   | 2600 | 13000 | 40    | 3200 | 16000 |
| 200   | 2200 | 11000 | 85    | 2800 | 14000 | 15    | 4000 | 20000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

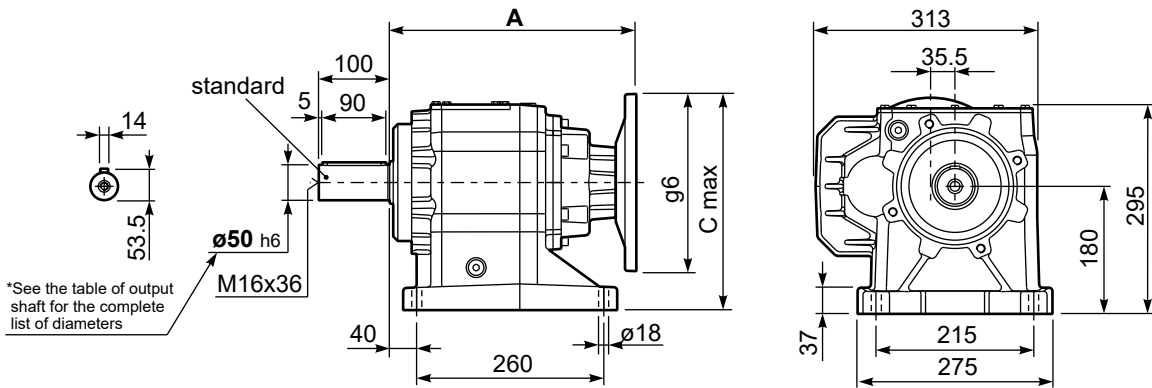
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

**tab. 2**



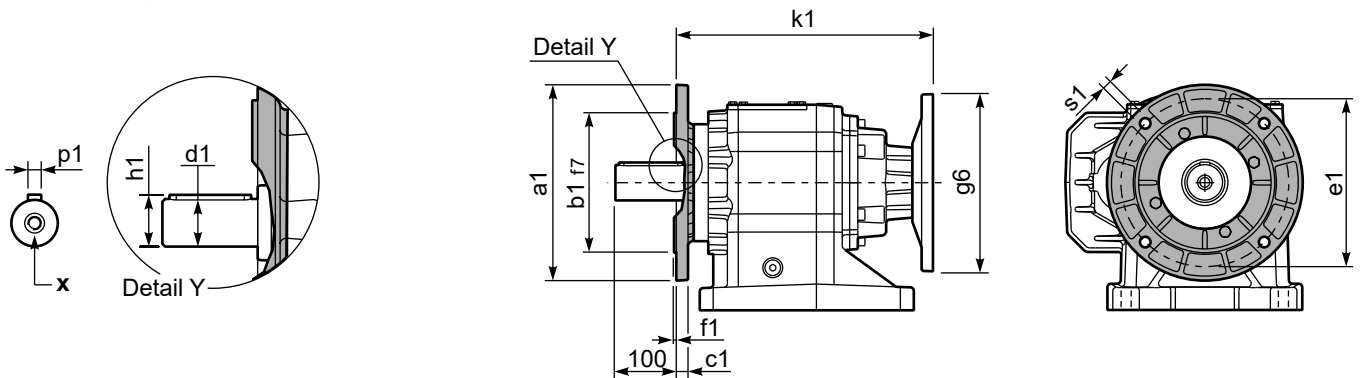
P862C**S8**... With foot  
Con piedino

Gearbox weight With flange **84.0 kg**  
peso riduttore With feet **74.5 kg**



\*See the table of output shaft for the complete list of diameters

P862C-**F**... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

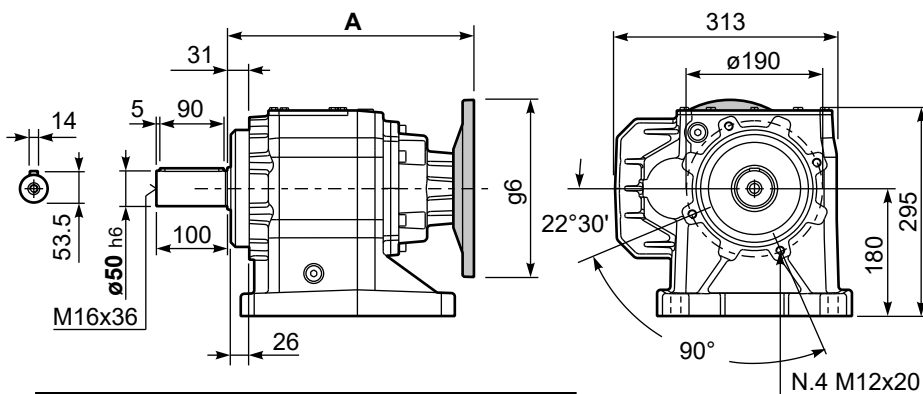
|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ∅ 50x100   | 14 | 53.5 | M16x36 |
| On request<br>A richiesta | ∅ 60x120   | 18 | 64   | M20x42 |
|                           | -          | -  | -    | -      |

Available output flanges / flange di uscita

| a1 ∅ | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 300  | 230 | 21 | 265 | 4  | 14 | KC90.9.014 |
| 350  | 250 | 21 | 300 | 5  | 18 | KC90.9.015 |
| -    | -   | -  | -   | -  | -  | -          |

All flanges are compatible with the foot

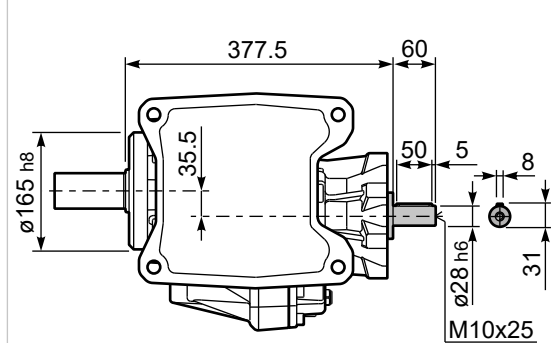
P862C**S8**... Basic gearbox  
Riduttore base

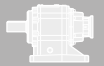


| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|------------------|-------|------------------|-----|-------|-------------|
| 100/112 B5       | 348.5 | 305              | 250 | 348.5 | K023.4.043  |
| 132 B5           | 370   | 330              | 300 | 370   | KC51.4.043C |
| 160/180 B5       | 402   | 355              | 350 | 402   | KC86.4.0.43 |

| B14 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|-------------------|-------|------------------|-----|-------|-------------|
| 100/112 B14       | 348.5 | 260              | 160 | 348.5 | K085.4.047  |
| 132 B14           | 370   | 280              | 200 | 370   | KC51.4.041C |
| -                 | -     | -                | -   | -     | -           |

R862C**S8**... Input Shaft  
Albero in entrata





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br><br>$\varnothing$ | Ratios code                  |                  |    |
|---|---------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|-----------------------------------|------------------------------|------------------|----|
|   |               |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                                   |                              |                  |    |
|   |               |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                                   |                              |                  |    |
| 32.5  | <b>43.03</b>  | 5.5                             | 1478                              | 1.1                      | 5.8                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 201313                            | standard<br>$\varnothing 50$ | 01               |    |
| 28.9  | <b>48.52</b>  | 5.5                             | 1667                              | 0.9                      | 5.0                               | 1550                               | B                          |    |    |            |     |                             |    |            |     | 161315                            |                              | 02               |    |
| 27.0  | <b>51.81</b>  | 4                               | 1302                              | 1.2                      | 4.8                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 201311                            |                              | 03               |    |
| 24.1  | <b>58.17</b>  | 4                               | 1462                              | 1.1                      | 4.3                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 161313                            |                              | 04               |    |
| 22.2  | <b>63.09</b>  | 4                               | 1585                              | 1.0                      | 3.8                               | 1550                               | B                          |    |    |            |     |                             |    |            |     | 131315                            |                              | 05               |    |
| 20.0  | <b>70.05</b>  | 4                               | 1760                              | 1.0                      | 4.0                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 161311                            |                              | 06               |    |
| 18.5  | <b>75.65</b>  | 4                               | 1901                              | 0.9                      | 3.7                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 131313                            |                              | $\varnothing 60$ | 07 |
| 15.4  | <b>91.09</b>  | 3                               | 1723                              | 1.0                      | 3.1                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 131311                            |                              | On request       | 08 |
| 12.6  | <b>111.50</b> | 2.2                             | 1553                              | 1.2                      | 2.5                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 111311                            |                              | 09               |    |
| 10.5  | <b>133.91</b> | 2.2                             | 1865                              | 1.0                      | 2.1                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 81313                             |                              | 10               |    |
| 8.7   | <b>161.24</b> | 1.5                             | 1548                              | 1.2                      | 1.7                               | 1800                               | B                          |    |    |            |     |                             |    |            |     | 81311                             |                              | 11               |    |
| 7.6   | <b>184.40</b> | 1.1                             | 1293                              | 1.1                      | 1.2                               | 1450                               | B                          |    |    |            |     |                             |    |            |     | 61313                             |                              | 12               |    |
| 6.3   | <b>222.04</b> | 1.1                             | 1557                              | 1.1                      | 1.2                               | 1750                               | B                          |    |    |            |     |                             |    |            |     | 61311                             |                              | 13               |    |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **863C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **863C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **863C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **863C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **863C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
| 3.10 LT               | 4.60 LT | 2.60 LT | 3.10 LT | 5.60 LT         | 4.30 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 1800 | 9000  | 140   | 2400 | 12000 | 70    | 3000 | 15000 |
| 250   | 2000 | 10000 | 120   | 2600 | 13000 | 40    | 3200 | 16000 |
| 200   | 2200 | 11000 | 85    | 2800 | 14000 | 15    | 4000 | 20000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

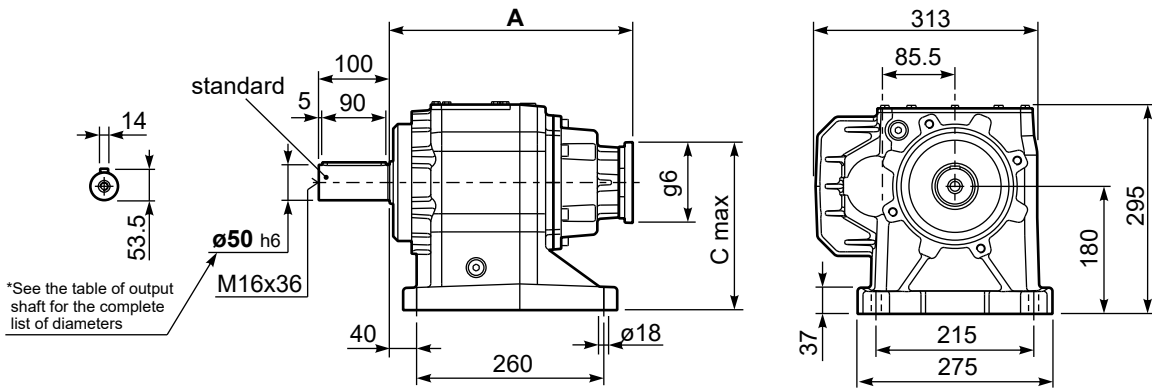
**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

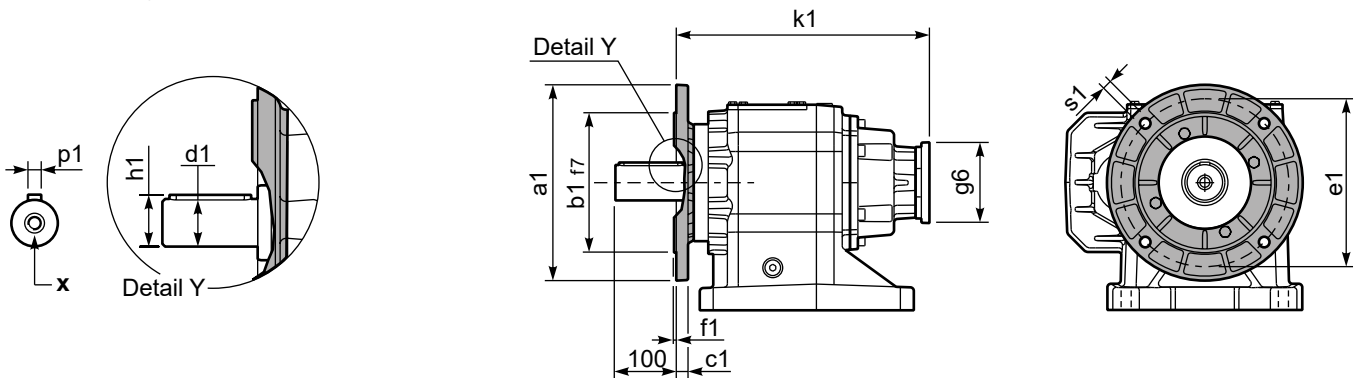
tab. 2

P863C**S8**... With foot  
Con piedino

Gearbox weight With flange **78.5 kg**  
peso riduttore With feet **69.0 kg**



P863C-**F**... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

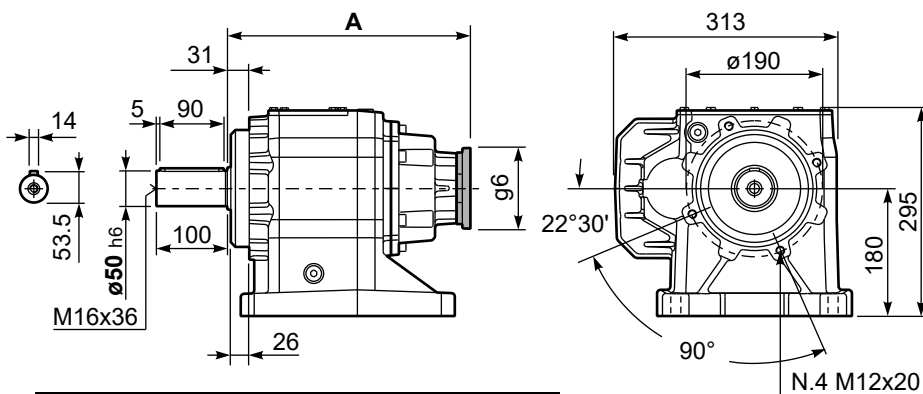
|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ∅ 50x100   | 14 | 53.5 | M16x36 |
| On request<br>A richiesta | ∅ 60x120   | 18 | 64   | M20x42 |

Available output flanges / flange di uscita

| a1 ∅ | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 300  | 230 | 21 | 265 | 4  | 14 | KC90.9.014 |
| 350  | 250 | 21 | 300 | 5  | 18 | KC90.9.015 |
| -    | -   | -  | -   | -  | -  | -          |

All flanges are compatible with the foot

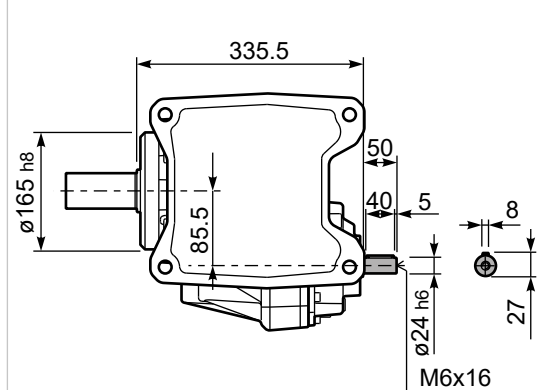
P863C**S8**... Basic gearbox  
Riduttore base

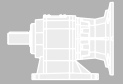


| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|------------------|-----|------------------|-----|-----|------------|
| 71 B5            | 342 | 260              | 160 | 344 | K023.4.041 |
| 80/90 B5         | 344 | 280              | 200 | 344 | K023.4.042 |
| 100/112 B5       | 353 | 305              | 250 | 353 | K023.4.043 |
| 132 B5           | 374 | 330              | 300 | 374 | KC51.4.043 |

| B14 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code   |
|-------------------|-----|------------------|-----|-----|------------|
| 80 B14            | 344 | 240              | 120 | 344 | K085.4.046 |
| 90 B14            | 344 | 250              | 140 | 344 | K085.4.045 |
| 100/112 B14       | 353 | 260              | 160 | 353 | K085.4.047 |
| 132 B14           | 374 | 280              | 200 | 374 | KC51.4.041 |

R863C**S8**... Input Shaft  
Albero in entrata





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |   |   |      | Output Shaft<br> | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|----------------------|---|---|------|------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -G                  | -H  | -I  | -L  | -                    | - | - | -    |                  |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 132                 | 160 | 180 | 200 | -                    | - | - | -    |                  |                 |
| 294   | <b>4.75</b>  | 30                              | 895                               | 1.8                    | <b>53.0</b>                       | <b>1650</b>                        |                     |     |     |     |                      |   |   | 3914 | 01               |                 |
| 269   | <b>5.21</b>  | 30                              | 980                               | 1.8                    | <b>51.3</b>                       | <b>1750</b>                        |                     |     |     |     |                      |   |   | 3913 | 02               |                 |
| 220   | <b>6.36</b>  | 30                              | 1197                              | 1.6                    | <b>45.6</b>                       | <b>1900</b>                        |                     |     |     |     |                      |   |   | 3911 | 03               |                 |
| 188   | <b>7.45</b>  | 30                              | 1401                              | 1.5                    | <b>43.1</b>                       | <b>2100</b>                        |                     |     |     |     |                      |   |   | 3014 | 04               |                 |
| 172   | <b>8.15</b>  | 30                              | 1535                              | 1.4                    | <b>39.3</b>                       | <b>2100</b>                        |                     |     |     |     |                      |   |   | 3013 | 05               |                 |
| 141   | <b>9.96</b>  | 30                              | 1874                              | 1.2                    | <b>33.7</b>                       | <b>2200</b>                        |                     |     |     |     |                      |   |   | 3011 | 06               |                 |
| 120   | <b>11.69</b> | 30                              | 2200                              | 1.0                    | <b>30.1</b>                       | <b>2300</b>                        |                     |     |     |     |                      |   |   | 2214 | 07               |                 |
| 109   | <b>12.80</b> | 30                              | 2409                              | 1.0                    | <b>27.4</b>                       | <b>2300</b>                        |                     |     |     |     |                      |   |   | 2213 | 08               |                 |
| 90  | <b>15.63</b> | 22                              | 2161                              | 1.1                    | <b>23.5</b>                       | <b>2400</b>                        |                     |     |     |     |                      |   |   | 2211 | 09               |                 |
| 79  | <b>17.65</b> | 22                              | 2441                              | 1.1                    | <b>22.5</b>                       | <b>2600</b>                        |                     |     |     |     |                      |   |   | 1614 | 10               |                 |
| 72  | <b>19.33</b> | 22                              | 2673                              | 1.1                    | <b>22.9</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1613 | 11               |                 |
| 67  | <b>20.77</b> | 22                              | 2872                              | 1.0                    | <b>21.3</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1414 | 12               |                 |
| 62  | <b>22.75</b> | 18.5                            | 2643                              | 1.1                    | <b>19.5</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1413 | 13               |                 |
| 59  | <b>23.60</b> | 18.5                            | 2743                              | 1.1                    | <b>18.8</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1611 | 14               |                 |
| 50  | <b>27.78</b> | 15                              | 2615                              | 1.1                    | <b>15.9</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1411 | 15               |                 |
| 45.5  | <b>30.76</b> | 15                              | 2896                              | 1.0                    | <b>14.4</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1014 | 16               |                 |
| 41.6  | <b>33.69</b> | 11                              | 2330                              | 1.2                    | <b>13.1</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1013 | 17               |                 |
| 34.0  | <b>41.15</b> | 11                              | 2845                              | 1.0                    | <b>10.8</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 1011 | 18               |                 |

The dynamic efficiency is **0.96** for all ratios

- Motor Flanges Available Flange Motore Disponibili
- B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit 1002 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 1002 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße 1002 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 1002 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño 1002 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
| 4.50 LT               | 8.00 LT | 5.50 LT | 6.00 LT | 10.00 LT        | 7.50 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{117}{X+57}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 2300 | 11500 | 140   | 2980 | 14900 | 70    | 3660 | 18300 |
| 250   | 2480 | 12400 | 120   | 3180 | 15900 | 40    | 4220 | 21100 |
| 200   | 2680 | 13400 | 85    | 3440 | 17200 | 15    | 4820 | 24100 |

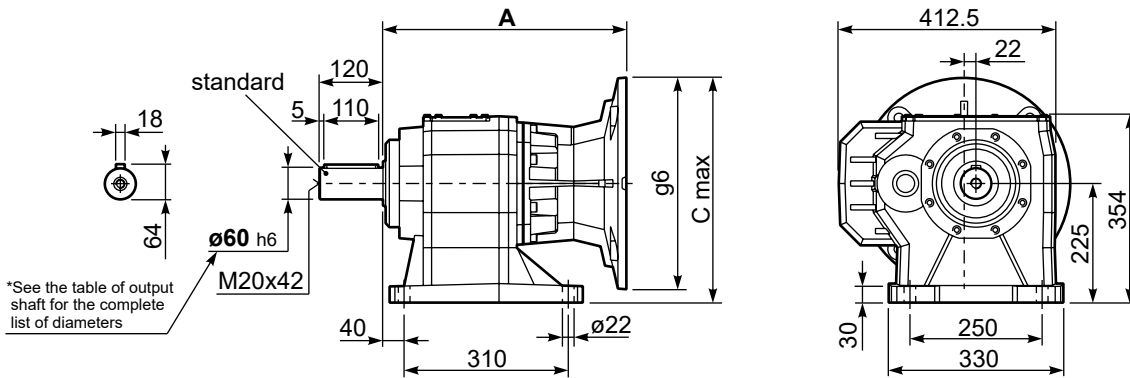
**Input shaft**  
Albero in entrata

| $n_1$ | FA   | FR   |
|-------|------|------|
| 1400  | 1120 | 5600 |
| 900   | 1220 | 6100 |
| 500   | 1300 | 6500 |

**tab. 2**

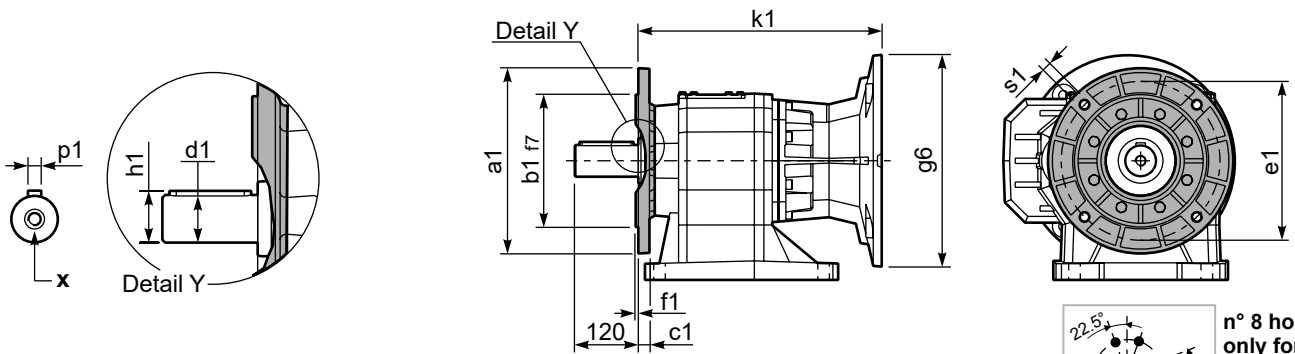
P1002**S9**... With foot  
Con piedino

Gearbox weight **120.0 kg**  
peso riduttore



\*See the table of output shaft for the complete list of diameters

P1002-**F**... Output flanges  
flange di uscita



n° 8 holes  
only for  
Kit KC909016  
Solo per il  
kit KC909016

\*Available output shaft / Albero di uscita

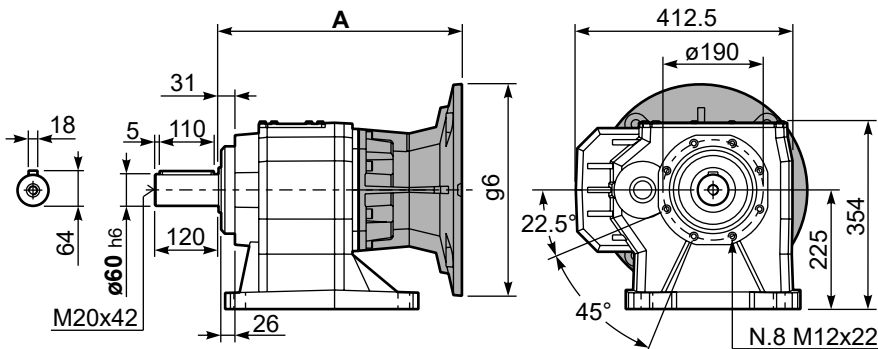
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 60x120   | 18 | 64 | M20x42 |
| On request<br>A richiesta | -          | -  | -  | -      |

Available output flanges / flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 300  | 230 | 21 | 265 | 4  | 14 | KC90.9.014 |
| 350  | 250 | 21 | 300 | 5  | 18 | KC90.9.015 |
| 450  | 350 | 22 | 400 | 5  | 18 | KC90.9.016 |

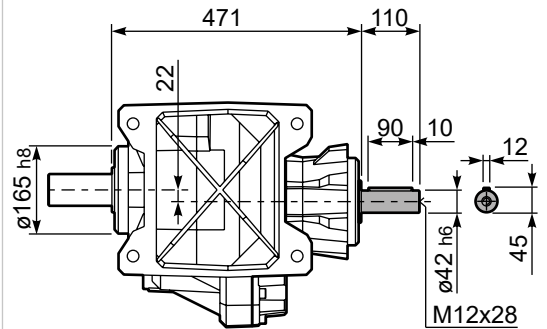
All flanges are compatible with the foot

P1002**S9**... Basic gearbox  
Riduttore base

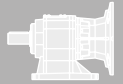


| B5 Motor Flanges | A   | C <sub>max</sub> | g6  | k1  | kit code      |
|------------------|-----|------------------|-----|-----|---------------|
| 132 B5           | 435 | 375              | 300 | 435 | KC110.9.052   |
| 160 B5           | 460 | 400              | 350 | 460 | KC110.9.053   |
| 180 B5           | 460 | 400              | 350 | 460 | KC110.9.053_B |
| 200 B5           | 460 | 425              | 400 | 460 | KC110.9.054   |

R1002**S9**... Input Shaft  
Albero in entrata







#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5 motor flanges |     |     | B14 motor flanges |        | Output Shaft<br><br>standard<br>ø60 | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|------------------|-----|-----|-------------------|--------|-------------------------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -F               | -G  | -H  | -U                | -V     |                                     |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 100<br>112       | 132 | 160 | 100<br>112        | 132    |                                     |                 |
| 38.8  | <b>36.11</b>  | 11                              | 2447                              | 1.2                    | <b>12.5</b>                       | <b>2900</b>                        |                  |     |     |                   | 301411 | 01                                  |                 |
| 27.5  | <b>50.89</b>  | 9                               | 2941                              | 1.0                    | <b>9.2</b>                        | <b>3000</b>                        |                  |     |     |                   | 201414 | 02                                  |                 |
| 25.1  | <b>55.73</b>  | 7.5                             | 2591                              | 1.2                    | <b>8.4</b>                        | <b>3000</b>                        |                  |     |     |                   | 201413 | 03                                  |                 |
| 20.3  | <b>68.80</b>  | 7.5                             | 3199                              | 0.9                    | <b>6.8</b>                        | <b>3000</b>                        |                  |     |     |                   | 161414 | 04                                  |                 |
| 18.6  | <b>75.35</b>  | 5.5                             | 2589                              | 1.2                    | <b>6.2</b>                        | <b>3000</b>                        |                  |     |     |                   | 161413 | 05                                  |                 |
| 15.6  | <b>89.47</b>  | 5.5                             | 3074                              | 1.0                    | <b>5.2</b>                        | <b>3000</b>                        |                  |     |     |                   | 131414 | 06                                  |                 |
| 15.2  | <b>92.02</b>  | 5.5                             | 3161                              | 0.9                    | <b>5.1</b>                        | <b>3000</b>                        |                  |     |     |                   | 161411 | 07                                  |                 |
| 14.3  | <b>97.99</b>  | 4                               | 2462                              | 1.2                    | <b>4.8</b>                        | <b>3000</b>                        |                  |     |     |                   | 131413 | 08                                  |                 |
| 12.8  | <b>109.52</b> | 4                               | 2752                              | 1.1                    | <b>4.3</b>                        | <b>3000</b>                        |                  |     |     |                   | 111414 | 09                                  |                 |
| 11.7  | <b>119.94</b> | 4                               | 3014                              | 1.0                    | <b>3.9</b>                        | <b>3000</b>                        |                  |     |     |                   | 111413 | 10                                  |                 |
| 9.6   | <b>146.47</b> | 3                               | 2771                              | 1.1                    | <b>3.2</b>                        | <b>3000</b>                        |                  |     |     |                   | 111411 | 11                                  |                 |
| 8.8   | <b>158.37</b> | 3                               | 2996                              | 1.0                    | <b>3.0</b>                        | <b>3000</b>                        |                  |     |     |                   | 81414  | 12                                  |                 |
| 8.1   | <b>173.45</b> | 2.2                             | 2416                              | 1.2                    | <b>2.7</b>                        | <b>3000</b>                        |                  |     |     |                   | 81413  | 13                                  |                 |
| 6.6   | <b>211.82</b> | 2.2                             | 2951                              | 1.0                    | <b>2.2</b>                        | <b>3000</b>                        |                  |     |     |                   | 81411  | 14                                  |                 |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **1003** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **1003** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **1003** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **1003** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **1003** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
| 5.00 LT               | 9.00 LT | 6.50 LT | 6.50 LT | 11.00 LT        | 9.00 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{117}{X+57}$

**Input shaft**  
Albero in entrata

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 2300 | 11500 | 140   | 2980 | 14900 | 70    | 3660 | 18300 |
| 250   | 2480 | 12400 | 120   | 3180 | 15900 | 40    | 4220 | 21100 |
| 200   | 2680 | 13400 | 85    | 3440 | 17200 | 15    | 4820 | 24100 |

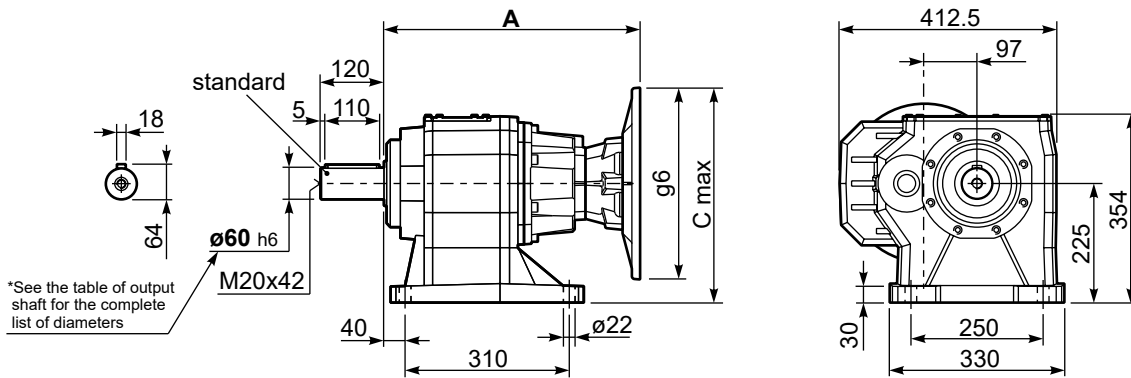
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

tab. 2

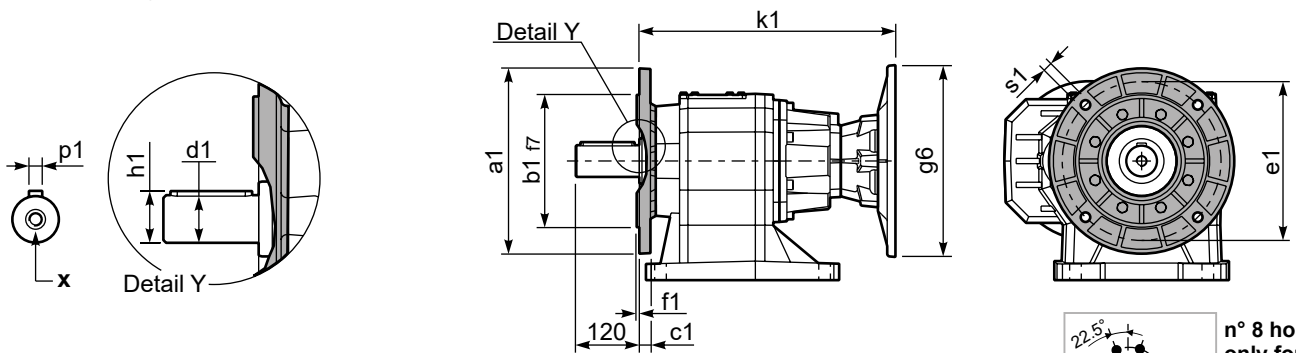


P1003**S9**... With foot  
Con piedino

Gearbox weight **116 kg**  
peso riduttore



P1003-**F**... Output flanges  
flange di uscita



n° 8 holes  
only for  
Kit KC909016  
Solo per il  
kit KC909016

\*Available output shaft / Albero di uscita

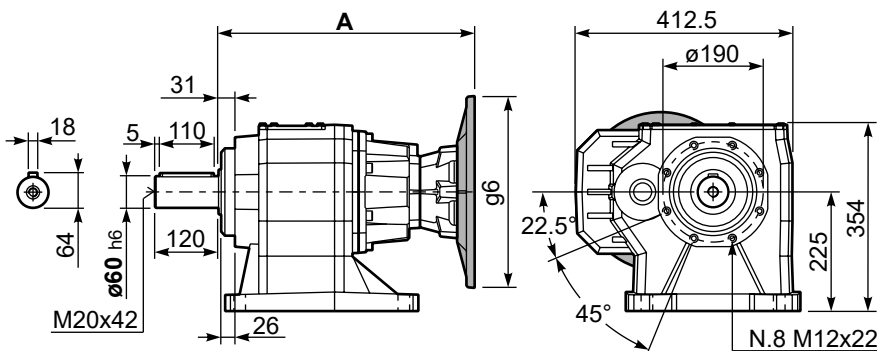
|                           | Shaft - d1 | p1 | h1 | x      |
|---------------------------|------------|----|----|--------|
| Standard                  | ø 60x120   | 18 | 64 | M20x42 |
| On request<br>A richiesta | -          | -  | -  | -      |

Available output flanges / flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code   |
|------|-----|----|-----|----|----|------------|
| 300  | 230 | 21 | 265 | 4  | 14 | KC90.9.014 |
| 350  | 250 | 21 | 300 | 5  | 18 | KC90.9.015 |
| 450  | 350 | 22 | 400 | 5  | 18 | KC90.9.016 |

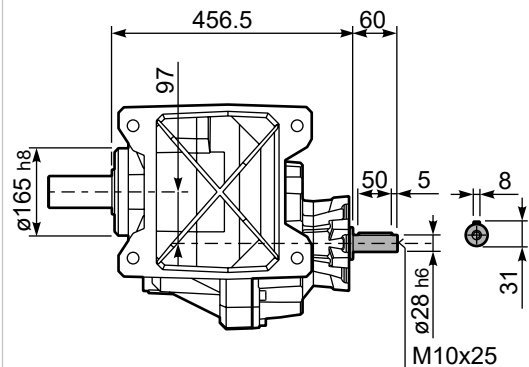
All flanges are compatible with the foot

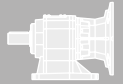
P1003**S9**... Basic gearbox  
Riduttore base



| Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|---------------|-------|------------------|-----|-------|-------------|
| 100/112 B5    | 427.5 | 350              | 250 | 427.5 | K023.4.043  |
| 132 B5        | 448.5 | 375              | 300 | 449   | KC51.4.043C |
| 160 B5        | 481   | 400              | 350 | 481   | KC86.4.043  |
| 100/112B14    | 427.5 | 305              | 160 | 427.5 | K085.4.047  |
| 132B14        | 448.5 | 325              | 200 | 449   | KC51.4.041C |

R1003**S9**... Input Shaft  
Albero in entrata





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     |     | B14<br>motor flanges |   |      | Output Shaft<br> | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|-----|----------------------|---|------|------------------|-----------------|
|   |              |                                 |                                   |                          |                                   |                                    | -G                  | -H  | -I  | -L  | CA  | -                    | - | -    |                  |                 |
|   |              |                                 |                                   |                          |                                   |                                    | 132                 | 160 | 180 | 200 | 225 | -                    | - | -    |                  |                 |
| 294   | <b>4.75</b>  | 45                              | 1333                              | 2.0                      | <b>86.7</b>                       | <b>2700</b>                        |                     |     |     |     |     |                      |   | 3914 |                  | 01              |
| 269   | <b>5.21</b>  | 45                              | 1460                              | 1.9                      | <b>82.1</b>                       | <b>2800</b>                        |                     |     |     |     |     |                      |   | 3913 |                  | 02              |
| 220   | <b>6.36</b>  | 45                              | 1783                              | 1.7                      | <b>72.0</b>                       | <b>3000</b>                        |                     |     |     |     |     |                      |   | 3911 |                  | 03              |
| 188   | <b>7.45</b>  | 45                              | 2088                              | 1.6                      | <b>67.7</b>                       | <b>3300</b>                        |                     |     |     |     |     |                      |   | 3014 |                  | 04              |
| 172   | <b>8.15</b>  | 45                              | 2287                              | 1.5                      | <b>63.7</b>                       | <b>3400</b>                        |                     |     |     |     |     |                      |   | 3013 |                  | 05              |
| 141   | <b>9.96</b>  | 45                              | 2792                              | 1.3                      | <b>55.2</b>                       | <b>3600</b>                        |                     |     |     |     |     |                      |   | 3011 |                  | 06              |
| 120   | <b>11.69</b> | 45                              | 3277                              | 1.2                      | <b>49.7</b>                       | <b>3800</b>                        |                     |     |     |     |     |                      |   | 2214 |                  | 07              |
| 109   | <b>12.80</b> | 45                              | 3589                              | 1.1                      | <b>47.7</b>                       | <b>4000</b>                        |                     |     |     |     |     |                      |   | 2213 |                  | 08              |
| 90  | <b>15.63</b> | 45                              | 4383                              | 1.0                      | <b>42.0</b>                       | <b>4300</b>                        |                     |     |     |     |     |                      |   | 2211 | standard         | 09              |
| 79  | <b>17.65</b> | 37                              | 4068                              | 1.1                      | <b>38.9</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1614 | ø70              | 10              |
| 72  | <b>19.33</b> | 37                              | 4455                              | 1.0                      | <b>35.6</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1613 |                  | 11              |
| 67  | <b>20.77</b> | 30                              | 3910                              | 1.2                      | <b>33.1</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1414 |                  | 12              |
| 62  | <b>22.75</b> | 30                              | 4282                              | 1.1                      | <b>30.2</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1413 |                  | 13              |
| 59  | <b>23.60</b> | 30                              | 4443                              | 1.0                      | <b>29.1</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1611 |                  | 14              |
| 50  | <b>27.78</b> | 22                              | 3842                              | 1.2                      | <b>24.7</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1411 |                  | 15              |
| 45.5  | <b>30.76</b> | 22                              | 4255                              | 1.1                      | <b>22.3</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1014 |                  | 16              |
| 41.6  | <b>33.69</b> | 22                              | 4660                              | 1.0                      | <b>20.4</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1013 |                  | 17              |
| 34.0  | <b>41.15</b> | 18.5                            | 4781                              | 0.9                      | <b>16.7</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 1011 |                  | 18              |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit 1102 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 1102 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße 1102 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 1102 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño 1102 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6       | B7      | B8      | V5              | V6       | V8  |
|-----------------------|----------|---------|---------|-----------------|----------|-----|
| 6.50 LT               | 12.50 LT | 7.50 LT | 8.50 LT | 14.50 LT        | 11.50 LT | Ask |
| SHELL Omala S2 GX 460 |          |         |         | ENI Blasias 460 |          |     |

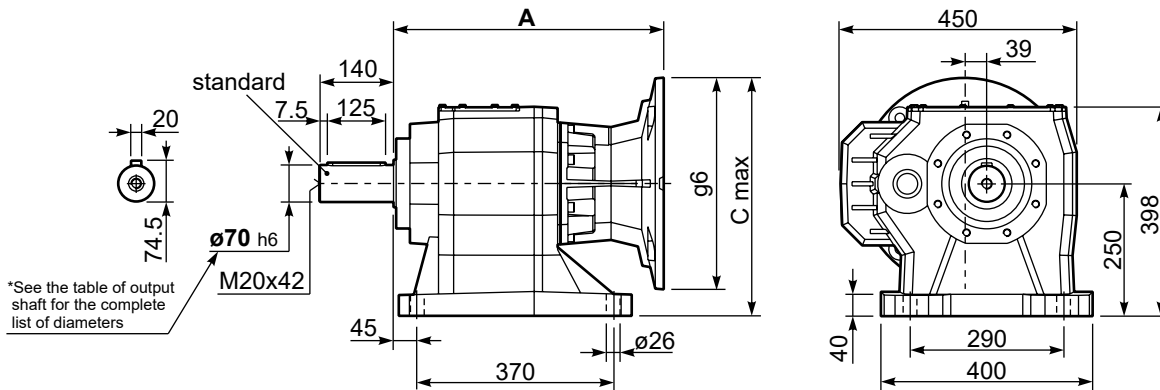
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |      |       |                                       |      |       |       |      |       |  |
|---|------|-------|---------------------------------------|------|-------|-------|------|-------|--|
| <b>Output shaft</b><br>Albero di uscita |      |       | $F_{eq} = F_R \cdot \frac{138}{X+68}$ |      |       |       |      |       |  |
|   |      |       |                                       |      |       |       |      |       |  |
| $n_2$                                   | FA   | FR    | $n_2$                                 | FA   | FR    | $n_2$ | FA   | FR    |  |
| 300                                     | 2600 | 13000 | 140                                   | 3300 | 16500 | 70    | 4300 | 21500 |  |
| 250                                     | 2700 | 13500 | 120                                   | 3500 | 17500 | 40    | 5000 | 25000 |  |
| 200                                     | 3000 | 15000 | 85                                    | 3900 | 19500 | 15    | 5900 | 29500 |  |
| <b>Input shaft</b><br>Albero in entrata |      |       |                                       |      |       |       |      |       |  |
| $n_1$                                   | FA   | FR    |                                       |      |       |       |      |       |  |
| 1400                                    | 1120 | 5600  |                                       |      |       |       |      |       |  |
| 900                                     | 1220 | 6100  |                                       |      |       |       |      |       |  |
| 500                                     | 1300 | 6500  |                                       |      |       |       |      |       |  |

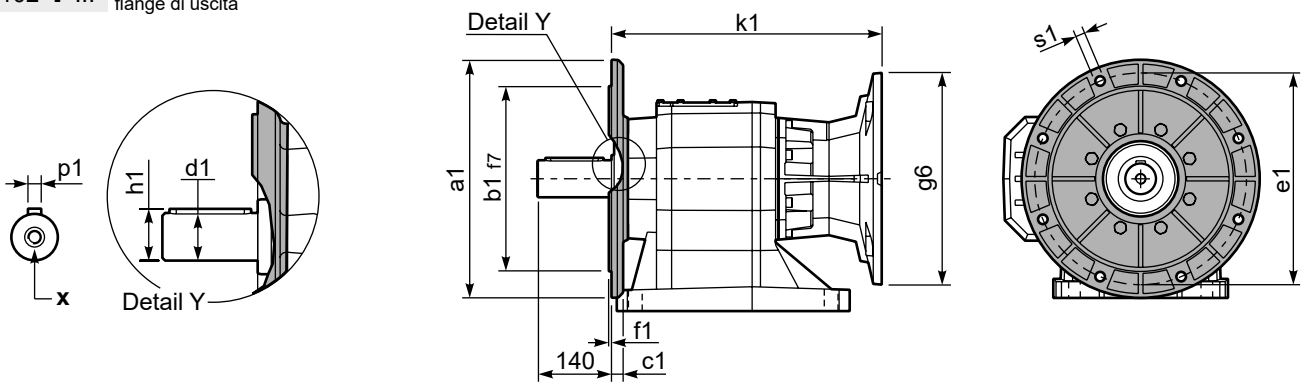
**tab. 2**

P1102**S0**... With foot  
Con piedino

Gearbox weight  
peso riduttore **165 kg**



P1102-**F**... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

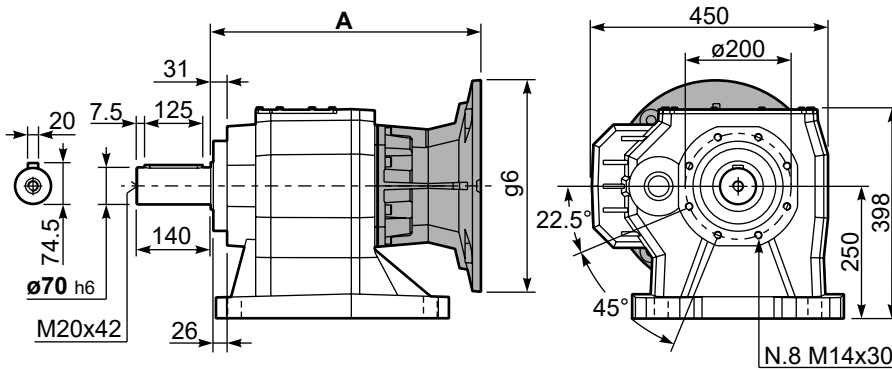
|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ø 70x140   | 20 | 74.5 | M20x42 |
| On request<br>A richiesta | -          | -  | -    | -      |

Available output flanges / flange di uscita

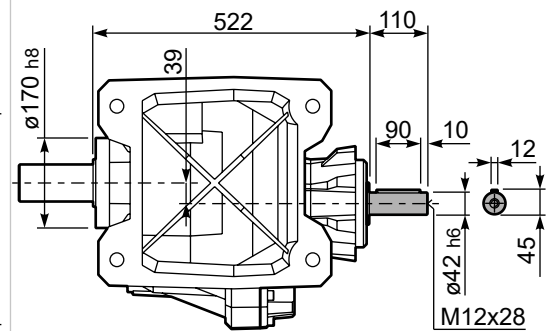
| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code    |
|------|-----|----|-----|----|----|-------------|
| 350  | 250 | 21 | 300 | 5  | 18 | KC110.9.015 |
| 450  | 350 | 22 | 400 | 5  | 18 | KC110.9.016 |
| -    | -   | -  | -   | -  | -  | -           |

All flanges are compatible with the foot

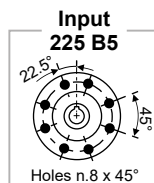
P1102**S0**... Basic gearbox  
Riduttore base

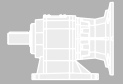


R1102**S0**... Input Shaft  
Albero in entrata



| B5 Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code      |
|------------------|-------|------------------|-----|-------|---------------|
| 132 B5           | 485.5 | 400              | 300 | 485.5 | KC110.9.052   |
| 160 B5           | 510.5 | 425              | 350 | 510.5 | KC110.9.053   |
| 180 B5           | 510.5 | 425              | 350 | 510.5 | KC110.9.053 B |
| 200 B5           | 510.5 | 450              | 400 | 510.5 | KC110.9.054   |
| 225 B5           | 537.5 | 475              | 450 | 537.5 | KC110.9.055   |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available<br>B5 motor flanges |     |     |     | B14<br>motor flanges |        | Output Shaft<br><br>standard<br>ø70 | Ratios<br>code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|-------------------------------|-----|-----|-----|----------------------|--------|-------------------------------------|--------------------|
|   |               |                                 |                                   |                        |                                   |                                    | -F                            | -G  | -H  | -I  | -U                   | -V     |                                     |                    |
|   |               |                                 |                                   |                        |                                   |                                    | 100<br>112                    | 132 | 160 | 180 | 100<br>112           | 132    |                                     |                    |
| 38.8  | <b>36.11</b>  | 18.5                            | 4113                              | 1.1                    | 19.4                              | 4500                               |                               |     |     |     |                      | 301411 | 01                                  |                    |
| 27.5  | <b>50.89</b>  | 15                              | 4694                              | 1.0                    | 14.1                              | 4600                               |                               |     |     |     |                      | 201414 | 02                                  |                    |
| 25.1  | <b>55.73</b>  | 11                              | 3777                              | 1.2                    | 12.9                              | 4600                               |                               |     |     |     |                      | 201413 | 03                                  |                    |
| 20.3  | <b>68.80</b>  | 11                              | 4662                              | 1.0                    | 10.4                              | 4600                               |                               |     |     |     |                      | 161414 | 04                                  |                    |
| 18.6  | <b>75.35</b>  | 9                               | 4354                              | 1.1                    | 9.5                               | 4600                               |                               |     |     |     |                      | 161413 | 05                                  |                    |
| 15.6  | <b>89.47</b>  | 7.5                             | 4160                              | 1.1                    | 8.0                               | 4600                               |                               |     |     |     |                      | 131414 | 06                                  |                    |
| 15.2  | <b>92.02</b>  | 7.5                             | 4278                              | 1.1                    | 7.6                               | 4500                               |                               |     |     |     |                      | 161411 | 07                                  |                    |
| 14.3  | <b>97.99</b>  | 7.5                             | 4556                              | 1.0                    | 7.3                               | 4600                               |                               |     |     |     |                      | 131413 | 08                                  |                    |
| 12.8  | <b>109.52</b> | 5.5                             | 3762                              | 1.2                    | 6.6                               | 4600                               |                               |     |     |     |                      | 111414 | 09                                  |                    |
| 11.7  | <b>119.94</b> | 5.5                             | 4120                              | 1.1                    | 6.0                               | 4600                               |                               |     |     |     |                      | 111413 | 10                                  |                    |
| 9.6   | <b>146.47</b> | 4                               | 3681                              | 1.2                    | 4.8                               | 4500                               |                               |     |     |     |                      | 111411 | 11                                  |                    |
| 8.8   | <b>158.37</b> | 4                               | 3980                              | 1.2                    | 4.5                               | 4600                               |                               |     |     |     |                      | 81414  | 12                                  |                    |
| 8.1   | <b>173.45</b> | 4                               | 4359                              | 1.1                    | 4.1                               | 4600                               |                               |     |     |     |                      | 81413  | 13                                  |                    |
| 6.6   | <b>211.82</b> | 3                               | 4007                              | 1.1                    | 3.3                               | 4500                               |                               |     |     |     |                      | 81411  | 14                                  |                    |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit 1103 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo 1103 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße 1103 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type 1103 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño 1103 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |          |         |         |                 |          |     |
|-----------------------|----------|---------|---------|-----------------|----------|-----|
|                       |          |         |         |                 |          |     |
| B3                    | B6       | B7      | B8      | V5              | V6       | V8  |
| 7.00 LT               | 13.00 LT | 8.00 LT | 9.00 LT | 16.00 LT        | 13.50 LT | Ask |
| SHELL Omala S2 GX 460 |          |         |         | ENI Blasias 460 |          |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{138}{X+68}$

$F_{eq} (N)$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 2600 | 13000 | 140   | 3300 | 16500 | 70    | 4300 | 21500 |
| 250   | 2700 | 13500 | 120   | 3500 | 17500 | 40    | 5000 | 25000 |
| 200   | 3000 | 15000 | 85    | 3900 | 19500 | 15    | 5900 | 29500 |

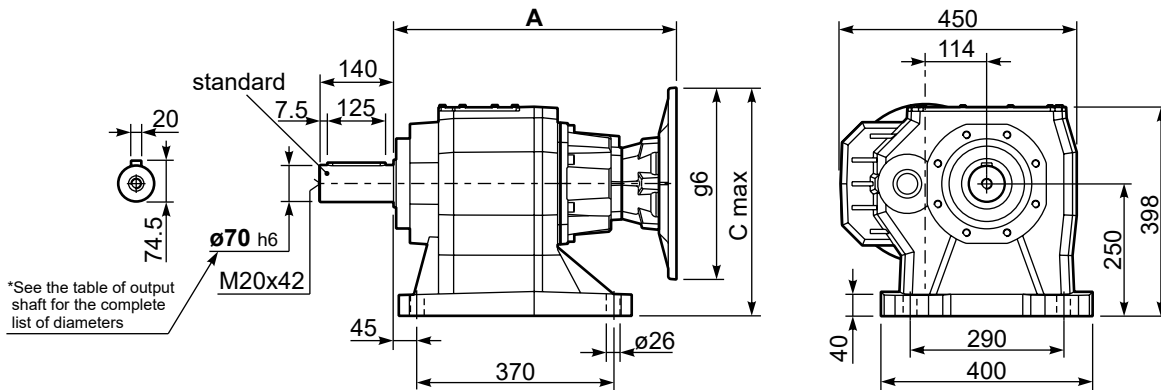
**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

**tab. 2**

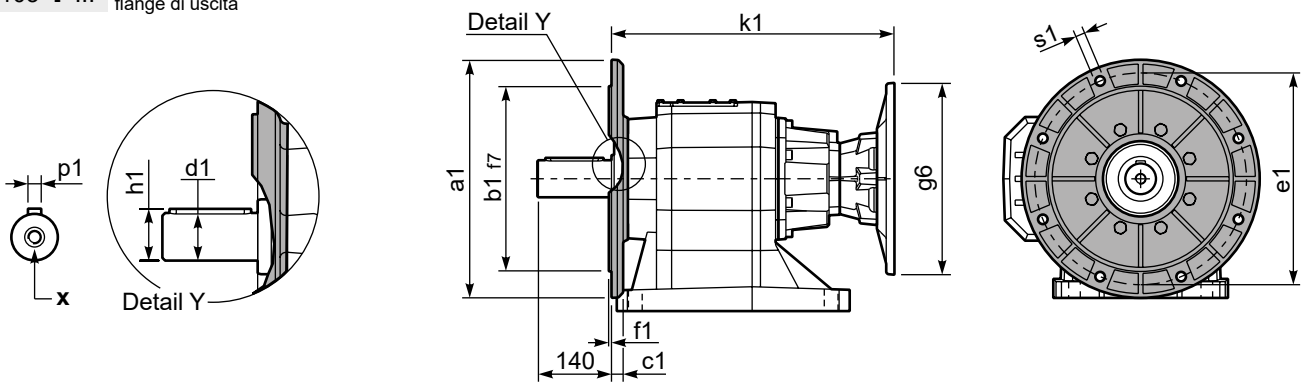
P1103**S0**... With foot  
Con piedino

Gearbox weight **156 kg**  
peso riduttore



\*See the table of output shaft for the complete list of diameters

P1103-**F**... Output flanges  
flange di uscita



\*Available output shaft / Albero di uscita

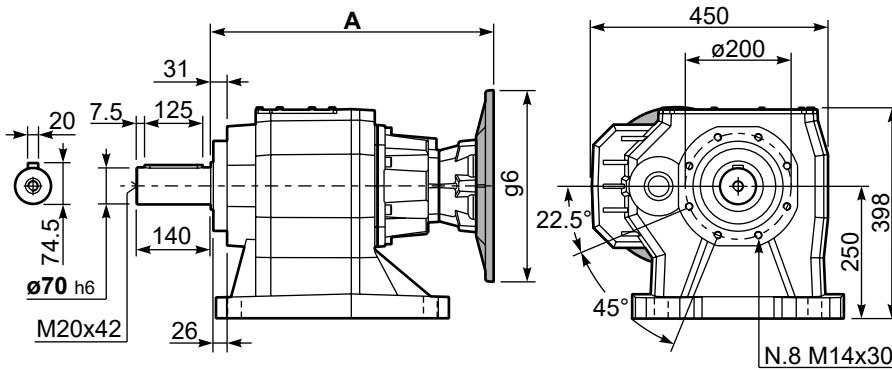
|                           | Shaft - d1 | p1 | h1   | x      |
|---------------------------|------------|----|------|--------|
| Standard                  | ø 70x140   | 20 | 74.5 | M20x42 |
| On request<br>A richiesta | -          | -  | -    | -      |

Available output flanges / flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | kit code    |
|------|-----|----|-----|----|----|-------------|
| 350  | 250 | 21 | 300 | 5  | 18 | KC110.9.015 |
| 450  | 350 | 22 | 400 | 5  | 18 | KC110.9.016 |
| -    | -   | -  | -   | -  | -  | -           |

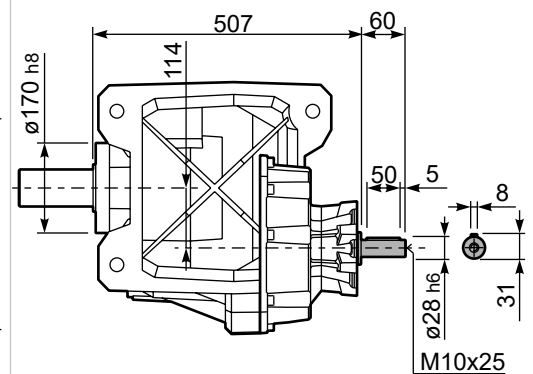
All flanges are compatible with the foot

P1103**S0**... Basic gearbox  
Riduttore base



| Motor Flanges | A     | C <sub>max</sub> | g6  | k1    | kit code    |
|---------------|-------|------------------|-----|-------|-------------|
| 100/112 B5    | 478   | 375              | 250 | 478   | K023.4.043  |
| 132 B5        | 499.5 | 400              | 300 | 499.5 | KC51.4.043C |
| 160-180 B5    | 531.5 | 425              | 350 | 531.5 | KC864.043   |
| 100/112B14    | 478   | 330              | 160 | 478   | K085.4.047  |
| 132B14        | 499.5 | 350              | 200 | 499.5 | KC51.4.041C |

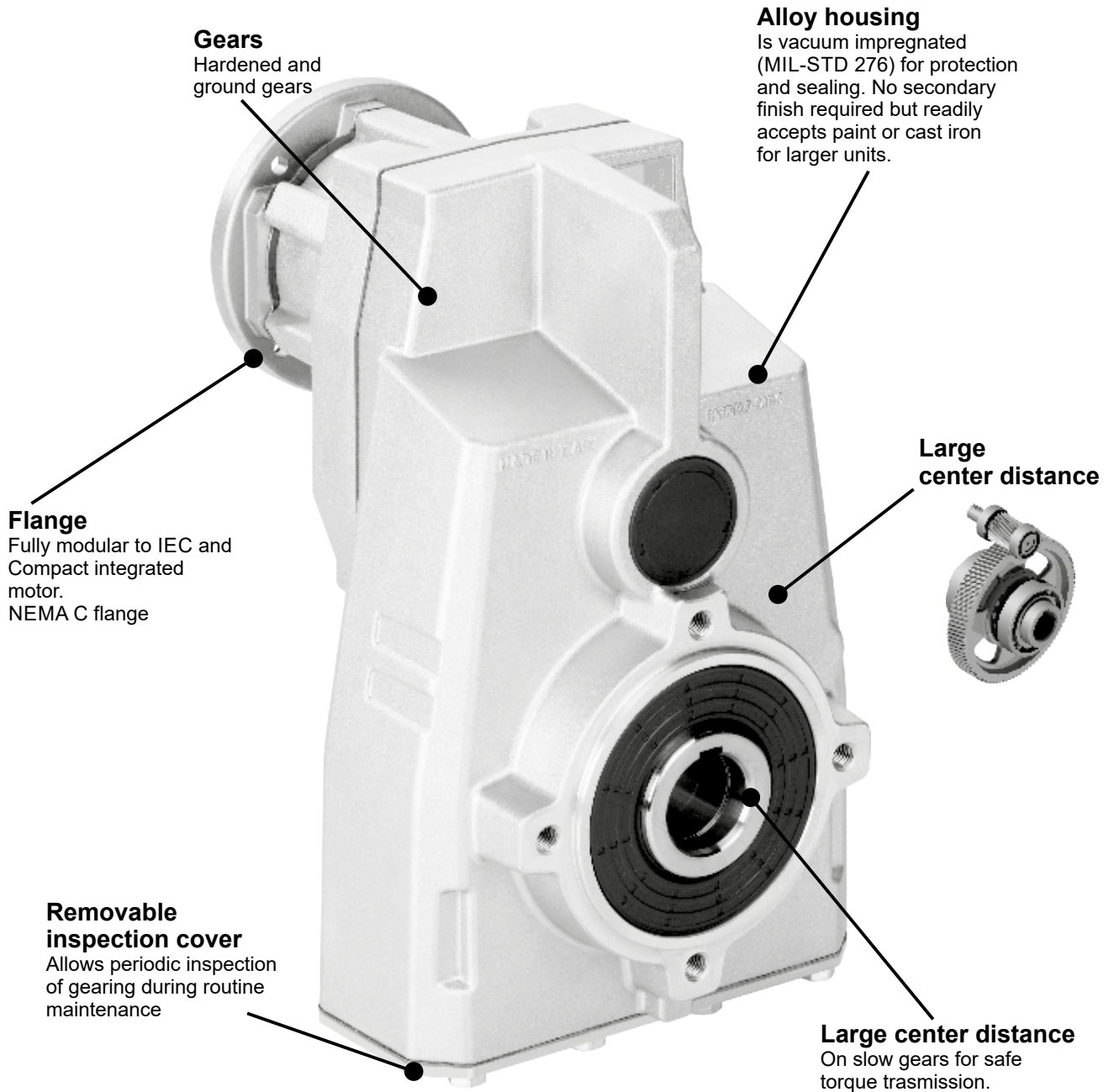
R1103**S0**... Input Shaft  
Albero in entrata





# Aluminum & cast iron shaft mounted gearboxes

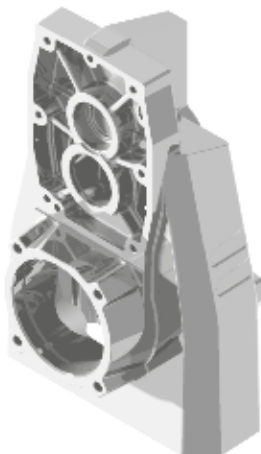
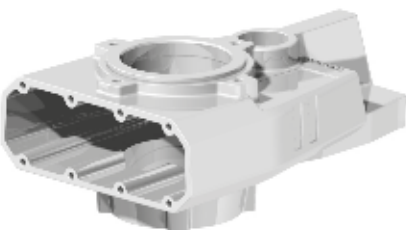
## A modular and compact product



7

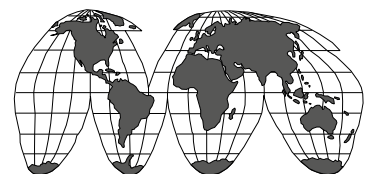
### Single-piece aluminum / Cast Iron housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing



### Painting

Cast iron gearboxes are painted RAL 7046



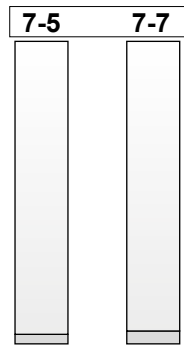
World wide sales network.



# Specific type datasheet on page...

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3 Stage

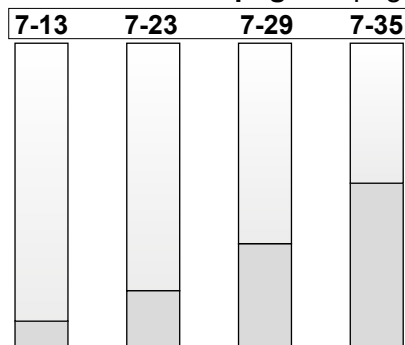
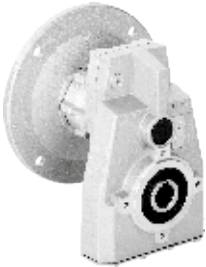


Types / Tipi /  
Tipen / Types /  
Tipos

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FS20 90Nm

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1 Stage

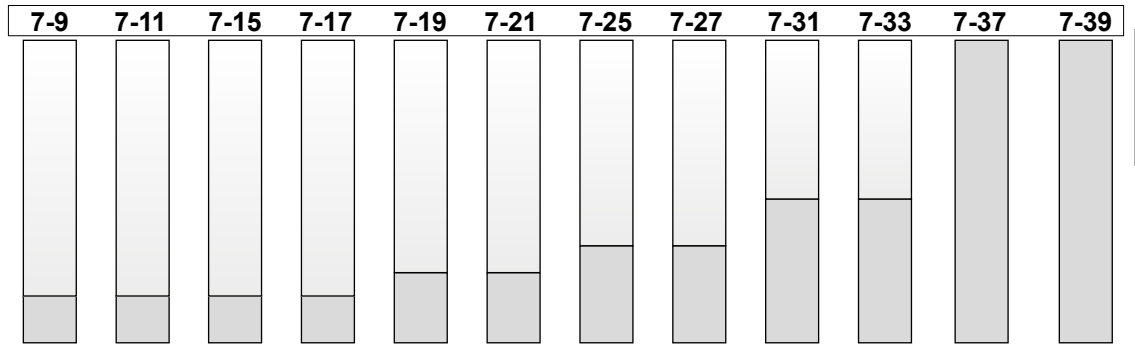


Types / Tipi /  
Tipen / Types /  
Tipos

FA41 225Nm  
FC61 380Nm  
FC71 670Nm  
FC81 1175Nm

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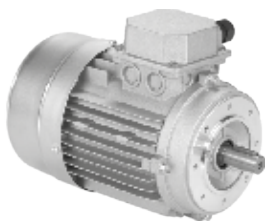
2 and 3 Stage



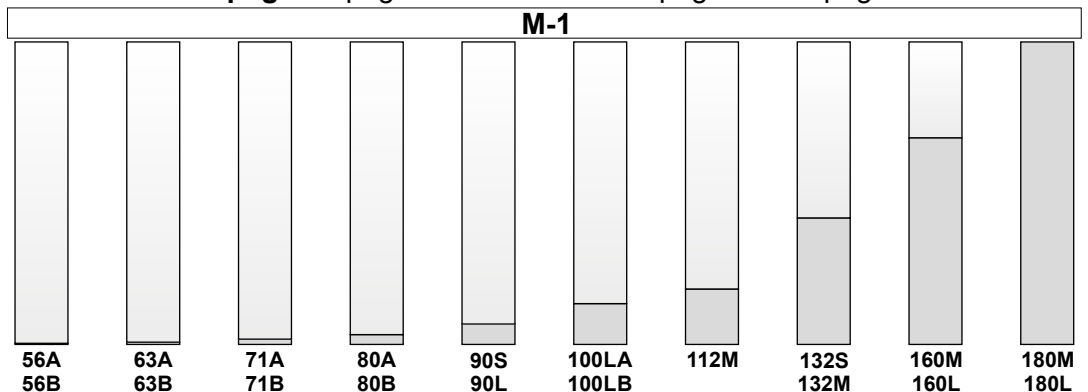
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Tipen / Types /  
Tipos

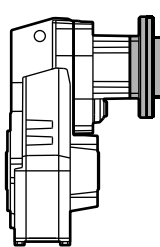
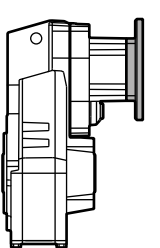
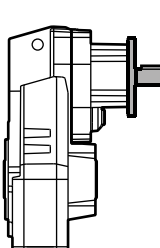
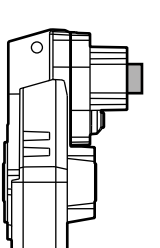
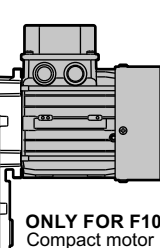
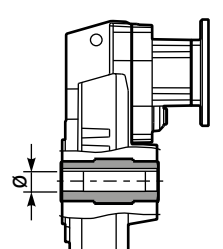
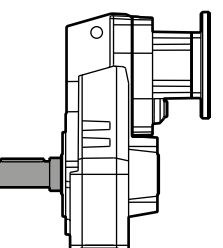
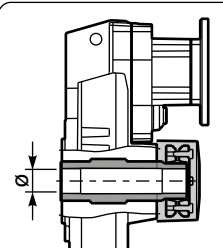
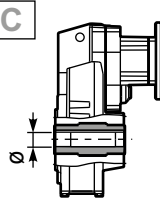
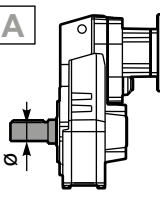
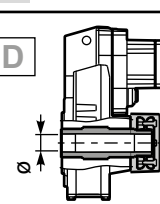
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FC63 675Nm  
FC72 900Nm  
FC73 900Nm  
FC82 2100Nm  
FC83 2100Nm

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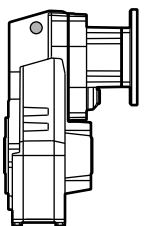
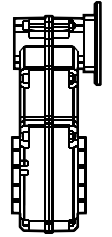
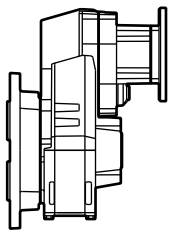
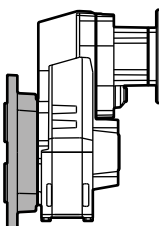



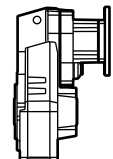
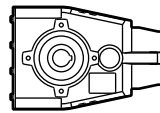
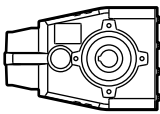
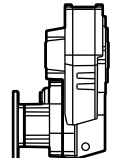
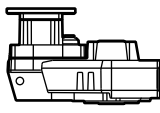
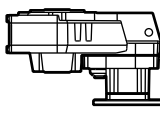
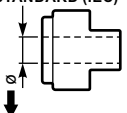
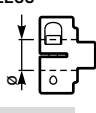
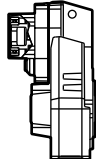
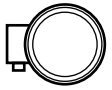



Types / Tipi /  
Tipen / Types /  
Tipos



| Type - Tipo - Typ<br>Type - Tipo   | Size - Grandezza - Grösse<br>Taille - Tamaño   | Mounting - Montaggio<br>Montage - Fixation<br>Tipo de montaje  | Rapporto - Ratio<br>Untersetzung<br>Reduction - Relacion  | Output shaft<br>Albero uscita<br>Abtriebswelle<br>Arbre de sortie<br>Eje en salida  |
|--|--|--|---|---|
| <p><b>M</b></p> <p>Shaft mounted helical<br/>Riduttori ad assi paralleli</p>  <p>With IEC motor</p> <p><b>M</b></p>  <p>With motor flange</p> <p><b>P</b></p>  <p>With male input shaft</p> <p><b>R</b></p>  <p>Modular base</p> <p><b>B</b></p> <p>Not available for: FC61, FC71, FC81, FC82.</p>  <p>ONLY FOR F10 Compact motor</p> <p><b>C</b></p> | <p><b>FA42</b></p> <p>1 Stage<br/>Riduzione<br/>Stufe<br/>Trains<br/>Etapa</p> <p>2 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p>3 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p><b>Aluminum/Alluminio/Aluminium/Aluminio</b></p> <p><b>FA41</b></p> <p><b>FA32<br/>FA42<br/>FA52</b></p> <p><b>FA33<br/>FA43<br/>FA53</b></p> <p><b>Cast Iron/Ghisa/Grauguss/Fonte/Fundicion</b></p> <p><b>FC61<br/>FC71<br/>FC81</b></p> <p><b>FC62<br/>FC72<br/>FC82</b></p> <p><b>FC63<br/>FC73<br/>FC83</b></p> <p><b>FS10<br/>FS20</b></p> <p><b>FC61<br/>FC71<br/>FC81</b></p> <p><b>FC62<br/>FC72<br/>FC82</b></p> <p><b>FC63<br/>FC73<br/>FC83</b></p> | <p><b>C</b></p>  <p>Hollow output shaft</p> <p><b>C</b></p>  <p>Single output shaft</p> <p><b>A</b></p>  <p>Shrink Disk</p> <p><b>D</b></p> <p>Only on request for Q.ty<br/>A richiesta per quantità</p> | <p><b>10.04</b></p> <p>See technical data table</p> <p>Vedi tabelle dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p> | <p><b>-D</b></p>  <p><b>C</b></p> <p>→ <b>STANDARD</b><br/>→ Only on request for Q.ty<br/>A richiesta per quantità</p> <p>FS10</p> <p><b>-J</b> → <math>\varnothing 17</math></p> <p>FS20</p> <p><b>-B</b> → <math>\varnothing 20</math></p> <p>FA32-3</p> <p><b>-C</b> → <math>\varnothing 25</math></p> <p>FA41 FA42<br/>FA43</p> <p><b>-C</b> → <math>\varnothing 25</math></p> <p><b>-D</b> → <math>\varnothing 30</math></p> <p><b>-E</b> → <math>\varnothing 35</math></p> <p>FA52 FA53<br/>FC61 FC62 FC63</p> <p><b>-E</b> → <math>\varnothing 35</math></p> <p><b>-F</b> → <math>\varnothing 40</math></p> <p>FC71 FC72 FC73</p> <p><b>-F</b> → <math>\varnothing 40</math></p> <p><b>-G</b> → <math>\varnothing 45</math></p> <p>FC81 FC82 FC83</p> <p><b>-H</b> → <math>\varnothing 50</math></p> <p><b>-I</b> → <math>\varnothing 55</math></p>  <p>Single output shaft</p> <p><b>-L</b> FA32/3 → <math>\varnothing 25</math></p> <p><b>-M</b> FA41/2/3 → <math>\varnothing 30</math></p> <p><b>-N</b> FA52/3<br/>FC61/2/3 → <math>\varnothing 35</math></p> <p><b>-O</b> FC71/2/3 → <math>\varnothing 40</math></p> <p><b>-K</b> FC81/2/3 → <math>\varnothing 50</math></p>  <p>Shrink disk</p> <p><b>-Q</b> FA42/3 → <math>\varnothing 30</math></p> <p><b>-T</b> FA52/3<br/>FC62/3 → <math>\varnothing 35</math></p> <p><b>-U</b> FC72/3 → <math>\varnothing 40</math></p> <p><b>-V</b> FC82/3 → <math>\varnothing 50</math></p> |



On request we can deliver our products according to the ATEX  
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
 Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
 Sur demande nos produits peuvent se conformer à la réglementation ATEX  
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

| Type - Tipo - Typ<br>Types - Tipo   | Output flange<br>Flangia uscita<br>Ausgangsflansch<br>Bride de sortie<br>Brida en salida  | Motor size - Grandezza motore<br>Motor Grösse<br>Grandeur moteur - Tamaño motor  | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje   | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Terminal box position<br>Posizione morsettiere<br>Klemmkastenlage<br>Position boîte à bornes<br>Posición caja de bornes   |
|---|---|--|--|--|---|
| <p><b>ST</b></p>  <p><b>ST</b><br/>Foro standard<br/>Standard bore</p>  <p>only for FS10 / FS20</p> <p><b>ST</b><br/>Senza braccio di reazione<br/>Without reaction arm</p>  <p><b>-F</b><br/>Whit output flange<br/>con flangia uscita</p> | <p><b>N</b></p>  <p><b>N</b> Senza flangia<br/>Without flange</p> <p>FS20</p> <p><b>1</b> → <b>∅140</b></p> <p>FA32 FA33</p> <p><b>2</b> → <b>∅160</b></p> <p><b>3</b> → <b>∅200</b></p> <p>FA41 FA42 FA43</p> <p><b>2</b> → <b>∅160</b></p> <p><b>3</b> → <b>∅200</b></p> <p><b>4</b> → <b>∅250</b></p> <p>FA52 FA53<br/>FC61 FC62 FC63</p> <p><b>4</b> → <b>∅250</b></p> <p>FC71 FC72 FC73</p> <p><b>4</b> → <b>∅250</b></p> <p><b>5</b> → <b>∅300</b></p> <p>FC81 FC82 FC83</p> <p><b>5</b> → <b>∅300</b></p> <p><b>6</b> → <b>∅350</b></p> | <p><b>-C</b></p> <p>Flange<br/>Flangia</p>  <p>B5</p> <p><b>-A</b>=56 (∅120)</p> <p><b>-B</b>=63 (∅140)</p> <p><b>-C</b>=71 (∅160)</p> <p><b>-D</b>=80 (∅200)</p> <p><b>-E</b>=90 (∅200)</p> <p><b>-F</b>=100 (∅250)</p> <p><b>-G</b>=132 (∅300)</p> <p><b>-H</b>=160 (∅350)</p> <p><b>-I</b>=180 (∅350)</p> <p>Without flange<br/>Senza flangia</p>  <p><b>B14</b></p> <p><b>-O</b>=56 (∅80)</p> <p><b>-P</b>=63 (∅90)</p> <p><b>-Q</b>=71 (∅105)</p> <p><b>-R</b>=80 (∅120)</p> <p><b>-T</b>=90 (∅140)</p> <p><b>-U</b>=100 (∅160)</p> <p><b>-V</b>=132 (∅200)</p> <p>Brushless</p> <p><b>BB</b>=50/70-M5</p> <p><b>BC</b>=60/75-M5</p> <p><b>BD</b>=70/90-M6</p> <p><b>BE</b>=80/100-M6</p> <p><b>BF</b>=95/115-M8</p> <p><b>BG</b>=110/145-M8</p> <p><b>BH</b>=130/165-M8</p> <p>Type R<br/>Tipo R</p>  <p>FA33 FA43<br/>FS10 FS20</p> <p><b>-1</b> → <b>∅14</b></p> <p>FA32 FA42<br/>FA53 FC63 FC73</p> <p><b>-2</b> → <b>∅19</b></p> <p>FA52 FC62<br/>FC72 FC83</p> <p><b>-3</b> → <b>∅24</b></p> <p>FC82</p> <p><b>-4</b> → <b>∅28</b></p> <p><b>-M</b> → With coupling</p> <p>FA33 FA43<br/>FS10 FS20</p> <p><b>-Z</b> → <b>∅9</b><br/>(IEC56)</p> <p><b>-0</b> → <b>∅11</b><br/>(IEC63)</p> <p><b>-1</b> → <b>∅14</b><br/>(IEC71)</p> <p>FA32 FA42 FA53<br/>FC63 FC73</p> <p><b>-1</b> → <b>∅14</b><br/>(IEC71)</p> <p><b>-2</b> → <b>∅19</b><br/>(IEC80)</p> <p><b>-3</b> → <b>∅24</b><br/>(IEC90)</p> <p>FA52 FC62<br/>FC72 FC83</p> <p><b>-2</b> → <b>∅19</b><br/>(IEC80)</p> <p><b>-3</b> → <b>∅24</b><br/>(IEC90)</p> <p><b>-4</b> → <b>∅28</b><br/>(IEC100)</p> <p>FA41</p> <p><b>-4</b> → <b>∅28</b><br/>(IEC100)</p> | <p><b>H1</b></p>  <p><b>H1</b><br/>STANDARD</p>  <p><b>H4</b></p>  <p><b>H3</b></p>  <p><b>H2</b></p>  <p><b>H5</b></p>  <p><b>H6</b></p> | <p><b>ST</b><br/>standard bore<br/>foro standard</p> <p>COUPLING<br/>STANDARD (IEC)</p>  <p><b>-A</b> = 9mm</p> <p><b>-B</b> = 11mm</p> <p><b>-C</b> = 14mm</p> <p><b>-D</b> = 19mm</p> <p><b>-E</b> = 24mm</p> <p><b>-F</b> = 28mm</p> <p>BRUSHLESS*</p>  <p><b>-2</b> = 11mm</p> <p><b>-3</b> = 14mm</p> <p><b>-4</b> = 19mm</p> <p><b>-5</b> = 22mm</p> <p><b>-6</b> = 24mm</p> <p><b>-0</b><br/>Ready for input coupling<br/>Predisposto per giunto</p>  <p>* With reduction bushing where applicable<br/>Con bussola di riduzione dove prevista</p> | <p>With Type M specify terminal box position<br/>Con tipo M specificare posizione morsettiere</p>  <p><b>A</b></p>  <p><b>B</b><br/>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

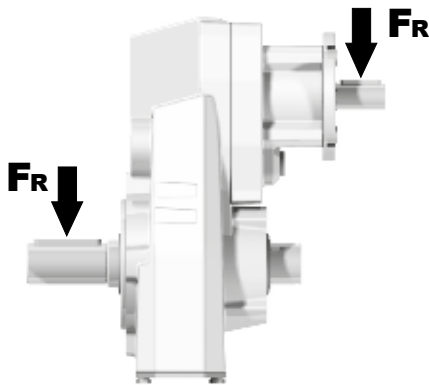
|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotação                        | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translación | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



7

|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor

**B** Output speed  
Velocità in uscita  
Abtriebsdrehzahl  
Vitesse de sortie  
Velocidad de salida

Nominal power  
Potenza nominale  
Max. mögliche Leistung  
Poissance nominale  
Potencia nominal

**A** Nominal torque  
Momento torcente nominale  
Nenn Drehmoment  
Couple nominal  
Par de torsión nominal

Flange code  
Codice flangia  
Flanschtype  
Code bride  
Código bridas

Input speed  
Velocità in entrata  
Eintriebsdrehzahl  
Vitesse en entrée  
Velocidad de entrada

Gear size  
Grandezza riduttore  
Getriebegröße  
Taille réducteur  
Tamaño reductor

Motor power  
Potenza motore  
Motorleistung  
Puissance moteur  
Potencia motor

# FA42

## Compact-Gear

### 320Nm

Rating - Aluminum  
SHAFT MOUNTED HELICAL

| QUICK SELECTION / Selezione veloce                     |              |  |  |                        |  |   |                            |    |    | input speed (n <sub>1</sub> ) = 1400 min <sup>-1</sup> |    |                             |    |    |    |              |            |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|--|----|-----------------------------|----|----|----|--------------|------------|
| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |  |    | Available B14 motor flanges |    |    |    | Output Shaft |            |
|  |              |  |  |                        |  |   | -B                         | -C | -D | -E   | -F | -Q                          | -R | -T | -U |              | Ratio code |
| 167  | <b>8.38</b>  | 4                                      | 215                                      | 1.0                    | 4.1                                      | 225                                       | B                          |    |    |  |    | C                           | C  |    |    | 2821         | 01         |
| 139  | <b>10.04</b> | 3                                      | 194                                      | 1.2                    | 3.7                                      | 240                                       | B                          |    |    |  |    | C                           | C  |    |    | 2818         | 02         |
| 114  | <b>12.33</b> | 3                                      | 238                                      | 1.1                    | 3.2                                      | 260                                       | B                          |    |    |  |    | C                           | C  |    |    | 2813         | 03         |
| 92   | <b>15.16</b> | 2.2                                    | 216                                      | 1.2                    | 2.6                                      | 260                                       | B                          |    |    |  |    | C                           | C  |    |    | 1921         | 04         |

**C** Ratio  
Rapporto  
Untersetzung  
Rapport de réduction  
Relación

Transmitted torque  
Momento torcente trasmesso  
Mögliche Drehmomente  
Couple de sortie  
Par transmitido

Service factor  
Fattore di servizio  
Betriebsfaktor  
Facteur de service  
Factor de servicio

Output shaft diam.  
Diam. albero uscita  
Durchmesser abtriebswelle  
Diametre arbre lent  
Diametro eje de salida

Notes  
Note  
Anmerkungen  
Note  
Notas

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
|  |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

| <b>D</b>  | Motor flange available<br>Flange disponibili<br>Erhältliche Motorflansche<br>Brides disponibles<br>Bridas disponibles  |
|-----------|--|
| <b>B)</b> | Mounting with reduction ring<br>Montaggio con boccola di riduzione<br>Reduzierhülsen<br>Montage avec douille de réduction<br>Montaje con casquillo de reducción  |
| <b>C)</b> | Motor flangeholes position/terminal box position<br>Posizione fori flangia/basetta motore<br>Bohrungsposition am Motorflansch/-socket<br>Position trous bride/barrette à bornes moteur<br>Posición agujeros brida / base motor |
| <b>B)</b> | Available without reduction bushes<br>Disponibile anche senza boccola<br>Auch ohne Reduzierbuchse verfügbar<br>Disponible aussi sans douille de réduction<br>Disponible tambien sin casquillo                                  |

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |                 | Hollow Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|-----------------|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P | -Q              |                  |             |
| 72  | <b>19.42</b>  | 0.37                            | 46                                | 1.3                    | <b>0.48</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 281713           | 01          |
| 51  | <b>27.21</b>  | 0.37                            | 65                                | 0.9                    | <b>0.34</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 281313           | 02          |
| 36.4  | <b>38.49</b>  | 0.25                            | 62                                | 1.0                    | <b>0.24</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 191713           | 03          |
| 31.7  | <b>44.12</b>  | 0.18                            | 54                                | 1.1                    | <b>0.21</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 171713           | 04          |
| 26.7  | <b>52.50</b>  | 0.18                            | 64                                | 0.9                    | <b>0.18</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 151713           | 05          |
| 22.6  | <b>61.82</b>  | 0.12                            | 49                                | 1.2                    | <b>0.15</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 171313           | 06          |
| 19.0  | <b>73.56</b>  | 0.12                            | 58                                | 1.0                    | <b>0.13</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 151313           | 07          |
| 15.9  | <b>88.13</b>  | 0.09                            | 56                                | 1.1                    | <b>0.11</b>                       | <b>60</b>                          |                            |    | C                           | C  | standard<br>ø17 | 101713           | 08          |
| 12.0  | <b>116.67</b> | 0.06                            | 48                                | 1.2                    | <b>0.08</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 91713            | 09          |
| 11.3  | <b>123.48</b> | 0.06                            | 51                                | 1.2                    | <b>0.08</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 101313           | 10          |
| 9.0   | <b>155.37</b> | 0.06                            | 64                                | 0.9                    | <b>0.06</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 71713            | 11          |
| 8.6   | <b>163.47</b> | 0.06                            | 68                                | 0.9                    | <b>0.06</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 91313            | 12          |
| 7.6   | <b>184.39</b> | 0.06                            | 76                                | 0.8                    | <b>0.05</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 61713            | 13          |
| 6.4   | <b>217.68</b> | 0.06*                           | 90                                | 0.7                    | <b>0.04</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 71313            | 14          |
| 5.4   | <b>258.34</b> | 0.06*                           | 107                               | 0.6                    | <b>0.04</b>                       | <b>60</b>                          |                            |    | C                           | C  |                 | 61313            | 15          |

The dynamic efficiency is **0.94** for all ratios \* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FS10** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FS10** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FS10** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FS10** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FS10** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION FS10 Oil Quantity 0.35 Lt.

**SHELL** Omala S4 WE 320      **ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL LOADS

**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR  |
|-------|-----|-----|
| 1400  | 140 | 700 |
| 900   | 160 | 800 |

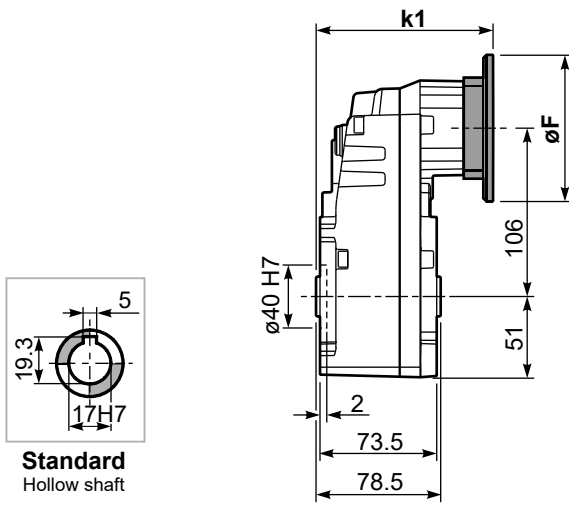
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

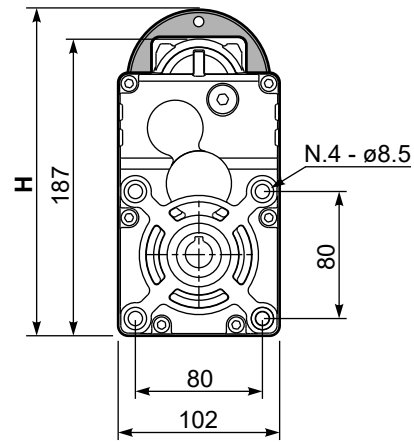


**PFS10...** Basic gearbox  
Riduttore base

Gearbox weight **3.1 kg**  
peso riduttore



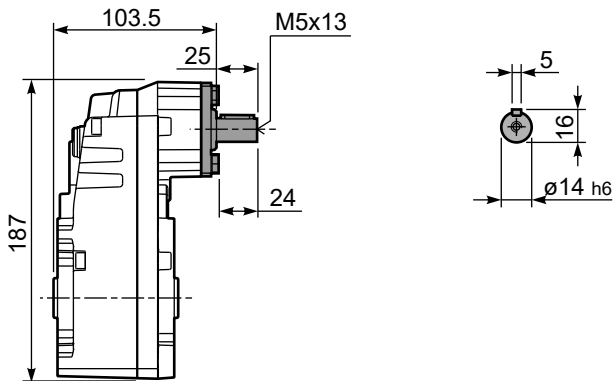
**Standard**  
Hollow shaft



| B14 Motor Flanges | H     | øF  | k1    | kit code   |
|-------------------|-------|-----|-------|------------|
| 56 B14            | 197   | 80  | 109.3 | KC40.4.049 |
| 63 B14            | 202   | 90  | 111.8 | K050.4.047 |
| 71 B14            | 209.5 | 105 | 109.3 | K050.4.045 |

| B5 Motor Flanges | H   | øF  | k1    | kit code   |
|------------------|-----|-----|-------|------------|
| 63 B5            | 226 | 138 | 111.8 | K050.4.041 |
| 71 B5            | 237 | 160 | 109.3 | K050.4.042 |



**RFS10...** Input Shaft  
Albero in entrata





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Hollow Shaft<br><br>standard<br>ø20 | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|-----------------------------|----|----|--|--|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -O                          | -P | -Q |  |  |
| 24.2  | <b>57.95</b>  | 0.25                            | 93                                | 1.0                    | <b>0.24</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 2844   | 01   |
| 13.4  | <b>104.80</b> | 0.12                            | 83                                | 1.1                    | <b>0.13</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 1954   | 02   |
| 11.5  | <b>121.47</b> | 0.12                            | 96                                | 0.9                    | <b>0.12</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 1756   | 03   |
| 9.8   | <b>142.59</b> | 0.09                            | 90                                | 1.0                    | <b>0.10</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 1558   | 04   |
| 8.2   | <b>170.20</b> | 0.06                            | 70                                | 1.3                    | <b>0.08</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 1360   | 05   |
| 6.0   | <b>232.32</b> | 0.06                            | 96                                | 0.9                    | <b>0.06</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 1063   | 06   |
| 4.6   | <b>303.20</b> | 0.06*                           | 126                               | 0.7                    | <b>0.05</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 974  | 07   |
| 3.5   | <b>400.37</b> | 0.06*                           | 166                               | 0.5                    | <b>0.04</b>                       | <b>90</b>                          |                            |    | C                           | C  |    | 776  | 08   |

The dynamic efficiency is **0.94** for all ratios \* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **FS20** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FS20** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FS20** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FS20** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FS20** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

#### LUBRICATION FS20 Oil Quantity 0.50 Lt.

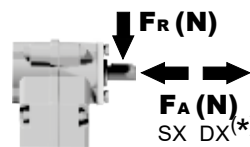
**SHELL** Omala S4 WE 320

**ENI** Telium VSF 320

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL LOADS

Input shaft  
Albero in entrata



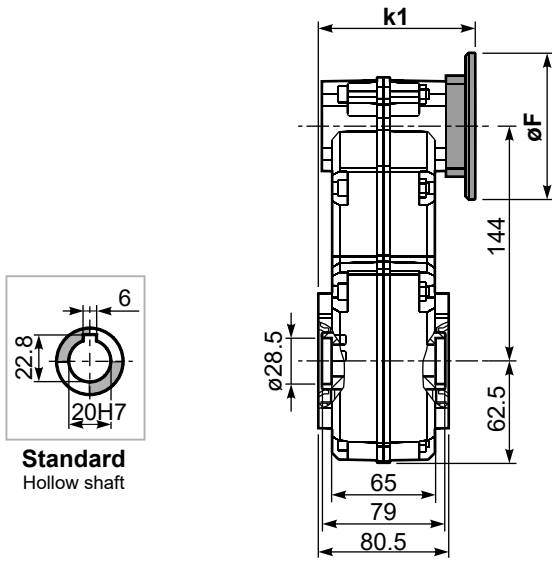
| $n_1$ | FA  | FR  |
|-------|-----|-----|
| 1400  | 140 | 700 |
| 900   | 160 | 800 |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

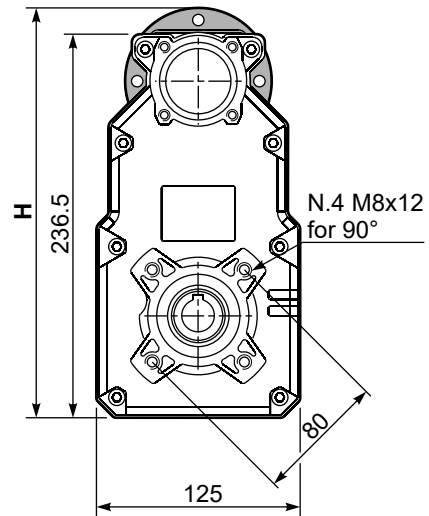
**tab. 2**

**P**FS20... Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **4.3 kg**



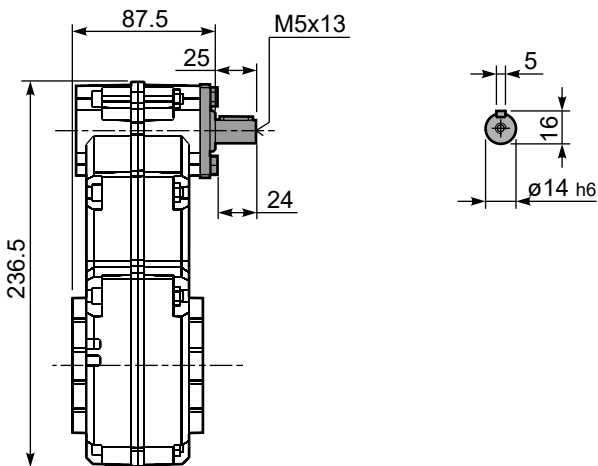
**Standard**  
Hollow shaft



| B14 Motor Flanges | H     | øF  | k1   | kit code   |
|-------------------|-------|-----|------|------------|
| 56 B14            | 246.5 | 80  | 94.3 | KC40.4.049 |
| 63 B14            | 251.5 | 90  | 96.8 | K050.4.047 |
| 71 B14            | 259   | 105 | 94.3 | K050.4.045 |

| B5 Motor Flanges | H     | øF  | k1   | kit code   |
|------------------|-------|-----|------|------------|
| 63 B5            | 275.5 | 138 | 96.8 | K050.4.041 |
| 71 B5            | 286.5 | 160 | 94.3 | K050.4.042 |

**R**FS20... Input Shaft  
Albero in entrata





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    |     | Available B14 motor flanges |    |    |    | Output Shaft<br> | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----|-----------------------------|----|----|----|------------------|-------------|
|   |              |                                 |                                   |                          |                                   |                                    | -B                         | -C | -D | -E | -F  | -Q                          | -R | -T | -U |                  |             |
|   |              |                                 |                                   |                          |                                   |                                    | 63                         | 71 | 80 | 90 | 100 | 112                         | 71 | 80 | 90 |                  |             |
| 231   | <b>6.06</b>  | 2.2                             | 86                                | 0.9                      | <b>2.02</b>                       | <b>80</b>                          | B                          |    |    |    |     | C                           | C  |    |    | 2821             | 01          |
| 150   | <b>9.31</b>  | 1.5                             | 91                                | 1.0                      | <b>1.48</b>                       | <b>90</b>                          | B                          |    |    |    |     | C                           | C  |    |    | 2813             | 02          |
| 128   | <b>10.96</b> | 1.5                             | 107                               | 1.0                      | <b>1.53</b>                       | <b>110</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1921             | 03          |
| 110   | <b>12.71</b> | 1.5                             | 124                               | 1.0                      | <b>1.50</b>                       | <b>125</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1721             | 04          |
| 94  | <b>14.91</b> | 1.5                             | 146                               | 1.0                      | <b>1.45</b>                       | <b>142</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1521             | 05          |
| 83  | <b>16.83</b> | 1.5                             | 165                               | 0.9                      | <b>1.36</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1913             | 06          |
| 79  | <b>17.80</b> | 1.1                             | 127                               | 1.2                      | <b>1.29</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1321             | 07          |
| 72  | <b>19.51</b> | 1.1                             | 140                               | 1.1                      | <b>1.17</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1713             | 08          |
| 61  | <b>22.90</b> | 1.1                             | 164                               | 0.9                      | <b>1.00</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1513             | 09          |
| 58  | <b>24.30</b> | 1.1                             | 174                               | 0.9                      | <b>0.94</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1021             | 10          |
| 54  | <b>26.15</b> | 0.75                            | 128                               | 1.2                      | <b>0.88</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1910             | 11          |
| 51  | <b>27.34</b> | 0.75                            | 134                               | 1.1                      | <b>0.84</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1313             | 12          |
| 46.2  | <b>30.31</b> | 0.75                            | 149                               | 1.0                      | <b>0.76</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1710             | 13          |
| 44.1  | <b>31.71</b> | 0.75                            | 156                               | 1.0                      | <b>0.72</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 921              | 14          |
| 39.4  | <b>35.57</b> | 0.75                            | 175                               | 0.9                      | <b>0.64</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1510             | 15          |
| 37.5  | <b>37.32</b> | 0.55                            | 135                               | 1.1                      | <b>0.61</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1013             | 16          |
| 33.0  | <b>42.46</b> | 0.55                            | 154                               | 1.0                      | <b>0.54</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1310             | 17          |
| 28.7  | <b>48.70</b> | 0.55                            | 176                               | 0.9                      | <b>0.47</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 913              | 18          |
| 24.2  | <b>57.96</b> | 0.37                            | 140                               | 1.1                      | <b>0.40</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 1010             | 19          |
| 21.8  | <b>64.31</b> | 0.37                            | 156                               | 1.0                      | <b>0.36</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 713              | 20          |
| 18.5  | <b>75.64</b> | 0.25                            | 124                               | 1.2                      | <b>0.30</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 910              | 21          |
| 14.0  | <b>99.89</b> | 0.25                            | 163                               | 0.9                      | <b>0.23</b>                       | <b>150</b>                         | B                          |    |    |    |     | C                           | C  |    |    | 710              | 22          |

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili  
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione  
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione  
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **FA32** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA32** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA32** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA32** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA32** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| H1                    | H4   | H3      | H2                 | H5      | H6      |
| 0.65 LT               | 0.50 LT  | 0.50 LT | 0.60 LT            | 0.80 LT | 0.65 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{106}{X+80}$

**Input shaft**  
Albero in entrata

| $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   |
|-------------------------------|-----|------|-------------------------------|-----|------|-------------------------------|-----|------|
| 300                           | 250 | 1250 | 140                           | 360 | 1800 | 70                            | 470 | 2350 |
| 250                           | 270 | 1350 | 120                           | 380 | 1900 | 40                            | 550 | 2750 |
| 200                           | 320 | 1600 | 85                            | 440 | 2200 | 15                            | 560 | 2800 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

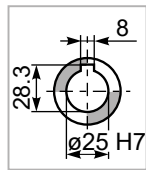
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 240 | 1200 |
| 900   | 280 | 1400 |
| 500   | 340 | 1700 |

tab. 2

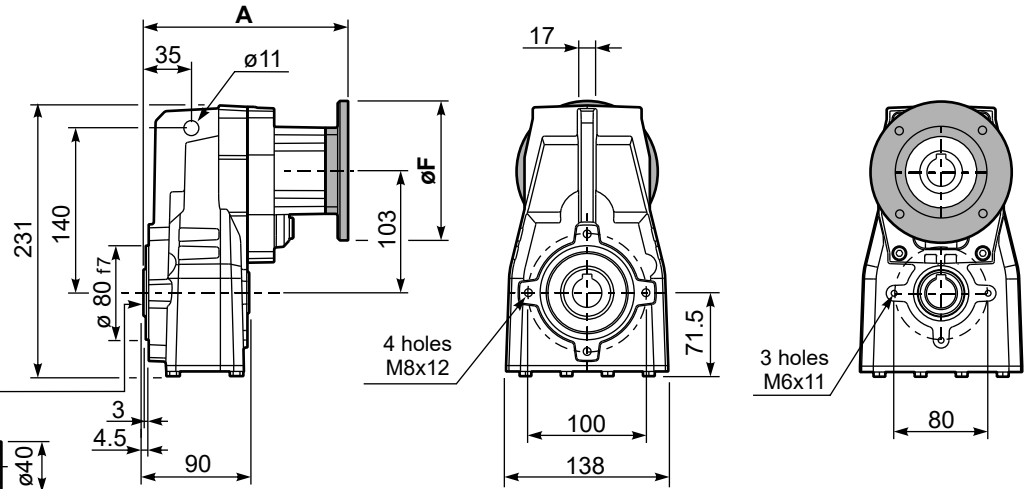
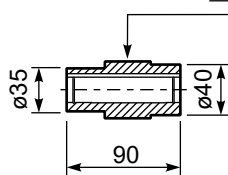
**P**FA32C... Basic gearbox  
Riduttore base

Gearbox weight **7.0 kg**  
peso riduttore

| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>63B5</b>       | K063.4.041 | 140 | 176.5 |
| <b>71B5</b>       | K063.4.042 | 160 | 174.5 |
| <b>80/90B5</b>    | K063.4.043 | 200 | 176.5 |
| <b>100/112B5</b>  | KC40.4.043 | 250 | 191.5 |
| <b>71B14</b>      | K063.4.047 | 105 | 174.5 |
| <b>80B14</b>      | K063.4.046 | 120 | 176.5 |
| <b>90B14</b>      | K063.4.041 | 140 | 176.5 |
| <b>100/112B14</b> | KC40.4.041 | 160 | 191.5 |

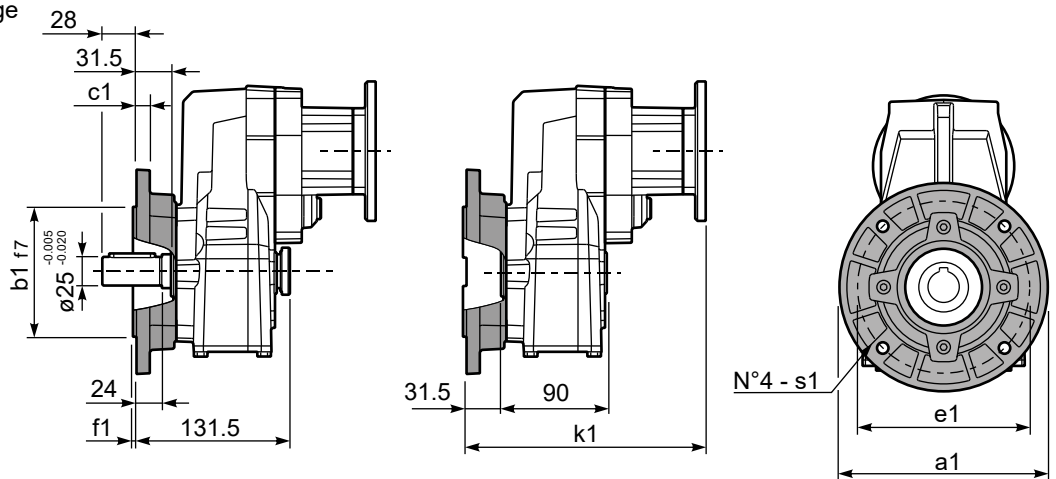


**Standard**  
Hollow shaft



**PFA32...-F...** Output flange  
Flangia uscita

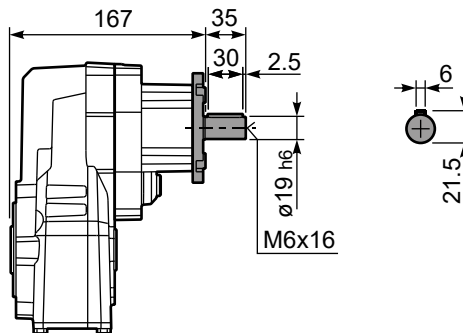
| Motor Flange | k1  |
|--------------|-----|
| 63B5         | 208 |
| 71B5         | 206 |
| 80/90B5      | 208 |
| 100/112B5    | 223 |
| 71B14        | 206 |
| 80B14        | 208 |
| 90B14        | 208 |
| 100/112B14   | 223 |



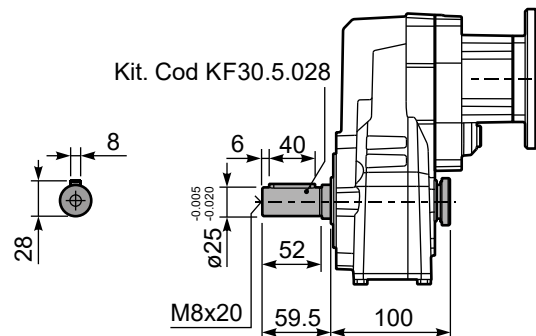
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1  | s1 | Kit code   |
|------|-----|----|-----|-----|----|------------|
| 160  | 110 | 10 | 130 | 3   | 9  | KX4A.9.010 |
| 200  | 130 | 11 | 165 | 3.5 | 11 | KX4A.9.011 |
| -    | -   | -  | -   | -   | -  | -          |

**R**FA32C... Input Shaft  
Albero in entrata



**PFA32 A...** Single output shaft  
Albero uscita semplice





| QUICK SELECTION / Selezione veloce                     |               |  |  |                        |  |   | input speed (n <sub>1</sub> ) = 1400 min <sup>-1</sup> |    |                             |    |    |                   |             |
|--|---------------|--|--|------------------------|--|---|--|----|-----------------------------|----|----|-------------------|-------------|
| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges                             |    | Available B14 motor flanges |    |    | Output Shaft<br>Ø | Ratios code |
|  |               |  |  |                        |  |   | -B   | -C | -O                          | -P | -Q |                   |             |
| 13.6   | <b>102.57</b> | 0.25                                   | 164                                      | 0.9                    | <b>0.23</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 131710            | 01          |
| 12.6   | <b>110.77</b> | 0.18                                   | 136                                      | 1.1                    | <b>0.21</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 91321             | 02          |
| 11.8   | <b>118.89</b> | 0.18                                   | 145                                      | 1.0                    | <b>0.20</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 151310            | 03          |
| 10.9   | <b>128.49</b> | 0.18                                   | 157                                      | 1.0                    | <b>0.18</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 101313            | 04          |
| 9.7  | <b>143.72</b> | 0.18                                   | 176                                      | 0.9                    | <b>0.16</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 131310            | 05          |
| 8.7  | <b>161.67</b> | 0.12                                   | 128                                      | 1.2                    | <b>0.14</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 71713             | 06          |
| 8.2  | <b>170.10</b> | 0.12                                   | 134                                      | 1.1                    | <b>0.14</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 91313             | 07          |
| 7.4  | <b>188.57</b> | 0.12                                   | 149                                      | 1.0                    | <b>0.12</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 91710             | 08          |
| 7.0  | <b>199.57</b> | 0.12                                   | 158                                      | 1.0                    | <b>0.12</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 101310            | 09          |
| 6.2  | <b>226.51</b> | 0.09                                   | 143                                      | 1.1                    | <b>0.10</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 71313             | 10          |
| 5.6  | <b>251.11</b> | 0.09                                   | 158                                      | 0.9                    | <b>0.09</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 71710             | 11          |
| 5.3  | <b>264.21</b> | 0.09                                   | 167                                      | 0.9                    | <b>0.09</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 91310             | 12          |
| 4.7  | <b>298.01</b> | 0.06                                   | 123                                      | 1.2                    | <b>0.08</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 61710             | 13          |
| 4.0  | <b>351.82</b> | 0.06                                   | 146                                      | 1.0                    | <b>0.07</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 71310             | 14          |
| 3.4  | <b>417.54</b> | 0.06                                   | 173                                      | 0.9                    | <b>0.06</b>                              | <b>150</b>                                |  |    | C                           | C  |    | 61310             | 15          |

The dynamic efficiency is **0.94** for all ratios

  Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**E** Unit **FA33** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA33** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA33** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA33** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA33** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
| H1                    | H4   | H3      | H2                 | H5      | H6      |
| 0.90 LT               | 0.55 LT  | 0.55 LT | 0.65 LT            | 0.95 LT | 0.70 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website [Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web](#) **tab. 1**

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{106}{X+80}$

| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 300                                    | 250 | 1250 | 140                                    | 360 | 1800 | 70                                     | 470 | 2350 |
| 250                                    | 270 | 1350 | 120                                    | 380 | 1900 | 40                                     | 550 | 2750 |
| 200                                    | 320 | 1600 | 85                                     | 440 | 2200 | 15                                     | 560 | 2800 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

| n <sub>1</sub> | FA  | FR  |
|----------------|-----|-----|
| 1400           | 140 | 700 |
| 900            | 160 | 800 |
| 500            | 190 | 950 |

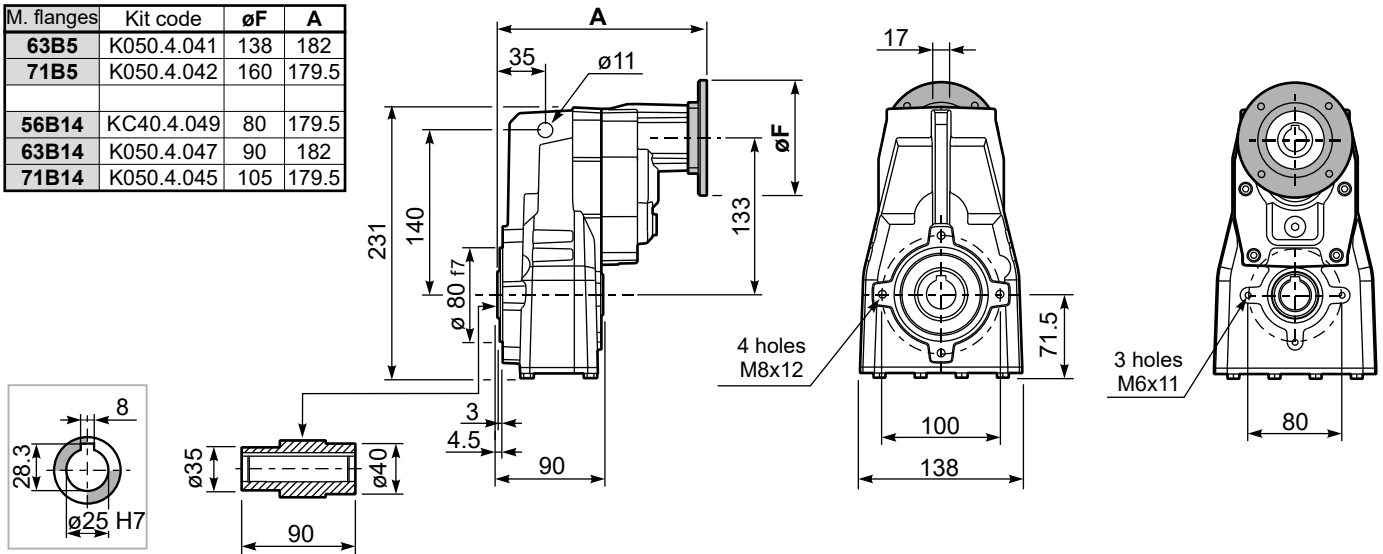
**tab. 2**



**P**FA33C... Basic gearbox  
Riduttore base

Gearbox weight **7.0 kg**  
peso riduttore

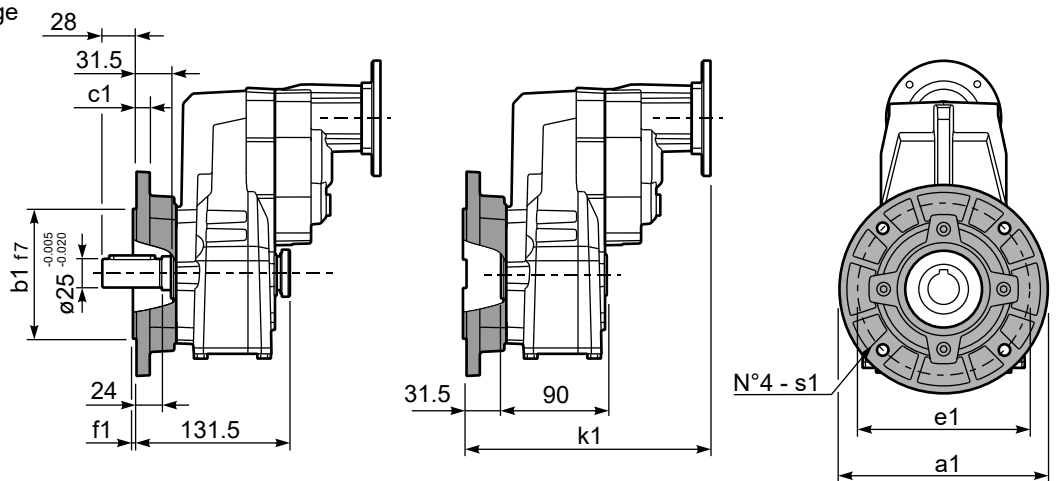
| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>63B5</b>  | K050.4.041 | 138 | 182   |
| <b>71B5</b>  | K050.4.042 | 160 | 179.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 179.5 |
| <b>63B14</b> | K050.4.047 | 90  | 182   |
| <b>71B14</b> | K050.4.045 | 105 | 179.5 |



**Standard**  
Hollow shaft

**P**FA33...-**F**... Output flange  
Flangia uscita

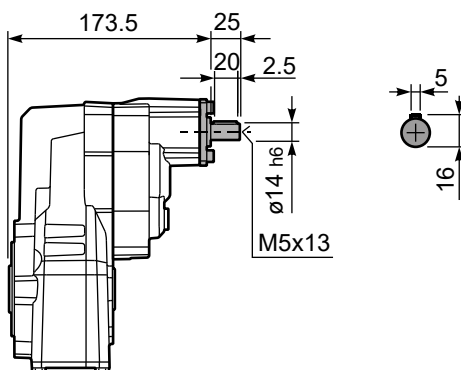
| Motor Flange | k1    |
|--------------|-------|
| 63B5         | 213.5 |
| 71B5         | 211   |
| 56B14        | 211   |
| 63B14        | 213.5 |
| 71B14        | 211   |



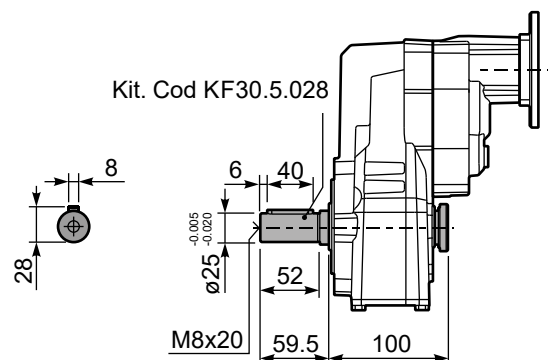
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1  | s1 | Kit code   |
|------|-----|----|-----|-----|----|------------|
| 160  | 110 | 10 | 130 | 3   | 9  | KX4A.9.010 |
| 200  | 130 | 11 | 165 | 3.5 | 11 | KX4A.9.011 |
| -    | -   | -  | -   | -   | -  | -          |

**R**FA33C... Input Shaft  
Albero in entrata



**P**FA33 **A**... Single output shaft  
Albero uscita semplice





**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |            | Available B14 motor flanges |    |            | Output Shaft<br> | Ratios code     |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|------------|-----------------------------|----|------------|------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -D                         | -E | -F         | -R                          | -T | -U         |                  |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 80                         | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                  |                 |    |
| 481   | <b>2.91</b>  | 4                               | 76                                | 1.8                    | 7.2                               | 140                                | B                          | B  |            | B                           | B  |            | 3499             | <b>standard</b> | 01 |
| 373   | <b>3.75</b>  | 4                               | 98                                | 1.6                    | 6.4                               | 160                                | B                          | B  |            | B                           | B  |            | 28105            | <b>ø30</b>      | 02 |
| 263   | <b>5.33</b>  | 4                               | 140                               | 1.2                    | 4.8                               | 170                                | B                          | B  |            | B                           | B  |            | 21112            |                 | 03 |
| 219   | <b>6.39</b>  | 4                               | 167                               | 1.0                    | 4.0                               | 170                                | B                          | B  |            | B                           | B  |            | 18115            | ø25             | 04 |
| 178   | <b>7.85</b>  | 4                               | 205                               | 1.1                    | 4.3                               | 225                                | B                          | B  |            | B                           | B  |            | 13102            | ø35             | 05 |

The dynamic efficiency is **0.98** for all ratios On request

Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **FA41** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA41** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA41** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA41** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA41** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| 1.10 LT               | 0.65 LT  | 0.65 LT | 0.65 LT            | 1.15 LT | 0.80 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_R$  (N)  
 $F_A$  (N)

$F_{eq} = F_R \cdot \frac{127.5}{X+97.5}$

| $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   |
|-------------------------------|-----|------|-------------------------------|-----|------|-------------------------------|-----|------|
| 300                           | 300 | 1500 | 140                           | 390 | 1950 | 70                            | 490 | 2450 |
| 250                           | 320 | 1600 | 120                           | 410 | 2050 | 40                            | 590 | 2950 |
| 200                           | 350 | 1750 | 85                            | 460 | 2300 | 15                            | 800 | 4000 |

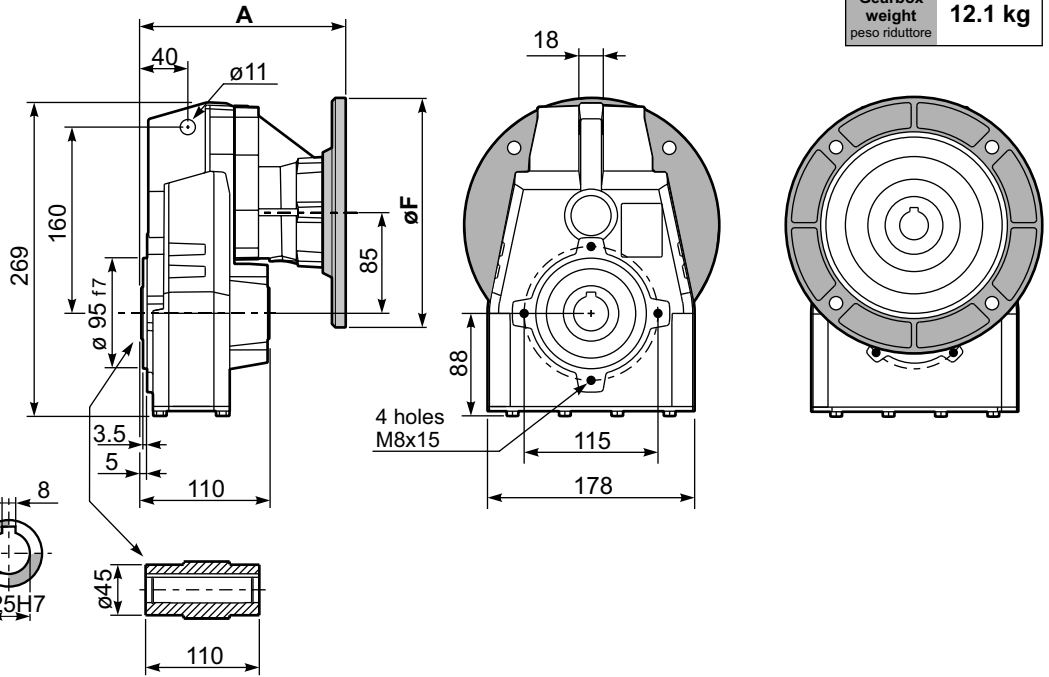
**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

tab. 2

**PFA41C...** Basic gearbox  
Riduttore base

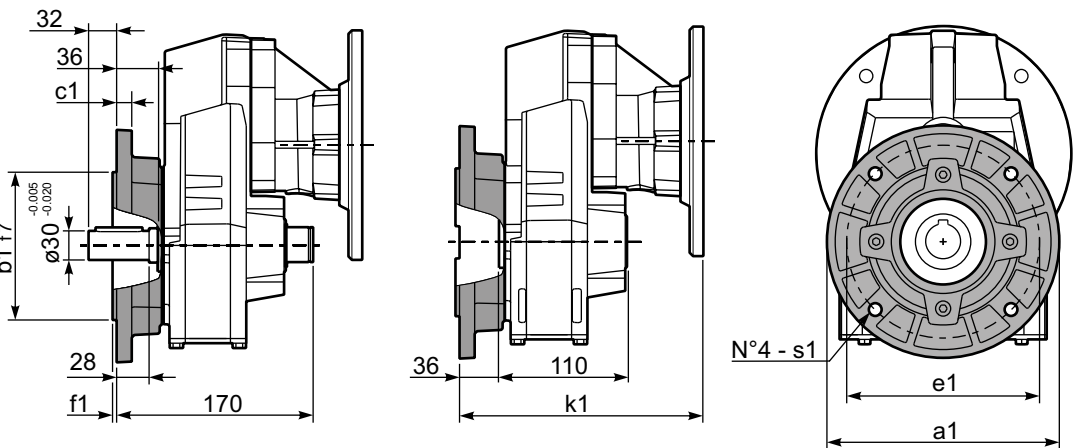
Gearbox weight  
peso riduttore **12.1 kg**

| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>80/90B5</b>    | K023.4.042 | 200 | 179.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 188.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 179.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 179.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 188.5 |



**PFA41...-F...** Output flange  
Flangia uscita

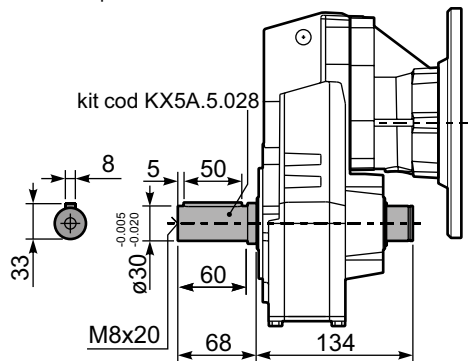
| M. flanges        | k1    |
|-------------------|-------|
| <b>80/90B5</b>    | 215.5 |
| <b>100/112B5</b>  | 221.5 |
| <b>80B14</b>      | 213.5 |
| <b>90B14</b>      | 213.5 |
| <b>100/112B14</b> | 224.5 |



**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1  | s1 | Kit code   |
|------|-----|----|-----|-----|----|------------|
| 160  | 110 | 10 | 130 | 3   | 9  | KX5A.9.010 |
| 200  | 130 | 13 | 165 | 3.5 | 11 | KX5A.9.011 |
| 250  | 180 | 14 | 215 | 4   | 14 | KX5A.9.012 |

**PFA41 A...** Single output shaft  
Albero uscita semplice





**QUICK SELECTION / Selezione veloce** input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    |     | Available B14 motor flanges |    |    |    | Output Shaft<br> | Ratios code<br> |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----|-----------------------------|----|----|----|------------------|-----------------|
|  |              |  |  |                        |  |   | -B                         | -C | -D | -E | -F  | -Q                          | -R | -T | -U |                  |                 |
|  |              |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 100 | 112                         | 71 | 80 | 90 |                  |                 |
| 167  | <b>8.38</b>  | 4                                      | 215                                      | 1.0                    | 4.1                                      | 225                                       | B                          |    |    |    |     | C                           | C  |    |    | 2821             | 01              |
| 139  | <b>10.04</b> | 3                                      | 194                                      | 1.2                    | 3.7                                      | 240                                       | B                          |    |    |    |     | C                           | C  |    |    | 2818             | 02              |
| 114  | <b>12.33</b> | 3                                      | 238                                      | 1.1                    | 3.2                                      | 260                                       | B                          |    |    |    |     | C                           | C  |    |    | 2813             | 03              |
| 92   | <b>15.16</b> | 2.2                                    | 215                                      | 1.2                    | 2.6                                      | 260                                       | B                          |    |    |    |     | C                           | C  |    |    | 1921             | 04              |
| 80   | <b>17.57</b> | 2.2                                    | 250                                      | 1.1                    | 2.3                                      | 270                                       | B                          |    |    |    |     | C                           | C  |    |    | 1721             | 05              |
| 77   | <b>18.16</b> | 2.2                                    | 258                                      | 1.1                    | 2.4                                      | 290                                       | B                          |    |    |    |     | C                           | C  |    |    | 1918             | 06              |
| 67   | <b>21.05</b> | 2.2                                    | 299                                      | 1.1                    | 2.3                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1718             | 07              |
| 63   | <b>22.30</b> | 2.2                                    | 317                                      | 1.0                    | 2.2                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1913             | 08              |
| 57   | <b>24.70</b> | 1.5                                    | 242                                      | 1.3                    | 2.0                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1518             | 09              |
| 54   | <b>25.85</b> | 1.5                                    | 253                                      | 1.3                    | 1.9                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1713             | 10              |
| 47.5   | <b>29.49</b> | 1.5                                    | 289                                      | 1.1                    | 1.7                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1318             | 11              |
| 46.1   | <b>30.34</b> | 1.5                                    | 297                                      | 1.1                    | 1.6                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1513             | 12              |
| 41.7   | <b>33.60</b> | 1.1                                    | 240                                      | 1.0                    | 1.1                                      | 250                                       | B                          |    |    |    |     | C                           | C  |    |    | 1021             | 13              |
| 38.7   | <b>36.21</b> | 1.1                                    | 259                                      | 1.2                    | 1.3                                      | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1313             | 14              |
| 34.8   | <b>40.25</b> | 1.1                                    | 288                                      | 1.0                    | 1.1                                      | 300                                       | B                          |    |    |    |     | C                           | C  |    |    | 1018             | 15              |
| 28.3   | <b>49.43</b> | 1.1                                    | 354                                      | 0.9                    | 0.99                                     | 320                                       | B                          |    |    |    |     | C                           | C  |    |    | 1013             | 16              |
| 26.7   | <b>52.53</b> | 0.75                                   | 258                                      | 1.0                    | 0.76                                     | 260                                       | B                          |    |    |    |     | C                           | C  |    |    | 918              | 17              |
| 21.7   | <b>64.51</b> | 0.75                                   | 317                                      | 1.0                    | 0.75                                     | 315                                       | B                          |    |    |    |     | C                           | C  |    |    | 913              | 18              |
| 20.2   | <b>69.37</b> | 0.37                                   | 168                                      | 1.1                    | 0.42                                     | 190                                       | B                          |    |    |    |     | C                           | C  |    |    | 718              | 19              |
| 16.4   | <b>85.19</b> | 0.37                                   | 206                                      | 1.1                    | 0.41                                     | 230                                       | B                          |    |    |    |     | C                           | C  |    |    | 713              | 20              |

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **FA42** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA42** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA42** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA42** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA42** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| H1                    | H4   | H3      | H2                 | H5      | H6      |
| 1.15 LT               | 0.70 LT  | 0.70 LT | 0.70 LT            | 1.20 LT | 0.80 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$Feq = FR \cdot \frac{127.5}{X+97.5}$

| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 300                                    | 300 | 1500 | 140                                    | 390 | 1950 | 70                                     | 490 | 2450 |
| 250                                    | 320 | 1600 | 120                                    | 410 | 2050 | 40                                     | 590 | 2950 |
| 200                                    | 350 | 1750 | 85                                     | 460 | 2300 | 15                                     | 800 | 4000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

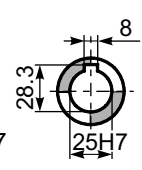
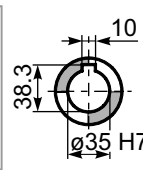
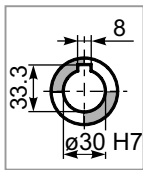
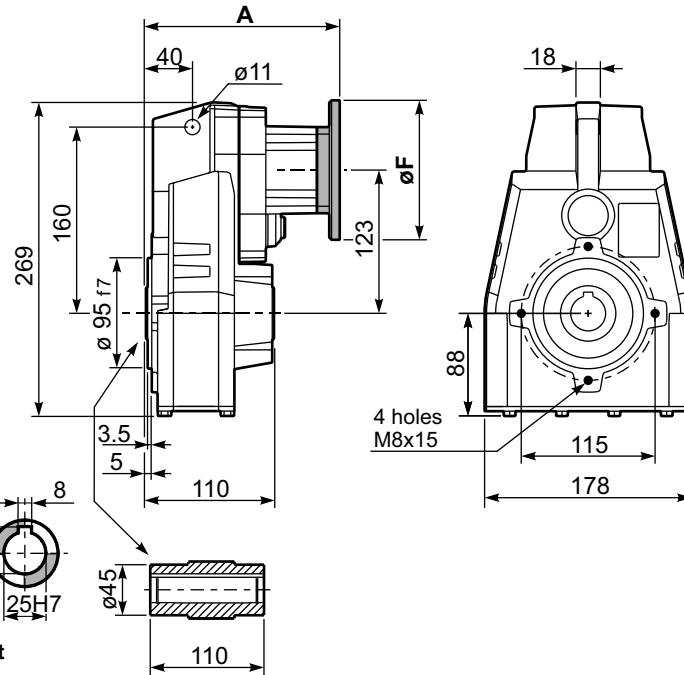
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 240 | 1200 |
| 900            | 280 | 1400 |
| 500            | 340 | 1700 |

tab. 2

**PFA42C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **9.0 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 169.5 |
| 71B5       | K063.4.042 | 160 | 167.5 |
| 80/90B5    | K063.4.043 | 200 | 169.5 |
| 100/112B5  | KC40.4.043 | 250 | 184.5 |
| 71B14      | K063.4.047 | 105 | 167.5 |
| 80B14      | K063.4.046 | 120 | 169.5 |
| 90B14      | K063.4.041 | 140 | 169.5 |
| 100/112B14 | KC40.4.041 | 160 | 184.5 |

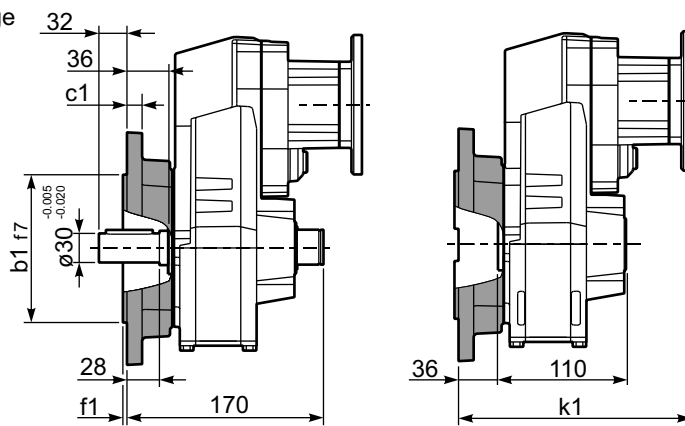


**Standard**  
Hollow shaft

**On request**  
A richiesta

**PFA42...-F...** Output flange  
Flangia uscita

| Motor Flange | k1    |
|--------------|-------|
| 63B5         | 205.5 |
| 71B5         | 203.5 |
| 80/90B5      | 205.5 |
| 100/112B5    | 220.5 |
| 71B14        | 203.5 |
| 80B14        | 205.5 |
| 90B14        | 205.5 |
| 100/112B14   | 220.5 |



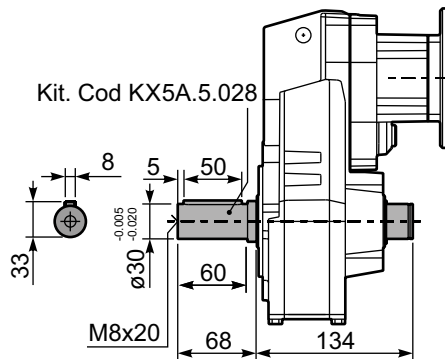
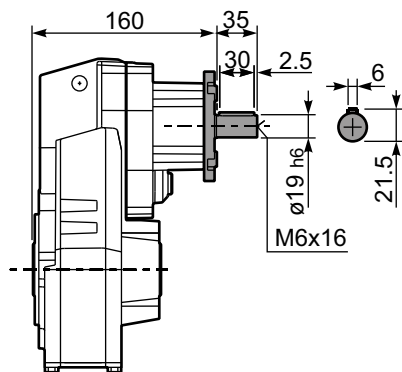
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1  | s1 | Kit code   |
|------|-----|----|-----|-----|----|------------|
| 160  | 110 | 10 | 130 | 3   | 9  | KX5A.9.010 |
| 200  | 130 | 13 | 165 | 3.5 | 11 | KX5A.9.011 |
| 250  | 180 | 14 | 215 | 4   | 14 | KX5A.9.012 |

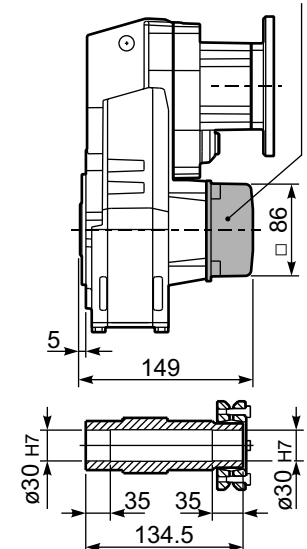
**RFA42C...** Input Shaft  
Albero in entrata

**PFA42 A...** Single output shaft  
Albero uscita semplice

**PFA42D...** Shrink disk  
Calettatore



Kit. Cod KF40.0.210LM





| QUICK SELECTION / Selezione veloce                     |               |  |  |                        |  |   | input speed (n <sub>1</sub> ) = 1400 min <sup>-1</sup> |    |                             |    |    |                   |             |
|--|---------------|--|--|------------------------|--|---|--|----|-----------------------------|----|----|-------------------|-------------|
| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges                             |    | Available B14 motor flanges |    |    | Output Shaft<br>Ø | Ratios code |
|  |               |  |  |                        |  |   | -B   | -C | -O                          | -P | -Q |                   |             |
| 18.8   | <b>74.33</b>  | 0.37                                   | 176                                      | 1.8                    | <b>0.67</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 191313            | 01          |
| 17.0   | <b>82.56</b>  | 0.37                                   | 196                                      | 1.6                    | <b>0.60</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 151318            | 02          |
| 16.0   | <b>87.48</b>  | 0.37                                   | 207                                      | 1.5                    | <b>0.57</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 131713            | 03          |
| 13.8   | <b>101.40</b> | 0.37                                   | 240                                      | 1.3                    | <b>0.49</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 151313            | 04          |
| 11.4   | <b>122.57</b> | 0.37                                   | 291                                      | 1.1                    | <b>0.41</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 131313            | 05          |
| 10.1   | <b>138.59</b> | 0.37                                   | 329                                      | 1.0                    | <b>0.36</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 101318            | 06          |
| 8.7  | <b>160.82</b> | 0.25                                   | 257                                      | 1.2                    | <b>0.31</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 91713             | 07          |
| 8.2  | <b>170.20</b> | 0.25                                   | 272                                      | 1.2                    | <b>0.29</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 101313            | 08          |
| 7.6  | <b>183.48</b> | 0.25                                   | 294                                      | 1.1                    | <b>0.27</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 91318             | 09          |
| 6.5  | <b>214.15</b> | 0.18                                   | 262                                      | 1.2                    | <b>0.23</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 71713             | 10          |
| 6.2  | <b>225.33</b> | 0.18                                   | 276                                      | 1.2                    | <b>0.22</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 91313             | 11          |
| 5.7  | <b>244.32</b> | 0.18                                   | 299                                      | 1.1                    | <b>0.20</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 71318             | 12          |
| 5.5  | <b>254.15</b> | 0.18                                   | 311                                      | 1.0                    | <b>0.20</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 61713             | 13          |
| 4.8  | <b>289.96</b> | 0.18                                   | 355                                      | 0.9                    | <b>0.17</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 61318             | 14          |
| 4.7  | <b>300.05</b> | 0.18                                   | 367                                      | 0.9                    | <b>0.17</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 71313             | 15          |
| 3.9  | <b>356.09</b> | 0.12                                   | 282                                      | 1.1                    | <b>0.14</b>                              | <b>320</b>                                |  |    | C                           | C  |    | 61313             | 16          |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili  
 **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
 **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
 **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FA43** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA43** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA43** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA43** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA43** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |                    |         |         |
|-----------------------|---|---------|--------------------|---------|---------|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|                       |   |         |                    |         |         |
| H1                    | H4  | H3      | H2                 | H5      | H6      |
| 1.30 LT               | 0.70 LT   | 0.70 LT | 0.70 LT            | 1.35 LT | 0.90 LT |
| SHELL Omala S4 WE 320 |   |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website [www.igus.com](#) **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

**Input shaft**  
Albero in entrata

| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| <b>300</b>                             | 300 | 1500 | <b>140</b>                             | 390 | 1950 | <b>70</b>                              | 490 | 2450 |
| <b>250</b>                             | 320 | 1600 | <b>120</b>                             | 410 | 2050 | <b>40</b>                              | 590 | 2950 |
| <b>200</b>                             | 350 | 1750 | <b>85</b>                              | 460 | 2300 | <b>15</b>                              | 800 | 4000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

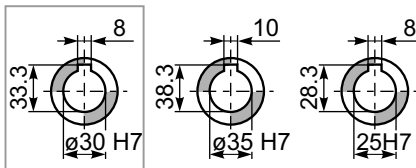
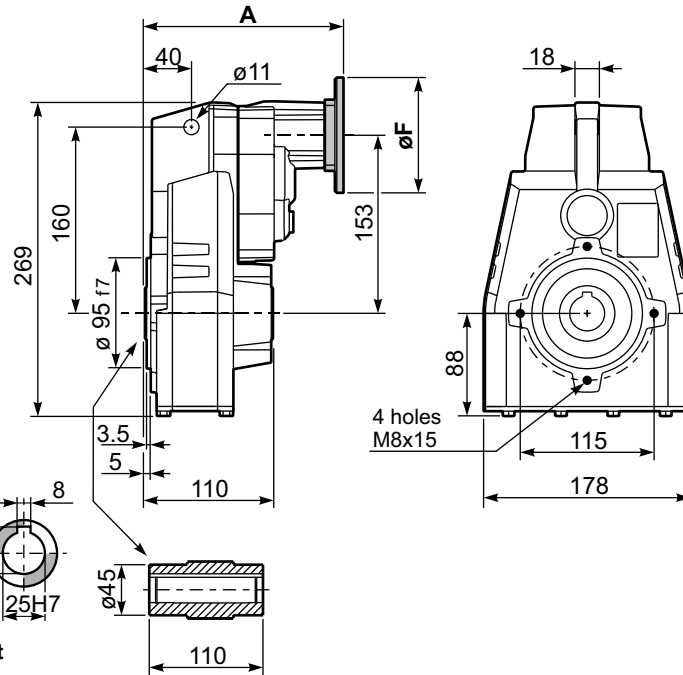
**tab. 2**



**PFA43C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **8.9 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K050.4.041 | 138 | 175   |
| 71B5       | K050.4.042 | 160 | 172.5 |
| 56B14      | KC40.4.049 | 80  | 172.5 |
| 63B14      | K050.4.047 | 90  | 175   |
| 71B14      | K050.4.045 | 105 | 172.5 |

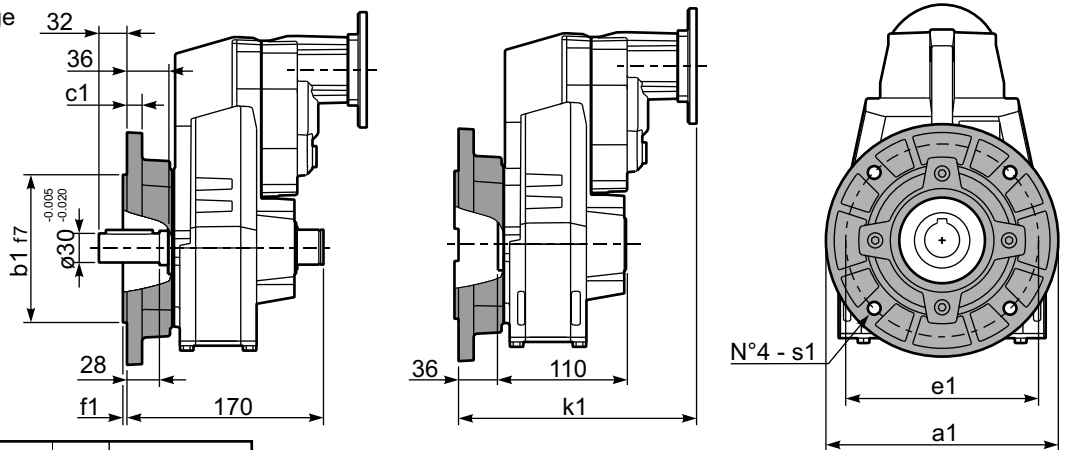


**Standard**  
Hollow shaft

**On request**  
A richiesta

**PFA43...-F...** Output flange  
Flangia uscita

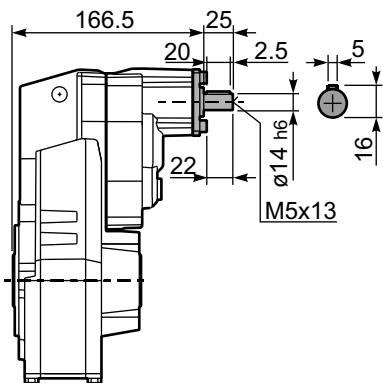
| Motor Flange | k1    |
|--------------|-------|
| 63B5         | 211   |
| 71B5         | 208.5 |
| 56B14        | 208.5 |
| 63B14        | 211   |
| 71B14        | 208.5 |



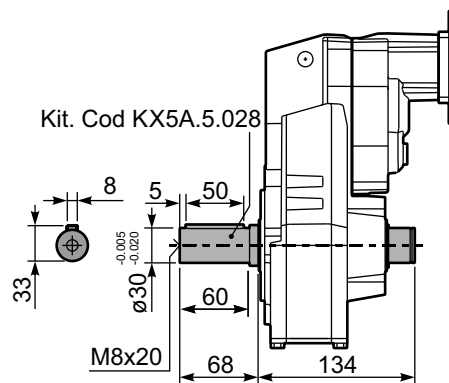
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1  | s1 | Kit code   |
|------|-----|----|-----|-----|----|------------|
| 160  | 110 | 10 | 130 | 3   | 9  | KX5A.9.010 |
| 200  | 130 | 13 | 165 | 3.5 | 11 | KX5A.9.011 |
| 250  | 180 | 14 | 215 | 4   | 14 | KX5A.9.012 |

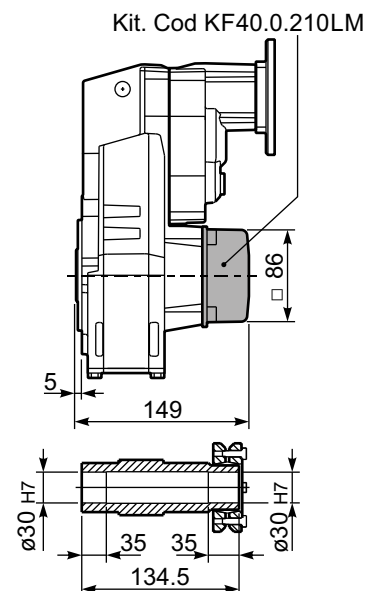
**RFA43C...** Input Shaft  
Albero in entrata



**PFA43 A...** Single output shaft  
Albero uscita semplice



**PFA43D...** Shrink disk  
Calettatore





**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |              |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |    |
|   |              |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 213   | <b>6.57</b>  | 5.5                             | 230                               | 1.2                      | 6.5                               | 280                                | B                          |    |    |            |     |                             |    |            |     |                  | 3018        | 01 |
| 185   | <b>7.56</b>  | 5.5                             | 265                               | 1.1                      | 5.9                               | 290                                | B                          |    |    |            |     |                             |    |            |     |                  | 3016        | 02 |
| 159   | <b>8.82</b>  | 5.5                             | 309                               | 1.0                      | 5.5                               | 320                                | B                          |    |    |            |     |                             |    |            |     |                  | 3014        | 03 |
| 113   | <b>12.39</b> | 5.5                             | 434                               | 1.0                      | 5.5                               | 450                                | B                          |    |    |            |     |                             |    |            |     |                  | 2018        | 04 |
| 98  | <b>14.24</b> | 5.5                             | 499                               | 0.9                      | 4.8                               | 450                                | B                          |    |    |            |     |                             |    |            |     |                  | 2016        | 05 |
| 84  | <b>16.75</b> | 4                               | 429                               | 1.1                      | 4.3                               | 470                                | B                          |    |    |            |     |                             |    |            |     |                  | 1618        | 06 |
| 73  | <b>19.25</b> | 4                               | 494                               | 1.0                      | 3.9                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1616        | 07 |
| 64  | <b>21.78</b> | 4                               | 558                               | 0.9                      | 3.4                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1318        | 08 |
| 56  | <b>25.04</b> | 3                               | 483                               | 1.0                      | 3.0                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1316        | 09 |
| 47.9  | <b>29.23</b> | 3                               | 564                               | 0.9                      | 2.6                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1314        | 10 |
| 45.7  | <b>30.65</b> | 2.2                             | 436                               | 1.1                      | 2.4                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1116        | 11 |
| 39.1  | <b>35.78</b> | 2.2                             | 509                               | 1.0                      | 2.1                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 1114        | 12 |
| 36.3  | <b>38.55</b> | 2.2                             | 548                               | 0.9                      | 1.9                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 818         | 13 |
| 31.6  | <b>44.32</b> | 1.5                             | 434                               | 1.1                      | 1.7                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 816         | 14 |
| 27.1  | <b>51.74</b> | 1.5                             | 507                               | 1.0                      | 1.4                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 814         | 15 |
| 22.9  | <b>61.03</b> | 1.1                             | 437                               | 1.1                      | 1.2                               | 480                                | B                          |    |    |            |     |                             |    |            |     |                  | 616         | 16 |
| 19.6  | <b>71.25</b> | 1.1                             | 510                               | 1.0                      | 1.1                               | 490                                | B                          |    |    |            |     |                             |    |            |     |                  | 614         | 17 |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FA52** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA52** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA52** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA52** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA52** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| 1.85 LT               | 1.15 LT  | 1.15 LT | 1.30 LT            | 2.10 LT | 1.30 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{149.5}{X+119.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 400 | 2000 | 140   | 460 | 2300 | 70    | 580  | 2900 |
| 250   | 420 | 2100 | 120   | 500 | 2500 | 40    | 780  | 3900 |
| 200   | 440 | 2200 | 85    | 550 | 2750 | 15    | 1140 | 5700 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

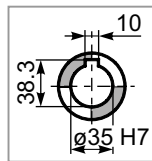
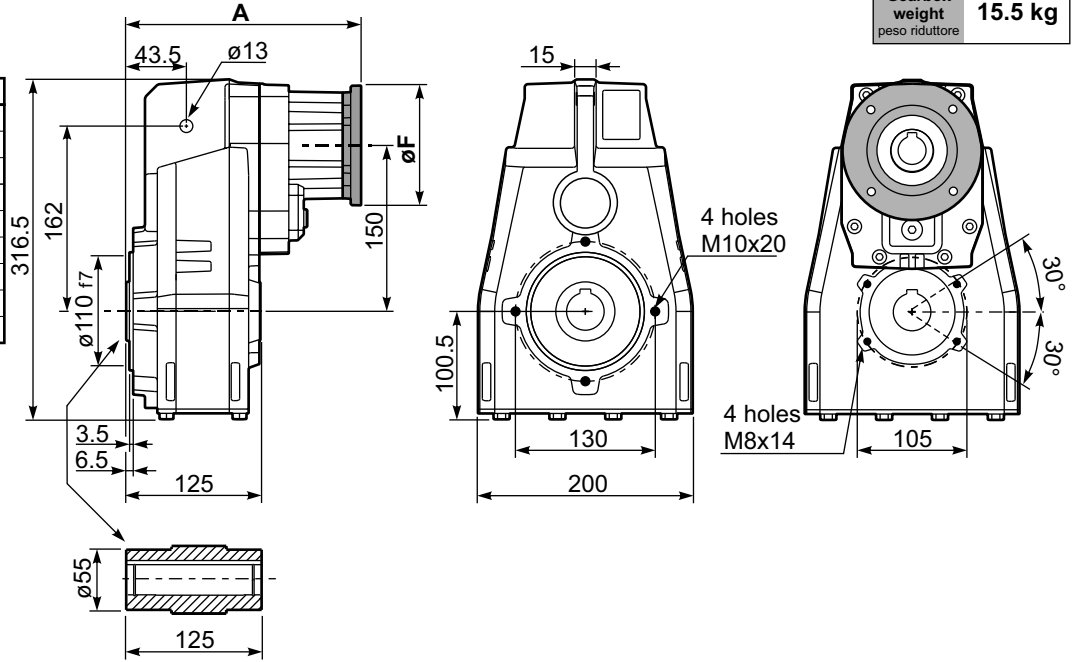
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

tab. 2

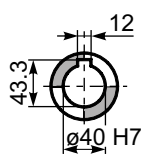
**PFA52C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **15.5 kg**

| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 71B5       | K023.4.041 | 160 | 227 |
| 80/90B5    | K023.4.042 | 200 | 229 |
| 100/112B5  | K023.4.043 | 250 | 238 |
| 132B5      | KC51.4.043 | 300 | 259 |
| 80B14      | K085.4.046 | 120 | 229 |
| 90B14      | K085.4.045 | 140 | 229 |
| 100/112B14 | K085.4.047 | 160 | 238 |
| 132B14     | KC51.4.041 | 200 | 259 |



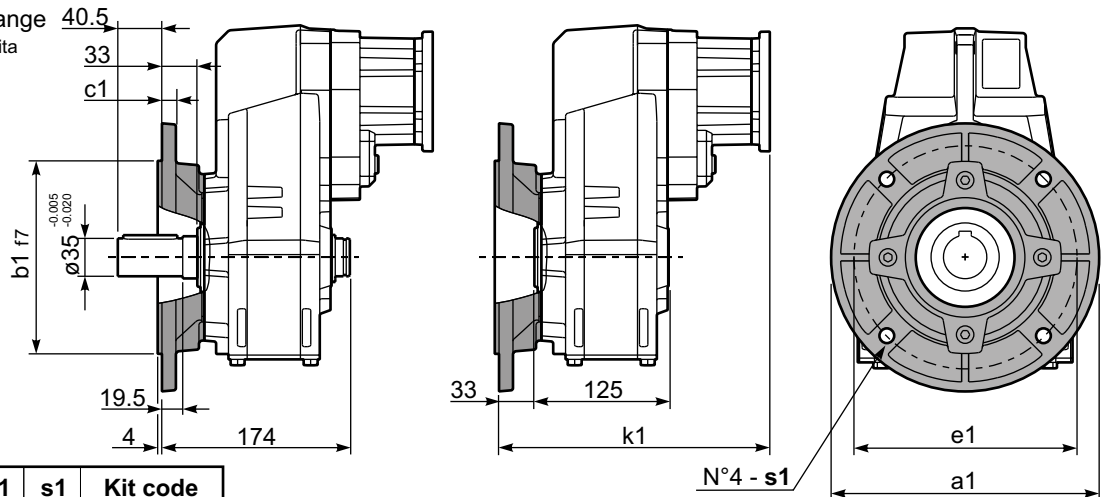
**Standard**  
Hollow shaft



**On request**  
A richiesta

**PFA52...-F...** Output flange  
Flangia uscita

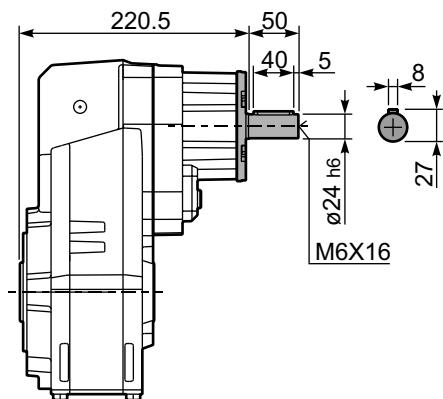
| M. flanges | k1  |
|------------|-----|
| 71B5       | 260 |
| 80/90B5    | 262 |
| 100/112B5  | 271 |
| 132B5      | 289 |
| 80B14      | 262 |
| 90B14      | 262 |
| 100/112B14 | 271 |
| 132B14     | 289 |



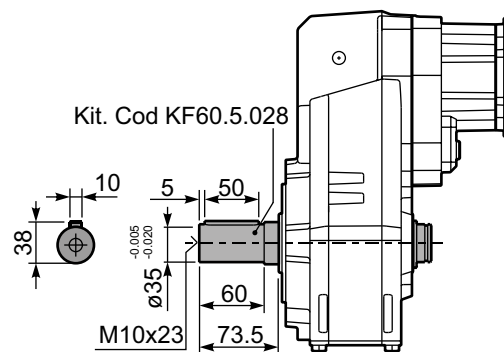
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | s1 | Kit code   |
|------|-----|----|-----|----|------------|
| 250  | 180 | 13 | 215 | 14 | KF60.9.011 |
| -    | -   | -  | -   | -  | -          |

**RFA52C...** Input Shaft  
Albero in entrata

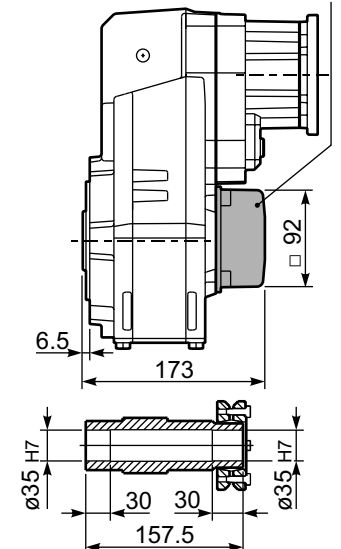


**PFA52 A...** Single output shaft  
Albero uscita semplice



**PFA52D...** Shrink disk  
Calettatore

Kit. Cod KF60.0.210LM





### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br><br>∅ | Ratios code<br> |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|-----------------------|-----------------|
|  |               |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                       |                 |
|  |               |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                       |                 |
| 22.6   | <b>61.89</b>  | 1.1                                    | 434                                      | 1.2                    | 1.3                                      | 510                                       | B                          |    |    |    | C                           | C  |    | 191318                | 01              |
| 19.7   | <b>71.16</b>  | 1.1                                    | 499                                      | 1.0                    | 1.1                                      | 510                                       | B                          |    |    |    | C                           | C  |    | 191316                | 02              |
| 17.0   | <b>82.48</b>  | 1.1                                    | 578                                      | 0.9                    | 0.96                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 171316                | 03              |
| 14.5   | <b>96.29</b>  | 0.75                                   | 463                                      | 1.1                    | 0.83                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 171314                | 04              |
| 13.9   | <b>100.51</b> | 0.75                                   | 483                                      | 1.1                    | 0.79                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 131318                | 05              |
| 12.1   | <b>115.56</b> | 0.55                                   | 410                                      | 1.2                    | 0.69                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 131316                | 06              |
| 11.1   | <b>125.96</b> | 0.55                                   | 447                                      | 1.1                    | 0.63                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 190816                | 07              |
| 10.4   | <b>134.91</b> | 0.55                                   | 479                                      | 1.1                    | 0.59                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 131314                | 08              |
| 9.5  | <b>147.05</b> | 0.55                                   | 522                                      | 1.0                    | 0.54                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 190814                | 09              |
| 8.2  | <b>170.44</b> | 0.37                                   | 404                                      | 1.3                    | 0.47                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 170814                | 10              |
| 7.6  | <b>184.15</b> | 0.37                                   | 437                                      | 1.2                    | 0.43                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 101314                | 11              |
| 6.8  | <b>205.87</b> | 0.37                                   | 488                                      | 1.0                    | 0.39                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 91316                 | 12              |
| 5.8  | <b>240.34</b> | 0.37                                   | 570                                      | 0.9                    | 0.33                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 91314                 | 13              |
| 5.0  | <b>279.22</b> | 0.25                                   | 447                                      | 1.1                    | 0.28                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 100816                | 14              |
| 4.3  | <b>325.97</b> | 0.25                                   | 522                                      | 1.0                    | 0.24                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 100814                | 15              |
| 3.8  | <b>364.41</b> | 0.18                                   | 446                                      | 1.1                    | 0.22                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 90816                 | 16              |
| 3.3  | <b>425.43</b> | 0.18                                   | 521                                      | 1.0                    | 0.19                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 90814                 | 17              |
| 2.9  | <b>481.19</b> | 0.18                                   | 589                                      | 0.9                    | 0.17                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 70816                 | 18              |
| 2.5  | <b>561.76</b> | 0.12                                   | 444                                      | 1.1                    | 0.14                                     | 510                                       | B                          |    |    |    | C                           | C  |    | 70814                 | 19              |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FA53** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FA53** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FA53** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FA53** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FA53** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| 2.15 LT               | 1.25 LT  | 1.25 LT | 1.45 LT            | 2.35 LT | 1.45 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

**Input shaft**  
Albero in entrata

| n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA   | FR   |
|----------------|-----|------|----------------|-----|------|----------------|------|------|
| 300            | 400 | 2000 | 140            | 460 | 2300 | 70             | 580  | 2900 |
| 250            | 420 | 2100 | 120            | 500 | 2500 | 40             | 780  | 3900 |
| 200            | 440 | 2200 | 85             | 550 | 2750 | 15             | 1140 | 5700 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

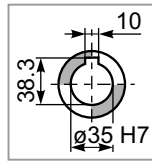
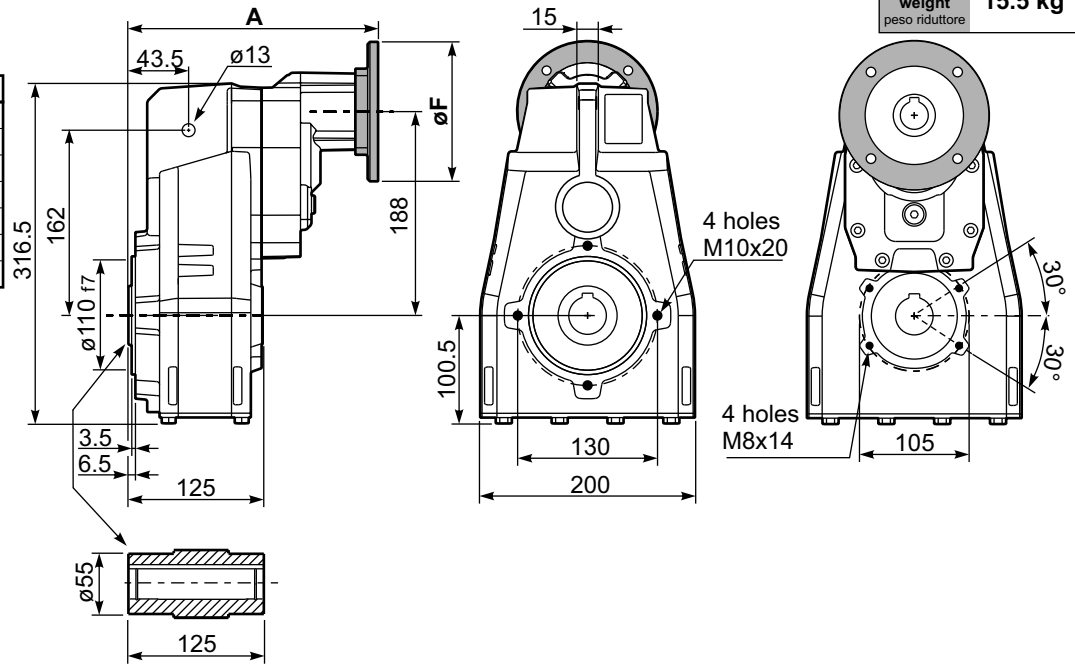
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 240 | 1200 |
| 900            | 280 | 1400 |
| 500            | 340 | 1700 |

tab. 2

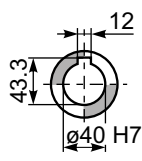
**PFA53C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **15.5 kg**

| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 63B5       | K063.4.041 | 140 | 239 |
| 71B5       | K063.4.042 | 160 | 237 |
| 80/90B5    | K063.4.043 | 200 | 239 |
| 71B14      | K063.4.047 | 105 | 237 |
| 80B14      | K063.4.046 | 120 | 239 |
| 90B14      | K063.4.041 | 140 | 239 |



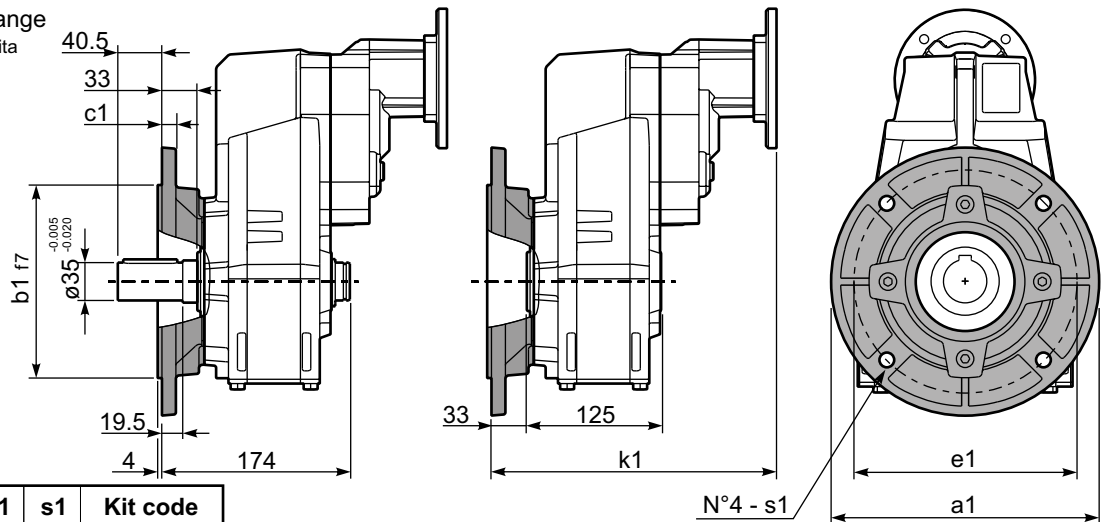
**Standard**  
Hollow shaft



**On request**  
A richiesta

**PFA53...-F...** Output flange  
Flangia uscita

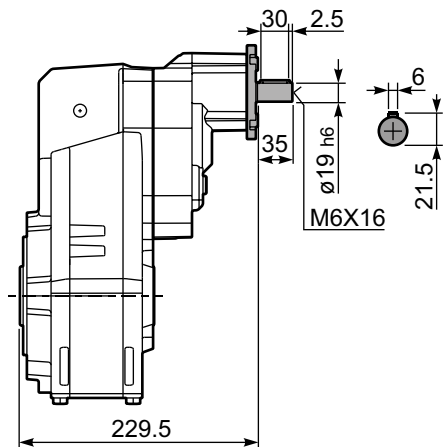
| Motor Flange | k1  |
|--------------|-----|
| 63B5         | 272 |
| 71B5         | 270 |
| 80/90B5      | 272 |
| 71B14        | 270 |
| 80B14        | 272 |
| 90B14        | 272 |



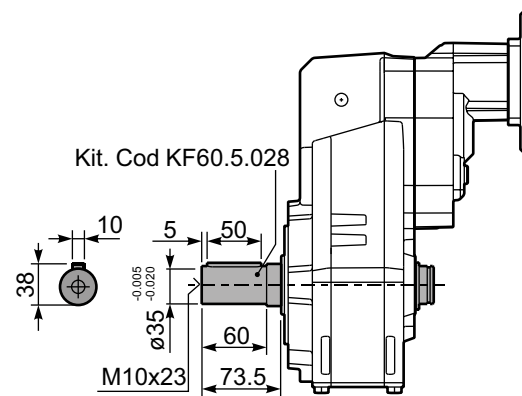
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | s1 | Kit code   |
|------|-----|----|-----|----|------------|
| 250  | 180 | 13 | 215 | 14 | KF60.9.011 |
| -    | -   | -  | -   | -  | -          |

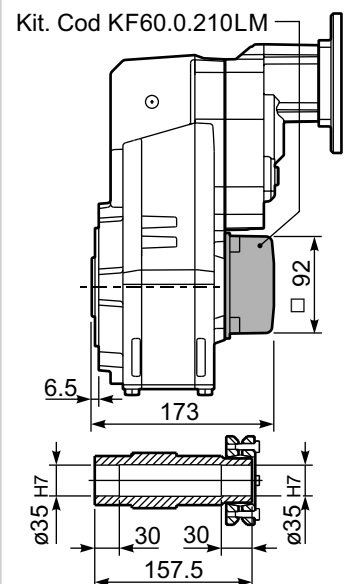
**RFA53C...** Input Shaft  
Albero in entrata



**PFA53 A...** Single output shaft  
Albero uscita semplice



**PFA53D...** Shrink disk  
Calettatore





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     | B14 motor flanges    |   |   |   | Output Shaft |                 |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|----------------------|---|---|---|--------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -G                         | 132 | -                    | - | - | - | -            | -               |    |
| 507   | <b>2.76</b>  | 9                               | 166                               | 1.6                    | <b>14.4</b>                       | <b>265</b>                         |                            |     | <b>not available</b> |   |   |   | 2980         | <b>standard</b> | 01 |
| 395   | <b>3.54</b>  | 9                               | 213                               | 1.3                    | <b>11.6</b>                       | <b>275</b>                         |                            |     |                      |   |   |   | 2485         | <b>ø35</b>      | 02 |
| 277   | <b>5.06</b>  | 9                               | 304                               | 1.0                    | <b>8.6</b>                        | <b>290</b>                         |                            |     |                      |   |   |   | 1891         |                 | 03 |
| 241   | <b>5.81</b>  | 7.5                             | 281                               | 1.2                    | <b>8.5</b>                        | <b>330</b>                         |                            |     |                      |   |   |   | 1693         | ø40             | 04 |
| 206   | <b>6.79</b>  | 7.5                             | 329                               | 1.2                    | <b>8.4</b>                        | <b>380</b>                         |                            |     |                      |   |   |   | 1495         | On request      | 05 |

The dynamic efficiency is **0.98** for all ratios

- Motor Flanges Available**  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **FC61** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FC61** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FC61** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FC61** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FC61** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| 2.05 LT               | 1.25 LT  | 1.25 LT | 1.40 LT            | 2.05 LT | 1.40 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
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### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_R$  (N) ↓  
 $F_A$  (N) ←

$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$

$F_{eq}$  (N) ↓

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 600 | 3000 | 140   | 720 | 3600 | 70    | 940  | 4700 |
| 250   | 640 | 3200 | 120   | 740 | 3700 | 40    | 1220 | 6100 |
| 200   | 690 | 3460 | 85    | 860 | 4300 | 15    | 1300 | 6500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

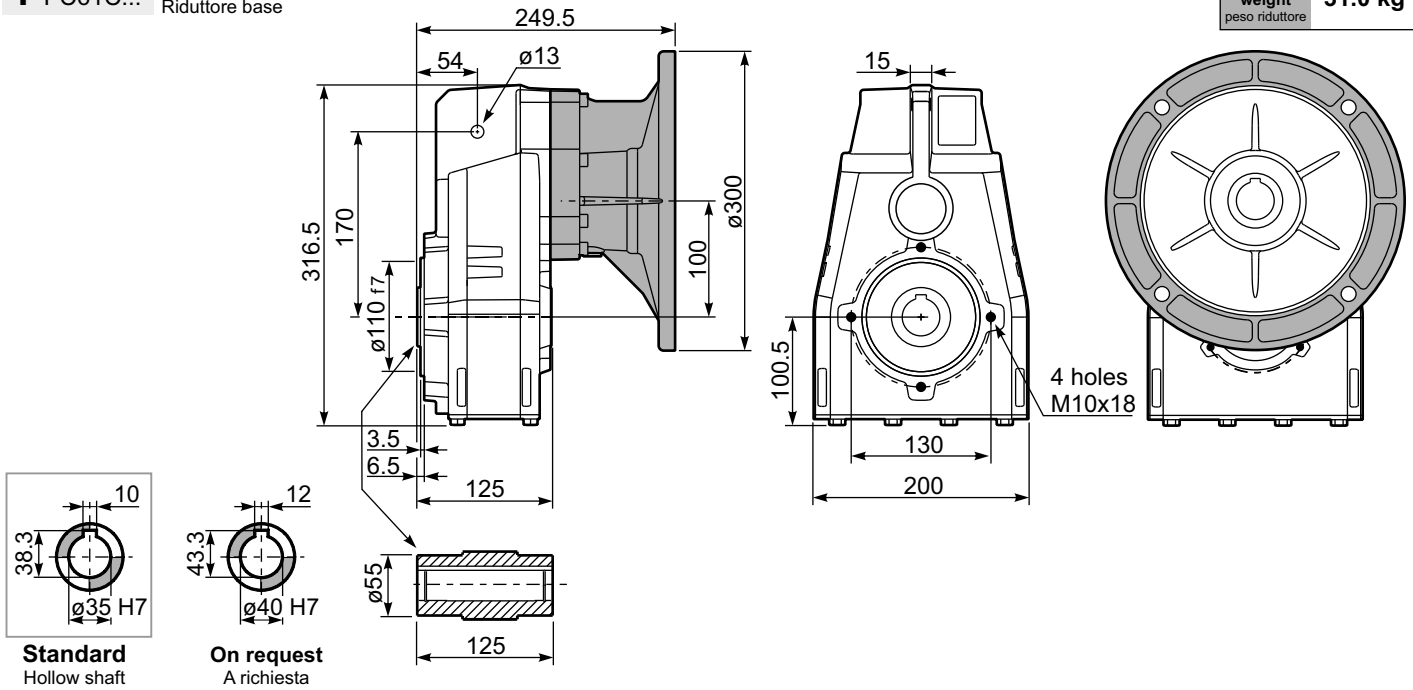
**tab. 2**



**PFC61C...**

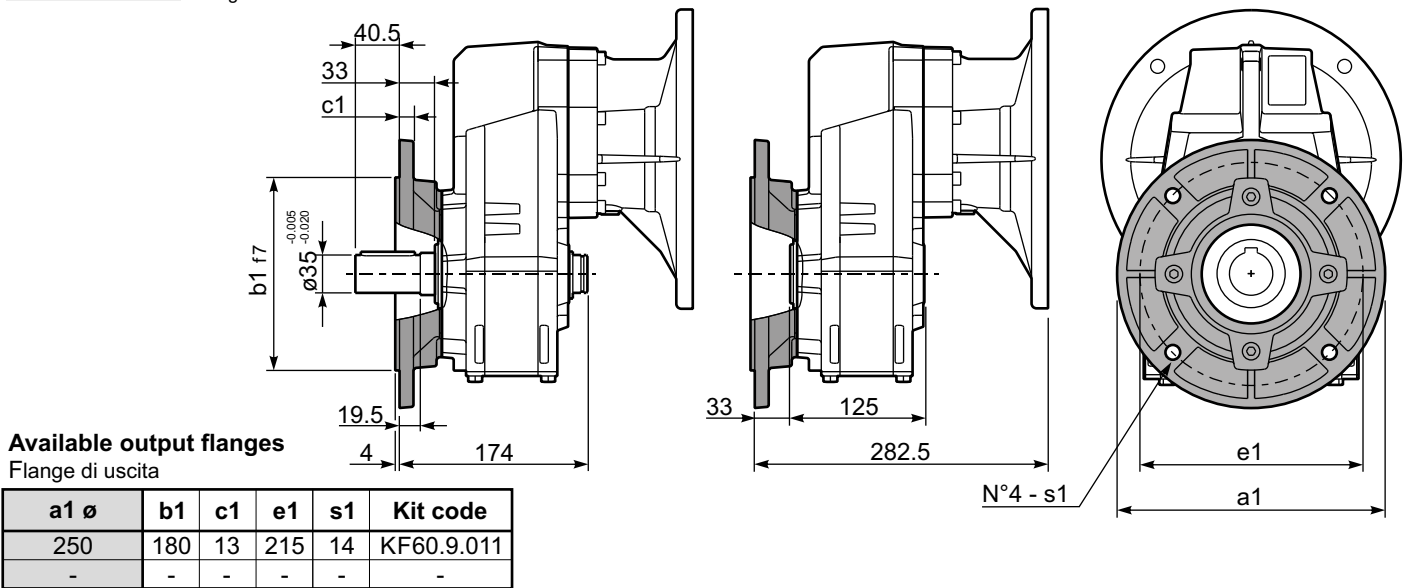
Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **31.0 kg**



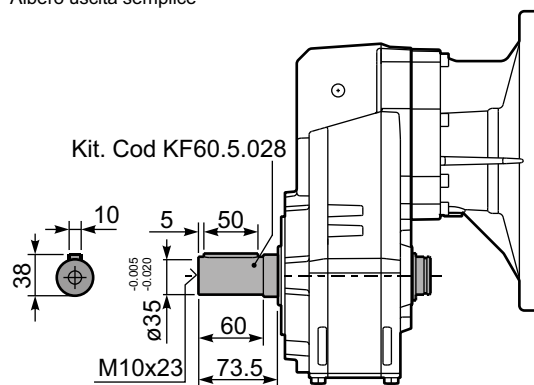
**PFC61...-F...**

Output flange  
Flangia uscita



**PFC61 A...**

Single output shaft  
Albero uscita semplice





**QUICK SELECTION / Selezione veloce** input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code<br> |    |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-----------------|----|
|  |              |  |  |                        |  |   | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |                 |    |
|  |              |  |  |                        |  |   | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |                 |    |
| 213  | <b>6.57</b>  | 7.5                                    | 312                                      | 1.2                    | 8.8                                      | 380                                       | B                          |    |    |            |     |                             |    |            |     |                  | 3018            | 01 |
| 185  | <b>7.56</b>  | 7.5                                    | 358                                      | 1.1                    | 7.9                                      | 390                                       | B                          |    |    |            |     |                             |    |            |     |                  | 3016            | 02 |
| 159  | <b>8.82</b>  | 7.5                                    | 419                                      | 1.0                    | 7.1                                      | 410                                       | B                          |    |    |            |     |                             |    |            |     |                  | 3014            | 03 |
| 113  | <b>12.39</b> | 7.5                                    | 588                                      | 1.0                    | 7.2                                      | 580                                       | B                          |    |    |            |     |                             |    |            |     |                  | 2018            | 04 |
| 98   | <b>14.24</b> | 5.5                                    | 499                                      | 1.2                    | 6.4                                      | 600                                       | B                          |    |    |            |     |                             |    |            |     |                  | 2016            | 05 |
| 84   | <b>16.75</b> | 5.5                                    | 587                                      | 1.1                    | 6.1                                      | 665                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1618            | 06 |
| 73   | <b>19.25</b> | 5.5                                    | 675                                      | 1.0                    | 5.4                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1616            | 07 |
| 64   | <b>21.78</b> | 4                                      | 558                                      | 1.2                    | 4.7                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1318            | 08 |
| 56   | <b>25.04</b> | 4                                      | 642                                      | 1.1                    | 4.1                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1316            | 09 |
| 47.9   | <b>29.23</b> | 4                                      | 750                                      | 0.9                    | 3.5                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1314            | 10 |
| 45.7   | <b>30.65</b> | 3                                      | 592                                      | 1.1                    | 3.4                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1116            | 11 |
| 39.1   | <b>35.78</b> | 3                                      | 691                                      | 1.0                    | 2.9                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 1114            | 12 |
| 36.3   | <b>38.55</b> | 2.2                                    | 548                                      | 1.1                    | 2.3                                      | 580                                       | B                          |    |    |            |     |                             |    |            |     |                  | 818             | 13 |
| 31.6   | <b>44.32</b> | 2.2                                    | 630                                      | 1.1                    | 2.3                                      | 665                                       | B                          |    |    |            |     |                             |    |            |     |                  | 816             | 14 |
| 27.1   | <b>51.74</b> | 2.2                                    | 735                                      | 0.9                    | 2.0                                      | 675                                       | B                          |    |    |            |     |                             |    |            |     |                  | 814             | 15 |
| 22.9   | <b>61.03</b> | 1.1                                    | 437                                      | 1.1                    | 1.2                                      | 480                                       | B                          |    |    |            |     |                             |    |            |     |                  | 616             | 16 |
| 19.6   | <b>71.25</b> | 1.1                                    | 510                                      | 1.1                    | 1.2                                      | 560                                       | B                          |    |    |            |     |                             |    |            |     |                  | 614             | 17 |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FC62** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FC62** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FC62** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FC62** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FC62** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| 2.05 LT               | 1.25 LT  | 1.25 LT | 1.40 LT            | 2.20 LT | 1.40 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{149.5}{X+119.5}$

| n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA  | FR   | n <sub>2</sub> | FA   | FR   |
|----------------|-----|------|----------------|-----|------|----------------|------|------|
| 300            | 600 | 3000 | 140            | 720 | 3600 | 70             | 940  | 4700 |
| 250            | 640 | 3200 | 120            | 740 | 3700 | 40             | 1220 | 6100 |
| 200            | 690 | 3460 | 85             | 860 | 4300 | 15             | 1300 | 6500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

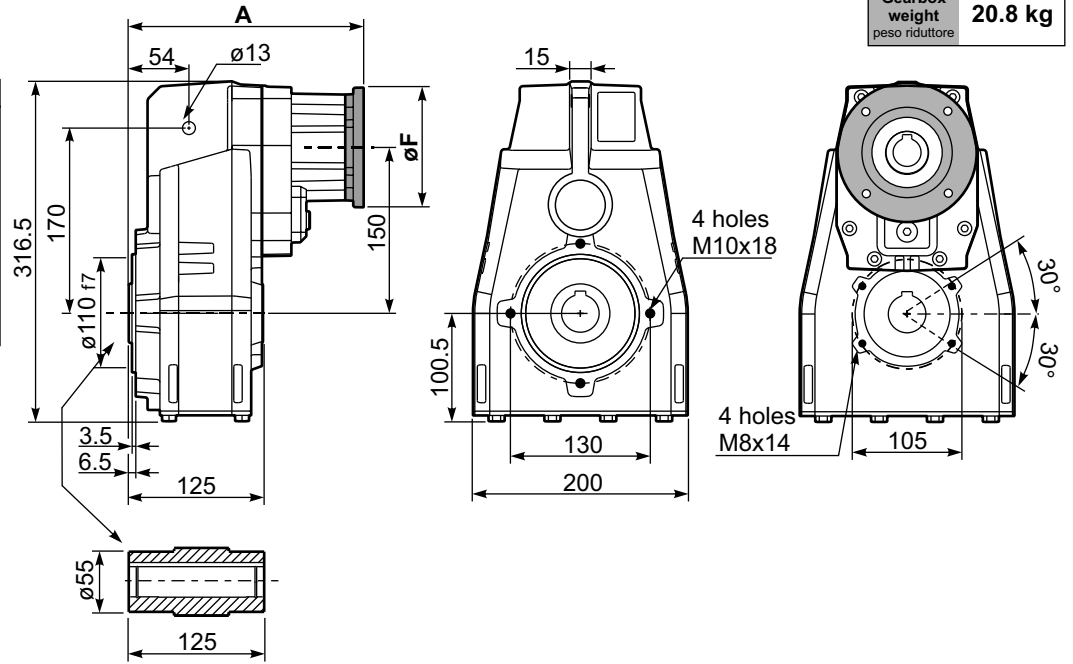
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 450 | 2250 |
| 900            | 500 | 2500 |
| 500            | 600 | 3000 |

tab. 2

**PFC62C...** Basic gearbox  
Riduttore base

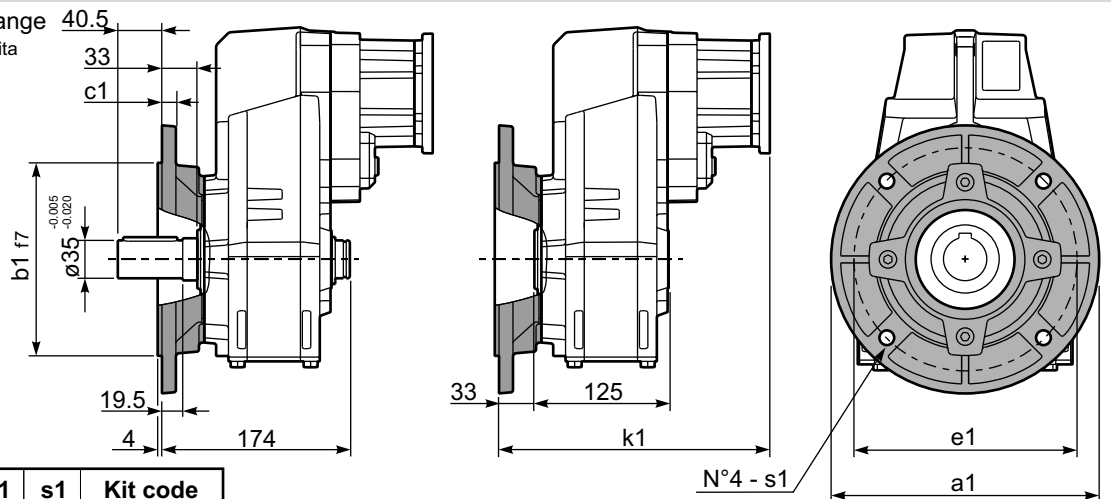
Gearbox weight  
peso riduttore **20.8 kg**

| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 71B5       | K023.4.041 | 160 | 227 |
| 80/90B5    | K023.4.042 | 200 | 229 |
| 100/112B5  | K023.4.043 | 250 | 238 |
| 132B5      | KC51.4.043 | 300 | 259 |
| 80B14      | K085.4.046 | 120 | 229 |
| 90B14      | K085.4.045 | 140 | 229 |
| 100/112B14 | K085.4.047 | 160 | 238 |
| 132B14     | KC51.4.041 | 200 | 259 |



**PFC62...-F...** Output flange  
Flangia uscita

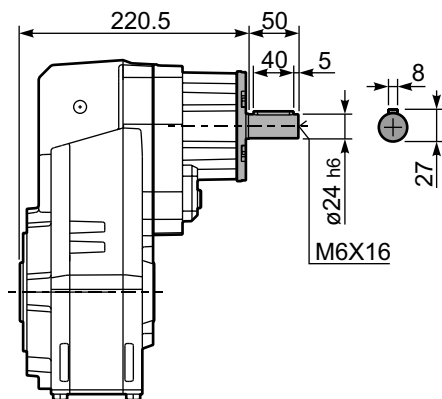
| M. flanges | k1  |
|------------|-----|
| 71B5       | 260 |
| 80/90B5    | 262 |
| 100/112B5  | 271 |
| 132B5      | 289 |
| 80B14      | 262 |
| 90B14      | 262 |
| 100/112B14 | 271 |
| 132B14     | 289 |



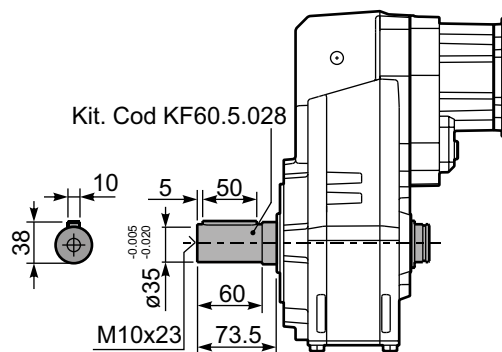
Available output flanges  
Flange di uscita

| a1 ø | b1  | c1 | e1  | s1 | Kit code   |
|------|-----|----|-----|----|------------|
| 250  | 180 | 13 | 215 | 14 | KF60.9.011 |
| -    | -   | -  | -   | -  | -          |

**RFC62C...** Input Shaft  
Albero in entrata

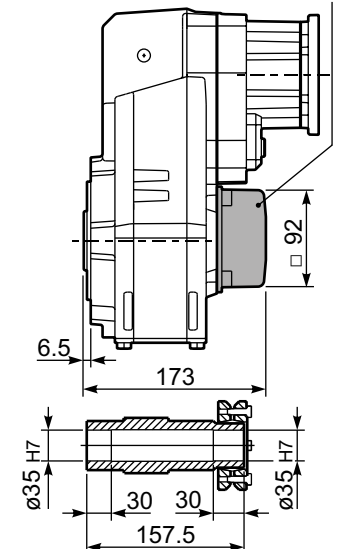


**PFC62 A...** Single output shaft  
Albero uscita semplice



**PFC62D...** Shrink disk  
Calettatore

Kit. Cod KF60.0.210LM





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 22.6  | <b>61.89</b>  | 1.5                             | 594                               | 1.1                    | 1.7                               | 675                                | B                          |    |    |    | C                           | C  |    | 191318           | 01          |
| 19.7  | <b>71.16</b>  | 1.5                             | 683                               | 1.0                    | 1.5                               | 675                                | B                          |    |    |    | C                           | C  |    | 191316           | 02          |
| 17.0  | <b>82.48</b>  | 1.5                             | 792                               | 0.9                    | 1.3                               | 675                                | B                          |    |    |    | C                           | C  |    | 171316           | 03          |
| 14.5  | <b>96.29</b>  | 1.1                             | 675                               | 1.0                    | 1.1                               | 675                                | B                          |    |    |    | C                           | C  |    | 171314           | 04          |
| 13.9  | <b>100.51</b> | 1.1                             | 705                               | 1.0                    | 1.0                               | 675                                | B                          |    |    |    | C                           | C  |    | 131318           | 05          |
| 12.1  | <b>115.56</b> | 0.75                            | 556                               | 1.2                    | 0.91                              | 675                                | B                          |    |    |    | C                           | C  |    | 131316           | 06          |
| 11.1  | <b>125.96</b> | 0.75                            | 606                               | 1.1                    | 0.82                              | 665                                | B                          |    |    |    | C                           | C  |    | 190816           | 07          |
| 10.4  | <b>134.91</b> | 0.75                            | 649                               | 1.0                    | 0.78                              | 675                                | B                          |    |    |    | C                           | C  |    | 131314           | 08          |
| 9.5   | <b>147.05</b> | 0.75                            | 707                               | 1.0                    | 0.72                              | 675                                | B                          |    |    |    | C                           | C  |    | 190814           | 09          |
| 8.2   | <b>170.44</b> | 0.55                            | 605                               | 1.1                    | 0.62                              | 675                                | B                          |    |    |    | C                           | C  |    | 170814           | 10          |
| 7.6   | <b>184.15</b> | 0.55                            | 653                               | 1.0                    | 0.57                              | 675                                | B                          |    |    |    | C                           | C  |    | 101314           | 11          |
| 6.8   | <b>205.87</b> | 0.55                            | 730                               | 0.9                    | 0.51                              | 675                                | B                          |    |    |    | C                           | C  |    | 91316            | 12          |
| 5.8   | <b>240.34</b> | 0.37                            | 570                               | 1.2                    | 0.44                              | 675                                | B                          |    |    |    | C                           | C  |    | 91314            | 13          |
| 5.0   | <b>279.22</b> | 0.37                            | 662                               | 1.0                    | 0.37                              | 665                                | B                          |    |    |    | C                           | C  |    | 100816           | 14          |
| 4.3   | <b>325.97</b> | 0.37                            | 773                               | 0.9                    | 0.32                              | 675                                | B                          |    |    |    | C                           | C  |    | 100814           | 15          |
| 3.8   | <b>364.41</b> | 0.25                            | 583                               | 1.1                    | 0.28                              | 665                                | B                          |    |    |    | C                           | C  |    | 90816            | 16          |
| 3.3   | <b>425.43</b> | 0.25                            | 681                               | 1.0                    | 0.25                              | 675                                | B                          |    |    |    | C                           | C  |    | 90814            | 17          |
| 2.9   | <b>481.19</b> | 0.18                            | 589                               | 1.1                    | 0.22                              | 665                                | B                          |    |    |    | C                           | C  |    | 70816            | 18          |
| 2.5   | <b>561.76</b> | 0.18                            | 687                               | 1.0                    | 0.19                              | 675                                | B                          |    |    |    | C                           | C  |    | 70814            | 19          |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **FC63** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **FC63** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **FC63** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **FC63** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **FC63** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |
|-----------------------|--|---------|--------------------|---------|---------|
|                       |  |         |                    |         |         |
| H1                    | H4   | H3      | H2                 | H5      | H6      |
| 2.30 LT               | 1.35 LT  | 1.35 LT | 1.55 LT            | 2.45 LT | 1.55 LT |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{149.5}{X+119.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 600 | 3000 | 140   | 720 | 3600 | 70    | 940  | 4700 |
| 250   | 640 | 3200 | 120   | 740 | 3700 | 40    | 1220 | 6100 |
| 200   | 690 | 3460 | 85    | 860 | 4300 | 15    | 1300 | 6500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

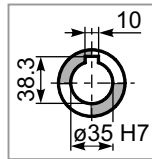
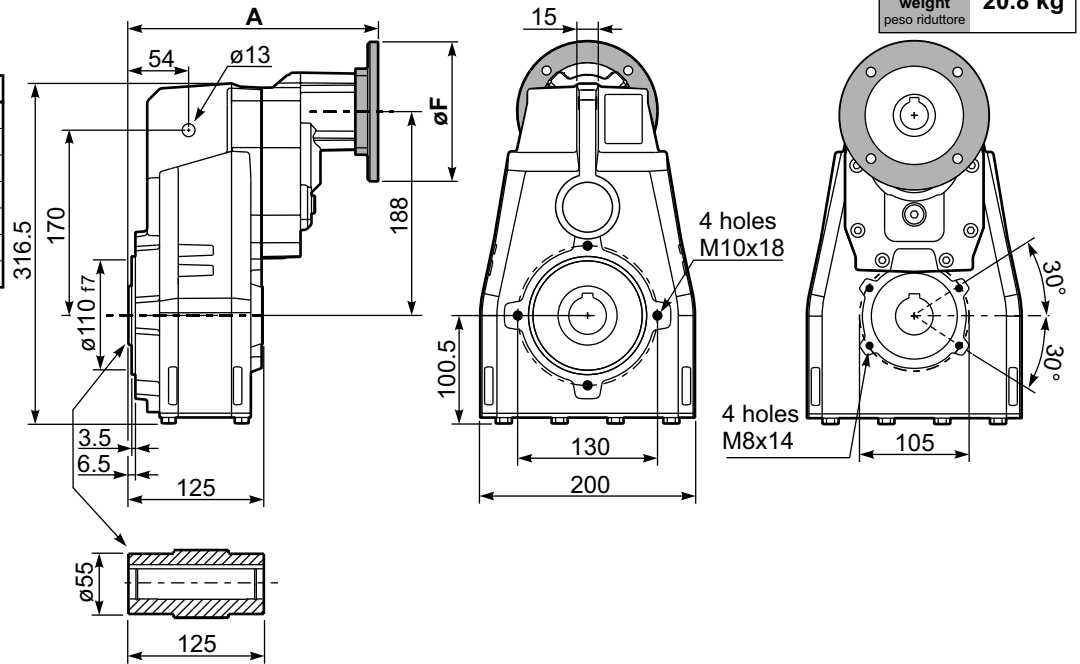
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 240 | 1200 |
| 900   | 280 | 1400 |
| 500   | 340 | 1700 |

tab. 2

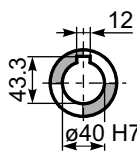
**PFC63C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **20.8 kg**

| M. flanges | Kit code   | øF  | A   |
|------------|------------|-----|-----|
| 63B5       | K063.4.041 | 140 | 239 |
| 71B5       | K063.4.042 | 160 | 237 |
| 80/90B5    | K063.4.043 | 200 | 239 |
| 71B14      | K063.4.047 | 105 | 237 |
| 80B14      | K063.4.046 | 120 | 239 |
| 90B14      | K063.4.041 | 140 | 239 |



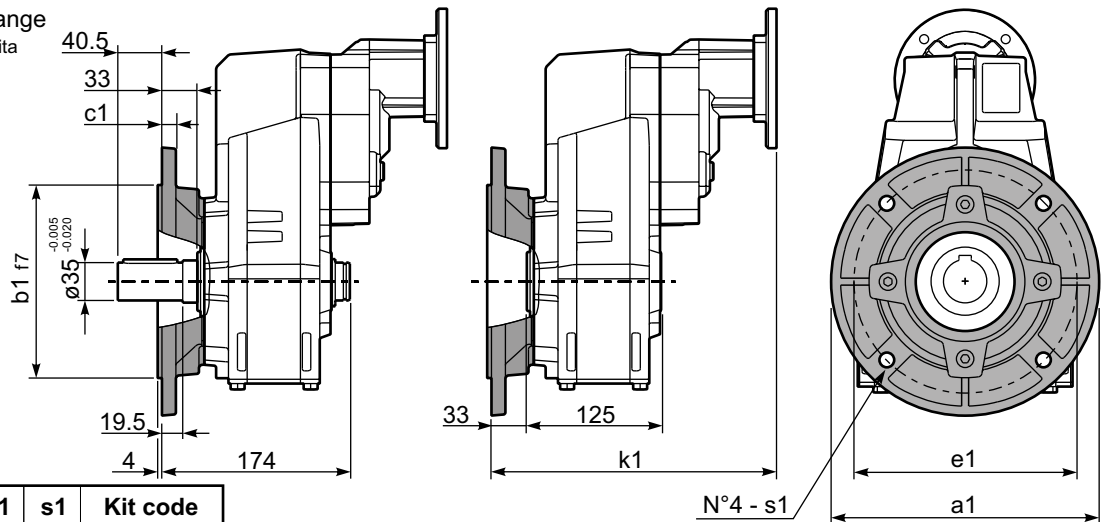
**Standard**  
Hollow shaft



**On request**  
A richiesta

**PFC63...-F...** Output flange  
Flangia uscita

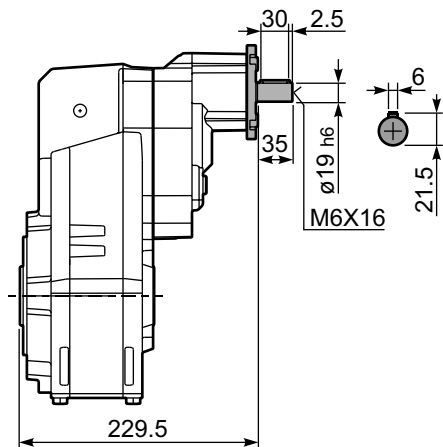
| Motor Flange | k1  |
|--------------|-----|
| 63B5         | 272 |
| 71B5         | 270 |
| 80/90B5      | 272 |
| 71B14        | 270 |
| 80B14        | 272 |
| 90B14        | 272 |



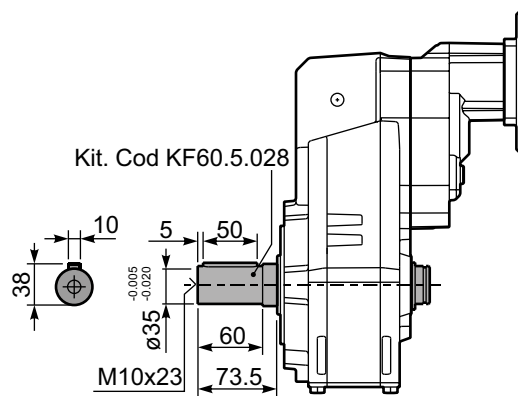
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | s1 | Kit code   |
|------|-----|----|-----|----|------------|
| 250  | 180 | 13 | 215 | 14 | KF60.9.011 |
| -    | -   | -  | -   | -  | -          |

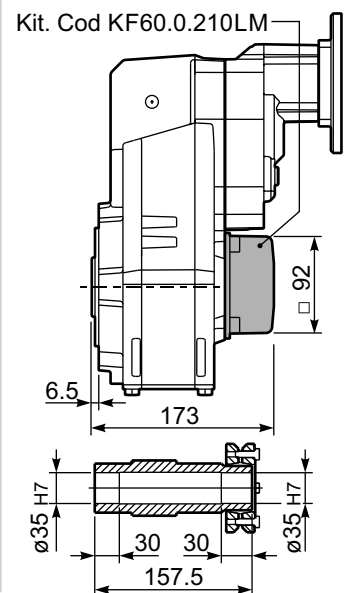
**RFC63C...** Input Shaft  
Albero in entrata



**PFC63 A...** Single output shaft  
Albero uscita semplice



**PFC63 D...** Shrink disk  
Calettatore





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     | B14 motor flanges    |   |   |   | Output Shaft |   |       |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|----------------------|---|---|---|--------------|---|-------|
|   |              |                                 |                                   |                        |                                   |                                    | -G                         | 132 | -                    | - | - | - | -            | - | 18111 |
| 227   | <b>6.17</b>  | 9                               | 371                               | 1.2                    | <b>10.9</b>                       | <b>450</b>                         |                            |     | <b>not available</b> |   |   |   |              |   |       |
| 198   | <b>7.06</b>  | 9                               | 425                               | 1.4                    | <b>12.7</b>                       | <b>600</b>                         |                            |     | <b>not available</b> |   |   |   |              |   |       |
| 170   | <b>8.21</b>  | 9                               | 494                               | 1.4                    | <b>12.2</b>                       | <b>670</b>                         |                            |     | <b>not available</b> |   |   |   |              |   |       |

The dynamic efficiency is **0.98** for all ratios

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **FC71** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **FC71** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC71** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC71** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **FC71** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| H1                    | H4      | H3      | H2              | H5      | H6      |
|-----------------------|---------|---------|-----------------|---------|---------|
| 3.30 LT               | 1.90 LT | 1.90 LT | 1.80 LT         | 3.30 LT | 1.90 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$

| $n_2$      | FA  | FR   | $n_2$      | FA  | FR   | $n_2$     | FA   | FR   |
|------------|-----|------|------------|-----|------|-----------|------|------|
| <b>300</b> | 740 | 3700 | <b>140</b> | 860 | 4300 | <b>70</b> | 1020 | 5100 |
| <b>250</b> | 800 | 4000 | <b>120</b> | 900 | 4500 | <b>40</b> | 1300 | 6500 |
| <b>200</b> | 830 | 4150 | <b>85</b>  | 970 | 4850 | <b>15</b> | 1700 | 8500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

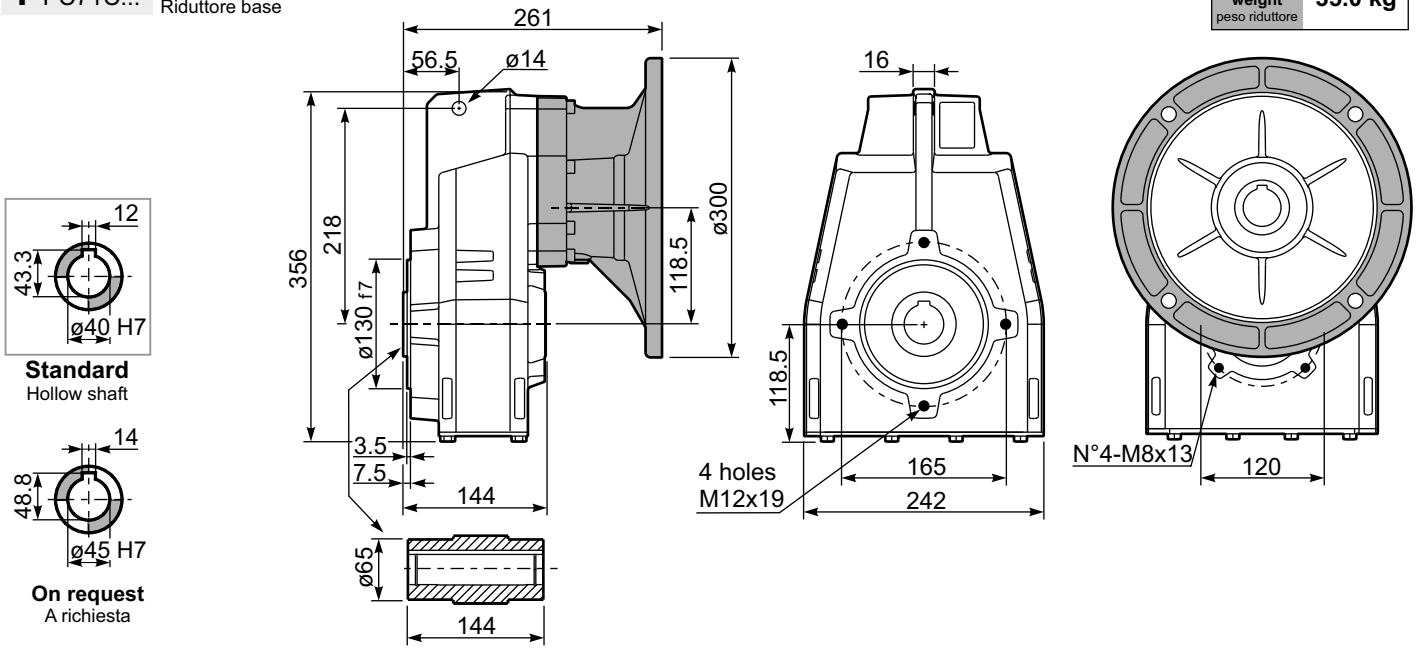
**tab. 2**



**PFC71C...**

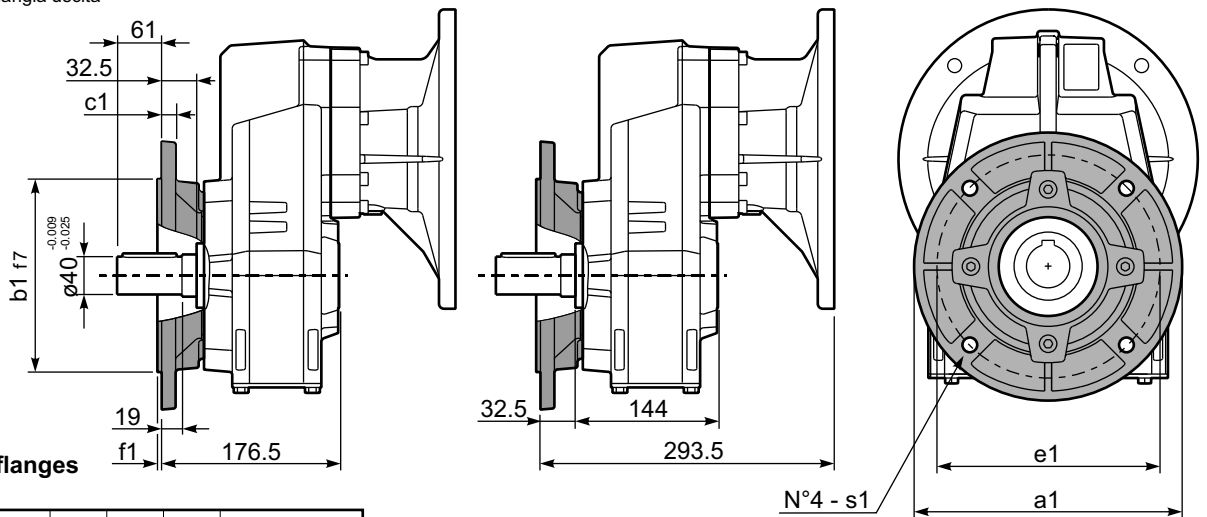
Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **35.0 kg**



**PFC71...-F...**

Output flange  
Flangia uscita



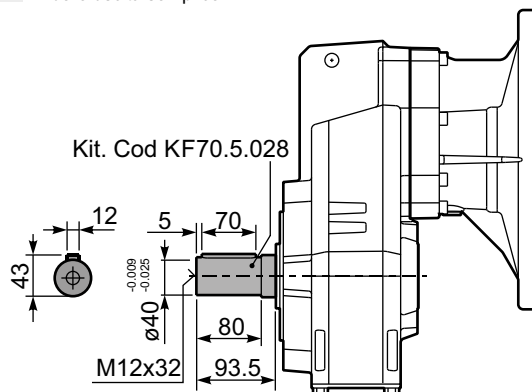
Available output flanges

Flange di uscita

| a1 $\phi$ | b1  | c1 | e1  | f1 | s1 | Kit code   |
|-----------|-----|----|-----|----|----|------------|
| 250       | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300       | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

**PFC71 A...**

Single output shaft  
Albero uscita semplice





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-----------------|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |                 |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |                 |
| 175   | <b>8.02</b>  | 9                               | 473                               | 1.1                    | <b>9.9</b>                        | <b>520</b>                         | B                          |    |    |            |     |                             |    |            |     | 3018             | 01              |
| 152   | <b>9.18</b>  | 9                               | 541                               | 1.1                    | <b>9.8</b>                        | <b>590</b>                         | B                          |    |    |            |     |                             |    |            |     | 3016             | 02              |
| 131   | <b>10.68</b> | 9                               | 630                               | 1.1                    | <b>9.7</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     | 3014             | 03              |
| 93  | <b>15.11</b> | 7.5                             | 717                               | 1.1                    | <b>7.8</b>                        | <b>775</b>                         | B                          |    |    |            |     |                             |    |            |     | 2018             | 04              |
| 81  | <b>17.30</b> | 7.5                             | 821                               | 1.1                    | <b>7.8</b>                        | <b>885</b>                         | B                          |    |    |            |     |                             |    |            |     | 2016             | 05              |
| 70  | <b>20.13</b> | 7.5                             | 955                               | 0.9                    | <b>6.8</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 2014             | 06              |
| 60  | <b>23.39</b> | 5.5                             | 820                               | 1.1                    | <b>5.9</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 1616             | 07              |
| 51  | <b>27.21</b> | 5.5                             | 954                               | 0.9                    | <b>5.1</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 1614             | 08              |
| 46.0  | <b>30.42</b> | 4                               | 780                               | 1.2                    | <b>4.5</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 1316             | 09              |
| 39.6  | <b>35.38</b> | 4                               | 907                               | 1.0                    | <b>3.9</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 1314             | 10              |
| 37.6  | <b>37.24</b> | 3                               | 719                               | 1.2                    | <b>3.7</b>                        | <b>895</b>                         | B                          |    |    |            |     |                             |    |            |     | 1116             | 11              |
| 32.3  | <b>43.31</b> | 3                               | 836                               | 1.1                    | <b>3.2</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 1114             | 12              |
| 29.8  | <b>47.02</b> | 2.2                             | 668                               | 1.1                    | <b>2.3</b>                        | <b>705</b>                         | B                          |    |    |            |     |                             |    |            |     | 818              | 13              |
| 26.0  | <b>53.85</b> | 2.2                             | 765                               | 1.1                    | <b>2.3</b>                        | <b>810</b>                         | B                          |    |    |            |     |                             |    |            |     | 816              | 14              |
| 22.4  | <b>62.63</b> | 2.2                             | 890                               | 1.0                    | <b>2.2</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     | 814              | 15              |
| 18.9  | <b>74.16</b> | 1.1                             | 531                               | 1.1                    | <b>1.2</b>                        | <b>585</b>                         | B                          |    |    |            |     |                             |    |            |     | 616              | 16              |
| 16.2  | <b>86.25</b> | 1.1                             | 617                               | 1.1                    | <b>1.2</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     | 614              | 17              |

The dynamic efficiency is **0.96** for all ratios

- Motor Flanges Available  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **FC72** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

| H1                    | H4      | H3      | H2              | H5      | H6      |
|-----------------------|---------|---------|-----------------|---------|---------|
|                       |         |         |                 |         |         |
| 3.50 LT               | 1.90 LT | 1.90 LT | 1.80 LT         | 3.60 LT | 1.90 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**I** Il riduttore tipo **FC72** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC72** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC72** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **FC72** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 740 | 3700 | 140   | 860 | 4300 | 70    | 1020 | 5100 |
| 250   | 800 | 4000 | 120   | 900 | 4500 | 40    | 1300 | 6500 |
| 200   | 830 | 4150 | 85    | 970 | 4850 | 15    | 1700 | 8500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

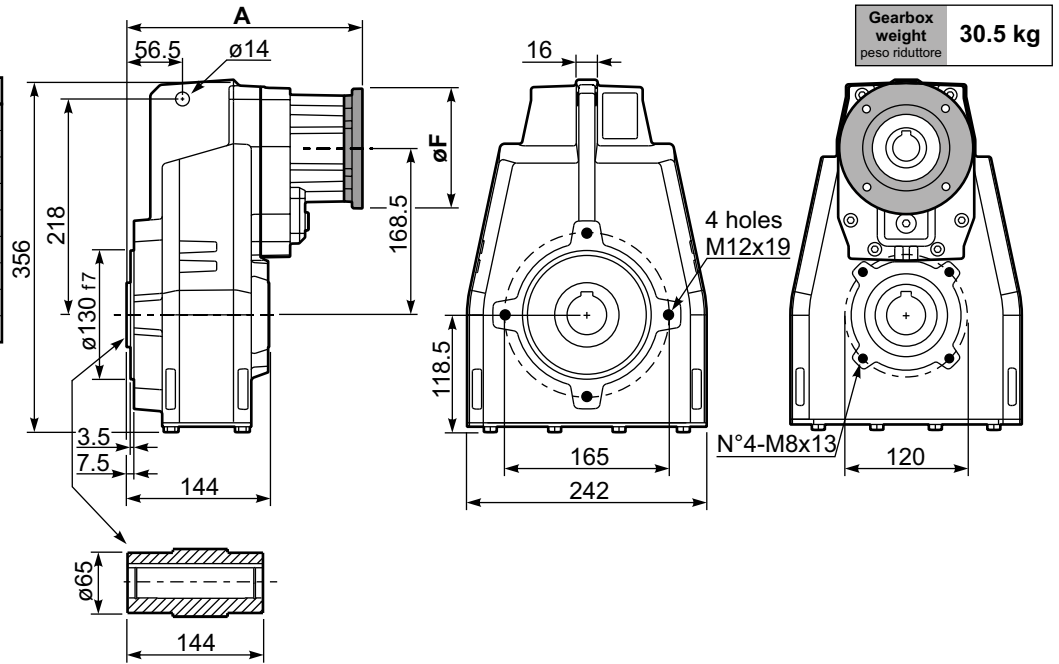
**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

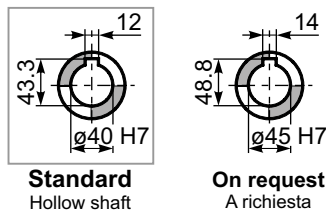
**tab. 2**

**PFC72C...** Basic gearbox  
Riduttore base

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 71B5       | K023.4.041 | 160 | 238.5 |
| 80/90B5    | K023.4.042 | 200 | 240.5 |
| 100/112B5  | K023.4.043 | 250 | 249.5 |
| 132B5      | KC51.4.043 | 300 | 270.5 |
| 80B14      | K085.4.046 | 120 | 240.5 |
| 90B14      | K085.4.045 | 140 | 240.5 |
| 100/112B14 | K085.4.047 | 160 | 249.5 |
| 132B14     | KC51.4.041 | 200 | 270.5 |

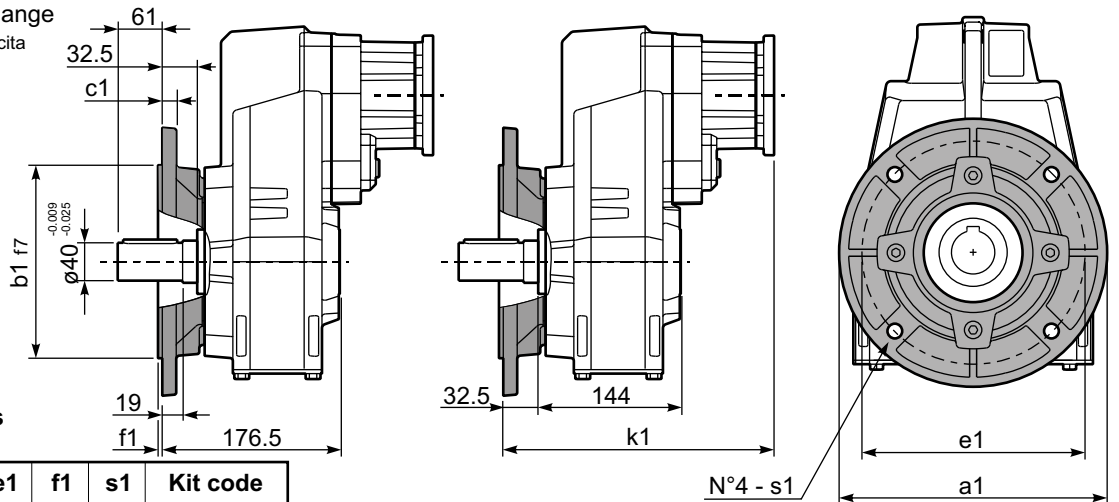


Gearbox weight  
peso riduttore **30.5 kg**



**PFC72...-F...** Output flange  
Flangia uscita

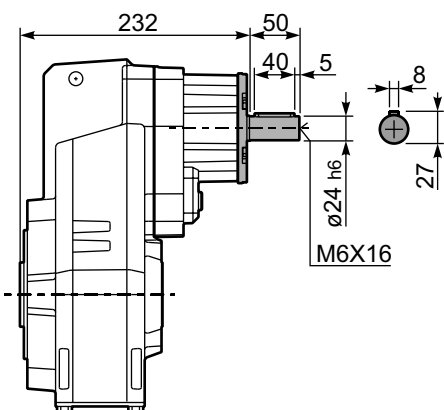
| M. flanges | k1  |
|------------|-----|
| 71B5       | 271 |
| 80/90B5    | 273 |
| 100/112B5  | 282 |
| 132B5      | 300 |
| 80B14      | 273 |
| 90B14      | 273 |
| 100/112B14 | 282 |
| 132B14     | 300 |



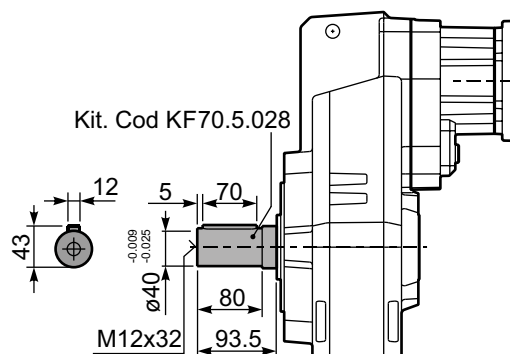
Available output flanges  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | Kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300  | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

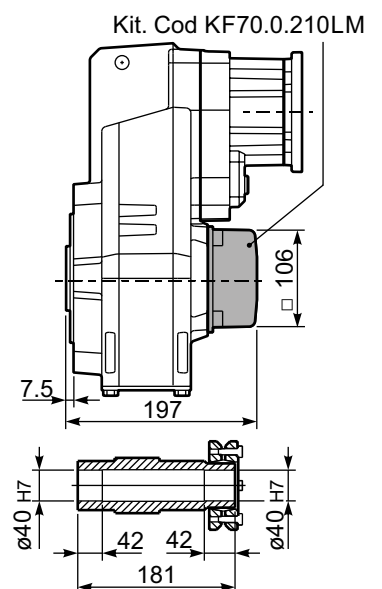
**RFC72C...** Input Shaft  
Albero in entrata



**PFC72 A...** Single output shaft  
Albero uscita semplice



**PFC72D...** Shrink disk  
Calettatore





**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br>$\varnothing$ | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|-------------------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                               |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                               |                 |
| 18.5  | <b>75.50</b>  | 1.5                             | 725                               | 1.1                    | 1.7                               | 825                                | B                          |    |    |    | C                           | C  |    | 191318                        | 01              |
| 16.2  | <b>86.47</b>  | 1.5                             | 830                               | 1.1                    | 1.6                               | 900                                | B                          |    |    |    | C                           | C  |    | 191316                        | 02              |
| 14.0  | <b>100.22</b> | 1.5                             | 962                               | 0.9                    | 1.4                               | 900                                | B                          |    |    |    | C                           | C  |    | 171316                        | 03              |
| 12.0  | <b>116.56</b> | 1.1                             | 817                               | 1.1                    | 1.2                               | 900                                | B                          |    |    |    | C                           | C  |    | 171314                        | 04              |
| 10.2  | <b>136.82</b> | 1.1                             | 959                               | 0.9                    | 1.0                               | 900                                | B                          |    |    |    | C                           | C  |    | 151314                        | 05              |
| 9.1   | <b>153.05</b> | 0.75                            | 736                               | 1.1                    | 0.83                              | 810                                | B                          |    |    |    | C                           | C  |    | 190816                        | 06              |
| 8.6   | <b>163.31</b> | 0.75                            | 785                               | 1.1                    | 0.86                              | 900                                | B                          |    |    |    | C                           | C  |    | 131314                        | 07              |
| 7.9   | <b>178.01</b> | 0.75                            | 856                               | 1.1                    | 0.79                              | 900                                | B                          |    |    |    | C                           | C  |    | 190814                        | 08              |
| 7.3   | <b>191.67</b> | 0.75                            | 922                               | 1.0                    | 0.73                              | 900                                | B                          |    |    |    | C                           | C  |    | 101316                        | 09              |
| 6.8   | <b>206.32</b> | 0.75                            | 992                               | 0.9                    | 0.68                              | 900                                | B                          |    |    |    | C                           | C  |    | 170814                        | 10              |
| 6.3   | <b>222.92</b> | 0.55                            | 791                               | 1.1                    | 0.63                              | 900                                | B                          |    |    |    | C                           | C  |    | 101314                        | 11              |
| 5.8   | <b>242.18</b> | 0.55                            | 859                               | 1.0                    | 0.58                              | 900                                | B                          |    |    |    | C                           | C  |    | 150814                        | 12              |
| 5.6   | <b>250.15</b> | 0.55                            | 888                               | 1.0                    | 0.56                              | 900                                | B                          |    |    |    | C                           | C  |    | 91316                         | 13              |
| 4.8   | <b>289.08</b> | 0.55                            | 1026                              | 0.9                    | 0.49                              | 900                                | B                          |    |    |    | C                           | C  |    | 130814                        | 14              |
| 4.2   | <b>330.31</b> | 0.37                            | 783                               | 1.1                    | 0.42                              | 890                                | B                          |    |    |    | C                           | C  |    | 71316                         | 15              |
| 3.5   | <b>394.59</b> | 0.37                            | 936                               | 1.0                    | 0.36                              | 900                                | B                          |    |    |    | C                           | C  |    | 100814                        | 16              |
| 2.7   | <b>514.99</b> | 0.25                            | 824                               | 1.1                    | 0.27                              | 900                                | B                          |    |    |    | C                           | C  |    | 90814                         | 17              |
| 2.1   | <b>680.03</b> | 0.18                            | 832                               | 1.1                    | 0.21                              | 900                                | B                          |    |    |    | C                           | C  |    | 70814                         | 18              |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili 
  B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione 
  B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione 
  C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **FC73** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

|                       |         |         |                 |         |         |
|-----------------------|---------|---------|-----------------|---------|---------|
|                       |         |         |                 |         |         |
| 3.55 LT               | 1.95 LT | 1.95 LT | 1.95 LT         | 3.75 LT | 2.00 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**I** Il riduttore tipo **FC73** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC73** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC73** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **FC73** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_R$  (N)  
 $F_A$  (N)

$F_{eq}$  (N)

$F_{eq} = F_R \cdot 174.5 \cdot X + 134.5$

| $n_2$ | $F_A$ | $F_R$ | $n_2$ | $F_A$ | $F_R$ | $n_2$ | $F_A$ | $F_R$ |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 300   | 740   | 3700  | 140   | 860   | 4300  | 70    | 1020  | 5100  |
| 250   | 800   | 4000  | 120   | 900   | 4500  | 40    | 1300  | 6500  |
| 200   | 830   | 4150  | 85    | 970   | 4850  | 15    | 1700  | 8500  |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

$F_R$  (N)  
 $F_A$  (N)

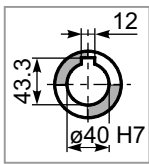
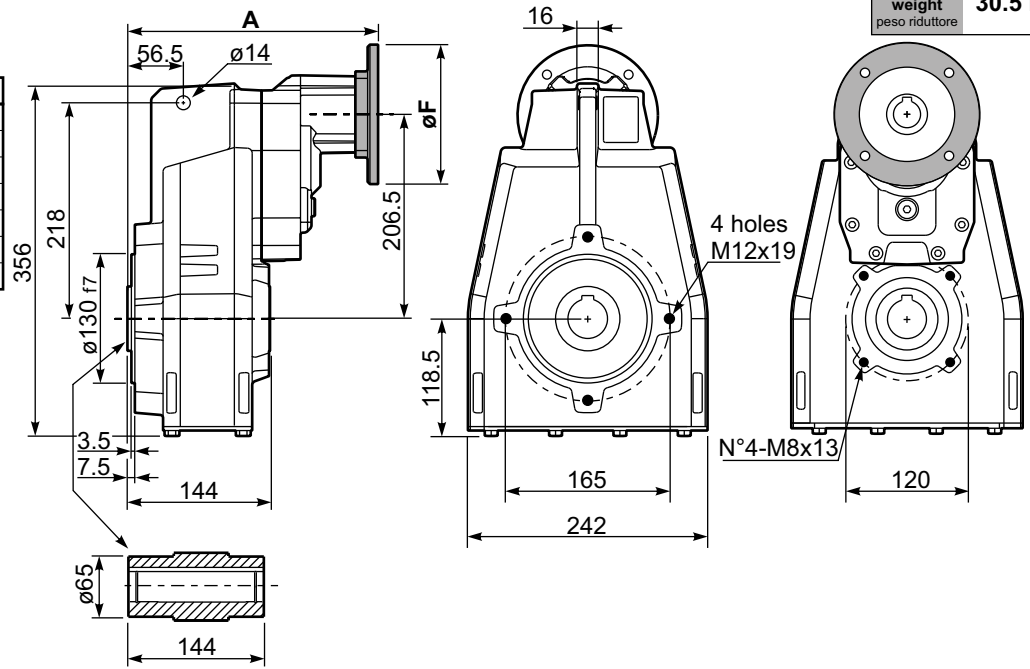
| $n_1$ | $F_A$ | $F_R$ |
|-------|-------|-------|
| 1400  | 400   | 2000  |
| 900   | 440   | 2200  |
| 500   | 440   | 2200  |

tab. 2

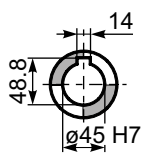
**PFC73C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **30.5 kg**

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 250.5 |
| 71B5       | K063.4.042 | 160 | 248.5 |
| 80/90B5    | K063.4.043 | 200 | 250.5 |
| 71B14      | K063.4.047 | 105 | 248.5 |
| 80B14      | K063.4.046 | 120 | 250.5 |
| 90B14      | K063.4.041 | 140 | 250.5 |



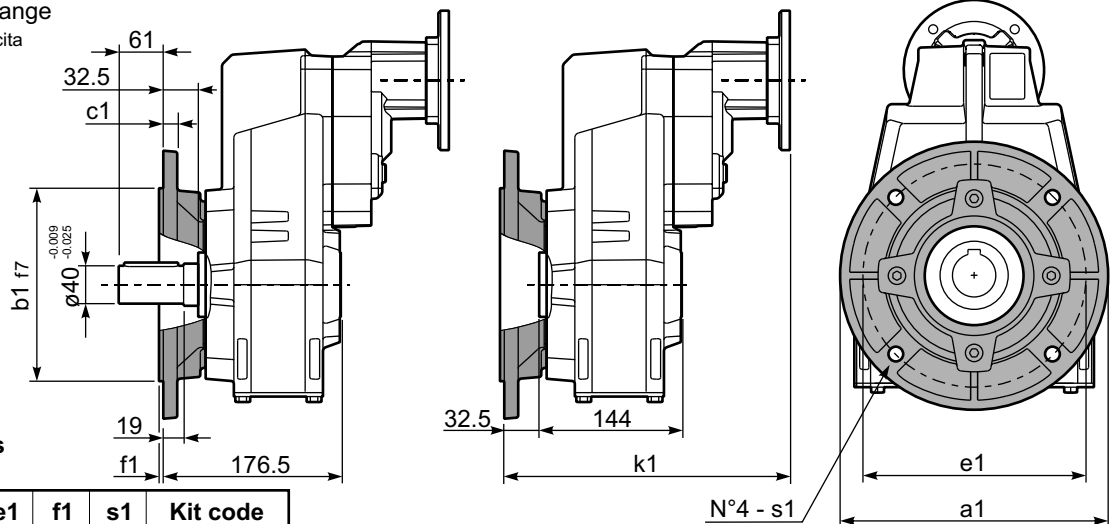
**Standard**  
Hollow shaft



**On request**  
A richiesta

**PFC73...-F...** Output flange  
Flangia uscita

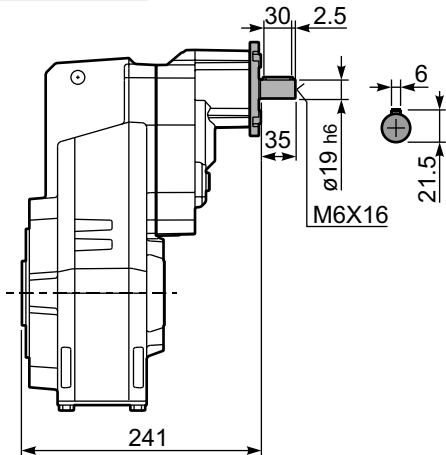
| M. flanges | k1  |
|------------|-----|
| 63B5       | 283 |
| 71B5       | 281 |
| 80/90B5    | 283 |
| 71B14      | 281 |
| 80B14      | 283 |
| 90B14      | 283 |



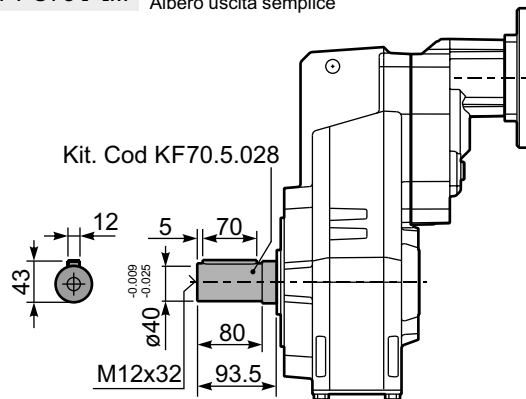
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | Kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300  | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

**RFC73C...** Input Shaft  
Albero in entrata

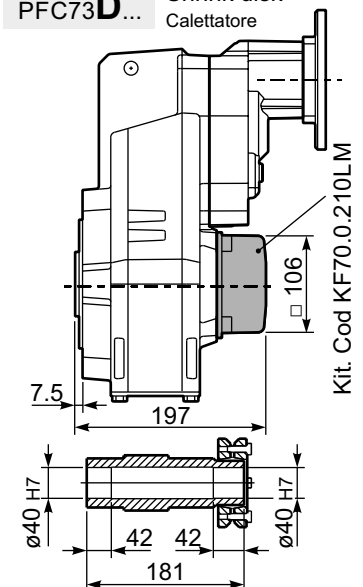


**PFC73 A...** Single output shaft  
Albero uscita semplice



Kit. Cod KF70.5.028

**PFC73D...** Shrink disk  
Calettatore



Kit. Cod KF70.0.210LM





**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     | B14 motor flanges    |   |   |   | Output Shaft | Ratios code     |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|----------------------|---|---|---|--------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -H                         | -I  | -                    | - | - | - |              |                 | -  |
| 528   | <b>2.65</b>  | 22                              | 374                               | 1.7                    | <b>36.7</b>                       | <b>650</b>                         | 160                        | 180 | <b>not available</b> |   |   |   | 2361         | <b>standard</b> | 01 |
| 409   | <b>3.42</b>  | 22                              | 483                               | 1.6                    | <b>32.8</b>                       | <b>750</b>                         |                            |     |                      |   |   |   | 1965         | <b>ø50</b>      | 02 |
| 304   | <b>4.60</b>  | 22                              | 649                               | 1.5                    | <b>30.9</b>                       | <b>950</b>                         |                            |     |                      |   |   |   | 1569         |                 | 03 |
| 256   | <b>5.46</b>  | 22                              | 771                               | 1.3                    | <b>27.4</b>                       | <b>1000</b>                        |                            |     |                      |   |   |   | 1371         | <b>ø55</b>      | 04 |
| 211   | <b>6.64</b>  | 22                              | 937                               | 1.3                    | <b>26.5</b>                       | <b>1175</b>                        |                            |     |                      |   |   |   | 1173         | On request      | 05 |

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **FC81** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

| H1                    | H4      | H3      | H2              | H5      | H6      |
|-----------------------|---------|---------|-----------------|---------|---------|
| 5.50 LT               | 3.50 LT | 3.50 LT | 3.50 LT         | 6.20 LT | 4.40 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**I** Il riduttore tipo **FC81** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC81** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC81** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **FC81** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| <b>RADIAL AND AXIAL LOADS</b>    |      |      |                                 |      |      |       |      |       |
|----------------------------------|------|------|---------------------------------|------|------|-------|------|-------|
| Output shaft<br>Albero di uscita |      |      | Freq=FR $\frac{227.5}{X+177.5}$ |      |      |       |      |       |
|                                  |      |      |                                 |      |      |       |      |       |
| $n_2$                            | FA   | FR   | $n_2$                           | FA   | FR   | $n_2$ | FA   | FR    |
| 300                              | 920  | 4600 | 140                             | 1120 | 5600 | 70    | 1400 | 7000  |
| 250                              | 1000 | 5000 | 120                             | 1140 | 5700 | 40    | 1800 | 9000  |
| 200                              | 1060 | 5300 | 85                              | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

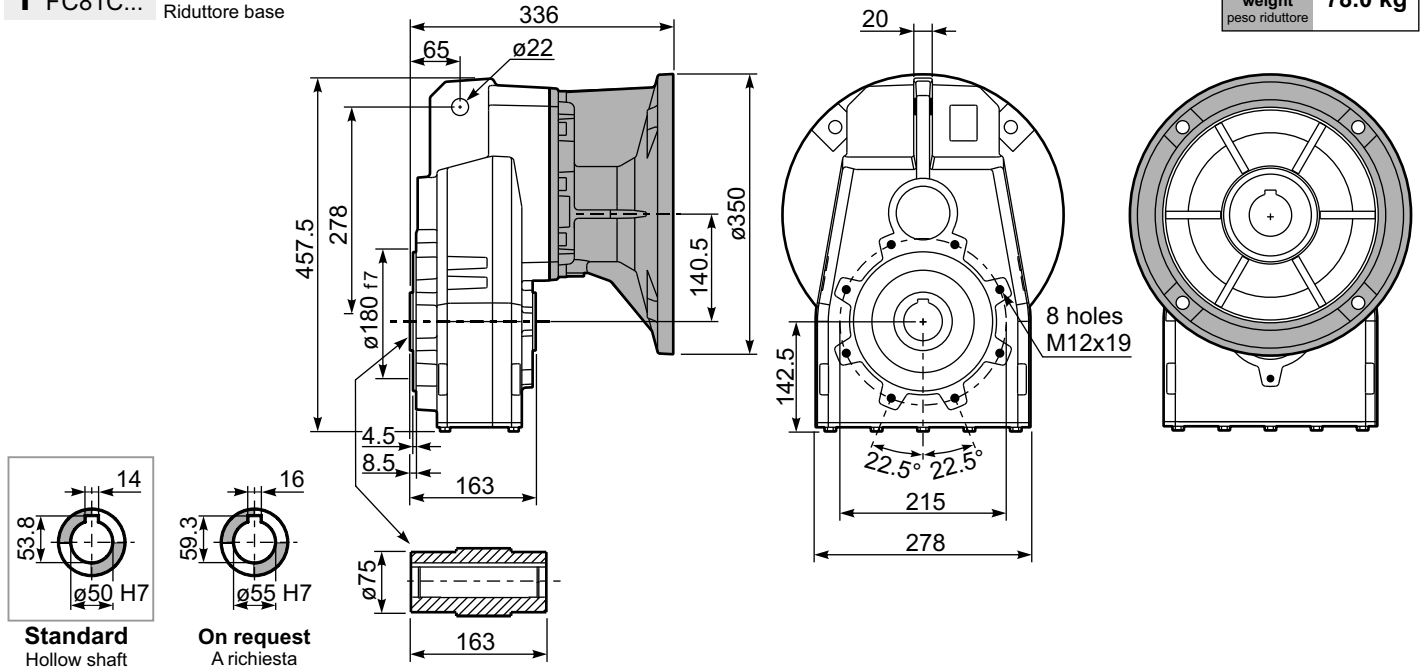
tab. 2



**PFC81C...**

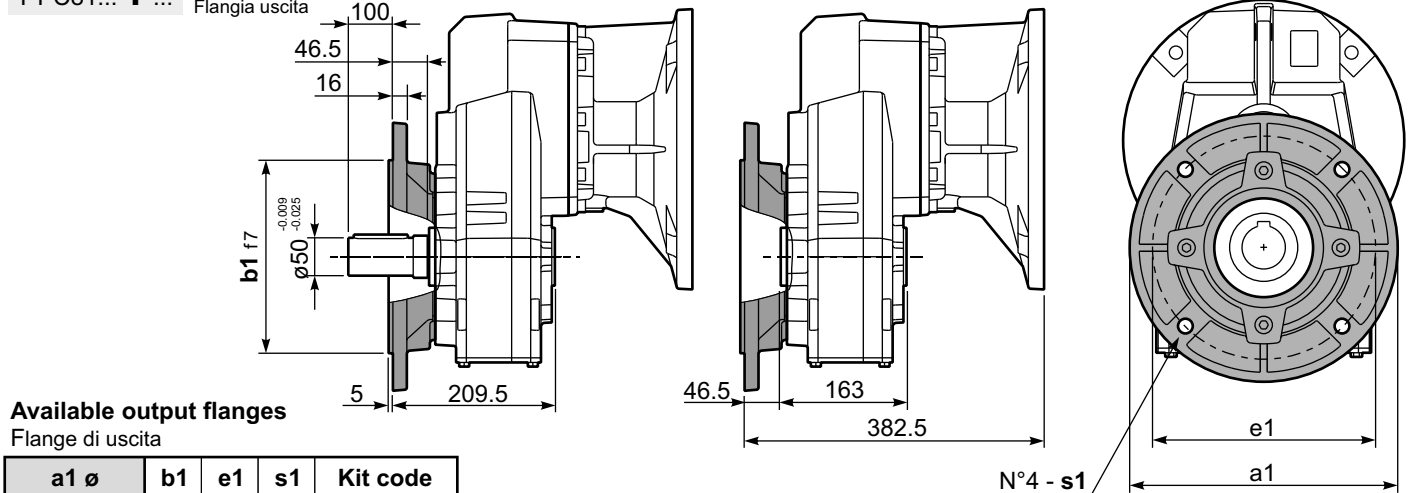
Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **78.0 kg**



**PFC81...-F...**

Output flange  
Flangia uscita

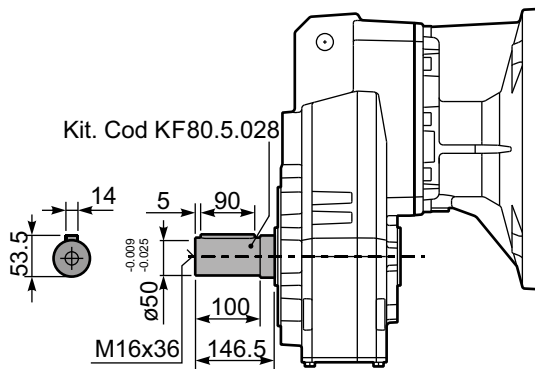


Available output flanges  
Flange di uscita

| a1 $\phi$ | b1  | e1  | s1 | Kit code   |
|-----------|-----|-----|----|------------|
| 300       | 230 | 265 | 14 | KF80.9.011 |
| 350       | 250 | 300 | 18 | KF80.9.012 |

**PFC81A...**

Single output shaft  
Albero uscita semplice





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |      | Output Shaft<br> | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|----------------------|------|------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -F                  | -G  | -H  | -I  | -U                   | -V   |                  |             |
|   |              |                                 |                                   |                        |                                   |                                    | 100<br>112          | 132 | 160 | 180 | 100<br>112           | 132  |                  |             |
| 234   | <b>5.98</b>  | 22                              | 827                               | 1.2                    | <b>25.5</b>                       | <b>1000</b>                        |                     |     |     |     |                      | 3015 | 01               |             |
| 197   | <b>7.10</b>  | 22                              | 982                               | 1.2                    | <b>25.3</b>                       | <b>1175</b>                        |                     |     |     |     |                      | 3013 | 02               |             |
| 162   | <b>8.63</b>  | 22                              | 1193                              | 1.1                    | <b>23.9</b>                       | <b>1350</b>                        |                     |     |     |     |                      | 3011 | 03               |             |
| 124   | <b>11.27</b> | 18.5                            | 1310                              | 1.1                    | <b>20.3</b>                       | <b>1500</b>                        |                     |     |     |     |                      | 2015 | 04               |             |
| 105   | <b>13.38</b> | 18.5                            | 1555                              | 1.1                    | <b>19.4</b>                       | <b>1700</b>                        |                     |     |     |     |                      | 2013 | 05               |             |
| 92  | <b>15.24</b> | 18.5                            | 1771                              | 1.1                    | <b>19.0</b>                       | <b>1900</b>                        |                     |     |     |     |                      | 1615 | 06               |             |
| 86  | <b>16.26</b> | 18.5                            | 1889                              | 1.1                    | <b>19.7</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 2011 | 07               |             |
| 77  | <b>18.09</b> | 18.5                            | 2102                              | 1.0                    | <b>17.7</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1613 | 08               |             |
| 71  | <b>19.82</b> | 15                              | 1865                              | 1.1                    | <b>15.9</b>                       | <b>2060</b>                        |                     |     |     |     |                      | 1315 | 09               |             |
| 64  | <b>21.98</b> | 15                              | 2069                              | 1.0                    | <b>14.6</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1611 | 10               |             |
| 60  | <b>23.53</b> | 15                              | 2214                              | 0.9                    | <b>13.6</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1313 | 11               |             |
| 58  | <b>24.25</b> | 11                              | 1677                              | 1.2                    | <b>12.2</b>                       | <b>1940</b>                        |                     |     |     |     |                      | 1115 | 12               |             |
| 48.6  | <b>28.80</b> | 11                              | 1991                              | 1.1                    | <b>11.1</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1113 | 13               |             |
| 40.0  | <b>34.99</b> | 9                               | 2063                              | 1.0                    | <b>9.2</b>                        | <b>2100</b>                        |                     |     |     |     |                      | 1111 | 14               |             |
| 33.6  | <b>41.64</b> | 7.5                             | 1976                              | 1.0                    | <b>7.2</b>                        | <b>1960</b>                        |                     |     |     |     |                      | 813  | 15               |             |
| 27.7  | <b>50.60</b> | 5.5                             | 1774                              | 1.2                    | <b>6.3</b>                        | <b>2100</b>                        |                     |     |     |     |                      | 811  | 16               |             |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **FC82** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **FC82** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC82** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC82** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **FC82** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |                 |         |         |
|-----------------------|---------|---------|-----------------|---------|---------|
|                       |         |         |                 |         |         |
| 5.70 LT               | 3.60 LT | 3.60 LT | 3.60 LT         | 6.60 LT | 4.50 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 920  | 4600 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 1000 | 5000 | 120   | 1140 | 5700 | 40    | 1800 | 9000  |
| 200   | 1060 | 5300 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

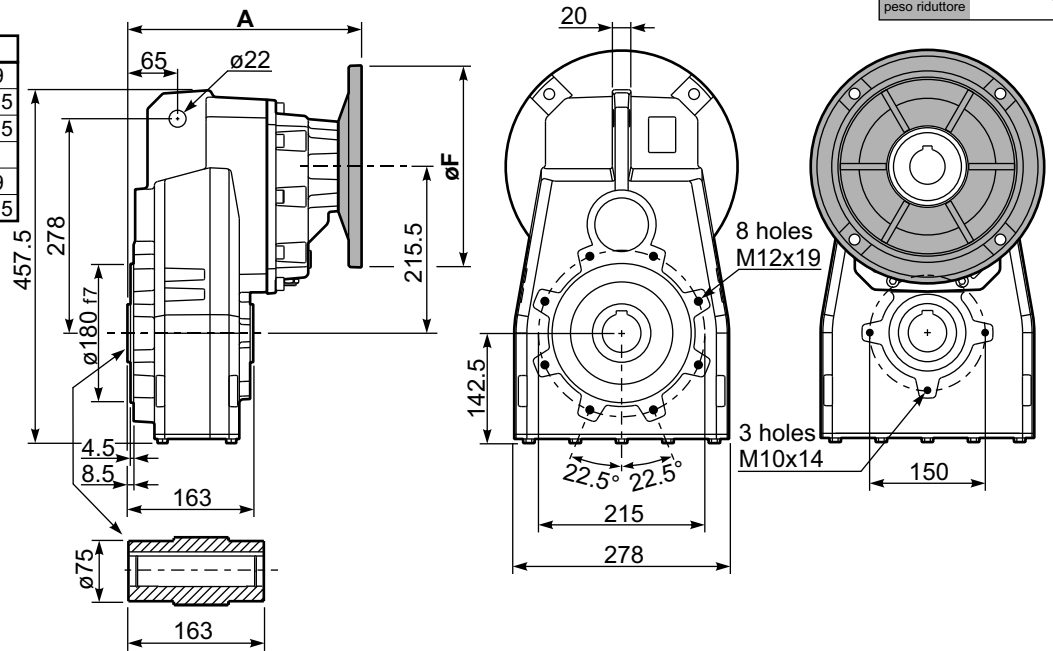
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

tab. 2

**PFC82C...** Basic gearbox  
Riduttore base

Gearbox weight **82.5 kg**  
peso riduttore

| M. flanges | Kit code    | øF  | A     |
|------------|-------------|-----|-------|
| 100/112B5  | K023.4.043  | 250 | 299   |
| 132B5      | KC51.4.043C | 300 | 320.5 |
| 160/180B5  | KC86.4.0.43 | 350 | 352.5 |
| 100/112B14 | K085.4.047  | 160 | 299   |
| 132B14     | KC51.4.041C | 200 | 320.5 |

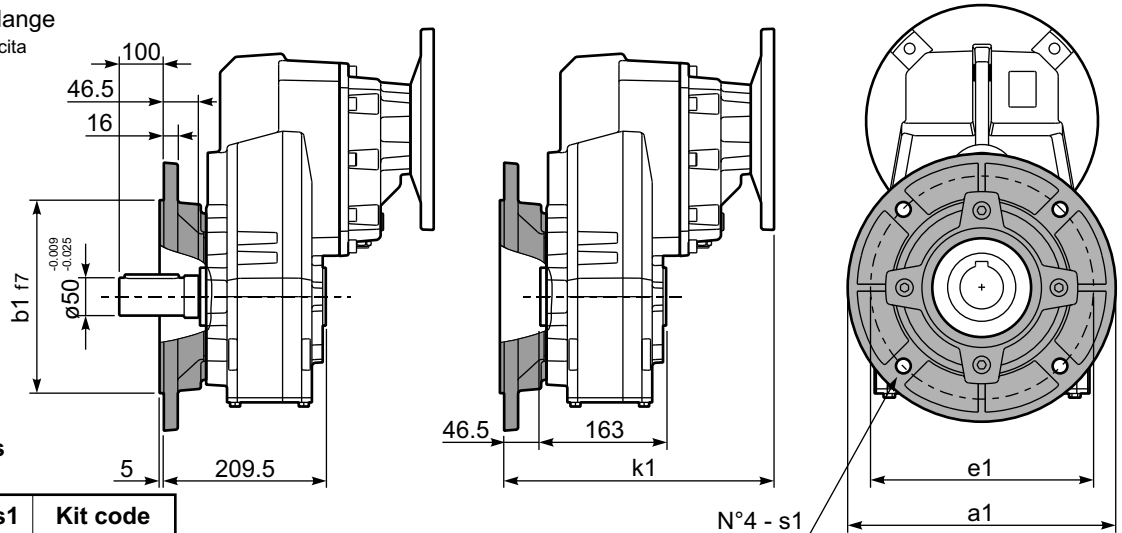


**Standard**  
Hollow shaft

**On request**  
A richiesta

**PFC82...-F...** Output flange  
Flangia uscita

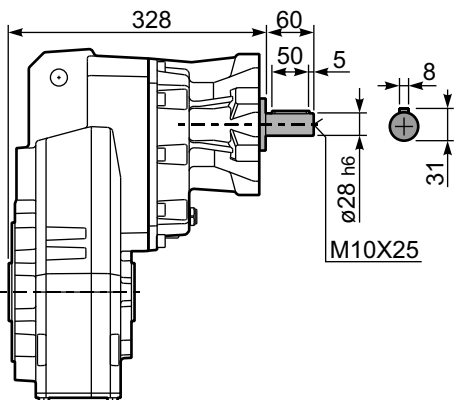
| M. flanges | k1    |
|------------|-------|
| 100/112B5  | 345.5 |
| 132B5      | 367   |
| 160/180B5  | 399   |
| 100/112B14 | 345.5 |
| 132B14     | 367   |



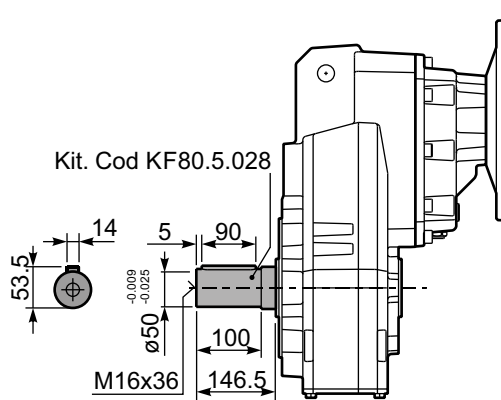
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | e1  | s1 | Kit code   |
|------|-----|-----|----|------------|
| 300  | 230 | 265 | 14 | KF80.9.011 |
| 350  | 250 | 300 | 18 | KF80.9.012 |

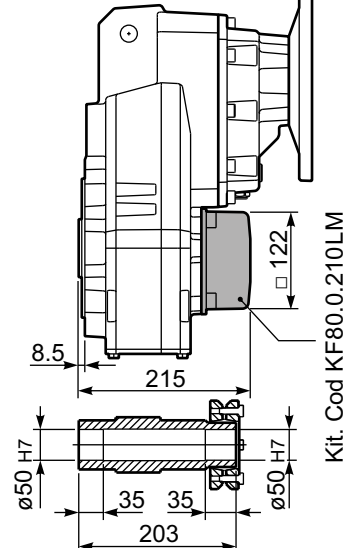
**RFC82C...** Input Shaft  
Albero in entrata



**PFC82 A...** Single output shaft  
Albero uscita semplice



**PFC82 D...** Shrink disk  
Calettatore





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code     |    |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-----------------|----|
|   |               |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |                 |    |
|   |               |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |                 |    |
| 28.8  | <b>48.55</b>  | 7.5                             | 2257                              | 0.9                    | 6.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201315           | standard<br>ø50 | 01 |
| 24.3  | <b>57.64</b>  | 5.5                             | 1980                              | 1.1                    | 5.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201313           |                 | 02 |
| 21.3  | <b>65.64</b>  | 5.5                             | 2255                              | 0.9                    | 5.0                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161315           |                 | 03 |
| 20.0  | <b>70.04</b>  | 4                               | 1760                              | 1.2                    | 4.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201311           |                 | 04 |
| 18.0  | <b>77.93</b>  | 4                               | 1958                              | 1.1                    | 4.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161313           |                 | 05 |
| 16.4  | <b>85.36</b>  | 4                               | 2145                              | 1.0                    | 3.8                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131315           |                 | 06 |
| 14.8  | <b>94.70</b>  | 4                               | 2380                              | 0.9                    | 3.5                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161311           |                 | 07 |
| 13.8  | <b>101.35</b> | 3                               | 1917                              | 1.1                    | 3.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131313           |                 | 08 |
| 11.4  | <b>123.15</b> | 3                               | 2330                              | 0.9                    | 2.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131311           |                 | 09 |
| 9.3   | <b>150.73</b> | 2.2                             | 2100                              | 1.0                    | 2.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 111311           |                 | 10 |
| 7.8   | <b>179.39</b> | 1.5                             | 1722                              | 1.2                    | 1.8                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 81313            |                 | 11 |
| 6.4   | <b>217.98</b> | 1.5                             | 2093                              | 1.0                    | 1.5                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 81311            |                 | 12 |
| 5.7   | <b>247.03</b> | 1.1                             | 1732                              | 1.1                    | 1.2                               | 1950                               | B                          |    |    |            |     |                             |    |            |     | 61313            |                 | 13 |
| 4.7   | <b>300.17</b> | 1.1                             | 2105                              | 1.0                    | 1.1                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 61311            |                 | 14 |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **FC83** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **FC83** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **FC83** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **FC83** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **FC83** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| H1                    | H4      | H3      | H2              | H5      | H6      |
|-----------------------|---------|---------|-----------------|---------|---------|
| 5.80 LT               | 3.90 LT | 3.90 LT | 3.90 LT         | 6.80 LT | 4.90 LT |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |

For all details on lubrication and plugs check our website [www.fc83.com](#) tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 920  | 4600 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 1000 | 5000 | 120   | 1140 | 5700 | 40    | 1800 | 9000  |
| 200   | 1060 | 5300 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

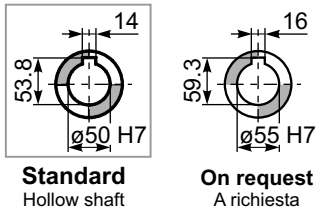
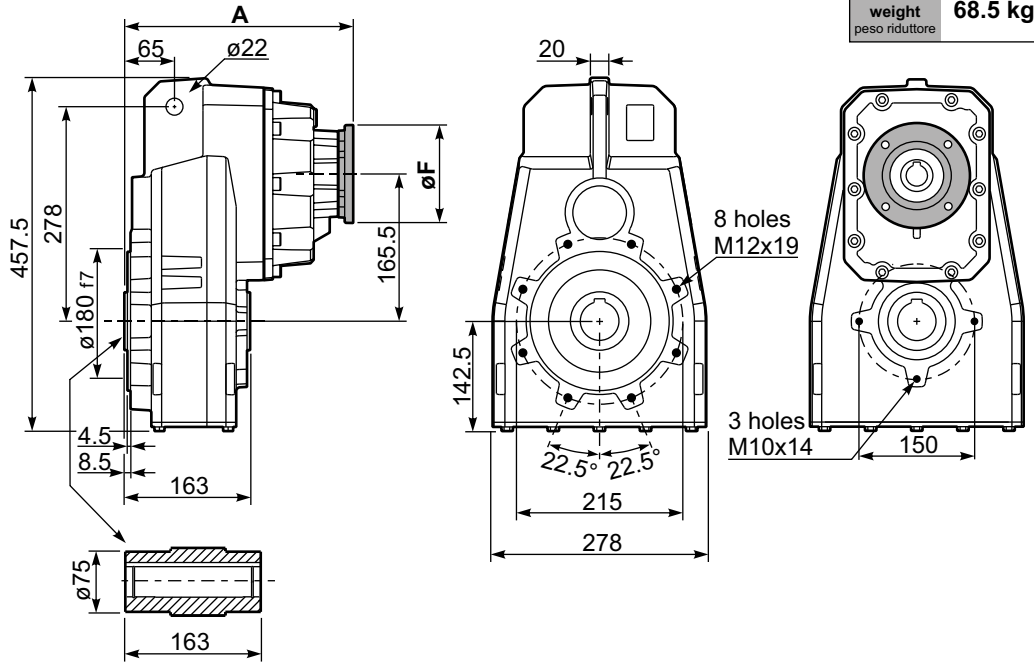
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

tab. 2

**PFC83C...** Basic gearbox  
Riduttore base

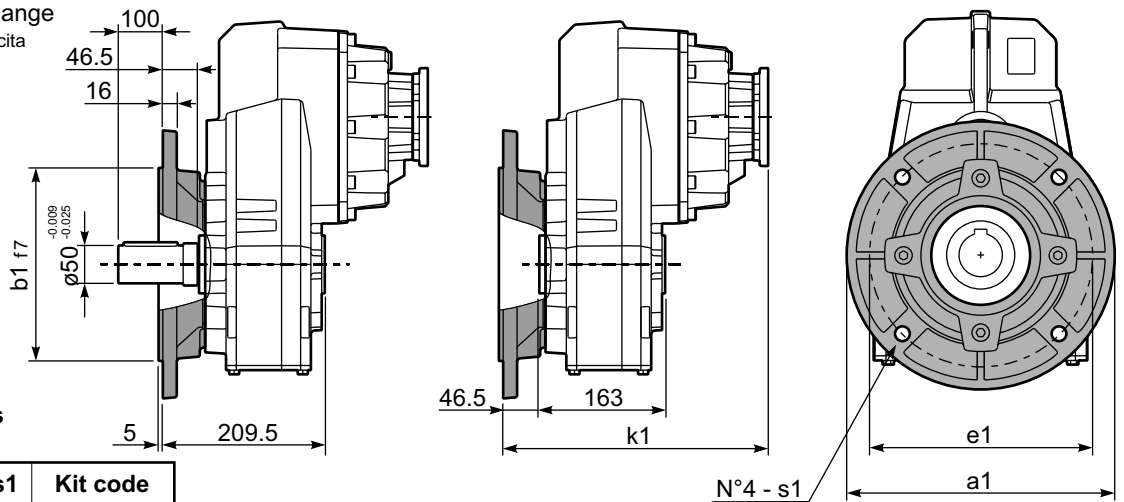
Gearbox weight **68.5 kg**  
peso riduttore

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 71B5       | K023.4.041 | 160 | 292.5 |
| 80/90B5    | K023.4.042 | 200 | 294.5 |
| 100/112B5  | K023.4.043 | 250 | 303.5 |
| 132B5      | KC51.4.043 | 300 | 324.5 |
|            |            |     |       |
| 80B14      | K085.4.046 | 120 | 294.5 |
| 90B14      | K085.4.045 | 140 | 294.5 |
| 100/112B14 | K085.4.047 | 160 | 303.5 |
| 132B14     | KC51.4.041 | 200 | 324.5 |



**PFC83...-F...** Output flange  
Flangia uscita

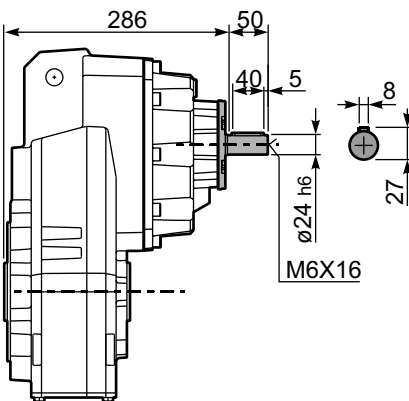
| M. flanges | k1  |
|------------|-----|
| 71B5       | 339 |
| 80/90B5    | 341 |
| 100/112B5  | 350 |
| 132B5      | 368 |
|            |     |
| 80B14      | 341 |
| 90B14      | 341 |
| 100/112B14 | 350 |
| 132B14     | 368 |



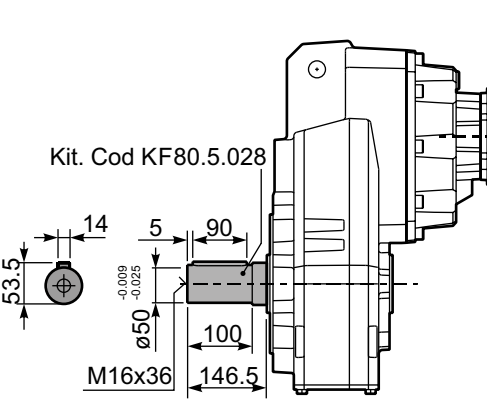
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | e1  | s1 | Kit code   |
|------|-----|-----|----|------------|
| 300  | 230 | 265 | 14 | KF80.9.011 |
| 350  | 250 | 300 | 18 | KF80.9.012 |

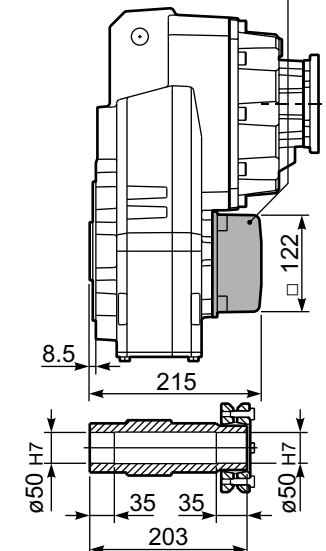
**RFC83C...** Input Shaft  
Albero in entrata



**PFC83 A...** Single output shaft  
Albero uscita semplice



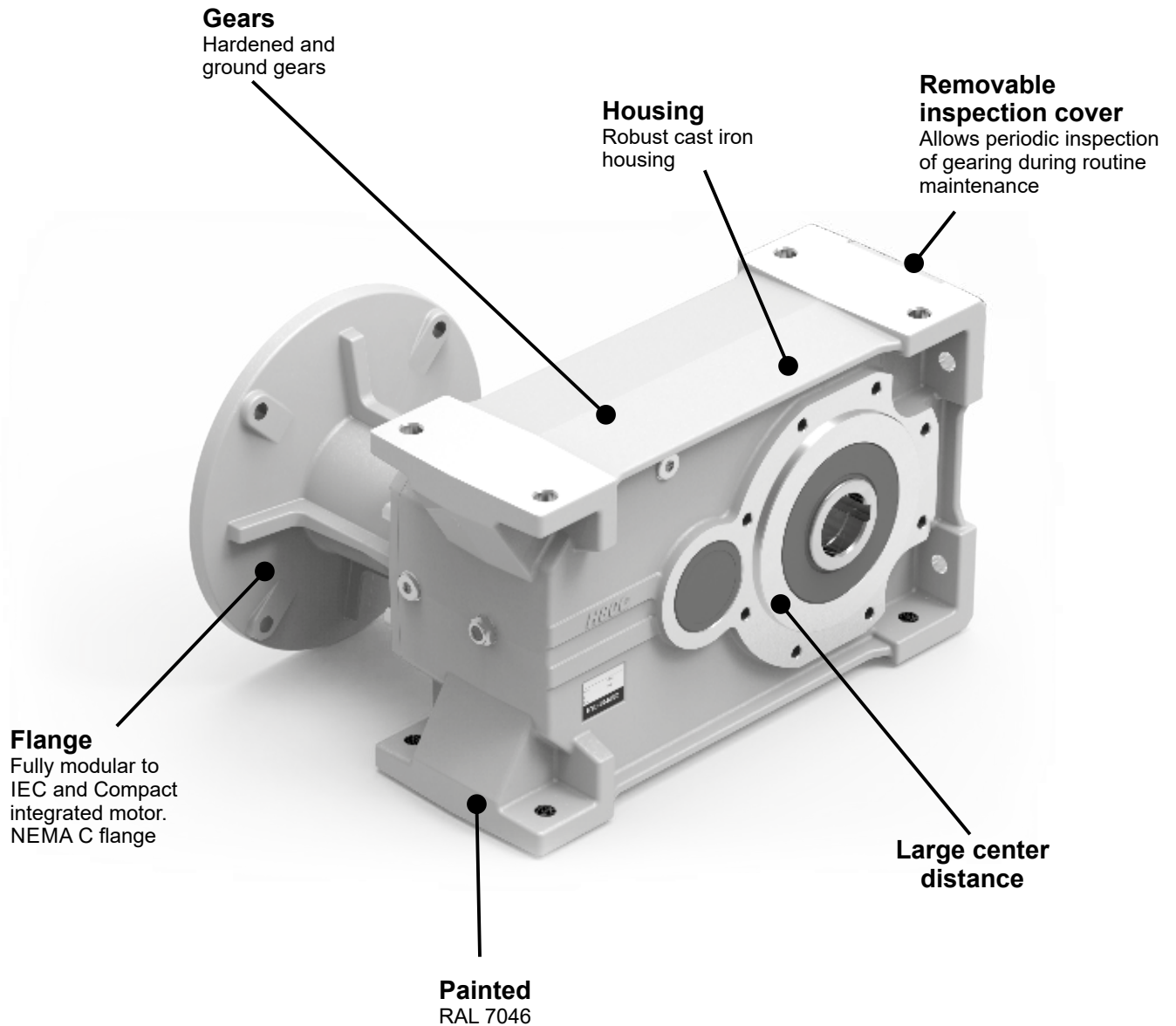
**PFC83D...** Shrink disk  
Calettatore  
Kit. Cod KF80.0.210LM





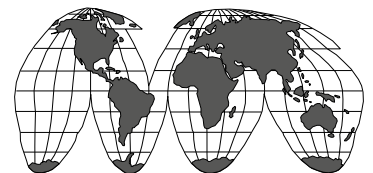
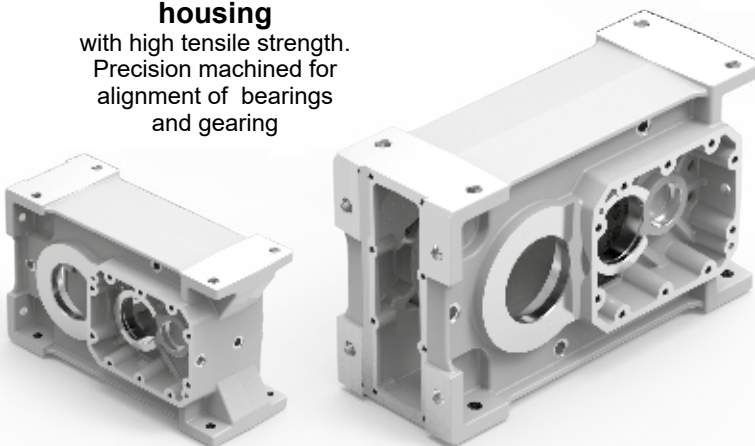
# Cast iron parallel shaft gearboxes

A modular and compact product



## Single-piece Cast Iron housing

with high tensile strength. Precision machined for alignment of bearings and gearing



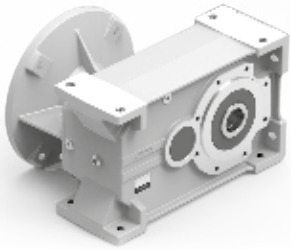
World wide sales network.



# Specific type datasheet on page...

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1 Stage

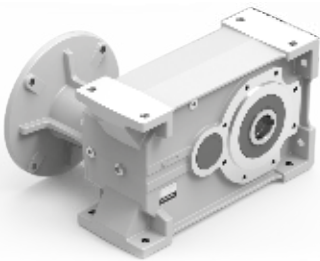


| 8-5                  | 8-11                 | 8-17                  |
|----------------------|----------------------|-----------------------|
| <b>H61C</b><br>380Nm | <b>H71C</b><br>670Nm | <b>H81C</b><br>1175Nm |

Types / Tipi /  
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Tipos

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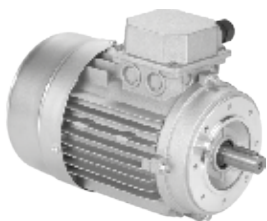
2 and 3 Stage



| 8-7                  | 8-9                  | 8-13                 | 8-15                 | 8-19                  | 8-21                  |
|----------------------|----------------------|----------------------|----------------------|-----------------------|-----------------------|
| <b>H62C</b><br>675Nm | <b>H63C</b><br>675Nm | <b>H72C</b><br>900Nm | <b>H73C</b><br>900Nm | <b>H82C</b><br>2100Nm | <b>H83C</b><br>2100Nm |

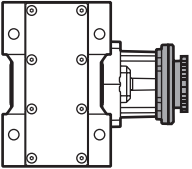
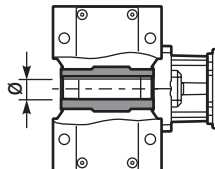
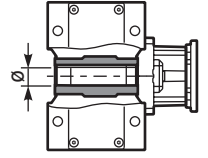
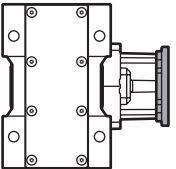
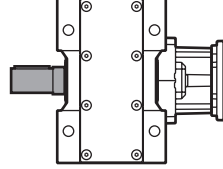
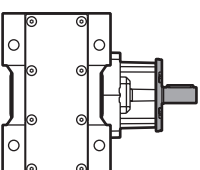
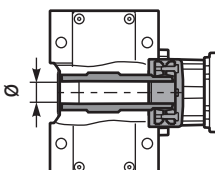
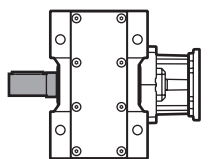
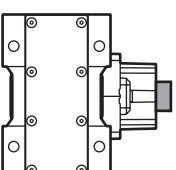
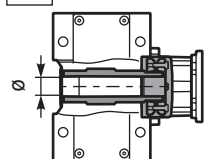
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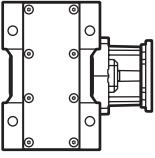
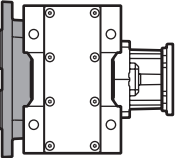



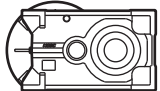

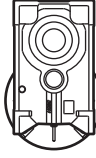
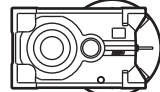
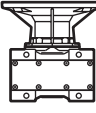
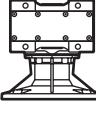

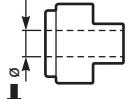

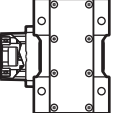




| M-1               |                   |                   |                   |                   |                       |             |                     |                     |                     |  |
|-------------------|-------------------|-------------------|-------------------|-------------------|-----------------------|-------------|---------------------|---------------------|---------------------|--|
| <b>56A</b><br>56B | <b>63A</b><br>63B | <b>71A</b><br>71B | <b>80A</b><br>80B | <b>90S</b><br>90L | <b>100LA</b><br>100LB | <b>112M</b> | <b>132S</b><br>132M | <b>160M</b><br>160L | <b>180M</b><br>180L |  |

Types / Tipi /  
Tipen / Types /  
Tipos

| Type - Tipo - Typ<br>Type - Tipo  | Size - Grandezza - Größe<br>Taille - Tamaño  | Mounting - Montaggio<br>Montage - Fixation<br>Tipo de montaje  | Rapporto - Ratio<br>Untersetzung<br>Reduction - Relacion  | Output shaft<br>Albero uscita<br>Abtriebswelle<br>Arbre de sortie<br>Eje en salida   |
|---|--|--|---|--|
| <b>M</b>  | <b>H62C</b>  | <b>C</b>   | <b>12.39</b>  | <b>-E</b>  |
| <p>Parallel shaft helical<br/>Riduttori ad assi paralleli</p>                                   | <p>1 Stage<br/>Riduzione<br/>Stufe<br/>Trains<br/>Etapas</p> <p>2 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p>3 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p>Cast Iron/Ghisa/Grauguss/Fonle/Fundicion</p> |  <p>Hollow output shaft</p>  | <p>See technical data table</p> <p>Vedi tabelle dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p> |  <p>→ <b>STANDARD</b><br/>⇒ Only on request for Q.ty<br/>A richiesta per quantità</p>   |
| <p>With IEC motor</p> <p><b>M</b></p>   | <p><b>H61C</b><br/><b>H71C</b><br/><b>H81C</b></p>   | <p><b>C</b></p>  |   | <p>H61C H62C H63C</p> <p><b>-E</b> → <math>\varnothing 35</math><br/><b>-F</b> ⇒ <math>\varnothing 40</math></p>   |
|  <p>With motor flange</p> <p><b>P</b></p>   | <p><b>H62C</b><br/><b>H72C</b><br/><b>H82C</b></p> <p><b>H63C</b><br/><b>H73C</b><br/><b>H83C</b></p>  |  <p>Single output shaft</p> <p><b>A</b></p>  |   | <p>H71C H72C H73C</p> <p><b>-F</b> → <math>\varnothing 40</math><br/><b>-G</b> ⇒ <math>\varnothing 45</math></p> <p>H81C H82C H83C</p> <p><b>-H</b> → <math>\varnothing 50</math><br/><b>-I</b> ⇒ <math>\varnothing 55</math></p>  |
|  <p>With male input shaft</p> <p><b>R</b></p>   |  |  <p>Shrink Disk</p> <p><b>D</b></p> <p>Only on request for Q.ty<br/>A richiesta per quantità</p> |   | <p><b>A</b></p>  <p>Single output shaft</p> <p><b>-N</b> H61/2/3C ⇒ <math>\varnothing 35</math><br/><b>-O</b> H71/2/3C ⇒ <math>\varnothing 40</math><br/><b>-K</b> H81/2/3C ⇒ <math>\varnothing 50</math></p> |
|  <p>Modular base</p> <p><b>B</b></p> <p>Not available for:<br/>H61C, H71C,<br/>H81C, H82C</p> |  |  |   | <p><b>D</b></p>  <p>Shrink disk</p> <p><b>-T</b> H62/3C ⇒ <math>\varnothing 35</math><br/><b>-U</b> H72/3C ⇒ <math>\varnothing 40</math><br/><b>-V</b> H82/3C ⇒ <math>\varnothing 50</math></p>               |



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 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
 Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
 Sur demande nos produits peuvent se conformer à la réglementation ATEX  
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

| Type - Tipo - Typ<br>Types - Tipo   | Output flange<br>Flangia uscita<br>Ausgangsflansch<br>Bride de sortie<br>Brida en salida   | Motor size - Grandezza motore<br>Motor Grösse<br>Motor Grösse<br>Grandeur moteur - Tamaño motor   | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje   | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Terminal box position<br>Posizione morsettieria<br>Klemmkastenlage<br>Position boîte à bornes<br>Posición caja de bornes   |
|---|--|---|--|--|--|
| <p><b>-N</b></p>  <p><b>-N</b><br/>Senza flangia<br/>Without flange</p>  <p><b>-F</b><br/>Whit output flange<br/>con flangia uscita</p> | <p><b>N</b> Senza flangia<br/>Without flange</p> <p>H61C H62C H63C</p> <p><b>4</b> → <b>∅250</b></p> <p>H71C H72C H73C</p> <p><b>4</b> → <b>∅250</b><br/><b>5</b> → <b>∅300</b></p> <p>H81C H82C H83C</p> <p><b>5</b> → <b>∅300</b><br/><b>6</b> → <b>∅350</b></p> | <p><b>-C</b></p> <p>Flange<br/>Flangia</p>  <p><b>B5</b></p> <p><b>-A</b>=56 (∅120)<br/><b>-B</b>=63 (∅140)<br/><b>-C</b>=71 (∅160)<br/><b>-D</b>=80 (∅200)<br/><b>-E</b>=90 (∅200)<br/><b>-F</b>=100 (∅250)<br/><b>-G</b>=132 (∅300)<br/><b>-H</b>=160 (∅350)<br/><b>-I</b>=180 (∅350)</p> <p><b>B14</b></p> <p><b>-O</b>=56 (∅80)<br/><b>-P</b>=63 (∅90)<br/><b>-Q</b>=71 (∅105)<br/><b>-R</b>=80 (∅120)<br/><b>-T</b>=90 (∅140)<br/><b>-U</b>=100 (∅160)<br/><b>-V</b>=132 (∅200)</p> <p>Brushless</p> <p><b>BB</b>=50/70-M5<br/><b>BC</b>=60/75-M5<br/><b>BD</b>=70/90-M6<br/><b>BE</b>=80/100-M6<br/><b>BF</b>=95/115-M8<br/><b>BG</b>=110/145-M8<br/><b>BH</b>=130/165-M8</p> <p>Type R<br/>Tipo R</p>  <p>H63C H73C</p> <p><b>-2</b> → <b>∅19</b></p> <p>H62C<br/>H72C H83C</p> <p><b>-3</b> → <b>∅24</b></p> <p>H82C</p> <p><b>-4</b> → <b>∅28</b></p> <p>Without flange<br/>Senza flangia</p>  <p><b>-M</b> → With coupling</p> <p>H63C H73C</p> <p><b>-1</b> → <b>∅14</b><br/>(IEC71)<br/><b>-2</b> → <b>∅19</b><br/>(IEC80)<br/><b>-3</b> → <b>∅24</b><br/>(IEC90)</p> <p>H62C<br/>H72C H83C</p> <p><b>-2</b> → <b>∅19</b><br/>(IEC80)<br/><b>-3</b> → <b>∅24</b><br/>(IEC90)<br/><b>-4</b> → <b>∅28</b><br/>(IEC100)</p> | <p><b>B3</b></p>  <p><b>B3</b><br/>STANDARD</p>  <p><b>B6</b></p>  <p><b>B7</b></p>  <p><b>B8</b></p>  <p><b>V5</b></p>  <p><b>V6</b></p>  <p><b>V8</b></p> | <p><b>ST</b><br/>standard bore<br/>foro standard</p> <p>COUPLING<br/>STANDARD (IEC)</p>  <p><b>-A</b> = 9mm<br/><b>-B</b> = 11mm<br/><b>-C</b> = 14mm<br/><b>-D</b> = 19mm<br/><b>-E</b> = 24mm<br/><b>-F</b> = 28mm</p> <p>BRUSHLESS *</p>  <p><b>-3</b> = 14mm<br/><b>-4</b> = 19mm<br/><b>-5</b> = 22mm<br/><b>-6</b> = 24mm</p> <p><b>-0</b><br/>Ready for input coupling<br/>Predisposto per giunto</p>  <p>* With reduction bushing where applicable<br/>Con bussola di riduzione dove prevista</p> | <p>With Type M specify terminal box position<br/>Con tipo M specificare posizione morsettieria</p>  <p><b>A</b></p>  <p><b>B</b><br/>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

Lifting / sollevamento / hubantriebe / levage / elevación

$$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$$

Rotation / rotazione / drehung / rotation / rotação

$$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$$

Linear movement / traslazione / linearbewegung / translation / translación

$$P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$$

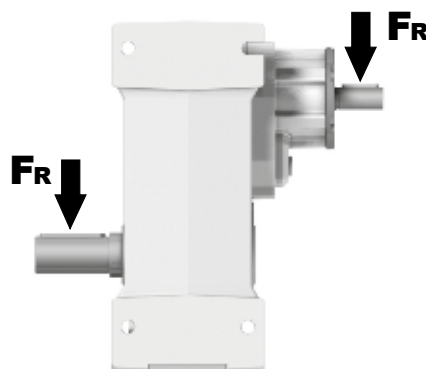
**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

$$M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$$

$$M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$$

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



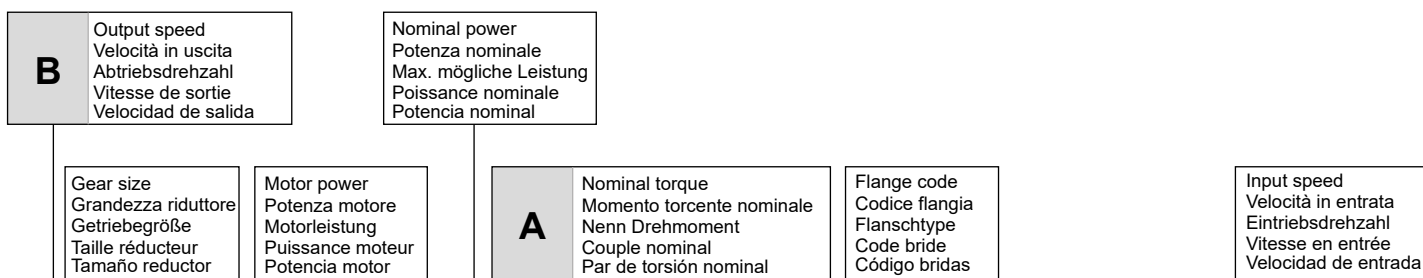
$$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$$

$$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$$

|                      |  |
|----------------------|--|
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

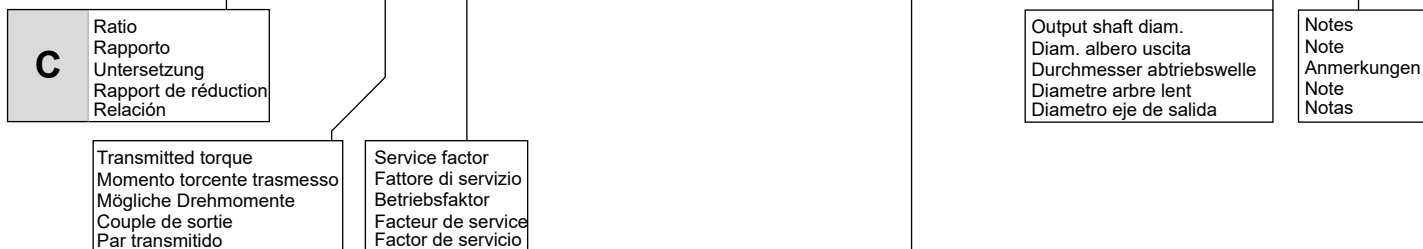
How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor



**H62C** Cube gear **675Nm** Rating - Cast Iron  
PARALLEL SHAFT GEARBOXES

**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code<br> |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |                 |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |                 |    |
| 213   | <b>6.57</b>  | 7.5                             | 312                               | 1.2                    | 8.8                               | 380                                | <b>B</b>                   |    |    |            |     |                             |    |            |     |                  | 3018            | 01 |
| 185   | <b>7.56</b>  | 7.5                             | 358                               | 1.1                    | 7.9                               | 390                                | <b>B</b>                   |    |    |            |     |                             |    |            |     |                  | 3016            | 02 |
| 159   | <b>8.82</b>  | 7.5                             | 419                               | 1.0                    | 7.1                               | 410                                | <b>B</b>                   |    |    |            |     |                             |    |            |     |                  | 3014            | 03 |
| 113   | <b>12.39</b> | 7.5                             | 588                               | 1.0                    | 7.2                               | 580                                | <b>B</b>                   |    |    |            |     |                             |    |            |     |                  | 2018            | 04 |



**fs**

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
|  |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

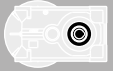
**D** Motor flange available  
Flange disponibili  
Erhältliche Motorflansche  
Brides disponibles  
Bridas disponibles

**B)** Mounting with reduction ring  
Montaggio con boccola di riduzione  
Reduzierhülsen  
Montage avec douille de réduction  
Montaje con casquillo de reducción

**C)** Motor flangeholes position/terminal box position  
Posizione fori flangia/basetta motore  
Bohrungsposition am Motorflansch/-socket  
Position trous bride/barrette à bornes moteur  
Posición agujeros brida / base motor

**B)** Available without reduction bushes  
Disponibile anche senza boccola  
Auch ohne Reduzierbuchse verfügbar  
Disponible aussi sans douille de réduction  
Disponible tambien sin casquillo

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



**QUICK SELECTION / Selezione veloce**

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     | B14 motor flanges    |   |   |   | Output Shaft |                 |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|----------------------|---|---|---|--------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -G                         | 132 | -                    | - | - | - | -            | -               | Ø  |
| 507   | <b>2.76</b>  | 9                               | 166                               | 1.6                    | <b>14.4</b>                       | <b>265</b>                         |                            |     | <b>not available</b> |   |   |   | 2980         | <b>standard</b> | 01 |
| 395   | <b>3.54</b>  | 9                               | 213                               | 1.3                    | <b>11.6</b>                       | <b>275</b>                         |                            |     |                      |   |   |   | 2485         | <b>Ø35</b>      | 02 |
| 277   | <b>5.06</b>  | 9                               | 304                               | 1.0                    | <b>8.6</b>                        | <b>290</b>                         |                            |     |                      |   |   |   | 1891         |                 | 03 |
| 241   | <b>5.81</b>  | 7.5                             | 281                               | 1.2                    | <b>8.5</b>                        | <b>330</b>                         |                            |     |                      |   |   |   | 1693         | Ø40             | 04 |
| 206   | <b>6.79</b>  | 7.5                             | 329                               | 1.2                    | <b>8.4</b>                        | <b>380</b>                         |                            |     |                      |   |   |   | 1495         | On request      | 05 |

The dynamic efficiency is **0.98** for all ratios

- Motor Flanges Available**  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **H61C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **H61C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **H61C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **H61C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **H61C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |           |           |                    |           |           |           |           |
|-----------------------|---|-----------|-----------|--------------------|-----------|-----------|-----------|-----------|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |           |           |                    |           |           |           |           |
|                       |   |           |           |                    |           |           |           |           |
| <b>B3</b>             | <b>B6</b>   | <b>B7</b> | <b>B8</b> | <b>V5</b>          | <b>V6</b> | <b>V8</b> | <b>V8</b> | <b>V8</b> |
| 2.25 LT               | 3.20 LT   | 3.00 LT   | 2.25 LT   | 4.35 LT            | 2.35 LT   | Ask       | Ask       | Ask       |
| SHELL Omala S4 WE 320 |   |           |           | ENI Telium VSF 320 |           |           |           |           |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**RADIAL AND AXIAL LOADS**

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$

| $n_2$      | FA  | FR   | $n_2$      | FA  | FR   | $n_2$     | FA   | FR   |
|------------|-----|------|------------|-----|------|-----------|------|------|
| <b>300</b> | 600 | 3000 | <b>140</b> | 720 | 3600 | <b>70</b> | 940  | 4700 |
| <b>250</b> | 640 | 3200 | <b>120</b> | 740 | 3700 | <b>40</b> | 1220 | 6100 |
| <b>200</b> | 690 | 3460 | <b>85</b>  | 860 | 4300 | <b>15</b> | 1300 | 6500 |

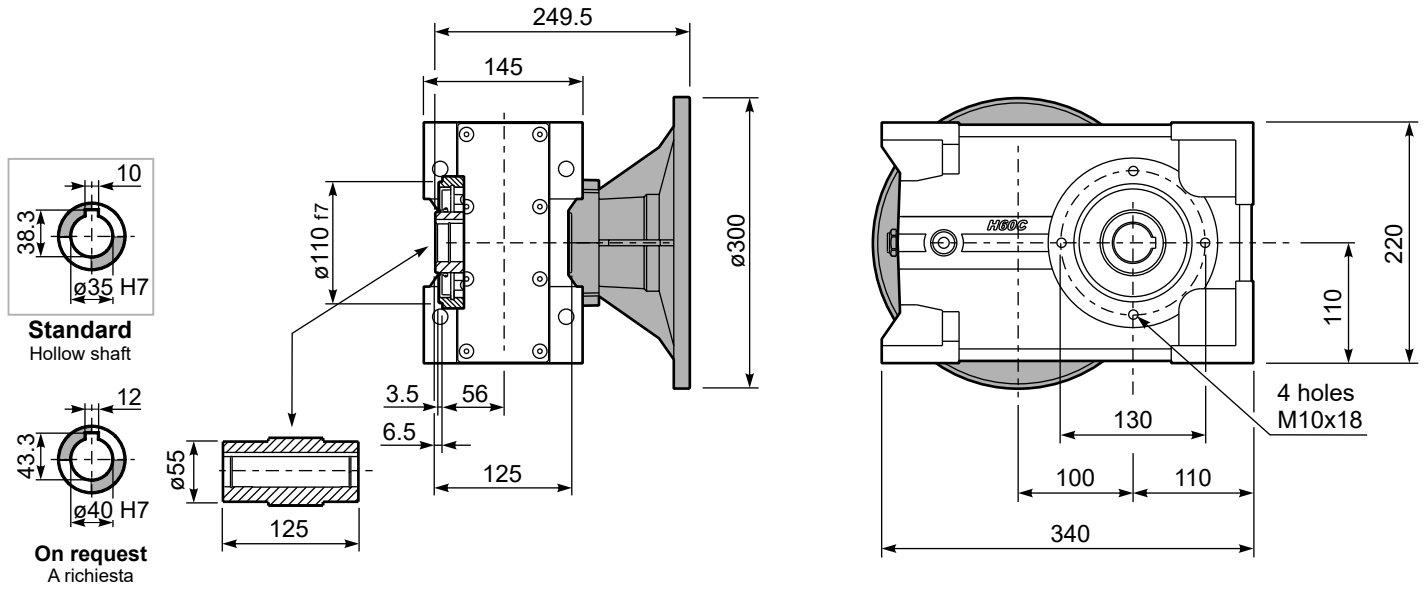
**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**tab. 2**

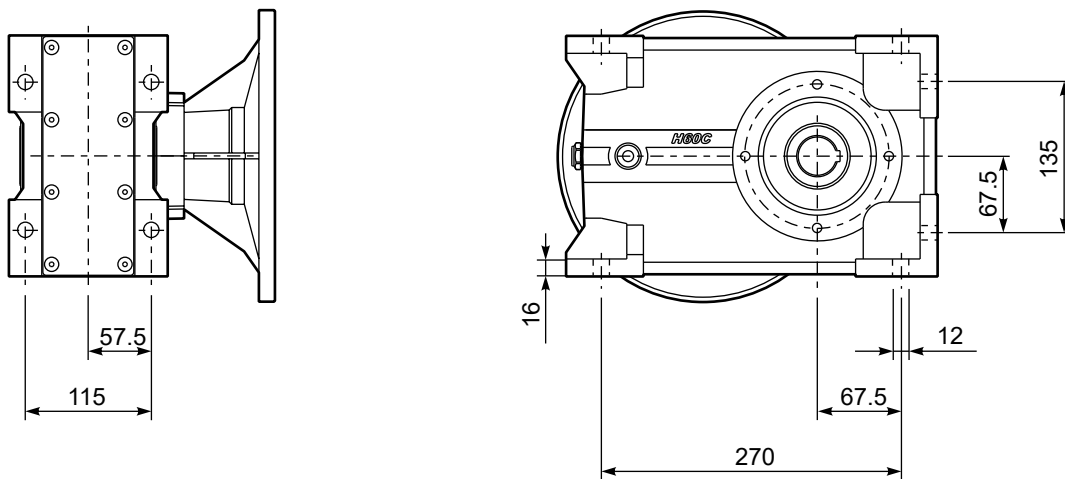


**P** H61C... Basic gearbox  
Riduttore base

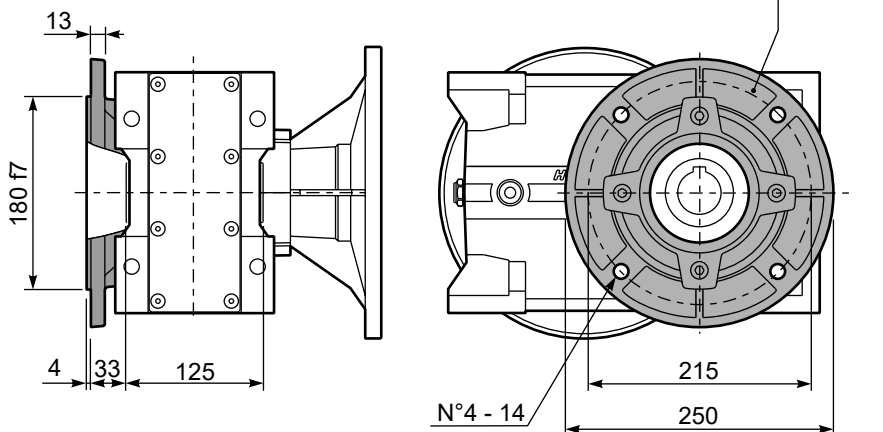
Gearbox weight  
peso riduttore **40.0 kg**



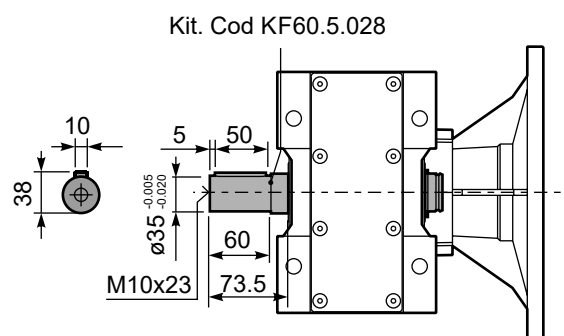
**PH61C...-N** Feet  
Piedini

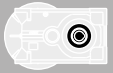


**PH61C...-F** Output flange  
Flangia uscita



**PH61C A...** Single output shaft  
Albero uscita semplice





▪ **QUICK SELECTION** / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |              |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |    |
|   |              |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 213   | <b>6.57</b>  | 7.5                             | 312                               | 1.2                      | 8.8                               | 380                                | B                          |    |    |            |     |                             |    |            |     |                  | 3018        | 01 |
| 185   | <b>7.56</b>  | 7.5                             | 358                               | 1.1                      | 7.9                               | 390                                | B                          |    |    |            |     |                             |    |            |     |                  | 3016        | 02 |
| 159   | <b>8.82</b>  | 7.5                             | 419                               | 1.0                      | 7.1                               | 410                                | B                          |    |    |            |     |                             |    |            |     |                  | 3014        | 03 |
| 113   | <b>12.39</b> | 7.5                             | 588                               | 1.0                      | 7.2                               | 580                                | B                          |    |    |            |     |                             |    |            |     |                  | 2018        | 04 |
| 98  | <b>14.24</b> | 5.5                             | 499                               | 1.2                      | 6.4                               | 600                                | B                          |    |    |            |     |                             |    |            |     |                  | 2016        | 05 |
| 84  | <b>16.75</b> | 5.5                             | 587                               | 1.1                      | 6.1                               | 665                                | B                          |    |    |            |     |                             |    |            |     |                  | 1618        | 06 |
| 73  | <b>19.25</b> | 5.5                             | 675                               | 1.0                      | 5.4                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1616        | 07 |
| 64  | <b>21.78</b> | 4                               | 558                               | 1.2                      | 4.7                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1318        | 08 |
| 56  | <b>25.04</b> | 4                               | 642                               | 1.1                      | 4.1                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1316        | 09 |
| 47.9  | <b>29.23</b> | 4                               | 750                               | 0.9                      | 3.5                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1314        | 10 |
| 45.7  | <b>30.65</b> | 3                               | 592                               | 1.1                      | 3.4                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1116        | 11 |
| 39.1  | <b>35.78</b> | 3                               | 691                               | 1.0                      | 2.9                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 1114        | 12 |
| 36.3  | <b>38.55</b> | 2.2                             | 548                               | 1.1                      | 2.3                               | 580                                | B                          |    |    |            |     |                             |    |            |     |                  | 818         | 13 |
| 31.6  | <b>44.32</b> | 2.2                             | 630                               | 1.1                      | 2.3                               | 665                                | B                          |    |    |            |     |                             |    |            |     |                  | 816         | 14 |
| 27.1  | <b>51.74</b> | 2.2                             | 735                               | 0.9                      | 2.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 814         | 15 |
| 22.9  | <b>61.03</b> | 1.1                             | 437                               | 1.1                      | 1.2                               | 480                                | B                          |    |    |            |     |                             |    |            |     |                  | 616         | 16 |
| 19.6  | <b>71.25</b> | 1.1                             | 510                               | 1.1                      | 1.2                               | 560                                | B                          |    |    |            |     |                             |    |            |     |                  | 614         | 17 |

The dynamic efficiency is **0.96** for all ratios

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **H62C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **H62C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **H62C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **H62C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **H62C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |                    |         |         |     |
|-----------------------|---|---------|--------------------|---------|---------|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|                       |   |         |                    |         |         |     |
| B3                    | B6  | B7      | B8                 | V5      | V6      | V8  |
| 2.25 LT               | 3.20 LT   | 3.00 LT | 2.25 LT            | 4.35 LT | 2.35 LT | Ask |
| SHELL Omala S4 WE 320 |   |         | ENI Telium VSF 320 |         |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 600 | 3000 | 140   | 720 | 3600 | 70    | 940  | 4700 |
| 250   | 640 | 3200 | 120   | 740 | 3700 | 40    | 1220 | 6100 |
| 200   | 690 | 3460 | 85    | 860 | 4300 | 15    | 1300 | 6500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

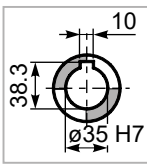
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

tab. 2

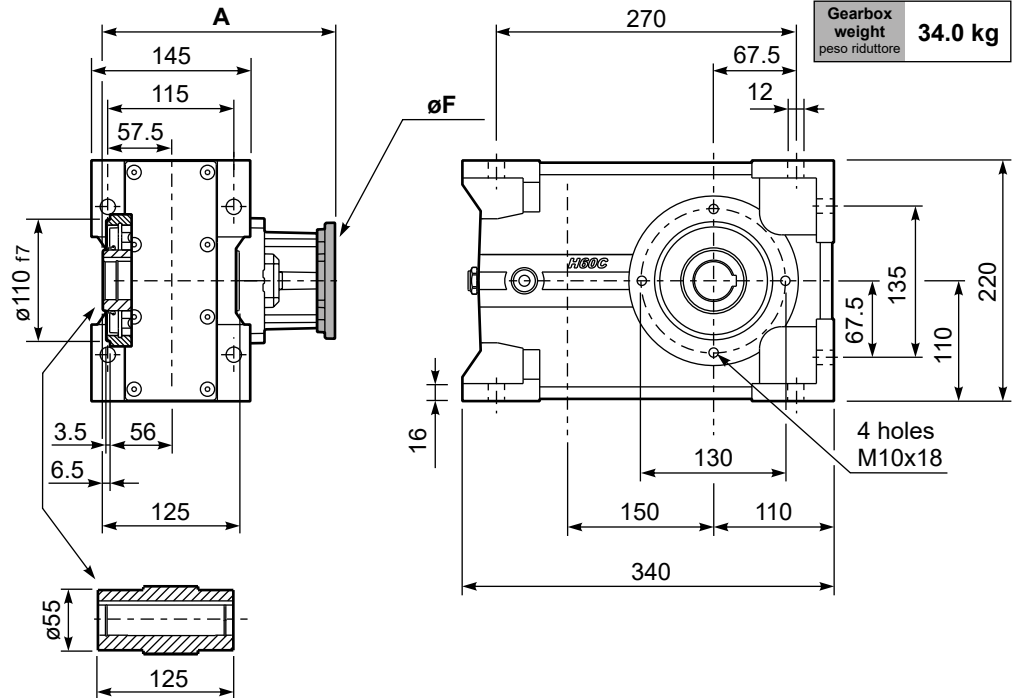
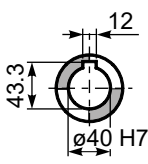
**P**H62C... Basic gearbox  
Riduttore base

| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 227 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 229 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 238 |
| <b>132B5</b>      | KC51.4.043 | 300 | 259 |
| <b>80B14</b>      | K085.4.046 | 120 | 229 |
| <b>90B14</b>      | K085.4.045 | 140 | 229 |
| <b>100/112B14</b> | K085.4.047 | 160 | 238 |
| <b>132B14</b>     | KC51.4.041 | 200 | 259 |

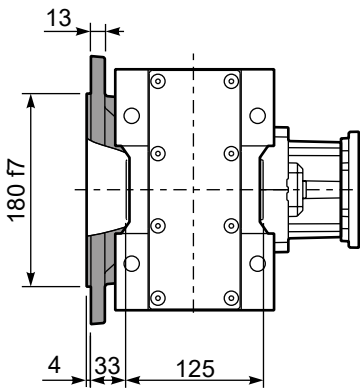
**Standard**  
Hollow shaft



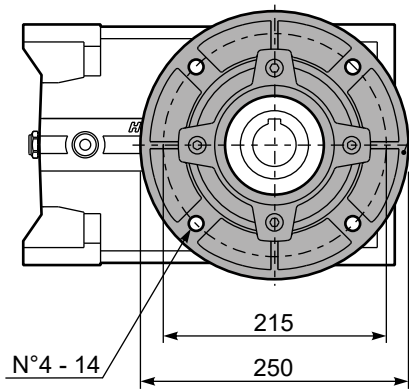
**On request**  
A richiesta



**PH62C...-F** Output flange  
Flangia uscita

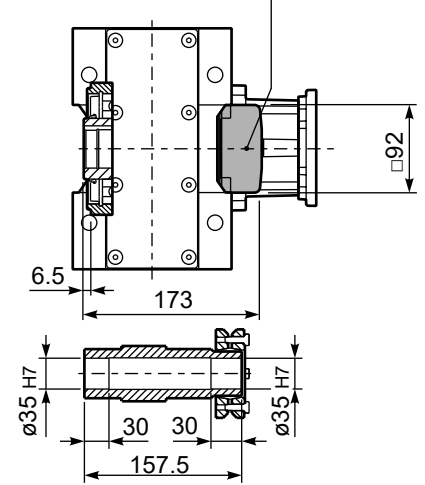


Kit. Cod KF60.9.011

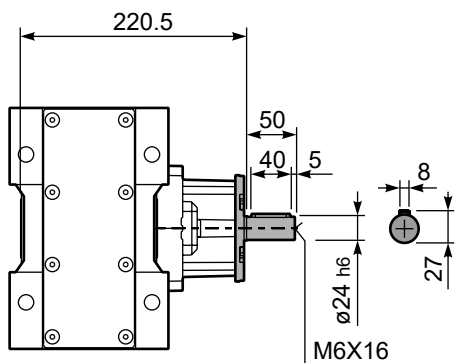


**PH62C D...** Shrink disk  
Calettatore

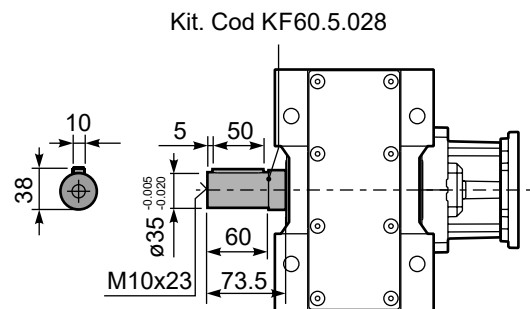
Kit. Cod KF60.0.210LM

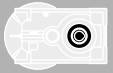


**R**H62C... Input Shaft  
Albero in entrata



**PH62C A...** Single output shaft  
Albero uscita semplice





**QUICK SELECTION / Selezione veloce**

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 22.6  | <b>61.89</b>  | 1.5                             | 594                               | 1.1                    | 1.7                               | 675                                | B                          |    |    |    | C                           | C  |    | 191318           | 01          |
| 19.7  | <b>71.16</b>  | 1.5                             | 683                               | 1.0                    | 1.5                               | 675                                | B                          |    |    |    | C                           | C  |    | 191316           | 02          |
| 17.0  | <b>82.48</b>  | 1.5                             | 792                               | 0.9                    | 1.3                               | 675                                | B                          |    |    |    | C                           | C  |    | 171316           | 03          |
| 14.5  | <b>96.29</b>  | 1.1                             | 675                               | 1.0                    | 1.1                               | 675                                | B                          |    |    |    | C                           | C  |    | 171314           | 04          |
| 13.9  | <b>100.51</b> | 1.1                             | 705                               | 1.0                    | 1.0                               | 675                                | B                          |    |    |    | C                           | C  |    | 131318           | 05          |
| 12.1  | <b>115.56</b> | 0.75                            | 556                               | 1.2                    | 0.91                              | 675                                | B                          |    |    |    | C                           | C  |    | 131316           | 06          |
| 11.1  | <b>125.96</b> | 0.75                            | 606                               | 1.1                    | 0.82                              | 665                                | B                          |    |    |    | C                           | C  |    | 190816           | 07          |
| 10.4  | <b>134.91</b> | 0.75                            | 649                               | 1.0                    | 0.78                              | 675                                | B                          |    |    |    | C                           | C  |    | 131314           | 08          |
| 9.5   | <b>147.05</b> | 0.75                            | 707                               | 1.0                    | 0.72                              | 675                                | B                          |    |    |    | C                           | C  |    | 190814           | 09          |
| 8.2   | <b>170.44</b> | 0.55                            | 605                               | 1.1                    | 0.62                              | 675                                | B                          |    |    |    | C                           | C  |    | 170814           | 10          |
| 7.6   | <b>184.15</b> | 0.55                            | 653                               | 1.0                    | 0.57                              | 675                                | B                          |    |    |    | C                           | C  |    | 101314           | 11          |
| 6.8   | <b>205.87</b> | 0.55                            | 730                               | 0.9                    | 0.51                              | 675                                | B                          |    |    |    | C                           | C  |    | 91316            | 12          |
| 5.8   | <b>240.34</b> | 0.37                            | 570                               | 1.2                    | 0.44                              | 675                                | B                          |    |    |    | C                           | C  |    | 91314            | 13          |
| 5.0   | <b>279.22</b> | 0.37                            | 662                               | 1.0                    | 0.37                              | 665                                | B                          |    |    |    | C                           | C  |    | 100816           | 14          |
| 4.3   | <b>325.97</b> | 0.37                            | 773                               | 0.9                    | 0.32                              | 675                                | B                          |    |    |    | C                           | C  |    | 100814           | 15          |
| 3.8   | <b>364.41</b> | 0.25                            | 583                               | 1.1                    | 0.28                              | 665                                | B                          |    |    |    | C                           | C  |    | 90816            | 16          |
| 3.3   | <b>425.43</b> | 0.25                            | 681                               | 1.0                    | 0.25                              | 675                                | B                          |    |    |    | C                           | C  |    | 90814            | 17          |
| 2.9   | <b>481.19</b> | 0.18                            | 589                               | 1.1                    | 0.22                              | 665                                | B                          |    |    |    | C                           | C  |    | 70816            | 18          |
| 2.5   | <b>561.76</b> | 0.18                            | 687                               | 1.0                    | 0.19                              | 675                                | B                          |    |    |    | C                           | C  |    | 70814            | 19          |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **H63C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **H63C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **H63C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **H63C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **H63C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |         |                    |         |     |     |     |
|-----------------------|---|---------|---------|--------------------|---------|-----|-----|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |     |     |
|                       |   |         |         |                    |         |     |     |     |
| B3                    | B6  | B7      | B8      | V5                 | V6      | V8  | V8  | V8  |
| 2.35 LT               | 3.85 LT   | 3.15 LT | 2.35 LT | 4.55 LT            | 2.50 LT | Ask | Ask | Ask |
| SHELL Omala S4 WE 320 |   |         |         | ENI Telium VSF 320 |         |     |     |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

**RADIAL AND AXIAL LOADS**

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{149.5}{X+119.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 600 | 3000 | 140   | 720 | 3600 | 70    | 940  | 4700 |
| 250   | 640 | 3200 | 120   | 740 | 3700 | 40    | 1220 | 6100 |
| 200   | 690 | 3460 | 85    | 860 | 4300 | 15    | 1300 | 6500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

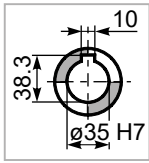
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 240 | 1200 |
| 900   | 280 | 1400 |
| 500   | 340 | 1700 |

**tab. 2**

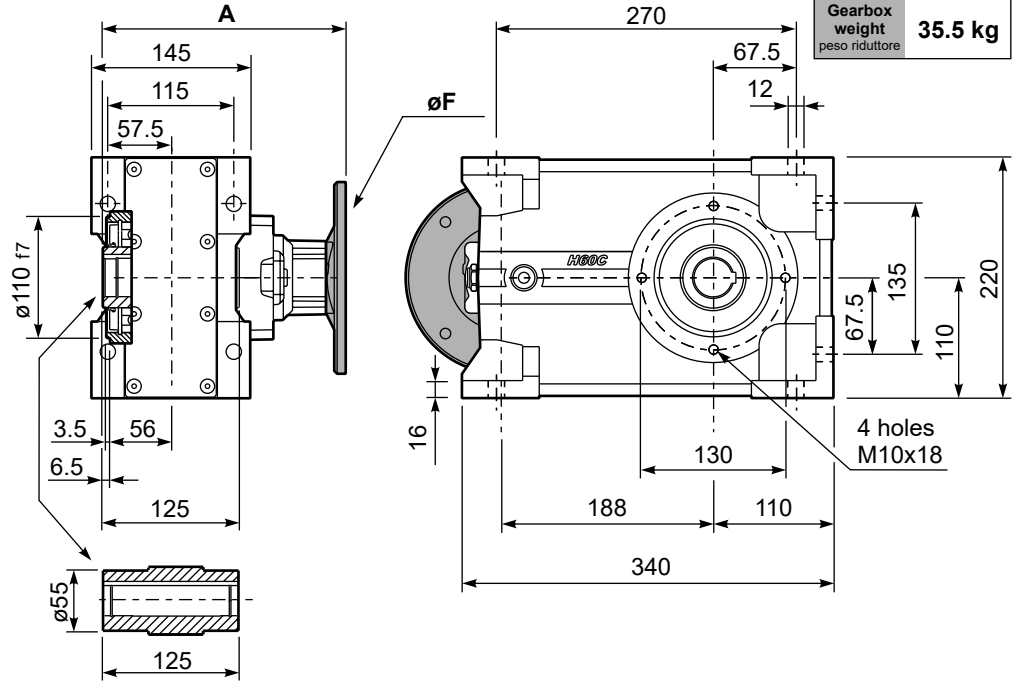
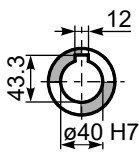
**P**H63C... Basic gearbox  
Riduttore base

| M. flanges     | Kit code   | øF  | A   |
|----------------|------------|-----|-----|
| <b>63B5</b>    | K063.4.041 | 140 | 239 |
| <b>71B5</b>    | K063.4.042 | 160 | 237 |
| <b>80/90B5</b> | K063.4.043 | 200 | 239 |
| <b>71B14</b>   | K063.4.047 | 105 | 237 |
| <b>80B14</b>   | K063.4.046 | 120 | 239 |
| <b>90B14</b>   | K063.4.041 | 140 | 239 |

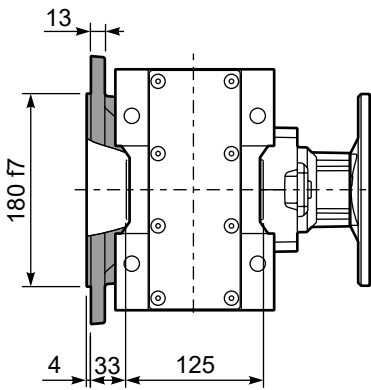
**Standard**  
Hollow shaft



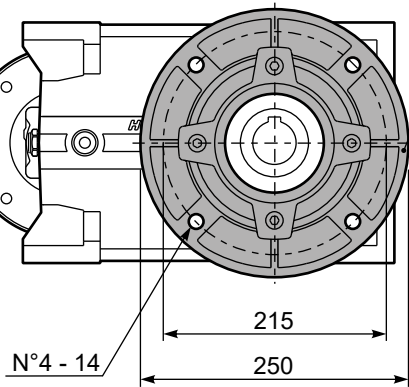
**On request**  
A richiesta



**PH63C...-F** Output flange  
Flangia uscita

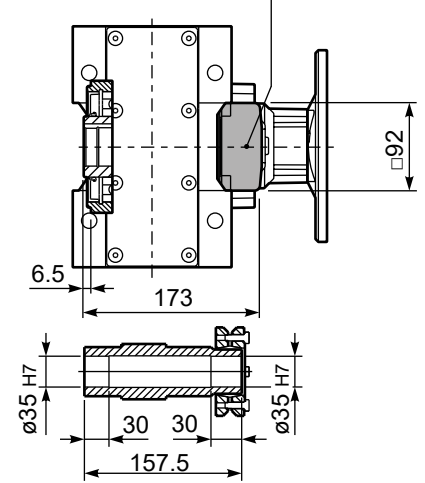


Kit. Cod KF60.9.011

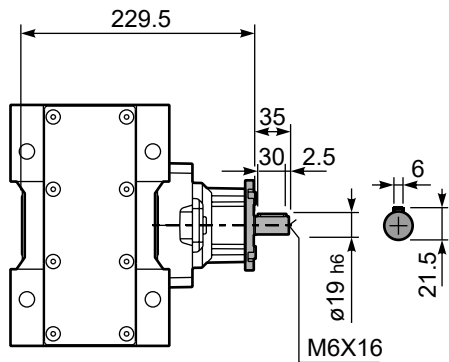


**PH63C D...** Shrink disk  
Calettatore

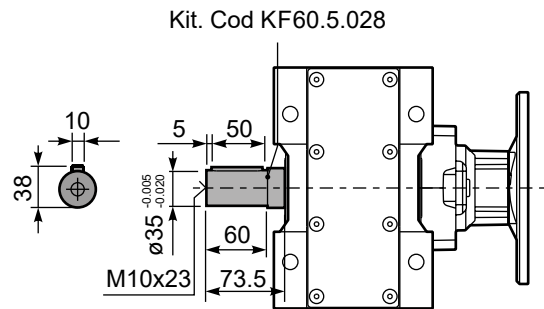
Kit. Cod KF60.0.210LM



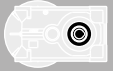
**R**H63C... Input Shaft  
Albero in entrata



**PH63C A...** Single output shaft  
Albero uscita semplice



Kit. Cod KF60.5.028



## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |  |  |  | B14 motor flanges    |  |            |  | Output Shaft |                 |    |  |       |            |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|--|--|--|----------------------|--|------------|--|--------------|-----------------|----|--|-------|------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -G                         |  |  |  |                      |  |            |  | Ratios code  |                 |    |  |       |            |    |
| 227   | <b>6.17</b>  | 9                               | 371                               | 1.2                    | <b>10.9</b>                       | <b>450</b>                         |                            |  |  |  | <b>not available</b> |  |            |  | 18111        | <b>standard</b> | 01 |  |       |            |    |
| 198   | <b>7.06</b>  | 9                               | 425                               | 1.4                    | <b>12.7</b>                       | <b>600</b>                         |                            |  |  |  |                      |  |            |  |              |                 |    |  | 16113 | <b>ø40</b> | 02 |
| 170   | <b>8.21</b>  | 9                               | 494                               | 1.4                    | <b>12.2</b>                       | <b>670</b>                         |                            |  |  |  |                      |  |            |  |              |                 |    |  | 14115 | <b>ø45</b> | 03 |
|   |              |                                 |                                   |                        |                                   |                                    |                            |  |  |  |                      |  | On request |  |              |                 |    |  |       |            |    |

The dynamic efficiency is **0.98** for all ratios

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **H71C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity.  
In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H71C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H71C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H71C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **H71C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
| 3.20 LT               | 4.65 LT | 4.00 LT | 3.20 LT | 6.00 LT         | 3.10 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$

| $n_2$      | $F_A$ | $F_R$ | $n_2$      | $F_A$ | $F_R$ | $n_2$     | $F_A$ | $F_R$ |
|------------|-------|-------|------------|-------|-------|-----------|-------|-------|
| <b>300</b> | 740   | 3700  | <b>140</b> | 860   | 4300  | <b>70</b> | 1020  | 5100  |
| <b>250</b> | 800   | 4000  | <b>120</b> | 900   | 4500  | <b>40</b> | 1300  | 6500  |
| <b>200</b> | 830   | 4150  | <b>85</b>  | 970   | 4850  | <b>15</b> | 1700  | 8500  |

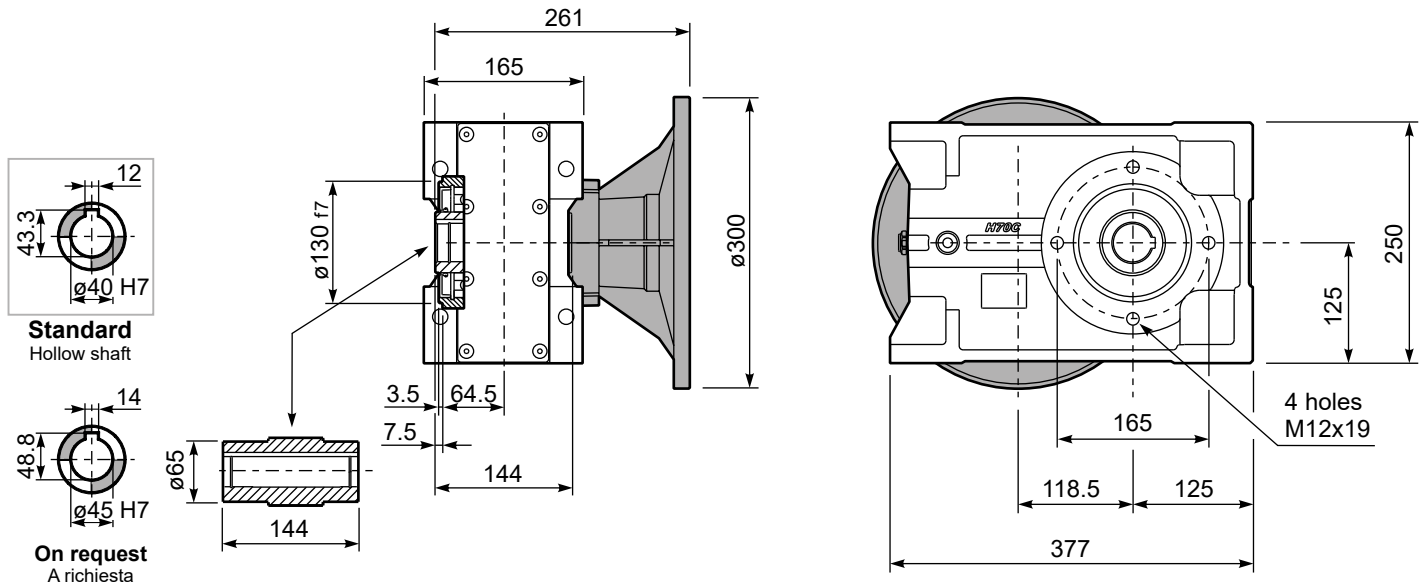
**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**tab. 2**

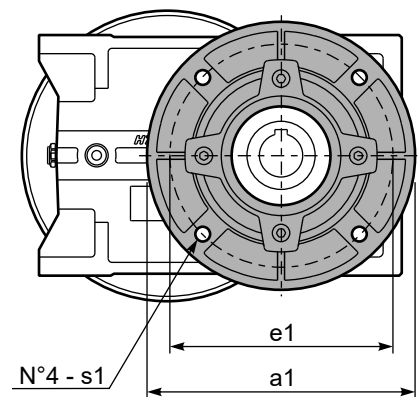
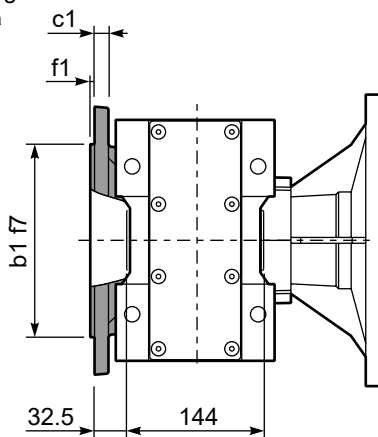


**PH71C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **51.0 kg**



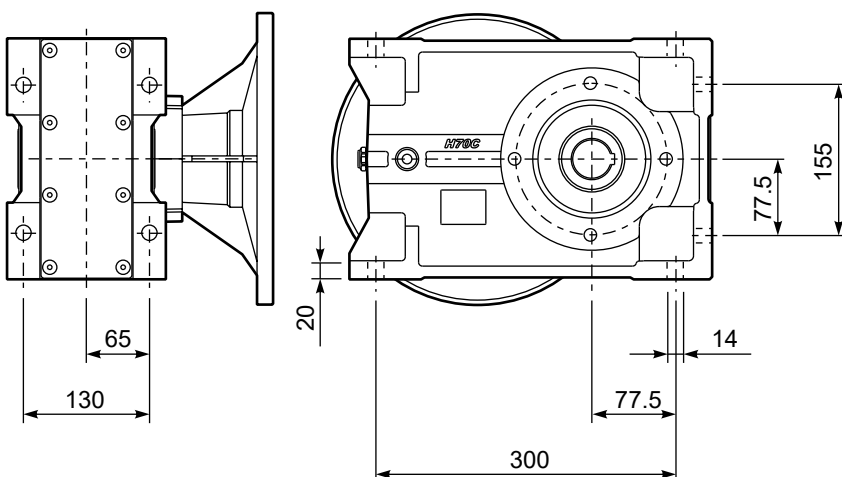
**PH71C...-F** Output flange  
Flangia uscita



**Available output flanges**  
Flange di uscita

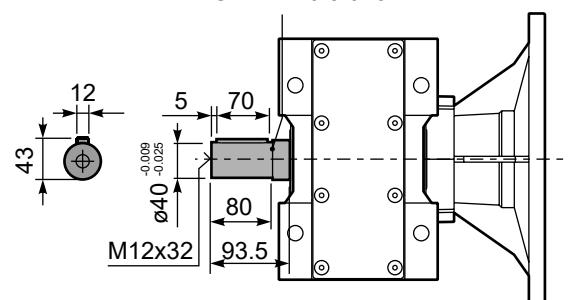
| a1 ø | b1  | c1 | e1  | f1 | s1 | Kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300  | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

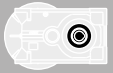
**PH71C...-N** Feet  
Piedini



**PH71C A...** Single output shaft  
Albero uscita semplice

Kit. Cod KF70.5.028





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |    |
|   |              |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 175   | <b>8.02</b>  | 9                               | 473                               | 1.1                    | <b>9.9</b>                        | <b>520</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 3018        | 01 |
| 152   | <b>9.18</b>  | 9                               | 541                               | 1.1                    | <b>9.8</b>                        | <b>590</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 3016        | 02 |
| 131   | <b>10.68</b> | 9                               | 630                               | 1.1                    | <b>9.7</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 3014        | 03 |
| 93  | <b>15.11</b> | 7.5                             | 717                               | 1.1                    | <b>7.8</b>                        | <b>775</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 2018        | 04 |
| 81  | <b>17.30</b> | 7.5                             | 821                               | 1.1                    | <b>7.8</b>                        | <b>885</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 2016        | 05 |
| 70  | <b>20.13</b> | 7.5                             | 955                               | 0.9                    | <b>6.8</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 2014        | 06 |
| 60  | <b>23.39</b> | 5.5                             | 820                               | 1.1                    | <b>5.9</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1616        | 07 |
| 51  | <b>27.21</b> | 5.5                             | 954                               | 0.9                    | <b>5.1</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1614        | 08 |
| 46.0  | <b>30.42</b> | 4                               | 780                               | 1.2                    | <b>4.5</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1316        | 09 |
| 39.6  | <b>35.38</b> | 4                               | 907                               | 1.0                    | <b>3.9</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1314        | 10 |
| 37.6  | <b>37.24</b> | 3                               | 719                               | 1.2                    | <b>3.7</b>                        | <b>895</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1116        | 11 |
| 32.3  | <b>43.31</b> | 3                               | 836                               | 1.1                    | <b>3.2</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 1114        | 12 |
| 29.8  | <b>47.02</b> | 2.2                             | 668                               | 1.1                    | <b>2.3</b>                        | <b>705</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 818         | 13 |
| 26.0  | <b>53.85</b> | 2.2                             | 765                               | 1.1                    | <b>2.3</b>                        | <b>810</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 816         | 14 |
| 22.4  | <b>62.63</b> | 2.2                             | 890                               | 1.0                    | <b>2.2</b>                        | <b>900</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 814         | 15 |
| 18.9  | <b>74.16</b> | 1.1                             | 531                               | 1.1                    | <b>1.2</b>                        | <b>585</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 616         | 16 |
| 16.2  | <b>86.25</b> | 1.1                             | 617                               | 1.1                    | <b>1.2</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 614         | 17 |

The dynamic efficiency is **0.96** for all ratios

- Motor Flanges Available  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **H72C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H72C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H72C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H72C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **H72C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8              | V5      | V6      | V8  |
|-----------------------|---------|---------|-----------------|---------|---------|-----|
| 3.20 LT               | 4.65 LT | 4.00 LT | 3.20 LT         | 6.20 LT | 3.10 LT | Ask |
| SHELL Omala S2 GX 460 |         |         | ENI Blasias 460 |         |         |     |

For all details on lubrication and plugs check our website  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web **tab. 1**

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{174.5}{X+134.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 740 | 3700 | 140   | 860 | 4300 | 70    | 1020 | 5100 |
| 250   | 800 | 4000 | 120   | 900 | 4500 | 40    | 1300 | 6500 |
| 200   | 830 | 4150 | 85    | 970 | 4850 | 15    | 1700 | 8500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

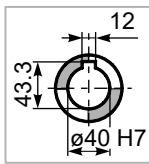
**tab. 2**

**PH72C...**

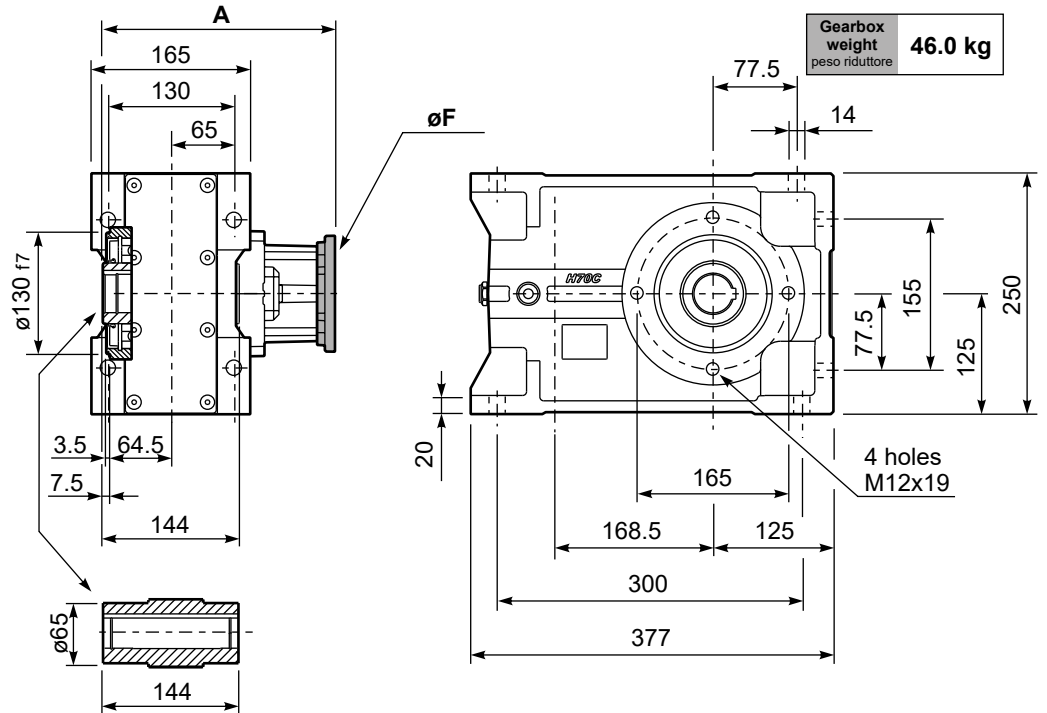
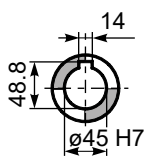
Basic gearbox  
Riduttore base

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 71B5       | K023.4.041 | 160 | 238.5 |
| 80/90B5    | K023.4.042 | 200 | 240.5 |
| 100/112B5  | K023.4.043 | 250 | 249.5 |
| 132B5      | KC51.4.043 | 300 | 270.5 |
| 80B14      | K085.4.046 | 120 | 240.5 |
| 90B14      | K085.4.045 | 140 | 240.5 |
| 100/112B14 | K085.4.047 | 160 | 249.5 |
| 132B14     | KC51.4.041 | 200 | 270.5 |

**Standard**  
Hollow shaft

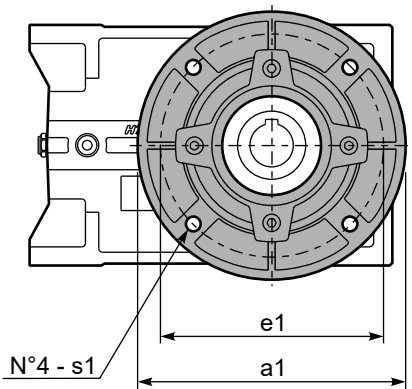
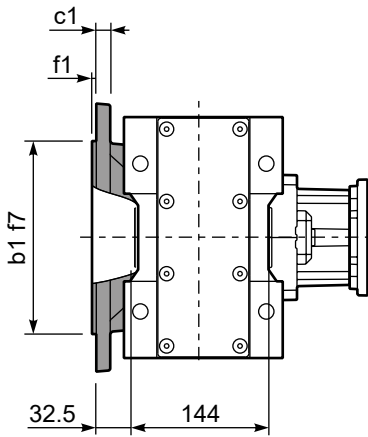


**On request**  
A richiesta



**PH72C...-F**

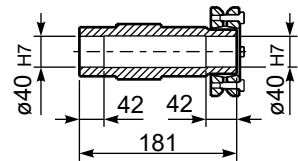
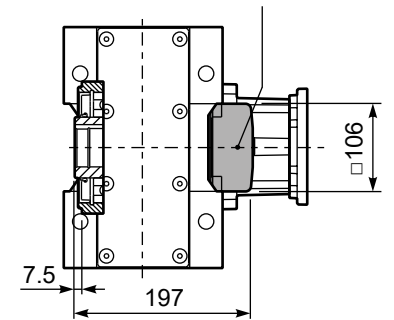
Output flange  
Flangia uscita



**PH72C D...**

Shrink disk  
Calettatore

Kit. Cod KF70.0.210LM



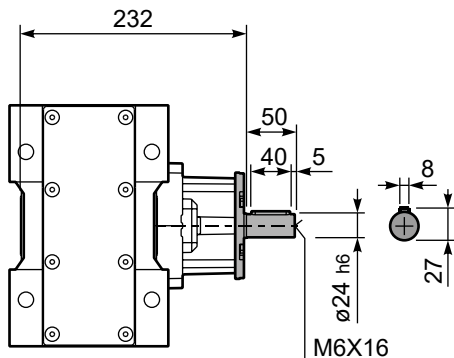
**Available output flanges**

Flange di uscita

| a1 ø | b1  | c1 | e1  | f1 | s1 | Kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300  | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

**RH72C...**

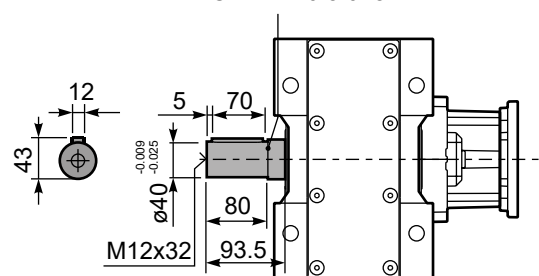
Input Shaft  
Albero in entrata

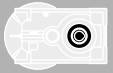


**PH72C A...**

Single output shaft  
Albero uscita semplice

Kit. Cod KF70.5.028





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 18.5  | <b>75.50</b>  | 1.5                             | 725                               | 1.1                    | 1.7                               | 825                                | B                          |    |    |    | C                           | C  |    | 191318           | 01          |
| 16.2  | <b>86.47</b>  | 1.5                             | 830                               | 1.1                    | 1.6                               | 900                                | B                          |    |    |    | C                           | C  |    | 191316           | 02          |
| 14.0  | <b>100.22</b> | 1.5                             | 962                               | 0.9                    | 1.4                               | 900                                | B                          |    |    |    | C                           | C  |    | 171316           | 03          |
| 12.0  | <b>116.56</b> | 1.1                             | 817                               | 1.1                    | 1.2                               | 900                                | B                          |    |    |    | C                           | C  |    | 171314           | 04          |
| 10.2  | <b>136.82</b> | 1.1                             | 959                               | 0.9                    | 1.0                               | 900                                | B                          |    |    |    | C                           | C  |    | 151314           | 05          |
| 9.1   | <b>153.05</b> | 0.75                            | 736                               | 1.1                    | 0.83                              | 810                                | B                          |    |    |    | C                           | C  |    | 190816           | 06          |
| 8.6   | <b>163.31</b> | 0.75                            | 785                               | 1.1                    | 0.86                              | 900                                | B                          |    |    |    | C                           | C  |    | 131314           | 07          |
| 7.9   | <b>178.01</b> | 0.75                            | 856                               | 1.1                    | 0.79                              | 900                                | B                          |    |    |    | C                           | C  |    | 190814           | 08          |
| 7.3   | <b>191.67</b> | 0.75                            | 922                               | 1.0                    | 0.73                              | 900                                | B                          |    |    |    | C                           | C  |    | 101316           | 09          |
| 6.8   | <b>206.32</b> | 0.75                            | 992                               | 0.9                    | 0.68                              | 900                                | B                          |    |    |    | C                           | C  |    | 170814           | 10          |
| 6.3   | <b>222.92</b> | 0.55                            | 791                               | 1.1                    | 0.63                              | 900                                | B                          |    |    |    | C                           | C  |    | 101314           | 11          |
| 5.8   | <b>242.18</b> | 0.55                            | 859                               | 1.0                    | 0.58                              | 900                                | B                          |    |    |    | C                           | C  |    | 150814           | 12          |
| 5.6   | <b>250.15</b> | 0.55                            | 888                               | 1.0                    | 0.56                              | 900                                | B                          |    |    |    | C                           | C  |    | 91316            | 13          |
| 4.8   | <b>289.08</b> | 0.55                            | 1026                              | 0.9                    | 0.49                              | 900                                | B                          |    |    |    | C                           | C  |    | 130814           | 14          |
| 4.2   | <b>330.31</b> | 0.37                            | 783                               | 1.1                    | 0.42                              | 890                                | B                          |    |    |    | C                           | C  |    | 71316            | 15          |
| 3.5   | <b>394.59</b> | 0.37                            | 936                               | 1.0                    | 0.36                              | 900                                | B                          |    |    |    | C                           | C  |    | 100814           | 16          |
| 2.7   | <b>514.99</b> | 0.25                            | 824                               | 1.1                    | 0.27                              | 900                                | B                          |    |    |    | C                           | C  |    | 90814            | 17          |
| 2.1   | <b>680.03</b> | 0.18                            | 832                               | 1.1                    | 0.21                              | 900                                | B                          |    |    |    | C                           | C  |    | 70814            | 18          |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **H73C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H73C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H73C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H73C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **H73C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| 3.30 LT               | 5.70 LT | 4.15 LT | 3.30 LT | 6.40 LT         | 3.25 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA  | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|-----|------|-------|------|------|
| 300   | 740 | 3700 | 140   | 860 | 4300 | 70    | 1020 | 5100 |
| 250   | 800 | 4000 | 120   | 900 | 4500 | 40    | 1300 | 6500 |
| 200   | 830 | 4150 | 85    | 970 | 4850 | 15    | 1700 | 8500 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

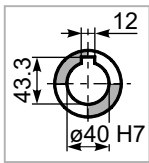
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

**tab. 2**

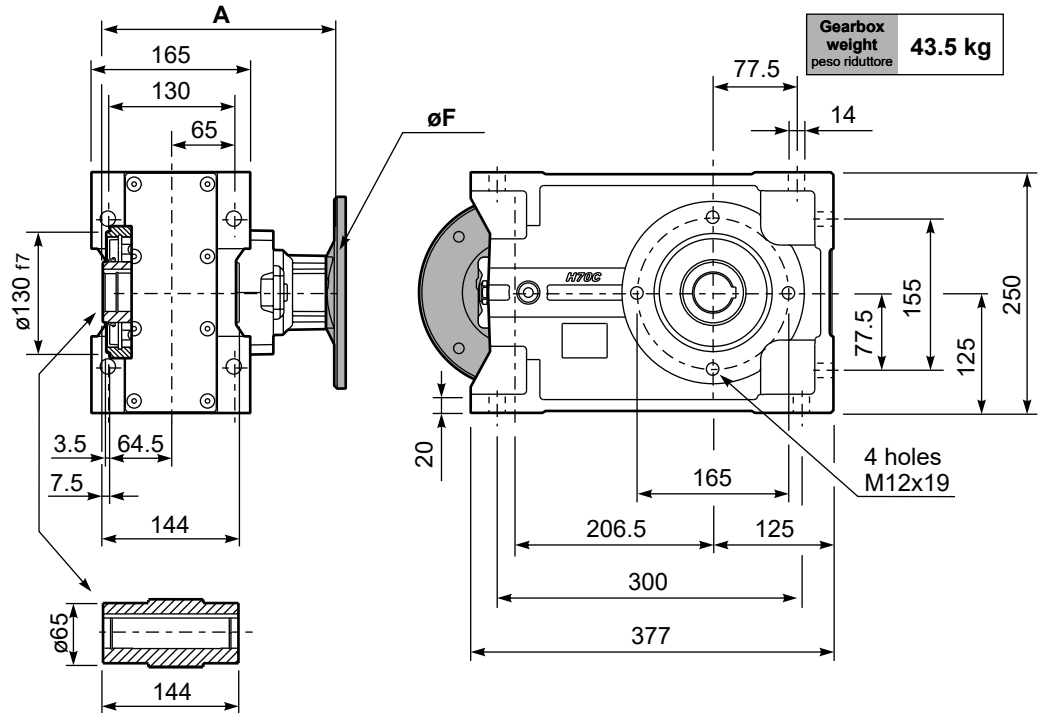
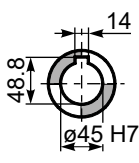
**PH73C...** Basic gearbox  
Riduttore base

| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 250.5 |
| 71B5       | K063.4.042 | 160 | 248.5 |
| 80/90B5    | K063.4.043 | 200 | 250.5 |
| 71B14      | K063.4.047 | 105 | 248.5 |
| 80B14      | K063.4.046 | 120 | 250.5 |
| 90B14      | K063.4.041 | 140 | 250.5 |

**Standard**  
Hollow shaft



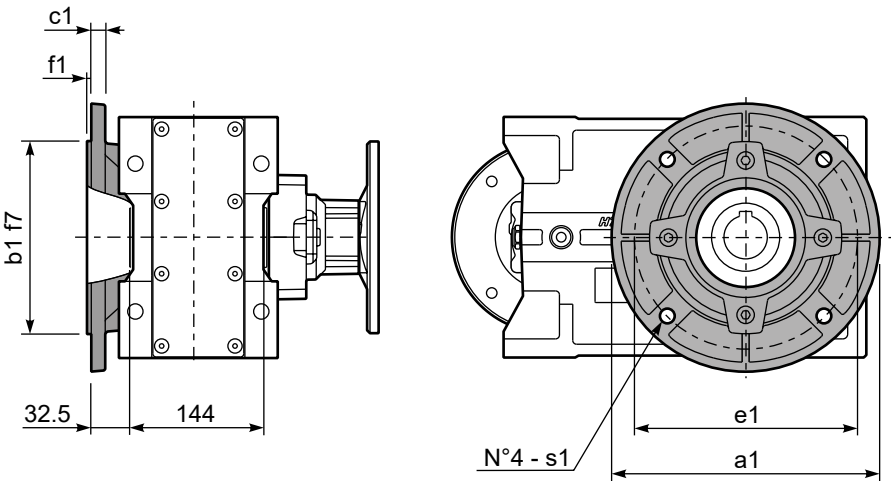
**On request**  
A richiesta



Gearbox weight  
peso riduttore **43.5 kg**

4 holes  
M12x19

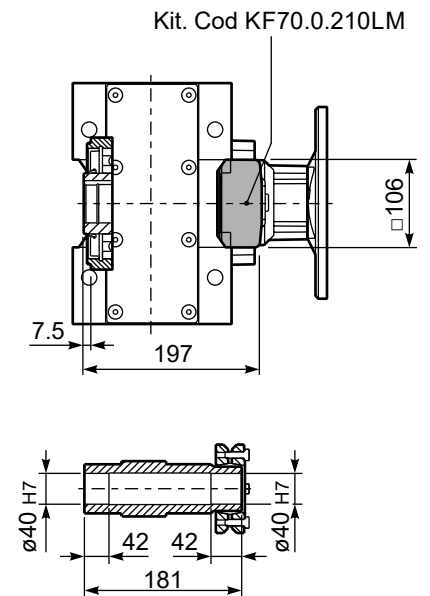
**PH73C...-F** Output flange  
Flangia uscita



**Available output flanges**  
Flange di uscita

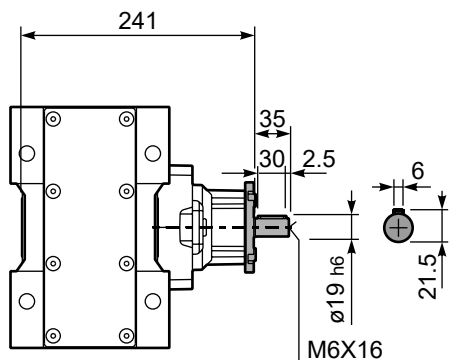
| a1 ø | b1  | c1 | e1  | f1 | s1 | Kit code   |
|------|-----|----|-----|----|----|------------|
| 250  | 180 | 13 | 215 | 3  | 14 | KF70.9.011 |
| 300  | 230 | 16 | 265 | 4  | 14 | KF70.9.012 |

**PH73C D...** Shrink disk  
Calettatore

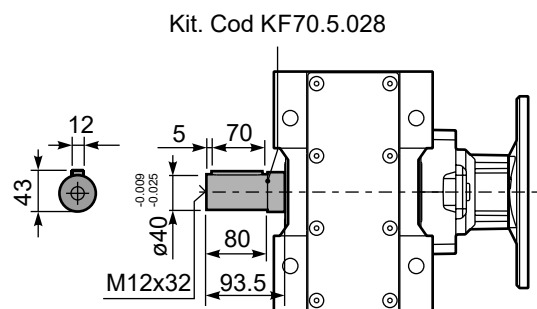


Kit. Cod KF70.0.210LM

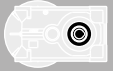
**RH73C...** Input Shaft  
Albero in entrata



**PH73C A...** Single output shaft  
Albero uscita semplice



Kit. Cod KF70.5.028



## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    | B14 motor flanges    |   |   |   | Output Shaft |                 |    |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----------------------|---|---|---|--------------|-----------------|----|
|   |              |                                 |                                   |                        |                                   |                                    | -H                         | -I | -                    | - | - | - | -            | -               | Ø  |
| 528   | <b>2.65</b>  | 22                              | 374                               | 1.7                    | <b>36.7</b>                       | <b>650</b>                         |                            |    | <b>not available</b> |   |   |   | 2361         | <b>standard</b> | 01 |
| 409   | <b>3.42</b>  | 22                              | 483                               | 1.6                    | <b>32.8</b>                       | <b>750</b>                         |                            |    |                      |   |   |   | 1965         | <b>Ø50</b>      | 02 |
| 304   | <b>4.60</b>  | 22                              | 649                               | 1.5                    | <b>30.9</b>                       | <b>950</b>                         |                            |    |                      |   |   |   | 1569         |                 | 03 |
| 256   | <b>5.46</b>  | 22                              | 771                               | 1.3                    | <b>27.4</b>                       | <b>1000</b>                        |                            |    |                      |   |   |   | 1371         | Ø55             | 04 |
| 211   | <b>6.64</b>  | 22                              | 937                               | 1.3                    | <b>26.5</b>                       | <b>1175</b>                        |                            |    |                      |   |   |   | 1173         | On request      | 05 |

The dynamic efficiency is **0.98** for all ratios

**A) Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **H81C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H81C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H81C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H81C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **H81C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
| 5.70 LT               | 7.00 LT | 7.90 LT | 5.70 LT | 10.20 LT        | 5.60 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

Output shaft  
Albero di uscita

$F_{eq} = FR \cdot \frac{227.5}{X+177.5}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 920  | 4600 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 1000 | 5000 | 120   | 1140 | 5700 | 40    | 1800 | 9000  |
| 200   | 1060 | 5300 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

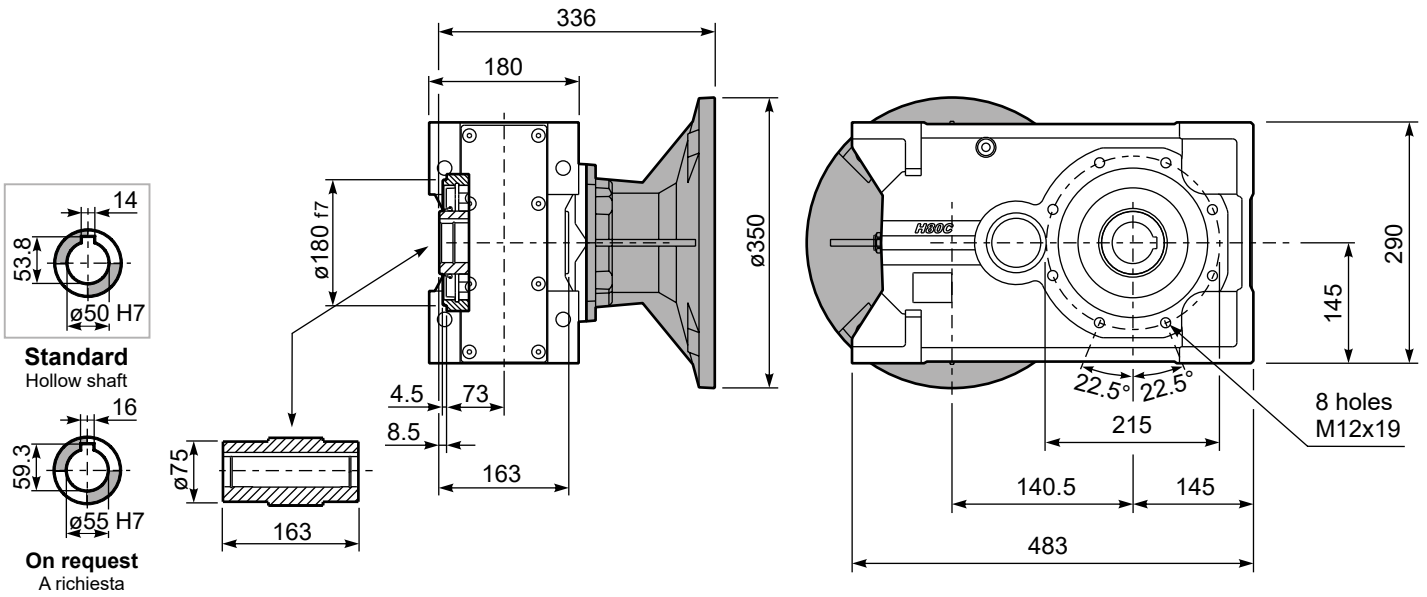
**tab. 2**



**P**H81C...

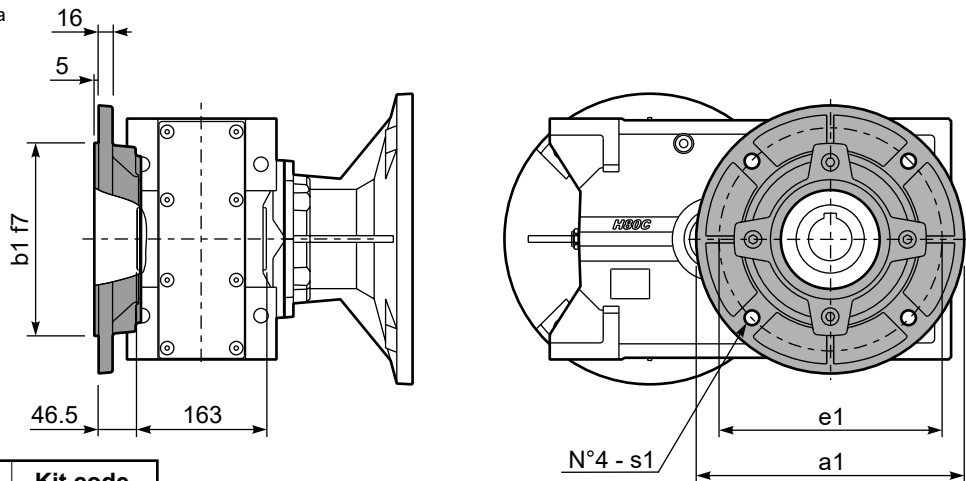
Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **89.0 kg**



**PH81C...-F**

Output flange  
Flangia uscita

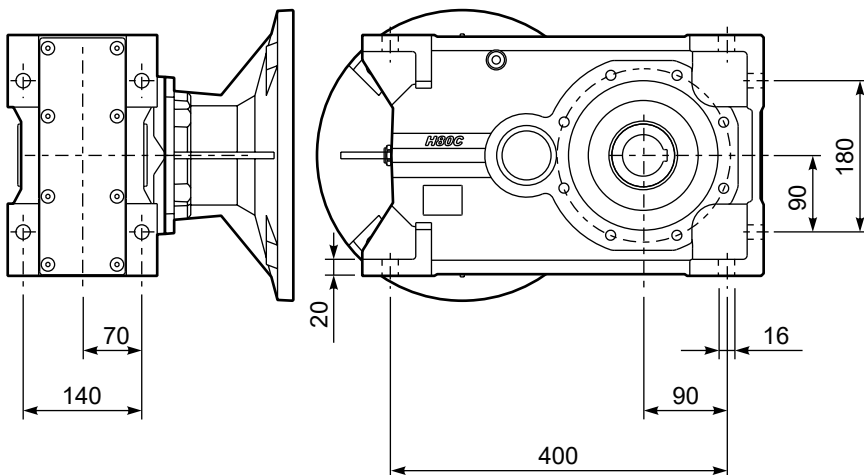


Available output flanges  
Flange di uscita

| a1 ø | b1  | e1  | s1 | Kit code   |
|------|-----|-----|----|------------|
| 300  | 230 | 265 | 14 | KF80.9.011 |
| 350  | 250 | 300 | 18 | KF80.9.012 |

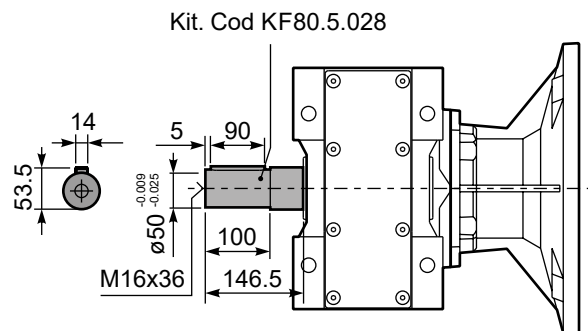
**PH81C...-N**

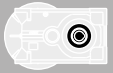
Feet  
Piedini



**PH81C A...**

Single output shaft  
Albero uscita semplice





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |      | Output Shaft<br> | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|----------------------|------|------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -F                  | -G  | -H  | -I  | -U                   | -V   |                  |             |
|   |              |                                 |                                   |                        |                                   |                                    | 100<br>112          | 132 | 160 | 180 | 100<br>112           | 132  |                  |             |
| 234   | <b>5.98</b>  | 22                              | 827                               | 1.2                    | <b>25.5</b>                       | <b>1000</b>                        |                     |     |     |     |                      | 3015 | 01               |             |
| 197   | <b>7.10</b>  | 22                              | 982                               | 1.2                    | <b>25.3</b>                       | <b>1175</b>                        |                     |     |     |     |                      | 3013 | 02               |             |
| 162   | <b>8.63</b>  | 22                              | 1193                              | 1.1                    | <b>23.9</b>                       | <b>1350</b>                        |                     |     |     |     |                      | 3011 | 03               |             |
| 124   | <b>11.27</b> | 18.5                            | 1310                              | 1.1                    | <b>20.3</b>                       | <b>1500</b>                        |                     |     |     |     |                      | 2015 | 04               |             |
| 105   | <b>13.38</b> | 18.5                            | 1555                              | 1.1                    | <b>19.4</b>                       | <b>1700</b>                        |                     |     |     |     |                      | 2013 | 05               |             |
| 92  | <b>15.24</b> | 18.5                            | 1771                              | 1.1                    | <b>19.0</b>                       | <b>1900</b>                        |                     |     |     |     |                      | 1615 | 06               |             |
| 86  | <b>16.26</b> | 18.5                            | 1889                              | 1.1                    | <b>19.7</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 2011 | 07               |             |
| 77  | <b>18.09</b> | 18.5                            | 2102                              | 1.0                    | <b>17.7</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1613 | 08               |             |
| 71  | <b>19.82</b> | 15                              | 1865                              | 1.1                    | <b>15.9</b>                       | <b>2060</b>                        |                     |     |     |     |                      | 1315 | 09               |             |
| 64  | <b>21.98</b> | 15                              | 2069                              | 1.0                    | <b>14.6</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1611 | 10               |             |
| 60  | <b>23.53</b> | 15                              | 2214                              | 0.9                    | <b>13.6</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1313 | 11               |             |
| 58  | <b>24.25</b> | 11                              | 1677                              | 1.2                    | <b>12.2</b>                       | <b>1940</b>                        |                     |     |     |     |                      | 1115 | 12               |             |
| 48.6  | <b>28.80</b> | 11                              | 1991                              | 1.1                    | <b>11.1</b>                       | <b>2100</b>                        |                     |     |     |     |                      | 1113 | 13               |             |
| 40.0  | <b>34.99</b> | 9                               | 2063                              | 1.0                    | <b>9.2</b>                        | <b>2100</b>                        |                     |     |     |     |                      | 1111 | 14               |             |
| 33.6  | <b>41.64</b> | 7.5                             | 1976                              | 1.0                    | <b>7.2</b>                        | <b>1960</b>                        |                     |     |     |     |                      | 813  | 15               |             |
| 27.7  | <b>50.60</b> | 5.5                             | 1774                              | 1.2                    | <b>6.3</b>                        | <b>2100</b>                        |                     |     |     |     |                      | 811  | 16               |             |

The dynamic efficiency is **0.96** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **H82C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H82C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H82C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H82C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **H82C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|         |         |         |         |          |         |     |
|---------|---------|---------|---------|----------|---------|-----|
|         |         |         |         |          |         |     |
| B3      | B6      | B7      | B8      | V5       | V6      | V8  |
| 5.60 LT | 6.80 LT | 7.80 LT | 5.60 LT | 10.00 LT | 5.50 LT | Ask |

**SHELL** Omala S2 GX 460      **ENI** Blasias 460  
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 920  | 4600 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 1000 | 5000 | 120   | 1140 | 5700 | 40    | 1800 | 9000  |
| 200   | 1060 | 5300 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

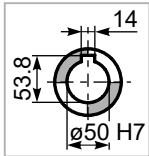
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

tab. 2

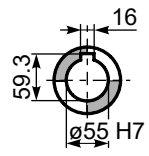
**PH82C...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **86.0 kg**

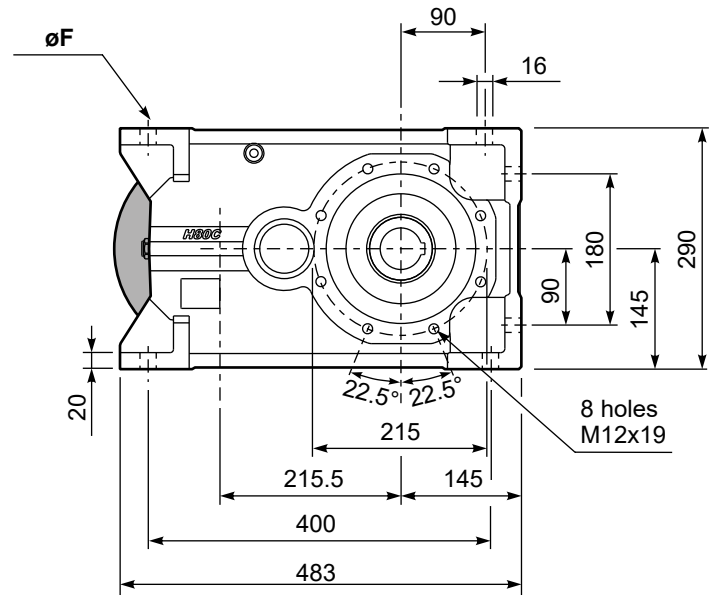
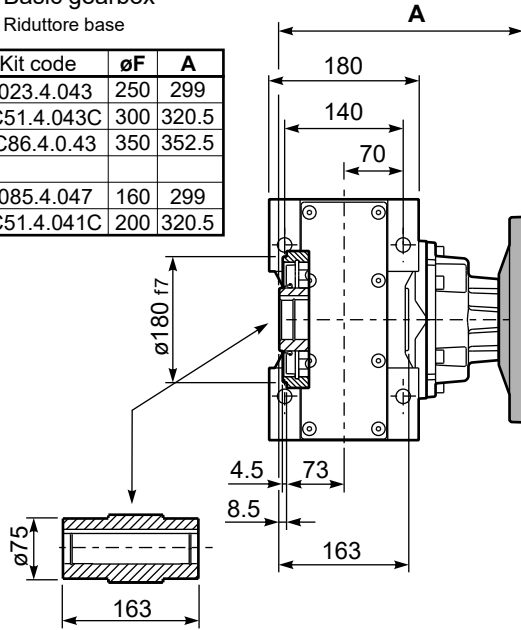
| M. flanges | Kit code    | øF  | A     |
|------------|-------------|-----|-------|
| 100/112B5  | K023.4.043  | 250 | 299   |
| 132B5      | KC51.4.043C | 300 | 320.5 |
| 160/180B5  | KC86.4.0.43 | 350 | 352.5 |
| 100/112B14 | K085.4.047  | 160 | 299   |
| 132B14     | KC51.4.041C | 200 | 320.5 |



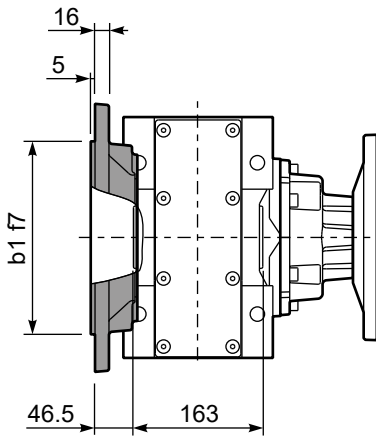
**Standard**  
Hollow shaft



**On request**  
A richiesta

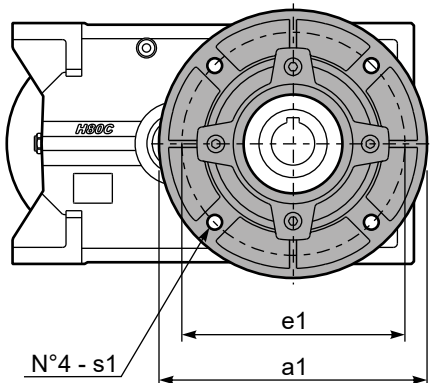


**PH82C...-F** Output flange  
Flangia uscita



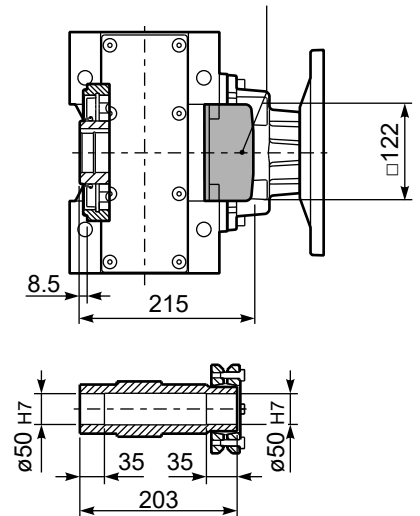
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | e1  | s1 | Kit code   |
|------|-----|-----|----|------------|
| 300  | 230 | 265 | 14 | KF80.9.011 |
| 350  | 250 | 300 | 18 | KF80.9.012 |

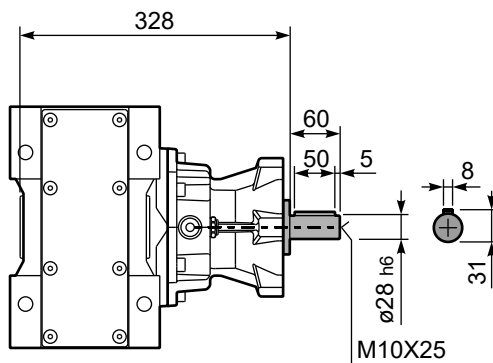


**PH82C D...** Shrink disk  
Calettatore

Kit. Cod KF80.0.210LM

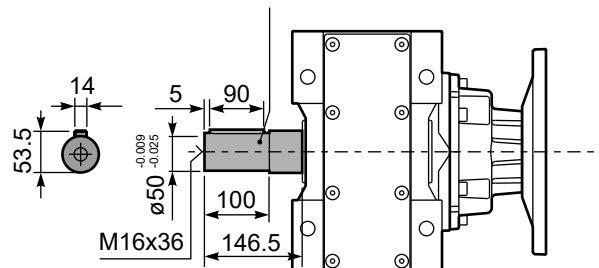


**RH82C...** Input Shaft  
Albero in entrata



**PH82C A...** Single output shaft  
Albero uscita semplice

Kit. Cod KF80.5.028





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |
| 28.8  | <b>48.55</b>  | 7.5                             | 2257                              | 0.9                    | 6.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201315           | 01          |
| 24.3  | <b>57.64</b>  | 5.5                             | 1980                              | 1.1                    | 5.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201313           | 02          |
| 21.3  | <b>65.64</b>  | 5.5                             | 2255                              | 0.9                    | 5.0                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161315           | 03          |
| 20.0  | <b>70.04</b>  | 4                               | 1760                              | 1.2                    | 4.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 201311           | 04          |
| 18.0  | <b>77.93</b>  | 4                               | 1958                              | 1.1                    | 4.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161313           | 05          |
| 16.4  | <b>85.36</b>  | 4                               | 2145                              | 1.0                    | 3.8                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131315           | 06          |
| 14.8  | <b>94.70</b>  | 4                               | 2380                              | 0.9                    | 3.5                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 161311           | 07          |
| 13.8  | <b>101.35</b> | 3                               | 1917                              | 1.1                    | 3.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131313           | 08          |
| 11.4  | <b>123.15</b> | 3                               | 2330                              | 0.9                    | 2.7                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 131311           | 09          |
| 9.3   | <b>150.73</b> | 2.2                             | 2100                              | 1.0                    | 2.2                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 111311           | 10          |
| 7.8   | <b>179.39</b> | 1.5                             | 1722                              | 1.2                    | 1.8                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 81313            | 11          |
| 6.4   | <b>217.98</b> | 1.5                             | 2093                              | 1.0                    | 1.5                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 81311            | 12          |
| 5.7   | <b>247.03</b> | 1.1                             | 1732                              | 1.1                    | 1.2                               | 1950                               | B                          |    |    |            |     |                             |    |            |     | 61313            | 13          |
| 4.7   | <b>300.17</b> | 1.1                             | 2105                              | 1.0                    | 1.1                               | 2100                               | B                          |    |    |            |     |                             |    |            |     | 61311            | 14          |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **H83C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **H83C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **H83C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablaßschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **H83C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **H83C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
| 5.80 LT               | 7.10 LT | 8.20 LT | 5.80 LT | 10.80 LT        | 6.00 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$

| $n_2$ | $F_A$ | $F_R$ | $n_2$ | $F_A$ | $F_R$ | $n_2$ | $F_A$ | $F_R$ |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 300   | 920   | 4600  | 140   | 1120  | 5600  | 70    | 1400  | 7000  |
| 250   | 1000  | 5000  | 120   | 1140  | 5700  | 40    | 1800  | 9000  |
| 200   | 1060  | 5300  | 85    | 1300  | 6500  | 15    | 2400  | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

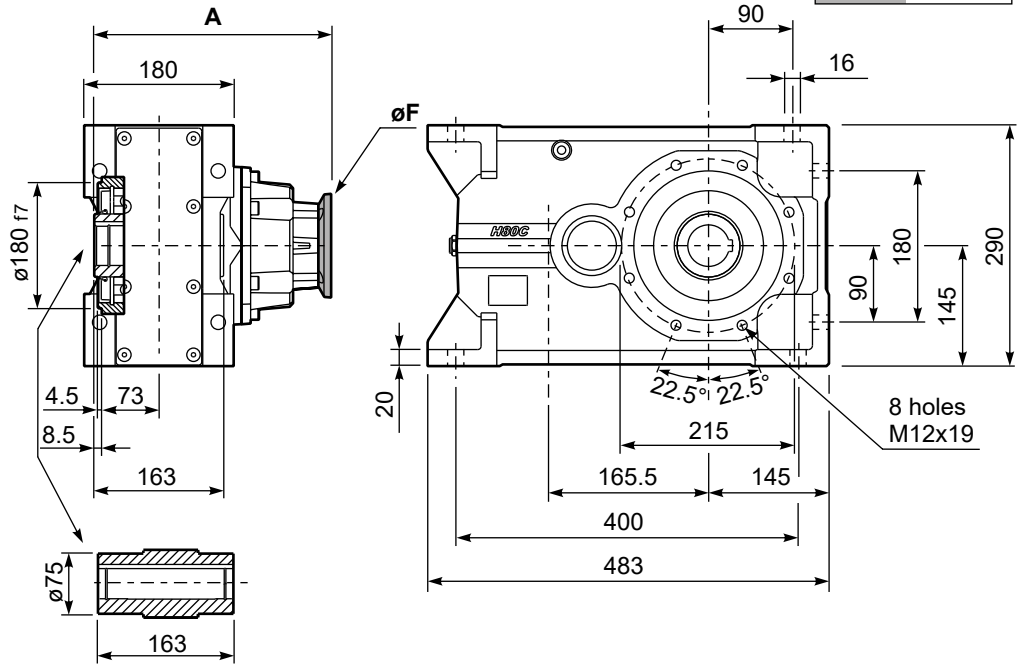
| $n_1$ | $F_A$ | $F_R$ |
|-------|-------|-------|
| 1400  | 450   | 2250  |
| 900   | 500   | 2500  |
| 500   | 600   | 3000  |

tab. 2

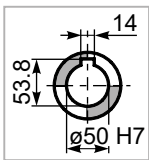
**P**H83C... Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **81.0 kg**

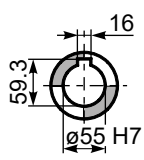
| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 292.5 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 294.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 303.5 |
| <b>132B5</b>      | KC51.4.043 | 300 | 324.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 294.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 294.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 303.5 |
| <b>132B14</b>     | KC51.4.041 | 200 | 324.5 |



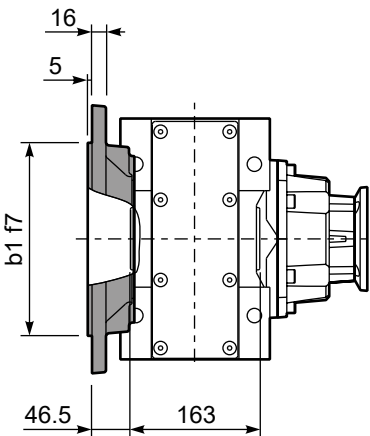
**Standard**  
Hollow shaft



**On request**  
A richiesta

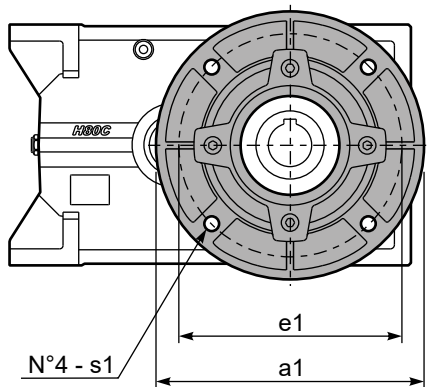


**PH83C...-F** Output flange  
Flangia uscita



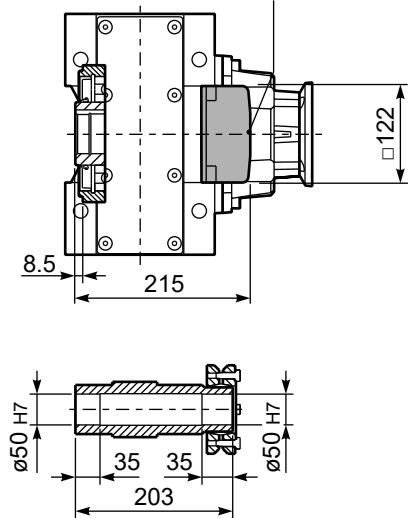
**Available output flanges**  
Flange di uscita

| a1 ø | b1  | e1  | s1 | Kit code   |
|------|-----|-----|----|------------|
| 300  | 230 | 265 | 14 | KF80.9.011 |
| 350  | 250 | 300 | 18 | KF80.9.012 |

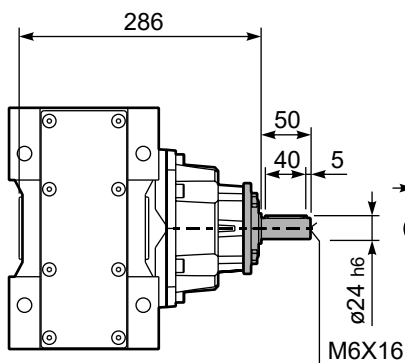


**PH83C D...** Shrink disk  
Calettatore

Kit. Cod KF80.0.210LM

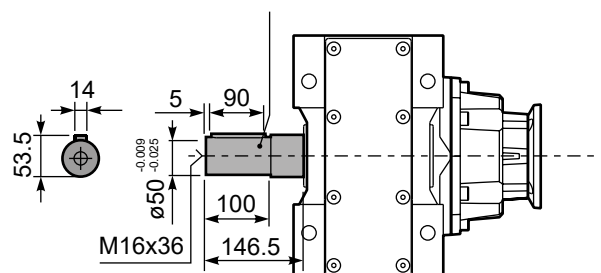


**R**H83C... Input Shaft  
Albero in entrata



**PH83C A...** Single output shaft  
Albero uscita semplice

Kit. Cod KF80.5.028





# Aluminum and cast iron helical bevel gearboxes

**A modular and compact product**  
**Very energy efficient drive**

## Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

## Gears

Hardened and ground gears

## Alloy housing

Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint.

## Oil seals

Two oil seals on request

## Single-piece aluminum

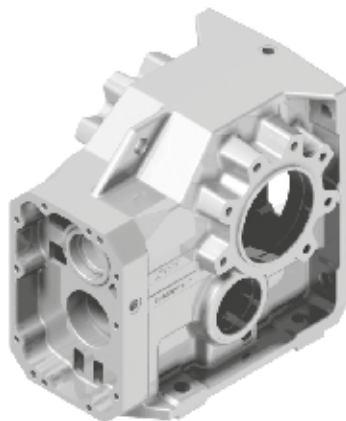
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

## Flange

Fully modular to IEC and Compact integrated motor. NEMA C flange

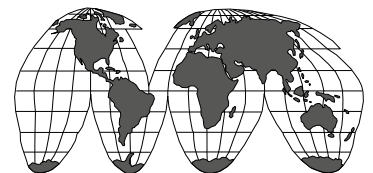
## Cast Iron housing

With high tensile strength. Precision machined for alignment of bearings and gearing



## Painting

Cast iron gearboxes are painted RAL 7046



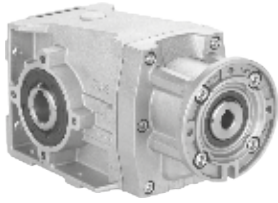
**World wide sales network.**



# Specific type datasheet on page...

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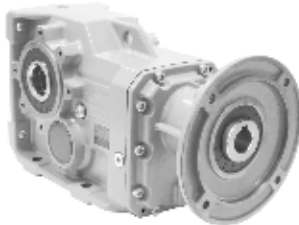
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|                     |                     |                      |                      |                      |                      |                      |                      |                      |
| <b>X22S</b><br>50Nm | <b>X32S</b><br>90Nm | <b>X33S</b><br>100Nm | <b>X42A</b><br>150Nm | <b>X43A</b><br>160Nm | <b>X52A</b><br>250Nm | <b>X53A</b><br>250Nm | <b>X62A</b><br>410Nm | <b>X63A</b><br>410Nm |



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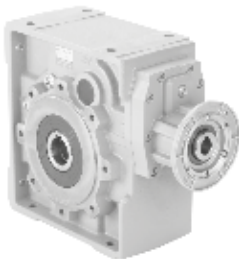
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|----------------------|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
|                      |                      |                       |                       |                       |                       |                       |                       |                       |                       |
| <b>X73C</b><br>675Nm | <b>X74C</b><br>675Nm | <b>X83C</b><br>1000Nm | <b>X84C</b><br>1000Nm | <b>X93C</b><br>1600Nm | <b>X94C</b><br>1650Nm | <b>X103</b><br>3000Nm | <b>X104</b><br>3000Nm | <b>X113</b><br>4500Nm | <b>X114</b><br>4600Nm |



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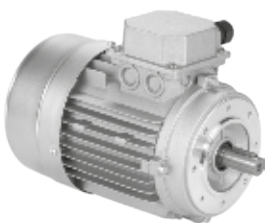
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|----------------------|----------------------|-----------------------|-----------------------|
|                      |                      |                       |                       |
| <b>113C</b><br>675Nm | <b>114C</b><br>675Nm | <b>133C</b><br>1000Nm | <b>134C</b><br>1000Nm |



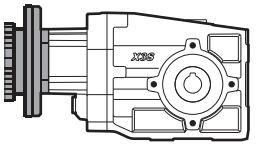
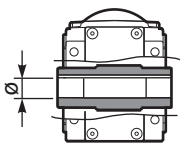
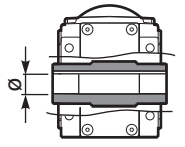
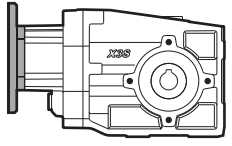
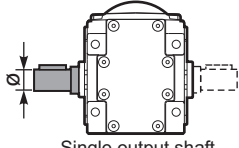
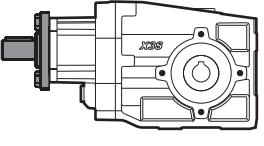
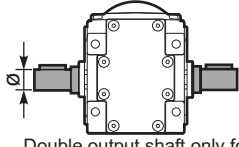
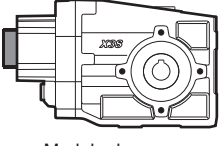
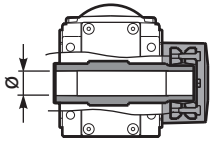
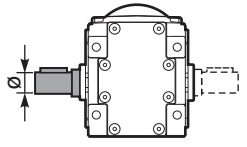
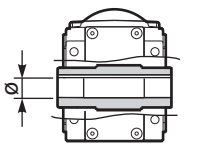
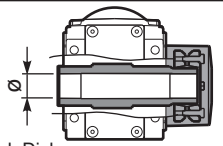
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Tipos

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| M-1                      |                          |                          |                          |                          |                              |             |                            |                            |                            |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------|-------------|----------------------------|----------------------------|----------------------------|
|                          |                          |                          |                          |                          |                              |             |                            |                            |                            |
| <b>56A</b><br><b>56B</b> | <b>63A</b><br><b>63B</b> | <b>71A</b><br><b>71B</b> | <b>80A</b><br><b>80B</b> | <b>90S</b><br><b>90L</b> | <b>100LA</b><br><b>100LB</b> | <b>112M</b> | <b>132S</b><br><b>132M</b> | <b>160M</b><br><b>160L</b> | <b>180M</b><br><b>180L</b> |

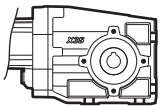
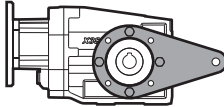
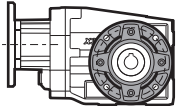
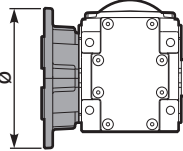



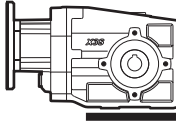
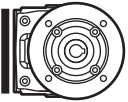
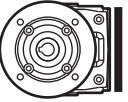
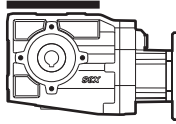
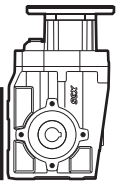
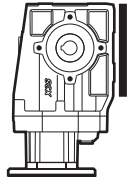
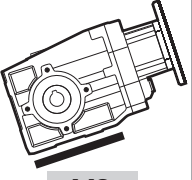
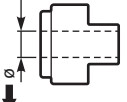

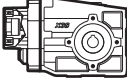



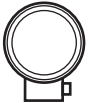


Types / Tipi  
Typen / Types  
Tipos

| Type - Tipo - Typ<br>Type - Tipo  | Size - Grandezza - Größe<br>Taille - Tamaño   | Hub - Mozzo corona<br>Hohlwelle<br>Arbre creux<br>Nucleo corona  | Rapporto - Ratio<br>Untersetzung<br>Reduction<br>Relacion   | Output shaft - Albero uscita<br>Ausgangsflansch<br>Arbre de sortie<br>Brida en salida  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|---|---|--|---|--|-------------|--------------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-------------|--|-------------|---------------------------|-----------------------|---|-----------------------|--|-----------|--------------------------------|-----------------------|----------------------------------|-----------------------|---------------------------|-----------|--|-----------------------|------------------------------------|-----------------------|-----------------------------|-----------|-----------------------------|-----------------------|-----------------------------|-----------------------|-----------------------------|
| <b>M</b>  | <b>X22S</b>   | <b>C</b>   | <b>4.83</b>   | <b>-A</b>  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <p>Helical-bevel gear<br/>Riduttori ortogonali</p>  <p>With IEC motor</p> <p><b>M</b></p>       | <p>2 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p>3 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p><b>Aluminum<br/>Alluminio<br/>Aluminium<br/>Aluminio</b></p>   |  <p>Hollow output shaft</p> <p><b>C</b></p>   | <p>See technical data table</p> <p>Vedi tabella dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p> |  <p>STANDARD</p> <p>Hollow output shaft</p> <table border="1"> <tr> <td>X22S</td> <td>X73/4C X83/4C</td> </tr> <tr> <td>-A ⇨ <math>\varnothing 18</math></td> <td>-F ⇨ <math>\varnothing 40</math></td> </tr> <tr> <td>-B ⇨ <math>\varnothing 20</math></td> <td>-H ⇨ <math>\varnothing 45</math></td> </tr> <tr> <td></td> <td>113C 114C</td> </tr> <tr> <td>X32S X33S</td> <td>-F ⇨ <math>\varnothing 40</math></td> </tr> <tr> <td>-B ⇨ <math>\varnothing 20</math></td> <td>-G ⇨ <math>\varnothing 42</math></td> </tr> <tr> <td>-C ⇨ <math>\varnothing 25</math></td> <td>133C 134C</td> </tr> <tr> <td>X42A X43A</td> <td>-F ⇨ <math>\varnothing 40</math></td> </tr> <tr> <td>-C ⇨ <math>\varnothing 25</math></td> <td>-H ⇨ <math>\varnothing 45</math></td> </tr> <tr> <td>-D ⇨ <math>\varnothing 30</math></td> <td>X93C X94C</td> </tr> <tr> <td>X52A X53A</td> <td>-H ⇨ <math>\varnothing 45</math></td> </tr> <tr> <td>-D ⇨ <math>\varnothing 30</math></td> <td>-J ⇨ <math>\varnothing 50</math></td> </tr> <tr> <td>-E ⇨ <math>\varnothing 35</math></td> <td>X103 X104</td> </tr> <tr> <td>X62A X63A</td> <td>-K ⇨ <math>\varnothing 60</math></td> </tr> <tr> <td>-E ⇨ <math>\varnothing 35</math></td> <td>X113 X114</td> </tr> <tr> <td>-F ⇨ <math>\varnothing 40</math></td> <td>-T ⇨ <math>\varnothing 70</math></td> </tr> </table> | X22S        | X73/4C X83/4C                  | -A ⇨ $\varnothing 18$ | -F ⇨ $\varnothing 40$     | -B ⇨ $\varnothing 20$ | -H ⇨ $\varnothing 45$     |             | 113C 114C                                      | X32S X33S   | -F ⇨ $\varnothing 40$     | -B ⇨ $\varnothing 20$ | -G ⇨ $\varnothing 42$   | -C ⇨ $\varnothing 25$ | 133C 134C  | X42A X43A | -F ⇨ $\varnothing 40$          | -C ⇨ $\varnothing 25$ | -H ⇨ $\varnothing 45$            | -D ⇨ $\varnothing 30$ | X93C X94C                 | X52A X53A | -H ⇨ $\varnothing 45$                    | -D ⇨ $\varnothing 30$ | -J ⇨ $\varnothing 50$              | -E ⇨ $\varnothing 35$ | X103 X104                   | X62A X63A | -K ⇨ $\varnothing 60$       | -E ⇨ $\varnothing 35$ | X113 X114                   | -F ⇨ $\varnothing 40$ | -T ⇨ $\varnothing 70$       |
| X22S  | X73/4C X83/4C   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -A ⇨ $\varnothing 18$   | -F ⇨ $\varnothing 40$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -B ⇨ $\varnothing 20$   | -H ⇨ $\varnothing 45$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|   | 113C 114C   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| X32S X33S   | -F ⇨ $\varnothing 40$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -B ⇨ $\varnothing 20$   | -G ⇨ $\varnothing 42$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -C ⇨ $\varnothing 25$   | 133C 134C   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| X42A X43A   | -F ⇨ $\varnothing 40$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -C ⇨ $\varnothing 25$   | -H ⇨ $\varnothing 45$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -D ⇨ $\varnothing 30$   | X93C X94C   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| X52A X53A   | -H ⇨ $\varnothing 45$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -D ⇨ $\varnothing 30$   | -J ⇨ $\varnothing 50$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -E ⇨ $\varnothing 35$   | X103 X104   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| X62A X63A   | -K ⇨ $\varnothing 60$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -E ⇨ $\varnothing 35$   | X113 X114   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -F ⇨ $\varnothing 40$   | -T ⇨ $\varnothing 70$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|  <p>With motor flange</p> <p><b>P</b></p>  | <p><b>X22S<br/>X32S<br/>X42A<br/>X52A<br/>X62A</b></p>  |  <p>Single output shaft</p> <p><b>A</b></p>   |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|  <p>With male input shaft</p> <p><b>R</b></p>   | <p><b>X33S<br/>X43A<br/>X53A<br/>X63A</b></p>   |  <p>Double output shaft only for 113/4C, 133/4C, X73/4C, X83/4C, X93/4C, X103/4 and X113/4</p> <p><b>B</b></p>  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|  <p>Modular base</p> <p><b>B</b></p> <p>Not available for: X93C, X103, X104, X113, X114.</p> | <p>3 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p>4 Stages<br/>Riduzioni<br/>Stufen<br/>Trains<br/>Etapas</p> <p><b>Cast Iron<br/>Ghisa<br/>Grauguss<br/>Fonte<br/>Fundicion</b></p> <table border="1"> <tr> <td><b>113C</b></td> <td><b>114C</b></td> </tr> <tr> <td><b>133C</b></td> <td><b>134C</b></td> </tr> <tr> <td><b>X73C</b></td> <td><b>X74C</b></td> </tr> <tr> <td><b>X83C</b></td> <td><b>X84C</b></td> </tr> <tr> <td><b>X93C</b></td> <td><b>X94C</b></td> </tr> <tr> <td><b>X103</b></td> <td><b>X104</b></td> </tr> <tr> <td><b>X113</b></td> <td><b>X114</b></td> </tr> </table> | <b>113C</b>  | <b>114C</b>   | <b>133C</b>  | <b>134C</b> | <b>X73C</b>                    | <b>X74C</b>           | <b>X83C</b>               | <b>X84C</b>           | <b>X93C</b>               | <b>X94C</b> | <b>X103</b>                                    | <b>X104</b> | <b>X113</b>               | <b>X114</b>           |  <p>Shrink Disk<br/>(only on the DX side)</p> <p><b>D</b></p> <p>Only on request for Q.ty<br/>A richiesta per quantità</p> |                       |  <p>Single and double output shaft</p> <table border="1"> <tr> <td>-I</td> <td>X22S X32/3S ⇨ <math>\varnothing 20</math></td> </tr> <tr> <td>-L</td> <td>X32/3S X42/3A ⇨ <math>\varnothing 25</math></td> </tr> <tr> <td>-M</td> <td>X52/3A ⇨ <math>\varnothing 30</math></td> </tr> <tr> <td>-N</td> <td>X52/3A X62/3A X73/4A* ⇨ <math>\varnothing 35</math></td> </tr> <tr> <td>-V</td> <td>X83/4A 113/4C ⇨ <math>\varnothing 40^*</math></td> </tr> <tr> <td>-P</td> <td>133/4C ⇨ <math>\varnothing 45^*</math></td> </tr> <tr> <td>-1</td> <td>X93/4C ⇨ <math>\varnothing 50^*</math></td> </tr> <tr> <td>-3</td> <td>X103/4 ⇨ <math>\varnothing 60^*</math></td> </tr> <tr> <td>-5</td> <td>X113/4 ⇨ <math>\varnothing 70^*</math></td> </tr> </table> | -I        | X22S X32/3S ⇨ $\varnothing 20$ | -L                    | X32/3S X42/3A ⇨ $\varnothing 25$ | -M                    | X52/3A ⇨ $\varnothing 30$ | -N        | X52/3A X62/3A X73/4A* ⇨ $\varnothing 35$ | -V                    | X83/4A 113/4C ⇨ $\varnothing 40^*$ | -P                    | 133/4C ⇨ $\varnothing 45^*$ | -1        | X93/4C ⇨ $\varnothing 50^*$ | -3                    | X103/4 ⇨ $\varnothing 60^*$ | -5                    | X113/4 ⇨ $\varnothing 70^*$ |
| <b>113C</b>   | <b>114C</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>133C</b>   | <b>134C</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>X73C</b>   | <b>X74C</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>X83C</b>   | <b>X84C</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>X93C</b>   | <b>X94C</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>X103</b>   | <b>X104</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| <b>X113</b>   | <b>X114</b>   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -I  | X22S X32/3S ⇨ $\varnothing 20$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -L  | X32/3S X42/3A ⇨ $\varnothing 25$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -M  | X52/3A ⇨ $\varnothing 30$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -N  | X52/3A X62/3A X73/4A* ⇨ $\varnothing 35$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -V  | X83/4A 113/4C ⇨ $\varnothing 40^*$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -P  | 133/4C ⇨ $\varnothing 45^*$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -1  | X93/4C ⇨ $\varnothing 50^*$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -3  | X103/4 ⇨ $\varnothing 60^*$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -5  | X113/4 ⇨ $\varnothing 70^*$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
|   |   |  <p>Stainless steel hub</p> <p><b>I</b></p> <p><b>Stainless steel hub<br/>Mozzo in acciaio Inox<br/>Edelstahlhohlwelle<br/>Moyeu en acier Inox<br/>Nucleo corona de acero Inox</b></p> <p>Only on request for Q.ty<br/>A richiesta per quantità</p> |   | <p>* Also available double output shaft</p>  <p>Shrink Disk</p> <table border="1"> <tr> <td>-U</td> <td>X22S X32/3S ⇨ <math>\varnothing 20</math></td> </tr> <tr> <td>-Q</td> <td>X42/3A ⇨ <math>\varnothing 30</math></td> </tr> <tr> <td>-R</td> <td>X52/3A ⇨ <math>\varnothing 35</math></td> </tr> <tr> <td>-S</td> <td>X62/3A X73/4A X83/4A 113/4C ⇨ <math>\varnothing 40</math></td> </tr> <tr> <td>-6</td> <td>133/4C ⇨ <math>\varnothing 45</math></td> </tr> <tr> <td>-7</td> <td>X93/4C ⇨ <math>\varnothing 50</math></td> </tr> <tr> <td>-8</td> <td>X103/4 ⇨ <math>\varnothing 65</math></td> </tr> <tr> <td>-9</td> <td>X113/4 ⇨ <math>\varnothing 75</math></td> </tr> </table>   | -U          | X22S X32/3S ⇨ $\varnothing 20$ | -Q                    | X42/3A ⇨ $\varnothing 30$ | -R                    | X52/3A ⇨ $\varnothing 35$ | -S          | X62/3A X73/4A X83/4A 113/4C ⇨ $\varnothing 40$ | -6          | 133/4C ⇨ $\varnothing 45$ | -7                    | X93/4C ⇨ $\varnothing 50$   | -8                    | X103/4 ⇨ $\varnothing 65$  | -9        | X113/4 ⇨ $\varnothing 75$      |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -U  | X22S X32/3S ⇨ $\varnothing 20$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -Q  | X42/3A ⇨ $\varnothing 30$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -R  | X52/3A ⇨ $\varnothing 35$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -S  | X62/3A X73/4A X83/4A 113/4C ⇨ $\varnothing 40$  |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -6  | 133/4C ⇨ $\varnothing 45$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -7  | X93/4C ⇨ $\varnothing 50$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -8  | X103/4 ⇨ $\varnothing 65$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |
| -9  | X113/4 ⇨ $\varnothing 75$   |  |   |  |             |                                |                       |                           |                       |                           |             |  |             |                           |                       |   |                       |  |           |                                |                       |                                  |                       |                           |           |  |                       |                                    |                       |                             |           |                             |                       |                             |                       |                             |



On request we can deliver our products according to the ATEX  
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX  
 Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern  
 Sur demande nos produits peuvent se conformer à la réglementation ATEX  
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

| Type - Tipo - Typ<br>Type - Tipo  | Output flange<br>Flangia di uscita<br>Ausgangs Flansch<br>Bride de sortie<br>Brida en salida   | Motor size - Grandezza motore<br>Motor Größe<br>Motor Grösse<br>Grandeur moteur - Tamaño motor  | Mounting position<br>Posizione montaggio<br>Einbaulage<br>Position de montage<br>Position de montaje  | Input bore<br>Foro entrata<br>Eingangshohlwelle<br>Trou d'entree<br>Eje hueco de entrada   | Terminal box position<br>Posizione morsettiere<br>Klemmkastenlage<br>Position boîte à bornes<br>Posición caja de bornes   |  |
|---|--|---|---|--|---|--|
| <b>BR</b>   | <b>N</b>   | <b>-O</b>   | <b>B3</b>   | <b>ST</b>  |   |  |
|  <p><b>FB</b><br/>Forma base<br/>Universal</p>  <p><b>BR</b><br/>Braccio di reazione<br/>Reaction arm</p>  <p><b>-F</b><br/>Flangia uscita<br/>output flange</p> |  <p><b>N</b> Senza flangia<br/>Without flange<br/>X22S</p> <p><b>1</b> ⇒ <math>\varnothing 120</math><br/>X32S X33S</p> <p><b>1</b> ⇒ <math>\varnothing 120</math><br/><b>2</b> ⇒ <math>\varnothing 160</math><br/>X42-3A X52-3A<br/>X62-3A</p> <p><b>2</b> ⇒ <math>\varnothing 160</math><br/><b>3</b> ⇒ <math>\varnothing 200</math><br/>X73C X74C<br/>X83C X84C</p> <p><b>4</b> ⇒ <math>\varnothing 250</math><br/>113C 114C<br/>X93C X94C</p> <p><b>C</b> ⇒ <math>\varnothing 280</math><br/><b>L</b> ⇒ <math>\varnothing 280</math><br/>133C 134C</p> <p><b>C</b> ⇒ <math>\varnothing 320</math><br/>X103 X104</p> <p><b>6</b> ⇒ <math>\varnothing 350</math><br/>X113 X114</p> <p><b>7</b> ⇒ <math>\varnothing 450</math></p> | <p><b>Flange Flangia</b> </p> <p><b>B5</b></p> <p><b>-A</b>=56 (<math>\varnothing 120</math>)<br/><b>-B</b>=63 (<math>\varnothing 140</math>)<br/><b>-C</b>=71 (<math>\varnothing 160</math>)<br/><b>-D</b>=80 (<math>\varnothing 200</math>)<br/><b>-E</b>=90 (<math>\varnothing 200</math>)<br/><b>-F</b>=100 (<math>\varnothing 250</math>)<br/><b>-G</b>=132 (<math>\varnothing 300</math>)<br/><b>-H</b>=160 (<math>\varnothing 350</math>)<br/><b>-I</b>=180 (<math>\varnothing 350</math>)<br/><b>-L</b>=200 (<math>\varnothing 400</math>)<br/><b>CA</b>=225 (<math>\varnothing 450</math>)</p> <p><b>B14</b></p> <p><b>-O</b>=56 (<math>\varnothing 80</math>)<br/><b>-P</b>=63 (<math>\varnothing 90</math>)<br/><b>-Q</b>=71 (<math>\varnothing 105</math>)<br/><b>-R</b>=80 (<math>\varnothing 120</math>)<br/><b>-T</b>=90 (<math>\varnothing 140</math>)<br/><b>-U</b>=100 (<math>\varnothing 160</math>)<br/><b>-V</b>=132 (<math>\varnothing 200</math>)</p> <p><b>Brushless</b></p> <p><b>BB</b>=50/70-M5<br/><b>BC</b>=60/75-M5<br/><b>BD</b>=70/90-M6<br/><b>BE</b>=80/100-M6<br/><b>BF</b>=95/115-M8<br/><b>BG</b>=110/145-M8<br/><b>BH</b>=130/165-M8</p> | <p><b>Type R Tipo R</b> </p> <p>X22S X33S X43A</p> <p><b>-1</b> ⇒ <math>\varnothing 14</math><br/>X32S X42A X53A<br/>X63A X74C X84C<br/>114C 134C</p> <p><b>-2</b> ⇒ <math>\varnothing 19</math><br/>X52A X62A<br/>113C 133C<br/>X73C X83C X94C</p> <p><b>-3</b> ⇒ <math>\varnothing 24</math><br/>X93C X104 X114</p> <p><b>-4</b> ⇒ <math>\varnothing 28</math><br/>X103 X113</p> <p><b>-6</b> ⇒ <math>\varnothing 42</math></p> <p><b>Without flange Senza flangia</b> </p> <p><b>-M</b> ⇒ With coupling</p> <p>X22S X33S X43A</p> <p><b>-Z</b> ⇒ <math>\varnothing 9</math> (IEC56)<br/><b>-0</b> ⇒ <math>\varnothing 11</math> (IEC63)<br/><b>-1</b> ⇒ <math>\varnothing 14</math> (IEC71)<br/>X32S X42A X53A<br/>X63A X74C X84C<br/>114C 134C</p> <p><b>-1</b> ⇒ <math>\varnothing 14</math> (IEC71)<br/><b>-2</b> ⇒ <math>\varnothing 19</math> (IEC80)<br/><b>-3</b> ⇒ <math>\varnothing 24</math> (IEC90)<br/>X52A X62A<br/>113C 133C<br/>X73C X83C X94C</p> <p><b>-2</b> ⇒ <math>\varnothing 19</math> (IEC80)<br/><b>-3</b> ⇒ <math>\varnothing 24</math> (IEC90)<br/><b>-4</b> ⇒ <math>\varnothing 28</math> (IEC100)</p> |  <p><b>B3</b><br/>STANDARD</p>  <p><b>B6</b></p>  <p><b>B7</b></p>  <p><b>B8</b></p>  <p><b>V5</b></p>  <p><b>V6</b></p>  <p><b>V8</b></p> | <p><b>ST</b><br/>standard bore<br/>foro standard</p> <p><b>COUPLING STANDARD (IEC)</b></p>  <p><b>-A</b> = 9mm<br/><b>-B</b> = 11mm<br/><b>-C</b> = 14mm<br/><b>-D</b> = 19mm<br/><b>-E</b> = 24mm<br/><b>-F</b> = 28mm</p> <p><b>BRUSHLESS *</b></p>  <p><b>-2</b> = 11mm<br/><b>-3</b> = 14mm<br/><b>-4</b> = 19mm<br/><b>-5</b> = 22mm<br/><b>-6</b> = 24mm</p> <p><b>-0</b><br/>Ready for input coupling<br/>Predisposto per giunto</p>  | <p><b>With Type M specify terminal box position</b><br/>Con tipo M specificare posizione morsettiere</p>  <p><b>A</b></p>  <p><b>B</b><br/>STANDARD</p>  <p><b>C</b></p>  <p><b>D</b></p> |

\* With reduction bushing where applicable  
Con bussola di riduzione dove prevista

**POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA**

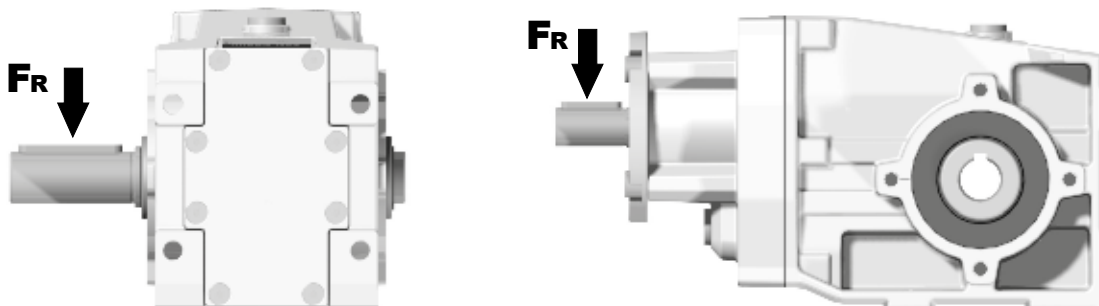
|  |   |
|--|---|
| Lifting / sollevamento / hubantriebe / levage / elevación                  | $P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$ |
| Rotation / rotazione / drehung / rotation / rotação                        | $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$                  |
| Linear movement / traslazione / linearbewegung / translation / translación | $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$                 |

**TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR**

|  |   |
|--|---|
|  | $M [Nm] = \frac{9550 \cdot P[KW]}{n [rpm]}$     |
|  | $M [lb in] = \frac{63030 \cdot P[HP]}{n [rpm]}$ |

**RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / CHARGES RADIALES / CARGA RADIAL Y AXIAL**

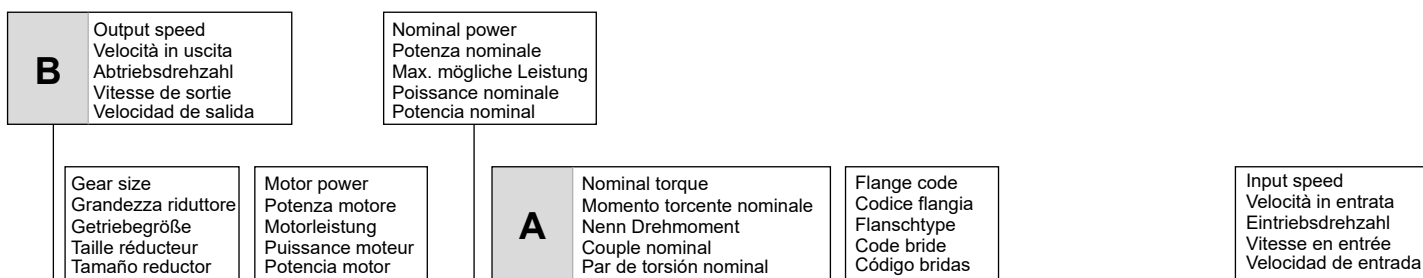
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée par la transmissions calés sur les entrées et / ou des arbres de sortie
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



|                      |  |  |
|----------------------|--|--|
|                      | $F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$   | $F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$ |
| <b>M</b>             | Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion   |  |
| <b>d</b>             | Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo   |  |
| <b>f<sub>k</sub></b> | Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión<br><b>1.15</b> Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje<br><b>1.25</b> Catena / Chain sprockets / Antriebskette / Chaîne / Cadena<br><b>1.75</b> Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal<br><b>2.50</b> Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Courroie crantée / Correa plana |  |

- If your application requires higher radial loads, contact our technical office. Higher load may be possible.
- Nel caso la vostra applicazione richieda carichi radiali superiori consultare il nostro ufficio tecnico, valori maggiori possono essere accettati.
- Wenn Ihre Anwendung höhere Radialbelastungen erfordert, so wenden Sie sich bitte an unser technischen Büro.
- Si votre application demande des charges radiales supérieures, s'adresser à notre bureau technique.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore / Wie wählt man ein Getriebe  
Comment sélectionner un réducteur / Cómo seleccionar un reductor



**X22S** Angletech Gear **50Nm** Rating - Aluminum HELICAL-BEVEL GEARBOXES

**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code<br> |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|-----------------------------|----|----|------------------|-----------------|
|  |              |  |  |                        |  |   | -B                         | -C | -O                          | -P | -Q |                  |                 |
| 289.7  | <b>4.83</b>  | 0.37                                   | 11.7                                     | 2.6                    | <b>0.95</b>                              | <b>30</b>                                 | 63                         | 71 | C                           | C  |    | 289              | 01              |
| 189.2  | <b>7.40</b>  | 0.37                                   | 17.9                                     | 1.7                    | <b>0.62</b>                              | <b>30</b>                                 |                            |    | C                           | C  |    | 287              | 02              |
| 146.2  | <b>9.58</b>  | 0.37                                   | 23.2                                     | 1.7                    | <b>0.64</b>                              | <b>40</b>                                 |                            |    | C                           | C  |    | 199              | 03              |
| 127.5  | <b>10.98</b> | 0.37                                   | 26.6                                     | 1.7                    | <b>0.63</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 179              | 04              |



**fs**

| Type of load and starts per hour<br>Tipo di carico e avviamenti per ora                                    |                     | Oper. hours per day<br>Ore di funz. giorn. |      |      |
|--|---------------------|--|------|------|
|  |                     | 3 h  | 10 h | 24 h |
| Continuous or intermittent appl. with start / hour<br>Applicazione cont. o interm. con n.ro operazioni/ora | Uniform / Uniforme  | 0.8  | 1    | 1.25 |
|  | Moderate / Moderato | 1  | 1.25 | 1.5  |
|  | Heavy / Forte       | 1.25                                       | 1.5  | 1.75 |
| Intermittent application with start / hour<br>Applicazione intermittente con n.ro operazioni/ora           | Uniform / Uniforme  | 1  | 1.25 | 1.5  |
|  | Moderate / Moderato | 1.25                                       | 1.5  | 1.75 |
|  | Heavy / Forte       | 1.5  | 1.75 | 2.15 |

**D** Motor flange available  
Flange disponibili  
Erhältliche Motorflansche  
Brides disponibles  
Bridas disponibles

**B)** Mounting with reduction ring  
Montaggio con boccia di riduzione  
Reduzierhülsen  
Montage avec douille de réduction  
Montaje con casquillo de reducción

**C)** Motor flangeholes position/terminal box position  
Bohrungsposition am Motorflansch/-sockel  
Position trous bride/barrette à bornes moteur  
Posición agujeros brida / base motor

**B)** Available without reduction bushes  
Disponibile anche senza boccia  
Auch ohne Reduzierbuchse verfügbar  
Disponible aussi sans douille de réduction  
Disponible tambien sin casquillo

|          |  |  |  |   |  |
|----------|--|--|--|---|--|
| <b>A</b> | Select required torque (according to service factor)                   | Seleziona la coppia desiderata (comprensiva del fattore di servizio)                             | Max. Drehmoment in Bezug zum Betriebsfaktor  | Sélectionner le couple souhaité (comprenant le facteur de service)                                | Seleccionar el par deseado (incluyendo el factor de servicio)                                      |
| <b>B</b> | Select output speed  | Seleziona la velocità in uscita  | Ausgewählte Abtriebsdrehzahl   | Sélectionner la vitesse de sortie   | Seleccionar la velocidad de salida   |
| <b>C</b> | On the same line of selected geared motor, you can find the gear ratio | Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione | Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung | Sur la ligne correspondante à la motorisation pré-choisie on peut relever le rapport de réduction | En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción |
| <b>D</b> | Select motor flange available (if requested)                           | Scegli la flangia disponibile (se richiesta)   | Erhältliche Motorflansche (auf Anfrage)  | Choisir la bride disponible (si elle est demandée)  | Seleccionar la brida disponible (sobre pedido)   |



**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code     |            |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|-----------------------------|----|----|------------------|-----------------|------------|
|  |              |  |  |                        |  |   | -B                         | -C | -O                          | -P | -Q |                  |                 |            |
|  |              |  |  |                        |  |   | 63                         | 71 | 56                          | 63 | 71 |                  |                 |            |
| 290  | <b>4.83</b>  | 0.37                                   | 12                                       | 2.6                    | <b>0.95</b>                              | <b>30</b>                                 |                            |    | C                           | C  |    | 289              | standard<br>ø20 | 01         |
| 189  | <b>7.40</b>  | 0.37                                   | 18                                       | 1.7                    | <b>0.62</b>                              | <b>30</b>                                 |                            |    | C                           | C  |    | 287              |                 | 02         |
| 146  | <b>9.58</b>  | 0.37                                   | 23                                       | 1.7                    | <b>0.64</b>                              | <b>40</b>                                 |                            |    | C                           | C  |    | 199              |                 | 03         |
| 128  | <b>10.98</b> | 0.37                                   | 27                                       | 1.7                    | <b>0.63</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 179              |                 | 04         |
| 107  | <b>13.07</b> | 0.37                                   | 32                                       | 1.4                    | <b>0.53</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 159              |                 | 05         |
| 95   | <b>14.66</b> | 0.37                                   | 35                                       | 1.3                    | <b>0.47</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 197              |                 | 06         |
| 89   | <b>15.79</b> | 0.37                                   | 38                                       | 1.2                    | <b>0.44</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 139              |                 | 07         |
| 83   | <b>16.81</b> | 0.37                                   | 41                                       | 1.1                    | <b>0.41</b>                              | <b>45</b>                                 |                            |    | C                           | C  |    | 177              |                 | 08         |
| 70   | <b>20.00</b> | 0.37                                   | 48                                       | 1.0                    | <b>0.37</b>                              | <b>48</b>                                 |                            |    | C                           | C  |    | 157              |                 | 09         |
| 64   | <b>21.93</b> | 0.37                                   | 53                                       | 0.9                    | <b>0.35</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 109              |                 | On request |
| 58   | <b>24.18</b> | 0.25                                   | 39                                       | 1.3                    | <b>0.32</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 137              |                 | 11         |
| 48.2   | <b>29.04</b> | 0.25                                   | 47                                       | 1.1                    | <b>0.26</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 99               |                 | 12         |
| 41.7   | <b>33.57</b> | 0.18                                   | 42                                       | 1.2                    | <b>0.23</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 107              |                 | 13         |
| 36.2   | <b>38.67</b> | 0.18                                   | 48                                       | 1.0                    | <b>0.20</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 79               |                 | 14         |
| 31.5   | <b>44.44</b> | 0.18                                   | 55                                       | 0.9                    | <b>0.17</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 97               |                 | 15         |
| 23.7   | <b>59.18</b> | 0.12                                   | 48                                       | 1.0                    | <b>0.13</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 77               |                 | 16         |
| 19.9   | <b>70.24</b> | 0.09                                   | 45                                       | 1.1                    | <b>0.11</b>                              | <b>50</b>                                 |                            |    | C                           | C  |    | 67               |                 | 17         |

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X22S** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X22S** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X22S** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X22S** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X22S** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |         |                    |         |     |
|-----------------------|---|---------|---------|--------------------|---------|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|                       |   |         |         |                    |         |     |
| 0.25 LT               | 0.25 LT   | 0.25 LT | 0.25 LT | 0.43 LT            | 0.31 LT | Ask |
| SHELL Omala S4 WE 320 |   |         |         | ENI Telium VSF 320 |         |     |

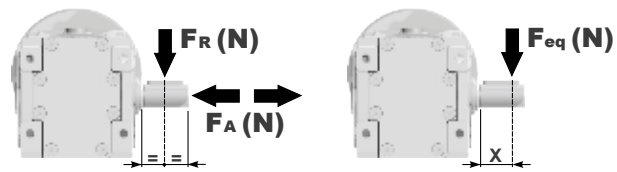
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

#### Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{101}{X+82}$$

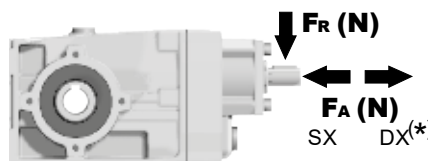


| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 400                                    | 360 | 1800 | 100                                    | 440 | 2200 | 25                                     | 440 | 2200 |
| 250                                    | 380 | 1900 | 75                                     | 440 | 2200 | 15                                     | 440 | 2200 |
| 150                                    | 420 | 2100 | 50                                     | 440 | 2200 |  |     |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

#### Input shaft

albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA  | FR  |
|--|-----|-----|
| 1400                                   | 140 | 700 |
| 900                                    | 160 | 800 |
| 500                                    | 190 | 950 |

\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

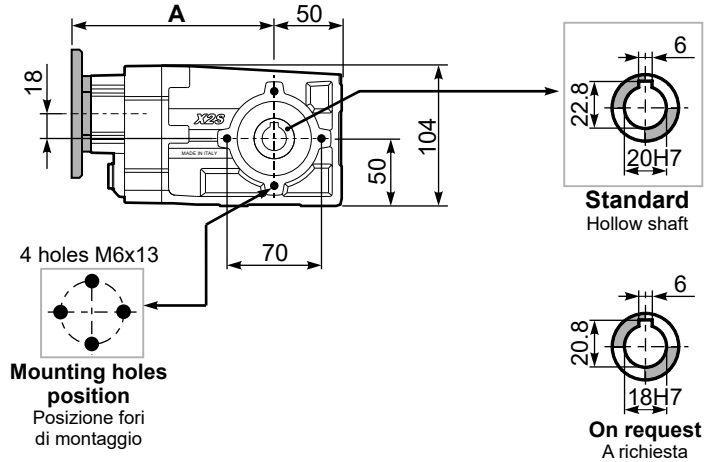
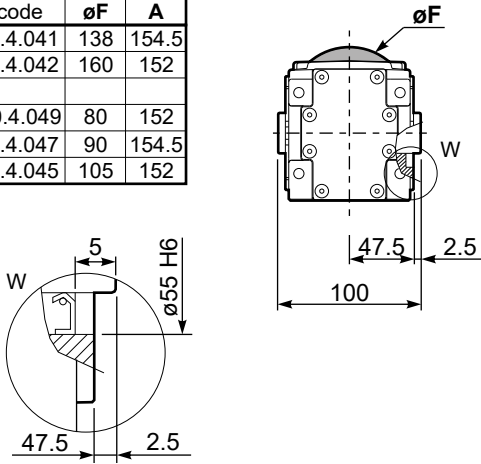
**tab. 2**



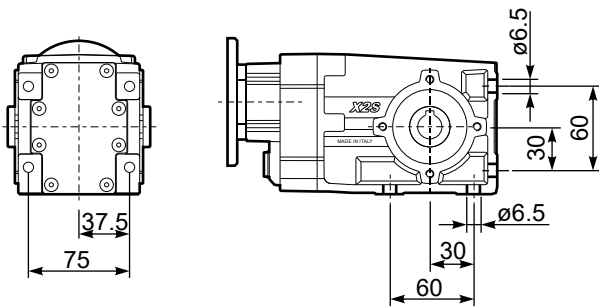
**P**X22SC... Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **3.70 kg**

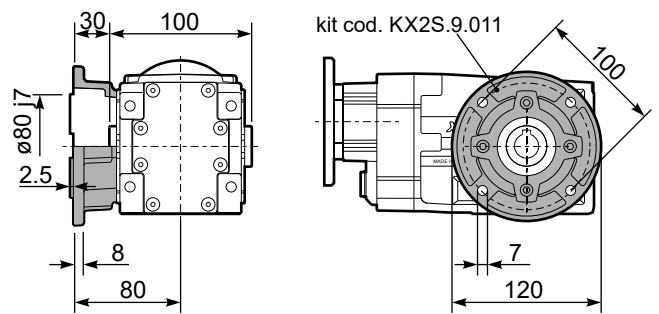
| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>63B5</b>  | K050.4.041 | 138 | 154.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 152   |
| <b>56B14</b> | KC40.4.049 | 80  | 152   |
| <b>63B14</b> | K050.4.047 | 90  | 154.5 |
| <b>71B14</b> | K050.4.045 | 105 | 152   |



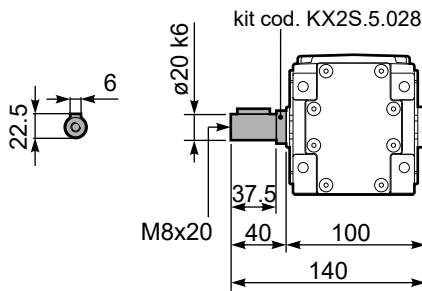
PX22S...**FB**.. Feet  
Piedini



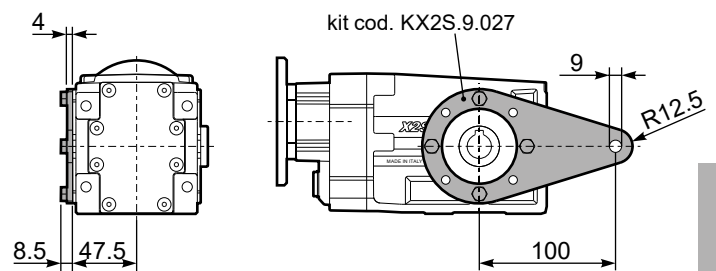
PX22S...**-F1**.. Output flange  
Flangia uscita



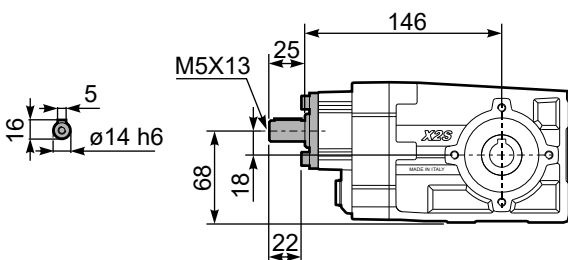
PX22S**A**.. Single output shaft  
Albero semplice in uscita



PX22S...**BR**.. Reaction Arm  
Braccio di reazione



**R**X22S.. Input shaft  
Albero in entrata





**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code     |            |
|--|------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|------------------|-----------------|------------|
|  |            |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |                 |            |
|  |            |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |                 |            |
| 191  | 7.33       | 1.5                                    | 72                                       | 1.0                    | 1.5                                      | 70  | B                          |    |    |    | C                           | C  |    | 289              | standard<br>ø20 | 01         |
| 125  | 11.22      | 1.1                                    | 80                                       | 1.1                    | 1.2                                      | 85  | B                          |    |    |    | C                           | C  |    | 287              |                 | 02         |
| 106  | 13.26      | 1.1                                    | 95                                       | 0.9                    | 0.98                                     | 85  | B                          |    |    |    | C                           | C  |    | 199              |                 | 03         |
| 91   | 15.37      | 1.1                                    | 110                                      | 0.8                    | 0.89                                     | 90  | B                          |    |    |    | C                           | C  |    | 179              |                 | 04         |
| 78   | 18.04      | 0.75                                   | 89                                       | 1.0                    | 0.76                                     | 90  | B                          |    |    |    | C                           | C  |    | 159              |                 | 05         |
| 69   | 20.30      | 0.75                                   | 100                                      | 0.9                    | 0.68                                     | 90  | B                          |    |    |    | C                           | C  |    | 197              |                 | 06         |
| 65   | 21.54      | 0.75                                   | 106                                      | 0.9                    | 0.64                                     | 90  | B                          |    |    |    | C                           | C  |    | 139              |                 | 07         |
| 59   | 23.53      | 0.55                                   | 85                                       | 1.1                    | 0.58                                     | 90  | B                          |    |    |    | C                           | C  |    | 177              |                 | 08         |
| 51   | 27.62      | 0.55                                   | 100                                      | 0.9                    | 0.50                                     | 90  | B                          |    |    |    | C                           | C  |    | 157              |                 | 09         |
| 47.6   | 29.40      | 0.55                                   | 106                                      | 0.8                    | 0.47                                     | 90  | B                          |    |    |    | C                           | C  |    | 109              |                 | On request |
| 42.5   | 32.97      | 0.37                                   | 80                                       | 1.1                    | 0.42                                     | 90  | B                          |    |    |    | C                           | C  |    | 137              |                 | 11         |
| 36.5   | 38.37      | 0.37                                   | 93                                       | 1.0                    | 0.36                                     | 90  | B                          |    |    |    | C                           | C  |    | 99               |                 | 12         |
| 31.1   | 45.00      | 0.25                                   | 73                                       | 1.2                    | 0.31                                     | 90  | B                          |    |    |    | C                           | C  |    | 107              |                 | 13         |
| 27.6   | 50.67      | 0.25                                   | 83                                       | 1.1                    | 0.27                                     | 90  | B                          |    |    |    | C                           | C  |    | 79               |                 | 14         |
| 23.8   | 58.73      | 0.18                                   | 73                                       | 1.2                    | 0.23                                     | 90  | B                          |    |    |    | C                           | C  |    | 97               |                 | 15         |
| 18.1   | 77.55      | 0.18                                   | 97                                       | 0.9                    | 0.18                                     | 90  | B                          |    |    |    | C                           | C  |    | 77               |                 | 16         |

**Motor Flanges Available** Flange Motore Disponibili **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X32S** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X32S** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X32S** ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X32S** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X32S** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

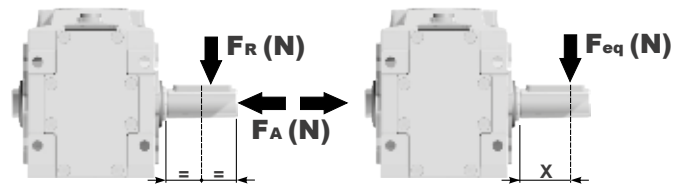
| Standard supplied     | For these mounting position specify in the order or add oil         |         |         |                    |         |     |  |
|-----------------------|---|---------|---------|--------------------|---------|-----|--|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |  |
|                       |   |         |         |                    |         |     |  |
| 0.40 LT               | 0.60 LT   | 0.40 LT | 0.60 LT | 0.85 LT            | 0.60 LT | Ask |  |
| SHELL Omala S4 WE 320 |   |         |         | ENI Telium VSF 320 |         |     |  |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

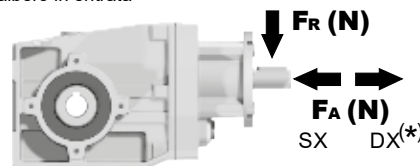
$$F_{eq} = F_R \cdot \frac{115.5}{X+96.5}$$



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 250                                    | 400 | 2000 | 75                                     | 560 | 2800 | 15                                     | 560 | 2800 |
| 150                                    | 450 | 2250 | 50                                     | 560 | 2800 |  |     |      |
| 100                                    | 500 | 2500 | 25                                     | 560 | 2800 |  |     |      |

**F<sub>R</sub>** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

**Input shaft**  
albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|
| 1400                                   | 240 | 1200 |
| 900                                    | 280 | 1400 |
| 500                                    | 340 | 1700 |

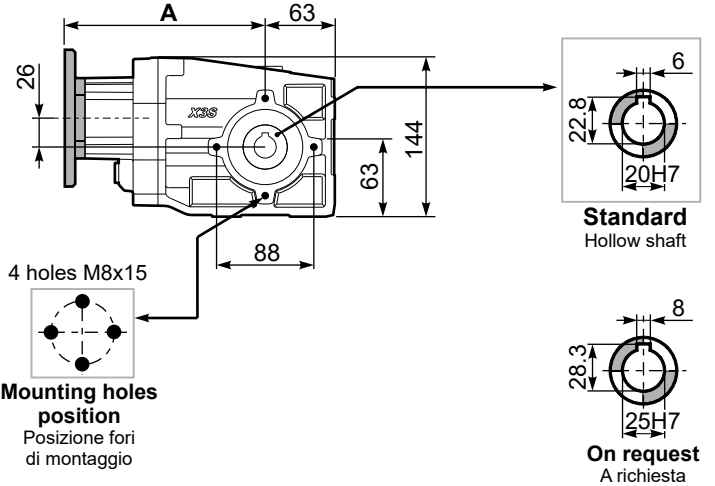
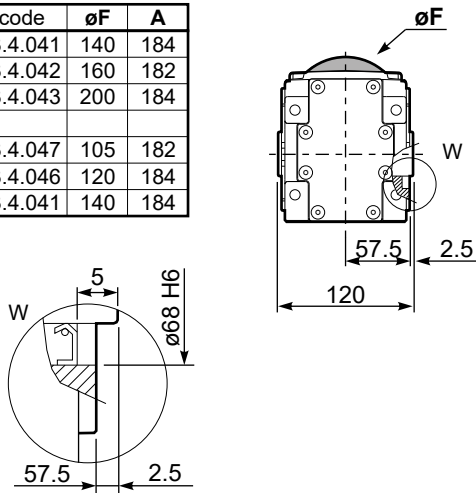
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

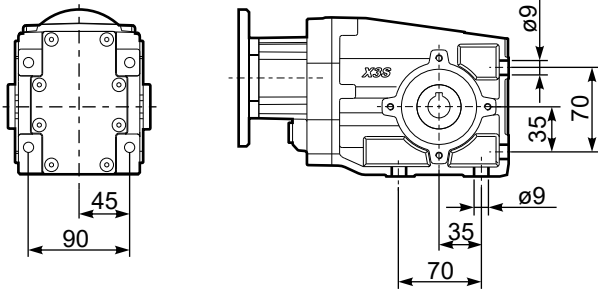
**PX32SC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **6.30 kg**

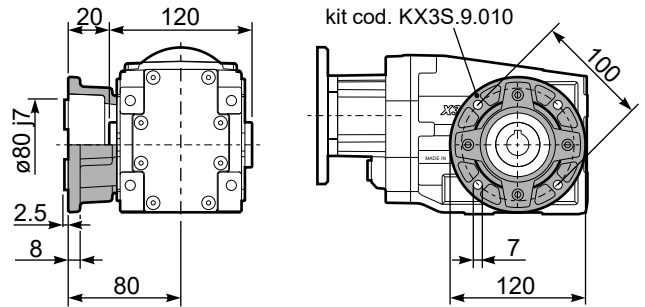
| M. flanges     | Kit code   | øF  | A   |
|----------------|------------|-----|-----|
| <b>63B5</b>    | K063.4.041 | 140 | 184 |
| <b>71B5</b>    | K063.4.042 | 160 | 182 |
| <b>80/90B5</b> | K063.4.043 | 200 | 184 |
| <b>71B14</b>   | K063.4.047 | 105 | 182 |
| <b>80B14</b>   | K063.4.046 | 120 | 184 |
| <b>90B14</b>   | K063.4.041 | 140 | 184 |



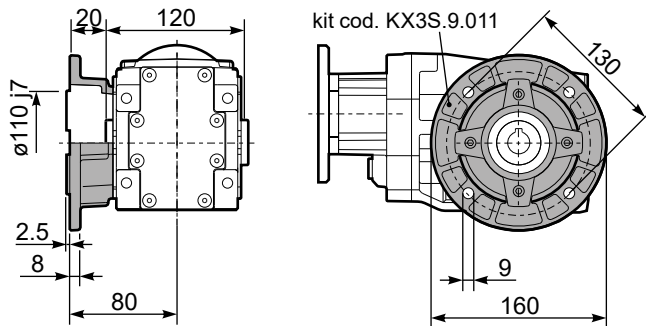
**PX32S...FB..** Feet  
Piedini



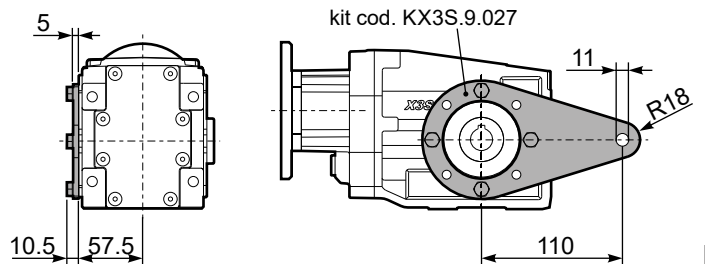
**PX32S...-F1..** Output flange  
Flangia uscita



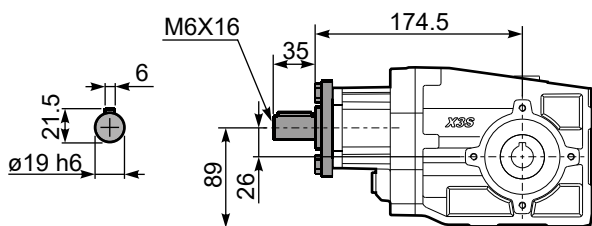
**PX32S...-F2..** Output flange  
Flangia uscita



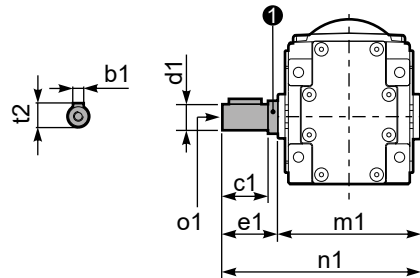
**PX32S...BR..** Reaction Arm  
Braccio di reazione



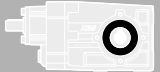
**RX32S...** Input shaft  
Albero in entrata



**PX32SA..** Single output shaft  
Albero semplice in uscita



| d1                                      | b1 | c1   | e1   | m1    | n1  | t2   | o1    | ① kit code |
|---|----|------|------|-------|-----|------|-------|------------|
| ø20 k6                                  | 6  | 37.5 | 40   | 120   | 160 | 22.5 | M8x20 | KX2S.5.028 |
| ø25 <sup>-0.005</sup> <sub>-0.020</sub> | 8  | 60   | 63.2 | 126.8 | 190 | 28   | M8x20 | K063.5.028 |



#### QUICK SELECTION / Selezione veloce The dynamic efficiency is 0.94 for all ratios input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |                 | Output Shaft<br> | Ratios code<br> |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|-----------------------------|----|-----------------|------------------|-----------------|
|  |               |  |  |                        |  |   | -B                         | -C | -O                          | -P | -Q              |                  |                 |
|  |               |  |  |                        |  |   | 63                         | 71 | 56                          | 63 | 71              |                  |                 |
| 38.7   | <b>36.17</b>  | 0.37                                   | 86                                       | 1.2                    | <b>0.43</b>                              | 100                                       |                            |    | C                           | C  |                 | 17179            | 02              |
| 31.7   | <b>44.21</b>  | 0.37                                   | 105                                      | 1.0                    | <b>0.35</b>                              | 100                                       |                            |    | C                           | C  |                 | 19139            | 03              |
| 27.6   | <b>50.68</b>  | 0.25                                   | 81                                       | 1.2                    | <b>0.31</b>                              | 100                                       |                            |    | C                           | C  |                 | 17139            | 04              |
| 25.3   | <b>55.36</b>  | 0.25                                   | 89                                       | 1.1                    | <b>0.28</b>                              | 100                                       |                            |    | C                           | C  |                 | 17177            | 05              |
| 23.2   | <b>60.31</b>  | 0.25                                   | 96                                       | 1.0                    | <b>0.26</b>                              | 100                                       |                            |    | C                           | C  |                 | 15139            | 06              |
| 21.2   | <b>65.88</b>  | 0.25                                   | 105                                      | 0.9                    | <b>0.24</b>                              | 100                                       |                            |    | C                           | C  |                 | 15177            | 07              |
| 19.4   | <b>72.25</b>  | 0.18                                   | 88                                       | 1.1                    | <b>0.22</b>                              | 100                                       |                            |    | C                           | C  |                 | 10179            | 08              |
| 17.6   | <b>79.64</b>  | 0.18                                   | 97                                       | 1.0                    | <b>0.20</b>                              | 100                                       |                            |    | C                           | C  | standard<br>ø20 | 13177            | 09              |
| 15.2   | <b>92.31</b>  | 0.18                                   | 113                                      | 0.9                    | <b>0.17</b>                              | 100                                       |                            |    | C                           | C  |                 | 15137            | 10              |
| 14.6   | <b>95.65</b>  | 0.18                                   | 117                                      | 0.9                    | <b>0.16</b>                              | 100                                       |                            |    | C                           | C  |                 | 9179             | 11              |
| 13.8   | <b>101.23</b> | 0.12                                   | 80                                       | 1.2                    | <b>0.15</b>                              | 100                                       |                            |    | C                           | C  | ø25             | 10139            | 12              |
| 11.0   | <b>127.37</b> | 0.12                                   | 101                                      | 1.0                    | <b>0.12</b>                              | 100                                       |                            |    | C                           | C  | On request      | 7179             | 13              |
| 9.3  | <b>151.16</b> | 0.09                                   | 95                                       | 1.0                    | <b>0.10</b>                              | 100                                       |                            |    | C                           | C  |                 | 6179             | 14              |
| 7.8  | <b>178.46</b> | 0.09                                   | 113                                      | 0.9                    | <b>0.09</b>                              | 100                                       |                            |    | C                           | C  |                 | 7139             | 15              |
| 6.6  | <b>211.79</b> | 0.06                                   | 88                                       | 1.1                    | <b>0.07</b>                              | 100                                       |                            |    | C                           | C  |                 | 6139             | 16              |
| 6.1  | <b>231.37</b> | 0.06                                   | 96                                       | 1.0                    | <b>0.07</b>                              | 100                                       |                            |    | C                           | C  |                 | 6177             | 17              |
| 5.1  | <b>273.16</b> | 0.06                                   | 113                                      | 0.9                    | <b>0.06</b>                              | 100                                       |                            |    | C                           | C  |                 | 7137             | 18              |
| 4.3  | <b>324.18</b> | 0.06                                   | 134                                      | 0.7                    | <b>0.05</b>                              | 100                                       |                            |    | C                           | C  |                 | 6137             | 19              |

Motor Flanges Available  
Flange Motore Disponibili
 B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione
B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione
 C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **X33S** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X33S** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X33S** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X33S** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

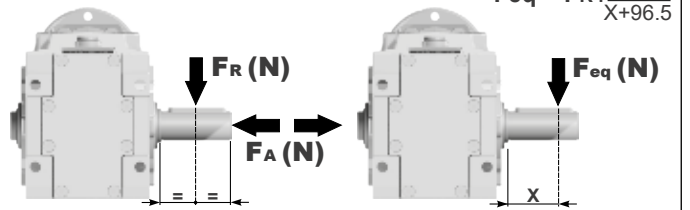
**E** El reductor tamaño **X33S** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|
|                       |  |         |         |                    |         |     |
| B3                    | B6   | B7      | B8      | V5                 | V6      | V8  |
| 0.70 LT               | 0.65 LT  | 0.40 LT | 0.65 LT | 0.95 LT            | 0.65 LT | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

#### RADIAL AND AXIAL LOADS

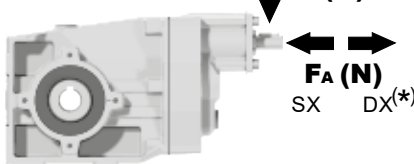
**Output shaft**  
Albero di uscita



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 250                                    | 400 | 2000 | 75                                     | 560 | 2800 | 15                                     | 560 | 2800 |
| 150                                    | 450 | 2250 | 50                                     | 560 | 2800 |  |     |      |
| 100                                    | 500 | 2500 | 25                                     | 560 | 2800 |  |     |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

**Input shaft**  
albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA  | FR  |
|--|-----|-----|
| 1400                                   | 140 | 700 |
| 900                                    | 160 | 800 |
| 500                                    | 190 | 950 |

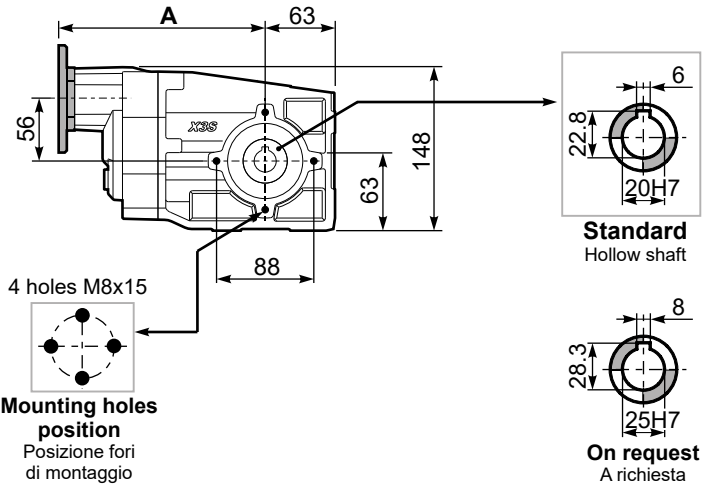
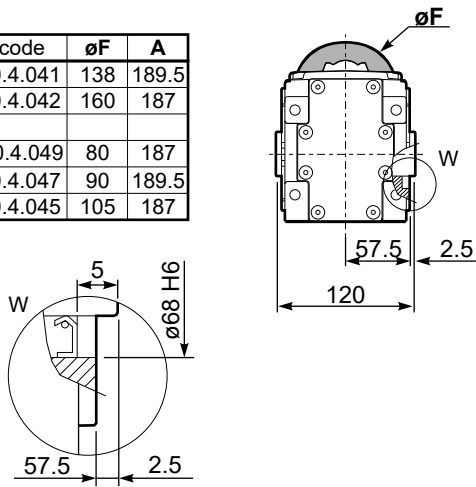
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

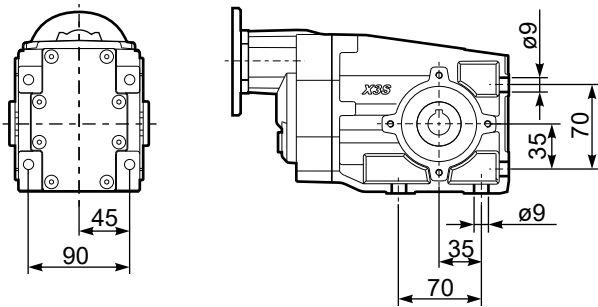
**PX33SC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **6.55 kg**

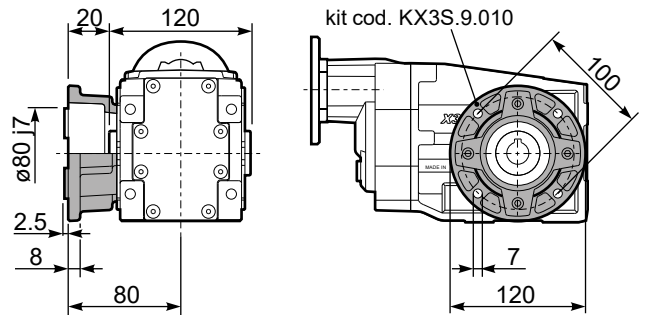
| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>63B5</b>  | K050.4.041 | 138 | 189.5 |
| <b>71B5</b>  | K050.4.042 | 160 | 187   |
| <b>56B14</b> | KC40.4.049 | 80  | 187   |
| <b>63B14</b> | K050.4.047 | 90  | 189.5 |
| <b>71B14</b> | K050.4.045 | 105 | 187   |



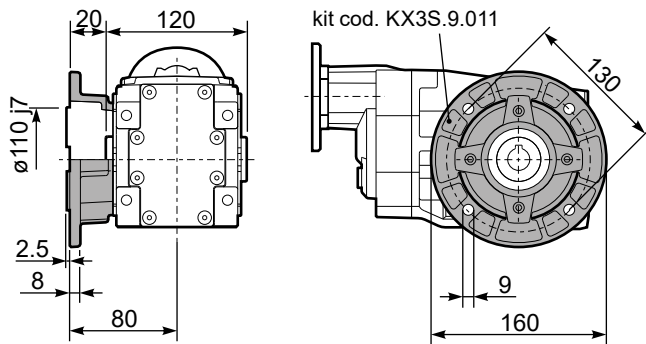
**PX33S...FB..** Feet  
Piedini



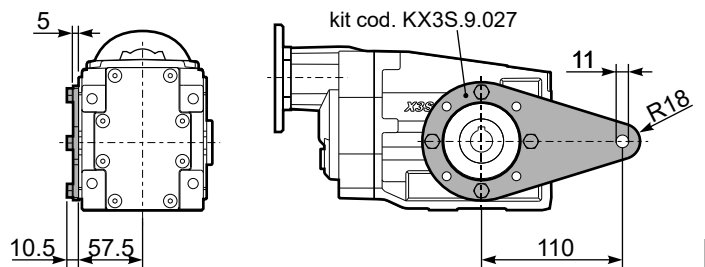
**PX33S...-F1..** Output flange  
Flangia uscita



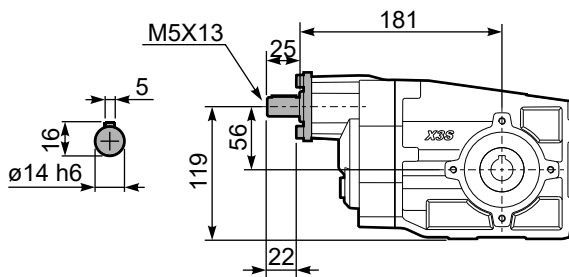
**PX33S...-F2..** Output flange  
Flangia uscita



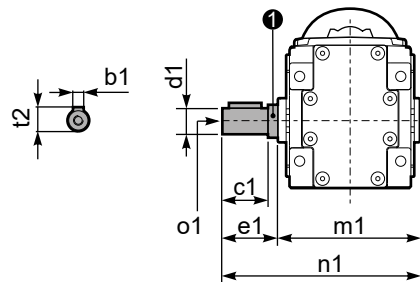
**PX33S...BR..** Reaction Arm  
Braccio di reazione



**RX33S...** Input shaft  
Albero in entrata



**PX33SA..** Single output shaft  
Albero semplice in uscita



| d1                                      | b1 | c1   | e1   | m1    | n1  | t2   | o1    | 1 kit code |
|---|----|------|------|-------|-----|------|-------|------------|
| ø20 k6                                  | 6  | 37.5 | 40   | 120   | 160 | 22.5 | M8x20 | KX2S.5.028 |
| ø25 <sup>-0.005</sup> <sub>-0.020</sub> | 8  | 60   | 63.2 | 126.8 | 190 | 28   | M8x20 | K063.5.028 |



**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    |     | Available B14 motor flanges |    |    |    | Output Shaft<br> | Ratios code |
|--|------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----|-----------------------------|----|----|----|------------------|-------------|
|  |            |  |  |                        |  |   | -B                         | -C | -D | -E | -F  | -Q                          | -R | -T | -U |                  |             |
|  |            |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 100 | 112                         | 71 | 80 | 90 |                  |             |
| 192  | 7.29       | 2.2                                    | 104                                      | 0.9                    | 2.0                                      | 95  | B                          |    |    |    |     | C                           | C  |    |    | 2811             | 01          |
| 125  | 11.20      | 2.2                                    | 159                                      | 0.9                    | 2.0                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 288              | 02          |
| 106  | 13.18      | 1.5                                    | 129                                      | 1.2                    | 1.7                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 1911             | 03          |
| 92   | 15.27      | 1.1                                    | 109                                      | 1.4                    | 1.5                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 1711             | 04          |
| 78   | 17.93      | 1.1                                    | 128                                      | 1.2                    | 1.3                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 1511             | 05          |
| 69   | 20.25      | 1.1                                    | 145                                      | 1.0                    | 1.1                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 198              | 06          |
| 65   | 21.40      | 1.1                                    | 153                                      | 1.0                    | 1.1                                      | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 1311             | 07          |
| 60   | 23.47      | 0.75                                   | 115                                      | 1.3                    | 0.98                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 178              | 08          |
| 51   | 27.55      | 0.75                                   | 135                                      | 1.1                    | 0.83                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 158              | 09          |
| 47.9   | 29.21      | 0.75                                   | 143                                      | 1.0                    | 0.78                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 1011             | 10          |
| 42.6   | 32.88      | 0.75                                   | 161                                      | 0.9                    | 0.70                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 138              | 11          |
| 36.7   | 38.12      | 0.55                                   | 138                                      | 1.1                    | 0.60                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 911              | 12          |
| 31.2   | 44.89      | 0.55                                   | 163                                      | 0.9                    | 0.51                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 108              | 13          |
| 27.8   | 50.34      | 0.37                                   | 122                                      | 1.1                    | 0.40                                     | 131                                       | B                          |    |    |    |     | C                           | C  |    |    | 711              | 14          |
| 23.9   | 58.58      | 0.37                                   | 142                                      | 1.1                    | 0.39                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 98               | 15          |
| 18.1   | 77.36      | 0.25                                   | 126                                      | 1.2                    | 0.30                                     | 150                                       | B                          |    |    |    |     | C                           | C  |    |    | 78               | 16          |

**Motor Flanges Available** Flange Motore Disponibili **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X42A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X42A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X42A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X42A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X42A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|-----------------------|--|---------|--------------------|---------|---------|-----|
|                       |  |         |                    |         |         |     |
| B3                    | B6   | B7      | B8                 | V5      | V6      | V8  |
| 0.60 LT               | 0.75 LT  | 0.50 LT | 0.70 LT            | 1.10 LT | 0.60 LT | Ask |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |     |

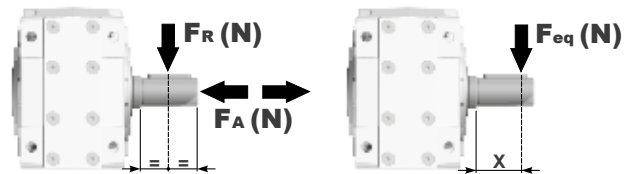
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

### Output shaft

Albero di uscita

$$F_{eq} = F_R \cdot \frac{123}{X+97}$$

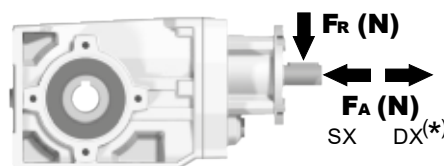


| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 250                                    | 500 | 2500 | 75                                     | 800 | 4000 | 15                                     | 960 | 4800 |
| 150                                    | 600 | 3000 | 50                                     | 960 | 4800 |  |     |      |
| 100                                    | 700 | 3500 | 25                                     | 960 | 4800 |  |     |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

### Input shaft

albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|
| 1400                                   | 240 | 1200 |
| 900                                    | 280 | 1400 |
| 500                                    | 340 | 1700 |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

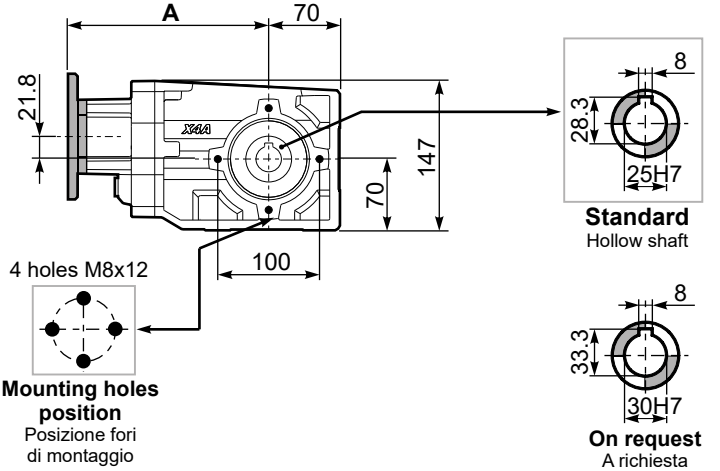
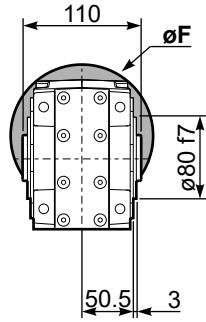
**tab. 2**



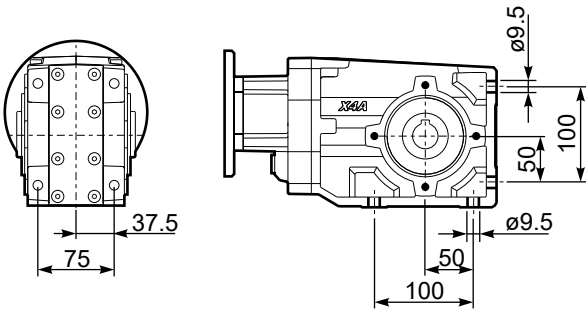
**PX42AC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **7.82 kg**

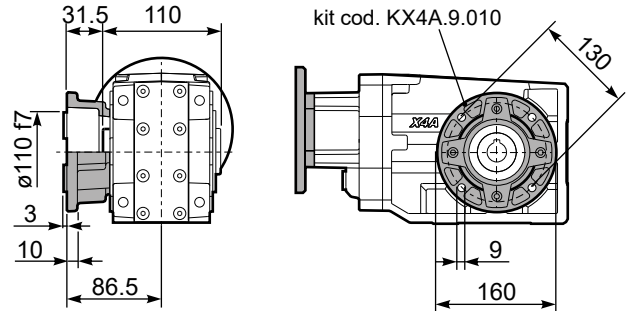
| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>63B5</b>       | K063.4.041 | 140 | 199.5 |
| <b>71B5</b>       | K063.4.042 | 160 | 197.5 |
| <b>80/90B5</b>    | K063.4.043 | 200 | 199.5 |
| <b>100/112B5</b>  | KC40.4.043 | 250 | 214.3 |
| <b>71B14</b>      | K063.4.047 | 105 | 197.5 |
| <b>80B14</b>      | K063.4.046 | 120 | 199.5 |
| <b>90B14</b>      | K063.4.041 | 140 | 199.5 |
| <b>100/112B14</b> | KC40.4.041 | 160 | 214.5 |



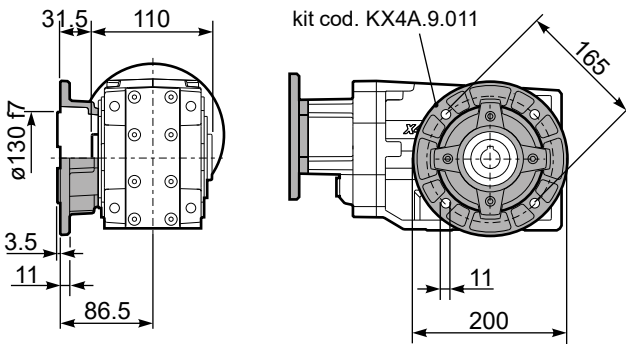
**PX42A...FB..** Feet  
Piedini



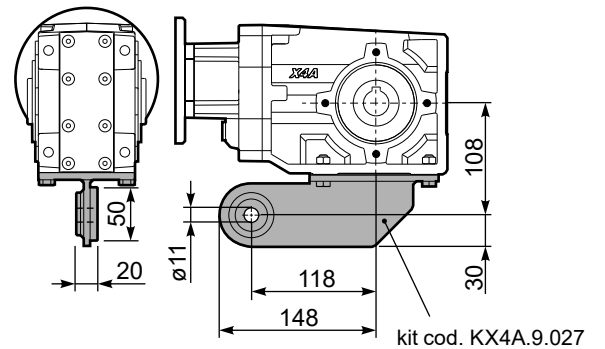
**PX42A...-F2..** Output flange  
Flangia uscita



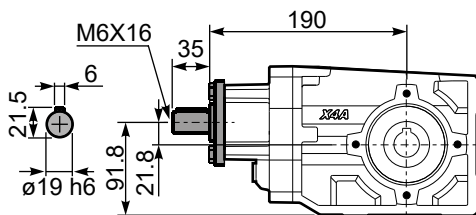
**PX42A...-F3..** Output flange  
Flangia uscita



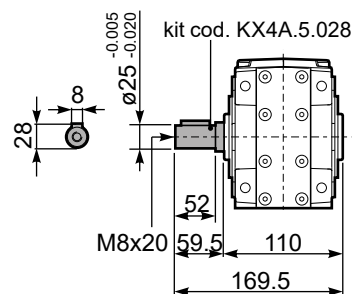
**PX42A...BR..** Reaction Arm  
Braccio di reazione



**RX42A...** Input shaft  
Albero in entrata



**PX42AA..** Single output shaft  
Albero semplice in uscita





**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.94** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|-----------------------------|----|----|------------------|-------------|
|  |               |  |  |                        |  |   | -B                         | -C | -O                          | -P | -Q |                  |             |
|  |               |  |  |                        |  |   | 63                         | 71 | 56                          | 63 | 71 |                  |             |
| 27.8   | <b>50.35</b>  | 0.37                                   | 119                                      | 1.3                    | <b>0.46</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 171311           | 01          |
| 25.4   | <b>55.22</b>  | 0.37                                   | 131                                      | 1.1                    | <b>0.42</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 17178            | 02          |
| 23.4   | <b>59.92</b>  | 0.37                                   | 142                                      | 1.1                    | <b>0.39</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 151311           | 03          |
| 21.3   | <b>65.72</b>  | 0.37                                   | 156                                      | 1.0                    | <b>0.36</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 15178            | 04          |
| 19.5   | <b>71.78</b>  | 0.25                                   | 115                                      | 1.3                    | <b>0.33</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 101711           | 05          |
| 17.6   | <b>79.44</b>  | 0.25                                   | 127                                      | 1.2                    | <b>0.29</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 13178            | 06          |
| 15.2   | <b>92.08</b>  | 0.25                                   | 147                                      | 1.0                    | <b>0.25</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 15138            | 07          |
| 14.7   | <b>95.03</b>  | 0.25                                   | 152                                      | 1.0                    | <b>0.25</b>                              | <b>150</b>                                |                            |    | C                           | C  |    | 91711            | 08          |
| 11.1   | <b>126.55</b> | 0.18                                   | 155                                      | 1.0                    | <b>0.20</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 71711            | 09          |
| 10.5   | <b>133.15</b> | 0.18                                   | 163                                      | 1.0                    | <b>0.19</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 91311            | 10          |
| 9.3  | <b>150.18</b> | 0.12                                   | 119                                      | 1.3                    | <b>0.17</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 61711            | 11          |
| 7.9  | <b>177.30</b> | 0.12                                   | 140                                      | 1.1                    | <b>0.14</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 71311            | 12          |
| 6.7  | <b>210.42</b> | 0.09                                   | 133                                      | 1.2                    | <b>0.12</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 61311            | 13          |
| 6.1  | <b>230.79</b> | 0.09                                   | 146                                      | 1.1                    | <b>0.11</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 6178             | 14          |
| 5.1  | <b>272.47</b> | 0.06                                   | 113                                      | 1.4                    | <b>0.09</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 7138             | 15          |
| 4.3  | <b>323.37</b> | 0.06                                   | 134                                      | 1.2                    | <b>0.08</b>                              | <b>160</b>                                |                            |    | C                           | C  |    | 6138             | 16          |

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X43A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X43A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X43A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X43A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X43A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|-----------------------|--|---------|--------------------|---------|---------|-----|
|                       |  |         |                    |         |         |     |
| B3                    | B6   | B7      | B8                 | V5      | V6      | V8  |
| 0.80 LT               | 0.80 LT  | 0.60 LT | 0.80 LT            | 1.20 LT | 0.70 LT | Ask |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |     |

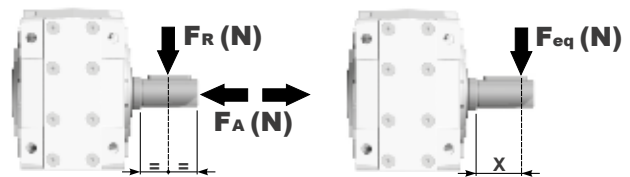
For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## -RADIAL AND AXIAL LOADS

### Output shaft

Albero di uscita

$$F_{eq} = FR \cdot \frac{123}{X+97}$$

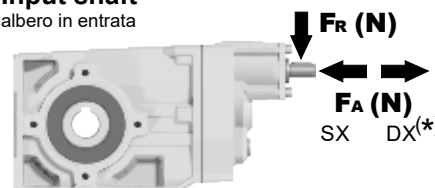


| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|--|-----|------|--|-----|------|
| 250                                    | 500 | 2500 | 75                                     | 800 | 4000 | 15                                     | 960 | 4800 |
| 150                                    | 600 | 3000 | 50                                     | 960 | 4800 |  |     |      |
| 100                                    | 700 | 3500 | 25                                     | 960 | 4800 |  |     |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

### Input shaft

albero in entrata



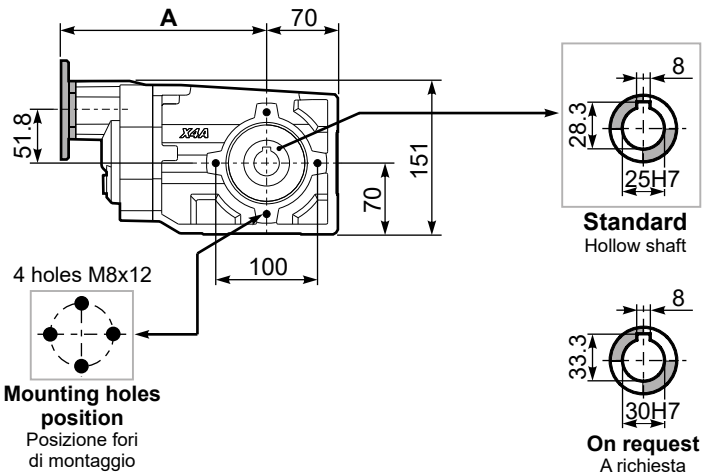
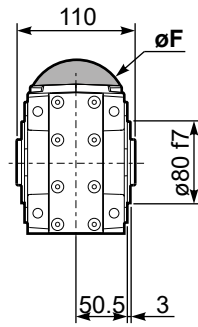
| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|--|-----------|-----------|
| 1400                                   | 140       | 700       |
| 900                                    | 160       | 800       |
| 500                                    | 190       | 950       |

**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

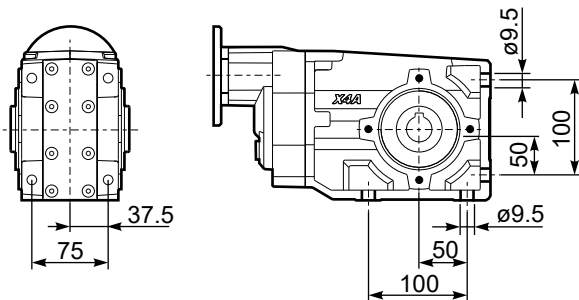
**PX43AC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **7.93 kg**

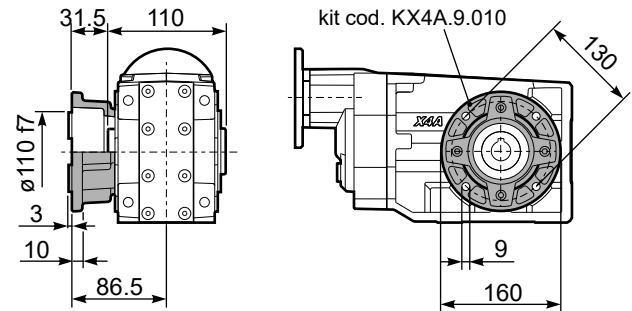
| M. flanges   | Kit code   | øF  | A     |
|--------------|------------|-----|-------|
| <b>63B5</b>  | K050.4.041 | 138 | 205   |
| <b>71B5</b>  | K050.4.042 | 160 | 202.5 |
| <b>56B14</b> | KC40.4.049 | 80  | 202.5 |
| <b>63B14</b> | K050.4.047 | 90  | 205   |
| <b>71B14</b> | K050.4.045 | 105 | 202.5 |



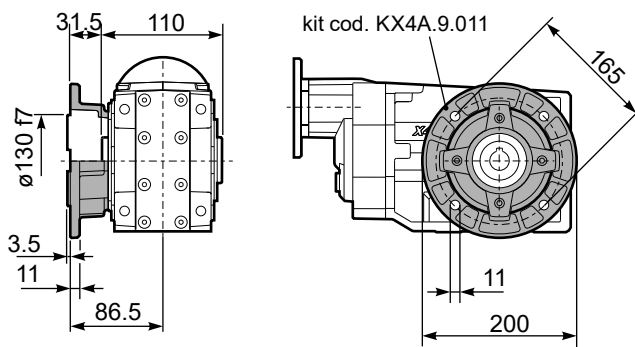
**PX43A...FB..** Feet  
Piedini



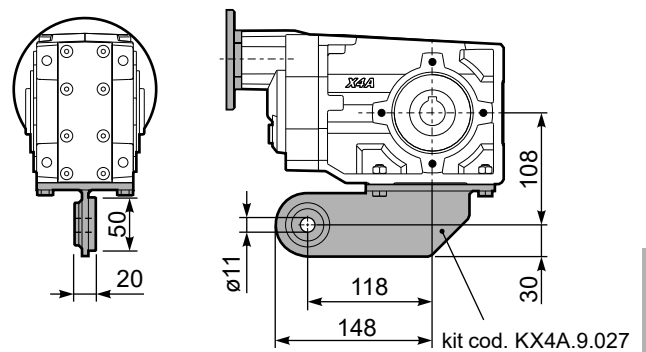
**PX43A...-F2..** Output flange  
Flangia uscita



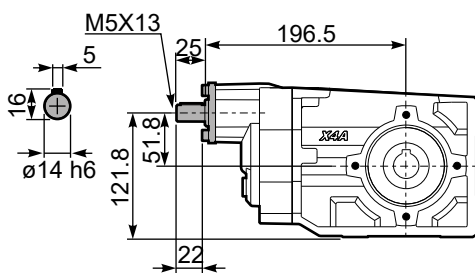
**PX43A...-F3..** Output flange  
Flangia uscita



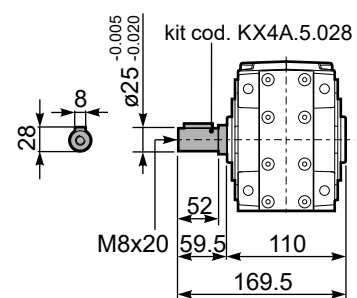
**PX43A...BR..** Reaction Arm  
Braccio di reazione



**RX43A...** Input shaft  
Albero in entrata



**PX43AA..** Single output shaft  
Albero semplice in uscita





**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |            | Available B14 motor flanges |    |            | Output Shaft<br> | Ratios code |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|------------|-----------------------------|----|------------|------------------|-------------|
|  |              |  |  |                        |  |   | -C                         | -D | -E | -F         | -R                          | -T | -U         |                  |             |
|  |              |  |  |                        |  |   | 71                         | 80 | 90 | 100<br>112 | 80                          | 90 | 100<br>112 |                  |             |
| 232  | <b>6.03</b>  | 3                                      | 116                                      | 1.2                    | <b>3.4</b>                               | <b>135</b>                                | B                          |    |    |            |                             |    |            | 3011             | 01          |
| 151  | <b>9.26</b>  | 3                                      | 179                                      | 0.9                    | <b>2.6</b>                               | <b>155</b>                                | B                          |    |    |            |                             |    |            | 308              | 02          |
| 123  | <b>11.36</b> | 3                                      | 219                                      | 1.0                    | <b>3.1</b>                               | <b>230</b>                                | B                          |    |    |            |                             |    |            | 2011             | 03          |
| 91   | <b>15.36</b> | 2.2                                    | 218                                      | 1.1                    | <b>2.5</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 1611             | 04          |
| 80   | <b>17.46</b> | 2.2                                    | 248                                      | 1.0                    | <b>2.2</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 208              | 05          |
| 70   | <b>19.97</b> | 2.2                                    | 284                                      | 0.9                    | <b>1.9</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 1311             | 06          |
| 59   | <b>23.60</b> | 1.5                                    | 231                                      | 1.1                    | <b>1.6</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 168              | 07          |
| 57   | <b>24.45</b> | 1.5                                    | 239                                      | 1.0                    | <b>1.6</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 1111             | 08          |
| 45.6   | <b>30.69</b> | 1.1                                    | 220                                      | 1.1                    | <b>1.2</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 138              | 09          |
| 39.6   | <b>35.35</b> | 1.1                                    | 253                                      | 1.0                    | <b>1.1</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 811              | 10          |
| 37.3   | <b>37.57</b> | 1.1                                    | 269                                      | 0.9                    | <b>1.0</b>                               | <b>250</b>                                | B                          |    |    |            |                             |    |            | 118              | 11          |
| 28.8   | <b>48.68</b> | 0.75                                   | 239                                      | 1.0                    | <b>0.78</b>                              | <b>250</b>                                | B                          |    |    |            |                             |    |            | 611              | 12          |
| 25.8   | <b>54.33</b> | 0.75                                   | 267                                      | 0.9                    | <b>0.70</b>                              | <b>250</b>                                | B                          |    |    |            |                             |    |            | 88               | 13          |
| 18.7   | <b>74.81</b> | 0.37                                   | 181                                      | 1.2                    | <b>0.43</b>                              | <b>210</b>                                | B                          |    |    |            |                             |    |            | 68               | 14          |

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **X52A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X52A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X52A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X52A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X52A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

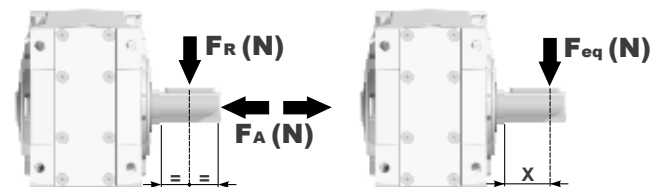
| Standard supplied            | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |           |           |                           |           |           |  |
|------------------------------|--|-----------|-----------|---------------------------|-----------|-----------|--|
|                              |  |           |           |                           |           |           |  |
| <b>B3</b>                    | <b>B6</b>  | <b>B7</b> | <b>B8</b> | <b>V5</b>                 | <b>V6</b> | <b>V8</b> |  |
| 0.90 LT                      | 1.50LT   | 0.75 LT   | 1.40 LT   | 1.95 LT                   | 1.15 LT   | Ask       |  |
| <b>SHELL Omala S4 WE 320</b> |  |           |           | <b>ENI Telium VSF 320</b> |           |           |  |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

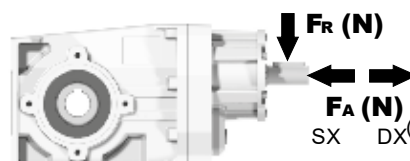
$$F_{eq} = F_R \frac{144.5}{X+114.5}$$



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA   | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA   | FR   |
|--|-----|------|--|------|------|--|------|------|
| <b>250</b>                             | 600 | 3000 | <b>75</b>                              | 820  | 4100 | <b>15</b>                              | 1660 | 8300 |
| <b>150</b>                             | 700 | 3500 | <b>50</b>                              | 960  | 4800 |  |      |      |
| <b>100</b>                             | 800 | 4000 | <b>25</b>                              | 1350 | 6750 |  |      |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

**Input shaft**  
albero in entrata



| n <sub>1</sub><br>[min <sup>-1</sup> ] | FA  | FR   |
|--|-----|------|
| <b>1400</b>                            | 450 | 2250 |
| <b>900</b>                             | 500 | 2500 |
| <b>500</b>                             | 600 | 3000 |

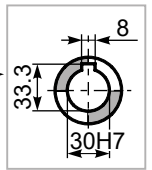
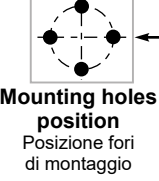
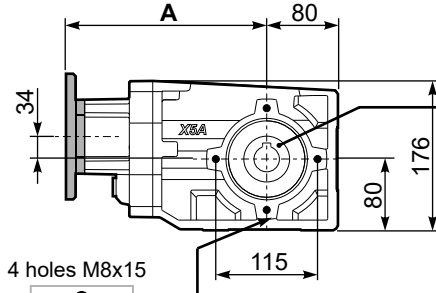
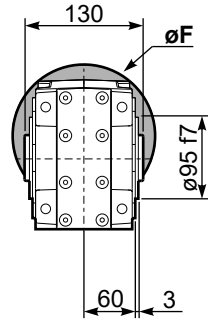
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

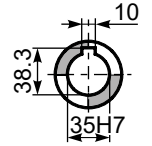
**PX52AC...** Basic Gearbox  
Riduttore base

Gearbox weight **12.80 kg**  
peso riduttore

| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 234 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 236 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 245 |
| <b>80B14</b>      | K085.4.046 | 120 | 236 |
| <b>90B14</b>      | K085.4.045 | 140 | 236 |
| <b>100/112B14</b> | K085.4.047 | 160 | 245 |

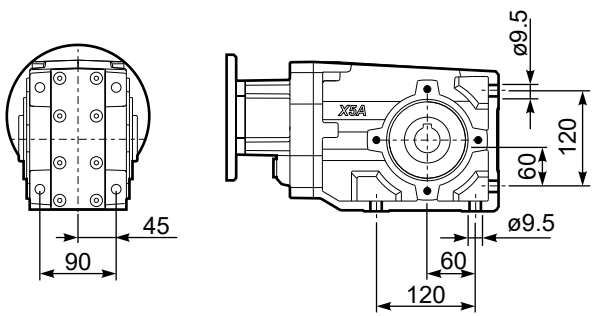


**Standard**  
Hollow shaft

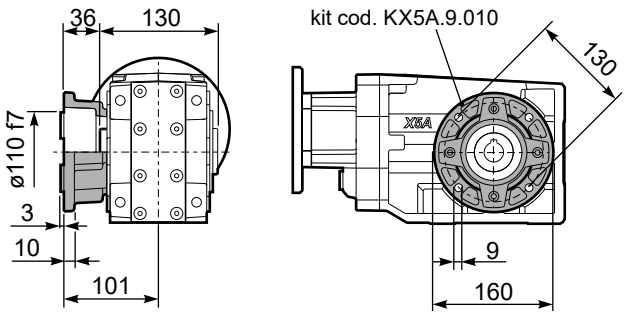


**On request**  
A richiesta

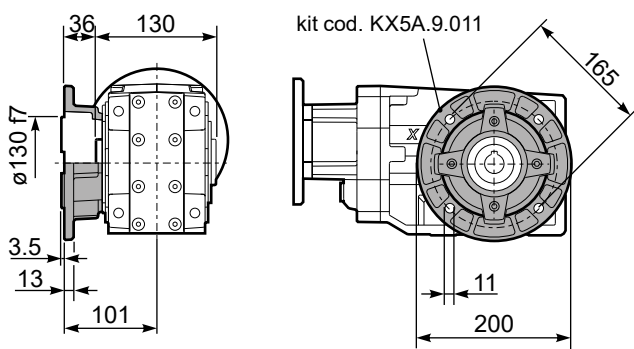
**PX52A...FB..** Feet  
Piedini



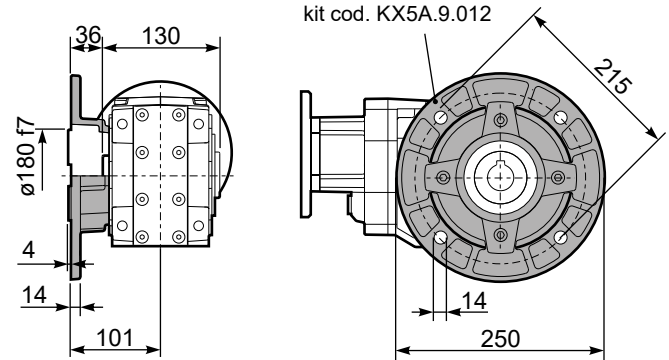
**PX52A...-F2..** Output flange  
Flangia uscita



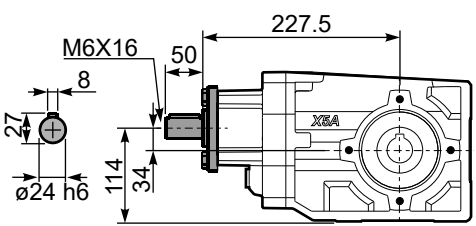
**PX52A...-F3..** Output flange  
Flangia uscita



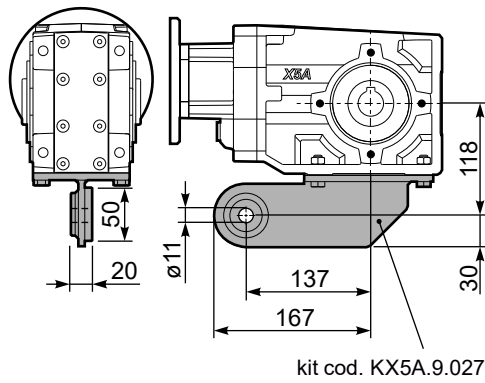
**PX52A...-F4..** Output flange  
Flangia uscita



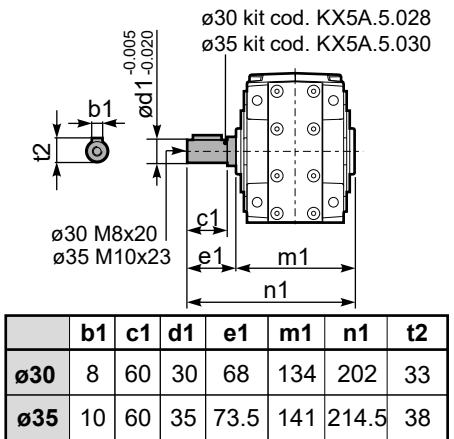
**RX52A...** Input shaft  
Albero in entrata



**PX52A...BR..** Reaction Arm  
Braccio di reazione



**PX52AA..** Single output shaft  
Albero semplice in uscita







### QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.94** for all ratios input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 24.7  | <b>56.76</b>  | 0.55                            | 201                               | 1.2                    | 0.69                              | 250                                | B                          |    |    |    | C                           | C  |    | 191311           | 01          |
| 21.3  | <b>65.79</b>  | 0.55                            | 233                               | 1.1                    | 0.59                              | 250                                | B                          |    |    |    | C                           | C  |    | 171311           | 02          |
| 18.1  | <b>77.23</b>  | 0.55                            | 274                               | 0.9                    | 0.50                              | 250                                | B                          |    |    |    | C                           | C  |    | 151311           | 03          |
| 16.0  | <b>87.23</b>  | 0.37                            | 207                               | 1.2                    | 0.45                              | 250                                | B                          |    |    |    | C                           | C  |    | 19138            | 04          |
| 15.2  | <b>92.18</b>  | 0.37                            | 219                               | 1.1                    | 0.42                              | 250                                | B                          |    |    |    | C                           | C  |    | 131311           | 05          |
| 13.9  | <b>100.47</b> | 0.37                            | 238                               | 1.0                    | 0.39                              | 250                                | B                          |    |    |    | C                           | C  |    | 19811            | 06          |
| 12.0  | <b>116.45</b> | 0.37                            | 276                               | 0.9                    | 0.33                              | 250                                | B                          |    |    |    | C                           | C  |    | 17811            | 07          |
| 11.1  | <b>125.82</b> | 0.25                            | 201                               | 1.2                    | 0.31                              | 250                                | B                          |    |    |    | C                           | C  |    | 101311           | 08          |
| 9.9   | <b>141.66</b> | 0.25                            | 227                               | 1.1                    | 0.28                              | 250                                | B                          |    |    |    | C                           | C  |    | 13138            | 09          |
| 8.6   | <b>163.16</b> | 0.25                            | 261                               | 1.0                    | 0.24                              | 250                                | B                          |    |    |    | C                           | C  |    | 13811            | 10          |
| 7.8   | <b>178.96</b> | 0.18                            | 219                               | 1.1                    | 0.22                              | 250                                | B                          |    |    |    | C                           | C  |    | 1788             | 11          |
| 7.2   | <b>193.36</b> | 0.18                            | 237                               | 1.1                    | 0.20                              | 250                                | B                          |    |    |    | C                           | C  |    | 10138            | 12          |
| 6.5   | <b>216.84</b> | 0.18                            | 265                               | 0.9                    | 0.18                              | 250                                | B                          |    |    |    | C                           | C  |    | 71311            | 13          |
| 5.5   | <b>252.36</b> | 0.12                            | 200                               | 1.3                    | 0.15                              | 250                                | B                          |    |    |    | C                           | C  |    | 9138             | 14          |
| 4.8   | <b>290.67</b> | 0.12                            | 230                               | 1.1                    | 0.13                              | 250                                | B                          |    |    |    | C                           | C  |    | 9811             | 15          |
| 4.2   | <b>333.23</b> | 0.12                            | 263                               | 0.9                    | 0.12                              | 250                                | B                          |    |    |    | C                           | C  |    | 7138             | 16          |
| 3.6   | <b>383.82</b> | 0.12                            | 303                               | 0.8                    | 0.10                              | 250                                | B                          |    |    |    | C                           | C  |    | 7811             | 17          |
| 3.1   | <b>446.70</b> | 0.12*                           | 353                               | 0.7                    | 0.09                              | 250                                | B                          |    |    |    | C                           | C  |    | 988              | 18          |
| 2.4   | <b>589.85</b> | 0.12*                           | 466                               | 0.5                    | 0.07                              | 250                                | B                          |    |    |    | C                           | C  |    | 788              | 19          |

  Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

\* Power higher than the maximum one which can be supported by the gearbox. Select according to the torque  $M_{2R}$   
 Potenza superiore a quella massima sopportabile dal riduttore. Selezionare in base al momento torcente  $M_{2R}$

**EN** Unit **X53A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X53A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X53A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X53A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X53A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|
|                       |  |         |         |                    |         |     |
| 1.30 LT               | 1.55 LT  | 0.85 LT | 1.45 LT | 2.10 LT            | 1.25 LT | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |

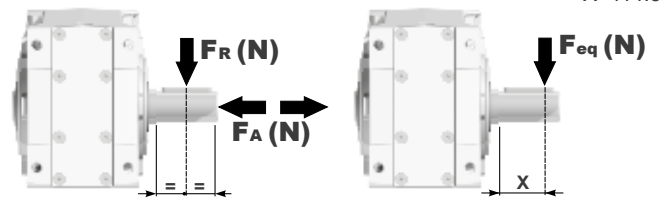
For all details on lubrication and plugs check our website tab. 1  
 Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

#### Output shaft

Albero di uscita

$$F_{eq} = FR \cdot \frac{144.5}{X+114.5}$$

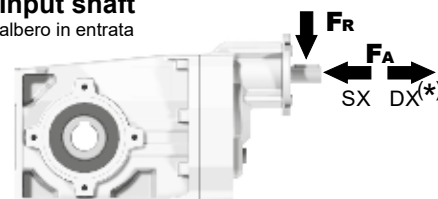


| $n_2$<br>[min <sup>-1</sup> ] | FA  | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA   | FR   | $n_2$<br>[min <sup>-1</sup> ] | FA   | FR   |
|-------------------------------|-----|------|-------------------------------|------|------|-------------------------------|------|------|
| 250                           | 600 | 3000 | 75                            | 820  | 4100 | 15                            | 1660 | 8300 |
| 150                           | 700 | 3500 | 50                            | 960  | 4800 |                               |      |      |
| 100                           | 800 | 4000 | 25                            | 1350 | 6750 |                               |      |      |

**FR** On request taper roller bearings to increase radial loads.  
 A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

#### Input shaft

albero in entrata



| $n_1$<br>[min <sup>-1</sup> ] | FA<br>[N] | FR<br>[N] |
|-------------------------------|-----------|-----------|
| 1400                          | 400       | 2000      |
| 900                           | 440       | 2200      |
| 500                           | 440       | 2200      |

\*Strong axial loads in the DX direction are not allowed.  
 Non sono consentiti forti carichi assiali con direzione DX

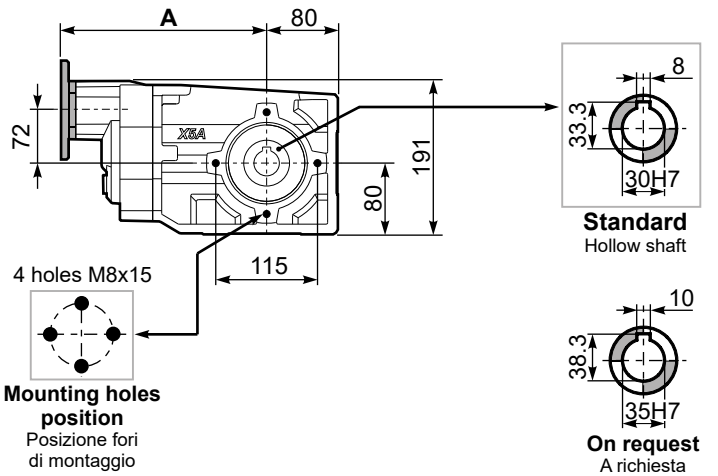
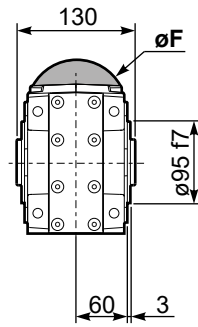
tab. 2



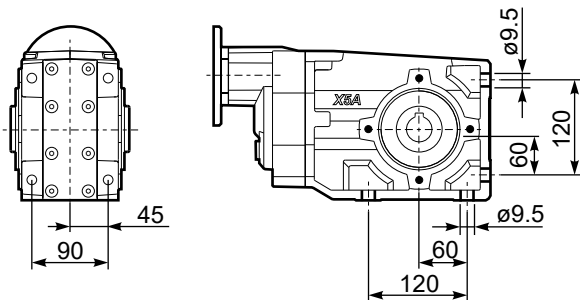
**PX53AC...** Basic Gearbox  
Riduttore base

Gearbox weight **12.65 kg**  
peso riduttore

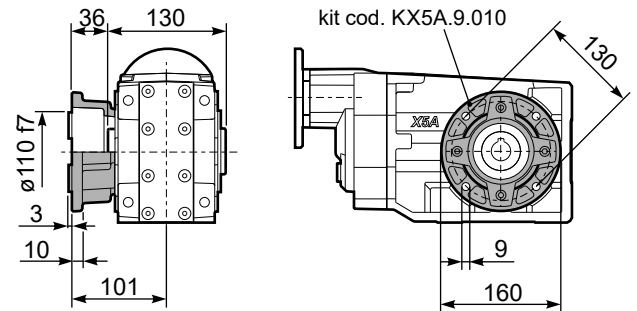
| M. flanges     | Kit code   | øF  | A   |
|----------------|------------|-----|-----|
| <b>63B5</b>    | K063.4.041 | 140 | 246 |
| <b>71B5</b>    | K063.4.042 | 160 | 244 |
| <b>80/90B5</b> | K063.4.043 | 200 | 246 |
| <b>71B14</b>   | K063.4.047 | 105 | 244 |
| <b>80B14</b>   | K063.4.046 | 120 | 246 |
| <b>90B14</b>   | K063.4.041 | 140 | 246 |



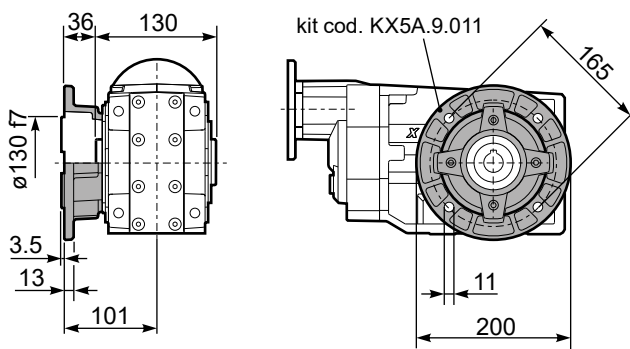
**PX53A...FB..** Feet  
Piedini



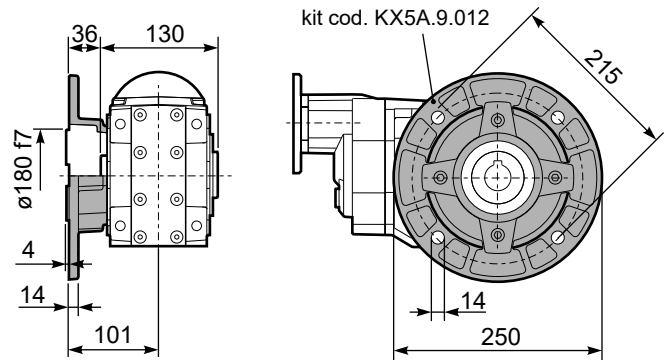
**PX53A...-F2..** Output flange  
Flangia uscita



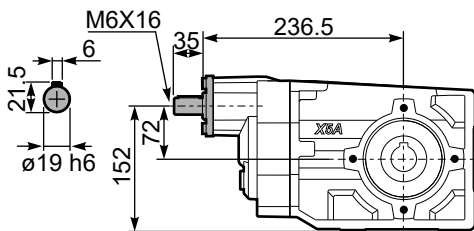
**PX53A...-F3..** Output flange  
Flangia uscita



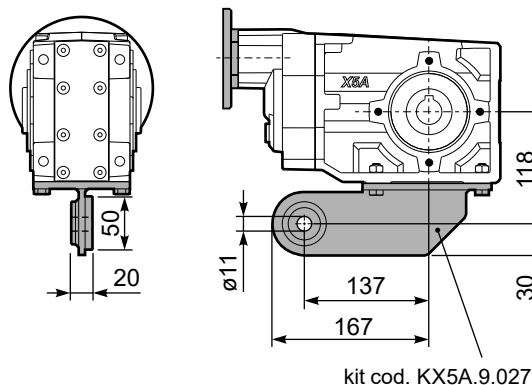
**PX53A...-F4..** Output flange  
Flangia uscita



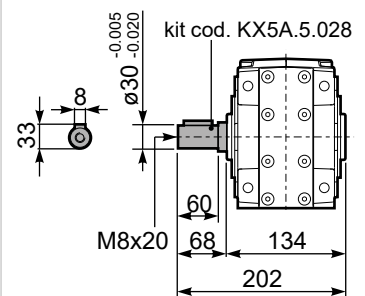
**RX53A...** Input shaft  
Albero in entrata



**PX53A...BR..** Reaction Arm  
Braccio di reazione



**PX53A..** Single output shaft  
Albero semplice in uscita





**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.96** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |
|--|--------------|--|--|------------------------|--|---|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|
|  |              |  |  |                        |  |   | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |
|  |              |  |  |                        |  |   | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |
| 232  | <b>6.03</b>  | 5.5                                    | 211                                      | 1.1                    | <b>6.1</b>                               | <b>240</b>                                | B                          |    |    |            |     |                             |    |            |     | 3011             | 01          |
| 151  | <b>9.26</b>  | 4                                      | 238                                      | 1.1                    | <b>4.5</b>                               | <b>270</b>                                | B                          |    |    |            |     |                             |    |            |     | 308              | 02          |
| 123  | <b>11.36</b> | 4                                      | 291                                      | 1.2                    | <b>4.7</b>                               | <b>350</b>                                | B                          |    |    |            |     |                             |    |            |     | 2011             | 03          |
| 91   | <b>15.36</b> | 4                                      | 394                                      | 1.0                    | <b>3.8</b>                               | <b>385</b>                                | B                          |    |    |            |     |                             |    |            |     | 1611             | 04          |
| 80   | <b>17.46</b> | 4                                      | 448                                      | 0.9                    | <b>3.5</b>                               | <b>400</b>                                | B                          |    |    |            |     |                             |    |            |     | 208              | 05          |
| 70   | <b>19.97</b> | 3                                      | 386                                      | 1.1                    | <b>3.1</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 1311             | 06          |
| 59   | <b>23.60</b> | 3                                      | 456                                      | 0.9                    | <b>2.7</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 168              | 07          |
| 57   | <b>24.45</b> | 3                                      | 472                                      | 0.9                    | <b>2.6</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 1111             | 08          |
| 45.6   | <b>30.69</b> | 2.2                                    | 436                                      | 0.9                    | <b>2.0</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 138              | 09          |
| 39.6   | <b>35.35</b> | 1.5                                    | 346                                      | 1.2                    | <b>1.8</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 811              | 10          |
| 37.3   | <b>37.57</b> | 1.5                                    | 368                                      | 1.1                    | <b>1.7</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 118              | 11          |
| 28.8   | <b>48.68</b> | 1.1                                    | 348                                      | 1.0                    | <b>1.1</b>                               | <b>365</b>                                | B                          |    |    |            |     |                             |    |            |     | 611              | 12          |
| 25.8   | <b>54.33</b> | 1.1                                    | 389                                      | 1.1                    | <b>1.2</b>                               | <b>410</b>                                | B                          |    |    |            |     |                             |    |            |     | 88               | 13          |
| 18.7   | <b>74.81</b> | 0.75                                   | 367                                      | 1.0                    | <b>0.73</b>                              | <b>360</b>                                | B                          |    |    |            |     |                             |    |            |     | 68               | 14          |

**Motor Flanges Available** Flange Motore Disponibili **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X62A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X62A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X62A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X62A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

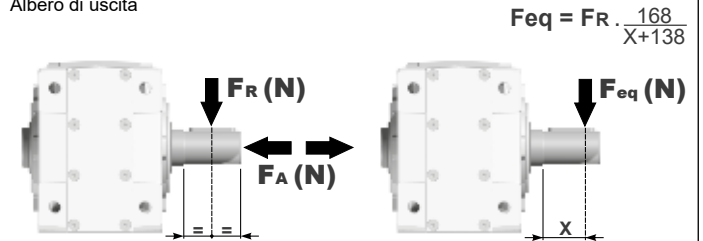
**E** El reductor tamaño **X62A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied            | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |           |           |                           |           |           |           |
|------------------------------|--|-----------|-----------|---------------------------|-----------|-----------|-----------|
|                              |  |           |           |                           |           |           |           |
| <b>B3</b>                    | <b>B6</b>  | <b>B7</b> | <b>B8</b> | <b>V5</b>                 | <b>V6</b> | <b>V8</b> | <b>V8</b> |
| 1.25 LT                      | 1.70 LT  | 0.95 LT   | 1.60 LT   | 2.45 LT                   | 1.50 LT   | Ask       | Ask       |
| <b>SHELL Omala S4 WE 320</b> |  |           |           | <b>ENI Telium VSF 320</b> |           |           |           |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

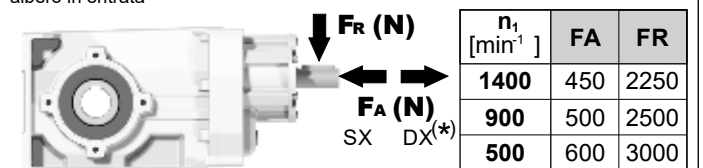
**Output shaft**  
Albero di uscita



| n <sub>2</sub><br>[min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA   | FR   | n <sub>2</sub><br>[min <sup>-1</sup> ] | FA   | FR   |
|--|-----|------|--|------|------|--|------|------|
| <b>250</b>                             | 600 | 3000 | <b>75</b>                              | 890  | 4450 | <b>15</b>                              | 1660 | 8300 |
| <b>150</b>                             | 700 | 3500 | <b>50</b>                              | 1140 | 5700 |  |      |      |
| <b>100</b>                             | 780 | 3900 | <b>25</b>                              | 1330 | 6650 |  |      |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

**Input shaft**  
albero in entrata



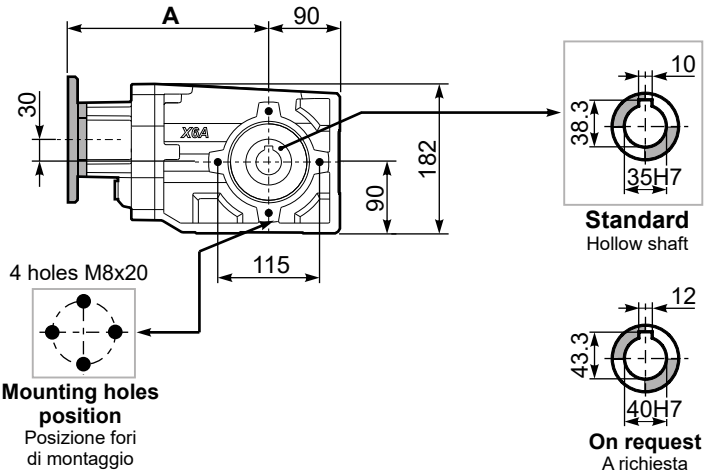
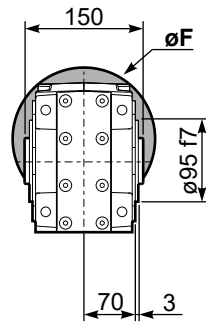
**\*Strong axial loads in the DX direction are not allowed.**  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

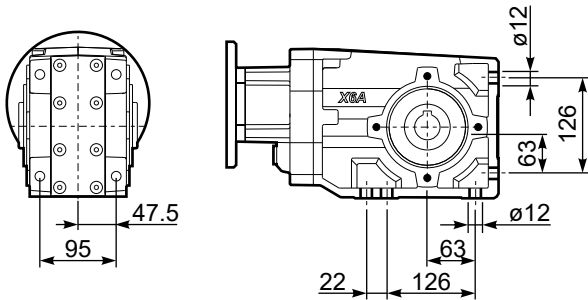
**PX62AC...** Basic Gearbox  
Riduttore base

Gearbox weight **15.80 kg**  
peso riduttore

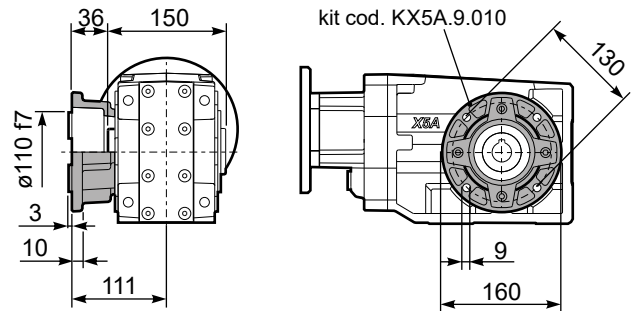
| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 253 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 255 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 264 |
| <b>132B5</b>      | KC51.4.043 | 300 | 285 |
| <hr/>             |            |     |     |
| <b>80B14</b>      | K085.4.046 | 120 | 255 |
| <b>90B14</b>      | K085.4.045 | 140 | 255 |
| <b>100/112B14</b> | K085.4.047 | 160 | 264 |
| <b>132B14</b>     | KC51.4.041 | 200 | 285 |



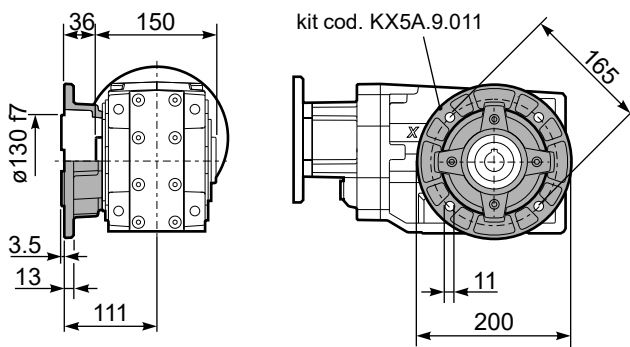
**PX62A...FB..** Feet  
Piedini



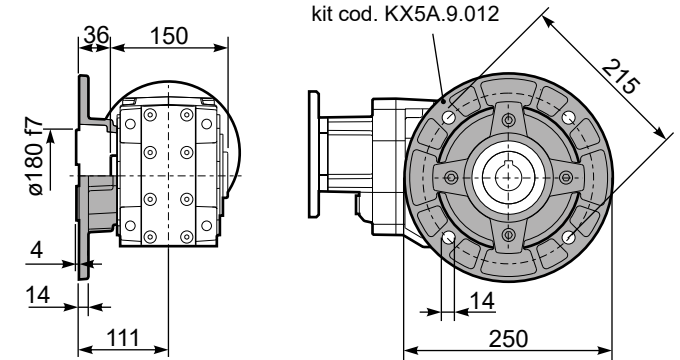
**PX62A...-F2..** Output flange  
Flangia uscita



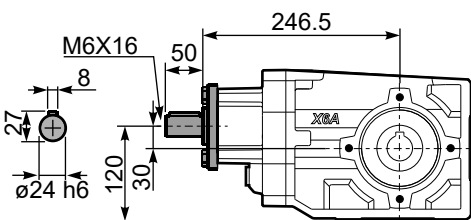
**PX62A...-F3..** Output flange  
Flangia uscita



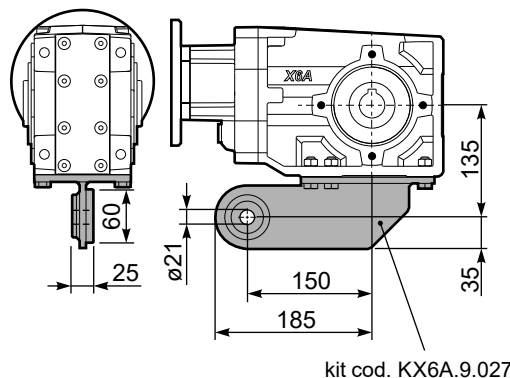
**PX62A...-F4..** Output flange  
Flangia uscita



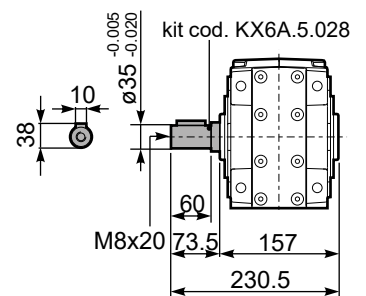
**RX62A...** Input shaft  
Albero in entrata



**PX62A...BR..** Reaction Arm  
Braccio di reazione



**PX62AA..** Single output shaft  
Albero semplice in uscita





**QUICK SELECTION / Selezione veloce** The dynamic efficiency is **0.94** for all ratios **input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>**

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|  |               |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|  |               |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 24.7   | <b>56.76</b>  | 1.1                                    | 398                                      | 1.0                    | <b>1.1</b>                               | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 191311           | 01          |
| 21.3   | <b>65.79</b>  | 0.75                                   | 316                                      | 1.3                    | <b>0.97</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 171311           | 02          |
| 18.1   | <b>77.23</b>  | 0.75                                   | 371                                      | 1.1                    | <b>0.83</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 151311           | 03          |
| 16.0   | <b>87.23</b>  | 0.75                                   | 420                                      | 1.0                    | <b>0.73</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 19138            | 04          |
| 15.2   | <b>92.18</b>  | 0.75                                   | 443                                      | 0.9                    | <b>0.69</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 131311           | 05          |
| 13.9   | <b>100.47</b> | 0.55                                   | 357                                      | 1.2                    | <b>0.64</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 19811            | 06          |
| 12.0   | <b>116.45</b> | 0.55                                   | 413                                      | 1.0                    | <b>0.55</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 17811            | 07          |
| 11.1   | <b>125.82</b> | 0.55                                   | 446                                      | 0.9                    | <b>0.51</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 101311           | 08          |
| 9.9  | <b>141.66</b> | 0.37                                   | 336                                      | 1.2                    | <b>0.45</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 13138            | 09          |
| 8.6  | <b>163.16</b> | 0.37                                   | 387                                      | 1.1                    | <b>0.39</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 13811            | 10          |
| 7.8  | <b>178.96</b> | 0.37                                   | 424                                      | 1.0                    | <b>0.36</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 1788             | 11          |
| 7.2  | <b>193.36</b> | 0.37                                   | 459                                      | 0.9                    | <b>0.33</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 10138            | 12          |
| 6.5  | <b>216.84</b> | 0.25                                   | 347                                      | 1.2                    | <b>0.29</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 71311            | 13          |
| 5.5  | <b>252.36</b> | 0.25                                   | 404                                      | 1.0                    | <b>0.25</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 9138             | 14          |
| 4.8  | <b>290.67</b> | 0.25                                   | 465                                      | 0.9                    | <b>0.22</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 9811             | 15          |
| 4.2  | <b>333.23</b> | 0.18                                   | 408                                      | 1.0                    | <b>0.19</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 7138             | 16          |
| 3.6  | <b>383.82</b> | 0.18                                   | 470                                      | 0.9                    | <b>0.17</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 7811             | 17          |
| 3.1  | <b>446.70</b> | 0.12                                   | 353                                      | 1.2                    | <b>0.14</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 988              | 18          |
| 2.4  | <b>589.85</b> | 0.12                                   | 466                                      | 0.9                    | <b>0.11</b>                              | <b>410</b>                                | B                          |    |    |    | C                           | C  |    | 788              | 19          |

  Motor Flanges Available Flange Motore Disponibili    
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione    
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione    
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **X63A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X63A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X63A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X63A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X63A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

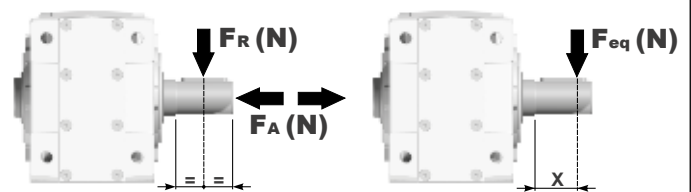
| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |  |
|-----------------------|--|---------|---------|--------------------|---------|-----|--|
|                       |  |         |         |                    |         |     |  |
| B3                    | B6   | B7      | B8      | V5                 | V6      | V8  |  |
| 1.80 LT               | 1.80 LT  | 1.05 LT | 1.70 LT | 2.60 LT            | 1.65 LT | Ask |  |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |  |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

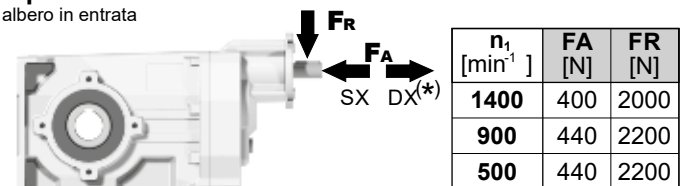
$F_{eq} = F_R \cdot \frac{168}{X+138}$



| n <sub>2</sub> [min <sup>-1</sup> ] | FA  | FR   | n <sub>2</sub> [min <sup>-1</sup> ] | FA   | FR   | n <sub>2</sub> [min <sup>-1</sup> ] | FA   | FR   |
|-------------------------------------|-----|------|-------------------------------------|------|------|-------------------------------------|------|------|
| 250                                 | 600 | 3000 | 75                                  | 890  | 4450 | 15                                  | 1660 | 8300 |
| 150                                 | 700 | 3500 | 50                                  | 1140 | 5700 |                                     |      |      |
| 100                                 | 780 | 3900 | 25                                  | 1330 | 6650 |                                     |      |      |

**FR** On request taper roller bearings to increase radial loads.  
A richiesta cuscinetti a rulli conici per aumentare i carichi radiali.

**Input shaft**  
albero in entrata



| n <sub>1</sub> [min <sup>-1</sup> ] | FA [N] | FR [N] |
|-------------------------------------|--------|--------|
| 1400                                | 400    | 2000   |
| 900                                 | 440    | 2200   |
| 500                                 | 440    | 2200   |

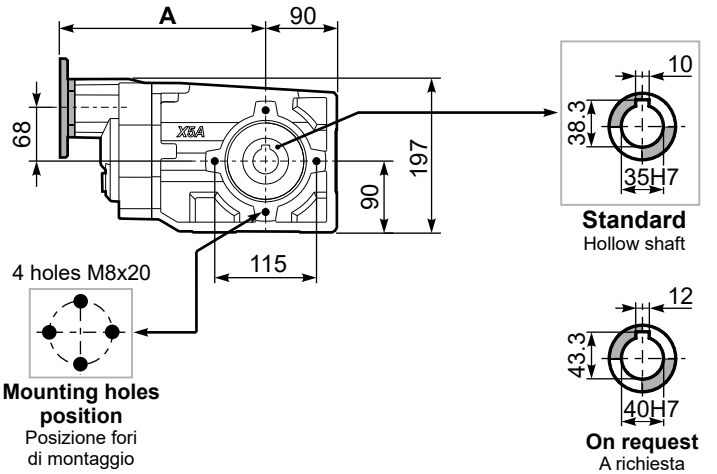
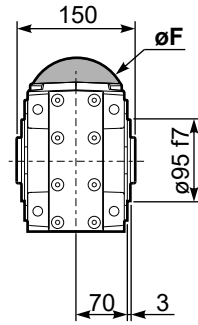
\*Strong axial loads in the DX direction are not allowed.  
Non sono consentiti forti carichi assiali con direzione DX

**tab. 2**

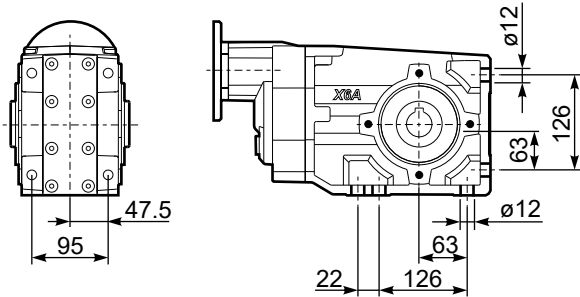
**PX63AC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **15.98 kg**

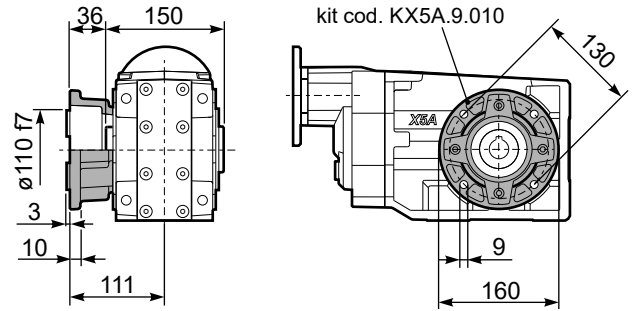
| M. flanges     | Kit code   | øF  | A   |
|----------------|------------|-----|-----|
| <b>63B5</b>    | K063.4.041 | 140 | 265 |
| <b>71B5</b>    | K063.4.042 | 160 | 263 |
| <b>80/90B5</b> | K063.4.043 | 200 | 265 |
| <b>71B14</b>   | K063.4.047 | 105 | 263 |
| <b>80B14</b>   | K063.4.046 | 120 | 265 |
| <b>90B14</b>   | K063.4.041 | 140 | 265 |



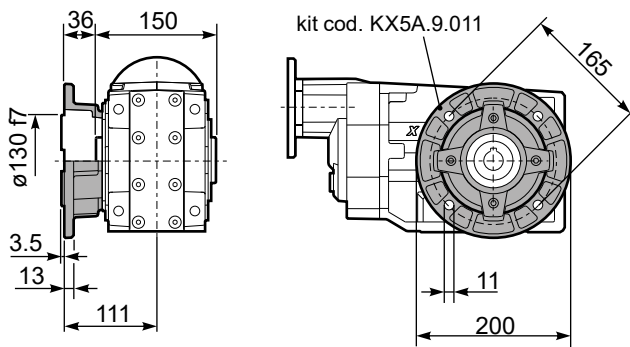
**PX63A...FB..** Feet  
Piedini



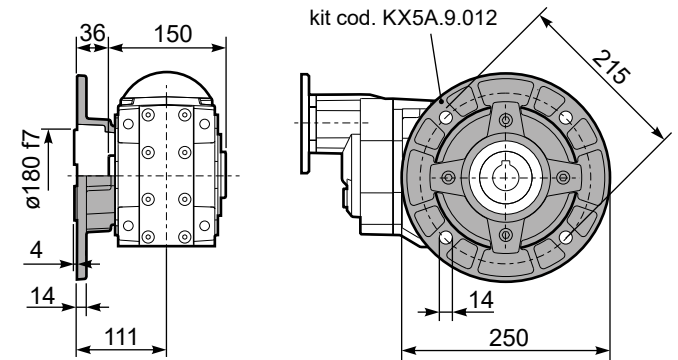
**PX63A...-F2..** Output flange  
Flangia uscita



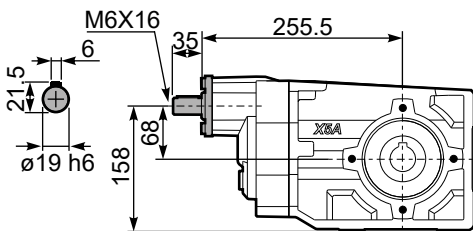
**PX63A...-F3..** Output flange  
Flangia uscita



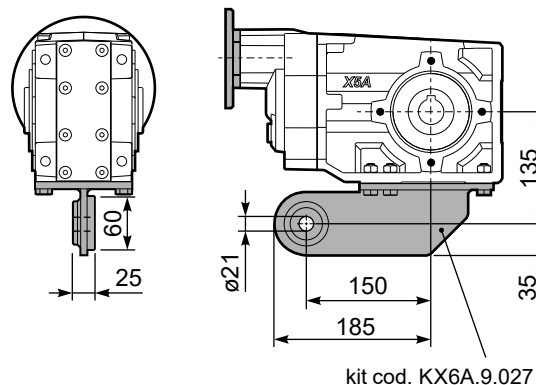
**PX63A...-F4..** Output flange  
Flangia uscita



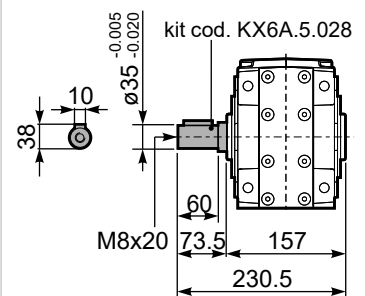
**RX63A...** Input shaft  
Albero in entrata



**PX63A...BR..** Reaction Arm  
Braccio di reazione



**PX63AA..** Single output shaft  
Albero semplice in uscita







## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br>$\varnothing$ | Ratios code<br> |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|-------------------------------|-----------------|
|   |              |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                               |                 |
|   |              |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                               |                 |
| 176   | <b>7.94</b>  | 7.5                             | 369                               | 1.0                      | 7.5                               | 380                                | B                          |    |    |            |     |                             |    |            |     | 302418                        | 01              |
| 153   | <b>9.13</b>  | 7.5                             | 425                               | 0.9                      | 6.7                               | 390                                | B                          |    |    |            |     |                             |    |            |     | 302416                        | 02              |
| 131   | <b>10.66</b> | 5.5                             | 366                               | 1.1                      | 6.0                               | 410                                | B                          |    |    |            |     |                             |    |            |     | 302414                        | 03              |
| 94  | <b>14.97</b> | 5.5                             | 514                               | 1.1                      | 6.0                               | 580                                | B                          |    |    |            |     |                             |    |            |     | 202418                        | 04              |
| 81  | <b>17.21</b> | 5.5                             | 591                               | 1.0                      | 5.4                               | 600                                | B                          |    |    |            |     |                             |    |            |     | 202416                        | 05              |
| 69  | <b>20.24</b> | 5.5                             | 695                               | 1.0                      | 5.2                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 162418                        | 06              |
| 60  | <b>23.27</b> | 4                               | 585                               | 1.2                      | 4.5                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 162416                        | 07              |
| 53  | <b>26.31</b> | 4                               | 661                               | 1.0                      | 4.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 132418                        | 08              |
| 46.3  | <b>30.25</b> | 4                               | 760                               | 0.9                      | 3.5                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 132416                        | 09              |
| 39.6  | <b>35.32</b> | 3                               | 668                               | 1.0                      | 3.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 132414                        | 10              |
| 37.8  | <b>37.03</b> | 3                               | 701                               | 1.0                      | 2.8                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 112416                        | 11              |
| 32.4  | <b>43.23</b> | 2.2                             | 602                               | 1.1                      | 2.4                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 112414                        | 12              |
| 30.1  | <b>46.58</b> | 2.2                             | 649                               | 1.0                      | 2.3                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 82418                         | 13              |
| 26.1  | <b>53.55</b> | 2.2                             | 746                               | 0.9                      | 2.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 82416                         | 14              |
| 22.4  | <b>62.52</b> | 1.5                             | 600                               | 1.1                      | 1.7                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 82414                         | 15              |
| 19.0  | <b>73.75</b> | 1.1                             | 517                               | 1.1                      | 1.2                               | 580                                | B                          |    |    |            |     |                             |    |            |     | 62416                         | 16              |
| 16.3  | <b>86.09</b> | 1.1                             | 604                               | 1.1                      | 1.2                               | 675                                | B                          |    |    |            |     |                             |    |            |     | 62414                         | 17              |

The dynamic efficiency is **0.94** for all ratios

**Motor Flanges Available** Flange Motore Disponibili  
**B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione  
**B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione  
**C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X73C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X73C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X73C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X73C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées.

Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X73C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|-----------------------|--|---------|--------------------|---------|---------|-----|
|                       |  |         |                    |         |         |     |
| B3                    | B6   | B7      | B8                 | V5      | V6      | V8  |
| 2.45 LT               | 2.55 LT  | 1.80 LT | 1.95 LT            | 4.05 LT | 2.55 LT | Ask |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |     |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{178.5}{X+143.5}$

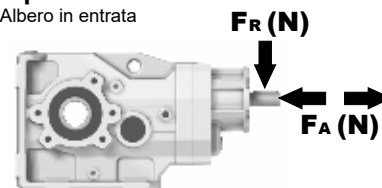
| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR   |
|-------|------|------|-------|------|------|-------|------|------|
| 300   | 1360 | 6800 | 140   | 1480 | 7400 | 70    | 1720 | 8600 |
| 250   | 1400 | 7000 | 120   | 1520 | 7600 | 40    | 1840 | 9200 |
| 200   | 1440 | 7200 | 85    | 1560 | 7800 | 15    | 1920 | 9600 |

**On request reinforced bearings to increase loads.**

A richiesta cuscinetti rinforzati per aumentare i carichi.

### Input shaft

Albero di entrata



| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

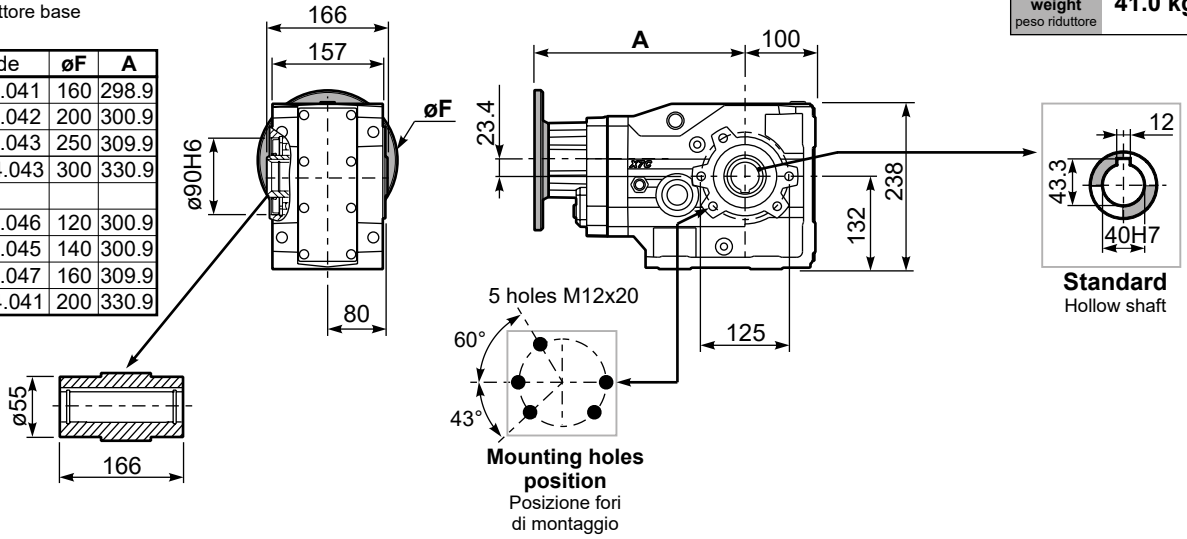
tab. 2



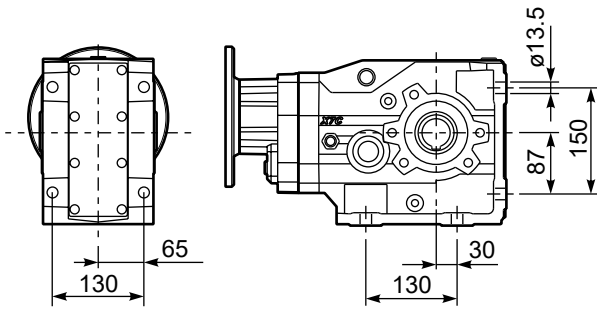
**PX73CC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **41.0 kg**

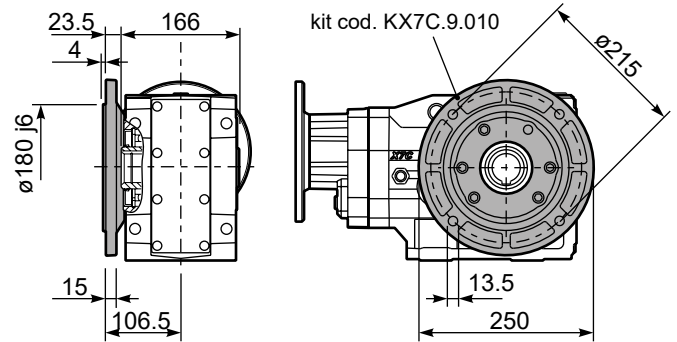
| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 298.9 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 300.9 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 309.9 |
| <b>132B5</b>      | KC51.4.043 | 300 | 330.9 |
| <b>80B14</b>      | K085.4.046 | 120 | 300.9 |
| <b>90B14</b>      | K085.4.045 | 140 | 300.9 |
| <b>100/112B14</b> | K085.4.047 | 160 | 309.9 |
| <b>132B14</b>     | KC51.4.041 | 200 | 330.9 |



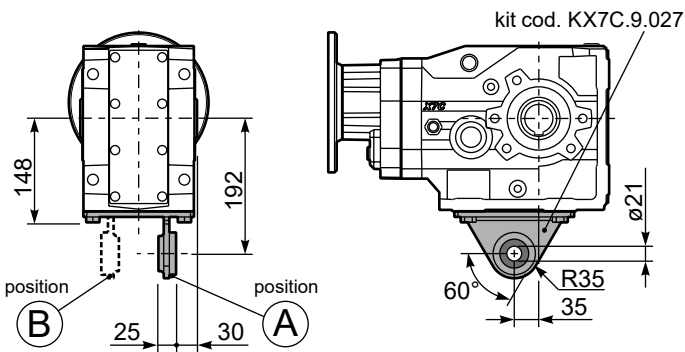
**PX73C...FB..** Feet  
Piedini



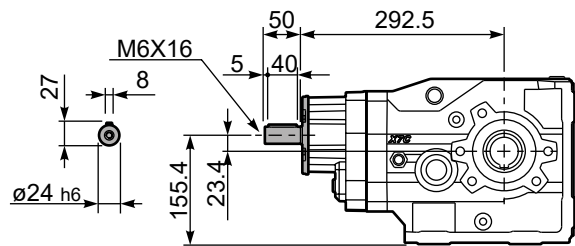
**PX73C...-F4..** Output flange  
Flangia uscita



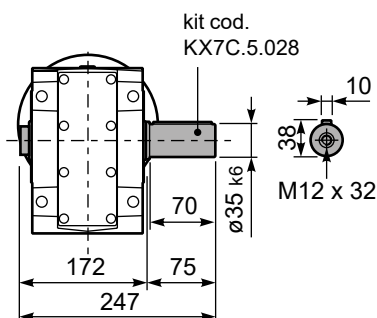
**PX73C...BR..** Reaction Arm  
Braccio di reazione



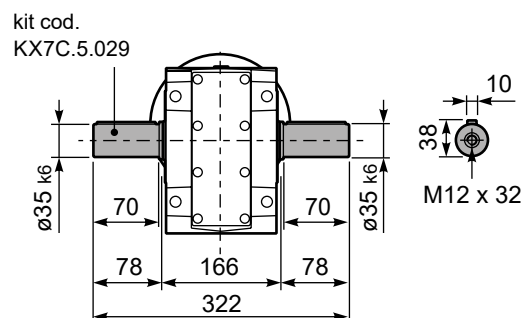
**RX73C...** Input shaft  
Albero in entrata



**PX73CA...** Single shaft  
Albero lento semplice



**PX73CB...** Double shaft  
Albero lento bisp.





**QUICK SELECTION / Selezione veloce** input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i    | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|--|---------------|--|--|------------------------|--|---|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|  |               |  |  |                        |  |   | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|  |               |  |  |                        |  |   | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 18.7   | <b>74.79</b>  | 1.5                                    | 704                                      | 1.0                    | 1.4                                      | 675                                       | B                          |    |    |    | C                           | C  |    | 19132418         | 01          |
| 16.3   | <b>85.99</b>  | 1.1                                    | 591                                      | 1.1                    | 1.3                                      | 675                                       | B                          |    |    |    | C                           | C  |    | 19132416         | 02          |
| 14.0   | <b>99.66</b>  | 1.1                                    | 685                                      | 1.0                    | 1.1                                      | 675                                       | B                          |    |    |    | C                           | C  |    | 17132416         | 03          |
| 12.0   | <b>116.35</b> | 0.75                                   | 548                                      | 1.2                    | 0.92                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 17132414         | 04          |
| 11.5   | <b>121.45</b> | 0.75                                   | 572                                      | 1.2                    | 0.89                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 13132418         | 05          |
| 10.0   | <b>139.64</b> | 0.75                                   | 658                                      | 1.0                    | 0.77                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 13132416         | 06          |
| 9.2  | <b>152.21</b> | 0.75                                   | 717                                      | 0.9                    | 0.71                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 19082416         | 07          |
| 8.6  | <b>163.02</b> | 0.55                                   | 567                                      | 1.2                    | 0.66                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 13132414         | 08          |
| 7.9  | <b>177.69</b> | 0.55                                   | 618                                      | 1.1                    | 0.61                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 19082414         | 09          |
| 6.8  | <b>205.95</b> | 0.55                                   | 716                                      | 0.9                    | 0.52                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 17082414         | 10          |
| 6.3  | <b>222.52</b> | 0.55                                   | 774                                      | 0.9                    | 0.48                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 10132414         | 11          |
| 5.6  | <b>248.76</b> | 0.37                                   | 578                                      | 1.2                    | 0.43                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 9132416          | 12          |
| 4.8  | <b>290.41</b> | 0.37                                   | 675                                      | 1.0                    | 0.37                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 9132414          | 13          |
| 4.1  | <b>337.39</b> | 0.37                                   | 784                                      | 0.9                    | 0.32                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 10082416         | 14          |
| 3.6  | <b>393.88</b> | 0.25                                   | 618                                      | 1.1                    | 0.27                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 10082414         | 15          |
| 3.2  | <b>440.33</b> | 0.25                                   | 690                                      | 1.0                    | 0.24                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 9082416          | 16          |
| 2.7  | <b>514.06</b> | 0.18                                   | 616                                      | 1.1                    | 0.21                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 9082414          | 17          |
| 2.4  | <b>581.44</b> | 0.18                                   | 697                                      | 1.0                    | 0.18                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 7082416          | 18          |
| 2.1  | <b>678.79</b> | 0.12                                   | 526                                      | 1.3                    | 0.16                                     | 675                                       | B                          |    |    |    | C                           | C  |    | 7082414          | 19          |

The dynamic efficiency is **0.92** for all ratios

  Motor Flanges Available Flange Motore Disponibili  
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione  
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione  
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **X74C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **X74C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **X74C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur **X74C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **X74C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |         |                    |         |         |     |
|-----------------------|---|---------|--------------------|---------|---------|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|                       |   |         |                    |         |         |     |
| 3.55 LT               | 2.65 LT   | 1.90 LT | 2.05 LT            | 4.25 LT | 2.65 LT | Ask |
| SHELL Omala S4 WE 320 |   |         | ENI Telium VSF 320 |         |         |     |

For all details on lubrication and plugs check our website tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{178.5}{X+143.5}$

$F_R (N)$   
 $F_A (N)$

$F_{eq} (N)$

| n <sub>2</sub> | FA   | FR   | n <sub>2</sub> | FA   | FR   | n <sub>2</sub> | FA   | FR   |
|----------------|------|------|----------------|------|------|----------------|------|------|
| 300            | 1360 | 6800 | 140            | 1480 | 7400 | 70             | 1720 | 8600 |
| 250            | 1400 | 7000 | 120            | 1520 | 7600 | 40             | 1840 | 9200 |
| 200            | 1440 | 7200 | 85             | 1560 | 7800 | 15             | 1920 | 9600 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

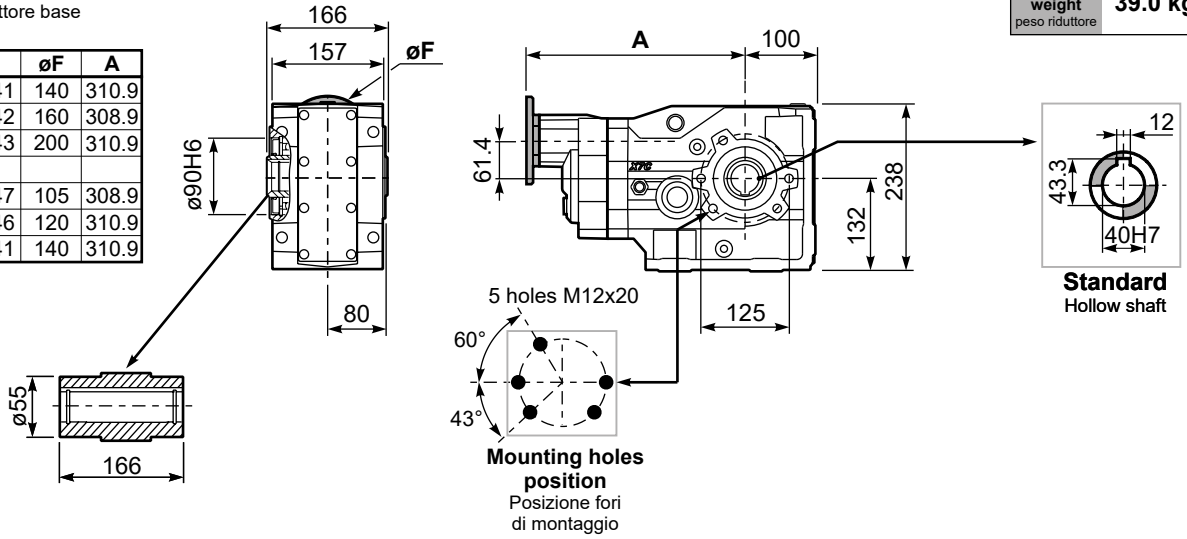
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 240 | 1200 |
| 900            | 280 | 1400 |
| 500            | 310 | 1700 |

tab. 2

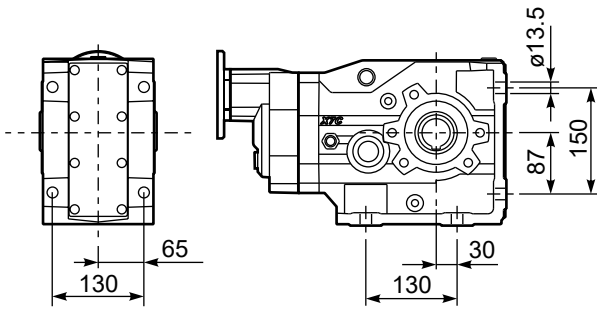
**PX74CC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **39.0 kg**

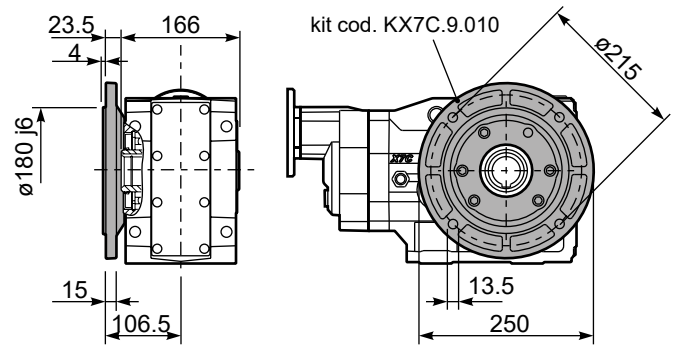
| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 310.9 |
| <b>71B5</b>    | K063.4.042 | 160 | 308.9 |
| <b>80/90B5</b> | K063.4.043 | 200 | 310.9 |
| <b>71B14</b>   | K063.4.047 | 105 | 308.9 |
| <b>80B14</b>   | K063.4.046 | 120 | 310.9 |
| <b>90B14</b>   | K063.4.041 | 140 | 310.9 |



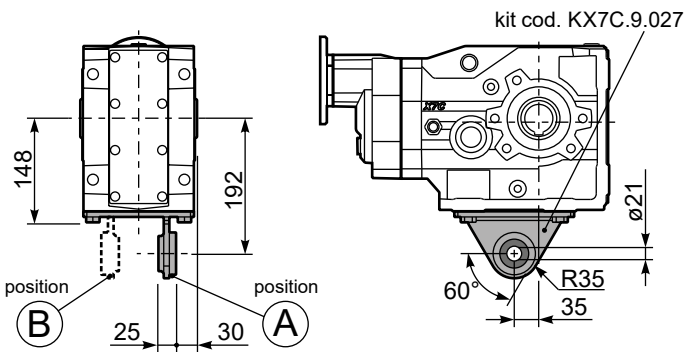
**PX74C...FB..** Feet  
Piedini



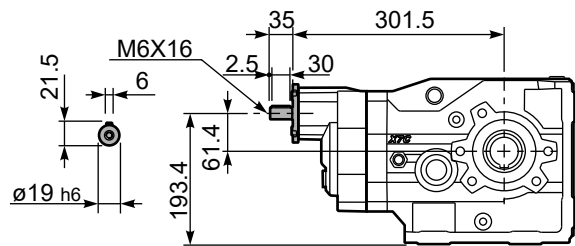
**PX74C...-F4..** Output flange  
Flangia uscita



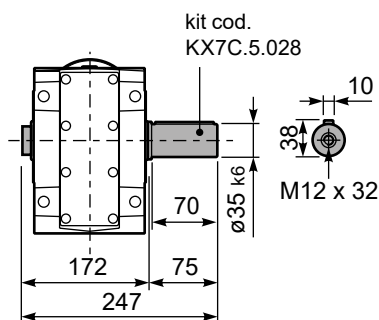
**PX74C...BR..** Reaction Arm  
Braccio di reazione



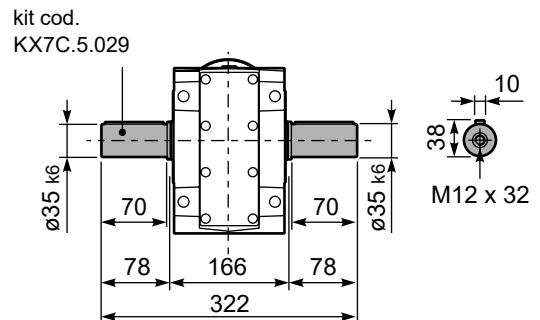
**RX74C...** Input shaft  
Albero in entrata

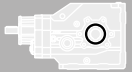


**PX74CA...** Single shaft  
Albero lento semplice



**PX74CB...** Double shaft  
Albero lento bisp.





**QUICK SELECTION / Selezione veloce** input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |               |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |    |
|   |               |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 145   | <b>9.69</b>   | 9                               | 560                               | 1.3                    | <b>12.2</b>                       | <b>755</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 302418      | 01 |
| 126   | <b>11.09</b>  | 9                               | 641                               | 1.1                    | <b>9.6</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 302416      | 02 |
| 108   | <b>12.90</b>  | 9                               | 746                               | 1.1                    | <b>9.6</b>                        | <b>790</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 302414      | 03 |
| 77  | <b>18.26</b>  | 7.5                             | 849                               | 1.1                    | <b>8.0</b>                        | <b>935</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 202418      | 04 |
| 67  | <b>20.91</b>  | 7.5                             | 972                               | 1.0                    | <b>7.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 202416      | 05 |
| 58  | <b>24.32</b>  | 5.5                             | 835                               | 1.2                    | <b>6.4</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 202414      | 06 |
| 49.5  | <b>28.27</b>  | 5.5                             | 971                               | 1.0                    | <b>5.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 162416      | 07 |
| 42.6  | <b>32.88</b>  | 4                               | 826                               | 1.2                    | <b>4.7</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 162414      | 08 |
| 38.1  | <b>36.76</b>  | 4                               | 924                               | 1.1                    | <b>4.2</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 132416      | 09 |
| 32.7  | <b>42.76</b>  | 3                               | 809                               | 1.2                    | <b>3.6</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 132414      | 10 |
| 31.1  | <b>45.00</b>  | 3                               | 851                               | 1.2                    | <b>3.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 112416      | 11 |
| 26.8  | <b>52.33</b>  | 3                               | 990                               | 1.0                    | <b>3.0</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 112414      | 12 |
| 24.6  | <b>56.82</b>  | 2.2                             | 791                               | 1.1                    | <b>2.3</b>                        | <b>850</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 82418       | 13 |
| 21.5  | <b>65.07</b>  | 2.2                             | 906                               | 1.1                    | <b>2.3</b>                        | <b>975</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 82416       | 14 |
| 18.5  | <b>75.68</b>  | 2.2                             | 1054                              | 0.9                    | <b>2.1</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     |                  | 82414       | 15 |
| 15.6  | <b>89.61</b>  | 1.1                             | 628                               | 1.1                    | <b>1.2</b>                        | <b>710</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 62416       | 16 |
| 13.4  | <b>104.22</b> | 1.1                             | 731                               | 1.1                    | <b>1.2</b>                        | <b>820</b>                         | B                          |    |    |            |     |                             |    |            |     |                  | 62414       | 17 |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili    
 **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione    
 **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione    
 **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X83C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X83C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X83C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X83C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **X83C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
| 2.80 LT               | 3.10 LT | 2.00 LT | 2.50 LT | 4.95 LT         | 2.80 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website [www.angletech.com](#) **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{196.5}{X+156.5}$

$F_R$  (N)  
 $F_A$  (N)

$F_{eq}$  (N)

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 1700 | 8500 | 140   | 1860 | 9300 | 70    | 2160 | 10800 |
| 250   | 1760 | 8800 | 120   | 1900 | 9500 | 40    | 2300 | 11500 |
| 200   | 1800 | 9000 | 85    | 1960 | 9800 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

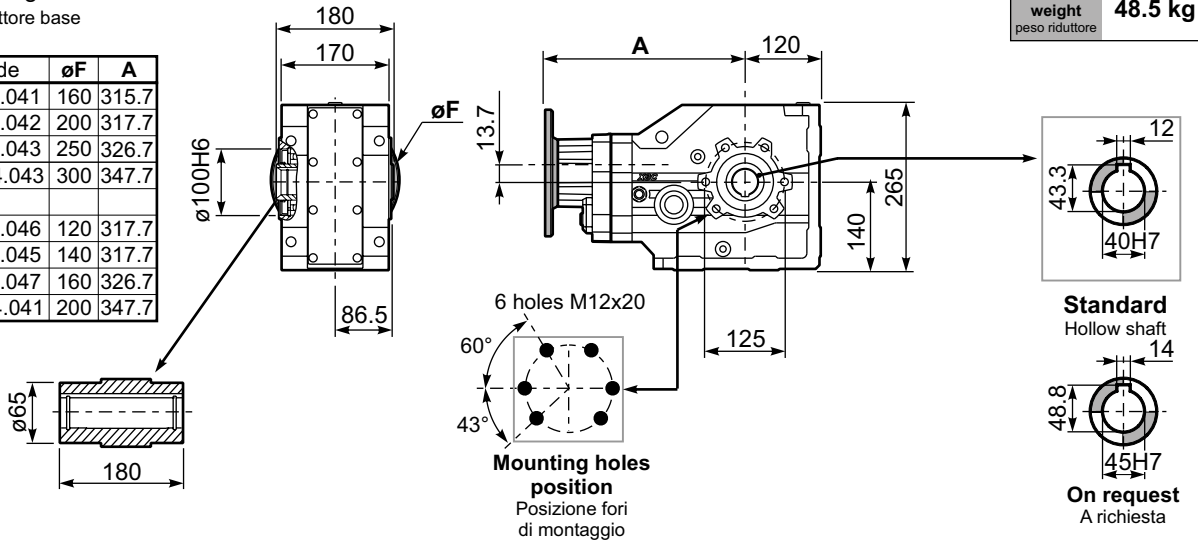
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

**tab. 2**

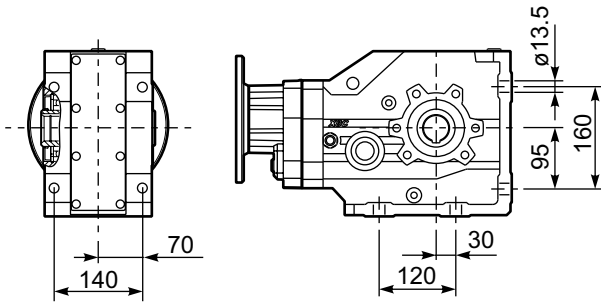
**PX83CC...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **48.5 kg**

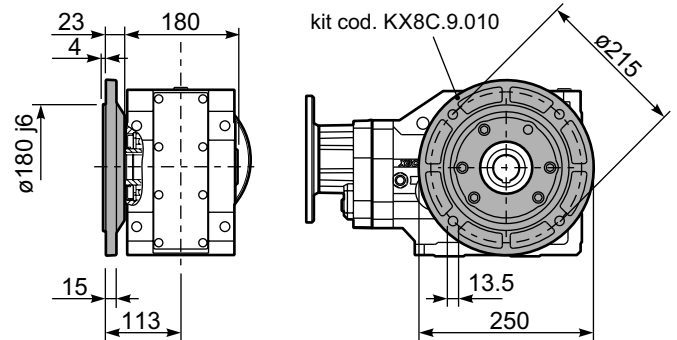
| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 315.7 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 317.7 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 326.7 |
| <b>132B5</b>      | KC51.4.043 | 300 | 347.7 |
| <b>80B14</b>      | K085.4.046 | 120 | 317.7 |
| <b>90B14</b>      | K085.4.045 | 140 | 317.7 |
| <b>100/112B14</b> | K085.4.047 | 160 | 326.7 |
| <b>132B14</b>     | KC51.4.041 | 200 | 347.7 |



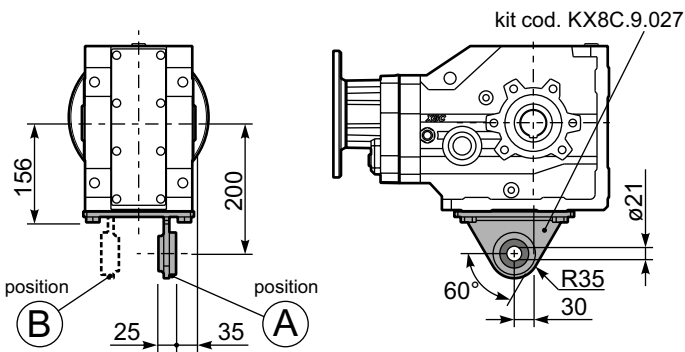
**PX83C...FB..** Feet  
Piedini



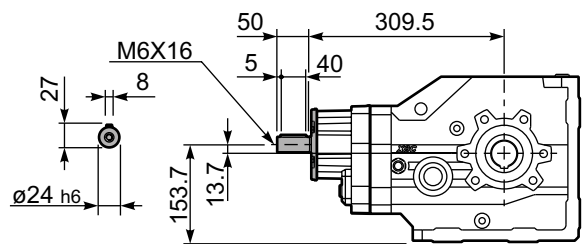
**PX83C...-F4..** Output flange  
Flangia uscita



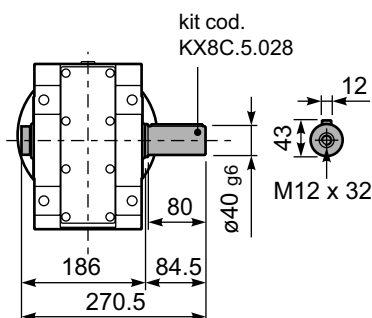
**PX83C...BR..** Reaction Arm  
Braccio di reazione



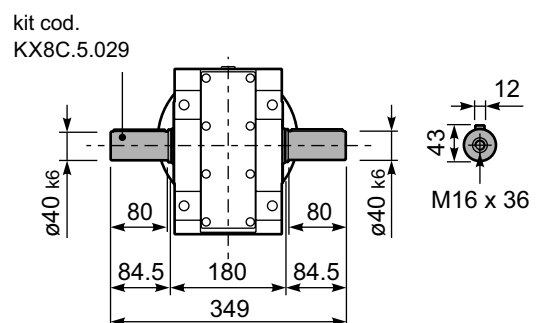
**RX83C...** Input shaft  
Albero in entrata



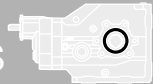
**PX83CA...** Single shaft  
Albero lento semplice



**PX83CB...** Double shaft  
Albero lento bisp.







### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 15.3  | <b>91.23</b>  | 1.5                             | 858                               | 1.2                    | 1.7                               | 1000                               | B                          |    |    |    | C                           | C  |    | 19132418         | 01          |
| 13.4  | <b>104.48</b> | 1.5                             | 983                               | 1.0                    | 1.5                               | 1000                               | B                          |    |    |    | C                           | C  |    | 19132416         | 02          |
| 11.6  | <b>121.10</b> | 1.5                             | 1139                              | 0.9                    | 1.3                               | 1000                               | B                          |    |    |    | C                           | C  |    | 17132416         | 03          |
| 9.9   | <b>140.84</b> | 1.1                             | 968                               | 1.0                    | 1.1                               | 1000                               | B                          |    |    |    | C                           | C  |    | 17132414         | 04          |
| 8.5   | <b>165.32</b> | 1.1                             | 1136                              | 0.9                    | 0.96                              | 1000                               | B                          |    |    |    | C                           | C  |    | 15132414         | 05          |
| 7.6   | <b>184.94</b> | 0.75                            | 872                               | 1.1                    | 0.86                              | 1000                               | B                          |    |    |    | C                           | C  |    | 19082416         | 06          |
| 7.1   | <b>197.34</b> | 0.75                            | 930                               | 1.1                    | 0.81                              | 1000                               | B                          |    |    |    | C                           | C  |    | 13132414         | 07          |
| 6.5   | <b>215.10</b> | 0.75                            | 1014                              | 1.0                    | 0.74                              | 1000                               | B                          |    |    |    | C                           | C  |    | 19082414         | 08          |
| 6.0   | <b>231.60</b> | 0.55                            | 805                               | 1.2                    | 0.69                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10132416         | 09          |
| 5.6   | <b>249.31</b> | 0.55                            | 867                               | 1.2                    | 0.64                              | 1000                               | B                          |    |    |    | C                           | C  |    | 17082414         | 10          |
| 5.2   | <b>269.37</b> | 0.55                            | 937                               | 1.1                    | 0.59                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10132414         | 11          |
| 4.8   | <b>292.64</b> | 0.55                            | 1018                              | 1.0                    | 0.54                              | 1000                               | B                          |    |    |    | C                           | C  |    | 15082414         | 12          |
| 4.6   | <b>302.26</b> | 0.55                            | 1051                              | 1.0                    | 0.53                              | 1000                               | B                          |    |    |    | C                           | C  |    | 9132416          | 13          |
| 4.0   | <b>349.30</b> | 0.37                            | 812                               | 1.2                    | 0.46                              | 1000                               | B                          |    |    |    | C                           | C  |    | 13082414         | 14          |
| 3.5   | <b>399.12</b> | 0.37                            | 928                               | 1.1                    | 0.40                              | 1000                               | B                          |    |    |    | C                           | C  |    | 7132416          | 15          |
| 2.9   | <b>476.80</b> | 0.37                            | 1108                              | 0.9                    | 0.33                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10082414         | 16          |
| 2.2   | <b>622.28</b> | 0.25                            | 976                               | 1.0                    | 0.26                              | 1000                               | B                          |    |    |    | C                           | C  |    | 9082414          | 17          |
| 1.7   | <b>821.70</b> | 0.18                            | 985                               | 1.0                    | 0.19                              | 1000                               | B                          |    |    |    | C                           | C  |    | 7082414          | 18          |

The dynamic efficiency is **0.92** for all ratios

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **X84C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X84C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X84C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X84C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants.  
S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X84C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
| 4.25 LT               | 3.20 LT | 2.10 LT | 2.60 LT | 5.20 LT         | 2.90 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{196.5}{X+156.5}$

| $n_2$ | FA   | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|------|------|-------|------|------|-------|------|-------|
| 300   | 1700 | 8500 | 140   | 1860 | 9300 | 70    | 2160 | 10800 |
| 250   | 1760 | 8800 | 120   | 1900 | 9500 | 40    | 2300 | 11500 |
| 200   | 1800 | 9000 | 85    | 1960 | 9800 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

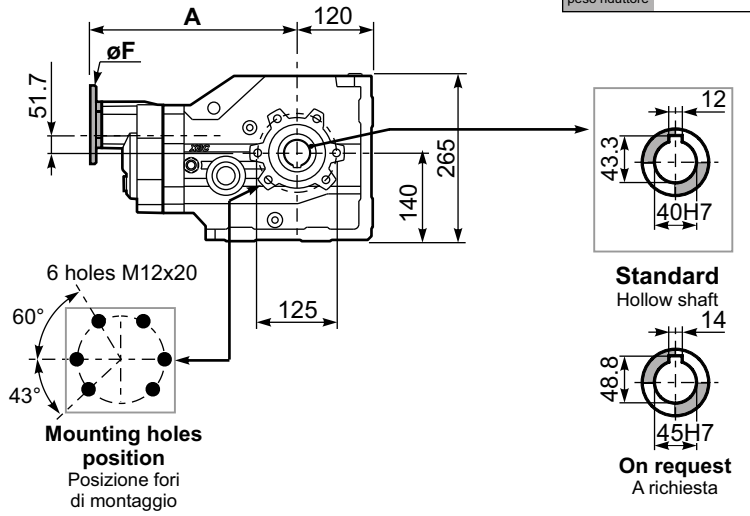
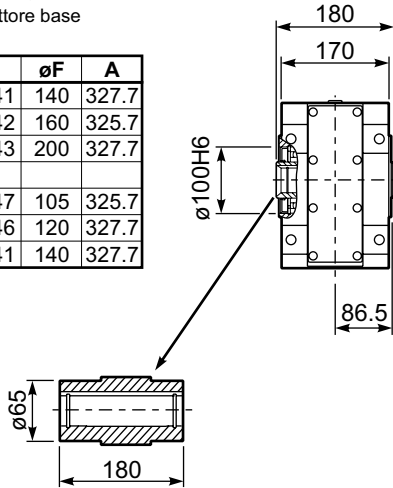
**tab. 2**



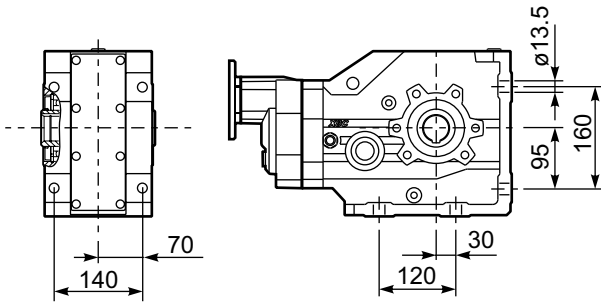
**PX84CC...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **46.5 kg**

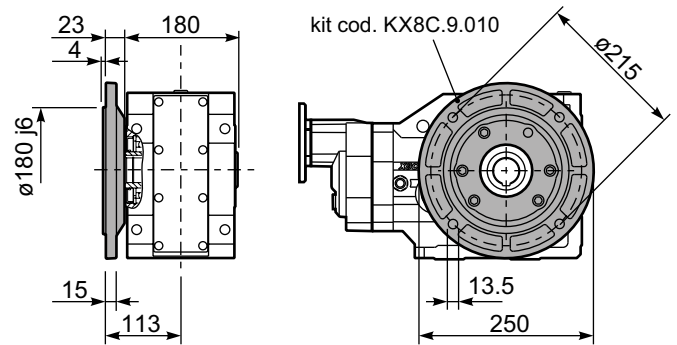
| M. flanges     | Kit code   | øF  | A     |
|----------------|------------|-----|-------|
| <b>63B5</b>    | K063.4.041 | 140 | 327.7 |
| <b>71B5</b>    | K063.4.042 | 160 | 325.7 |
| <b>80/90B5</b> | K063.4.043 | 200 | 327.7 |
| <b>71B14</b>   | K063.4.047 | 105 | 325.7 |
| <b>80B14</b>   | K063.4.046 | 120 | 327.7 |
| <b>90B14</b>   | K063.4.041 | 140 | 327.7 |



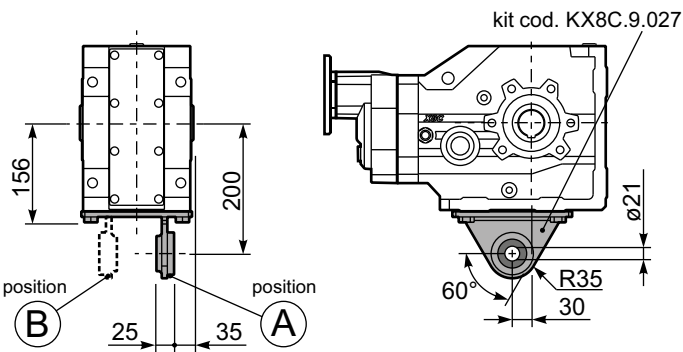
**PX84C...FB..** Feet  
Piedini



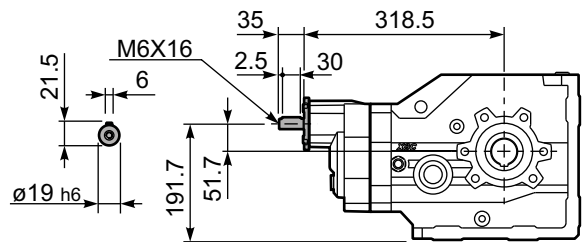
**PX84C...-F4..** Output flange  
Flangia uscita



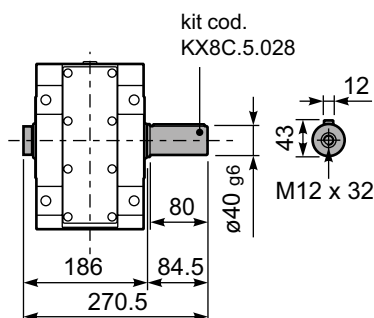
**PX84C...BR..** Reaction Arm  
Braccio di reazione



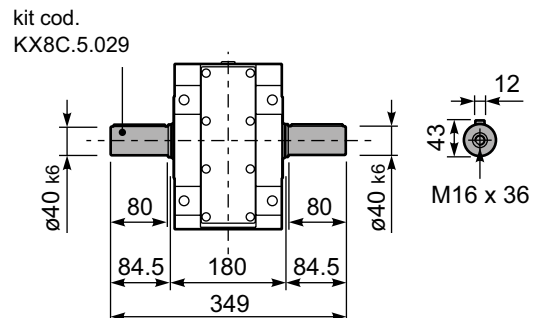
**RX84C...** Input shaft  
Albero in entrata

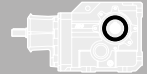


**PX84CA...** Single shaft  
Albero lento semplice



**PX84CB...** Double shaft  
Albero lento bisp.





### QUICK SELECTION / Selezione veloce

input speed (n<sub>1</sub>) = 1400 min<sup>-1</sup>

| Output Speed<br>n <sub>2</sub><br>[min <sup>-1</sup> ] | Ratio<br>i   | Motor power<br>P <sub>1M</sub><br>[kW] | Output torque<br>M <sub>2M</sub><br>[Nm] | Service factor<br>f.s. | Nominal power<br>P <sub>1R</sub><br>[kW] | Nominal torque<br>M <sub>2R</sub><br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |        | Output Shaft<br> | Ratios code |
|--|--------------|--|--|------------------------|--|---|---------------------|-----|-----|-----|----------------------|--------|------------------|-------------|
|  |              |  |  |                        |  |   | -F                  | -G  | -H  | -I  | -U                   | -V     |                  |             |
|  |              |  |  |                        |  |   | 100<br>112          | 132 | 160 | 180 | 100<br>112           | 132    |                  |             |
| 236  | <b>5.94</b>  | 22                                     | 806                                      | 1.0                    | <b>21.0</b>                              | <b>800</b>                                |                     |     |     |     |                      | 302915 | 01               |             |
| 196  | <b>7.13</b>  | 18.5                                   | 812                                      | 1.0                    | <b>17.9</b>                              | <b>820</b>                                |                     |     |     |     |                      | 302913 | 02               |             |
| 163  | <b>8.58</b>  | 18.5                                   | 977                                      | 1.0                    | <b>17.3</b>                              | <b>950</b>                                |                     |     |     |     |                      | 302911 | 03               |             |
| 125  | <b>11.20</b> | 15                                     | 1033                                     | 1.0                    | <b>13.9</b>                              | <b>1000</b>                               |                     |     |     |     |                      | 202915 | 04               |             |
| 104  | <b>13.43</b> | 15                                     | 1239                                     | 1.1                    | <b>15.7</b>                              | <b>1350</b>                               |                     |     |     |     |                      | 202913 | 05               |             |
| 92   | <b>15.15</b> | 15                                     | 1397                                     | 1.0                    | <b>14.4</b>                              | <b>1400</b>                               |                     |     |     |     |                      | 162915 | 06               |             |
| 87   | <b>16.17</b> | 15                                     | 1492                                     | 1.0                    | <b>14.0</b>                              | <b>1450</b>                               |                     |     |     |     |                      | 202911 | 07               |             |
| 77   | <b>18.16</b> | 15                                     | 1675                                     | 0.9                    | <b>13.3</b>                              | <b>1550</b>                               |                     |     |     |     |                      | 162913 | 08               |             |
| 71   | <b>19.70</b> | 11                                     | 1335                                     | 1.2                    | <b>12.3</b>                              | <b>1550</b>                               |                     |     |     |     |                      | 132915 | 09               |             |
| 64   | <b>21.87</b> | 11                                     | 1482                                     | 1.1                    | <b>11.4</b>                              | <b>1600</b>                               |                     |     |     |     |                      | 162911 | 10               |             |
| 59   | <b>23.62</b> | 11                                     | 1600                                     | 1.0                    | <b>10.6</b>                              | <b>1600</b>                               |                     |     |     |     |                      | 132913 | 11               |             |
| 48.4   | <b>28.91</b> | 9                                      | 1671                                     | 1.0                    | <b>8.6</b>                               | <b>1600</b>                               |                     |     |     |     |                      | 112913 | 12               |             |
| 40.2   | <b>34.81</b> | 7.5                                    | 1618                                     | 1.0                    | <b>7.2</b>                               | <b>1600</b>                               |                     |     |     |     |                      | 112911 | 13               |             |
| 33.5   | <b>41.81</b> | 5.5                                    | 1436                                     | 1.1                    | <b>6.0</b>                               | <b>1600</b>                               |                     |     |     |     |                      | 82913  | 14               |             |
| 27.8   | <b>50.34</b> | 5.5                                    | 1729                                     | 0.9                    | <b>5.0</b>                               | <b>1600</b>                               |                     |     |     |     |                      | 82911  | 15               |             |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available Flange Motore Disponibili
- B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **X93C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X93C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X93C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X93C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X93C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                 |         |     |
|-----------------------|--|---------|---------|-----------------|---------|-----|
|                       |  |         |         |                 |         |     |
| B3                    | B6   | B7      | B8      | V5              | V6      | V8  |
| 4.20 LT               | 3.60 LT  | 4.40 LT | 5.10 LT | 6.90 LT         | 5.00 LT | Ask |
| SHELL Omala S2 GX 460 |  |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{218}{X+168}$

| n <sub>2</sub> | FA   | FR    | n <sub>2</sub> | FA   | FR    | n <sub>2</sub> | FA   | FR    |
|----------------|------|-------|----------------|------|-------|----------------|------|-------|
| 300            | 1800 | 9000  | 140            | 2700 | 13500 | 70             | 3020 | 15100 |
| 250            | 2400 | 12000 | 120            | 2800 | 14000 | 40             | 3200 | 16000 |
| 200            | 2600 | 13000 | 85             | 2900 | 14500 | 15             | 3500 | 17500 |

**Input shaft**  
Albero in entrata

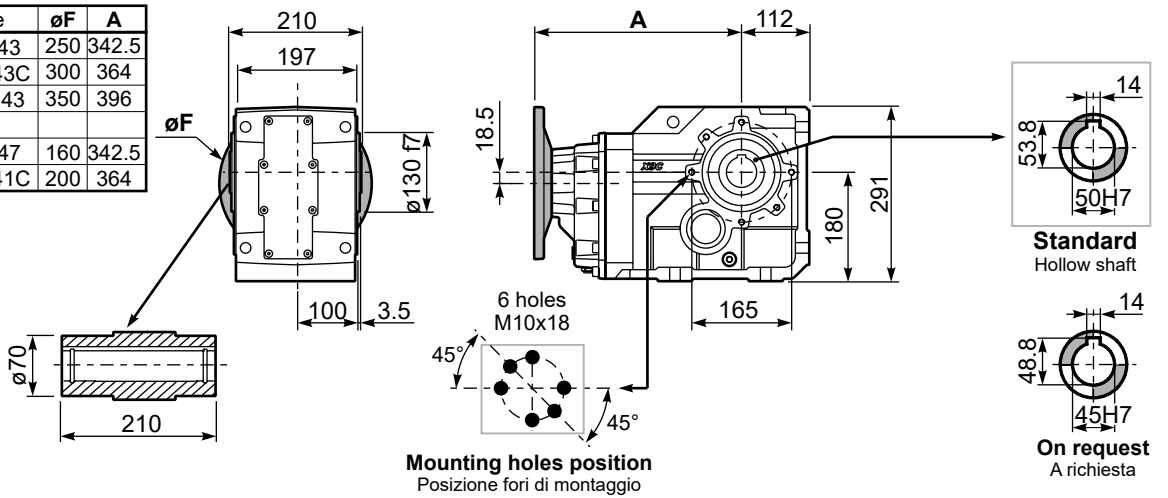
| n <sub>1</sub> | FA  | FR   |
|----------------|-----|------|
| 1400           | 700 | 3500 |
| 900            | 840 | 4200 |
| 500            | 900 | 4500 |

tab. 2

**PX93CC...** Basic Gearbox  
Riduttore base

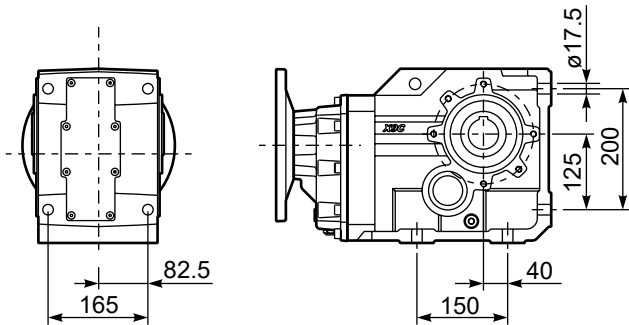
Gearbox weight  
peso riduttore **75.0 kg**

| M. flanges        | Kit code    | øF  | A     |
|-------------------|-------------|-----|-------|
| <b>100/112B5</b>  | K023.4.043  | 250 | 342.5 |
| <b>132B5</b>      | KC51.4.043C | 300 | 364   |
| <b>160/180B5</b>  | KC86.4.0.43 | 350 | 396   |
| <b>100/112B14</b> | K085.4.047  | 160 | 342.5 |
| <b>132B14</b>     | KC51.4.041C | 200 | 364   |

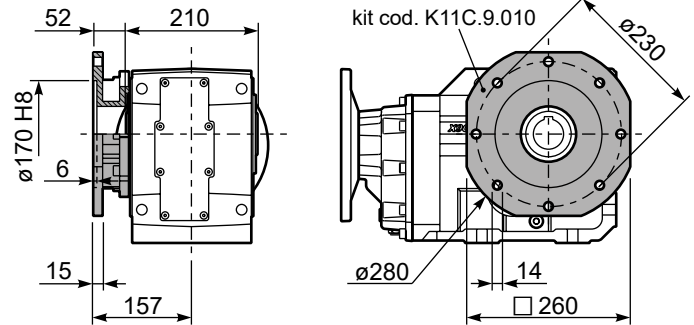


**Mounting holes position**  
Posizione fori di montaggio

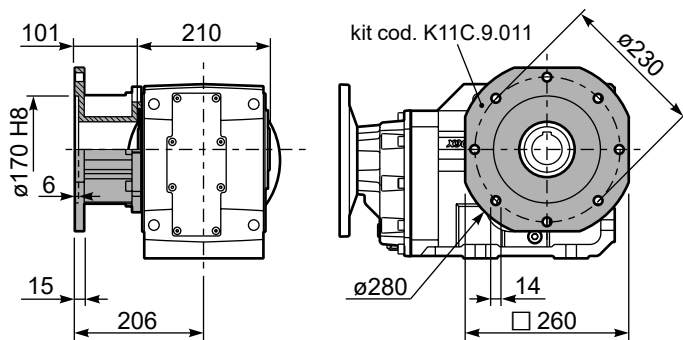
**PX93C...FB..** Feet  
Piedini



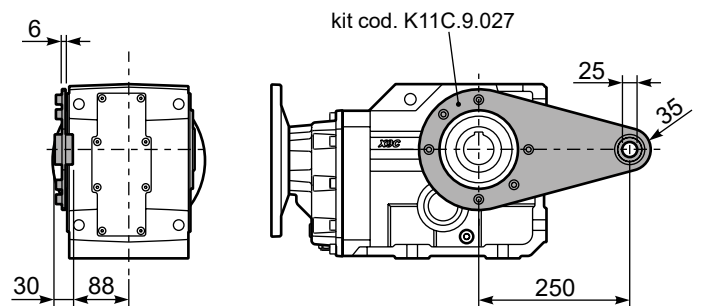
**PX93C...-FC..** Output flange  
Flangia uscita



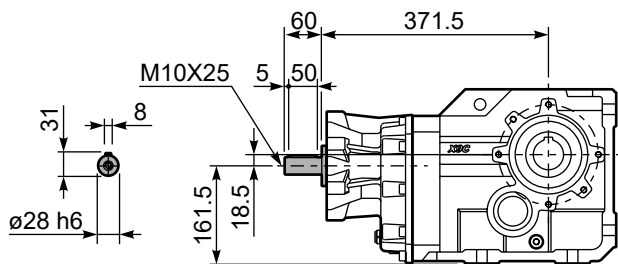
**PX93C...-FL..** Output flange  
Flangia uscita



**PX93C...BR..** Reaction Arm  
Braccio di reazione

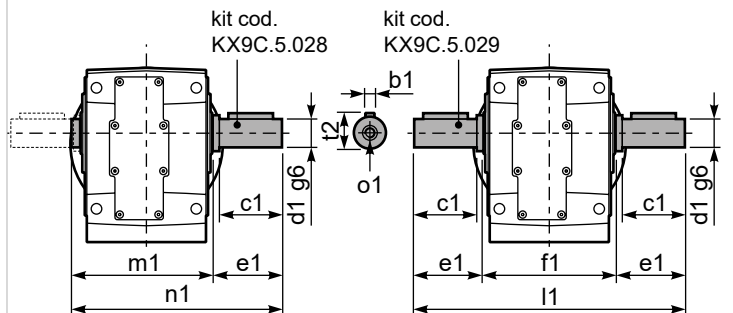


**RX93C...** Input shaft  
Albero in entrata



**PX93CA...** Single shaft  
Albero lento semplice

**PX93CB...** Double shaft  
Albero lento bisp.



|                 | b1 | c1  | d1 | e1  | f1  | l1  | m1  | n1  | t2   | o1  |
|-----------------|----|-----|----|-----|-----|-----|-----|-----|------|-----|
| <b>Standard</b> | 14 | 100 | 50 | 105 | 210 | 420 | 218 | 323 | 53.5 | M16 |
| -               | -  | -   | -  | -   | -   | -   | -   | -   | -    | -   |



### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |
| 45.6  | <b>30.70</b>  | 7.5                             | 1399                              | 1.1                    | 8.3                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 30132913         | 01          |
| 37.9  | <b>36.97</b>  | 7.5                             | 1685                              | 0.9                    | 6.9                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 30132911         | 02          |
| 29.0  | <b>48.26</b>  | 5.5                             | 1625                              | 1.0                    | 5.3                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 20132915         | 03          |
| 24.2  | <b>57.86</b>  | 4                               | 1425                              | 1.1                    | 4.4                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 20132913         | 04          |
| 21.5  | <b>65.24</b>  | 4                               | 1607                              | 1.0                    | 3.9                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 16132915         | 05          |
| 20.1  | <b>69.68</b>  | 4                               | 1716                              | 1.0                    | 3.8                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 20132911         | 06          |
| 17.9  | <b>78.23</b>  | 3                               | 1450                              | 1.1                    | 3.4                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 16132913         | 07          |
| 16.5  | <b>84.85</b>  | 3                               | 1573                              | 1.0                    | 3.0                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 13132915         | 08          |
| 14.9  | <b>94.20</b>  | 3                               | 1747                              | 0.9                    | 2.8                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 16132911         | 09          |
| 13.8  | <b>101.74</b> | 3                               | 1886                              | 0.9                    | 2.6                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 13132913         | 10          |
| 11.4  | <b>122.51</b> | 2.2                             | 1672                              | 1.0                    | 2.1                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 13132911         | 11          |
| 9.3   | <b>149.95</b> | 1.5                             | 1411                              | 1.2                    | 1.8                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 11132911         | 12          |
| 7.8   | <b>180.09</b> | 1.5                             | 1694                              | 1.0                    | 1.5                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 8132913          | 13          |
| 6.8   | <b>206.81</b> | 1.1                             | 1421                              | 1.1                    | 1.2                               | 1600                               | B                          |    |    |            |     |                             |    |            |     | 6132915          | 14          |
| 6.5   | <b>216.85</b> | 1.1                             | 1490                              | 1.1                    | 1.2                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 8132911          | 15          |
| 5.6   | <b>247.99</b> | 1.1                             | 1704                              | 1.0                    | 1.1                               | 1650                               | B                          |    |    |            |     |                             |    |            |     | 6132913          | 16          |
| 4.7   | <b>298.61</b> | 0.75                            | 1407                              | 1.2                    | 0.88                              | 1650                               | B                          |    |    |            |     |                             |    |            |     | 6132911          | 17          |

The dynamic efficiency is **0.92** for all ratios

- Motor Flanges Available Flange Motore Disponibili
- B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit **X94C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X94C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X94C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X94C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X94C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                 |         |     |
|-----------------------|--|---------|---------|-----------------|---------|-----|
|                       |  |         |         |                 |         |     |
| B3                    | B6   | B7      | B8      | V5              | V6      | V8  |
| 4.50 LT               | 3.80 LT  | 4.50 LT | 5.30 LT | 7.60 LT         | 5.30 LT | Ask |
| SHELL Omala S2 GX 460 |  |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{218}{X+168}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 1800 | 9000  | 140   | 2700 | 13500 | 70    | 3020 | 15100 |
| 250   | 2400 | 12000 | 120   | 2800 | 14000 | 40    | 3200 | 16000 |
| 200   | 2600 | 13000 | 85    | 2900 | 14500 | 15    | 3500 | 17500 |

**Input shaft**  
Albero in entrata

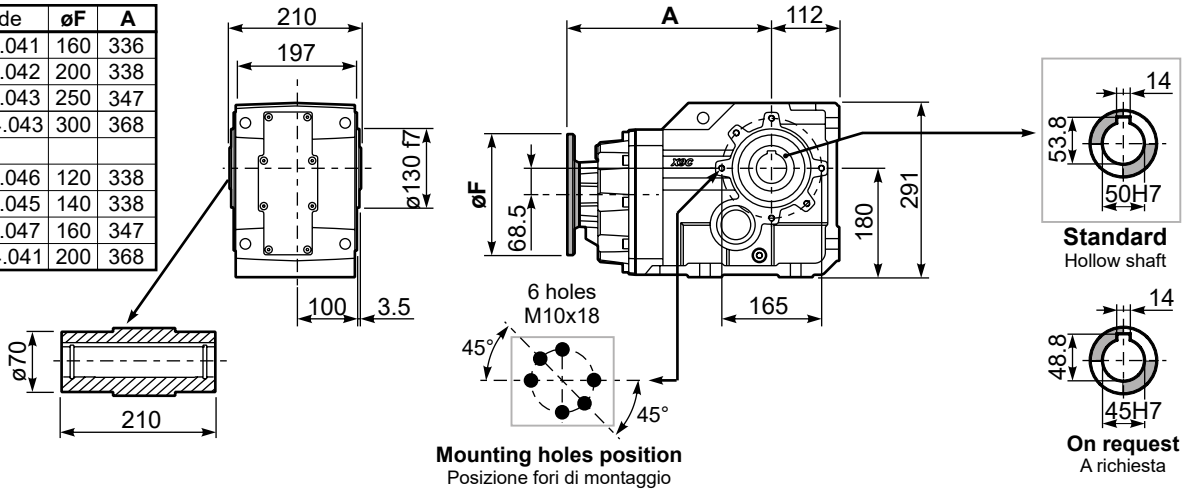
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

tab. 2

**PX94CC...** Basic Gearbox  
Riduttore base

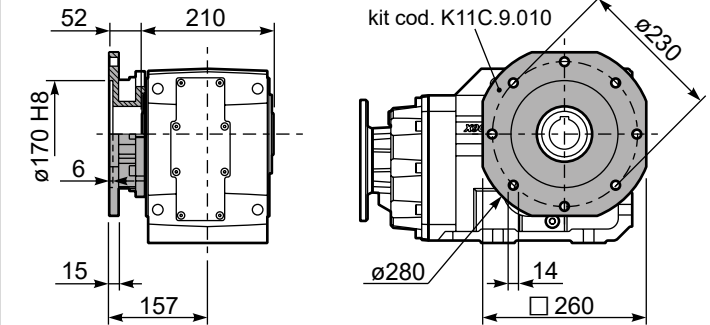
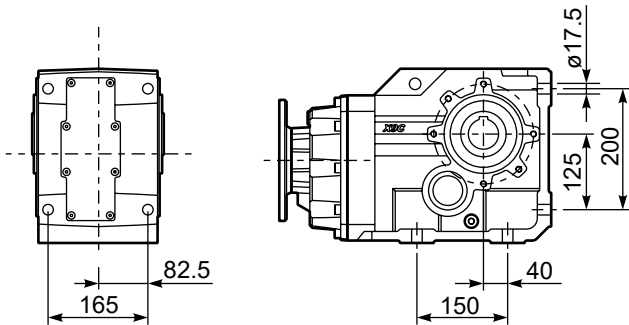
Gearbox weight  
peso riduttore **68.5 kg**

| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 336 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 338 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 347 |
| <b>132B5</b>      | KC51.4.043 | 300 | 368 |
| <b>80B14</b>      | K085.4.046 | 120 | 338 |
| <b>90B14</b>      | K085.4.045 | 140 | 338 |
| <b>100/112B14</b> | K085.4.047 | 160 | 347 |
| <b>132B14</b>     | KC51.4.041 | 200 | 368 |



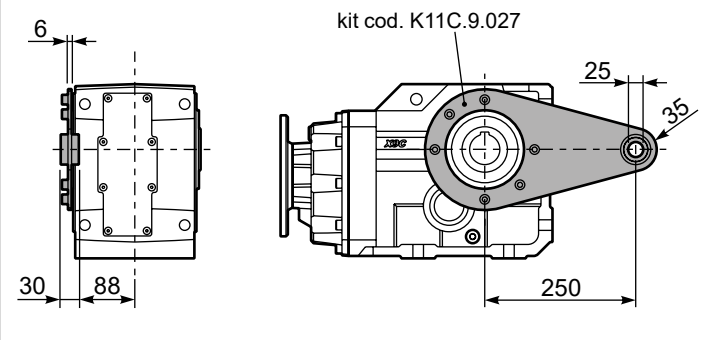
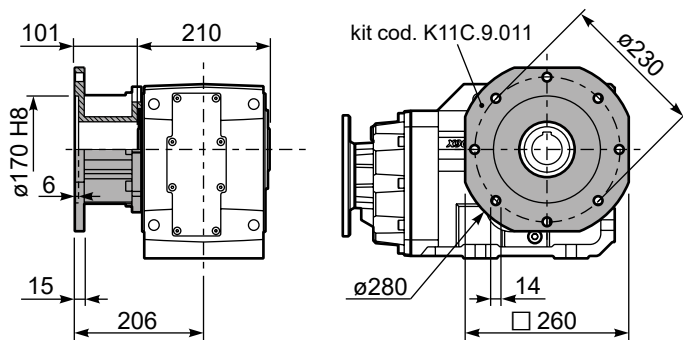
**PX94C...FB..** Feet  
Piedini

**PX94C...-FC..** Output flange  
Flangia uscita



**PX94C...-FL..** Output flange  
Flangia uscita

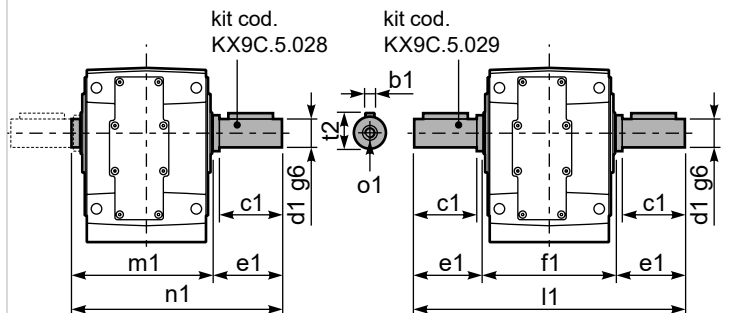
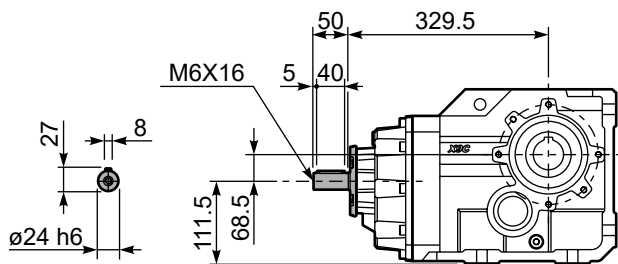
**PX94C...BR..** Reaction Arm  
Braccio di reazione



**RX94C...** Input shaft  
Albero in entrata

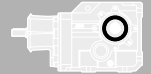
**PX94CA...** Single shaft  
Albero lento semplice

**PX94CB...** Double shaft  
Albero lento bisp.



|          | b1 | c1  | d1 | e1  | f1  | l1  | m1  | n1  | t2   | o1  |
|----------|----|-----|----|-----|-----|-----|-----|-----|------|-----|
| Standard | 14 | 100 | 50 | 105 | 210 | 420 | 218 | 323 | 53.5 | M16 |
| -        | -  | -   | -  | -   | -   | -   | -   | -   | -    | -   |





#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     | B14<br>motor flanges |   |   |        | Output Shaft<br> | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|----------------------|---|---|--------|------------------|-------------|
|   |              |                                 |                                   |                          |                                   |                                    | -G                  | -H  | -I  | -L  | -                    | - | - | -      |                  |             |
|   |              |                                 |                                   |                          |                                   |                                    | 132                 | 160 | 180 | 200 | -                    | - | - | -      |                  |             |
| 219   | <b>6.39</b>  | 30                              | 1180                              | 1.1                      | <b>31.7</b>                       | <b>1300</b>                        |                     |     |     |     |                      |   |   | 392914 | 01               |             |
| 200   | <b>7.00</b>  | 30                              | 1292                              | 1.1                      | <b>31.2</b>                       | <b>1400</b>                        |                     |     |     |     |                      |   |   | 392913 | 02               |             |
| 164   | <b>8.55</b>  | 30                              | 1578                              | 1.0                      | <b>27.4</b>                       | <b>1500</b>                        |                     |     |     |     |                      |   |   | 392911 | 03               |             |
| 140   | <b>10.01</b> | 22                              | 1357                              | 1.2                      | <b>24.9</b>                       | <b>1600</b>                        |                     |     |     |     |                      |   |   | 302914 | 04               |             |
| 128   | <b>10.97</b> | 22                              | 1486                              | 1.1                      | <b>24.2</b>                       | <b>1700</b>                        |                     |     |     |     |                      |   |   | 302913 | 05               |             |
| 105   | <b>13.39</b> | 22                              | 1815                              | 1.2                      | <b>24.5</b>                       | <b>2100</b>                        |                     |     |     |     |                      |   |   | 302911 | 06               |             |
| 89  | <b>15.71</b> | 22                              | 2130                              | 1.0                      | <b>21.8</b>                       | <b>2200</b>                        |                     |     |     |     |                      |   |   | 222914 | 07               |             |
| 81  | <b>17.21</b> | 22                              | 2333                              | 1.0                      | <b>20.8</b>                       | <b>2300</b>                        |                     |     |     |     |                      |   |   | 222913 | 08               |             |
| 67  | <b>21.02</b> | 18.5                            | 2394                              | 1.0                      | <b>17.8</b>                       | <b>2400</b>                        |                     |     |     |     |                      |   |   | 222911 | 09               |             |
| 59  | <b>23.73</b> | 18.5                            | 2703                              | 1.0                      | <b>17.1</b>                       | <b>2600</b>                        |                     |     |     |     |                      |   |   | 162914 | 10               |             |
| 54  | <b>25.99</b> | 18.5                            | 2960                              | 0.9                      | <b>16.8</b>                       | <b>2800</b>                        |                     |     |     |     |                      |   |   | 162913 | 11               |             |
| 50  | <b>27.93</b> | 15                              | 2576                              | 1.1                      | <b>16.2</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 142914 | 12               |             |
| 45.8  | <b>30.59</b> | 15                              | 2822                              | 1.0                      | <b>14.8</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 142913 | 13               |             |
| 44.1  | <b>31.74</b> | 15                              | 2928                              | 1.0                      | <b>14.2</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 162911 | 14               |             |
| 37.5  | <b>37.36</b> | 11                              | 2532                              | 1.1                      | <b>12.1</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 142911 | 15               |             |
| 33.8  | <b>41.37</b> | 11                              | 2804                              | 1.0                      | <b>10.9</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 102914 | 16               |             |
| 30.9  | <b>45.31</b> | 9                               | 2618                              | 1.1                      | <b>10.0</b>                       | <b>2900</b>                        |                     |     |     |     |                      |   |   | 102913 | 17               |             |
| 25.3  | <b>55.33</b> | 7.5                             | 2573                              | 1.2                      | <b>8.5</b>                        | <b>3000</b>                        |                     |     |     |     |                      |   |   | 102911 | 18               |             |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available**  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **X103** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X103** è fornito privo di lubrificazione con tappi di sfianto, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X103** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X103** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées.  
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X103** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.  
Ver tabla 1, para cantidades y aceites recomendados.  
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |          |         |                 |         |     |
|-----------------------|--|----------|---------|-----------------|---------|-----|
|                       |  |          |         |                 |         |     |
| B3                    | B6   | B7       | B8      | V5              | V6      | V8  |
| 11.50 LT              | 5.50 LT  | 10.50 LT | 7.50 LT | 13.50 LT        | 9.50 LT | Ask |
| SHELL Omala S2 GX 460 |  |          |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

| RADIAL AND AXIAL LOADS                  |      |       |                                       |      |       |       |      |       |
|---|------|-------|---------------------------------------|------|-------|-------|------|-------|
| <b>Output shaft</b><br>Albero di uscita |      |       | $F_{eq} = FR \cdot \frac{253}{X+193}$ |      |       |       |      |       |
|   |      |       |                                       |      |       |       |      |       |
| $n_2$                                   | FA   | FR    | $n_2$                                 | FA   | FR    | $n_2$ | FA   | FR    |
| 300                                     | 2000 | 10000 | 140                                   | 2800 | 14000 | 70    | 3500 | 17500 |
| 250                                     | 2500 | 12500 | 120                                   | 3000 | 15000 | 40    | 4200 | 21000 |
| 200                                     | 2700 | 13500 | 85                                    | 3200 | 16000 | 15    | 5400 | 27000 |
| <b>Input shaft</b><br>Albero in entrata |      |       |                                       |      |       |       |      |       |
| $n_1$                                   | FA   | FR    |                                       |      |       |       |      |       |
| 1400                                    | 1120 | 5600  |                                       |      |       |       |      |       |
| 900                                     | 1220 | 6100  |                                       |      |       |       |      |       |
| 500                                     | 1300 | 6500  |                                       |      |       |       |      |       |

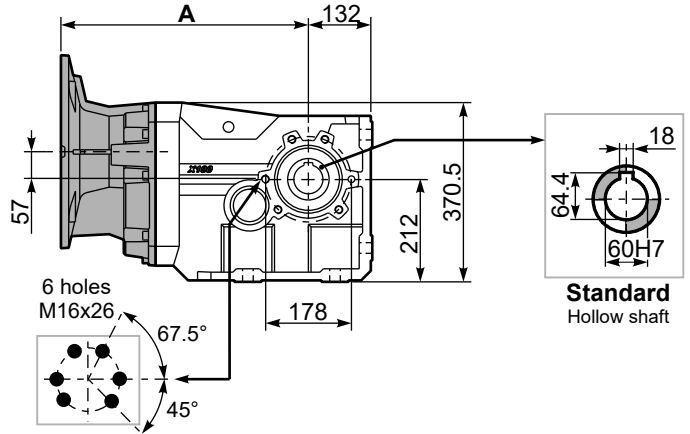
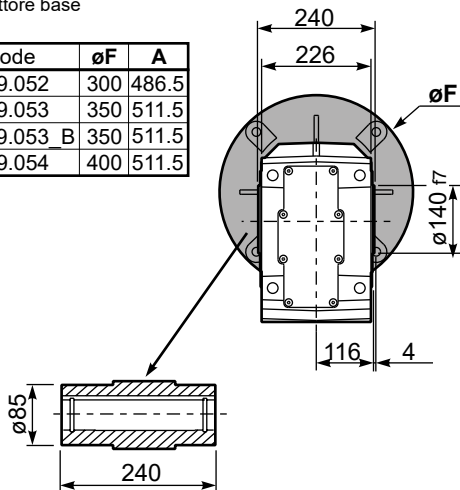
**tab. 2**



**PX103C...** Basic Gearbox  
Riduttore base

Gearbox weight **125 kg**  
peso riduttore

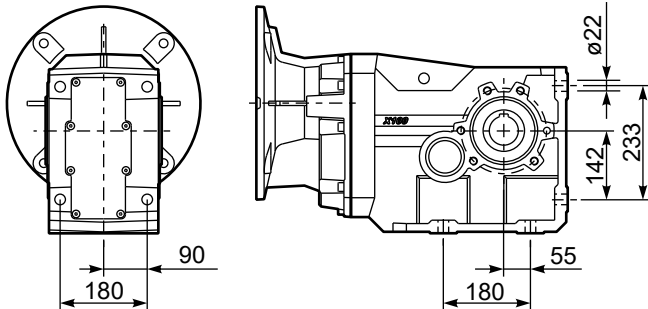
| M. flanges   | Kit code      | øF  | A     |
|--------------|---------------|-----|-------|
| <b>132B5</b> | KC110.9.052   | 300 | 486.5 |
| <b>160B5</b> | KC110.9.053   | 350 | 511.5 |
| <b>180B5</b> | KC110.9.053 B | 350 | 511.5 |
| <b>200B5</b> | KC110.9.054   | 400 | 511.5 |



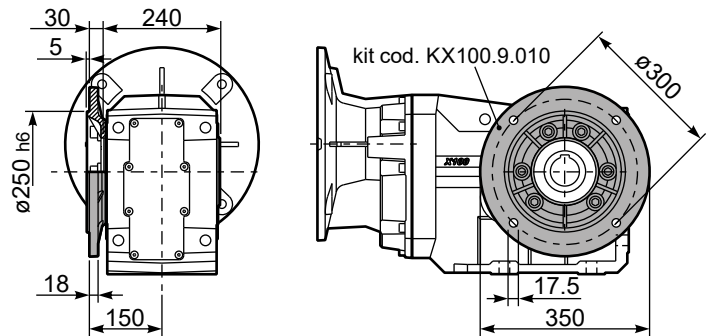
**Mounting holes position**  
Posizione fori di montaggio

**Standard**  
Hollow shaft

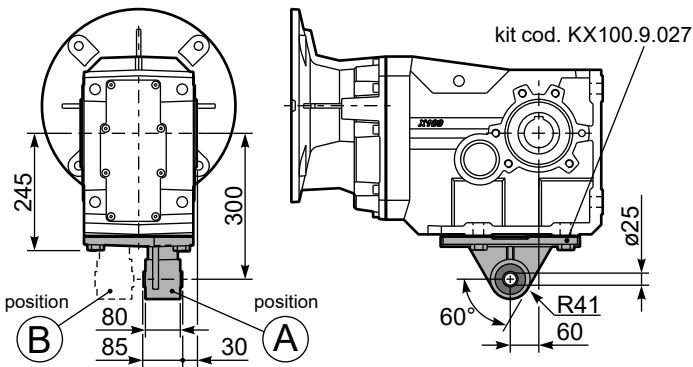
**PX103...FB..** Feet  
Piedini



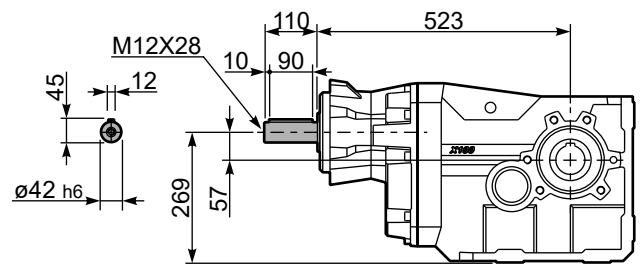
**PX103...-F6..** Output flange  
Flangia uscita



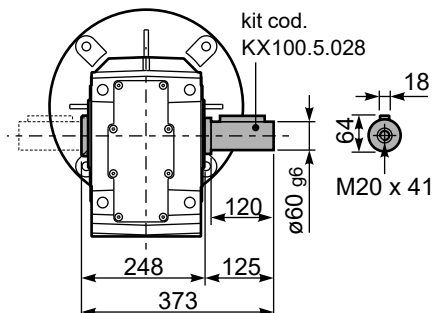
**PX103...BR..** Reaction Arm  
Braccio di reazione



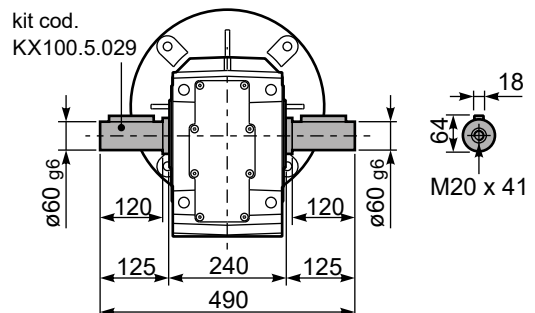
**RX103...** Input shaft  
Albero in entrata

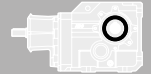


**PX103A...** Single shaft  
Albero lento semplice



**PX103B...** Double shaft  
Albero lento bisp.





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |     | B14 motor flanges |     |          | Output Shaft<br> | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|-----|-------------------|-----|----------|------------------|-----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -F                         | -G  | -U                | -V  |          |                  |                 |
|   |               |                                 |                                   |                        |                                   |                                    | 100<br>112                 | 132 | 100<br>112        | 132 |          |                  |                 |
| 28.8  | <b>48.57</b>  | 9                               | 2750                              | 1.1                    | <b>9.5</b>                        | <b>2900</b>                        |                            |     |                   |     | 30142911 | 01               |                 |
| 20.5  | <b>68.43</b>  | 7.5                             | 3118                              | 1.0                    | <b>7.0</b>                        | <b>3000</b>                        |                            |     |                   |     | 20142914 | 02               |                 |
| 18.7  | <b>74.95</b>  | 5.5                             | 2523                              | 1.2                    | <b>6.4</b>                        | <b>3000</b>                        |                            |     |                   |     | 20142913 | 03               |                 |
| 15.1  | <b>92.53</b>  | 5.5                             | 3115                              | 1.0                    | <b>5.2</b>                        | <b>3000</b>                        |                            |     |                   |     | 16142914 | 04               |                 |
| 13.8  | <b>101.33</b> | 4                               | 2496                              | 1.2                    | <b>4.7</b>                        | <b>3000</b>                        |                            |     |                   |     | 16142913 | 05               |                 |
| 11.6  | <b>120.33</b> | 4                               | 2963                              | 1.0                    | <b>4.0</b>                        | <b>3000</b>                        |                            |     |                   |     | 13142914 | 06               |                 |
| 11.3  | <b>123.75</b> | 4                               | 3048                              | 1.0                    | <b>3.9</b>                        | <b>3000</b>                        |                            |     |                   |     | 16142911 | 07               |                 |
| 10.6  | <b>131.78</b> | 4                               | 3245                              | 0.9                    | <b>3.6</b>                        | <b>3000</b>                        |                            |     |                   |     | 13142913 | 08               |                 |
| 9.5   | <b>147.28</b> | 3                               | 2731                              | 1.1                    | <b>3.2</b>                        | <b>3000</b>                        |                            |     |                   |     | 11142914 | 09               |                 |
| 8.7   | <b>161.30</b> | 3                               | 2990                              | 1.0                    | <b>3.0</b>                        | <b>3000</b>                        |                            |     |                   |     | 11142913 | 10               |                 |
| 7.1   | <b>196.98</b> | 2.2                             | 2689                              | 1.1                    | <b>2.4</b>                        | <b>3000</b>                        |                            |     |                   |     | 11142911 | 11               |                 |
| 6.6   | <b>212.99</b> | 2.2                             | 2907                              | 1.0                    | <b>2.2</b>                        | <b>3000</b>                        |                            |     |                   |     | 8142914  | 12               |                 |
| 6.0   | <b>233.26</b> | 2.2                             | 3184                              | 0.9                    | <b>2.0</b>                        | <b>3000</b>                        |                            |     |                   |     | 8142913  | 13               |                 |
| 4.9   | <b>284.86</b> | 2.2                             | 3889                              | 0.8                    | <b>1.7</b>                        | <b>3000</b>                        |                            |     |                   |     | 8142911  | 14               |                 |

The dynamic efficiency is **0.92** for all ratios

Motor Flanges Available  
Flange Motore Disponibili

B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione

C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **X104** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X104** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X104** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X104** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X104** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil         |          |                 |          |          |     |
|-----------------------|---|----------|-----------------|----------|----------|-----|
|                       | Per queste posizioni specificare in fase d'ordine o aggiungere olio |          |                 |          |          |     |
|                       |   |          |                 |          |          |     |
| B3                    | B6  | B7       | B8              | V5       | V6       | V8  |
| 12.00 LT              | 6.00 LT   | 11.50 LT | 8.00 LT         | 14.50 LT | 11.00 LT | Ask |
| SHELL Omala S2 GX 460 |   |          | ENI Blasias 460 |          |          |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

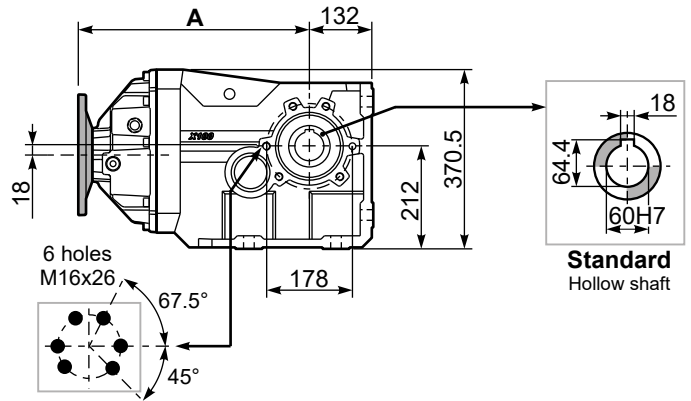
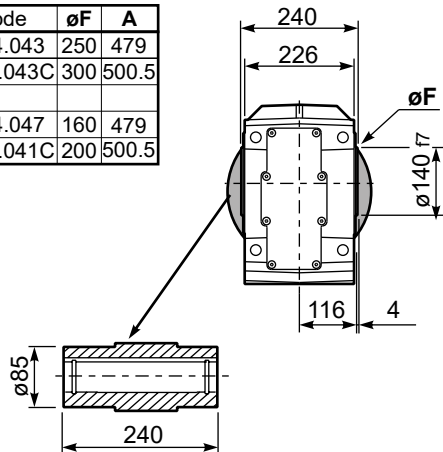
| RADIAL AND AXIAL LOADS           |      |       |                                       |      |       |       |      |       |
|----------------------------------|------|-------|---------------------------------------|------|-------|-------|------|-------|
| Output shaft<br>Albero di uscita |      |       | $F_{eq} = FR \cdot \frac{253}{X+193}$ |      |       |       |      |       |
|                                  |      |       |                                       |      |       |       |      |       |
| $n_2$                            | FA   | FR    | $n_2$                                 | FA   | FR    | $n_2$ | FA   | FR    |
| 300                              | 2000 | 10000 | 140                                   | 2800 | 14000 | 70    | 3500 | 17500 |
| 250                              | 2500 | 12500 | 120                                   | 3000 | 15000 | 40    | 4200 | 21000 |
| 200                              | 2700 | 13500 | 85                                    | 3200 | 16000 | 15    | 5400 | 27000 |
| Input shaft<br>Albero in entrata |      |       |                                       |      |       |       |      |       |
| $n_1$                            | FA   | FR    |                                       |      |       |       |      |       |
| 1400                             | 700  | 3500  |                                       |      |       |       |      |       |
| 900                              | 840  | 4200  |                                       |      |       |       |      |       |
| 500                              | 900  | 4500  |                                       |      |       |       |      |       |

**tab. 2**

**PX104C...** Basic Gearbox  
Riduttore base

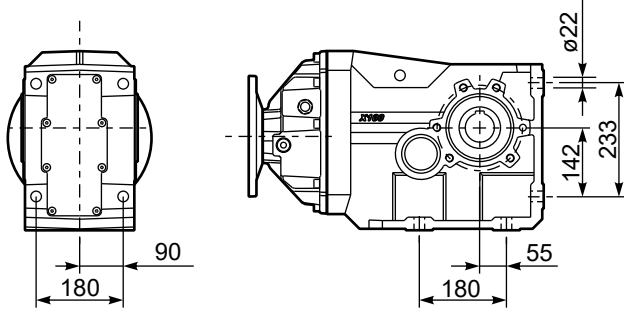
Gearbox weight  
peso riduttore **118 kg**

| M. flanges        | Kit code    | øF  | A     |
|-------------------|-------------|-----|-------|
| <b>100/112B5</b>  | K023.4.043  | 250 | 479   |
| <b>132B5</b>      | KC51.4.043C | 300 | 500.5 |
| <b>100/112B14</b> | K085.4.047  | 160 | 479   |
| <b>132B14</b>     | KC51.4.041C | 200 | 500.5 |

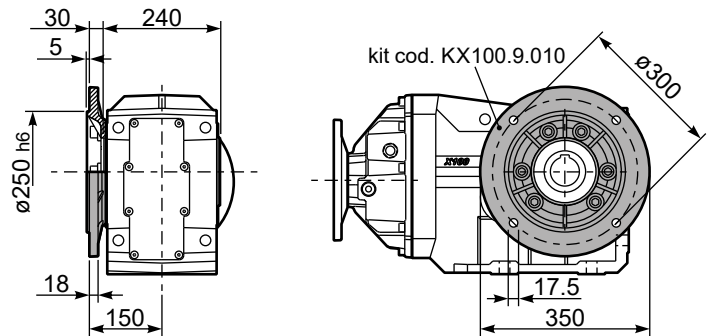


**Mounting holes position**  
Posizione fori di montaggio

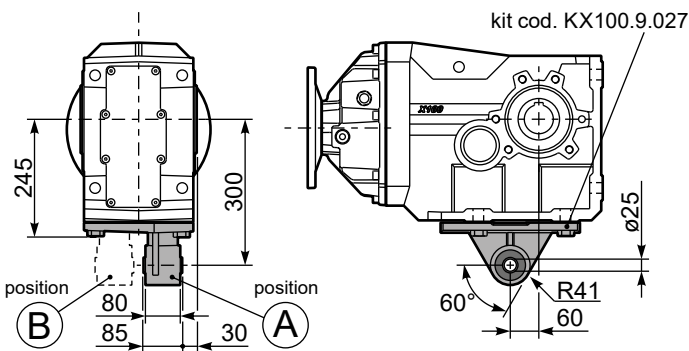
**PX104...FB..** Feet  
Piedini



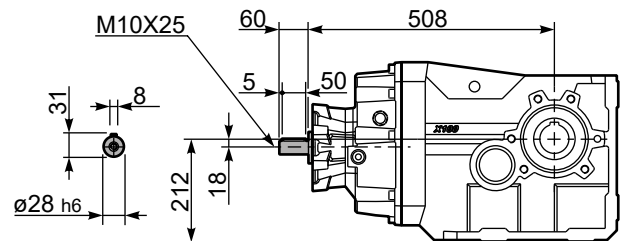
**PX104...-F6..** Output flange  
Flangia uscita



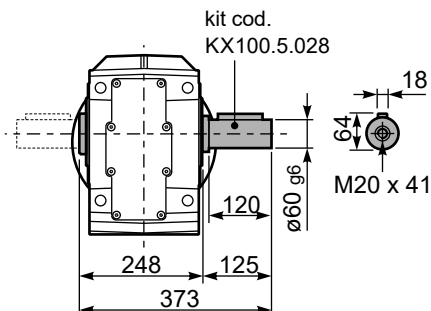
**PX104...BR..** Reaction Arm  
Braccio di reazione



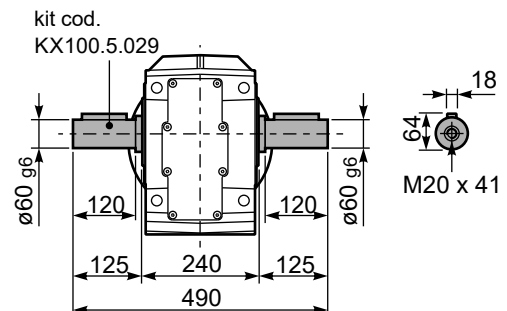
**RX104...** Input shaft  
Albero in entrata

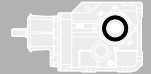


**PX104A...** Single shaft  
Albero lento semplice



**PX104B...** Double shaft  
Albero lento bisp.





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     |     |     | B14<br>motor flanges |   |        | Output Shaft<br> | Ratios code |
|---|--------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|-----|-----|----------------------|---|--------|------------------|-------------|
|   |              |                                 |                                   |                        |                                   |                                    | -G                  | -H  | -I  | -L  | CA  | -                    | - | -      |                  |             |
|   |              |                                 |                                   |                        |                                   |                                    | 132                 | 160 | 180 | 200 | 225 | -                    | - | -      |                  |             |
| 219   | <b>6.39</b>  | 45                              | 1757                              | 1.4                    | <b>61.0</b>                       | <b>2500</b>                        |                     |     |     |     |     |                      |   | 392914 | 01               |             |
| 200   | <b>7.00</b>  | 45                              | 1925                              | 1.4                    | <b>59.0</b>                       | <b>2650</b>                        |                     |     |     |     |     |                      |   | 392913 | 02               |             |
| 164   | <b>8.55</b>  | 45                              | 2350                              | 1.2                    | <b>51.1</b>                       | <b>2800</b>                        |                     |     |     |     |     |                      |   | 392911 | 03               |             |
| 140   | <b>10.01</b> | 45                              | 2752                              | 1.2                    | <b>49.8</b>                       | <b>3200</b>                        |                     |     |     |     |     |                      |   | 302914 | 04               |             |
| 128   | <b>10.97</b> | 45                              | 3014                              | 1.1                    | <b>45.5</b>                       | <b>3200</b>                        |                     |     |     |     |     |                      |   | 302913 | 05               |             |
| 105   | <b>13.39</b> | 37                              | 3025                              | 1.1                    | <b>39.6</b>                       | <b>3400</b>                        |                     |     |     |     |     |                      |   | 302911 | 06               |             |
| 89  | <b>15.71</b> | 37                              | 3550                              | 1.0                    | <b>34.7</b>                       | <b>3500</b>                        |                     |     |     |     |     |                      |   | 222914 | 07               |             |
| 81  | <b>17.21</b> | 37                              | 3888                              | 1.0                    | <b>33.5</b>                       | <b>3700</b>                        |                     |     |     |     |     |                      |   | 222913 | 08               |             |
| 67  | <b>21.02</b> | 30                              | 3877                              | 1.0                    | <b>29.7</b>                       | <b>4000</b>                        |                     |     |     |     |     |                      |   | 222911 | 09               |             |
| 59  | <b>23.73</b> | 30                              | 4378                              | 0.9                    | <b>26.9</b>                       | <b>4100</b>                        |                     |     |     |     |     |                      |   | 162914 | 10               |             |
| 54  | <b>25.99</b> | 22                              | 3523                              | 1.2                    | <b>25.8</b>                       | <b>4300</b>                        |                     |     |     |     |     |                      |   | 162913 | 11               |             |
| 50  | <b>27.93</b> | 22                              | 3786                              | 1.1                    | <b>24.0</b>                       | <b>4300</b>                        |                     |     |     |     |     |                      |   | 142914 | 12               |             |
| 45.8  | <b>30.59</b> | 22                              | 4146                              | 1.1                    | <b>22.9</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 142913 | 13               |             |
| 44.1  | <b>31.74</b> | 22                              | 4302                              | 1.0                    | <b>22.1</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 162911 | 14               |             |
| 37.5  | <b>37.36</b> | 18.5                            | 4255                              | 1.1                    | <b>18.8</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 142911 | 15               |             |
| 33.8  | <b>41.37</b> | 18.5                            | 4712                              | 1.0                    | <b>17.0</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 102914 | 16               |             |
| 30.9  | <b>45.31</b> | 15                              | 4179                              | 1.1                    | <b>15.5</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 102913 | 17               |             |
| 25.3  | <b>55.33</b> | 11                              | 3750                              | 1.2                    | <b>12.7</b>                       | <b>4500</b>                        |                     |     |     |     |     |                      |   | 102911 | 18               |             |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available  
Flange Motore Disponibili
- B) Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit X113 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.  
See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo X113 è fornito privo di lubrificazione con tappi di sfiatione, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.  
Tab.1 per oli e quantità consigliati.  
Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße X113 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.  
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben  
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type X113 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.  
Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño X113 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |          |          |                 |          |     |
|-----------------------|--|----------|----------|-----------------|----------|-----|
|                       |  |          |          |                 |          |     |
| B3                    | B6   | B7       | B8       | V5              | V6       | V8  |
| 13.50 LT              | 8.00 LT  | 15.50 LT | 14.50 LT | 22.00 LT        | 13.00 LT | Ask |
| SHELL Omala S2 GX 460 |  |          |          | ENI Blasias 460 |          |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{325.5}{X+255.5}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 2100 | 10500 | 140   | 3100 | 15500 | 70    | 4200 | 21000 |
| 250   | 2600 | 13000 | 120   | 3240 | 16200 | 40    | 5600 | 28000 |
| 200   | 3000 | 15000 | 85    | 3600 | 18000 | 15    | 8000 | 40000 |

**Input shaft**  
Albero in entrata

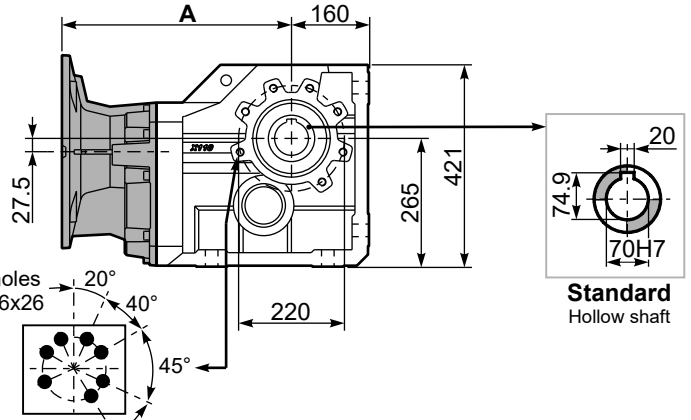
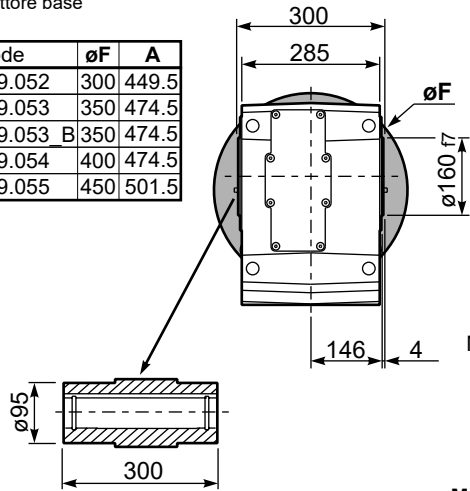
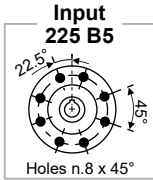
| $n_1$ | FA   | FR   |
|-------|------|------|
| 1400  | 1120 | 5600 |
| 900   | 1220 | 6100 |
| 500   | 1300 | 6500 |

tab. 2

**PX113C...** Basic Gearbox  
Riduttore base

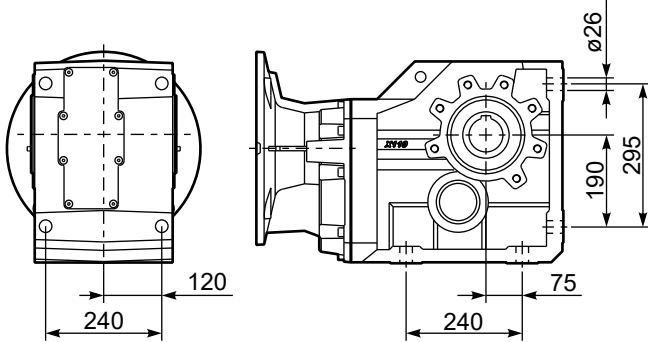
Gearbox weight **170 kg**  
peso riduttore

| M. flanges   | Kit code      | øF  | A     |
|--------------|---------------|-----|-------|
| <b>132B5</b> | KC110.9.052   | 300 | 449.5 |
| <b>160B5</b> | KC110.9.053   | 350 | 474.5 |
| <b>180B5</b> | KC110.9.053 B | 350 | 474.5 |
| <b>200B5</b> | KC110.9.054   | 400 | 474.5 |
| <b>225B5</b> | KC110.9.055   | 450 | 501.5 |

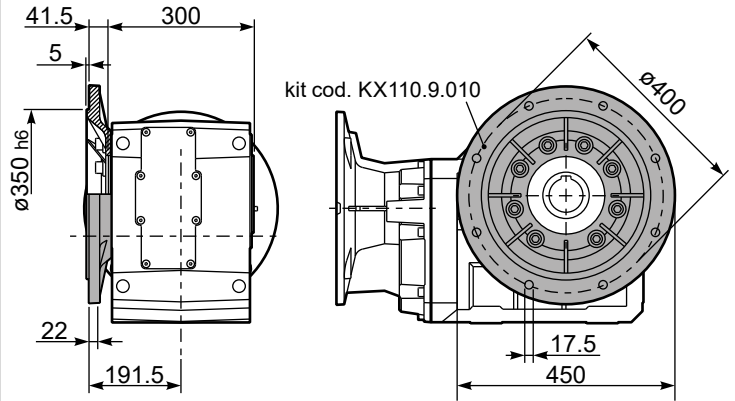


**Mounting holes position**  
Posizione fori di montaggio

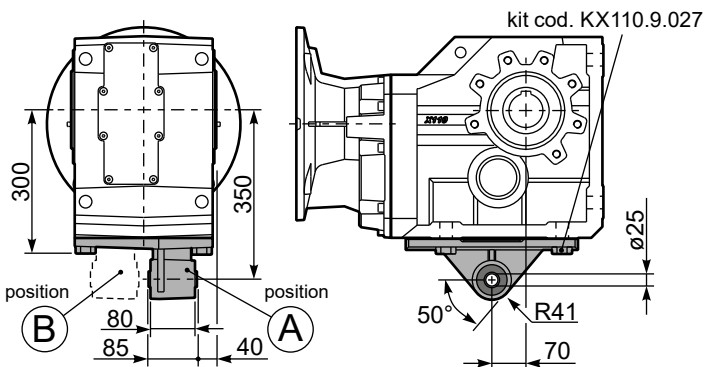
**PX113...FB..** Feet  
Piedini



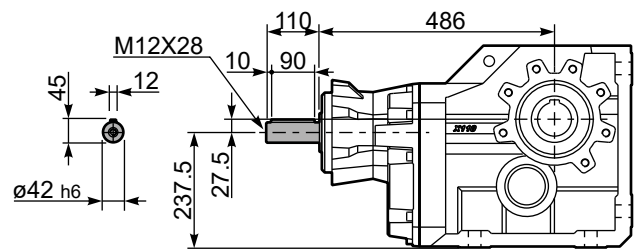
**PX113...-F7..** Output flange  
Flangia uscita



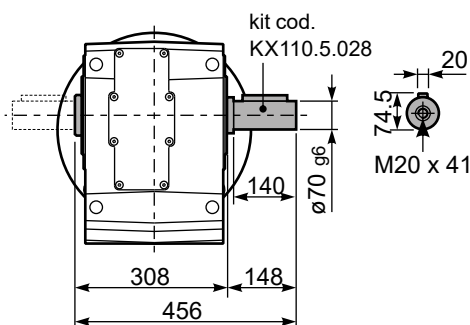
**PX113...BR..** Reaction Arm  
Braccio di reazione



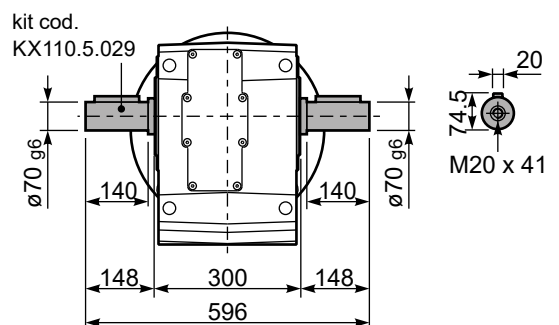
**RX113...** Input shaft  
Albero in entrata



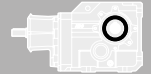
**PX113A...** Single shaft  
Albero lento semplice



**PX113B...** Double shaft  
Albero lento bisp.







#### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | B5<br>motor flanges |     |     | B14<br>motor flanges |     |          | Output Shaft<br> | Ratios<br>code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|---------------------|-----|-----|----------------------|-----|----------|------------------|----------------|
|   |               |                                 |                                   |                        |                                   |                                    | -F                  | -G  | -H  | -U                   | -V  |          |                  |                |
|   |               |                                 |                                   |                        |                                   |                                    | 100<br>112          | 132 | 160 | 100<br>112           | 132 |          |                  |                |
| 28.8  | <b>48.57</b>  | 15                              | 4390                              | 1.0                    | <b>14.8</b>                       | <b>4500</b>                        |                     |     |     |                      |     | 30142911 | 01               |                |
| 20.5  | <b>68.43</b>  | 11                              | 4545                              | 1.0                    | <b>10.7</b>                       | <b>4600</b>                        |                     |     |     |                      |     | 20142914 | 02               |                |
| 18.7  | <b>74.95</b>  | 11                              | 4977                              | 0.9                    | <b>9.8</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 20142913 | 03               |                |
| 15.1  | <b>92.53</b>  | 7.5                             | 4216                              | 1.1                    | <b>7.9</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 16142914 | 04               |                |
| 13.8  | <b>101.33</b> | 7.5                             | 4617                              | 1.0                    | <b>7.2</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 16142913 | 05               |                |
| 11.6  | <b>120.33</b> | 5.5                             | 4051                              | 1.1                    | <b>6.1</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 13142914 | 06               |                |
| 11.3  | <b>123.75</b> | 5.5                             | 4166                              | 1.1                    | <b>5.8</b>                        | <b>4500</b>                        |                     |     |     |                      |     | 16142911 | 07               |                |
| 10.6  | <b>131.78</b> | 5.5                             | 4436                              | 1.0                    | <b>5.6</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 13142913 | 08               |                |
| 9.5   | <b>147.28</b> | 5.5                             | 4958                              | 0.9                    | <b>5.0</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 11142914 | 09               |                |
| 8.7   | <b>161.30</b> | 4                               | 3972                              | 1.2                    | <b>4.5</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 11142913 | 10               |                |
| 7.1   | <b>196.98</b> | 3                               | 3652                              | 1.2                    | <b>3.6</b>                        | <b>4500</b>                        |                     |     |     |                      |     | 11142911 | 11               |                |
| 6.6   | <b>212.99</b> | 3                               | 3949                              | 1.2                    | <b>3.4</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 8142914  | 12               |                |
| 6.0   | <b>233.26</b> | 3                               | 4324                              | 1.1                    | <b>3.1</b>                        | <b>4600</b>                        |                     |     |     |                      |     | 8142913  | 13               |                |
| 4.9   | <b>284.86</b> | 2.2                             | 3889                              | 1.2                    | <b>2.5</b>                        | <b>4500</b>                        |                     |     |     |                      |     | 8142911  | 14               |                |

The dynamic efficiency is **0.92** for all ratios

**Motor Flanges Available**  
Flange Motore Disponibili

**B) Supplied with Reduction Bushing**  
Fornito con Bussola di Riduzione

**B) Available on Request without reduction bushing**  
Disponibile a Richiesta senza Bussola di Riduzione

**C) Motor Flange Holes Position**  
Posizione Fori Flangia Motore

**EN** Unit **X114** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **X114** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **X114** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **X114** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **X114** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil |          |                 |          |          |     |
|-----------------------|---|----------|-----------------|----------|----------|-----|
|                       |   |          |                 |          |          |     |
| B3                    | B6  | B7       | B8              | V5       | V6       | V8  |
| 14.50 LT              | 8.50 LT   | 16.50 LT | 16.00 LT        | 23.00 LT | 14.50 LT | Ask |
| SHELL Omala S2 GX 460 |   |          | ENI Blasias 460 |          |          |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{325.5}{X+255.5}$

| $n_2$ | FA   | FR    | $n_2$ | FA   | FR    | $n_2$ | FA   | FR    |
|-------|------|-------|-------|------|-------|-------|------|-------|
| 300   | 2100 | 10500 | 140   | 3100 | 15500 | 70    | 4200 | 21000 |
| 250   | 2600 | 13000 | 120   | 3240 | 16200 | 40    | 5600 | 28000 |
| 200   | 3000 | 15000 | 85    | 3600 | 18000 | 15    | 8000 | 40000 |

**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 700 | 3500 |
| 900   | 840 | 4200 |
| 500   | 900 | 4500 |

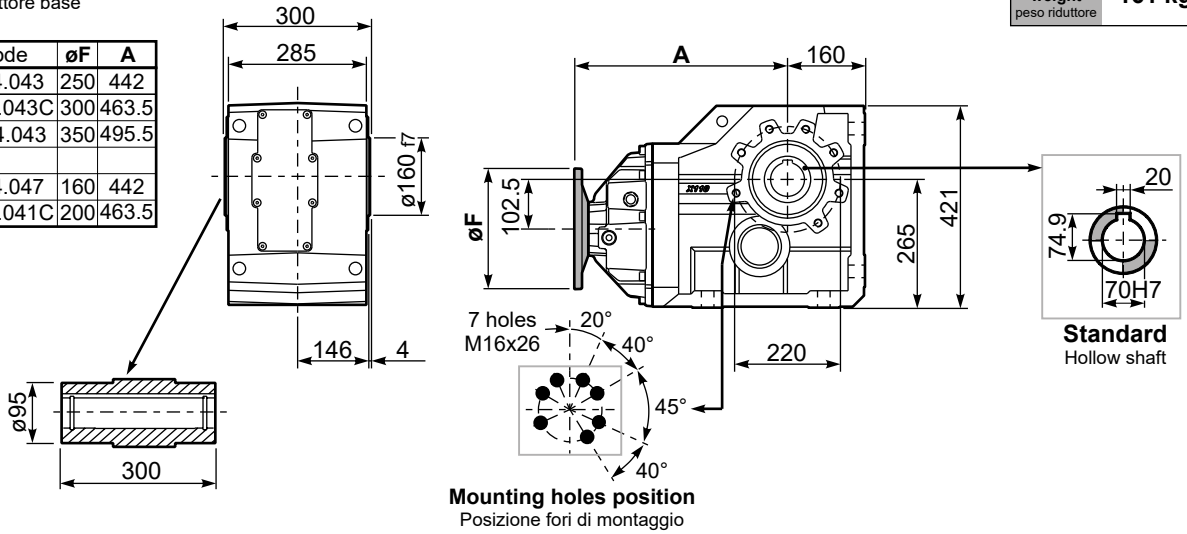
**tab. 2**



**PX114C...** Basic Gearbox  
Riduttore base

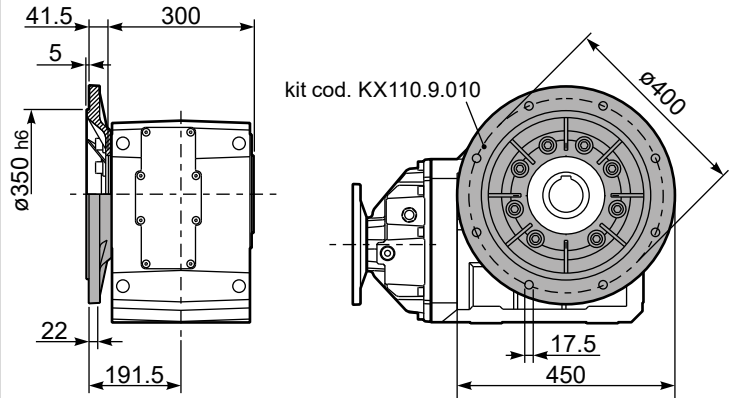
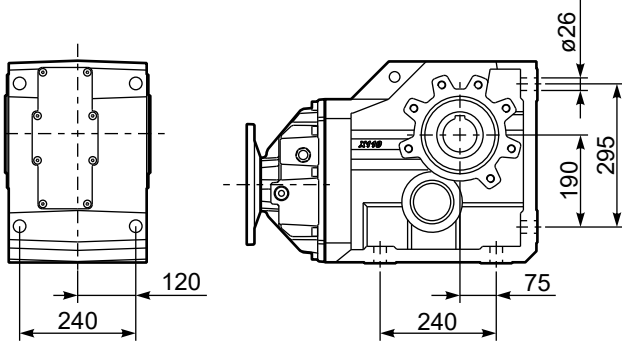
Gearbox weight **161 kg**  
peso riduttore

| M. flanges        | Kit code    | øF  | A     |
|-------------------|-------------|-----|-------|
| <b>100/112B5</b>  | K023.4.043  | 250 | 442   |
| <b>132B5</b>      | KC51.4.043C | 300 | 463.5 |
| <b>160B5</b>      | KC86.4.043  | 350 | 495.5 |
| <b>100/112B14</b> | K085.4.047  | 160 | 442   |
| <b>132B14</b>     | KC51.4.041C | 200 | 463.5 |



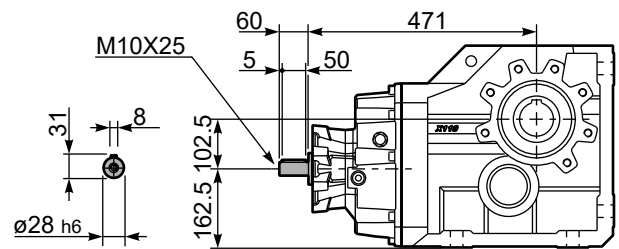
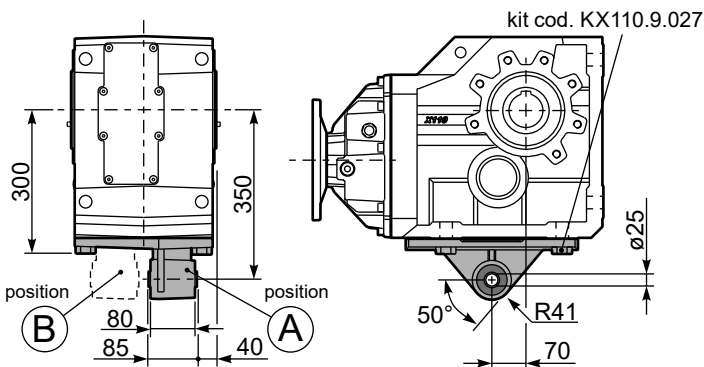
**PX114...FB..** Feet  
Piedini

**PX114...-F7..** Output flange  
Flangia uscita



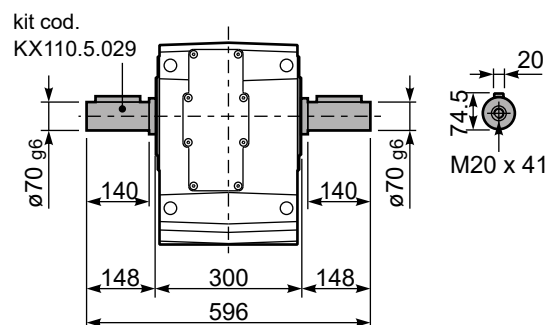
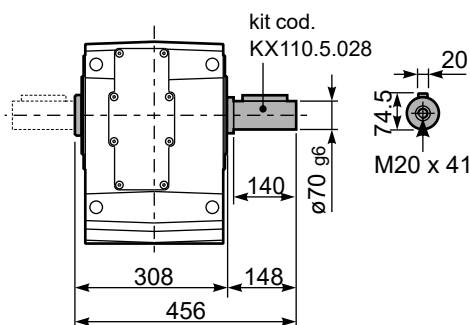
**PX114...BR..** Reaction Arm  
Braccio di reazione

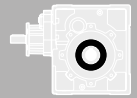
**RX114...** Input shaft  
Albero in entrata



**PX114A...** Single shaft  
Albero lento semplice

**PX114B...** Double shaft  
Albero lento bisp.





## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$ | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br> | Ratios code |    |
|---|--------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|------------------|-------------|----|
|   |              |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                  |             |    |
|   |              |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                  |             |    |
| 176   | <b>7.94</b>  | 7.5                             | 369                               | 1.0                      | 7.5                               | 380                                | B                          |    |    |            |     |                             |    |            |     |                  | 302418      | 01 |
| 153   | <b>9.13</b>  | 7.5                             | 425                               | 0.9                      | 6.7                               | 390                                | B                          |    |    |            |     |                             |    |            |     |                  | 302416      | 02 |
| 131   | <b>10.66</b> | 5.5                             | 366                               | 1.1                      | 6.0                               | 410                                | B                          |    |    |            |     |                             |    |            |     |                  | 302414      | 03 |
| 94  | <b>14.97</b> | 5.5                             | 514                               | 1.1                      | 6.0                               | 580                                | B                          |    |    |            |     |                             |    |            |     |                  | 202418      | 04 |
| 81  | <b>17.21</b> | 5.5                             | 591                               | 1.0                      | 5.4                               | 600                                | B                          |    |    |            |     |                             |    |            |     |                  | 202416      | 05 |
| 69  | <b>20.24</b> | 5.5                             | 695                               | 1.0                      | 5.2                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 162418      | 06 |
| 60  | <b>23.27</b> | 4                               | 585                               | 1.2                      | 4.5                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 162416      | 07 |
| 53  | <b>26.31</b> | 4                               | 661                               | 1.0                      | 4.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 132418      | 08 |
| 46.3  | <b>30.25</b> | 4                               | 760                               | 0.9                      | 3.5                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 132416      | 09 |
| 39.6  | <b>35.32</b> | 3                               | 668                               | 1.0                      | 3.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 132414      | 10 |
| 37.8  | <b>37.03</b> | 3                               | 701                               | 1.0                      | 2.8                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 112416      | 11 |
| 32.4  | <b>43.23</b> | 2.2                             | 602                               | 1.1                      | 2.4                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 112414      | 12 |
| 30.1  | <b>46.58</b> | 2.2                             | 649                               | 1.0                      | 2.3                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 82418       | 13 |
| 26.1  | <b>53.55</b> | 2.2                             | 746                               | 0.9                      | 2.0                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 82416       | 14 |
| 22.4  | <b>62.52</b> | 1.5                             | 600                               | 1.1                      | 1.7                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 82414       | 15 |
| 19.0  | <b>73.75</b> | 1.1                             | 517                               | 1.1                      | 1.2                               | 580                                | B                          |    |    |            |     |                             |    |            |     |                  | 62416       | 16 |
| 16.3  | <b>86.09</b> | 1.1                             | 604                               | 1.1                      | 1.2                               | 675                                | B                          |    |    |            |     |                             |    |            |     |                  | 62414       | 17 |

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available Flange Motore Disponibili  
 B) Supplied with Reduction Bushing Fornito con Bussola di Riduzione  
 B) Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione  
 C) Motor Flange Holes Position Posizione Fori Flangia Motore

**EN** Unit 113C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore 113C viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe 113C ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

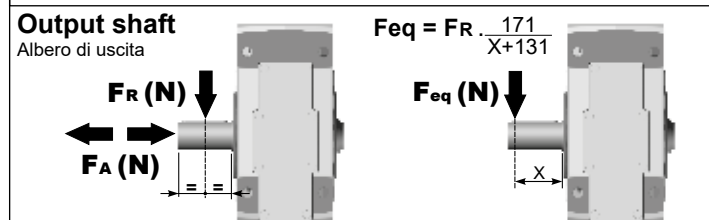
**F** Le réducteur 113C est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño 113C se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |         |                    |         |     |
|-----------------------|--|---------|---------|--------------------|---------|-----|
|                       |  |         |         |                    |         |     |
| B3                    | B6   | B7      | B8      | V5                 | V6      | V8  |
| 4.00 LT               | 2.60 LT  | 2.60 LT | 2.60 LT | 5.15 LT            | 2.20 LT | Ask |
| SHELL Omala S4 WE 320 |  |         |         | ENI Telium VSF 320 |         |     |

For all details on lubrication and plugs check our website [tab. 1](#)  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

## RADIAL AND AXIAL LOADS

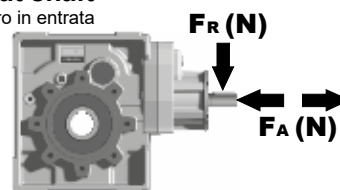


| $n_2$ | FA  | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|------|------|-------|------|------|
| 300   | 640 | 3200 | 140   | 860  | 4300 | 70    | 1080 | 5400 |
| 250   | 700 | 3500 | 120   | 900  | 4500 | 40    | 1300 | 6500 |
| 200   | 740 | 3700 | 85    | 1000 | 5000 | 15    | 1840 | 9200 |

On request reinforced bearings to increase loads.  
A richiesta cuscinetti rinforzati per aumentare i carichi.

### Input shaft

Albero in entrata



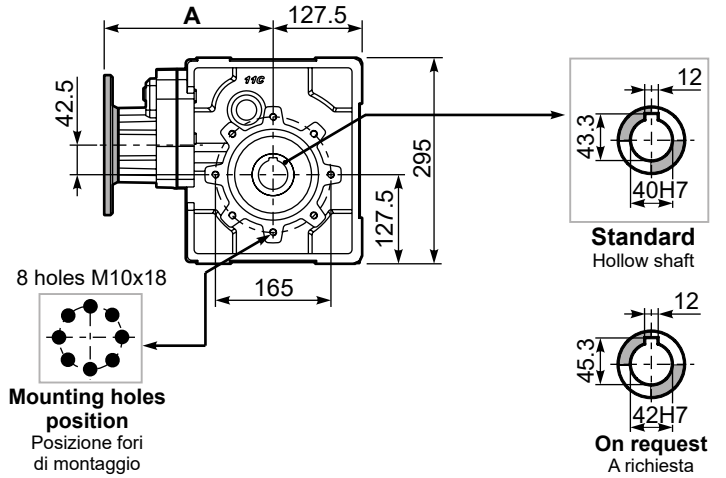
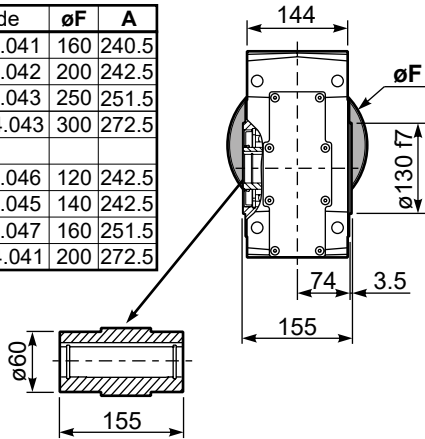
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

tab. 2

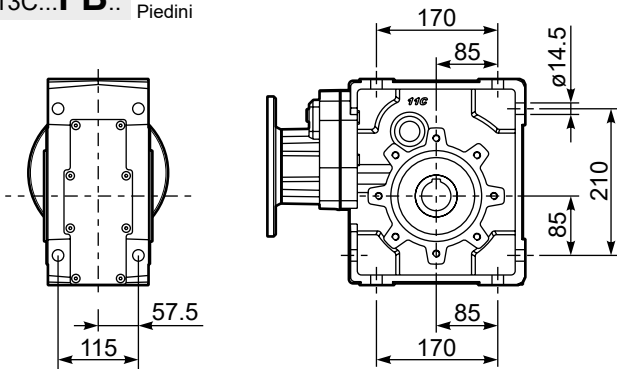
**P113CC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **38.0 kg**

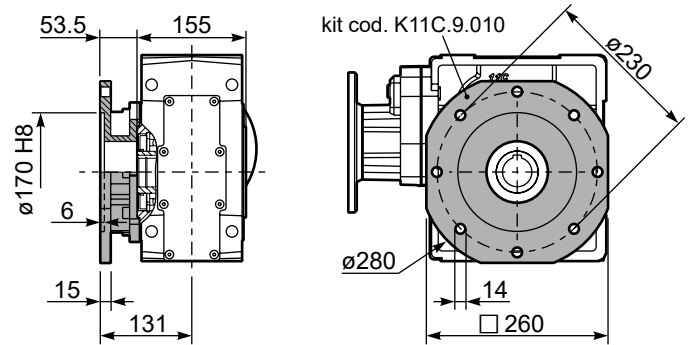
| M. flanges        | Kit code   | øF  | A     |
|-------------------|------------|-----|-------|
| <b>71B5</b>       | K023.4.041 | 160 | 240.5 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 242.5 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 251.5 |
| <b>132B5</b>      | KC51.4.043 | 300 | 272.5 |
| <b>80B14</b>      | K085.4.046 | 120 | 242.5 |
| <b>90B14</b>      | K085.4.045 | 140 | 242.5 |
| <b>100/112B14</b> | K085.4.047 | 160 | 251.5 |
| <b>132B14</b>     | KC51.4.041 | 200 | 272.5 |



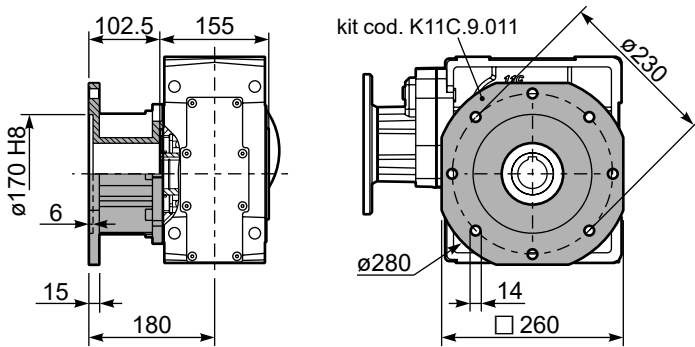
**P113C...FB..** Feet  
Piedini



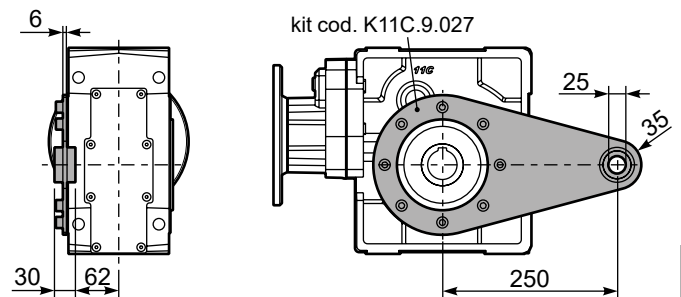
**P113C...-FC..** Output flange  
Flangia uscita



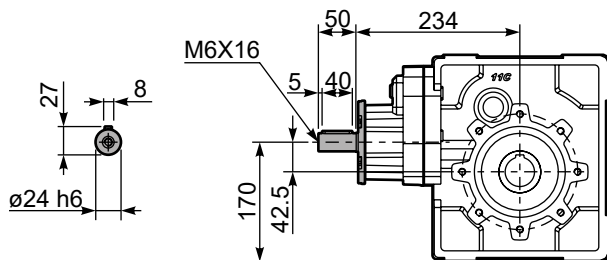
**P113C...-FL..** Output flange  
Flangia uscita



**P113C...BR..** Reaction Arm  
Braccio di reazione

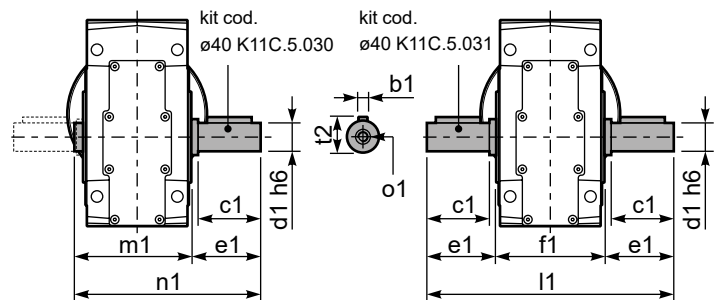


**R113C...** Input shaft  
Albero in entrata

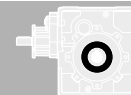


**P113CA...** Single shaft  
Albero lento semplice

**P113CB...** Double shaft  
Albero lento bisp.



|                     | b1 | c1 | d1 | e1   | f1  | l1  | m1    | n1  | t2 | o1  |
|---------------------|----|----|----|------|-----|-----|-------|-----|----|-----|
| <b>ø40 Standard</b> | 12 | 80 | 40 | 84.5 | 155 | 324 | 164.5 | 249 | 43 | M12 |
| On request          | -  | -  | -  | -    | -   | -   | -     | -   | -  | -   |



## QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 18.7  | <b>74.79</b>  | 1.5                             | 704                               | 1.0                    | 1.4                               | 675                                | B                          |    |    |    | C                           | C  |    | 19132418         | 01          |
| 16.3  | <b>85.99</b>  | 1.1                             | 591                               | 1.1                    | 1.3                               | 675                                | B                          |    |    |    | C                           | C  |    | 19132416         | 02          |
| 14.0  | <b>99.66</b>  | 1.1                             | 685                               | 1.0                    | 1.1                               | 675                                | B                          |    |    |    | C                           | C  |    | 17132416         | 03          |
| 12.0  | <b>116.35</b> | 0.75                            | 548                               | 1.2                    | 0.92                              | 675                                | B                          |    |    |    | C                           | C  |    | 17132414         | 04          |
| 11.5  | <b>121.45</b> | 0.75                            | 572                               | 1.2                    | 0.89                              | 675                                | B                          |    |    |    | C                           | C  |    | 13132418         | 05          |
| 10.0  | <b>139.64</b> | 0.75                            | 658                               | 1.0                    | 0.77                              | 675                                | B                          |    |    |    | C                           | C  |    | 13132416         | 06          |
| 9.2   | <b>152.21</b> | 0.75                            | 717                               | 0.9                    | 0.71                              | 675                                | B                          |    |    |    | C                           | C  |    | 19082416         | 07          |
| 8.6   | <b>163.02</b> | 0.55                            | 567                               | 1.2                    | 0.66                              | 675                                | B                          |    |    |    | C                           | C  |    | 13132414         | 08          |
| 7.9   | <b>177.69</b> | 0.55                            | 618                               | 1.1                    | 0.61                              | 675                                | B                          |    |    |    | C                           | C  |    | 19082414         | 09          |
| 6.8   | <b>205.95</b> | 0.55                            | 716                               | 0.9                    | 0.52                              | 675                                | B                          |    |    |    | C                           | C  |    | 17082414         | 10          |
| 6.3   | <b>222.52</b> | 0.55                            | 774                               | 0.9                    | 0.48                              | 675                                | B                          |    |    |    | C                           | C  |    | 10132414         | 11          |
| 5.6   | <b>248.76</b> | 0.37                            | 578                               | 1.2                    | 0.43                              | 675                                | B                          |    |    |    | C                           | C  |    | 9132416          | 12          |
| 4.8   | <b>290.41</b> | 0.37                            | 675                               | 1.0                    | 0.37                              | 675                                | B                          |    |    |    | C                           | C  |    | 9132414          | 13          |
| 4.1   | <b>337.39</b> | 0.37                            | 784                               | 0.9                    | 0.32                              | 675                                | B                          |    |    |    | C                           | C  |    | 10082416         | 14          |
| 3.6   | <b>393.88</b> | 0.25                            | 618                               | 1.1                    | 0.27                              | 675                                | B                          |    |    |    | C                           | C  |    | 10082414         | 15          |
| 3.2   | <b>440.33</b> | 0.25                            | 690                               | 1.0                    | 0.24                              | 675                                | B                          |    |    |    | C                           | C  |    | 9082416          | 16          |
| 2.7   | <b>514.06</b> | 0.18                            | 616                               | 1.1                    | 0.21                              | 675                                | B                          |    |    |    | C                           | C  |    | 9082414          | 17          |
| 2.4   | <b>581.44</b> | 0.18                            | 697                               | 1.0                    | 0.18                              | 675                                | B                          |    |    |    | C                           | C  |    | 7082416          | 18          |
| 2.1   | <b>678.79</b> | 0.12                            | 526                               | 1.3                    | 0.16                              | 675                                | B                          |    |    |    | C                           | C  |    | 7082414          | 19          |

The dynamic efficiency is **0.92** for all ratios

**A** Motor Flanges Available  
Flange Motore Disponibili

**B** Supplied with Reduction Bushing  
Fornito con Bussola di Riduzione

**B** Available on Request without reduction bushing  
Disponibile a Richiesta senza Bussola di Riduzione



**C** Motor Flange Holes Position  
Posizione Fori Flangia Motore

**EN** Unit **114C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore **114C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione. Vedi tab.1 per oli e quantità consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe **114C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

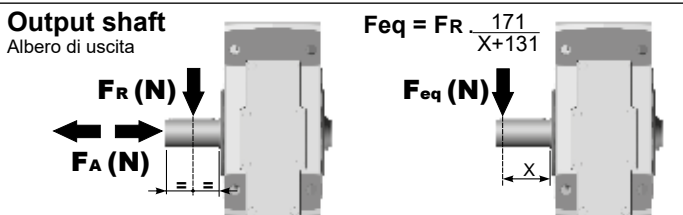
**F** Le réducteur **114C** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

**E** El reductor tamaño **114C** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

| Standard supplied     | For these mounting position specify in the order or add oil<br>Per queste posizioni specificare in fase d'ordine o aggiungere olio |         |                    |         |         |     |
|-----------------------|--|---------|--------------------|---------|---------|-----|
|                       |  |         |                    |         |         |     |
| B3                    | B6   | B7      | B8                 | V5      | V6      | V8  |
| 4.10 LT               | 2.70 LT  | 2.70 LT | 2.70 LT            | 5.30 LT | 2.35 LT | Ask |
| SHELL Omala S4 WE 320 |  |         | ENI Telium VSF 320 |         |         |     |

For all details on lubrication and plugs check our website [www.angletech.com](#) tab. 1  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

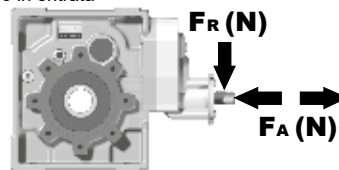
## RADIAL AND AXIAL LOADS



| $n_2$ | FA  | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR   |
|-------|-----|------|-------|------|------|-------|------|------|
| 300   | 640 | 3200 | 140   | 860  | 4300 | 70    | 1080 | 5400 |
| 250   | 700 | 3500 | 120   | 900  | 4500 | 40    | 1300 | 6500 |
| 200   | 740 | 3700 | 85    | 1000 | 5000 | 15    | 1840 | 9200 |

On request reinforced bearings to increase loads.  
A richiesta cuscinetti rinforzati per aumentare i carichi.

Input shaft  
Albero in entrata



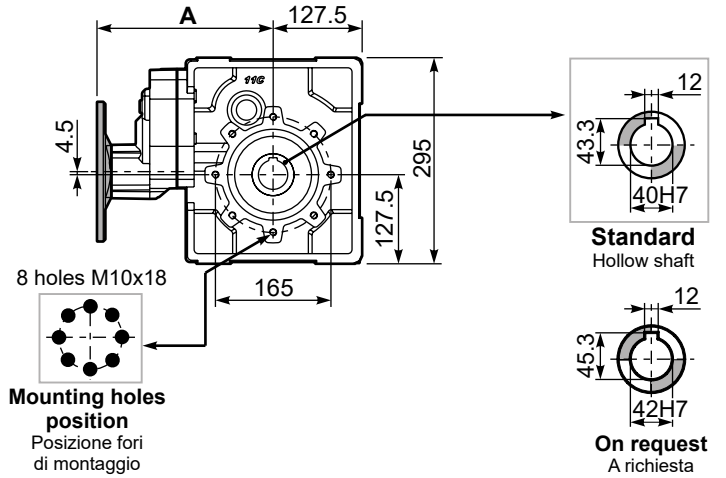
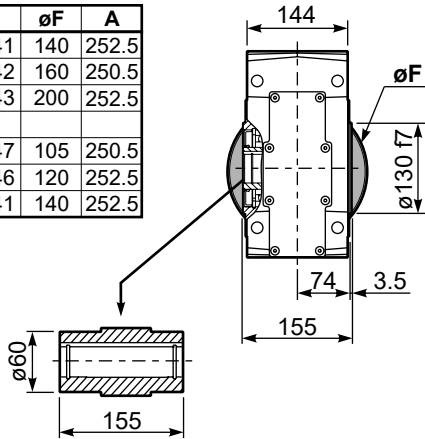
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 240 | 1200 |
| 900   | 280 | 1400 |
| 500   | 310 | 1700 |

tab. 2

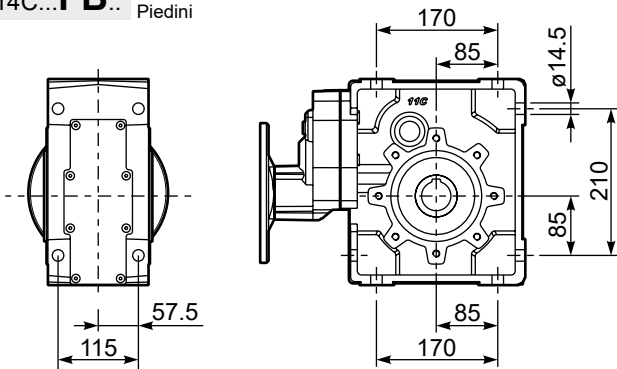
**P114CC...** Basic Gearbox  
Riduttore base

Gearbox weight  
peso riduttore **38.0 kg**

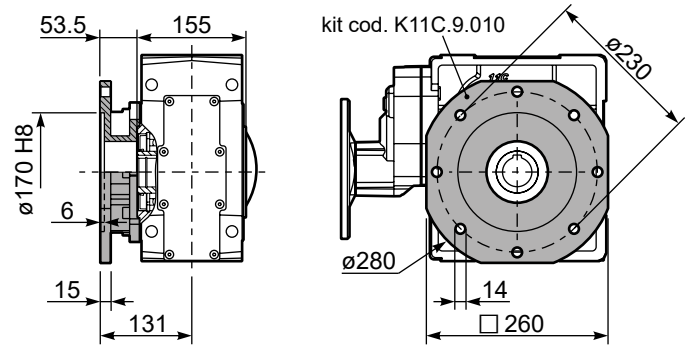
| M. flanges | Kit code   | øF  | A     |
|------------|------------|-----|-------|
| 63B5       | K063.4.041 | 140 | 252.5 |
| 71B5       | K063.4.042 | 160 | 250.5 |
| 80/90B5    | K063.4.043 | 200 | 252.5 |
| 71B14      | K063.4.047 | 105 | 250.5 |
| 80B14      | K063.4.046 | 120 | 252.5 |
| 90B14      | K063.4.041 | 140 | 252.5 |



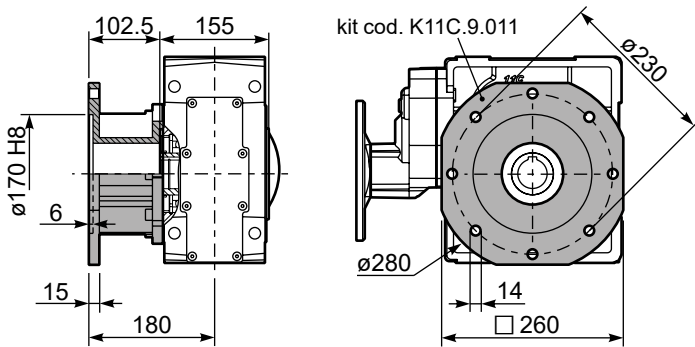
**P114C...FB..** Feet  
Piedini



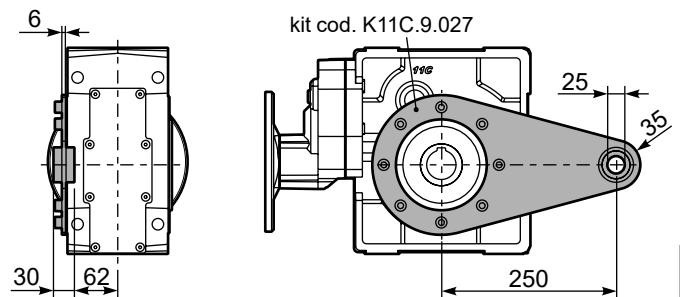
**P114C...-FC..** Output flange  
Flangia uscita



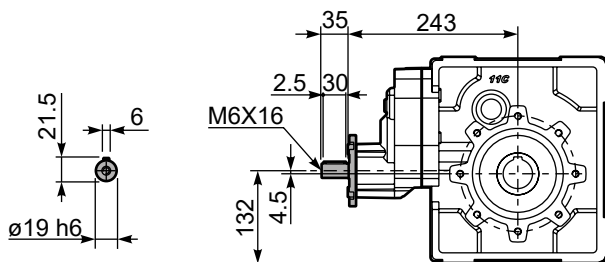
**P114C...-FL..** Output flange  
Flangia uscita



**P114C...BR..** Reaction Arm  
Braccio di reazione

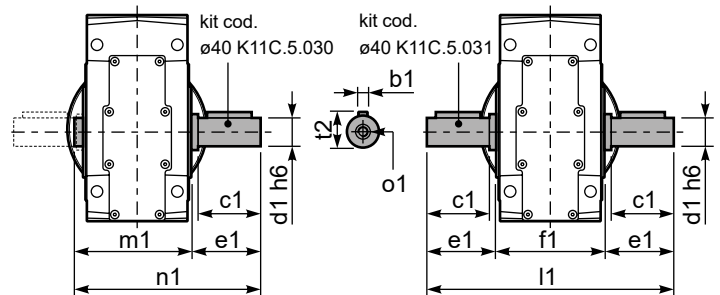


**R114C...** Input shaft  
Albero in entrata



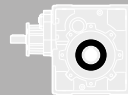
**P114CA...** Single shaft  
Albero lento semplice

**P114CB...** Double shaft  
Albero lento bisp.



|              | b1 | c1 | d1 | e1   | f1  | l1  | m1    | n1  | t2 | o1  |
|--------------|----|----|----|------|-----|-----|-------|-----|----|-----|
| ø40 Standard | 12 | 80 | 40 | 84.5 | 155 | 324 | 164.5 | 249 | 43 | M12 |
| On request   | -  | -  | -  | -    | -   | -   | -     | -   | -  | -   |





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>$f.s.$ | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |            |     | Available B14 motor flanges |    |            |     | Output Shaft<br><br>$\varnothing$ | Ratios code<br> |
|---|---------------|---------------------------------|-----------------------------------|--------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|------------|-----|-----------------------------|----|------------|-----|-----------------------------------|-----------------|
|   |               |                                 |                                   |                          |                                   |                                    | -C                         | -D | -E | -F         | -G  | -R                          | -T | -U         | -V  |                                   |                 |
|   |               |                                 |                                   |                          |                                   |                                    | 71                         | 80 | 90 | 100<br>112 | 132 | 80                          | 90 | 100<br>112 | 132 |                                   |                 |
| 145   | <b>9.69</b>   | 9                               | 560                               | 1.3                      | <b>12.2</b>                       | <b>755</b>                         | B                          |    |    |            |     |                             |    |            |     | 302418                            | 01              |
| 126   | <b>11.09</b>  | 9                               | 641                               | 1.1                      | <b>9.6</b>                        | <b>680</b>                         | B                          |    |    |            |     |                             |    |            |     | 302416                            | 02              |
| 108   | <b>12.90</b>  | 9                               | 746                               | 1.1                      | <b>9.6</b>                        | <b>790</b>                         | B                          |    |    |            |     |                             |    |            |     | 302414                            | 03              |
| 77  | <b>18.26</b>  | 7.5                             | 849                               | 1.1                      | <b>8.0</b>                        | <b>935</b>                         | B                          |    |    |            |     |                             |    |            |     | 202418                            | 04              |
| 67  | <b>20.91</b>  | 7.5                             | 972                               | 1.0                      | <b>7.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 202416                            | 05              |
| 58  | <b>24.32</b>  | 5.5                             | 835                               | 1.2                      | <b>6.4</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 202414                            | 06              |
| 49.5  | <b>28.27</b>  | 5.5                             | 971                               | 1.0                      | <b>5.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 162416                            | 07              |
| 42.6  | <b>32.88</b>  | 4                               | 826                               | 1.2                      | <b>4.7</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 162414                            | 08              |
| 38.1  | <b>36.76</b>  | 4                               | 924                               | 1.1                      | <b>4.2</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 132416                            | 09              |
| 32.7  | <b>42.76</b>  | 3                               | 809                               | 1.2                      | <b>3.6</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 132414                            | 10              |
| 31.1  | <b>45.00</b>  | 3                               | 851                               | 1.2                      | <b>3.5</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 112416                            | 11              |
| 26.8  | <b>52.33</b>  | 3                               | 990                               | 1.0                      | <b>3.0</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 112414                            | 12              |
| 24.6  | <b>56.82</b>  | 2.2                             | 791                               | 1.1                      | <b>2.3</b>                        | <b>850</b>                         | B                          |    |    |            |     |                             |    |            |     | 82418                             | 13              |
| 21.5  | <b>65.07</b>  | 2.2                             | 906                               | 1.1                      | <b>2.3</b>                        | <b>975</b>                         | B                          |    |    |            |     |                             |    |            |     | 82416                             | 14              |
| 18.5  | <b>75.68</b>  | 2.2                             | 1054                              | 0.9                      | <b>2.1</b>                        | <b>1000</b>                        | B                          |    |    |            |     |                             |    |            |     | 82414                             | 15              |
| 15.6  | <b>89.61</b>  | 1.1                             | 628                               | 1.1                      | <b>1.2</b>                        | <b>710</b>                         | B                          |    |    |            |     |                             |    |            |     | 62416                             | 16              |
| 13.4  | <b>104.22</b> | 1.1                             | 731                               | 1.1                      | <b>1.2</b>                        | <b>820</b>                         | B                          |    |    |            |     |                             |    |            |     | 62414                             | 17              |

The dynamic efficiency is **0.94** for all ratios

- Motor Flanges Available** Flange Motore Disponibili
- B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione
- B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione
- C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **133C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

**I** Il riduttore tipo **133C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **133C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **133C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

**E** El reductor tamaño **133C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

|                       |         |         |         |                 |         |     |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| 6.00 LT               | 4.30 LT | 4.30 LT | 3.30 LT | 7.20 LT         | 3.10 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website **tab. 1**  
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = F_R \cdot \frac{184.5}{X+144.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|-----|------|-------|------|------|-------|------|-------|
| 300   | 800 | 4000 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 900 | 4500 | 120   | 1200 | 6000 | 40    | 1700 | 8500  |
| 200   | 960 | 4800 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 450 | 2250 |
| 900   | 500 | 2500 |
| 500   | 600 | 3000 |

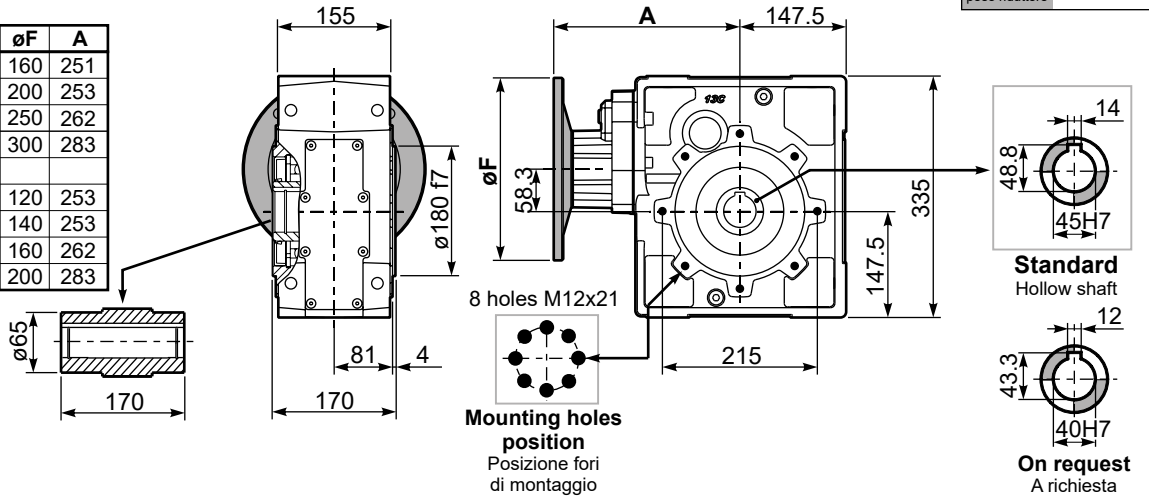
**tab. 2**



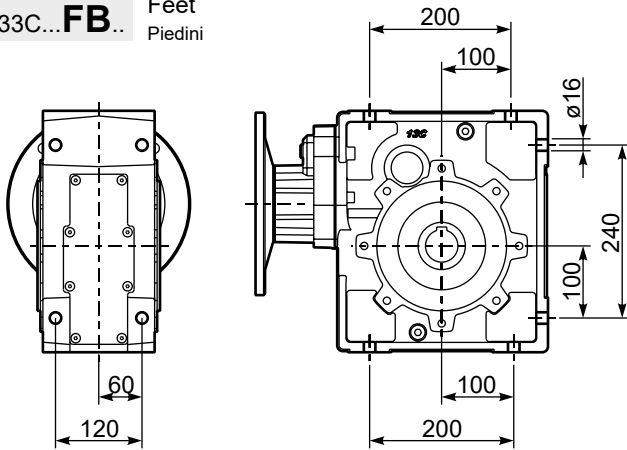
**P133CC...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **53.5 kg**

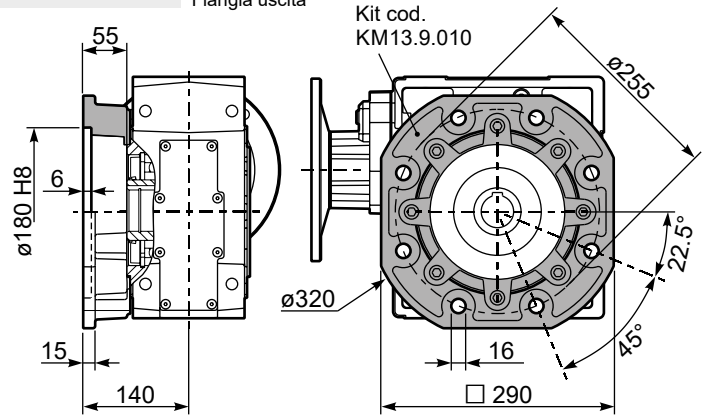
| M. flanges        | Kit code   | øF  | A   |
|-------------------|------------|-----|-----|
| <b>71B5</b>       | K023.4.041 | 160 | 251 |
| <b>80/90B5</b>    | K023.4.042 | 200 | 253 |
| <b>100/112B5</b>  | K023.4.043 | 250 | 262 |
| <b>132B5</b>      | KC51.4.043 | 300 | 283 |
| <b>80B14</b>      | K085.4.046 | 120 | 253 |
| <b>90B14</b>      | K085.4.045 | 140 | 253 |
| <b>100/112B14</b> | K085.4.047 | 160 | 262 |
| <b>132B14</b>     | KC51.4.041 | 200 | 283 |



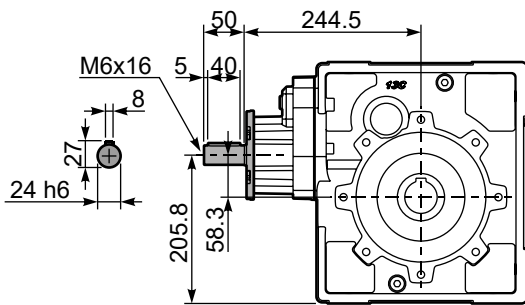
**P133C...FB..** Feet  
Piedini



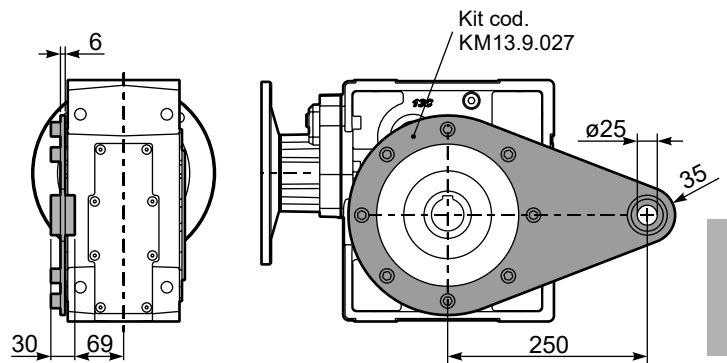
**P133C...-FC..** Output flange  
Flangia uscita



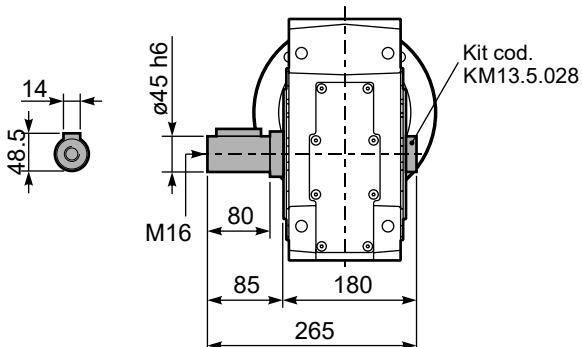
**R133C...** Input Shaft  
Albero in entrata



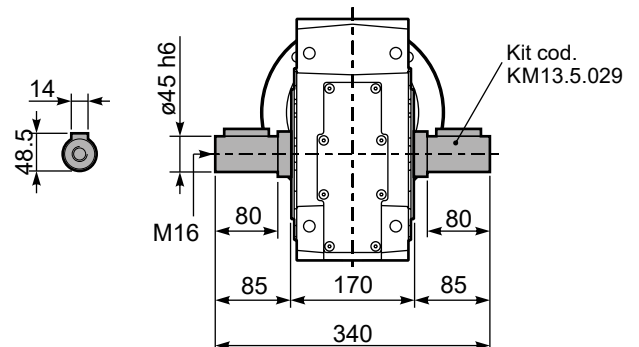
**P133C...BR..** Reaction arm  
Braccio di reazione

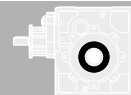


**P133CA..** Single output Shaft  
Albero lento semplice



**P133CB..** Double Input Shaft  
Albero lento bisorgente





### QUICK SELECTION / Selezione veloce

input speed ( $n_1$ ) = 1400 min<sup>-1</sup>

| Output Speed<br>$n_2$<br>[min <sup>-1</sup> ] | Ratio<br>$i$  | Motor power<br>$P_{1M}$<br>[kW] | Output torque<br>$M_{2M}$<br>[Nm] | Service factor<br>f.s. | Nominal power<br>$P_{1R}$<br>[kW] | Nominal torque<br>$M_{2R}$<br>[Nm] | Available B5 motor flanges |    |    |    | Available B14 motor flanges |    |    | Output Shaft<br> | Ratios code |
|---|---------------|---------------------------------|-----------------------------------|------------------------|-----------------------------------|------------------------------------|----------------------------|----|----|----|-----------------------------|----|----|------------------|-------------|
|   |               |                                 |                                   |                        |                                   |                                    | -B                         | -C | -D | -E | -Q                          | -R | -T |                  |             |
|   |               |                                 |                                   |                        |                                   |                                    | 63                         | 71 | 80 | 90 | 71                          | 80 | 90 |                  |             |
| 15.3  | <b>91.23</b>  | 1.5                             | 858                               | 1.2                    | 1.7                               | 1000                               | B                          |    |    |    | C                           | C  |    | 19132418         | 01          |
| 13.4  | <b>104.48</b> | 1.5                             | 983                               | 1.0                    | 1.5                               | 1000                               | B                          |    |    |    | C                           | C  |    | 19132416         | 02          |
| 11.6  | <b>121.10</b> | 1.5                             | 1139                              | 0.9                    | 1.3                               | 1000                               | B                          |    |    |    | C                           | C  |    | 17132416         | 03          |
| 9.9   | <b>140.84</b> | 1.1                             | 968                               | 1.0                    | 1.1                               | 1000                               | B                          |    |    |    | C                           | C  |    | 17132414         | 04          |
| 8.5   | <b>165.32</b> | 1.1                             | 1136                              | 0.9                    | 0.96                              | 1000                               | B                          |    |    |    | C                           | C  |    | 15132414         | 05          |
| 7.6   | <b>184.94</b> | 0.75                            | 872                               | 1.1                    | 0.86                              | 1000                               | B                          |    |    |    | C                           | C  |    | 19082416         | 06          |
| 7.1   | <b>197.34</b> | 0.75                            | 930                               | 1.1                    | 0.81                              | 1000                               | B                          |    |    |    | C                           | C  |    | 13132414         | 07          |
| 6.5   | <b>215.10</b> | 0.75                            | 1014                              | 1.0                    | 0.74                              | 1000                               | B                          |    |    |    | C                           | C  |    | 19082414         | 08          |
| 6.0   | <b>231.60</b> | 0.55                            | 805                               | 1.2                    | 0.69                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10132416         | 09          |
| 5.6   | <b>249.31</b> | 0.55                            | 867                               | 1.2                    | 0.64                              | 1000                               | B                          |    |    |    | C                           | C  |    | 17082414         | 10          |
| 5.2   | <b>269.37</b> | 0.55                            | 937                               | 1.1                    | 0.59                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10132414         | 11          |
| 4.8   | <b>292.64</b> | 0.55                            | 1018                              | 1.0                    | 0.54                              | 1000                               | B                          |    |    |    | C                           | C  |    | 15082414         | 12          |
| 4.6   | <b>302.26</b> | 0.55                            | 1051                              | 1.0                    | 0.53                              | 1000                               | B                          |    |    |    | C                           | C  |    | 9132416          | 13          |
| 4.0   | <b>349.30</b> | 0.37                            | 812                               | 1.2                    | 0.46                              | 1000                               | B                          |    |    |    | C                           | C  |    | 13082414         | 14          |
| 3.5   | <b>399.12</b> | 0.37                            | 928                               | 1.1                    | 0.40                              | 1000                               | B                          |    |    |    | C                           | C  |    | 7132416          | 15          |
| 2.9   | <b>476.80</b> | 0.37                            | 1108                              | 0.9                    | 0.33                              | 1000                               | B                          |    |    |    | C                           | C  |    | 10082414         | 16          |
| 2.2   | <b>622.28</b> | 0.25                            | 976                               | 1.0                    | 0.26                              | 1000                               | B                          |    |    |    | C                           | C  |    | 9082414          | 17          |
| 1.7   | <b>821.70</b> | 0.18                            | 985                               | 1.0                    | 0.19                              | 1000                               | B                          |    |    |    | C                           | C  |    | 7082414          | 18          |

The dynamic efficiency is **0.92** for all ratios

**A) Motor Flanges Available** Flange Motore Disponibili **B) Supplied with Reduction Bushing** Fornito con Bussola di Riduzione **B) Available on Request without reduction bushing** Disponibile a Richiesta senza Bussola di Riduzione **C) Motor Flange Holes Position** Posizione Fori Flangia Motore

**EN** Unit **134C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

| B3                    | B6      | B7      | B8      | V5              | V6      | V8  |
|-----------------------|---------|---------|---------|-----------------|---------|-----|
|                       |         |         |         |                 |         |     |
| 6.10 LT               | 4.40 LT | 4.40 LT | 3.40 LT | 7.50 LT         | 3.20 LT | Ask |
| SHELL Omala S2 GX 460 |         |         |         | ENI Blasias 460 |         |     |

For all details on lubrication and plugs check our website [Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web](#) **tab. 1**

**I** Il riduttore tipo **134C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

**D** Das Getriebe der Baugröße **134C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

**F** Le réducteur de type **134C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

**E** El reductor tamaño **134C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

### RADIAL AND AXIAL LOADS

**Output shaft**  
Albero di uscita

$F_{eq} = FR \cdot \frac{184.5}{X+144.5}$

| $n_2$ | FA  | FR   | $n_2$ | FA   | FR   | $n_2$ | FA   | FR    |
|-------|-----|------|-------|------|------|-------|------|-------|
| 300   | 800 | 4000 | 140   | 1120 | 5600 | 70    | 1400 | 7000  |
| 250   | 900 | 4500 | 120   | 1200 | 6000 | 40    | 1700 | 8500  |
| 200   | 960 | 4800 | 85    | 1300 | 6500 | 15    | 2400 | 12000 |

**On request reinforced bearings to increase loads.**  
A richiesta cuscinetti rinforzati per aumentare i carichi.

**Input shaft**  
Albero in entrata

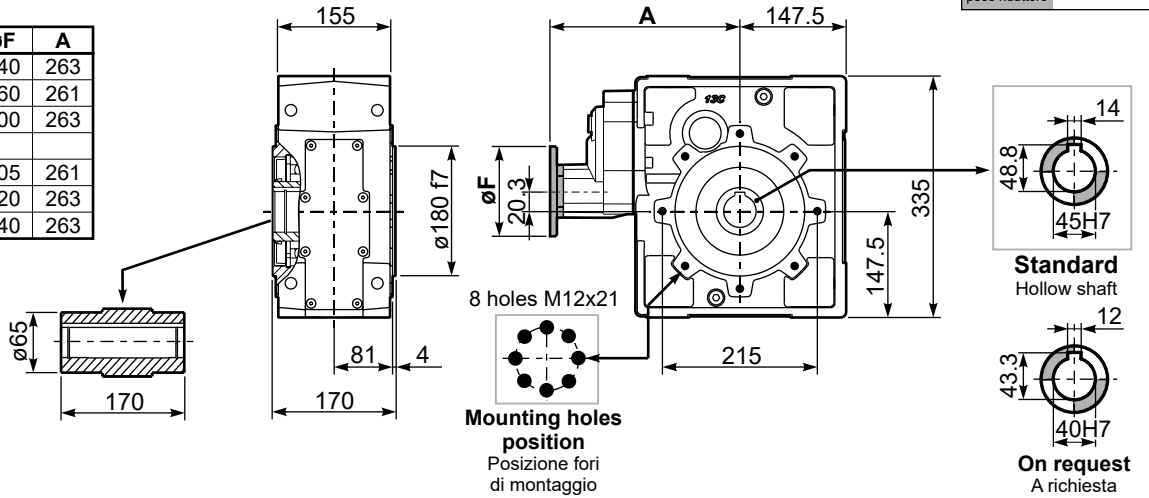
| $n_1$ | FA  | FR   |
|-------|-----|------|
| 1400  | 400 | 2000 |
| 900   | 440 | 2200 |
| 500   | 440 | 2200 |

**tab. 2**

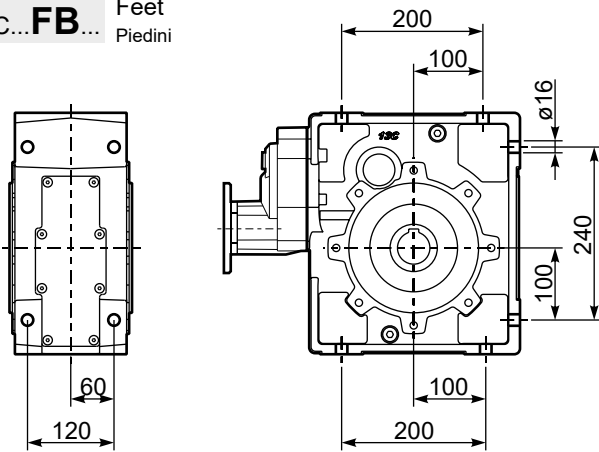
**P134CC...** Basic gearbox  
Riduttore base

Gearbox weight  
peso riduttore **53.5 kg**

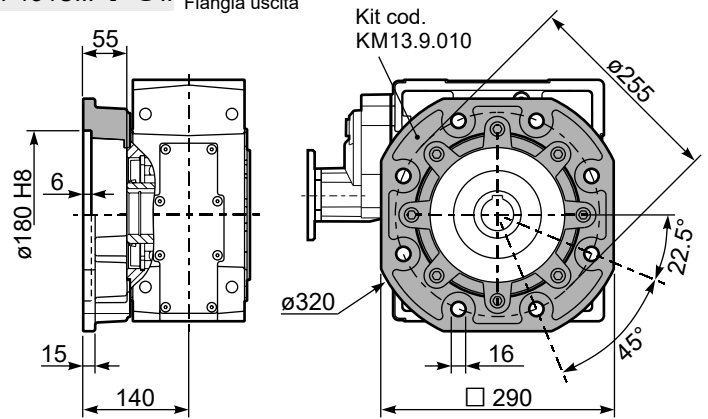
| M. flanges     | Kit code   | øF  | A   |
|----------------|------------|-----|-----|
| <b>63B5</b>    | K063.4.041 | 140 | 263 |
| <b>71B5</b>    | K063.4.042 | 160 | 261 |
| <b>80/90B5</b> | K063.4.043 | 200 | 263 |
| <b>71B14</b>   | K063.4.047 | 105 | 261 |
| <b>80B14</b>   | K063.4.046 | 120 | 263 |
| <b>90B14</b>   | K063.4.041 | 140 | 263 |



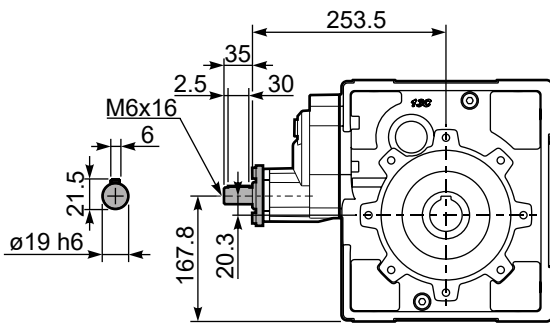
**P134C...FB...** Feet  
Piedini



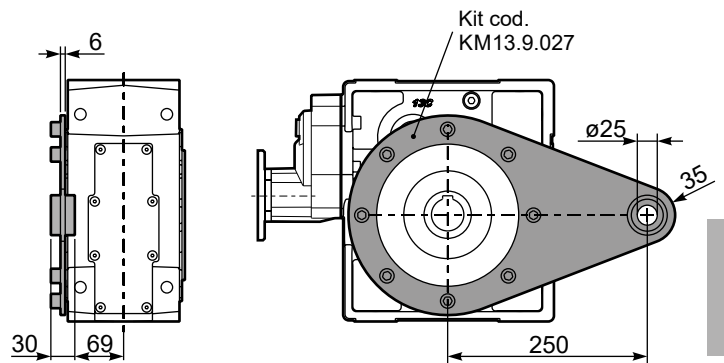
**P134C...-FC..** Output flange  
Flangia uscita



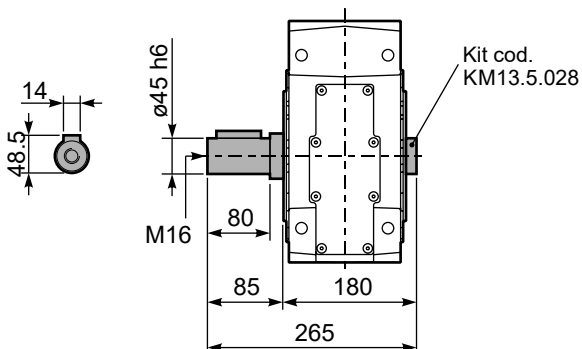
**R134C...** Input Shaft  
Albero in entrata



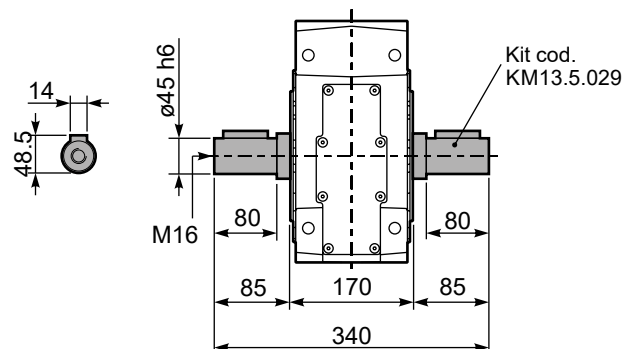
**P134C...BR..** Reaction arm  
Braccio di reazione



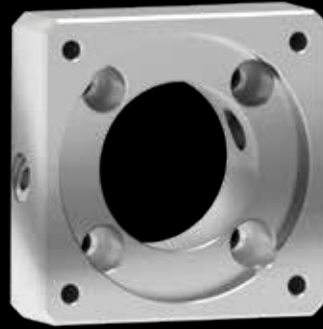
**P134CA..** Single output Shaft  
Albero lento semplice



**P134CB..** Double Input Shaft  
Albero lento bisporgente



# BRUSHLESS-TECH



Flange for servomotor  
Flange per servomotore



Coupling  
Giunto



Reduction bushing  
Bussola di riduzione



**HYDRO · MEC**

HIGH EFFICIENCY GEARBOXES

# UNIQUE FEATURES

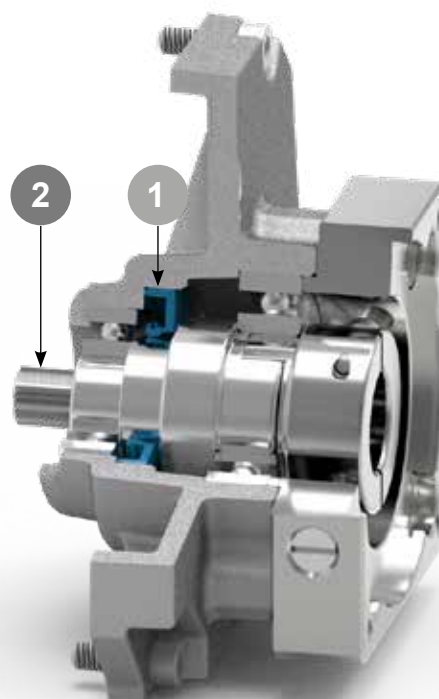
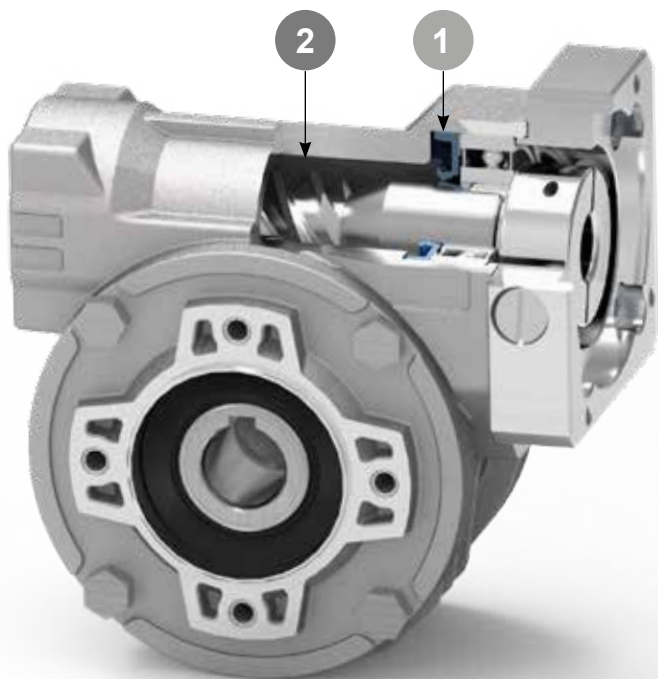
## Special input shaft design with internal seal for Brushless applications.

Design speciale dell'albero di entrata con guarnizione interna per applicazioni Brushless.

**1 Quality oil seals.**  
Anelli di tenuta di qualità.

**2 All grounded gears.**  
Tutti gli ingranaggi rettificati.

**On request FKM oil seals.**  
A richiesta anelli di tenuta FKM.



**All couplings on stock.**  
Giunti disponibili a magazzino.



**Flanges available for quantity.**  
**Drawings available to download on the web site for a quick production of small quantity.**

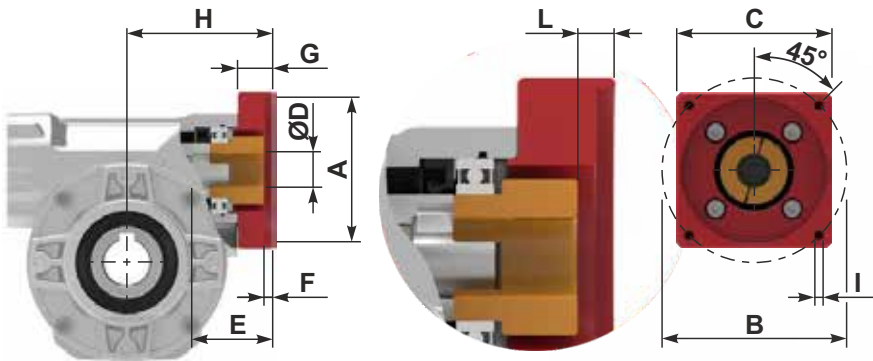
Flange disponibili per quantità.  
Disegni scaricabili dal sito web per una rapida produzione di piccole quantità.



# WORM GEARBOXES

Flanges for servomotors - Flange per servomotori

## Rightangle-Gear

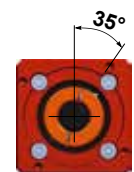


| Type         | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø |     |     |     |     |    |     |      |      |       |       |
|--------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|----|-----|------|------|-------|-------|
|              |                     |                        |                  |                   |               | A   | B   | C   | ØD  | E  | F   | G    | L    | I     | H     |
| 030<br>21Nm  | BA                  | K0304071               | KBR09/14G        | K0305190L         | Ø9            | 40  | 63  | 58  | Ø14 | 30 | 4   | 20   | 4.7  | M5x12 | 68    |
|              | BC                  | K0304072               | KBR11/14G        | K0305190L         | Ø11           | 60  | 75  | 70  | Ø14 | 30 | 4.5 | 20   | 4.7  | M5x12 | 68    |
|              | BB                  | K0304073               | -                | K0305190L         | Ø14           | 50  | 70  | 60  | Ø14 | 32 | 4.5 | 28.5 | 13.2 | M5x12 | 76.5  |
| 045<br>41Nm  | BC                  | K0504072               | KBR11/14G        | KC355190L         | Ø11           | 60  | 75  | 70  | Ø14 | 44 | 4.5 | 23   | 9    | M5x12 | 79    |
|              | BB                  | K0504073               | -                | KC355190L         | Ø14           | 50  | 70  | 70  | Ø14 | 44 | 4.5 | 23   | 9    | M5x12 | 79    |
|              | BE                  | K0504074               | -                | KC355190L         | Ø14           | 80  | 100 | 85  | Ø14 | 44 | 4.5 | 23   | 9    | M6x12 | 79    |
|              | BB                  | K0504075               | -                | KC355190L         | Ø14           | 95  | 115 | 100 | Ø14 | 44 | 4.5 | 23   | 9    | M8x12 | 79    |
|              | BE                  | K0504078               | -                | KC355190L         | Ø14           | 70  | 90  | 80  | Ø14 | 44 | 4.5 | 23   | 9    | M6x12 | 79    |
| 050<br>72Nm  | BC                  | K0504072               | KBR11/19G        | K0505190L         | Ø11           | 60  | 75  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 83.5  |
|              | BC                  | K0504072               | KBR14/19G        | K0505190L         | Ø14           | 60  | 75  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 83.5  |
|              | BB                  | K0504073               | KBR14/19G        | K0505190L         | Ø14           | 50  | 70  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 83.5  |
|              | BE                  | K0504074               | KBR14/19G        | K0505190L         | Ø14           | 80  | 100 | 85  | Ø19 | 48 | 4.5 | 23   | 9    | M6x12 | 83.5  |
|              | BF                  | K0504075               | -                | K0505190L         | Ø19           | 95  | 115 | 100 | Ø19 | 48 | 4.5 | 23   | 9    | M8x12 | 83.5  |
|              | BD                  | K0504078               | -                | K0505190L         | Ø19           | 70  | 90  | 80  | Ø19 | 48 | 4.5 | 23   | 9    | M6x12 | 83.5  |
| 063<br>147Nm | BC                  | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 58 | 4.5 | 25   | 9    | M5x12 | 104.5 |
|              | BB                  | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 58 | 4.5 | 25   | 9    | M5x12 | 104.5 |
|              | BE                  | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 58 | 4.5 | 25   | 9    | M6x12 | 104.5 |
| 63A<br>191Nm | BF                  | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 58 | 4.5 | 25   | 9    | M8x12 | 104.5 |
|              | BG                  | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 63 | 4.5 | 30   | 14   | M8x14 | 109.5 |
|              | BD                  | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 58 | 4.5 | 25   | 9    | M6x12 | 104.5 |
| 085<br>347Nm | BF                  | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 60 | 4.5 | 26   | 9.5  | M8x14 | 124.5 |
|              | BG                  | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 64 | 5   | 30   | 13.5 | M8x14 | 128.5 |
|              | BH                  | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 60 | 5   | 26   | 9.5  | M8x14 | 124.5 |
|              | BD                  | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 60 | 4.5 | 26   | 9.5  | M6x14 | 124.5 |

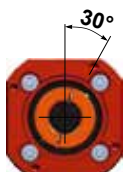


Supplied with reduction bushing  
Fornito con bussola di riduzione

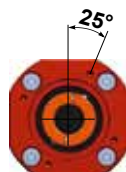
Coupling / Giunto



**K0504072**  
Fixing holes shifted by 35°  
Fori fissaggio motore ruotati a 35°



**K0504073**  
**K0634078**  
Fixing holes shifted by 30°  
Fori fissaggio motore ruotati a 30°



**K0634072**  
**K0634073**  
Fixing holes shifted by 25°  
Fori fissaggio motore ruotati a 25°



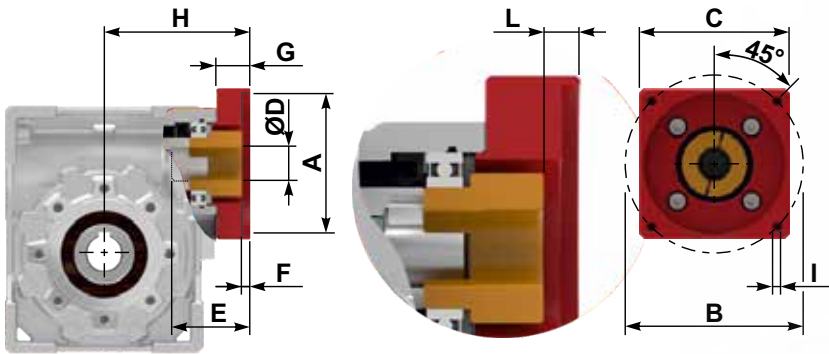
Coupling tightening  
Serraggio del giunto



# WORM GEARBOXES

Flanges for servomotors - Flange per servomotori

# M-Square-Gear



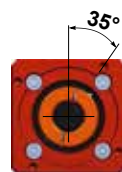
| Type                | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E  | F   | G    | L    | I     | H     |
|---------------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|----|-----|------|------|-------|-------|
| <b>M30</b><br>21Nm  | BA                  | K0304071               | KBR09/14G        | K0305190L         | Ø9            | 40  | 63  | 58  | Ø14 | 30 | 4   | 20   | 4.7  | M5x12 | 68    |
|                     | BC                  | K0304072               | KBR11/14G        | K0305190L         | Ø11           | 60  | 75  | 70  | Ø14 | 30 | 4.5 | 20   | 4.7  | M5x12 | 68    |
|                     | BB                  | K0304073               | -                | K0305190L         | Ø14           | 50  | 70  | 60  | Ø14 | 32 | 4.5 | 28.5 | 13.2 | M5x12 | 76.5  |
| <b>M45</b><br>41Nm  | BC                  | K0504072               | KBR11/14G        | KC355190L         | Ø11           | 60  | 75  | 70  | Ø14 | 44 | 4.5 | 23   | 9    | M5x12 | 85    |
|                     | BB                  | K0504073               | -                | KC355190L         | Ø14           | 50  | 70  | 70  | Ø14 | 44 | 4.5 | 23   | 9    | M5x12 | 85    |
|                     | BE                  | K0504074               | -                | KC355190L         | Ø14           | 80  | 100 | 85  | Ø14 | 44 | 4.5 | 23   | 9    | M6x12 | 85    |
|                     | BF                  | K0504075               | -                | KC355190L         | Ø14           | 95  | 115 | 100 | Ø14 | 44 | 4.5 | 23   | 9    | M8x12 | 85    |
|                     | BD                  | K0504078               | -                | KC355190L         | Ø14           | 70  | 90  | 80  | Ø14 | 44 | 4.5 | 23   | 9    | M6x12 | 85    |
| <b>M50</b><br>72Nm  | BC                  | K0504072               | KBR11/19G        | K0505190L         | Ø11           | 60  | 75  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 88.5  |
|                     | BC                  | K0504072               | KBR14/19G        | K0505190L         | Ø14           | 60  | 75  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 88.5  |
|                     | BB                  | K0504073               | KBR14/19G        | K0505190L         | Ø14           | 50  | 70  | 70  | Ø19 | 48 | 4.5 | 23   | 9    | M5x12 | 88.5  |
|                     | BE                  | K0504074               | KBR14/19G        | K0505190L         | Ø14           | 80  | 100 | 85  | Ø19 | 48 | 4.5 | 23   | 9    | M6x12 | 88.5  |
|                     | BF                  | K0504075               | -                | K0505190L         | Ø19           | 95  | 115 | 100 | Ø19 | 48 | 4.5 | 23   | 9    | M8x12 | 88.5  |
| <b>M63</b><br>147Nm | BD                  | K0504078               | -                | K0505190L         | Ø19           | 70  | 90  | 80  | Ø19 | 48 | 4.5 | 23   | 9    | M6x12 | 88.5  |
|                     | BC                  | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 58 | 4.5 | 25   | 9    | M5x12 | 105.5 |
|                     | BB                  | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 58 | 4.5 | 25   | 9    | M5x12 | 105.5 |
|                     | BE                  | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 58 | 4.5 | 25   | 9    | M6x12 | 105.5 |
|                     | BF                  | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 58 | 4.5 | 25   | 9    | M8x12 | 105.5 |
| <b>M75</b><br>270Nm | BG                  | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 63 | 4.5 | 30   | 14   | M8x14 | 105.5 |
|                     | BD                  | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 58 | 4.5 | 25   | 9    | M6x12 | 105.5 |
|                     | BF                  | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 60 | 4.5 | 26   | 9.5  | M8x14 | 122   |
|                     | BG                  | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 64 | 5   | 30   | 13.5 | M8x14 | 126   |
| <b>M85</b><br>347Nm | BH                  | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 60 | 5   | 26   | 9.5  | M8x14 | 122   |
|                     | BD                  | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 60 | 4.5 | 26   | 9.5  | M6x14 | 122   |
|                     | BF                  | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 60 | 4.5 | 26   | 9.5  | M8x14 | 124.5 |
|                     | BG                  | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 64 | 5   | 30   | 13.5 | M8x14 | 128.5 |

Supplied with reduction bushing  
Fornito con bussola di riduzione

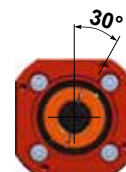


Coupling / Giunto

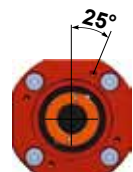
Coupling  
Giunto



**K0504072**  
Fixing holes shifted by 35°  
Fori fissaggio motore ruotati a 35°



**K0504073**  
**K0634078**  
Fixing holes shifted by 30°  
Fori fissaggio motore ruotati a 30°

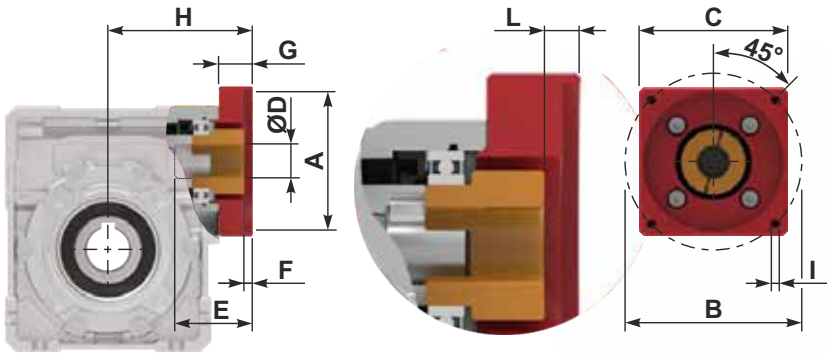


**K0634072**  
**K0634073**  
Fixing holes shifted by 25°  
Fori fissaggio motore ruotati a 25°

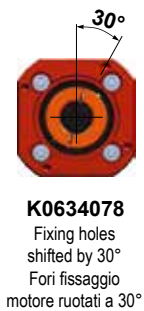
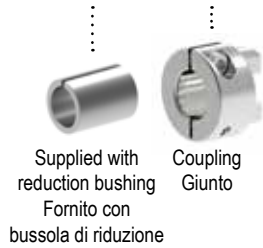
# WORM GEARBOXES

Flanges for servomotors - Flange per servomotori

## Q-Square-Gear



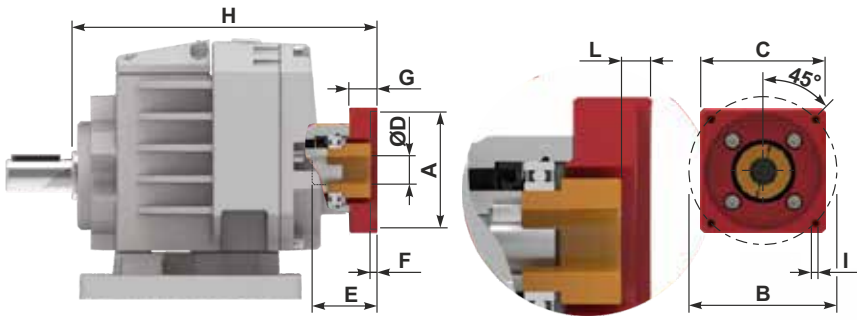
| Type         | Catalog Flange Code | Input Flanges Kit Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E  | F   | G  | L    | I     | H     |
|--------------|---------------------|------------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|----|-----|----|------|-------|-------|
| Q63<br>147Nm | BC                  | K0634072               | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 58 | 4.5 | 25 | 9    | M5x12 | 104.5 |
|              | BB                  | K0634073               | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 58 | 4.5 | 25 | 9    | M5x12 | 104.5 |
|              | BE                  | K0634074               | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 58 | 4.5 | 25 | 9    | M6x12 | 104.5 |
|              | BF                  | K0634075               | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 58 | 4.5 | 25 | 9    | M8x12 | 104.5 |
|              | BG                  | K0634076               | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 63 | 4.5 | 30 | 14   | M8x14 | 109.5 |
| Q75<br>270Nm | BD                  | K0634078               | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 58 | 4.5 | 25 | 9    | M6x12 | 104.5 |
|              | BF                  | K0854075               | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 60 | 4.5 | 26 | 9.5  | M8x14 | 122   |
|              | BG                  | K0854076               | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 64 | 5   | 30 | 13.5 | M8x14 | 126   |
|              | BH                  | K0854077               | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 60 | 5   | 26 | 9.5  | M8x14 | 122   |
| Q85<br>347Nm | BD                  | K0854078               | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 60 | 4.5 | 26 | 9.5  | M6x14 | 122   |
|              | BF                  | K0854075               | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 60 | 4.5 | 26 | 9.5  | M8x14 | 124.5 |
|              | BG                  | K0854076               | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 64 | 5   | 30 | 13.5 | M8x14 | 128.5 |
|              | BH                  | K0854077               | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 60 | 5   | 26 | 9.5  | M8x14 | 124.5 |



# COAXIAL GEARBOXES

Flanges for servomotors - Flange per servomotori

## Aluminum Coaxial-Gear

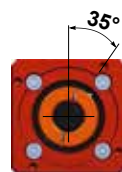


| Type          | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E    | F   | G  | L    | I     | H     | 412A | 513A | 613A |
|---------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|------|-----|----|------|-------|-------|------|------|------|
| 413A<br>175Nm | BC                  | K0504072               | KBR11/14G        | KC355190L         | Ø11           | 60  | 75  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 190.5 |      |      |      |
|               | BC                  | K0504072               | -                | KC355190L         | Ø14           | 60  | 75  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 190.5 |      |      |      |
|               | BB                  | K0504073               | -                | KC355190L         | Ø14           | 50  | 70  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 190.5 |      |      |      |
|               | BE                  | K0504074               | -                | KC355190L         | Ø14           | 80  | 100 | 85  | Ø14 | 38   | 4.5 | 23 | 9    | M6x12 | 190.5 |      |      |      |
|               | BB                  | K0504073               | -                | KC355190L         | Ø14           | 50  | 70  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 190.5 |      |      |      |
|               | BE                  | K0504074               | -                | KC355190L         | Ø14           | 80  | 100 | 85  | Ø14 | 38   | 4.5 | 23 | 9    | M6x12 | 190.5 |      |      |      |
| 412A<br>175Nm | BC                  | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M5x12 | 186.5 | 243  | 260  |      |
|               | BB                  | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 55.5 | 4.5 | 25 | 9    | M5x12 | 186.5 | 243  | 260  |      |
| 513A<br>360Nm | BE                  | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 186.5 | 243  | 260  |      |
|               | BF                  | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 55.5 | 4.5 | 25 | 9    | M8x12 | 186.5 | 243  | 260  |      |
| 613A<br>530Nm | BG                  | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 60.5 | 4.5 | 30 | 14   | M8x14 | 191.5 | 248  | 265  |      |
|               | BD                  | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 186.5 | 243  | 260  |      |
| 512A<br>360Nm | BF                  | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 58   | 4.5 | 26 | 9.5  | M8x14 | 235.5 |      | 252  |      |
|               | BG                  | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 62   | 5   | 30 | 13.5 | M8x14 | 239.5 |      | 256  |      |
| 612A<br>530Nm | BH                  | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 58   | 5   | 26 | 9.5  | M8x14 | 235.5 |      | 252  |      |
|               | BD                  | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 58   | 4.5 | 26 | 9.5  | M6x14 | 235.5 |      | 252  |      |

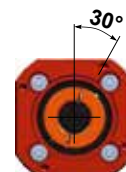


Flanges for servomotors

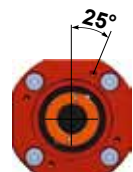
Flange per servomotori



**K0504072**  
Fixing holes shifted by 35°  
Fori fissaggio motore ruotati a 35°



**K0504073**  
**K0634078**  
Fixing holes shifted by 30°  
Fori fissaggio motore ruotati a 30°

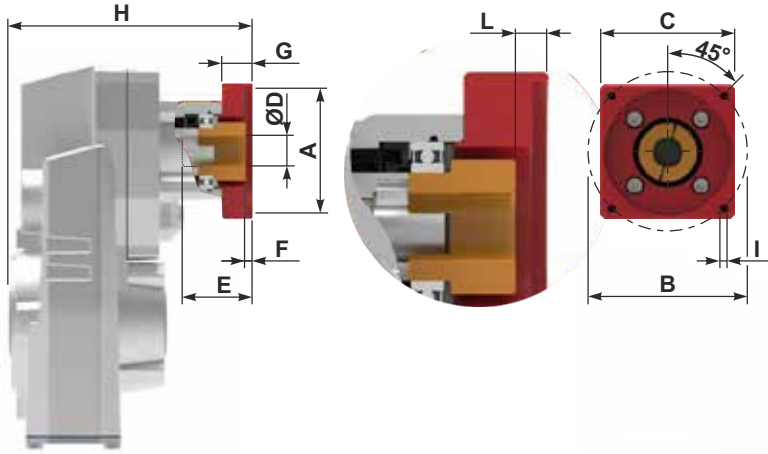


**K0634072**  
**K0634073**  
Fixing holes shifted by 25°  
Fori fissaggio motore ruotati a 25°

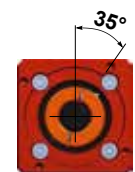
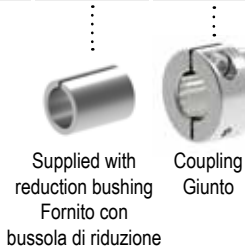
# SHAFT MOUNTED GEARBOXES

Flanges for servomotors - Flange per servomotori

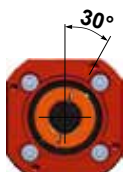
Aluminum Compact-Gear



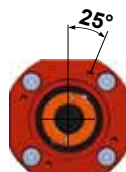
| Type          | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E    | F   | G  | L    | I     | H           |       |     |
|---------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|------|-----|----|------|-------|-------------|-------|-----|
|               |                     |                        |                  |                   |               |     |     |     |     |      |     |    |      |       | FA33        | FA43  |     |
| FA33<br>150Nm | BC                  | K0504072               | KBR11/14G        | KC355190L         | Ø11           | 60  | 75  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 180         | 180   |     |
|               | BC                  | K0504072               | -                | KC355190L         | Ø14           | 60  | 75  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 180         | 180   |     |
| FA43<br>320Nm | BB                  | K0504073               | -                | KC355190L         | Ø14           | 50  | 70  | 70  | Ø14 | 38   | 4.5 | 23 | 9    | M5x12 | 180         | 180   |     |
|               | BE                  | K0504074               | -                | KC355190L         | Ø14           | 80  | 100 | 85  | Ø14 | 38   | 4.5 | 23 | 9    | M6x12 | 180         | 180   |     |
| FA32<br>150Nm | BC                  | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M5x12 | 174.5       | 174.5 | 244 |
|               | BB                  | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 55.5 | 4.5 | 25 | 9    | M5x12 | 174.5       | 174.5 | 244 |
| FA42<br>320Nm | BE                  | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 174.5       | 174.5 | 244 |
|               | BF                  | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 55.5 | 4.5 | 25 | 9    | M8x12 | 174.5       | 174.5 | 244 |
| FA53<br>490Nm | BG                  | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 60.5 | 4.5 | 30 | 14   | M8x14 | 179.5       | 179.5 | 249 |
|               | BD                  | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 174.5       | 174.5 | 244 |
| FA52<br>490Nm | BF                  | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 58   | 4.5 | 26 | 9.5  | M8x14 | FA52<br>235 |       |     |
|               | BG                  | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 62   | 5   | 30 | 13.5 | M8x14 | 239         |       |     |
|               | BH                  | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 58   | 5   | 26 | 9.5  | M8x14 | 235         |       |     |
|               | BD                  | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 58   | 4.5 | 26 | 9.5  | M6x14 | 235         |       |     |



**K0504072**  
Fixing holes shifted by 35°  
Fori fissaggio motore ruotati a 35°



**K0504073**  
**K0634078**  
Fixing holes shifted by 30°  
Fori fissaggio motore ruotati a 30°



**K0634072**  
**K0634073**  
Fixing holes shifted by 25°  
Fori fissaggio motore ruotati a 25°

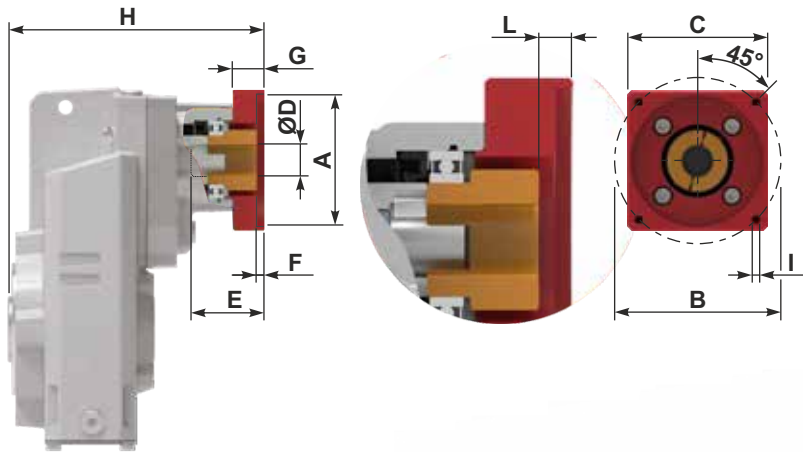


Coupling tightening  
Serraggio del giunto

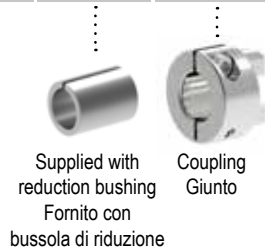
# SHAFT MOUNTED GEARBOXES

Flanges for servomotors - Flange per servomotori

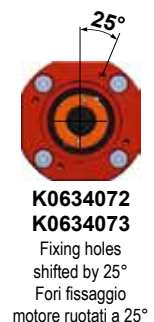
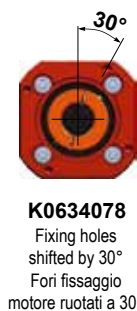
Cast Iron **Compact-Gear**



| Type                 | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E    | F   | G  | L    | I     | H    |       |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|------|-----|----|------|-------|------|-------|
|                      |                     |                        |                  |                   |               |     |     |     |     |      |     |    |      |       | FC63 | FC73  |
| <b>FC63</b><br>675Nm | <b>BC</b>           | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 51.5 | 4.5 | 21 | 9    | M5x12 | 244  | 255.5 |
|                      | <b>BB</b>           | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 51.5 | 4.5 | 21 | 9    | M5x12 | 244  | 255.5 |
|                      | <b>BE</b>           | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 51.5 | 4.5 | 21 | 9    | M6x12 | 244  | 255.5 |
| <b>FC73</b><br>900Nm | <b>BF</b>           | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 51.5 | 4.5 | 21 | 9    | M8x12 | 244  | 255.5 |
|                      | <b>BG</b>           | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 56.5 | 4.5 | 26 | 14   | M8x14 | 249  | 260.5 |
|                      | <b>BD</b>           | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 51.5 | 4.5 | 21 | 9    | M6x12 | 244  | 255.5 |
| <b>FC62</b><br>675Nm | <b>BF</b>           | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 54   | 4.5 | 22 | 9.5  | M8x14 | 235  | 246.5 |
|                      | <b>BG</b>           | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 58   | 5   | 26 | 13.5 | M8x14 | 239  | 251.5 |
| <b>FC72</b><br>900Nm | <b>BH</b>           | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 54   | 5   | 22 | 9.5  | M8x14 | 235  | 246.5 |
|                      | <b>BD</b>           | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 54   | 4.5 | 22 | 9.5  | M6x14 | 235  | 246.5 |



Reduction Bushing  
Bussola di riduzione

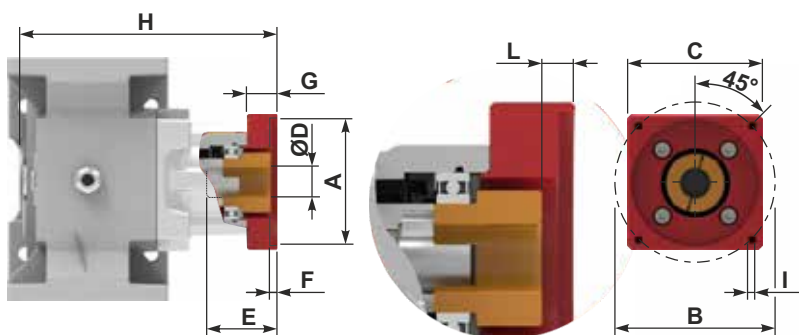




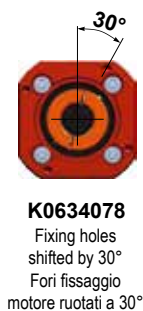
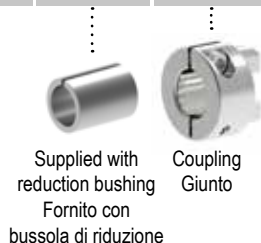
# PARALLEL SHAFT GEARBOXES

Flanges for servomotors - Flange per servomotori

## Cast Iron Cube-Gear



| Type                 | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A    | B    | C   | ØD  | E    | F   | G  | L  | I     | H   |       |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------|------|------|-----|-----|------|-----|----|----|-------|-----|-------|
|                      |                     |                        |                  |                   |               | H63C | H73C |     |     |      |     |    |    |       |     |       |
| <b>H63C</b><br>675Nm | <b>BC</b>           | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60   | 75   | 90  | Ø22 | 55.5 | 4.5 | 25 | 9  | M5x12 | 244 | 255.5 |
|                      | <b>BB</b>           | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50   | 70   | 80  | Ø22 | 55.5 | 4.5 | 25 | 9  | M5x12 | 244 | 255.5 |
|                      | <b>BE</b>           | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80   | 100  | 85  | Ø22 | 55.5 | 4.5 | 25 | 9  | M6x12 | 244 | 255.5 |
| <b>H73C</b><br>900Nm | <b>BF</b>           | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95   | 115  | 100 | Ø22 | 55.5 | 4.5 | 25 | 9  | M8x12 | 244 | 255.5 |
|                      | <b>BG</b>           | K0634076               | -                | KC405190L         | Ø22           | 110  | 145  | 130 | Ø22 | 60.5 | 4.5 | 30 | 14 | M8x14 | 249 | 260.5 |
|                      | <b>BD</b>           | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70   | 90   | 90  | Ø22 | 55.5 | 4.5 | 25 | 9  | M6x12 | 244 | 255.5 |
| <b>H62C</b><br>675Nm | <b>BF</b>           | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95   | 115  | 100 | Ø24 | 58   | 4.5 | 26 | 22 | M8x14 | 235 | 246.5 |
|                      | <b>BG</b>           | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110  | 145  | 130 | Ø24 | 62   | 5   | 30 | 26 | M8x14 | 239 | 250.5 |
| <b>H72C</b><br>900Nm | <b>BH</b>           | K0854077               | -                | KC505190L         | Ø24           | 130  | 165  | 140 | Ø24 | 58   | 5   | 26 | 22 | M8x14 | 235 | 246.5 |
|                      | <b>BD</b>           | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70   | 90   | 95  | Ø24 | 58   | 4.5 | 26 | 22 | M6x14 | 235 | 246.5 |



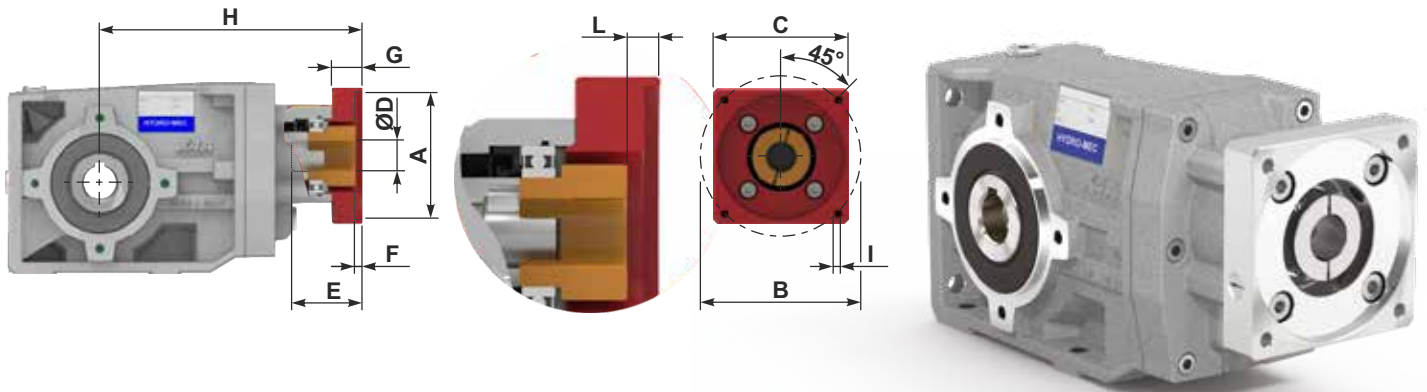
Flanges for servomotors  
Flange per servomotori



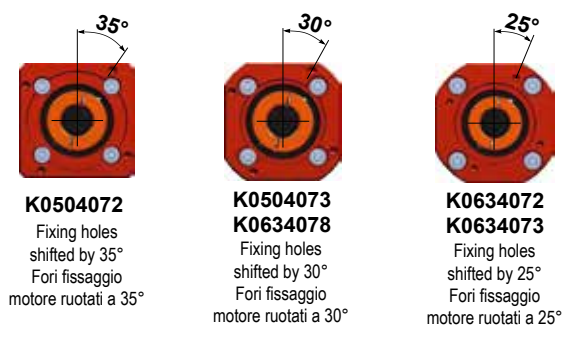
# HELICAL BEVEL GEARBOXES

Flanges for servomotors - Flange per servomotori

Aluminum Angletech-Gear



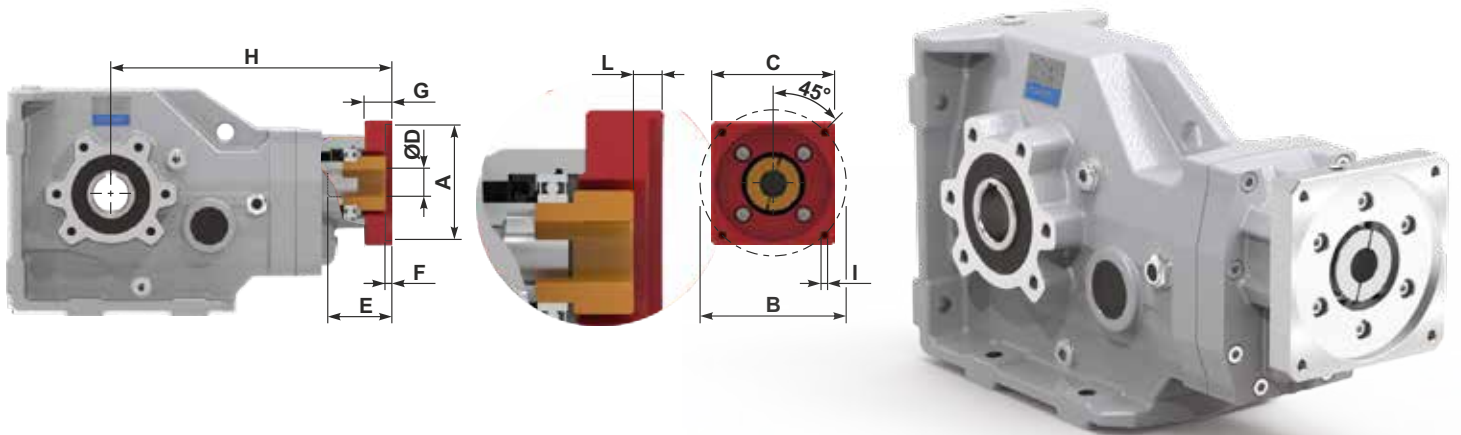
| Type                 | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft $\varnothing$ | A   | B   | C   | $\varnothing D$  | E    | F   | G  | L    | I     | H     |       |      |      |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------------------|-----|-----|-----|------------------|------|-----|----|------|-------|-------|-------|------|------|
|                      |                     |                        |                  |                   |                           |     |     |     |                  |      |     |    |      |       | X22S  | X33S  | X43A |      |
| <b>X22S</b><br>50Nm  | <b>BC</b>           | K0504072               | KBR11/14G        | KC355190L         | $\varnothing 11$          | 60  | 75  | 70  | $\varnothing 14$ | 38   | 4.5 | 23 | 9    | M5x12 | 159.5 | 194.5 | 210  |      |
| <b>X33S</b><br>100Nm | <b>BC</b>           | K0504072               | -                | KC355190L         | $\varnothing 14$          | 60  | 75  | 70  | $\varnothing 14$ | 38   | 4.5 | 23 | 9    | M5x12 | 159.5 | 194.5 | 210  |      |
| <b>X43A</b><br>160Nm | <b>BB</b>           | K0504073               | -                | KC355190L         | $\varnothing 14$          | 50  | 70  | 70  | $\varnothing 14$ | 38   | 4.5 | 23 | 9    | M5x12 | 159.5 | 194.5 | 210  |      |
|                      | <b>BE</b>           | K0504074               | -                | KC355190L         | $\varnothing 14$          | 80  | 100 | 85  | $\varnothing 14$ | 38   | 4.5 | 23 | 9    | M6x12 | 159.5 | 194.5 | 210  |      |
|                      |                     |                        |                  |                   |                           |     |     |     |                  |      |     |    |      |       | X32S  | X42A  | X53A | X63A |
| <b>X32S</b><br>90Nm  | <b>BC</b>           | K0634072               | KBR14/22G        | KC405190L         | $\varnothing 14$          | 60  | 75  | 90  | $\varnothing 22$ | 55.5 | 4.5 | 25 | 9    | M5x12 | 189   | 204.5 | 251  | 270  |
| <b>X42A</b><br>150Nm | <b>BB</b>           | K0634073               | KBR14/22G        | KC405190L         | $\varnothing 14$          | 50  | 70  | 80  | $\varnothing 22$ | 55.5 | 4.5 | 25 | 9    | M5x12 | 189   | 204.5 | 251  | 270  |
| <b>X53A</b><br>250Nm | <b>BE</b>           | K0634074               | KBR14/22G        | KC405190L         | $\varnothing 14$          | 80  | 100 | 85  | $\varnothing 22$ | 55.5 | 4.5 | 25 | 9    | M6x12 | 189   | 204.5 | 251  | 270  |
| <b>X63A</b><br>410Nm | <b>BF</b>           | K0634075               | KBR19/22G        | KC405190L         | $\varnothing 19$          | 95  | 115 | 100 | $\varnothing 22$ | 55.5 | 4.5 | 25 | 9    | M8x12 | 189   | 204.5 | 251  | 270  |
|                      | <b>BG</b>           | K0634076               | -                | KC405190L         | $\varnothing 22$          | 110 | 145 | 130 | $\varnothing 22$ | 60.5 | 4.5 | 30 | 14   | M8x14 | 194   | 209.5 | 256  | 275  |
|                      | <b>BD</b>           | K0634078               | KBR19/22G        | KC405190L         | $\varnothing 19$          | 70  | 90  | 90  | $\varnothing 22$ | 55.5 | 4.5 | 25 | 9    | M6x12 | 189   | 204.5 | 251  | 270  |
|                      |                     |                        |                  |                   |                           |     |     |     |                  |      |     |    |      |       | X52A  | X62A  |      |      |
| <b>X52A</b><br>250Nm | <b>BF</b>           | K0854075               | KBR19/24G        | KC505190L         | $\varnothing 19$          | 95  | 115 | 100 | $\varnothing 24$ | 58   | 4.5 | 26 | 9.5  | M8x14 | 242   |       | 261  |      |
|                      | <b>BG</b>           | K0854076               | KBR22/24G        | KC505190L         | $\varnothing 22$          | 110 | 145 | 130 | $\varnothing 24$ | 62   | 5   | 30 | 13.5 | M8x14 | 242   |       | 265  |      |
| <b>X62A</b><br>410Nm | <b>BH</b>           | K0854077               | -                | KC505190L         | $\varnothing 24$          | 130 | 165 | 140 | $\varnothing 24$ | 58   | 5   | 26 | 9.5  | M8x14 | 242   |       | 261  |      |
|                      | <b>BD</b>           | K0854078               | KBR19/24G        | KC505190L         | $\varnothing 19$          | 70  | 90  | 95  | $\varnothing 24$ | 58   | 4.5 | 26 | 9.5  | M6x14 | 242   |       | 261  |      |



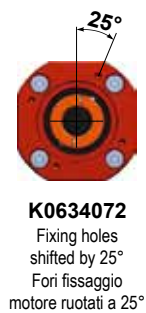
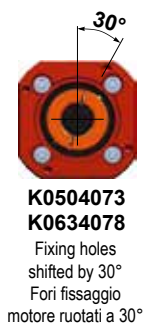
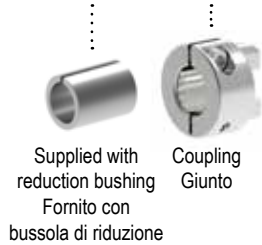
# HELICAL BEVEL GEARBOXES

Flanges for servomotors - Flange per servomotori

Cast Iron Angletech-Gear



| Type                 | Catalog Flange Code | Input Flanges Kit Code | Bushing Kit Code | Coupling Kit Code | Motor shaft Ø | A   | B   | C   | ØD  | E    | F   | G  | L    | I     | H    |      |       |      |
|----------------------|---------------------|------------------------|------------------|-------------------|---------------|-----|-----|-----|-----|------|-----|----|------|-------|------|------|-------|------|
|                      |                     |                        |                  |                   |               |     |     |     |     |      |     |    |      |       | X74C | X84C | 114C  | 134C |
| <b>X74C</b><br>100Nm | <b>BC</b>           | K0634072               | KBR14/22G        | KC405190L         | Ø14           | 60  | 75  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M5x12 | 316  | 333  | 257.5 | 268  |
|                      | <b>BB</b>           | K0634073               | KBR14/22G        | KC405190L         | Ø14           | 50  | 70  | 80  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 316  | 333  | 257.5 | 268  |
| <b>X84C</b><br>160Nm | <b>BE</b>           | K0634074               | KBR14/22G        | KC405190L         | Ø14           | 80  | 100 | 85  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 316  | 333  | 257.5 | 268  |
| <b>114C</b><br>250Nm | <b>BF</b>           | K0634075               | KBR19/22G        | KC405190L         | Ø19           | 95  | 115 | 100 | Ø22 | 55.5 | 4.5 | 25 | 9    | M8x12 | 316  | 333  | 257.5 | 268  |
|                      | <b>BG</b>           | K0634076               | -                | KC405190L         | Ø22           | 110 | 145 | 130 | Ø22 | 60.5 | 4.5 | 30 | 14   | M8x14 | 321  | 338  | 262.5 | 273  |
| <b>134C</b><br>410Nm | <b>BD</b>           | K0634078               | KBR19/22G        | KC405190L         | Ø19           | 70  | 90  | 90  | Ø22 | 55.5 | 4.5 | 25 | 9    | M6x12 | 316  | 333  | 257.5 | 268  |
| <b>X73C</b><br>90Nm  | <b>BF</b>           | K0854075               | KBR19/24G        | KC505190L         | Ø19           | 95  | 115 | 100 | Ø24 | 58   | 4.5 | 26 | 9.5  | M8x14 | 307  | 324  | 244.5 | 259  |
|                      | <b>BG</b>           | K0854076               | KBR22/24G        | KC505190L         | Ø22           | 110 | 145 | 130 | Ø24 | 62   | 5   | 30 | 13.5 | M8x14 | 311  | 328  | 248.5 | 263  |
| <b>X83C</b><br>150Nm | <b>BH</b>           | K0854077               | -                | KC505190L         | Ø24           | 130 | 165 | 140 | Ø24 | 58   | 5   | 26 | 9.5  | M8x14 | 307  | 324  | 248.5 | 259  |
| <b>113C</b><br>250Nm | <b>BD</b>           | K0854078               | KBR19/24G        | KC505190L         | Ø19           | 70  | 90  | 95  | Ø24 | 58   | 5   | 26 | 9.5  | M6x14 | 307  | 324  | 248.5 | 259  |
| <b>133C</b><br>410Nm |                     |                        |                  |                   |               |     |     |     |     |      |     |    |      |       |      |      |       |      |



# Available kits

Kit disponibili

## Reduction bushings

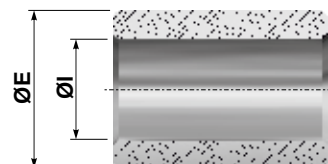
Bussole di riduzione



## Reduction bushing dimensions

Dimensioni bussola di riduzione

| ØI  | ØE  | Code      |
|-----|-----|-----------|
| Ø9  | Ø14 | KBR09/14G |
| Ø11 | Ø14 | KBR11/14G |
| Ø11 | Ø19 | KBR11/19G |
| Ø14 | Ø19 | KBR14/19G |
| Ø14 | Ø22 | KBR14/22G |
| Ø19 | Ø22 | KBR19/22G |
| Ø19 | Ø24 | KBR19/24G |
| Ø22 | Ø24 | KBR22/24G |



## Couplings

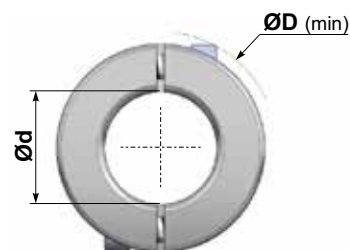
Giunti



## Coupling dimensions

Dimensioni giunto

| Ød  | ØD (min) | Code      |
|-----|----------|-----------|
| Ø9  | Ø34      | K0305190L |
| Ø14 | Ø40      | KC355190L |
| Ø19 | Ø42      | K0505190L |
| Ø22 | Ø48      | KC405190L |
| Ø24 | Ø57      | KC505190L |



## Flanges for servomotor

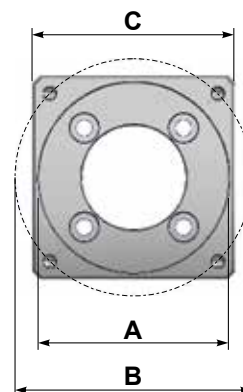
Flange per servomotore



## Flange dimensions

Dimensioni flangia

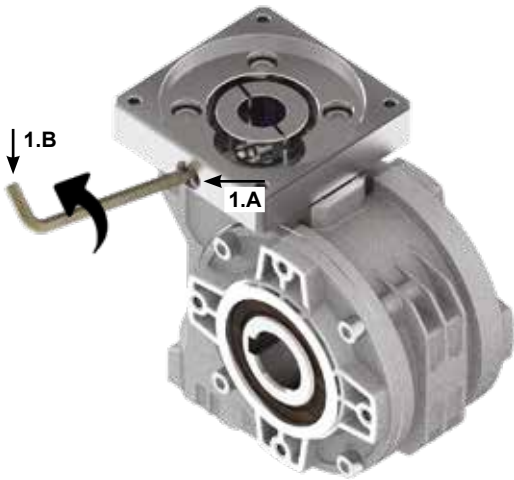
| Code Kit flange | A   | B   | C   |
|-----------------|-----|-----|-----|
| K0304071        | 40  | 63  | 58  |
| K0304072        | 60  | 75  | 70  |
| K0304073        | 50  | 70  | 60  |
| K0504072        | 60  | 75  | 70  |
| K0504073        | 50  | 70  | 70  |
| K0504074        | 80  | 100 | 85  |
| K0504075        | 95  | 115 | 100 |
| K0504078        | 70  | 90  | 80  |
| K0634072        | 60  | 75  | 90  |
| K0634073        | 50  | 70  | 80  |
| K0634074        | 80  | 100 | 85  |
| K0634075        | 95  | 115 | 100 |
| K0634076        | 110 | 145 | 130 |
| K0634078        | 70  | 90  | 90  |
| K0854075        | 95  | 115 | 100 |
| K0854076        | 110 | 145 | 130 |
| K0854077        | 130 | 165 | 140 |
| K0854078        | 70  | 90  | 95  |



# Instructions for motor assembly

Istruzioni per il montaggio del motore

1



**Remove the protection screws on the input flange.**

Rimuovere le viti di protezione sulla flangia motore.

1.A



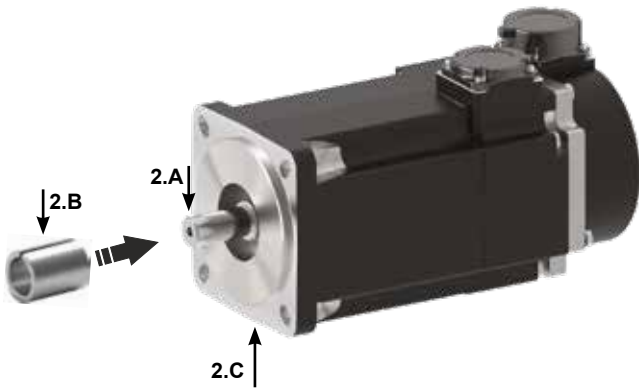
**Loosen the fastening screws of the coupling.**

Allentare le viti di serraggio del giunto.

1.B



2



**Motor shaft without key.**

Albero motore senza linguetta.

2.A



**Only if used with reduction bushing.**

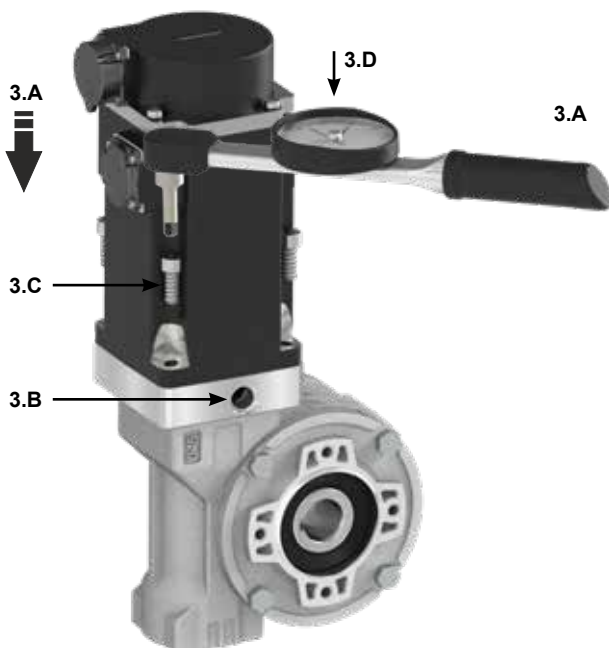
**Mount the reduction bushing with the rubber hammer.**

2.B

Se prevista la bussola di riduzione. Utilizzare un martello di gomma per il montaggio.



3



**Clean the contact surface on the motor flange and input flange.**

Pulire le superfici di contatto della flangia motore e flangia riduttore.

2.C



**Place the gearbox with the hollow shaft that has to be connected with the motor (input shaft) facing up. The gearbox has to be without load and the output shaft has to be free to rotate.**

Posizionare il riduttore con l'albero cavo di accoppiamento al motore (albero entrata) rivolto verso l'alto. Il riduttore non deve essere collegato a nessun carico e l'albero di uscita deve essere libero di ruotare.

3.A



**Before mounting the motor, check aligned the screw is with the hole on the input motor flange.**

Prima di montare il motore, assicurarsi che le viti del giunto sia allineata con il foro sulla flangia riduttore.

3.B



**For fixing the motor, apply anti-loosening paste on screw thread, employ Arexons 52A70 strong thread lock or similar.**

Per il fissaggio del motore, applicare un prodotto anti-svitamento sui filetti delle viti, utilizzare un frena filetto forte tipo Arexons 52A70 o similare.

3.C



**Tighten the screws according to table torque values. Recommended the class screws 8.8.**

Serrare le viti in base ai valori in tabella. Consigliato le viti di classe 8.8.

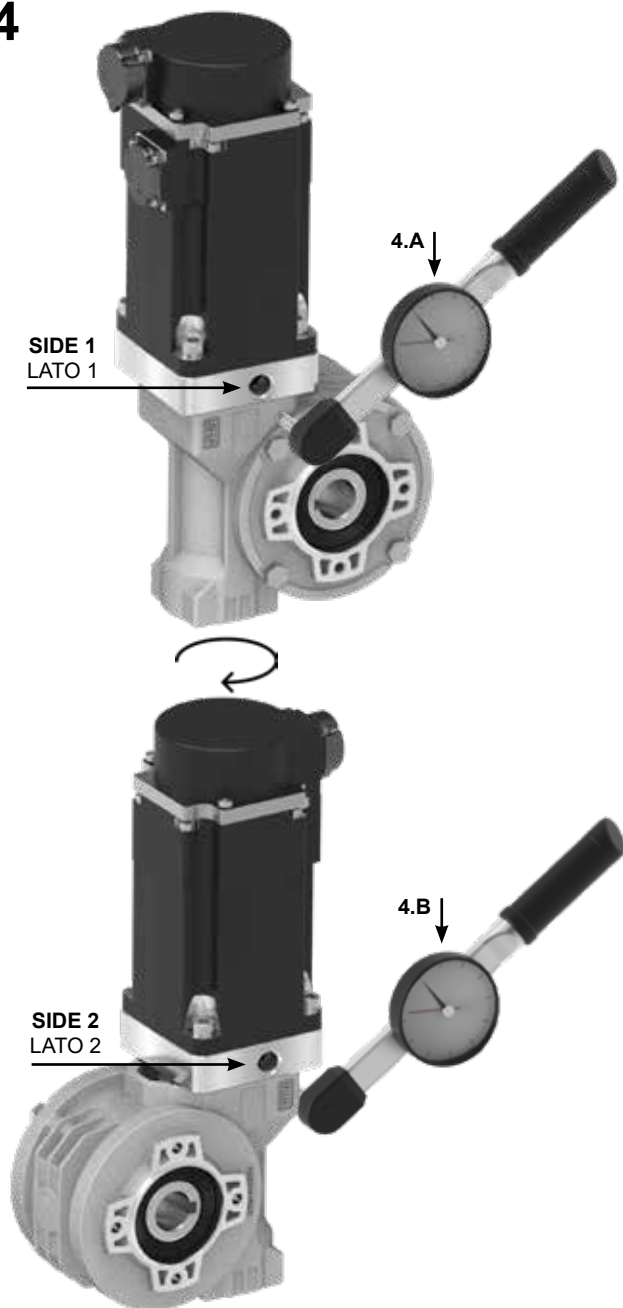
3.D

| Screw Vite | TS [Nm] |
|------------|---------|
| M4         | 3       |
| M5         | 6       |
| M6         | 10      |
| M8         | 25      |
| M10        | 45      |

# Instructions for motor assembly

Istruzioni per il montaggio del motore

4



4.A

**Tighten the screws (SC) according to the torque (TS) reported in the table.**

**(SC) Socked-head screw (Allen screw), class screws 8.8 .**

Stringere le viti (SC) del giunto in base alla coppia di serraggio (TS) riportata nella tabella.

(SC) Vite a testa cilindrica esagono incassato (Brogola), classe 8.8 .

| Coupling kit code | SC    | TS [Nm] |
|-------------------|-------|---------|
| K0305190L         | M4x14 | 3.5     |
| KC355190L         | M4x14 | 3.5     |
| K0505190L         | M5x16 | 6       |
| KC405190L         | M5x16 | 6       |
| KC505190L         | M6x20 | 10      |



4.B

**First tighten on side 1 and side 2, repeat the tightening a second round on both sides.**

Stringere una prima volta sul lato 1 e sul lato 2, ripetere il serraggio una seconda volta su entrambi i lati.



CHECK

**Exceeding the torque to fix the locking bolt can damage the coupling.**

Il superamento della coppia di serraggio della vite di bloccaggio può danneggiare il dispositivo di accoppiamento



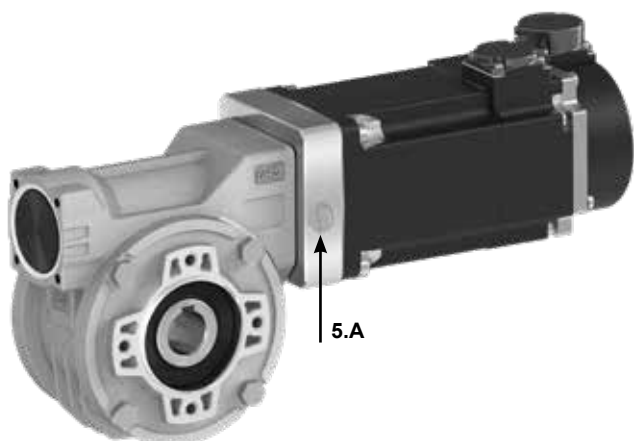
CHECK

5.A

**Reset the protection screws.**

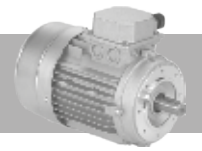
Riposizionare le viti di protezione.

5



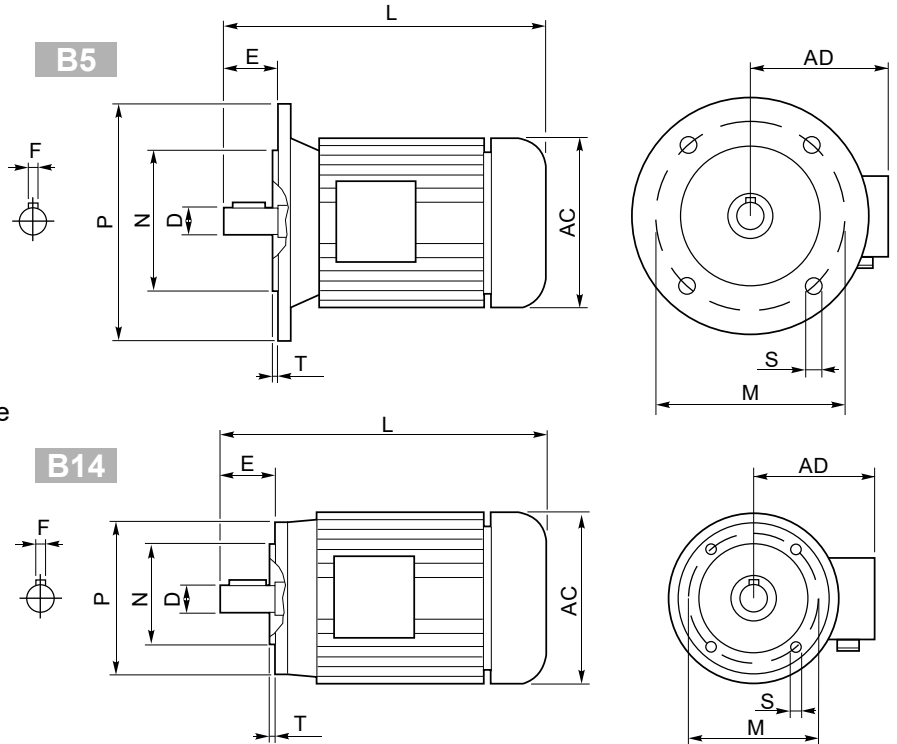


# Aluminum IEC motors



- 1) 230/400V - 50Hz three-phase asynchronous induction motor
- 2) Class F insulation
- 3) S1 duty
- 4) IP 55 protection
- 5) Not painted
- 6) Hard plastic sleeve to protect output shaft during the transportation

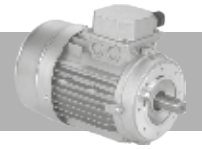
- 1) 230/400V - 50Hz motore trifase asincrono
- 2) Isolamento Classe F
- 3) S1 servizio continuo
- 4) Protezione IP 55
- 5) Non verniciato
- 6) Manicotto di protezione per l'albero motore



**Outside dimensions and weight may be different according to manufacturers.**  
 Le dimensioni esterne e il peso sono indicative, possono variare tra i vari costruttori.

|               | 2 poli / poles |      |                     | 4 poli / poles |      |                     | 6 poli / poles |      |                     | B5-B14 |    |     |     |     | B5  |     |     |     |      | B14 |     |     |     |     | Kg  |      |
|---------------|----------------|------|---------------------|----------------|------|---------------------|----------------|------|---------------------|--------|----|-----|-----|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|------|
|               | kW             | Nm   | A <sub>(400V)</sub> | kW             | Nm   | A <sub>(400V)</sub> | kW             | Nm   | A <sub>(400V)</sub> | D      | F  | E   | L   | AC  | AD  | N   | M   | P   | S    | T   | N   | M   | P   | S   |     | T    |
| <b>56 A</b>   | 0.09           | 0.32 | 0.38                | 0.06           | 0.44 | 0.27                | —              | —    | —                   | 9      | 3  | 20  | 199 | 108 | 96  | 80  | 100 | 120 | 7    | 2.5 | 50  | 65  | 80  | M5  | 2.5 | 2.7  |
| <b>56 B</b>   | 0.12           | 0.42 | 0.46                | 0.09           | 0.67 | 0.37                | —              | —    | —                   | 9      | 3  | 20  | 199 | 108 | 96  | 80  | 100 | 120 | 7    | 2.5 | 50  | 65  | 80  | M5  | 2.5 | 2.9  |
| <b>63 A</b>   | 0.18           | 0.63 | 0.60                | 0.12           | 0.84 | 0.50                | 0.09           | 0.99 | 0.57                | 11     | 4  | 23  | 208 | 120 | 99  | 95  | 115 | 140 | 9.5  | 3   | 60  | 75  | 90  | M5  | 2.5 | 3.8  |
| <b>63 B</b>   | 0.25           | 0.87 | 0.76                | 0.18           | 1.30 | 0.69                | 0.12           | 1.32 | 0.74                | 11     | 4  | 23  | 208 | 120 | 99  | 95  | 115 | 140 | 9.5  | 3   | 60  | 75  | 90  | M5  | 2.5 | 4.2  |
| <b>71 A</b>   | 0.37           | 1.30 | 1.00                | 0.25           | 1.70 | 0.91                | 0.18           | 1.90 | 0.80                | 14     | 5  | 30  | -   | 130 | 104 | 110 | 130 | 160 | 9.5  | 3.5 | 70  | 85  | 105 | M6  | 2.5 | 5.9  |
| <b>71 B</b>   | 0.55           | 1.90 | 1.54                | 0.37           | 2.52 | 1.14                | 0.25           | 2.72 | 1.10                | 14     | 5  | 30  | 255 | 141 | 107 | 110 | 130 | 160 | 9.5  | 3.5 | 70  | 85  | 105 | M6  | 2.5 | 6.5  |
| <b>80 A</b>   | 0.75           | 2.60 | 1.85                | 0.55           | 3.77 | 1.51                | 0.37           | 3.84 | 1.18                | 19     | 6  | 40  | 296 | 159 | 127 | 130 | 165 | 200 | 11.5 | 3.5 | 80  | 100 | 120 | M6  | 3   | 8.5  |
| <b>80 B</b>   | 1.1            | 3.90 | 2.64                | 0.75           | 5.11 | 2.57                | 0.55           | 5.84 | 1.80                | 19     | 6  | 40  | 296 | 159 | 127 | 130 | 165 | 200 | 11.5 | 3.5 | 80  | 100 | 120 | M6  | 3   | 10   |
| <b>90 S</b>   | 1.5            | 5.00 | 3.31                | 1.1            | 7.45 | 2.78                | 0.75           | 7.92 | 2.32                | 24     | 8  | 50  | -   | 170 | 135 | 130 | 165 | 200 | 11.5 | 3.5 | 95  | 115 | 140 | M8  | 3   | 12.5 |
| <b>90 L</b>   | 2.2            | 7.50 | 4.46                | 1.5            | 10.2 | 3.61                | 1.1            | 11.6 | 3.45                | 24     | 8  | 50  | 330 | 170 | 135 | 130 | 165 | 200 | 11.5 | 3.5 | 95  | 115 | 140 | M8  | 3   | 15   |
| <b>100 LA</b> | 3.0            | 10.0 | 6.28                | 2.2            | 14.8 | 5.07                | 1.5            | 15.4 | 3.88                | 28     | 8  | 60  | -   | 190 | 148 | 180 | 215 | 250 | 13   | 4   | 110 | 130 | 160 | M8  | 3.5 | 20   |
| <b>100 LB</b> | —              | —    | —                   | 3.0            | 20.1 | 6.66                | —              | —    | —                   | 28     | 8  | 60  | -   | 190 | 148 | 180 | 215 | 250 | 13   | 4   | 110 | 130 | 160 | M8  | 3.5 | 22   |
| <b>112 M</b>  | 4.0            | 13.4 | 8.10                | 4.0            | 26.7 | 8.55                | 2.2            | 22.6 | 5.30                | 28     | 8  | 60  | 381 | 210 | 164 | 180 | 215 | 250 | 13   | 4   | 110 | 130 | 160 | M8  | 3.5 | 35   |
| <b>132 S</b>  | 5.5            | 18.3 | 11.2                | 5.5            | 36.5 | 11.4                | 3.0            | 30.2 | 7.20                | 38     | 10 | 80  | 455 | 244 | 180 | 230 | 265 | 300 | 14   | 4   | 130 | 165 | 200 | M10 | 4   | 41   |
|               | 7.5            | 24.9 | 15.3                | 5.5            | 36.5 | 11.4                | 3.0            | 30.2 | 7.20                | 38     | 10 | 80  | 455 | 244 | 180 | 230 | 265 | 300 | 14   | 4   | 130 | 165 | 200 | M10 | 4   | 51   |
| <b>132 M</b>  | —              | —    | —                   | 7.5            | 49.4 | 15.0                | 4.0            | 40.0 | 9.13                | 38     | 10 | 80  | 500 | 244 | 180 | 230 | 265 | 300 | 14   | 4   | 130 | 165 | 200 | M10 | 4   | 51   |
|               | —              | —    | —                   | 9              | 61.4 | 18.5                | —              | —    | —                   | 38     | 10 | 80  | 500 | 244 | 180 | 230 | 265 | 300 | 14   | 4   | 130 | 165 | 200 | M10 | 4   | 51   |
| <b>160 M</b>  | —              | —    | —                   | 11             | 72   | 21.5                | —              | —    | —                   | 42     | 12 | 110 | 613 | 335 | 246 | 250 | 300 | 350 | 18   | 5   | —   | —   | —   | —   | —   | 79.2 |
|               | —              | —    | —                   | 15             | 98   | 29                  | —              | —    | —                   | 42     | 12 | 110 | 657 | 335 | 246 | 250 | 300 | 350 | 18   | 5   | —   | —   | —   | —   | —   | 97.5 |
| <b>180 M</b>  | —              | —    | —                   | 18.5           | 121  | 35.5                | —              | —    | —                   | 48     | 14 | 110 | 712 | 366 | 266 | 250 | 300 | 350 | 19   | 5   | —   | —   | —   | —   | —   | 170  |
| <b>180 L</b>  | —              | —    | —                   | 22             | 144  | 42                  | —              | —    | —                   | 48     | 14 | 110 | 712 | 366 | 266 | 250 | 300 | 350 | 19   | 5   | —   | —   | —   | —   | —   | 170  |
| <b>200 L</b>  | —              | —    | —                   | 30             | 196  | 53                  | —              | —    | —                   | 55     | 16 | 110 | 780 | 405 | 341 | 300 | 350 | 400 | 19   | 5   | —   | —   | —   | —   | —   | 240  |
| <b>225 S</b>  | —              | —    | —                   | 37             | 240  | 69                  | —              | —    | —                   | 60     | 18 | 140 | 888 | 463 | 360 | 350 | 400 | 450 | 19   | 5   | —   | —   | —   | —   | —   | 305  |
| <b>225 M</b>  | —              | —    | —                   | 45             | 292  | 84                  | —              | —    | —                   | 60     | 18 | 140 | 888 | 463 | 360 | 350 | 400 | 450 | 19   | 5   | —   | —   | —   | —   | —   | 310  |





**Protection**

Standard IP55  
Please specify on purchase orders if you need a higher IP protection class.

**Grado di protezione**

IP55 Standard  
Specificare in sede di ordinazione per IP superiore.

**Schutzart**

IP55 Standard.  
Höheren IP Grad bitte im Auftrag angeben.

**Degré de protection**

IP55 standard.  
Au moment de la commande, spécifiez si vous souhaitez IP supérieur.

**Grado de protección**

IP55 standard.  
Especificar en el pedido cuando necesiten protección IP superior.

**Insulation**

Standard CI.F  
To be specified upon placing the order if different insulation is required.

**Isolamento**

CI.F Standard  
Specificare in sede di ordinazione classe di isolamento diversa.

**Isolierung**

CI.F Standard.  
Davon abweichende Isolierungsklasse im Auftrag angeben.

**Isolement**

CI.F Standard.  
Au moment de la commande, spécifiez si vous souhaitez une classe d'isolement différente.

**Aislamiento**

CI.F standard.  
Especificar al efectuar el pedido la clase diferente de aislamiento.

| Insulation / Isolamento<br>Isolierung /Aislamiento |    | E    | B    | F    | H    |
|--|----|------|------|------|------|
| Max. temp.   | C° | 120° | 130° | 155° | 175° |
|  | F* | 248° | 266° | 311° | 347° |

**Connections**

**Collegamenti**

**Verbindungselemente**

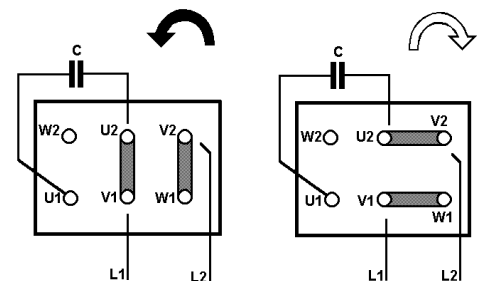
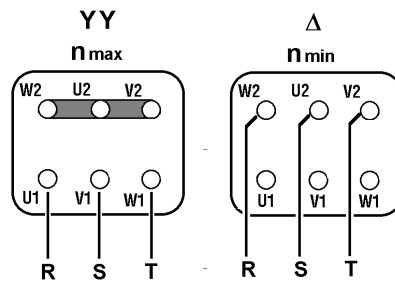
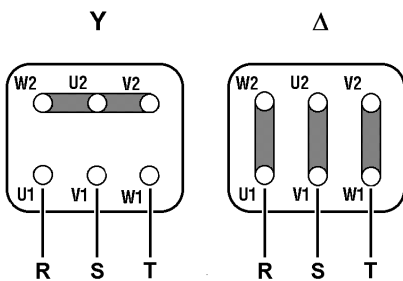
**Branchements**

**Conexiones**

Threephase asynchronous single polarity  
Asincrono trifase singola polarità  
Asynchronmotor 3-ph eine Drehzahl  
Moteur triphasé à une vitesse  
Asincrono trifasico de una velocidad

Threephase asynchronous double polarity  
Asincrono trifase doppia polarità  
Asynchronmotor 3-ph doppelte Drehzahl  
Moteur triphasé à deux vitesses  
Asincrono trifasico de dos velocidades

Single phase asynchronous  
Asincrono monofase  
Einphasen-Asynchronmotor  
Moteur monophasé  
Asincrono monofasico



**Quotations:**

Unless differently agreed, the validity of all quotations is 2 months. The quotations are provided according to the RFQ (request for quotation) which shall contain the complete and detailed specification of the Product, the correctness of which is fully under responsibility of RFQ applicant.

**Orders:**

Only official orders issued on the Customer's letter-head are accepted. The Order Confirmation (OC) is issued within 2 working days from the order receipt unless the Products configuration issues arise. The OC shall be confirmed in writing within 2 working days from the OC date and in all its parts the product code and description, quantities and price, other specific information, if any. The OC is considered confirmed by tacit approval in case no written confirmation is provided by the Customer.

**Production time:**

An average production time for the standard Products is 3-4 weeks and 2-3 weeks for kits from the OC confirmation date and/or payment receipt in case of advanced payment term. For some configurations of the standard Products the production time can be different and shall be advised in the quotation and/or in any case in OC. In the period of Christmas holidays and August holidays the days of company closure are excluded from the abovementioned production term.

**Delivery terms:**

FCA Sovizzo, Italy (Incoterms 2016)

**Packaging:**

The products are packed in wooden boxes as a standard packaging. Europallets can be also used on request. The prices and details of the packaging are indicated in the apposite section of the Price List.

**Payment terms:**

The payment should be performed in terms indicated in the invoice and by wire transfer.

**Prices:**

The prices are indicated in the invoice and intended ex-works, unless differently specified, and do not include any kind of taxes, shipment or other type of costs.

**Standard Products orders cancellation:**

Modification or cancellation of the orders is accepted only if notified to Hydro-Mec S.p.A. in writing and not later than 3 days from the Order Confirmation and in any case before the production of the ordered Products is launched.

**Special execution of customized products:**

The Products that are not included in the catalogue or configurations of the products that can not be realized using catalogue, options and accessories brochure and/or online configurator ( [www.cleangeartech.com](http://www.cleangeartech.com) ) are considered Customized Products.

(a) Hydro-Mec S.p.A. is entitled to examine feasibility of Special Execution of Customized Products and define the minimum quantity, production time and eventually other special sales and production conditions issuing thereafter a Special Execution Quotation that shall be confirmed by the Customer in writing.

(b) Once the Quotation is confirmed, Hydro-Mec S.p.A. shall realize a Special Execution (SE) data sheet with its unique code for each Customized product. The SE data sheet shall be confirmed in full and in writing by The Customer.

(c) The production time of SE is definitely settled by Hydro-Mec S.p.A. and notified to the Customer after the SE data sheet confirmation. As a rule, the production time for SE of Customized products is longer than standard.

(d) The orders of Special Execution of Customized products can not be cancelled unless special written agreement is made before the production of SE is launched.

**WARRANTY Conditions:**

(a) Warranty period is 12 months form the shipment date.

(b) Warranty period could be extended to 18 months prior written agreement of the parties and in any case excluding wearable parts.

(c) Warranty covers only manufacturing defects. Wearable parts (for example, oil seals or lubricants leakages caused by normal wear) and failures due to the wrong assembling by the Customer are not covered by warranty.

(d) This warranty is also void in any case in which the products have been misused, used in improper environment conditions, configurated beyond design limits indicated in the catalogue (especially service factor, loads and type of motors) or damaged, even accidentally or whenever installation instructions have not been strictly followed and in case of any natural disasters, in case of negligence of the Customer and the end user.

(e) The Customer is fully responsible to assure the compatibility of applications and correct mechanical couplings and electrical connections with the specifications of the Products according to Hydro-Mec S.p.A. catalogues and technical documentation

(f) The liability of Hydro-Mec S.p.A. is strictly limited to the above-stated obligations and it is therefore clearly agreed that Hydro-Mec S.p.A. take on no responsibility for any damage to persons and/or property deriving from accidents of any nature that may occur during use of the Products, whether the warranty is confirmed or otherwise, also in cases of the choice of the Product configuration being recommended by Hydro-Mec S.p.A.

**WARRANTY Procedure:**

(a) The Customer shall fill in the COMPLAINT FORM and forward it to Hydro-Mec S.p.A. along with other relevant information.

(b) Hydro-Mec S.p.A. examines the COMPLAINT FORM and confirms or declines the warranty.

(c) Hydro-Mec S.p.A. has the right to ask the Customer to send the malfunctioning product to Hydro-Mec S.p.A. for further examination. In case the warranty is not confirmed the Product will be shipped back to the Customer at the Customer expense. If the warranty is confirmed, Hydro-Mec S.p.A. shall compensate the shipment costs to the Customer within the limits of the best shipment quotation.

(d) In case the warranty is confirmed the Products shall be substituted at Hydro-Mec S.p.A. expense using ordinary shipment procedure. The express shipment can be used prior the agreement of the parties.

(e) In case the Product can not be substituted Hydro-Mec S.p.A. shall reimburse the value of the Product by issuing of Credit Note or in any other way agreed by the Parties.

**WARNING (Please Read Carefully):**

The following WARNING and CAUTION information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your product. Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

- (a) Written authorization is required to operate or use reducers in man lift or people moving devices.
- (b) Check to make sure that certain applications do not exceed the allowable load capacities published in the current catalog.
- (c) Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
- (d) For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
- (e) Gearboxes operating in high position should have a protective shield for any possible parts falling down for casual accidents where people are moving under them.
- (f) Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
- (g) Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application power.
- (h) Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
- (i) Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
- (l) Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and not other associated attachments or motors.
- (m) Use of an oil with an EP additive on units with backstops may prevent proper operation of the back-stop. Injury to personnel, damage to the reducer or other equipment may result.
- (n) Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and or shaft breakage from bending fatigue, if not sized properly.

**Our company will not be responsible for any direct or indirect damages, caused by a wrong use of the products or for not observing the catalogue/web indication.**

## 1) Definizioni

1.1 Ai fini delle presenti condizioni generali di vendita (di seguito denominate “Condizioni di Vendita”), i seguenti termini avranno il significato di seguito ad essi attribuito:

- “HM”: Hydro-Mec S.p.A.;
- “Cliente”: qualunque società, ente o entità giuridica che acquisti i Prodotti di HM da quest’ultima;
- “Prodotti”: i beni prodotti, assemblati e/o venduti da HM;
- “Ordine/i”: ciascuna proposta di acquisto dei Prodotti inoltrata dal Cliente ad HM esclusivamente tramite e-mail, fax o web;
- “Vendita/e”: ciascun contratto di vendita concluso tra HM e il Cliente a seguito del ricevimento da parte del Cliente dell’accettazione scritta dell’Ordine da parte di HM;

## 2) Scopi

2.1 Le presenti Condizioni di Vendita si applicano a tutte le Vendite di Prodotti. Nel caso di contrasto tra le condizioni e i termini di cui alle presenti Condizioni di Vendita e le condizioni e i termini pattuiti nella singola Vendita, quest’ultimi prevarranno. HM non sarà vincolata da condizioni generali di acquisto del Cliente (di seguito, “CGA”), neanche nell’ipotesi in cui si faccia loro riferimento o siano contenute negli ordini o in qualsiasi altra documentazione di provenienza del Cliente, senza il preventivo consenso scritto di HM. Le CGA non saranno vincolanti per HM neppure per effetto di tacito consenso.

2.2 HM si riserva il diritto di aggiungere, modificare o eliminare qualsiasi previsione delle presenti Condizioni di Vendita, restando inteso che tali aggiunte, modifiche o cancellazioni si applicheranno a tutte le Vendite concluse a partire dal trentesimo giorno successivo alla notifica al Cliente delle nuove Condizioni di Vendita.

## 3) Ordini e Vendite

3.1 Il Cliente dovrà inoltrare a HM Ordini specifici contenenti la descrizione dei Prodotti, la quantità richiesta, il prezzo ed i termini richiesti per la consegna.

3.2 La Vendita dovrà ritenersi conclusa: (i) nel momento in cui il Cliente riceva da parte di HM una conferma scritta (tale conferma potrà essere inviata via e-mail, fax o mezzi telematici) conforme ai termini e alle condizioni dell’Ordine (ii) o, nel caso in cui il Cliente riceva da parte di HM una conferma scritta contenente termini difformi da quelli contenuti nell’Ordine, decorsi tre giorni lavorativi dalla data di ricezione della conferma contenente termini difformi senza che nel suddetto periodo pervenga a HM contestazione scritta da parte del Cliente; (iii) o, in assenza di conferma scritta da parte di HM, nel momento in cui i Prodotti saranno consegnati al Cliente.

3.3 Gli Ordini regolarmente accettati da HM non potranno essere annullati dal Cliente senza il consenso scritto di HM.

#### **4) Prezzo dei Prodotti**

4.1 I prezzi dei Prodotti saranno quelli indicati nel listino prezzi di HM in vigore al momento dell'inoltro dell'Ordine da parte del Cliente o, qualora il Prodotto non sia inserito nel listino prezzi o il listino prezzi non sia disponibile, quelli indicati nell'Ordine e confermati per iscritto da HM al momento dell'accettazione dell'Ordine. Eccetto quanto diversamente concordato per iscritto tra le parti, i predetti prezzi saranno calcolati franco fabbrica, al netto dell'IVA e degli sconti. Tali prezzi non comprendono i costi di imballaggio, spedizione e trasporto dai locali di HM a quelli del Cliente. Tali costi dovranno essere sostenuti separatamente dal Cliente.

4.2 HM manterrà la proprietà dei Prodotti fino alla completa corresponsione del prezzo degli stessi. Il Cliente dovrà compiere tutti gli adempimenti richiesti dalle leggi locali al fine di rendere valida ed eseguibile nei confronti di tutti i terzi la presente clausola di riserva della proprietà anche operando l'iscrizione in ogni apposito registro, ove localmente richiesto.

#### **5) Termini di consegna**

5.1 Eccetto quanto eventualmente diversamente concordato per iscritto tra le parti, HM consegnerà i prodotti franco fabbrica presso i propri stabilimenti, così come questo termine è definito negli INCOTERMS 2010 pubblicati dalla Camera di Commercio internazionale nella loro versione più aggiornata, in vigore al momento della consegna. Se richiesto, HM si occuperà del trasporto dei Prodotti a rischio, costi e spese del Cliente.

5.2 La consegna dovrà avvenire entro il termine indicato nell'Ordine come accettato nella conferma d'ordine. I termini di consegna sono indicativi e non sono termini essenziali ai sensi dell'art. 1457 del Codice Civile e, in ogni caso, non includono i tempi di trasporto.

5.3 Salvo quanto previsto dal precedente art. 5.2, HM non sarà considerata responsabile dei ritardi o della mancata consegna ascrivibili a circostanze che siano fuori dal suo controllo, quali a titolo meramente esemplificativo e senza pretesa di esaustività:

- a) dati tecnici inadeguati o imprecisioni o ritardi del Cliente nella trasmissione a HM di informazioni o dati necessari alla spedizione dei Prodotti;
- b) difficoltà nell'ottenere rifornimenti delle materie prime;
- c) problemi legati alla produzione o alla pianificazione degli ordini;
- d) scioperi parziali o totali, mancanza di energia elettrica, calamità naturali, misure imposte dalle autorità pubbliche, difficoltà nel trasporto, cause di forza maggiore, disordini, attacchi terroristici e tutte le altre cause di forza maggiore;
- e) ritardi da parte dello spedizioniere.

5.4 Il verificarsi di alcuni degli eventi sopra elencati non darà diritto al Cliente di richiedere il risarcimento degli eventuali danni o indennizzi di alcun genere.

#### **6) Trasporto**

6.1 Eccetto quanto eventualmente diversamente concordato per iscritto tra le parti, il trasporto avverrà sempre a spese e rischio del Cliente. Nel caso in cui a HM, ai sensi dell'art. 5.1, venga richiesto di occuparsi del trasporto dei Prodotti, HM sceglierà il mezzo di trasporto che riterrà più appropriato in mancanza di specifiche istruzioni del Cliente.



## 7) Pagamenti

7.1 Salvo diverso accordo scritto tra le parti, HM emetterà le fatture al momento della consegna dei Prodotti.

7.2 Il mancato pagamento nel tempo concordato darà diritto a HM di chiedere al Cliente il pagamento degli interessi scaduti al tasso stabilito dal Decreto Legislativo n. 231/02.

7.3 Il mancato pagamento o il ritardo nei pagamenti superiore a 30 giorni daranno a HM il diritto di sospendere la consegna dei Prodotti e risolvere ogni singola Vendita sottoscritta. La sospensione della consegna dei Prodotti o la risoluzione delle Vendite non darà il diritto al Cliente di pretendere alcun risarcimento dei danni.

7.4 Ogni reclamo relativo ai Prodotti e/o alla consegna dei medesimi non potrà in alcun caso giustificare la sospensione o il ritardo nel pagamento.

## 8) Non-conformità

8.1 Qualsiasi difformità dei Prodotti consegnati al Cliente rispetto al tipo ed alla quantità indicata nell'Ordine dovrà essere denunciata per iscritto a HM entro cinque giorni dalla data di consegna. Qualora la denuncia non venga comunicata entro il predetto termine, i Prodotti consegnati verranno considerati come conformi a quelli ordinati dal Cliente.

## 9) Garanzia

9.1 Salvo diverso accordo scritto tra le parti, HM garantisce che i Prodotti sono esenti da vizi/difetti (con esclusione di quelle parti dei Prodotti che non sono prodotte da HM) per un periodo di 12 mesi decorrente dalla data di consegna dei medesimi al Cliente.

9.2 La garanzia non opererà con riferimento a quei Prodotti i cui difetti sono dovuti a

- danni causati durante il trasporto;
- un uso negligente o improprio degli stessi;
- inosservanza delle istruzioni di HM relative al funzionamento, manutenzione ed alla conservazione dei Prodotti;
- riparazioni o modifiche apportate dal Cliente o da soggetti terzi senza la previa autorizzazione scritta di HM.

9.3 A condizione che il reclamo del Cliente sia coperto dalla garanzia e notificato nei termini di cui al presente articolo, HM si impegnerà, a sua discrezione, a sostituire o riparare ciascun Prodotto o le parti di questo che presentino vizi o difetti.

9.4 Il Cliente dovrà denunciare per iscritto a HM, la presenza di vizi o difetti entro 8 giorni dalla consegna dei Prodotti se si tratta di vizi o difetti palesi, oppure, entro 8 giorni dalla scoperta in caso di vizi o difetti occulti o non rilevabili da una persona di media diligenza.

9.5 I Prodotti oggetto di denuncia dovranno essere immediatamente inviati presso la fabbrica di HM, o in qualsiasi altro luogo che quest'ultima indicherà di volta in volta, a costi e spese a carico del Cliente salvo diverso accordo tra le parti, al fine di consentire a HM l'espletamento dei necessari controlli. La garanzia non copre danni e/o difetti dei Prodotti derivanti da anomalie causate da, o connesse a, parti assemblate/aggiunte direttamente dal Cliente o dal consumatore finale. Qualora, nell'ambito della presente garanzia, un Prodotto o un componente difettoso venisse sostituito, la proprietà del Prodotto o del componente sostituito sarà ritrasferita dal Cliente a HM.

9.6 In ogni caso il Cliente non potrà far valere i diritti di garanzia verso HM se il prezzo dei Prodotti non sia stato corrisposto alle condizioni e nei termini pattuiti, anche nel caso in cui la mancata corresponsione del prezzo alle condizioni e nei termini pattuiti si riferisca a Prodotti diversi da quelli per i quali il Cliente intende far valere la garanzia.

9.7 HM non riconosce alcuna garanzia circa la conformità dei Prodotti alle norme e ai regolamenti di Paesi che non rientrano o non appartengono all'Unione Europea. Nessun'altra garanzia, espressa o implicita, quale, a titolo esemplificativo, la garanzia di buon funzionamento o di idoneità per uno scopo specifico, è concessa con riferimento ai Prodotti.

9.8 Senza pregiudizio a quanto indicato nel precedente art. 9.3 e salvo il caso di dolo o colpa grave, HM non sarà responsabile per qualsivoglia danno derivante e/connesso ai vizi dei Prodotti. In ogni caso, HM non sarà ritenuto responsabile per danni indiretti o consequenziali di qualsiasi natura quali, a titolo esemplificativo, le perdite derivanti dall'inattività del Cliente o il mancato guadagno.

### **10) Diritti di Proprietà Intellettuale**

10.1 I Diritti di Proprietà Intellettuale sono di totale ed esclusiva proprietà di HM e la loro comunicazione o utilizzo nell'ambito delle presenti Condizioni di Vendita non crea, in relazione ad essi, alcun diritto o pretesa in capo al Cliente. Il Cliente si obbliga a non compiere alcun atto incompatibile con la titolarità dei Diritti di Proprietà Intellettuale.

### **11) Clausola risolutiva espressa**

11.1 HM avrà facoltà di risolvere, ai sensi e per gli effetti dell'art. 1456 del Codice Civile Italiano, in qualsiasi momento mediante comunicazione scritta da inviare al Cliente, la singola Vendita nel caso di inadempimento delle obbligazioni previste dagli articoli: 4 (Prezzo dei Prodotti); 7 (Pagamenti); 10 (Diritti di Proprietà Intellettuale).

### **12) Mutamento nelle condizioni patrimoniali del Cliente**

12.1 HM avrà diritto a sospendere l'adempimento delle obbligazioni derivanti dalla Vendita dei prodotti, in base all'art. 1461 del Codice Civile Italiano, nel caso in cui le condizioni patrimoniali del Cliente divenissero tali da porre in serio pericolo il conseguimento della controprestazione salvo che sia prestata idonea garanzia.

### **13) Domicilio legale, legge applicabile e giurisdizione**

13.1 HM è legalmente domiciliata presso la sua sede principale.

13.2 Le Condizioni di Vendita e ogni singola Vendita saranno regolate e interpretate in conformità alla Legge Italiana.

13.3 Tutte le controversie derivanti da o connesse alle presenti Condizioni di Vendita e/o ad ogni Vendita saranno soggette alla esclusiva giurisdizione del Tribunale di Vicenza.

13.4 Salvo quanto pattuito nel precedente art. 13.3, HM si riserva il diritto, quando promotore di una azione legale in qualità di attore, di promuovere tale azione nel luogo di residenza del Cliente.

**14) ATTENZIONE (Leggere attentamente):**

Le seguenti raccomandazioni sono fondamentali per la vostra protezione e per garantirvi molti anni di sicuro funzionamento del vostro prodotto senza alcun problema.

Leggere attentamente tutte le istruzioni prima di azionare il riduttore. L'inappropriata installazione, manutenzione o funzionamento del riduttore può causare incidenti al personale addetto e danni al riduttore stesso.

14.1 E' richiesta autorizzazione scritta per azionare riduttori in ascensori o dispositivi per il movimento delle persone.

14.2 Controllare che alcune applicazioni non eccedano la massima capacità di carico ammessa pubblicata in questo catalogo.

14.3 L'acquirente è l'unico responsabile per la determinazione dell'adeguatezza del prodotto per qualcuna o tutte le utilizzazioni che l'acquirente stesso farà del riduttore. L'applicazione dell'acquirente non potrà essere soggetta ad alcuna implicita garanzia di montaggio per uno scopo particolare.

14.4 Per ragioni di sicurezza l'acquirente dovrà provvedere a porre protezioni adeguate su tutta la lunghezza dell'albero a tutti gli organi in movimento. L'utilizzatore è responsabile del controllo di tutti i codici di sicurezza e la predisposizione di protezioni adeguate. In assenza di tali precauzioni si possono verificare incidenti alle persone e danni agli apparati.

14.5 Su riduttori installati in posizioni elevate utilizzare protezioni adeguate per qualsiasi distacco accidentale di parti nel caso di passaggio di persone al di sotto.

14.6 Olio e riduttori bollenti possono causare gravi ustioni. Usare estrema cautela nella rimozione dei tappi e delle ventole.

14.7 Assicurarci che la corrente di alimentazione sia scollegata prima di riparare o rimuovere alcun componente. Chiudere l'alimentazione e contrassegnare tale operazione per evitare accensioni accidentali.

14.8 I riduttori non devono essere considerati esenti da guasti o a bloccaggio automatico. Se sono indispensabili queste caratteristiche, deve essere utilizzato un dispositivo indipendente della dimensione adatta. I riduttori non devono essere utilizzati come freni.

14.9 Qualsiasi freno sia utilizzato insieme al riduttore deve essere della giusta grandezza e posizionato in modo da non causare carichi eccessivi non previsti dai dati forniti nel catalogo.

14.10 I dispositivi di sollevamento come le golfare devono essere usati solo per sollevare verticalmente il riduttore e non altri dispositivi associati o motori.

14.11 L'utilizzo di un olio con un additivo EP su gruppi provvisti di dispositivo di arresto possono inficiare l'uso corretto del freno e provocare danni alle persone, alle cose ed al riduttore stesso nonché ad altri apparecchi.

14.12 I Carichi sospesi assoggettano i cuscinetti della vite e la vite stessa a sollecitazioni che possono causare, se non adeguatamente dimensionati, l'usura prematura dei cuscinetti e/o la rottura della vite a causa della resistenza alla flessione.

**La nostra ditta non si ritiene responsabile per eventuali danni diretti o indiretti derivanti da un uso improprio dei prodotti e dalla mancata osservanza delle indicazioni riportate a catalogo o web.**







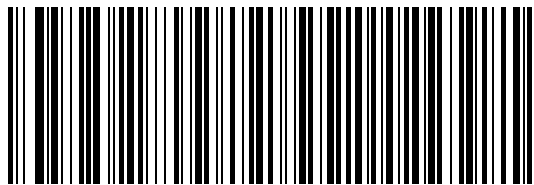




# HYDRO-MEC

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