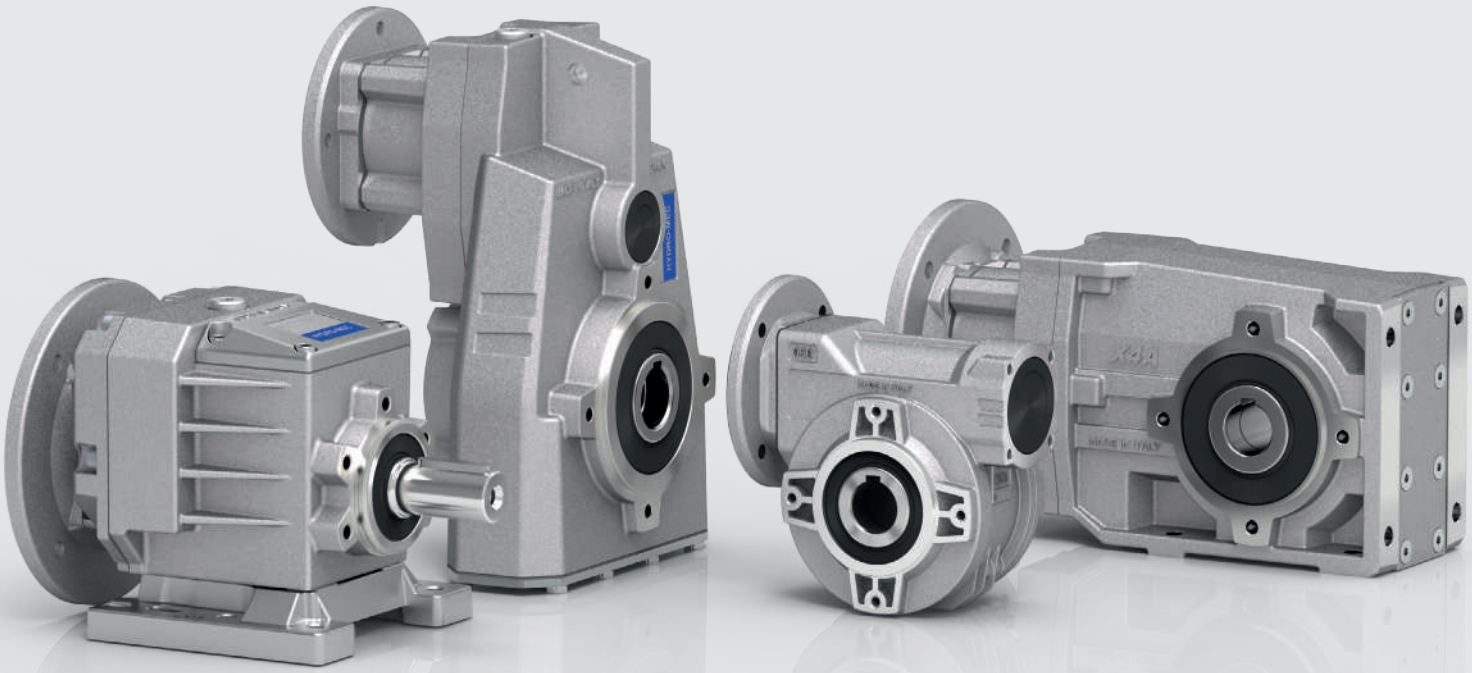
GENERAL CATALOGUE GEARBOXES

METRIC CATALOGUE EDITION 2025

ITALIAN MADE PRODUCTS

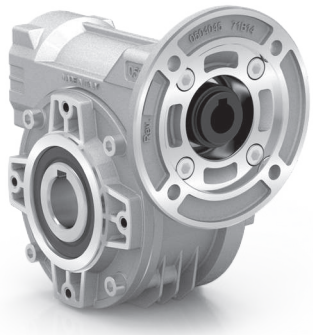


HYDRO·MEC

HIGH EFFICENCY GEARBOXES

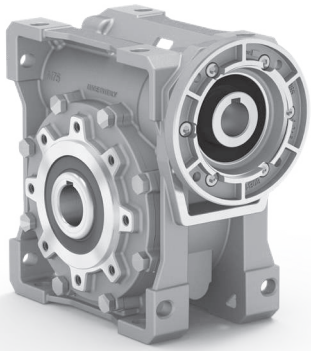
In this catalogue

Rightangle-gear
Worm gearboxes



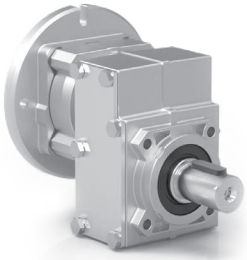
21÷978Nm Paragraph 1

M Square gear
Square worm gearboxes



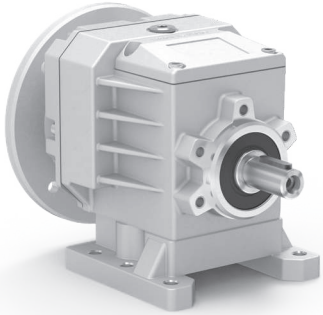
21÷1550Nm Paragraph 2

One step-gear
One step gearboxes



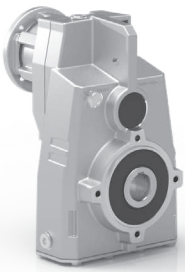
20÷110Nm Paragraph 4

Coaxial-gear
Aluminum gearboxes



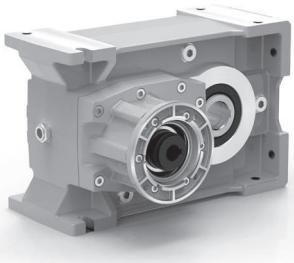
70÷520Nm Paragraph 5

Compact-gear
Shaft mounted gearboxes



60÷2100Nm Paragraph 7

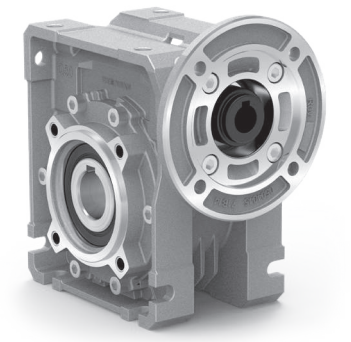
Cube-gear
Parallel shaft gearboxes



380÷2100Nm Paragraph 8

In this catalogue

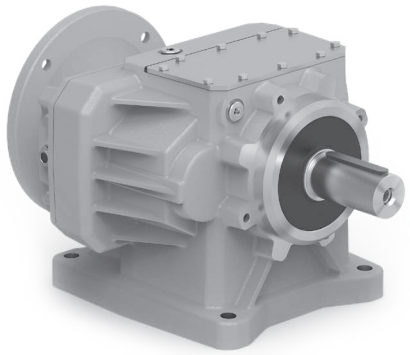
Q Square gear
Square worm gearboxes



147÷978Nm

Paragraph 3

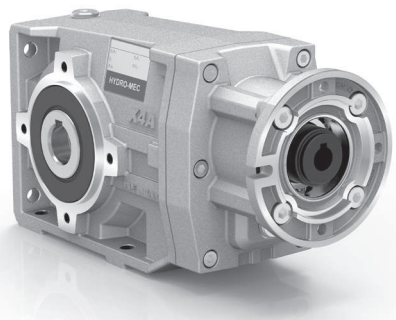
Coaxial-gear
Cast iron gearboxes



675÷4600Nm

Paragraph 6

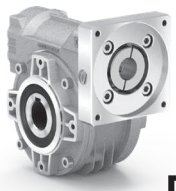
Angletech-gear
Helical bevel gearboxes



50÷4600Nm

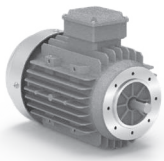
Paragraph 9

Brushless motor flanges



Paragraph B

Aluminum electric motors



Paragraph M

Paragraph 1
Paragraph 2
Paragraph 3
Paragraph 4
Paragraph 5
Paragraph 6
Paragraph 7
Paragraph 8
Paragraph 9
Paragraph B
Paragraph M

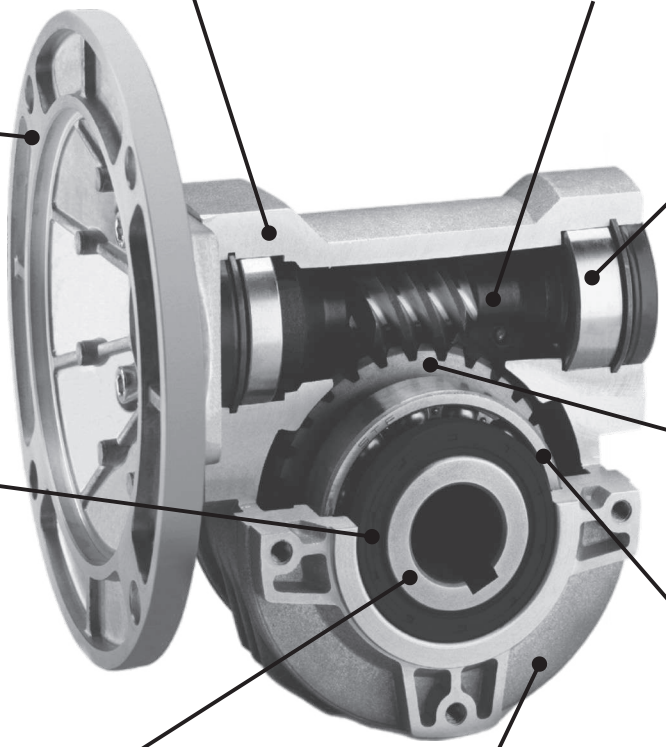
Worm gearboxes

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.

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



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.

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

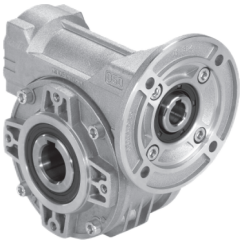
Vent Free Design.
No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15ºC to 130ºC.

oil free

vent free

World wide sales network.

Specific type datasheet on page...

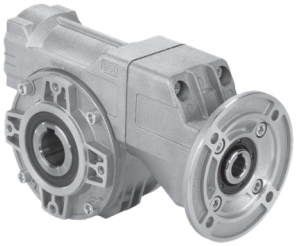


On page / A pagina / Auf Seite / À la page / En la página

1-5	1-7	1-9	1-11	1-13	1-15	1-17

Types / Tipi / Tipen / Types / Tipos

030	045	050	063	63A	085	110
21Nm	41Nm	72Nm	147Nm	191Nm	347Nm	651Nm



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1-19	1-21	1-23	1-25	1-27	1-29

Types / Tipi / Tipen / Types / Tipos

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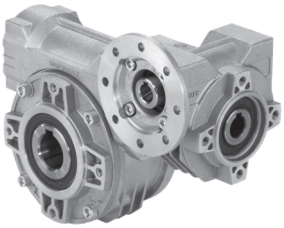

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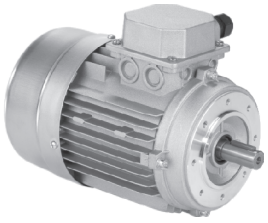
Types / Tipi / Tipen / Types / Tipos

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



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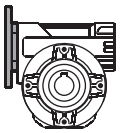
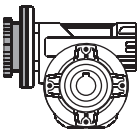
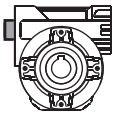
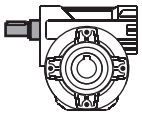
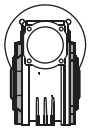
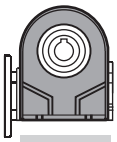
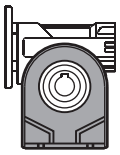
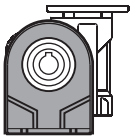
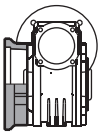
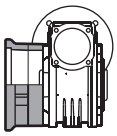
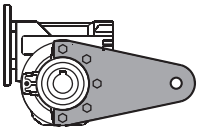
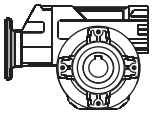
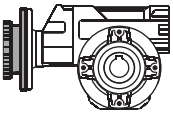
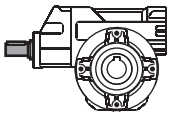
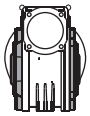
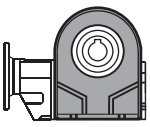
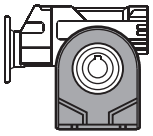
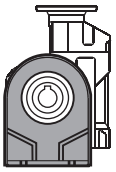
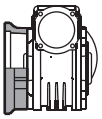
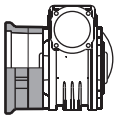
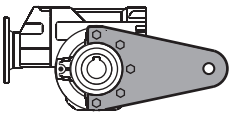
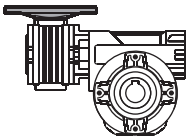
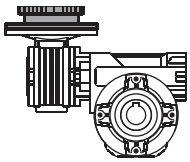
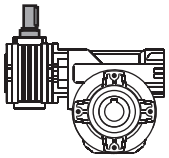
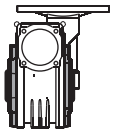
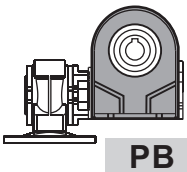
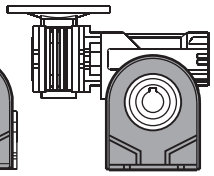
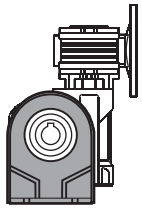
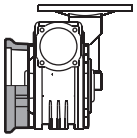
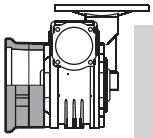
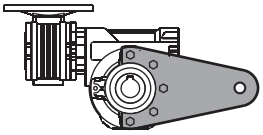
M-1									

Types / Tipi Tipen / Types Tipos

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

Type - Tipo - Typ Type - Tipo	**Size** - Grandezza Grösse - Taille Tamaño	**Mounting** - Montaggio - Montage Fixation Fixation - Tipo de montaje
P	**045**	**PA**
Worm gearboxes Riduttori a vite senza fine Schneckengetriebe Reducteurs a vis sans fin Reductores de corona sin fin  P  M  B  R	030 045 050 063 63A 085 110	 FB  PB  PA  PV  FC  FL F1 F2 F3 F4  BR
Worm gearboxes with primary reduction Riduttori a vite senza fine con precoppia Schneckengetriebe mit stirnradstufe am Eintrieb Reducteurs a vis sans fin avec pré-réduction Reductores corona sin fin con prereductora de engranajes  P  M  R	P45 P50 P63 P6A P85 P10	 FB  PB  PA  PV  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	303 453 503 633 634 6A3 6A4 854 115	 FB  PB  PA  PV  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 Rapporto Untersetzung Reduction Relaciòn	Hub Mozzo corona Hohlwelle Arbre creux Nucleo corona	Output shaft Albero lento Abtriebswelle Arbre de sortie Eje salida	Motor size Grandezza motore Motor Grösse Grandeur moteur Tamaño motor	Mounting position Posizione montaggio Einbaulage Position de montage Position de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Mountin position Esecuzione montaggio Einbaulage Exécution de montage Posición de montaje	Terminal box position Posizione morsettiera Klemmkastenlage Position boîte a bornes Posición caja de bornes
10	**C**	**Ø**	**-Q**	**B3**	**ST**	**---**	

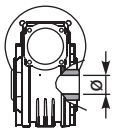
See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir tableau données techniques

Ver tabla datos técnicos



STANDARD

C

030 ⇨ ø14
045 ⇨ ø18
050 ⇨ ø25
063 ⇨ ø25
63A ⇨ ø28
085 ⇨ ø35
110 ⇨ ø42

I

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox

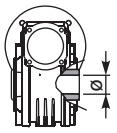
SPECIAL SERIES
SERIE SPECIALE

S

045 ⇨ ø19
050 ⇨ ø24

X

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



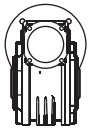
INCH

U

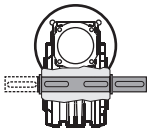
045⇨ø0.750"
050⇨ø1.000"
063⇨ø1.125"
085⇨ø1.500"

Z

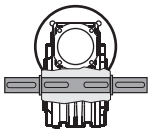
Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



Ø



S



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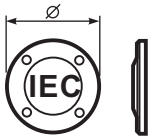


-M
without flange
Senza flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)

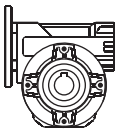
B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

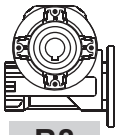
Brushless

BA=40/63-M5
BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

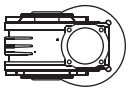
-0=Type R
-S=Type R
S series



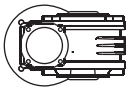
B3



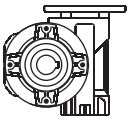
B8



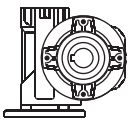
B6



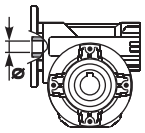
B7



V5



V6



ST

Standard bore *
Kit R standard

Foro standard *
Kit R standard

Input bore without Reduction Bushing

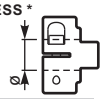
-O = 9mm
-P = 11mm
-Q = 14mm
-R = 19mm
-T = 24mm
-U = 28mm
-V = 38mm

COUPLING

STANDARD (IEC)

-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

BRUSHLESS *



-1 = 9mm
-2 = 11mm
-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

Ready for input coupling
Predisposto per giunto

-0
Type B
Tipo B

-0
Type R
Tipo R

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

Only for combined units See technical data table

Solo per i riduttori combinati Vedi tabelle dati tecnici.

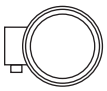
Ausführungen für Getriebekombinationen it

Uniquement pour combinés. Voir tableau données techniques

Sólo para combinados ver tabla datos técnicos

With Type M specify terminal box position

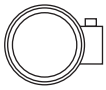
Con tipo M specificare posizione morsettiera



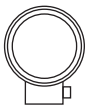
A

B

STANDARD



C



D

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

Lifting / sollevamento / hubantriebe / levage / elevactión

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

Rotation / rotazione / drehung / rotation / rotaction

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$$

Linear movement / traslazione / linearbewegung / translation / translacion

$$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

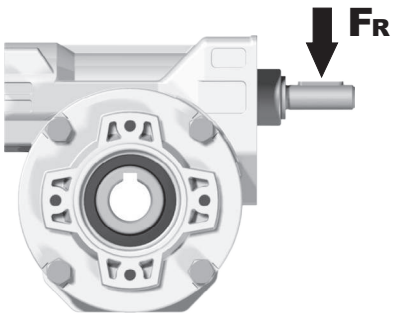
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

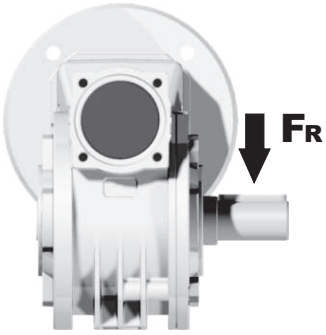
$$\mathbf{M}\ [Nm] = \frac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$$

$$\mathbf{M}\ [lb\ in] = \frac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$$

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





$F_R\ [N] = \frac{M\ [Nm] \cdot 2000}{d\ [mm]} \cdot f_K$	$F_R\ [N] = \frac{M\ [lb\ in] \cdot 8.9}{d\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

A Nominal torque / Momento torcente nominale / Nenn Drehmoment / Couple nominal / Par de torsión nominal

Flange code / Codice flangia / Flanschtype / Code bride / Código bridas

Dynamic efficiency / Rendimento dinamico / Dynamischer / Rendement dynamique / Rendimento dinámico

Input speed / Velocità in entrata / Eintriebsdrehzahl / Vitesse en entrée / Velocidad de entrada

045 Rightangle - Gear 41Nm

Rating - Aluminum WORM GEARBOXES

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. <2 h	2 - 8 h	8 - 16 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	Uniform / Uniforme	1.25	1.5	1.75
		Moderate / Moderato	1.5	1.75	2
		Heavy / Forte	1.75	2	2.25

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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

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

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.

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.

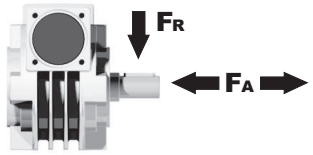
▪ LUBRICATION 030 Oil Quantity 0.03 Lt.

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

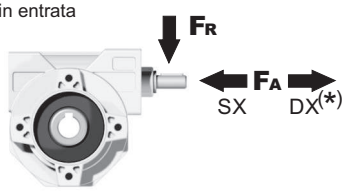
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	20	100

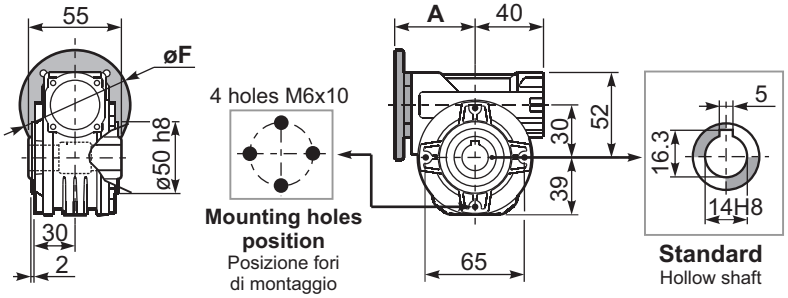
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

Gearbox weight peso riduttore	1.05 kg

P030FB... Basic wormbox
Riduttore base

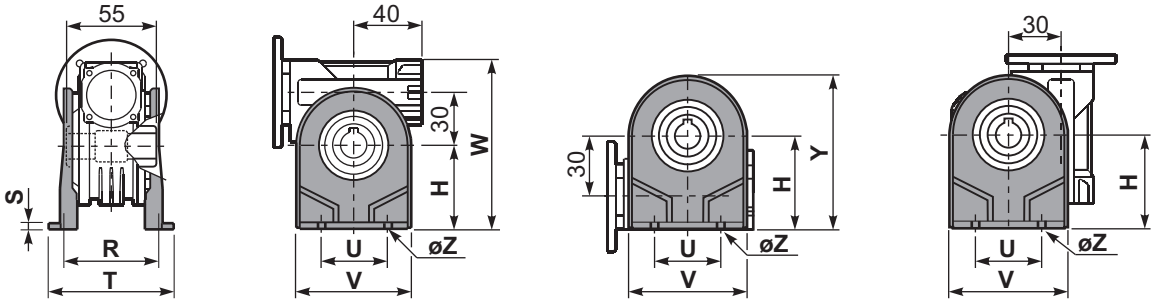
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



P030PA... Feet
Piedini

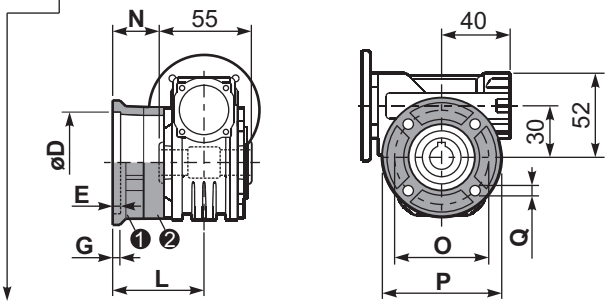
P030PB... Feet
Piedini

P030PV... Feet
Piedini



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

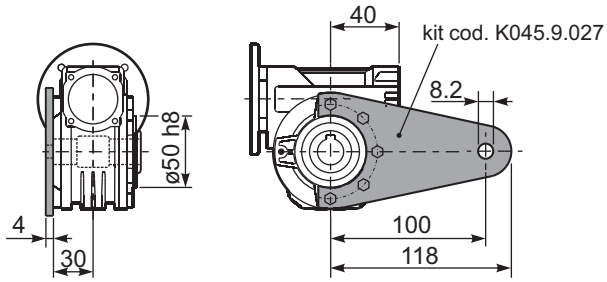
P030FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$50^{+0.15}_{+0.05}$	6	6	50.5	23	68	80	7	❶ K030.9.010 ❷ -
FL	$60^{+0.15}_{+0.05}$	6	6	55.5	28	87	110	8.5	❶ K045.9.010 ❷ -

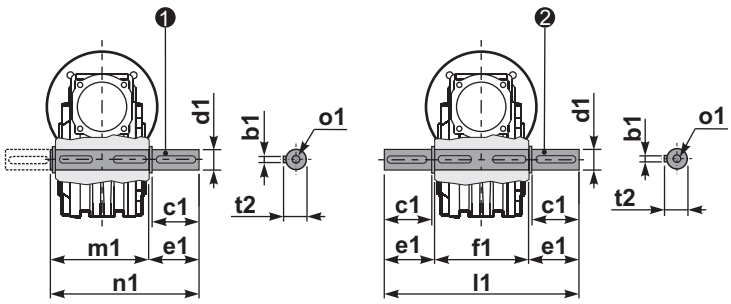
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$40^{+0.15}_{+0.10}$	3.5	5.5	49	21.5	56	80	6.5	❶ KS030.9.012 ❷ -

P030BR... Reaction arm
Braccio di reazione



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

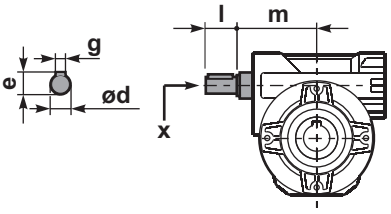
P030.....D... Double Shaft
Albero lento bisp.



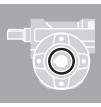
❶ kit cod. K030.5.028 type **B** ❷ kit cod. K030.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	5	25	$14^{-0.005}_{-0.020}$	35.5	55	126	59	94.5	16	M5x14
type S	-	-	-	-	-	-	-	-	-	-

R030FB... 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	-	-	-	-	-	-	-



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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
67	**21**	0.37	36	1.2	0.43	41	**B**		B-C	**B**-C		67	1.6	04
50	**28**	0.25	31	1.3	0.33	41	**B**		B-C	**B**-C		65	2.5	05
38	**37**	0.25	40	1.0	0.26	41	**B**		B-C	**B**-C		63	1.8	06
30	**46**	0.25	46	0.9	0.22	41	**B**		B-C	**B**-C		59	1.5	07
23	**60**	0.18	41	1.0	0.18	41	**B**		B-C	**B**-C		56	1.2	08
20	**70**	0.12	31	1.0	0.12	30	**B**		B-C	**B**-C		54	1.0	09
13.7	**102**	0.09	31	1.0	0.09	29	**B**		B-C	**B**-C		49	0.72	10

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.

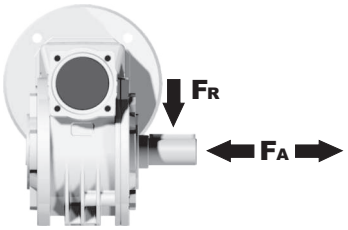
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

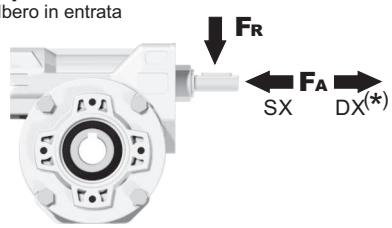
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
200	180	900
150	200	1000
100	220	1100
75	240	1200
50	260	1400
25	300	1800
15	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

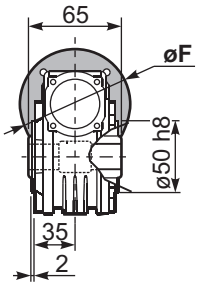
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

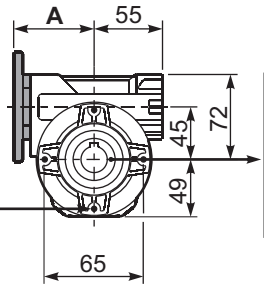
Gearbox weight peso riduttore	2.40 kg

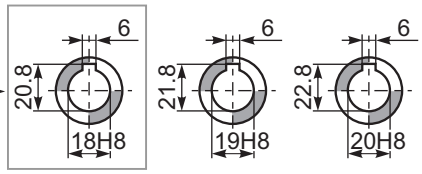
P045FB... Basic wormbox
Riduttore base

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



Mounting holes position
Posizione fori di montaggio

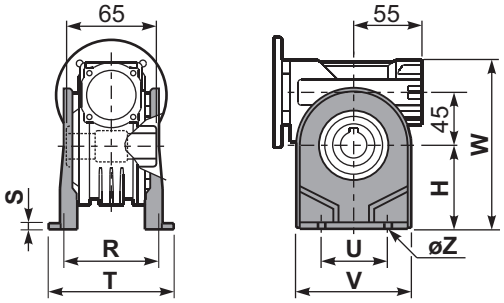




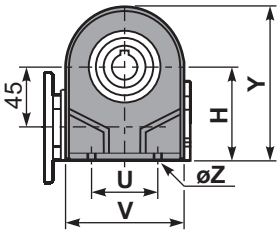
Standard
Hollow shaft

On request
A richiesta

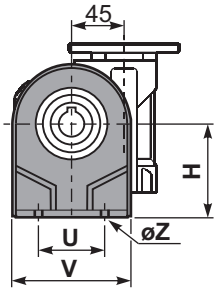
P045PA... Feet
Piedini



P045PB... Feet
Piedini

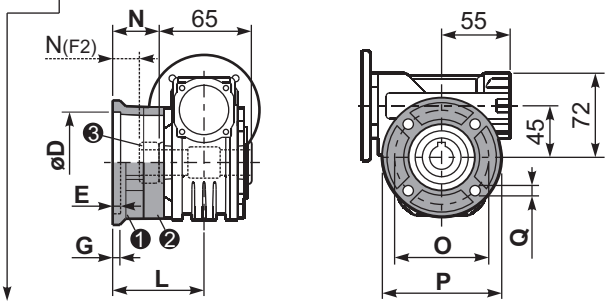


P045PV... Feet
Piedini



	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

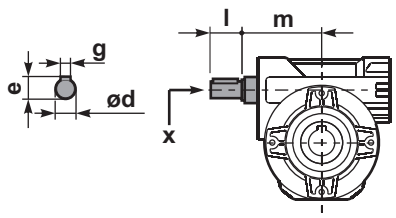
P045FC... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$60^{+0.15}_{+0.05}$	9	9	60.5	28	87	110	8.5	❶ K045.9.010 ❷ -
FL	$60^{+0.15}_{+0.05}$	9	9	90.5	58	87	110	8.5	❶ K045.9.010 ❷ K045.0.200

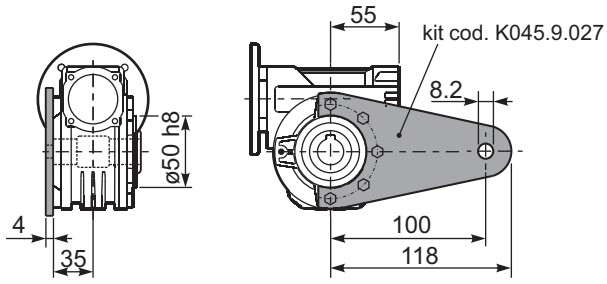
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$95^{+0.20}_{+0.15}$	4	11	73.5	41	115	140	9	❶ KS045.9.013 ❷ -
F2	$60^{+0.15}_{+0.05}$	9	9	60.5	19	87	110	8.5	❶ KS045.9.010 ❸ S045.0.204
F3	$80^{+0.15}_{+0.10}$	3	8	51.5	19	100	120	9	❶ KS045.9.014 ❷ -

R045FB... Input shaft
Albero in entrata



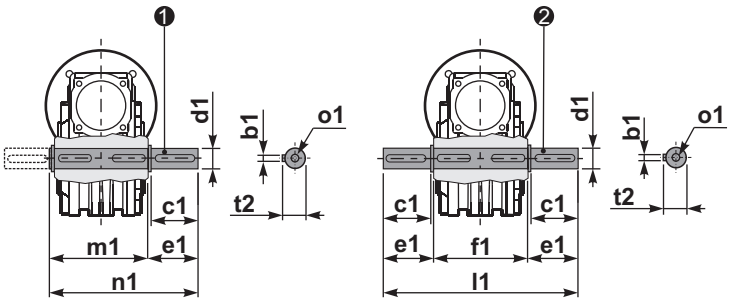
	ød	e	g	l	m	x	kit code
type **B**	11 h6	12.5	4	30	68	-	❶ K045.5.006 PAM71 ❷ -
type **S**	-	-	-	-	-	-	❶ - ❷ -

P045BR... Reaction arm
Braccio di reazione



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

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



❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

❷ kit cod. K045.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type **S**	6	40	$19^{-0.005}_{-0.020}$	58.8	-	-	70	128.5	21.5	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	Available B14 motor flanges -O 56	-P 63	-Q 71	-R 80	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

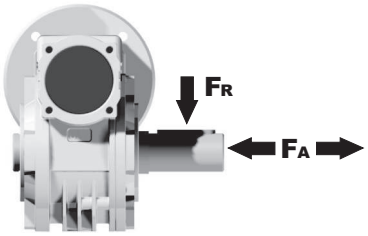
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

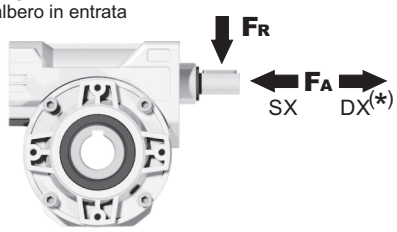
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	76	380

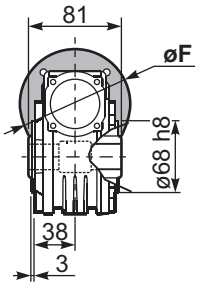
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

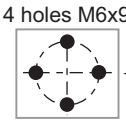
tab. 2

Gearbox weight peso riduttore	3.00 kg

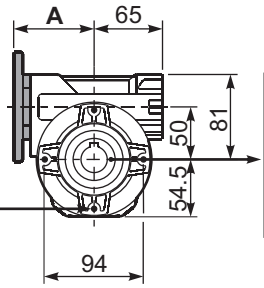
P050FB... Basic wormbox
Riduttore base

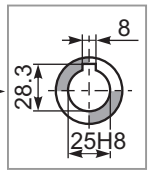
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	78.5
71B5	K050.4.042	160	76
80B5	K050.4.043	200	76.5
56B14	KC40.4.049	80	76
63B14	K050.4.047	90	78.5
71B14	K050.4.045	105	76
80B14	K050.4.046	120	76.5



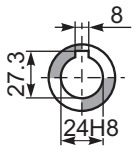


Mounting holes position
Posizione fori di montaggio



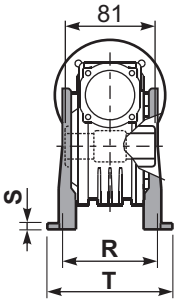


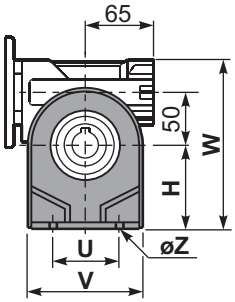
Standard
Hollow shaft



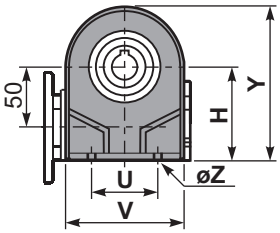
On request "type S"
A richiesta "tipo S"

P050PA... Feet
Piedini

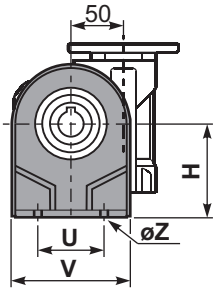




P050PB... Feet
Piedini

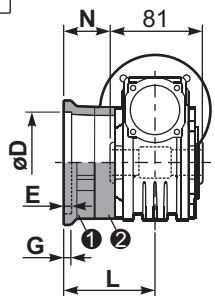


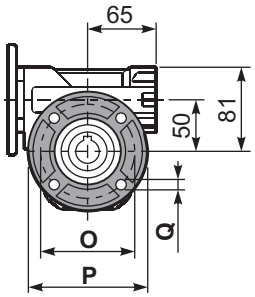
P050PV... Feet
Piedini



	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

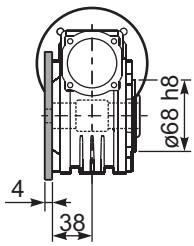


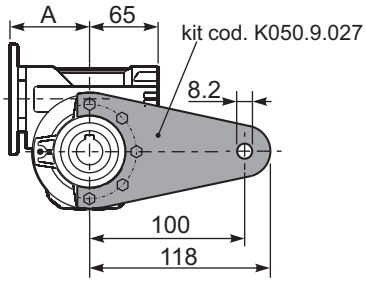


type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$70^{+0.20}_{+0.15}$	9	12	85	44.5	90	123	10.5	❶ K050.9.010 ❷ -
FL	$70^{+0.20}_{+0.15}$	9	12	114.5	74	90	123	10.5	❶ K050.9.010 ❷ K050.0.200

type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$110^{+0.20}_{+0.15}$	4	11	83.5	43	130	160	10	❶ KS050.9.012 ❷ -
F2	$70^{+0.20}_{+0.15}$	9	12	76.5	36	90	123	10.5	❶ KS050.9.014 ❷ -
F3	$95^{+0.035}_{0}$	4	10	66.5	26	115	140	10	❶ KS050.9.013 ❷ -

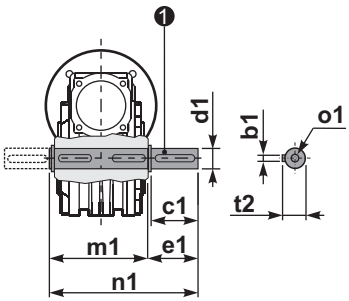
P050BR... Reaction arm
Braccio di reazione

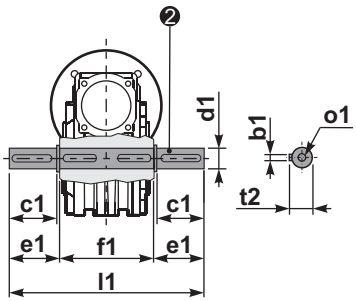




P050.....S... Single Shaft
Albero lento semplice

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



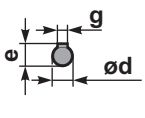


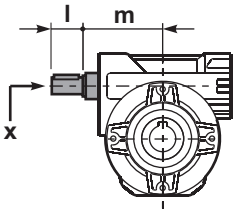
❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type **S**	8	50	$24^{-0.005}_{-0.020}$	68.8	-	-	86.5	155	27	M8x20

R050FB... Input shaft
Albero in entrata





	ød	e	g	l	m	x	kit code
type **B**	16 h6	18	5	30	74.5	M6x16	❶ K050.5.006 PAM71 ❷ K050.5.007 PAM80
type **S**	14 h6	16	5	30	74.5	M5x10	❶ KS050.5.008 PAM71 ❷ KS050.5.009 PAM80

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

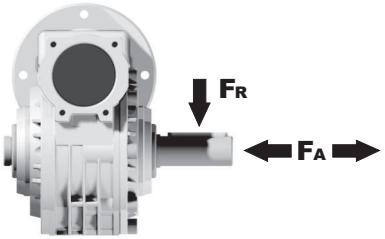
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

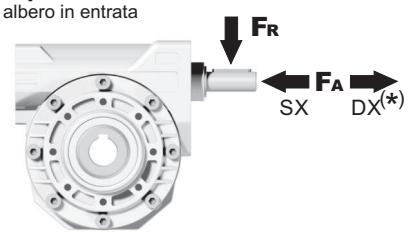
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	90	450

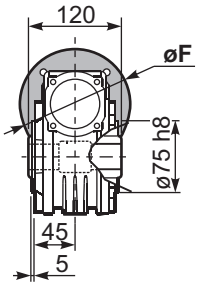
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

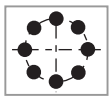
tab. 2

Gearbox weight peso riduttore	6.00 kg

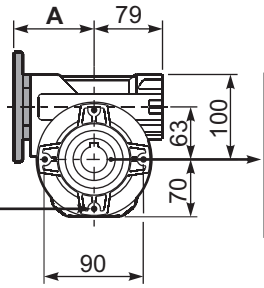
P063FB... Basic wormbox
Riduttore base

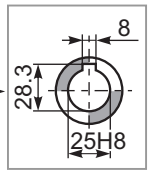
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	99.5
71B5	K063.4.042	160	97.5
80/90B5	K063.4.043	200	99.5
71B14	K063.4.047	105	97.5
80B14	K063.4.046	120	99.5
90B14	K063.4.041	140	99.5





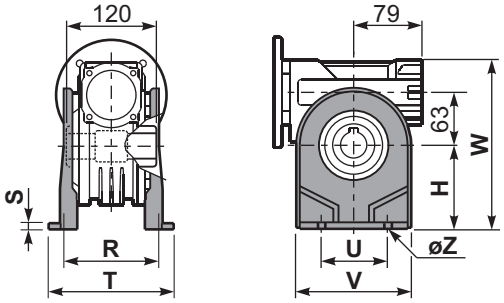
Mounting holes position
Posizione fori di montaggio



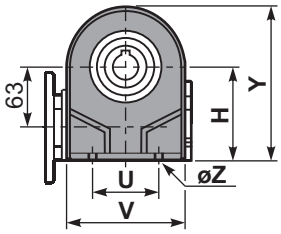


Standard
Hollow shaft

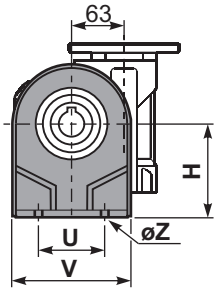
P063PA... Feet
Piedini



P063PB... Feet
Piedini

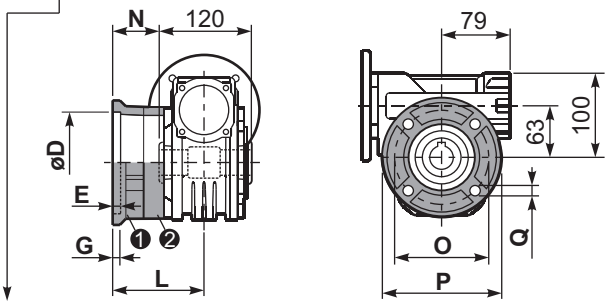


P063PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

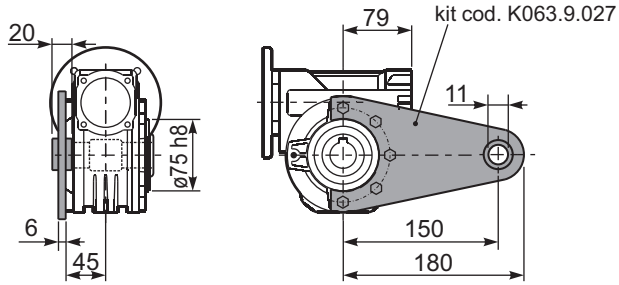
P063FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$115^{+0.20}_{+0.15}$	7	13	86	26	150	175	11	❶ K063.9.010 ❷ -
FL	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ K063.9.010 ❷ K063.0.200

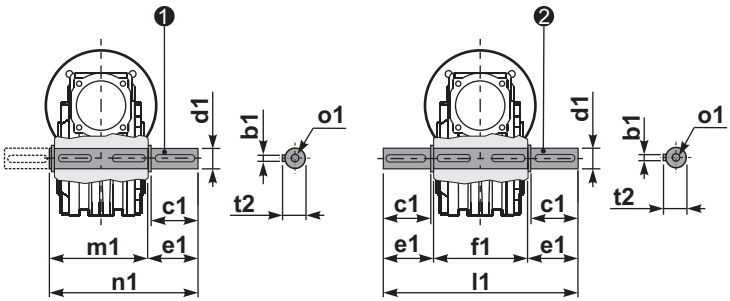
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	102	42	165	200	13	❶ KS070.9.013 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	11	82	22	130	160	10	❶ KS063.9.011 ❷ -

P063BR... Reaction arm
Braccio di reazione



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

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

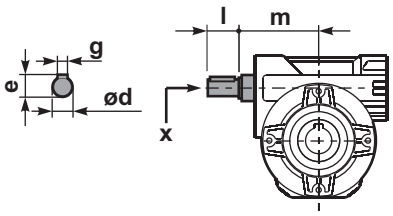


❶ kit cod. K063.5.028 type **B**

❷ kit cod. K063.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	60	$25^{-0.005}_{-0.020}$	63.2	120	246.4	126.8	190	28	M8x20
type S	-	-	-	-	-	-	-	-	-	-

R063FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	18 h6	20.5	6	45	93	M6x16	❶ K063.5.006 PAM80 ❷ K063.5.007 PAM90
type S	19 h6	21.5	6	40	93	M8x20	❶ KS063.5.008 PAM80 ❷ KS063.5.009 PAM90

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

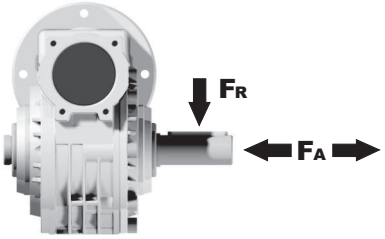
▪ LUBRICATION 63A Oil Quantity 0.40 Lt.

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

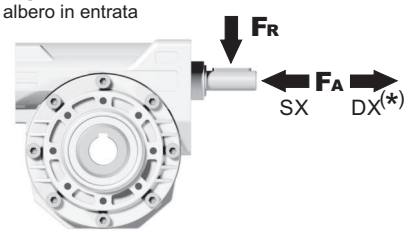
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	90	450

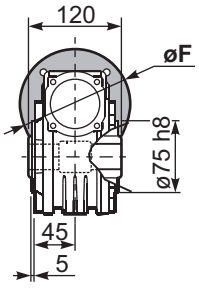
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

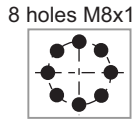
tab. 2

Gearbox weight peso riduttore	6.00 kg

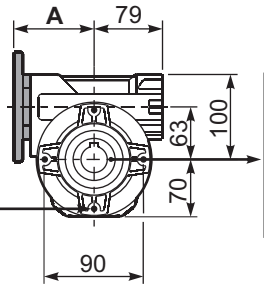
P63A**FB**... Basic wormbox
Riduttore base

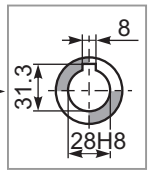
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	99.5
71B5	K063.4.042	160	97.5
80/90B5	K063.4.043	200	99.5
71B14	K063.4.047	105	97.5
80B14	K063.4.046	120	99.5
90B14	K063.4.041	140	99.5



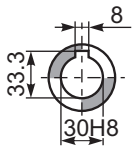


Mounting holes position
Posizione fori di montaggio



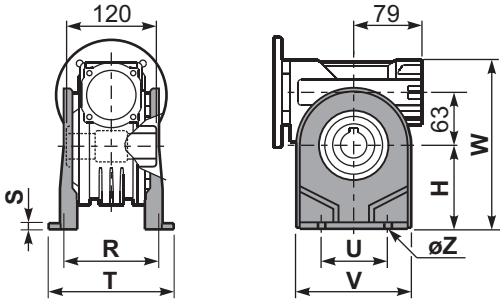


Standard
Hollow shaft

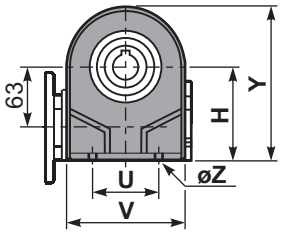


On request
A richiesta

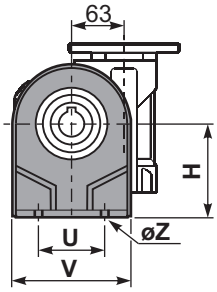
P63A**PA**... Feet
Piedini



P63A**PB**... Feet
Piedini

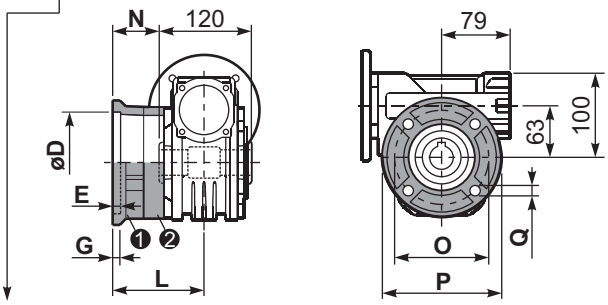


P63A**PV**... Feet
Piedini



	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**	-	-	-	-	-	-	-	-	-	-

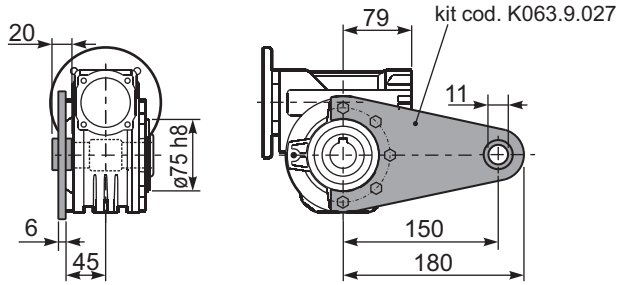
P63A**FC**... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$130^{+0.20}_{+0.15}$	7	13	85	25	165	200	13	❶ K070.9.010 ❷ -
FL	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ K070.9.010 ❷ K070.0.200

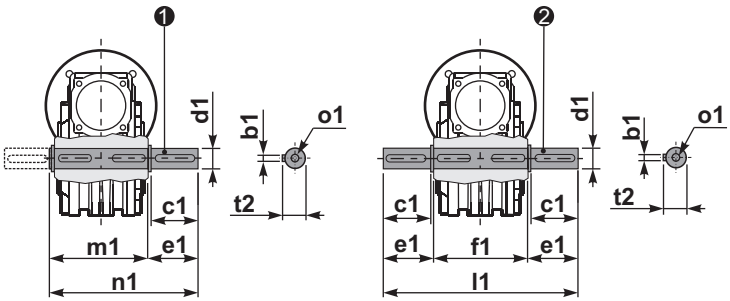
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ KS070.9.014 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	13.5	84.5	24.5	130	160	11	❶ KS070.9.011 ❷ -

P63A**BR**... Reaction arm
Braccio di reazione



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

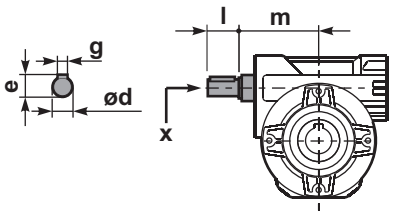
P63A.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K070.5.028 type **B**

❷ 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	❶ K063.5.006 PAM80 ❷ K063.5.007 PAM90
type **S**	19 h6	21.5	6	40	93	M8x20	❶ KS063.5.008 PAM80 ❷ KS063.5.009 PAM90

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	60	$28^{-0.005}_{-0.020}$	63.5	120	247	127.5	191	31	M8x20
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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			71	3.5	07
30	**46**	1.5	320	1.0	1.5	326	B	B			B			68	3.1	08
27	**52**	1.1	258	1.1	1.2	289	B	B			B			66	2.7	09
21	**67**	1.1	327	0.9	0.97	289	B	B			B			65	2.1	10
18.9	**74**	0.75	220	1.2	0.91	268	B	B			B			58	1.9	11
14.6	**96**	0.55	191	1.3	0.70	242	B	B			B			53	1.5	12

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.

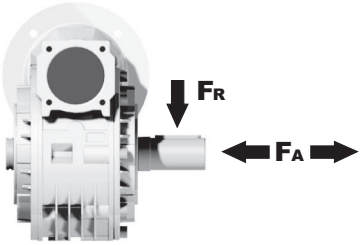
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

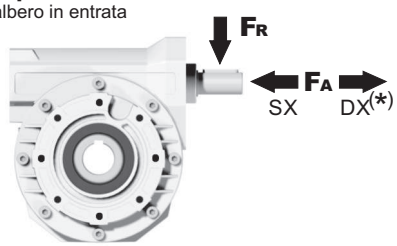
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	130	650

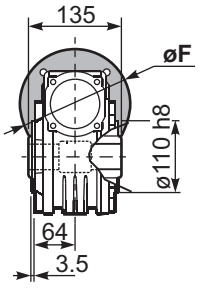
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

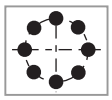
tab. 2

Gearbox weight peso riduttore	11.00 kg

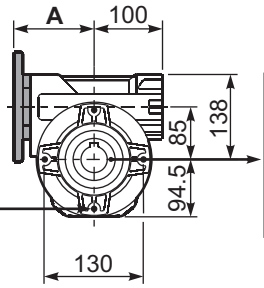
P085FB... Basic wormbox
Riduttore base

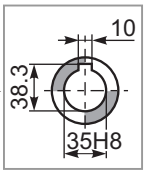
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	116.5
80/90B5	K023.4.042	200	118.5
100/112B5	K023.4.043	250	127.5
80B14	K085.4.046	120	118.5
90B14	K085.4.045	140	118.5
100/112B14	K085.4.047	160	127.5



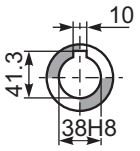


Mounting holes position
Posizione fori di montaggio



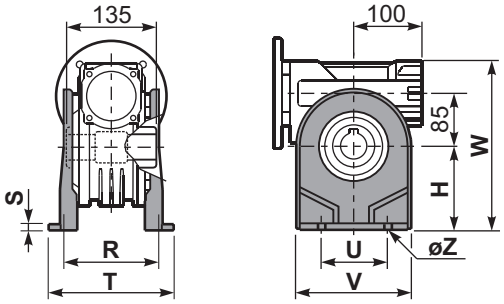


Standard
Hollow shaft

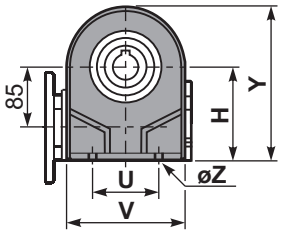


On request
A richiesta

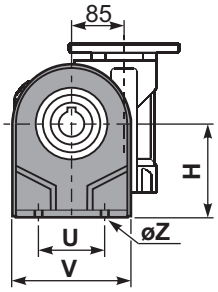
P085PA... Feet
Piedini



P085PB... Feet
Piedini

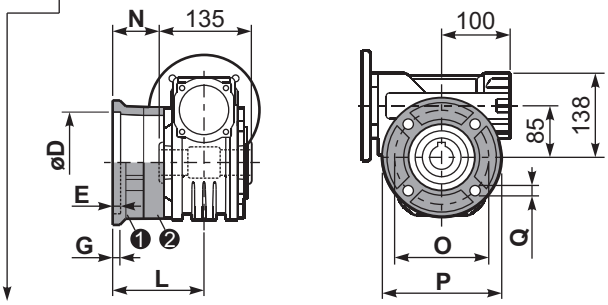


P085PV... Feet
Piedini



	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**	-	-	-	-	-	-	-	-	-	-

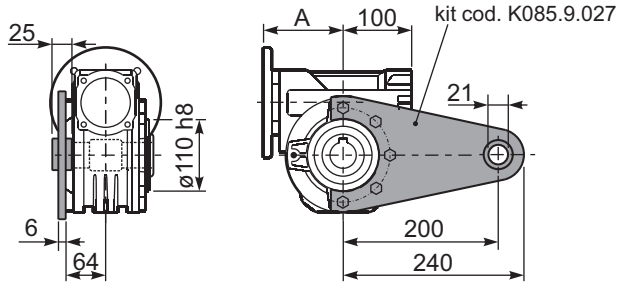
P085FC... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

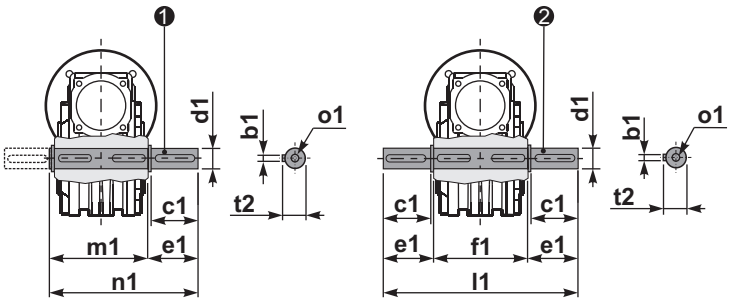
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	130 H7	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{+0.00}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	130 H7	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

P085BR... Reaction arm
Braccio di reazione



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

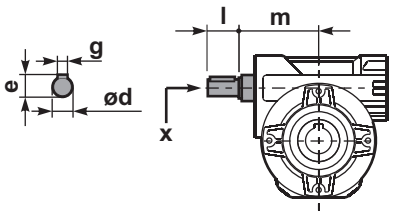
P085.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B**

❷ 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	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type **S**	24 h6	27	8	50	112	M8x20	❶ KS085.5.009 PAM90 ❷ KS085.5.011 PAM100

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

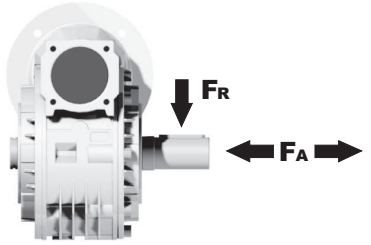
B3	B6	B7	B8	V5	V6
1.90 LT	1.35 LT	1.35 LT	2.00LT	2.00 LT	2.00LT
SHELL Omala S2 GX 460			**ENI** Blasia 460		

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

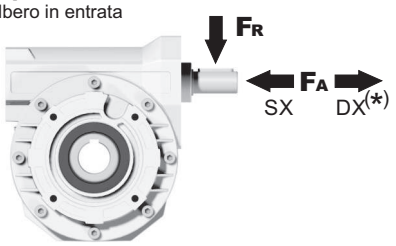
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	228	1140

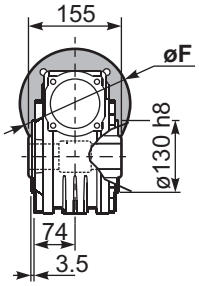
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

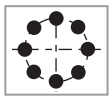
tab. 2

P110FB... Basic wormbox
Riduttore base

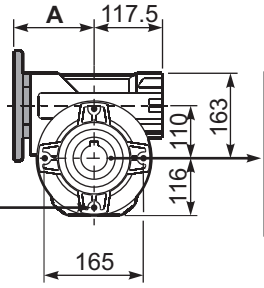
Gearbox weight peso riduttore	35.00 kg

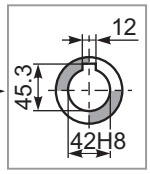
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	136
80/90B5	K023.4.042	200	138
100/112B5	K023.4.043	250	147
132B5	-	300	187
80B14	K085.4.046	120	138
90B14	K085.4.045	140	138
100/112B14	K023.4.041	160	136
132B14	-	200	187



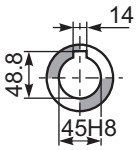


Mounting holes position
Posizione fori di montaggio



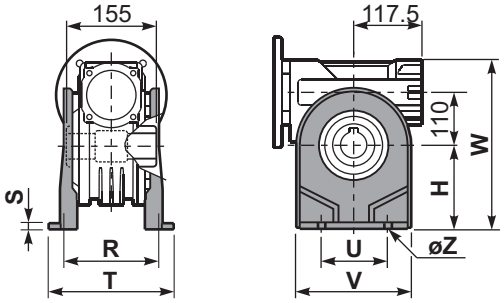


Standard
Hollow shaft

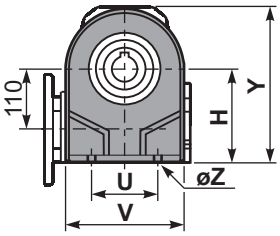


On request
A richiesta

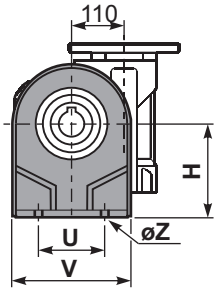
P110PA... Feet
Piedini



P110PB... Feet
Piedini

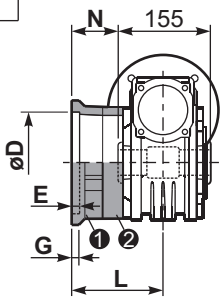


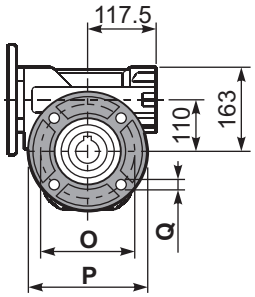
P110PV... Feet
Piedini



	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

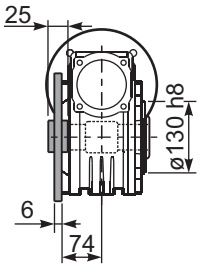


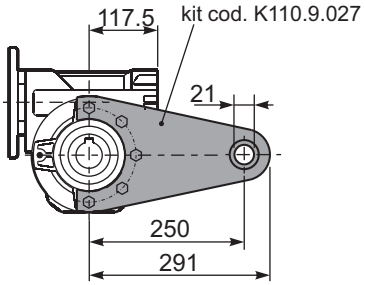


type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$170^{+0.083}_{+0.043}$	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	$170^{+0.083}_{+0.043}$	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$180^{+0.040}_{0}$	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	$180^{+0.040}_{0}$	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

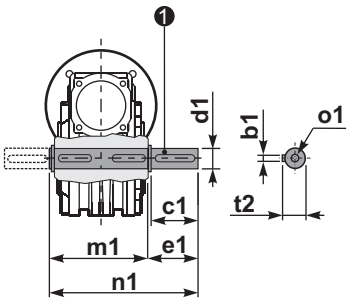
P110BR... Reaction arm
Braccio di reazione

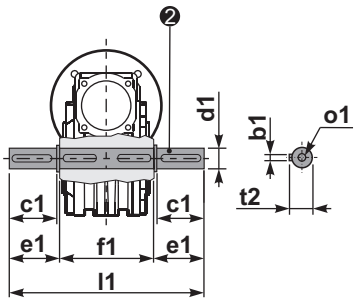




P110.....S... Single Shaft
Albero lento semplice

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

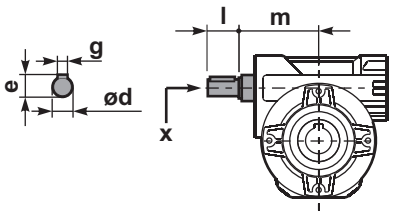




❶ kit cod. K110.5.028 type **B**

❷ 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	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type **S**	24 h6	27	8	50	131.5	M8x20	❶ KS085.5.009 PAM90 ❷ KS085.5.011 PAM100

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	12	75	$42^{-0.005}_{-0.020}$	96.5	155	348	163.5	260	45	M12x32
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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).

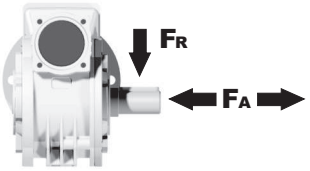
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

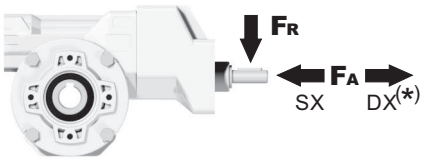
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	240	1200
50	260	1400
25	300	1800
15-6	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	44	220

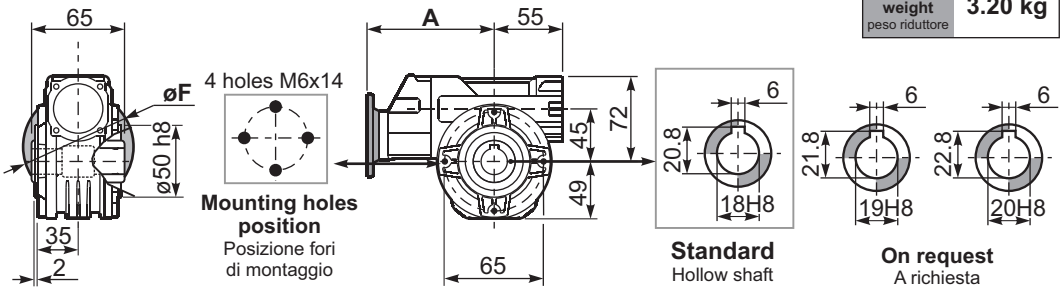
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PP45FB... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	3.20 kg

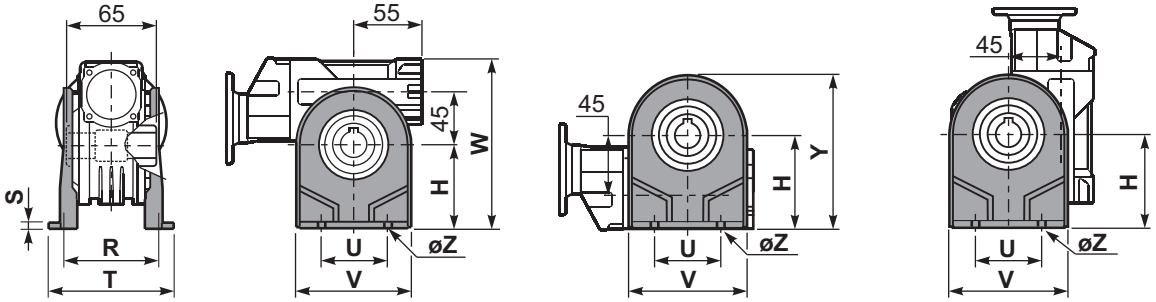
M. flanges	Kit code	øF	A
56B5	K050.4.046	120	137.5
63B5	K050.4.041	138	139.5
71B5	K050.4.042	160	137
63B14	K050.4.047	90	139.5
71B14	K050.4.045	105	137



PP45PA... Feet
Piedini

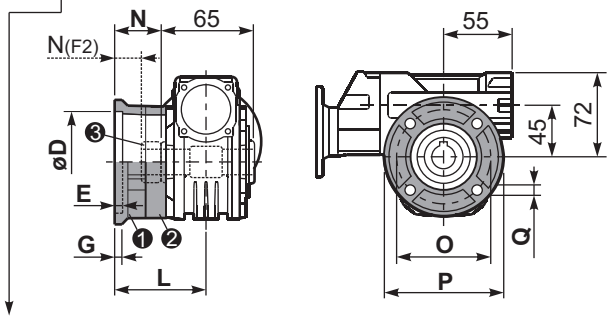
PP45PB... Feet
Piedini

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

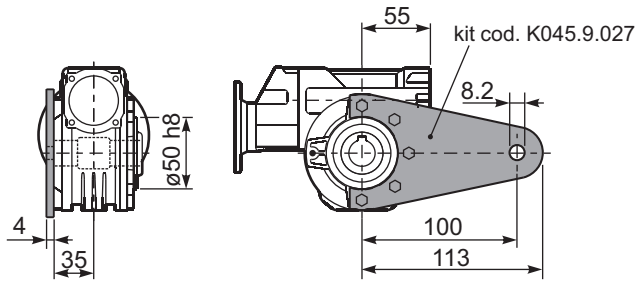
PP45FC... Output flange
Flangia uscita



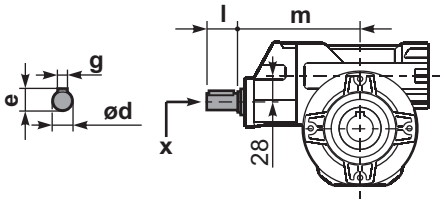
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$60^{+0.15}_{+0.05}$	9	9	60.5	28	87	110	8.5	❶ K045.9.010 ❷ -
FL	$60^{+0.15}_{+0.05}$	9	9	90.5	58	87	110	8.5	❶ K045.9.010 ❷ K045.0.200

type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$95^{+0.20}_{+0.15}$	4	11	73.5	41	115	140	9	❶ KS045.9.013 ❷ -
F2	$60^{+0.15}_{+0.05}$	9	9	60.5	19	87	110	8.5	❶ KS045.9.010 ❸ S045.0.204
F3	$80^{+0.03}_{+0.00}$	3	8	51.5	19	100	120	9	❶ KS045.9.014 ❷ -

PP45BR... Reaction arm
Braccio di reazione



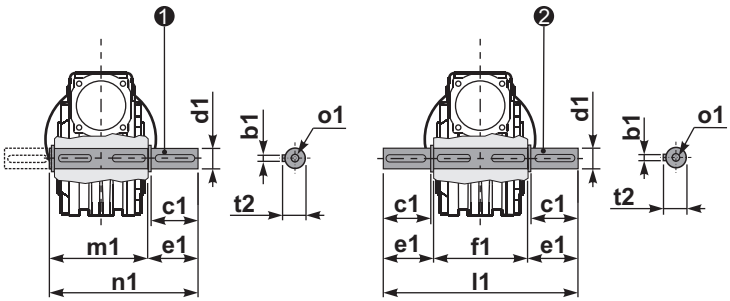
RP45FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	
type **B**	14 h6	16	5	25	131	M5x13	C35.5.061
type **S**	-	-	-	-	-	-	

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

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



❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

❷ kit cod. K045.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type **S**	6	40	$19^{-0.005}_{-0.020}$	58.8	-	-	70	128.5	21.5	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

*** 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).

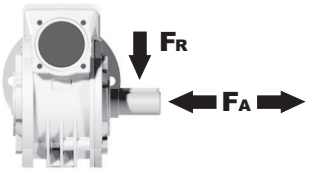
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

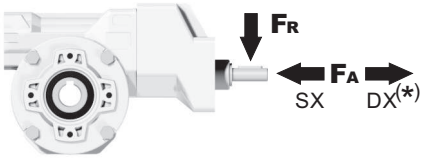
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	340	1700
50	380	1900
25	480	2500
15-6	560	2800

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	44	220

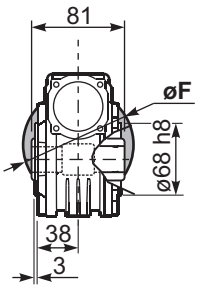
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

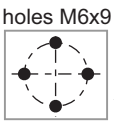
tab. 2

PP50FB... Basic wormbox
Riduttore base

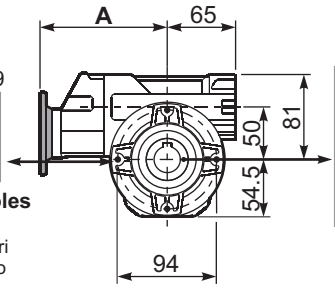
Gearbox weight peso riduttore	3.80 kg

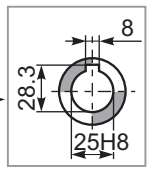
M. flanges	Kit code	øF	A
56B5	K050.4.046	120	142
63B5	K050.4.041	138	144
71B5	K050.4.042	160	141.5
63B14	K050.4.047	90	144
71B14	K050.4.045	105	141.5



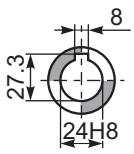


Mounting holes position
Posizione fori di montaggio



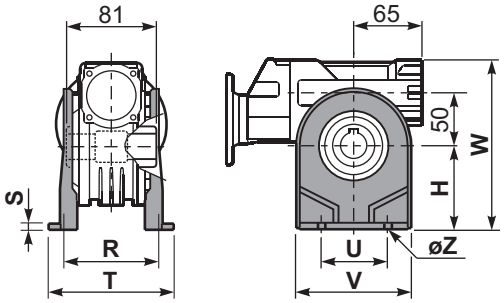


Standard
Hollow shaft

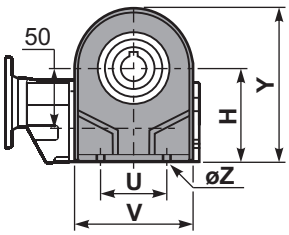


On Request "type S"
A richiesta "tipo S"

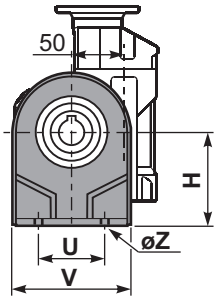
PP50PA... Feet
Piedini



PP50PB... Feet
Piedini

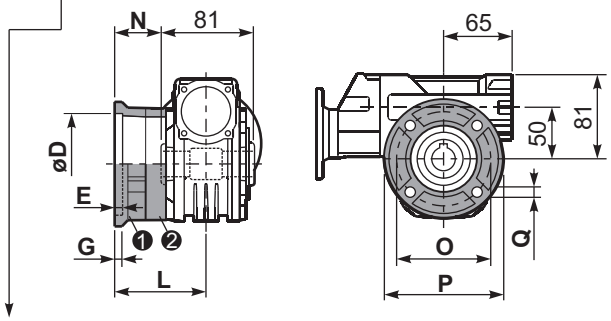


PP50PV... Feet
Piedini



	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

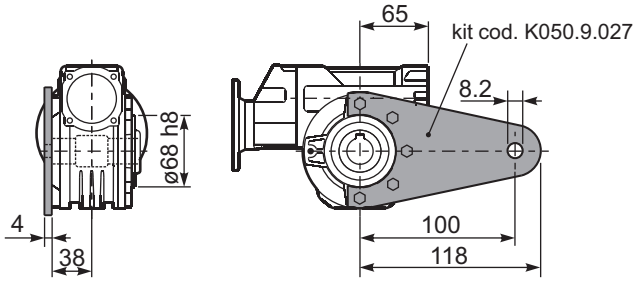
PP50FC... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$70^{+0.20}_{+0.15}$	9	12	85	44.5	90	123	10.5	❶ K050.9.010 ❷ -
FL	$70^{+0.20}_{+0.15}$	9	12	114.5	74	90	123	10.5	❶ K050.9.010 ❷ K050.0.200

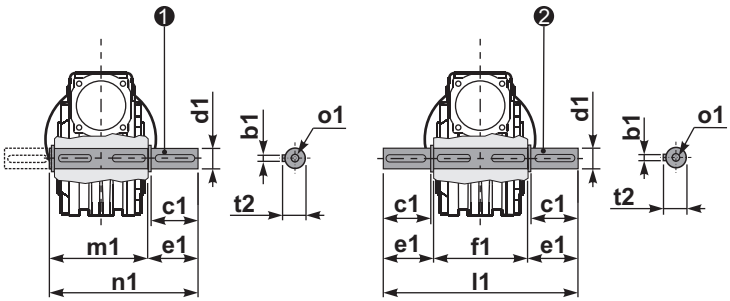
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$110^{+0.20}_{+0.15}$	4	11	83.5	43	130	160	10	❶ KS050.9.012 ❷ -
F2	$70^{+0.20}_{+0.15}$	9	12	76.5	36	90	123	10.5	❶ KS050.9.014 ❷ -
F3	$95^{+0.035}_{0}$	4	10	66.5	26	115	140	10	❶ KS050.9.013 ❷ -

PP50BR... Reaction arm
Braccio di reazione



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

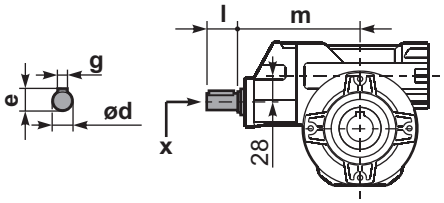
PP50.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

RP50FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	
type **B**	14 h6	16	5	25	135.5	M5x13	C35.5.061
type **S**	-	-	-	-	-	-	

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type **S**	8	50	$24^{-0.005}_{-0.020}$	68.8	-	-	86.5	155	27	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

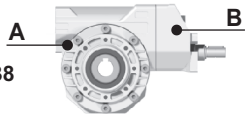
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P63** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes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

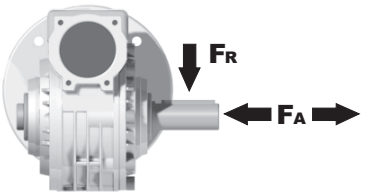


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

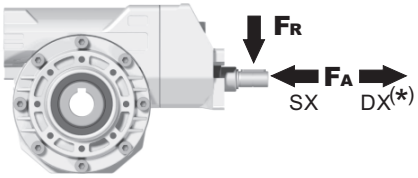
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	500	2500
50	600	3000
25	700	3800
15-6	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	61	305

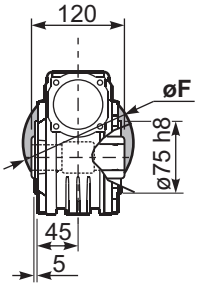
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

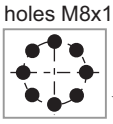
tab. 2

PP63FB... Basic wormbox
Riduttore base

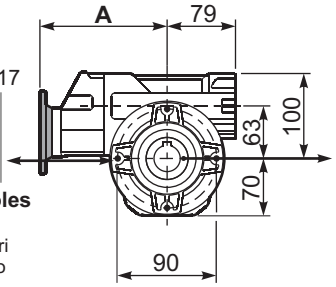
Gearbox weight peso riduttore	29.9÷111	139÷434
	7.30 Kg	7.80 Kg

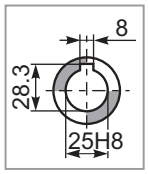
	M.flange	Kit code	øF	A
29.9÷111	71B5	K063.4.042	160	176.5
	80/90B5	K063.4.043	200	178.5
	71B14	K063.4.047	105	176.5
	80B14	K063.4.046	120	178.5
	90B14	K063.4.041	140	178.5
139÷434	63B5	K050.4.041	138	162.5
	71B5	K050.4.042	160	160
	63B14	K050.4.047	90	162.5
	71B14	K050.4.045	105	160





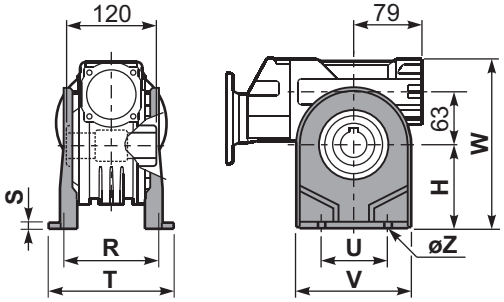
Mounting holes position
Posizione fori di montaggio



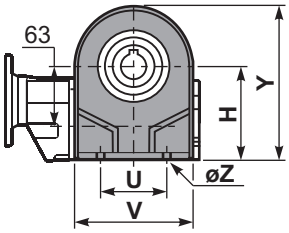


Standard
Hollow shaft

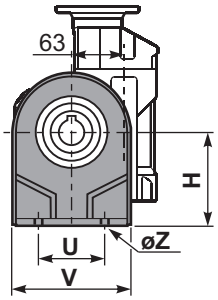
PP63PA... Feet
Piedini



PP63PB... Feet
Piedini

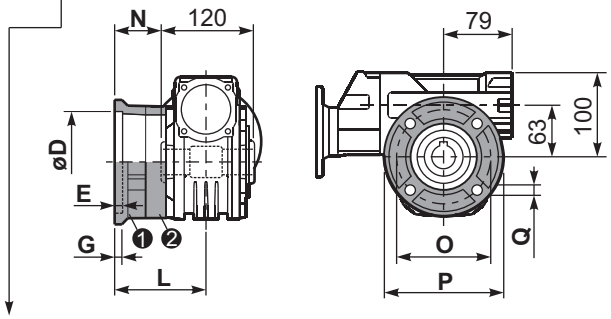


PP63PV... Feet
Piedini



	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**	-	-	-	-	-	-	-	-	-	-

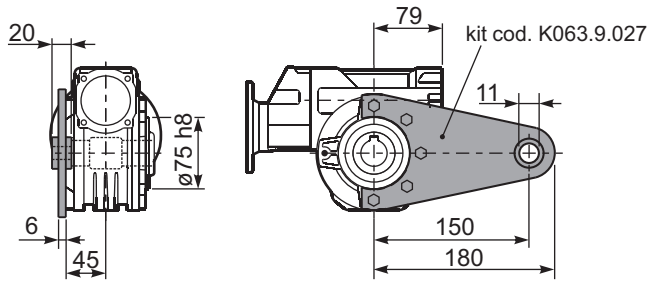
PP63FC... Output flange
Flangia uscita



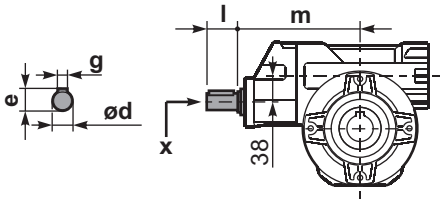
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$115^{+0.20}_{+0.15}$	7	13	86	26	150	175	11	❶ K063.9.010 ❷ -
FL	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ K063.9.010 ❷ K063.0.200

type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	102	42	165	200	13	❶ KS070.9.013 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	11	82	22	130	160	10	❶ KS063.9.011 ❷ -

PP63BR... Reaction arm
Braccio di reazione



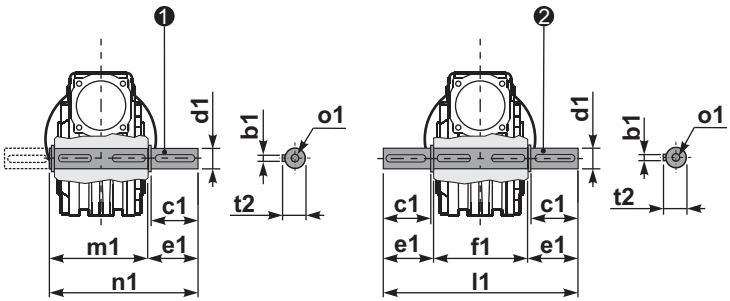
RP63FB... Input shaft
Albero in entrata



	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

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

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



❶ kit cod. K063.5.028 type **B**

❷ kit cod. K063.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	60	$25^{-0.005}_{-0.020}$	63.2	120	246.4	126.8	190	28	M8x20
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

	Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -P 63	-Q 71	-R 80	-T 90	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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 **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.

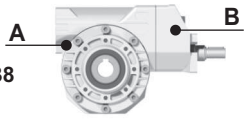
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P6A** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes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

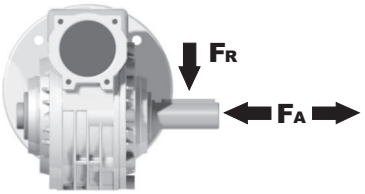


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

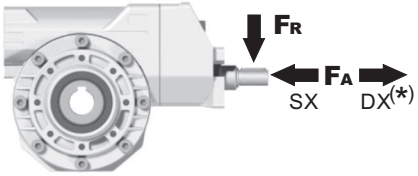
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	500	2500
50	600	3000
25	700	3800
15-6	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	61	305

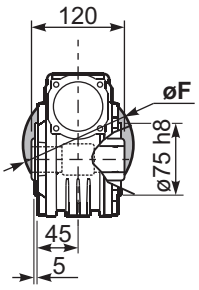
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

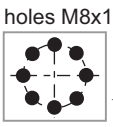
tab. 2

PP6A**FB**... Basic wormbox
Riduttore base

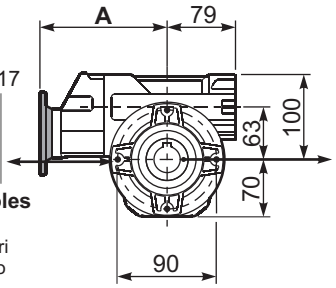
	M.flange	Kit code	øF	A
29.9÷111	71B5	K063.4.042	160	176.5
	80/90B5	K063.4.043	200	178.5
	71B14	K063.4.047	105	176.5
	80B14	K063.4.046	120	178.5
	90B14	K063.4.041	140	178.5
139÷434	63B5	K050.4.041	138	162.5
	71B5	K050.4.042	160	160
	63B14	K050.4.047	90	162.5
	71B14	K050.4.045	105	160

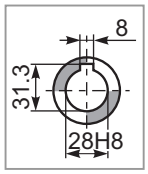
Gearbox weight peso riduttore	29.9÷111	139÷434
	7.30 Kg	7.80 Kg



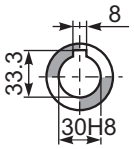


Mounting holes position
Posizione fori di montaggio



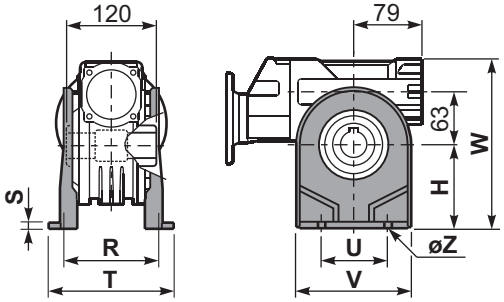


Standard
Hollow shaft

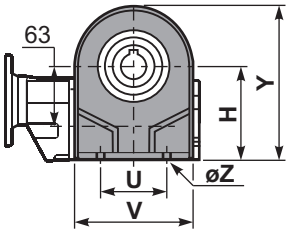


On request
A richiesta

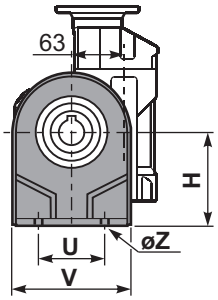
PP6A**PA**... Feet
Piedini



PP6A**PB**... Feet
Piedini

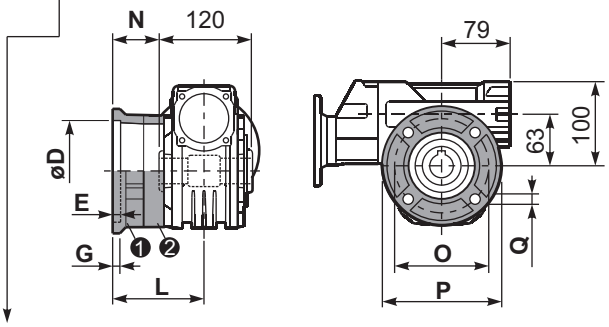


PP6A**PV**... Feet
Piedini



	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**	-	-	-	-	-	-	-	-	-	-

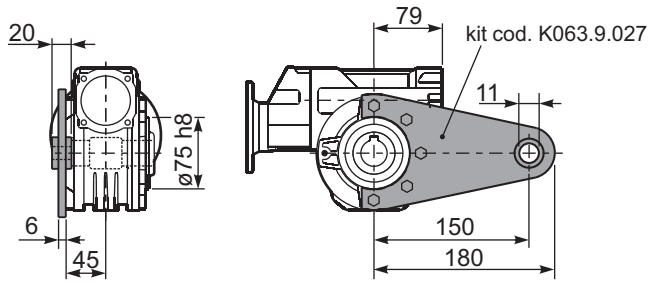
PP6A**FC**... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$130^{+0.20}_{+0.15}$	7	13	85	25	165	200	13	❶ K070.9.010 ❷ -
FL	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ K070.9.010 ❷ K070.0.200

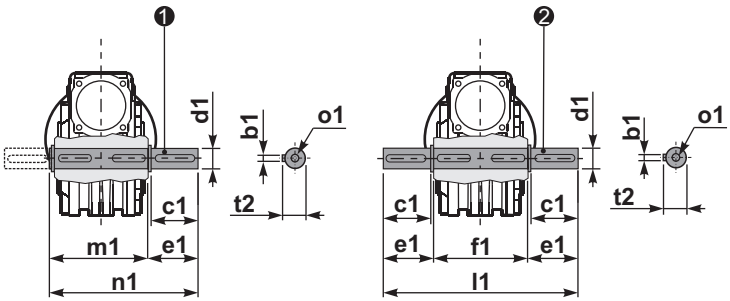
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ KS070.9.014 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	13.5	84.5	24.5	130	160	11	❶ KS070.9.011 ❷ -

PP6A**BR**... Reaction arm
Braccio di reazione



PP6A.....**S**... Single Shaft
Albero lento semplice

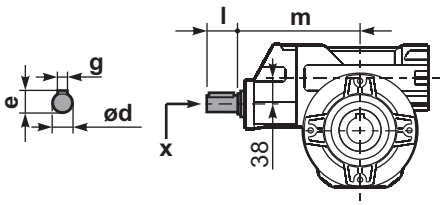
PP6A.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K070.5.028 type **B**

❷ kit cod. K070.5.029 type **B**

RP6AFB... 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	$28^{-0.005}_{-0.020}$	63.5	120	247	127.5	191	31	M8x20
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

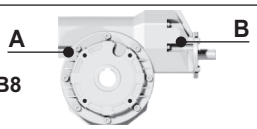
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P85** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes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



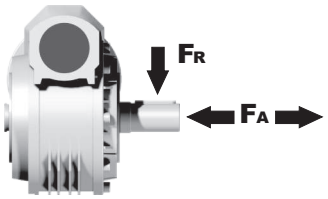
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

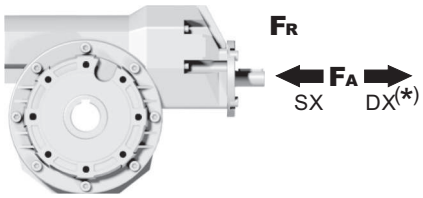
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	700	3500
50	800	4000
25	1000	5000
15-6	1160	5800

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	108	540

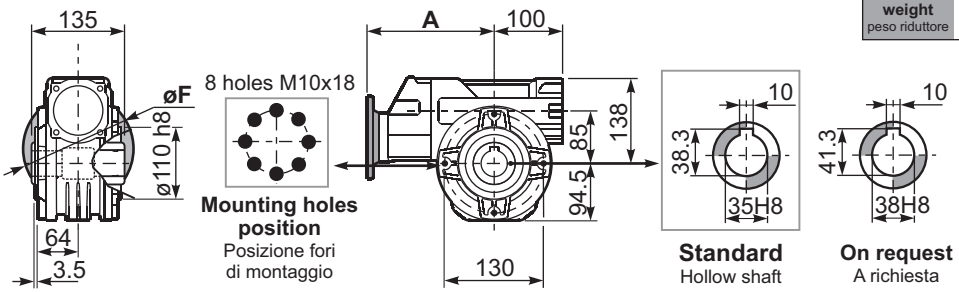
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

Gearbox weight peso riduttore	19.30 kg

PP85FB... Basic wormbox
Riduttore base

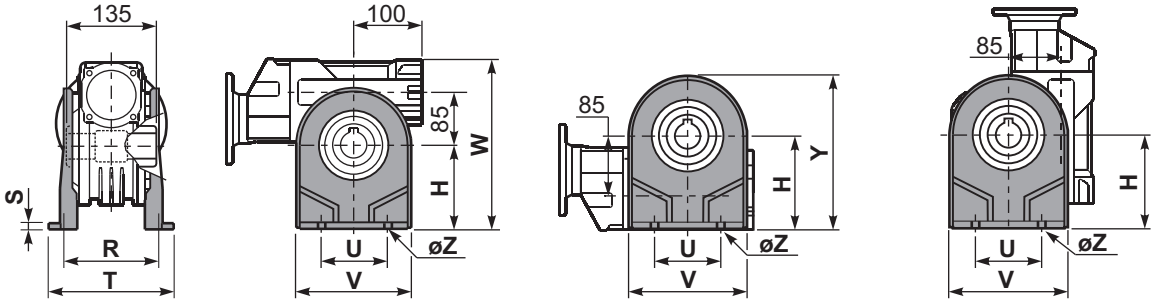
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	195.2
71B5	K063.4.042	160	193.2
80/90B5	K063.4.043	200	195.2
71B14	K063.4.047	105	193.2
80B14	K063.4.046	120	195.2
90B14	K063.4.041	140	195.2



PP85PA... Feet
Piedini

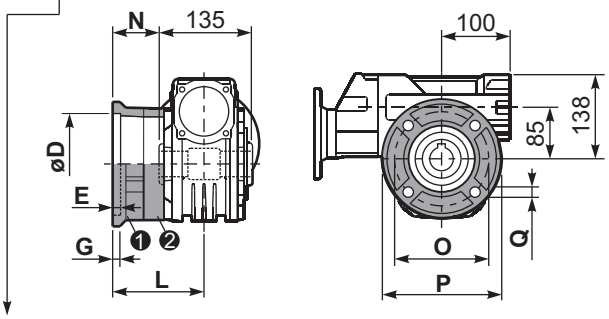
PP85PB... Feet
Piedini

PP85PV... 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	-	-	-	-	-	-	-	-	-	-

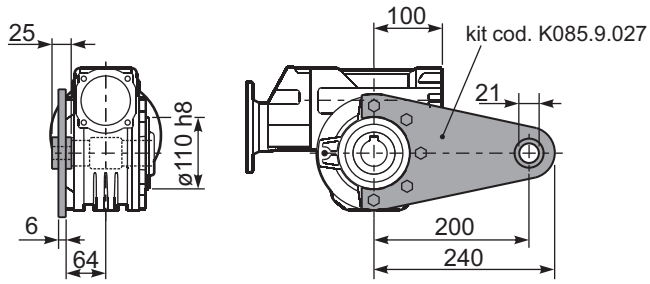
PP85FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

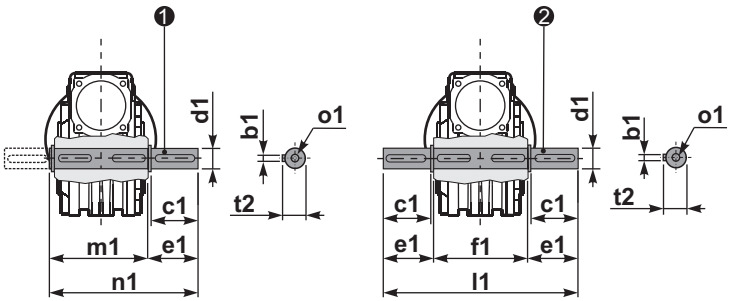
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.04}_{+0.00}$	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{+0.00}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	$130^{+0.04}_{+0.00}$	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

PP85BR... Reaction arm
Braccio di reazione



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

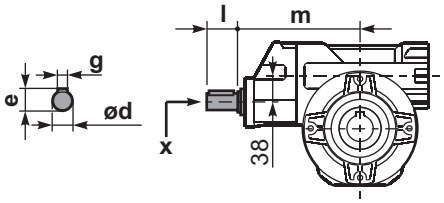
PP85.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B**

❷ kit cod. K085.5.029 type **B**

RP85FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	
type B	19 h6	21.5	6	35	187.5	M6x16	C40.5.062
type S	-	-	-	-	-	-	

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

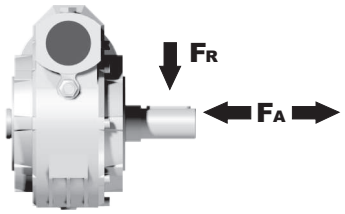
E El reductor tamaño **P10** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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.

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** Blasia 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

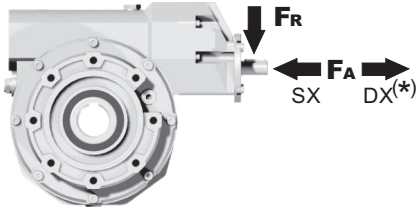
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	800	4000
50	920	4600
25	1200	6000
15-6	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	150	760

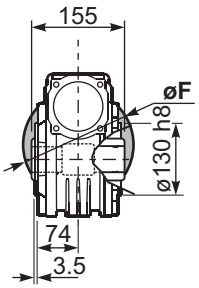
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

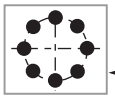
tab. 2

PP10FB... Basic wormbox
Riduttore base

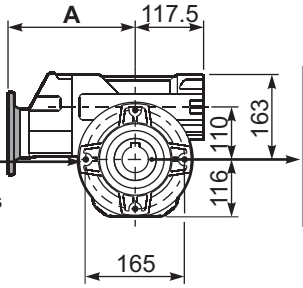
Gearbox weight peso riduttore	41.00 kg

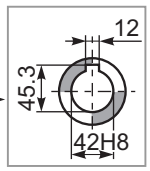
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	214.7
71B5	K063.4.042	160	212.7
80/90B5	K063.4.043	200	214.7
71B14	K063.4.047	105	212.7
80B14	K063.4.046	120	214.7
90B14	K063.4.041	140	214.7



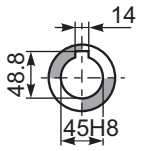


Mounting holes position
Posizione fori di montaggio



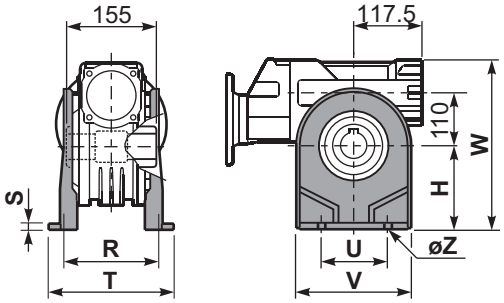


Standard
Hollow shaft

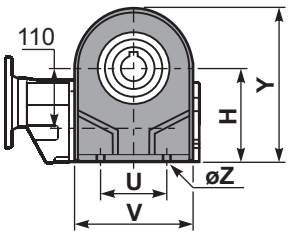


On request
A richiesta

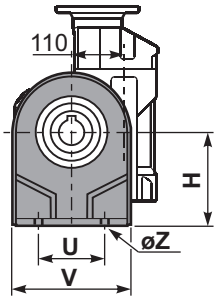
PP10PA... Feet
Piedini



PP10PB... Feet
Piedini

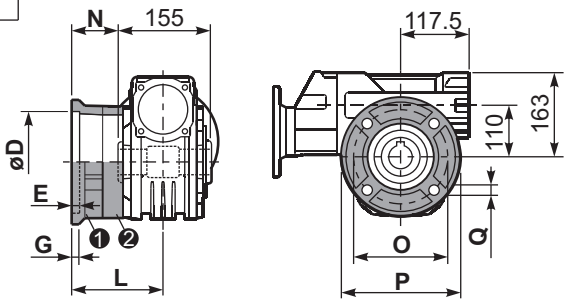


PP10PV... Feet
Piedini



	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**	-	-	-	-	-	-	-	-	-	-

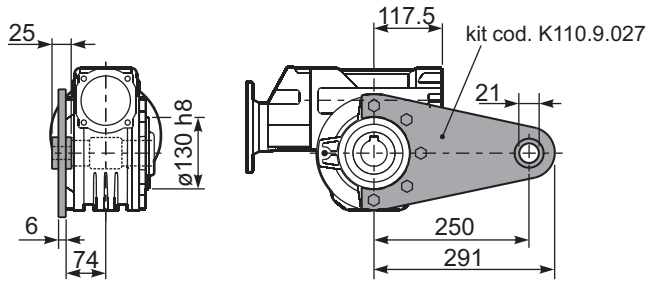
PP10FC... Output flange
Flangia uscita



type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$170^{+0.083}_{+0.043}$	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	$170^{+0.083}_{+0.043}$	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

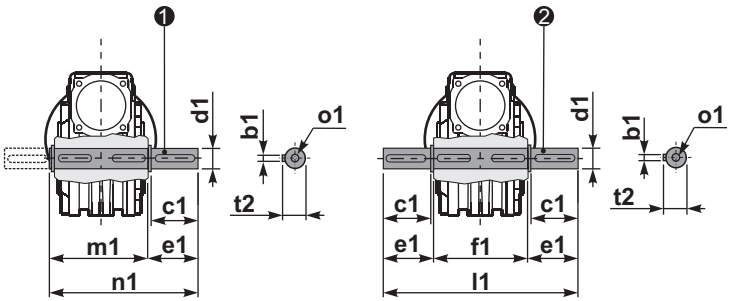
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$180^{+0.040}_{0}$	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	$180^{+0.040}_{0}$	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

PP10BR... Reaction arm
Braccio di reazione



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

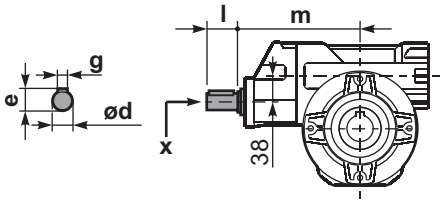
PP10.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K110.5.028 type **B**

❷ 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	C40.5.062
type **S**	-	-	-	-	-	-	

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	12	75	$42^{-0.005}_{-0.020}$	96.5	155	348	163.5	260	45	M12x32
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

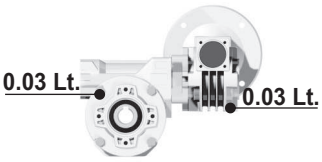
I Il riduttore tipo **303** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.03/0.03 Lt.



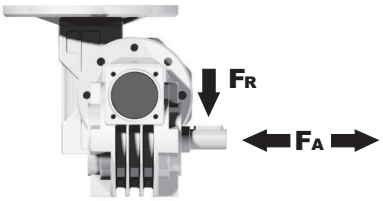
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

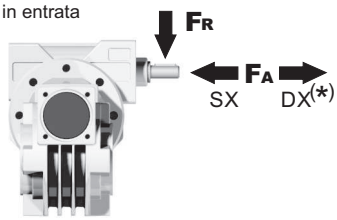
▪RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	300	1800
15	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

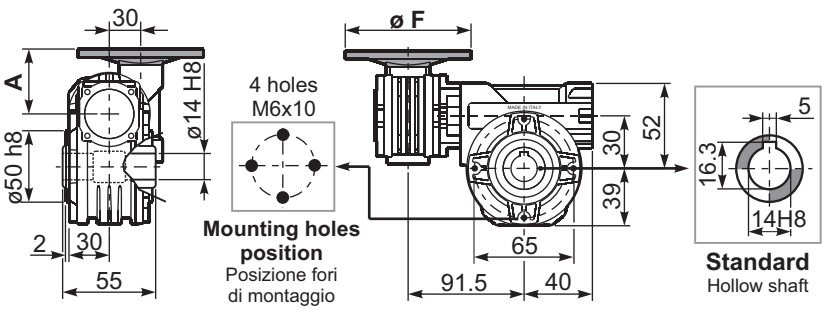
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

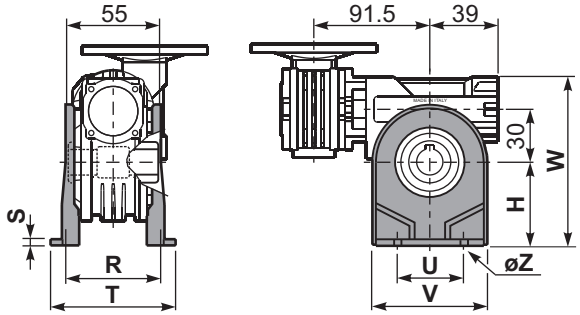
Gearbox weight peso riduttore	2.15 kg

P303FB... Basic wormbox
Riduttore base

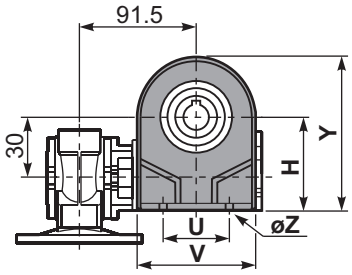
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



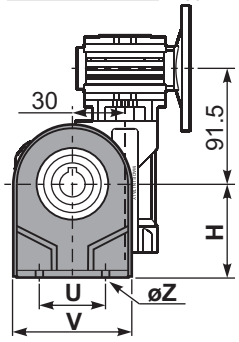
P303PA... Feet
Piedini



P303PB... Feet
Piedini

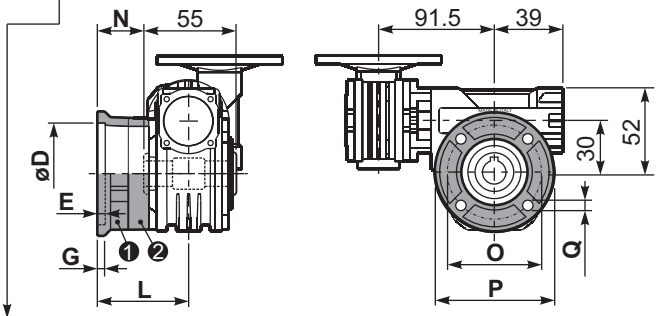


P303PV... Feet
Piedini



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

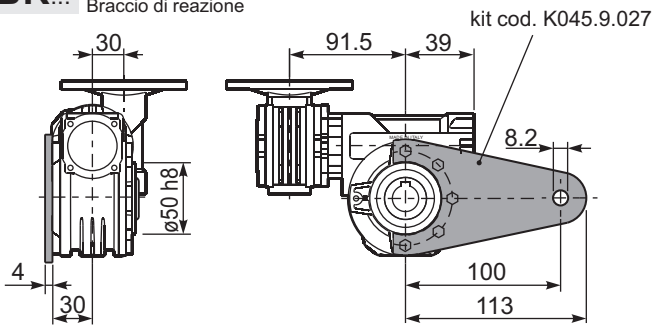
P303FC... Output flange
Flangia uscita



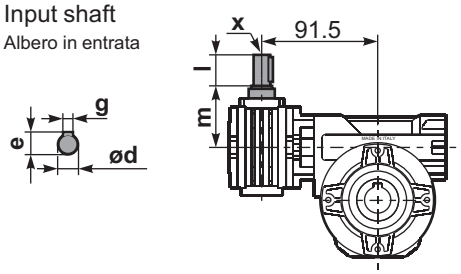
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$50^{+0.15}_{+0.05}$	6	6	50.5	23	68	80	7	❶ K030.9.010 ❷ -
FL	$60^{+0.15}_{+0.05}$	6	6	55.5	28	87	110	8.5	❶ K045.9.010 ❷ -

type S	øD	E	G	L	N	O	P	Q	kit code
F1	$40^{+0.15}_{+0.10}$	3.5	5.5	49	21.5	56	80	6.5	❶ KS030.9.012 ❷ -

P303BR... Reaction arm
Braccio di reazione



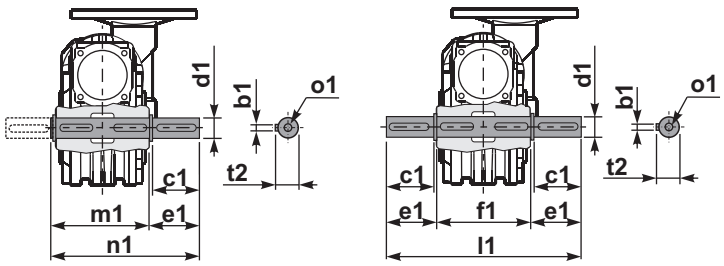
R303FB... Input shaft
Albero in entrata



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

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

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



❶ kit cod. K030.5.028 type **B**

❷ kit cod. K030.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	5	25	$14^{-0.005}_{-0.020}$	35.5	55	126	59	94.5	15.8	M5x14
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

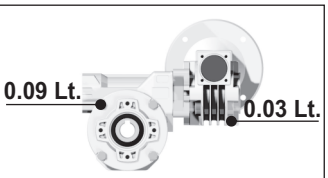
I Il riduttore tipo **453** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.09/0.03 Lt.

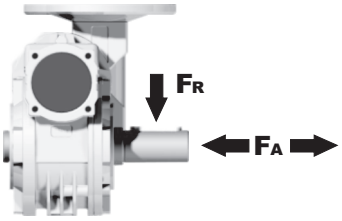


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

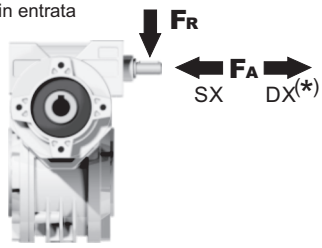
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	300	1800
15	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

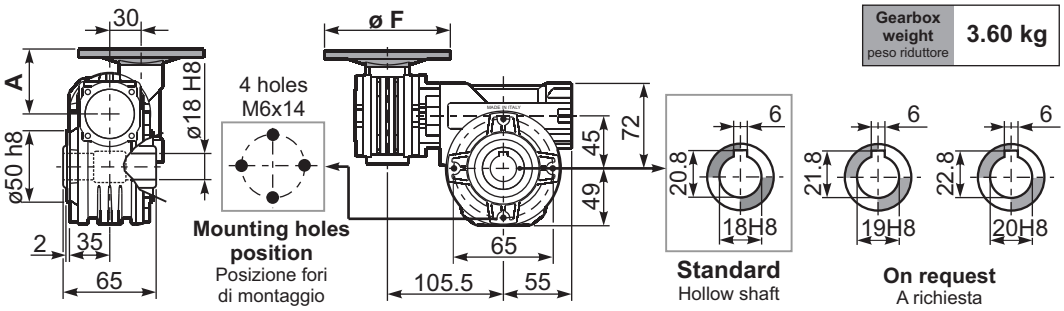
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

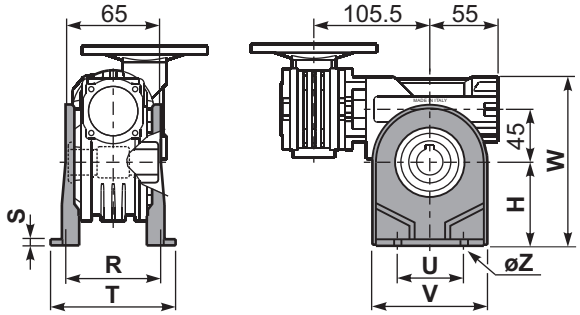
Gearbox weight peso riduttore	3.60 kg

P453FB... Basic wormbox
Riduttore base

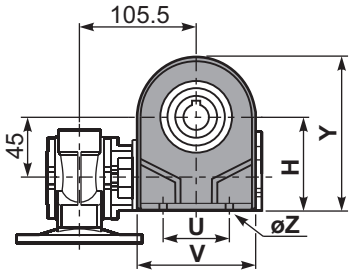
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



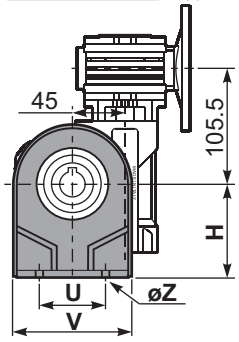
P453PA... Feet
Piedini



P453PB... Feet
Piedini

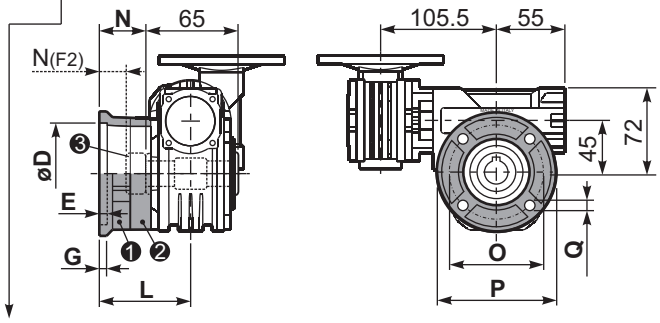


P453PV... Feet
Piedini



	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

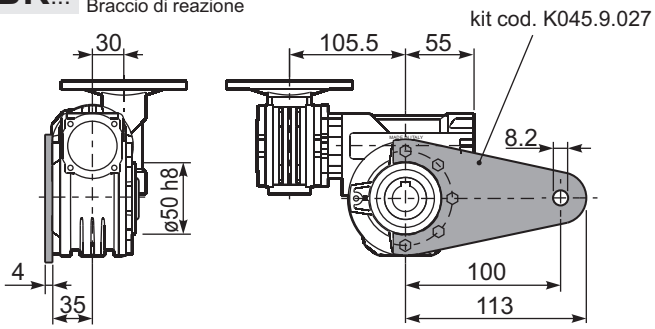
P453FC... Output flange
Flangia uscita



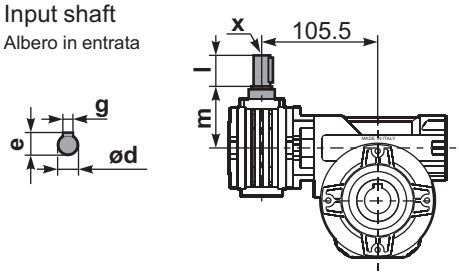
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$60^{+0.15}_{+0.05}$	9	9	60.5	28	87	110	8.5	❶ K045.9.010 ❷ -
FL	$60^{+0.15}_{+0.05}$	9	9	90.5	58	87	110	8.5	❶ K045.9.010 ❷ K045.0.200

type S	øD	E	G	L	N	O	P	Q	kit code
F1	$95^{+0.20}_{+0.15}$	4	11	73.5	41	115	140	9	❶ KS045.9.013 ❷ -
F2	$60^{+0.15}_{+0.05}$	9	9	60.5	19	87	110	8.5	❶ KS045.9.010 ❸ S045.0.204
F3	$80^{+0.030}_{0}$	3	8	51.5	19	100	120	9	❶ KS045.9.014 ❷ -

P453BR... Reaction arm
Braccio di reazione



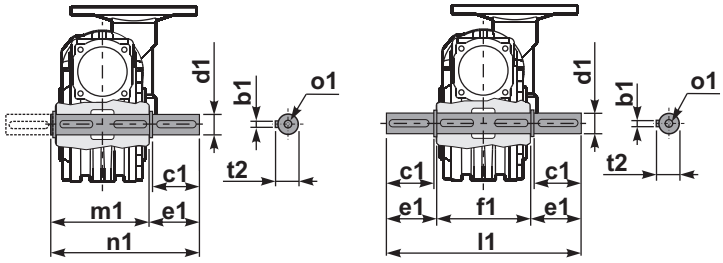
R453FB... Input shaft
Albero in entrata



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

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

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



❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

❷ kit cod. K045.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type S	6	40	$19^{-0.005}_{-0.020}$	58.5	-	-	70	128.5	21.5	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

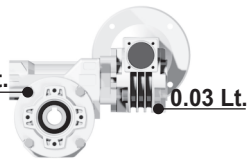
I Il riduttore tipo **503** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.14/0.03 Lt.

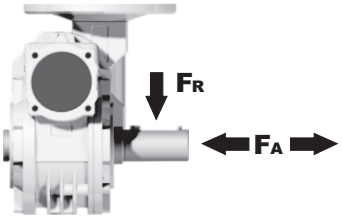


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

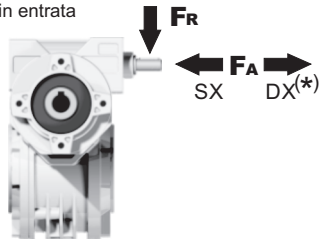
▪RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	480	2500
15	560	2800

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

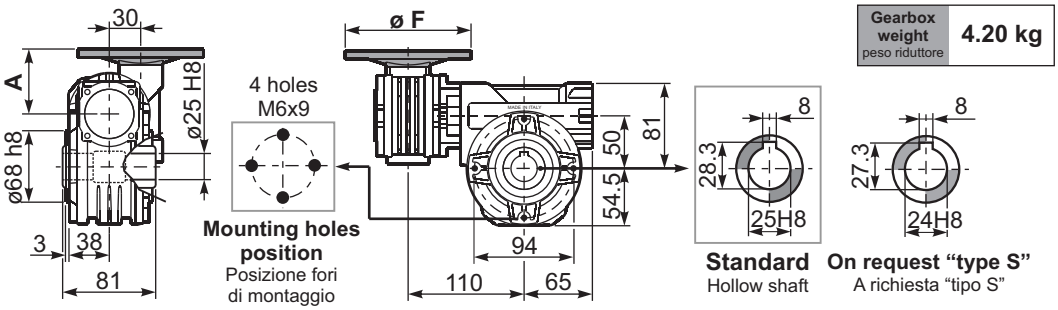
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

Gearbox weight peso riduttore	4.20 kg

P503FB... Basic wormbox
Riduttore base

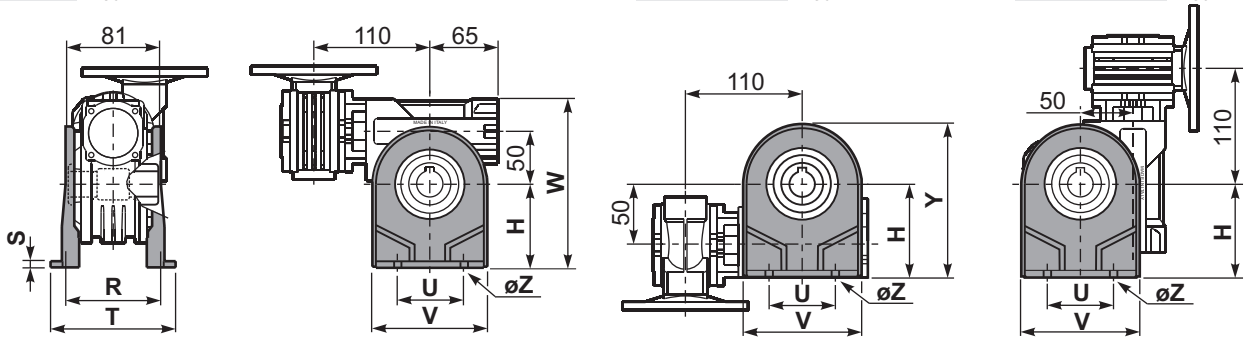
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



P503PA... Feet
Piedini

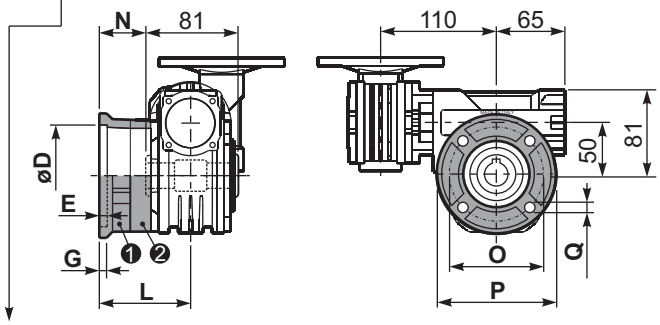
P503PB... Feet
Piedini

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

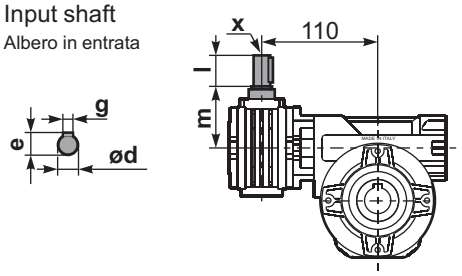
P503FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$70^{+0.20}_{+0.15}$	9	12	85	44.5	90	123	10.5	❶ K050.9.010 ❷ -
FL	$70^{+0.20}_{+0.15}$	9	12	114.5	74	90	123	10.5	❶ K050.9.010 ❷ K050.0.200

type S	øD	E	G	L	N	O	P	Q	kit code
F1	$110^{+0.20}_{+0.15}$	4	11	83.5	43	130	160	10	❶ KS050.9.012 ❷ -
F2	$70^{+0.20}_{+0.15}$	9	12	76.5	36	90	123	10.5	❶ KS050.9.014 ❷ -
F3	$95^{+0.035}_{0}$	4	10	66.5	26	115	140	10	❶ KS050.9.013 ❷ -

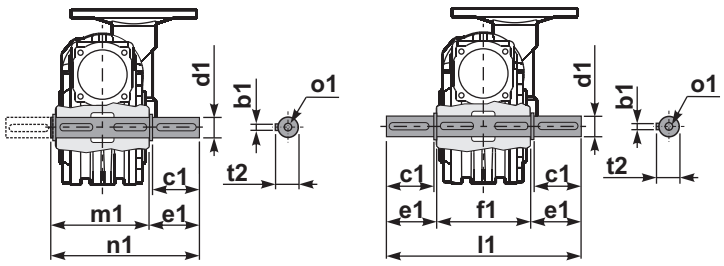
R503FB... Input shaft
Albero in entrata



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

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

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



❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type S	8	50	$24^{-0.005}_{-0.020}$	68.5	-	-	86.5	155	27	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

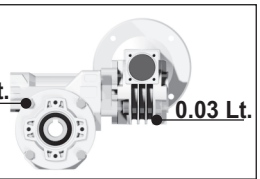
I Il riduttore tipo **633** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.40/0.03 Lt.



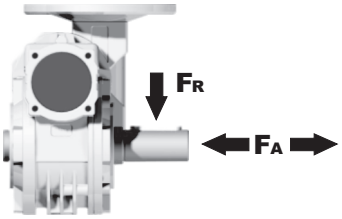
SHELL Omala S4 WE 320	ENI Telium VSF 320

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

tab. 1

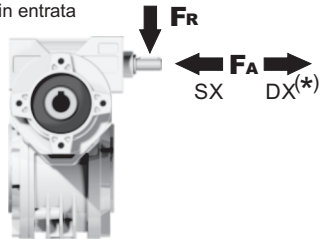
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

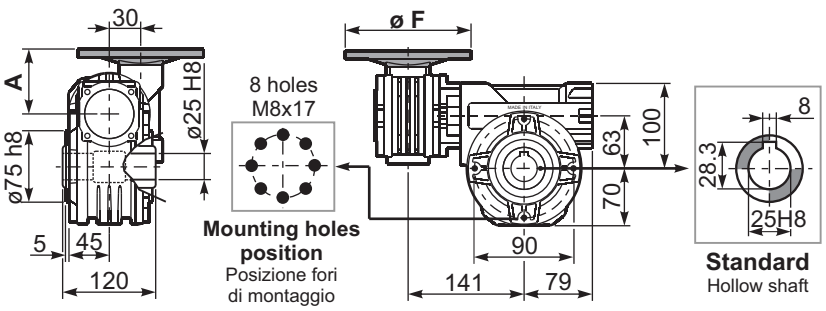
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

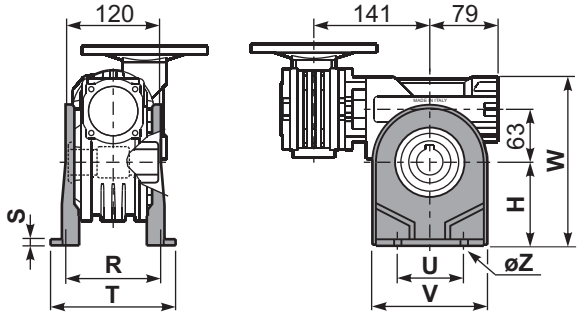
Gearbox weight peso riduttore	7.50 kg

P633FB... Basic wormbox
Riduttore base

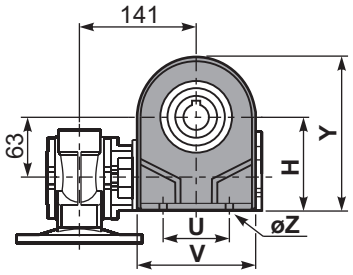
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



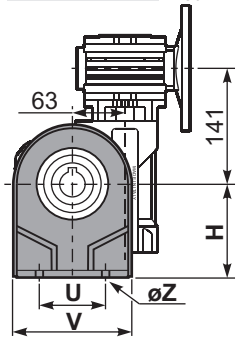
P633PA... Feet
Piedini



P633PB... Feet
Piedini

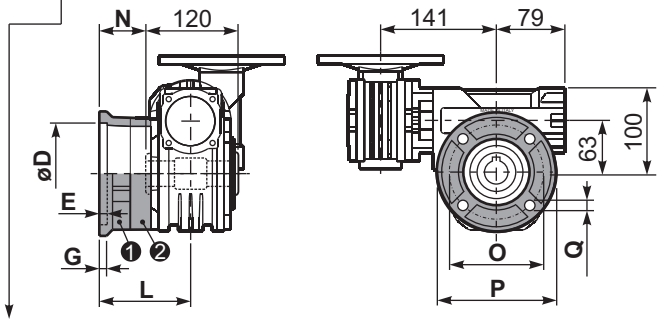


P633PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

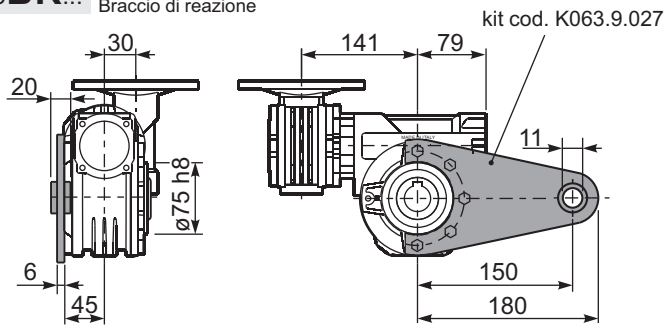
P633FC... Output flange
Flangia uscita



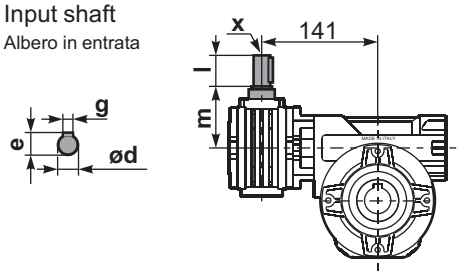
type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 +0.20 +0.15	7	13	86	26	150	175	11	❶ K063.9.010 ❷ -
FL	115 +0.20 +0.15	7	13	116	56	150	175	11	❶ K063.9.010 ❷ K063.0.200

type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 +0.20 +0.15	7	13	102	42	165	200	13	❶ KS070.9.013 ❷ -
F2	115 +0.20 +0.15	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	110 +0.035 0	5	11	82	22	130	160	10	❶ KS063.9.011 ❷ -

P633BR... Reaction arm
Braccio di reazione



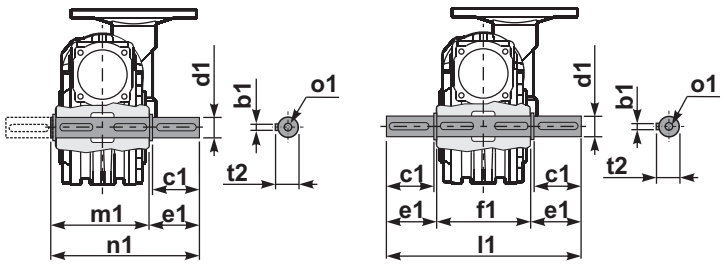
R633FB... Input shaft
Albero in entrata



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

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

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



❶ kit cod. K063.5.028 type **B**

❷ kit cod. K063.5.029 type **B**

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

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

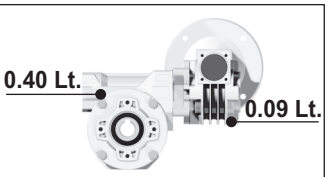
I Il riduttore tipo **634** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.40/0.09 Lt.



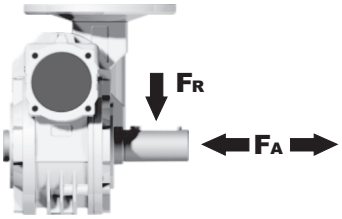
SHELL Omala S4 WE 320	ENI Telium VSF 320

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

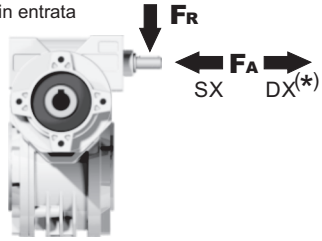
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

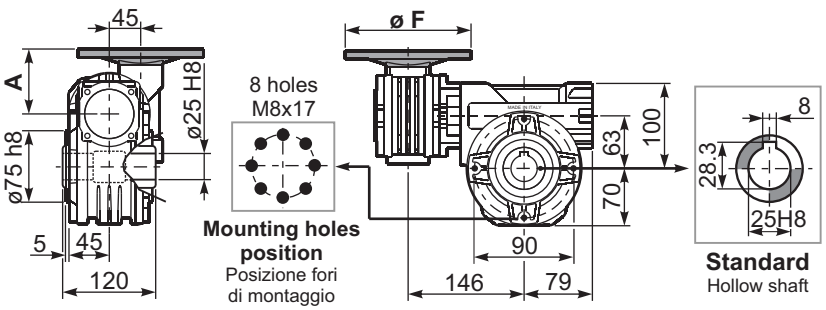
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

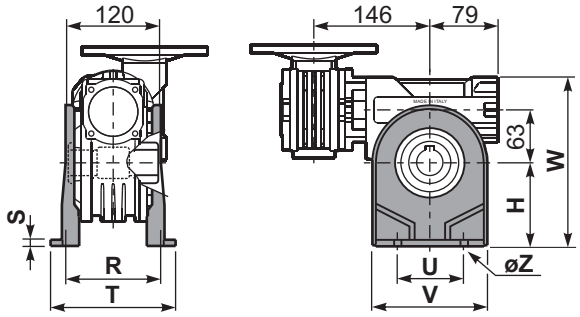
Gearbox weight peso riduttore	8.90 kg

P634FB... Basic wormbox
Riduttore base

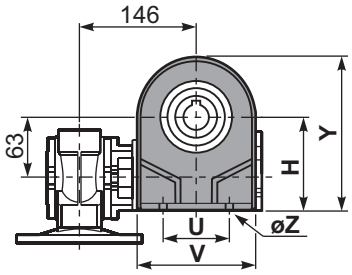
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	74
71B5	K050.4.042	160	71.5
56B14	KC40.4.049	80	71.5
63B14	K050.4.047	90	74
71B14	K050.4.045	105	71.5



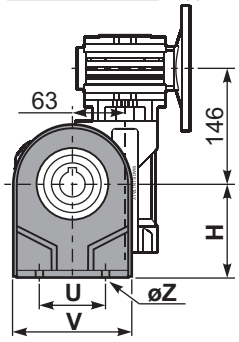
P634PA... Feet
Piedini



P634PB... Feet
Piedini

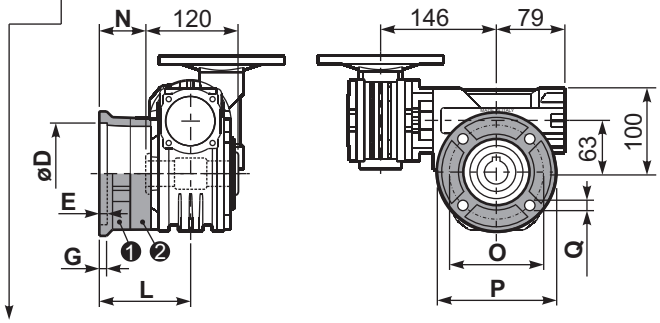


P634PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

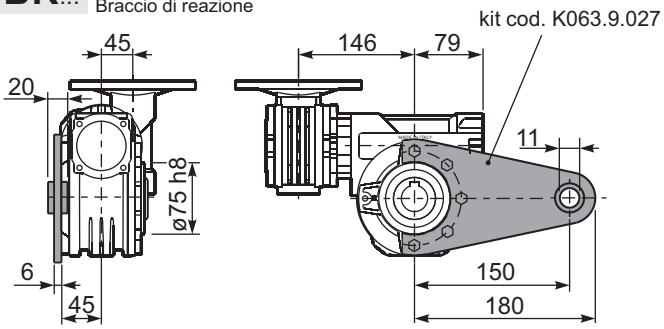
P634FC... Output flange
Flangia uscita



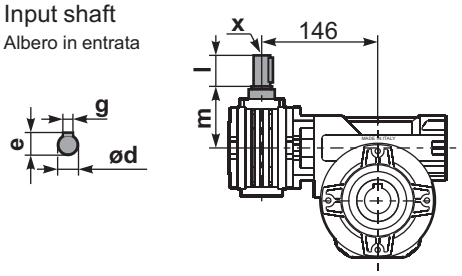
type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 +0.20 +0.15	7	13	86	26	150	175	11	❶ K063.9.010 ❷ -
FL	115 +0.20 +0.15	7	13	116	56	150	175	11	❶ K063.9.010 ❷ K063.0.200

type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 +0.20 +0.15	7	13	102	42	165	200	13	❶ KS070.9.013 ❷ -
F2	115 +0.20 +0.15	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	110 +0.035 0	5	11	82	22	130	160	10	❶ KS063.9.011 ❷ -

P634BR... Reaction arm
Braccio di reazione



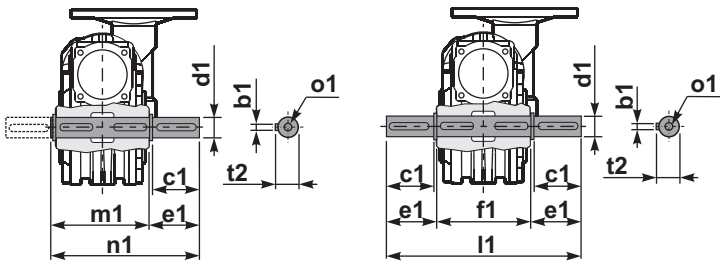
R634FB... Input shaft
Albero in entrata



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

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

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



❶ kit cod. K063.5.028 type B ❷ kit cod. K063.5.029 type B

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

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

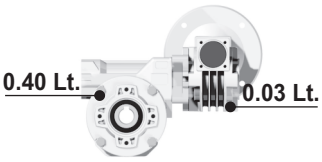
I Il riduttore tipo **6A3** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.40/0.03 Lt.



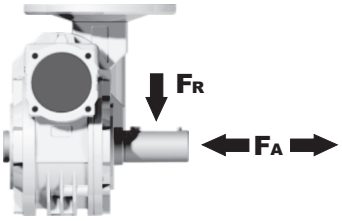
SHELL Omala S4 WE 320	ENI Telium VSF 320

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

tab. 1

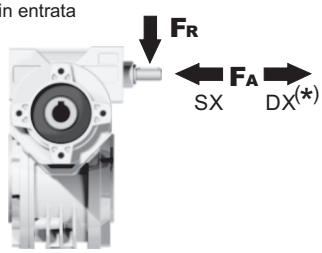
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

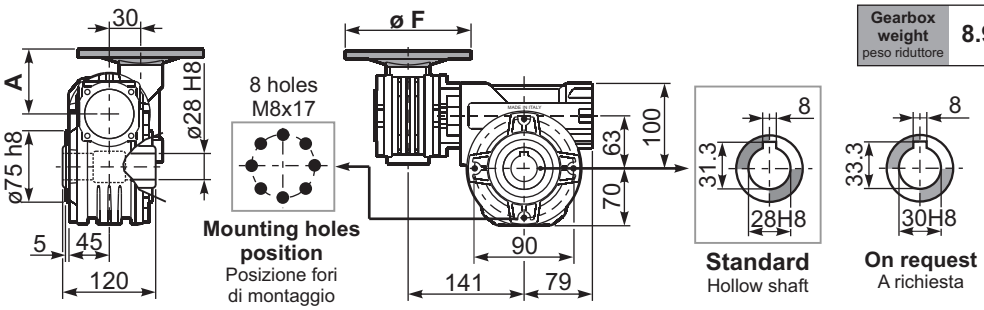
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

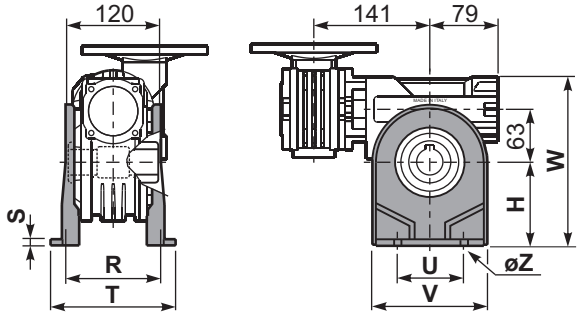
P6A3FB... Basic wormbox
Riduttore base

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

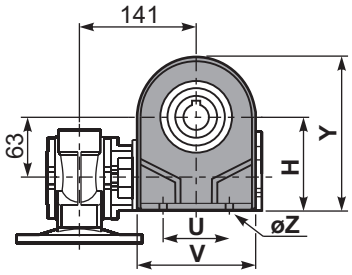
Gearbox weight peso riduttore	8.90 kg



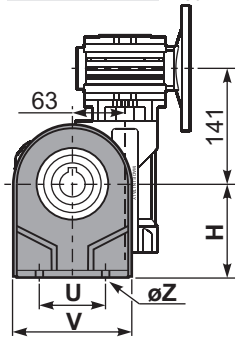
P6A3PA... Feet
Piedini



P6A3PB... Feet
Piedini

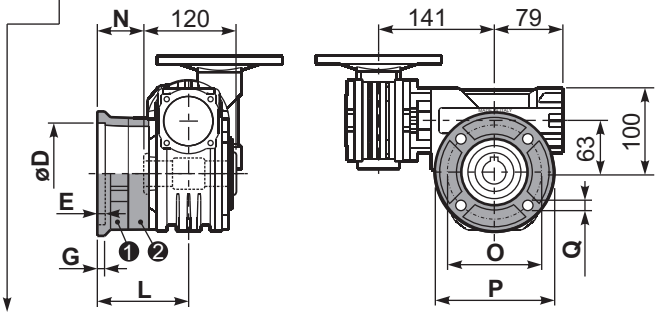


P6A3PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

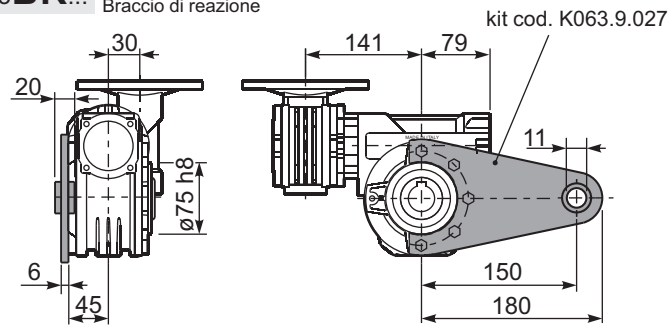
P6A3FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$130^{+0.20}_{+0.15}$	7	13	85	25	165	200	13	❶ K070.9.010 ❷ -
FL	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ K070.9.010 ❷ K070.0.200

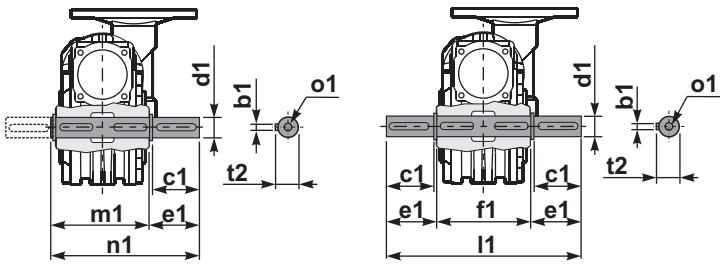
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ KS070.9.014 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❸ -
F3	$110^{+0.035}_{0}$	5	13.5	84.5	24.5	130	160	11	❶ KS070.9.011 ❷ -

P6A3BR... Reaction arm
Braccio di reazione



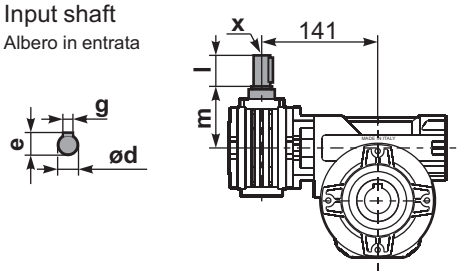
P6A3.....S... Single Shaft
Albero lento semplice

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



❶ kit cod. K070.5.028 type **B** ❷ 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	-	❶ K030.5.006 PAM63 ❷ -
type S	-	-	-	-	-	-	❶ - ❷ -

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	60	$28^{-0.005}_{-0.020}$	63.5	120	247	127.5	191	31	M8x20
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

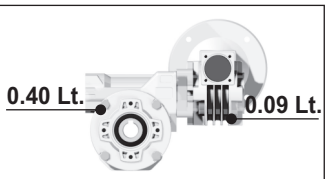
I Il riduttore tipo **6A4** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.40/0.09 Lt.



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

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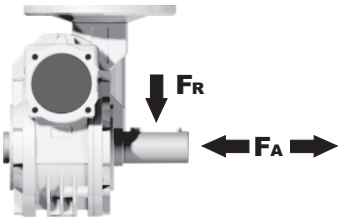
tab. 1

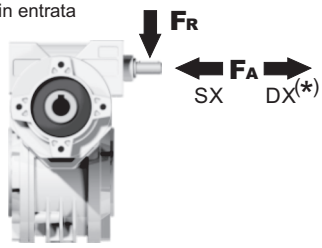
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



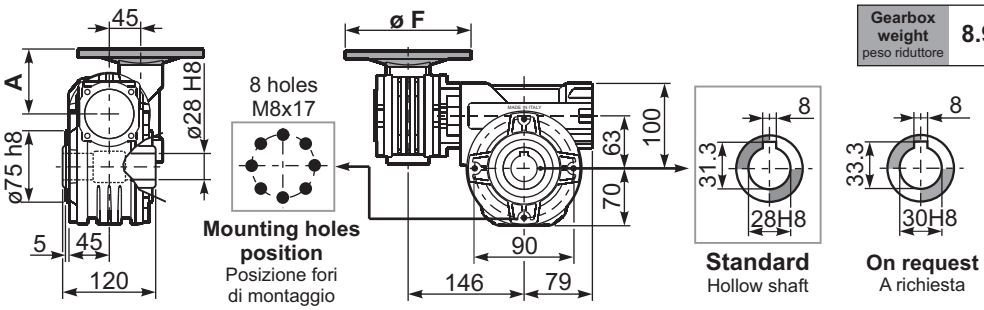
n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

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

tab. 2

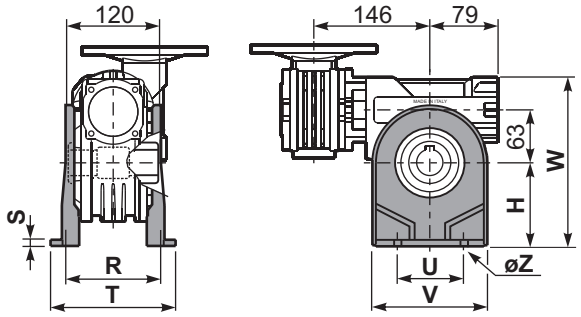
P6A4FB... Basic wormbox
Riduttore base

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

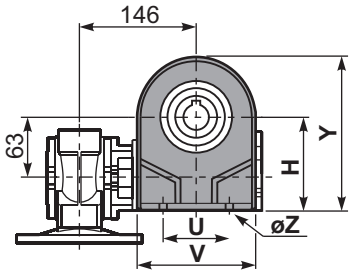


Gearbox weight peso riduttore	8.90 kg

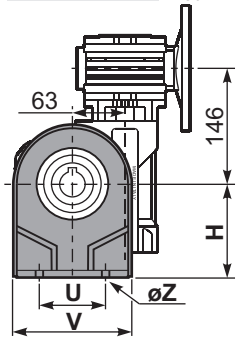
P6A4PA... Feet
Piedini



P6A4PB... Feet
Piedini

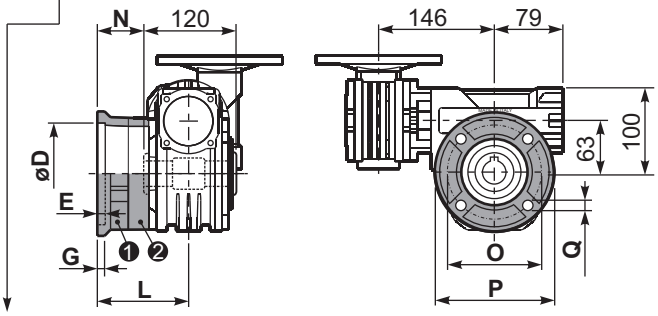


P6A4PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

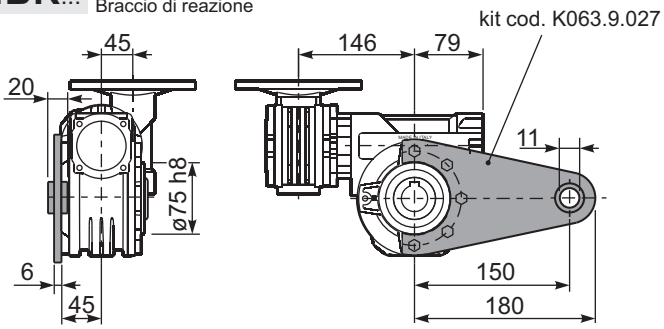
P6A4FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$130^{+0.20}_{+0.15}$	7	13	85	25	165	200	13	❶ K070.9.010 ❷ -
FL	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ K070.9.010 ❷ K070.0.200

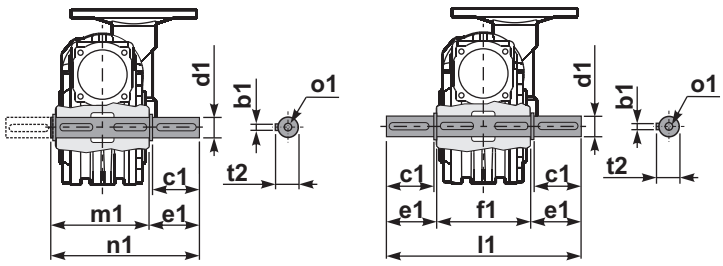
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	111	51	165	200	13	❶ KS070.9.014 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	116	56	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	13.5	84.5	24.5	130	160	11	❶ KS070.9.011 ❷ -

P6A4BR... Reaction arm
Braccio di reazione



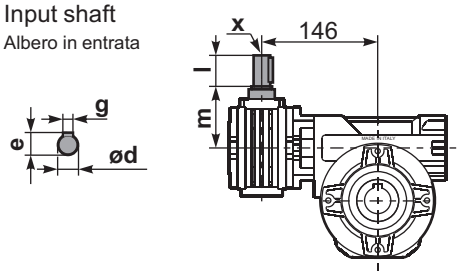
P6A4.....S... Single Shaft
Albero lento semplice

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



❶ kit cod. K070.5.028 type **B** ❷ 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	-	❶ K045.5.006 PAM71 ❷ -
type S	-	-	-	-	-	-	❶ - ❷ -

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	60	$28^{-0.005}_{-0.020}$	63.5	120	247	127.5	191	31	M8x20
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

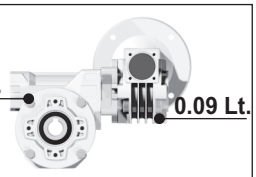
I Il riduttore tipo **854** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 1.2/0.09 Lt.



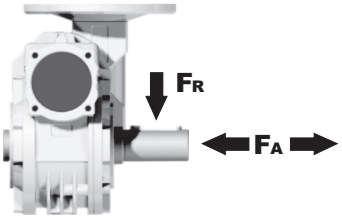
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

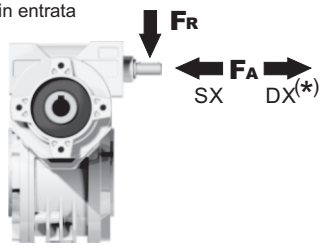
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	1000	5000
15	1160	5800

Input shaft
albero in entrata



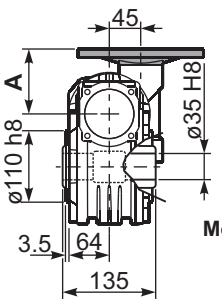
n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

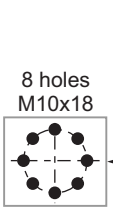
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

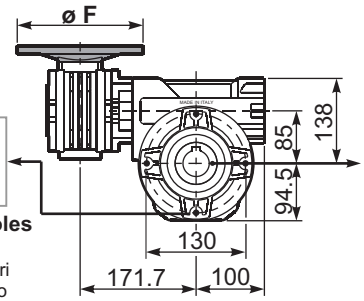
P854FB... Basic wormbox
Riduttore base

M. flanges	Kit code	øF	A
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

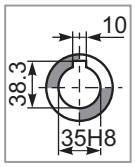




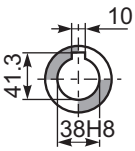
Mounting holes position
Posizione fori di montaggio



Gearbox weight peso riduttore	19.50 kg

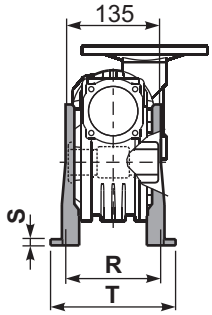


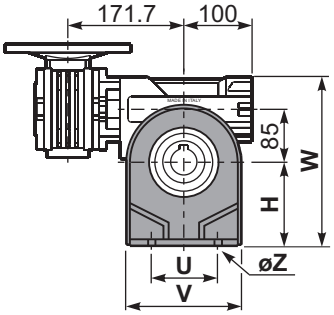
Standard
Hollow shaft



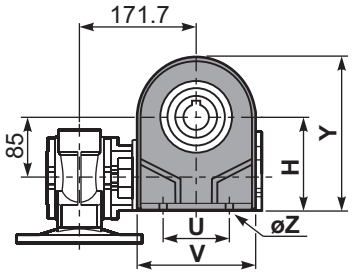
On request
A richiesta

P854PA... Feet
Piedini

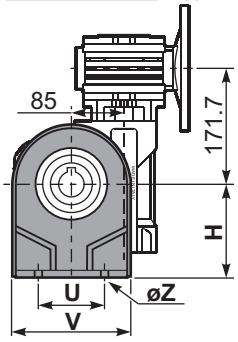




P854PB... Feet
Piedini

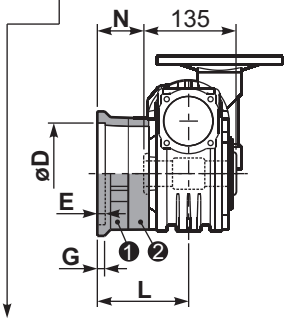


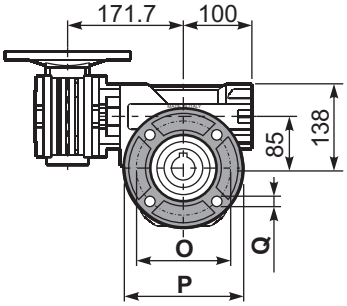
P854PV... Feet
Piedini



	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

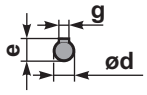


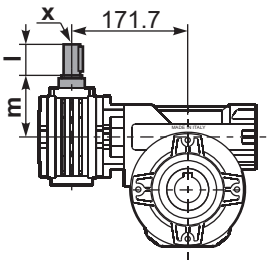


type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.040}_{0}$	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{0}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	$130^{+0.040}_{0}$	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

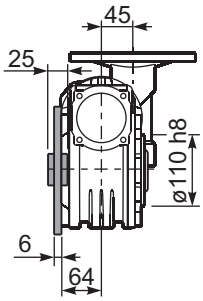
R854FB... Input shaft
Albero in entrata

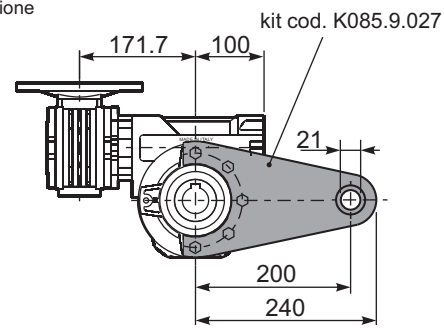




	ød	e	g	l	m	x	kit code
type **B**	11 h6	12.5	4	30	68	-	❶ K045.5.006 PAM71 ❷ -
type **S**	-	-	-	-	-	-	❶ - ❷ -

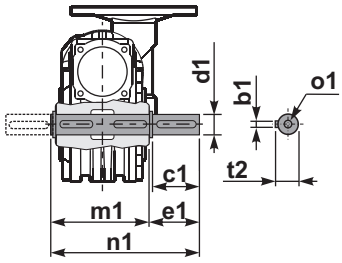
P854BR... Reaction arm
Braccio di reazione

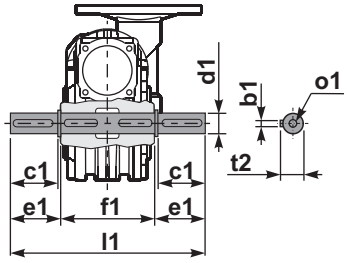




P854.....S... Single Shaft
Albero lento semplice

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





❶ kit cod. K085.5.028 type **B**

❷ kit cod. K085.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

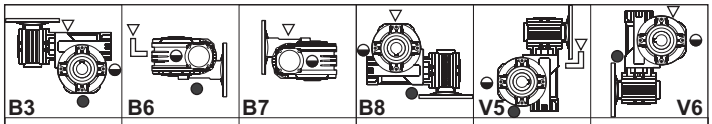
EN Unit **115** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a type that are closed.
Gearbox **050** is supplied 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 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 **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 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 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.

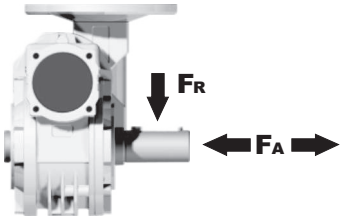


B3	B6	B7	B8	V5	V6
1.9/0.14 LT	1.35/0.14 LT	1.35/0.14 LT	2.0/0.14 LT	2.0/0.14 LT	2.0/0.14 LT
SHELL Omala S2 GX 460			**ENI** Blasia 460		

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

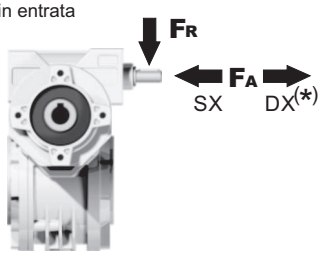
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	1200	6000
15	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	76	380

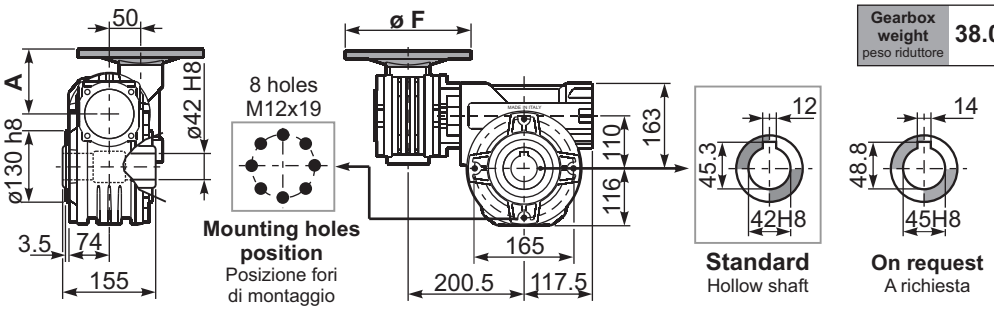
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

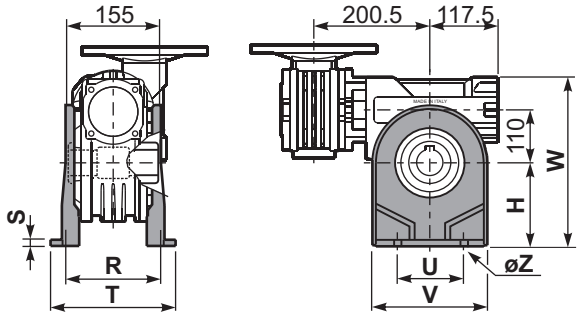
Gearbox weight peso riduttore	38.00 kg

P115FB... Basic wormbox
Riduttore base

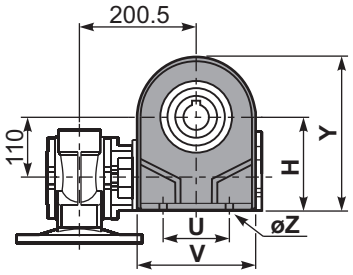
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	78.5
71B5	K050.4.042	160	76
80B5	K050.4.043	200	76.5
56B14	KC40.4.049	80	76
63B14	K050.4.047	90	78.5
71B14	K050.4.045	105	76
80B14	K050.4.046	120	76.5



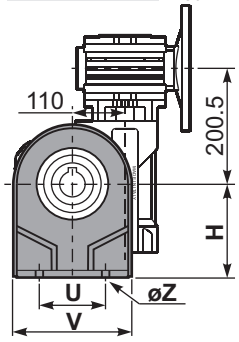
P115PA... Feet
Piedini



P115PB... Feet
Piedini

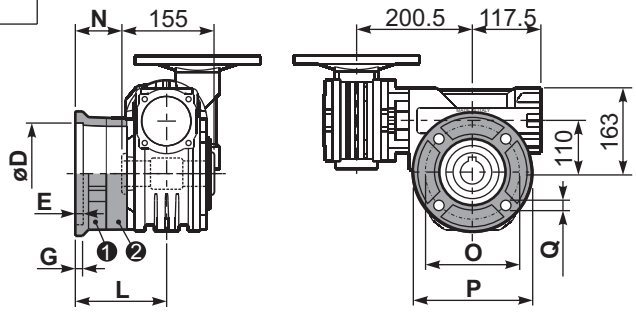


P115PV... Feet
Piedini



	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	-	-	-	-	-	-	-	-	-	-

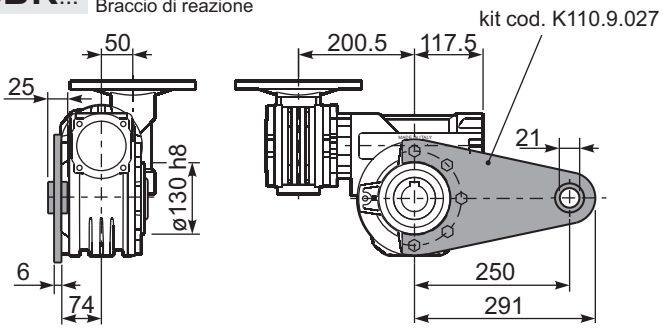
P115FC... Output flange
Flangia uscita



type B	øD	E	G	L	N	O	P	Q	kit code
FC	$170^{+0.083}_{+0.043}$	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	$170^{+0.083}_{+0.043}$	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

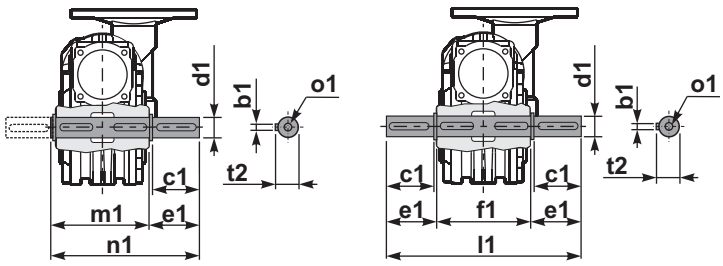
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$180^{+0.040}_{0}$	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	$180^{+0.040}_{0}$	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

P115BR... Reaction arm
Braccio di reazione



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

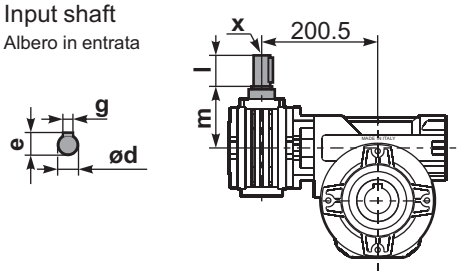
P115.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K110.5.028 type **B**

❷ 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	❶ K050.5.006 PAM71 ❷ K050.5.007 PAM80
type S	14 h6	16	5	30	74.5	M5x10	❶ KS050.5.008 PAM71 ❷ KS050.5.009 PAM80

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	12	75	$42^{-0.005}_{-0.020}$	96.5	155	348	163.5	260	45	M12x32
type S	-	-	-	-	-	-	-	-	-	-

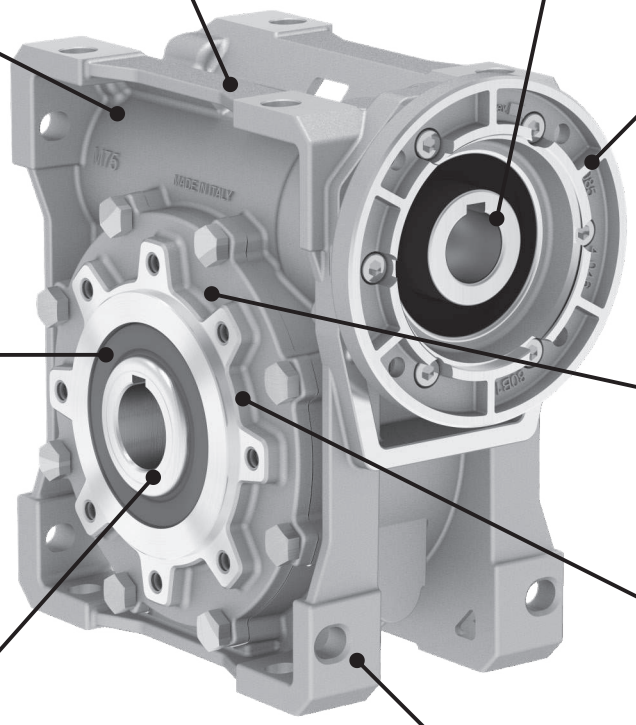
M Square worm gearboxes

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.

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

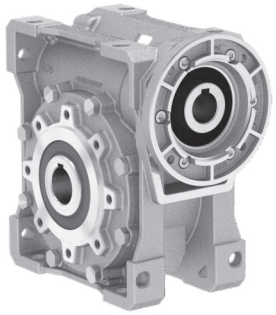
Vent Free Design.
No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15ºC to 130ºC.

oil free

vent free

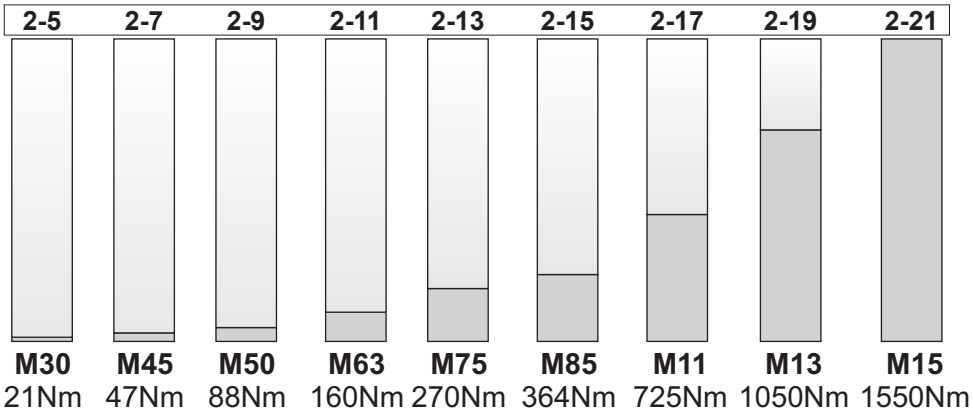
World wide sales network.

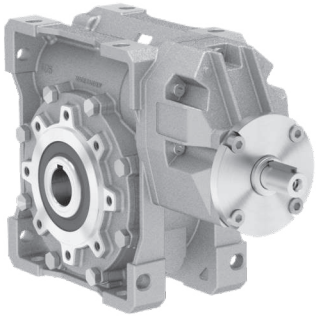
Specific type datasheet on page...



Types / Tipi / Tipen / Types / Tipos

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





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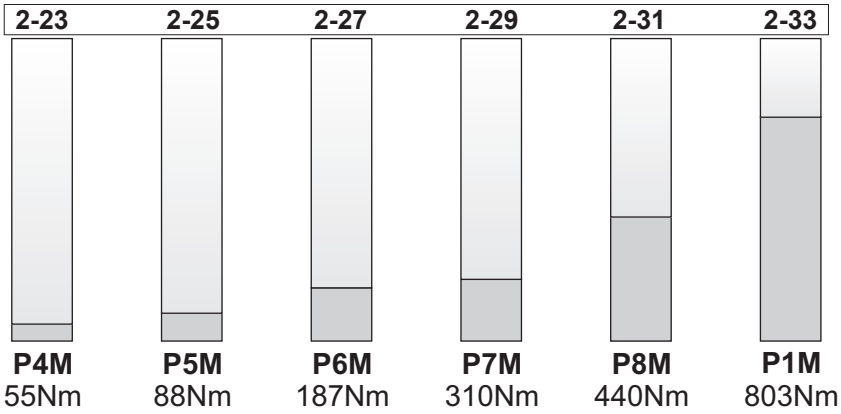

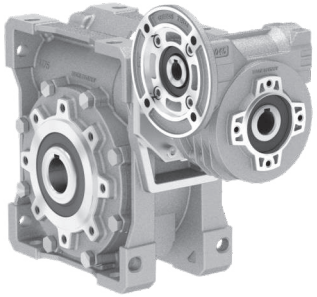

Types / Tipi / Tipen / Types / Tipos

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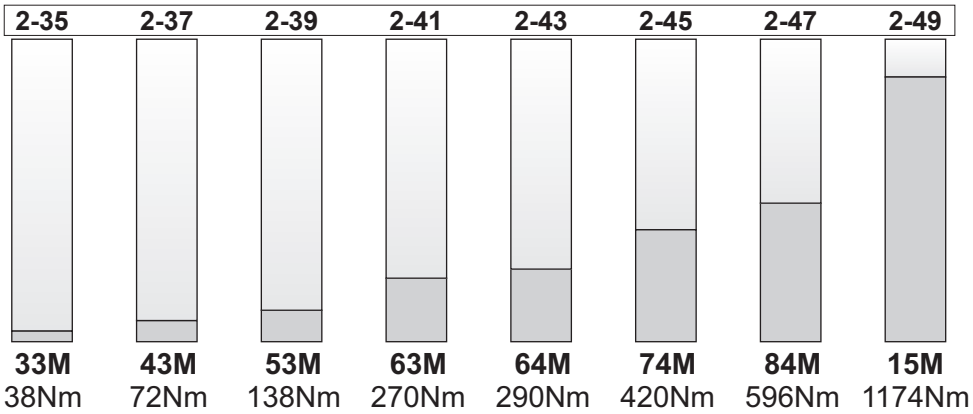
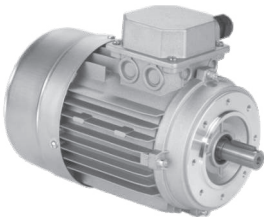
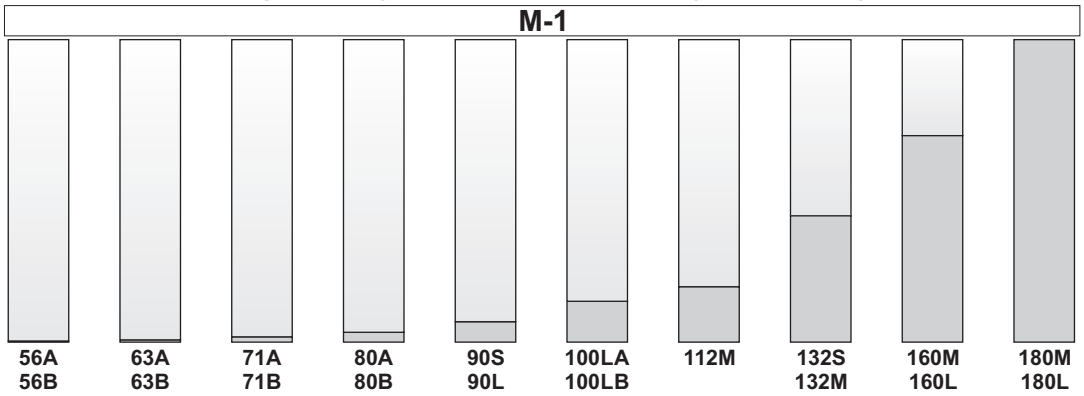
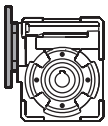
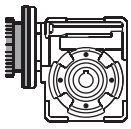
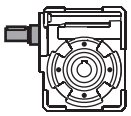
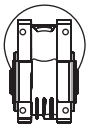
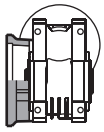
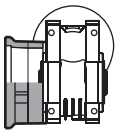
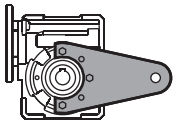
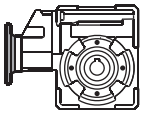
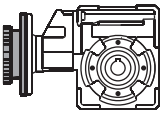
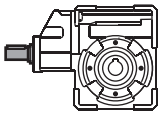
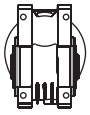
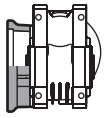
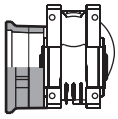
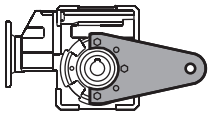
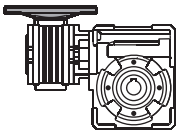
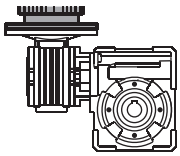
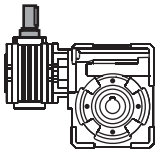
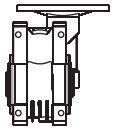
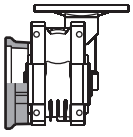
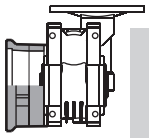
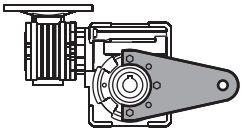




Types / Tipi Tipen / Types Tipos

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



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 stirnradstufe am Eintrieb Reducteurs a vis sans fin avec pré-réduction Reductores corona sin fin con prereductora de engranajes  P  M  R	P4M P5M P6M P7M P8M P1M	 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	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 Rapporto Untersetzung Reduction Relaciòn	Hub Mozzo corona Hohlwelle Arbre creux Nucleo corona	Output shaft Albero lento Abtriebswelle Arbre de sortie Eje salida	Motor size Grandezza motore Motor Grösse Grandeur moteur Tamaño motor	Mounting position Posizione montaggio Einbaulage Position de montage Position de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Mountin position Esecuzione montaggio Einbaulage Exécution de montage Posición de montaje	Terminal box position Posizione morsettiera Klemmkastenlage Position boîte a bornes Posición caja de bornes
10	**C**	**Ø**	**-Q**	**B3**	**ST**	**---**	

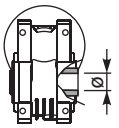
See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir tableau données techniques

Ver tabla datos técnicos



STANDARD

C

M30 ⇨ ø14
M45 ⇨ ø18
M50 ⇨ ø25
M63 ⇨ ø25
M75 ⇨ ø28
M85 ⇨ ø35
M11 ⇨ ø42
M13 ⇨ ø45
M15 ⇨ ø50

I

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox

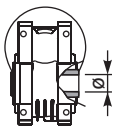
SPECIAL SERIES
SERIE SPECIALE

S

M45 ⇨ ø19
M50 ⇨ ø24

X

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



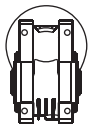
INCH

U

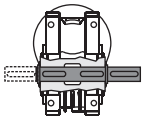
M45 ⇨ ø0.750"
M50 ⇨ ø1.000"
M63 ⇨ ø1.125"
M85 ⇨ ø1.500"

Z

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



Ø



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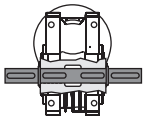

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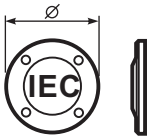


-M
without flange
Senza flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)
-H=160 (ø350)

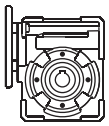
B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

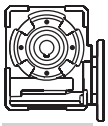
Brushless

BA=40/63-M5
BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

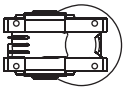
-0=Type R
-S=Type R
S series



B3



B8



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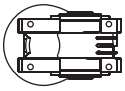

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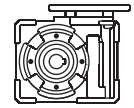
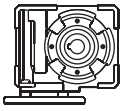
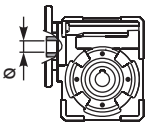


V5



V6



ST

Standard bore *
Kit R standard

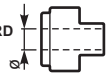
Foro standard *
Kit R standard

Input bore without Reduction Bushing

-O = 9mm
-P = 11mm
-Q = 14mm
-R = 19mm
-T = 24mm
-U = 28mm
-V = 38mm

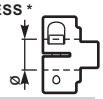
COUPLING

STANDARD (IEC)



-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

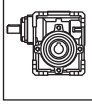
BRUSHLESS *



-1 = 9mm
-2 = 11mm
-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

Ready for input coupling
Predisposto per giunto

-0
Type B
Tipo B



-0
Type R
Tipo R

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

Only for combined units See technical data table

Solo per i riduttori combinati Vedi tabelle dati tecnici.

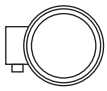
Ausführungen für Getriebekombinationen it

Uniquement pour combinés. Voir tableau données techniques

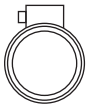
Sólo para combinados ver tabla datos técnicos

With Type M specify terminal box position

Con tipo M specificare posizione morsettiera

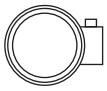


A

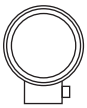


B

STANDARD



C



D

2

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

Lifting / sollevamento / hubantriebe / levage / elevactión

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

Rotation / rotazione / drehung / rotation / rotaction

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$$

Linear movement / traslazione / linearbewegung / translation / translacion

$$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

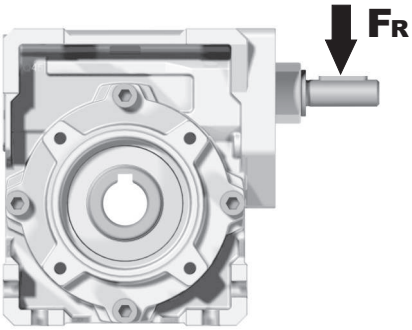
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

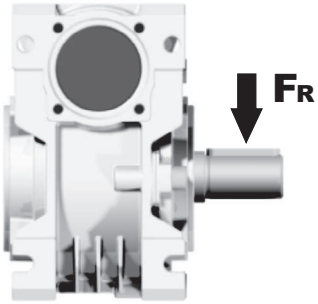
$$\mathbf{M}\ [Nm] = \frac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$$

$$\mathbf{M}\ [lb\ in] = \frac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$$

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





$F_R\ [N] = \frac{M\ [Nm] \cdot 2000}{d\ [mm]} \cdot f_K$	$F_R\ [N] = \frac{M\ [lb\ in] \cdot 8.9}{d\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

A — Nominal torque / Momento torcente nominale / Nenn Drehmoment / Couple nominal / Par de torsión nominal

Flange code / Codice flangia / Flanschtype / Code bride / Código bridas

Dynamic efficiency / Rendimento dinamico / Dynamischer / Rendement dynamique / Rendimento dinámico

Input speed / Velocità in entrata / Eintriebsdrehzahl / Vitesse en entrée / Velocidad de entrada

M45 M Square - Gear 47Nm

Rating - Aluminum WORM GEARBOXES

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. <2 h	2 - 8 h	8 - 16 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	**10**	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 / Applicazione intermittente con n.ro operazioni/ora	**> 10**	Uniform / Uniforme	1.25	1.5	1.75
		Moderate / Moderato	1.5	1.75	2
		Heavy / Forte	1.75	2	2.25

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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

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

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.

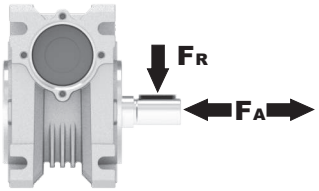
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

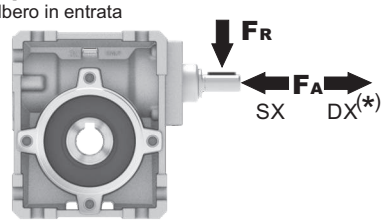
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	20	100

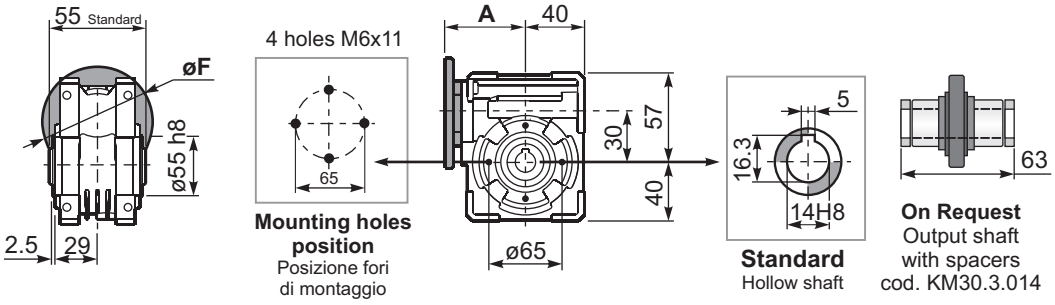
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

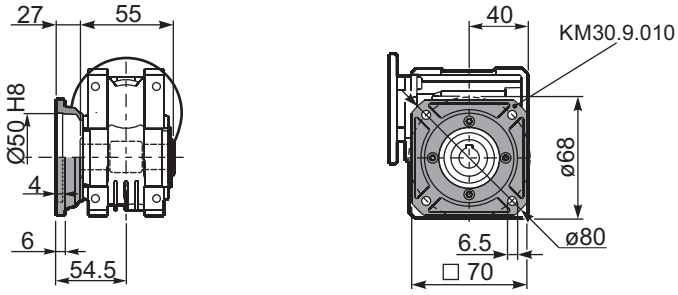
PM30**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	1.15 kg

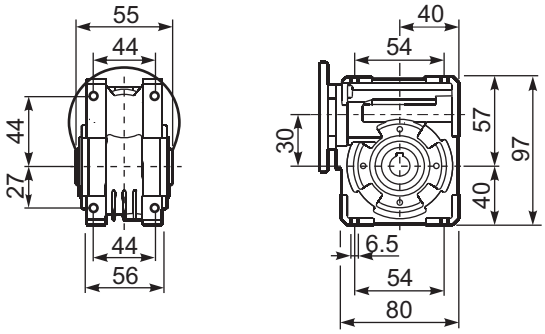
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



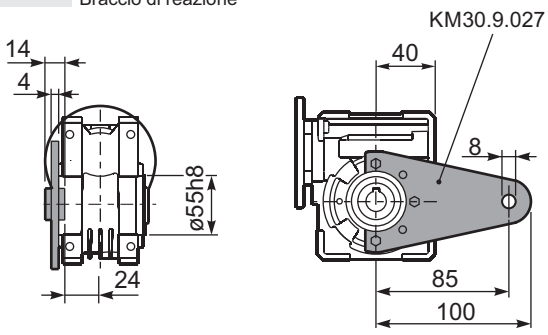
PM30**FC**... Square flange
Flangia quadrata



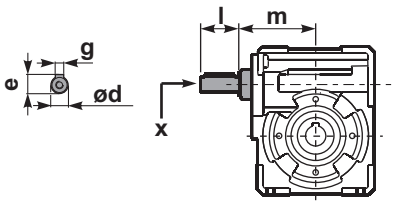
PM30**FB**... Feet
Piedini



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

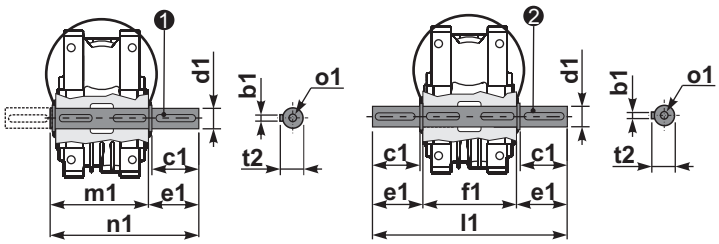


RM30FB... Input shaft
Albero in entrata



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

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



❶ kit cod. K030.5.028 type **B**

❷ 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	$14^{-0.005}_{-0.020}$	35.5	55	126	59	94.5	16	M5x14
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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
67	**21**	0.37	36	1.2	0.44	42	**B**		B-C	**B**-C		67	1.6	04
50	**28**	0.37	46	1.0	0.38	47	**B**		B-C	**B**-C		65	2.5	05
38	**37**	0.25	40	1.0	0.26	41	**B**		B-C	**B**-C		63	1.8	06
30	**46**	0.25	46	0.9	0.22	41	**B**		B-C	**B**-C		59	1.5	07
23	**60**	0.18	41	1.0	0.18	41	**B**		B-C	**B**-C		56	1.2	08
20	**70**	0.12	31	1.0	0.12	30	**B**		B-C	**B**-C		54	1.0	09
13.7	**102**	0.09	31	0.9	0.09	29	**B**		B-C	**B**-C		49	0.72	10

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.

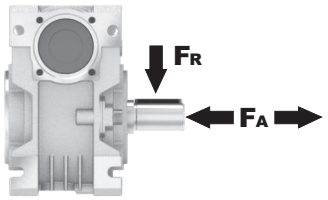
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

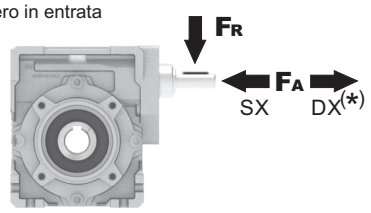
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
200	180	900
150	200	1000
100	220	1100
75	240	1200
50	260	1400
25	300	1800
15	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

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

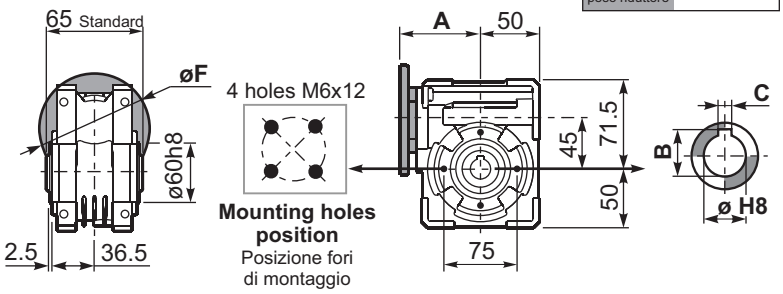
tab. 2

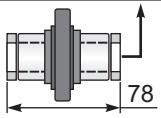
PM45FB... Basic wormbox
Riduttore base

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

Gearbox weight peso riduttore	2.30 kg

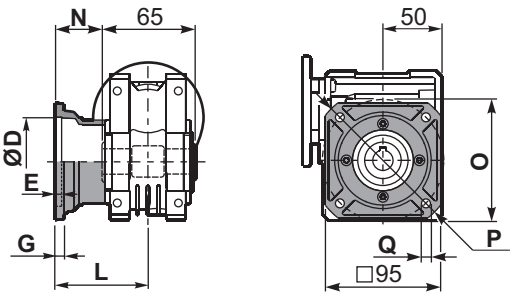
ø H8	B	C	*Spacer code
18 Standard	20.8	6	KM45.3.018
19 on request	21.8	6	KM45.3.019
20 on request	22.8	6	KM45.3.020





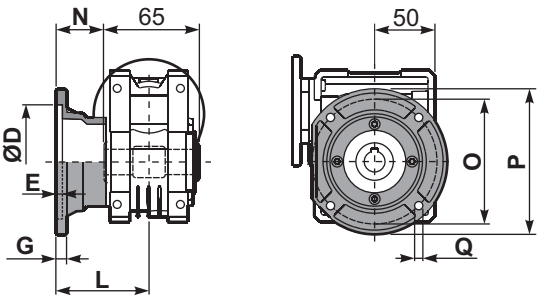
***On Request**
output shaft with spacers

PM45FC... Square flange
Flangia quadrata



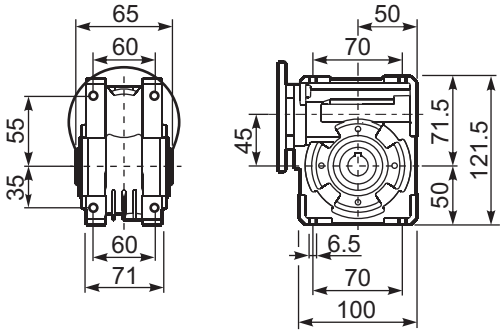
type B	øD	E	G	L	N	O	P	Q	kit code
FC	60 H8	4	7	67	34.5	75	110	9	KM45.9.010
FL	60 H8	4	7	97	64.5	75	110	9	KM45.9.011

PM45F1... Round flange
Flangia rotonda

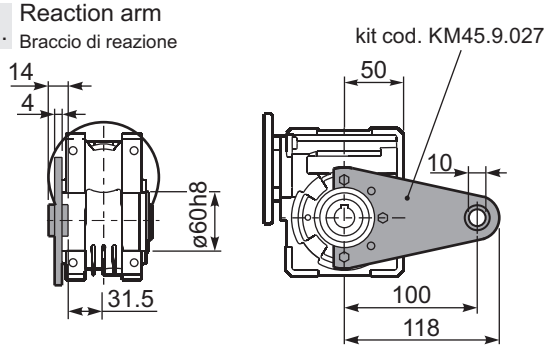


type S	øD	E	G	L	N	O	P	Q	kit code
F1	95H8	5	9	80	47.5	115	140	9.5	KM45.9.012
F2	-	-	-	-	-	-	-	-	-

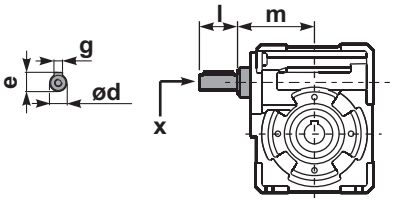
PM45FB... Feet
Piedini



PM45BR... Reaction arm
Braccio di reazione



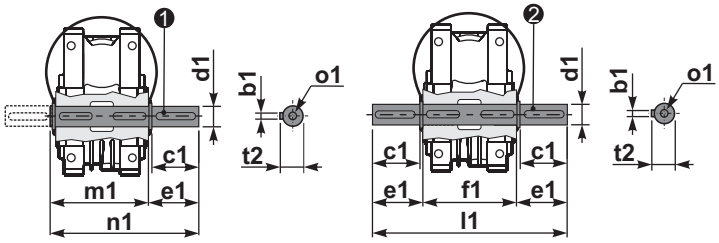
RM45FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	11 h6	12.5	4	30	74	-	❶ K045.5.006 PAM71 ❷ -
type S	-	-	-	-	-	-	❶ - ❷ -

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

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



❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

❷ kit cod. K045.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type S	6	40	$19^{-0.005}_{-0.020}$	58.5	-	-	70	128.5	21.5	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	Available B14 motor flanges -O 56	-P 63	-Q 71	-R 80	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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.

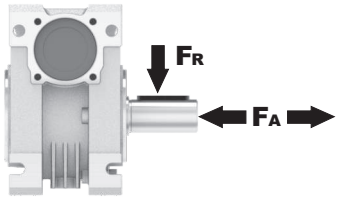
▪ LUBRICATION M50 Oil Quantity 0.14 Lt.

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

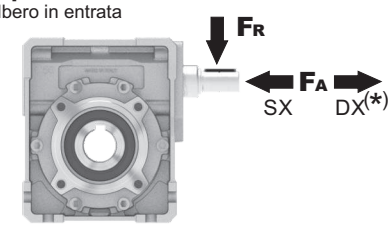
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	76	380

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

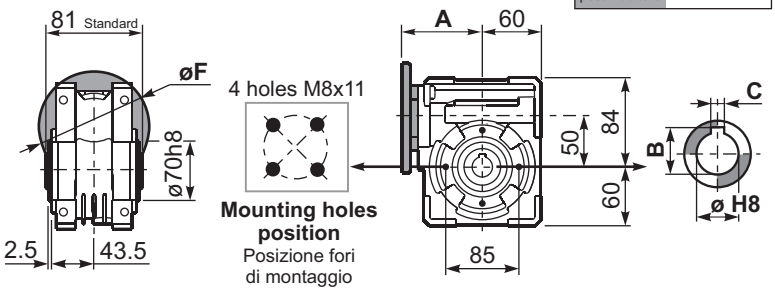
tab. 2

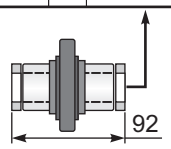
PM50FB... Basic wormbox
Riduttore base

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

Gearbox weight peso riduttore	3.25 kg

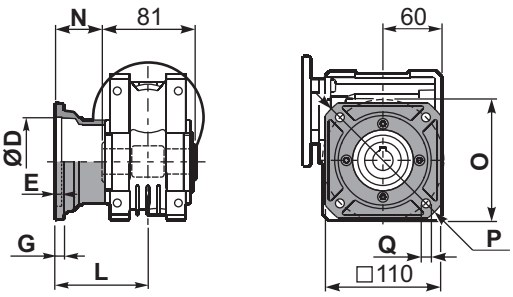
ø H8	B	C	*Spacer code
25 Standard	28.3	8	KM50.3.025
24 on request	27.3	8	KM50.3.024





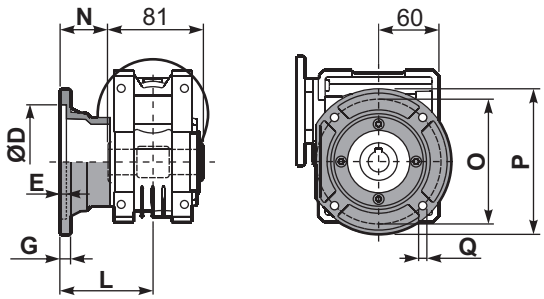
***On Request**
output shaft with spacers

PM50FC... Square flange
Flangia quadrata



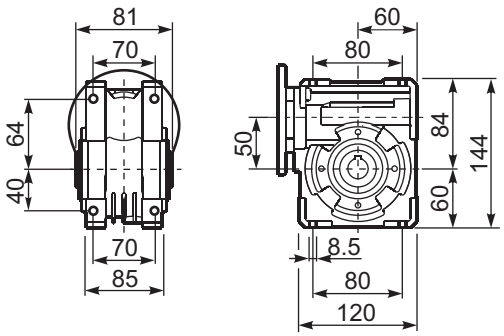
type B	øD	E	G	L	N	O	P	Q	kit code
FC	70 H8	5	9	90	49.5	85	125	11	KM50.9.010
FL	70 H8	5	9	120	79.5	85	125	11	KM50.9.011

PM50F1... Round flange
Flangia rotonda

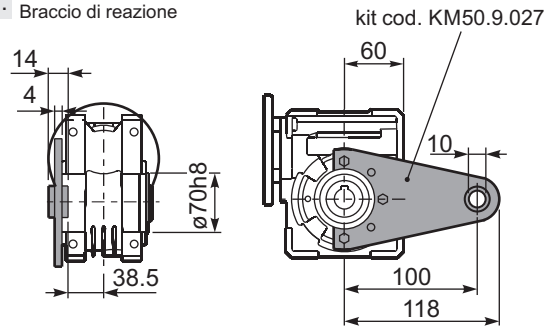


type S	øD	E	G	L	N	O	P	Q	kit code
F1	110 H8	5	10	89	48.5	130	160	9.5	KM50.9.012
F2	95 H8	5	14.5	72	31.5	115	140	11	KM50.9.013

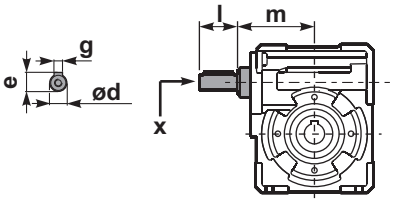
PM50FB... Feet
Piedini



PM50BR... Reaction arm
Braccio di reazione



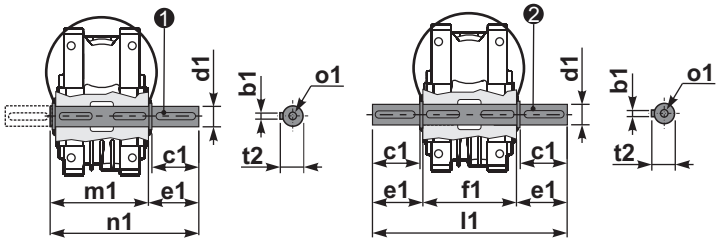
RM50FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	16 h6	18	5	30	79.5	M6x16	❶ K050.5.006 PAM71 ❷ K050.5.007 PAM80
type S	14 h6	16	5	30	79.5	M5x10	❶ KS050.5.008 PAM71 ❷ KS050.5.009 PAM80

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

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



❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type S	8	50	$24^{-0.005}_{-0.020}$	68.8	-	-	86.5	155	27	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

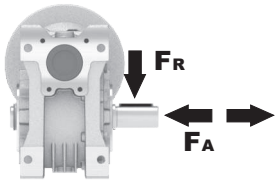
▪ LUBRICATION M63 Oil Quantity 0.30 Lt.

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

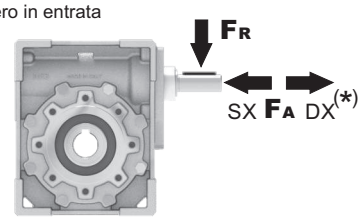
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	90	450

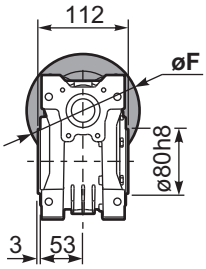
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

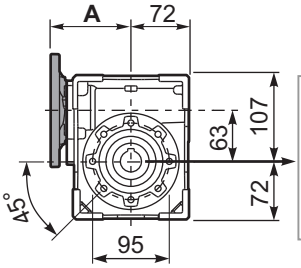
tab. 2

Gearbox weight peso riduttore	6.00 kg

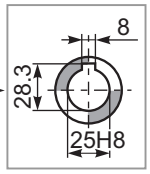
PM63**FB**... Basic wormbox
Riduttore base

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

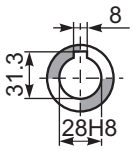




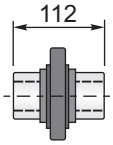
8 holes M8x14



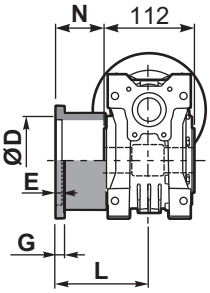
Standard
Hollow shaft

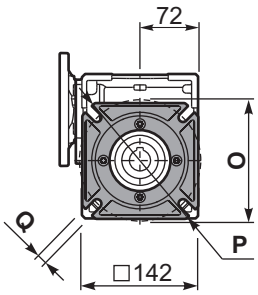


On request
A richiesta



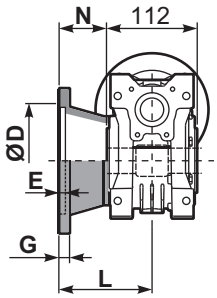
PM63**FC**... Square flange
Flangia quadrata

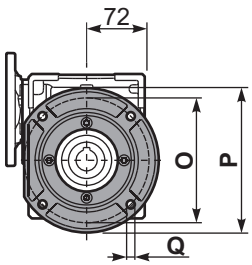




type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	115 H8	6	10	82	26	150	180	11	KM63.9.010
FL	115 H8	6	10	112	56	150	180	11	KM63.9.011

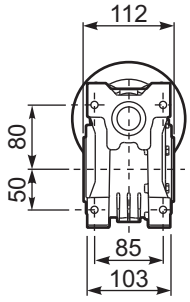
PM63**F1**... Round flange
Flangia rotonda

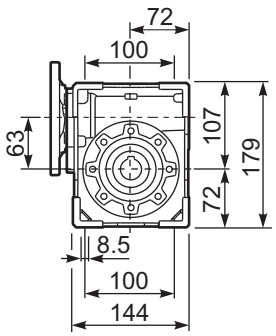




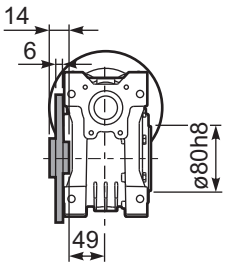
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	10	98	42	165	200	11	KM63.9.012
F2	130 H8	5	10	107	51	165	200	11	KM63.9.013
F3	110 H8	5	16.5	80.5	24.5	130	160	11	KM63.9.014

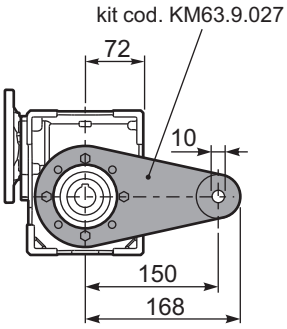
PM63**FB**... Feet
Piedini



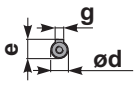


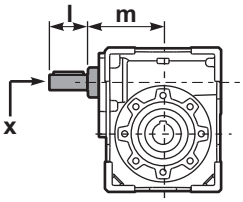
PM63**BR**... Reaction arm
Braccio di reazione





RM63FB... Input shaft
Albero in entrata

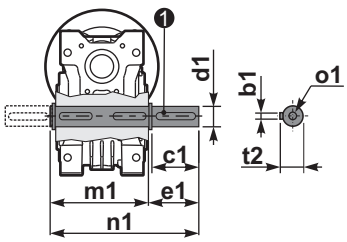


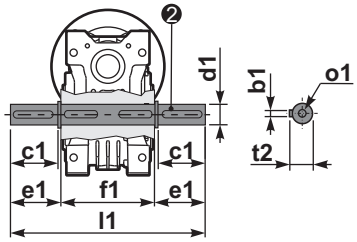


	ød	e	g	l	m	x	kit code
type **B**	18 h6	20.5	6	45	94	M6x16	❶ K063.5.006 PAM80 ❷ K063.5.007 PAM90
type **S**	19 h6	21.5	6	40	94	M8x20	❶ KS063.5.008 PAM80 ❷ KS063.5.009 PAM90

PM63.....**S**... Single Shaft
Albero lento semplice

PM63.....**D**... Double Shaft
Albero lento bisp.





❶ kit cod. KM63.5.028 type **B** ❷ kit cod. KM63.5.029 type **B**

	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

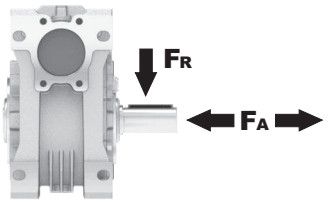
▪ LUBRICATION M75 Oil Quantity 0.40 Lt.

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

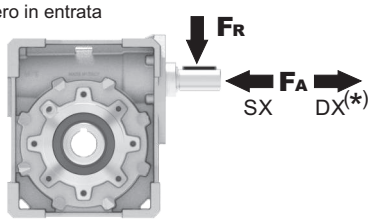
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	125	630

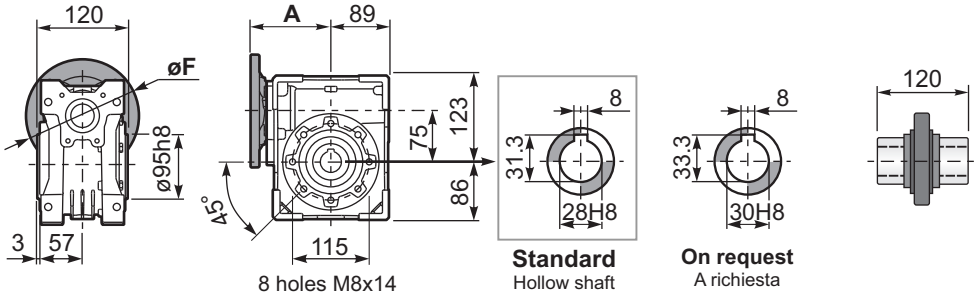
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

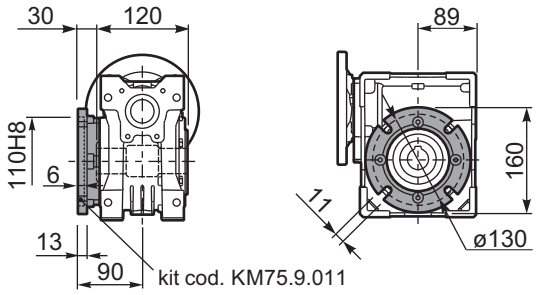
PM75**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	8.70 kg

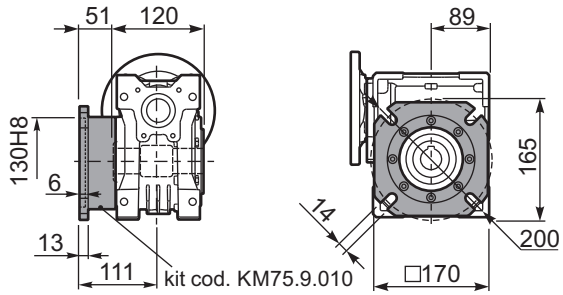
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	114
80/90B5	K023.4.042	200	116
100/112B5	K023.4.043	250	125
80B14	K085.4.046	120	116
90B14	K085.4.045	140	116
100/112B14	K085.4.047	160	125



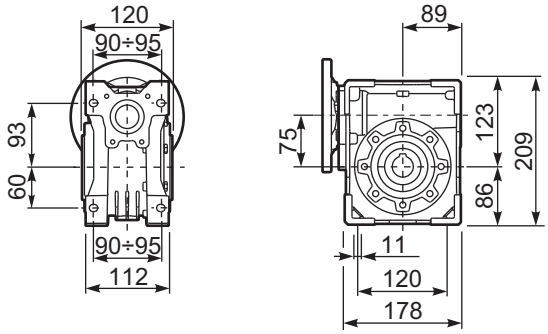
PM75**FC**... Round flange
Flangia rotonda



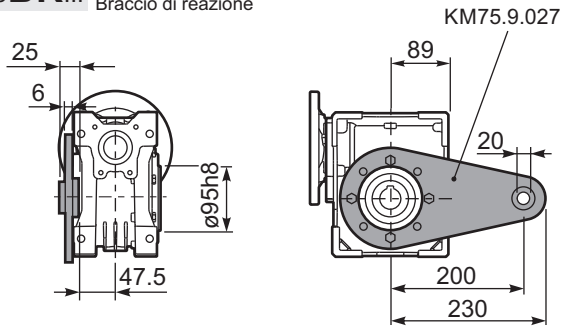
PM75**FL**... Square flange
Flangia quadrata



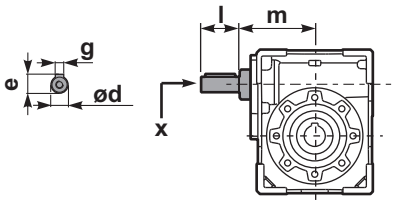
PM75**FB**... Feet
Piedini



PM75**BR**... Reaction arm
Braccio di reazione

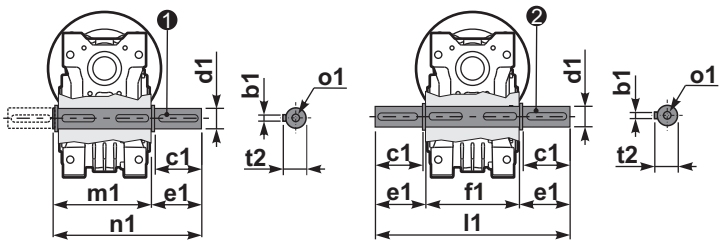


RM75FB... Input shaft
Albero in entrata



PM75.....**S**... Single Shaft
Albero lento semplice

PM75.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM75.5.028 Standard ❷ 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 K085.5.007 PAM90 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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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		75	4.7	06
37	**38**	1.5	276	1.3	1.9	353	B	B			B			71	3.5	07
30	**46**	1.5	320	1.1	1.6	342	B	B			B			68	3.1	08
27	**52**	1.1	258	1.2	1.3	303	B	B			B			66	2.7	09
21	**67**	1.1	327	0.9	1.02	303	B	B			B			65	2.1	10
18.9	**74**	0.75	220	1.3	0.96	281	B	B			B			58	1.9	11
14.6	**96**	0.55	191	1.3	0.73	254	B	B			B			53	1.5	12

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.

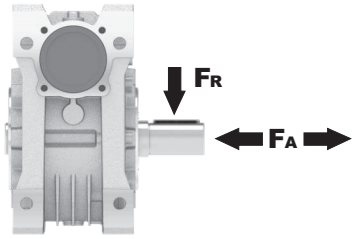
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

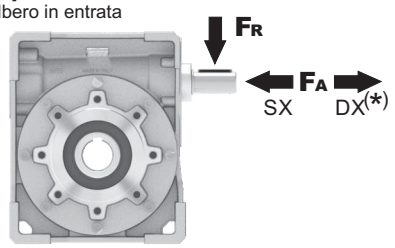
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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



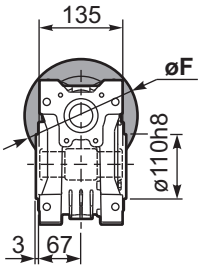
n_1 [min^{-1}]	FA [N]	FR [N]
1400	130	650

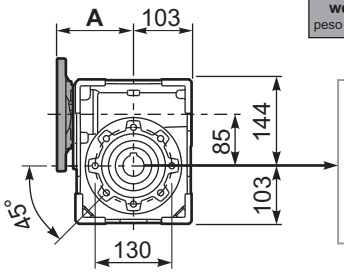
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PM85FB... Basic wormbox
Riduttore base

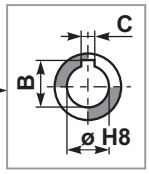
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	116.5
80/90B5	K023.4.042	200	118.5
100/112B5	K023.4.043	250	127.5
80B14	K085.4.046	120	118.5
90B14	K085.4.045	140	118.5
100/112B14	K085.4.047	160	127.5



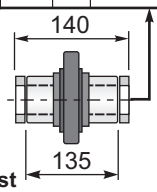


8 holes M10x18

Gearbox weight peso riduttore	12.1 kg

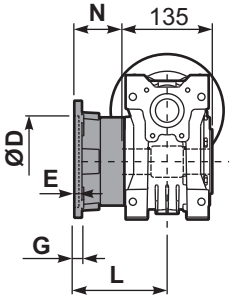


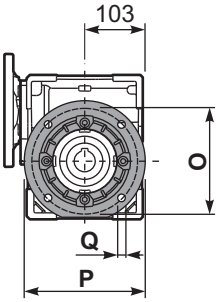
ø H8	B	C	*Spacer code
35 Standard	38.3	10	KM85.3.035
38 on request	41.3	10	KM85.3.038



***On Request**
output shaft with spacers

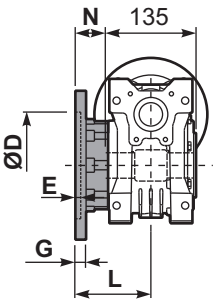
PM85FC... Output flange
Flangia uscita

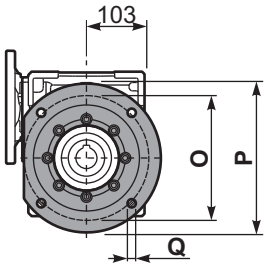




type B	øD	E	G	L	N	O	P	Q	kit code
FC	152 H8	5	16	111	43.5	176	205	13	K085.9.010
FL	180 H8	6	18	122	54.5	215	250	14	KM85.9.011

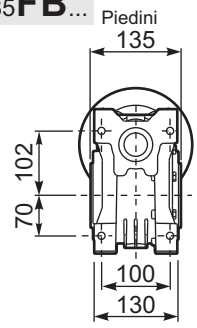
PM85F1 Output flange
Flangia usicta

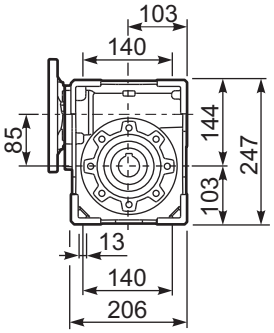




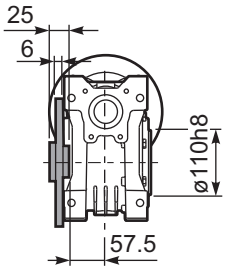
type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	13	109.5	42	165	200	13	KS085.9.015
F2	152 H8	5	16	151.5	84	176	205	13	K085.9.010 K085.0.201

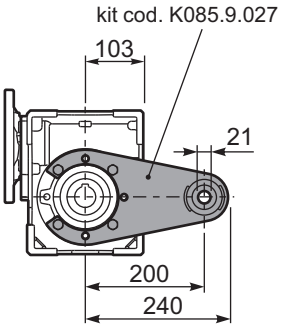
PM85FB... Feet
Piedini



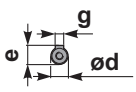


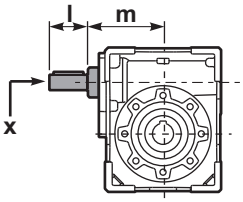
PM85BR... Reaction arm
Braccio di reazione





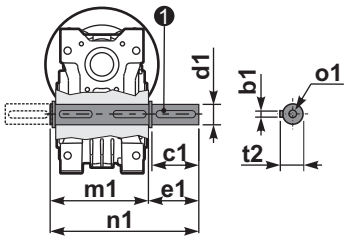
RM85FB... Input shaft
Albero in entrata



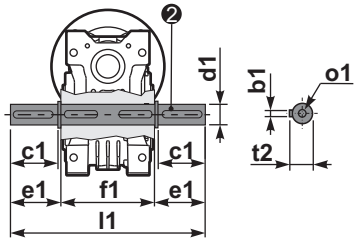


	ød	e	g	l	m	x	kit code
type **B**	25 h6	28	8	50	112	M8x20	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type **S**	24 h6	27	8	50	112	M8x20	❶ KS085.5.009 PAM90 ❷ KS085.5.011 PAM100

PM85.....S... Single Shaft
Albero lento semplice



PM85.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B** ❷ kit cod. K085.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

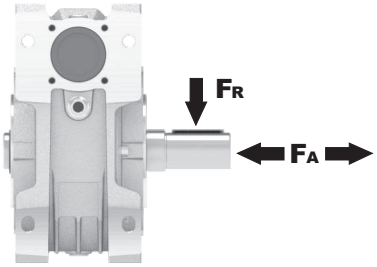
E El reductor tamaño **M11** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes.
Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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** Blasia 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

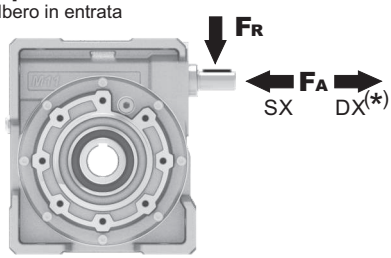
▪RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	228	1140

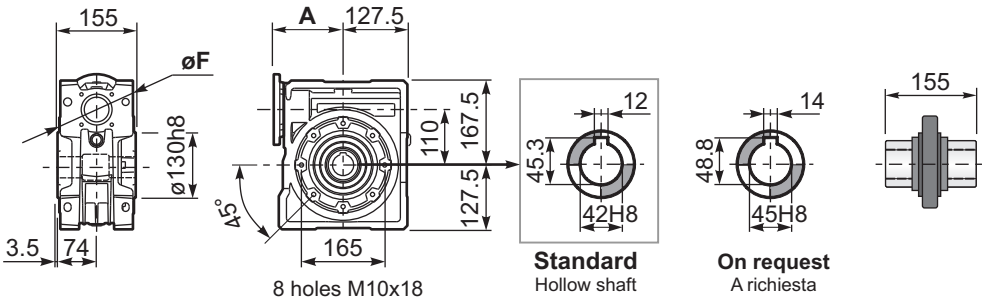
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

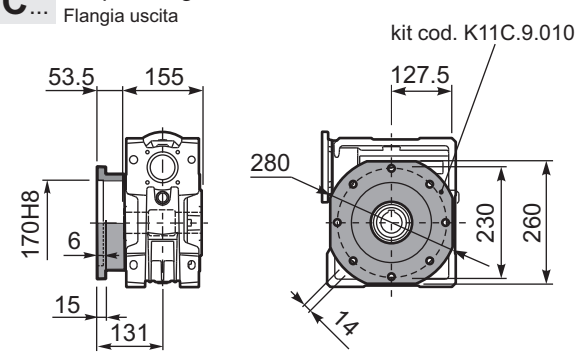
PM11**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	35.0 kg

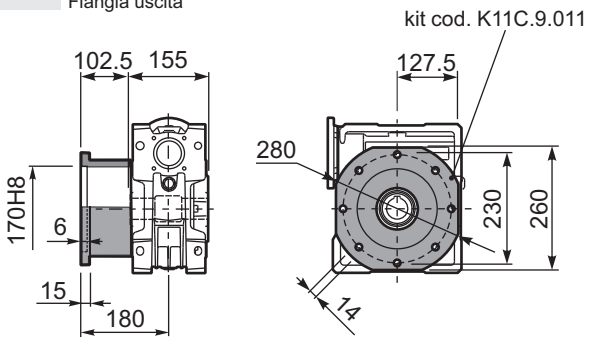
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	136
80/90B5	K023.4.042	200	138
100/112B5	K023.4.043	250	147
132B5	-	300	187
80B14	K085.4.046	120	138
90B14	K085.4.045	140	138
100/112B14	K023.4.041	160	136
132B14	-	200	187



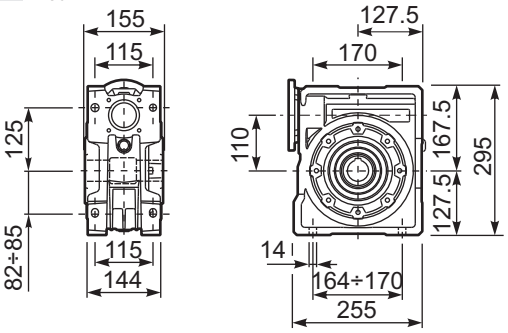
PM11**FC**... Output flange
Flangia uscita



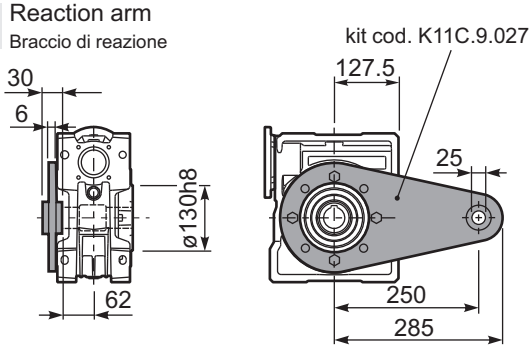
PM11**FL**... Output flange
Flangia uscita



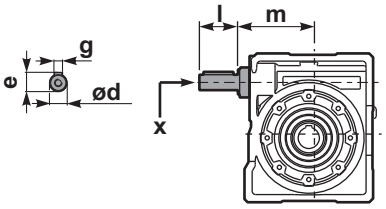
PM11**FB**... Feet
Piedini



PM11**BR**... Reaction arm
Braccio di reazione

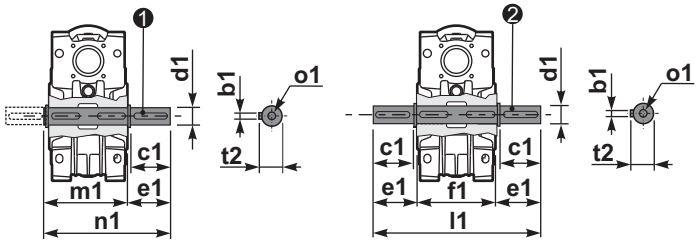


RM11FB... Input shaft
Albero in entrata



PM11.....**S**... Single Shaft
Albero lento semplice

PM11.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K11C.5.028 type **B** ❷ 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	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type **S**	24 h6	27	8	50	131.5	M8x20	❶ KS085.5.009 PAM90 ❷ 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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -E 90	-F 100 112	-G 132	B14 motor flanges not available - - - - - - - -	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
187	**7.5**	7.5	345	2.1	16.1	741		B			90	6.11	01
140	**10**	7.5	455	1.8	13.5	820		B			89	6.45	02
93	**15**	7.5	668	1.4	10.3	917		B			87	6.72	03
70	**20**	7.5	870	1.0	7.8	905		B			85	5.24	04
56	**25**	5.5	788	1.2	6.5	931		B			84	4.28	05
46.7	**30**	5.5	900	1.2	6.4	1047		B			80	6.91	06
35	**40**	4.0	851	1.2	4.9	1043		B			78	5.36	07
28	**50**	4.0	1023	0.9	3.8	972	B				75	4.35	08
23.3	**60**	3.0	896	1.0	3.1	928	B				73	3.65	09
17.5	**80**	2.2	816	1.0	2.3	853	B				68	2.76	10
14	**100**	1.5	655	1.1	1.7	742	B				64	2.23	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 **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.

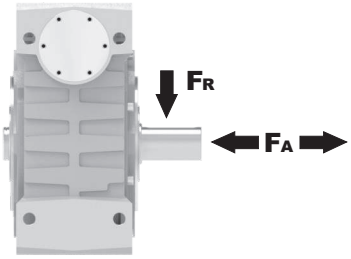
E El reductor tamaño **M13** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes.
Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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.

B3	B6	B7	B8	V5	V6
4.50 LT	3.50 LT	3.50 LT	3.30LT	4.50 LT	3.30LT
SHELL Omala S2 GX 460			**ENI** Blasia 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

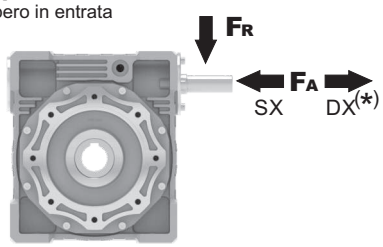
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
200	960	4800
150	1100	5500
100	1240	6200
75	1380	6900
50	1560	7800
25	2000	10000
15	2400	12000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	300	1500

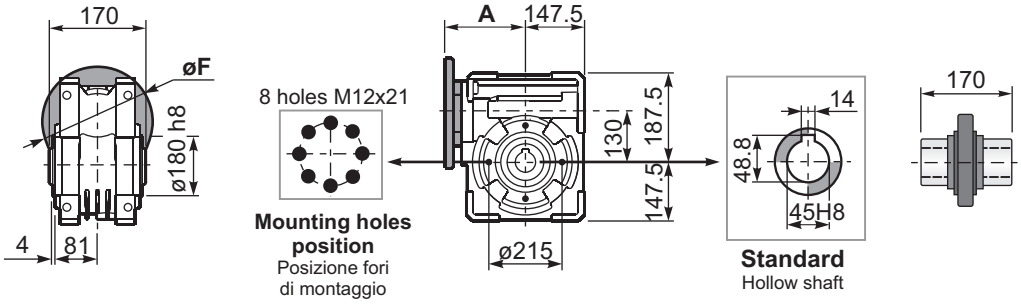
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

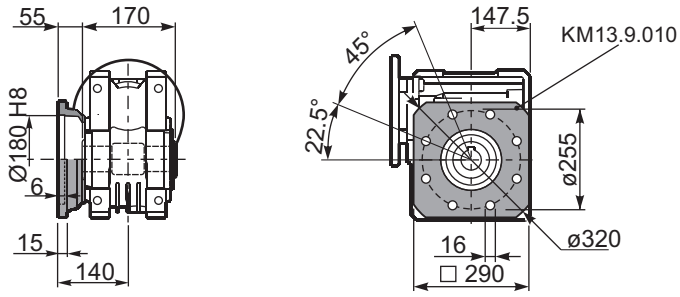
PM13**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	48.0 kg

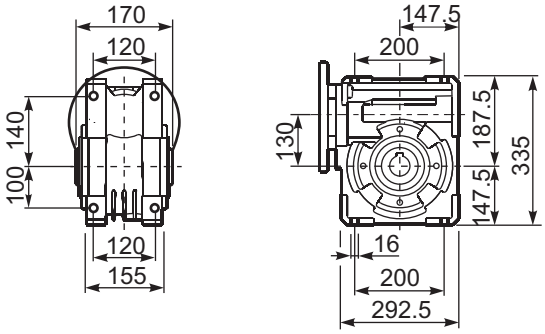
M. flanges	Kit code	øF	A
90B5	KM13.4.041	200	180
100/112B5	KM13.4.042	250	180
132B5	KM13.4.043	300	180



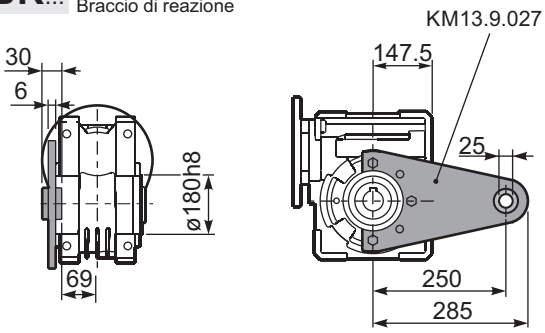
PM13**FC**... Square flange
Flangia quadrata



PM13**FB**... Feet
Piedini

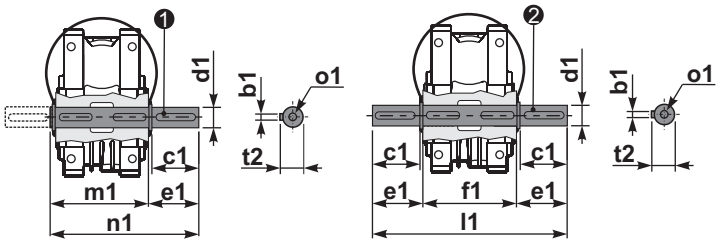


PM13**BR**... Reaction arm
Braccio di reazione



PM13.....**S**... Single Shaft
Albero lento semplice

PM13.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM13.5.028 type **B**

❷ kit cod. KM13.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type	14	80	$45^{-0.005}_{-0.020}$	85	170	340	180	265	48.5	M16
type	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -F 100 112	-G 132	-H 160	B14 motor flanges not available - - - - - - - -	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
187	**7.5**	15	698	1.7	25.8	1200		B			91	5.5	01
140	**10**	15	921	1.3	20.2	1240		B			90	6.155	02
93	**15**	11	990	1.3	13.9	1250		B			88	5.5	03
70	**20**	11	1291	1.0	11.1	1300		B			86	6.155	04
56	**25**	9	1289	0.9	8.4	1200		B			84	5	05
46.7	**30**	7.5	1274	0.9	7.1	1200	B				83	4.193	06
35	**40**	7.5	1596	1.0	7.3	1550	B				78	6.155	07
28	**50**	5.5	1426	1.0	5.4	1400	B				76	5	08
23.3	**60**	4	1195	1.1	4.2	1260	B				73	4.193	09
17.5	**80**	3	1113	1.0	3.1	1150					68	3.17	10
14	**100**	2.2	960	1.0	2.3	1000					64	2.55	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 **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.

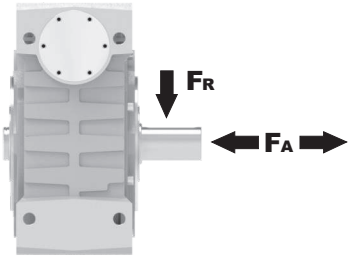
E El reductor tamaño **M15** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes.
Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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** Blasia 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

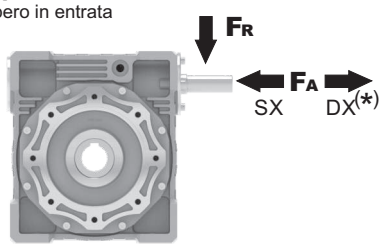
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
200	1300	6500
150	1440	7200
100	1640	8200
75	1800	9000
50	2120	10600
25	2700	13500
15	3300	16500

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	400	2000

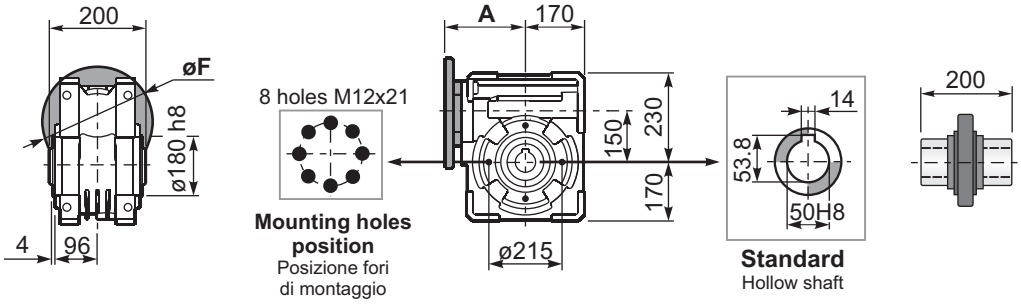
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

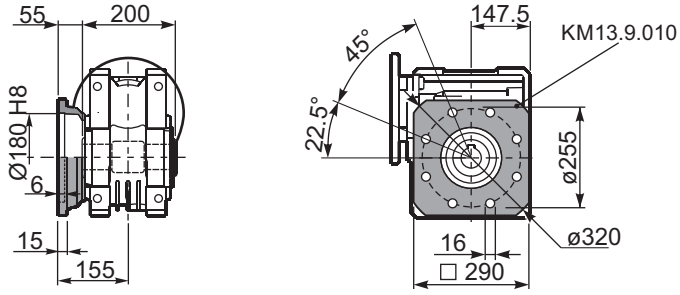
PM15**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	84.0 kg

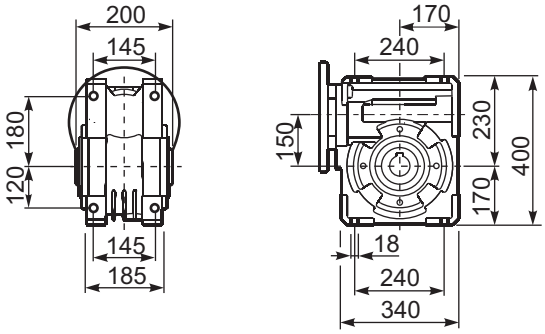
M. flanges	Kit code	øF	A
100/112B5	KM15.4.042	250	210
132B5	KM15.4.043	300	210
160B5	KM15.4.044	350	210



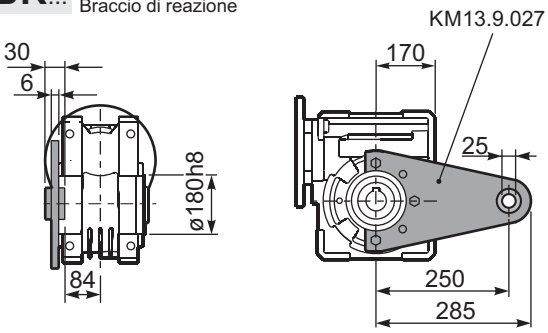
PM15**FC**... Square flange
Flangia quadrata



PM15**FB**... Feet
Piedini

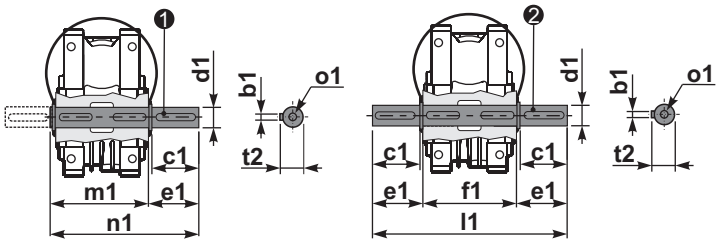


PM15**BR**... Reaction arm
Braccio di reazione



PM15.....**S**... Single Shaft
Albero lento semplice

PM15.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM15.5.028 type **B**

❷ kit cod. KM15.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type	14	82	$50^{-0.005}_{-0.020}$	87	200	374	210	297	53.5	M16
type	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

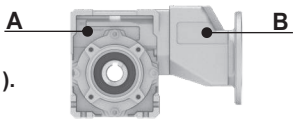
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P4M** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).



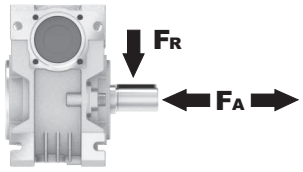
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

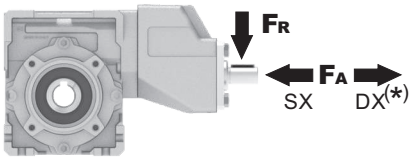
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	240	1200
50	260	1400
25	300	1800
15-6	400	2000

Input shaft
albero in entrata



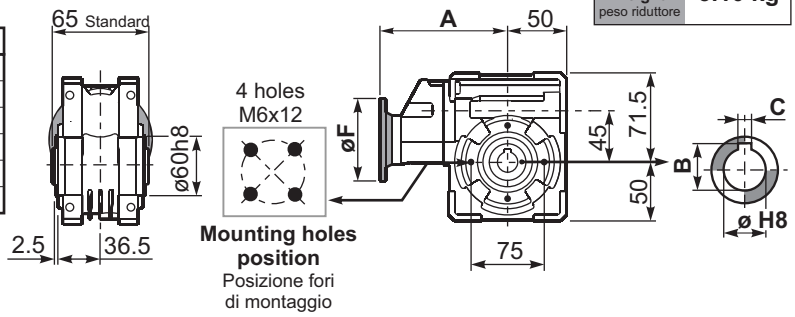
n_1 [min^{-1}]	FA [N]	FR [N]
1400	44	220

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

tab. 2

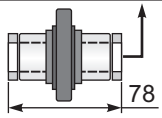
PP4M**FB**... Basic wormbox
Riduttore base

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



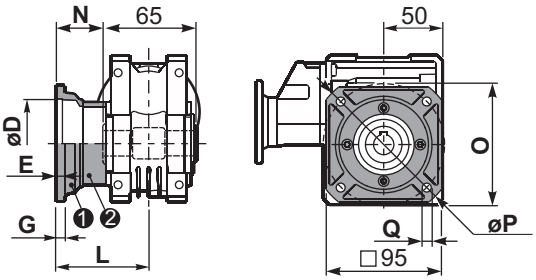
Gearbox weight peso riduttore	3.10 kg

ø H8	B	C	*Spacer code
18 Standard	20.8	6	KM45.3.018
19 on request	21.8	6	KM45.3.019
20 on request	22.8	6	KM45.3.020



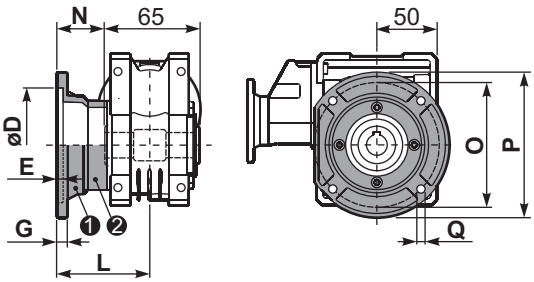
***On Request**
output shaft with spacers

PP4M**FC**... Square flange
Flangia quadrata



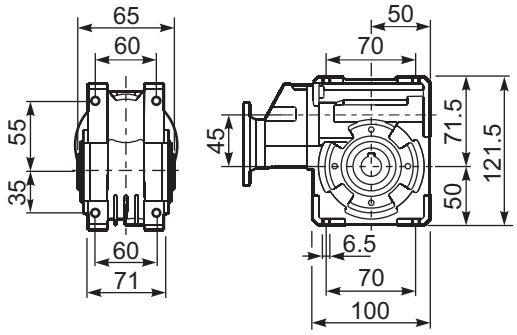
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	60 H8	4	7	67	34.5	75	110	9	KM45.9.010
FL	60 H8	4	7	97	64.5	75	110	9	KM45.9.011

PP4M**F1**... Round flange
Flangia rotonda

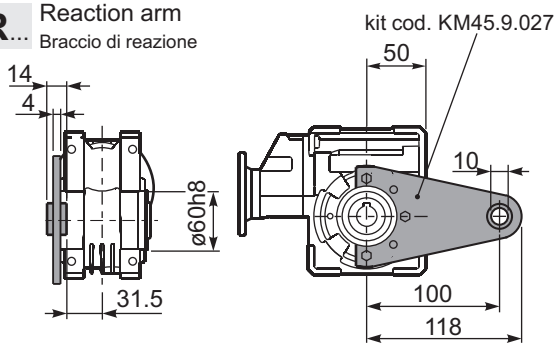


type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	95H8	5	9	80	47.5	115	140	9.5	KM45.9.012
F2	-	-	-	-	-	-	-	-	-

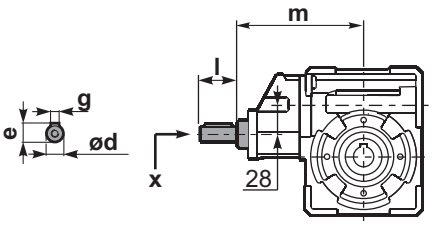
PP4M**FB**... Feet
Piedini



PP4M**BR**... Reaction arm
Braccio di reazione

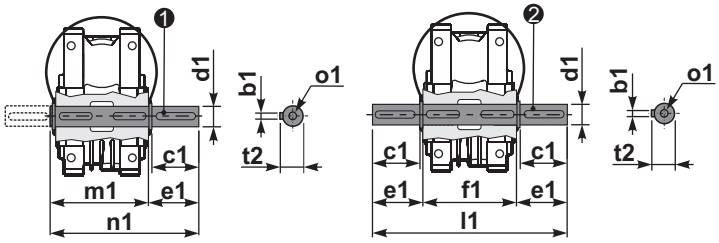


RP4MFB... Input shaft
Albero in entrata



PP4M.....**S**... Single Shaft
Albero lento semplice

PP4M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

❷ kit cod. K045.5.029 type **B**

	ød	e	g	l	m	x	
type **B**	14 h6	16	5	25	141	M5x13	C35.5.061
type **S**	-	-	-	-	-	-	-

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type **S**	6	40	$19^{-0.005}_{-0.020}$	58.5	-	-	70	128.5	21.5	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

*** 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.

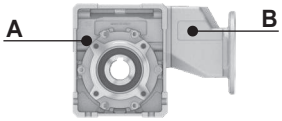
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P5M** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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

Common lubrication 0.26 l (A + B).



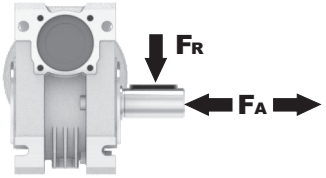
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

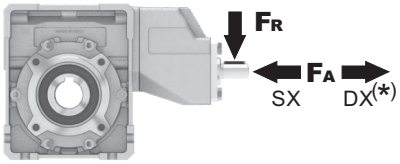
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	340	1700
50	380	1900
25	480	2500
15-6	560	2800

Input shaft
albero in entrata



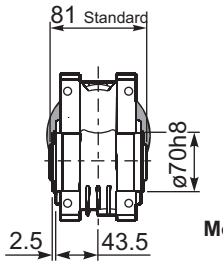
n_1 [min^{-1}]	FA [N]	FR [N]
1400	44	220

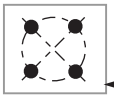
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

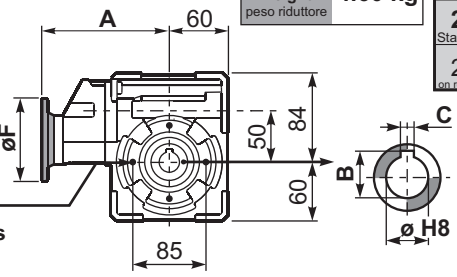
PP5M**FB**... Basic wormbox
Riduttore base

M. flanges	Kit code	øF	A
56B5	K050.4.046	120	147
63B5	K050.4.041	138	149
71B5	K050.4.042	160	146.5
63B14	K050.4.047	90	149
71B14	K050.4.045	105	146.5



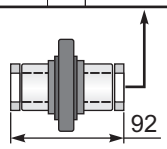


Mounting holes position
Posizione fori di montaggio



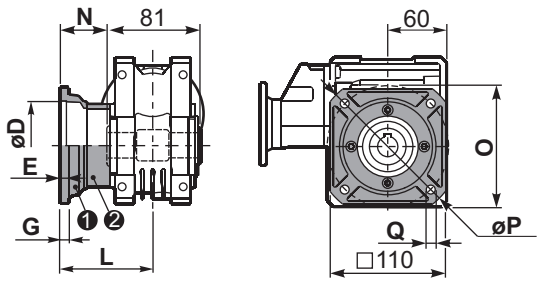
Gearbox weight peso riduttore	4.60 kg

ø H8	B	C	*Spacer code
25 Standard	28.3	8	KM50.3.025
24 on request	27.3	8	KM50.3.024



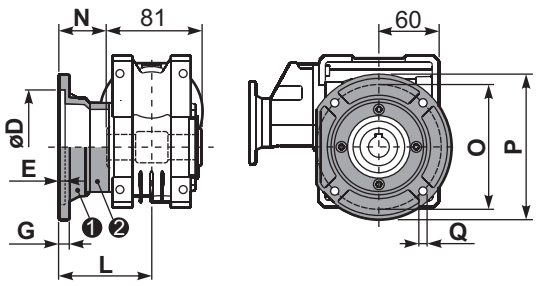
***On Request** output shaft with spacers

PP5M**FC**... Square flange
Flangia quadrata



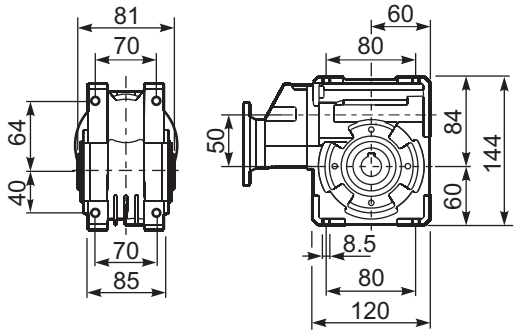
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	70 H8	5	9	90	49.5	85	125	11	KM50.9.010
FL	70 H8	5	9	120	79.5	85	125	11	KM50.9.011

PP5M**F1**... Round flange
Flangia rotonda

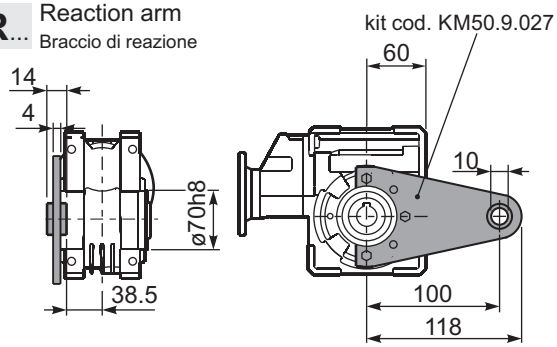


type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	110 H8	5	10	89	69.5	130	160	9.5	KM50.9.012
F2	95 H8	5	14.5	72	31.5	115	140	11	KM50.9.013

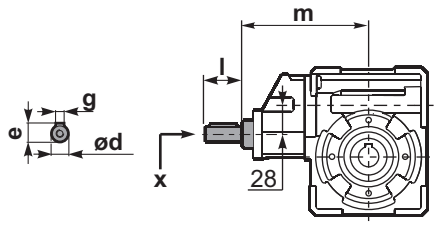
PP5M**FB**... Feet
Piedini



PP5M**BR**... Reaction arm
Braccio di reazione

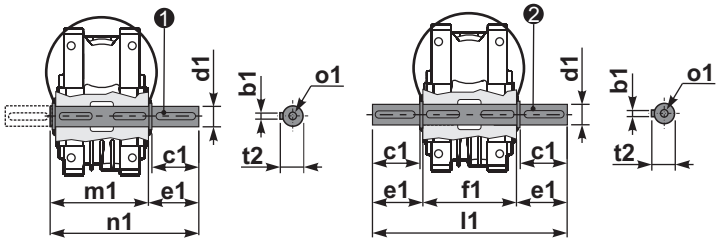


RP5MFB... Input shaft
Albero in entrata



PP5M.....**S**... Single Shaft
Albero lento semplice

PP5M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

	ød	e	g	l	m	x	
type **B**	14 h6	16	5	25	140.5	M5x13	C35.5.061
type **S**	-	-	-	-	-	-	-

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type **S**	8	50	$24^{-0.005}_{-0.020}$	68.8	-	-	86.5	155	27	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

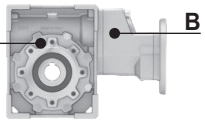
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P6M** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).

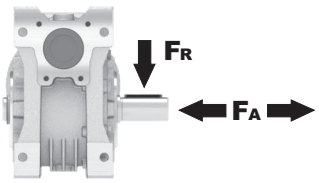


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

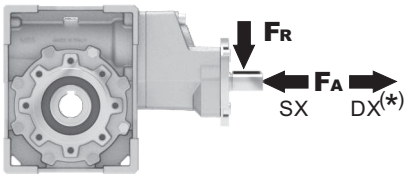
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	500	2500
50	600	3000
25	700	3800
15-6	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	61	305

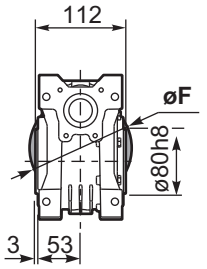
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

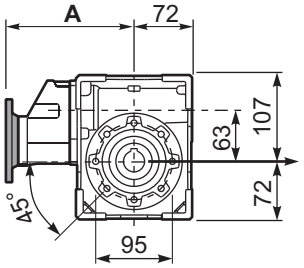
tab. 2

PP6M**FB**... Basic wormbox
Riduttore base

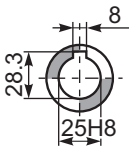
Gearbox weight peso riduttore	29.9÷111	139÷434
	7.00 Kg	6.60 Kg

	M.flange	Kit code	øF	A
29.9÷111	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
139÷434	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

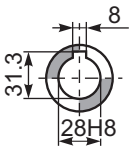




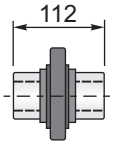
8 holes M8x14



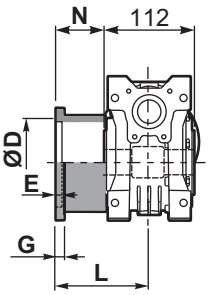
Standard
Hollow shaft

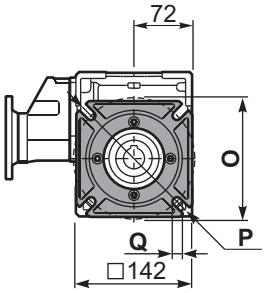


On request
A richiesta



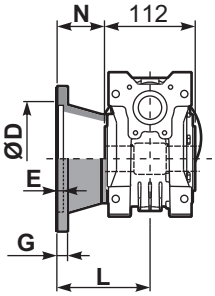
PP6M**FC**... Output flange
Flangia uscita

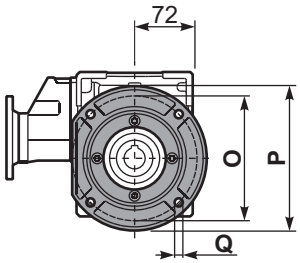




type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 H8	6	10	82	26	150	180	11	KM63.9.010
FL	115 H8	6	10	112	56	150	180	11	KM63.9.011

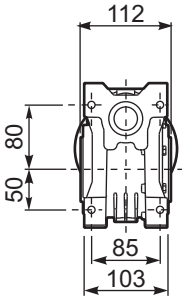
PP6M**F1**... Output flange
Flangia uscita

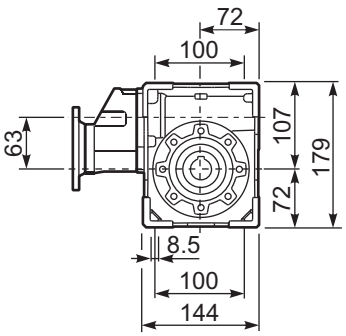




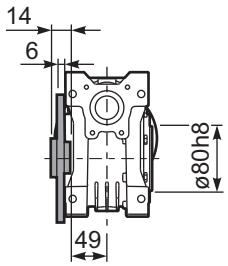
type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	10	98	42	165	200	11	KM63.9.012
F2	130 H8	5	10	107	51	165	200	11	KM63.9.013
F3	110 H8	5	16.5	80.5	24.5	130	160	11	KM63.9.014

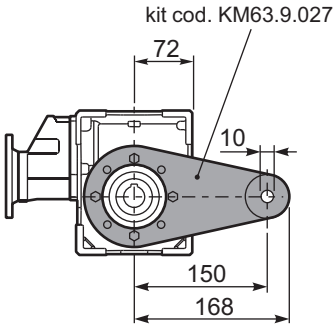
PP6M**FB**... Feet
Piedini



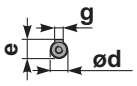


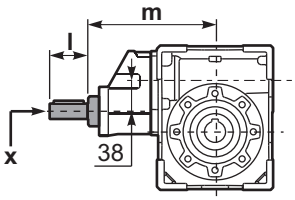
PP6M**BR**... Reaction arm
Braccio di reazione



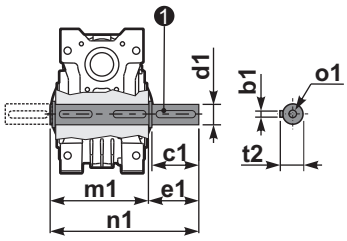


RP6MFB... Input shaft
Albero in entrata

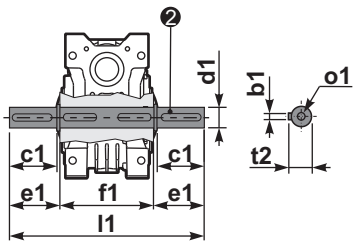




PP6M.....**S**... Single Shaft
Albero lento semplice



PP6M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM63.5.028 type **B** ❷ 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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
22	**62.9**	0.75	248	1.2	**0.87**	**286**					C	C		77	3.10	01
18	**78.5**	0.75	293	1.0	**0.73**	**286**					C	C		73	2.41	02
15	**94.2**	0.75	333	0.9	**0.70**	**310**					C	C		69	2.10	03
11	**126**	0.55	297	1.0	**0.55**	**296**	B				C	C		63	1.53	04
9	**157**	0.37	230	1.1	**0.41**	**252**	B				C	C		58	1.23	05
8	**185**	0.37	257	1.2	**0.43**	**296**	B				C	C		55	3.10	06
6	**231**	0.25	193	1.5	**0.38**	**296**	B				C	C		49	2.41	07
5	**277**	0.25	222	1.3	**0.33**	**296**	B				C	C		47	2.10	08
4	**378**	0.18	200	1.5	**0.27**	**296**	B				C	C		43	2.10	09

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 **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.

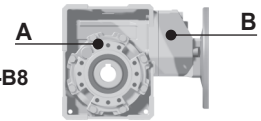
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P7M** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).

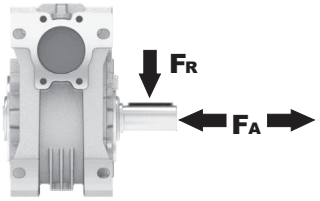


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

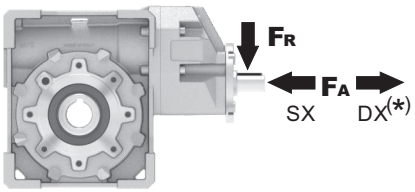
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	620	3100
50	720	3600
25	880	4400
15-6	1000	5000

Input shaft
albero in entrata



n [min^{-1}]	FA [N]	FR [N]
1400	108	540

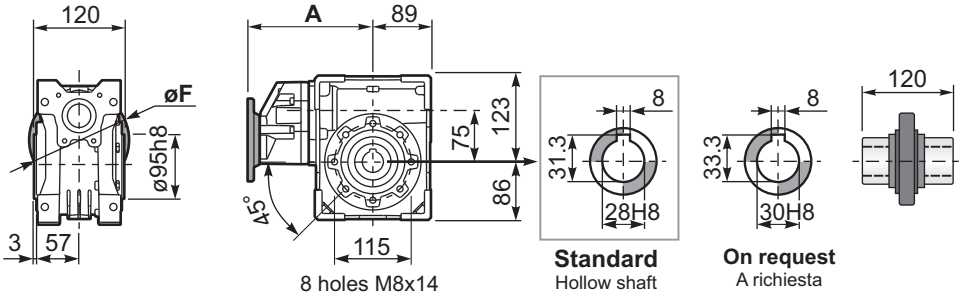
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

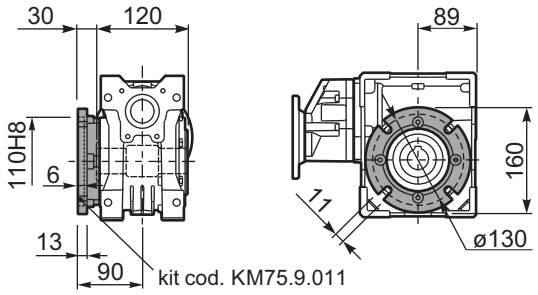
PP7M**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	9.90 kg

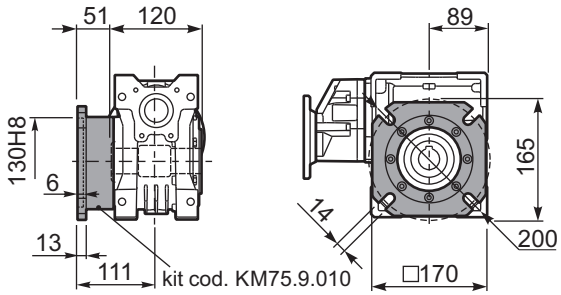
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	192.7
71B5	K063.4.042	160	190.7
80/90B5	K063.4.043	200	192.7
71B14	K063.4.047	105	190.7
80B14	K063.4.046	120	192.7
90B14	K063.4.041	140	192.7



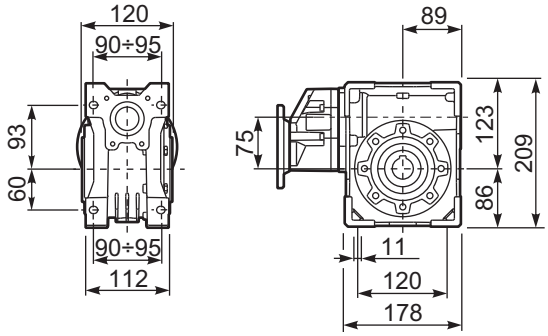
PP7M**FC**... Square flange
Flangia quadrata



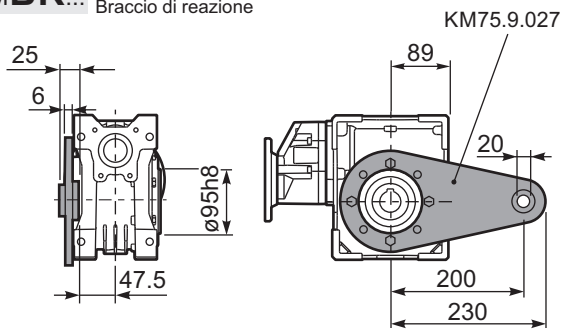
PP7M**FL**... Square flange
Flangia quadrata



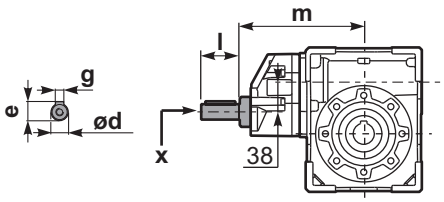
PP7M**FB**... Feet
Piedini



PP7M**BR**... Reaction arm
Braccio di reazione

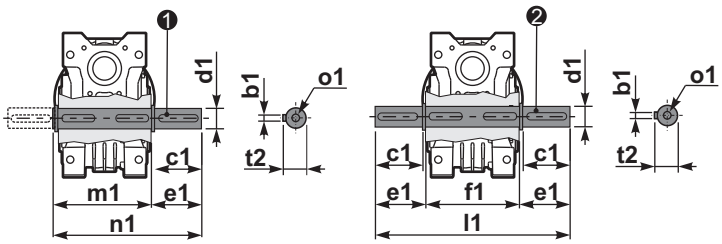


RP7MFB... Input shaft
Albero in entrata



PP7M.....**S**... Single Shaft
Albero lento semplice

PP7M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM75.5.028 Standard ❷ 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^{-1}

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

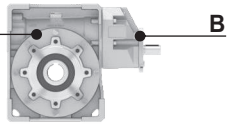
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P8M** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).

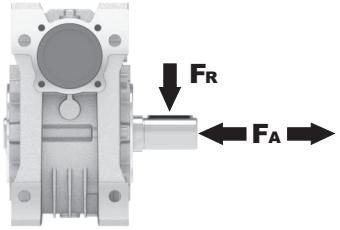


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

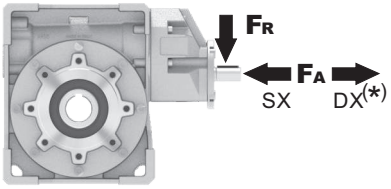
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	700	3500
50	800	4000
25	1000	5000
15-6	1160	5800

Input shaft
albero in entrata



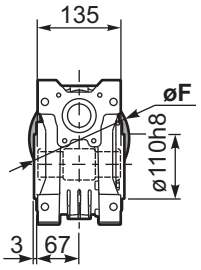
n_1 [min^{-1}]	FA [N]	FR [N]
1400	108	540

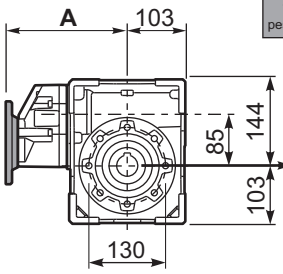
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

PP8M**FB**... Basic wormbox
Riduttore base

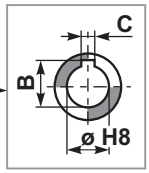
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	195.2
71B5	K063.4.042	160	193.2
80/90B5	K063.4.043	200	195.2
71B14	K063.4.047	105	193.2
80B14	K063.4.046	120	195.2
90B14	K063.4.041	140	195.2



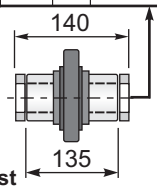


8 holes M10x18

Gearbox weight peso riduttore	12.3 kg

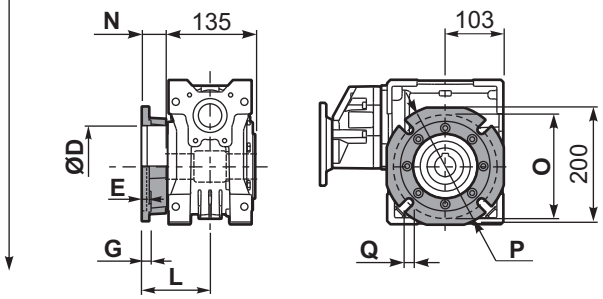


ø H8	B	C	*Spacer code
35 Standard	38.3	10	KM85.3.035
38 on request	41.3	10	KM85.3.038



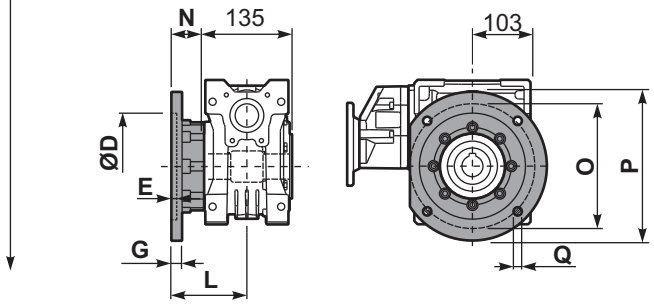
***On Request**
output shaft with spacers

PP8M**FC**... Output flange
Flangia uscita



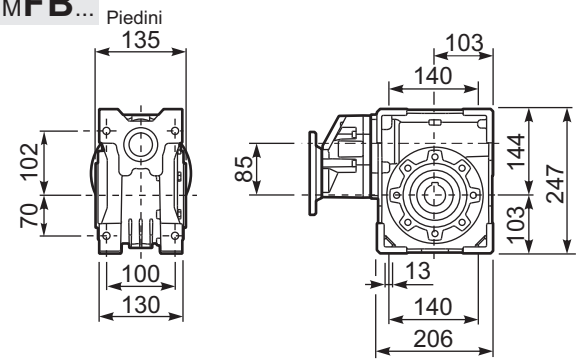
type B	øD	E	G	L	N	O	P	Q	kit code
FC	152 H8	5	16	111	43.5	176	205	13	K085.9.010
FL	180 H8	6	18	122	54.5	215	250	14	KM85.9.011

PP8M**F1**... Output flange
Flangia uscita

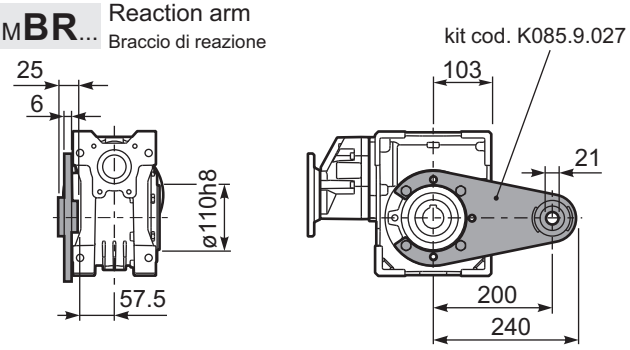


type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	13	109.5	42	165	200	13	KS085.9.015
F2	152 H8	5	16	151.5	84	176	205	13	K085.9.010 K085.0.201

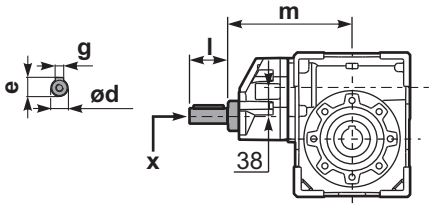
PP8M**FB**... Feet
Piedini



PP8M**BR**... Reaction arm
Braccio di reazione

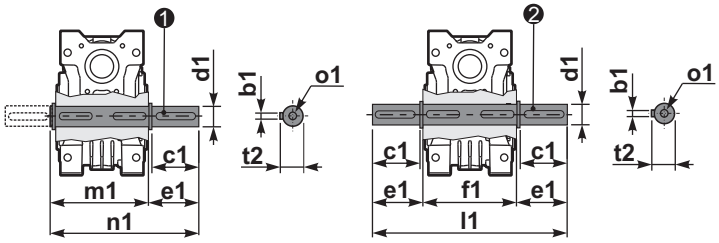


RP8MFB... Input shaft
Albero in entrata



PP8M.....**S**... Single Shaft
Albero lento semplice

PP8M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B** ❷ 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	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

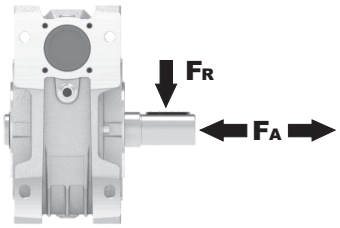
B3	B6	B7	B8	V5	V6
1.9/0.14LT	1.35/0.14 LT	1.35/0.14 LT	2.0/0.14 LT	2.0/0.14 LT	2.0/0.14 LT
SHELL Omala S2 GX 460			**ENI** Blasia 460		

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

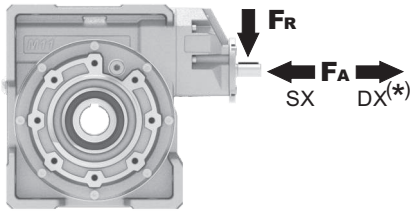
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	800	4000
50	920	4600
25	1200	6000
15-6	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	150	760

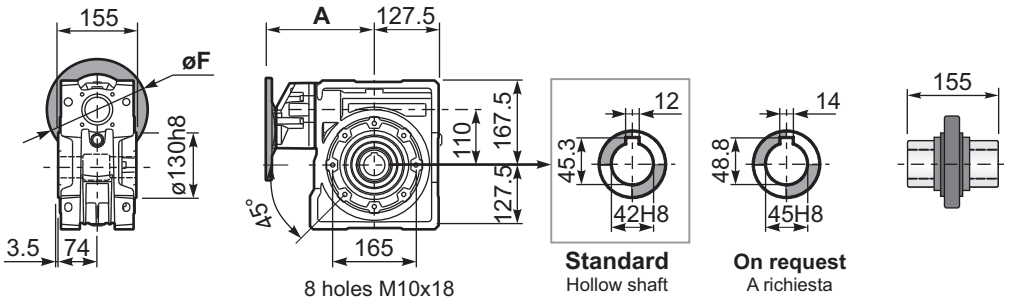
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

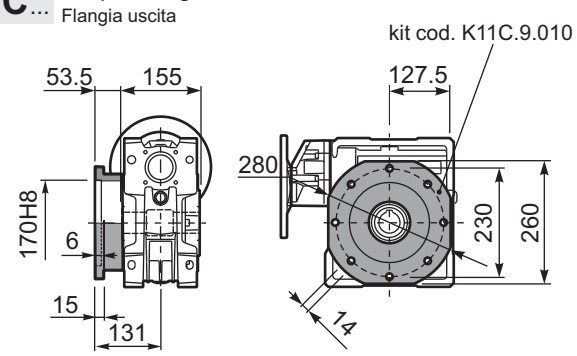
PP1M**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	37.3 kg

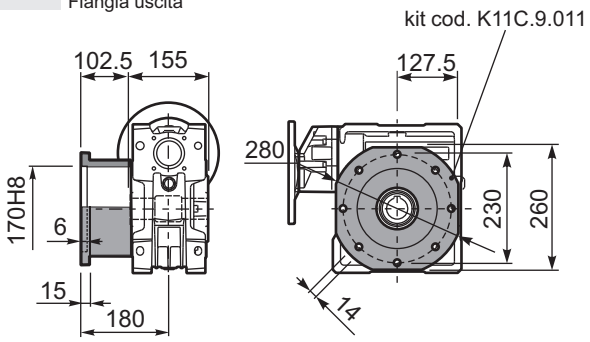
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	214.7
71B5	K063.4.042	160	212.7
80/90B5	K063.4.043	200	214.7
71B14	K063.4.047	105	212.7
80B14	K063.4.046	120	214.7
90B14	K063.4.041	140	214.7



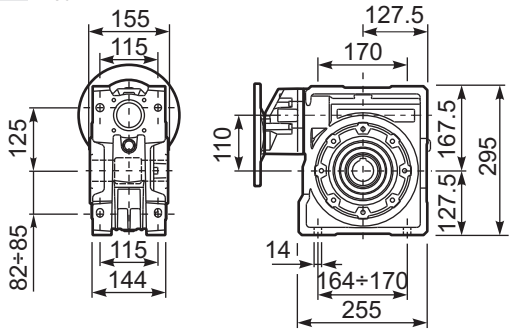
PP1M**FC**... Output flange
Flangia uscita



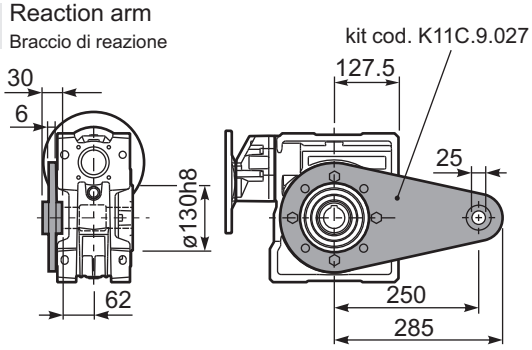
PP1M**FL**... Output flange
Flangia uscita



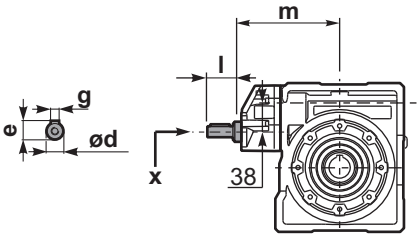
PP1M**FB**... Feet
Piedini



PP1M**BR**... Reaction arm
Braccio di reazione

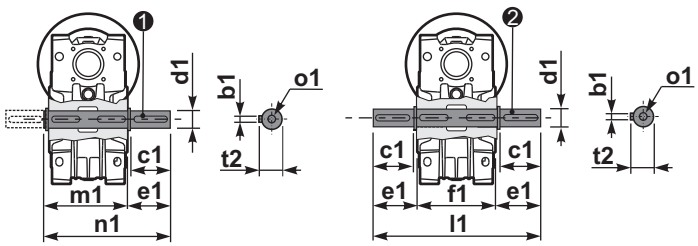


RP1MFB... Input shaft
Albero in entrata



PP1M.....**S**... Single Shaft
Albero lento semplice

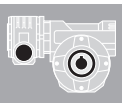
PP1M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K11C.5.028 type **B** ❷ 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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -A 56	Available B5 motor flanges -B 63	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
9.3	**150**	0.06	29	1.3	**0.08**	**38**	**B**		**B**-C		48	1.44	01
6.7	**210**	0.06	39	1.0	**0.06**	**38**	**B**		**B**-C		45	1.44	02
4.7	**300**	0.06	44	0.9	**0.05**	**38**	**B**		**B**-C		36	1.44	03
3.1	**450**	0.06*	38	<0.8	**0.04**	**38**	**B**		**B**-C		33	1.44	04
2.3	**600**	0.06*	38	<0.8	**0.03**	**38**	**B**		**B**-C		30	1.44	05
1.6	**900**	0.06*	38	<0.8	**0.02**	**38**	**B**		**B**-C		27	1.44	06
1.2	**1200**	0.06*	38	<0.8	**0.02**	**38**	**B**		**B**-C		26	1.44	07
0.8	**1830**	0.06*	38	<0.8	**0.01**	**38**	**B**		**B**-C		24	1.44	08
0.6	**2400**	0.06*	38	<0.8	**0.01**	**38**	**B**		**B**-C		22	1.44	09

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.

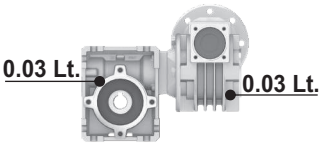
I Il riduttore tipo **33M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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 Quantity 0.03/0.03 Lt.

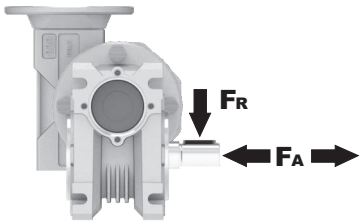


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

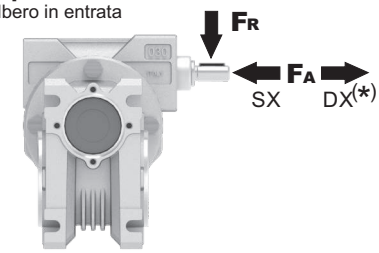
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	300	1800
15	400	2000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

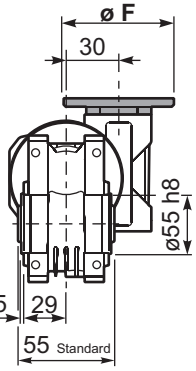
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

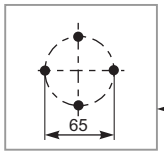
tab. 2

P33M**FB**... Basic wormbox
Riduttore base

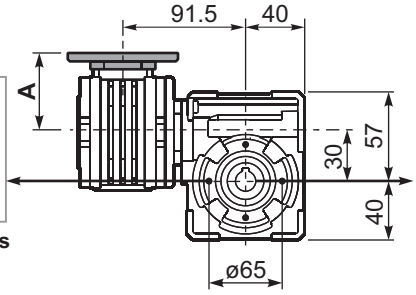
Gearbox weight peso riduttore	2.25 kg

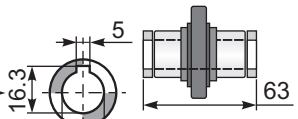
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5





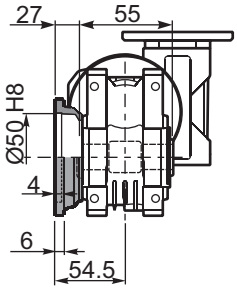
Mounting holes position
Posizione fori di montaggio

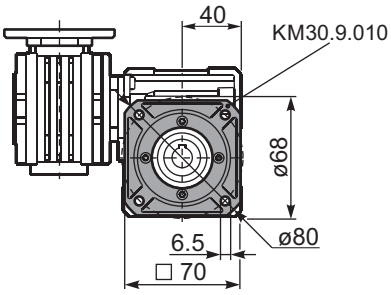




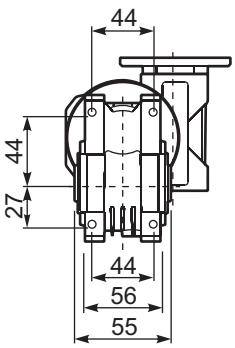
On Request
Output shaft with spacers cod. KM30.3.014

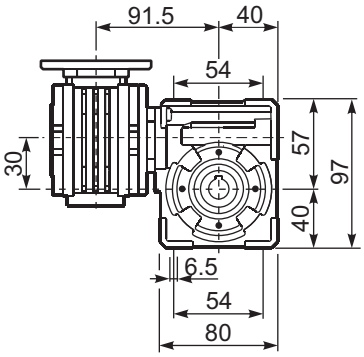
P33M**FC**... Square flange
Flangia quadrata



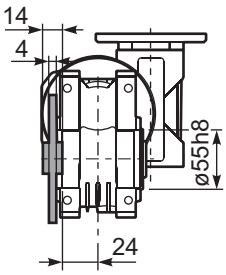


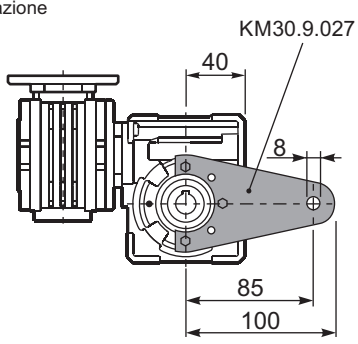
P33M**FB**... Feet
Piedini



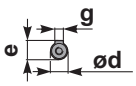


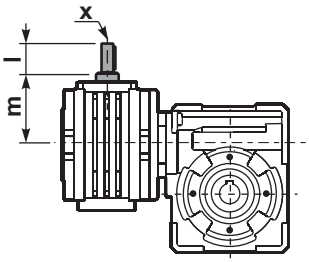
P33M**BR**... Reaction arm
Braccio di reazione



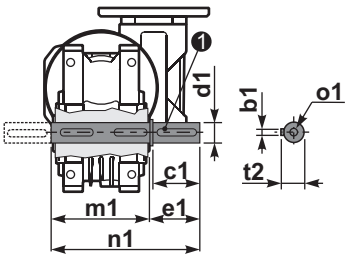


R33MFB... Input shaft
Albero in entrata

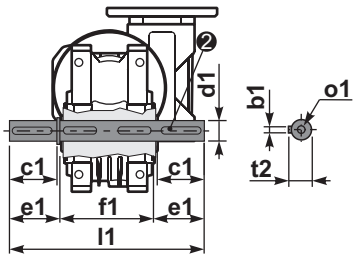




P33M.....**S**... Single Shaft
Albero lento semplice



P33M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K030.5.028 type **B**

❷ 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	$14^{-0.005}_{-0.020}$	35.5	55	126	59	94.5	16	M5x14
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -A 56	Available B5 motor flanges -B 63	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
10.0	**140**	0.12	57	1.3	0.15	72	**B**		**B**-C		50	2.2	01
7.0	**200**	0.12	79	0.9	0.11	72	**B**		**B**-C		48	2.2	02
5.0	**280**	0.09	77	0.9	0.08	72	**B**		**B**-C		45	2.4	03
3.3	**420**	0.06	62	1.2	0.07	72	**B**		**B**-C		36	1.6	04
2.5	**560**	0.06	76	1.0	0.06	72	**B**		**B**-C		33	2.5	05
1.9	**740**	0.06	91	0.8	0.05	72	**B**		**B**-C		30	1.8	06
1.5	**920**	0.06*	72	<0.8	0.04	72	**B**		**B**-C		27	1.5	07
1.3	**1120**	0.06*	72	<0.8	0.04	72	**B**		**B**-C		26	2.5	08
0.9	**1480**	0.06*	72	<0.8	0.03	72	**B**		**B**-C		24	1.8	09
0.8	**1840**	0.06*	72	<0.8	0.03	72	**B**		**B**-C		22	1.5	10
0.6	**2400**	0.06*	72	<0.8	0.02	72	**B**		**B**-C		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.

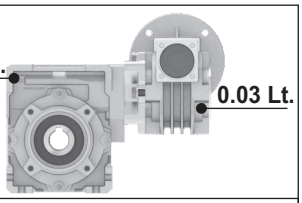
I Il riduttore tipo **43M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

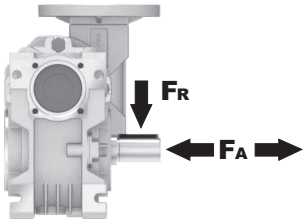


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

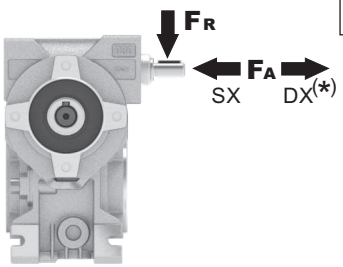
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	300	1800
15	400	2000

Input shaft
albero in entrata



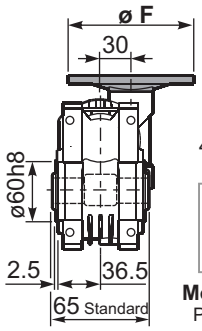
n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

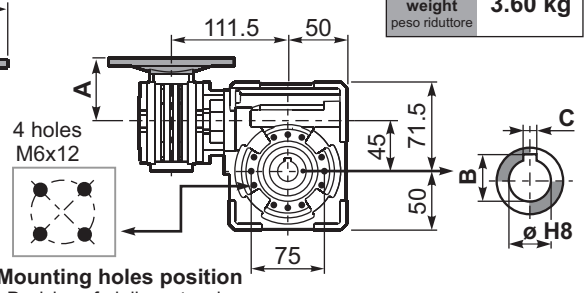
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P43M**FB**... Basic wormbox
Riduttore base

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

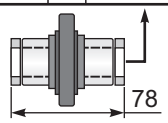




Mounting holes position
Posizione fori di montaggio

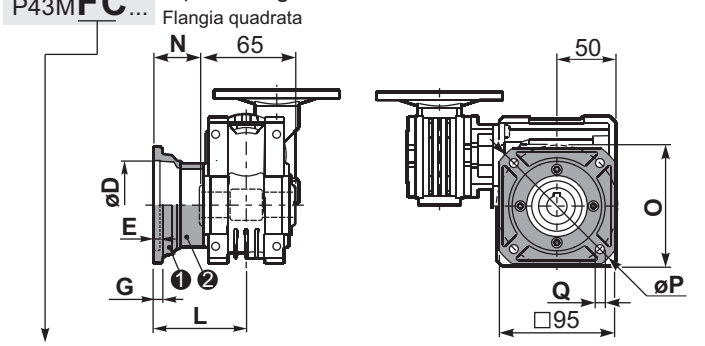
Gearbox weight peso riduttore	3.60 kg

ø H8	B	C	*Spacer code
18 Standard	20.8	6	KM45.3.018
19 on request	21.8	6	KM45.3.019
20 on request	22.8	6	KM45.3.020



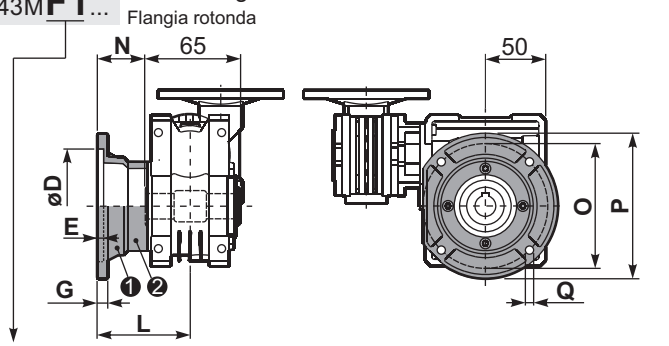
***On Request**
output shaft with spacers

P43M**FC**... Square flange
Flangia quadrata



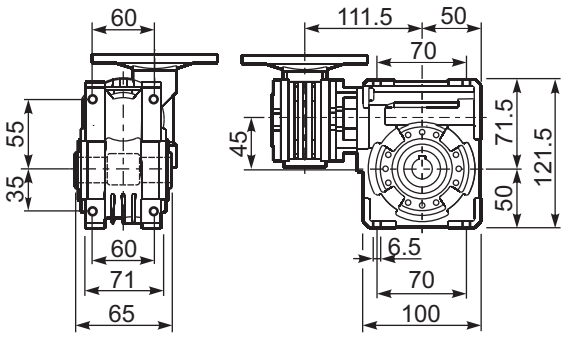
type B	øD	E	G	L	N	O	P	Q	kit code
FC	60 H8	4	7	67	34.5	75	110	9	KM45.9.010
FL	60 H8	4	7	97	64.5	75	110	9	KM45.9.011

P43M**F1**... Round flange
Flangia rotonda



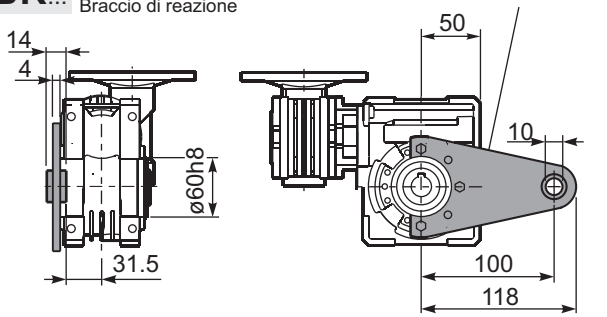
type S	øD	E	G	L	N	O	P	Q	kit code
F1	95H8	5	9	80	47.5	115	140	9.5	KM45.9.012
F2	-	-	-	-	-	-	-	-	-

P43M**FB**... Feet
Piedini

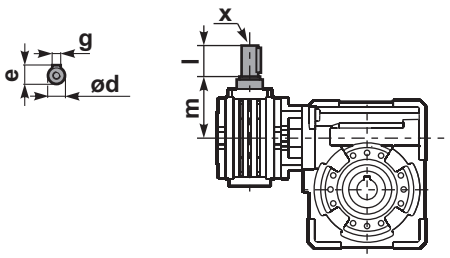


P43M**BR**... Reaction arm
Braccio di reazione

kit cod. KM45.9.027

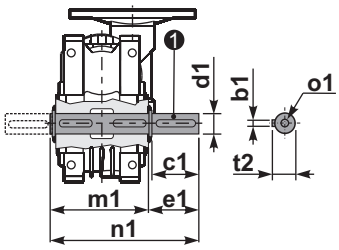


R43MFB... Input shaft
Albero in entrata



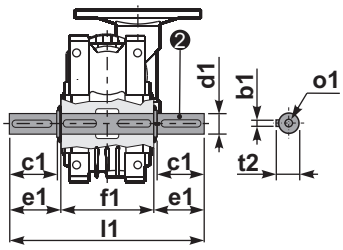
	ød	e	g	l	m	x	kit code
type **B**	9 h6	10.2	3	20	58	-	K030.5.006 PAM63
type **S**	-	-	-	-	-	-	-

P43M.....**S**... Single Shaft
Albero lento semplice



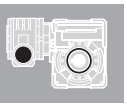
❶ kit cod. K045.5.028 type **B**
kit cod. KS045.5.030 type **S**

P43M.....**D**... Double Shaft
Albero lento bisp.



❷ kit cod. K045.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	6	32	$18^{-0.005}_{-0.020}$	43	65	151	70	113	20.5	M6x18
type **S**	6	40	$19^{-0.005}_{-0.020}$	58.5	-	-	70	128.5	21.5	M8x20



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -A 56	Available B5 motor flanges -B 63	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
5.6	**252**	0.12	97	1.4	0.17	138	B		B-C		47	2.1	01
3.9	**360**	0.12	124	1.1	0.13	138	B		B-C		42	2.1	02
2.6	**540**	0.09	129	1.1	0.10	138	B		B-C		39	2.1	03
1.9	**720**	0.09	159	0.9	0.08	138	B		B-C		36	2.1	04
1.6	**860**	0.06	113	1.2	0.07	138	B		B-C		32	1.8	05
1.2	**1200**	0.06	133	1.0	0.06	138	B		B-C		27	1.3	06
1.0	**1440**	0.06	153	0.9	0.05	138	B		B-C		26	2.1	07
0.8	**1720**	0.06	176	0.8	0.05	138	B		B-C		25	1.8	08
0.6	**2400**	0.06*	132	<0.8	0.04	132	B		B-C		21	1.3	09

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.

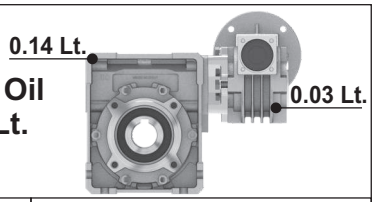
I Il riduttore tipo **53M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.



SHELL Omala S4 WE 320	ENI Telium VSF 320

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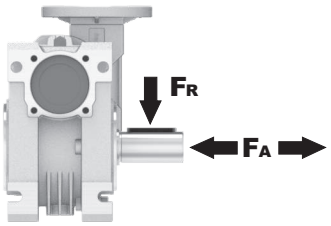
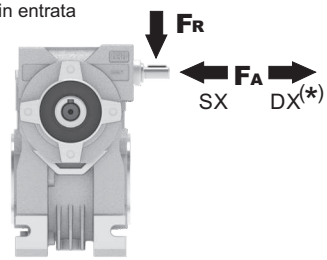
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	480	2500
15	560	2800

Input shaft
albero in entrata



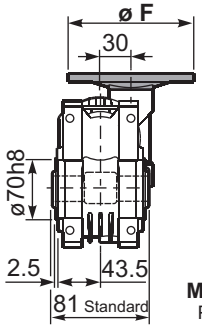
n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

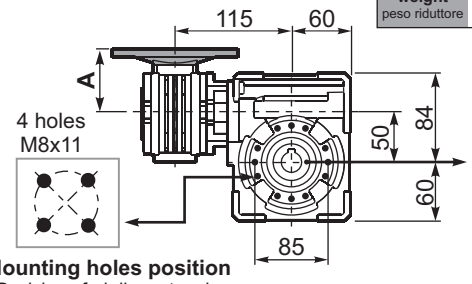
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P53M**FB**... Basic wormbox
Riduttore base

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

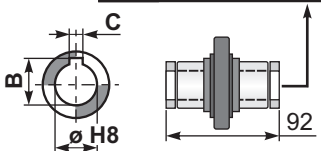




Mounting holes position
Posizione fori di montaggio

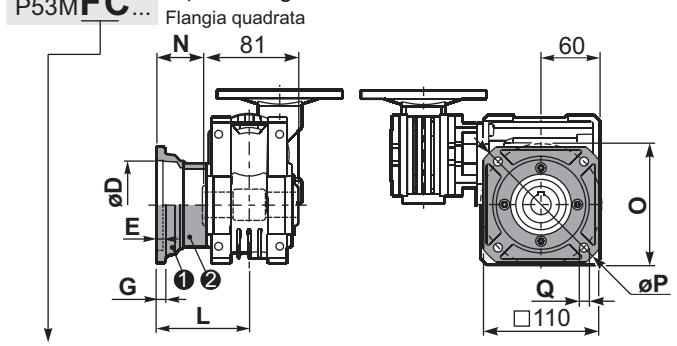
Gearbox weight peso riduttore	4.61 kg

ø H8	B	C	*Spacer code
25 Standard	28.3	8	KM50.3.025
24 on request	27.3	8	KM50.3.024



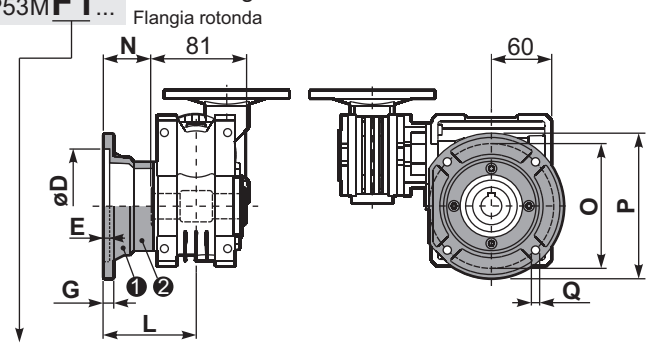
***On Request**
output shaft
with spacers

P53M**FC**... Square flange
Flangia quadrata



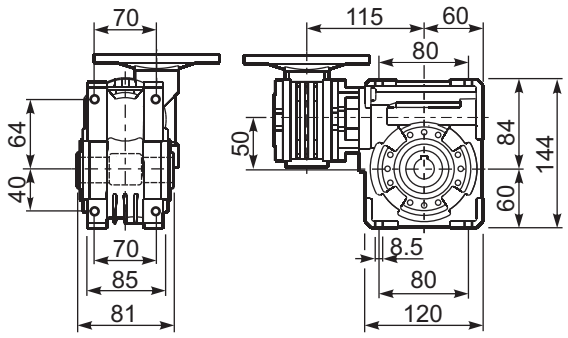
type B	øD	E	G	L	N	O	P	Q	kit code
FC	70 H8	5	9	90	49.5	85	125	11	KM50.9.010
FL	70 H8	5	9	120	79.5	85	125	11	KM50.9.011

P53M**F1**... Round flange
Flangia rotonda



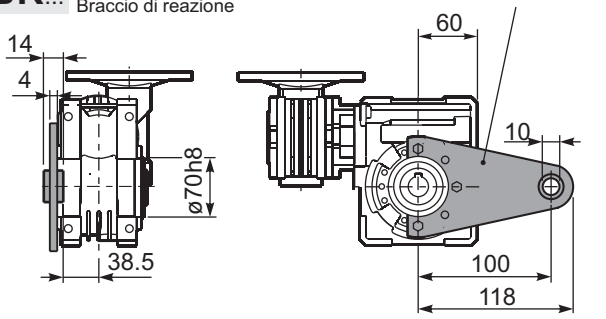
type S	øD	E	G	L	N	O	P	Q	kit code
F1	110 H8	5	10	89	48.5	130	160	9.5	KM50.9.012
F2	95 H8	5	14.5	72	31.5	115	140	11	KM50.9.013

P53M**FB**... Feet
Piedini

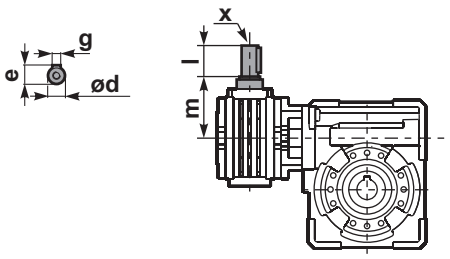


P53M**BR**... Reaction arm
Braccio di reazione

kit cod. KM50.9.027



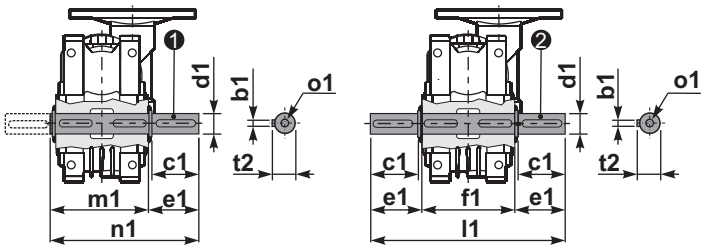
R53MFB... Input shaft
Albero in entrata



	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

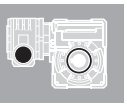
P53M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K050.5.028 type **B**
kit cod. KS050.5.030 type **S**

❷ kit cod. K050.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	52	$25^{-0.005}_{-0.020}$	59.5	81	200	86.5	146	28	M8x20
type **S**	8	50	$24^{-0.005}_{-0.020}$	68.8	-	-	86.5	155	27	M8x20



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -A 56	Available B5 motor flanges -B 63	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
5.6	**252**	0.18	142	1.9	0.34	270	**B**		**B**-C		46	2.7	01
3.9	**360**	0.18	181	1.5	0.27	270	**B**		**B**-C		41	2.7	02
2.6	**540**	0.18	245	1.1	0.20	270	**B**		**B**-C		37	2.7	03
1.9	**720**	0.12	200	1.3	0.16	270	**B**		**B**-C		34	2.7	04
1.3	**1080**	0.12	265	1.0	0.12	270	**B**		**B**-C		30	2.7	05
1.0	**1440**	0.09	239	1.1	0.10	270	**B**		**B**-C		27	2.7	06
0.5	**2745**	0.06	258	1.0	0.06	270	**B**		**B**-C		23	2.1	07

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.

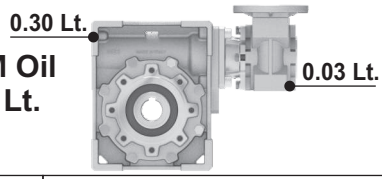
I Il riduttore tipo **63M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

▪ LUBRICATION 63M Oil Quantity 0.30/0.03 Lt.

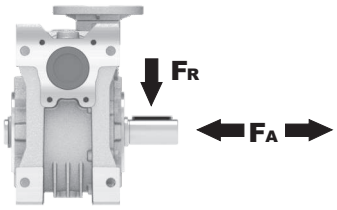


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

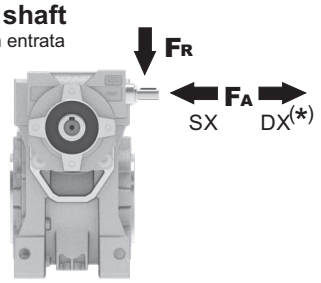
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

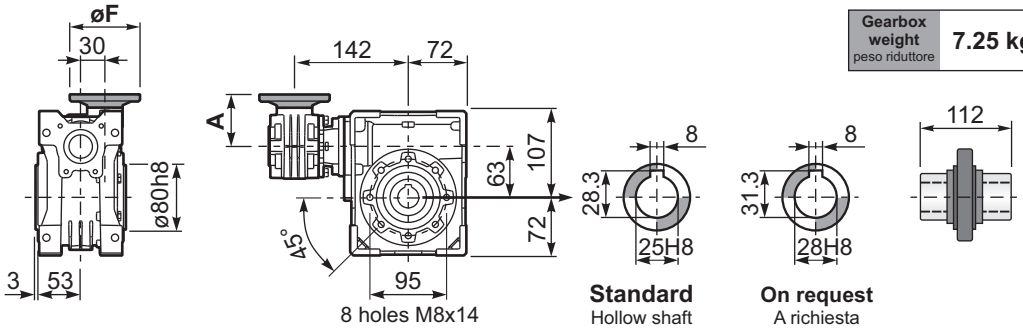
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P63M**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	7.25 kg

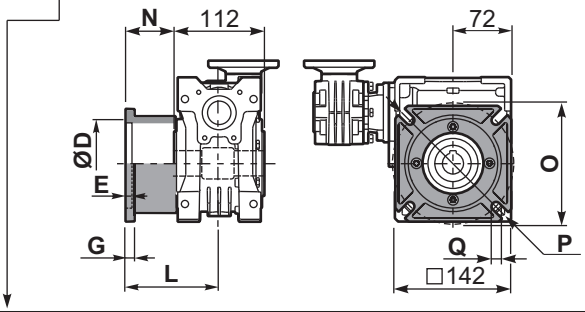
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5



Standard
Hollow shaft

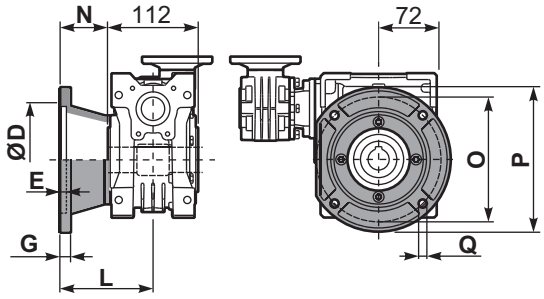
On request
A richiesta

P63M**FC**... Square flange
Flangia quadrata



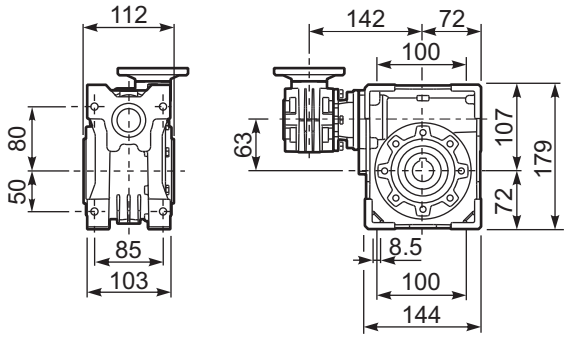
type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 H8	6	10	82	26	150	180	11	KM63.9.010
FL	115 H8	6	10	112	56	150	180	11	KM63.9.011

P63M**F1**... Round flange
Flangia rotonda

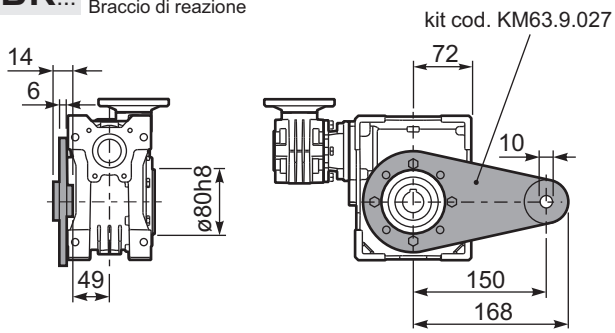


type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	10	98	42	165	200	11	KM63.9.012
F2	130 H8	5	10	107	51	165	200	11	KM63.9.013
F3	110 H8	5	16.5	80.5	24.5	130	160	11	KM63.9.014

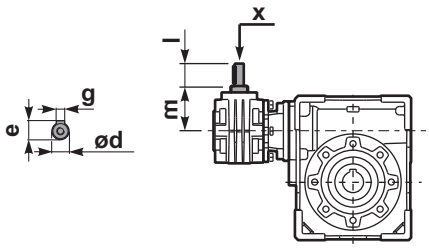
P63M**FB**... Feet
Piedini



P63M**BR**... Reaction arm
Braccio di reazione



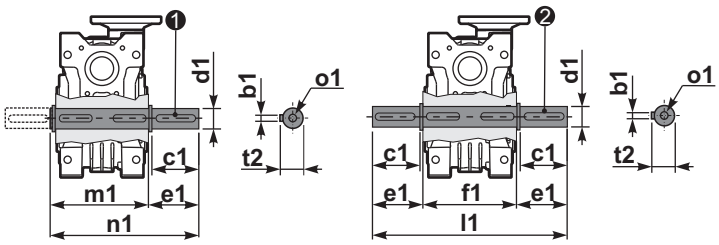
R63MFB... Input shaft
Albero in entrata



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

P63M.....**S**... Single Shaft
Albero lento semplice

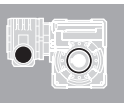
P63M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM63.5.028 type **B**

❷ kit cod. KM63.5.029 type **B**

	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
5.6	**252**	0.25	198	1.5	0.37	290	**B**		B-C	**B**-C		46	2.7	01
3.9	**360**	0.25	258	1.1	0.28	290	**B**		B-C	**B**-C		42	2.7	02
2.8	**504**	0.18	241	1.2	0.22	290	**B**		B-C	**B**-C		39	2.7	03
1.9	**756**	0.18	306	0.9	0.17	290	**B**		B-C	**B**-C		33	2.7	04
1.4	**1008**	0.12	256	1.1	0.14	290	**B**		B-C	**B**-C		31	2.7	05
1.1	**1332**	0.12	327	0.9	0.11	290	**B**		B-C	**B**-C		30	2.7	06
0.8	**1656**	0.09	285	1.0	0.09	290	**B**		B-C	**B**-C		28	2.7	07
0.6	**2160**	0.06	230	1.3	0.08	290	**B**		B-C	**B**-C		26	2.7	08
0.6	**2520**	0.06	258	1.1	0.07	290	**B**		B-C	**B**-C		25	2.7	09

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.

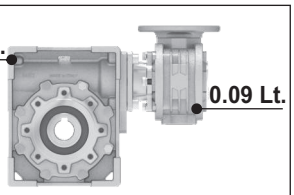
I Il riduttore tipo **64M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

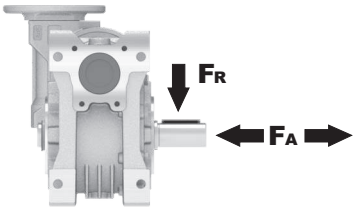


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

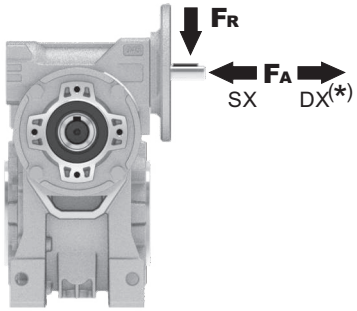
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

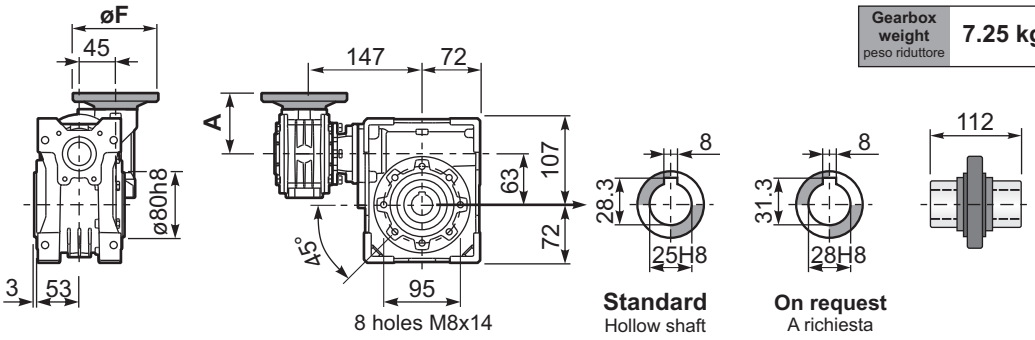
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P64M**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	7.25 kg

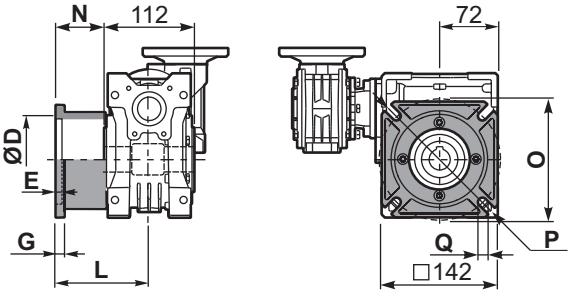
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	74
71B5	K050.4.042	160	71.5
56B14	KC40.4.049	80	71.5
63B14	K050.4.047	90	74
71B14	K050.4.045	105	71.5



Standard Hollow shaft

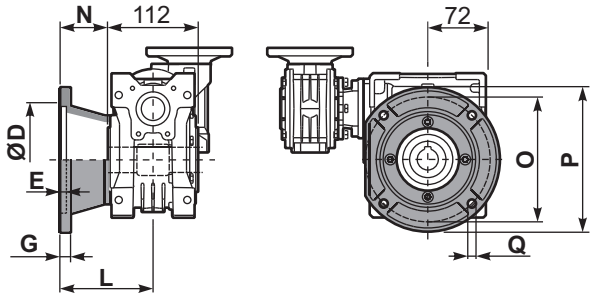
On request A richiesta

P64M**FC**... Square flange
Flangia quadrata



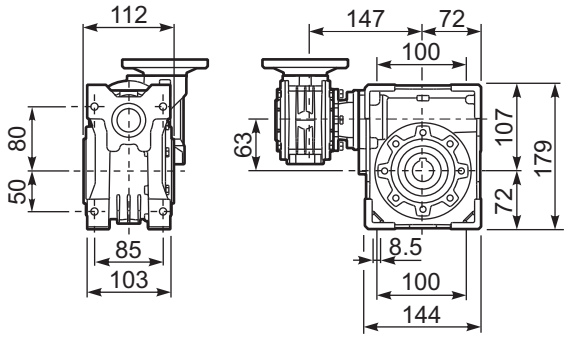
type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 H8	6	10	82	26	150	180	11	KM63.9.010
FL	115 H8	6	10	112	56	150	180	11	KM63.9.011

P64M**F1**... Round flange
Flangia rotonda

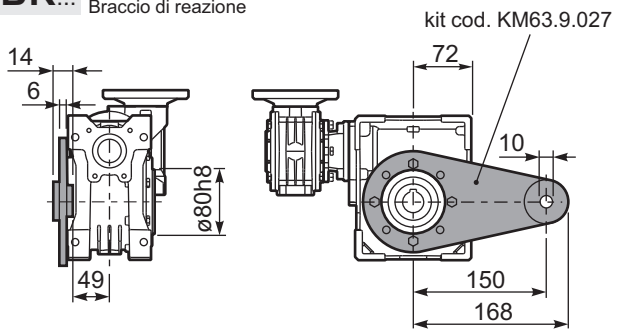


type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	10	98	42	165	200	11	KM63.9.012
F2	130 H8	5	10	107	51	165	200	11	KM63.9.013
F3	110 H8	5	16.5	80.5	24.5	130	160	11	KM63.9.014

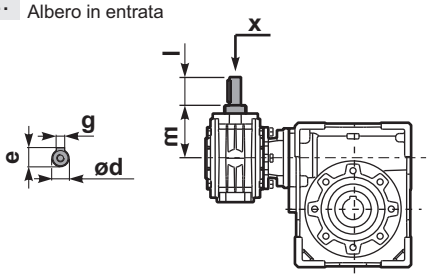
P64M**FB**... Feet
Piedini



P64M**BR**... Reaction arm
Braccio di reazione



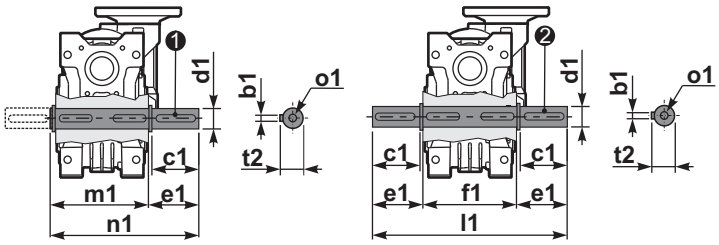
R64MFB... Input shaft
Albero in entrata



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

P64M.....**S**... Single Shaft
Albero lento semplice

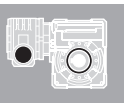
P64M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM63.5.028 type **B**

❷ kit cod. KM63.5.029 type **B**

	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
5	**280**	0.37	403	1.0	0.39	420	**B**		B-C	**B**-C		57	3.10	01
3.5	**400**	0.25	314	1.3	0.33	420	**B**		B-C	**B**-C		46	3.10	02
2.5	**560**	0.25	420	1.0	0.25	420	**B**		B-C	**B**-C		44	3.10	03
1.7	**840**	0.18	423	1.0	0.18	420	**B**		B-C	**B**-C		41	3.10	04
1.3	**1120**	0.12	339	1.2	0.15	420	**B**		B-C	**B**-C		37	3.10	05
0.9	**1480**	0.09	336	1.2	0.11	420	**B**		B-C	**B**-C		37	3.10	06
0.8	**1840**	0.09	373	1.1	0.10	420	**B**		B-C	**B**-C		33	3.10	07
0.6	**2400**	0.09	413	1.0	0.09	420	**B**		B-C	**B**-C		28	3.10	08
0.5	**2800**	0.06	298	1.4	0.08	420	**B**		B-C	**B**-C		26	3.10	09
0.3	**4080**	0.06	250	1.4	0.09	359	**B**		B-C	**B**-C		15	3.10	10

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.

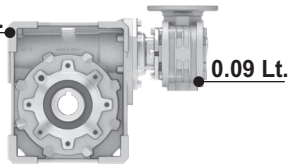
I Il riduttore tipo **74M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

▪ LUBRICATION 74M Oil Quantity 0.40/0.09 Lt.

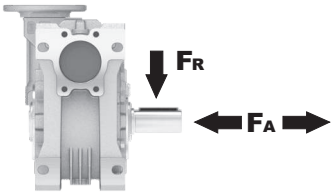


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

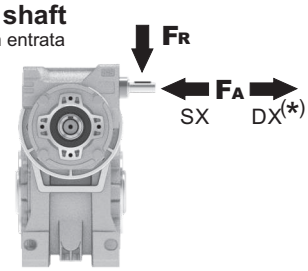
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	880	4400
15	1000	5000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

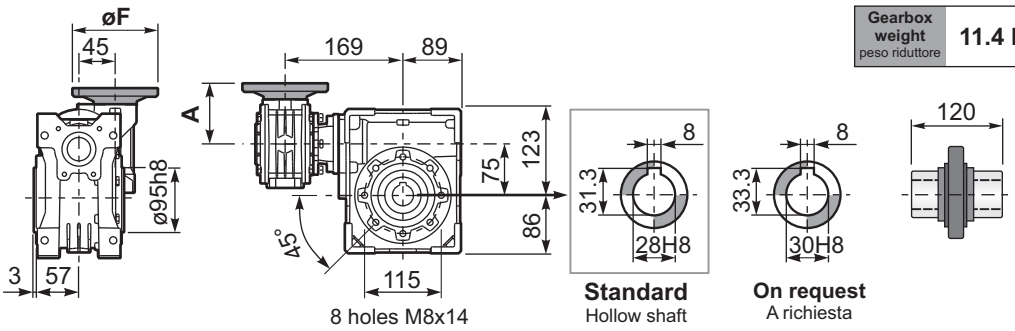
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

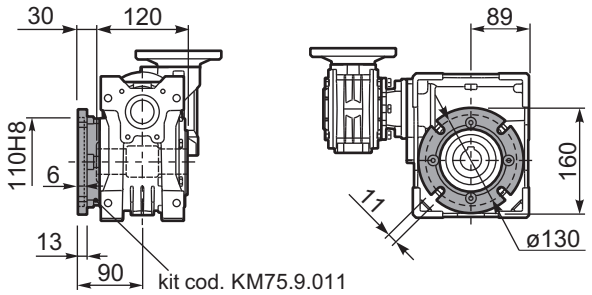
P74M**FB**... Basic wormbox
Riduttore base

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

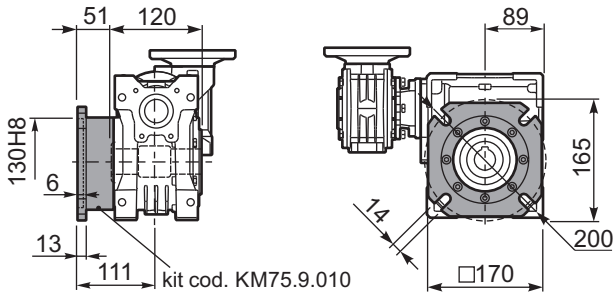
Gearbox weight peso riduttore	11.4 kg



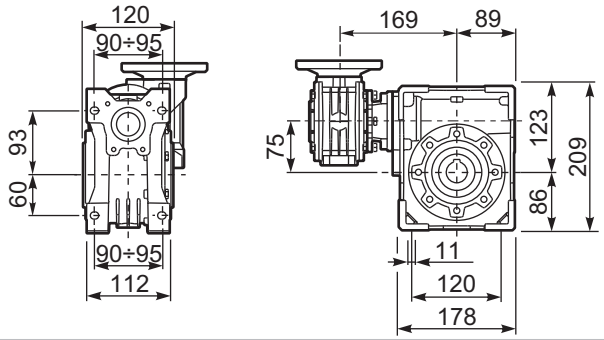
P74M**FC**... Round flange
Flangia rotonda



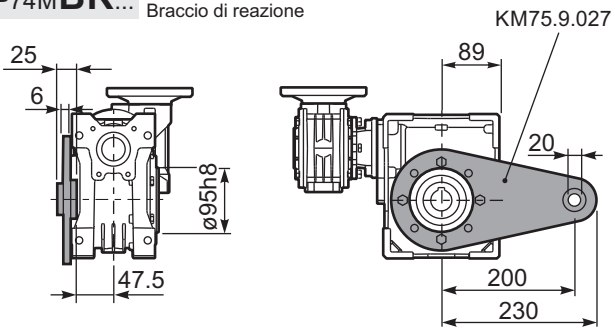
P74M**FL**... Square flange
Flangia quadrata



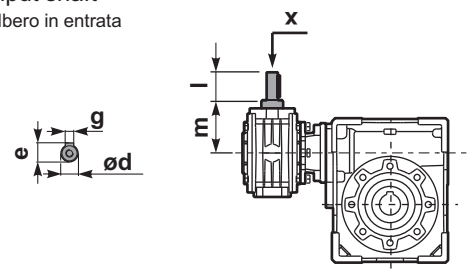
P74M**FB**... Feet
Piedini



P74M**BR**... Reaction arm
Braccio di reazione

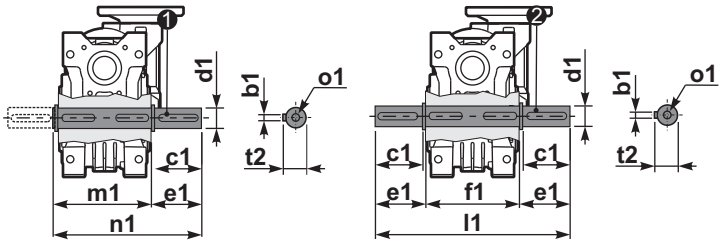


R74MFB... Input shaft
Albero in entrata



P74M.....**S**... Single Shaft
Albero lento semplice

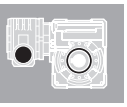
P74M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. KM75.5.028 Standard ❷ 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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
10	**140**	0.37	205	2.1	0.76	423	**B**		B-C	**B**-C		58	4.5	01
7.1	**196**	0.37	257	1.6	0.61	423	**B**		B-C	**B**-C		52	4.7	02
5.0	**280**	0.37	332	1.8	0.66	596	**B**		B-C	**B**-C		47	4.7	03
3.6	**392**	0.37	435	1.4	0.51	596	**B**		B-C	**B**-C		44	4.7	04
2.4	**588**	0.37	549	1.1	0.40	596	**B**		B-C	**B**-C		37	4.7	05
1.8	**784**	0.25	455	1.3	0.33	596	**B**		B-C	**B**-C		34	4.7	06
1.4	**1036**	0.25	583	1.0	0.26	596	**B**		B-C	**B**-C		33	4.7	07
1.1	**1288**	0.18	474	1.2	0.22	580	**B**		B-C	**B**-C		30	4.7	08
0.7	**1960**	0.12	449	1.2	0.14	518	**B**		B-C	**B**-C		28	4.7	09
0.5	**2856**	0.12	584	0.9	0.11	518	**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 — **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.

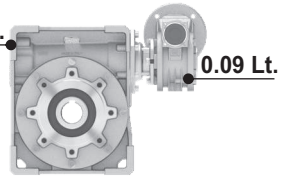
I Il riduttore tipo **84M** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

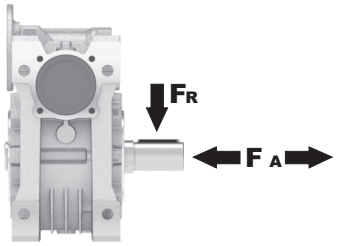


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

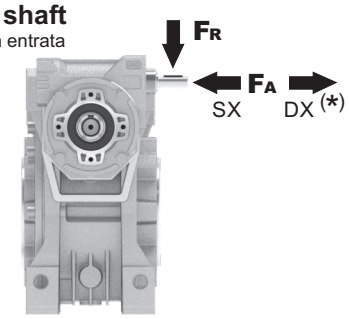
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n [min^{-1}] 2	FA [N]	FR [N]
25	1000	5000
15	1160	5800

Input shaft
albero in entrata



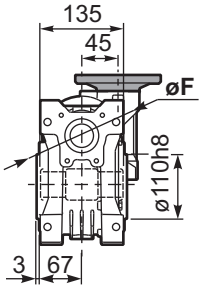
n [min^{-1}] 1	FA [N]	FR [N]
1400	42	210

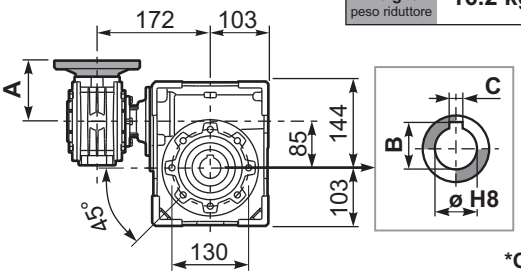
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P84M**FB**... 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

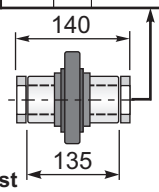




8 holes M10x18

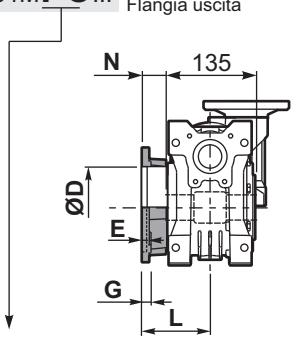
Gearbox weight peso riduttore	16.2 kg

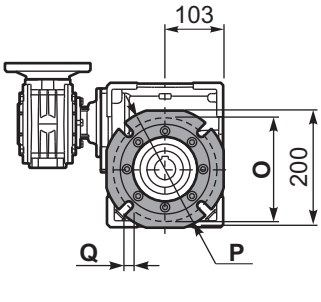
ø H8	B	C	*Spacer code
35 Standard	38.3	10	KM85.3.035
38 on request	41.3	10	KM85.3.038



***On Request**
output shaft with spacers

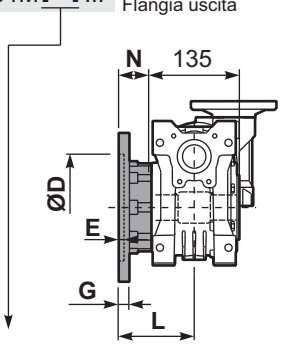
P84M**FC**... Output flange
Flangia uscita

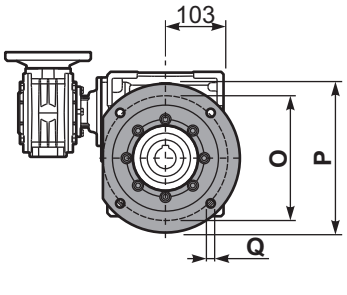




type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	152 H8	5	16	111	43.5	176	205	13	K085.9.010
FL	180 H8	6	18	122	54.5	215	250	14	KM85.9.011

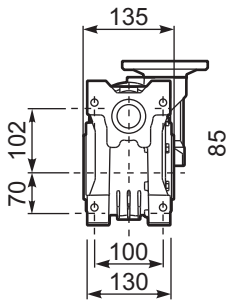
P84M**F1**... Output flange
Flangia uscita

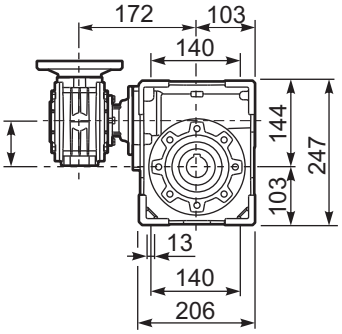




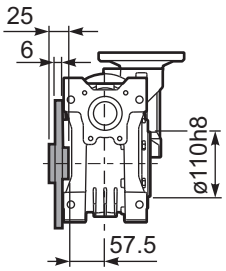
type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	130 H8	5	13	109.5	42	165	200	13	KS085.9.015
F2	152 H8	5	16	151.5	84	176	205	13	K085.9.010 K085.0.201

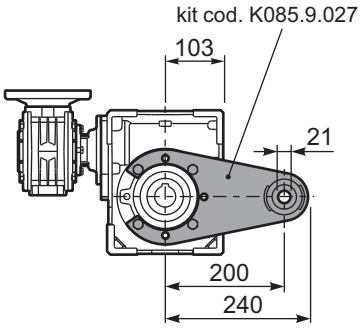
P84M**FB**... Feet
Piedini



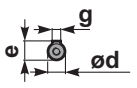


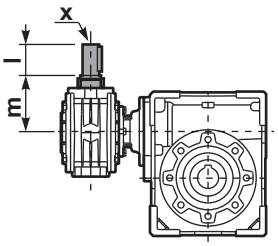
P84M**BR**... Reaction arm
Braccio di reazione





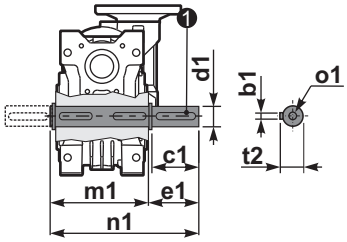
R84MFB... Input shaft
Albero in entrata



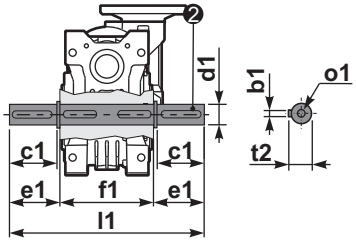


	ød	e	g	l	m	x	kit code
type **B**	11 h6	12.5	4	30	68	-	❶ K045.5.006 PAM71 ❷ -
type **S**	-	-	-	-	-	-	❶ - ❷ -

P84M.....**S**... Single Shaft
Albero lento semplice



P84M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B** ❷ kit cod. K085.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	Available B14 motor flanges -O 56	-P 63	-Q 71	-R 80	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
6.7	**210**	0.75	591	1.8	1.3	1036	B	B			B-C	B		55	5.6	01
4.7	**300**	0.75	752	1.6	1.2	1174	B	B			B-C	B		49	5.6	02
3.3	**420**	0.75	1010	1.2	0.87	1174	B	B			B-C	B		47	5.6	03
2.6	**540**	0.55	851	1.4	0.76	1174	B	B			B-C	B		42	5.6	04
1.8	**780**	0.55	1112	1.1	0.58	1174	B	B			B-C	B		38	5.6	05
1.3	**1080**	0.37	1009	1.2	0.43	1174	B			B-C	B-C			37	5.6	06
1.1	**1290**	0.37	1140	1.0	0.38	1174	B			B-C	B-C			35	5.6	07
0.8	**1800**	0.25	921	1.3	0.32	1174	B			B-C	B-C			30	5.6	08
0.7	**2040**	0.25	1044	1.1	0.28	1174	B			B-C	B-C			30	5.6	09
0.6	**2400**	0.25	1228	1.0	0.26	1174	B			B-C	B-C			28	5.6	10
0.5	**3000**	0.18	958	1.0	0.18	978	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 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 de type **15M** 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.

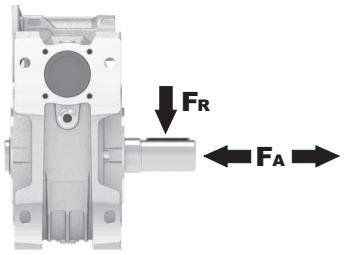
E El reductor tamaño **15M** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos.
El 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.

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** Blasia 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

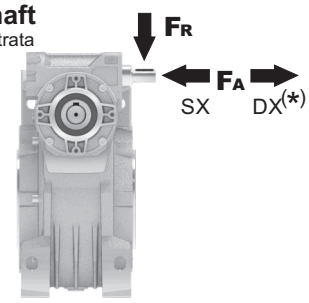
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	1200	6000
15	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	76	380

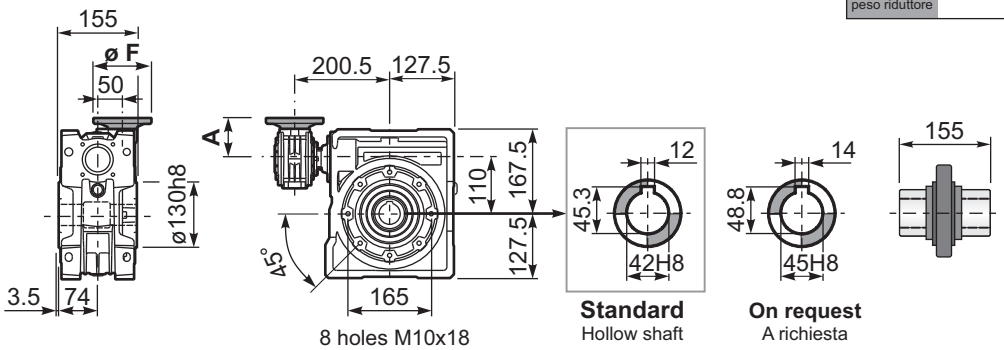
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

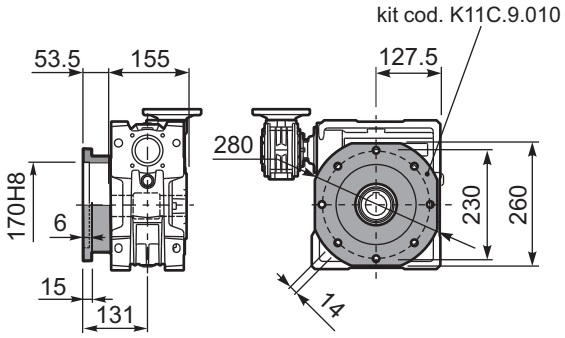
P15M**FB**... Basic wormbox
Riduttore base

Gearbox weight peso riduttore	38.8 kg

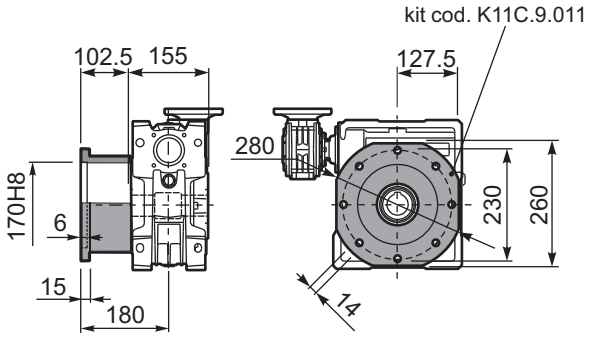
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	78.5
71B5	K050.4.042	160	76
80B5	K050.4.043	200	76.5
56B14	KC40.4.049	80	76
63B14	K050.4.047	90	78.5
71B14	K050.4.045	105	76
80B14	K050.4.046	120	76.5



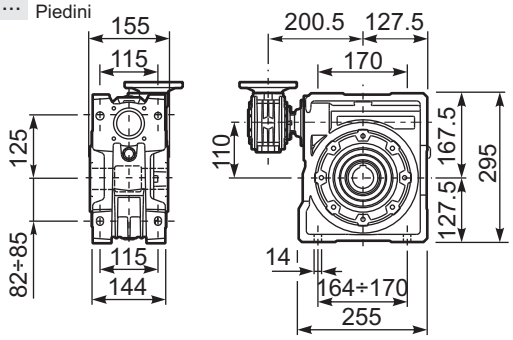
P15M**FC**... Output flange
Flangia uscita



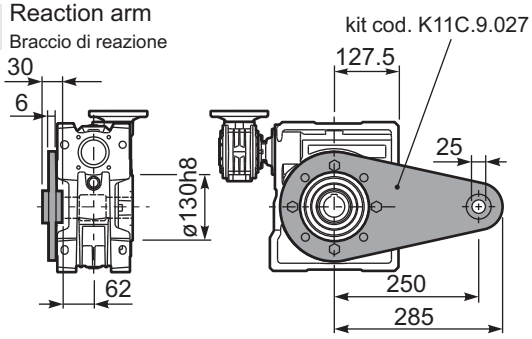
P15M**FL**... Output flange
Flangia uscita



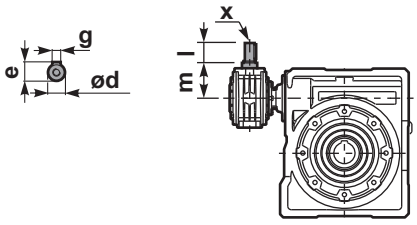
P15M**FB**... Feet
Piedini



P15M**BR**... Reaction arm
Braccio di reazione

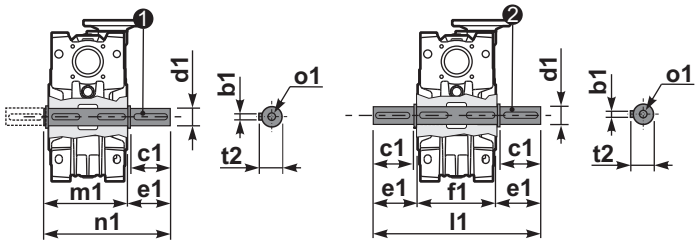


R15MFB... Input shaft
Albero in entrata



P15M.....**S**... Single Shaft
Albero lento semplice

P15M.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K11C.5.028 type **B** ❷ kit cod. K11C.5.029 type **B**

	ød	e	g	l	m	x	kit code
type **B**	16 h6	18	5	30	79.5	M6x16	❶ K050.5.006 PAM71 ❷ K050.5.007 PAM80
type **S**	14 h6	16	5	30	79.5	M5x10	❶ KS050.5.008 PAM71 ❷ 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**	-	-	-	-	-	-	-	-	-	-

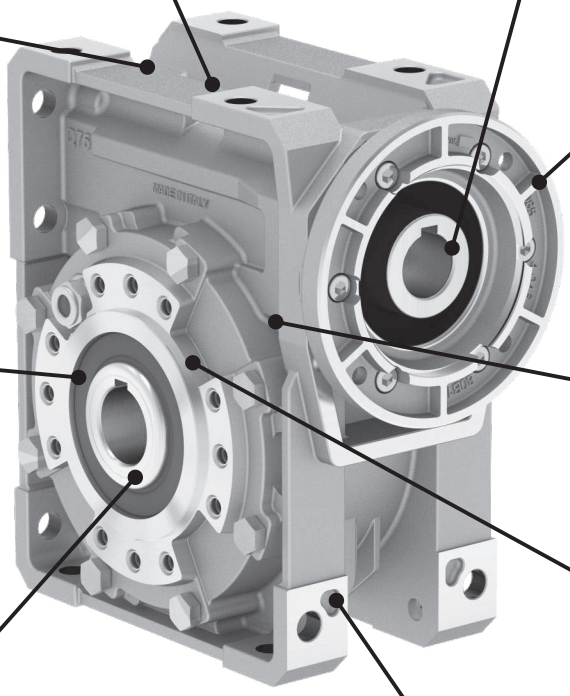
Q Square worm gearboxes

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

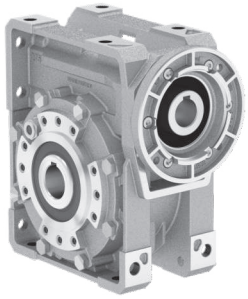
Vent Free Design.
No breather or vents to leak! Factory lubricated for life with synthetic, semi-fluid gear lubricant with an operating range of -15ºC to 130ºC.

oil free

vent free

World wide sales network.

Specific type datasheet on page...



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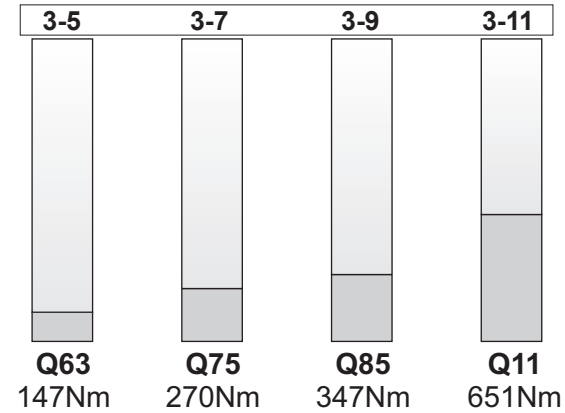

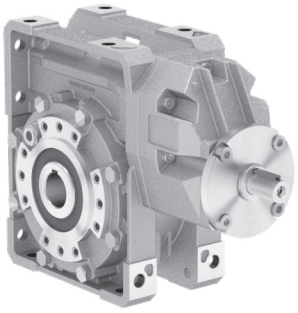

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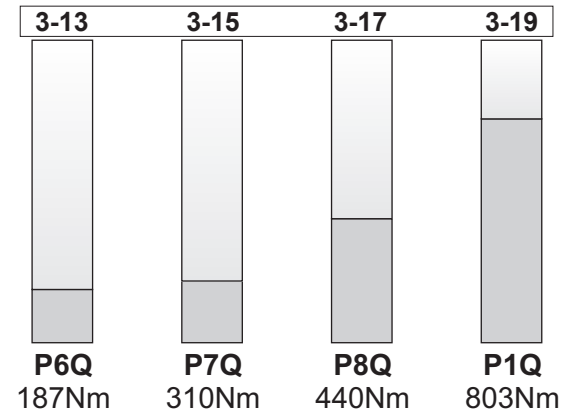

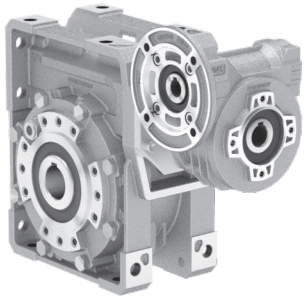

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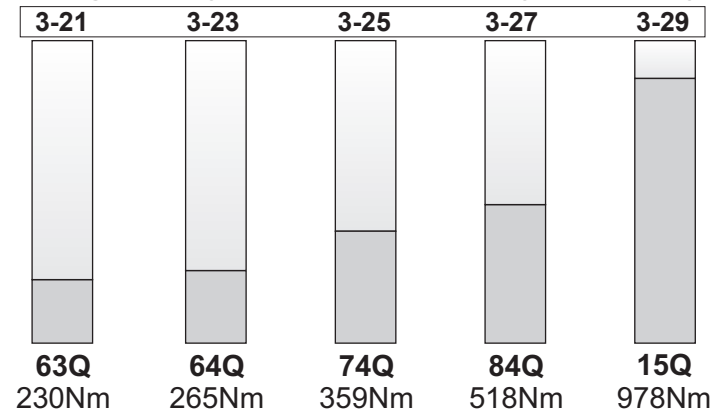

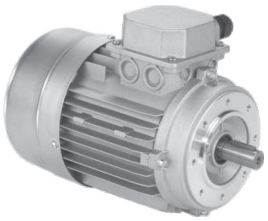

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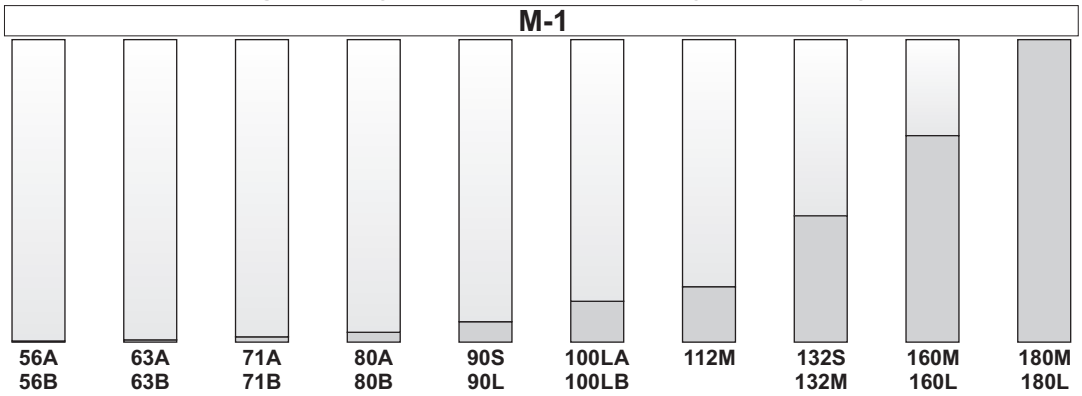
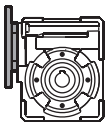
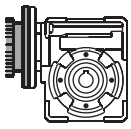
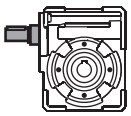
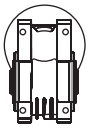
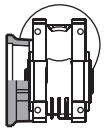
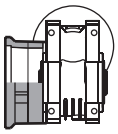
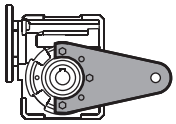
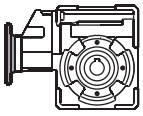
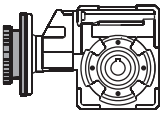
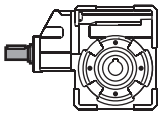
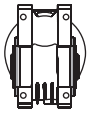
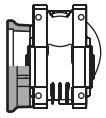
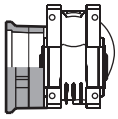
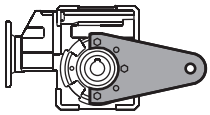
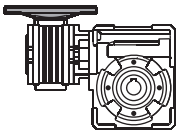
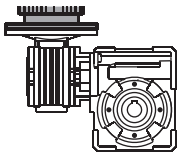
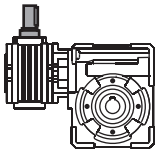
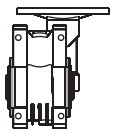
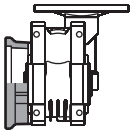
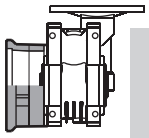
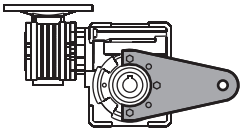


Type - Tipo - Typ Type - Tipo	**Size** - Grandezza Grösse - Taille Tamaño	**Mounting** - Montaggio - Montage Fixation Fixation - Tipo de montaje
P	**Q63**	**FC**
Worm gearboxes Riduttori a vite senza fine Schneckengetriebe Reducteurs a vis sans fin Reductores de corona sin fin  P  M B  R	Q63 Q75 Q85 Q11	 FB  FC  FL F1 F2 F3 F4  BR
Worm gearboxes with primary reduction Riduttori a vite senza fine con precoppia Schneckengetriebe mit stirnradstufe am Eintrieb Reducteurs a vis sans fin avec pré-réduction Reductores corona sin fin con prereductora de engranajes  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 Rapporto Untersetzung Reduction Relaciòn	Hub Mozzo corona Hohlwelle Arbre creux Nucleo corona	Output shaft Albero lento Abtriebswelle Arbre de sortie Eje salida	Motor size Grandezza motore Motor Grösse Grandeur moteur Tamaño motor	Mounting position Posizione montaggio Einbaulage Position de montage Position de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Mountin position Esecuzione montaggio Einbaulage Exécution de montage Posición de montaje	Terminal box position Posizione morsettiera Klemmkastenlage Position boîte a bornes Posición caja de bornes
10	**C**	**Ø**	**-Q**	**B3**	**ST**	**---**	

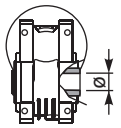
See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir tableau données techniques

Ver tabla datos técnicos



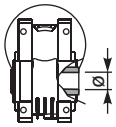
STANDARD

C

Q63 ⇨ ø25
Q75 ⇨ ø30
Q85 ⇨ ø35
Q11 ⇨ ø42

I

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



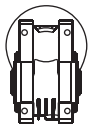
INCH

U

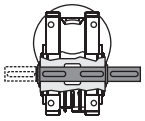
Q63⇨ø1.125"
Q85⇨ø1.500"

Z

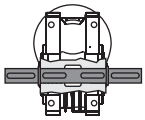
Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox



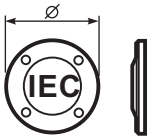
Ø



S



D



-M
without flange
Senza flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)
-H=160 (ø350)

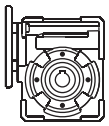
B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

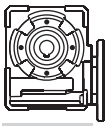
Brushless

BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

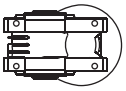
-0=Type R
-S=Type R
S series



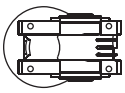
B3



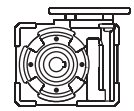
B8



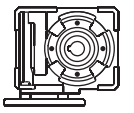
B6



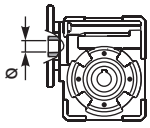
B7



V5



V6



ST

Standard bore *
Kit R standard

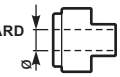
Foro standard *
Kit R standard

Input bore without Reduction Bushing

-O = 9mm
-P = 11mm
-Q = 14mm
-R = 19mm
-T = 24mm
-U = 28mm
-V = 38mm

COUPLING

STANDARD (IEC)



-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

BRUSHLESS *

-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

Ready for input coupling
Predisposto per giunto

-0
Type B
Tipo B

-0
Type R
Tipo R

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

Only for combined units See technical data table

Solo per i riduttori combinati Vedi tabelle dati tecnici.

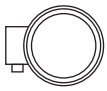
Ausführungen für Getriebekombinationen it

Uniquement pour combinés. Voir tableau données techniques

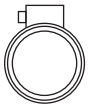
Sólo para combinados ver tabla datos técnicos

With Type M specify terminal box position

Con tipo M specificare posizione morsettiera

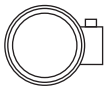


A

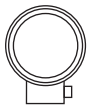


B

STANDARD



C



D

3

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

Lifting / sollevamento / hubantriebe / levage / elevactión

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

Rotation / rotazione / drehung / rotation / rotaction

$$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$$

Linear movement / traslazione / linearbewegung / translation / translacion

$$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$$

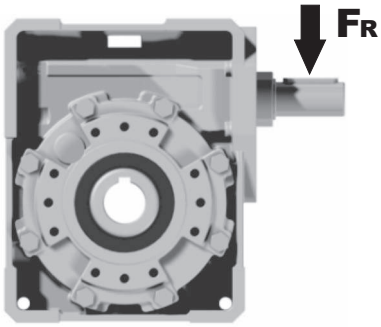
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

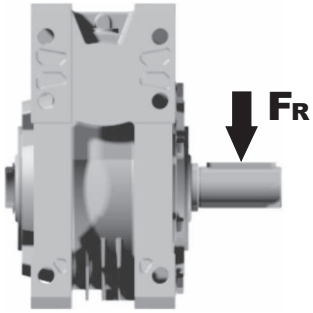
$$\mathbf{M}\ [Nm] = \frac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$$

$$\mathbf{M}\ [lb\ in] = \frac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$$

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





$F_R\ [N] = \frac{M\ [Nm] \cdot 2000}{d\ [mm]} \cdot f_K$	$F_R\ [N] = \frac{M\ [lb\ in] \cdot 8.9}{d\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

A — Nominal torque / Momento torcente nominale / Nenn Drehmoment / Couple nominal / Par de torsión nominal

Flange code / Codice flangia / Flanschtype / Code bride / Código bridas

Dynamic efficiency / Rendimento dinamico / Dynamischer / Rendement dynamique / Rendimento dinámico

Input speed / Velocità in entrata / Eintriebsdrehzahl / Vitesse en entrée / Velocidad de entrada

Q63 Q Square - Gear 147Nm

Rating - Aluminum WORM GEARBOXES

3

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. <2 h	2 - 8 h	8 - 16 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	Uniform / Uniforme	1.25	1.5	1.75
		Moderate / Moderato	1.5	1.75	2
		Heavy / Forte	1.75	2	2.25

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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

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

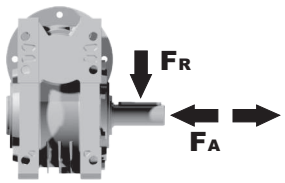
▪ LUBRICATION Q63 Oil Quantity 0.30 Lt.

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

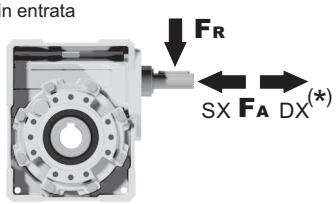
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	90	450

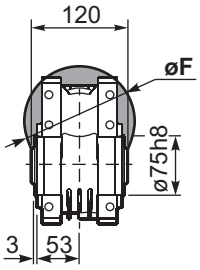
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

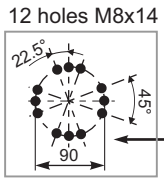
tab. 2

PQ63FB... Basic wormbox
Riduttore base

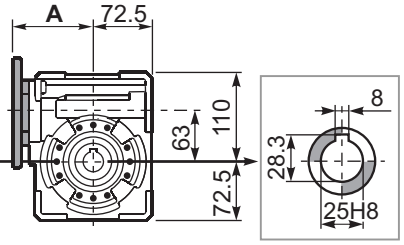
Gearbox weight peso riduttore	6.00 kg

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





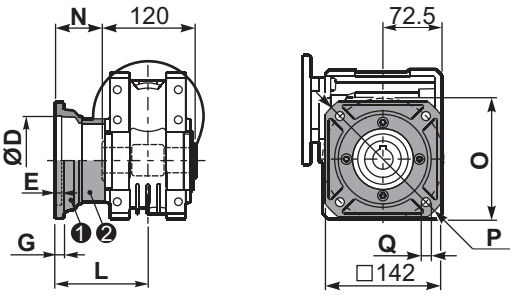
Mounting holes position
Posizione fori di montaggio



Standard
Hollow shaft

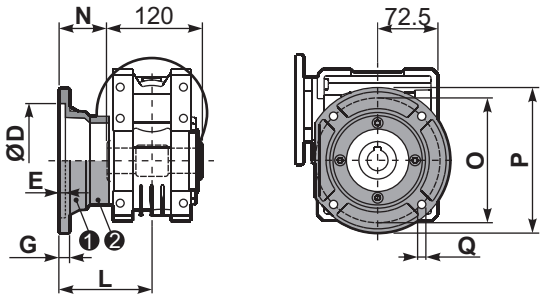
On request
A richiesta

PQ63FC... Square flange
Flangia quadrata



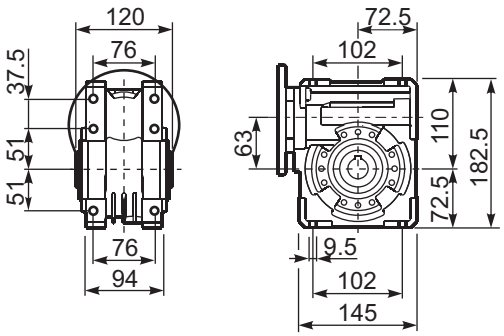
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$115^{+0.20}_{+0.15}$	6	12	86	26	150	180	11	❶ KQ63.9.010 ❷ -
FL	$115^{+0.20}_{+0.15}$	6	12	116	56	150	180	11	❶ KQ63.9.010 ❷ K063.0.200

PQ63F1... Round flange
Flangia rotonda

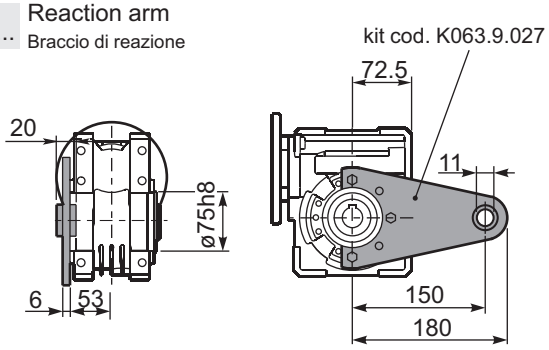


type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	110	50	165	200	13	❶ KS070.9.013 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	124	64	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	11	90	30	130	160	10	❶ KS063.9.011 ❷ -

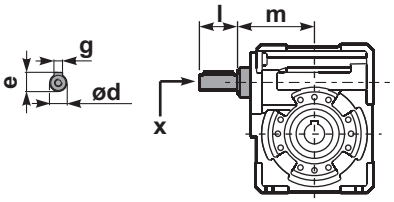
PQ63FB... Feet
Piedini



PQ63BR... Reaction arm
Braccio di reazione



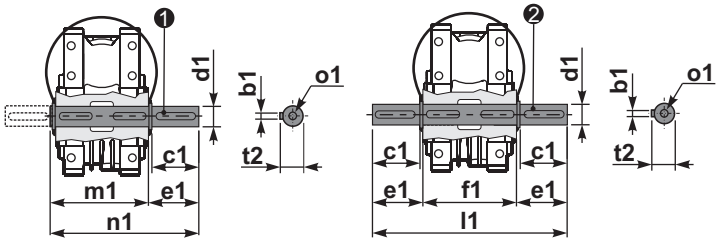
RQ63FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	18 h6	20.5	6	45	93	M6x16	❶ K063.5.006 PAM80 ❷ K063.5.007 PAM90
type S	19 h6	21.5	6	40	93	M8x20	❶ KS063.5.008 PAM80 ❷ KS063.5.009 PAM90

PQ63.....S... Single Shaft
Albero lento semplice

PQ63.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K063.5.028 type **B**

❷ kit cod. K063.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	8	60	$25^{-0.005}_{-0.020}$	63.2	120	246.4	126.8	190	28	M8x20
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

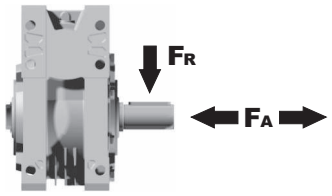
▪ LUBRICATION Q75 Oil Quantity 0.40 Lt.

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

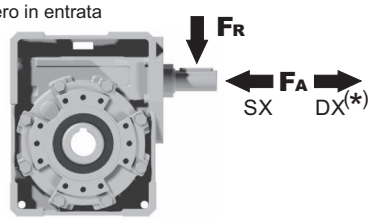
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	125	630

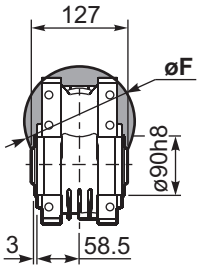
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

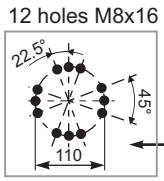
tab. 2

PQ75FB... Basic wormbox
Riduttore base

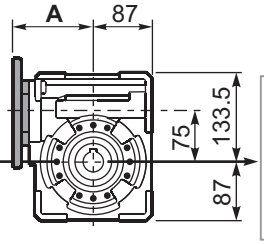
Gearbox weight peso riduttore	8.70 kg

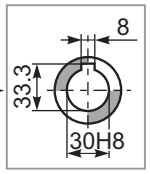
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	114
80/90B5	K023.4.042	200	116
100/112B5	K023.4.043	250	125
80B14	K085.4.046	120	116
90B14	K085.4.045	140	116
100/112B14	K085.4.047	160	125



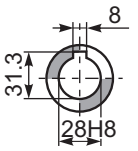


Mounting holes position
Posizione fori di montaggio



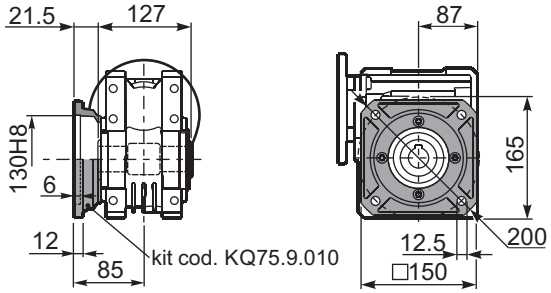


Standard
Hollow shaft

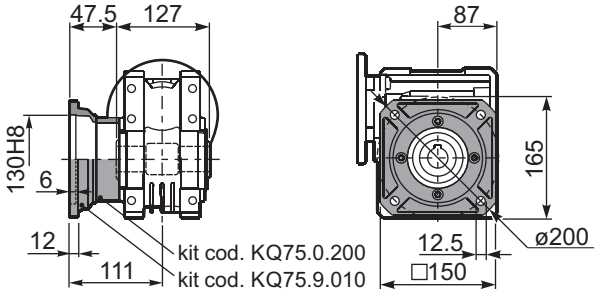


On request
A richiesta

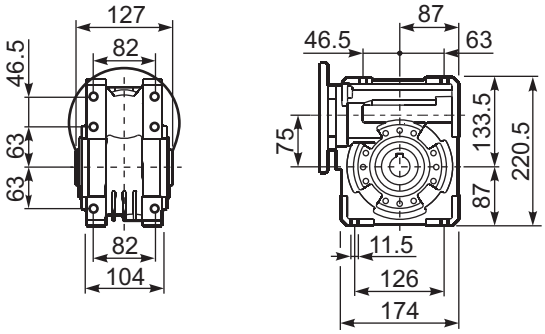
PQ75FC... Square flange
Flangia quadrata



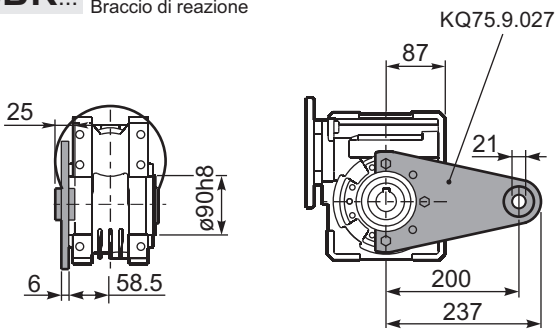
PQ75FL... Square flange
Flangia quadrata



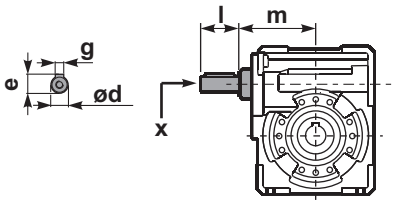
PQ75FB... Feet
Piedini



PQ75BR... Reaction arm
Braccio di reazione

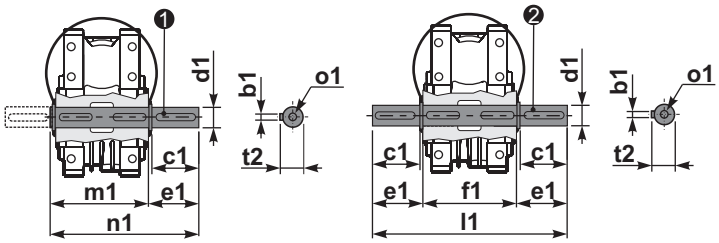


RQ75FB... Input shaft
Albero in entrata



PQ75.....S... Single Shaft
Albero lento semplice

PQ75.....D... Double Shaft
Albero lento bisp.



❶ kit cod. KQ75.5.028 Standard
kit cod. KQ75.5.026 On request

❷ 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 K085.5.007 PAM90 K085.5.008 PAM100

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
Standard	8	60	$30^{-0.005}_{-0.020}$	65	127	255	134	199	33	M8x20
On request	8	60	$28^{-0.005}_{-0.020}$	65	-	-	134	199	31	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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			71	3.5	07
30	**46**	1.5	320	1.0	1.5	326	B	B			B			68	3.1	08
27	**52**	1.1	258	1.1	1.2	289	B	B			B			66	2.7	09
21	**67**	1.1	327	0.9	0.97	289	B	B			B			65	2.1	10
18.9	**74**	0.75	220	1.2	0.91	268	B	B			B			58	1.9	11
14.6	**96**	0.55	191	1.3	0.70	242	B	B			B			53	1.5	12

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.

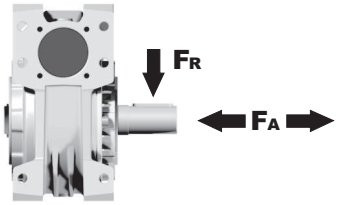
▪ LUBRICATION Q85 Oil Quantity 1.20 Lt.

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

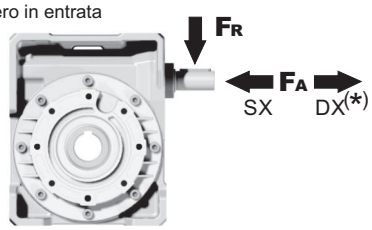
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	130	650

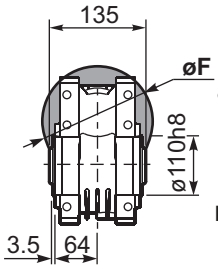
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

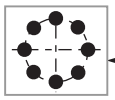
tab. 2

PQ85FB... Basic wormbox
Riduttore base

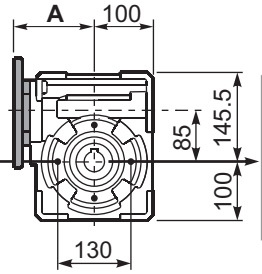
Gearbox weight / peso riduttore	12.1 kg

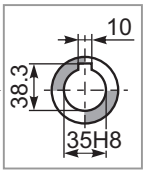
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	116.5
80/90B5	K023.4.042	200	118.5
100/112B5	K023.4.043	250	127.5
80B14	K085.4.046	120	118.5
90B14	K085.4.045	140	118.5
100/112B14	K085.4.047	160	127.5



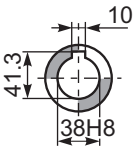


Mounting holes position
Posizione fori di montaggio



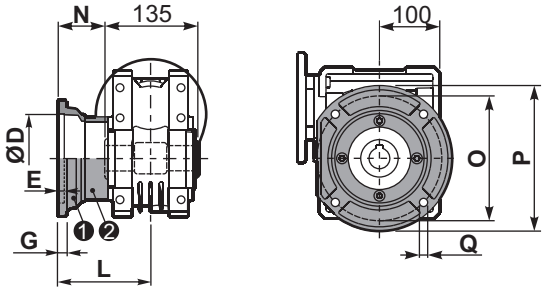


Standard
Hollow shaft



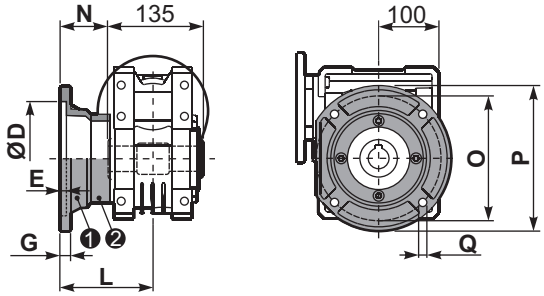
On request
A richiesta

PQ85FC... Output flange
Flangia uscita



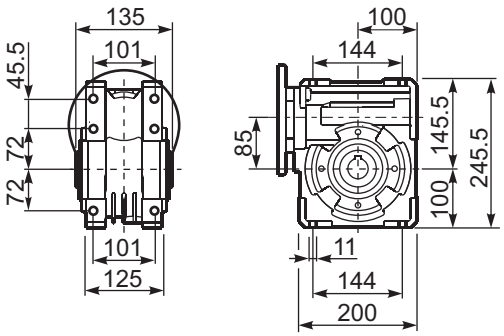
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

PQ85F1... Output flange
Flangia usicta

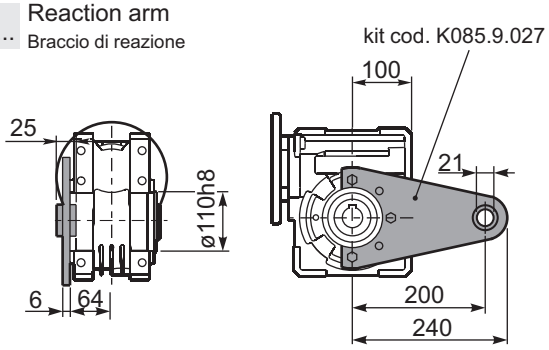


type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H7	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{+0.00}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	130 H7	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

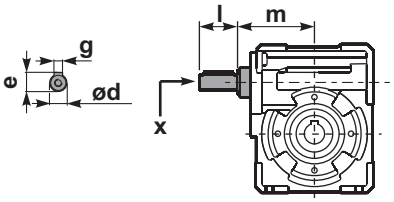
PQ85FB... Feet
Piedini



PQ85BR... Reaction arm
Braccio di reazione



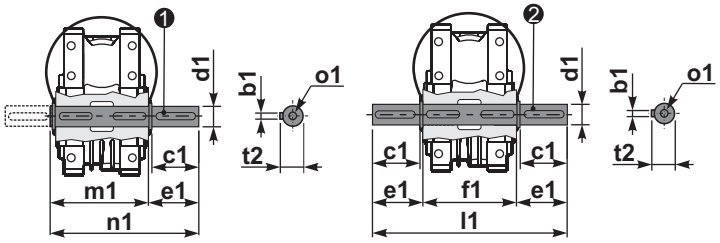
RQ85FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	25 h6	28	8	50	112	M8x20	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type S	24 h6	27	8	50	112	M8x20	❶ KS085.5.009 PAM90 ❷ KS085.5.011 PAM100

PQ85.....S... Single Shaft
Albero lento semplice

PQ85.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B** ❷ kit cod. K085.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
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

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.

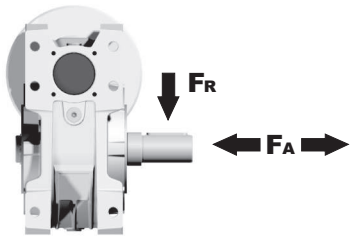
E El reductor tamaño **Q11** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes.
Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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.

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** Blasia 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

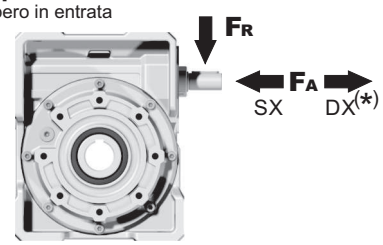
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [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 [min^{-1}]	FA [N]	FR [N]
1400	228	1140

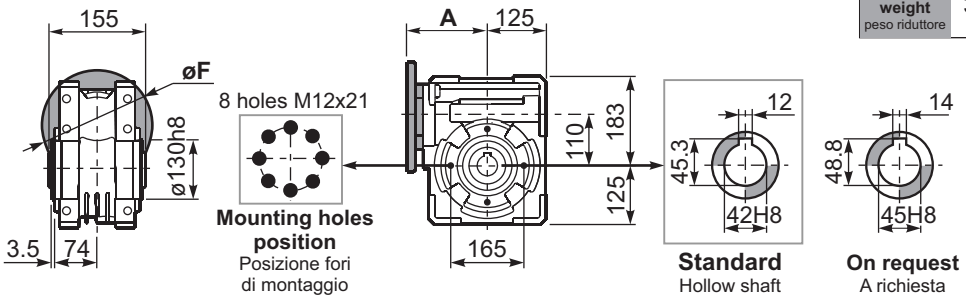
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

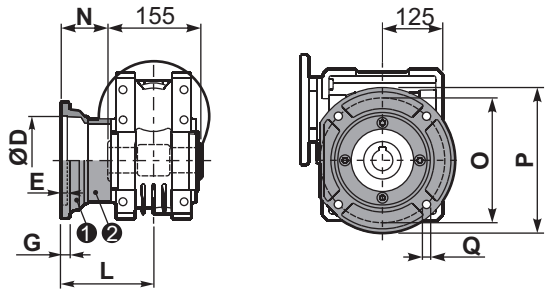
PQ11FB... Basic wormbox
Riduttore base

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

Gearbox weight / peso riduttore: 35.0 kg

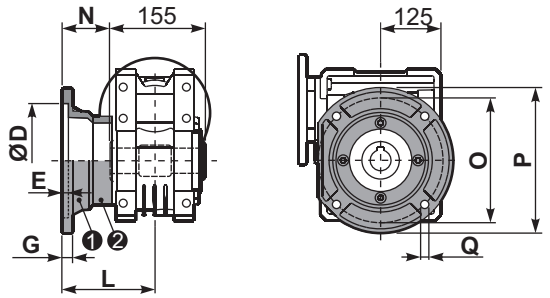


PQ11FC... Output flange
Flangia uscita



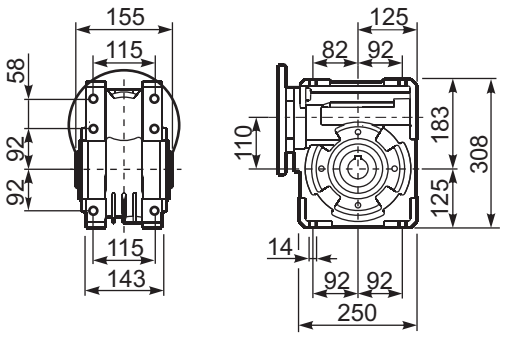
type B	øD	E	G	L	N	O	P	Q	kit code
FC	170 +0.083 +0.043	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	170 +0.083 +0.043	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

PQ11F1... Output flange
Flangia uscita

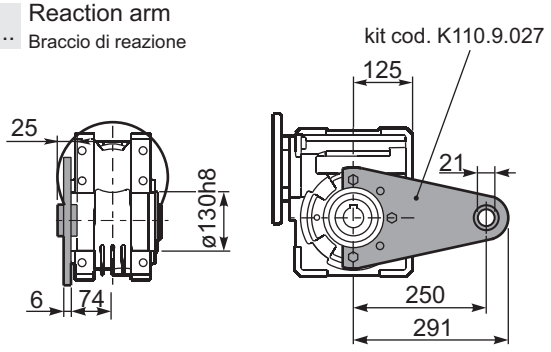


type S	øD	E	G	L	N	O	P	Q	kit code
F1	180 +0.040 0	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	180 +0.040 0	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

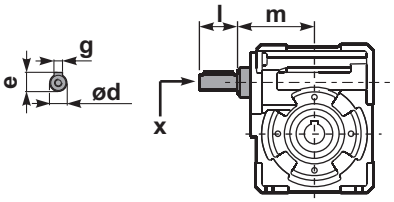
PQ11FB... Feet
Piedini



PQ11BR... Reaction arm
Braccio di reazione



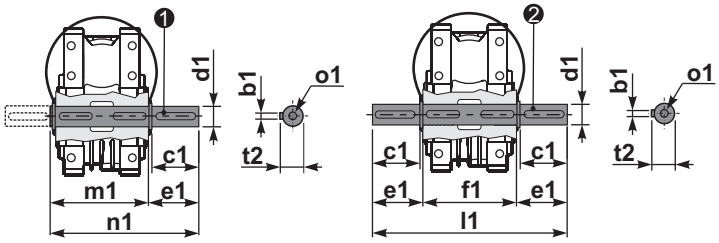
RQ11FB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type B	25 h6	28	8	50	131.5	M8x20	❶ K085.5.007 PAM90 ❷ K085.5.008 PAM100
type S	24 h6	27	8	50	131.5	M8x20	❶ KS085.5.009 PAM90 ❷ KS085.5.011 PAM100

PQ11.....S... Single Shaft
Albero lento semplice

PQ11.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K110.5.028 type **B** ❷ kit cod. K110.5.029 type **B**

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

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

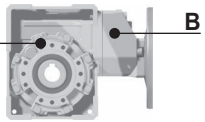
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P6Q** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).

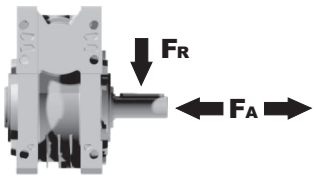


SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

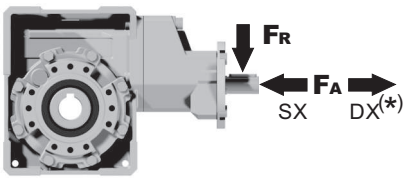
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	500	2500
50	600	3000
25	700	3800
15-6	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	61	305

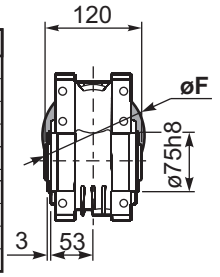
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

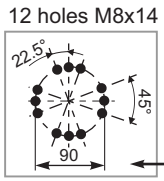
tab. 2

PP6Q**FB**... Basic wormbox
Riduttore base

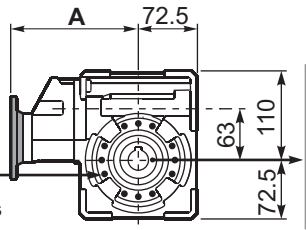
Gearbox weight peso riduttore	29.9÷111	139÷434
	7.05 Kg	6.60 Kg

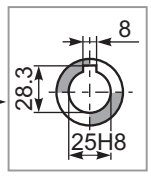
	M.flange	Kit code	øF	A
29.9÷111	71B5	K063.4.042	160	176.5
	80/90B5	K063.4.043	200	178.5
	71B14	K063.4.047	105	176.5
	80B14	K063.4.046	120	178.5
	90B14	K063.4.041	140	178.5
139÷434	63B5	K050.4.041	138	162.5
	71B5	K050.4.042	160	160
	63B14	K050.4.047	90	162.5
	71B14	K050.4.045	105	160



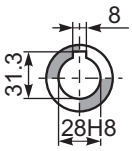


Mounting holes position
Posizione fori di montaggio



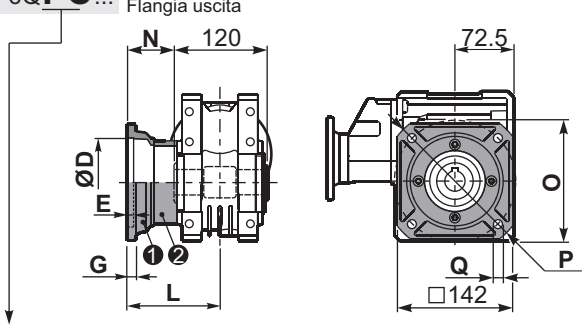


Standard
Hollow shaft



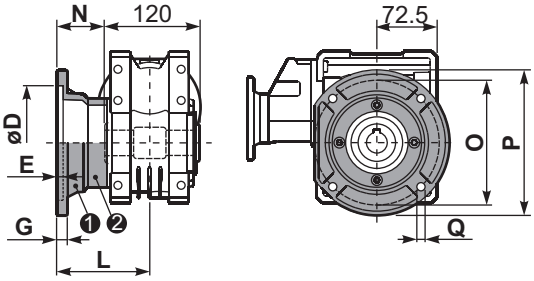
On request
A richiesta

PP6Q**FC**... Output flange
Flangia uscita



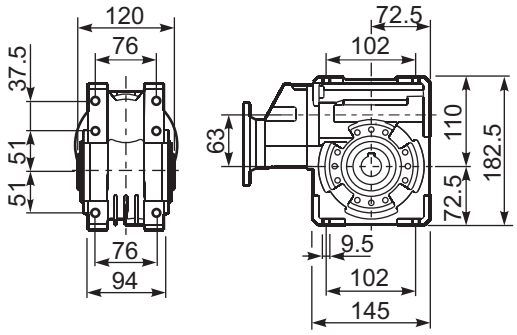
type B	øD	E	G	L	N	O	P	Q	kit code
FC	115 +0.20 +0.15	6	12	86	26	150	180	11	❶ KQ63.9.010 ❷ -
FL	115 +0.20 +0.15	6	12	116	56	150	180	11	❶ KQ63.9.010 ❷ K063.0.200

PP6Q**F1**... Output flange
Flangia uscita

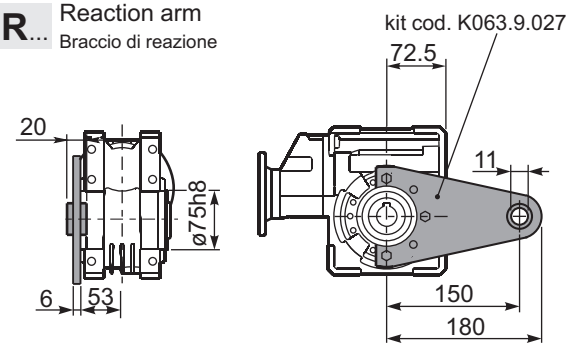


type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 +0.20 +0.15	7	13	110	50	165	200	13	❶ KS070.9.013 ❷ -
F2	115 +0.20 +0.15	7	13	124	64	150	175	11	❶ KS063.9.013 ❷ -
F3	110 +0.035 0	5	11	90	30	130	160	10	❶ KS063.9.011 ❷ -

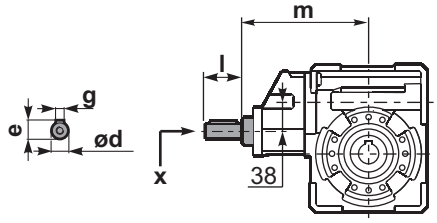
PP6Q**FB**... Feet
Piedini



PP6Q**BR**... Reaction arm
Braccio di reazione



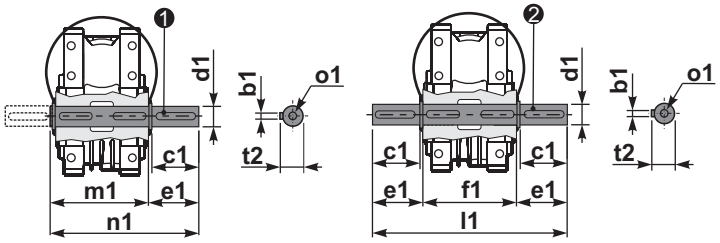
RP6QFB... Input shaft
Albero in entrata



	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

PP6Q.....**S**... Single Shaft
Albero lento semplice

PP6Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K063.5.028 type **B** ❷ kit cod. K063.5.029 type **B**

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

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
22	**62.9**	0.75	248	1.2	0.87	286					C	C		77	3.10	01
18	**78.5**	0.75	293	1.0	0.73	286					C	C		73	2.41	02
15	**94.2**	0.75	333	0.9	0.70	310					C	C		69	2.10	03
11	**126**	0.55	297	1.0	0.55	296	B				C	C		63	1.53	04
9	**157**	0.37	230	1.1	0.41	252	B				C	C		58	1.23	05
8	**185**	0.37	257	1.2	0.43	296	B				C	C		55	3.10	06
6	**231**	0.25	193	1.5	0.38	296	B				C	C		49	2.41	07
5	**277**	0.25	222	1.3	0.33	296	B				C	C		47	2.10	08
4	**378**	0.18	200	1.5	0.27	296	B				C	C		43	2.10	09

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 **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.

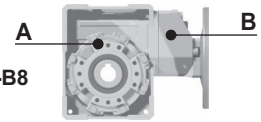
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P7Q** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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

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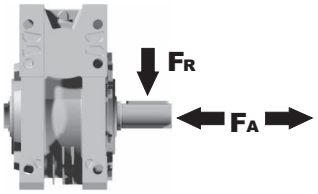
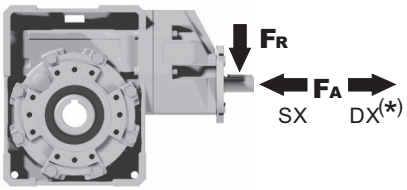
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	620	3100
50	720	3600
25	880	4400
15-6	1000	5000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	108	540

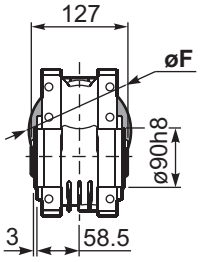
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

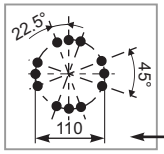
tab. 2

PP7Q**FB**... Basic wormbox
Riduttore base

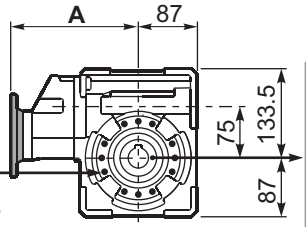
Gearbox weight peso riduttore	9.90 kg

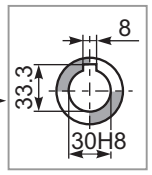
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	192.7
71B5	K063.4.042	160	190.7
80/90B5	K063.4.043	200	192.7
71B14	K063.4.047	105	190.7
80B14	K063.4.046	120	192.7
90B14	K063.4.041	140	192.7



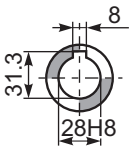


Mounting holes position
Posizione fori di montaggio



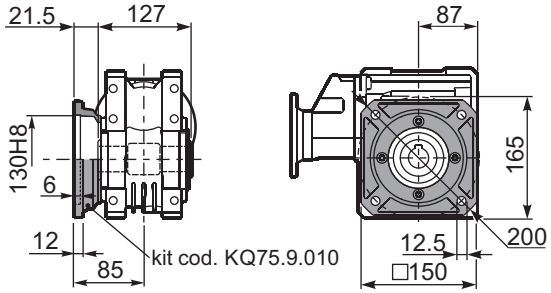


Standard
Hollow shaft

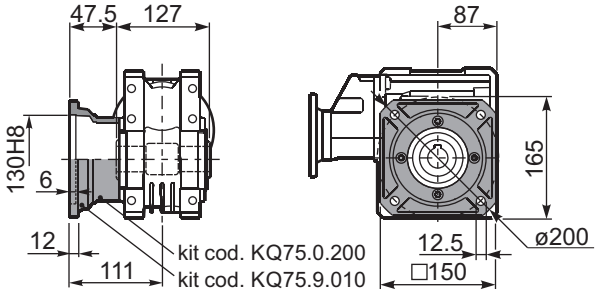


On request
A richiesta

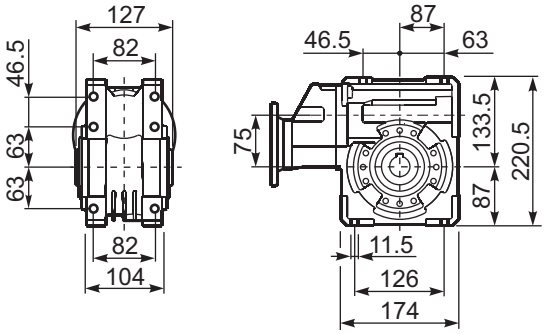
PP7Q**FC**... Square flange
Flangia quadrata



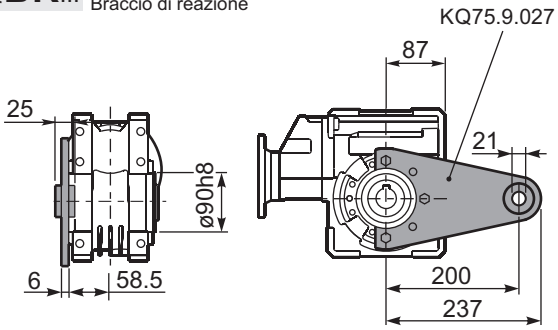
PP7Q**FL**... Square flange
Flangia quadrata



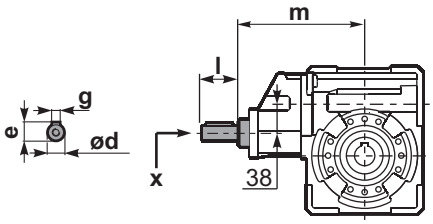
PP7Q**FB**... Feet
Piedini



PP7Q**BR**... Reaction arm
Braccio di reazione

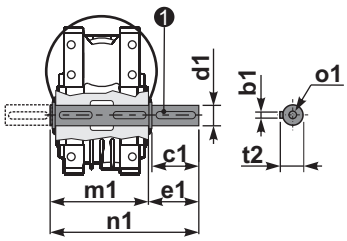


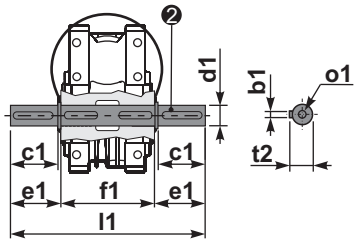
RP7QFB... Input shaft
Albero in entrata



PP7Q.....**S**... Single Shaft
Albero lento semplice

PP7Q.....**D**... Double Shaft
Albero lento bisp.





❶ kit cod. KQ75.5.028 Standard
kit cod. KQ75.5.026 On request

❷ kit cod. KQ75.5.029 Standard

	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	$30^{-0.005}_{-0.020}$	65	127	255	134	199	33	M8x20
On request	8	50	$28^{-0.005}_{-0.020}$	65	-	-	134	199	31	M8x20

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

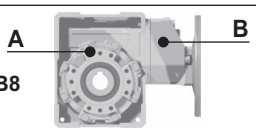
D Für die Lebensdauerschmierung ist das Getriebe der Größe **P8Q** mit synthetischem Öl befüllt.
Bei Einbaulage V5 oder V6 bitten wir um Rücksprache.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes 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).

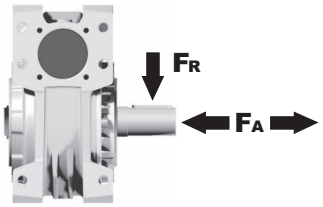


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

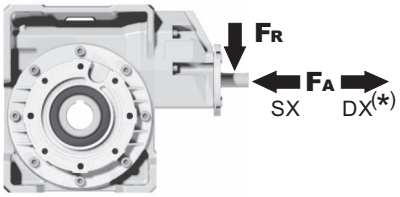
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	700	3500
50	800	4000
25	1000	5000
15-6	1160	5800

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	108	540

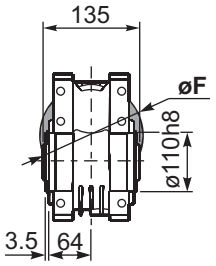
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

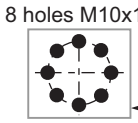
tab. 2

PP8Q**FB**... Basic wormbox
Riduttore base

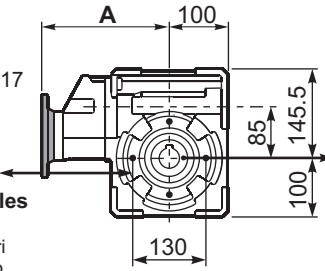
Gearbox weight peso riduttore	12.3 kg

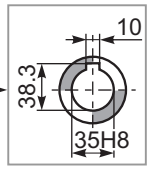
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	195.2
71B5	K063.4.042	160	193.2
80/90B5	K063.4.043	200	195.2
71B14	K063.4.047	105	193.2
80B14	K063.4.046	120	195.2
90B14	K063.4.041	140	195.2



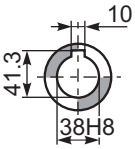


Mounting holes position
Posizione fori di montaggio



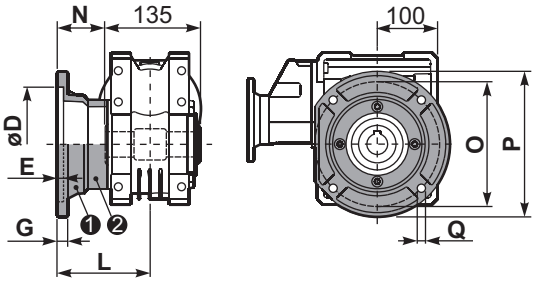


Standard
Hollow shaft



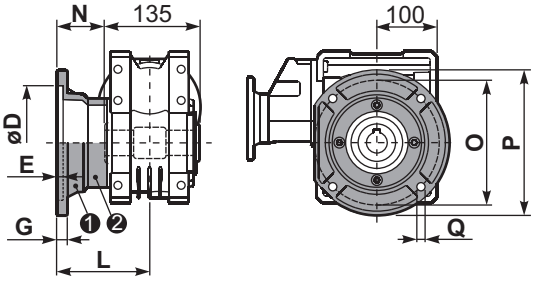
On request
A richiesta

PP8Q**FC**... Output flange
Flangia uscita



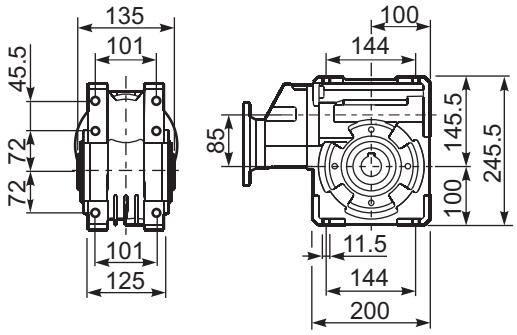
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

PP8Q**F1**... Output flange
Flangia uscita

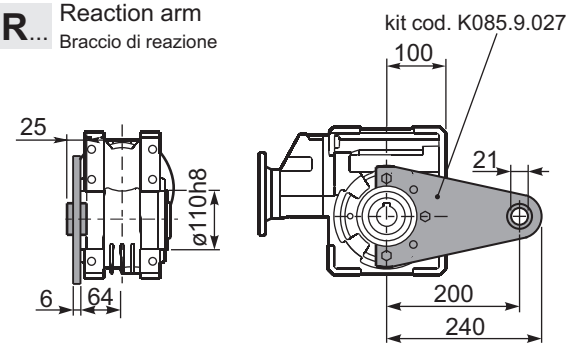


type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.04}_{+0.00}$	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{+0.00}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	$130^{+0.04}_{+0.00}$	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

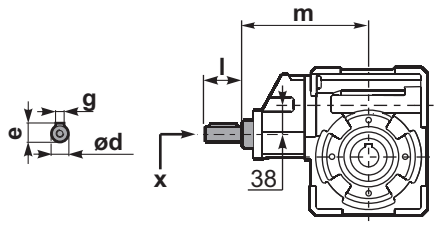
PP8Q**FB**... Feet
Piedini



PP8Q**BR**... Reaction arm
Braccio di reazione

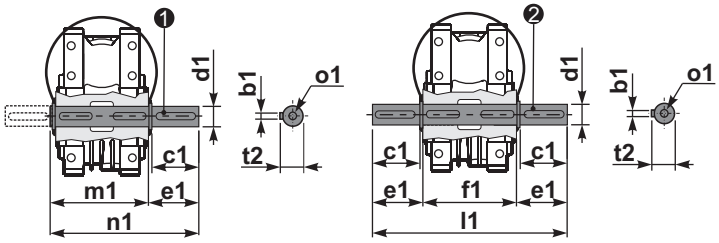


RP8QFB... Input shaft
Albero in entrata



PP8Q.....**S**... Single Shaft
Albero lento semplice

PP8Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B** ❷ 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	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

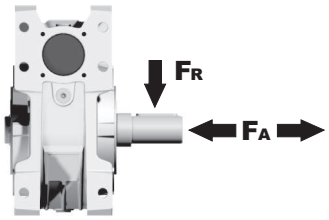
B3	B6	B7	B8	V5	V6
1.9/0.14LT	1.35/0.14 LT	1.35/0.14 LT	2.0/0.14 LT	2.0/0.14 LT	2.0/0.14 LT
SHELL Omala S2 GX 460			**ENI** Blasia 460		

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

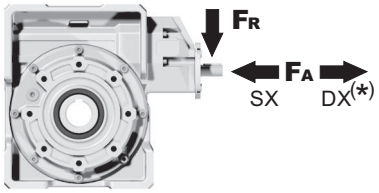
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
75	800	4000
50	920	4600
25	1200	6000
15-6	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	150	760

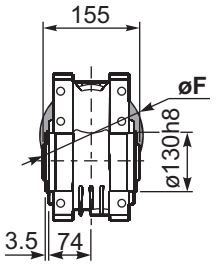
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

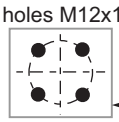
tab. 2

PP1Q**FB**... Basic wormbox
Riduttore base

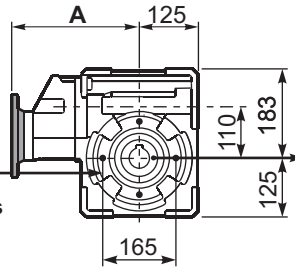
Gearbox weight peso riduttore	37.3 kg

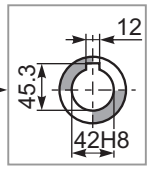
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	214.7
71B5	K063.4.042	160	212.7
80/90B5	K063.4.043	200	214.7
71B14	K063.4.047	105	212.7
80B14	K063.4.046	120	214.7
90B14	K063.4.041	140	214.7



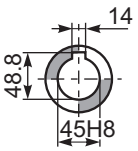


Mounting holes position
Posizione fori di montaggio



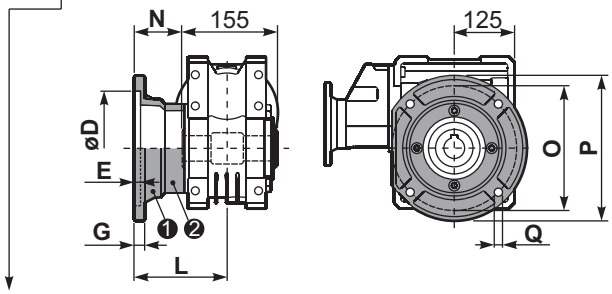


Standard
Hollow shaft



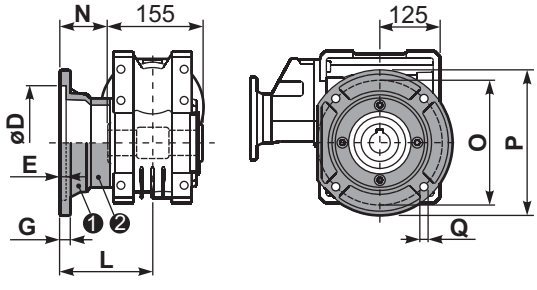
On request
A richiesta

PP1Q**FC**... Output flange
Flangia uscita



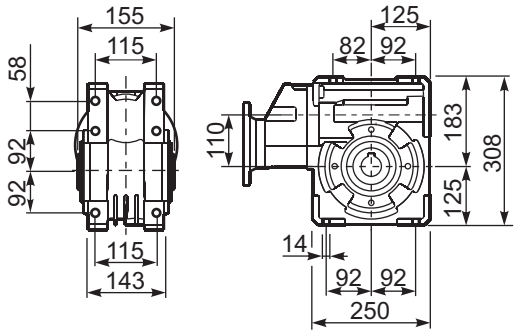
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$170^{+0.083}_{+0.043}$	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	$170^{+0.083}_{+0.043}$	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

PP1Q**F1**... Output flange
Flangia uscita

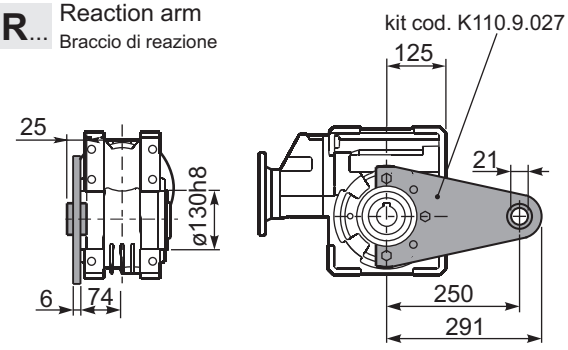


type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$180^{+0.040}_{0}$	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	$180^{+0.040}_{0}$	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

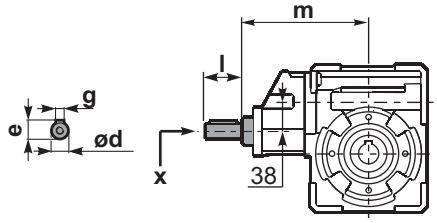
PP1Q**FB**... Feet
Piedini



PP1Q**BR**... Reaction arm
Braccio di reazione

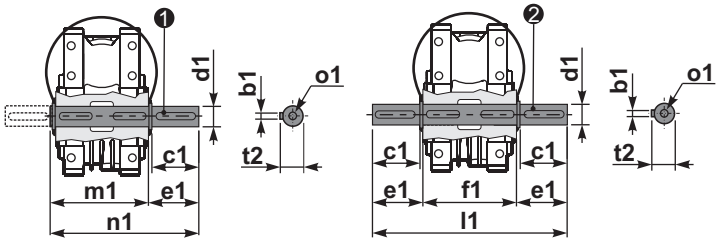


RP1QFB... Input shaft
Albero in entrata



PP1Q.....**S**... Single Shaft
Albero lento semplice

PP1Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K110.5.028 type **B** ❷ kit cod. K110.5.029 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	75	$42^{-0.005}_{-0.020}$	96.5	155	348	163.5	260	45	M12x32
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

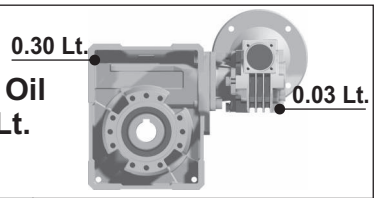
I Il riduttore tipo **63Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

▪ LUBRICATION 63Q Oil Quantity 0.30/0.03 Lt.

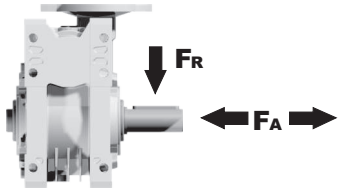


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

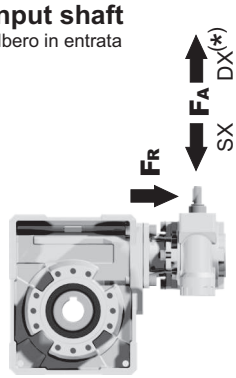
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	20	100

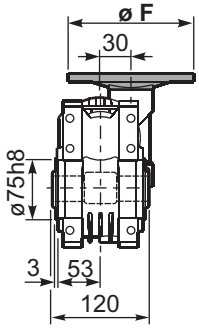
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

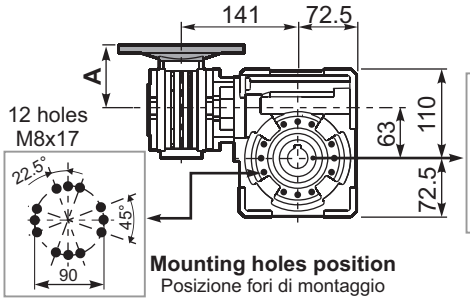
tab. 2

P63Q**FB**... Basic wormbox
Riduttore base

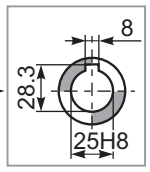
M. flanges	Kit code	øF	A
56B5	K030.4.041	120	61.5
63B5	K030.4.042	140	62.5
56B14	K030.4.046	80	61.5
63B14	K030.4.045	90	62.5

Gearbox weight peso riduttore	7.25 kg

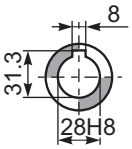




Mounting holes position
Posizione fori di montaggio

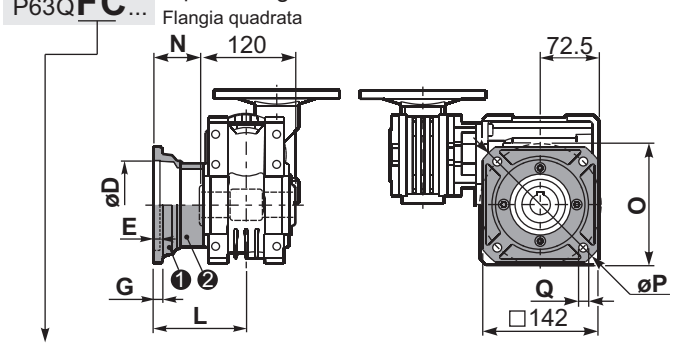


Standard
Hollow shaft



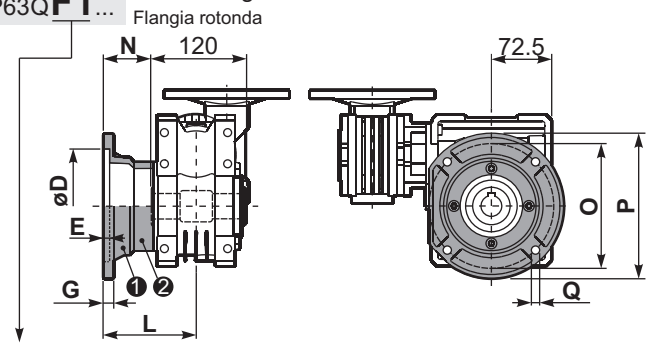
On Request
A richiesta

P63Q**FC**... Square flange
Flangia quadrata



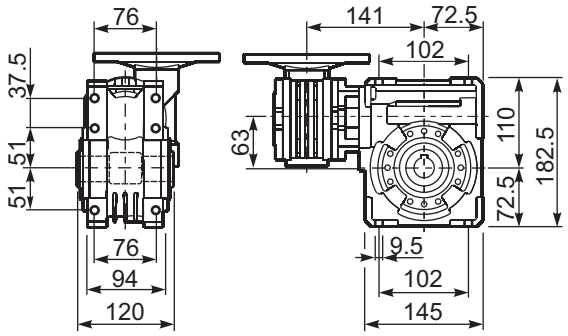
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$115^{+0.20}_{+0.15}$	6	12	86	26	150	180	11	❶ KQ63.9.010 ❷ -
FL	$115^{+0.20}_{+0.15}$	6	12	116	56	150	180	11	❶ KQ63.9.010 ❷ K063.0.200

P63Q**F1**... Round flange
Flangia rotonda



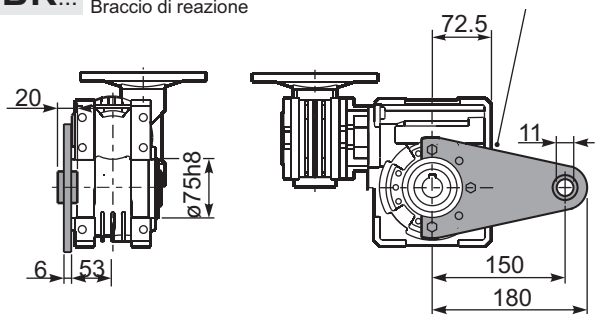
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	110	50	165	200	13	❶ KS070.9.013 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	124	64	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	11	90	30	130	160	10	❶ KS063.9.011 ❷ -

P63Q**FB**... Feet
Piedini

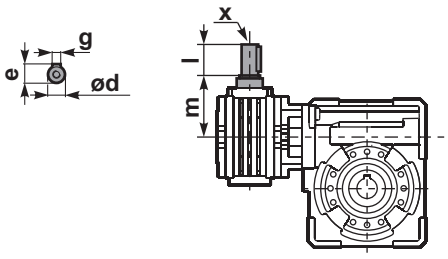


P63Q**BR**... Reaction arm
Braccio di reazione

kit cod. K063.9.027



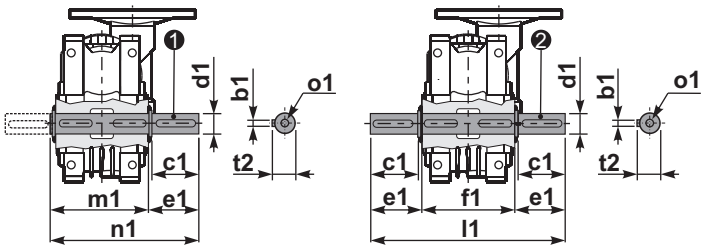
R63QFB... Input shaft
Albero in entrata



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

P63Q.....**S**... Single Shaft
Albero lento semplice

P63Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K063.5.028 type **B** ❷ kit cod. K063.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	60	$25^{-0.005}_{-0.020}$	63.2	120	246.4	126.8	190	28	M8x20
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

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.

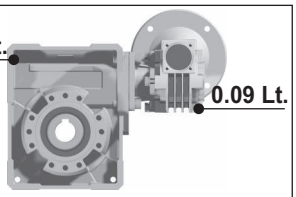
I Il riduttore tipo **64Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.



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

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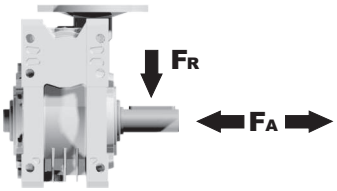
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

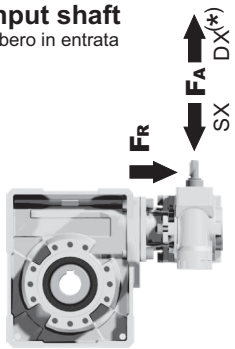
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	700	3800
15	800	4000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

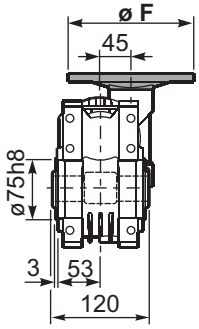
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

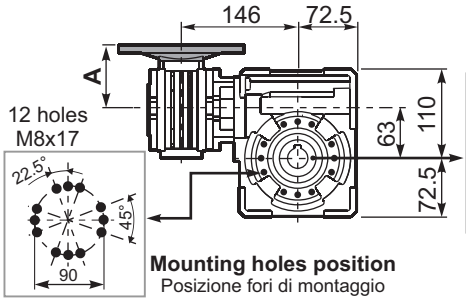
tab. 2

Gearbox weight peso riduttore	7.25 kg

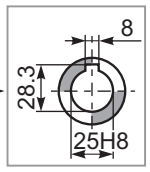
P64Q**FB**... Basic wormbox
Riduttore base

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

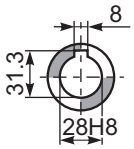




Mounting holes position
Posizione fori di montaggio

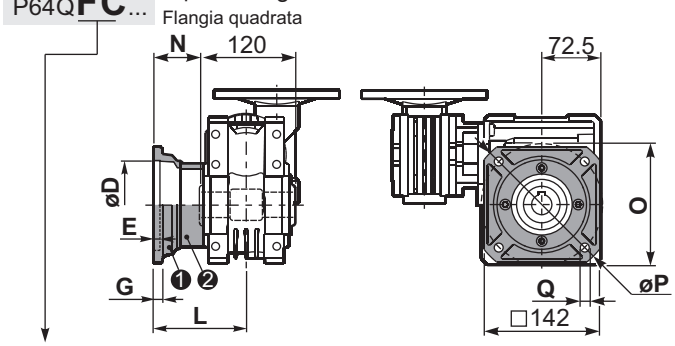


Standard
Hollow shaft



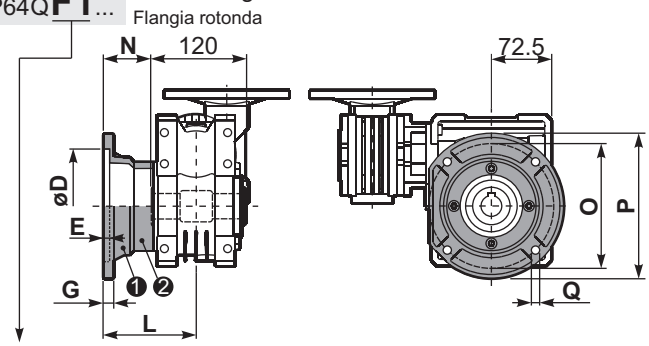
On Request
A richiesta

P64Q**FC**... Square flange
Flangia quadrata



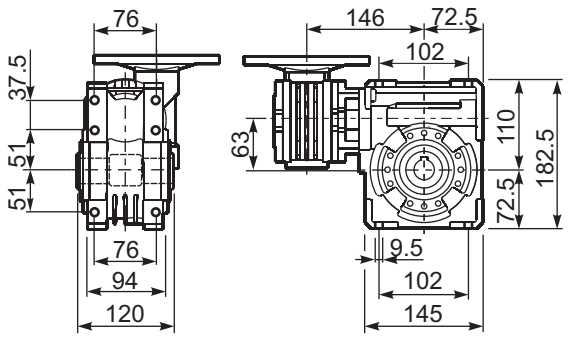
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$115^{+0.20}_{+0.15}$	6	12	86	26	150	180	11	❶ KQ63.9.010 ❷ -
FL	$115^{+0.20}_{+0.15}$	6	12	116	56	150	180	11	❶ KQ63.9.010 ❷ K063.0.200

P64Q**F1**... Round flange
Flangia rotonda



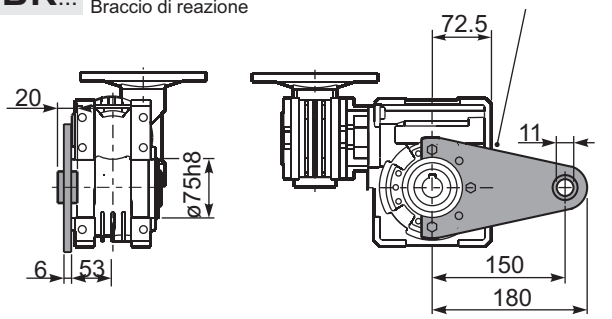
type S	øD	E	G	L	N	O	P	Q	kit code
F1	$130^{+0.20}_{+0.15}$	7	13	110	50	165	200	13	❶ KS070.9.013 ❷ -
F2	$115^{+0.20}_{+0.15}$	7	13	124	64	150	175	11	❶ KS063.9.013 ❷ -
F3	$110^{+0.035}_{0}$	5	11	90	30	130	160	10	❶ KS063.9.011 ❷ -

P64Q**FB**... Feet
Piedini

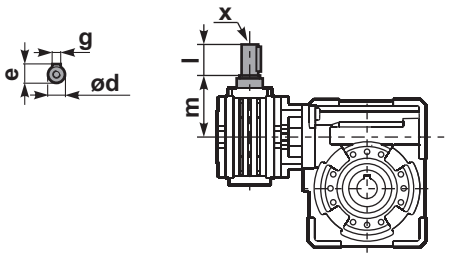


P64Q**BR**... Reaction arm
Braccio di reazione

kit cod. K063.9.027

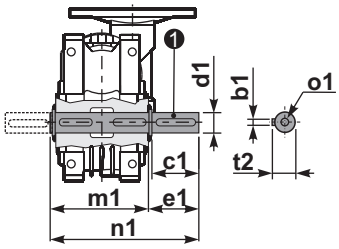


R64QFB... Input shaft
Albero in entrata

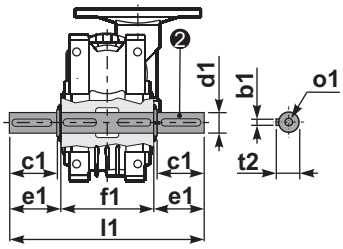


	ød	e	g	l	m	x	kit code
type **B**	11 h6	12.5	4	30	68	-	❶ K045.5.006 PAM71 ❷ -
type **S**	-	-	-	-	-	-	❶ - ❷ -

P64Q.....**S**... Single Shaft
Albero lento semplice



P64Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K063.5.028 type **B** ❷ kit cod. K063.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	8	60	$25^{-0.005}_{-0.020}$	63.2	120	246.4	126.8	190	28	M8x20
type **S**	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71	Dynamic efficiency RD	Tooth Module [mm]	Ratios code
5	**280**	0.37	403	0.9	0.33	359	**B**		B-C	**B**-C		57	3.10	01
3.5	**400**	0.25	314	1.1	0.29	359	**B**		B-C	**B**-C		46	3.10	02
2.5	**560**	0.25	420	0.9	0.21	359	**B**		B-C	**B**-C		44	3.10	03
1.7	**840**	0.18	423	0.8	0.15	359	**B**		B-C	**B**-C		41	3.10	04
1.3	**1120**	0.12	339	1.1	0.13	359	**B**		B-C	**B**-C		37	3.10	05
0.9	**1480**	0.09	336	1.1	0.10	359	**B**		B-C	**B**-C		37	3.10	06
0.8	**1840**	0.09	373	1.0	0.09	359	**B**		B-C	**B**-C		33	3.10	07
0.6	**2400**	0.06	275	1.3	0.08	359	**B**		B-C	**B**-C		28	3.10	08
0.5	**2800**	0.06	298	1.2	0.07	359	**B**		B-C	**B**-C		26	3.10	09
0.3	**4080**	0.06	250	1.4	0.09	359	**B**		B-C	**B**-C		15	3.10	10

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.

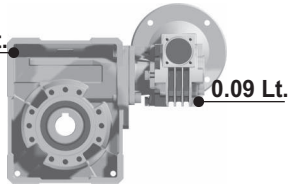
I Il riduttore tipo **74Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

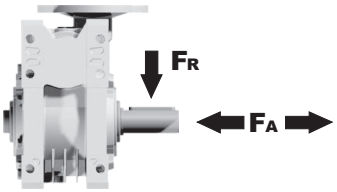


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

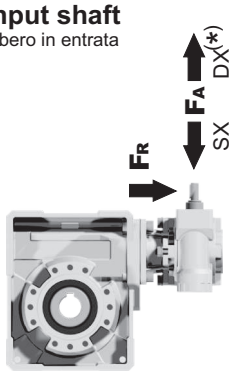
▪RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	880	4400
15	1000	5000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	42	210

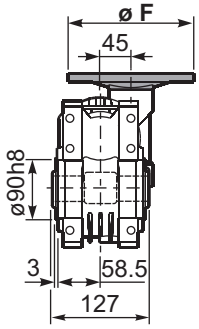
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

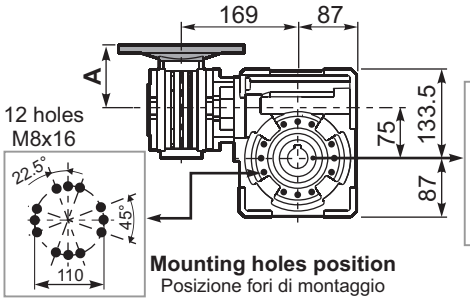
tab. 2

P74Q**FB**... Basic wormbox
Riduttore base

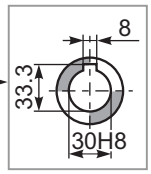
Gearbox weight / peso riduttore	11.4 kg

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

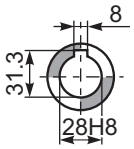




Mounting holes position
Posizione fori di montaggio

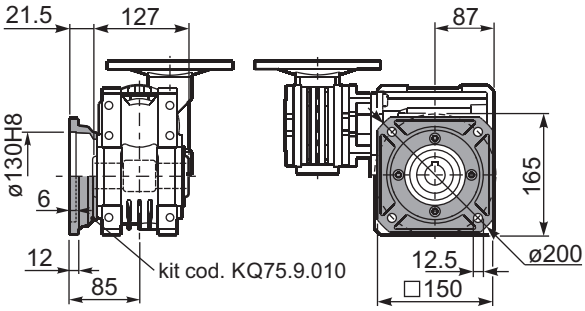


Standard
Hollow shaft

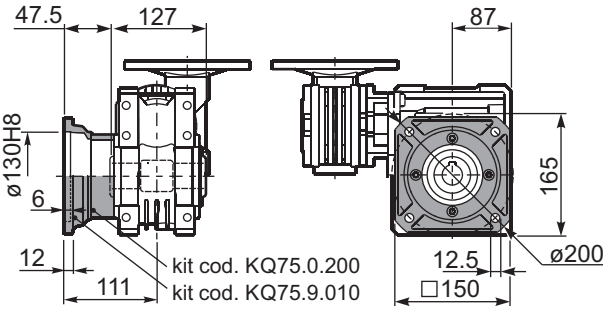


On request
A richiesta

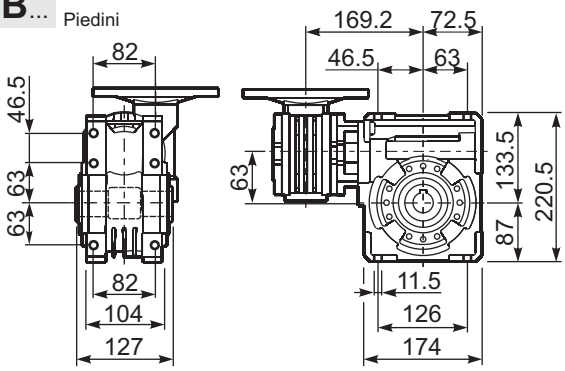
P74Q**FC**... Square flange
Flangia quadrata



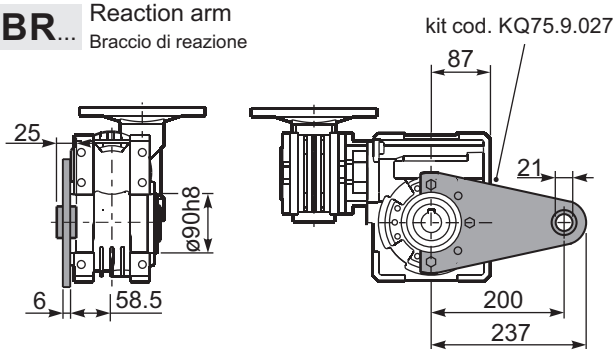
P74Q**FL**... Square flange
Flangia quadrata



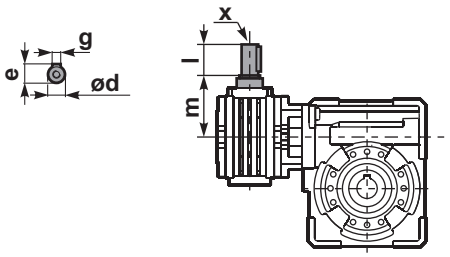
P74Q**FB**... Feet
Piedini



P74Q**BR**... Reaction arm
Braccio di reazione

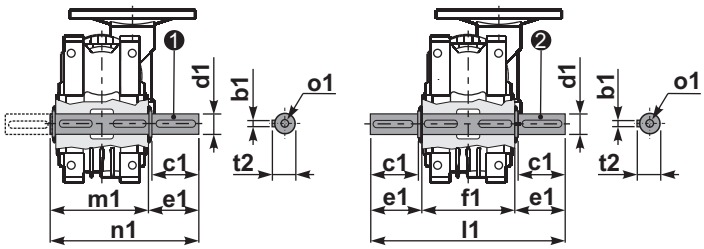


R74QFB... Input shaft
Albero in entrata



P74Q.....**S**... Single Shaft
Albero lento semplice

P74Q.....**D**... Double Shaft
Albero lento bisp.

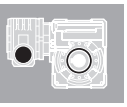


❶ kit cod. KQ75.5.028 Standard
kit cod. KQ75.5.026 On request

❷ kit cod. KQ75.5.029 Standard

	ød	e	g	l	m	x	kit code
type **B**	11 h6	12.5	4	30	68	-	❶ K045.5.006 PAM71 ❷ -
type **S**	-	-	-	-	-	-	❶ - ❷ -

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
Standard	8	60	$30^{-0.005}_{-0.020}$	65	127	255	134	199	33	M8x20
On request	8	60	$28^{-0.005}_{-0.020}$	65	-	-	134	199	31	M8x20



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

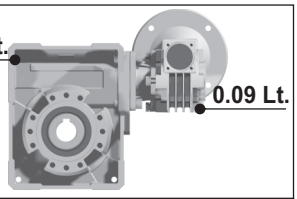
I Il riduttore tipo **84Q** viene fornito lubrificato a vita con olio sintetico. Per posizioni V5-V6 contattare il ns. servizio tecnico.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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.

▪ LUBRICATION 84Q Oil Quantity 1.20/0.09 Lt.

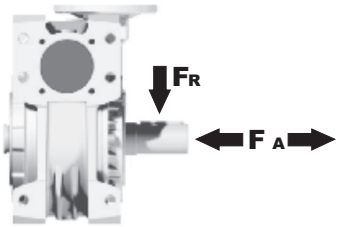


SHELL Omala S4 WE 320	ENI Telium VSF 320

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

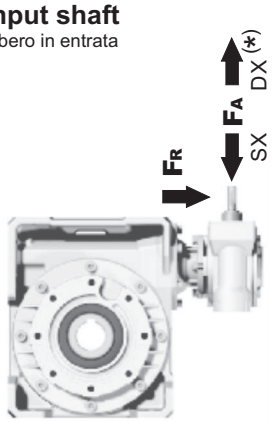
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n [min^{-1}] 2	FA [N]	FR [N]
25	1000	5000
15	1160	5800

Input shaft
albero in entrata



n [min^{-1}] 1	FA [N]	FR [N]
1400	42	210

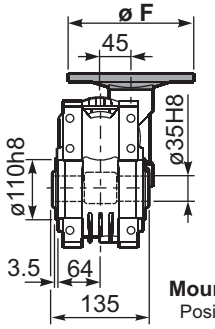
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

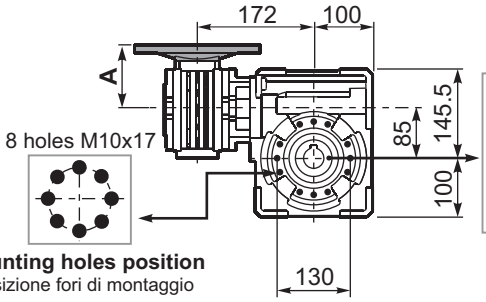
tab. 2

P84QFB... Basic wormbox
Riduttore base

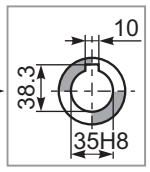
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	74
71B5	K050.4.042	160	71.5
56B14	KC40.4.049	80	71.5
63B14	K050.4.047	90	74
71B14	K050.4.045	105	71.5

Gearbox weight peso riduttore	16.2 kg

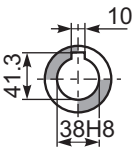




Mounting holes position
Posizione fori di montaggio

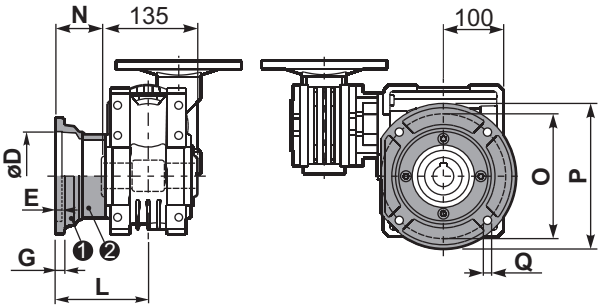


Standard
Hollow shaft



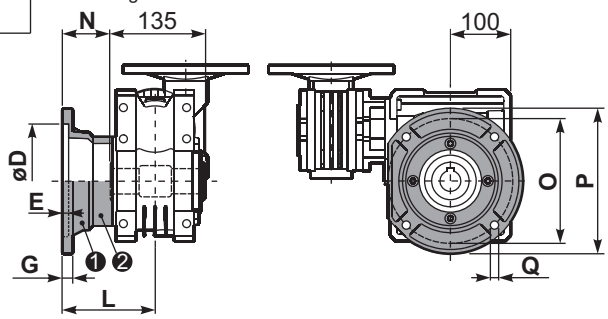
On request
A richiesta

P84QFC... Output flange
Flangia uscita



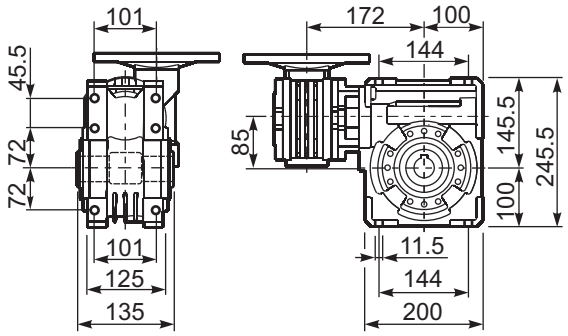
type B	øD	E	G	L	N	O	P	Q	kit code
FC	$152^{+0.06}_{+0.00}$	5	16	108	40.5	176	205	13	❶ K085.9.010 ❷ -
FL	$152^{+0.06}_{+0.00}$	5	16	148.5	81	176	205	13	❶ K085.9.010 ❷ K085.0.201

P84QF1... Output flange
Flangia uscita



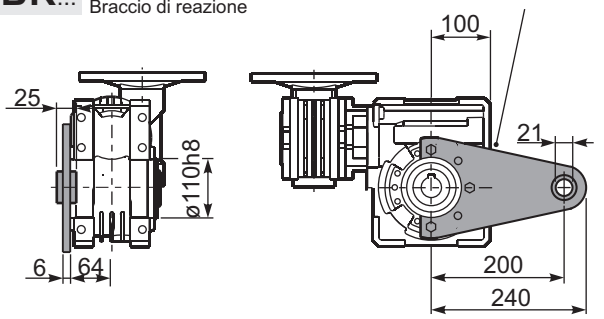
type S	øD	E	G	L	N	O	P	Q	kit code
F1	130 H7	5	13	117.5	50	165	200	11.5	❶ KS085.9.012 ❷ -
F2	$152^{+0.06}_{+0.00}$	5	15	147.5	80	180	205	12.5	❶ KS085.9.013 ❷ -
F4	130 H7	5	13	106.5	39	165	200	13	❶ KS085.9.015 ❷ -

P84QFB... Feet
Piedini

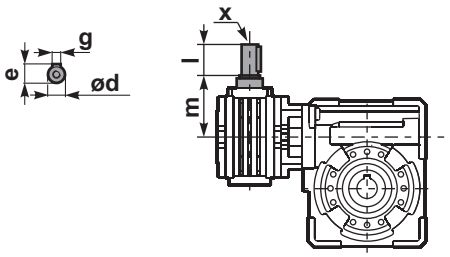


P84QBR... Reaction arm
Braccio di reazione

kit cod. K085.9.027



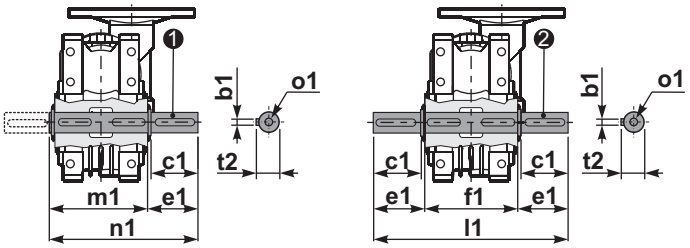
RP84QFB... Input shaft
Albero in entrata



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

P84Q.....S... Single Shaft
Albero lento semplice

P84Q.....D... Double Shaft
Albero lento bisp.



❶ kit cod. K085.5.028 type **B**

❷ kit cod. K085.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type B	10	60	$35^{-0.005}_{-0.020}$	73.5	135	282	141	214.5	38	M10x23
type S	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

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

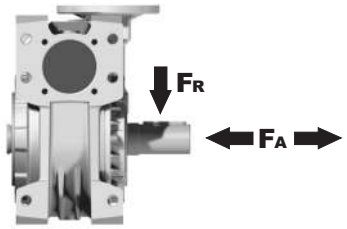
E El reductor tamaño **15Q** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos.
El 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.

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** Blasia 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

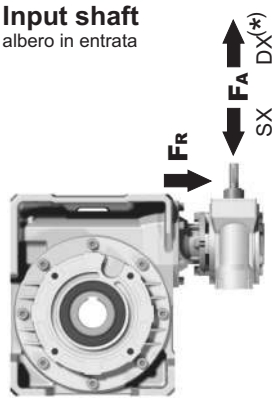
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2 [min^{-1}]	FA [N]	FR [N]
25	1200	6000
15	1400	7000

Input shaft
albero in entrata



n_1 [min^{-1}]	FA [N]	FR [N]
1400	76	380

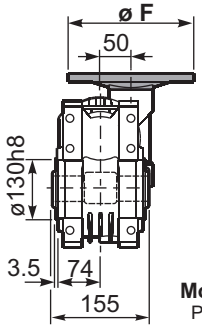
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

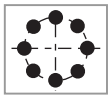
tab. 2

Gearbox weight peso riduttore	38.8 kg

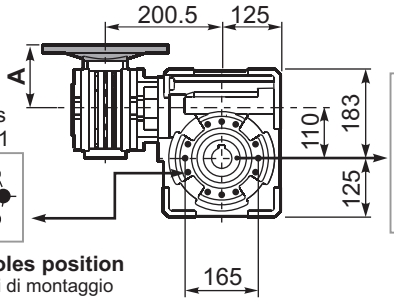
P15Q**FB**... Basic wormbox
Riduttore base

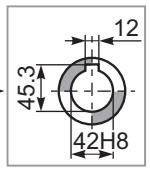
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	78.5
71B5	K050.4.042	160	76
80B5	K050.4.043	200	76.5
56B14	KC40.4.049	80	76
63B14	K050.4.047	90	78.5
71B14	K050.4.045	105	76
80B14	K050.4.046	120	76.5



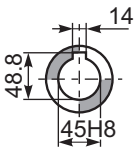


Mounting holes position
Posizione fori di montaggio



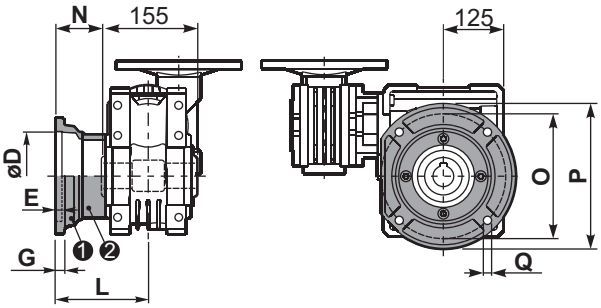


Standard
Hollow shaft



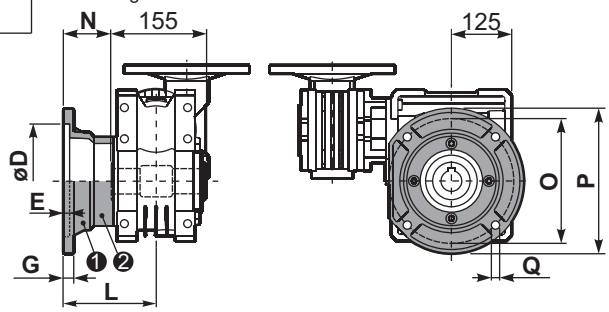
On request
A richiesta

P15Q**FC**... Output flange
Flangia uscita



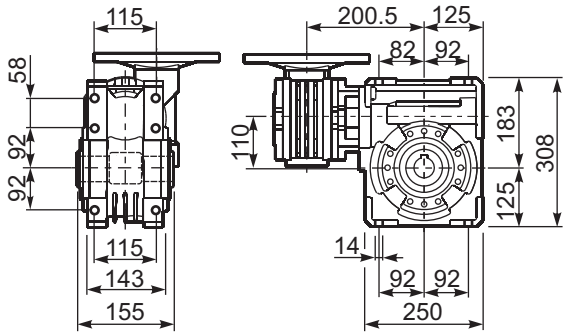
type **B**	øD	E	G	L	N	O	P	Q	kit code
FC	$170^{+0.083}_{+0.043}$	11	16.5	131.5	54	230	270	13	❶ K110.9.010 ❷ -
FL	$170^{+0.083}_{+0.043}$	11	16.5	179.5	102	230	270	13	❶ K110.9.011 ❷ -

P15Q**F1**... Output flange
Flangia uscita

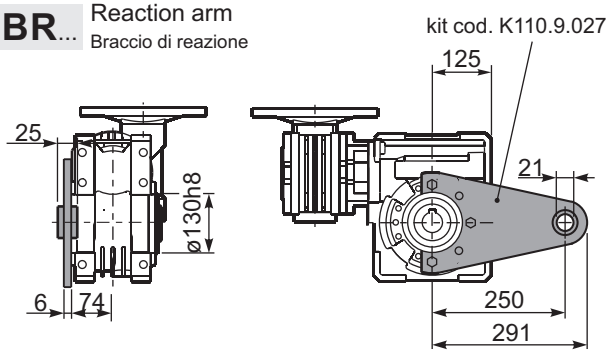


type **S**	øD	E	G	L	N	O	P	Q	kit code
F1	$180^{+0.040}_{0}$	5	18	150	72.5	215	250	15	❶ KS110.9.014 ❷ -
F3	$180^{+0.040}_{0}$	5	18	130	52.5	215	250	15	❶ KS110.9.013 ❷ -

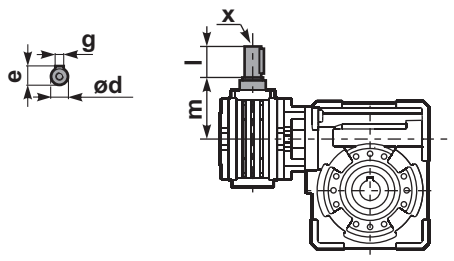
P15Q**FB**... Feet
Piedini



P15Q**BR**... Reaction arm
Braccio di reazione



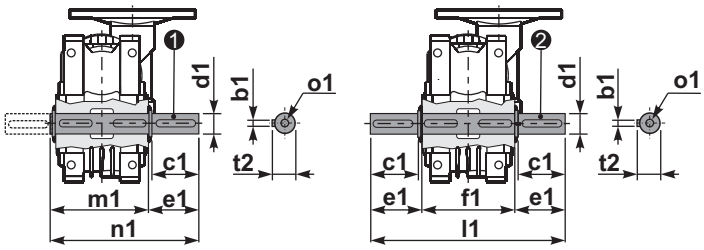
R15QFB... Input shaft
Albero in entrata



	ød	e	g	l	m	x	kit code
type **B**	16 h6	18	5	30	79.5	M6x16	❶ K050.5.006 PAM71 ❷ K050.5.007 PAM80
type **S**	14 h6	16	5	30	79.5	M5x10	❶ KS050.5.008 PAM71 ❷ KS050.5.009 PAM80

P15Q.....**S**... Single Shaft
Albero lento semplice

P15Q.....**D**... Double Shaft
Albero lento bisp.



❶ kit cod. K110.5.028 type **B**

❷ kit cod. K110.5.029 type **B**

	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
type **B**	12	75	$42^{-0.005}_{-0.020}$	96.5	155	348	163.5	260	45	M12x32
type **S**	-	-	-	-	-	-	-	-	-	-

Aluminum one step gearboxes

A modular and compact product

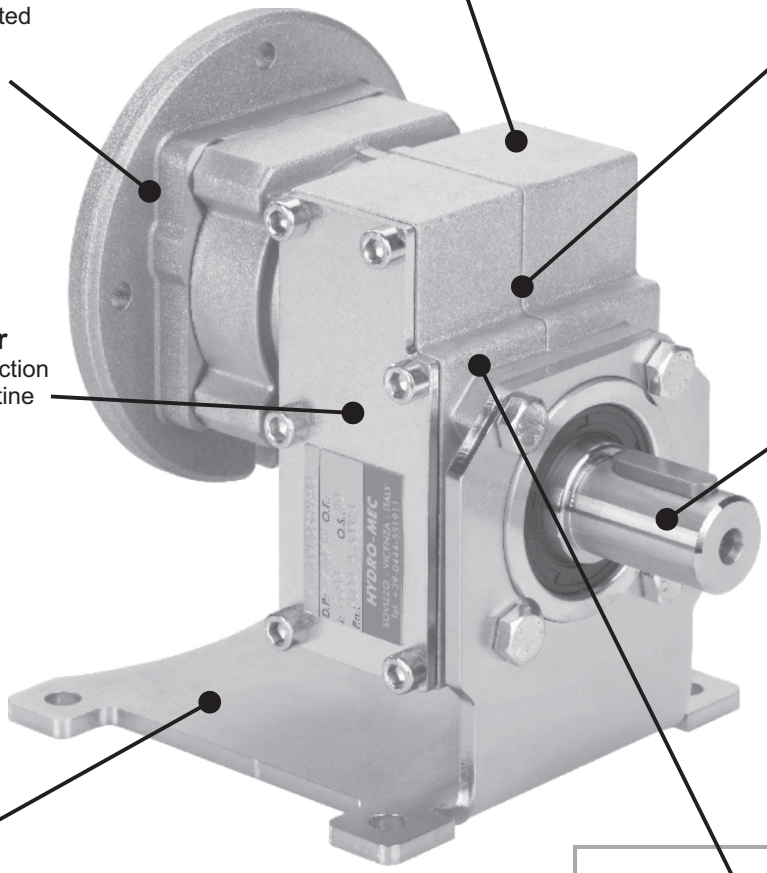
Alloy housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

Flange
Fully modular to IEC and Compact integrated motor.
NEMA C flange

Gears
Hardened and ground gears.

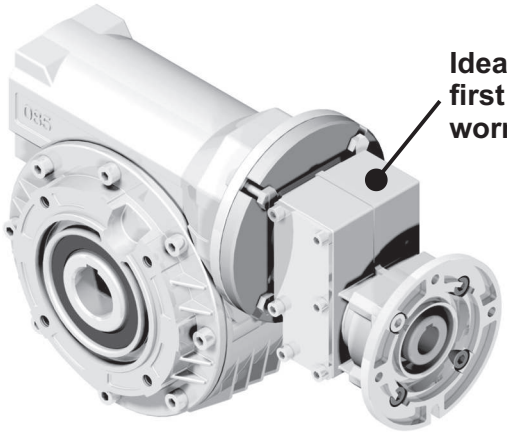
Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

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.

World wide sales network.

Lubricated for life with synthetic oil with operative range from -15° to +130°C

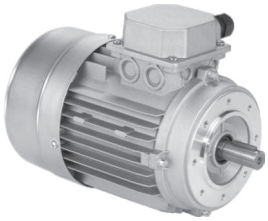
Specific type datasheet on page...

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

Types / Tipi
Tipen / Types
Tipos

4-5	4-7	4-9	4-11
211A 20Nm	**311A** 30Nm	**411A** 38Nm	**511A** 110Nm

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



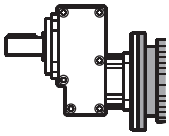
Types / Tipi
Tipen / Types
Tipos

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

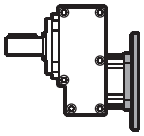
CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

Type - Tipo - Typ Type - Tipo	**Size** - Grandezza - Grösse Taille - Tamaño	**Mounting** - Montaggio Montage - Fixation Tipo de montaje	**Ratio** - Rapporto Untersetzung Reduction Relaciòn
P	**311A**	**-F**	**2.84**

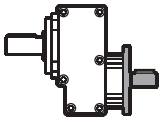
Aluminum one step gear
Riduttori in alluminio a uno stadio



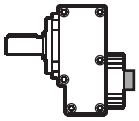
With IEC motor
M



With motor flange
P

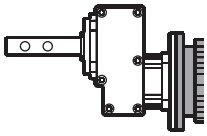


With male input shaft
R



Modular Base
B

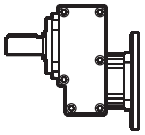
Special output shaft
Albero uscita speciale



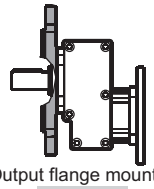
Only on request for Q.ty
A richiesta per quantità

1 Stages
Riduzioni
Stufen
Trains
Etapas

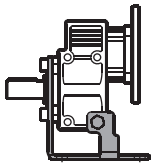
211A
311A
411A
511A



Without flange / feet
-N



Output flange mounted
-F



Mounted feet
H1

See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir Tableau données techniques

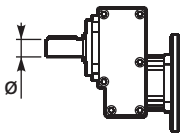
Ver tabla datos técnicos

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
Albero uscita
Abtriebswelle
Arbre de sortie
Eje en salida

S



➡ **STANDARD**

211A
- **S** ➡ **ø14**

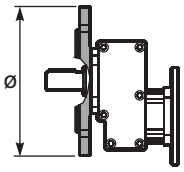
311A
- **S** ➡ **ø14**
- **C** ⇨ ø19
- **E** ⇨ ø24

411A
- **S** ⇨ ø14
- **C** ➡ **ø19**
- **E** ⇨ ø24

511A
- **C** ⇨ ø19
- **E** ⇨ ø24
- **G** ➡ **ø28**

Output flange
Flangia uscita
Ausgangsflansch
Bride de sortie
Brida en salida

2



- **N** Senza flangia / Without flange

211A
- **I** ⇨ **ø105**
  Flangia integrata
  Integrated flange

311A
- **1** ⇨ ø120
- **2** ⇨ ø140
- **3** ➡ **ø160**
- **4** ⇨ ø200

411A
- **1** ⇨ ø120
- **2** ⇨ ø140
- **3** ⇨ ø160
- **4** ➡ **ø200**

511A
- **1** ⇨ ø120
- **2** ⇨ ø140
- **3** ⇨ ø160
- **4** ⇨ ø200
- **5** ➡ **ø250**

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-C

Flange / Flangia

B5
- **-A**=56 (ø120)
- **-B**=63 (ø140)
- **-C**=71 (ø160)
- **-D**=80 (ø200)
- **-E**=90 (ø200)
- **-F**=100÷112 (ø250)
- **-G**=132 (ø300)

B14
- **-O**=56 (ø80)
- **-P**=63 (ø90)
- **-Q**=71 (ø105)
- **-R**=80 (ø120)
- **-T**=90 (ø140)
- **-U**=100÷112 (ø160)
- **-V**=132 (ø200)

Type R / Tipo R

211A / 311A
- **-1** ⇨ ø14

411A
- **-2** ⇨ ø19

511A
- **-3** ⇨ ø24

Without flange / Senza flangia

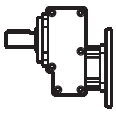
211A / 311A
- **-Z** ⇨ ø9 (IEC56)
- **-0** ⇨ ø11 (IEC63)
- **-1** ⇨ ø14 (IEC71)

411A
- **-1** ⇨ ø14 (IEC71)
- **-2** ⇨ ø19 (IEC80)
- **-3** ⇨ ø24 (IEC90)

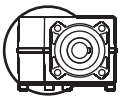
511A
- **-2** ⇨ ø19 (IEC80)
- **-3** ⇨ ø24 (IEC90)
- **-4** ⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

B3

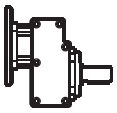


B3
STANDARD

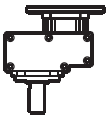


B6

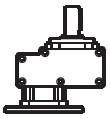
B7



B8



V5



V6

Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

ST
standard bore
foro standard

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

With Type M specify terminal box position
Con tipo M specificare posizione morsettiera

A

B
STANDARD

C

D

4

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

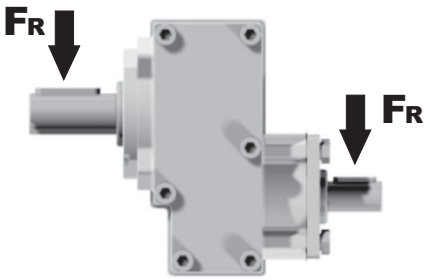
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

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



$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

311A One step 30Nm

Rating - Aluminum ONE STEP GEARBOXES

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft	Ratios code
892	**1.57**	0.37	3.9	3.3	1.24	13			C	C		2844	standard 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

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
682	**2.05**	0.37	5	2.0	0.73	10			C	C		1939	standard ø14	01
595	**2.35**	0.37	6	2.1	0.76	12			C	C		1740		02
500	**2.80**	0.37	7	2.0	0.75	14			C	C		1542		03
414	**3.38**	0.37	8	2.0	0.75	17			C	C		1344		04
298	**4.70**	0.37	12	1.7	0.64	20			C	C		1047		05
225	**6.22**	0.37	15	1.5	0.55	23			C	C		956		06
169	**8.29**	0.37	20	1.0	0.36	20			C	C		758		07
142	**9.83**	0.25	16	1.0	0.24	16			C	C		659		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 **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 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 **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 requiren 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.

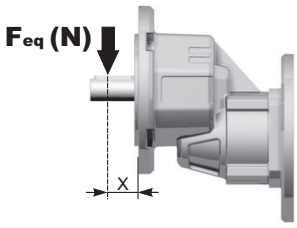
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

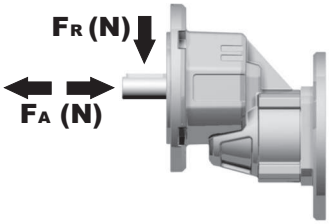
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

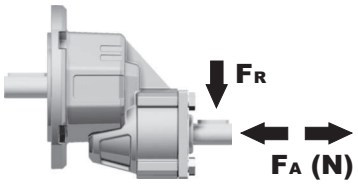
$$F_{eq} = F_R \cdot \frac{34.5}{X+19.5}$$





n_2	FA	FR
700	101	504
600	120	600
400	138	696
300	151	756
200	175	876
140	192	960

Input shaft
albero in entrata



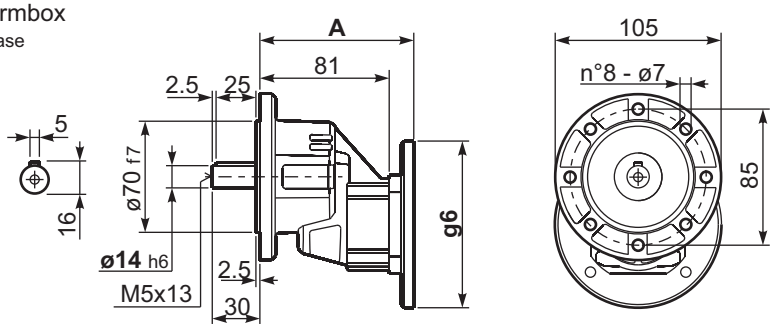
n_1	FA	FR
1400	168	840
900	192	960

***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

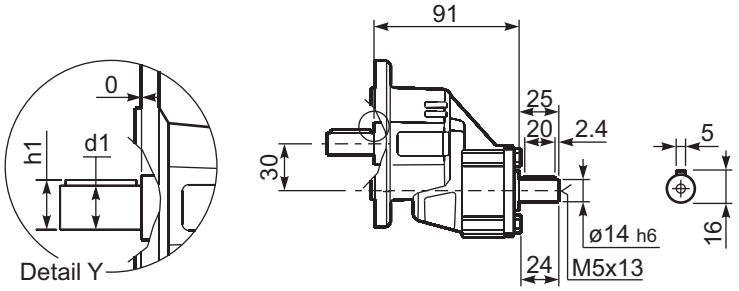
Gearbox weight peso riduttore	1.40 kg



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	ø 14x30	5	16	M5x13

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
891	**1.57**	0.37	4	3.3	1.2	13			C	C		2844	standard ø14	01
493	**2.84**	0.37	7	3.3	1.2	23			C	C		1954		02
425	**3.29**	0.37	8	3.2	1.2	26			C	C		1756		03
362	**3.87**	0.37	10	2.9	1.1	28			C	C		1558		04
303	**4.62**	0.37	11	2.6	0.97	30			C	C		1360	On request ø19 ø24	05
222	**6.30**	0.37	16	2.2	0.83	35			C	C		1063		06
170	**8.22**	0.37	20	1.9	0.69	38			C	C		974		07
129	**10.86**	0.37	27	1.0	0.39	28			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 **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 requiren 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.

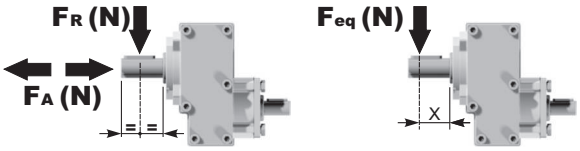
SHELL Omala S4 WE 320	ENI Telium VSF 320

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

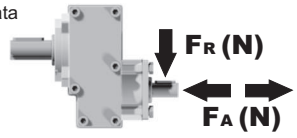
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{38.5}{X+18.5}$$



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

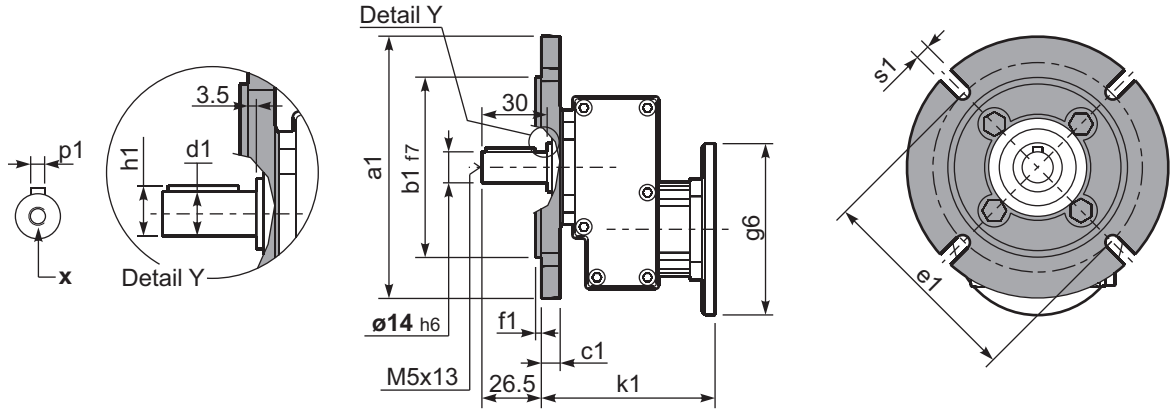


n_1	FA	FR
1400	180	860
900	200	980

tab. 2

Gearbox weight peso riduttore	2.50 kg

P311-F... Output flange
flange di uscita



***Available output shaft** / Albero di uscita

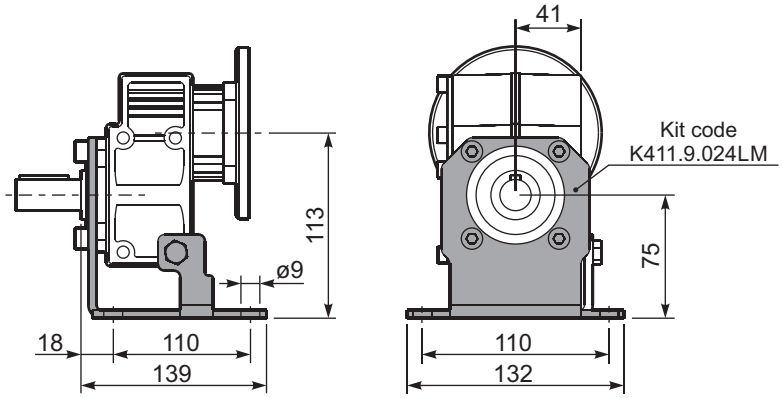
	Shaft - d1	p1	h1	x
Standard	ø 14x30	5	16	M5x13
On request A richiesta	ø 19x40 ø 24x40	6 8	21.5 27	M6x16 M6x16

Available output flanges / flange di uscita

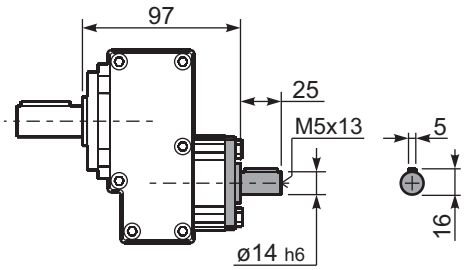
a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

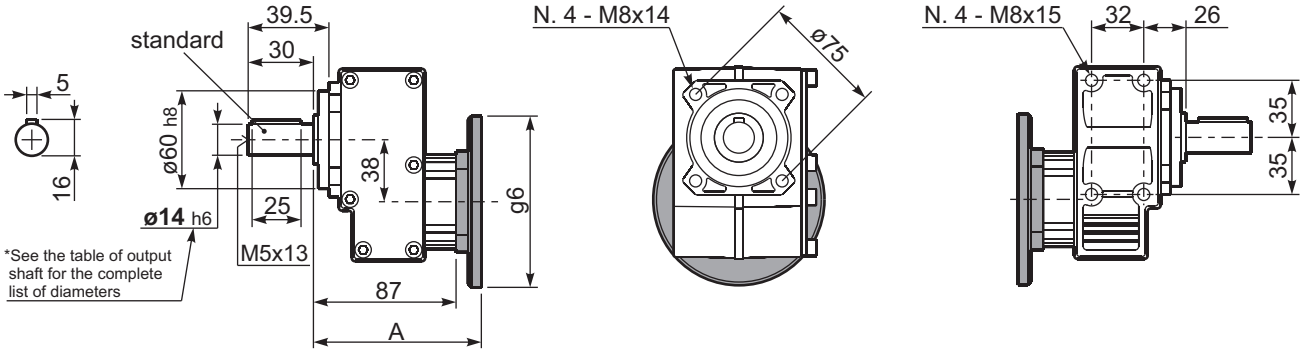
P311-H1... With feet
Con piedini



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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
891	**1.57**	1.5	16	1.3	1.9	20	B				C	C		2844	standard ø19	01
493	**2.84**	1.5	28	1.2	1.8	35	B				C	C		1954		02
425	**3.29**	1.5	33	1.2	1.7	38	B				C	C		1756		03
362	**3.87**	1.5	39	1.0	1.5	40	B				C	C		1558		04
303	**4.62**	1.5	46	1.0	1.5	47	B				C	C		1360	On request ø14 ø24	05
222	**6.30**	1.1	46	1.0	1.1	46	B				C	C		1063		06
170	**8.22**	0.55	30	1.3	0.69	38	B				C	C		974		07
129	**10.86**	0.37	27	1.0	0.39	28	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 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 **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 requiren 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.

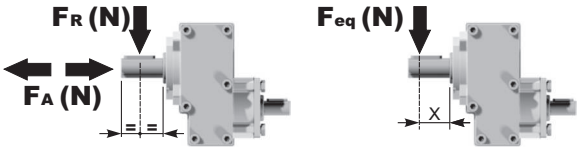
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

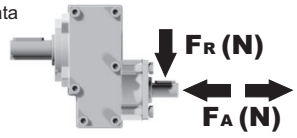
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{40}{X+20}$$



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

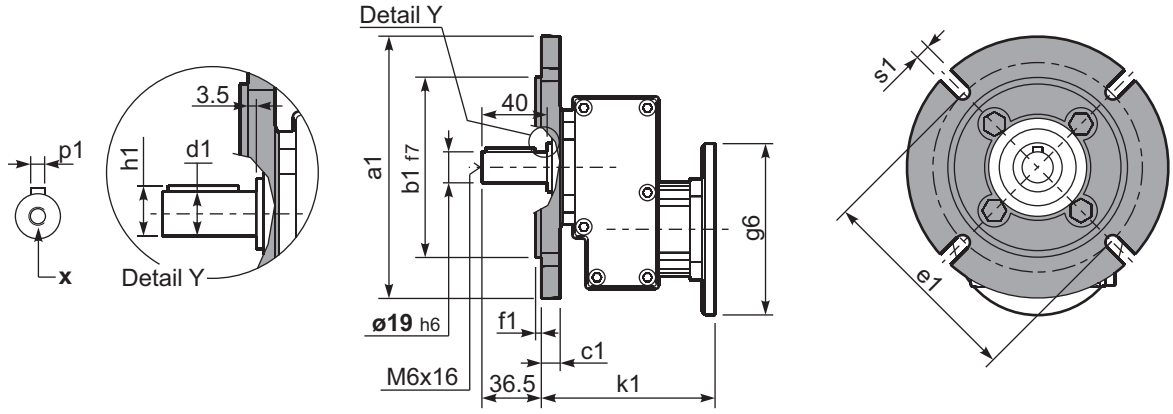


n_1	FA	FR
1400	240	1200
900	280	1400

tab. 2

P411-F... Output flange
flange di uscita

Gearbox weight peso riduttore	3.20 kg



***Available output shaft** / Albero di uscita

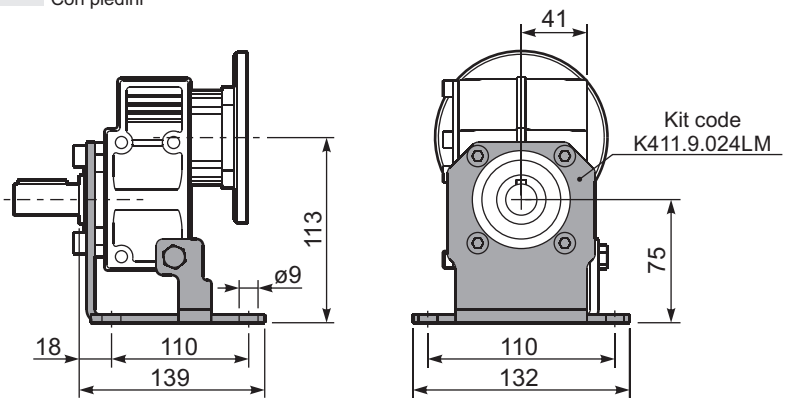
	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16
On request A richiesta	ø 14x30 ø 24x40	5 8	16 27	M5x13 M6x16

Available output flanges / flange di uscita

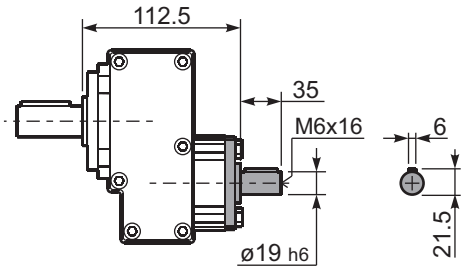
a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

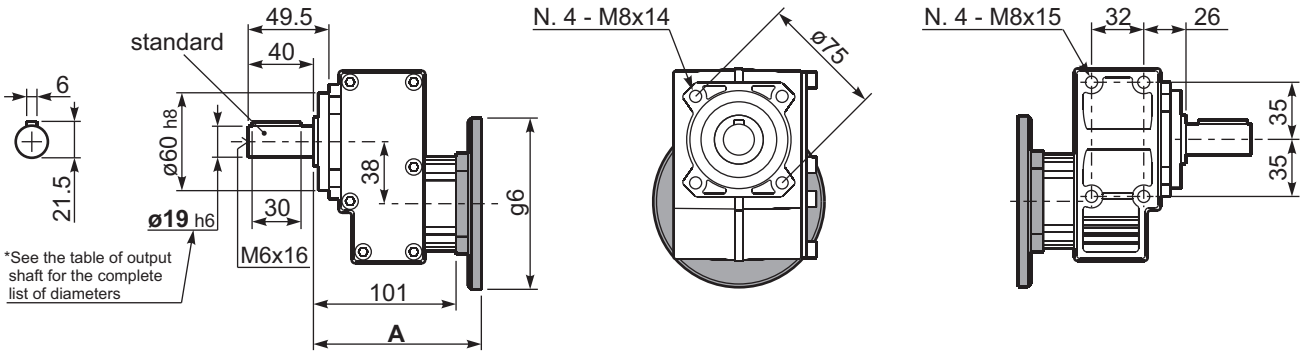
P411-H1... With feet
Con piedini



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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
1077	**1.30**	4	34	1.2	**4.6**	**40**	B									3039	**standard ø28**	01
571	**2.45**	4	64	1.1	**4.3**	**70**	B									2049		02
423	**3.31**	4	87	1.0	**4.1**	**90**	B									1653		03
325	**4.31**	4	113	1.0	**3.8**	**110**	B									1356	On request ø24	04
266	**5.27**	3	104	1.1	**3.1**	**110**	B									1158		05
184	**7.63**	2.2	111	1.0	**2.2**	**110**	B									861		06
133	**10.50**	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 requiren 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.

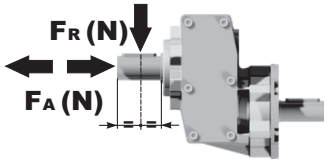
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

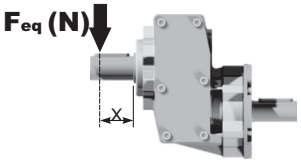
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

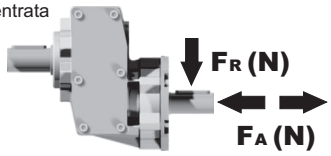
$$F_{eq} = F_R \cdot \frac{47.5}{X+22.5}$$





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

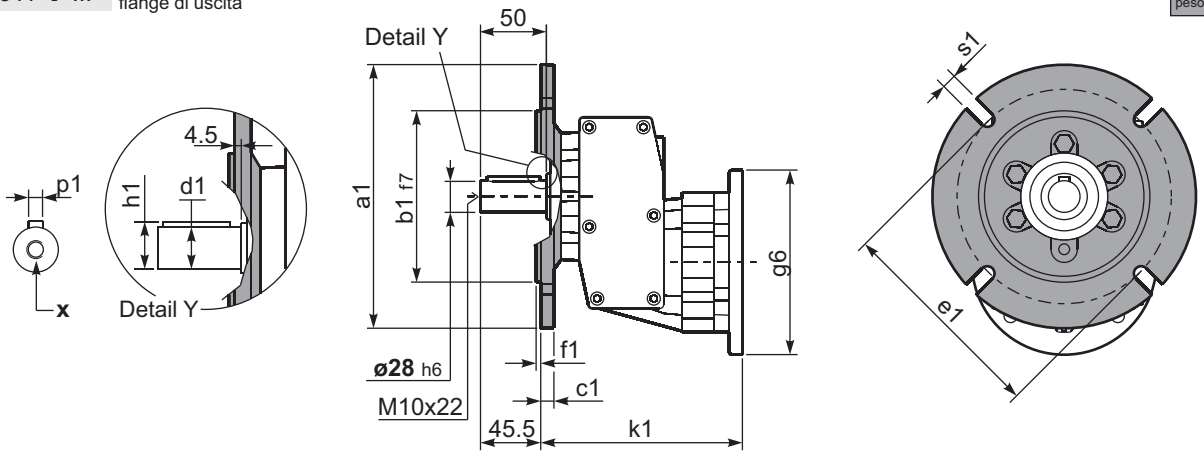


n_1	FA	FR
1400	400	2000
900	440	2200

tab. 2

Gearbox weight peso riduttore	5.00 kg

P511-F... Output flanges
flange di uscita



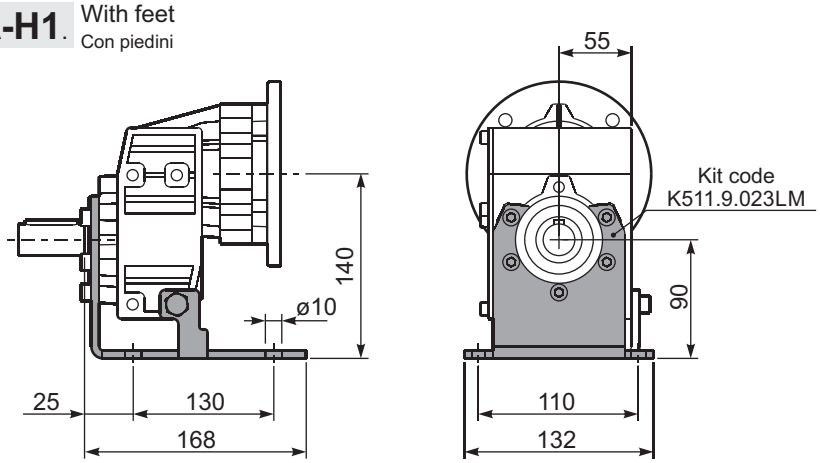
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 28x50	8	31	M10x22
On request A richiesta	ø 24x50	8	27	M8x19

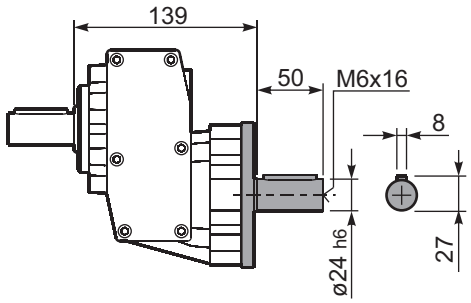
Available output flanges / flange di uscita

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

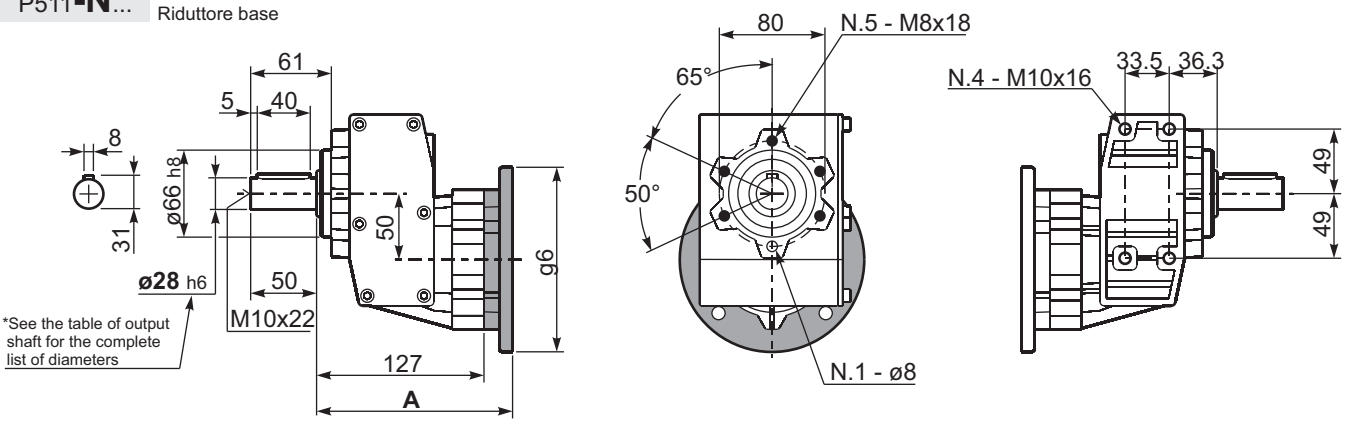
P511A-H1. With feet
Con piedini



R511A-N... Input Shaft
Albero in entrata



P511-N... Basic gearbox
Riduttore base



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

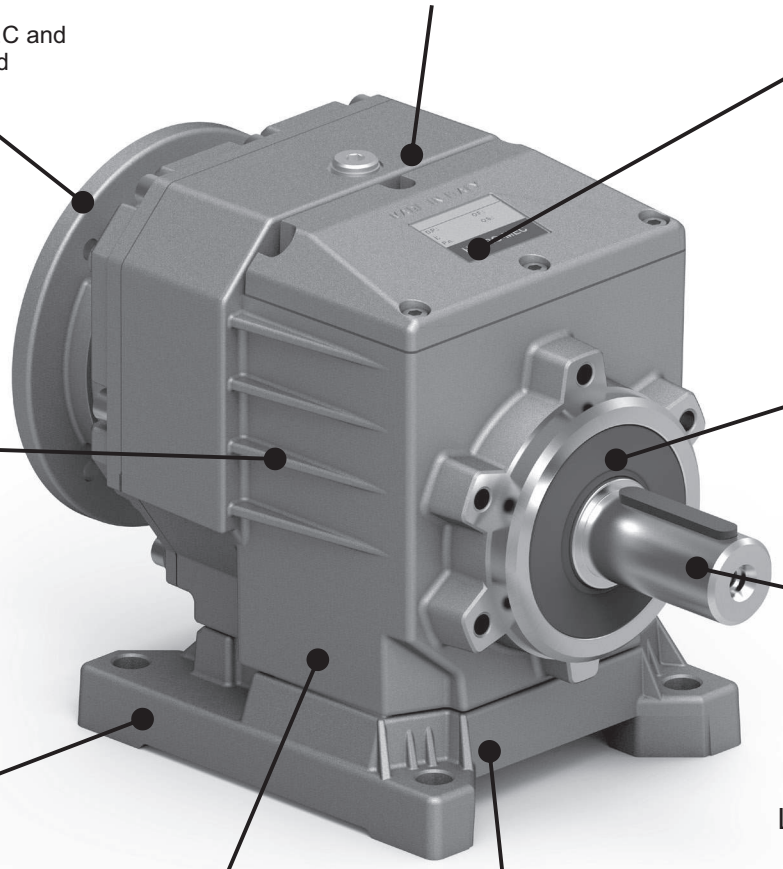
Aluminum in line gearboxes

A modular and compact product

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

Removable inspection cover
Allows periodic inspection of gearing during routine maintenance



Oil seals
Two oil seals on request

Gears
Hardened and ground gears.

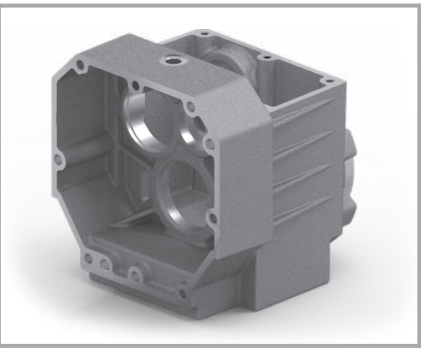
Output shaft
With well proportioned bearings

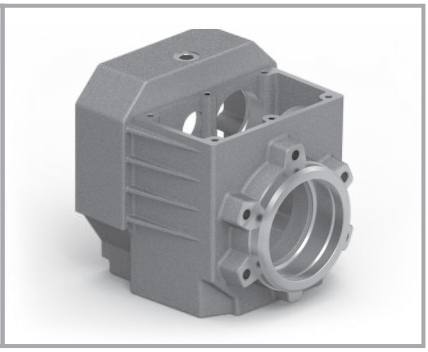
Feet
Removable feet.
With patented locking system.

Lubricated for life with synthetic oil with operative range from -15° to +130°C

Foot prints
Compatible to the main standard of the market.

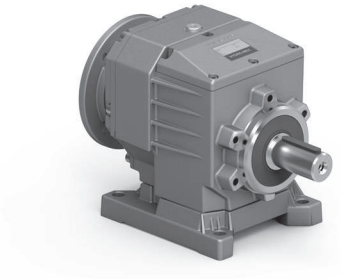
Single-piece aluminum alloy housing
Combines light weight with high tensile strength.
Precision machined for alignment of bearings and gearing





World wide sales network.

Specific type datasheet on page...



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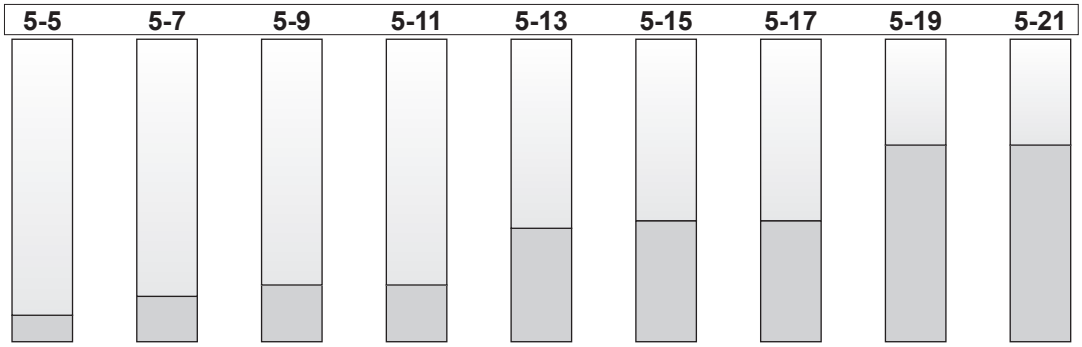

Types / Tipi
Tipen / Types
Tipos

202A	302A	412A	413A	452A	512A	513A	612A	613A
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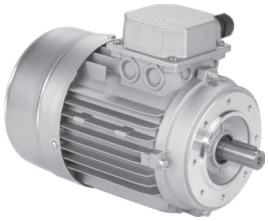

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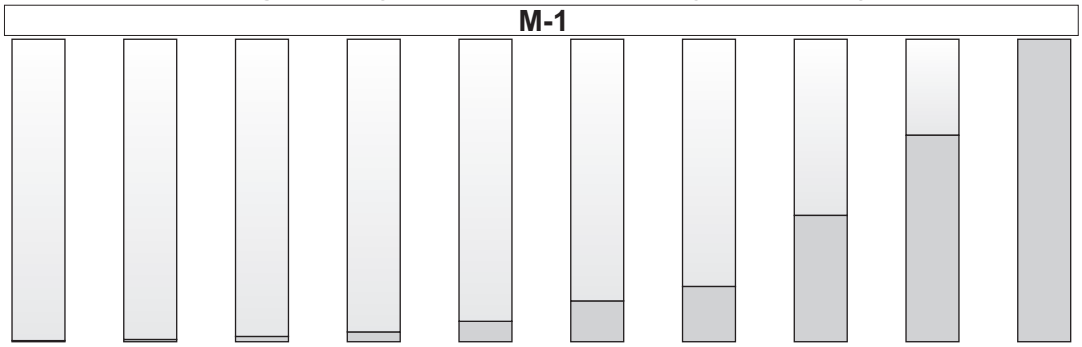


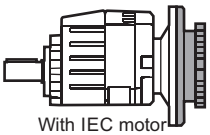
Types / Tipi
Tipen / Types
Tipos

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

Type - Tipo - Typ
Type - Tipo

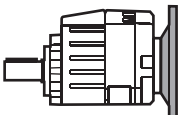
P

Aluminum coaxial gear boxes
Riduttori coassiali in alluminio



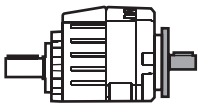
With IEC motor

M



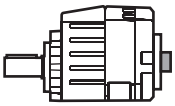
With motor flange

P



With male input shaft

R



Modular base

B

Size - Grandezza - Grösse
Taille - Tamaño

412A

2 Stages
Riduzioni
Stufen
Trains
Etapas

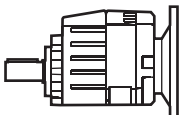
202A
302A
412A
452A
512A
612A

3 Stages
Riduzioni
Stufen
Trains
Etapas

413A
513A
613A

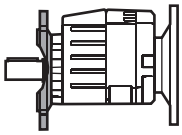
Mounting - Montaggio
Montage - Fixation
Tipo de montaje

-F



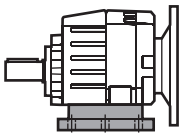
Without flange / feet

-N



Output flange mounted

-F



Mounted feet

B..

Feet / piedini

Feet Code	Market reference	G	H	R	L	L1	S
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

Ratio - Rapporto
Untersetzung - Reduction
Relaciòn

7.33

See technical data table

Vedi tabelle dati tecnici

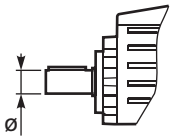
Ver tabla datos técnicos

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
Albero uscita
Abtriebswelle
Arbre de sortie
Eje en salida

V



➡ **STANDARD**

202A

S	⇨ Ø14
B	➡ **Ø16**
D	⇨ Ø20
V	⇨ Ø25

302A

S	⇨ ø14
B	⇨ ø16
C	⇨ ø19
D	➡ **ø20**
E	⇨ ø24
V	⇨ ø25

412A 413A

B	⇨ ø16
C	⇨ ø19
D	⇨ ø20
E	⇨ ø24
V	➡ **ø25**

452A 512A 513A

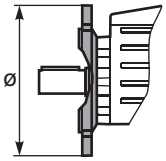
E	⇨ ø24
V	⇨ ø25
G	⇨ ø28
H	➡ **ø30**
I	⇨ ø35

612A 613A

G	⇨ ø28
H	⇨ ø30
I	➡ **ø35**
L	⇨ ø38
M	⇨ ø40

Output flange
Flangia uscita
Ausgangsflansch
Bride de sortie
Brida en salida

2



N Senza flangia
Without flange

202A 302A

1	⇨ ø120
2	➡ **ø140**
3	⇨ ø160
4	⇨ ø200

412A 413A

1	⇨ ø120
2	➡ **ø140**
3	⇨ ø160
4	⇨ ø200
5	⇨ ø250

452A 512A 513A

3	⇨ ø160
4	➡ **ø200**
5	⇨ ø250

612A 613A

3	⇨ ø160
4	⇨ ø200
5	➡ **ø250**

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-C

Flange Flangia

B5

-A	=56 (ø120)
-B	=63 (ø140)
-C	=71 (ø160)
-D	=80 (ø200)
-E	=90 (ø200)
-F	=100 (ø250)
-G	=132 (ø300)

B14

-O	=56 (ø80)
-P	=63 (ø90)
-Q	=71 (ø105)
-R	=80 (ø120)
-T	=90 (ø140)
-U	=100 (ø160)
-V	=132 (ø200)

Brushless

BB	=50/70-M5
BC	=60/75-M5
BD	=70/90-M6
BE	=80/100-M6
BF	=95/115-M8
BG	=110/145-M8
BH	=130/165-M8

Type R Tipo R

202A 413A

-1	⇨ ø14

302A 412A 513A 613A

-2	⇨ ø19

452A 512A 612A

-3	⇨ ø24

Without flange Senza flangia

-M	⇨ With coupling

202A 413A

-Z	⇨ ø9 (IEC56)
-0	⇨ ø11 (IEC63)
-1	⇨ ø14 (IEC71)

302A 412A 513A 613A

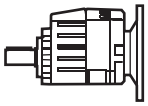
-1	⇨ ø14 (IEC71)
-2	⇨ ø19 (IEC80)
-3	⇨ ø24 (IEC90)

452A 512A 612A

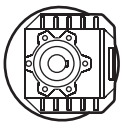
-2	⇨ ø19 (IEC80)
-3	⇨ ø24 (IEC90)
-4	⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

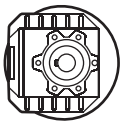
B3



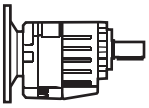
B3
STANDARD



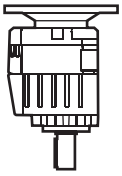
B6



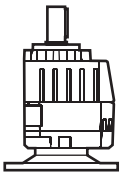
B7



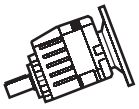
B8



V5



V6



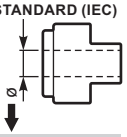
V8

Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

ST
standard bore
foro standard

COUPLING
STANDARD (IEC)

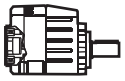


-A	= 9mm
-B	= 11mm
-C	= 14mm
-D	= 19mm
-E	= 24mm
-F	= 28mm

BRUSHLESS *

-2	= 11mm
-3	= 14mm
-4	= 19mm
-5	= 22mm
-6	= 24mm

-0
Ready for input coupling
Predisposto per giunto



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

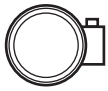
Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

With Type M specify terminal box position

Con tipo M specificare posizione morsettiera

A

B
STANDARD



C

D

5

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

Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

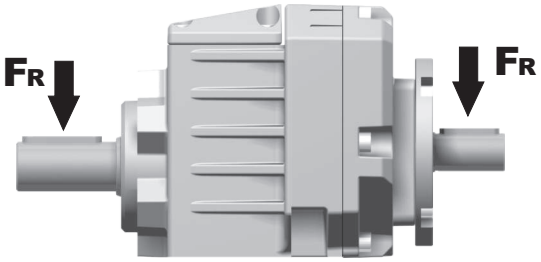
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

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



$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

412A Coaxial - Gear 160Nm

Rating - Aluminum COAXIAL GEARBOXES

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80*	-E 90*	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
398	**3.52**	3	69	1.2	3.5	80	B				C	C			2821		01
320	**4.37**	3	86	1.0	3.1	90	B				C	C			2818		02
252	**5.55**	3	109	0.9	2.8	100	B				C	C			2813		03
220	**6.36**	2.2	92	1.0	2.3	95	B				C	C			1921		04
191	**7.33**	2.2	106	1.1	2.5	120	B				C	C			2812		05

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

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71*	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
407	**3.44**	0.55**	12	2.0	1.1	25			C	C		2821		01
327	**4.28**	0.55**	15	1.9	1.1	30			C	C		2818		02
257	**5.45**	0.55**	20	2.0	1.1	40			C	C		2815		03
225	**6.23**	0.55**	23	2.0	1.1	45			C	C		1921		04
194	**7.20**	0.55**	26	1.9	1.1	50			C	C		2812		05
181	**7.74**	0.55**	28	1.8	0.99	50			C	C		1918		06
142	**9.85**	0.55**	36	1.7	0.93	60			C	C		1915	**standard**	07
123	**11.42**	0.55**	41	1.5	0.80	60			C	C		1715	**ø16**	08
107	**13.03**	0.55**	47	1.3	0.70	60			C	C		1912		09
93	**15.10**	0.37	37	1.6	0.61	60			C	C		1712	ø14	10
86	**16.20**	0.37	39	1.5	0.57	60			C	C		1910	ø20	11
75	**18.78**	0.37	45	1.3	0.49	60			C	C		1710	ø25	12
66	**21.15**	0.37	51	1.2	0.43	60			C	C		1312	On request	13
64	**21.84**	0.37	53	1.1	0.42	60			C	C		1015		14
53	**26.31**	0.37	64	0.9	0.35	60			C	C		1310		15
48.5	**28.88**	0.37	70	1.0	0.37	70			C	C		1012		16
39	**35.91**	0.37	87	0.8	0.30	70			C	C		1010		17
37.1	**37.69**	0.25	62	1.1	0.28	70			C	C		912		18
29.9	**46.87**	0.25	77	0.9	0.23	70			C	C		910		19
28.1	**49.76**	0.25	81	0.9	0.21	70			C	C		712		20
22.6	**61.89**	0.18	77	0.9	0.17	70			C	C		710		21

**** Concerning a reduced dimensions electric motor.**
Riferito a motore con grandezza ridotta

* 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 **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 requiren 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

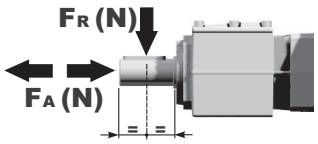
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

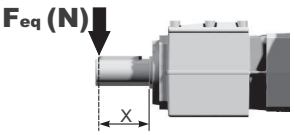
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

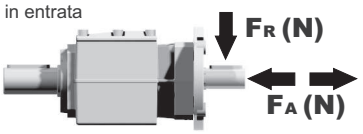
$$F_{eq} = F_R \cdot \frac{35.7}{X+20.7}$$





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

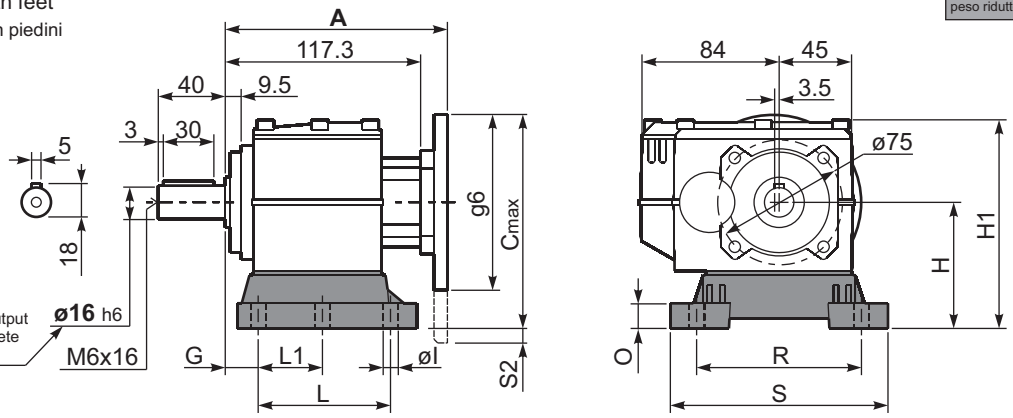


n_1	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

Gearbox weight peso riduttore	With flange 3.3 kg
	With feet 3.7 Kg

P202A**B1**... With feet / Con piedini



*See the table of output shaft for the complete list of diameters

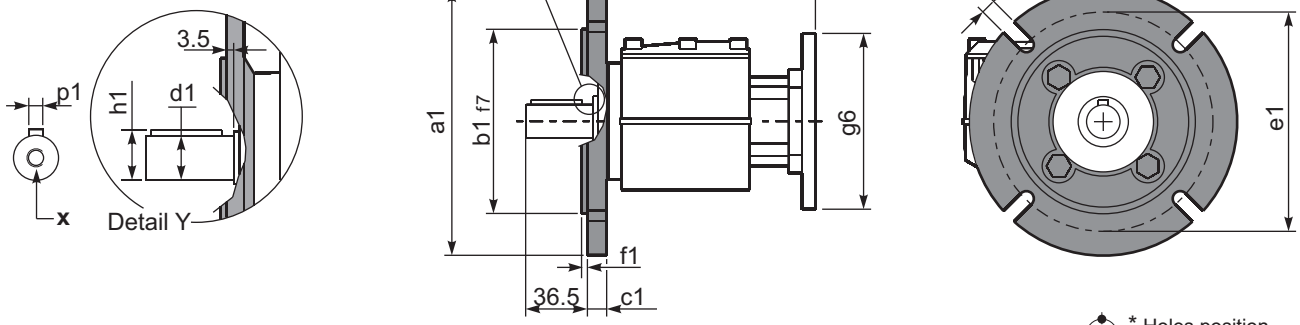
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	133	15	9	-	-	KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	-	-	KC30.9.023LM
S1	17-32	18	75	110	110	50	130	123	15	9	-	63B5	KC30.9.024

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

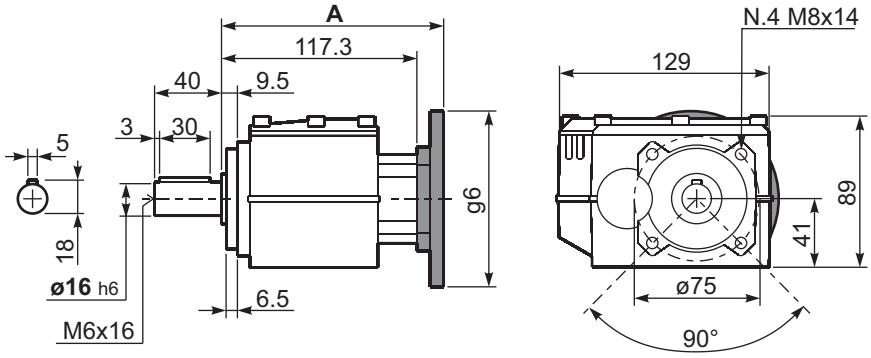
	Shaft - d1	p1	h1	x
Standard	ø 16x40	5	18	M6x16
On request A richiesta	ø 14x30	5	16	M6x16
	ø 20x40	6	22.5	M8x19
	ø 25x50	8	28	M8x19

Available output flanges / flange di uscita

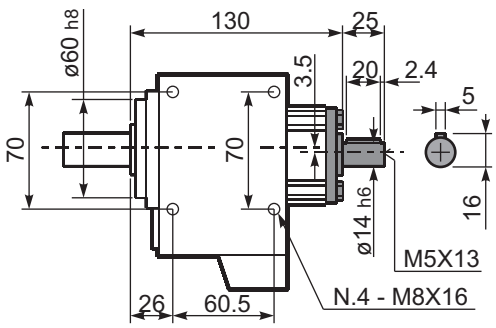
* Holes position / Posizione fori

a1 ø	b1	c1	e1	f1	s1	kit code	
120	80	11.5	100	3	9*	KC30.9.010	With flange and feet only on request. Ask for compatibility
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	

P202A-**N**... Basic gearbox / Riduttore base



R202A-**N**... Input Shaft / Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71*	-D 80*	-E 90*	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
407	**3.44**	1.5	34	1.0	**1.6**	**35**	B				C	C		2821		01
327	**4.28**	1.5	42	1.0	**1.4**	**40**	B				C	C		2818		02
257	**5.45**	1.5	53	1.0	**1.5**	**52**	B				C	C		2815		03
225	**6.23**	1.5	61	1.1	**1.7**	**70**	B				C	C		1921		04
194	**7.20**	1.5	71	1.0	**1.5**	**70**	B				C	C		2812		05
181	**7.74**	1.5	76	1.1	**1.6**	**80**	B				C	C		1918	**standard**	06
142	**9.85**	1.5	97	1.0	**1.5**	**95**	B				C	C		1915	**ø20**	07
123	**11.42**	1.5	112	1.0	**1.5**	**115**	B				C	C		1715		08
107	**13.03**	1.1	93	1.2	**1.3**	**114**	B				C	C		1912	ø14	09
93	**15.10**	1.1	108	1.1	**1.2**	**114**	B				C	C		1712	ø16	10
86	**16.20**	0.75	80	1.3	**1.0**	**107**	B				C	C		1910	ø19	11
75	**18.78**	0.75	92	1.2	**0.87**	**107**	B				C	C		1710	ø24	12
66	**21.15**	0.75	104	1.1	**0.82**	**114**	B				C	C		1312	ø25	13
64	**21.84**	0.75	107	1.1	**0.83**	**119**	B				C	C		1015	On request	14
53	**26.31**	0.55	95	1.1	**0.62**	**107**	B				C	C		1310		15
48.5	**28.88**	0.55	105	1.1	**0.60**	**114**	B				C	C		1012		16
39	**35.91**	0.37	87	1.2	**0.46**	**107**	B				C	C		1010		17
37.1	**37.69**	0.37	91	1.1	**0.41**	**102**	B				C	C		912		18
29.9	**46.87**	0.37	113	0.9	**0.35**	**107**	B				C	C		910		19
28.1	**49.76**	0.25	81	1.2	**0.31**	**101**	B				C	C		712		20
22.6	**61.89**	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

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 **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 requiren 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

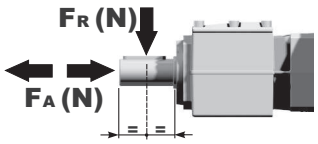
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

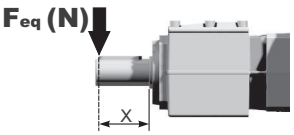
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

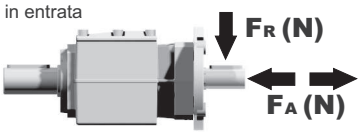
$$F_{eq} = F_R \cdot \frac{35.7}{X+20.7}$$





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

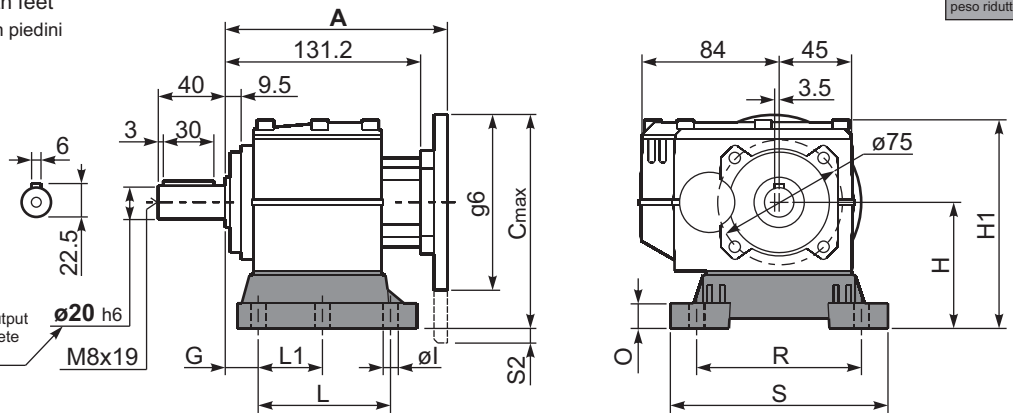


n_1	FA	FR
1400	226	1130
900	264	1320
500	322	1610

tab. 2

Gearbox weight peso riduttore	With flange 3.5 kg With feet 4.0 Kg

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	øl	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

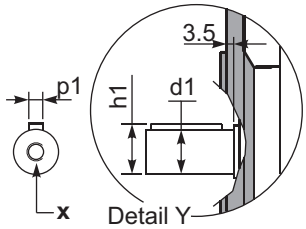
Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

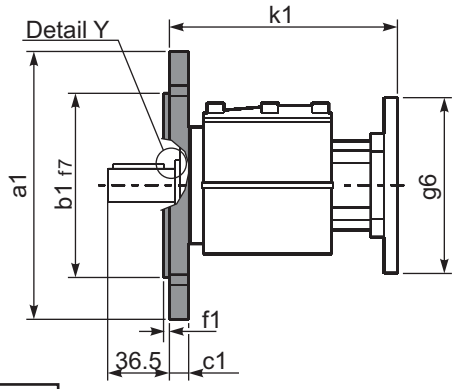
A see on page bottom

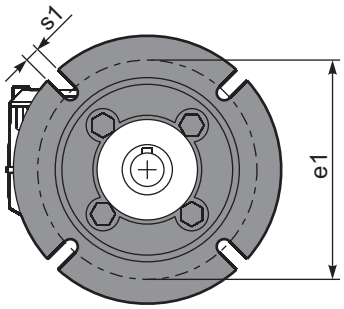
Most popular types
Tipi più diffusi

5

P302A-**F**... Output flanges / flange di uscita







***Available output shaft** / Albero di uscita

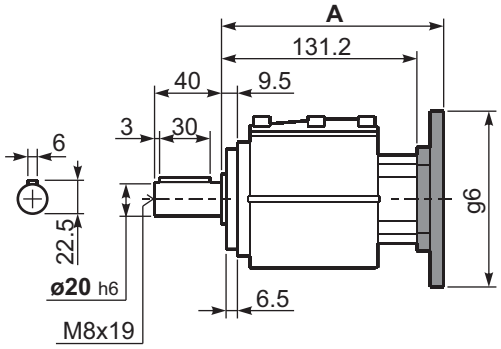
	Shaft - d1	p1	h1	x
Standard	ø 20x40	6	22.5	M8x19
On request A richiesta	ø 14x30 ø 16x40 ø 19x40 ø 24x50 ø 25x50	5 5 6 8 8	16 18 21.5 27 28	M6x16 M6x16 M6x16 M8x19 M8x19

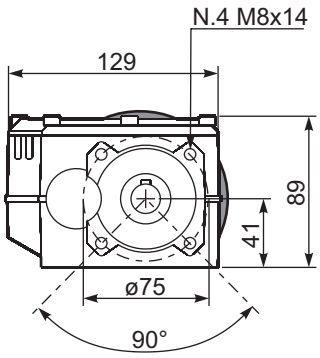
Available output flanges / flange di uscita

* Holes position
Posizione fori

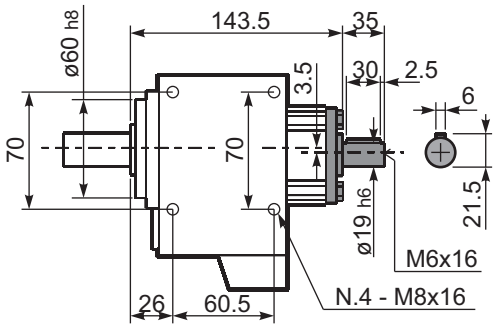
a1 ø	b1	c1	e1	f1	s1	kit code	
120	80	11.5	100	3	9*	KC30.9.010	With flange and feet only on request. Ask for compatibility
140	95	11.5	115	3	9	KC30.9.011	
160	110	11.5	130	3.5	9	KC30.9.012	
200	130	11.5	165	3.5	11	KC30.9.013	

P302A-**N**... Basic gearbox / Riduttore base





R302A-**N**... Input Shaft / Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80*	-E 90*	-F 100* 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
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 requiren 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.

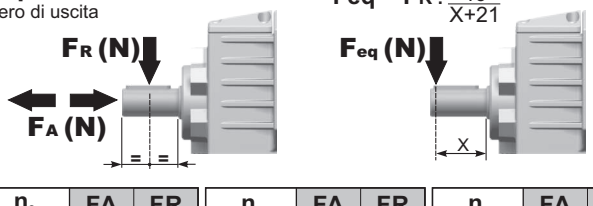
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.25 LT	0.35 LT	0.40 LT	0.45 LT	0.40 LT	0.50 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

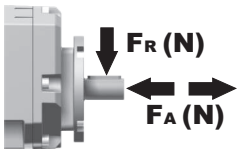
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{46}{X+21}$$



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

Input shaft
Albero in entrata

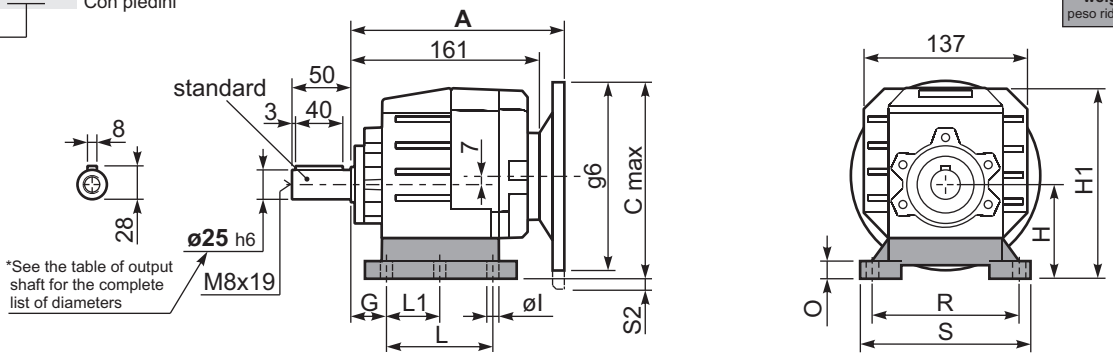


n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

P412A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	
With flange	5.7 kg
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 80/90B5 33 100/112B5	-	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 80/90B5 43 100/112B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172.5	20	9	3 80/90B5 28 100/112B5	-	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 80/90B5 38 100/112B5	-	KC40.9.023

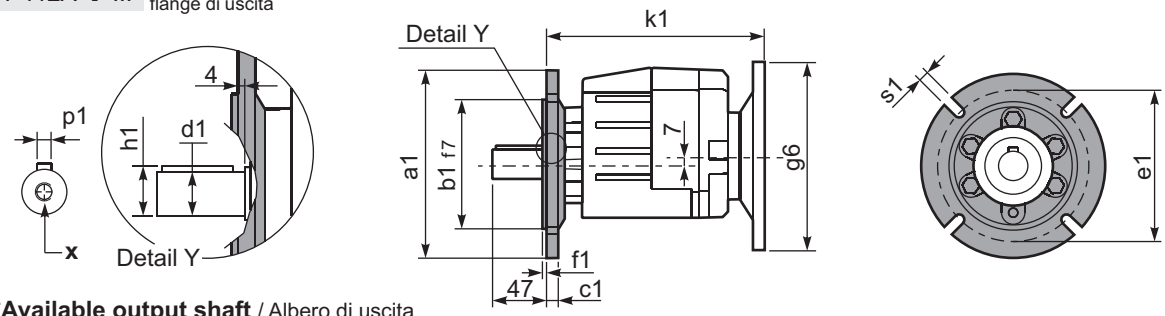
Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

5

P412A**-F**... Output flanges
flange di uscita

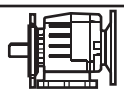


***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 16x40 ø 19x40 ø 20x40 ø 24x50	5 6 6 8	18 21.5 22.5 27	M6x16 M6x16 M8x19 M8x19

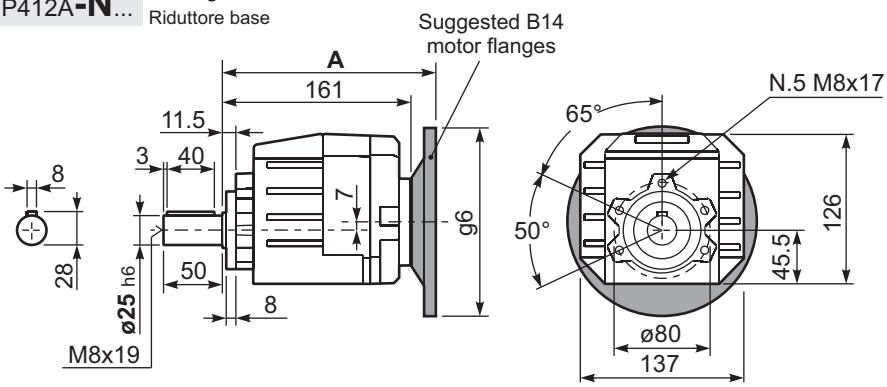
Available output flanges / flange di uscita

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

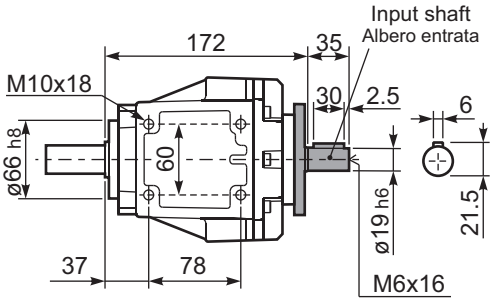


With flange and feet only on request. Ask for compatibility

P412A**-N**... Basic gearbox
Riduttore base



R412A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
36.5	**38.40**	0.37	91	1.8	0.67	165			C	C		171713		02
32.0	**43.69**	0.37	104	1.6	0.59	165			C	C		191712		03
27.6	**50.64**	0.37	120	1.4	0.51	165			C	C		171712		04
26.2	**53.36**	0.37	127	1.3	0.47	160			C	C		191710		05
22.9	**61.21**	0.37	145	1.2	0.43	170			C	C		191312	**standard**	06
22.6	**61.85**	0.37	147	1.1	0.40	160			C	C		171710	**ø25**	07
19.7	**70.95**	0.37	168	1.0	0.37	170			C	C		131712		08
19.1	**73.43**	0.37	174	1.0	0.37	175			C	C		101713	ø16	09
18.7	**74.77**	0.37	177	0.9	0.33	160			C	C		191310	ø19	10
16.2	**86.66**	0.25	139	1.2	0.29	160			C	C		131710	ø20	11
14.5	**96.85**	0.25	155	1.1	0.27	170			C	C		101712	ø24	12
13.6	**102.89**	0.25	165	1.1	0.27	175			C	C		101313	On request	13
11.1	**126.40**	0.18	155	1.1	0.21	170			C	C		91712		17
10.3	**135.69**	0.18	166	1.0	0.20	170			C	C		101312		15
8.4	**165.74**	0.12	131	1.2	0.15	160			C	C		101310		16
7.9	**177.09**	0.12	140	1.2	0.15	170			C	C		91312		18
6.5	**216.31**	0.09	136	1.2	0.12	160			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

5

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.

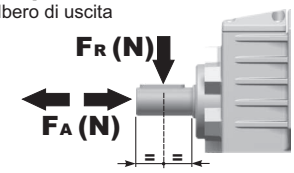
E El reductor tamaño **413A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

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
0.30 LT	0.35 LT	0.45 LT	0.45 LT	0.45 LT	0.55 LT	Ask
SHELL Omala S4 WE 320				**ENI** Telium VSF 320		

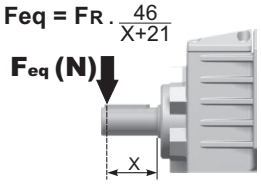
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

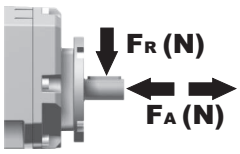


$$F_{eq} = F_R \cdot \frac{46}{X+21}$$



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

Input shaft
Albero in entrata

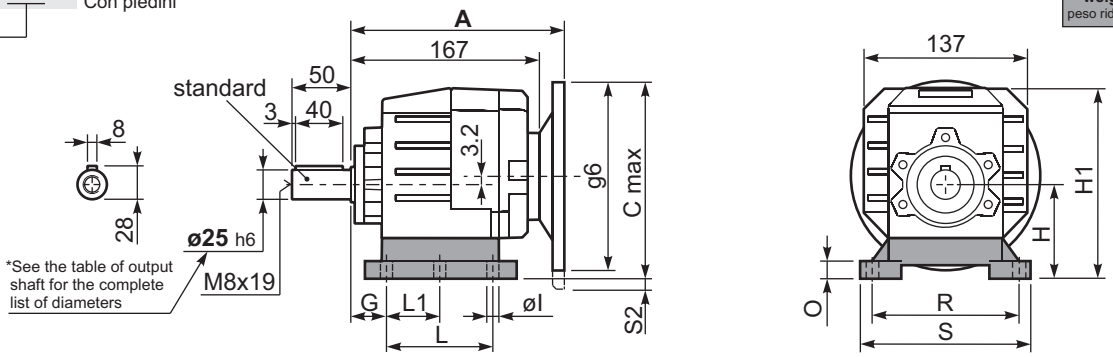


n_1	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

P413A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	
With flange	**6.1 kg**
With feet	**6.3 Kg**



Feet / piedini

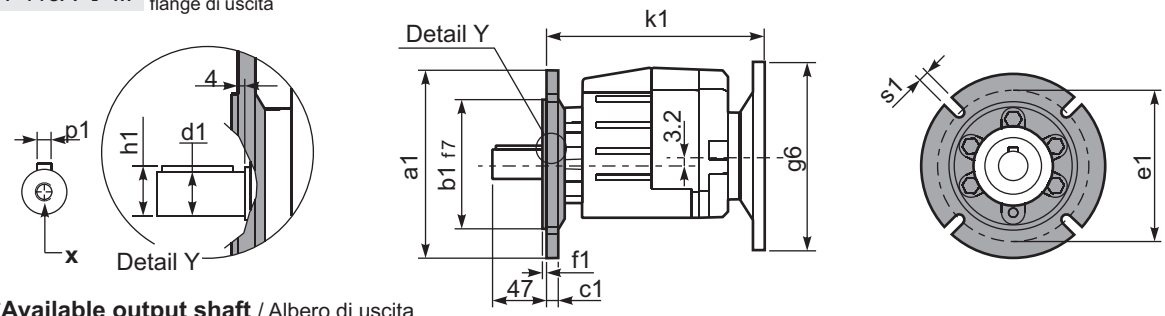
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167.5	15	-	-	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182.5	17	11	-	-	KC40.9.025
S1	17	18	75	110	90÷110	50	145	155.5	15	9	2 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	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

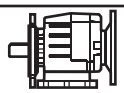


***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 16x40 ø 19x40 ø 20x40 ø 24x50	5 6 6 8	18 21.5 22.5 27	M6x16 M6x16 M8x19 M8x19

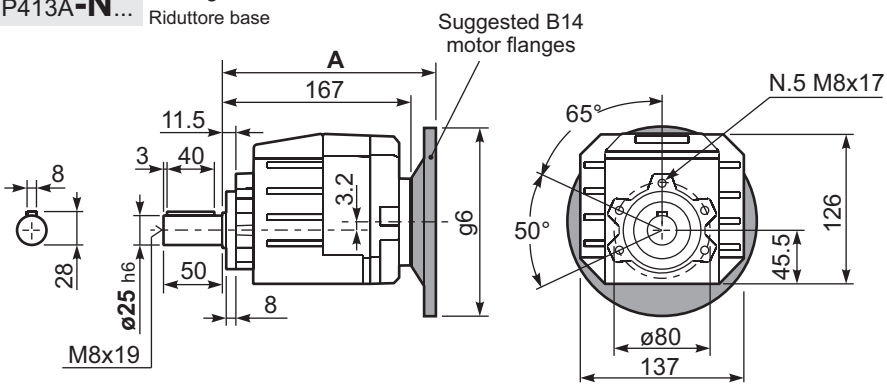
Available output flanges / flange di uscita

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

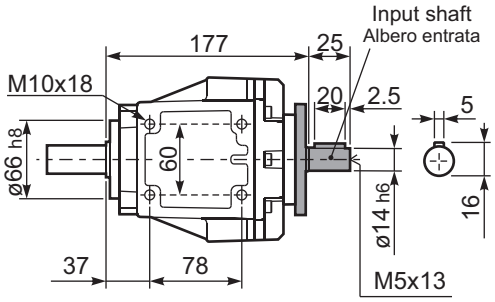


With flange and feet only on request. Ask for compatibility

P413A**-N**... Basic gearbox
Riduttore base



R413A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100* 112	-G 132*	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
388	**3.61**	4	93	1.6	6.3	150	B									3018	standard ø30	01
331	**4.23**	4	108	1.6	6.1	170	B									3016		02
279	**5.01**	4	129	1.6	6.1	200	B									3014		03
231	**6.07**	4	156	1.6	6.3	250	B									3012		04
206	**6.81**	4	175	1.6	6.2	277	B									2018		05
176	**7.96**	4	204	1.5	5.8	300	B									2016		06
148	**9.45**	4	242	1.3	4.9	304	B									2014		07
122	**11.43**	4	293	1.0	4.0	300	B									2012		08
99	**14.21**	3	274	1.0	2.8	265	B									2010	ø24	09
84	**16.62**	3	321	0.9	2.8	304	B									1314	ø25	10
70	**20.10**	2.2	286	1.0	2.3	300	B									1312	ø28	11
56	**24.98**	1.85	302	0.9	1.6	265	B									1310	ø35	12
47.6	**29.41**	1.5	288	1.1	1.6	304	B									814	On request	13
39.3	**35.58**	1.5	349	0.9	1.3	300	B									812		14
34.6	**40.50**	1.1	290	1.0	1.1	290	B									614		15
31.7	**44.23**	1.1	316	0.8	0.92	265	B									810		16
28.6	**49.00**	0.75	240	1.2	0.93	300	B									612		17
23.0	**60.90**	0.75	299	0.9	0.66	265	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

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 requiren 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.

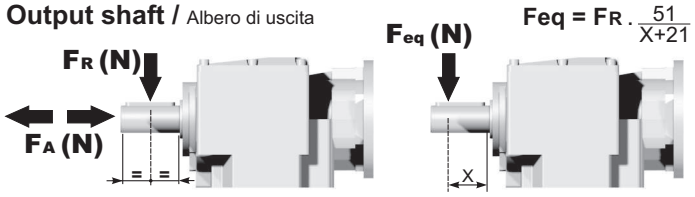
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	Ask
SHELL Omala S4 WE 320			**AGIP** Telium VSF 320			

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

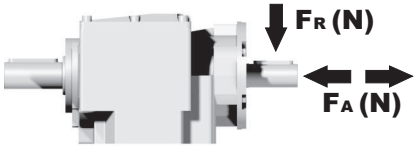
Output shaft / Albero di uscita

$$F_{eq} = F_R \cdot \frac{51}{X+21}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	415	2070	**140**	540	2700	**70**	700	3510
250	430	2160	**120**	560	2790	**40**	810	4050
200	470	2340	**85**	630	3150	**15**	900	4500

Input shaft / Albero in entrata

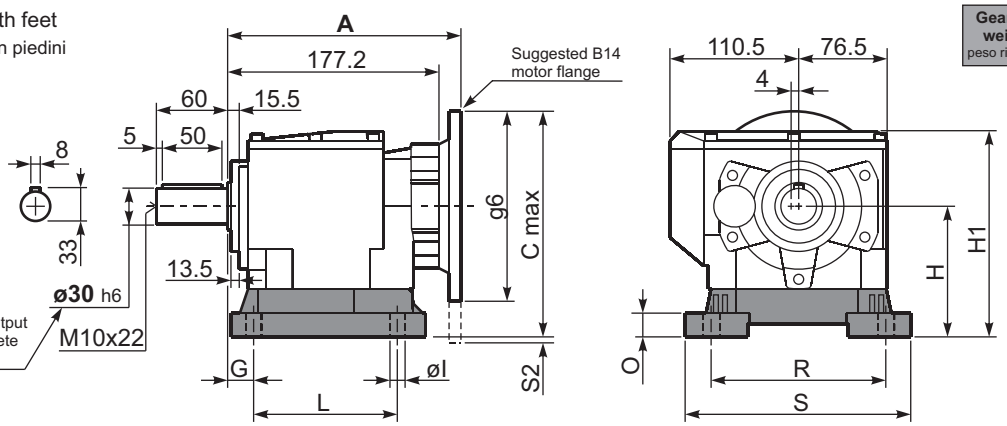


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

P452A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	
With flange	**8.7 kg**
With feet	**8.9 Kg**



Feet / piedini

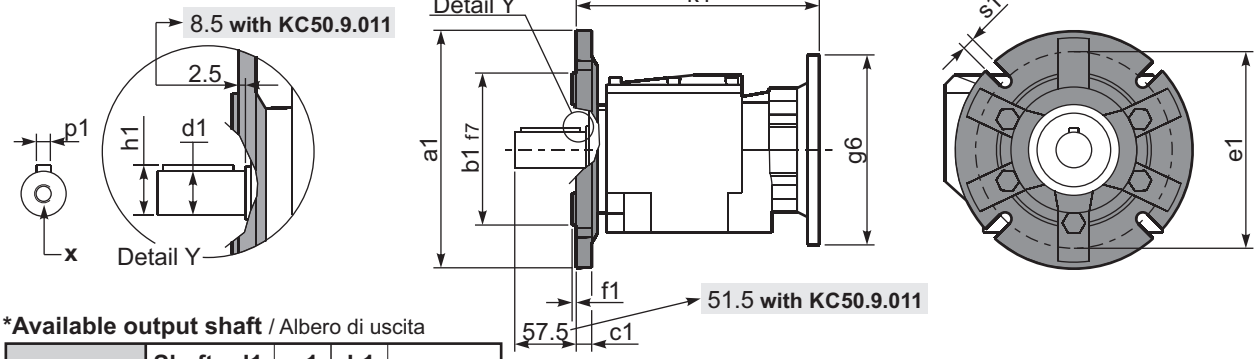
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	173	20	11	15 100/112B5 40 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	193	18	14	20 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	178	24	13.5	-	80/90B5	KC50.9.022
H3	023-233	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 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



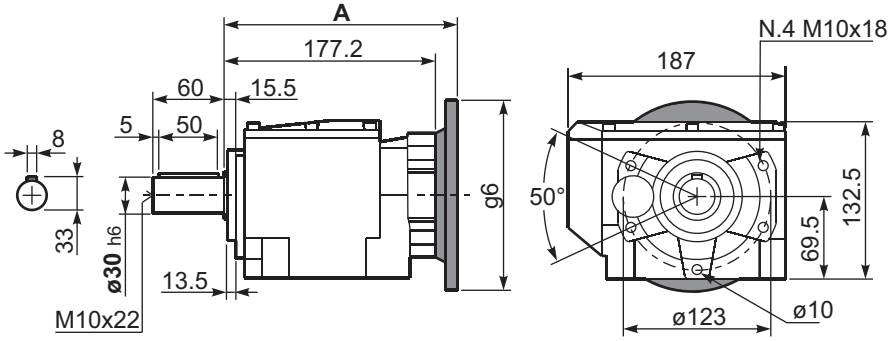
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

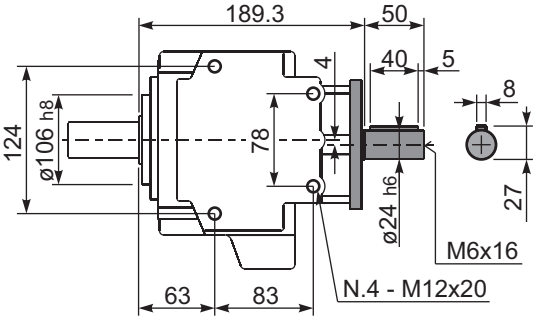
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	11	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P452A-**N**... Basic gearbox
Riduttore base



R452A-**N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	195.7	222	160	198.2	K023.4.041	204.2
80/90 B5	197.7	242	200	200.2	K023.4.042	206.2
100/112 B5	206.7	267	250	209.2	K023.4.043	215.2
132 B5	227.7	292	300	227.2	KC51.4.043	233.2

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
80 B14	197.7	202	120	200.2	K085.4.046	206.2
90 B14	197.7	212	140	200.2	K085.4.045	206.2
100/112 B14	206.7	222	160	209.2	K085.4.047	215.2
132 B14	227.7	242	200	227.2	KC51.4.041	233.2

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100* 112	-G 132*	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
388	**3.61**	5.5	127	1.2	6.6	155	B									3018		01
331	**4.23**	5.5	148	1.2	6.5	180	B									3016		02
279	**5.01**	5.5	176	1.2	6.4	210	B									3014		03
231	**6.07**	5.5	213	1.2	6.4	255	B									3012		04
206	**6.81**	5.5	239	1.3	6.7	300	B									2018		05
176	**7.96**	5.5	279	1.2	6.4	335	B									2016		07
148	**9.45**	5.5	331	1.1	5.8	360	B									2014	**standard ø30**	08
122	**11.43**	4	293	1.1	4.4	330	B									2012		09
100	**14.00**	3	270	1.3	3.9	360	B									1316		21
84	**16.62**	3	321	1.1	3.3	360	B									1314	ø24	11
70	**20.10**	2.2	286	1.2	2.5	330	B									1312	ø25	12
57	**24.61**	2.2	350	0.9	2.0	330	B									1112	ø28	20
47.6	**29.41**	1.5	288	1.2	1.9	360	B									814	ø35	14
39.3	**35.58**	1.5	349	0.9	1.4	330	B									812	On request	15
34.6	**40.50**	1.1	290	1.1	1.2	320	B									614		16
31.7	**44.23**	1.1	316	0.8	0.88	255	B									810		17
28.6	**49.00**	1.1	351	0.9	1.0	330	B									612		18
23.0	**60.90**	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

5

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 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 **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 requiren 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
0.70 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

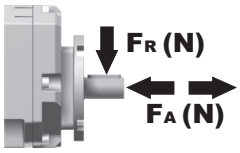
RADIAL AND AXIAL LOADS

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

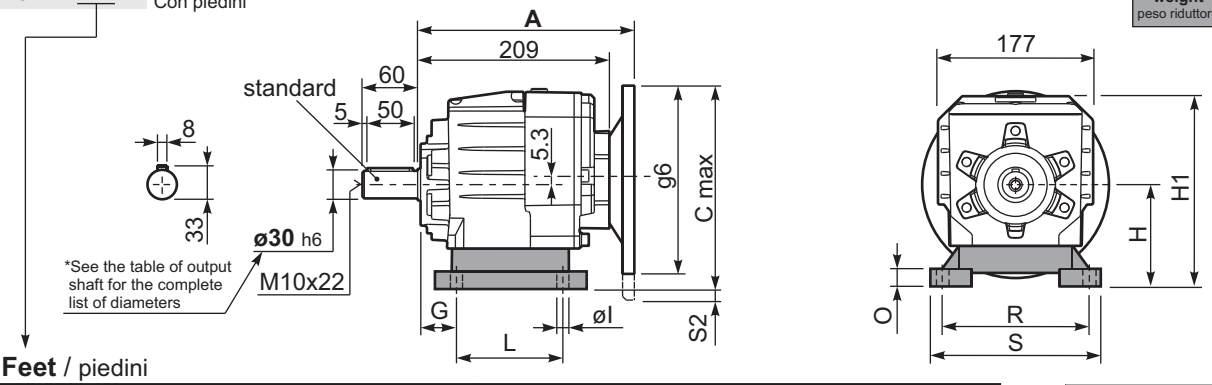


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P512A**B1**... With feet
Con piedini

Gearbox weight / peso riduttore	
With flange	**11.7 kg**
With feet	**11.9 Kg**



Feet / piedini

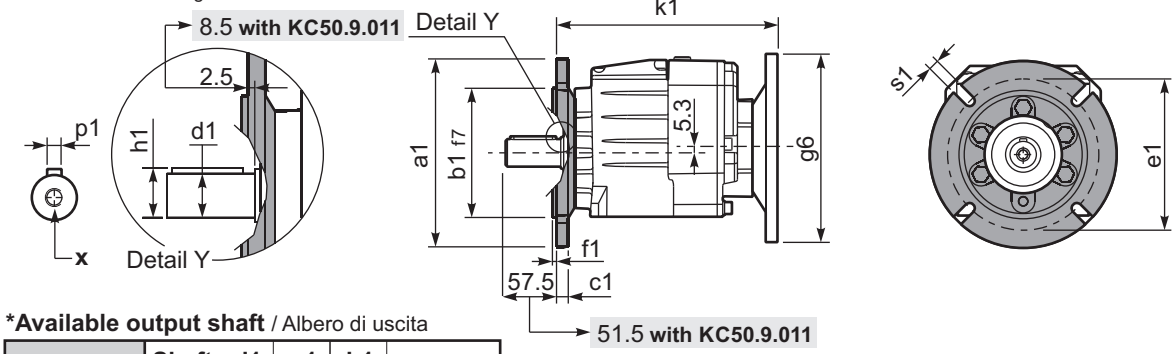
Feet Code	Market reference	G	H	R	L	S	H1	O	øI	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211	20	11	10 100/112B5 35 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231	18	14	15 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	216	25	14	5 100/112B5 30 132B5	-	KC50.9.022
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 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** / Albero di uscita

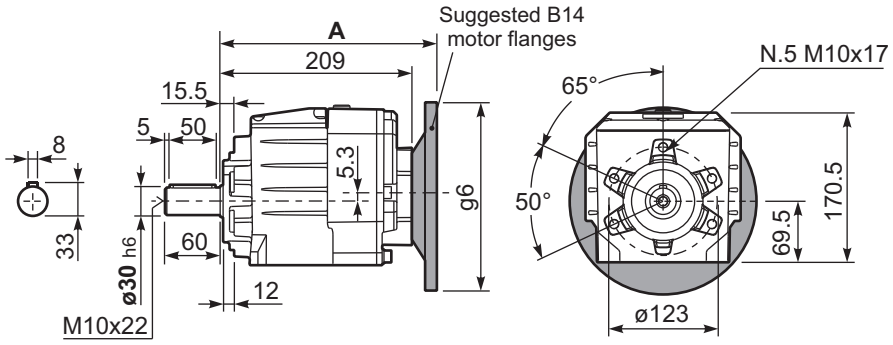
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

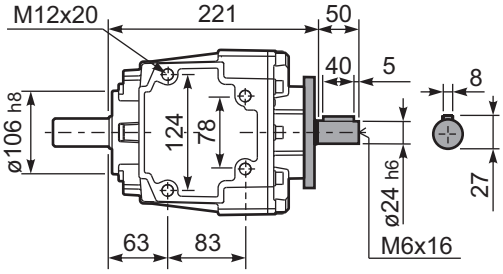
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	11	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

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_{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	227.5	215.3	160	230	K023.4.041	236
80/90 B5	229.5	235.3	200	232	K023.4.042	238
100/112 B5	238.5	260.3	250	241	K023.4.043	247
132 B5	259.5	285.3	300	259	KC51.4.043	265

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
80 B14	229.5	195.3	120	232	K085.4.046	238
90 B14	229.5	205.3	140	232	K085.4.045	238
100/112 B14	238.5	215.3	160	241	K085.4.047	247
132 B14	259.5	235.3	200	259	KC51.4.041	265

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
35.2	**39.79**	1.5	382	0.9	1.4	360	B				C	C		191316		01
29.6	**47.22**	1.1	331	1.1	1.2	360	B				C	C		191314		02
25.6	**54.73**	1.1	384	0.9	1.0	360	B				C	C		171314		03
21.1	**66.22**	0.75	318	1.0	0.78	330	B				C	C		171312		04
18.3	**76.69**	0.75	369	1.0	0.73	360	B				C	C		131314		05
16.7	**83.59**	0.55	297	1.2	0.67	360	B				C	C		190814	**standard**	06
15.1	**92.78**	0.55	329	1.0	0.55	330	B				C	C		131312	**ø30**	07
13.4	**104.68**	0.55	371	1.0	0.54	360	B				C	C		101314		08
11.9	**117.22**	0.37	278	1.2	0.44	330	B				C	C		170812	ø24	09
11.1	**126.65**	0.37	300	1.1	0.41	330	B				C	C		101312	ø25	10
10.2	**136.62**	0.37	324	1.1	0.41	360	B				C	C		91314	ø28	11
8.5	**165.29**	0.25	264	1.2	0.31	330	B				C	C		91312	ø35	12
7.8	**180.40**	0.25	289	1.2	0.31	360	B				C	C		71314	On request	13
6.4	**218.26**	0.25	349	0.9	0.24	330	B				C	C		71312		14
5.8	**241.82**	0.25	387	0.9	0.23	360	B				C	C		90814		15
4.8	**292.57**	0.18	358	0.9	0.18	330	B				C	C		90812		16
4.4	**319.32**	0.18	391	0.9	0.18	360	B				C	C		70814		17
3.6	**386.33**	0.12	305	1.1	0.13	330	B				C	C		70812		18
2.9	**480.16**	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

5

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 requiren 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.

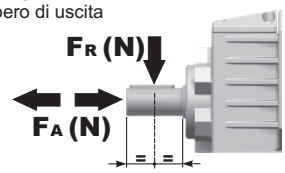
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
1.00 LT	0.90 LT	1.25 LT	1.15 LT	1.45 LT	1.40 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

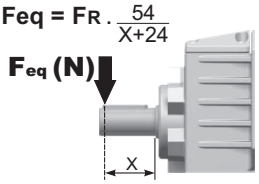
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

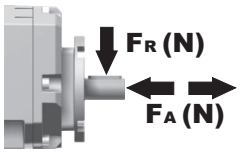


$$F_{eq} = F_R \cdot \frac{54}{X+24}$$



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

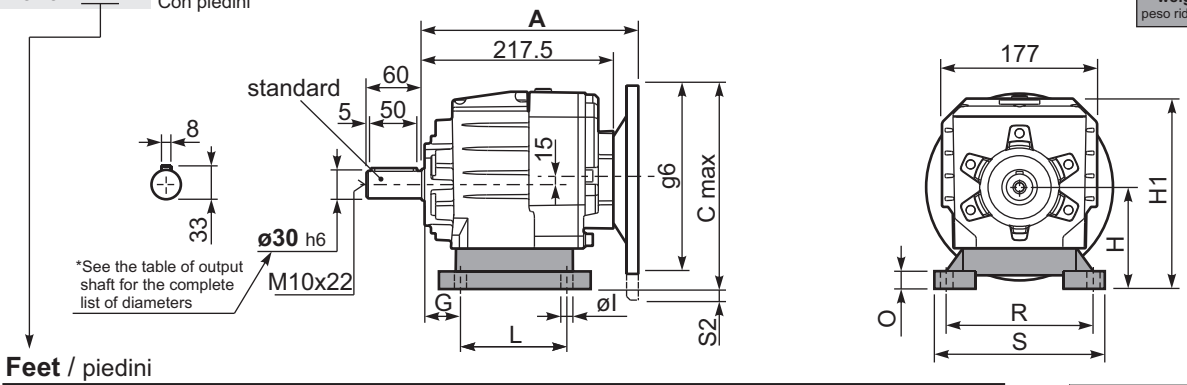


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

P513A**B1**... With feet
Con piedini

Gearbox weight / peso riduttore	
With flange	**11.9 kg**
With feet	**12.1 Kg**



Feet / piedini

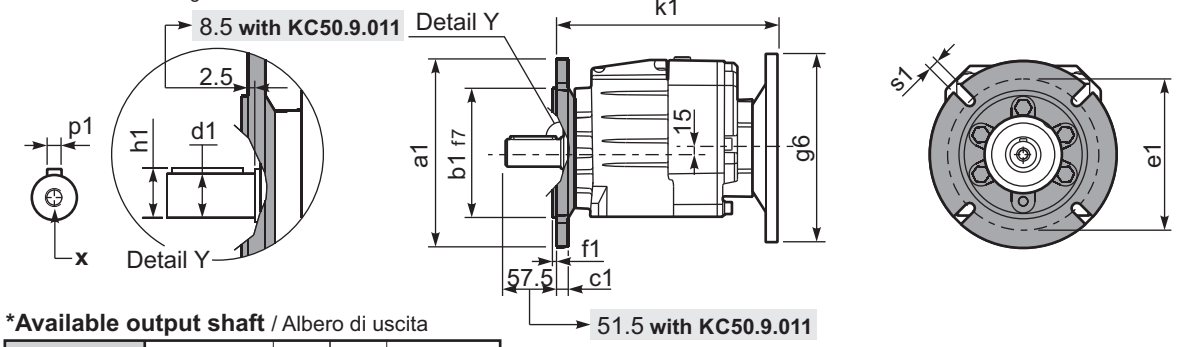
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211	20	11	-	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	216	25	14	-	-	KC50.9.022
H3	023-233	30	130	135	135	185	231	25	14	-	-	KC50.9.025
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



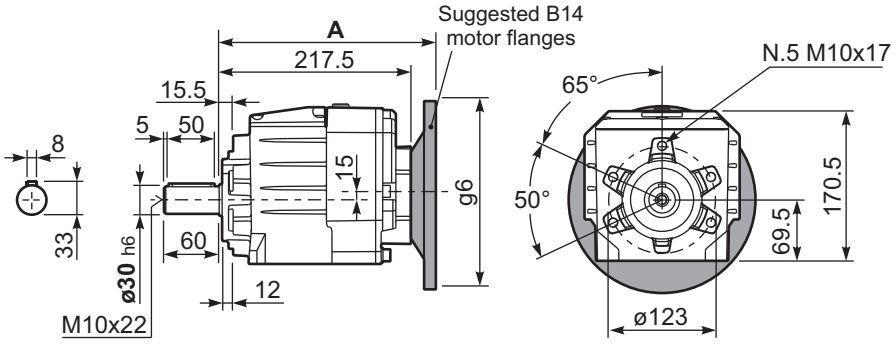
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

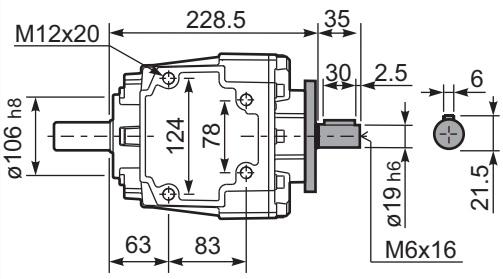
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	11	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P513A**-N**... Basic gearbox
Riduttore base



R513A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132*	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
388	**3.61**	7.5	171	1.1	8.0	190	B									3018	standard ø35	01
331	**4.23**	7.5	200	1.1	8.3	230	B									3016		02
279	**5.01**	7.5	238	1.1	7.9	260	B									3014		03
231	**6.07**	7.5	288	1.1	7.8	310	B									3012		04
206	**6.81**	7.5	323	1.1	7.9	350	B									2018		05
176	**7.96**	7.5	378	1.0	7.1	370	B									2016		07
148	**9.45**	5.5	331	1.2	6.6	410	B									2014		08
122	**11.43**	5.5	401	1.1	5.7	425	B									2012		09
100	**14.00**	4	359	1.2	4.7	435	B									1316	ø28	10
84	**16.62**	4	426	1.2	4.7	515	B									1314	ø30	11
70	**20.10**	4	515	1.0	4.0	530	B									1312	ø38	12
57	**24.61**	3	475	1.1	3.3	530	B									1112	ø40	20
47.6	**29.41**	2.2	418	1.1	2.3	450	B									814	On request	14
39.3	**35.58**	2.2	506	1.0	2.3	530	B									812		15
34.6	**40.50**	1.1	290	1.1	1.2	320	B									614		16
31.7	**44.23**	1.5	433	0.9	1.4	410	B									810		17
28.6	**49.00**	1.1	351	1.1	1.2	400	B									612		18
23.0	**60.90**	1.1	436	0.9	1.0	410	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

5

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 requiren 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
0.80 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

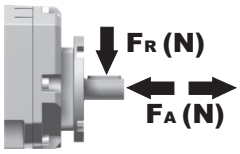
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{60.5}{X+25.5}$$

n_2	FA	FR	n_2	FA	FR	n_2	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

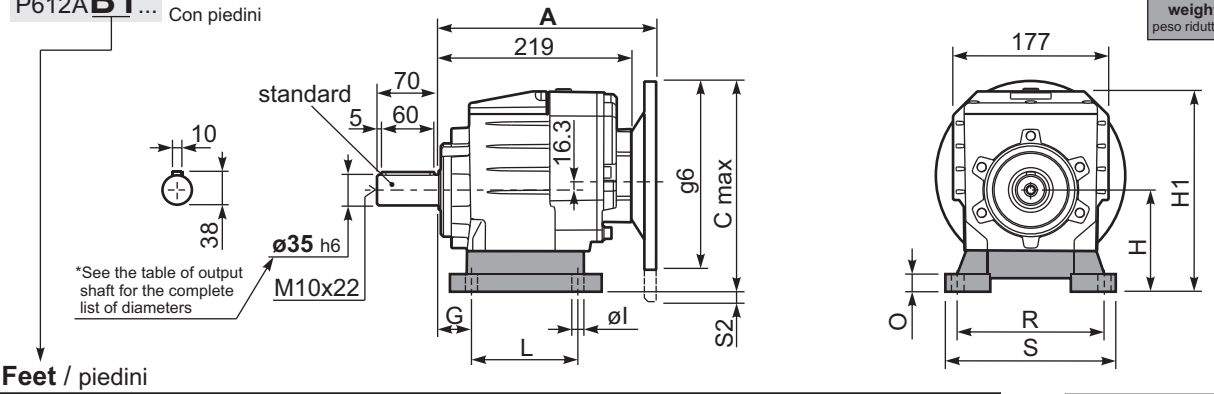


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P612A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	
With flange	**14.1 kg**
With feet	**14.5 kg**



Feet / piedini

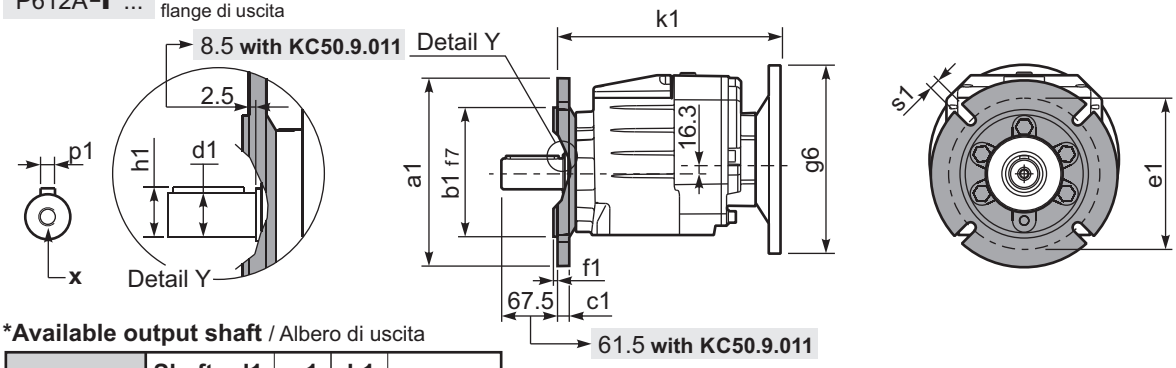
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	242	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	227	25	14	13 132B5	-	KC50.9.022
M3	62/3	35	120	170÷185	110	230	232	20	14	8 132B5	-	KC60.9.023
S7	77	35	140	170	205	204	252	8	14	-	-	KC60.9.029LM
H4	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



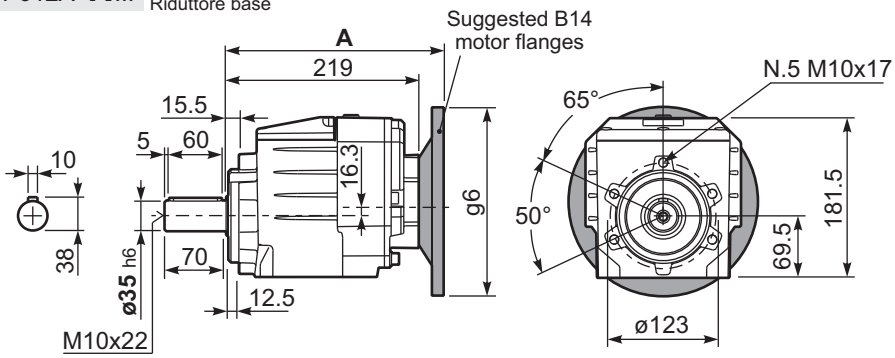
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

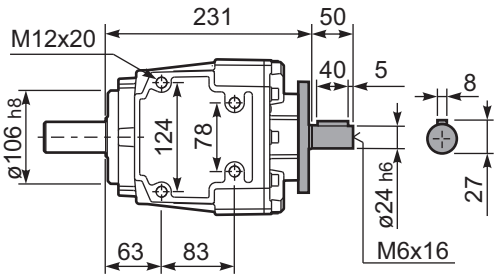
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	11	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P612A**-N**... Basic gearbox
Riduttore base



R612A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	237.5	251.3	160	240	K023.4.041	246
80/90 B5	239.5	271.3	200	242	K023.4.042	248
100/112 B5	248.5	296.3	250	251	K023.4.043	257
132 B5	269.5	321.3	300	269	KC51.4.043	275

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
80 B14	239.5	231.3	120	242	K085.4.046	248
90 B14	239.5	241.3	140	242	K085.4.045	248
100/112 B14	248.5	251.3	160	251	K085.4.047	257
132 B14	269.5	271.3	200	269	KC51.4.041	275

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
35.2	**39.79**	1.5	382	1.1	1.7	434	B				C	C		191316	standard ø35	05
29.6	**47.22**	1.5	453	1.1	1.7	515	B				C	C		191314		06
25.6	**54.73**	1.5	525	1.0	1.5	515	B				C	C		171314		07
24.5	**57.13**	1.5	548	1.0	1.4	530	B				C	C		191312		08
21.1	**66.22**	1.1	464	1.1	1.2	530	B				C	C		171312		09
19.7	**71.01**	1.1	498	0.9	0.96	435	B				C	C		191310		10
18.3	**76.69**	1.1	538	1.0	1.0	515	B				C	C		131314		11
17.0	**82.30**	0.75	396	1.1	0.82	435	B				C	C		171310		12
16.7	**83.59**	0.75	402	1.1	0.82	440	B				C	C		190814		13
15.1	**92.78**	0.75	446	1.2	0.89	530	B				C	C		131312		14
13.4	**104.68**	0.75	503	1.0	0.77	515	B				C	C		101314	ø28	15
11.9	**117.22**	0.75	564	0.9	0.71	530	B				C	C		170812	ø30	16
11.1	**126.65**	0.55	449	1.2	0.65	530	B				C	C		101312	ø38	17
10.3	**135.74**	0.55	482	0.9	0.51	440	B				C	C		130814	ø40	18
9.6	**145.68**	0.37	346	1.3	0.47	435	B				C	C		170810	On request	19
8.9	**157.40**	0.37	373	1.2	0.43	435	B				C	C		101310		20
8.5	**165.29**	0.37	392	1.3	0.50	525	B				C	C		91312		21
7.6	**185.29**	0.37	439	1.0	0.37	440	B				C	C		100814		22
6.8	**205.43**	0.37	487	0.9	0.33	435	B				C	C		91310		23
6.2	**224.18**	0.37	532	1.0	0.37	530	B				C	C		100812		24
5.8	**241.82**	0.25	387	1.1	0.28	440	B				C	C		90814		25
5.0	**278.62**	0.25	446	1.0	0.24	435	B				C	C		100810		26
4.8	**292.57**	0.25	468	1.1	0.28	530	B				C	C		90812		27
3.9	**363.63**	0.18	445	1.0	0.19	435	B				C	C		90810		28

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 **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 requiren 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
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

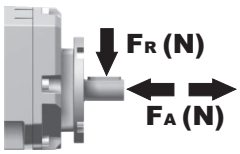
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{60.5}{X+25.5}$$

n_2	FA	FR	n_2	FA	FR	n_2	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

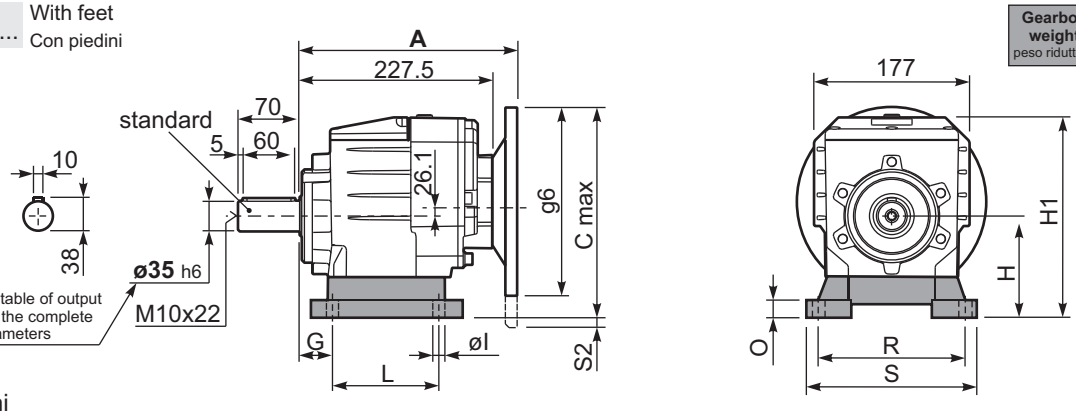


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

P613A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	
With flange	**14.3 kg**
With feet	**14.7 Kg**



Feet / piedini

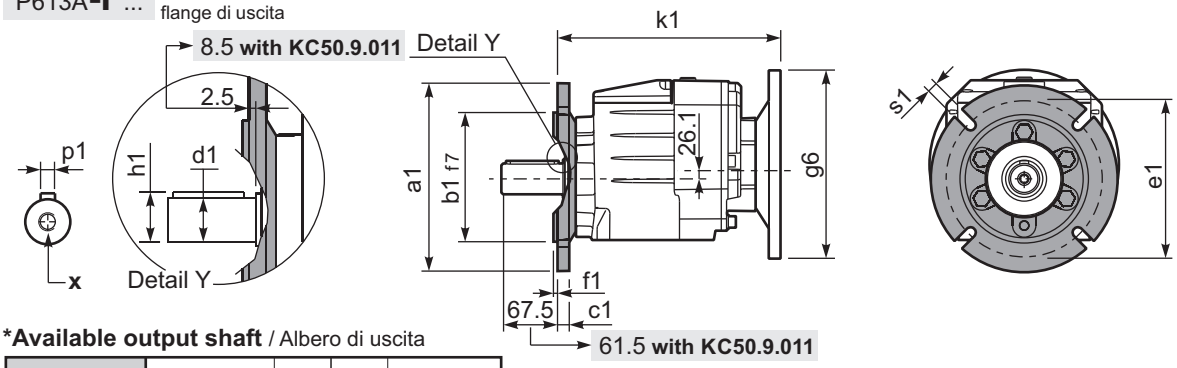
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	242	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	227	25	14	13 132B5	-	KC50.9.022
M3	62/3	35	120	170÷185	110	230	232	20	14	8 132B5	-	KC60.9.023
S7	77	35	140	170	205	204	252	8	14	-	-	KC60.9.029LM
H4	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



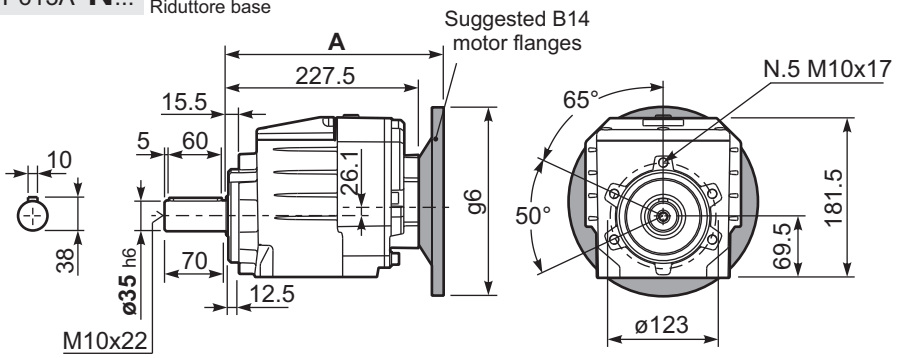
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

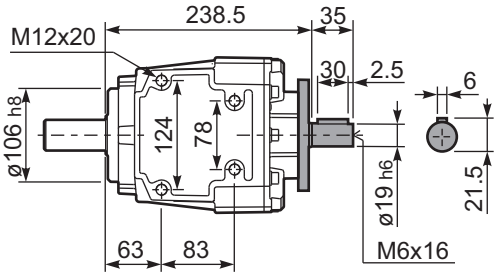
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	11	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P613A**-N**... Basic gearbox
Riduttore base



R613A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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

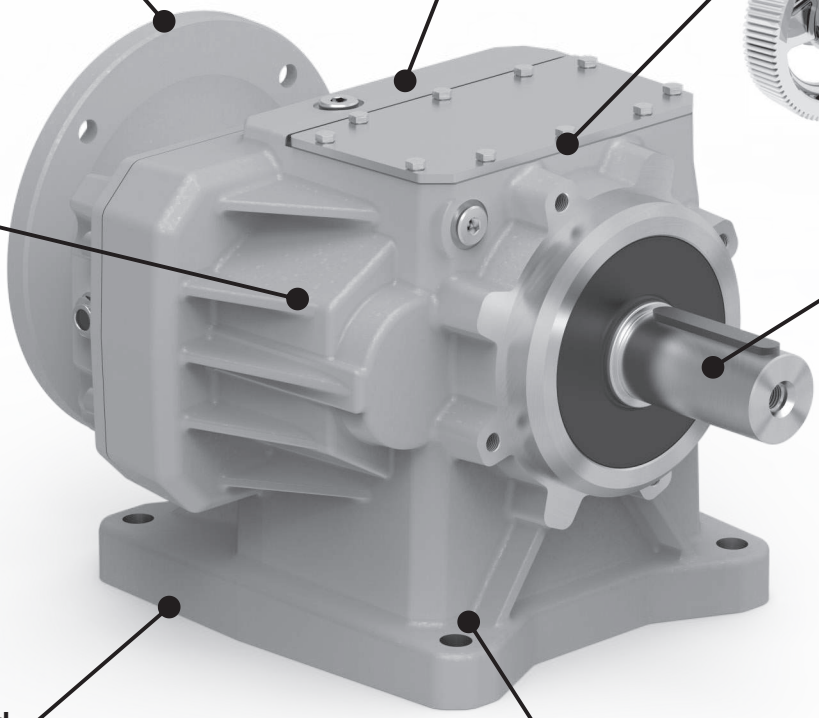
A modular and compact product

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

Housing
Robust cast iron housing

Large center distance gears

Gears
Hardened and ground gears.

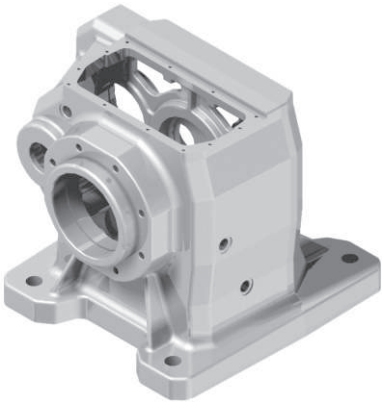


Output shaft
With well proportioned bearings

Painted
RAL 7046

Foot prints
Compatible to the main standard of the market.

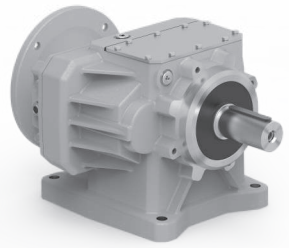
Single-piece Cast Iron housing
with high tensile strength. Precision machined for alignment of bearings and gearing



World wide sales network.

Specific type datasheet on page...

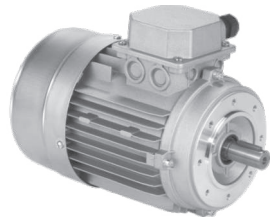
2 and 3 Stages



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

6-5	6-7	6-9	6-11	6-13	6-15	6-17	6-19	6-21	6-23
712C 675Nm	**713C** 675Nm	**812C** 900Nm	**813C** 900Nm	**862C** 1600Nm	**863C** 1800Nm	**1002** 2900Nm	**1003** 3000Nm	**1102** 4500Nm	**1103** 4600Nm

Types / Tipi
Tipen / Types
Tipos



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

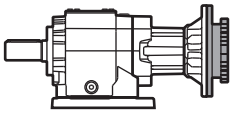
M-1									
56A 56B	**63A 63B**	**71A 71B**	**80A 80B**	**90S 90L**	**100LA 100LB**	**112M**	**132S 132M**	**160M 160L**	**180M 180L**

Types / Tipi
Tipen / Types
Tipos

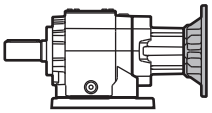
Type - Tipo - Typ
Type - Tipo

P

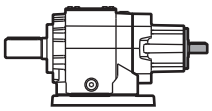
Cast iron coaxial gear boxes
Riduttori coassiali in Ghisa



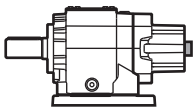
With IEC motor
M



With motor flange
P



With male input shaft
R



Modular base
B

Not available for:
862C,1002 , 1102,
1003 , 1103 .

Size - Grandezza - Grösse
Taille - Tamaño

712C

2 Stages
Riduzioni
Stufen
Trains
Etapas

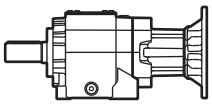
712C
812C
862C
1002
1102

3 Stages
Riduzioni
Stufen
Trains
Etapas

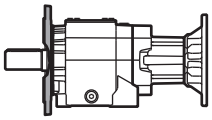
713C
813C
863C
1003
1103

Mounting - Montaggio
Montage - Fixation
Tipo de montaje

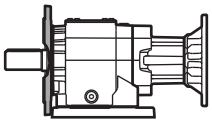
-F



Without flange / feet
-N

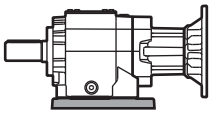


without feet
712/3C - 812/3C



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

Ratio - Rapporto
Untersetzung
Reduction
Relaciòn

6.57

See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir Tableau données techniques

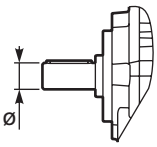
Ver tabla datos técnicos

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
Albero uscita
Abtriebswelle
Arbre de sortie
Eje en salida

I



➡ **STANDARD**

712C 713C

I ➡ **ø35**
L ⇨ ø38

812C 813C

M ➡ **ø40**
N ⇨ ø45

862C 863C

P ➡ **ø50**
J ⇨ ø60

1002 1003

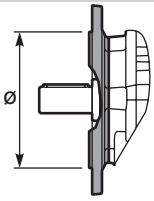
J ➡ ø60

1102 1103

A ➡ ø70

Output flange
Flangia uscita
Ausgangsflansch
Bride de sortie
Brida en salida

4



➡ **STANDARD**

N Senza flangia / Without flange

712C 713C

4 ⇨ ø200
5 ➡ **ø250**

812C 813C

5 ⇨ ø250
6 ➡ **ø300**

862C 863C

6 ⇨ ø300
7 ➡ **ø350**

1002 1003

6 ⇨ ø300
7 ➡ **ø350**
8 ⇨ ø450

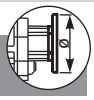
1102 1103

7 ⇨ ø350
8 ➡ **ø450**

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-F

Flange / Flangia



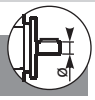
B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100÷112 (ø250)
-G=132 (ø300)
-H=160 (ø350)
-I=180 (ø350)
-L=200 (ø400)
CA=225 (ø450)

B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100÷112 (ø160)
-V=132 (ø200)

Type R / Tipo R



713C 813C

-2 ⇨ ø19

712C 812C 863C

-3 ⇨ ø24

862C 1003 1103

-4 ⇨ ø28

1002 1102

-6 ⇨ ø42

Without flange / Senza flangia

-M ⇨ With coupling

713C 813C

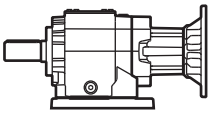
-1 ⇨ ø14 (IEC71)
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)

712C 812C 863C

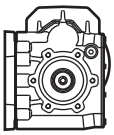
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)
-4 ⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

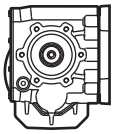
B3



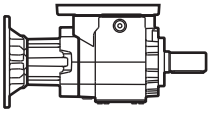
B3
STANDARD



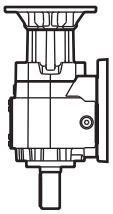
B6



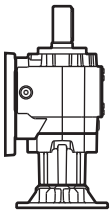
B7



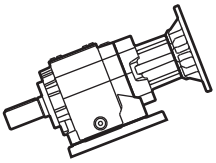
B8



V5



V6



V8

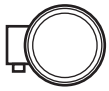
Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

ST
standard bore
foro standard

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

With Type M specify terminal box position
Con tipo M specificare posizione morsettiera



A

B
STANDARD

C

D

6

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

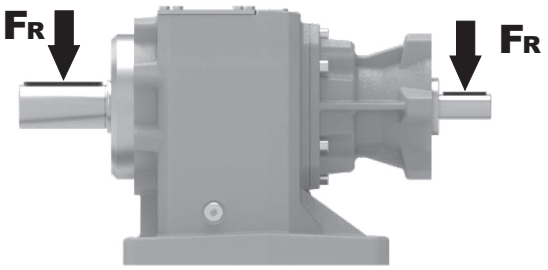
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

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



$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

712C Coaxial - Gear 675Nm

Rating - Cast Iron COAXIAL GEARBOXES

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
364.3	**3.84**	9	227	1.5	13.91	350									3317		01
257.5	**5.44**	9	321	1.1	10.11	360									3313		02
233.3	**6.00**	9	354	1.1	9.67	380									3312		03
187.5	**7.47**	9	440	1.0	8.59	420									3310		04
165.1	**8.48**	9	500	1.0	8.64	480									2513		05

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

6

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	≤ 10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
364.3	**3.84**	9	227	1.5	13.91	350									3317		01
257.5	**5.44**	9	321	1.1	10.11	360									3313		02
233.3	**6.00**	9	354	1.1	9.67	380									3312		03
187.5	**7.47**	9	440	1.0	8.59	420									3310		04
165.1	**8.48**	9	500	1.0	8.64	480									2513		05
149.6	**9.36**	7.5	444	1.1	8.16	500									2512	**standard**	06
120.2	**11.65**	7.5	553	1.1	8.00	610									2510	**ø35**	07
97.3	**14.39**	5.5	504	1.2	6.69	630									1713		08
88.1	**15.88**	5.5	557	1.2	6.35	660									1712	ø38	09
70.8	**19.76**	5.5	693	1.0	5.22	675									1710	On request	10
63.4	**22.08**	4	566	1.2	4.67	675									1213		11
57.4	**24.38**	4	625	1.1	4.23	675									1212		12
46.2	**30.33**	3	586	1.2	3.40	675									1210		13
41.2	**34.00**	3	656	1.0	3.03	675									912		14
36.1	**38.81**	2.2	552	1.2	2.66	675									812		15
33.1	**42.31**	2.2	601	1.1	2.44	675									910		16
29.0	**48.30**	2.2	687	1.0	2.13	675									810		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 **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 requiren 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

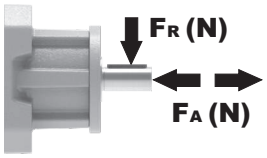
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{78}{X+38}$$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	680	3400	**140**	960	4800	**70**	1300	6500
250	760	3800	**120**	1040	5200	**40**	1460	7300
200	900	4500	**85**	1120	5600	**15**	1800	9000

Input shaft
Albero in entrata

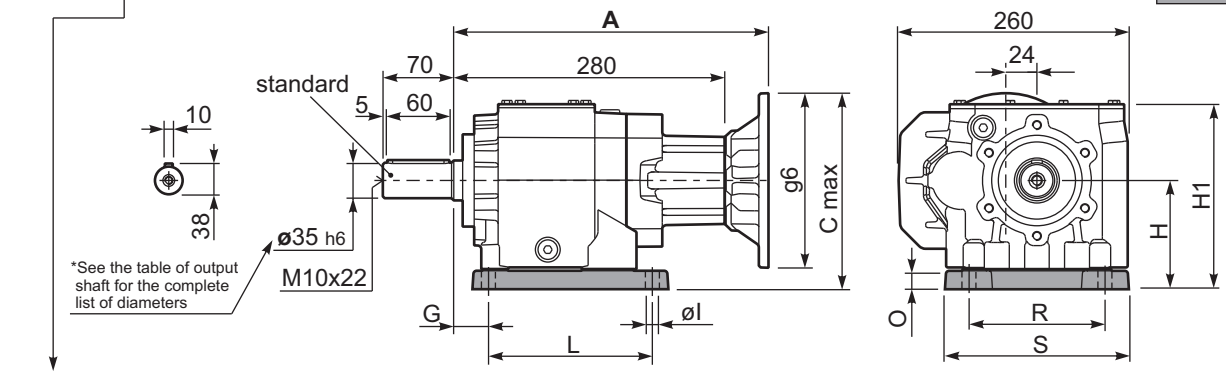


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P712C**S6**... With feet
Con piedini

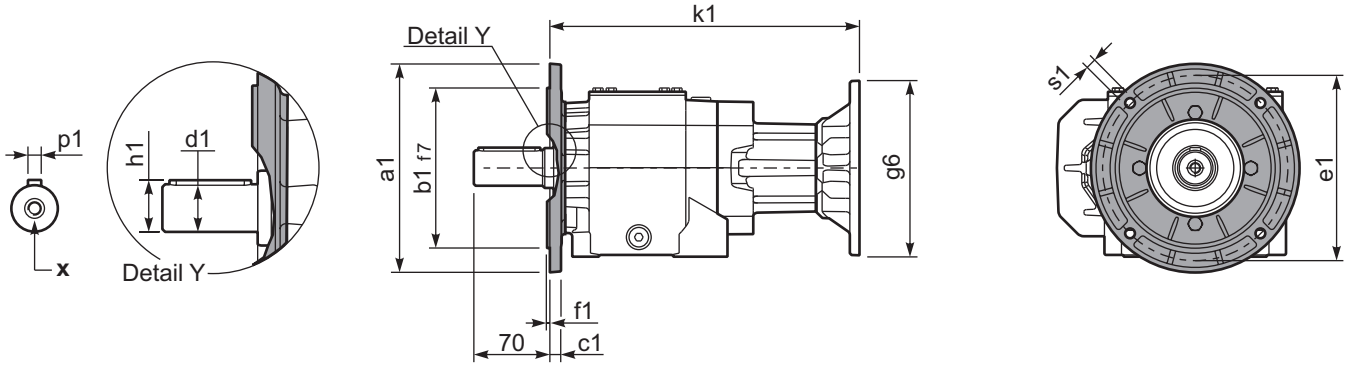
Gearbox weight peso riduttore		
	With flange	33.3 kg
	With feet	35.0 kg



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

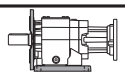
P712C**-F**... Output flanges
flange di uscita



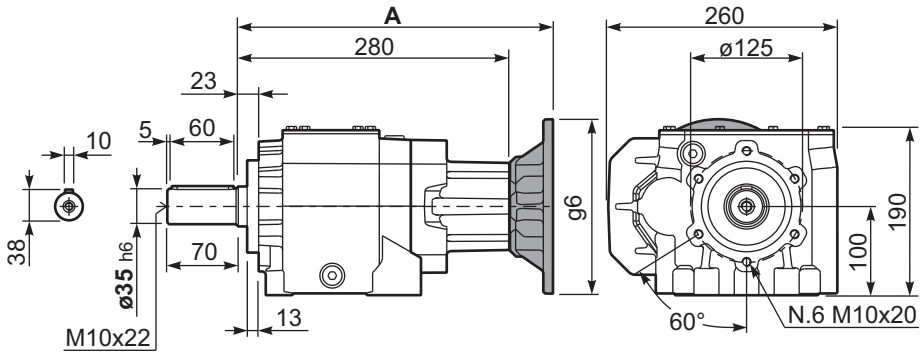
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 38x70	10	41	M10x25

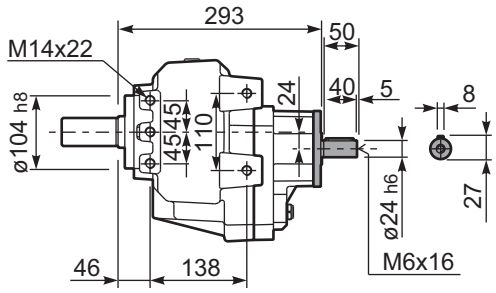
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
200	130	11	165	3.5	11	KC71.9.012	 With flange and feet only on request. Ask for compatibility
250	180	13	215	4	14	KC81.9.013	
-	-	-	-	-	-	-	

P712C**-N**... Basic gearbox
Riduttore base



R712C**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
22.3	**62.76**	1.5	603	1.1	1.68	675	B				C	C		191213		01
20.2	**69.28**	1.5	665	1.0	1.52	675	B				C	C		191212		02
19.2	**72.75**	1.5	698	1.0	1.45	675	B				C	C		171213		03
17.4	**80.29**	1.5	771	0.9	1.31	675	B				C	C		171212		04
16.4	**85.39**	1.1	599	1.1	1.23	675	B				C	C		151213		05
14.9	**94.25**	1.1	661	1.0	1.12	675	B				C	C		151212	**standard**	06
13.7	**101.92**	1.1	715	0.9	1.03	675	B				C	C		131213	**ø35**	07
12.4	**112.50**	0.75	541	1.2	0.94	675	B				C	C		131212		08
11.9	**117.29**	0.75	564	1.2	0.90	675	B				C	C		151210	ø38	09
10.1	**139.13**	0.75	669	1.0	0.76	675	B				C	C		101213	On request	10
9.1	**153.56**	0.75	739	0.9	0.69	675	B				C	C		101212		11
7.7	**181.57**	0.55	644	1.0	0.58	675	B				C	C		91213		12
7.0	**200.42**	0.55	711	0.9	0.53	675	B				C	C		91212		13
5.6	**249.41**	0.37	592	1.1	0.42	675	B				C	C		91210		14
4.3	**329.33**	0.37	781	0.9	0.32	675	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 requiren 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
1.60 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
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

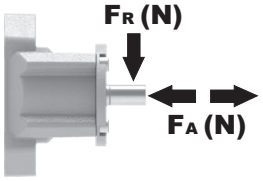
RADIAL AND AXIAL LOADS

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
300	680	3400	**140**	960	4800	**70**	1300	6500
250	760	3800	**120**	1040	5200	**40**	1460	7300
200	900	4500	**85**	1120	5600	**15**	1800	9000

Input shaft
Albero in entrata

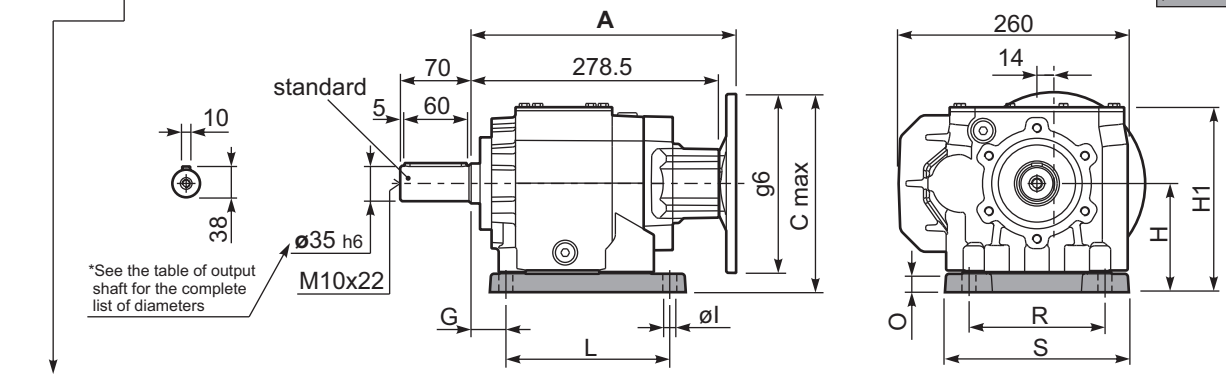


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

P713C**S6**... With feet
Con piedini

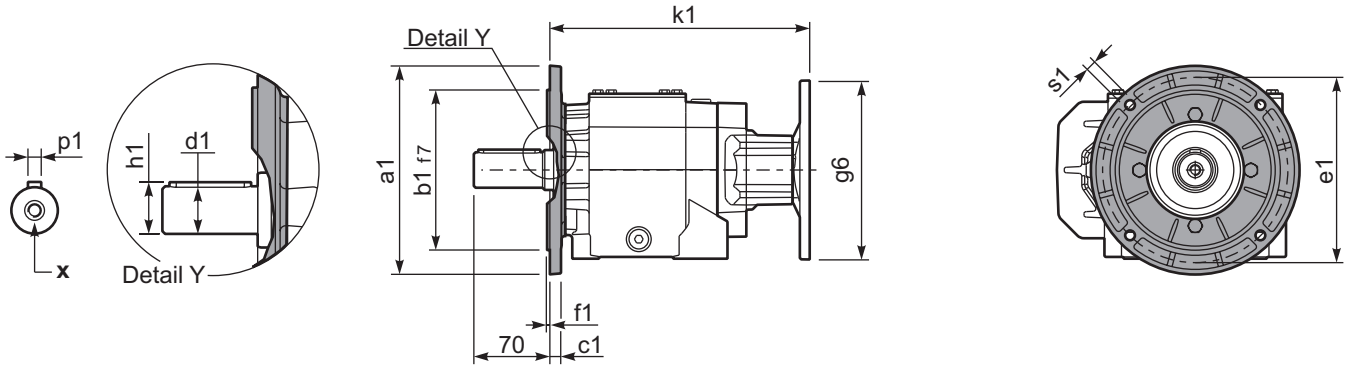
Gearbox weight peso riduttore		
	With flange	**34.5 kg**
	With feet	**36.2 kg**



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

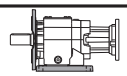
P713C**-F**... Output flanges
flange di uscita



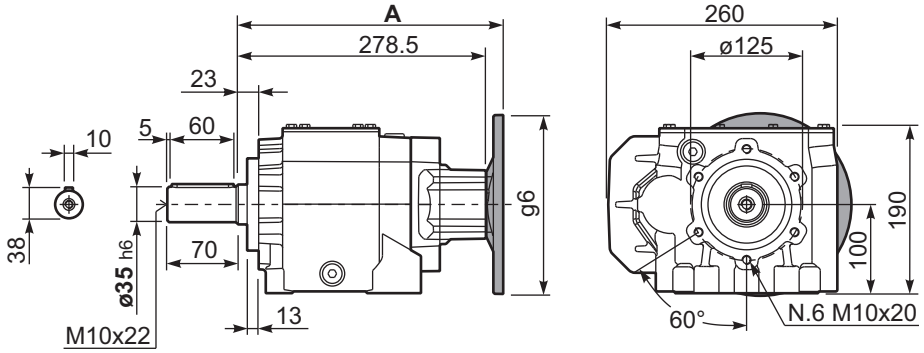
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 38x70	10	41	M10x25

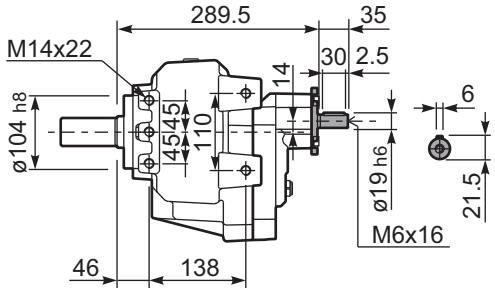
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
200	130	11	165	3.5	11	KC71.9.012	 With flange and feet only on request. Ask for compatibility
250	180	13	215	4	14	KC81.9.013	
-	-	-	-	-	-	-	

P713C**-N**... Basic gearbox
Riduttore base



R713C**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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

B14 Motor Flanges	A	C_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
364.3	**3.84**	9	227	2.2	19.47	490									3317		01
257.5	**5.44**	9	321	1.6	14.61	520									3313		02
233.3	**6.00**	9	354	1.6	14.00	550									3312		03
187.5	**7.47**	9	440	1.4	12.27	600									3310		04
165.1	**8.48**	9	500	1.3	11.43	635									2513		05
149.6	**9.36**	9	552	1.2	10.44	640									2512	**standard**	06
120.2	**11.65**	9	687	1.0	8.65	660									2510	**ø40**	07
97.3	**14.39**	7.5	683	1.1	7.64	720									1713		08
88.1	**15.88**	7.5	754	1.0	7.21	750									1712	ø45	09
70.8	**19.76**	7.5	938	0.9	6.34	820									1710	On request	10
63.4	**22.08**	5.5	774	1.1	5.98	865									1213		11
57.4	**24.38**	5.5	854	1.0	5.42	865									1212		12
46.2	**30.33**	4	778	1.1	4.35	865									1210		13
41.2	**34.00**	4	872	1.0	3.88	865									912		14
36.1	**38.81**	3	749	1.1	3.33	846									812		15
33.1	**42.31**	3	817	1.1	3.12	865									910		16
29.0	**48.30**	3	932	0.9	2.73	865									810		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 **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 requiren 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	ENI
Omala S4 WE 320	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

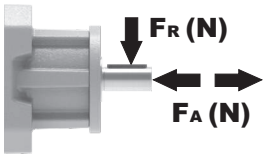
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{78}{X+38}$$

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

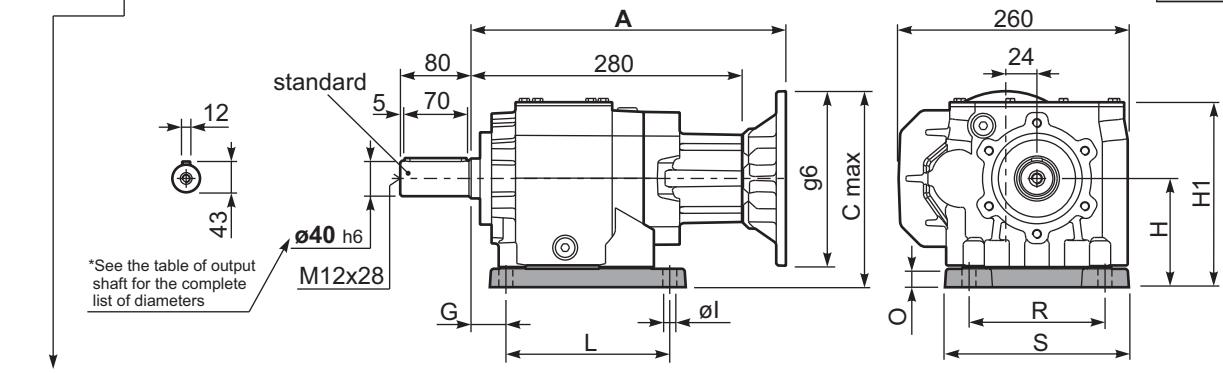


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P812C**S7**... With feet
Con piedini

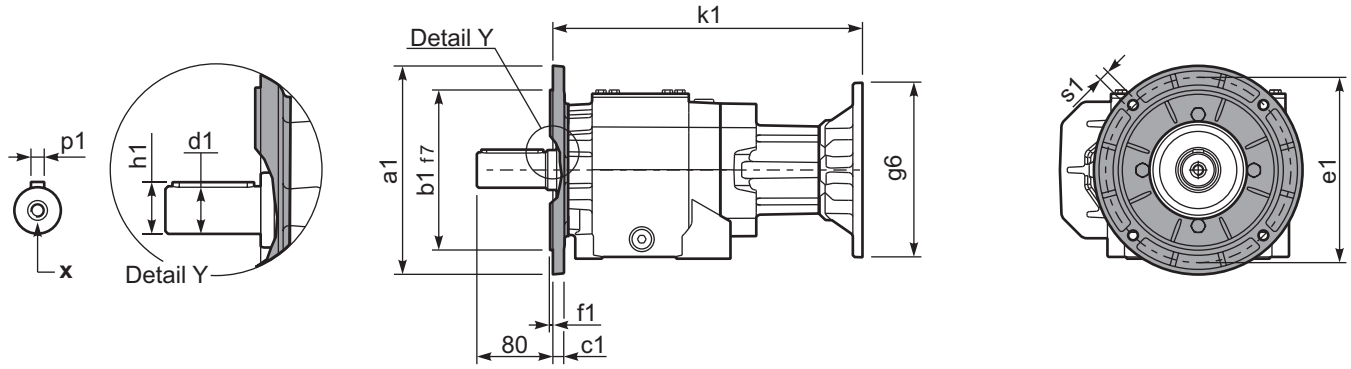
Gearbox weight / peso riduttore	
With flange	33.7 kg
With feet	39.2 kg



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

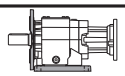
P812C-**F**... Output flanges
flange di uscita



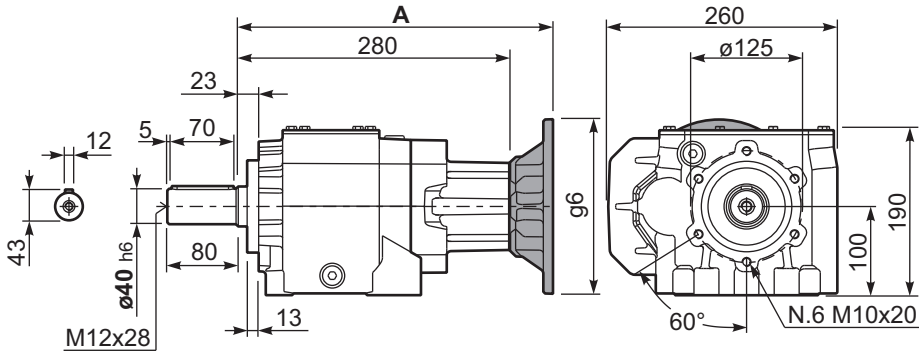
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 40x80	12	43	M12x28
On request A richiesta	ø 45x90	14	48.5	M14x34

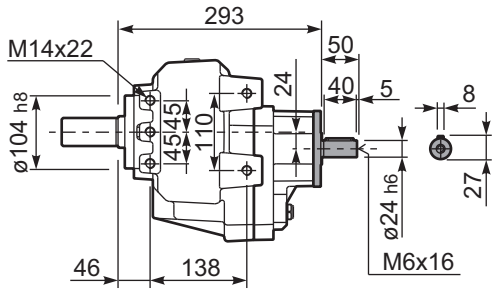
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
250	180	13	215	4	14	KC81.9.013	 With flange and feet only on request. Ask for compatibility
300	230	16	265	4	14	KC81.9.014	
-	-	-	-	-	-	-	

P812C-**N**... Basic gearbox
Riduttore base



R812C-**N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
22.3	**62.76**	2.2	874	1.0	2.15	865	B					C	C			191213	standard ø40	01
20.2	**69.28**	2.2	965	0.9	1.95	865	B					C	C			191212		02
19.2	**72.75**	1.5	698	1.2	1.85	865	B					C	C			171213		03
17.4	**80.29**	1.5	771	1.1	1.68	865	B					C	C			171212		04
16.4	**85.39**	1.5	820	1.1	1.58	865	B					C	C			151213		05
14.9	**94.25**	1.5	905	1.0	1.43	865	B					C	C			151212		06
13.7	**101.92**	1.1	715	1.2	1.32	865	B					C	C			131213		07
12.4	**112.50**	1.1	789	1.1	1.20	865	B					C	C			131212		08
11.9	**117.29**	1.1	822	1.1	1.15	865	B					C	C			151210	ø45 On request	09
10.1	**139.13**	1.1	976	0.9	0.97	865	B					C	C			101213		10
9.1	**153.56**	0.75	739	1.2	0.88	865	B					C	C			101212		11
7.7	**181.57**	0.75	873	1.0	0.74	865	B					C	C			91213		12
7.0	**200.42**	0.55	711	1.2	0.67	865	B					C	C			91212		13
5.6	**249.41**	0.55	885	1.0	0.54	865	B					C	C			91210		14
4.3	**329.33**	0.37	781	1.1	0.41	865	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 requiren 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
1.60 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**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

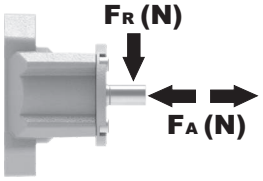
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{78}{X+38}$$

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

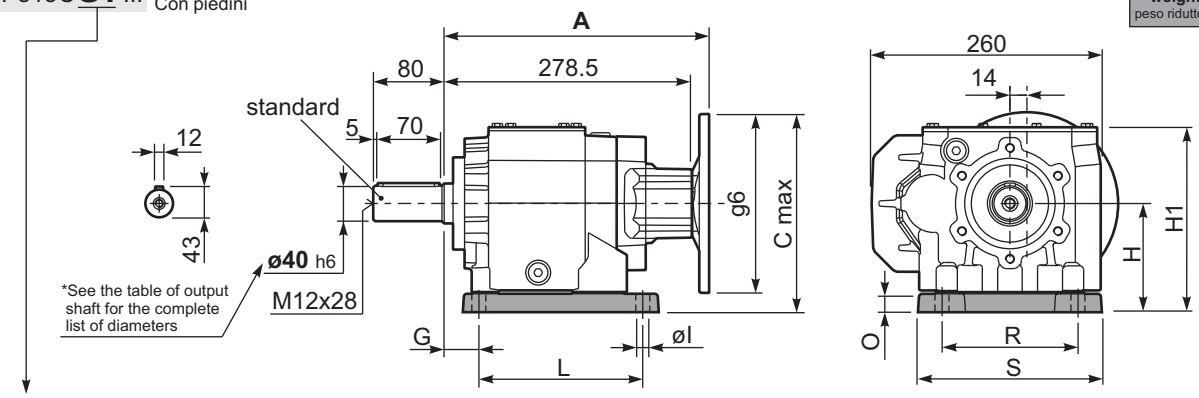


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

P813C**S7**... With feet
Con piedini

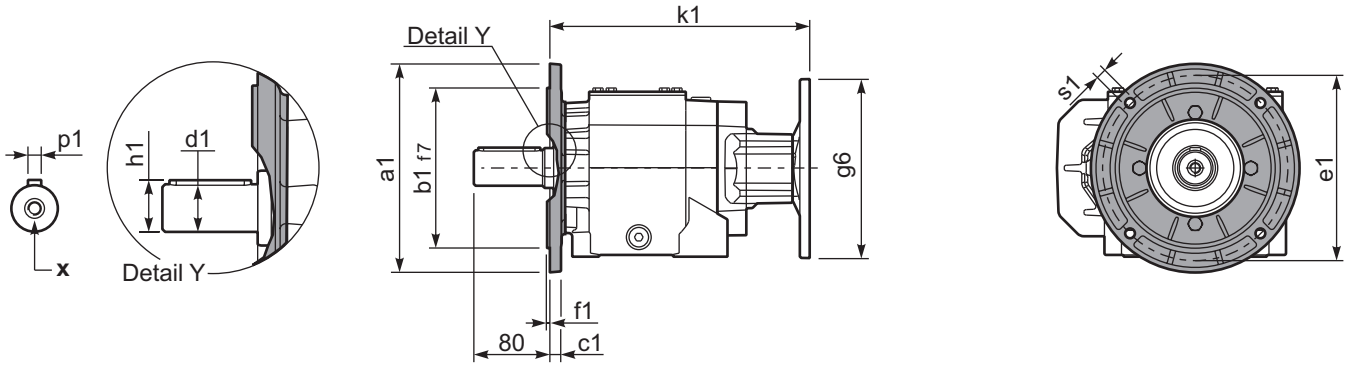
Gearbox weight peso riduttore	
With flange	34.8 kg
With feet	40.3 kg



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

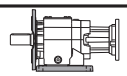
P813C**-F**... Output flanges
flange di uscita



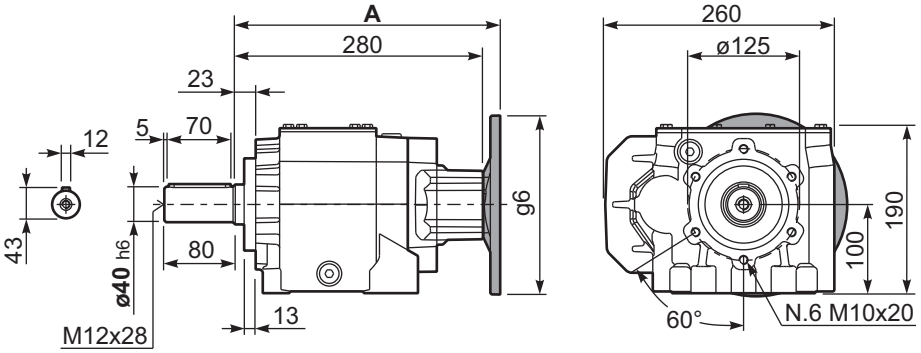
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 40x80	12	43	M12x28
On request A richiesta	ø 45x90	14	48.5	M14x34

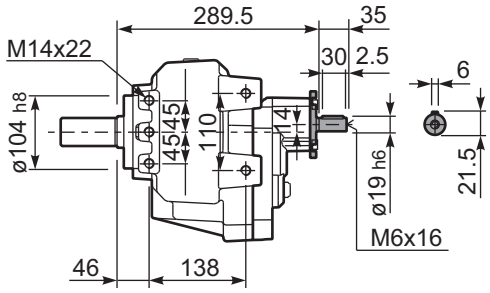
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
250	180	13	215	4	14	KC81.9.013	 With flange and feet only on request. Ask for compatibility
300	230	16	265	4	14	KC81.9.014	
-	-	-	-	-	-	-	

P813C**-N**... Basic gearbox
Riduttore base



R813C**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B5 -I 180	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
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	**standard**	05
124	**11.26**	15	1060	1.0	14.9	1100							1615	**ø50**	06
116	**12.03**	15	1132	1.1	15.2	1200							2011		07
104	**13.50**	15	1271	1.1	15.8	1400							1613	ø60	08
96	**14.65**	15	1378	1.1	15.6	1500							1315	On request	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.

B3	B6	B7	B8	V5	V6	V8
3.10 LT	4.50 LT	2.50 LT	3.10 LT	4.90 LT	4.20 LT	Ask

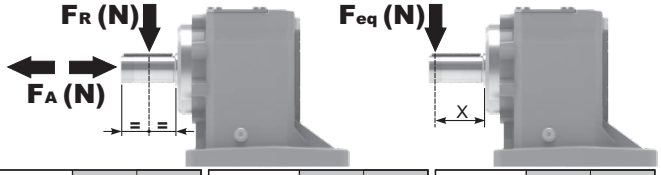
SHELL Omala S2 GX 460	ENI Blasia 460

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

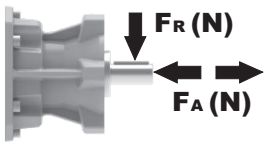
$$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$$



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

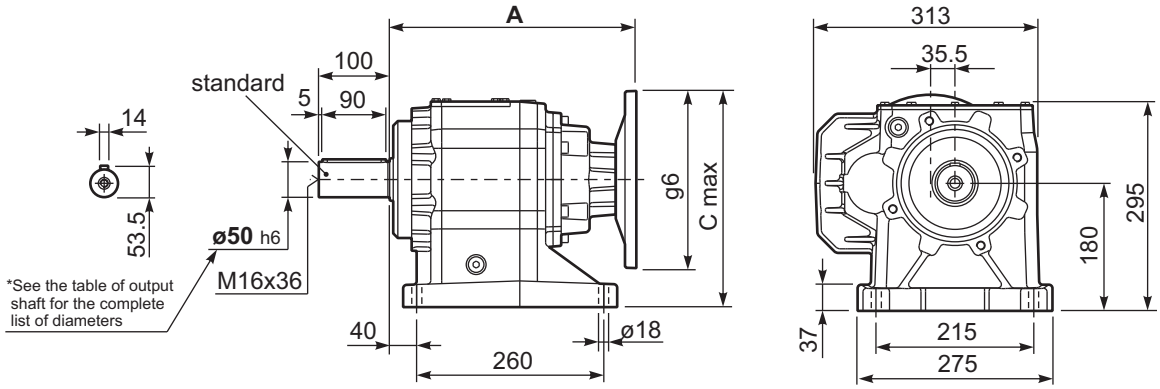


n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

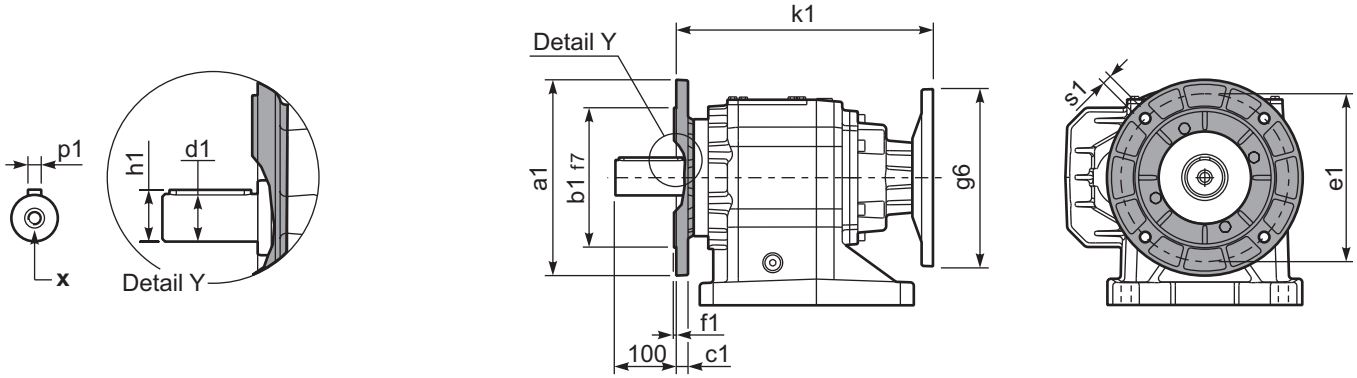
tab. 2

P862C**S8**... With foot
Con piedino

Gearbox weight / peso riduttore		
	With flange	**84.0 kg**
	With feet	**74.5 kg**



P862C-**F**... Output flanges
flange di uscita



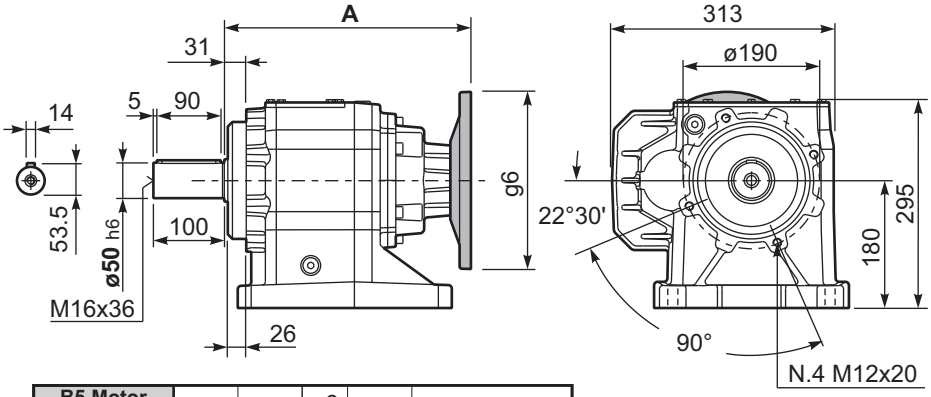
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 50x100	14	53.5	M16x36
On request A richiesta	ø 60x120 -	18 -	64 -	M20x42 -

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
300	230	21	265	4	14	KC90.9.014	All flanges are compatible with the foot
350	250	21	300	5	18	KC90.9.015	
-	-	-	-	-	-	-	

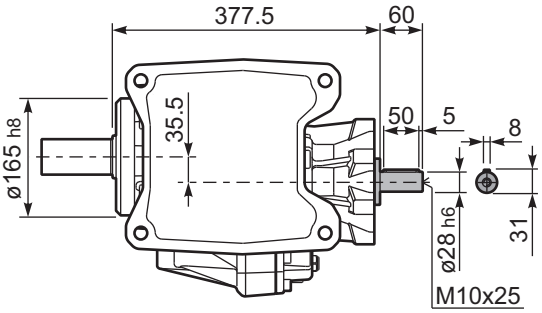
P862C**S8**... Basic gearbox
Riduttore base



B5 Motor Flanges	A	C_{max}	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
32.5	**43.03**	5.5	1478	1.1	**5.8**	**1600**	B									201313	**standard ø50**	01
28.9	**48.52**	5.5	1667	0.9	**5.0**	**1550**	B									161315		02
27.0	**51.81**	4	1302	1.2	**4.8**	**1600**	B									201311		03
24.1	**58.17**	4	1462	1.1	**4.3**	**1600**	B									161313		04
22.2	**63.09**	4	1585	1.0	**3.8**	**1550**	B									131315		05
20.0	**70.05**	4	1760	1.0	**4.0**	**1800**	B									161311		06
18.5	**75.65**	4	1901	0.9	**3.7**	**1800**	B									131313	ø60 On request	07
15.4	**91.09**	3	1723	1.0	**3.1**	**1800**	B									131311		08
12.6	**111.50**	2.2	1553	1.2	**2.5**	**1800**	B									111311		09
10.5	**133.91**	2.2	1865	1.0	**2.1**	**1800**	B									81313		10
8.7	**161.24**	1.5	1548	1.2	**1.7**	**1800**	B									81311		11
7.6	**184.40**	1.1	1293	1.1	**1.2**	**1450**	B									61313		12
6.3	**222.04**	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

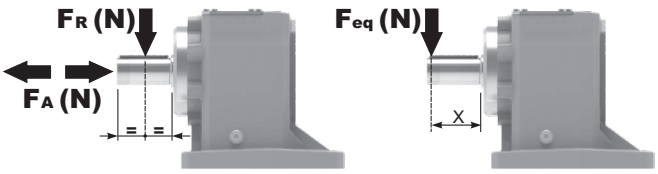
SHELL Omala S2 GX 460	ENI Blasia 460

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

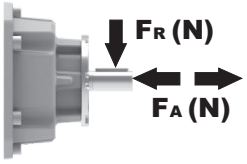
$$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$$



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

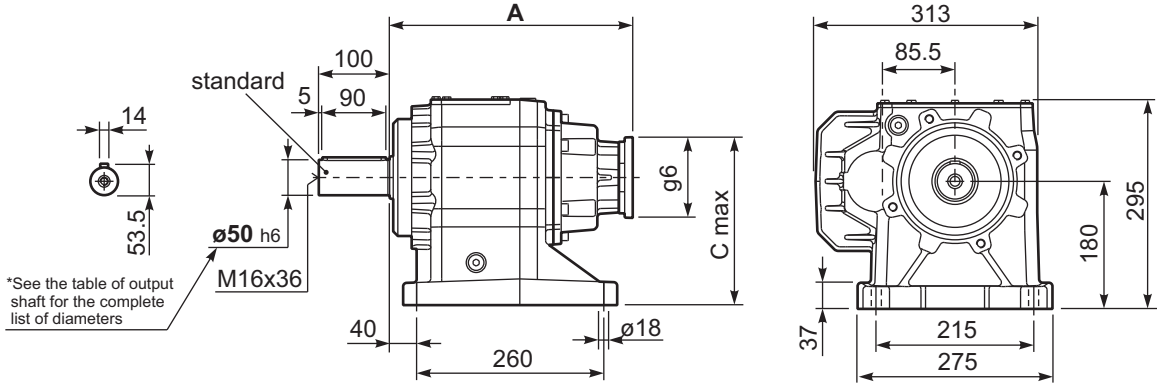


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

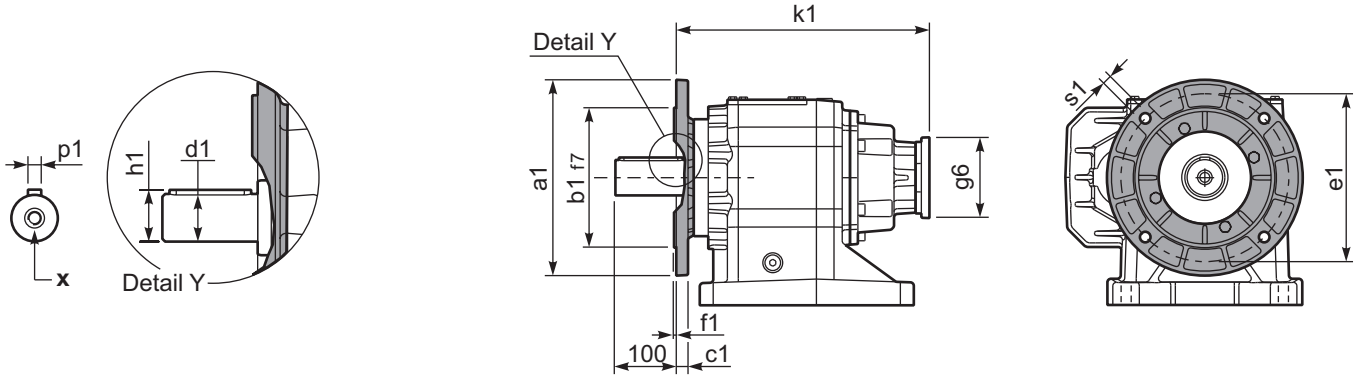
tab. 2

P863C**S8**... With foot
Con piedino

Gearbox weight peso riduttore		
	With flange	**78.5 kg**
	With feet	**69.0 kg**



P863C-**F**... Output flanges
flange di uscita



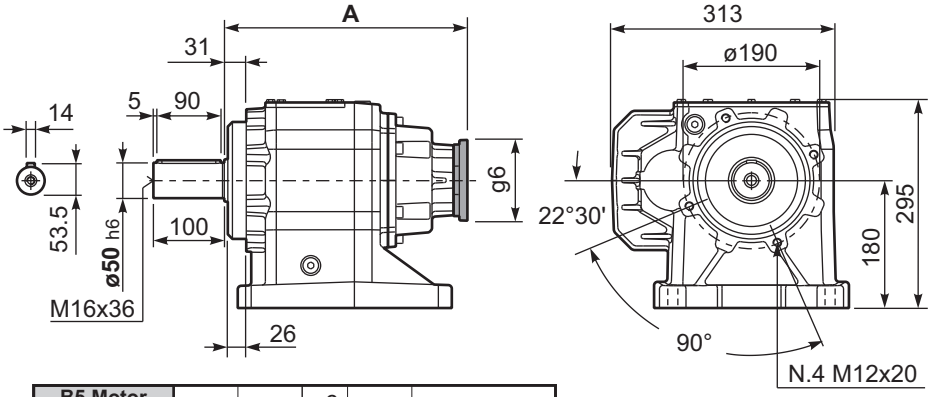
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 50x100	14	53.5	M16x36
On request A richiesta	ø 60x120	18	64	M20x42

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
300	230	21	265	4	14	KC90.9.014	All flanges are compatible with the foot
350	250	21	300	5	18	KC90.9.015	
-	-	-	-	-	-	-	

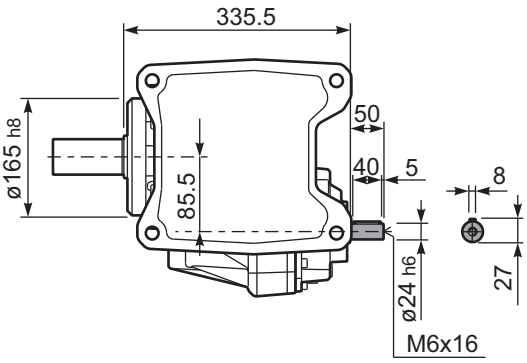
P863C**S8**... Basic gearbox
Riduttore base



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B5	342	260	160	342	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_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -G 132	-H 160	-I 180	-L 200	B14 motor flanges - -	- -	- -	- -		Output Shaft ø	Ratios code
294	**4.75**	30	895	1.8	53.0	1650									3914		01
269	**5.21**	30	980	1.8	51.3	1750									3913		02
220	**6.36**	30	1197	1.6	45.6	1900									3911		03
188	**7.45**	30	1401	1.5	43.1	2100									3014		04
172	**8.15**	30	1535	1.4	39.3	2100									3013		05
141	**9.96**	30	1874	1.2	33.7	2200									3011		06
120	**11.69**	30	2200	1.0	30.1	2300									2214		07
109	**12.80**	30	2409	1.0	27.4	2300									2213		08
90	**15.63**	22	2161	1.1	23.5	2400					**not available**				2211	**standard ø60**	09
79	**17.65**	22	2441	1.1	22.5	2600									1614		10
72	**19.33**	22	2673	1.1	22.9	2900									1613		11
67	**20.77**	22	2872	1.0	21.3	2900									1414		12
62	**22.75**	18.5	2643	1.1	19.5	2900									1413		13
59	**23.60**	18.5	2743	1.1	18.8	2900									1611		14
50	**27.78**	15	2615	1.1	15.9	2900									1411		15
45.5	**30.76**	15	2896	1.0	14.4	2900									1014		16
41.6	**33.69**	11	2330	1.2	13.1	2900									1013		17
34.0	**41.15**	11	2845	1.0	10.8	2900									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** Blasia 460

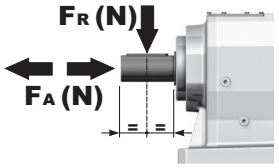
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

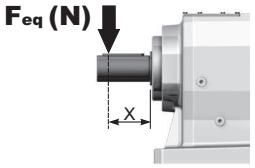
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

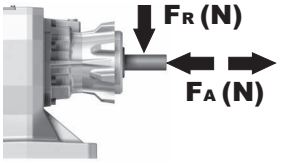
$$F_{eq} = F_R \cdot \frac{117}{X+57}$$





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

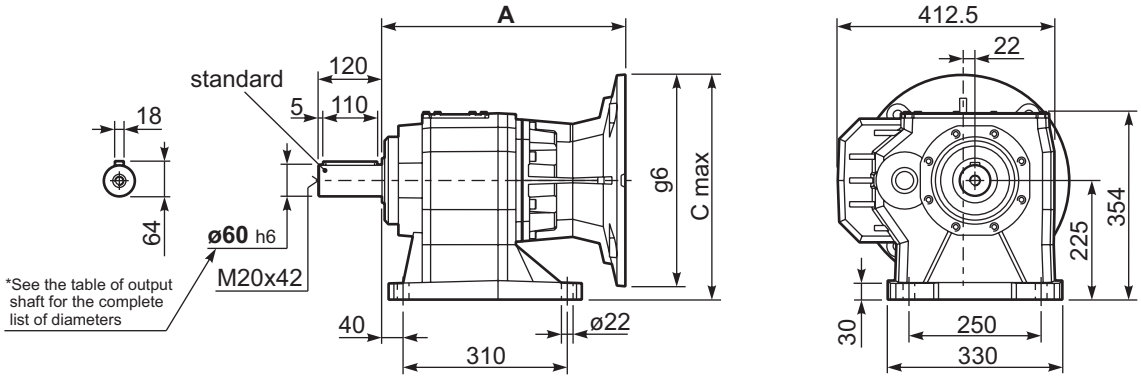


n_1	FA	FR
1400	1120	5600
900	1220	6100
500	1300	6500

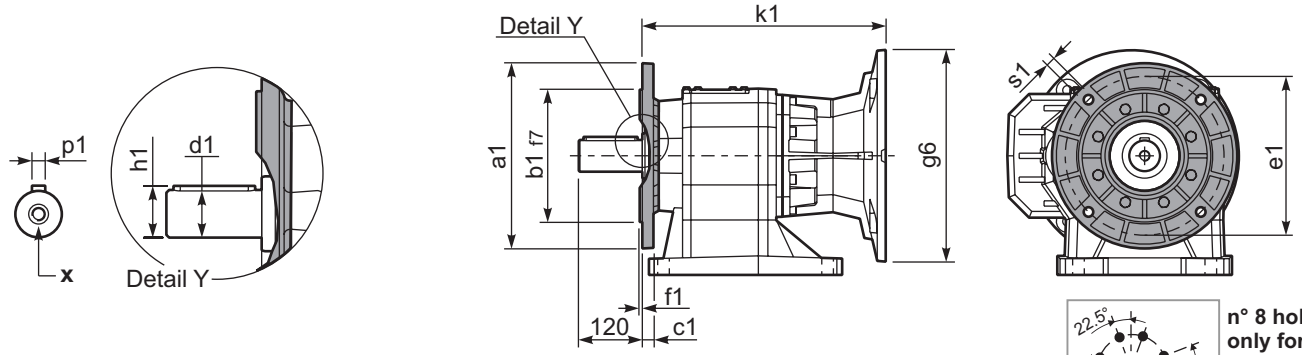
tab. 2

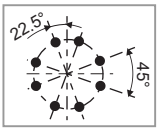
P1002**S9**... With foot
Con piedino

Gearbox weight peso riduttore	120.0 kg



P1002-**F**... Output flanges
flange di uscita



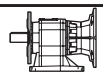


n° 8 holes only for Kit KC909016
Solo per il kit KC909016

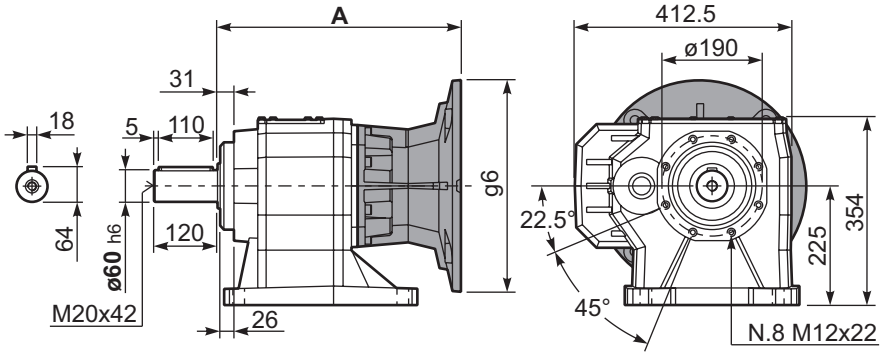
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 60x120	18	64	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

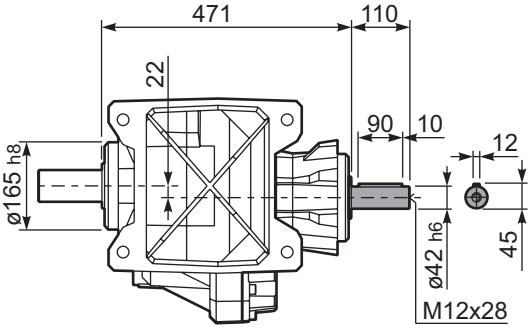
a1 ø	b1	c1	e1	f1	s1	kit code	
300	230	21	265	4	14	KC90.9.014	 All flanges are compatible with the foot
350	250	21	300	5	18	KC90.9.015	
450	350	22	400	5	18	KC90.9.016	

P1002**S9**... Basic gearbox
Riduttore base



B5 Motor Flanges	A	C_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
38.8	**36.11**	11	2447	1.2	12.5	2900						301411	standard ø60	01
27.5	**50.89**	9	2941	1.0	9.2	3000						201414		02
25.1	**55.73**	7.5	2591	1.2	8.4	3000						201413		03
20.3	**68.80**	7.5	3199	0.9	6.8	3000						161414		04
18.6	**75.35**	5.5	2589	1.2	6.2	3000						161413		05
15.6	**89.47**	5.5	3074	1.0	5.2	3000						131414		06
15.2	**92.02**	5.5	3161	0.9	5.1	3000						161411		07
14.3	**97.99**	4	2462	1.2	4.8	3000						131413		08
12.8	**109.52**	4	2752	1.1	4.3	3000						111414		09
11.7	**119.94**	4	3014	1.0	3.9	3000						111413		10
9.6	**146.47**	3	2771	1.1	3.2	3000						111411		11
8.8	**158.37**	3	2996	1.0	3.0	3000						81414		12
8.1	**173.45**	2.2	2416	1.2	2.7	3000						81413		13
6.6	**211.82**	2.2	2951	1.0	2.2	3000						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

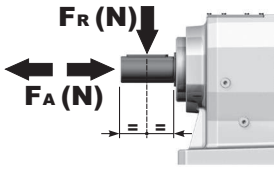
SHELL Omala S2 GX 460	ENI Blasia 460

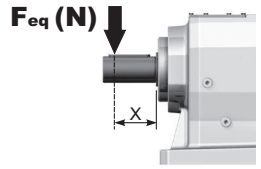
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

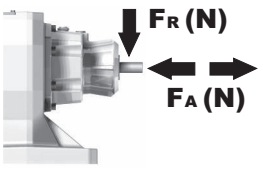
$$F_{eq} = F_R \cdot \frac{117}{X+57}$$





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

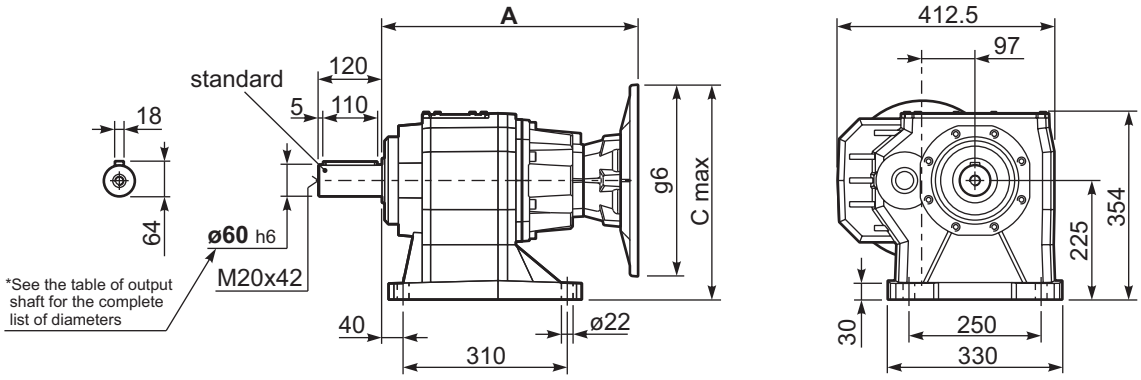


n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

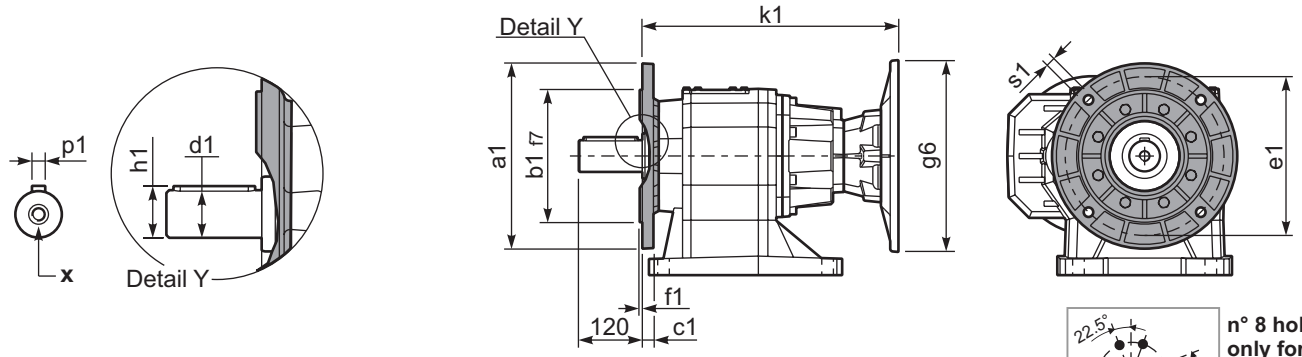
tab. 2

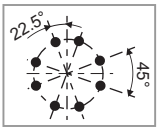
P1003**S9**... With foot
Con piedino

Gearbox weight peso riduttore	116 kg



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

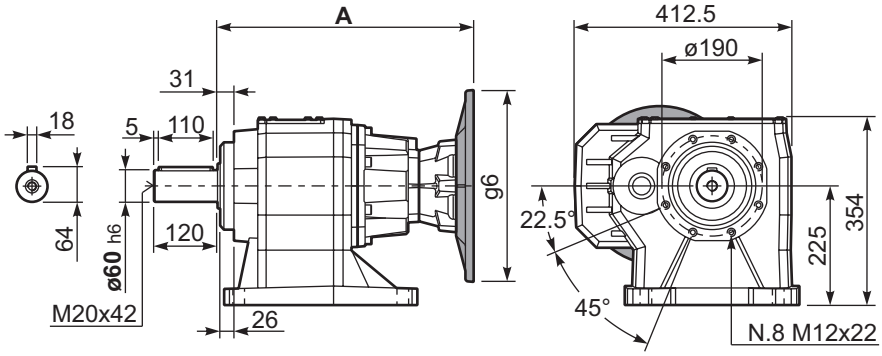
	Shaft - d1	p1	h1	x
Standard	ø 60x120	18	64	M20x42
On request A richiesta	-	-	-	-

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

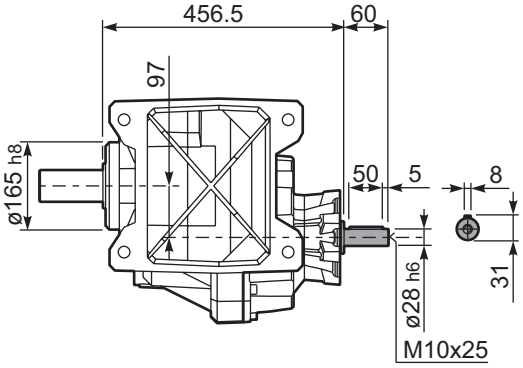
All flanges are compatible with the foot

P1003**S9**... Basic gearbox
Riduttore base



Motor Flanges	A	C_{max}	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -G 132	-H 160	-I 180	-L 200	CA 225	B14 motor flanges –	-	-		Output Shaft ø	Ratios code
294	**4.75**	45	1333	2.0	**86.7**	**2700**									3914		01
269	**5.21**	45	1460	1.9	**82.1**	**2800**									3913		02
220	**6.36**	45	1783	1.7	**72.0**	**3000**									3911		03
188	**7.45**	45	2088	1.6	**67.7**	**3300**									3014		04
172	**8.15**	45	2287	1.5	**63.7**	**3400**									3013		05
141	**9.96**	45	2792	1.3	**55.2**	**3600**									3011		06
120	**11.69**	45	3277	1.2	**49.7**	**3800**									2214		07
109	**12.80**	45	3589	1.1	**47.7**	**4000**									2213		08
90	**15.63**	45	4383	1.0	**42.0**	**4300**						**not available**			2211	**standard ø70**	09
79	**17.65**	37	4068	1.1	**38.9**	**4500**									1614		10
72	**19.33**	37	4455	1.0	**35.6**	**4500**									1613		11
67	**20.77**	30	3910	1.2	**33.1**	**4500**									1414		12
62	**22.75**	30	4282	1.1	**30.2**	**4500**									1413		13
59	**23.60**	30	4443	1.0	**29.1**	**4500**									1611		14
50	**27.78**	22	3842	1.2	**24.7**	**4500**									1411		15
45.5	**30.76**	22	4255	1.1	**22.3**	**4500**									1014		16
41.6	**33.69**	22	4660	1.0	**20.4**	**4500**									1013		17
34.0	**41.15**	18.5	4781	0.9	**16.7**	**4500**									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** Blasia 460

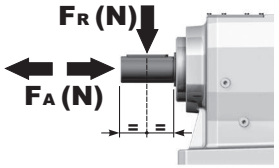
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

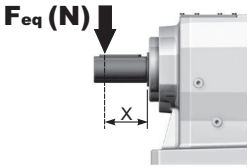
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

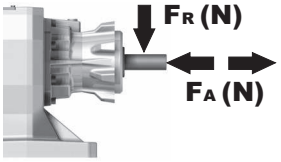
$$F_{eq} = F_R \cdot \frac{138}{X+68}$$





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

Input shaft
Albero in entrata

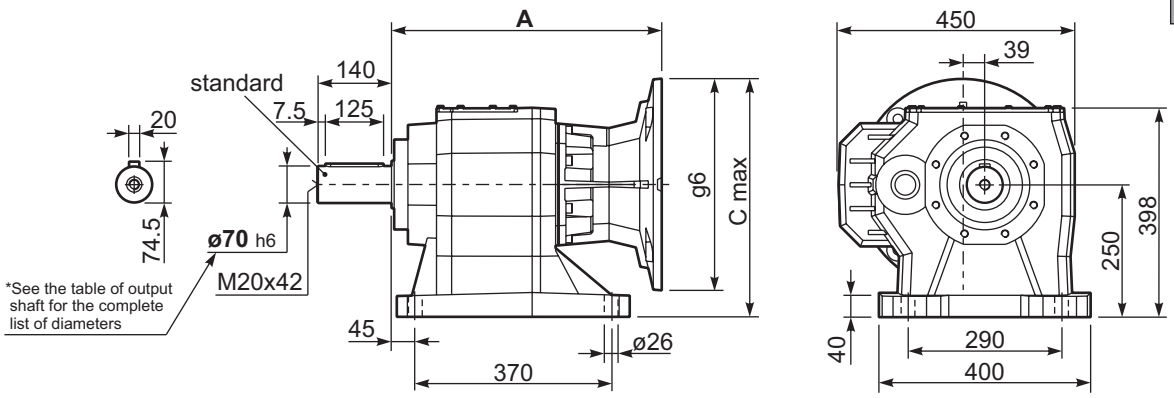


n_1	FA	FR
1400	1120	5600
900	1220	6100
500	1300	6500

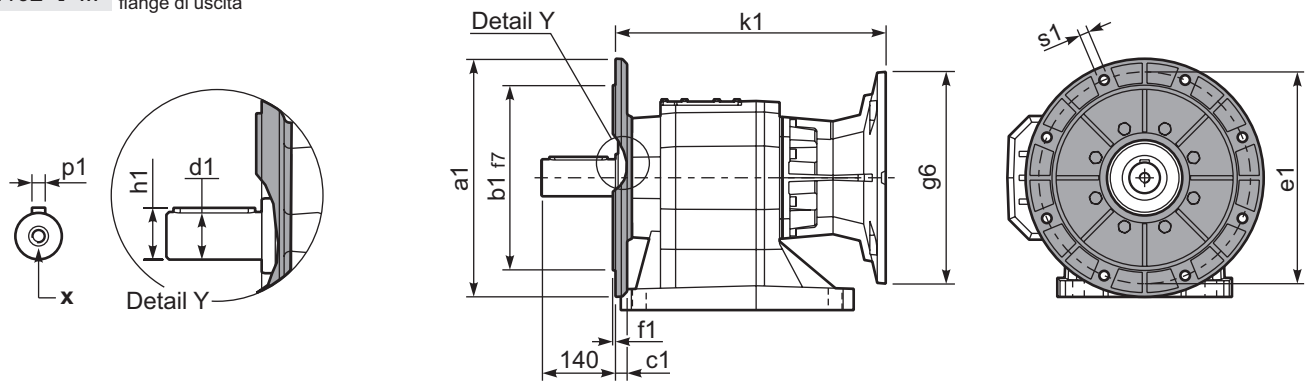
tab. 2

P1102**S0**... With foot
Con piedino

Gearbox weight peso riduttore	165 kg



P1102-**F**... Output flanges
flange di uscita



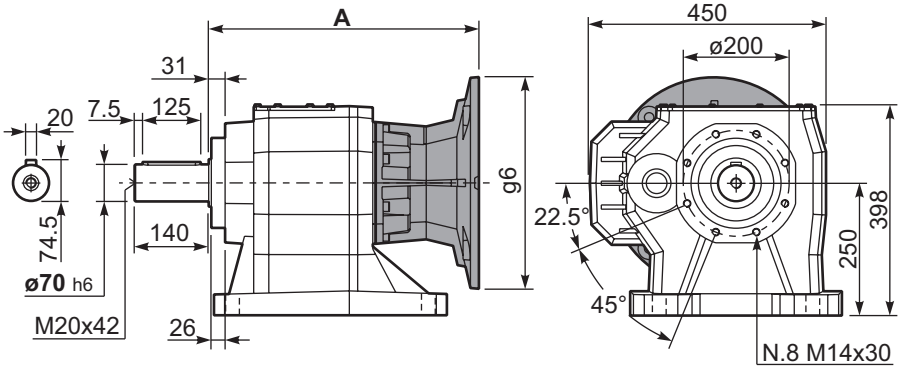
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 70x140	20	74.5	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

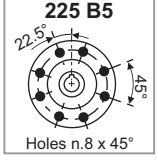
a1 ø	b1	c1	e1	f1	s1	kit code	
350	250	21	300	5	18	KC110.9.015	All flanges are compatible with the foot
450	350	22	400	5	18	KC110.9.016	
-	-	-	-	-	-	-	

P1102**S0**... Basic gearbox
Riduttore base

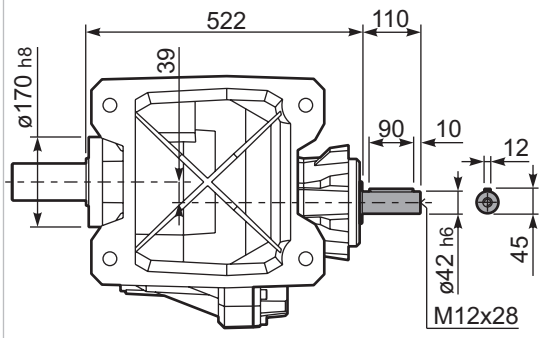


B5 Motor Flanges	A	C_{max}	g6	k1	kit code
132 B5	485.5	400	300	485.5	KC110.9.052
160 B5	510.5	425	350	510.5	KC110.9.053
180 B5	510.5	425	350	510.5	KC110.9.053_B
200 B5	510.5	450	400	510.5	KC110.9.054
225 B5	537.5	475	450	537.5	KC110.9.055

Input 225 B5



R1102**S0**... Input Shaft
Albero in entrata



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -F 100 112	-G 132	-H 160	-I 180	B14 motor flanges -U 100 112	-V 132		Output Shaft ø	Ratios code
38.8	**36.11**	18.5	4113	1.1	**19.4**	**4500**							301411		01
27.5	**50.89**	15	4694	1.0	**14.1**	**4600**							201414		02
25.1	**55.73**	11	3777	1.2	**12.9**	**4600**							201413		03
20.3	**68.80**	11	4662	1.0	**10.4**	**4600**							161414		04
18.6	**75.35**	9	4354	1.1	**9.5**	**4600**							161413		05
15.6	**89.47**	7.5	4160	1.1	**8.0**	**4600**							131414		06
15.2	**92.02**	7.5	4278	1.1	**7.6**	**4500**							161411	**standard ø70**	07
14.3	**97.99**	7.5	4556	1.0	**7.3**	**4600**							131413		08
12.8	**109.52**	5.5	3762	1.2	**6.6**	**4600**							111414		09
11.7	**119.94**	5.5	4120	1.1	**6.0**	**4600**							111413		10
9.6	**146.47**	4	3681	1.2	**4.8**	**4500**							111411		11
8.8	**158.37**	4	3980	1.2	**4.5**	**4600**							81414		12
8.1	**173.45**	4	4359	1.1	**4.1**	**4600**							81413		13
6.6	**211.82**	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.

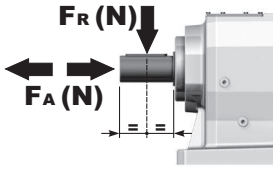
B3	B6	B7	B8	V5	V6	V8
7.00 LT	13.00 LT	8.00 LT	9.00 LT	16.00 LT	13.50 LT	Ask
SHELL Omala S2 GX 460				**ENI** Blasia 460		

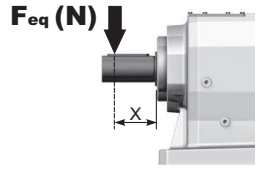
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

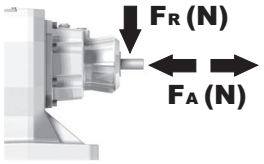
$$F_{eq} = F_R \cdot \frac{138}{X+68}$$





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

Input shaft
Albero in entrata

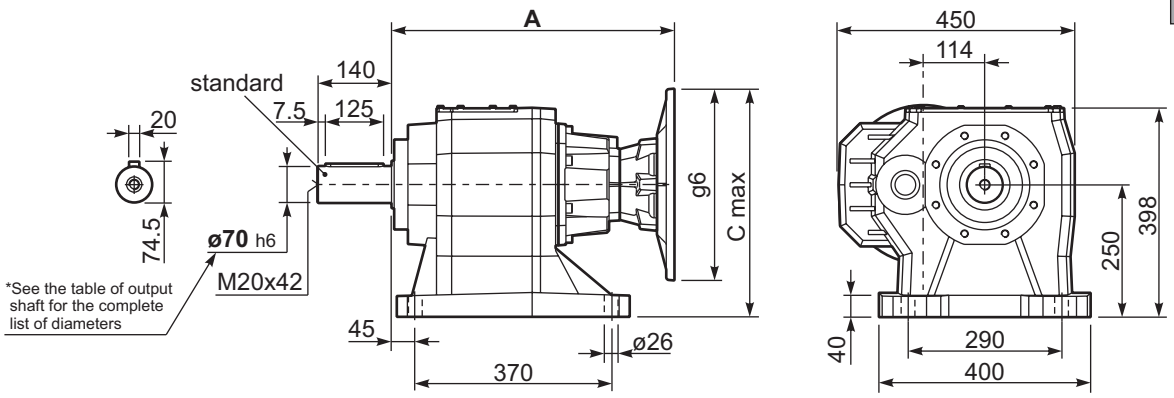


n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

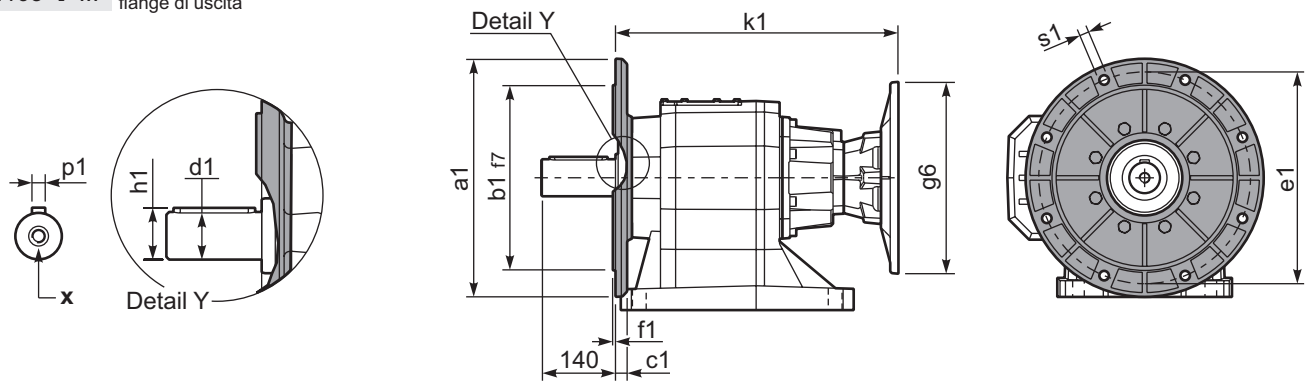
tab. 2

P1103**S0**... With foot
Con piedino

Gearbox weight peso riduttore	156 kg



P1103-**F**... Output flanges
flange di uscita



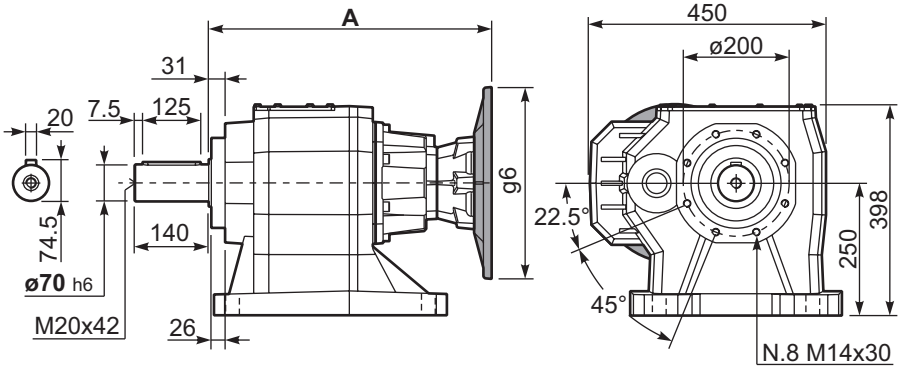
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 70x140	20	74.5	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

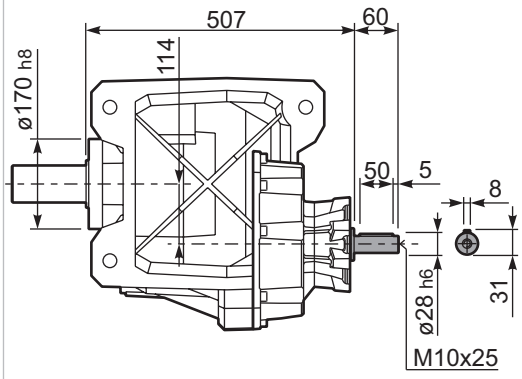
a1 ø	b1	c1	e1	f1	s1	kit code	
350	250	21	300	5	18	KC110.9.015	All flanges are compatible with the foot
450	350	22	400	5	18	KC110.9.016	
-	-	-	-	-	-	-	

P1103**S0**... Basic gearbox
Riduttore base



Motor Flanges	A	C_{max}	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

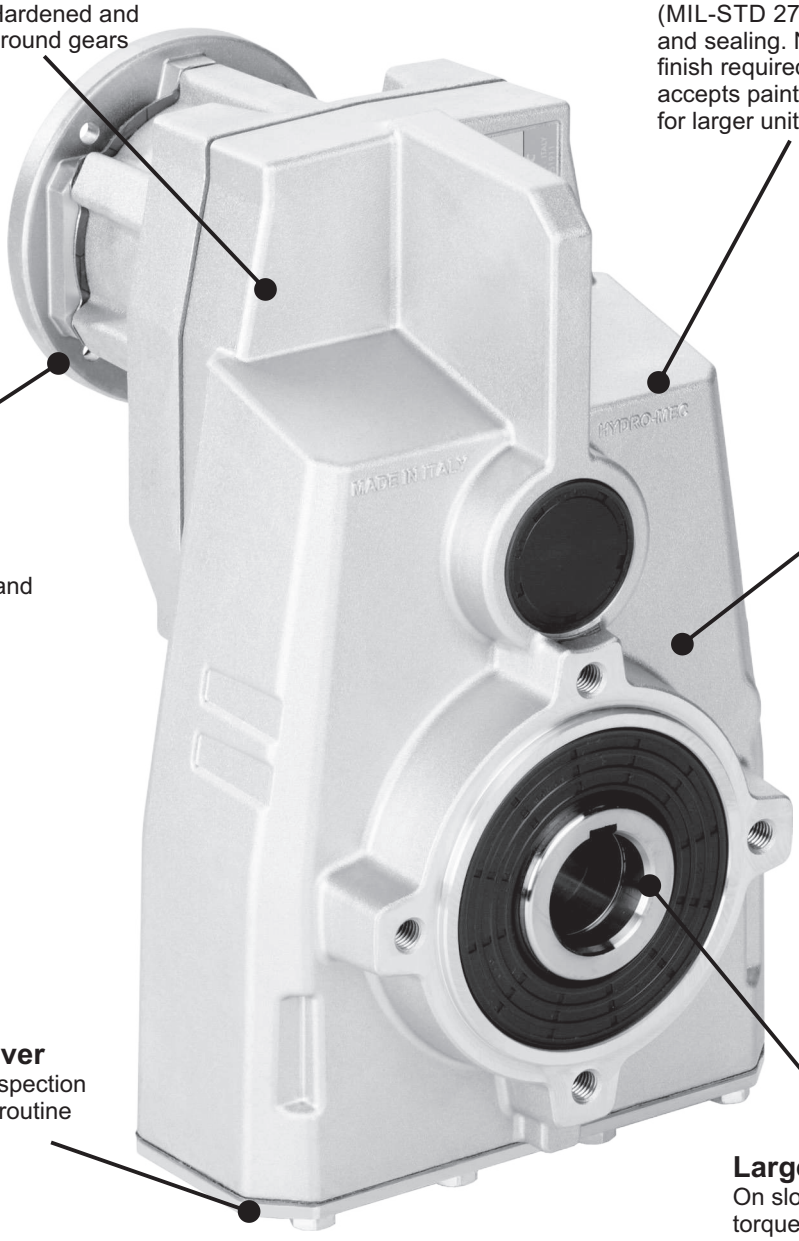


Aluminum & cast iron shaft mounted gearboxes

A modular and compact product

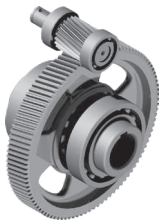
Gears
Hardened and ground gears

Alloy housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint or cast iron for larger units.



Flange
Fully modular to IEC and Compact integrated motor.
NEMA C flange

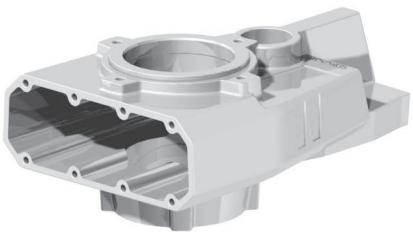
Large center distance

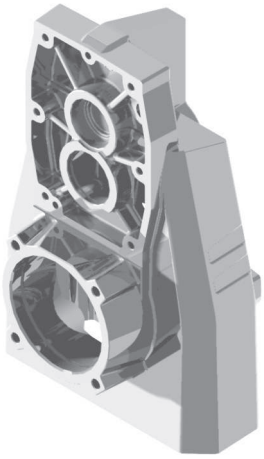


Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

Large center distance
On slow gears for safe torque trasmission.

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...

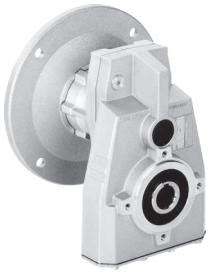
3 Stage

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

7-5	7-7
FS10 60Nm	**FS20** 90Nm

Types / Tipi / Tipen / Types / Tipos

1 Stage



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

7-13	7-23	7-29	7-35
FA41 225Nm	**FC61** 380Nm	**FC71** 670Nm	**FC81** 1175Nm

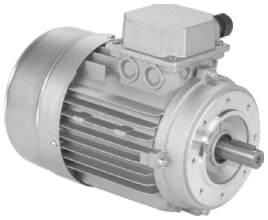
Types / Tipi / Tipen / Types / Tipos

2 and 3 Stage

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

7-9	7-11	7-15	7-17	7-19	7-21	7-25	7-27	7-31	7-33	7-37	7-39
FA32 150Nm	**FA33** 150Nm	**FA42** 320Nm	**FA43** 320Nm	**FA52** 490Nm	**FA53** 510Nm	**FC62** 675Nm	**FC63** 675Nm	**FC72** 900Nm	**FC73** 900Nm	**FC82** 2100Nm	**FC83** 2100Nm

Types / Tipi / Tipen / Types / Tipos



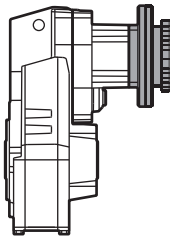
On page / A pagina / Auf Seite / À la page / En la página

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

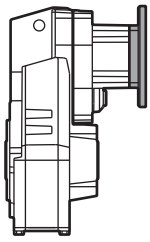
Types / Tipi / Tipen / Types / Tipos

Type - Tipo - Typ Type - Tipo	**Size** - Grandezza - Grösse Taille - Tamaño	**Mounting** - Montaggio Montage - Fixation Tipo de montaje	**Rapporto** - Ratio Untersetzung Reduction - Relacion	**Output shaft** Albero uscita Abtriebswelle Arbre de sortie Eje en salida
M	**FA42**	**C**	**10.04**	**-D**

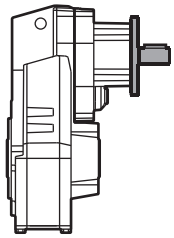
Shaft mounted helical
Riduttori ad assi paralleli



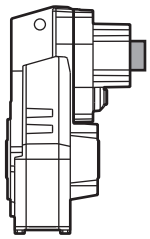
With IEC motor
M



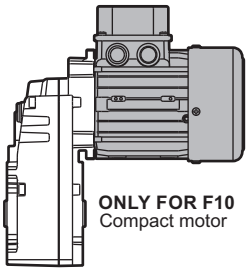
With motor flange
P



With male input shaft
R

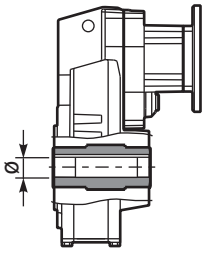


Modular base
B
Not available for: FC61, FC71, FC81, FC82 .

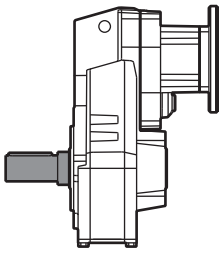


ONLY FOR F10
Compact motor
C

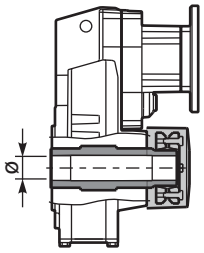
1 Stage Riduzione Stufe Trains Etapa	2 Stages Riduzioni Stufen Trains Etapas	3 Stages Riduzioni Stufen Trains Etapas
Aluminum/Alluminio/Aluminium/Aluminio		
FA41	**FA32** **FA42** **FA52**	**FS10** **FS20** **FA33** **FA43** **FA53**
Cast Iron/Ghisa/Grauguss/Fonte/Fundicion		
FC61 **FC71** **FC81**	**FC62** **FC72** **FC82**	**FC63** **FC73** **FC83**



Hollow output shaft
C



Single output shaft
A



Shrink Disk
D
Only on request for Q.ty
A richiesta per quantità

See technical data table

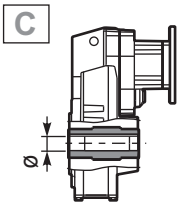
Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir Tableau données techniques

Ver tabla datos técnicos

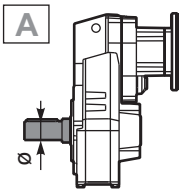
C



➡ **STANDARD**
⇨ Only on request for Q.ty
A richiesta per quantità

FS10	
-J	➡ ø17
FS20	
-B	➡ ø20
FA32-3	
-C	➡ ø25
FA41 FA42 FA43	
-C	⇨ ø25
-D	➡ **ø30**
-E	⇨ ø35
FA52 FA53 FC61 FC62 FC63	
-E	➡ **ø35**
-F	⇨ ø40
FC71 FC72 FC73	
-F	➡ **ø40**
-G	⇨ ø45
FC81 FC82 FC83	
-H	➡ **ø50**
-I	⇨ ø55

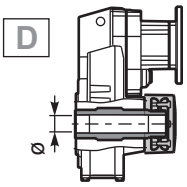
A



Single output shaft

-L	FA32/3 ⇨ø25
-M	FA41/2/3⇨ø30
-N	FA52/3 FC61/2/3⇨ø35
-O	FC71/2/3⇨ø40
-K	FC81/2/3⇨ø50

D



Shrink disk

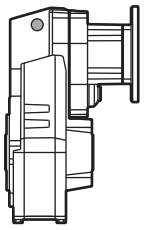
-Q	FA42/3 ⇨ø30
-T	FA52/3 FC62/3 ⇨ø35
-U	FC72/3 ⇨ø40
-V	FC82/3 ⇨ø50

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

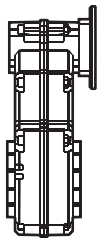
Type - Tipo - Typ
Types - Tipo

ST



ST

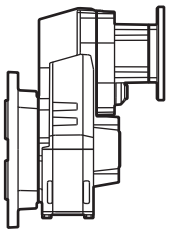
Foro standard
Standard bore



only for FS10 / FS20

ST

Senza braccio
di reazione
Without reaction arm

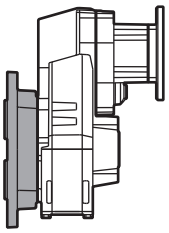


-F

Whit output flange
con flangia uscita

Output flange
Flangia uscita
Ausgangsflansch
Bride de sortie
Brida en salida

N



N Senza flangia
Without flange

FS20

1 ➡ ø140

FA32 FA33

2 ➡ ø160
3 ⇨ ø200

FA41 FA42 FA43

2 ➡ ø160
3 ⇨ ø200
4 ⇨ ø250

FA52 FA53
FC61 FC62 FC63

4 ➡ ø250

FC71 FC72 FC73

4 ➡ ø250
5 ⇨ ø300

FC81 FC82 FC83

5 ➡ ø300
6 ⇨ ø350

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-C

Flange
Flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)
-H=160 (ø350)
-I=180 (ø350)

B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

Brushless

BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

Type R
Tipo R

FA33 FA43
FS10 FS20

-1 ⇨ ø14

FA32 FA42
FA53 FC63 FC73

-2 ⇨ ø19

FA52 FC62
FC72 FC83

-3 ⇨ ø24

FC82

-4 ⇨ ø28

Without flange
Senza flangia

-M ⇨ With coupling

FA33 FA43
FS10 FS20

-Z ⇨ ø9 (IEC56)
-0 ⇨ ø11 (IEC63)
-1 ⇨ ø14 (IEC71)

FA32 FA42 FA53
FC63 FC73

-1 ⇨ ø14 (IEC71)
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)

FA52 FC62
FC72 FC83

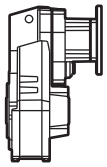
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)
-4 ⇨ ø28 (IEC100)

FA41

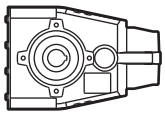
-4 ⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

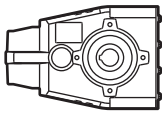
H1



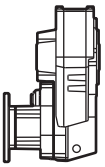
H1
STANDARD



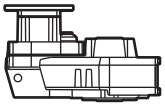
H4



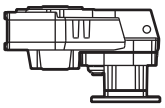
H3



H2



H5



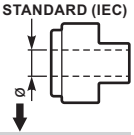
H6

Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

ST
standard bore
foro standard

COUPLING
STANDARD (IEC)

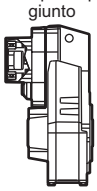


-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

BRUSHLESS *

-2 = 11mm
-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

-0
Ready for input
coupling
Predisposto per
giunto



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

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

With Type M specify terminal box position

Con tipo M specificare
posizione morsettiera

A

B
STANDARD

C

D

7

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

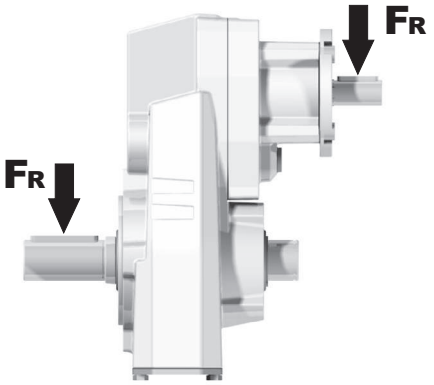
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{}$

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



$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

FA42 Compact- Gear 320Nm

Rating - Aluminum
SHAFT MOUNTED HELICAL

QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
167	**8.38**	4	215	1.0	4.1	225	B					C	C			2821		01
139	**10.04**	3	194	1.2	3.7	240	B					C	C			2818		02
114	**12.33**	3	238	1.1	3.2	260	B					C	C			2813		03
92	**15.16**	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

fs

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Hollow Shaft ø	Ratios code
72	**19.42**	0.37	46	1.3	**0.48**	**60**			C	C		281713	standard ø17	01
51	**27.21**	0.37	65	0.9	**0.34**	**60**			C	C		281313		02
36.4	**38.49**	0.25	62	1.0	**0.24**	**60**			C	C		191713		03
31.7	**44.12**	0.18	54	1.1	**0.21**	**60**			C	C		171713		04
26.7	**52.50**	0.18	64	0.9	**0.18**	**60**			C	C		151713		05
22.6	**61.82**	0.12	49	1.2	**0.15**	**60**			C	C		171313		06
19.0	**73.56**	0.12	58	1.0	**0.13**	**60**			C	C		151313		07
15.9	**88.13**	0.09	56	1.1	**0.11**	**60**			C	C		101713		08
12.0	**116.67**	0.06	48	1.2	**0.08**	**60**			C	C		91713		09
11.3	**123.48**	0.06	51	1.2	**0.08**	**60**			C	C		101313		10
9.0	**155.37**	0.06	64	0.9	**0.06**	**60**			C	C		71713		11
8.6	**163.47**	0.06	68	0.9	**0.06**	**60**			C	C		91313		12
7.6	**184.39**	0.06	76	0.8	**0.05**	**60**			C	C		61713		13
6.4	**217.68**	0.06*	90	0.7	**0.04**	**60**			C	C		71313		14
5.4	**258.34**	0.06*	107	0.6	**0.04**	**60**			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 requiren 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.

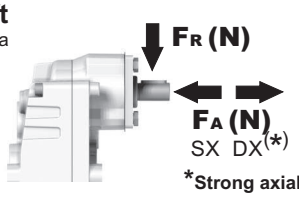
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

RADIAL LOADS

Input shaft
Albero in entrata



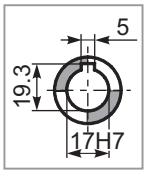
n_1	FA	FR
1400	140	700
900	160	800

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

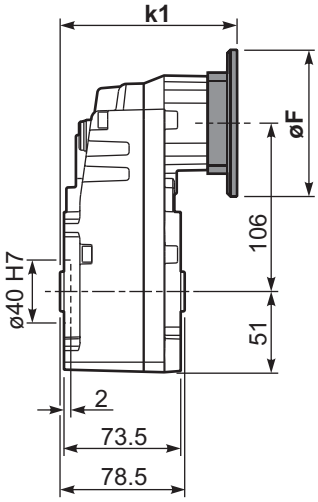
tab. 2

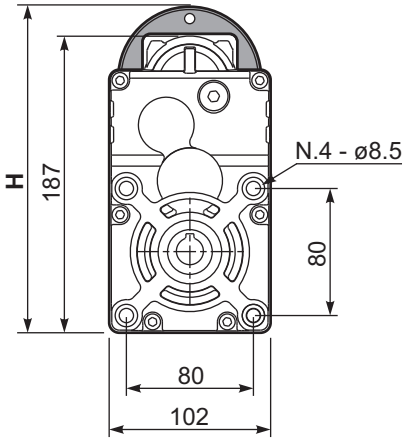
PFS10... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	3.1 kg



Standard
Hollow shaft

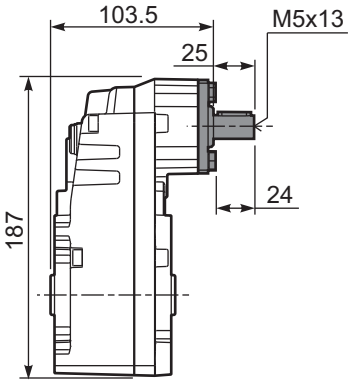


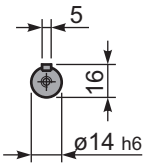


B14 Motor Flanges	H	øF	k1	kit code
56 B14	197	80	109.3	KC40.4.049
63 B14	202	90	111.8	K050.4.047
71 B14	209.5	105	109.3	K050.4.045

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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Hollow Shaft ø	Ratios code
24.2	**57.95**	0.25	93	1.0	**0.24**	**90**			C	C		2844	standard ø20	01
13.4	**104.80**	0.12	83	1.1	**0.13**	**90**			C	C		1954		02
11.5	**121.47**	0.12	96	0.9	**0.12**	**90**			C	C		1756		03
9.8	**142.59**	0.09	90	1.0	**0.10**	**90**			C	C		1558		04
8.2	**170.20**	0.06	70	1.3	**0.08**	**90**			C	C		1360		05
6.0	**232.32**	0.06	96	0.9	**0.06**	**90**			C	C		1063		06
4.6	**303.20**	0.06*	126	0.7	**0.05**	**90**			C	C		974		07
3.5	**400.37**	0.06*	166	0.5	**0.04**	**90**			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}

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 requiren 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.

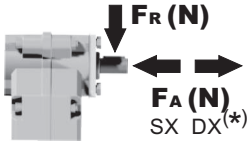
SHELL Omala S4 WE 320	**ENI** Telium VSF 320

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

tab. 1

RADIAL LOADS

Input shaft
Albero in entrata



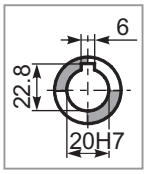
n_1	FA	FR
1400	140	700
900	160	800

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

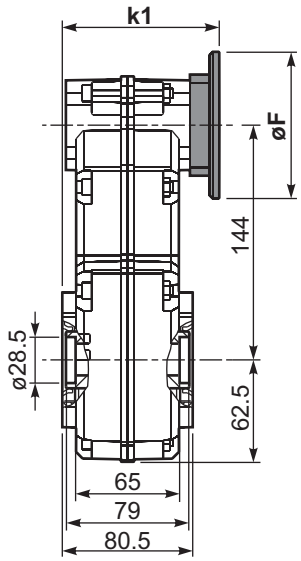
tab. 2

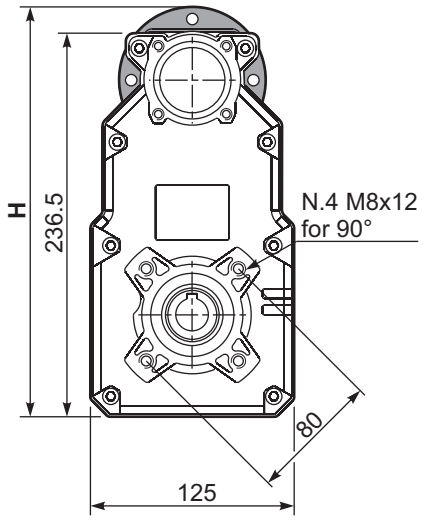
PFS20... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	4.3 kg



Standard
Hollow shaft

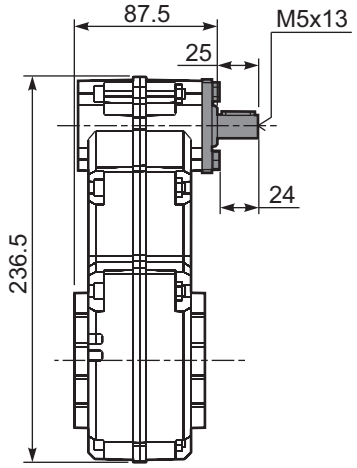


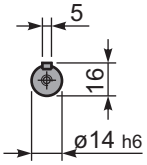


B14 Motor Flanges	H	øF	k1	kit code
56 B14	246.5	80	94.3	KC40.4.049
63 B14	251.5	90	96.8	K050.4.047
71 B14	259	105	94.3	K050.4.045

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

RFS20... Input Shaft
Albero in entrata





▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
231	**6.06**	2.2	86	0.9	**2.02**	**80**	B					C	C			2821		01
150	**9.31**	1.5	91	1.0	**1.48**	**90**	B					C	C			2813		02
128	**10.96**	1.5	107	1.0	**1.53**	**110**	B					C	C			1921		03
110	**12.71**	1.5	124	1.0	**1.50**	**125**	B					C	C			1721		04
94	**14.91**	1.5	146	1.0	**1.45**	**142**	B					C	C			1521		05
83	**16.83**	1.5	165	0.9	**1.36**	**150**	B					C	C			1913		06
79	**17.80**	1.1	127	1.2	**1.29**	**150**	B					C	C			1321		07
72	**19.51**	1.1	140	1.1	**1.17**	**150**	B					C	C			1713		08
61	**22.90**	1.1	164	0.9	**1.00**	**150**	B					C	C			1513		09
58	**24.30**	1.1	174	0.9	**0.94**	**150**	B					C	C			1021		10
54	**26.15**	0.75	128	1.2	**0.88**	**150**	B					C	C			1910	**standard**	11
51	**27.34**	0.75	134	1.1	**0.84**	**150**	B					C	C			1313	**ø25**	12
46.2	**30.31**	0.75	149	1.0	**0.76**	**150**	B					C	C			1710		13
44.1	**31.71**	0.75	156	1.0	**0.72**	**150**	B					C	C			921		14
39.4	**35.57**	0.75	175	0.9	**0.64**	**150**	B					C	C			1510		15
37.5	**37.32**	0.55	135	1.1	**0.61**	**150**	B					C	C			1013		16
33.0	**42.46**	0.55	154	1.0	**0.54**	**150**	B					C	C			1310		17
28.7	**48.70**	0.55	176	0.9	**0.47**	**150**	B					C	C			913		18
24.2	**57.96**	0.37	140	1.1	**0.40**	**150**	B					C	C			1010		19
21.8	**64.31**	0.37	156	1.0	**0.36**	**150**	B					C	C			713		20
18.5	**75.64**	0.25	124	1.2	**0.30**	**150**	B					C	C			910		21
14.0	**99.89**	0.25	163	0.9	**0.23**	**150**	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 requiren 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.

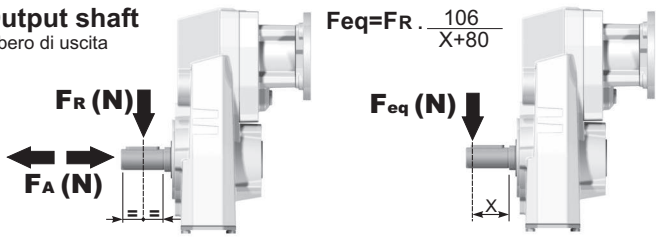
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
0.65 LT	0.50 LT	0.50 LT	0.60 LT	0.80 LT	0.65 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

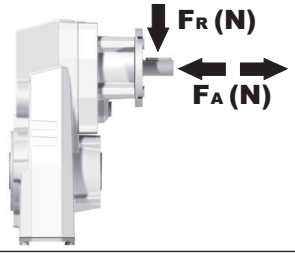
$$F_{eq} = F_R \cdot \frac{106}{X+80}$$



n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	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



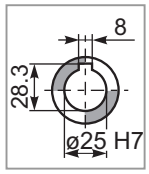
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

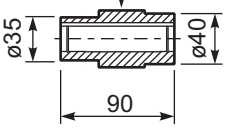
PFA32C... Basic gearbox
Riduttore base

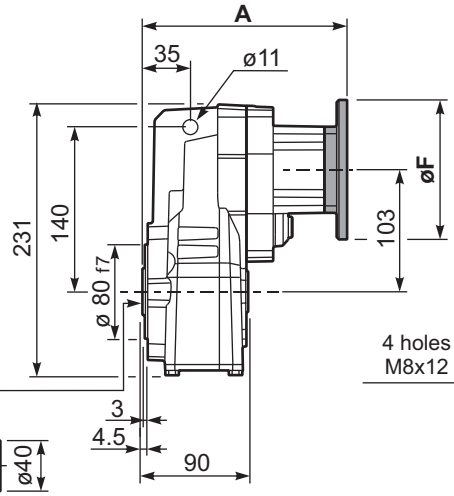
Gearbox weight peso riduttore	7.0 kg

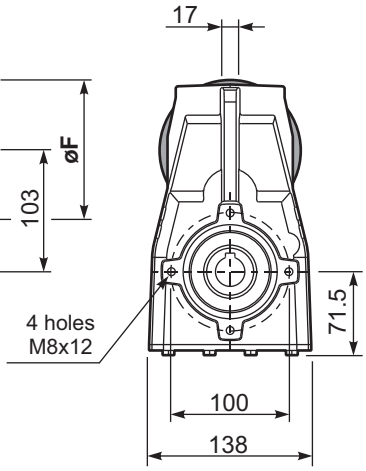
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	176.5
71B5	K063.4.042	160	174.5
80/90B5	K063.4.043	200	176.5
100/112B5	KC40.4.043	250	191.5
71B14	K063.4.047	105	174.5
80B14	K063.4.046	120	176.5
90B14	K063.4.041	140	176.5
100/112B14	KC40.4.041	160	191.5

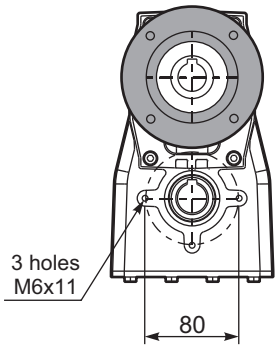


Standard
Hollow shaft



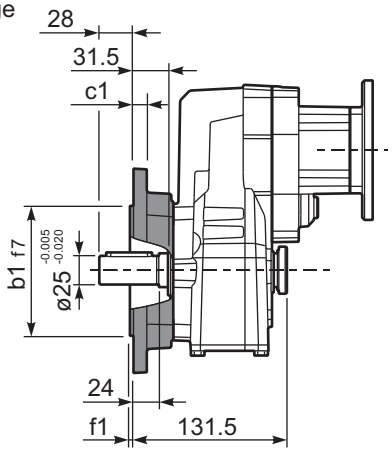


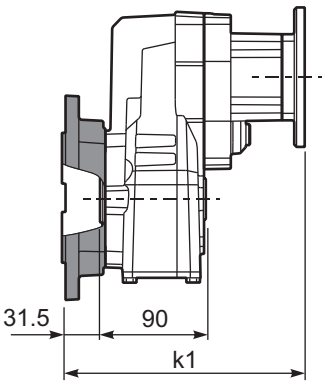


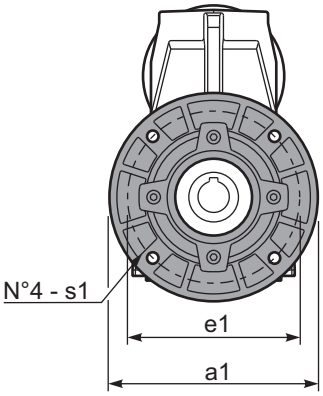


PFA32...-F... Output flange
Flangia uscita

Motor Flange	k1
63B5	208
71B5	206
80/90B5	208
100/112B5	223
71B14	206
80B14	208
90B14	208
100/112B14	223



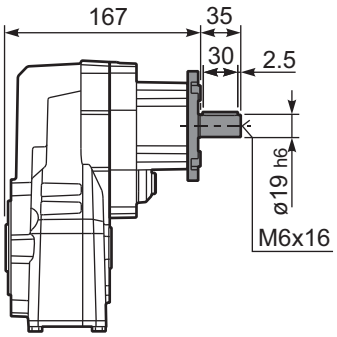


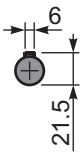


Available output flanges
Flange di uscita

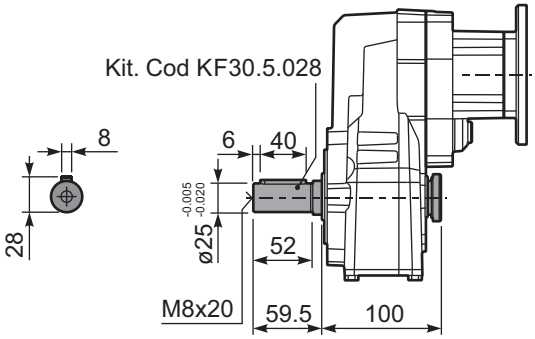
a1 ø	b1	c1	e1	f1	s1	Kit code
160	110	10	130	3	9	KX4A.9.010
200	130	11	165	3.5	11	KX4A.9.011
-	-	-	-	-	-	-

RFA32C... Input Shaft
Albero in entrata





PFA32 A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
13.6	**102.57**	0.25	164	0,9	**0.23**	**150**			C	C		131710	**standard ø25**	01
12.6	**110.77**	0.18	136	1.1	**0.21**	**150**			C	C		91321		02
11.8	**118.89**	0.18	145	1.0	**0.20**	**150**			C	C		151310		03
10.9	**128.49**	0.18	157	1.0	**0.18**	**150**			C	C		101313		04
9.7	**143.72**	0.18	176	0.9	**0.16**	**150**			C	C		131310		05
8.7	**161.67**	0.12	128	1.2	**0.14**	**150**			C	C		71713		06
8.2	**170.10**	0.12	134	1.1	**0.14**	**150**			C	C		91313		07
7.4	**188.57**	0.12	149	1.0	**0.12**	**150**			C	C		91710		08
7.0	**199.57**	0.12	158	1.0	**0.12**	**150**			C	C		101310		09
6.2	**226.51**	0.09	143	1.1	**0.10**	**150**			C	C		71313		10
5.6	**251.11**	0.09	158	0.9	**0.09**	**150**			C	C		71710		11
5.3	**264.21**	0.09	167	0.9	**0.09**	**150**			C	C		91310		12
4.7	**298.01**	0.06	123	1.2	**0.08**	**150**			C	C		61710		13
4.0	**351.82**	0.06	146	1.0	**0.07**	**150**			C	C		71310		14
3.4	**417.54**	0.06	173	0.9	**0.06**	**150**			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

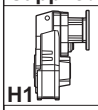
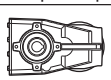
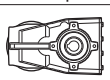
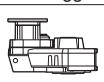
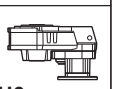
EN Unit **FA33** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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 requiren 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.

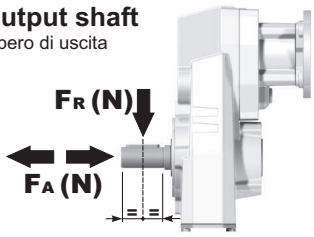
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 H1	 H4	 H3	H2	 H5	 H6
0.90 LT	0.55 LT	0.55 LT	0.65 LT	0.95 LT	0.70 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

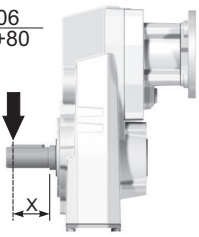
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



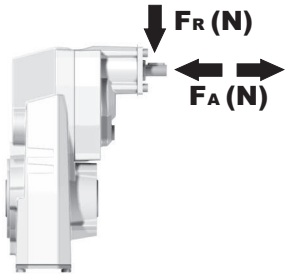
$$F_{eq} = F_R \cdot \frac{106}{X+80}$$



n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	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



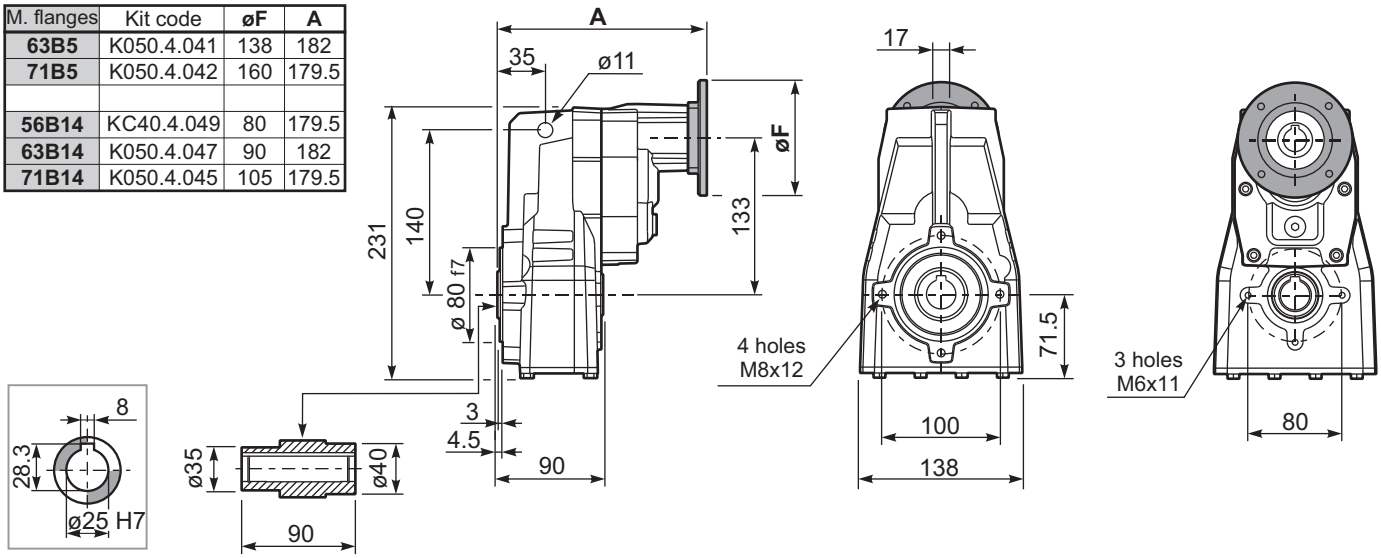
n_1	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

PFA33C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	7.0 kg

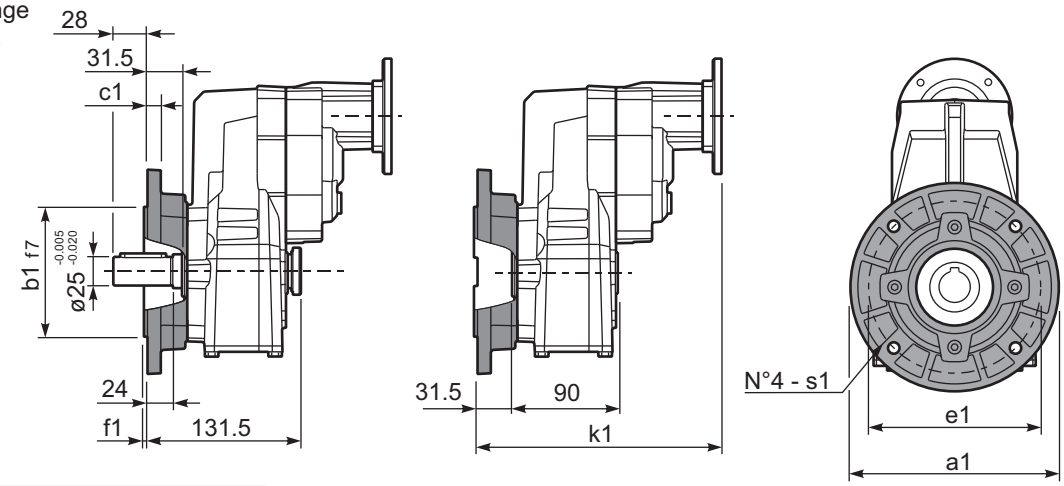
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	182
71B5	K050.4.042	160	179.5
56B14	KC40.4.049	80	179.5
63B14	K050.4.047	90	182
71B14	K050.4.045	105	179.5



Standard
Hollow shaft

PFA33...-F... Output flange
Flangia uscita

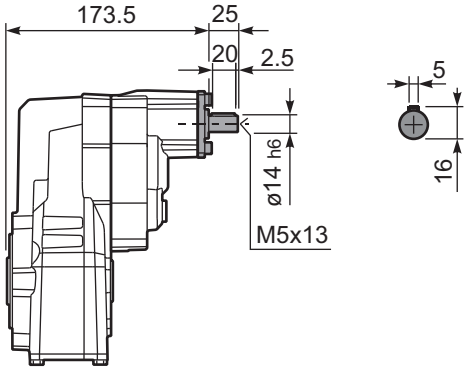
Motor Flange	k1
63B5	213.5
71B5	211
56B14	211
63B14	213.5
71B14	211



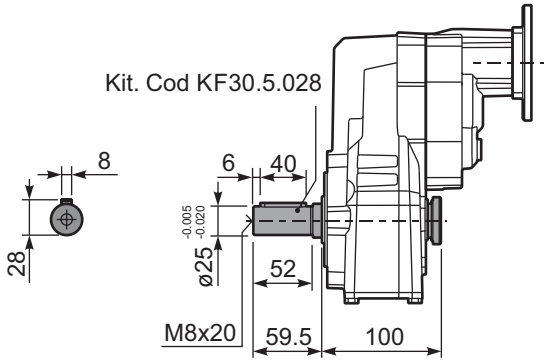
Available output flanges
Flange di uscita

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
-	-	-	-	-	-	-

RFA33C... Input Shaft
Albero in entrata



PFA33 A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
481	**2.91**	4	76	1.8	7.2	140	B	B		B	B		3499	**standard**	01
373	**3.75**	4	98	1.6	6.4	160	B	B		B	B		28105	**ø30**	02
263	**5.33**	4	140	1.2	4.8	170	B	B		B	B		21112		03
219	**6.39**	4	167	1.0	4.0	170	B	B		B	B		18115	ø25	04
178	**7.85**	4	205	1.1	4.3	225	B	B		B	B		13102	ø35	05
														On request	

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

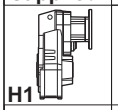
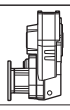
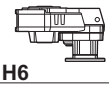
EN Unit **FA41** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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 requiren 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.

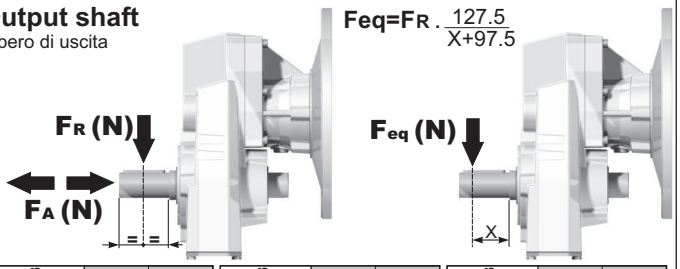
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 H1	H4	H3	 H2	H5	 H6
1.10 LT	0.65 LT	0.65 LT	0.65 LT	1.15 LT	0.80 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

$$F_{eq} = F_R \cdot \frac{127.5}{X+97.5}$$



n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	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

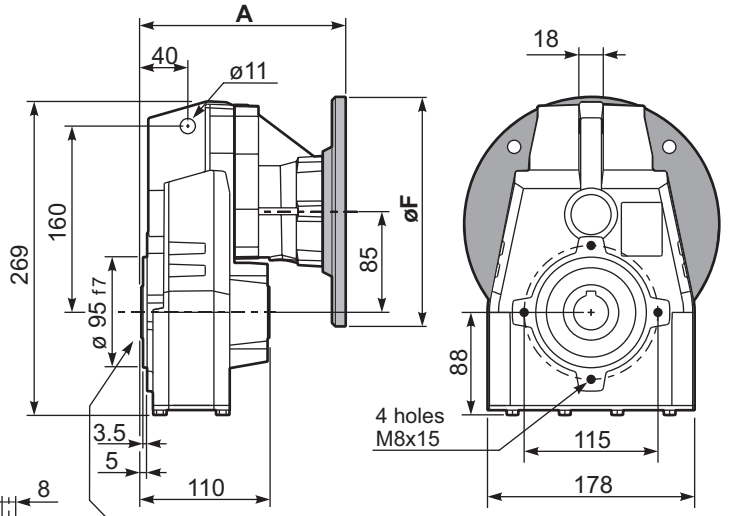
On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

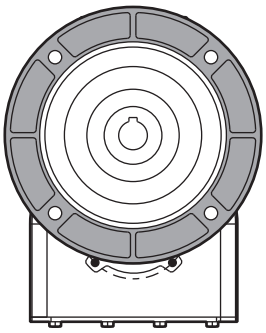
tab. 2

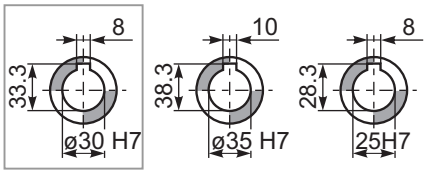
PFA41C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	12.1 kg

M. flanges	Kit code	øF	A
80/90B5	K023.4.042	200	179.5
100/112B5	K023.4.043	250	188.5
80B14	K085.4.046	120	179.5
90B14	K085.4.045	140	179.5
100/112B14	K085.4.047	160	188.5

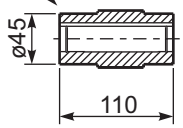






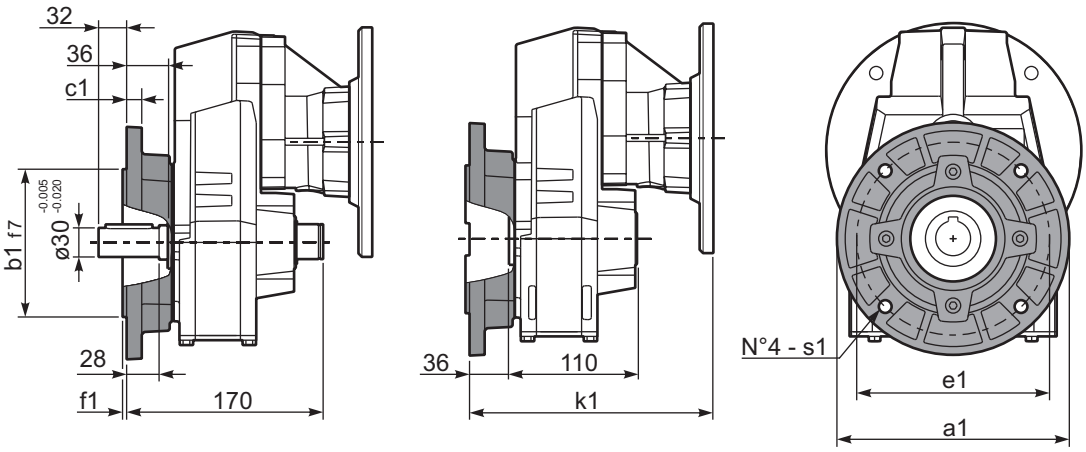
Standard
Hollow shaft

On request
A richiesta



PFA41...-F... Output flange
Flangia uscita

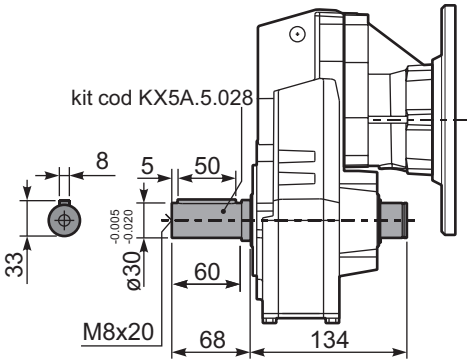
M. flanges	k1
80/90B5	215.5
100/112B5	221.5
80B14	213.5
90B14	213.5
100/112B14	224.5



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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
167	**8.38**	4	215	1.0	4.1	225	B					C	C			2821		01
139	**10.04**	3	194	1.2	3.7	240	B					C	C			2818		02
114	**12.33**	3	238	1.1	3.2	260	B					C	C			2813		03
92	**15.16**	2.2	215	1.2	2.6	260	B					C	C			1921		04
80	**17.57**	2.2	250	1.1	2.3	270	B					C	C			1721		05
77	**18.16**	2.2	258	1.1	2.4	290	B					C	C			1918		06
67	**21.05**	2.2	299	1.1	2.3	320	B					C	C			1718		07
63	**22.30**	2.2	317	1.0	2.2	320	B					C	C			1913	**standard**	08
57	**24.70**	1.5	242	1.3	2.0	320	B					C	C			1518	**ø30**	09
54	**25.85**	1.5	253	1.3	1.9	320	B					C	C			1713		10
47.5	**29.49**	1.5	289	1.1	1.7	320	B					C	C			1318	ø25	11
46.1	**30.34**	1.5	297	1.1	1.6	320	B					C	C			1513	ø35	12
41.7	**33.60**	1.1	240	1.0	1.1	250	B					C	C			1021	On request	13
38.7	**36.21**	1.1	259	1.2	1.3	320	B					C	C			1313		14
34.8	**40.25**	1.1	288	1.0	1.1	300	B					C	C			1018		15
28.3	**49.43**	1.1	354	0.9	0.99	320	B					C	C			1013		16
26.7	**52.53**	0.75	258	1.0	0.76	260	B					C	C			918		17
21.7	**64.51**	0.75	317	1.0	0.75	315	B					C	C			913		18
20.2	**69.37**	0.37	168	1.1	0.42	190	B					C	C			718		19
16.4	**85.19**	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

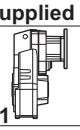
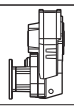
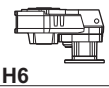
EN Unit **FA42** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.

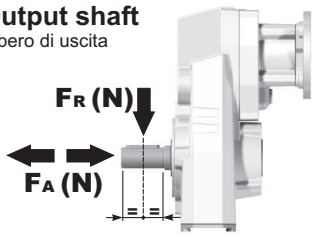
E El reductor tamaño **FA42** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

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
1.15 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		

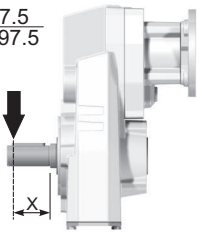
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



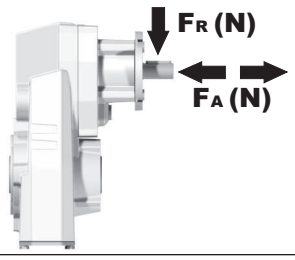
$$F_{eq} = F_R \cdot \frac{127.5}{X+97.5}$$



n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	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



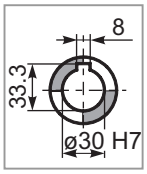
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

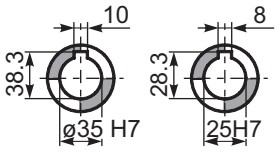
PFA42C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	9.0 kg

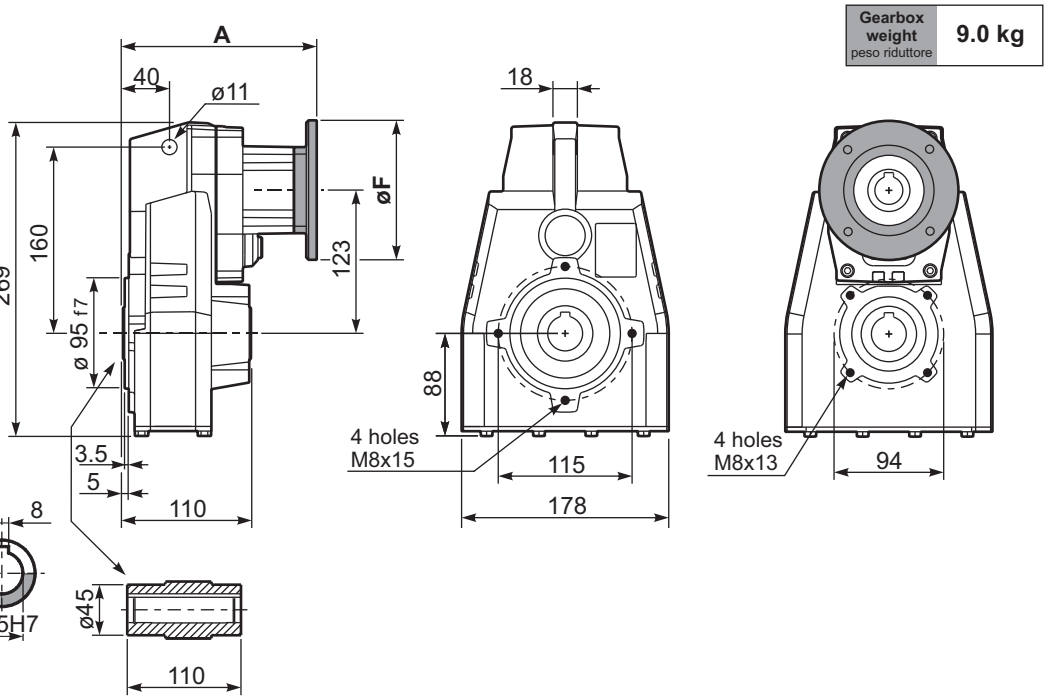
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	169.5
71B5	K063.4.042	160	167.5
80/90B5	K063.4.043	200	169.5
100/112B5	KC40.4.043	250	184.5
71B14	K063.4.047	105	167.5
80B14	K063.4.046	120	169.5
90B14	K063.4.041	140	169.5
100/112B14	KC40.4.041	160	184.5



Standard
Hollow shaft

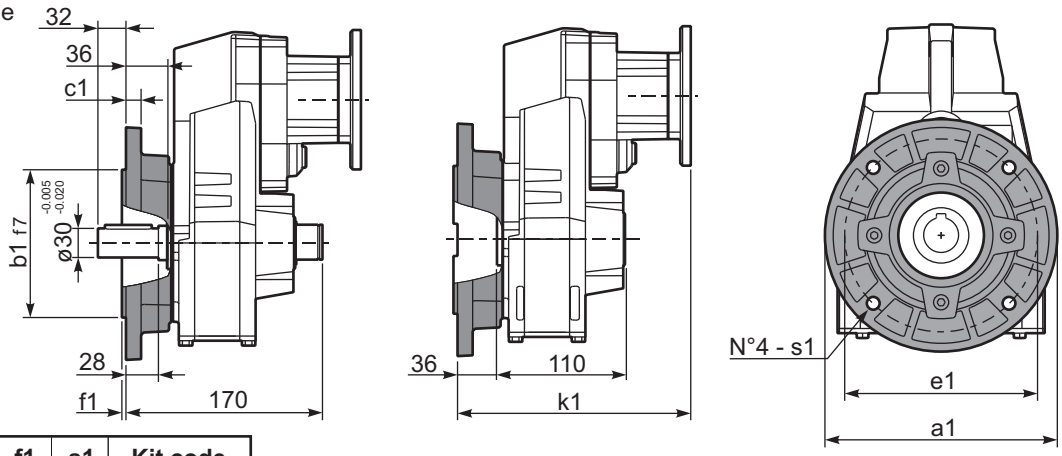


On request
A richiesta



PFA42...-F... Output flange
Flangia uscita

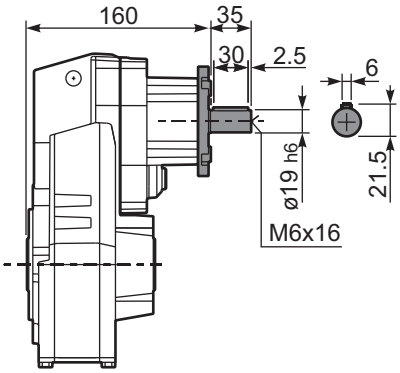
Motor Flange	k1
63B5	205.5
71B5	203.5
80/90B5	205.5
100/112B5	220.5
71B14	203.5
80B14	205.5
90B14	205.5
100/112B14	220.5



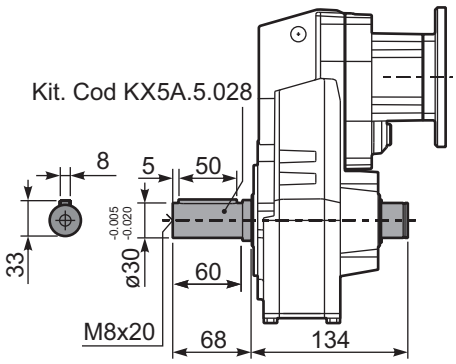
Available output flanges
Flange di uscita

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

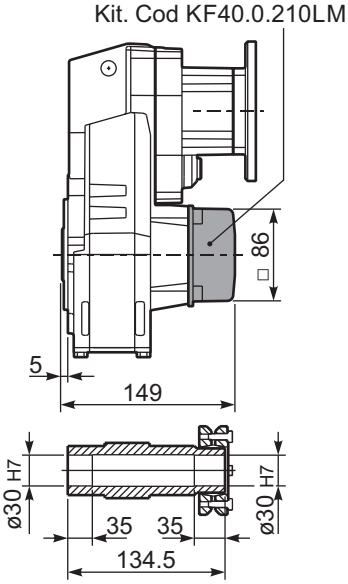
RFA42C... Input Shaft
Albero in entrata



PFA42 A... Single output shaft
Albero uscita semplice



PFA42D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
18.8	**74.33**	0.37	176	1.8	0.67	320			C	C		191313		01
17.0	**82.56**	0.37	196	1.6	0.60	320			C	C		151318		02
16.0	**87.48**	0.37	207	1.5	0.57	320			C	C		131713		03
13.8	**101.40**	0.37	240	1.3	0.49	320			C	C		151313		04
11.4	**122.57**	0.37	291	1.1	0.41	320			C	C		131313		05
10.1	**138.59**	0.37	329	1.0	0.36	320			C	C		101318	**standard ø30**	06
8.7	**160.82**	0.25	257	1.2	0.31	320			C	C		91713		07
8.2	**170.20**	0.25	272	1.2	0.29	320			C	C		101313		08
7.6	**183.48**	0.25	294	1.1	0.27	320			C	C		91318	ø25	09
6.5	**214.15**	0.18	262	1.2	0.23	320			C	C		71713	ø35	10
6.2	**225.33**	0.18	276	1.2	0.22	320			C	C		91313	On request	11
5.7	**244.32**	0.18	299	1.1	0.20	320			C	C		71318		12
5.5	**254.15**	0.18	311	1.0	0.20	320			C	C		61713		13
4.8	**289.96**	0.18	355	0.9	0.17	320			C	C		61318		14
4.7	**300.05**	0.18	367	0.9	0.17	320			C	C		71313		15
3.9	**356.09**	0.12	282	1.1	0.14	320			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

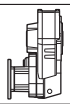
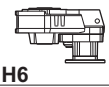
EN Unit **FA43** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.

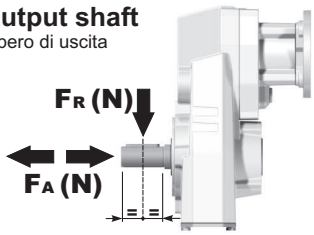
E El reductor tamaño **FA43** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

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		

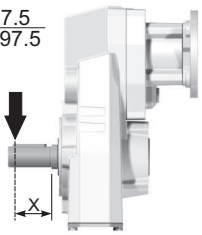
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



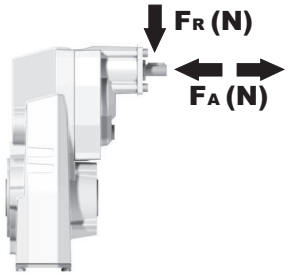
$$F_{eq} = F_R \cdot \frac{127.5}{X+97.5}$$



n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	FA	FR	n_2 [min^{-1}]	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



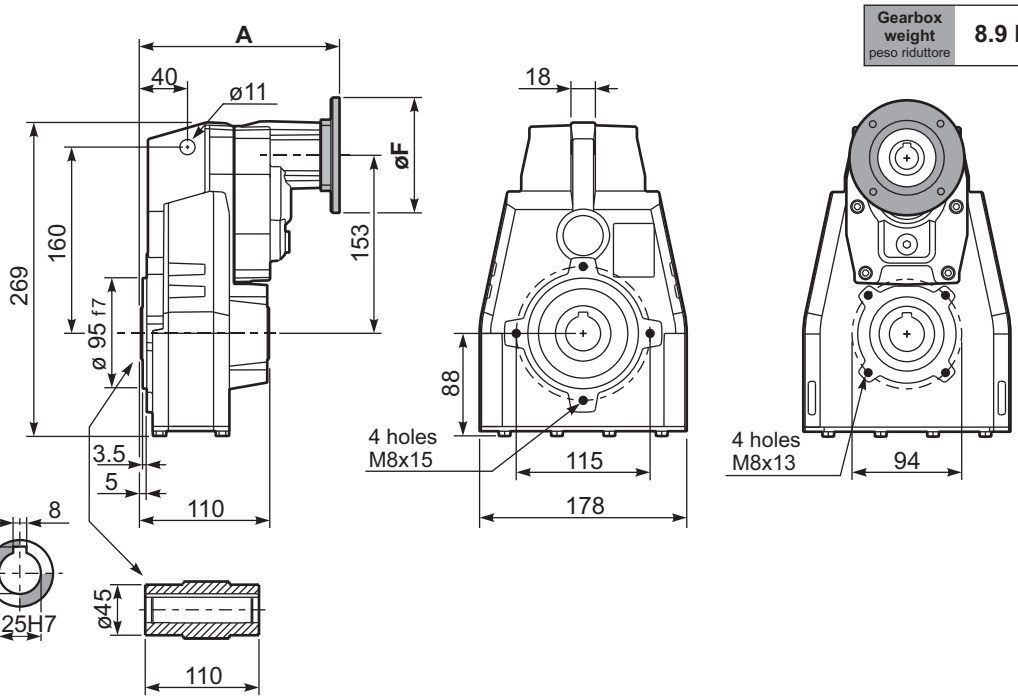
n_1	FA	FR
1400	140	700
900	160	800
500	190	950

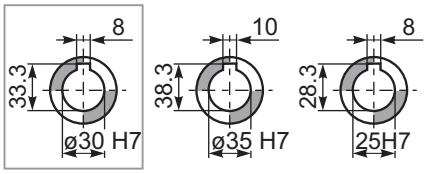
tab. 2

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



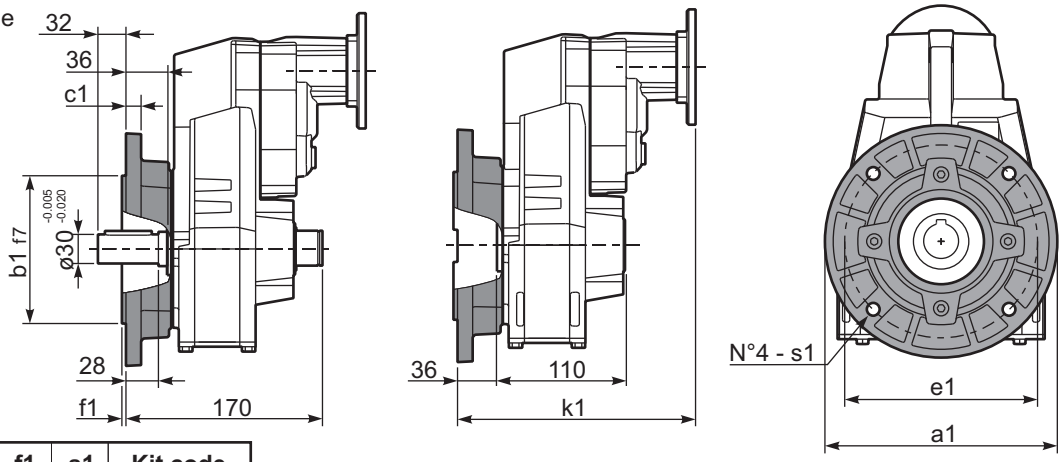


Standard
Hollow shaft

On request
A richiesta

PFA43...-F... Output flange
Flangia uscita

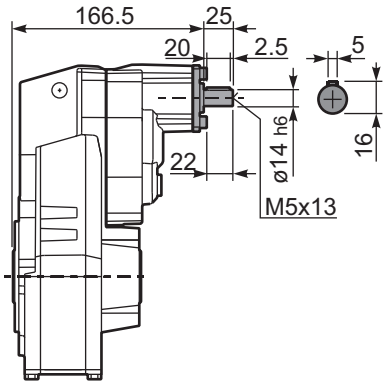
Motor Flange	k1
63B5	211
71B5	208.5
56B14	208.5
63B14	211
71B14	208.5



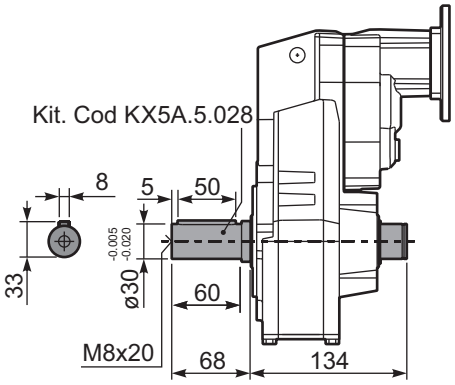
Available output flanges
Flange di uscita

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

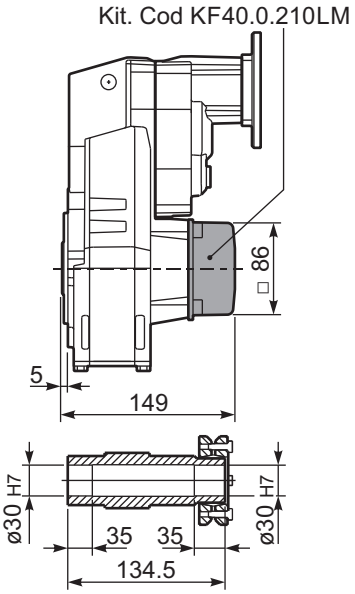
RFA43C... Input Shaft
Albero in entrata



PFA43 A... Single output shaft
Albero uscita semplice



PFA43D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
213	**6.57**	5.5	230	1.2	6.5	280	B									3018	standard ø35	01
185	**7.56**	5.5	265	1.1	5.9	290	B									3016		02
159	**8.82**	5.5	309	1.0	5.5	320	B									3014		03
113	**12.39**	5.5	434	1.0	5.5	450	B									2018		04
98	**14.24**	5.5	499	0.9	4.8	450	B									2016		05
84	**16.75**	4	429	1.1	4.3	470	B									1618		06
73	**19.25**	4	494	1.0	3.9	490	B									1616		07
64	**21.78**	4	558	0.9	3.4	490	B									1318		08
56	**25.04**	3	483	1.0	3.0	490	B									1316	ø40 On request	09
47.9	**29.23**	3	564	0.9	2.6	490	B									1314		10
45.7	**30.65**	2.2	436	1.1	2.4	490	B									1116		11
39.1	**35.78**	2.2	509	1.0	2.1	490	B									1114		12
36.3	**38.55**	2.2	548	0.9	1.9	490	B									818		13
31.6	**44.32**	1.5	434	1.1	1.7	490	B									816		14
27.1	**51.74**	1.5	507	1.0	1.4	490	B									814		15
22.9	**61.03**	1.1	437	1.1	1.2	480	B									616		16
19.6	**71.25**	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

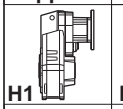
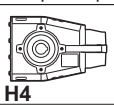
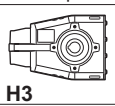
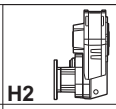
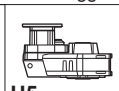
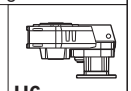
EN Unit **FA52** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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 requiren 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.

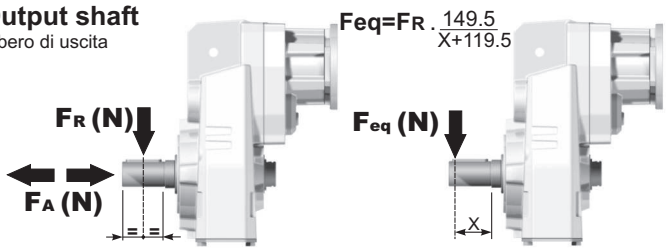
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 H1	 H4	 H3	 H2	 H5	 H6
1.85 LT	1.15 LT	1.15 LT	1.30 LT	2.10 LT	1.30 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

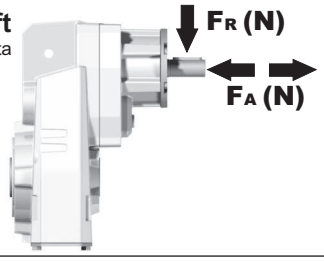
$$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$$



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



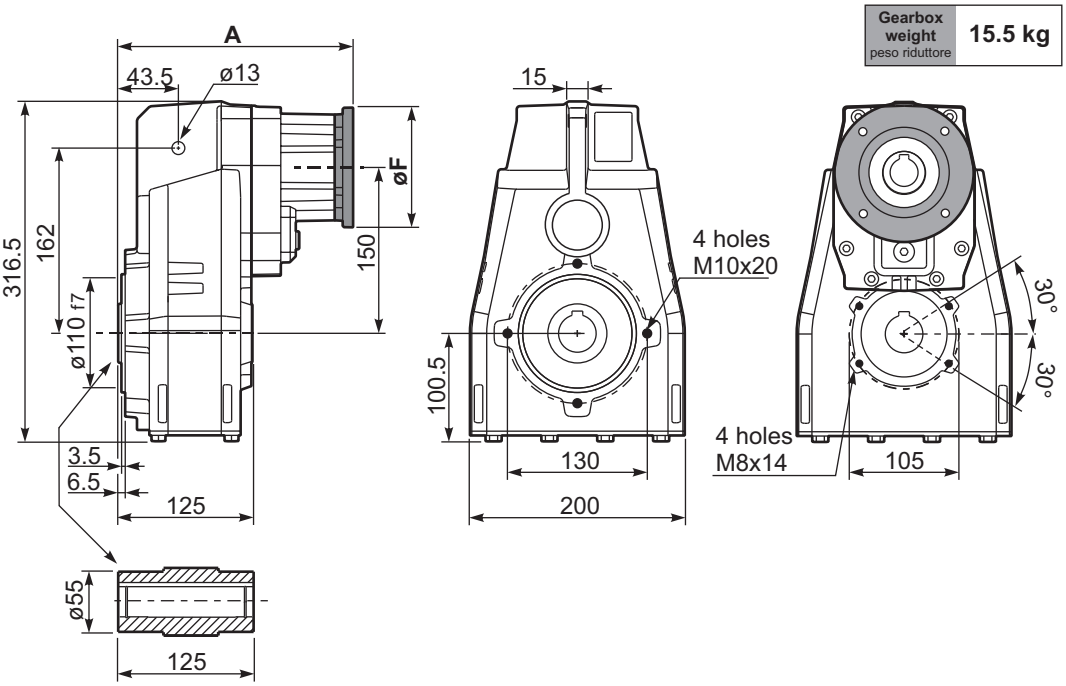
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

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

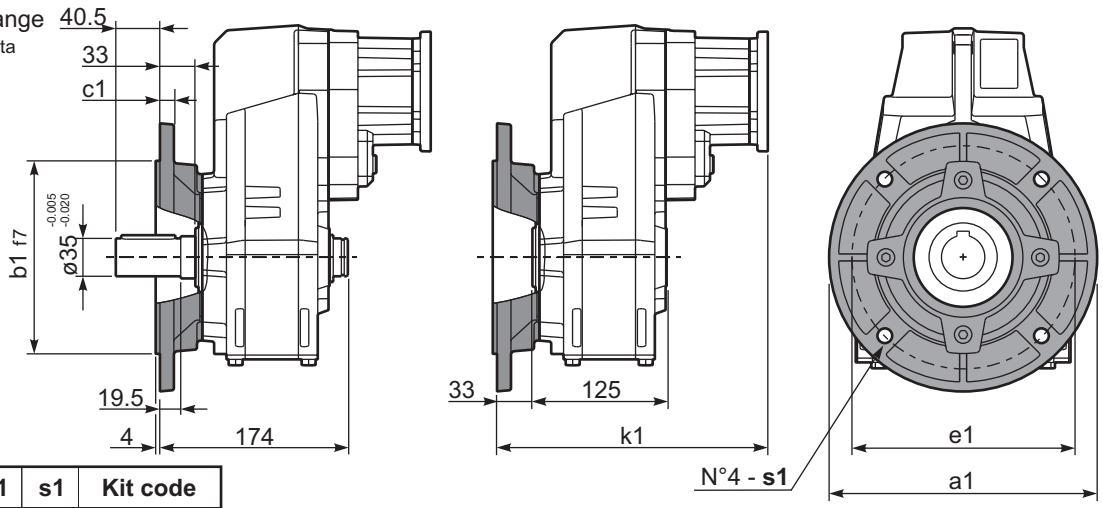


Standard
Hollow shaft

On request
A richiesta

PFA52...-F... Output flange
Flangia uscita

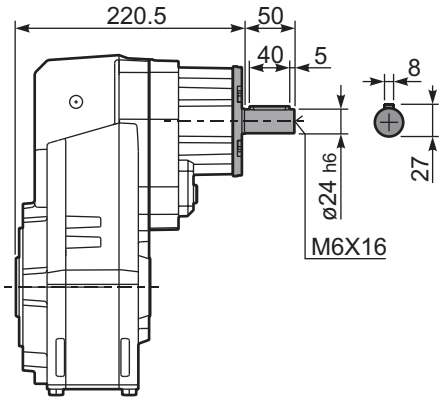
M. flanges	k1
71B5	260
80/90B5	262
100/112B5	271
132B5	289
80B14	262
90B14	262
100/112B14	271
132B14	289



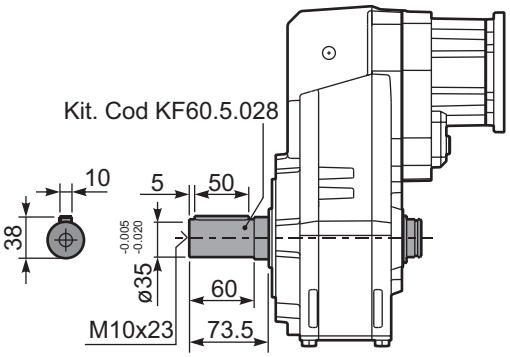
Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
250	180	13	215	14	KF60.9.011
-	-	-	-	-	-

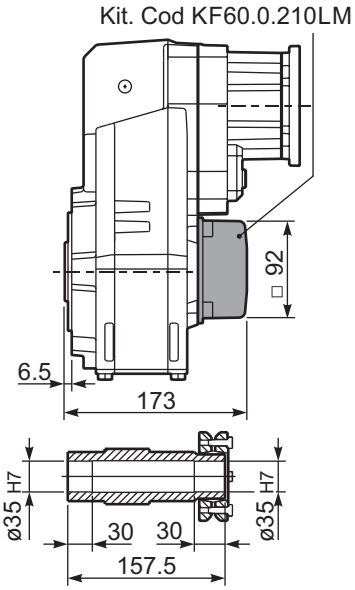
RFA52C... Input Shaft
Albero in entrata



PFA52 A... Single output shaft
Albero uscita semplice



PFA52D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
22.6	**61.89**	1.1	434	1.2	1.3	510	B				C	C		191318		01
19.7	**71.16**	1.1	499	1.0	1.1	510	B				C	C		191316		02
17.0	**82.48**	1.1	578	0.9	0.96	510	B				C	C		171316		03
14.5	**96.29**	0.75	463	1.1	0.83	510	B				C	C		171314		04
13.9	**100.51**	0.75	483	1.1	0.79	510	B				C	C		131318		05
12.1	**115.56**	0.55	410	1.2	0.69	510	B				C	C		131316		06
11.1	**125.96**	0.55	447	1.1	0.63	510	B				C	C		190816		07
10.4	**134.91**	0.55	479	1.1	0.59	510	B				C	C		131314	**standard ø35**	08
9.5	**147.05**	0.55	522	1.0	0.54	510	B				C	C		190814		09
8.2	**170.44**	0.37	404	1.3	0.47	510	B				C	C		170814		10
7.6	**184.15**	0.37	437	1.2	0.43	510	B				C	C		101314	ø40	11
6.8	**205.87**	0.37	488	1.0	0.39	510	B				C	C		91316	On request	12
5.8	**240.34**	0.37	570	0.9	0.33	510	B				C	C		91314		13
5.0	**279.22**	0.25	447	1.1	0.28	510	B				C	C		100816		14
4.3	**325.97**	0.25	522	1.0	0.24	510	B				C	C		100814		15
3.8	**364.41**	0.18	446	1.1	0.22	510	B				C	C		90816		16
3.3	**425.43**	0.18	521	1.0	0.19	510	B				C	C		90814		17
2.9	**481.19**	0.18	589	0.9	0.17	510	B				C	C		70816		18
2.5	**561.76**	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

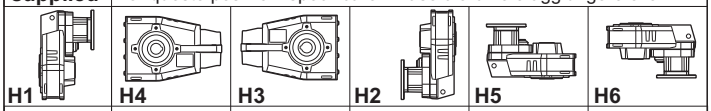
EN Unit **FA53** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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 requiren 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.

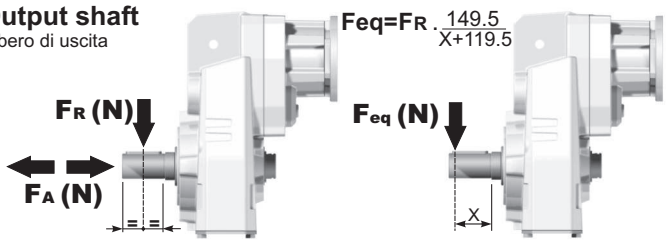
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
					
H1	H4	H3	H2	H5	H6
2.15 LT	1.25 LT	1.25 LT	1.45 LT	2.35 LT	1.45 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

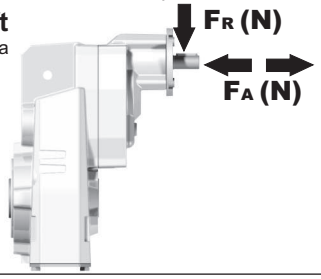
$$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$$



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



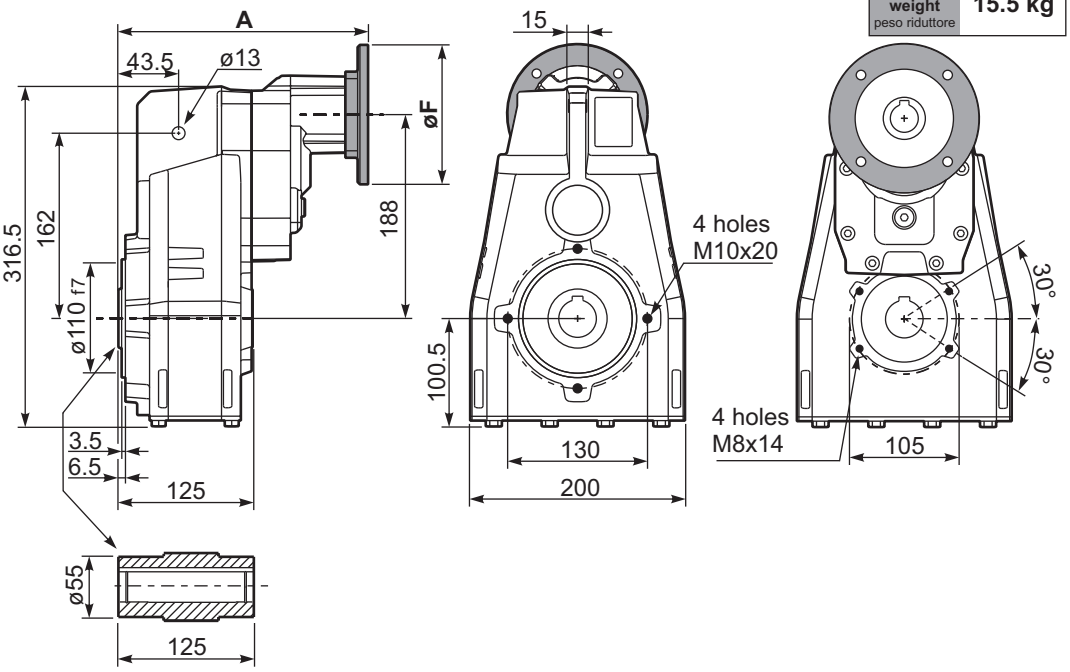
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

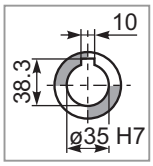
tab. 2

PFA53C... Basic gearbox
Riduttore base

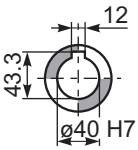
Gearbox weight peso riduttore	15.5 kg

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





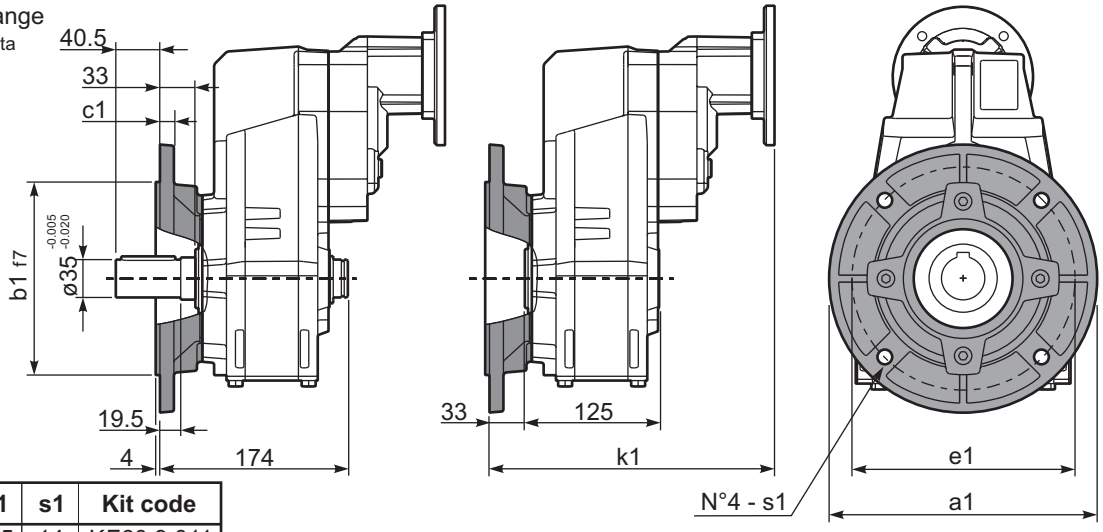
Standard
Hollow shaft



On request
A richiesta

PFA53...-F... Output flange
Flangia uscita

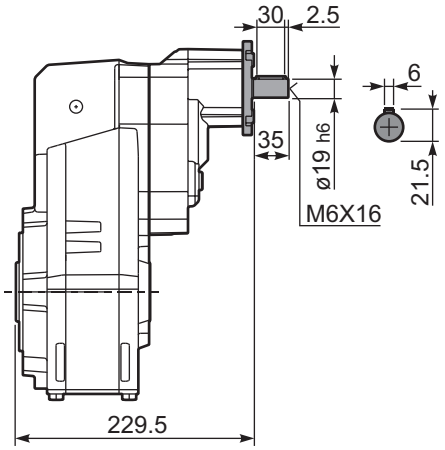
Motor Flange	k1
63B5	272
71B5	270
80/90B5	272
71B14	270
80B14	272
90B14	272



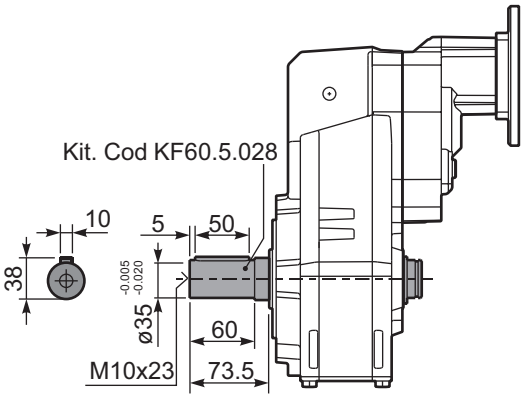
Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
250	180	13	215	14	KF60.9.011
-	-	-	-	-	-

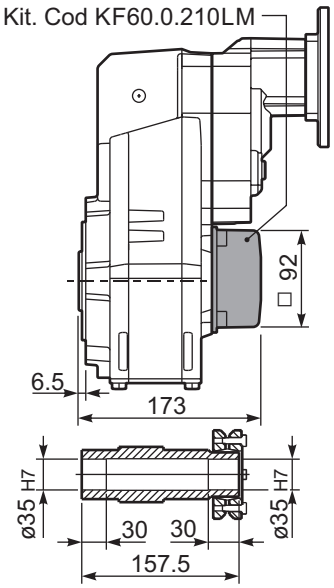
RFA53C... Input Shaft
Albero in entrata



PFA53 A... Single output shaft
Albero uscita semplice



PFA53D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -G	B14 motor flanges - - - -	B14 motor flanges - - - -		Output Shaft ø	Ratios code
507	**2.76**	9	166	1.6	14.4	265		not available		2980	**standard**	01
395	**3.54**	9	213	1.3	11.6	275				2485	**ø35**	02
277	**5.06**	9	304	1.0	8.6	290				1891		03
241	**5.81**	7.5	281	1.2	8.5	330				1693	ø40	04
206	**6.79**	7.5	329	1.2	8.4	380				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 requiren 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.

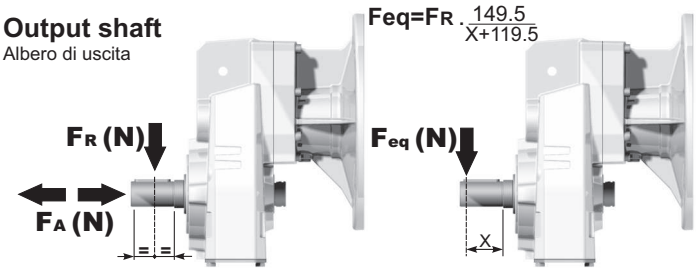
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio				
H1	H4	H3	H2	H5	H6
2.05 LT	1.25 LT	1.25 LT	1.40 LT	2.05 LT	1.40 LT
SHELL Omala S4 WE 320			**ENI** Telium VSF 320		

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$$



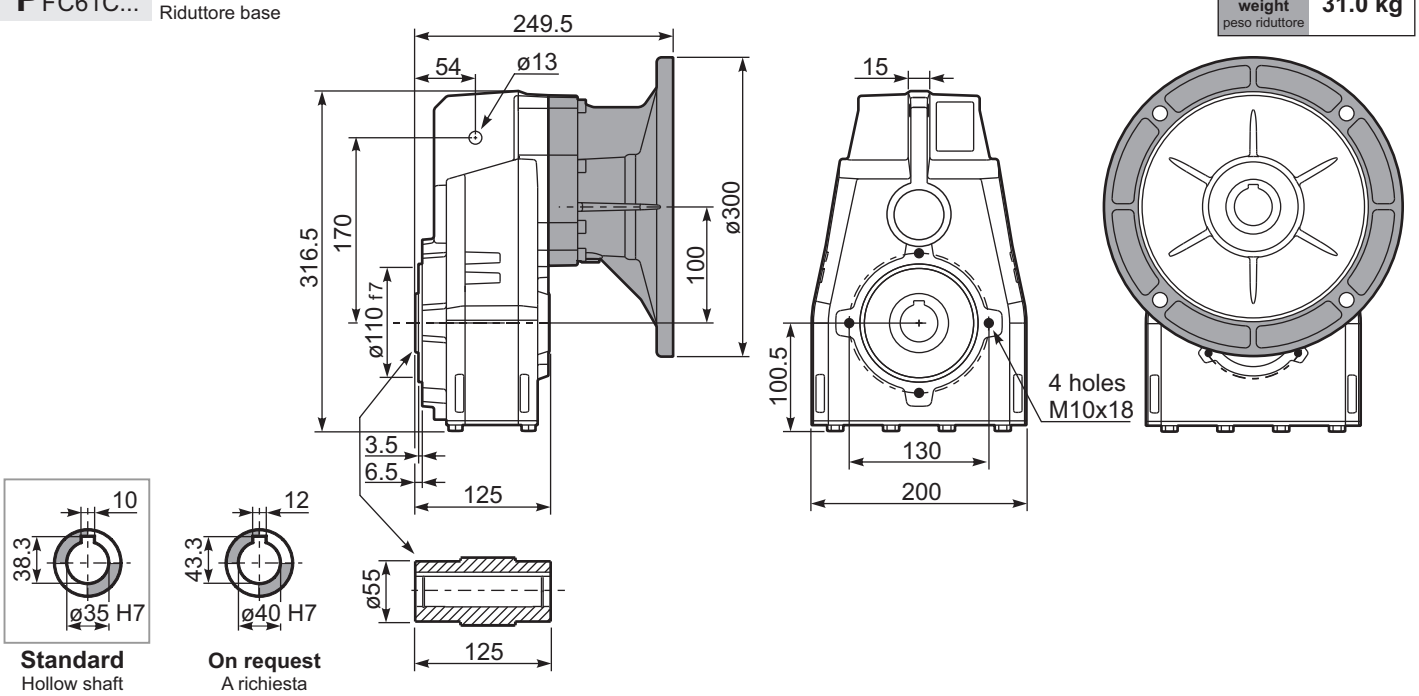
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	600	3000	**140**	720	3600	**70**	940	4700
250	640	3200	**120**	740	3700	**40**	1220	6100
200	690	3460	**85**	860	4300	**15**	1300	6500

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

tab. 2

PFC61C... Basic gearbox
Riduttore base

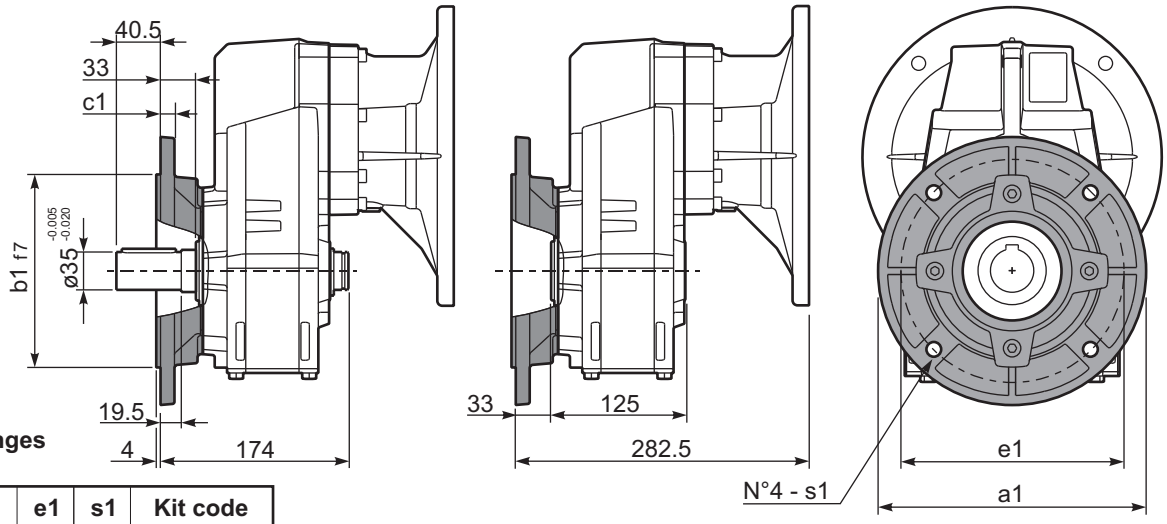
Gearbox weight peso riduttore	31.0 kg



Standard
Hollow shaft

On request
A richiesta

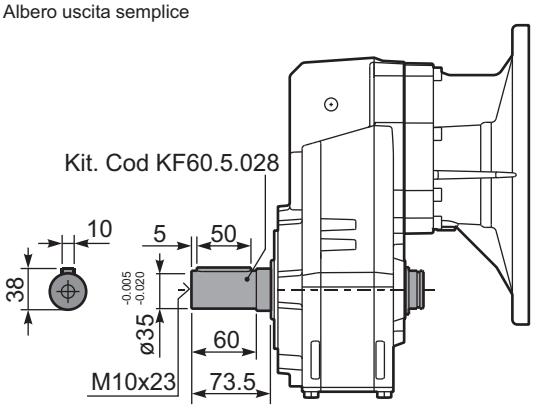
PFC61...**-F**... Output flange
Flangia uscita



Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
250	180	13	215	14	KF60.9.011
-	-	-	-	-	-

PFC61 **A**... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
213	**6.57**	7.5	312	1.2	8.8	380	B									3018	standard ø35	01
185	**7.56**	7.5	358	1.1	7.9	390	B									3016		02
159	**8.82**	7.5	419	1.0	7.1	410	B									3014		03
113	**12.39**	7.5	588	1.0	7.2	580	B									2018		04
98	**14.24**	5.5	499	1.2	6.4	600	B									2016		05
84	**16.75**	5.5	587	1.1	6.1	665	B									1618		06
73	**19.25**	5.5	675	1.0	5.4	675	B									1616		07
64	**21.78**	4	558	1.2	4.7	675	B									1318		08
56	**25.04**	4	642	1.1	4.1	675	B									1316		09
47.9	**29.23**	4	750	0.9	3.5	675	B									1314	ø40 On request	10
45.7	**30.65**	3	592	1.1	3.4	675	B									1116		11
39.1	**35.78**	3	691	1.0	2.9	675	B									1114		12
36.3	**38.55**	2.2	548	1.1	2.3	580	B									818		13
31.6	**44.32**	2.2	630	1.1	2.3	665	B									816		14
27.1	**51.74**	2.2	735	0.9	2.0	675	B									814		15
22.9	**61.03**	1.1	437	1.1	1.2	480	B									616		16
19.6	**71.25**	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

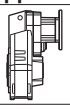
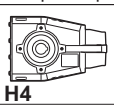
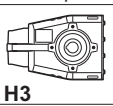
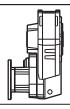
EN Unit **FC62** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.

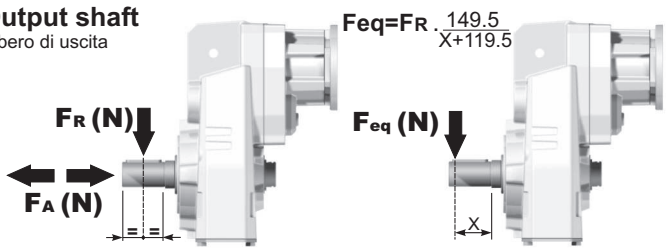
E El reductor tamaño **FC62** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

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
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

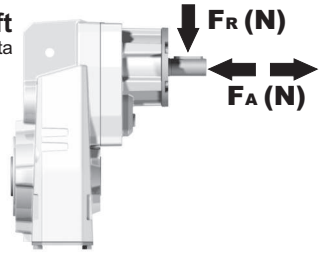
Output shaft
Albero di uscita



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



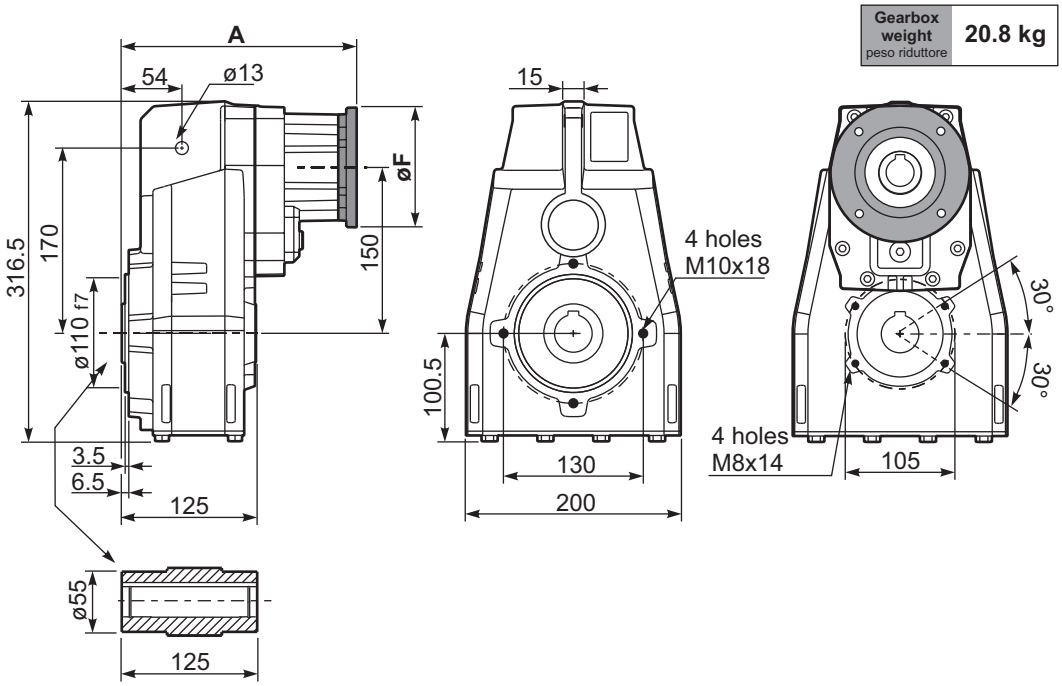
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

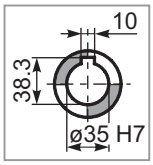
tab. 2

PFC62C... Basic gearbox
Riduttore base

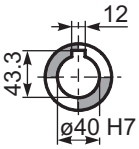
Gearbox weight peso riduttore	20.8 kg

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





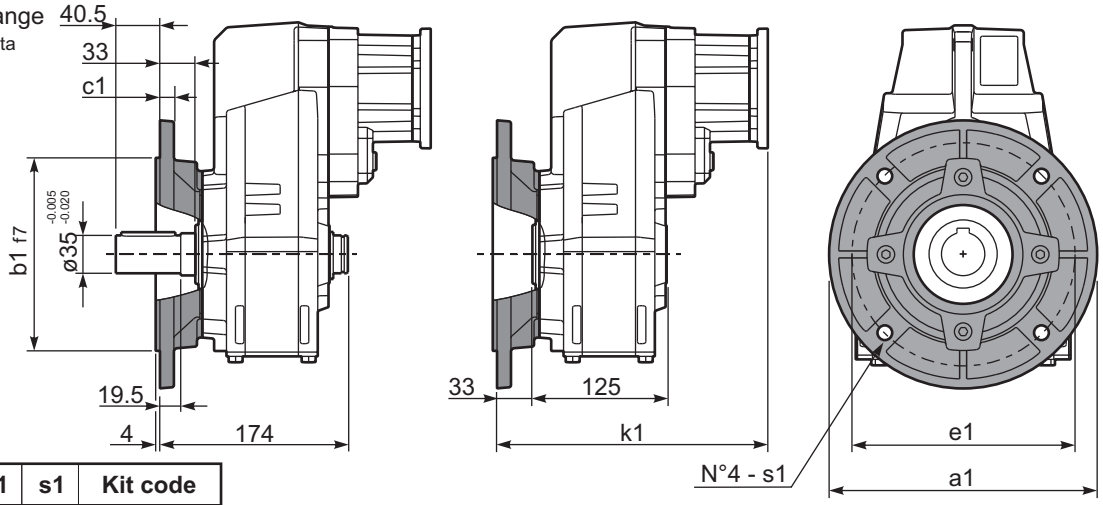
Standard
Hollow shaft



On request
A richiesta

PFC62...-F... Output flange
Flangia uscita

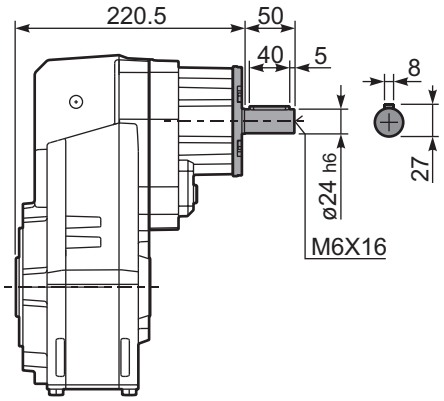
M. flanges	k1
71B5	260
80/90B5	262
100/112B5	271
132B5	289
80B14	262
90B14	262
100/112B14	271
132B14	289



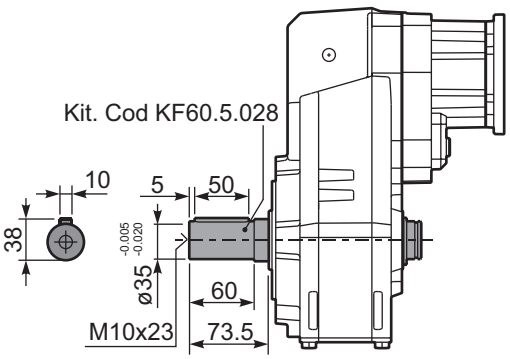
Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
250	180	13	215	14	KF60.9.011
-	-	-	-	-	-

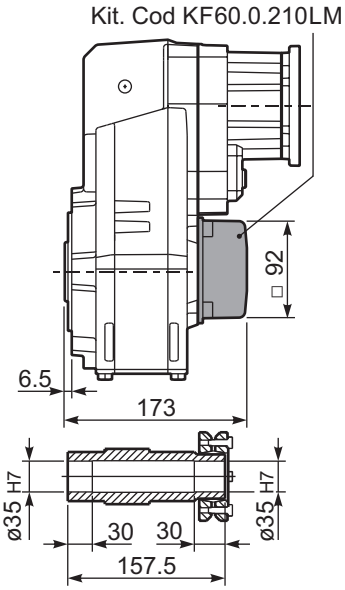
RFC62C... Input Shaft
Albero in entrata



PFC62 A... Single output shaft
Albero uscita semplice



PFC62D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
22.6	**61.89**	1.5	594	1.1	1.7	675	B				C	C		191318	standard ø35 ø40 On request	01
19.7	**71.16**	1.5	683	1.0	1.5	675	B				C	C		191316		02
17.0	**82.48**	1.5	792	0.9	1.3	675	B				C	C		171316		03
14.5	**96.29**	1.1	675	1.0	1.1	675	B				C	C		171314		04
13.9	**100.51**	1.1	705	1.0	1.0	675	B				C	C		131318		05
12.1	**115.56**	0.75	556	1.2	0.91	675	B				C	C		131316		06
11.1	**125.96**	0.75	606	1.1	0.82	665	B				C	C		190816		07
10.4	**134.91**	0.75	649	1.0	0.78	675	B				C	C		131314		08
9.5	**147.05**	0.75	707	1.0	0.72	675	B				C	C		190814		09
8.2	**170.44**	0.55	605	1.1	0.62	675	B				C	C		170814		10
7.6	**184.15**	0.55	653	1.0	0.57	675	B				C	C		101314		11
6.8	**205.87**	0.55	730	0.9	0.51	675	B				C	C		91316		12
5.8	**240.34**	0.37	570	1.2	0.44	675	B				C	C		91314		13
5.0	**279.22**	0.37	662	1.0	0.37	665	B				C	C		100816		14
4.3	**325.97**	0.37	773	0.9	0.32	675	B				C	C		100814		15
3.8	**364.41**	0.25	583	1.1	0.28	665	B				C	C		90816		16
3.3	**425.43**	0.25	681	1.0	0.25	675	B				C	C		90814		17
2.9	**481.19**	0.18	589	1.1	0.22	665	B				C	C		70816		18
2.5	**561.76**	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

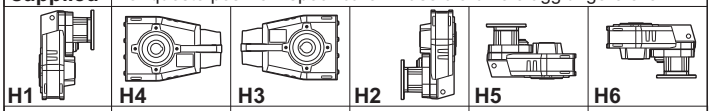
EN Unit **FC63** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.

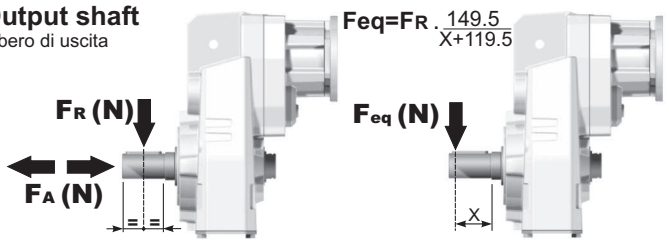
E El reductor tamaño **FC63** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

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
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

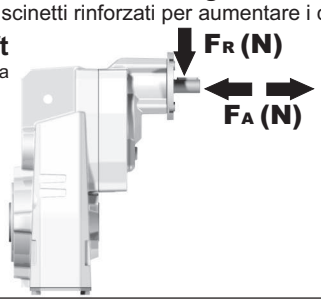
Output shaft
Albero di uscita



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



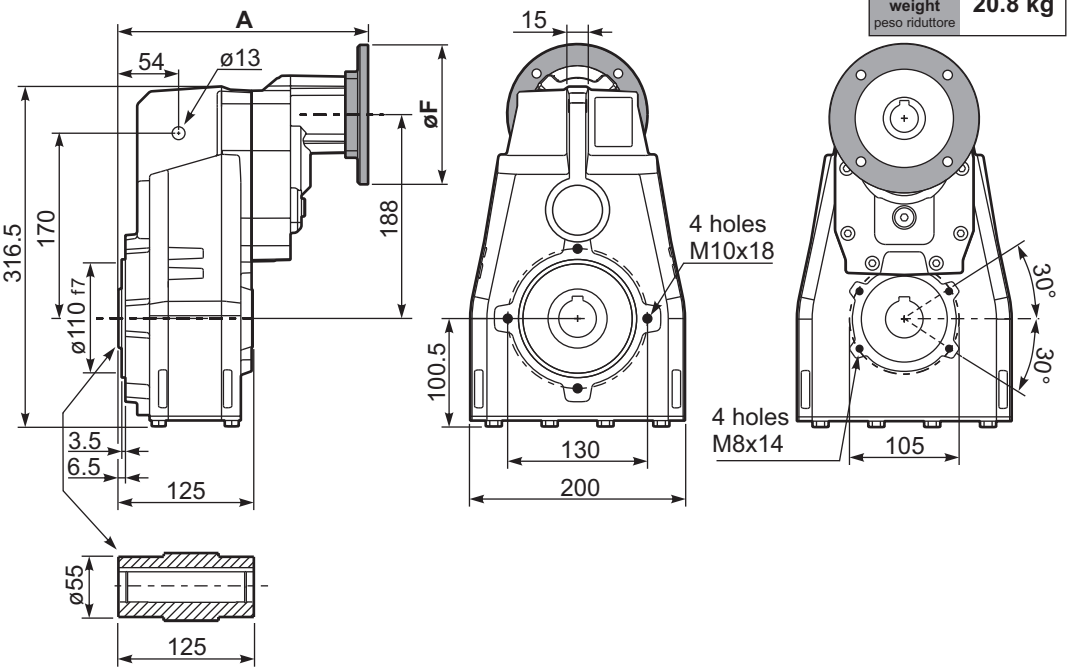
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

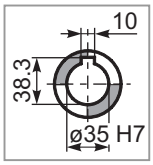
tab. 2

PFC63C... Basic gearbox
Riduttore base

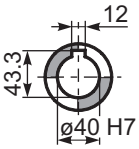
Gearbox weight peso riduttore	20.8 kg

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





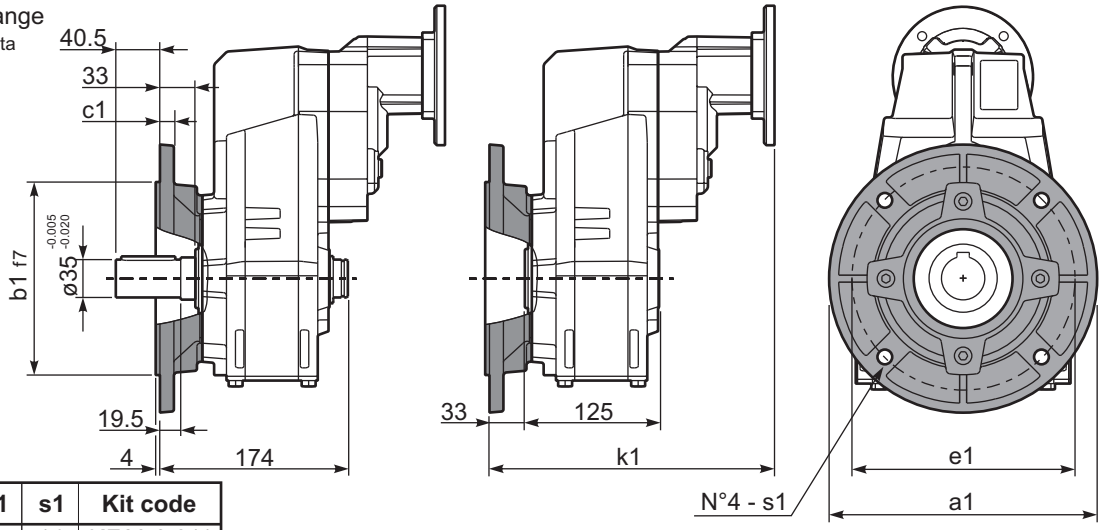
Standard
Hollow shaft



On request
A richiesta

PFC63...-F... Output flange
Flangia uscita

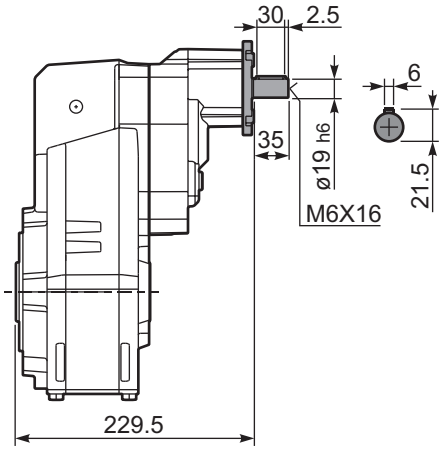
Motor Flange	k1
63B5	272
71B5	270
80/90B5	272
71B14	270
80B14	272
90B14	272



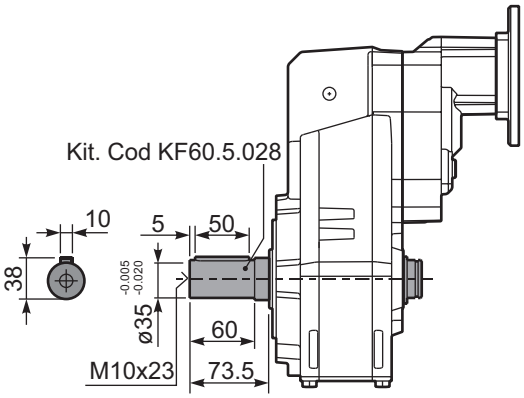
Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
250	180	13	215	14	KF60.9.011
-	-	-	-	-	-

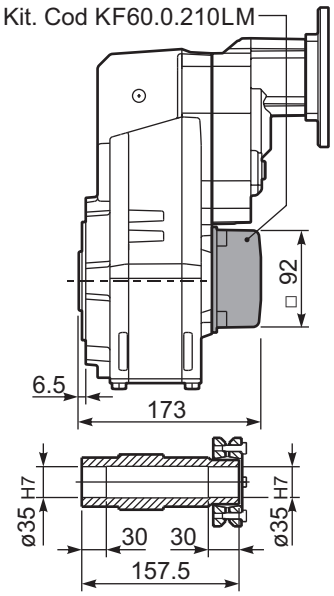
RFC63C... Input Shaft
Albero in entrata



PFC63 A... Single output shaft
Albero uscita semplice



PFC63D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -G	Available B5 motor flanges 132	B14 motor flanges - - - -	B14 motor flanges - - - -		Output Shaft ø	Ratios code
227	**6.17**	9	371	1.2	10.9	450			not available		18111	**standard**	01
198	**7.06**	9	425	1.4	12.7	600					16113	**ø40**	02
170	**8.21**	9	494	1.4	12.2	670					14115	ø45 On request	03

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 **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

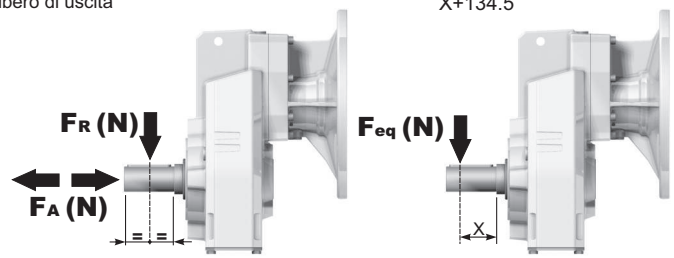
SHELL Omala S2 GX 460	ENI Blasia 460

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

$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



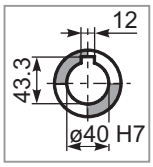
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	740	3700	**140**	860	4300	**70**	1020	5100
250	800	4000	**120**	900	4500	**40**	1300	6500
200	830	4150	**85**	970	4850	**15**	1700	8500

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

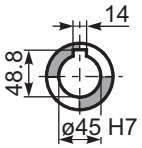
tab. 2

PFC71C... Basic gearbox
Riduttore base

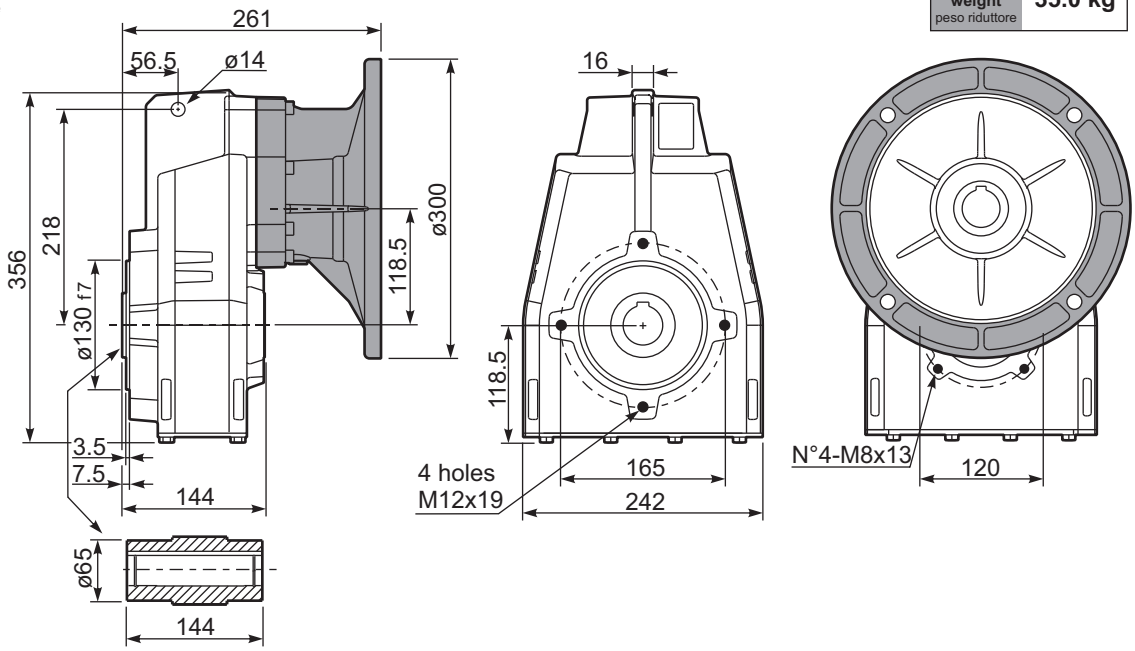
Gearbox weight peso riduttore	35.0 kg



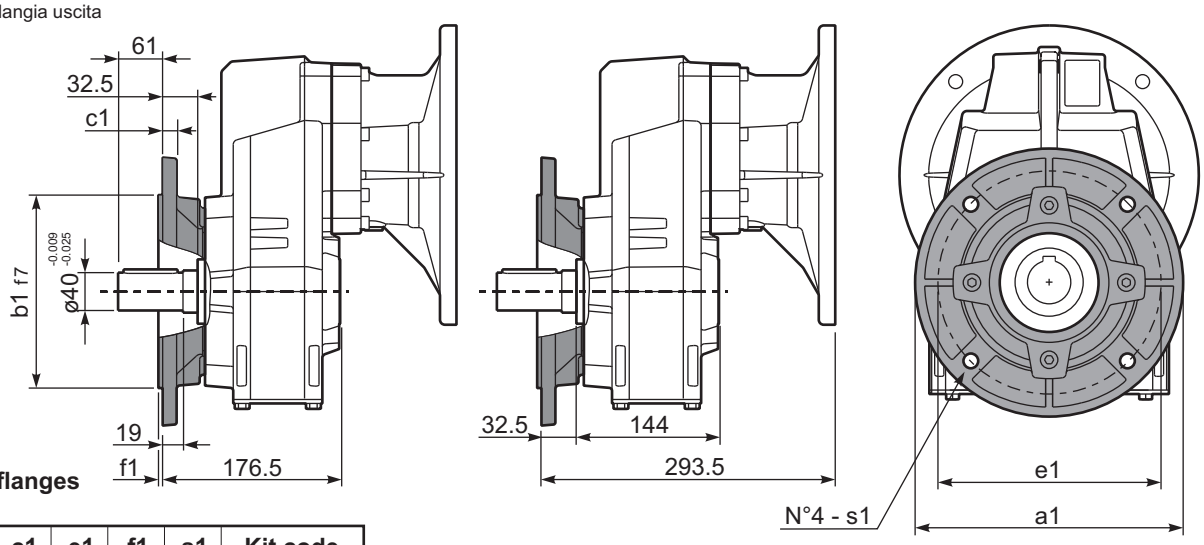
Standard
Hollow shaft



On request
A richiesta



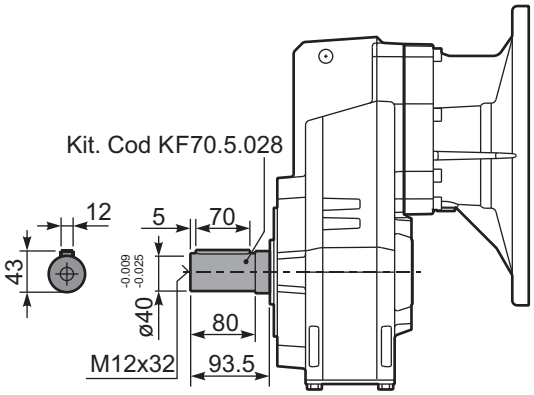
PFC71...-F... Output flange
Flangia uscita



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

PFC71 A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
175	**8.02**	9	473	1.1	9.9	520	B									3018	standard ø40	01
152	**9.18**	9	541	1.1	9.8	590	B									3016		02
131	**10.68**	9	630	1.1	9.7	680	B									3014		03
93	**15.11**	7.5	717	1.1	7.8	775	B									2018		04
81	**17.30**	7.5	821	1.1	7.8	885	B									2016		05
70	**20.13**	7.5	955	0.9	6.8	900	B									2014		06
60	**23.39**	5.5	820	1.1	5.9	900	B									1616		07
51	**27.21**	5.5	954	0.9	5.1	900	B									1614		08
46.0	**30.42**	4	780	1.2	4.5	900	B									1316	ø45 On request	09
39.6	**35.38**	4	907	1.0	3.9	900	B									1314		10
37.6	**37.24**	3	719	1.2	3.7	895	B									1116		11
32.3	**43.31**	3	836	1.1	3.2	900	B									1114		12
29.8	**47.02**	2.2	668	1.1	2.3	705	B									818		13
26.0	**53.85**	2.2	765	1.1	2.3	810	B									816		14
22.4	**62.63**	2.2	890	1.0	2.2	900	B									814		15
18.9	**74.16**	1.1	531	1.1	1.2	585	B									616		16
16.2	**86.25**	1.1	617	1.1	1.2	680	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.

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.

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** Blasia 460		

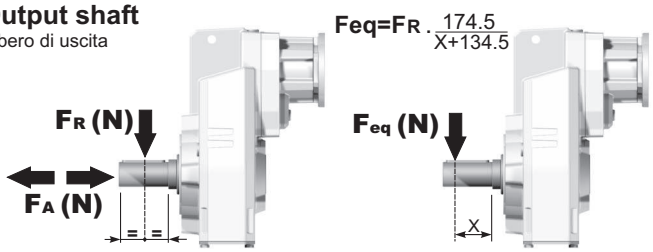
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

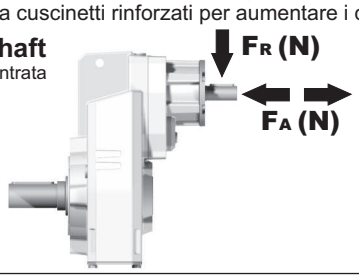
$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



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



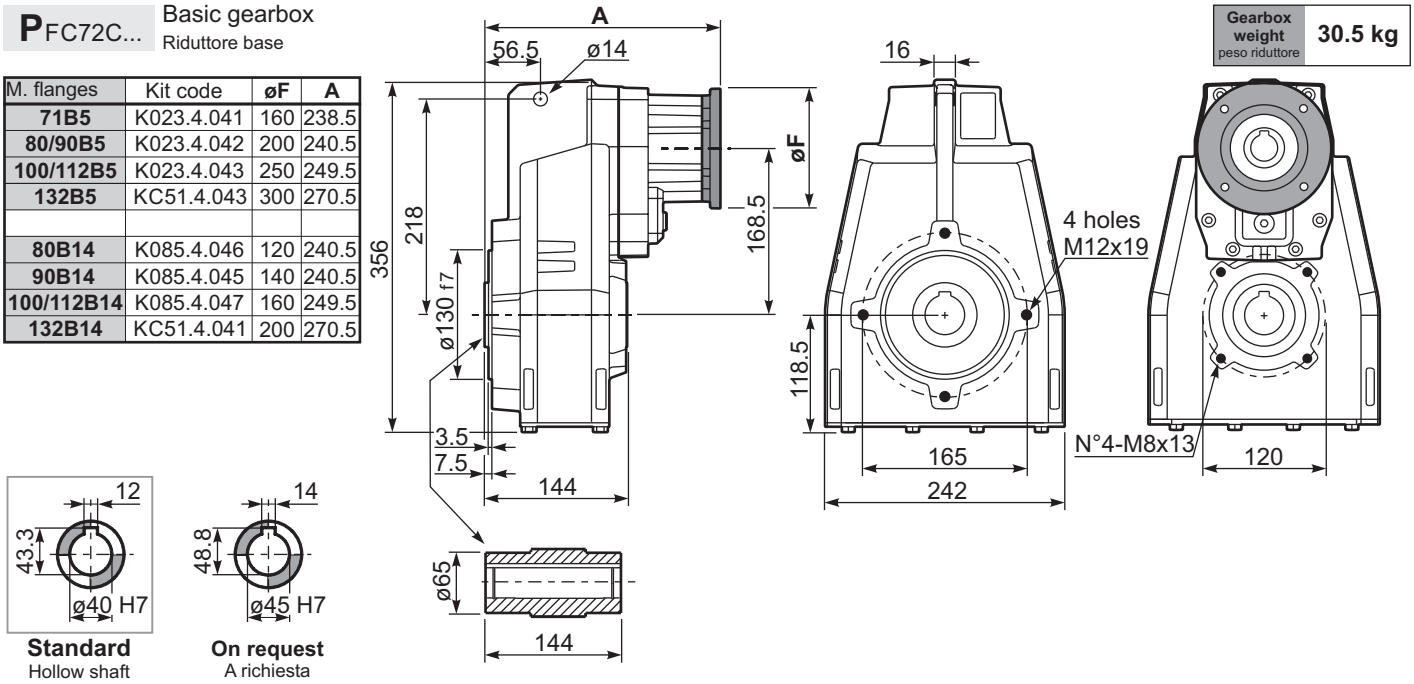
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

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

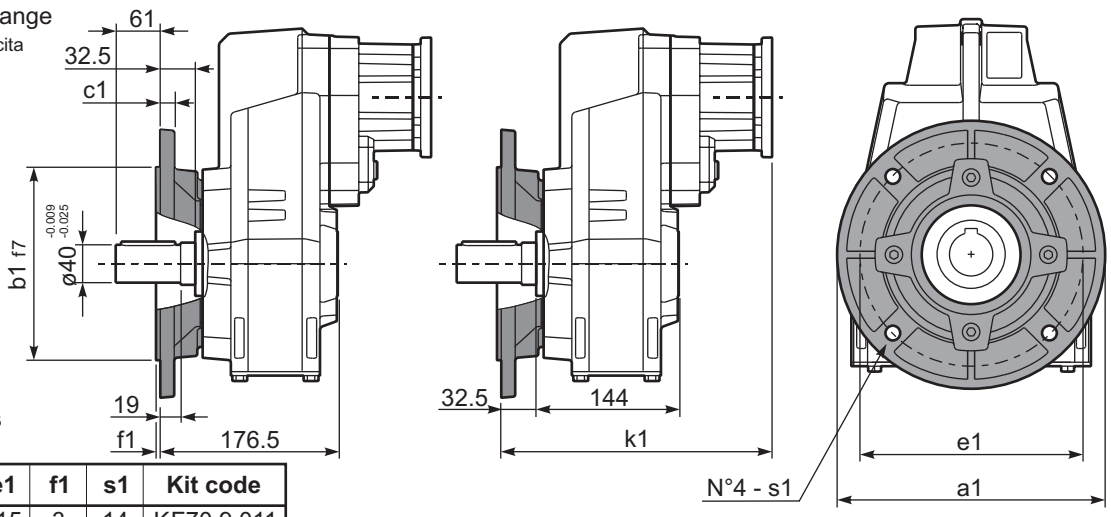


Standard
Hollow shaft

On request
A richiesta

PFC72...-F... Output flange
Flangia uscita

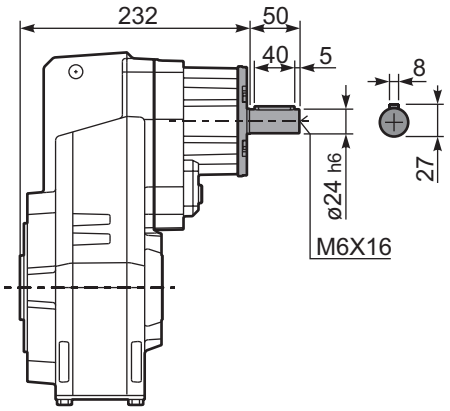
M. flanges	k1
71B5	271
80/90B5	273
100/112B5	282
132B5	300
80B14	273
90B14	273
100/112B14	282
132B14	300



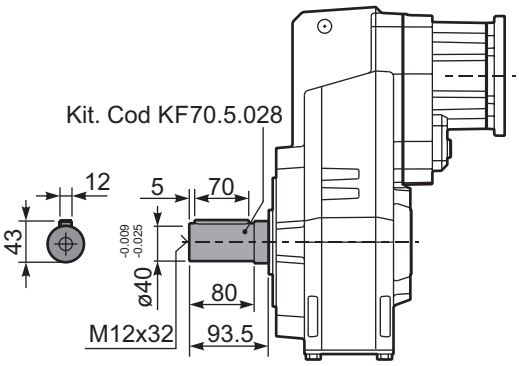
Available output flanges
Flange di uscita

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

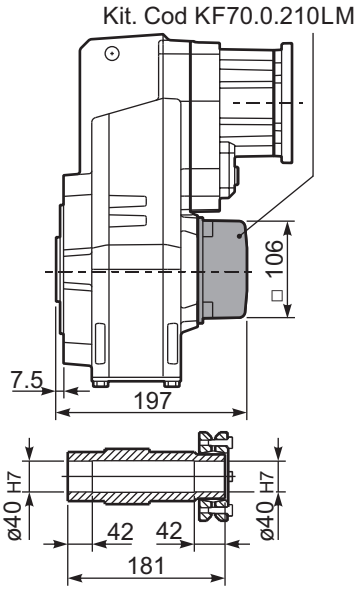
RFC72C... Input Shaft
Albero in entrata



PFC72 A... Single output shaft
Albero uscita semplice



PFC72D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
18.5	**75.50**	1.5	725	1.1	1.7	825	B				C	C		191318	standard ø40	01
16.2	**86.47**	1.5	830	1.1	1.6	900	B				C	C		191316		02
14.0	**100.22**	1.5	962	0.9	1.4	900	B				C	C		171316		03
12.0	**116.56**	1.1	817	1.1	1.2	900	B				C	C		171314		04
10.2	**136.82**	1.1	959	0.9	1.0	900	B				C	C		151314		05
9.1	**153.05**	0.75	736	1.1	0.83	810	B				C	C		190816		06
8.6	**163.31**	0.75	785	1.1	0.86	900	B				C	C		131314		07
7.9	**178.01**	0.75	856	1.1	0.79	900	B				C	C		190814		08
7.3	**191.67**	0.75	922	1.0	0.73	900	B				C	C		101316		09
6.8	**206.32**	0.75	992	0.9	0.68	900	B				C	C		170814	ø45 On request	10
6.3	**222.92**	0.55	791	1.1	0.63	900	B				C	C		101314		11
5.8	**242.18**	0.55	859	1.0	0.58	900	B				C	C		150814		12
5.6	**250.15**	0.55	888	1.0	0.56	900	B				C	C		91316		13
4.8	**289.08**	0.55	1026	0.9	0.49	900	B				C	C		130814		14
4.2	**330.31**	0.37	783	1.1	0.42	890	B				C	C		71316		15
3.5	**394.59**	0.37	936	1.0	0.36	900	B				C	C		100814		16
2.7	**514.99**	0.25	824	1.1	0.27	900	B				C	C		90814		17
2.1	**680.03**	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

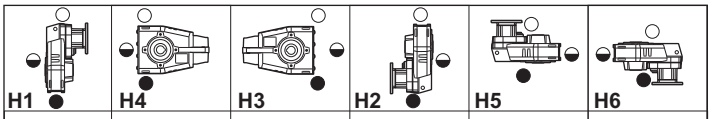
EN Unit **FC73** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.



H1	H4	H3	H2	H5	H6
3.55 LT	1.95 LT	1.95 LT	1.95 LT	3.75 LT	2.00 LT

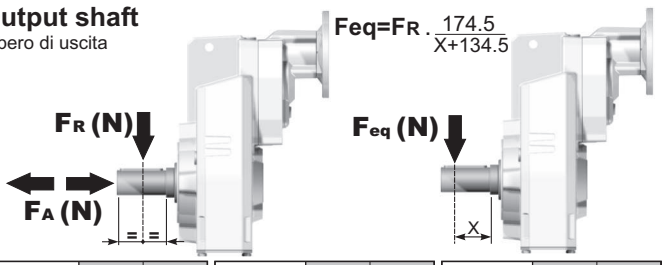
SHELL Omala S2 GX 460	ENI Blasia 460

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

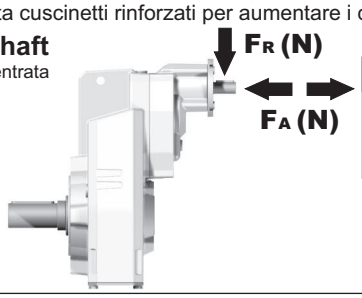
$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



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



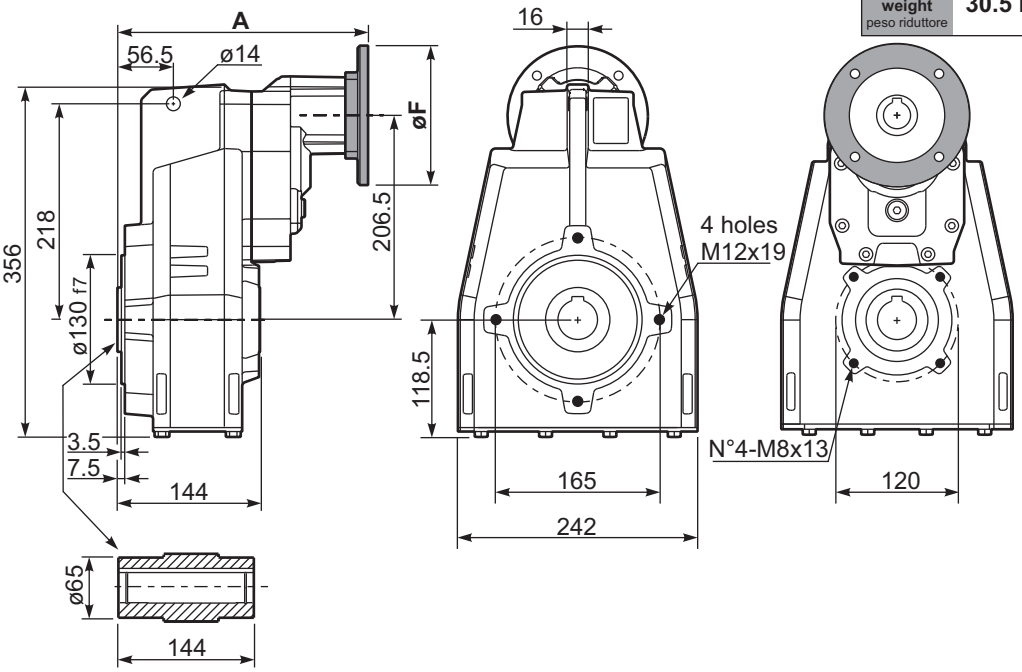
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

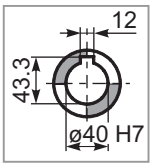
tab. 2

PFC73C... Basic gearbox
Riduttore base

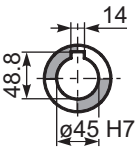
Gearbox weight peso riduttore	30.5 kg

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





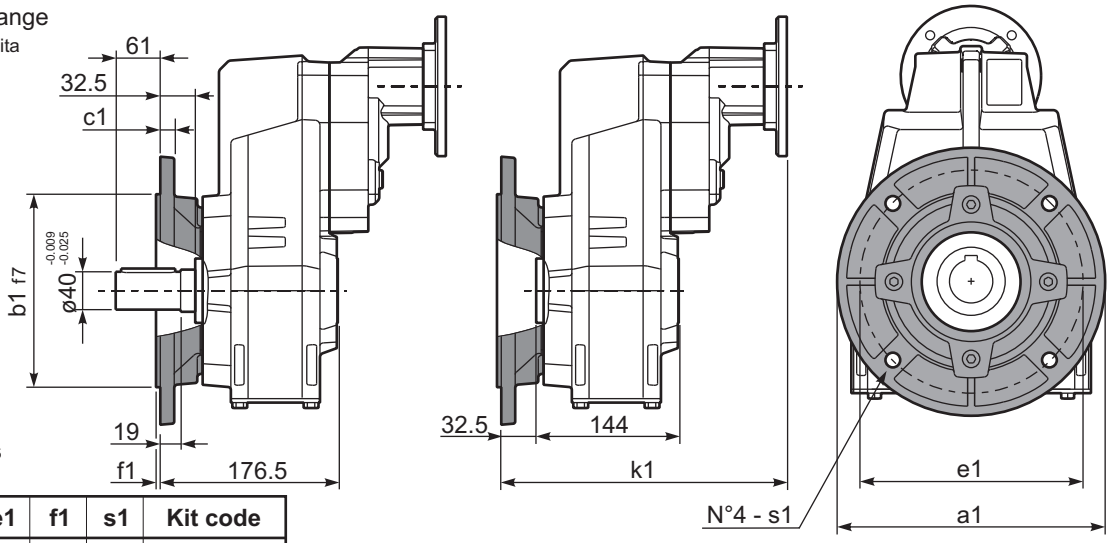
Standard
Hollow shaft



On request
A richiesta

PFC73...-F... Output flange
Flangia uscita

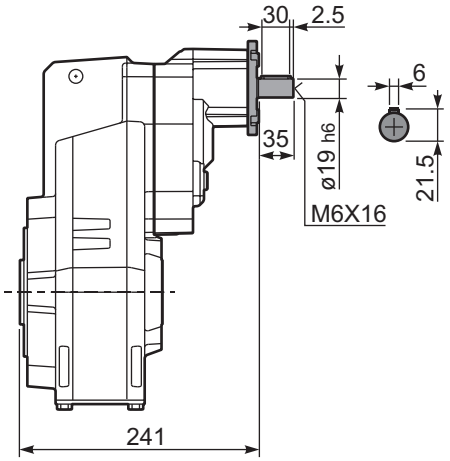
M. flanges	k1
63B5	283
71B5	281
80/90B5	283
71B14	281
80B14	283
90B14	283



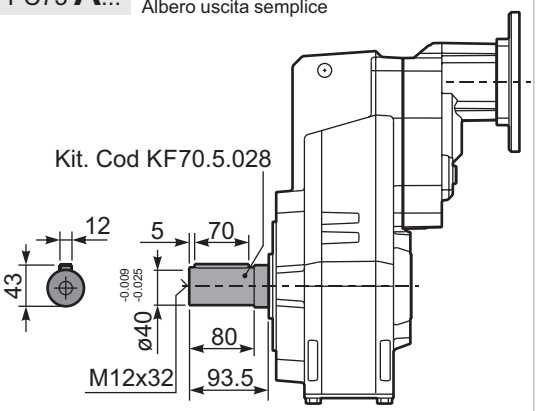
Available output flanges
Flange di uscita

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

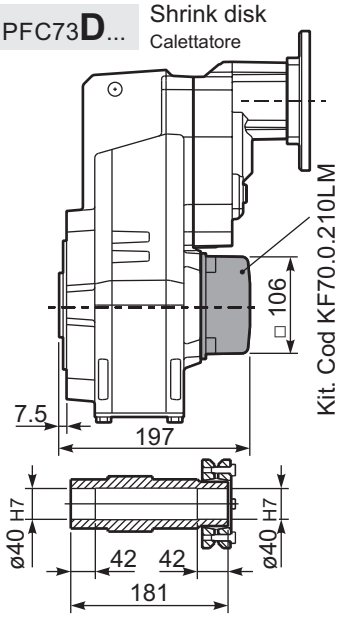
RFC73C... Input Shaft
Albero in entrata



PFC73 A... Single output shaft
Albero uscita semplice



PFC73D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -H 160	Available B5 motor flanges -I 180	B14 motor flanges - - - - - - - -		Output Shaft ø	Ratios code
528	**2.65**	22	374	1.7	36.7	650			not available	2361	**standard**	01
409	**3.42**	22	483	1.6	32.8	750				1965	**ø50**	02
304	**4.60**	22	649	1.5	30.9	950				1569		03
256	**5.46**	22	771	1.3	27.4	1000				1371	ø55	04
211	**6.64**	22	937	1.3	26.5	1175				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

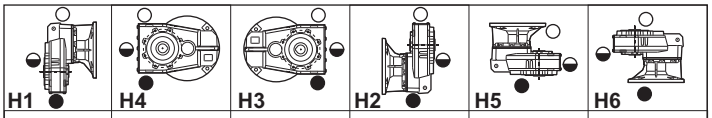
EN Unit **FC81** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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.



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 Blasia 460

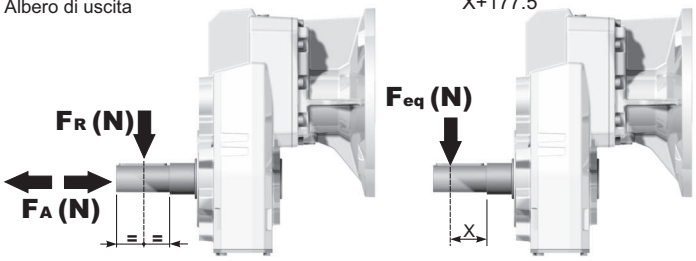
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$



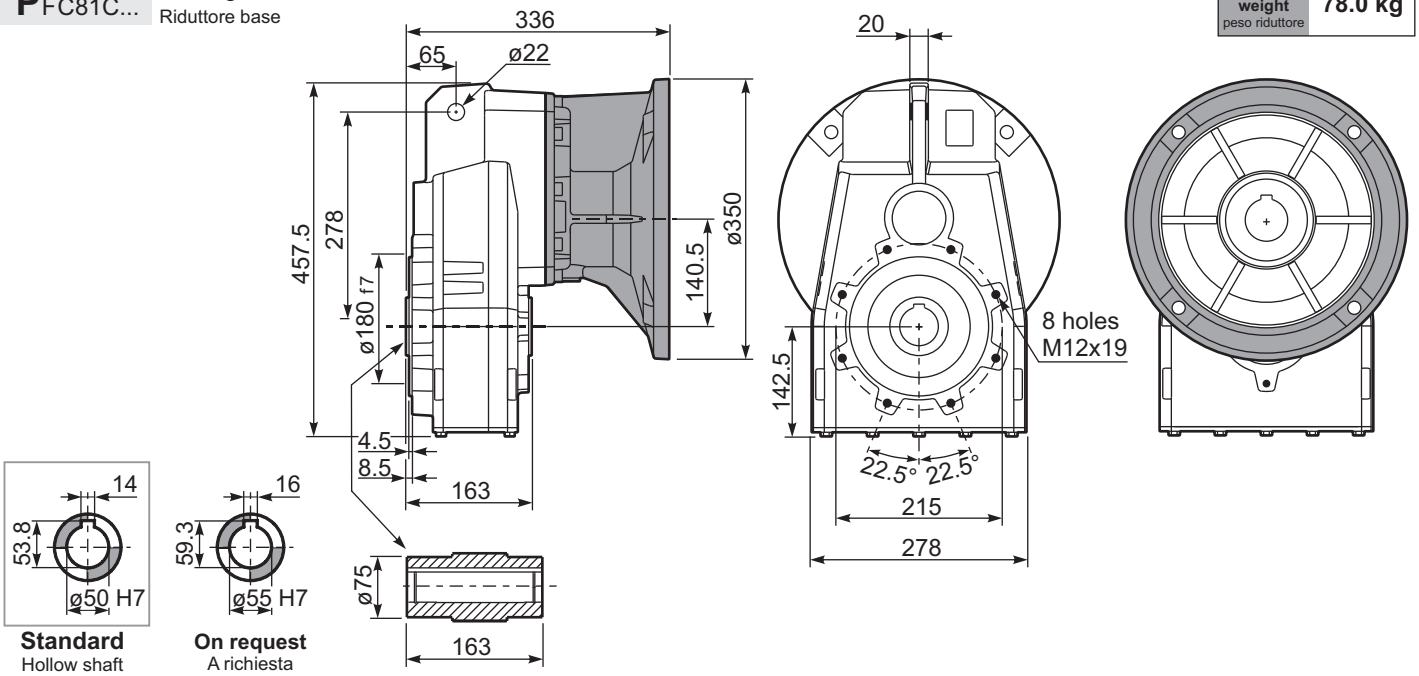
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	920	4600	**140**	1120	5600	**70**	1400	7000
250	1000	5000	**120**	1140	5700	**40**	1800	9000
200	1060	5300	**85**	1300	6500	**15**	2400	12000

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

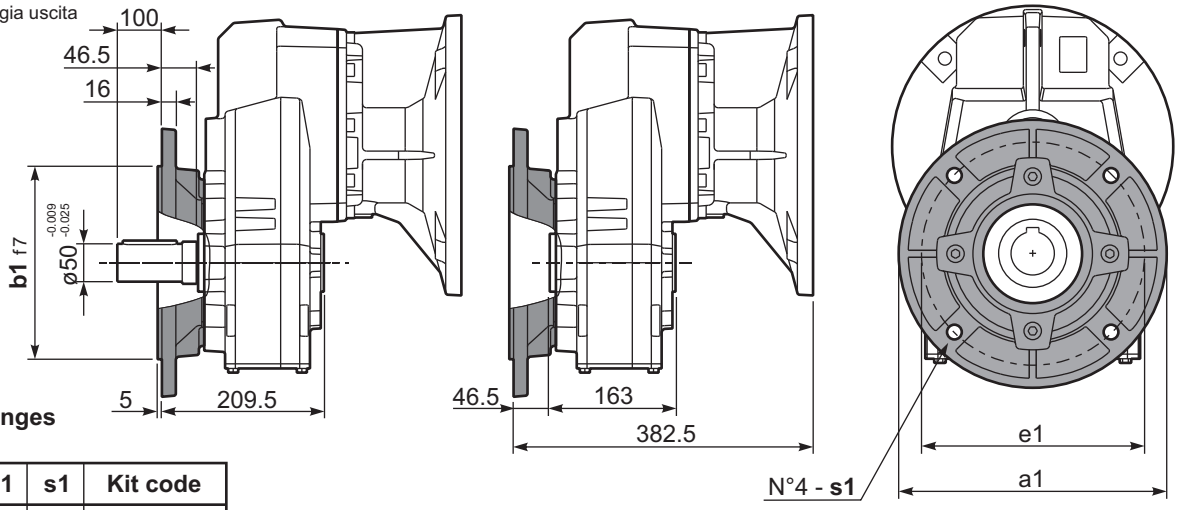
tab. 2

PFC81C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	78.0 kg



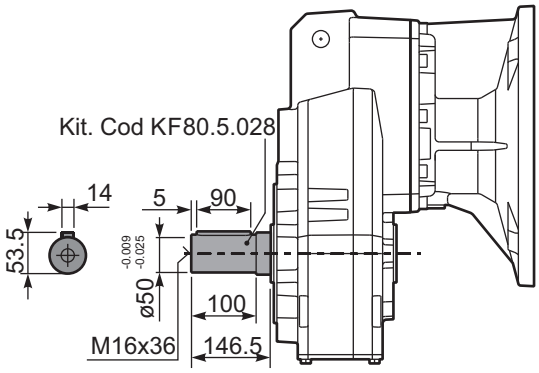
PFC81...**-F**... Output flange
Flangia uscita



Available output flanges
Flange di uscita

a1 ø	b1	e1	s1	Kit code
300	230	265	14	KF80.9.011
350	250	300	18	KF80.9.012

PFC81**A**... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B5 -I 180	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
234	**5.98**	22	827	1.2	25.5	1000							3015	standard ø50	01
197	**7.10**	22	982	1.2	25.3	1175							3013		02
162	**8.63**	22	1193	1.1	23.9	1350							3011		03
124	**11.27**	18.5	1310	1.1	20.3	1500							2015		04
105	**13.38**	18.5	1555	1.1	19.4	1700							2013		05
92	**15.24**	18.5	1771	1.1	19.0	1900							1615		06
86	**16.26**	18.5	1889	1.1	19.7	2100							2011		07
77	**18.09**	18.5	2102	1.0	17.7	2100							1613		08
71	**19.82**	15	1865	1.1	15.9	2060							1315	ø55 On request	09
64	**21.98**	15	2069	1.0	14.6	2100							1611		10
60	**23.53**	15	2214	0.9	13.6	2100							1313		11
58	**24.25**	11	1677	1.2	12.2	1940							1115		12
48.6	**28.80**	11	1991	1.1	11.1	2100							1113		13
40.0	**34.99**	9	2063	1.0	9.2	2100							1111		14
33.6	**41.64**	7.5	1976	1.0	7.2	1960							813		15
27.7	**50.60**	5.5	1774	1.2	6.3	2100							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.

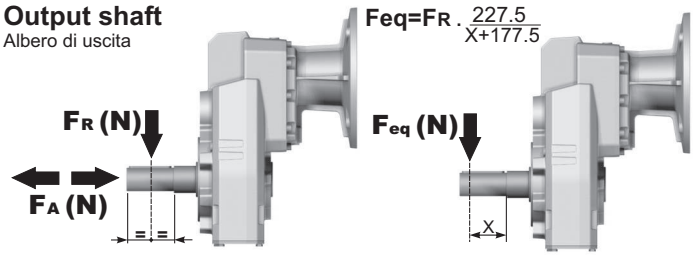
H1	H4	H3	H2	H5	H6
5.70 LT	3.60 LT	3.60 LT	3.60 LT	6.60 LT	4.50 LT
SHELL Omala S2 GX 460			**ENI** Blasia 460		

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

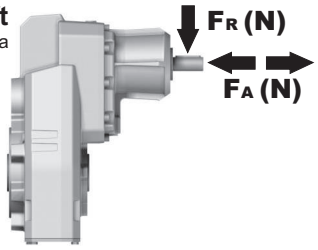
$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$



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



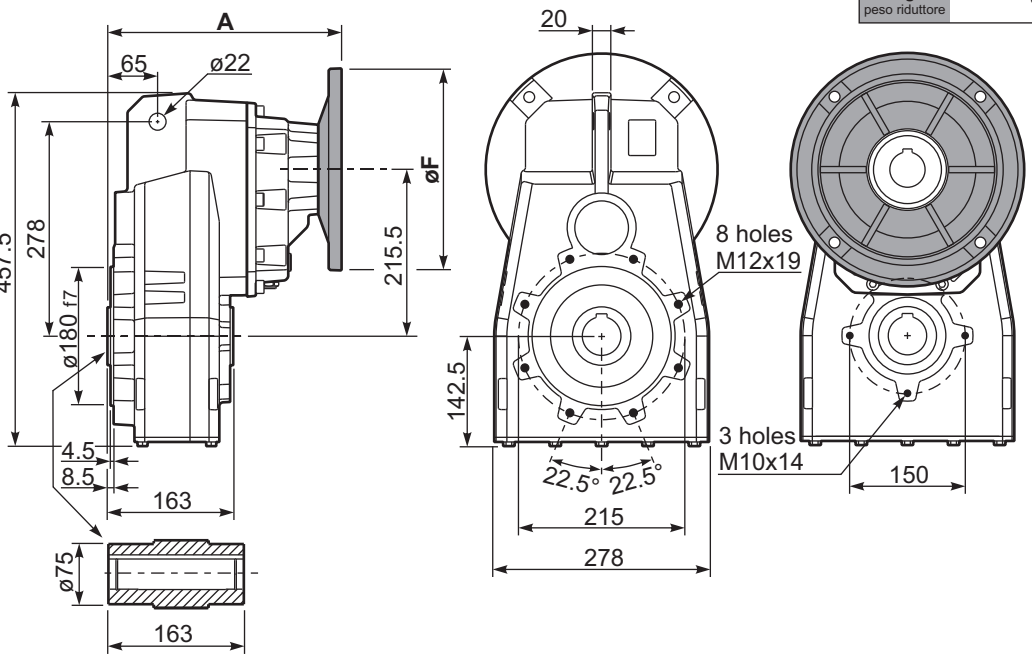
n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

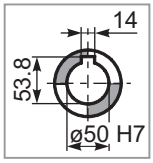
tab. 2

PFC82C... Basic gearbox
Riduttore base

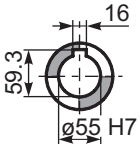
Gearbox weight peso riduttore	82.5 kg

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





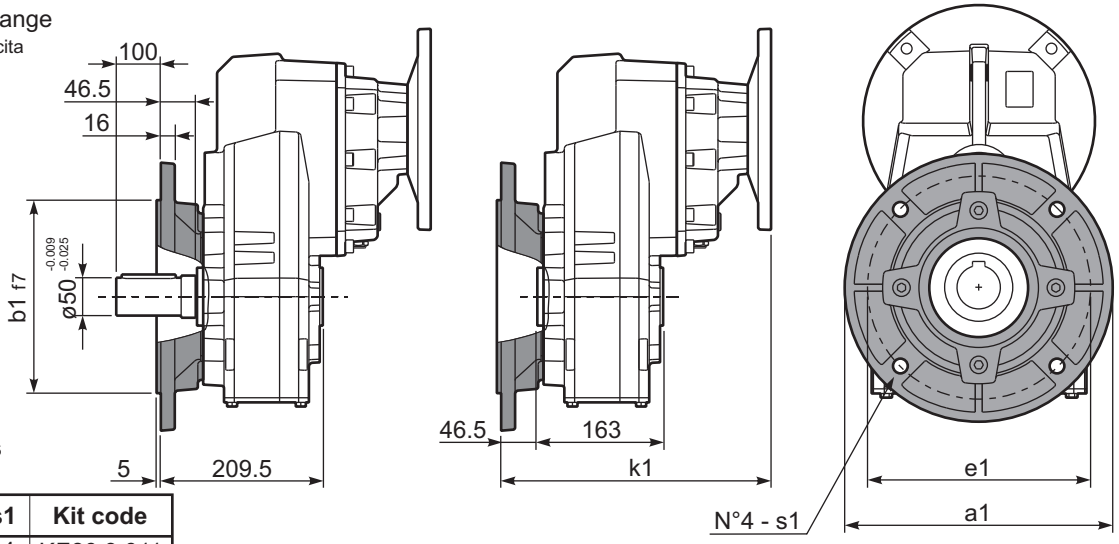
Standard
Hollow shaft



On request
A richiesta

PFC82...-F... Output flange
Flangia uscita

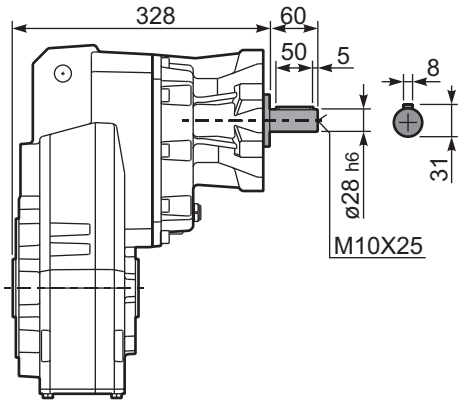
M. flanges	k1
100/112B5	345.5
132B5	367
160/180B5	399
100/112B14	345.5
132B14	367



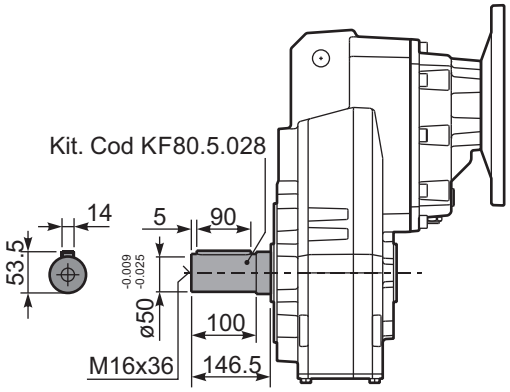
Available output flanges
Flange di uscita

a1 ø	b1	e1	s1	Kit code
300	230	265	14	KF80.9.011
350	250	300	18	KF80.9.012

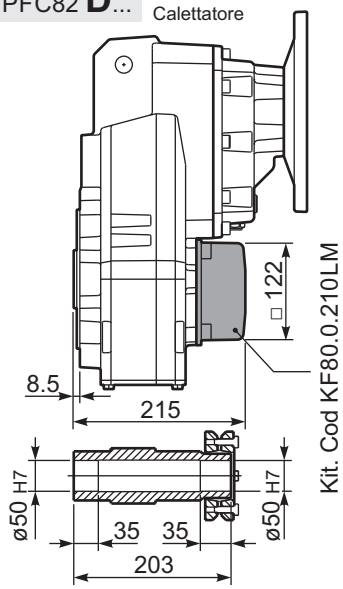
RFC82C... Input Shaft
Albero in entrata



PFC82 A... Single output shaft
Albero uscita semplice



PFC82 D... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
28.8	**48.55**	7.5	2257	0.9	6.7	2100	B									201315	standard ø50	01
24.3	**57.64**	5.5	1980	1.1	5.7	2100	B									201313		02
21.3	**65.64**	5.5	2255	0.9	5.0	2100	B									161315		03
20.0	**70.04**	4	1760	1.2	4.7	2100	B									201311		04
18.0	**77.93**	4	1958	1.1	4.2	2100	B									161313		05
16.4	**85.36**	4	2145	1.0	3.8	2100	B									131315		06
14.8	**94.70**	4	2380	0.9	3.5	2100	B									161311		07
13.8	**101.35**	3	1917	1.1	3.2	2100	B									131313		08
11.4	**123.15**	3	2330	0.9	2.7	2100	B									131311	ø55 On request	09
9.3	**150.73**	2.2	2100	1.0	2.2	2100	B									111311		10
7.8	**179.39**	1.5	1722	1.2	1.8	2100	B									81313		11
6.4	**217.98**	1.5	2093	1.0	1.5	2100	B									81311		12
5.7	**247.03**	1.1	1732	1.1	1.2	1950	B									61313		13
4.7	**300.17**	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.

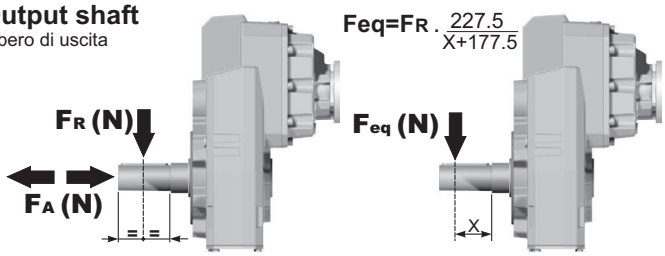
H1	H4	H3	H2	H5	H6
5.80 LT	3.90 LT	3.90 LT	3.90 LT	6.80 LT	4.90 LT

SHELL Omala S2 GX 460	ENI Blasia 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

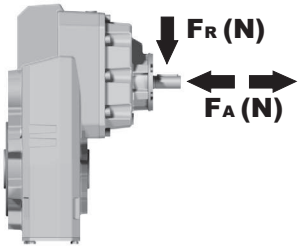


$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$

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



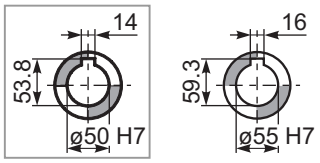
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

PFC83C... Basic gearbox
Riduttore base

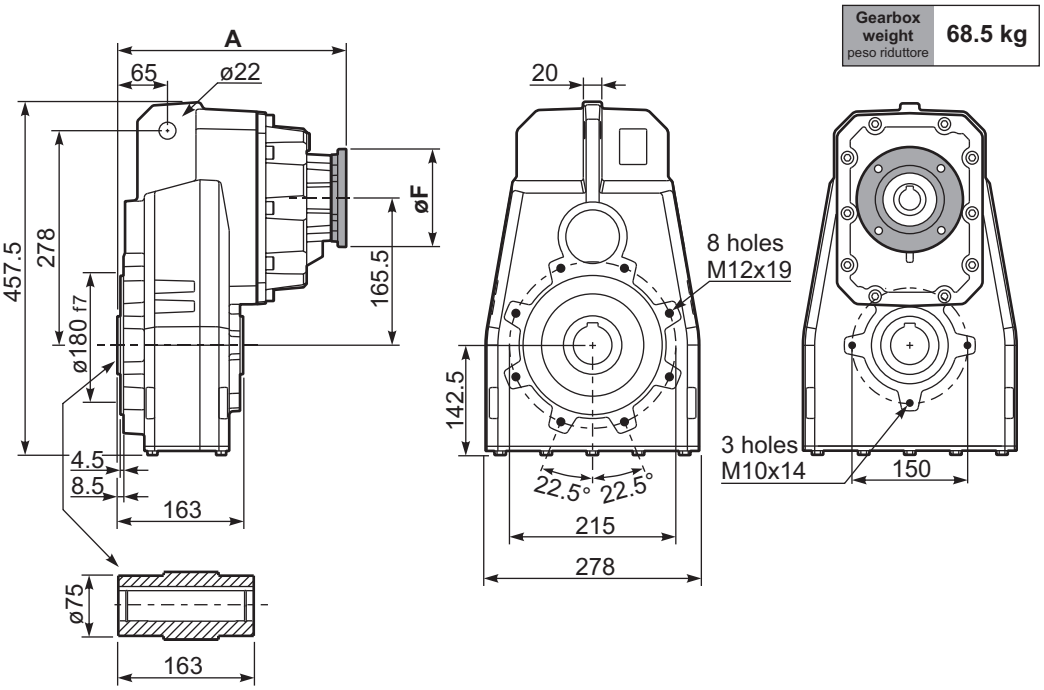
Gearbox weight peso riduttore	68.5 kg

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



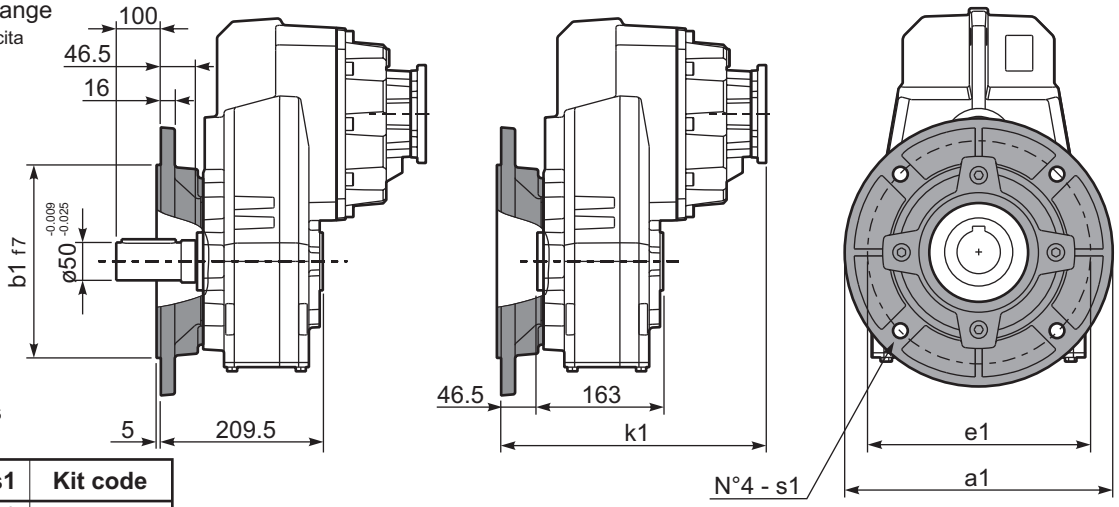
Standard
Hollow shaft

On request
A richiesta



PFC83...-F... Output flange
Flangia uscita

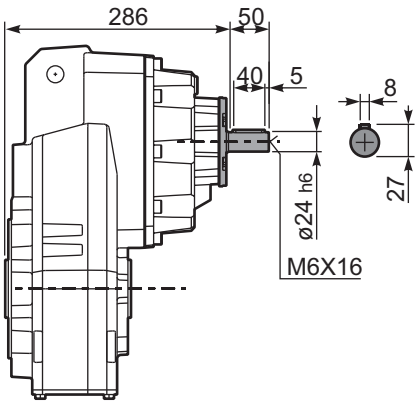
M. flanges	k1
71B5	339
80/90B5	341
100/112B5	350
132B5	368
80B14	341
90B14	341
100/112B14	350
132B14	368



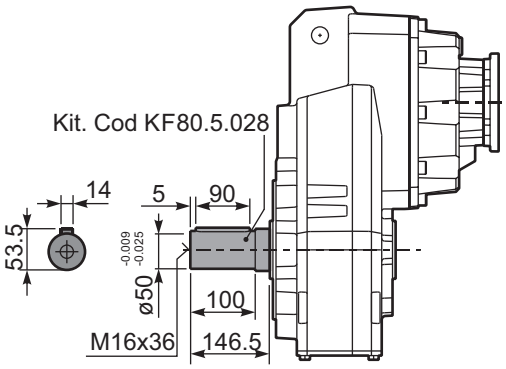
Available output flanges
Flange di uscita

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

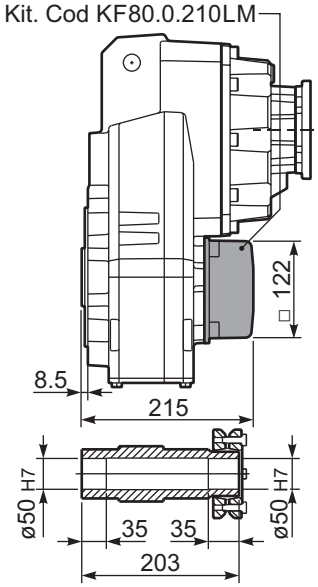


PFC83 A... Single output shaft
Albero uscita semplice



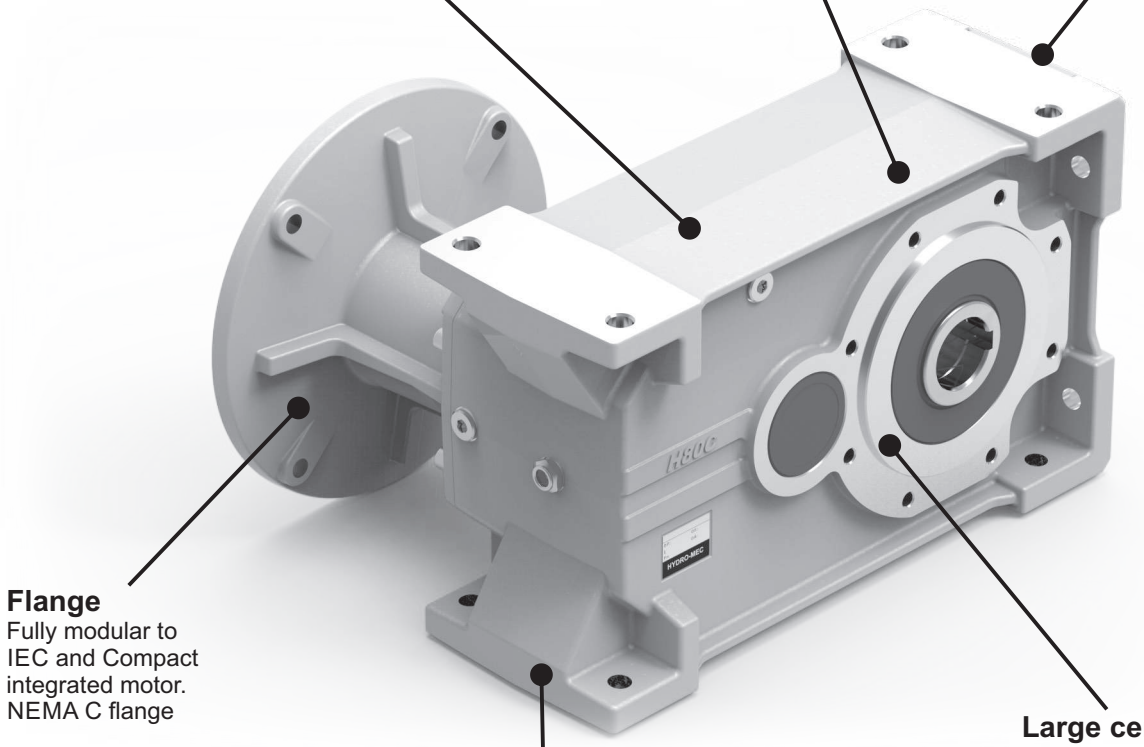
PFC83D... Shrink disk
Calettatore

Kit. Cod KF80.0.210LM



Cast iron parallel shaft gearboxes

A modular and compact product



Gears
Hardened and ground gears

Housing
Robust cast iron housing

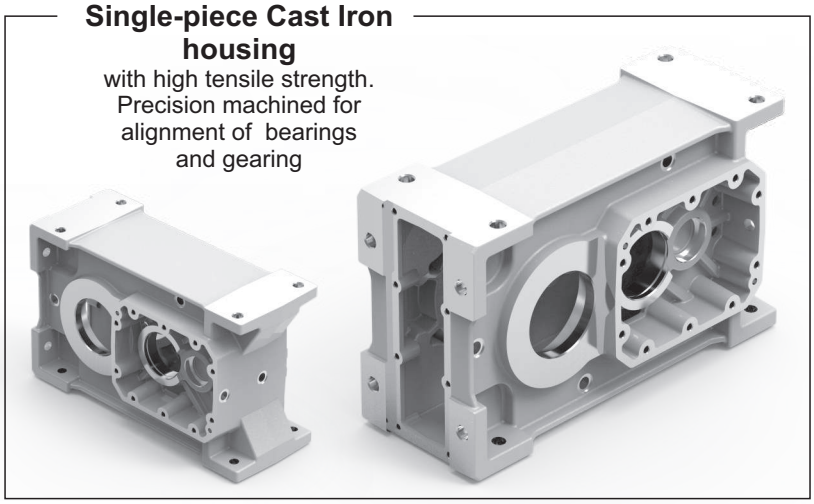
Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

Flange
Fully modular to IEC and Compact integrated motor. NEMA C flange

Large center distance

Painted
RAL 7046

Single-piece Cast Iron housing
with high tensile strength. Precision machined for alignment of bearings and gearing

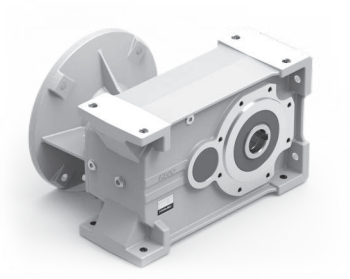


World wide sales network.

Specific type datasheet on page...

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

1 Stage

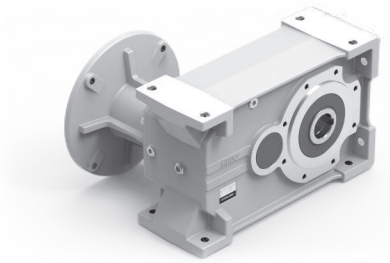


8-5	8-11	8-17
H61C 380Nm	**H71C** 670Nm	**H81C** 1175Nm

Types / Tipi / Tipen / Types / Tipos

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

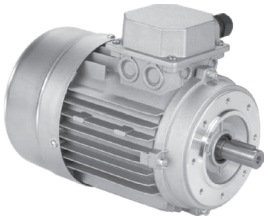
2 and 3 Stage



8-7	8-9	8-13	8-15	8-19	8-21
H62C 675Nm	**H63C** 675Nm	**H72C** 900Nm	**H73C** 900Nm	**H82C** 2100Nm	**H83C** 2100Nm

Types / Tipi / Tipen / Types / Tipos

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

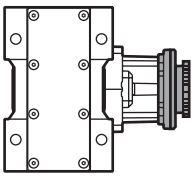


M-1									
56A 56B	**63A 63B**	**71A 71B**	**80A 80B**	**90S 90L**	**100LA 100LB**	**112M**	**132S 132M**	**160M 160L**	**180M 180L**

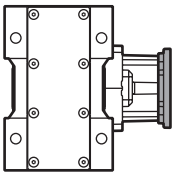
Types / Tipi / Tipen / Types / Tipos

Type - Tipo - Typ Type - Tipo	**Size** - Grandezza - Grösse Taille - Tamaño	**Mounting** - Montaggio Montage - Fixation Tipo de montaje	**Rapporto** - Ratio Untersetzung Reduction - Relacion	**Output shaft** Albero uscita Abtriebswelle Arbre de sortie Eje en salida
M	**H62C**	**C**	**12.39**	**-E**

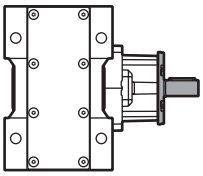
Parallel shaft helical
Riduttori ad assi paralleli



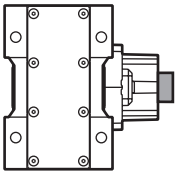
With IEC motor
M



With motor flange
P



With male input shaft
R



Modular base
B
↓
Not available for:
H61C, H71C, H81C, H82C

1 Stage
Riduzione
Stufe
Trains
Etapa

2 Stages
Riduzioni
Stufen
Trains
Etapas

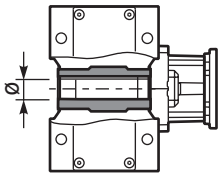
3 Stages
Riduzioni
Stufen
Trains
Etapas

Cast Iron/Ghisa/Grauguss/Fonte/Fundicion

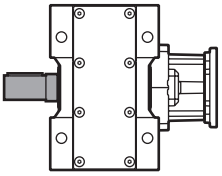
H61C H71C H81C

H62C H72C H82C

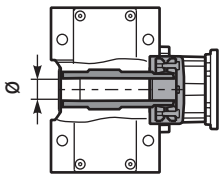
H63C H73C H83C



Hollow output shaft
C



Single output shaft
A



Shrink Disk
D
Only on request for Q.ty
A richiesta per quantità

See technical data table

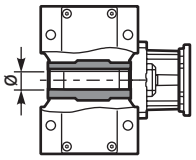
Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir Tableau données techniques

Ver tabla datos técnicos

C



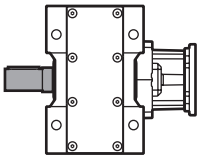
➡ **STANDARD**
⇨ Only on request for Q.ty
A richiesta per quantità

H61C H62C H63C
-E ➡ **ø35**
-F ⇨ ø40

H71C H72C H73C
-F ➡ **ø40**
-G ⇨ ø45

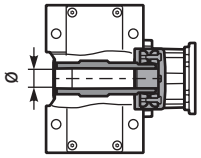
H81C H82C H83C
-H ➡ **ø50**
-I ⇨ ø55

A



Single output shaft
-N H61/2/3C ⇨ ø35
-O H71/2/3C ⇨ ø40
-K H81/2/3C ⇨ ø50

D



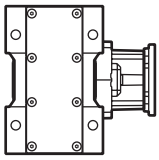
Shrink disk
-T H62/3C ⇨ ø35
-U H72/3C ⇨ ø40
-V H82/3C ⇨ ø50

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

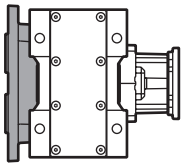
Type - Tipo - Typ
Types - Tipo

-N



-N

Senza flangia
Without flange

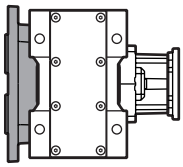


-F

Whit output flange
con flangia uscita

Output flange
Flangia uscita
Ausgangsflansch
Bride de sortie
Brida en salida

N



N Senza flangia / Without flange

H61C H62C H63C

4 ➡ **ø250**

H71C H72C H73C

4 ➡ **ø250**
5 ⇨ ø300

H81C H82C H83C

5 ➡ **ø300**
6 ⇨ ø350

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-C

Flange / Flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)
-H=160 (ø350)
-I=180 (ø350)

B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

Brushless

BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

Type R / Tipo R

H63C H73C

-2 ⇨ ø19

H62C H72C H83C

-3 ⇨ ø24

H82C

-4 ⇨ ø28

Without flange / Senza flangia

-M ⇨ With coupling

H63C H73C

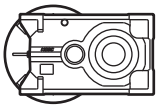
-1 ⇨ ø14 (IEC71)
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)

H62C H72C H83C

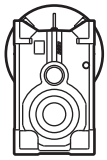
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)
-4 ⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

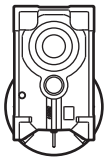
B3



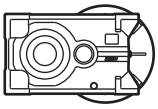
B3
STANDARD



B6

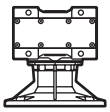


B7

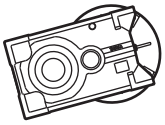


B8

V5



V6



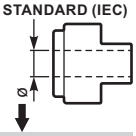
V8

Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

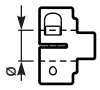
ST
standard bore
foro standard

COUPLING
STANDARD (IEC)



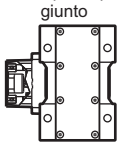
-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

BRUSHLESS *



-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

-0
Ready for input coupling
Predisposto per giunto

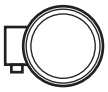


* With reduction bushing where applicable
Con bussola di riduzione dove prevista

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

With Type M specify terminal box position

Con tipo M specificare posizione morsettiera



A

B
STANDARD

C

D

8

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

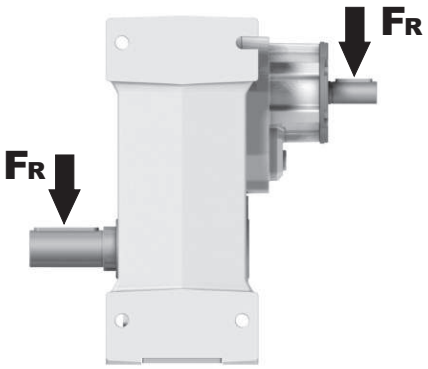
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

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



$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_K	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

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

H62C Cube gear 675Nm

Rating - Cast Iron
PARALLEL SHAFT GEARBOXES

QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
213	**6.57**	7.5	312	1.2	8.8	380	B									3018		01
185	**7.56**	7.5	358	1.1	7.9	390	B									3016		02
159	**8.82**	7.5	419	1.0	7.1	410	B									3014		03
113	**12.39**	7.5	588	1.0	7.2	580	B									2018		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

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -G 132	B14 motor flanges - - - - / - - - -		Output Shaft ø	Ratios code
507	**2.76**	9	166	1.6	14.4	265		not available	2980	**standard**	01
395	**3.54**	9	213	1.3	11.6	275			2485	**ø35**	02
277	**5.06**	9	304	1.0	8.6	290			1891		03
241	**5.81**	7.5	281	1.2	8.5	330			1693	ø40	04
206	**6.79**	7.5	329	1.2	8.4	380			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

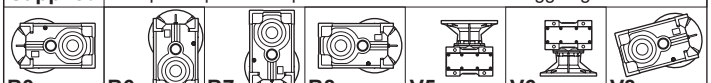
EN Unit **H61C** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.

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 requiren 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.

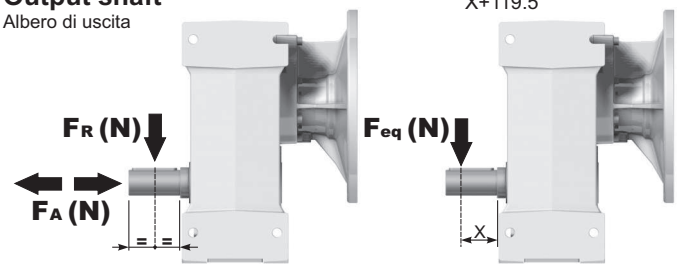
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
2.25 LT	3.20 LT	3.00 LT	2.25 LT	4.35 LT	2.35 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

$$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$$



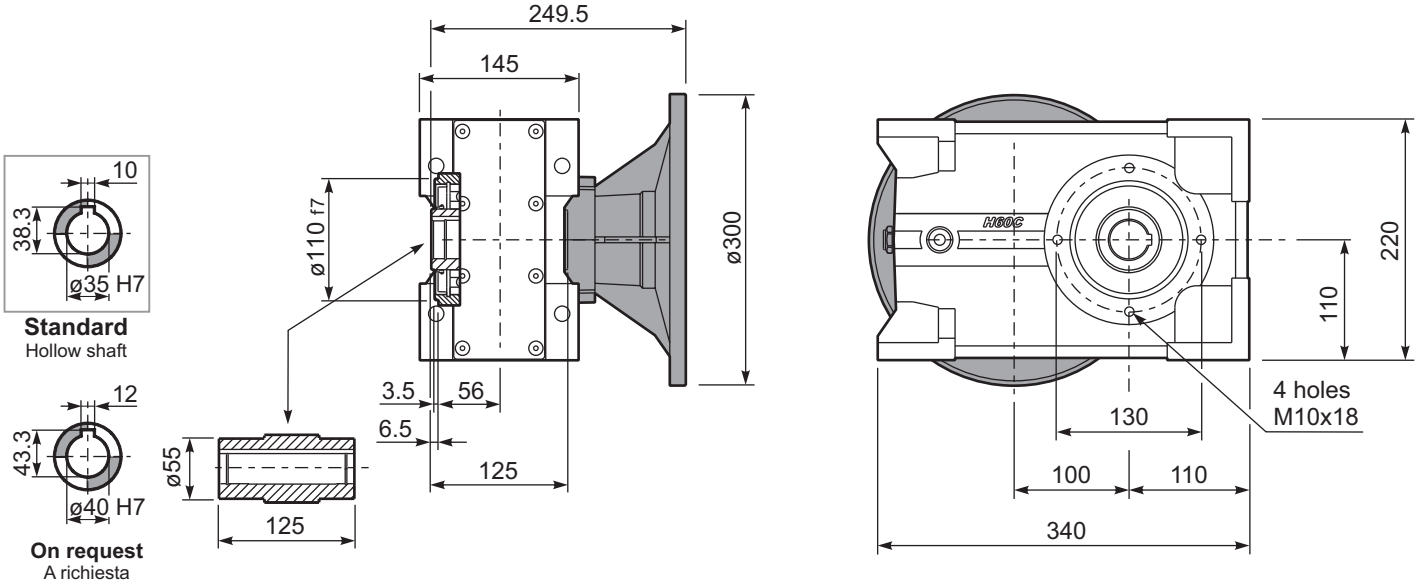
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	600	3000	**140**	720	3600	**70**	940	4700
250	640	3200	**120**	740	3700	**40**	1220	6100
200	690	3460	**85**	860	4300	**15**	1300	6500

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

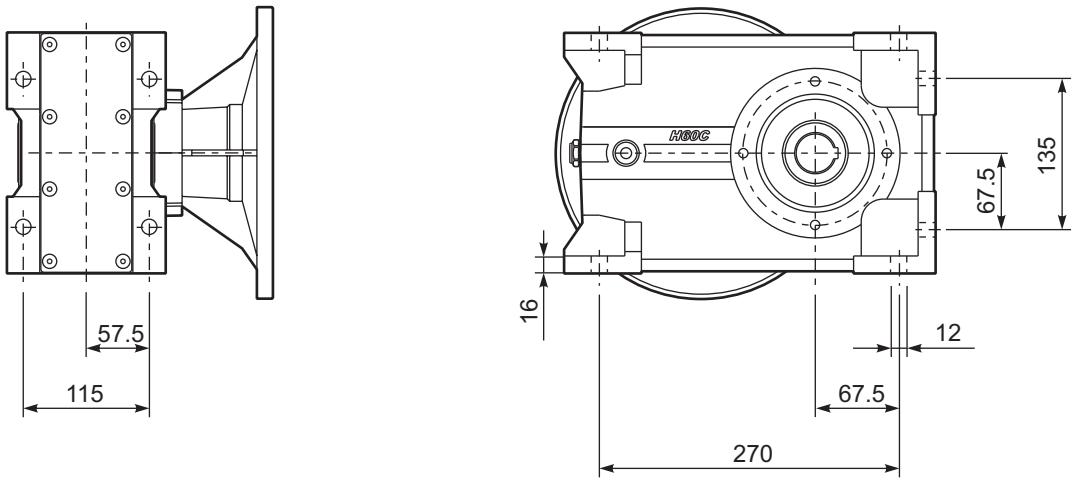
tab. 2

PH61C... Basic gearbox
Riduttore base

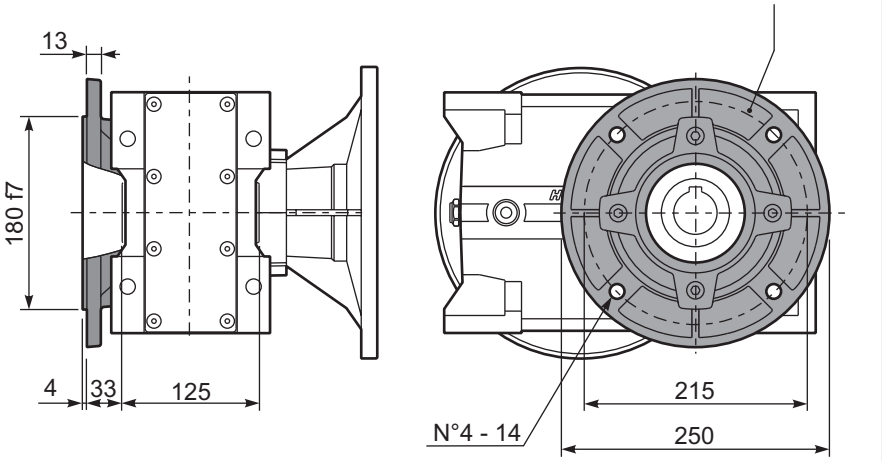
Gearbox weight peso riduttore	40.0 kg



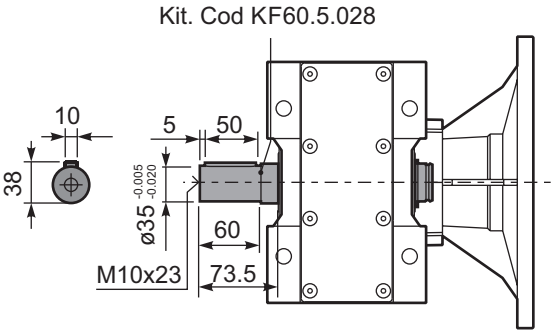
PH61C...**-N** Feet
Piedini



PH61C...**-F** Output flange
Flangia uscita



PH61C **A**... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
213	**6.57**	7.5	312	1.2	8.8	380	B									3018	standard ø35	01
185	**7.56**	7.5	358	1.1	7.9	390	B									3016		02
159	**8.82**	7.5	419	1.0	7.1	410	B									3014		03
113	**12.39**	7.5	588	1.0	7.2	580	B									2018		04
98	**14.24**	5.5	499	1.2	6.4	600	B									2016		05
84	**16.75**	5.5	587	1.1	6.1	665	B									1618		06
73	**19.25**	5.5	675	1.0	5.4	675	B									1616		07
64	**21.78**	4	558	1.2	4.7	675	B									1318		08
56	**25.04**	4	642	1.1	4.1	675	B									1316		09
47.9	**29.23**	4	750	0.9	3.5	675	B									1314	ø40 On request	10
45.7	**30.65**	3	592	1.1	3.4	675	B									1116		11
39.1	**35.78**	3	691	1.0	2.9	675	B									1114		12
36.3	**38.55**	2.2	548	1.1	2.3	580	B									818		13
31.6	**44.32**	2.2	630	1.1	2.3	665	B									816		14
27.1	**51.74**	2.2	735	0.9	2.0	675	B									814		15
22.9	**61.03**	1.1	437	1.1	1.2	480	B									616		16
19.6	**71.25**	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

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In table 2 please see possible radial loads and axial loads on the gearbox.

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Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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Voir tableau 1 concernant les huiles et les quantités conseillées.
Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

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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		

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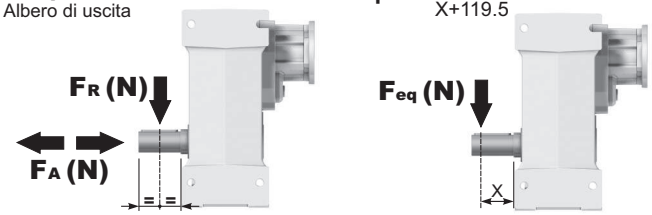
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

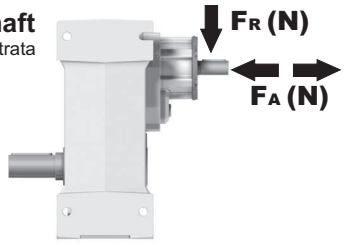
$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$



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



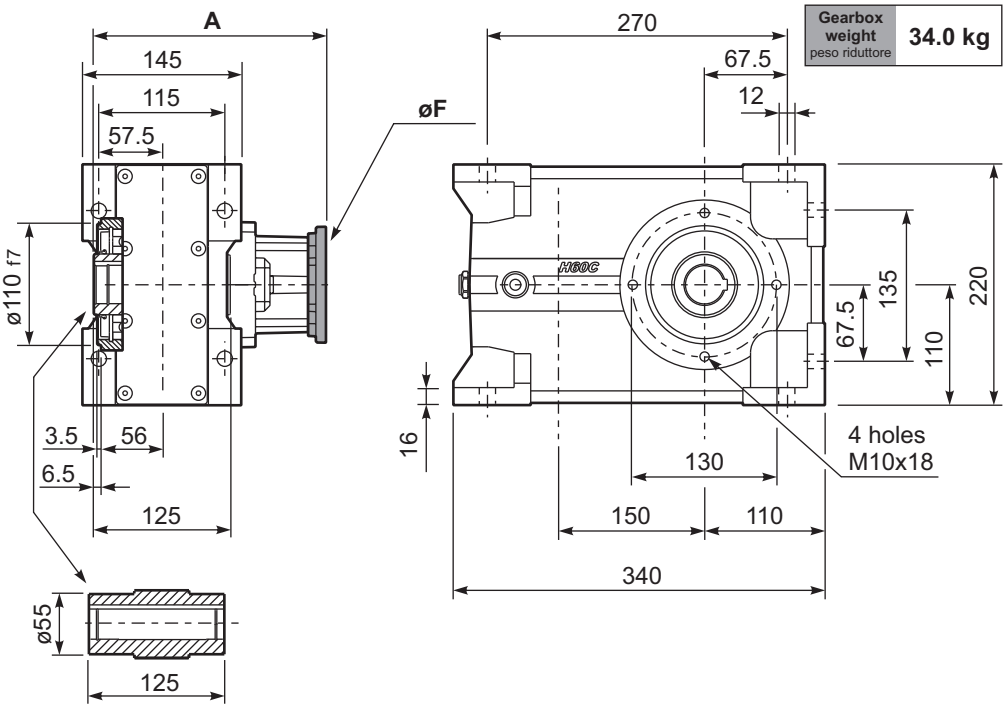
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

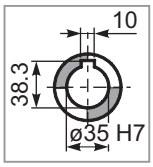
PH62C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	34.0 kg

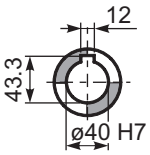
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	227
80/90B5	K023.4.042	200	229
100/112B5	K023.4.043	250	238
132B5	KC51.4.043	300	259
80B14	K085.4.046	120	229
90B14	K085.4.045	140	229
100/112B14	K085.4.047	160	238
132B14	KC51.4.041	200	259



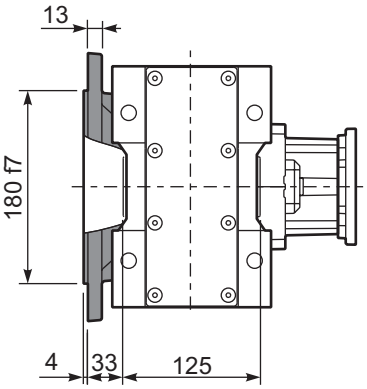
Standard
Hollow shaft

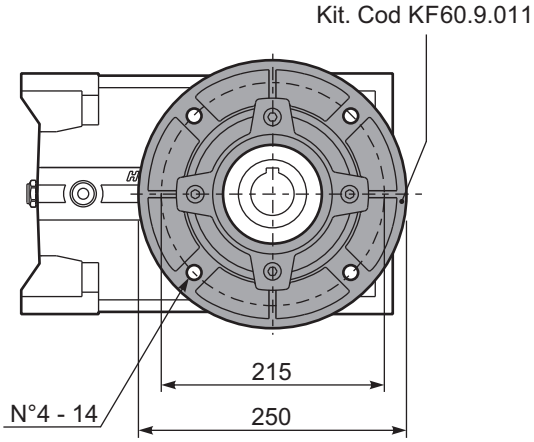


On request
A richiesta

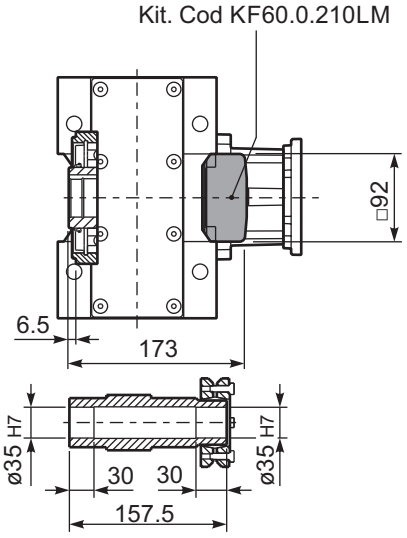


PH62C...-F Output flange
Flangia uscita

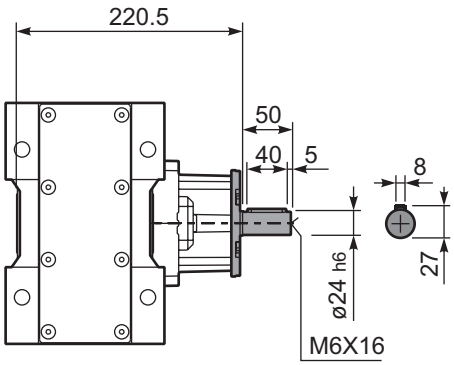




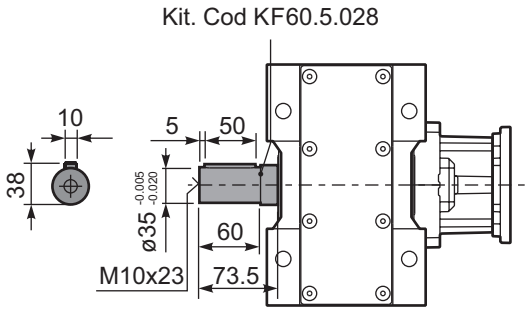
PH62C D... Shrink disk
Calettatore



RH62C... Input Shaft
Albero in entrata



PH62C A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
22.6	**61.89**	1.5	594	1.1	1.7	675	B				C	C		191318	standard ø35	01
19.7	**71.16**	1.5	683	1.0	1.5	675	B				C	C		191316		02
17.0	**82.48**	1.5	792	0.9	1.3	675	B				C	C		171316		03
14.5	**96.29**	1.1	675	1.0	1.1	675	B				C	C		171314		04
13.9	**100.51**	1.1	705	1.0	1.0	675	B				C	C		131318		05
12.1	**115.56**	0.75	556	1.2	0.91	675	B				C	C		131316		06
11.1	**125.96**	0.75	606	1.1	0.82	665	B				C	C		190816		07
10.4	**134.91**	0.75	649	1.0	0.78	675	B				C	C		131314		08
9.5	**147.05**	0.75	707	1.0	0.72	675	B				C	C		190814		09
8.2	**170.44**	0.55	605	1.1	0.62	675	B				C	C		170814	ø40 On request	10
7.6	**184.15**	0.55	653	1.0	0.57	675	B				C	C		101314		11
6.8	**205.87**	0.55	730	0.9	0.51	675	B				C	C		91316		12
5.8	**240.34**	0.37	570	1.2	0.44	675	B				C	C		91314		13
5.0	**279.22**	0.37	662	1.0	0.37	665	B				C	C		100816		14
4.3	**325.97**	0.37	773	0.9	0.32	675	B				C	C		100814		15
3.8	**364.41**	0.25	583	1.1	0.28	665	B				C	C		90816		16
3.3	**425.43**	0.25	681	1.0	0.25	675	B				C	C		90814		17
2.9	**481.19**	0.18	589	1.1	0.22	665	B				C	C		70816		18
2.5	**561.76**	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 requiren 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
2.35 LT	3.85 LT	3.15 LT	2.35 LT	4.55 LT	2.50 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

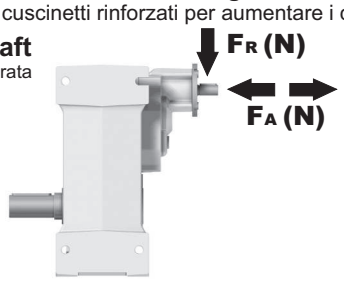
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{149.5}{X+119.5}$$

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



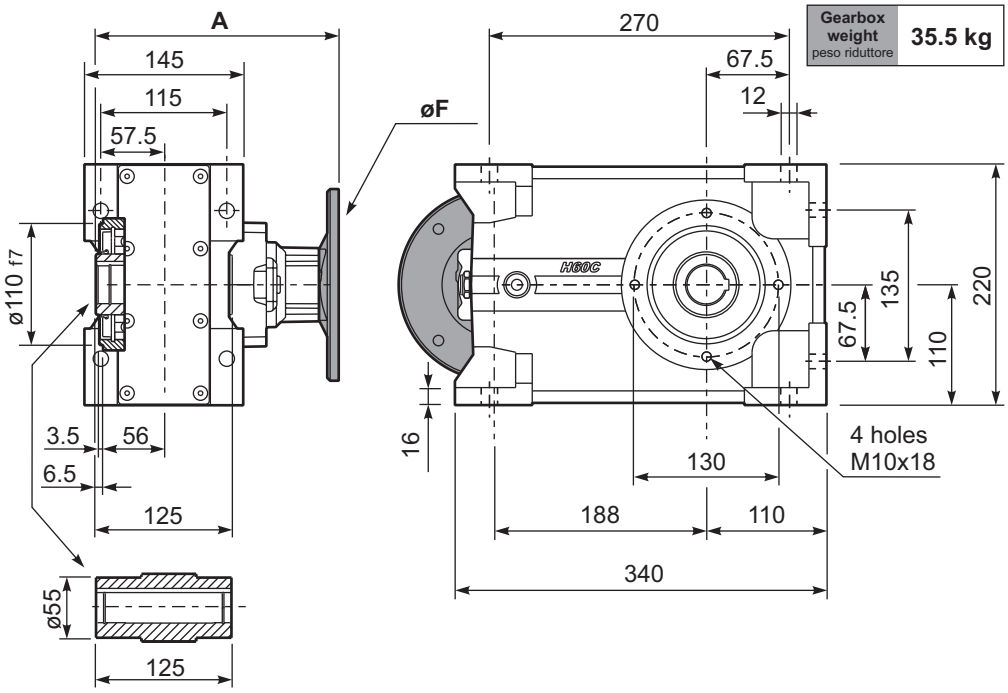
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

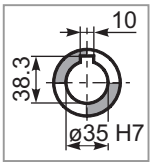
PH63C... Basic gearbox
Riduttore base

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

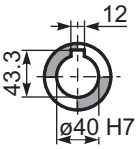
Gearbox weight peso riduttore	35.5 kg



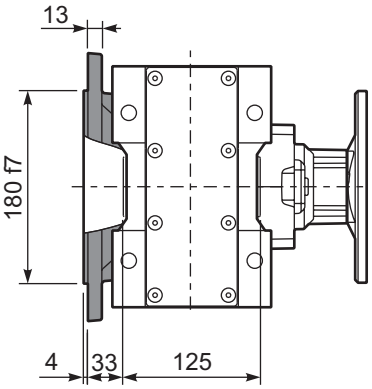
Standard
Hollow shaft

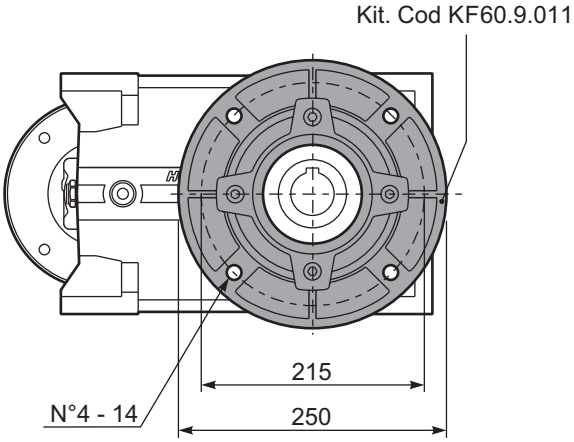


On request
A richiesta

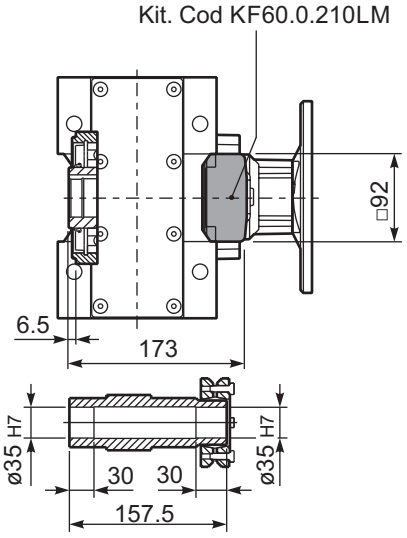


PH63C...-F Output flange
Flangia uscita

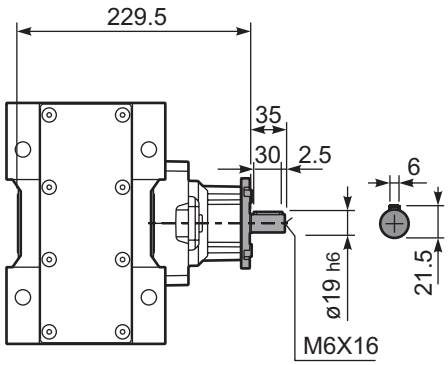




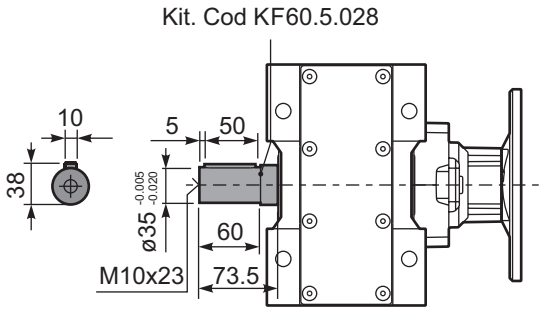
PH63C D... Shrink disk
Calettatore



RH63C... Input Shaft
Albero in entrata



PH63C A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -G	Available B5 motor flanges 132	B14 motor flanges - - - -	B14 motor flanges - - - -		Output Shaft	Ratios code
227	**6.17**	9	371	1.2	10.9	450			not available		18111	**standard**	01
198	**7.06**	9	425	1.4	12.7	600					16113	**ø40**	02
170	**8.21**	9	494	1.4	12.2	670					14115	ø45 On request	03

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 **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

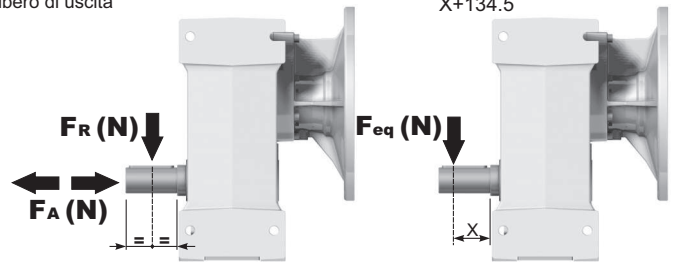
SHELL Omala S2 GX 460	**ENI** Blasia 460

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

$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



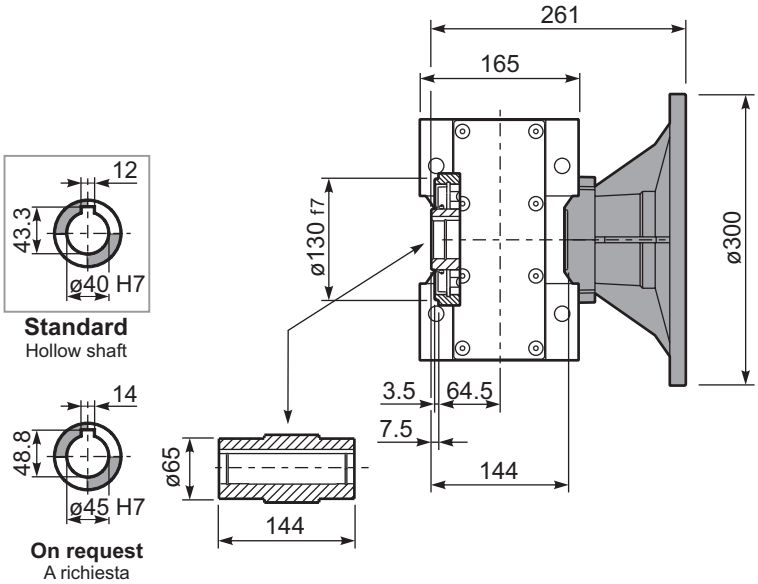
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	740	3700	**140**	860	4300	**70**	1020	5100
250	800	4000	**120**	900	4500	**40**	1300	6500
200	830	4150	**85**	970	4850	**15**	1700	8500

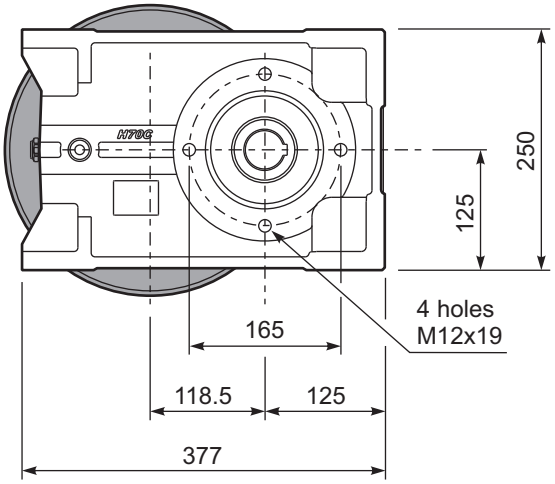
On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

tab. 2

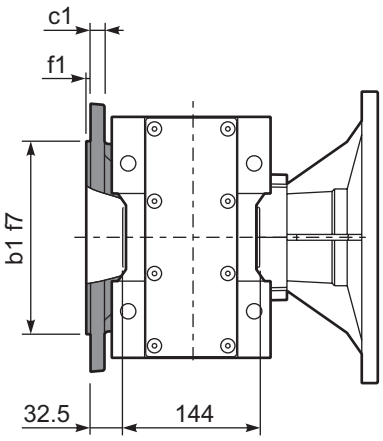
PH71C... Basic gearbox
Riduttore base

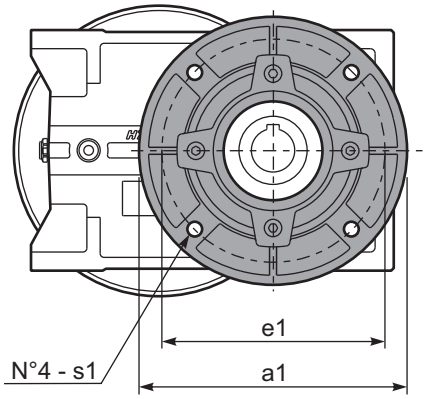
Gearbox weight peso riduttore	51.0 kg





PH71C...-F Output flange
Flangia uscita

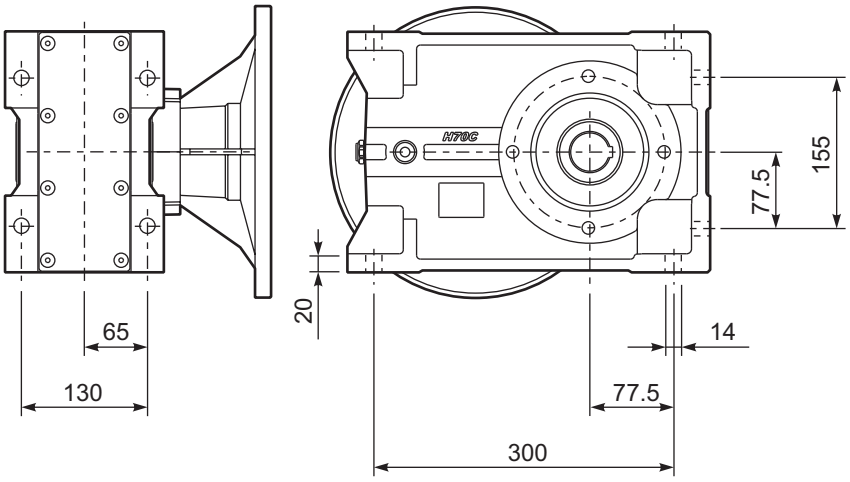




Available output flanges
Flange di uscita

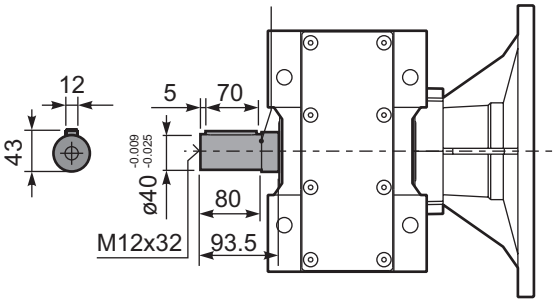
a1 ø	b1	c1	e1	f1	s1	Kit code
250	180	13	215	3	14	KF70.9.011
300	230	16	265	4	14	KF70.9.012

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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
175	**8.02**	9	473	1.1	9.9	520	B									3018	standard ø40	01
152	**9.18**	9	541	1.1	9.8	590	B									3016		02
131	**10.68**	9	630	1.1	9.7	680	B									3014		03
93	**15.11**	7.5	717	1.1	7.8	775	B									2018		04
81	**17.30**	7.5	821	1.1	7.8	885	B									2016		05
70	**20.13**	7.5	955	0.9	6.8	900	B									2014		06
60	**23.39**	5.5	820	1.1	5.9	900	B									1616		07
51	**27.21**	5.5	954	0.9	5.1	900	B									1614		08
46.0	**30.42**	4	780	1.2	4.5	900	B									1316	ø45 On request	09
39.6	**35.38**	4	907	1.0	3.9	900	B									1314		10
37.6	**37.24**	3	719	1.2	3.7	895	B									1116		11
32.3	**43.31**	3	836	1.1	3.2	900	B									1114		12
29.8	**47.02**	2.2	668	1.1	2.3	705	B									818		13
26.0	**53.85**	2.2	765	1.1	2.3	810	B									816		14
22.4	**62.63**	2.2	890	1.0	2.2	900	B									814		15
18.9	**74.16**	1.1	531	1.1	1.2	585	B									616		16
16.2	**86.25**	1.1	617	1.1	1.2	680	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 Blasia 460

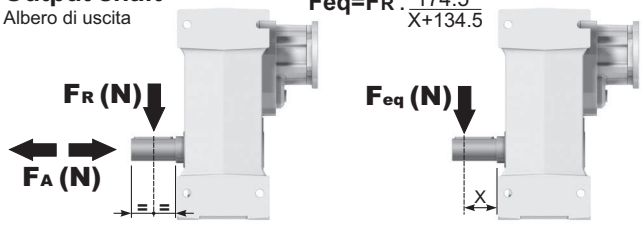
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

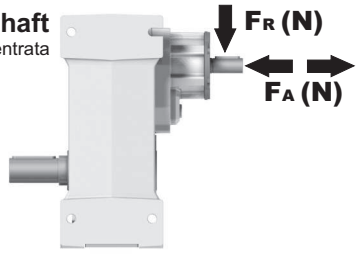
$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



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



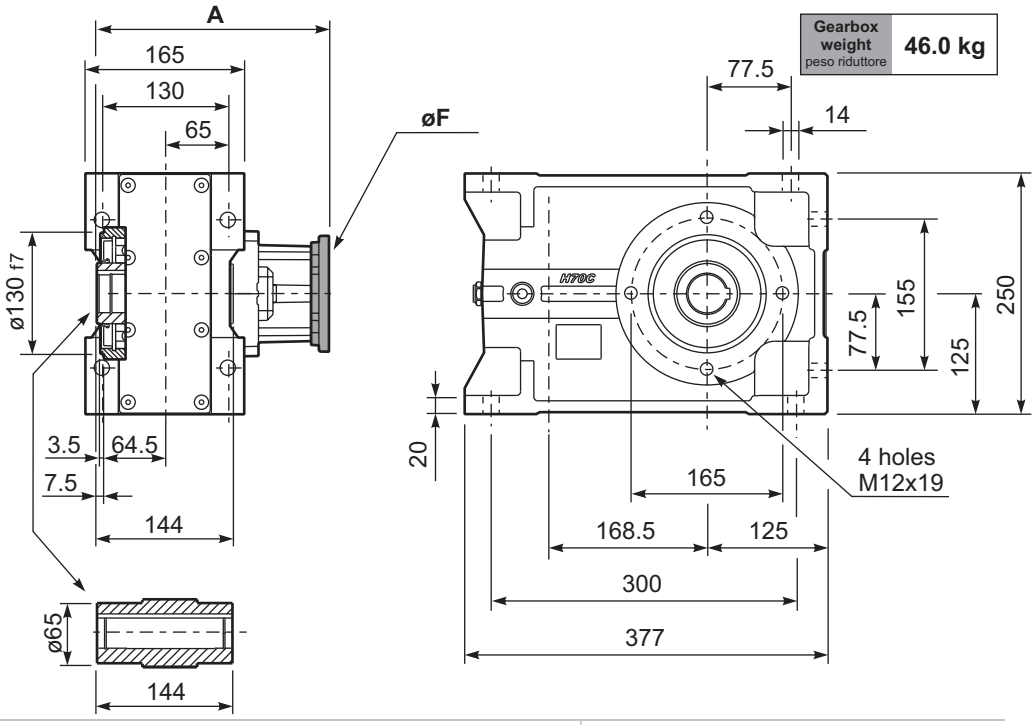
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

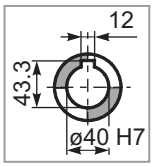
PH72C... Basic gearbox
Riduttore base

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

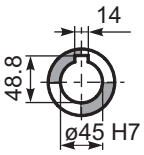
Gearbox weight peso riduttore	46.0 kg



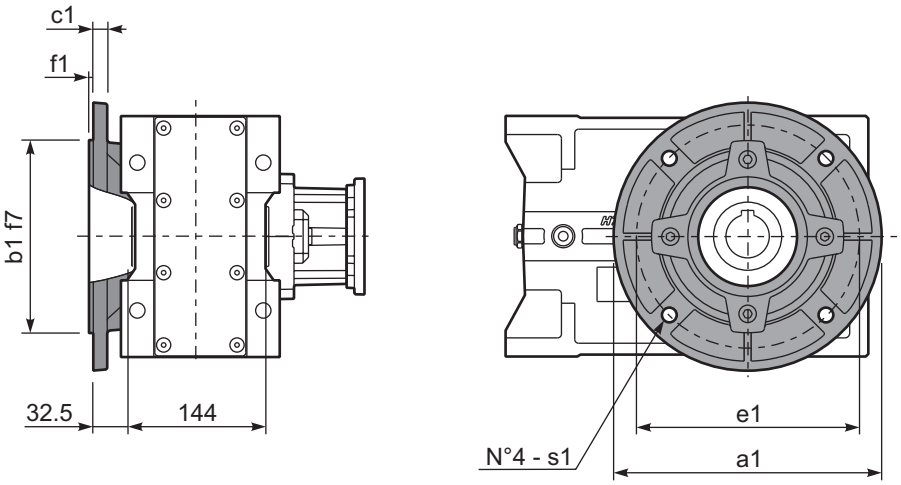
Standard
Hollow shaft



On request
A richiesta



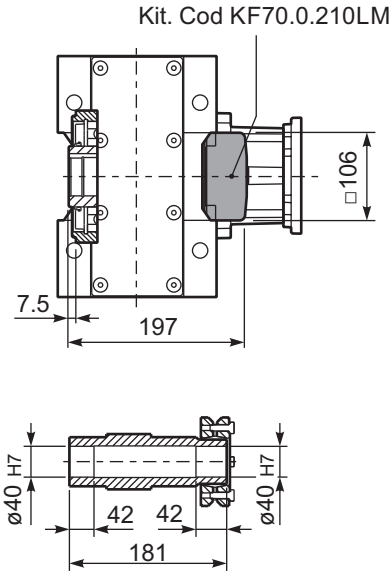
PH72C...-F Output flange
Flangia uscita



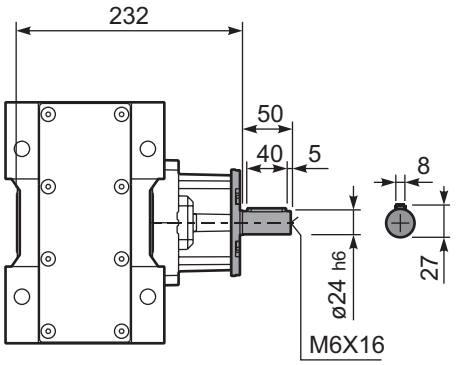
Available output flanges
Flange di uscita

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

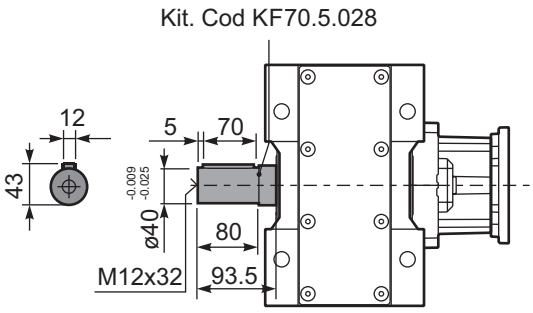
PH72C D... Shrink disk
Calettatore



RH72C... Input Shaft
Albero in entrata



PH72C A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
18.5	**75.50**	1.5	725	1.1	1.7	825	B				C	C		191318	standard ø40	01
16.2	**86.47**	1.5	830	1.1	1.6	900	B				C	C		191316		02
14.0	**100.22**	1.5	962	0.9	1.4	900	B				C	C		171316		03
12.0	**116.56**	1.1	817	1.1	1.2	900	B				C	C		171314		04
10.2	**136.82**	1.1	959	0.9	1.0	900	B				C	C		151314		05
9.1	**153.05**	0.75	736	1.1	0.83	810	B				C	C		190816		06
8.6	**163.31**	0.75	785	1.1	0.86	900	B				C	C		131314		07
7.9	**178.01**	0.75	856	1.1	0.79	900	B				C	C		190814		08
7.3	**191.67**	0.75	922	1.0	0.73	900	B				C	C		101316		09
6.8	**206.32**	0.75	992	0.9	0.68	900	B				C	C		170814	ø45 On request	10
6.3	**222.92**	0.55	791	1.1	0.63	900	B				C	C		101314		11
5.8	**242.18**	0.55	859	1.0	0.58	900	B				C	C		150814		12
5.6	**250.15**	0.55	888	1.0	0.56	900	B				C	C		91316		13
4.8	**289.08**	0.55	1026	0.9	0.49	900	B				C	C		130814		14
4.2	**330.31**	0.37	783	1.1	0.42	890	B				C	C		71316		15
3.5	**394.59**	0.37	936	1.0	0.36	900	B				C	C		100814		16
2.7	**514.99**	0.25	824	1.1	0.27	900	B				C	C		90814		17
2.1	**680.03**	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

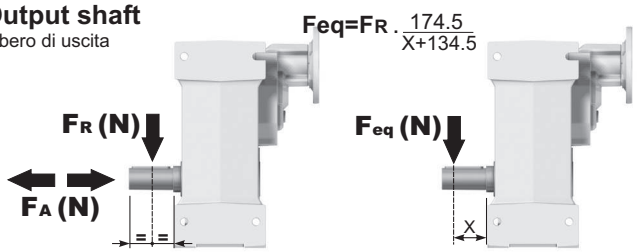
SHELL Omala S2 GX 460 — **ENI** Blasia 460

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

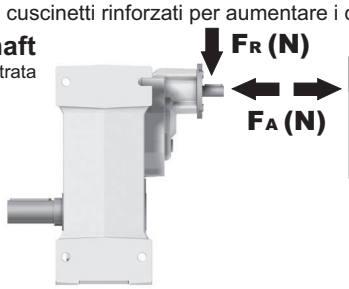
$$F_{eq} = F_R \cdot \frac{174.5}{X+134.5}$$



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



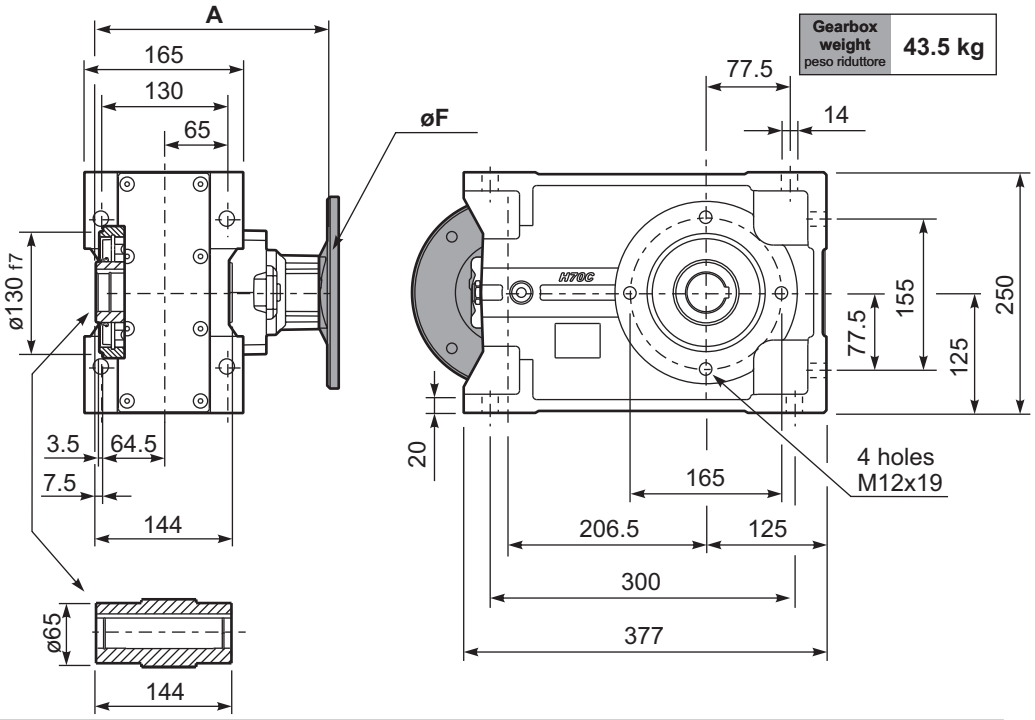
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

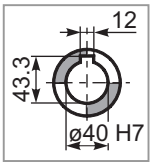
PH73C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	43.5 kg

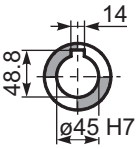
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	250.5
71B5	K063.4.042	160	248.5
80/90B5	K063.4.043	200	250.5
71B14	K063.4.047	105	248.5
80B14	K063.4.046	120	250.5
90B14	K063.4.041	140	250.5



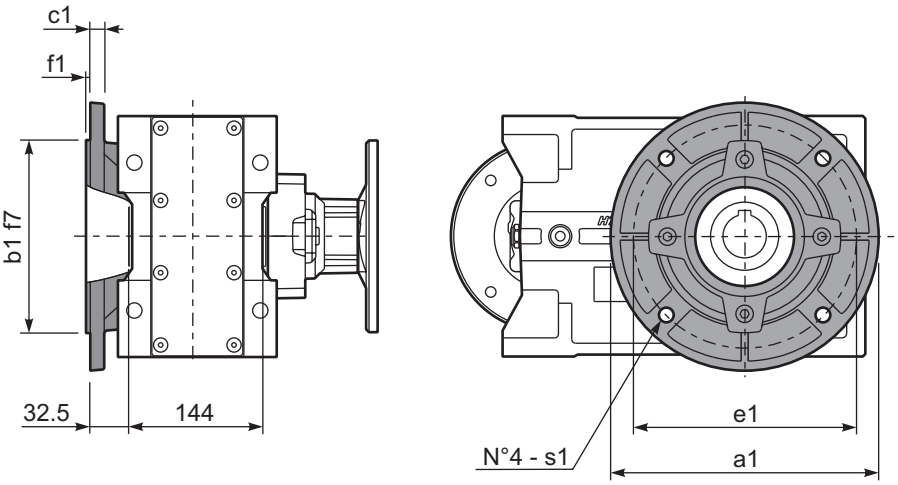
Standard
Hollow shaft



On request
A richiesta



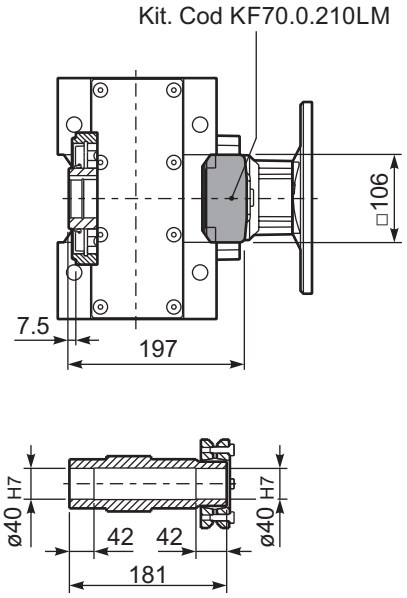
PH73C...-F Output flange
Flangia uscita



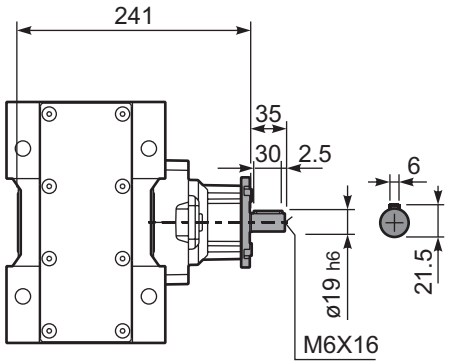
Available output flanges
Flange di uscita

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

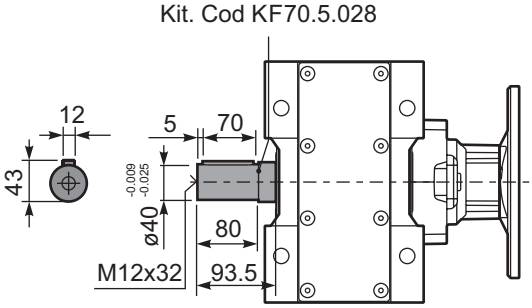
PH73C D... Shrink disk
Calettatore



RH73C... Input Shaft
Albero in entrata



PH73C A... Single output shaft
Albero uscita semplice



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -H 160	Available B5 motor flanges -I 180	B14 motor flanges - - - - / - - - -		Output Shaft ø	Ratios code
528	**2.65**	22	374	1.7	36.7	650			not available	2361	**standard**	01
409	**3.42**	22	483	1.6	32.8	750				1965	**ø50**	02
304	**4.60**	22	649	1.5	30.9	950				1569		03
256	**5.46**	22	771	1.3	27.4	1000				1371	ø55	04
211	**6.64**	22	937	1.3	26.5	1175				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 **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** Blasia 460

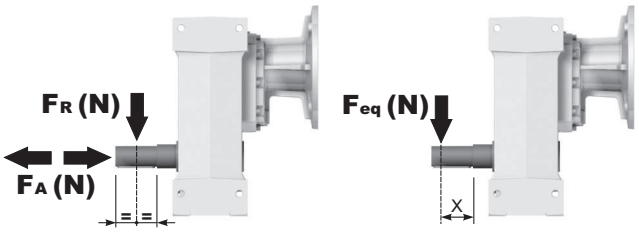
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$



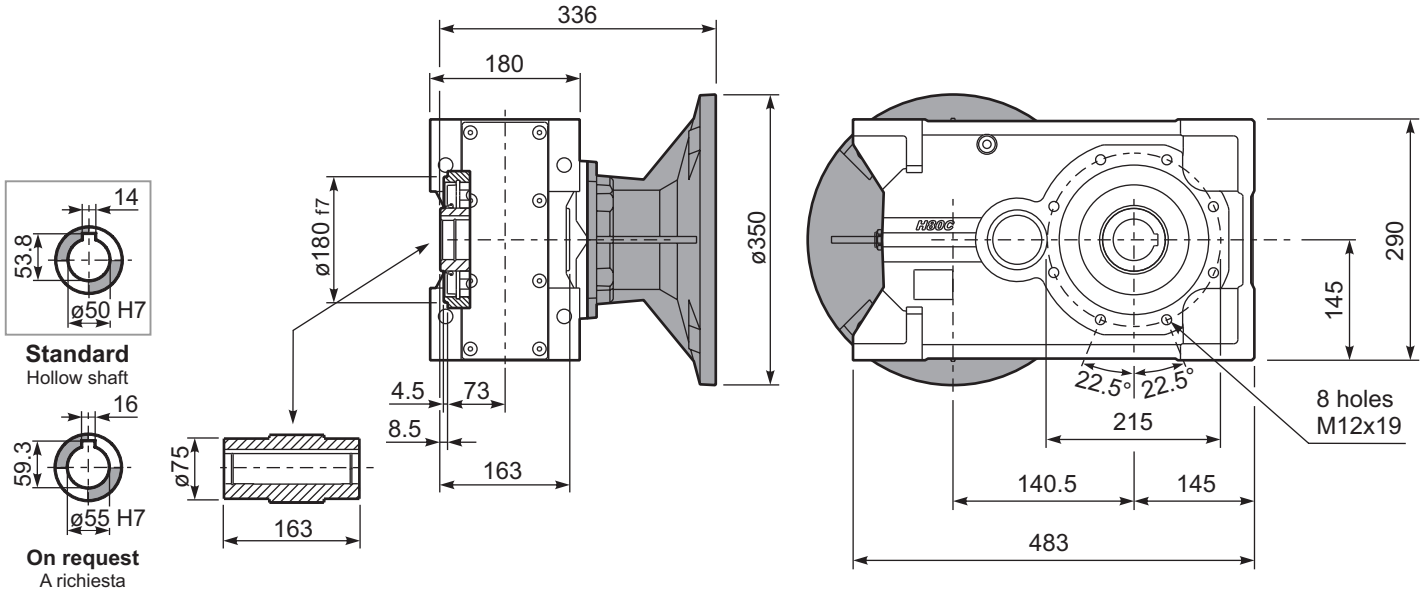
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	920	4600	**140**	1120	5600	**70**	1400	7000
250	1000	5000	**120**	1140	5700	**40**	1800	9000
200	1060	5300	**85**	1300	6500	**15**	2400	12000

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

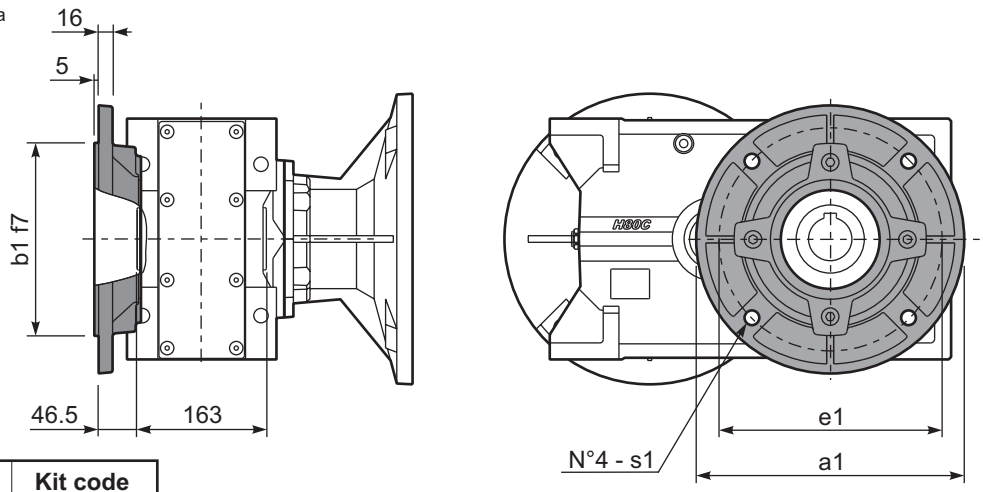
tab. 2

PH81C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	89.0 kg



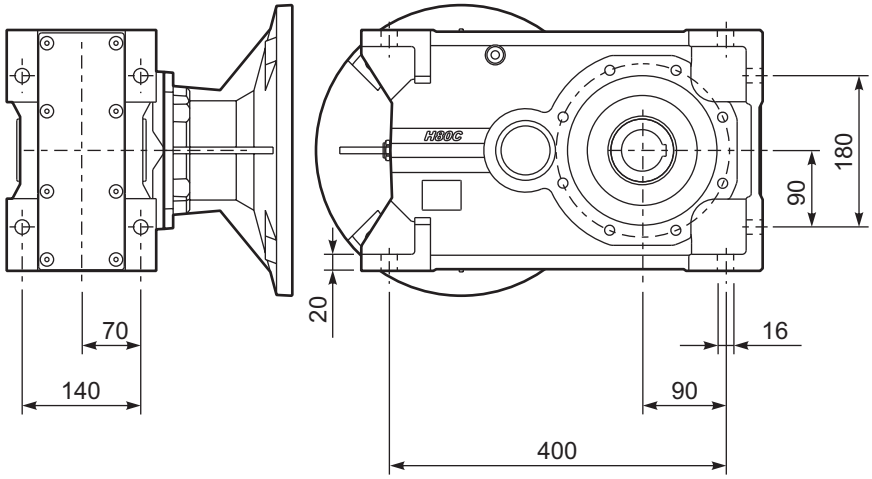
PH81C...**-F** Output flange
Flangia uscita



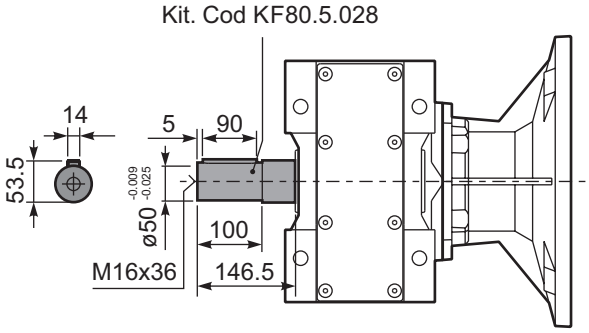
Available output flanges
Flange di uscita

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



8

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B5 -I 180	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
234	**5.98**	22	827	1.2	25.5	1000							3015	standard ø50	01
197	**7.10**	22	982	1.2	25.3	1175							3013		02
162	**8.63**	22	1193	1.1	23.9	1350							3011		03
124	**11.27**	18.5	1310	1.1	20.3	1500							2015		04
105	**13.38**	18.5	1555	1.1	19.4	1700							2013		05
92	**15.24**	18.5	1771	1.1	19.0	1900							1615		06
86	**16.26**	18.5	1889	1.1	19.7	2100							2011		07
77	**18.09**	18.5	2102	1.0	17.7	2100							1613		08
71	**19.82**	15	1865	1.1	15.9	2060							1315	ø55 On request	09
64	**21.98**	15	2069	1.0	14.6	2100							1611		10
60	**23.53**	15	2214	0.9	13.6	2100							1313		11
58	**24.25**	11	1677	1.2	12.2	1940							1115		12
48.6	**28.80**	11	1991	1.1	11.1	2100							1113		13
40.0	**34.99**	9	2063	1.0	9.2	2100							1111		14
33.6	**41.64**	7.5	1976	1.0	7.2	1960							813		15
27.7	**50.60**	5.5	1774	1.2	6.3	2100							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** Blasia 460		

For all details on lubrication and plugs check our website **tab. 1**
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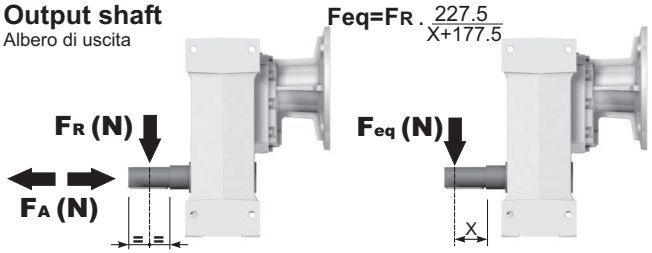
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

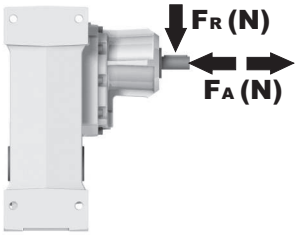
$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$



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



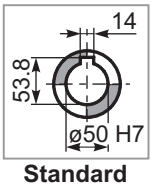
n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

tab. 2

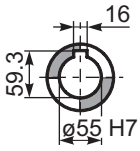
PH82C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	86.0 kg

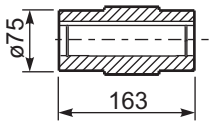
M. flanges	Kit code	øF	A
100/112B5	K023.4.043	250	299
132B5	KC51.4.043C	300	320.5
160/180B5	KC86.4.0.43	350	352.5
100/112B14	K085.4.047	160	299
132B14	KC51.4.041C	200	320.5

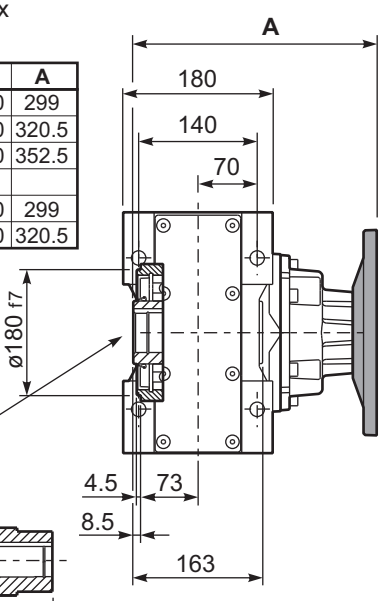


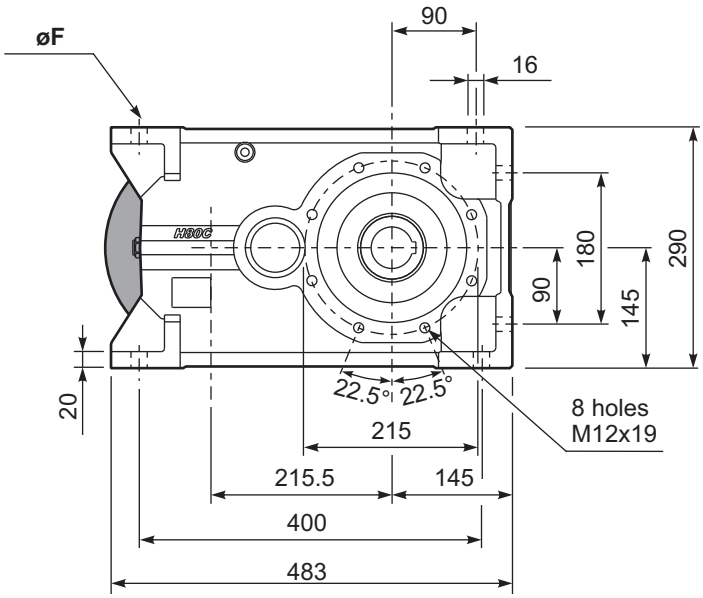
Standard
Hollow shaft



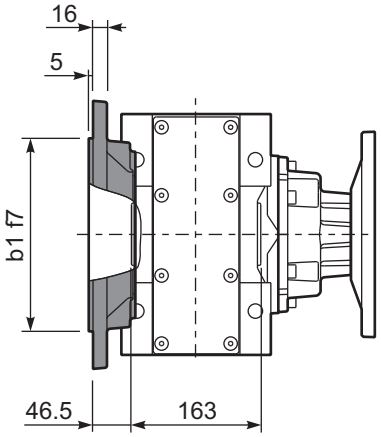
On request
A richiesta

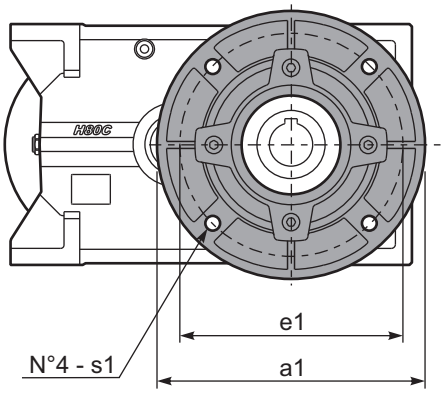






PH82C...-F Output flange
Flangia uscita



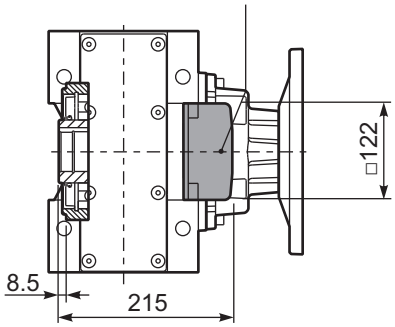


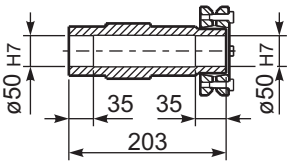
Available output flanges
Flange di uscita

a1 ø	b1	e1	s1	Kit code
300	230	265	14	KF80.9.011
350	250	300	18	KF80.9.012

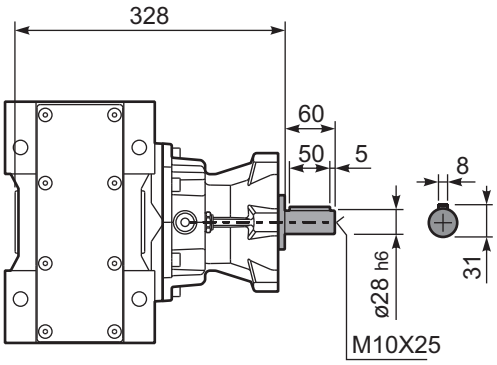
PH82C D... Shrink disk
Calettatore

Kit. Cod KF80.0.210LM



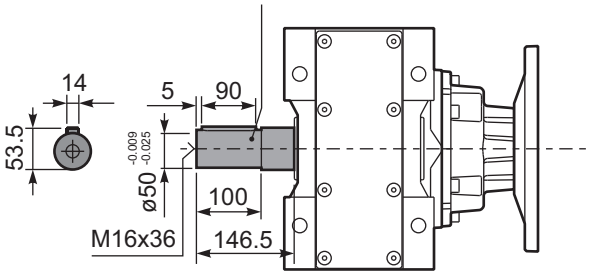


RH82C... Input Shaft
Albero in entrata



PH82C A... Single output shaft
Albero uscita semplice

Kit. Cod KF80.5.028



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
28.8	**48.55**	7.5	2257	0.9	6.7	2100	B									201315	standard ø50	01
24.3	**57.64**	5.5	1980	1.1	5.7	2100	B									201313		02
21.3	**65.64**	5.5	2255	0.9	5.0	2100	B									161315		03
20.0	**70.04**	4	1760	1.2	4.7	2100	B									201311		04
18.0	**77.93**	4	1958	1.1	4.2	2100	B									161313		05
16.4	**85.36**	4	2145	1.0	3.8	2100	B									131315		06
14.8	**94.70**	4	2380	0.9	3.5	2100	B									161311		07
13.8	**101.35**	3	1917	1.1	3.2	2100	B									131313	ø55 On request	08
11.4	**123.15**	3	2330	0.9	2.7	2100	B									131311		09
9.3	**150.73**	2.2	2100	1.0	2.2	2100	B									111311		10
7.8	**179.39**	1.5	1722	1.2	1.8	2100	B									81313		11
6.4	**217.98**	1.5	2093	1.0	1.5	2100	B									81311		12
5.7	**247.03**	1.1	1732	1.1	1.2	1950	B									61313		13
4.7	**300.17**	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.

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Voir tableau 1 concernant les huiles et les quantités conseillées.
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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 Blasia 460

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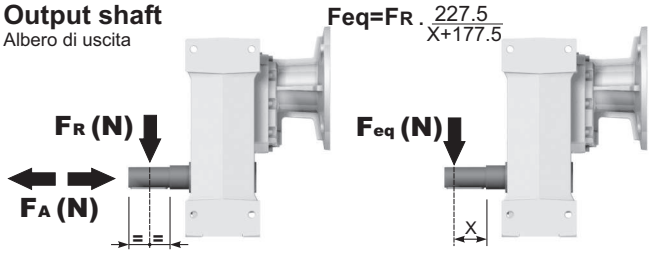
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

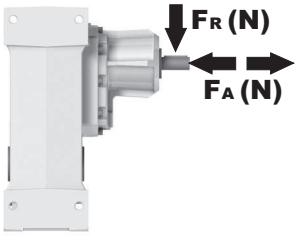
$$F_{eq} = F_R \cdot \frac{227.5}{X+177.5}$$



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



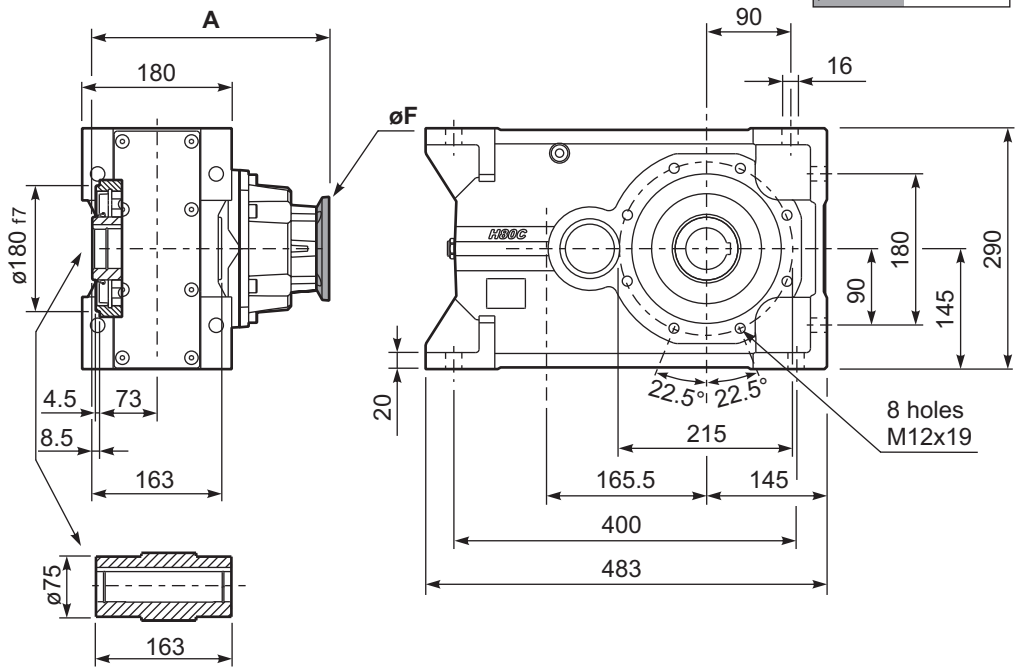
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

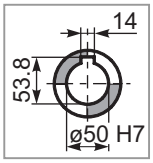
PH83C... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	81.0 kg

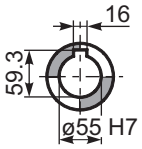
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	292.5
80/90B5	K023.4.042	200	294.5
100/112B5	K023.4.043	250	303.5
132B5	KC51.4.043	300	324.5
80B14	K085.4.046	120	294.5
90B14	K085.4.045	140	294.5
100/112B14	K085.4.047	160	303.5
132B14	KC51.4.041	200	324.5



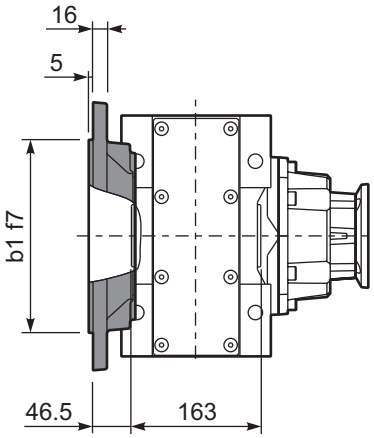
Standard
Hollow shaft

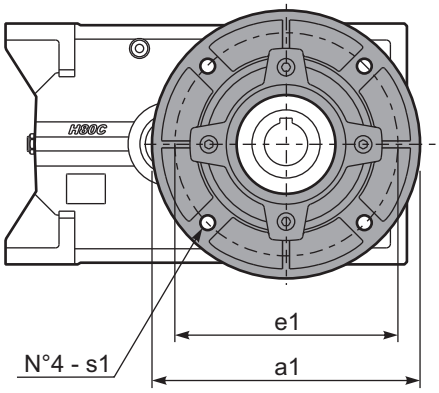


On request
A richiesta



PH83C...-F Output flange
Flangia uscita



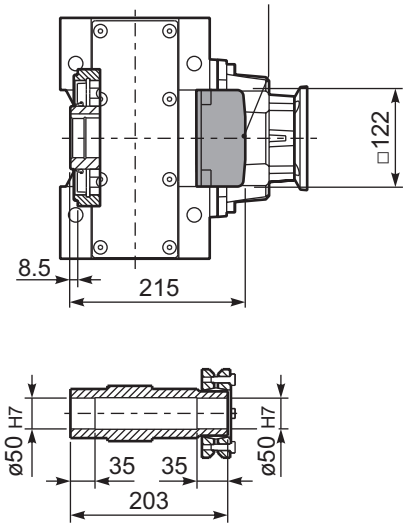


Available output flanges
Flange di uscita

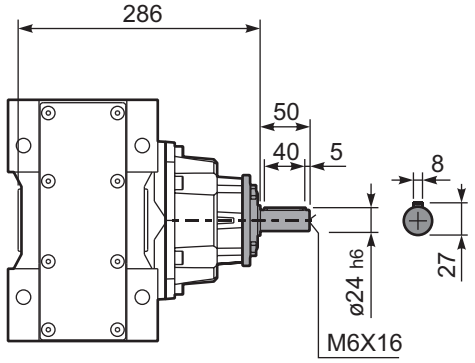
a1 ø	b1	e1	s1	Kit code
300	230	265	14	KF80.9.011
350	250	300	18	KF80.9.012

PH83C D... Shrink disk
Calettatore

Kit. Cod KF80.0.210LM

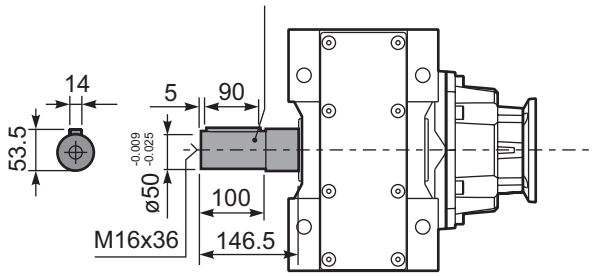


RH83C... Input Shaft
Albero in entrata



PH83C A... Single output shaft
Albero uscita semplice

Kit. Cod KF80.5.028



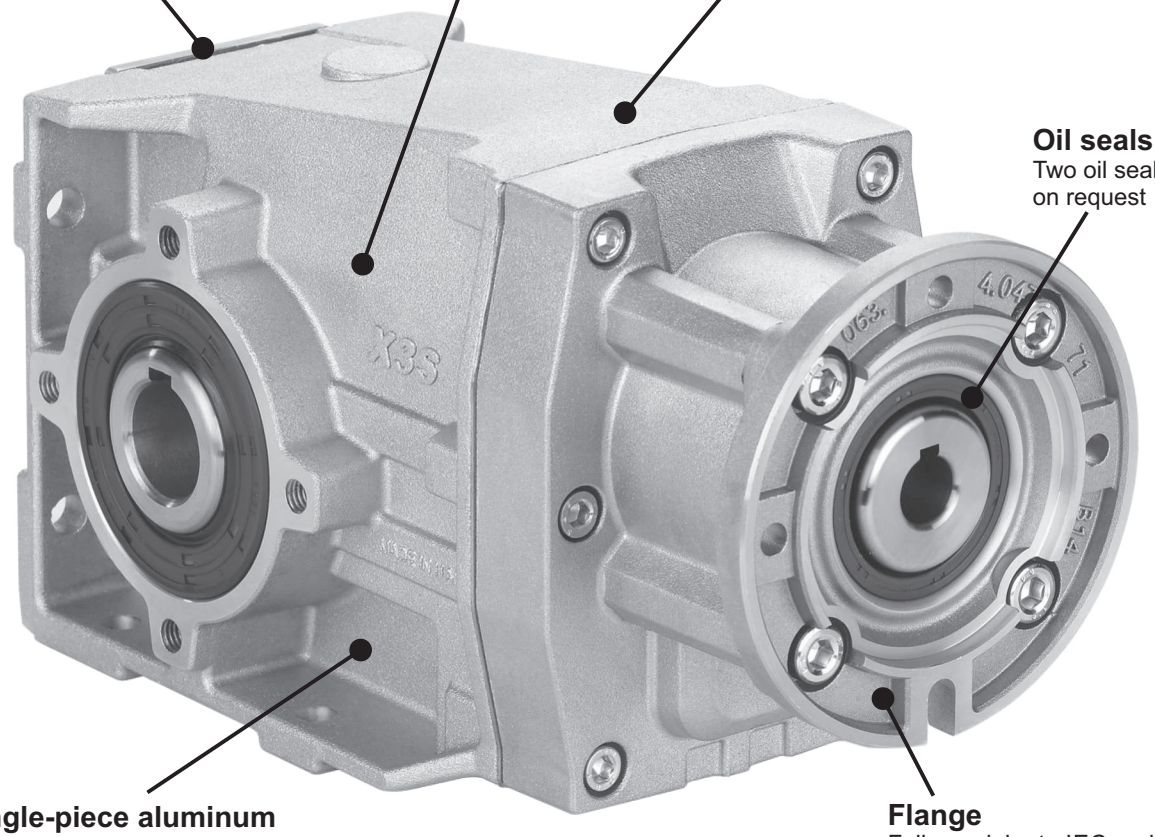
Aluminum and cast iron helical bevel gearboxes

A modular and compact product
Very energy efficent 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.

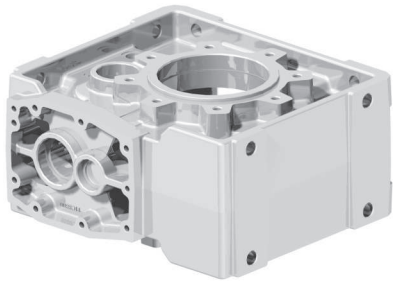


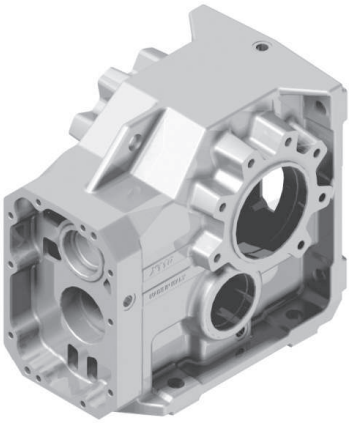
Oil seals
Two oil seals on request

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



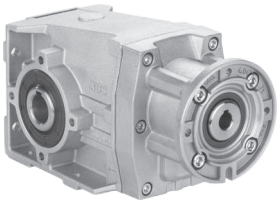


Painting
Cast iron gearboxes are painted RAL 7046

World wide sales network.

Specific type datasheet on page...

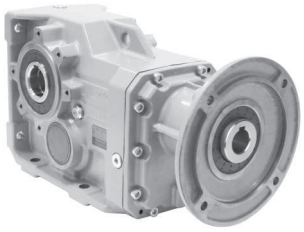
On page / A pagina / Auf Seite / À la page /En la página



Types / Tipi
Typen / Types
Tipos

9-5	9-7	9-9	9-11	9-13	9-15	9-17	9-19	9-21
X22S 50Nm	**X32S** 90Nm	**X33S** 100Nm	**X42A** 150Nm	**X43A** 160Nm	**X52A** 250Nm	**X53A** 250Nm	**X62A** 410Nm	**X63A** 410Nm

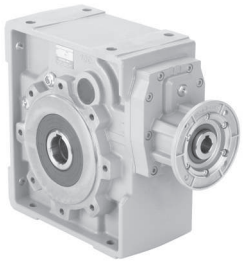
On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi
Typen / Types
Tipos

9-23	9-25	9-27	9-29	9-31	9-33	9-35	9-37	9-39	9-41
X73C 675Nm	**X74C** 675Nm	**X83C** 1000Nm	**X84C** 1000Nm	**X93C** 1600Nm	**X94C** 1650Nm	**X103** 3000Nm	**X104** 3000Nm	**X113** 4500Nm	**X114** 4600Nm

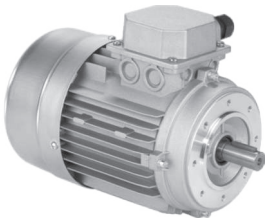
On page / A pagina / Auf Seite / À la page / En la página



Types / Tipi
Typen / Types
Tipos

9-43	9-45	9-47	9-49
113C 675Nm	**114C** 675Nm	**133C** 1000Nm	**134C** 1000Nm

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



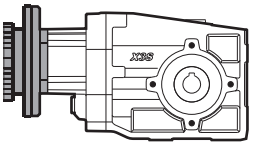
Types / Tipi
Typen / Types
Tipos

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

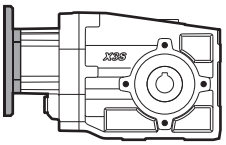
Type - Tipo - Typ Type - Tipo	**Size** - Grandezza - Grösse Taille - Tamaño	**Hub** - Mozzo corona Hohlwelle Arbre creux Nucleo corona	**Rapporto** - Ratio Untersetzung Reduction Relacion	**Output shaft** - Albero uscita Ausgangsflansch Arbre de sortie Brida en salida
M	**X22S**	**C**	**4.83**	**-A**

Helical-bevel gear
Riduttori ortogonali



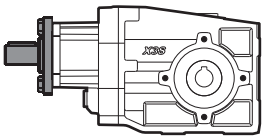
With IEC motor

M



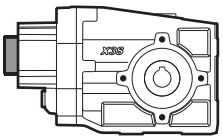
With motor flange

P



With male input shaft

R



Modular base

B

Not available for:
X93C , X103 ,
X104 , X113 ,
X114 .

2 Stages
Riduzioni
Stufen
Trains
Etapas

3 Stages
Riduzioni
Stufen
Trains
Etapas

Aluminum
Alluminio
Aluminium
Aluminium
Aluminio

X22S
X32S
X42A
X52A
X62A

X33S
X43A
X53A
X63A

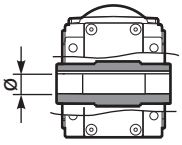
3 Stages
Riduzioni
Stufen
Trains
Etapas

4 Stages
Riduzioni
Stufen
Trains
Etapas

Cast Iron
Ghisa
Grauguss
Fonte
Fundicion

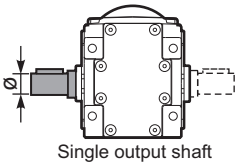
113C
133C
X73C
X83C
X93C
X103
X113

114C
134C
X74C
X84C
X94C
X104
X114



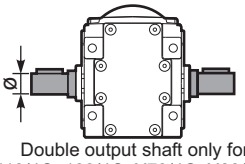
Hollow outpu shaft

C



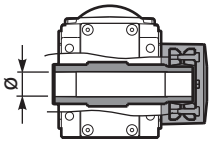
Single output shaft

A



Double output shaft only for
113/4C, 133/4C, X73/4C, X83/4C,
X93/4C, X103/4 and X113/4

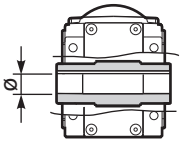
B



Shrink Disk
(only on the DX side)

D

Only on request for Q.ty
A richiesta per quantità



Stainless steel hub

I

Stainless steel hub
Mozzo in acciaio Inox
Edelstahlhohlwelle
Moyeu en acier Inox
Nucleo corona de acero Inox

Only on request for Q.ty
A richiesta per quantità

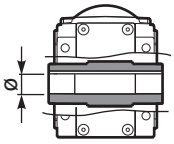
See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten

Voir Tableau données techniques

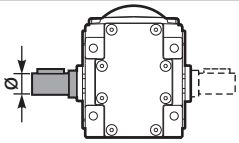
Ver tabla datos técnicos



➡ **STANDARD**

Hollow output shaft	
X22S	
-A	⇨ ø18
-B	➡ **ø20**
X32S X33S	
-B	➡ **ø20**
-C	⇨ ø25
X42A X43A	
-C	➡ **ø25**
-D	⇨ ø30
X52A X53A	
-D	➡ **ø30**
-E	⇨ ø35
X62A X63A	
-E	➡ **ø35**
-F	⇨ ø40

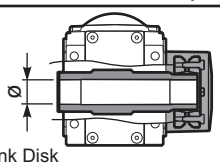
X73/4C X83/4C	
-F	➡ **ø40**
-H	⇨ ø45
113C 114C	
-F	➡ **ø40**
-G	⇨ ø42
133C 134C	
-F	⇨ ø40
-H	➡ **ø45**
X93C X94C	
-H	⇨ ø45
-J	➡ **ø50**
X103 X104	
-K	➡ **ø60**
X113 X114	
-T	➡ **ø70**



Single and double output shaft

-I	X22S X32/3S	⇨ ø20
-L	X32/3S X42/3A	⇨ ø25
-M	X52/3A	⇨ ø30
-N	X52/3A X62/3A X73/4A*	⇨ ø35
-V	X83/4A 113/4C	⇨ ø40*
-P	133/4C	⇨ ø45*
-1	X93/4C	⇨ ø50*
-3	X103/4	⇨ ø60*
-5	X113/4	⇨ ø70*

* **Also available double output shaft**



Shrink Disk

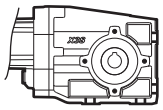
-U	X22S X32/3S	⇨ ø20
-Q	X42/3A	⇨ ø30
-R	X52/3A	⇨ ø35
-S	X62/3A X73/4A X83/4A 113/4C	⇨ ø40
-6	133/4C	⇨ ø45
-7	X93/4C	⇨ ø50
-8	X103/4	⇨ ø65
-9	X113/4	⇨ ø75

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

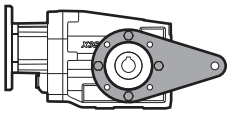
Type - Tipo - Typ
Type - Tipo

BR



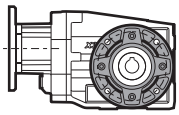
FB

Forma base
Universal



BR

Braccio d reazione
Reaction arm

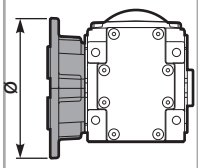


-F

Flangia uscita
output flange

Output flange
Flangia di uscita
Ausgangs Flansch
Bride de sortie
Brida en salida

N



N Senza flangia
Without flange

X22S

1 ⇨ ø120

X32S X33S

1 ⇨ ø120
2 ⇨ ø160

X42-3A X52-3A
X62-3A

2 ⇨ ø160
3 ⇨ ø200

X73C X74C
X83C X84C

4 ⇨ ø250

113C 114C
X93C X94C

C ⇨ ø280
L ⇨ ø280

133C 134C

C ⇨ ø320

X103 X104

6 ⇨ ø350

X113 X114

7 ⇨ ø450

Motor size - Grandezza motore
Motor Grösse
Grandeur moteur - Tamaño motor

-O

Flange
Flangia

B5

-A=56 (ø120)
-B=63 (ø140)
-C=71 (ø160)
-D=80 (ø200)
-E=90 (ø200)
-F=100 (ø250)
-G=132 (ø300)
-H=160 (ø350)
-I=180 (ø350)
-L=200 (ø400)
CA=225 (ø450)

B14

-O=56 (ø80)
-P=63 (ø90)
-Q=71 (ø105)
-R=80 (ø120)
-T=90 (ø140)
-U=100 (ø160)
-V=132 (ø200)

Brushless

BB=50/70-M5
BC=60/75-M5
BD=70/90-M6
BE=80/100-M6
BF=95/115-M8
BG=110/145-M8
BH=130/165-M8

Type R
Tipo R

X22S X33S X43A

-1 ⇨ ø14

X32S X42A X53A
X63A X74C X84C
114C 134C

-2 ⇨ ø19

X52A X62A
113C 133C
X73C X83C X94C

-3 ⇨ ø24

X93C X104 X114

-4 ⇨ ø28

X103 X113

-6 ⇨ ø42

Without flange
Senza flangia

-M ⇨ With coupling

X22S X33S X43A

-Z ⇨ ø9 (IEC56)
-0 ⇨ ø11 (IEC63)
-1 ⇨ ø14 (IEC71)

X32S X42A X53A
X63A X74C X84C
114C 134C

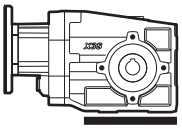
-1 ⇨ ø14 (IEC71)
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)

X52A X62A
113C 133C
X73C X83C X94C

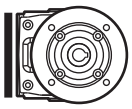
-2 ⇨ ø19 (IEC80)
-3 ⇨ ø24 (IEC90)
-4 ⇨ ø28 (IEC100)

Mounting position
Posizione montaggio
Einbaulage
Position de montage
Position de montaje

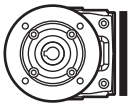
B3



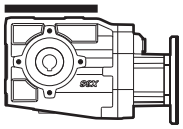
B3
STANDARD



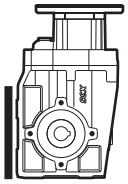
B6



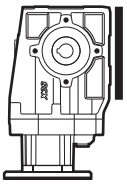
B7



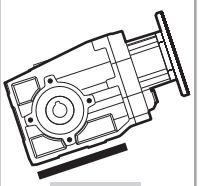
B8



V5



V6



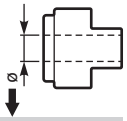
V8

Input bore
Foro entrata
Eingangshohlwelle
Trou d'entree
Eje hueco de entrada

ST

ST
standard bore
foro standard

COUPLING
STANDARD (IEC)

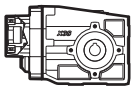


-A = 9mm
-B = 11mm
-C = 14mm
-D = 19mm
-E = 24mm
-F = 28mm

BRUSHLESS *

-2 = 11mm
-3 = 14mm
-4 = 19mm
-5 = 22mm
-6 = 24mm

-0
Ready for input coupling
Predisposto per giunto

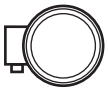


* With reduction bushing where applicable
Con bussola di riduzione dove prevista

Terminal box position
Posizione morsettiera
Klemmkastenlage
Position boîte à bornes
Posición caja de bornes

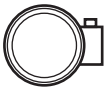
With Type M specify terminal box position

Con tipo M specificare posizione morsettiera



A

B
STANDARD



C

D

9

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

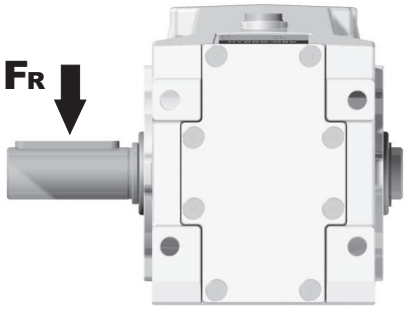
Lifting / sollevamento / hubantriebe / levage / elevactión	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotation / rotaction	$\mathbf{P}\ [KW] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translation / translacion	$\mathbf{P}\ [KW] = \dfrac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

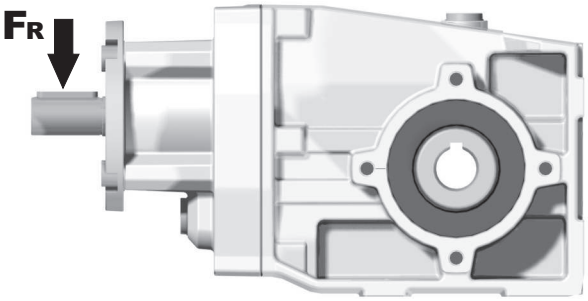
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

	$\mathbf{M}\ [Nm] = \dfrac{\mathbf{9550} \cdot \mathbf{P}[KW]}{\mathbf{n}\ [rpm]}$
	$\mathbf{M}\ [lb\ in] = \dfrac{\mathbf{63030} \cdot \mathbf{P}[HP]}{\mathbf{n}\ [rpm]}$

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





9

$F_R\ [N] = \dfrac{\mathbf{M}\ [Nm] \cdot \mathbf{2000}}{\mathbf{d}\ [mm]} \cdot f_K$	$F_R\ [N] = \dfrac{\mathbf{M}\ [lb\ in] \cdot \mathbf{8.9}}{\mathbf{d}\ [in]} \cdot f_K$

M	Momento torcente / Output torque / Abtriebsdrehmoment / Couple / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diamètre primitif / Diámetro primitivo
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficient de transmission / Coeficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engrenage / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Chaîne / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Courroie trap. / Correa trapezoidal **2.50** 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.

B — Output speed / Velocità in uscita / Abtriebsdrehzahl / Vitesse de sortie / Velocidad de salida

Nominal power / Potenza nominale / Max. mögliche Leistung / Poissance nominale / Potencia nominal

Gear size / Grandezza riduttore / Getriebegröße / Taille réducteur / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Puissance moteur / Potencia motor

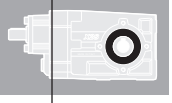
A — Nominal torque / Momento torcente nominale / Nenn Drehmoment / Couple nominal / Par de torsión nominal

Flange code / Codice flangia / Flanschtype / Code bride / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Vitesse en entrée / Velocidad de entrada

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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft Ø	Ratios code
289.7	**4.83**	0.37	11.7	2.6	0.95	30			C	C		289		01
189.2	**7.40**	0.37	17.9	1.7	0.62	30			C	C		287		02
146.2	**9.58**	0.37	23.2	1.7	0.64	40			C	C		199		03
127.5	**10.98**	0.37	26.6	1.7	0.63	45			C	C		179		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

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour / Applicazione cont. o interm. con n.ro operazioni/ora	10	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 / Applicazione intermittente con n.ro operazioni/ora	> 10	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/-sockel / 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

A	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	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Sélectionner la vitesse de sortie	Seleccionar la velocidad de salida
C	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
D	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft ø	Ratios code
290	**4.83**	0.37	12	2.6	0.95	30			C	C		289		01
189	**7.40**	0.37	18	1.7	0.62	30			C	C		287		02
146	**9.58**	0.37	23	1.7	0.64	40			C	C		199		03
128	**10.98**	0.37	27	1.7	0.63	45			C	C		179		04
107	**13.07**	0.37	32	1.4	0.53	45			C	C		159	**standard**	05
95	**14.66**	0.37	35	1.3	0.47	45			C	C		197	**ø20**	06
89	**15.79**	0.37	38	1.2	0.44	45			C	C		139		07
83	**16.81**	0.37	41	1.1	0.41	45			C	C		177		08
70	**20.00**	0.37	48	1.0	0.37	48			C	C		157	ø18	09
64	**21.93**	0.37	53	0.9	0.35	50			C	C		109	On request	10
58	**24.18**	0.25	39	1.3	0.32	50			C	C		137		11
48.2	**29.04**	0.25	47	1.1	0.26	50			C	C		99		12
41.7	**33.57**	0.18	42	1.2	0.23	50			C	C		107		13
36.2	**38.67**	0.18	48	1.0	0.20	50			C	C		79		14
31.5	**44.44**	0.18	55	0.9	0.17	50			C	C		97		15
23.7	**59.18**	0.12	48	1.0	0.13	50			C	C		77		16
19.9	**70.24**	0.09	45	1.1	0.11	50			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 requiren 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
0.25 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			

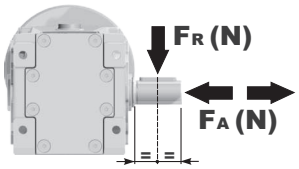
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

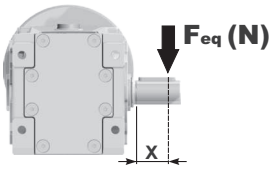
tab. 1

▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$Feq = F_R \cdot \frac{101}{X+82}$$





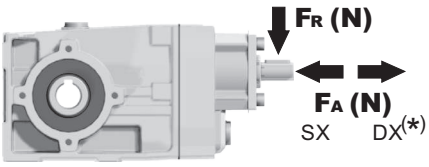
n_2 [min^{-1}]	FA	FR
400	360	1800
250	380	1900
150	420	2100

n_2 [min^{-1}]	FA	FR
100	440	2200
75	440	2200
50	440	2200

n_2 [min^{-1}]	FA	FR
25	440	2200
15	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_1 [min^{-1}]	FA	FR
1400	140	700
900	160	800
500	190	950

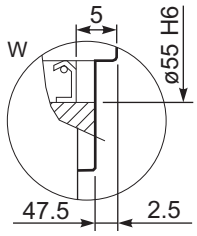
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

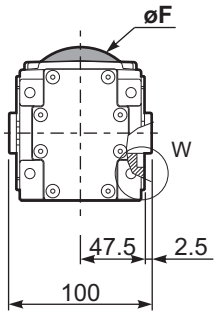
tab. 2

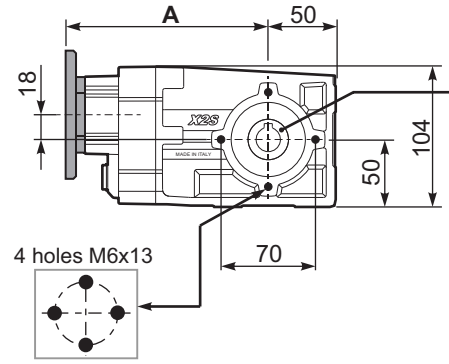
PX22SC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	3.70 kg

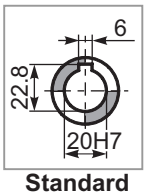
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	154.5
71B5	K050.4.042	160	152
56B14	KC40.4.049	80	152
63B14	K050.4.047	90	154.5
71B14	K050.4.045	105	152



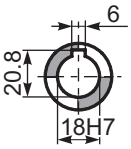




Mounting holes position
Posizione fori di montaggio

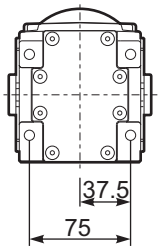


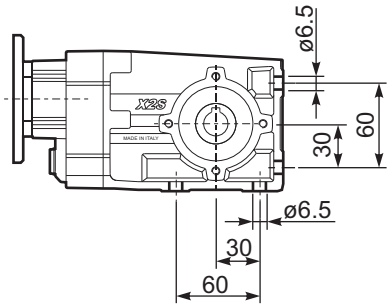
Standard
Hollow shaft



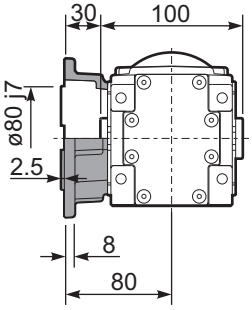
On request
A richiesta

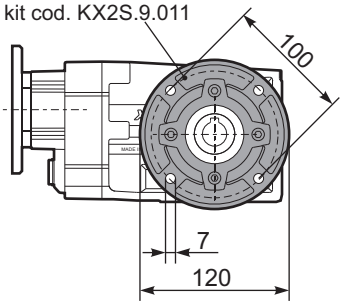
PX22S...FB.. Feet
Piedini



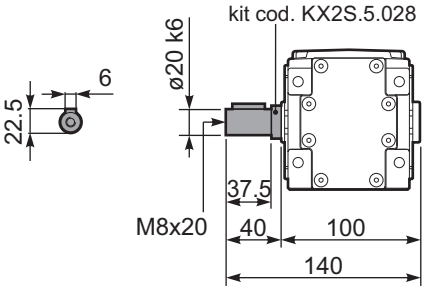


PX22S...-F1.. Output flange
Flangia uscita

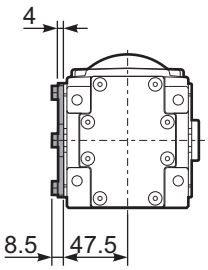


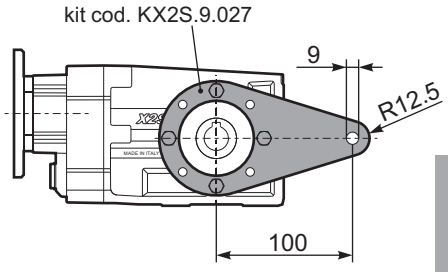


PX22SA.. Single output shaft
Albero semplice in uscita

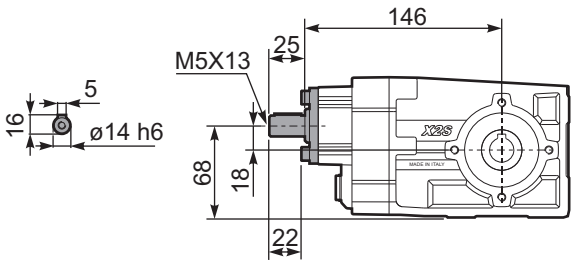


PX22S...BR.. Reaction Arm
Braccio di reazione





RX22S.. Input shaft
Albero in entrata



▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.96** for all ratios

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
191	**7.33**	1.5	72	1.0	**1.5**	**70**	B				C	C		289		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	**standard**	05
69	**20.30**	0.75	100	0.9	**0.68**	**90**	B				C	C		197	**ø20**	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	ø25	09
47.6	**29.40**	0.55	106	0.8	**0.47**	**90**	B				C	C		109	On request	10
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 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 **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 requiren 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
0.40 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		

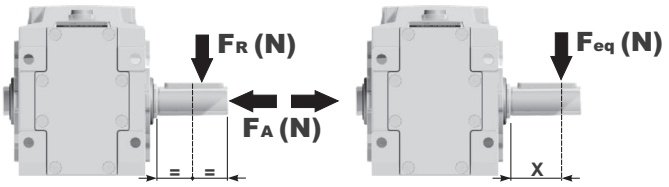
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$Feq = F_R \cdot \frac{115.5}{X+96.5}$$



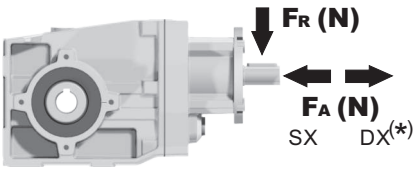
n_2 [min^{-1}]	FA	FR
250	400	2000
150	450	2250
100	500	2500

n_2 [min^{-1}]	FA	FR
75	560	2800
50	560	2800
25	560	2800

n_2 [min^{-1}]	FA	FR
15	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_1 [min^{-1}]	FA	FR
1400	240	1200
900	280	1400
500	340	1700

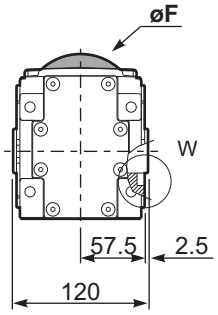
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

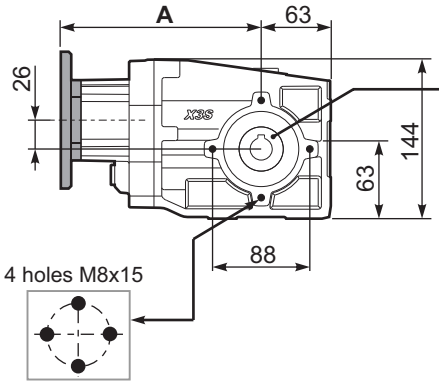
tab. 2

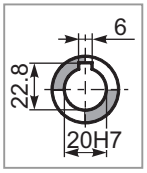
PX32SC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	6.30 kg

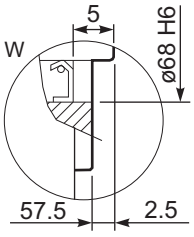
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	184
71B5	K063.4.042	160	182
80/90B5	K063.4.043	200	184
71B14	K063.4.047	105	182
80B14	K063.4.046	120	184
90B14	K063.4.041	140	184



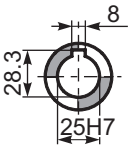




Standard
Hollow shaft

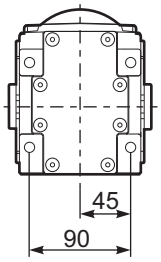


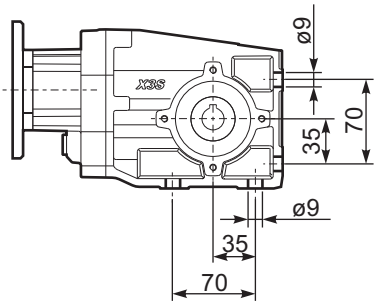
Mounting holes position
Posizione fori di montaggio



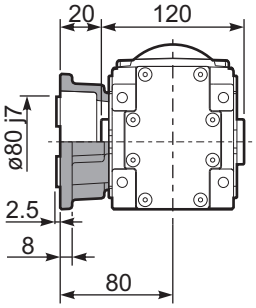
On request
A richiesta

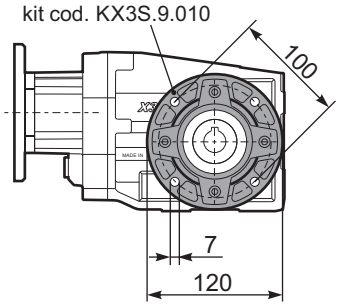
PX32S...FB.. Feet
Piedini



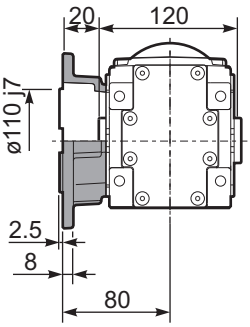


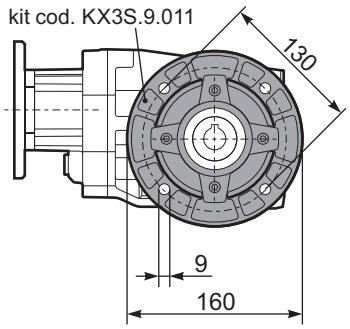
PX32S...-F1.. Output flange
Flangia uscita



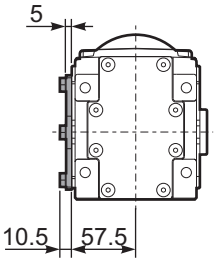


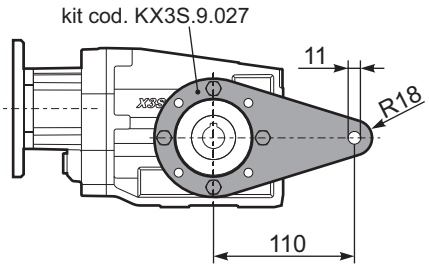
PX32S...-F2.. Output flange
Flangia uscita



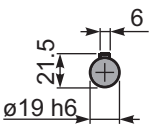


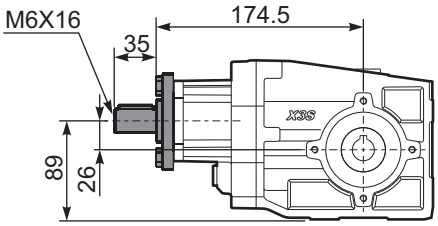
PX32S...BR.. Reaction Arm
Braccio di reazione



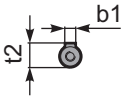


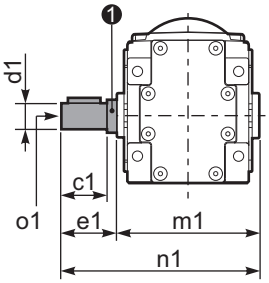
RX32S... Input shaft
Albero in entrata





PX32SA.. Single output shaft
Albero semplice in uscita





d1	b1	c1	e1	m1	n1	t2	o1	❶ kit code
ø20 k6	6	37.5	40	120	160	22.5	M8x20	KX2S.5.028
ø25 $^{-0.005}_{-0.020}$	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft	Ratios code
38.7	**36.17**	0.37	86	1.2	**0.43**	**100**			C	C		17179		02
31.7	**44.21**	0.37	105	1.0	**0.35**	**100**			C	C		19139		03
27.6	**50.68**	0.25	81	1.2	**0.31**	**100**			C	C		17139		04
25.3	**55.36**	0.25	89	1.1	**0.28**	**100**			C	C		17177		05
23.2	**60.31**	0.25	96	1.0	**0.26**	**100**			C	C		15139		06
21.2	**65.88**	0.25	105	0.9	**0.24**	**100**			C	C		15177		07
19.4	**72.25**	0.18	88	1.1	**0.22**	**100**			C	C		10179	**standard**	08
17.6	**79.64**	0.18	97	1.0	**0.20**	**100**			C	C		13177	**ø20**	09
15.2	**92.31**	0.18	113	0.9	**0.17**	**100**			C	C		15137		10
14.6	**95.65**	0.18	117	0.9	**0.16**	**100**			C	C		9179		11
13.8	**101.23**	0.12	80	1.2	**0.15**	**100**			C	C		10139	ø25	12
11.0	**127.37**	0.12	101	1.0	**0.12**	**100**			C	C		7179	On request	13
9.3	**151.16**	0.09	95	1.0	**0.10**	**100**			C	C		6179		14
7.8	**178.46**	0.09	113	0.9	**0.09**	**100**			C	C		7139		15
6.6	**211.79**	0.06	88	1.1	**0.07**	**100**			C	C		6139		16
6.1	**231.37**	0.06	96	1.0	**0.07**	**100**			C	C		6177		17
5.1	**273.16**	0.06	113	0.9	**0.06**	**100**			C	C		7137		18
4.3	**324.18**	0.06	134	0.7	**0.05**	**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 requiren 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.

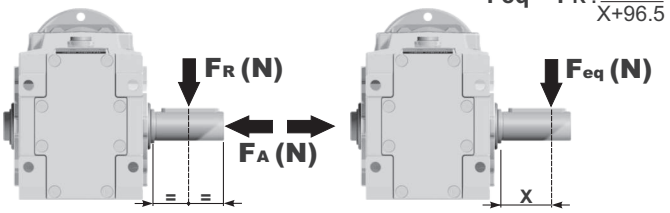
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.70 LT	0.65 LT	0.40 LT	0.65 LT	0.95 LT	0.65 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

$$F_{eq} = F_R \cdot \frac{115.5}{X+96.5}$$



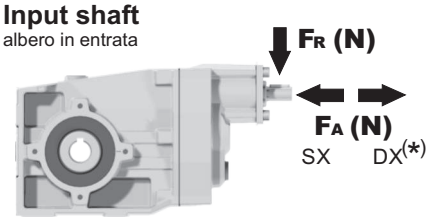
n_2 [min^{-1}]	FA	FR
250	400	2000
150	450	2250
100	500	2500

n_2 [min^{-1}]	FA	FR
75	560	2800
50	560	2800
25	560	2800

n_2 [min^{-1}]	FA	FR
15	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_1 [min^{-1}]	FA	FR
1400	140	700
900	160	800
500	190	950

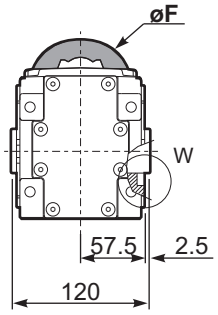
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

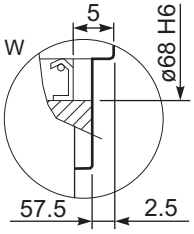
tab. 2

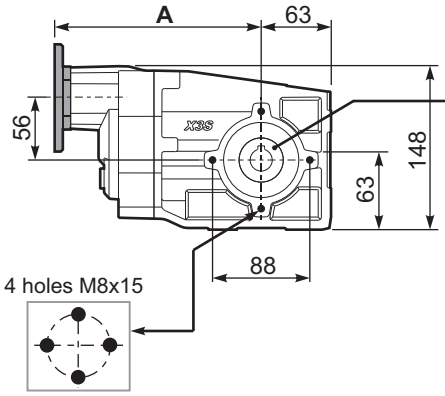
PX33SC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	6.55 kg

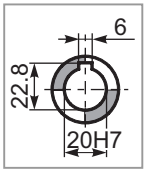
M. flanges	Kit code	øF	A
63B5	K050.4.041	138	189.5
71B5	K050.4.042	160	187
56B14	KC40.4.049	80	187
63B14	K050.4.047	90	189.5
71B14	K050.4.045	105	187



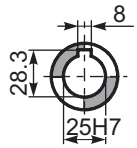




Mounting holes position
Posizione fori di montaggio

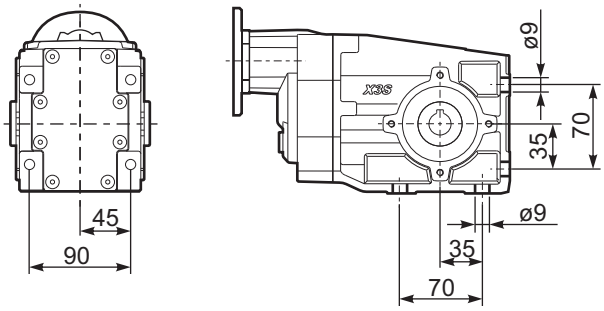


Standard
Hollow shaft

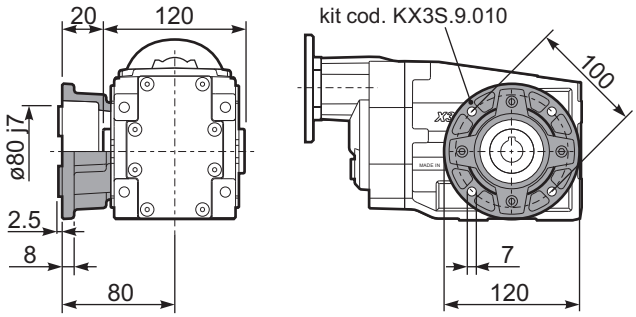


On request
A richiesta

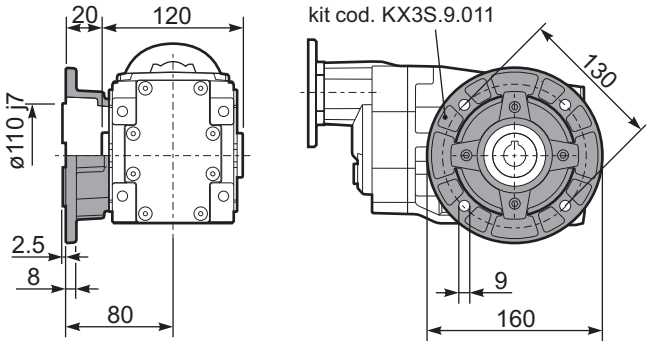
PX33S...FB.. Feet
Piedini



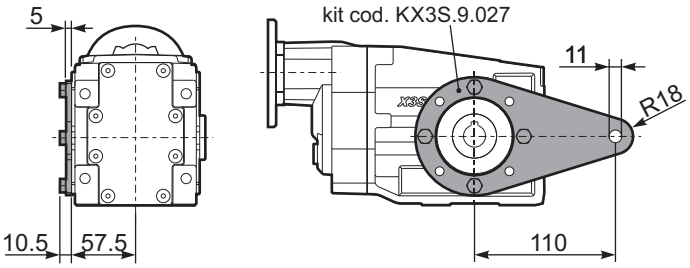
PX33S...-F1.. Output flange
Flangia uscita



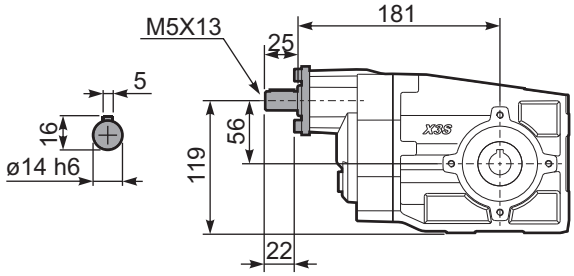
PX33S...-F2.. Output flange
Flangia uscita



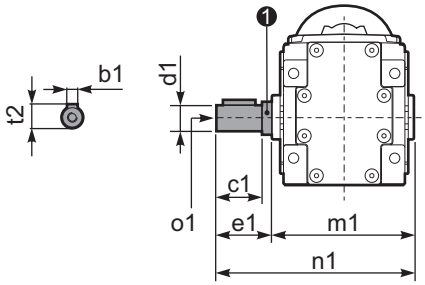
PX33S...BR.. Reaction Arm
Braccio di reazione



RX33S... Input shaft
Albero in entrata



PX33SA.. Single output shaft
Albero semplice in uscita



d1	b1	c1	e1	m1	n1	t2	o1	❶ kit code
ø20 k6	6	37.5	40	120	160	22.5	M8x20	KX2S.5.028
ø25 $^{-0.005}_{-0.020}$	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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -Q 71	-R 80	-T 90	-U 100 112		Output Shaft	Ratios code
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	**standard ø25**	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	ø30 On request	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 requiren 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.

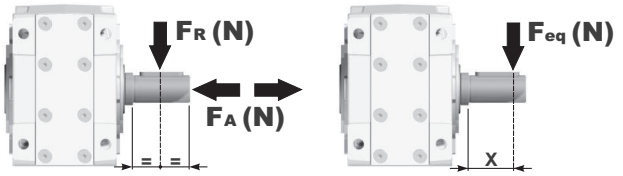
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.60 LT	0.75 LT	0.50 LT	0.70 LT	1.10 LT	0.60 LT	Ask
SHELL Omala S4 WE 320				**ENI** Telium VSF 320		

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

$$F_{eq} = F_R \cdot \frac{123}{X+97}$$



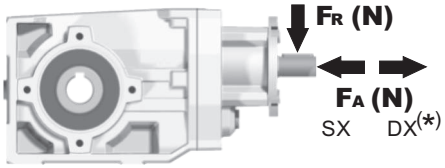
n_2 [min^{-1}]	FA	FR
250	500	2500
150	600	3000
100	700	3500

n_2 [min^{-1}]	FA	FR
75	800	4000
50	960	4800
25	960	4800

n_2 [min^{-1}]	FA	FR
15	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_1 [min^{-1}]	FA	FR
1400	240	1200
900	280	1400
500	340	1700

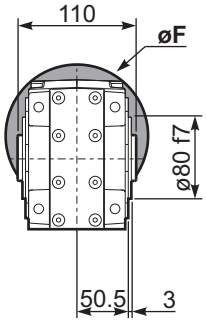
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

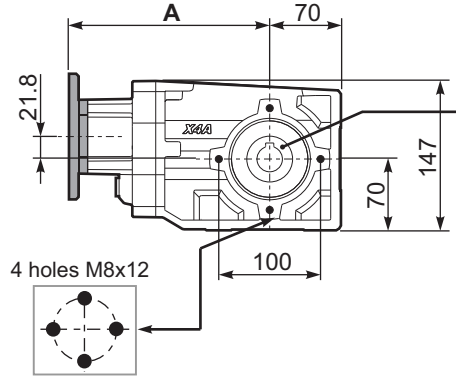
tab. 2

PX42AC... Basic Gearbox
Riduttore base

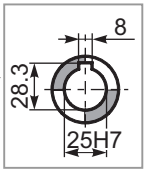
Gearbox weight peso riduttore	7.82 kg

M. flanges	Kit code	øF	A
63B5	K063.4.041	140	199.5
71B5	K063.4.042	160	197.5
80/90B5	K063.4.043	200	199.5
100/112B5	KC40.4.043	250	214.3
71B14	K063.4.047	105	197.5
80B14	K063.4.046	120	199.5
90B14	K063.4.041	140	199.5
100/112B14	KC40.4.041	160	214.5

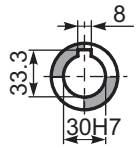




Mounting holes position
Posizione fori di montaggio

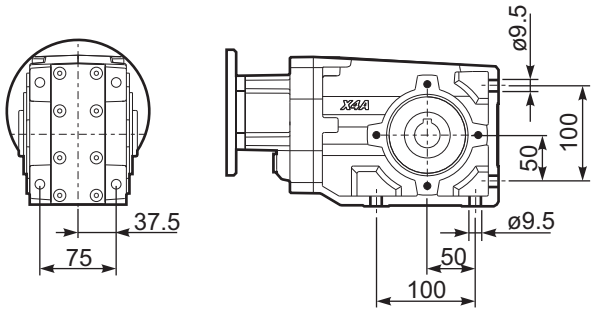


Standard
Hollow shaft

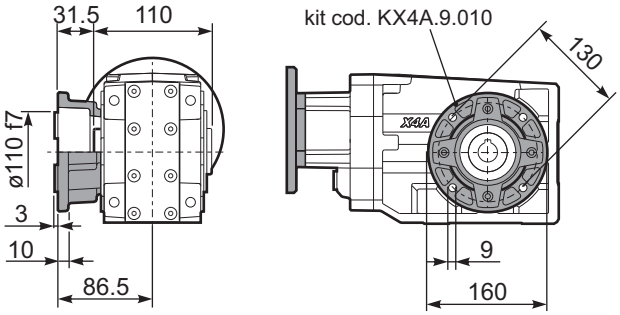


On request
A richiesta

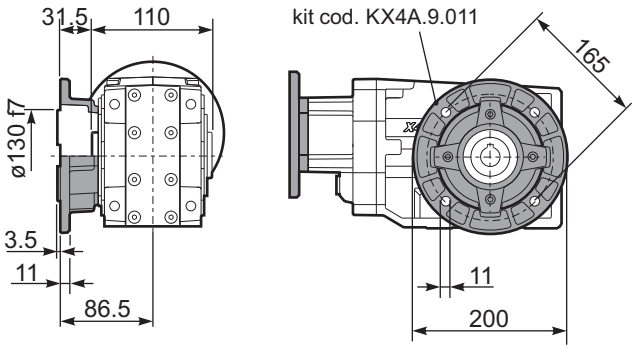
PX42A...FB.. Feet
Piedini



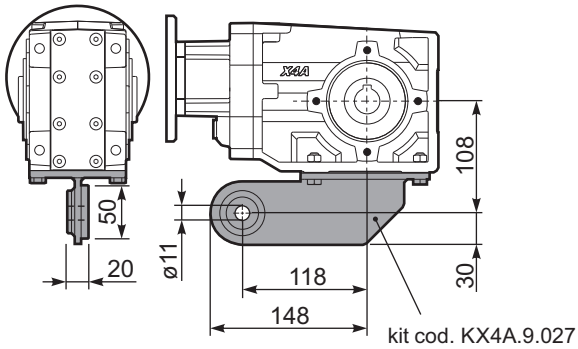
PX42A...-F2.. Output flange
Flangia uscita



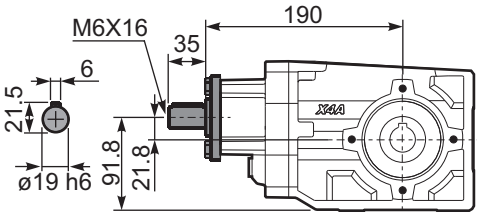
PX42A...-F3.. Output flange
Flangia uscita



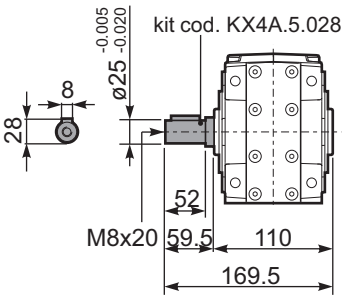
PX42A...BR.. Reaction Arm
Braccio di reazione



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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	Available B5 motor flanges -C 71	Available B14 motor flanges -O 56	Available B14 motor flanges -P 63	Available B14 motor flanges -Q 71		Output Shaft	Ratios code
27.8	**50.35**	0.37	119	1.3	**0.46**	**150**			C	C		171311		01
25.4	**55.22**	0.37	131	1.1	**0.42**	**150**			C	C		17178		02
23.4	**59.92**	0.37	142	1.1	**0.39**	**150**			C	C		151311		03
21.3	**65.72**	0.37	156	1.0	**0.36**	**150**			C	C		15178		04
19.5	**71.78**	0.25	115	1.3	**0.33**	**150**			C	C		101711		05
17.6	**79.44**	0.25	127	1.2	**0.29**	**150**			C	C		13178	**standard ø25**	06
15.2	**92.08**	0.25	147	1.0	**0.25**	**150**			C	C		15138		07
14.7	**95.03**	0.25	152	1.0	**0.25**	**150**			C	C		91711		08
11.1	**126.55**	0.18	155	1.0	**0.20**	**160**			C	C		71711		09
10.5	**133.15**	0.18	163	1.0	**0.19**	**160**			C	C		91311	ø30 On request	10
9.3	**150.18**	0.12	119	1.3	**0.17**	**160**			C	C		61711		11
7.9	**177.30**	0.12	140	1.1	**0.14**	**160**			C	C		71311		12
6.7	**210.42**	0.09	133	1.2	**0.12**	**160**			C	C		61311		13
6.1	**230.79**	0.09	146	1.1	**0.11**	**160**			C	C		6178		14
5.1	**272.47**	0.06	113	1.4	**0.09**	**160**			C	C		7138		15
4.3	**323.37**	0.06	134	1.2	**0.08**	**160**			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 requiren 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.

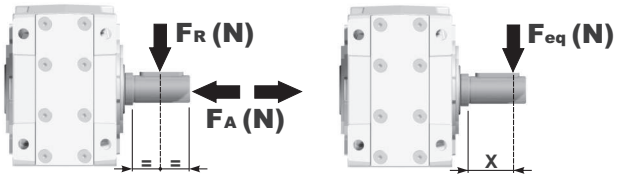
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.80 LT	0.80 LT	0.60 LT	0.80 LT	1.20 LT	0.70 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

$$F_{eq} = F_R \cdot \frac{123}{X+97}$$



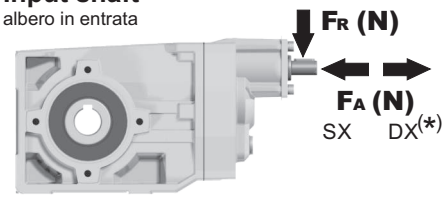
n_2 [min^{-1}]	FA	FR
250	500	2500
150	600	3000
100	700	3500

n_2 [min^{-1}]	FA	FR
75	800	4000
50	960	4800
25	960	4800

n_2 [min^{-1}]	FA	FR
15	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



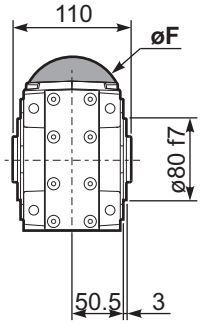
n_1 [min^{-1}]	FA [N]	FR [N]
1400	140	700
900	160	800
500	190	950

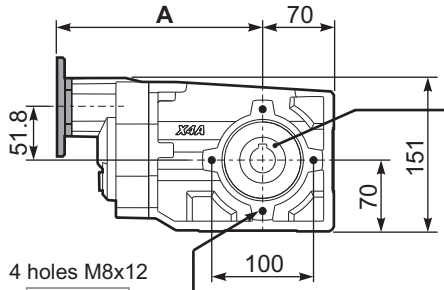
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

PX43AC... Basic Gearbox
Riduttore base

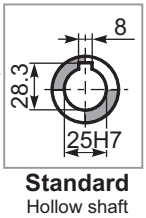
Gearbox weight peso riduttore	7.93 kg

M. flanges	Kit code	øF	A
63B5	K050.4.041	138	205
71B5	K050.4.042	160	202.5
56B14	KC40.4.049	80	202.5
63B14	K050.4.047	90	205
71B14	K050.4.045	105	202.5

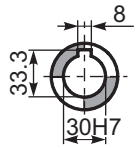




Mounting holes position
Posizione fori di montaggio

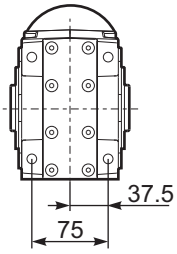


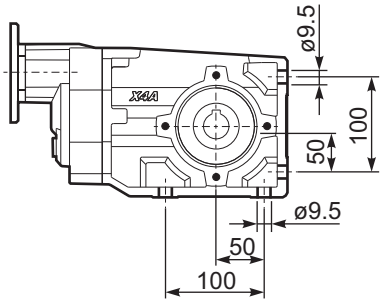
Standard
Hollow shaft



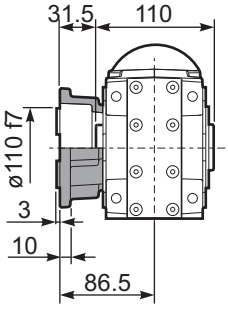
On request
A richiesta

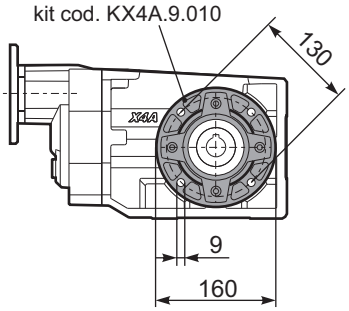
PX43A...FB.. Feet
Piedini



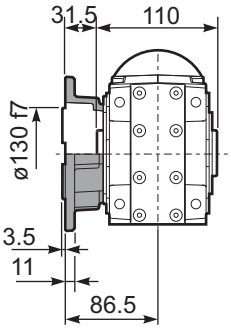


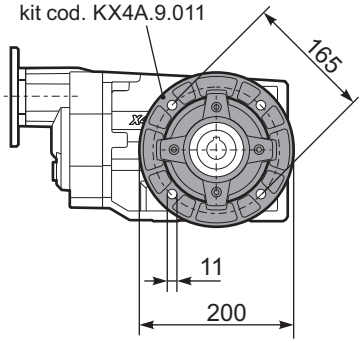
PX43A...-F2.. Output flange
Flangia uscita



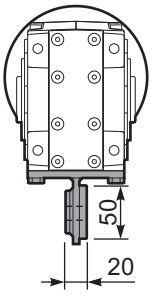


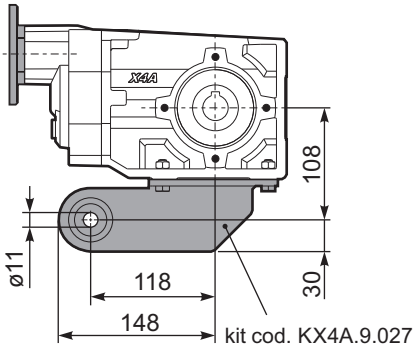
PX43A...-F3.. Output flange
Flangia uscita



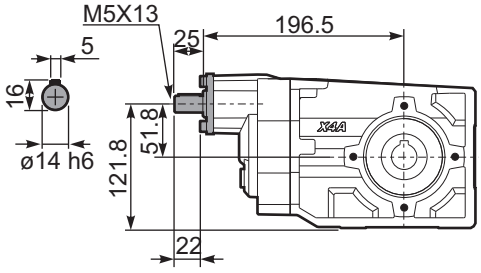


PX43A...BR.. Reaction Arm
Braccio di reazione

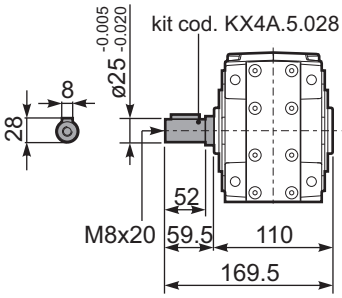




RX43A... Input shaft
Albero in entrata



PX43A**A**.. Single output shaft
Albero semplice in uscita



▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.96** for all ratios

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	Available B14 motor flanges -R 80	-T 90	-U 100 112		Output Shaft ø	Ratios code
232	**6.03**	3	116	1.2	3.4	135	B							3011		01
151	**9.26**	3	179	0.9	2.6	155	B							308		02
123	**11.36**	3	219	1.0	3.1	230	B							2011		03
91	**15.36**	2.2	218	1.1	2.5	250	B							1611		04
80	**17.46**	2.2	248	1.0	2.2	250	B							208	**standard**	05
70	**19.97**	2.2	284	0.9	1.9	250	B							1311	**ø30**	06
59	**23.60**	1.5	231	1.1	1.6	250	B							168		07
57	**24.45**	1.5	239	1.0	1.6	250	B							1111		08
45.6	**30.69**	1.1	220	1.1	1.2	250	B							138	ø35	09
39.6	**35.35**	1.1	253	1.0	1.1	250	B							811	On request	10
37.3	**37.57**	1.1	269	0.9	1.0	250	B							118		11
28.8	**48.68**	0.75	239	1.0	0.78	250	B							611		12
25.8	**54.33**	0.75	267	0.9	0.70	250	B							88		13
18.7	**74.81**	0.37	181	1.2	0.43	210	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 requiren 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.

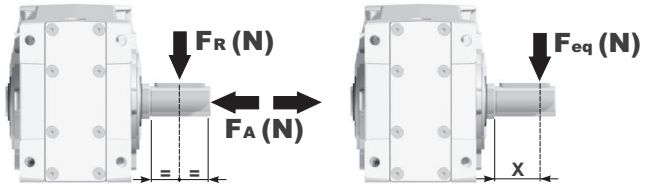
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.90 LT	1.50LT	0.75 LT	1.40 LT	1.95 LT	1.15 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

$$F_{eq} = F_R \cdot \frac{144.5}{X+114.5}$$



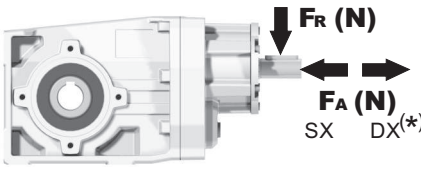
n_2 [min^{-1}]	FA	FR
250	600	3000
150	700	3500
100	800	4000

n_2 [min^{-1}]	FA	FR
75	820	4100
50	960	4800
25	1350	6750

n_2 [min^{-1}]	FA	FR
15	1660	8300

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 [min^{-1}]	FA	FR
1400	450	2250
900	500	2500
500	600	3000

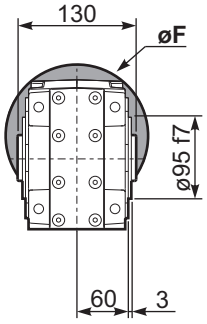
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

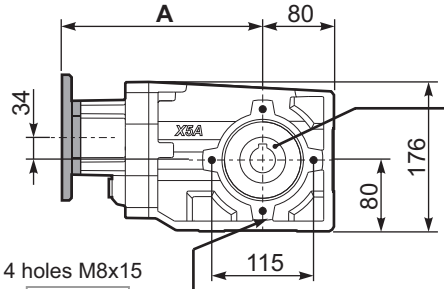
tab. 2

PX52AC... Basic Gearbox
Riduttore base

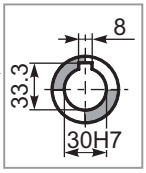
Gearbox weight peso riduttore	12.80 kg

M. flanges	Kit code	øF	A
71B5	K023.4.041	160	234
80/90B5	K023.4.042	200	236
100/112B5	K023.4.043	250	245
80B14	K085.4.046	120	236
90B14	K085.4.045	140	236
100/112B14	K085.4.047	160	245

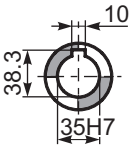




Mounting holes position
Posizione fori di montaggio

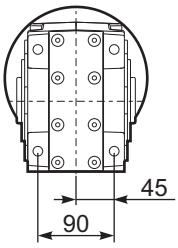


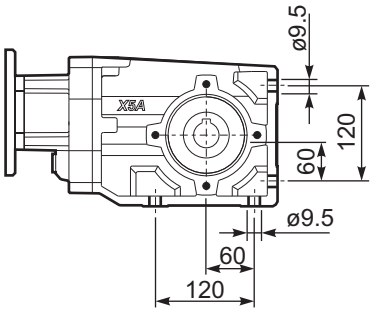
Standard
Hollow shaft



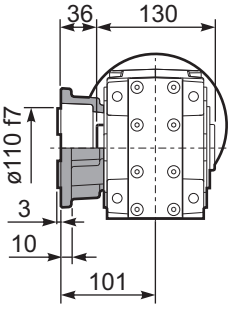
On request
A richiesta

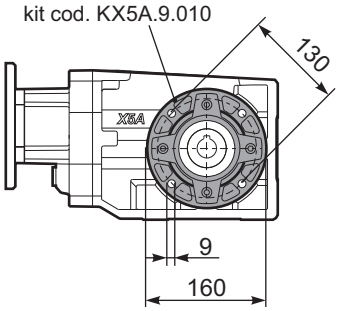
PX52A...FB.. Feet
Piedini



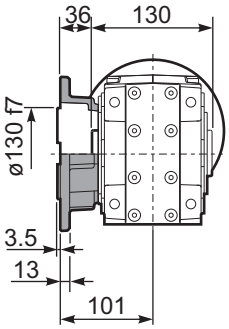


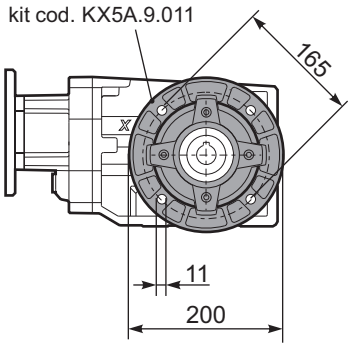
PX52A...-F2.. Output flange
Flangia uscita



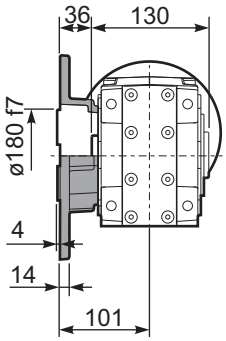


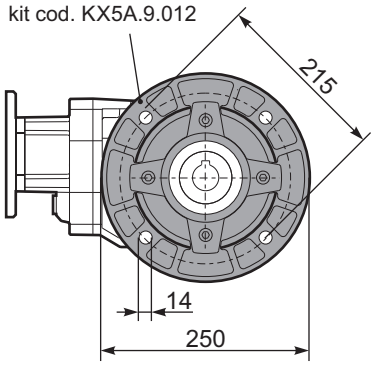
PX52A...-F3.. Output flange
Flangia uscita



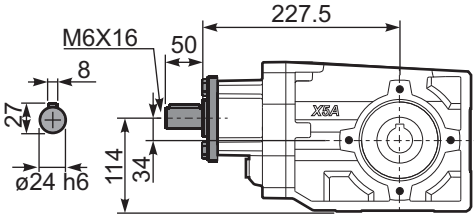


PX52A...-F4.. Output flange
Flangia uscita

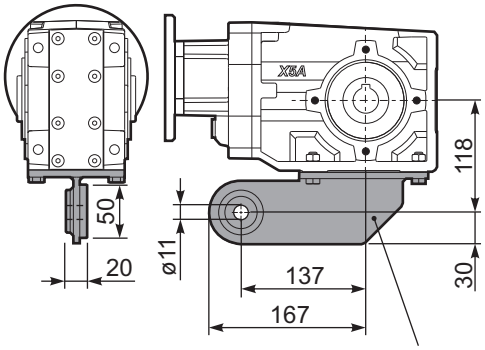




RX52A... Input shaft
Albero in entrata

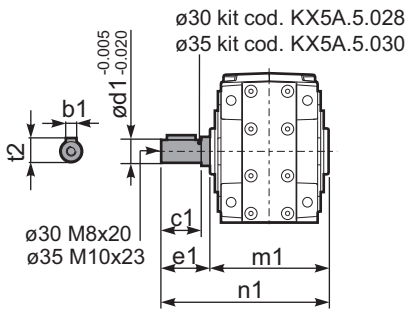


PX52A...BR.. Reaction Arm
Braccio di reazione



kit cod. KX5A.9.027

PX52A**A**.. Single output shaft
Albero semplice in uscita



	b1	c1	d1	e1	m1	n1	t2
ø30	8	60	30	68	134	202	33
ø35	10	60	35	73.5	141	214.5	38

▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.94** for all ratios

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
24.7	**56.76**	0.55	201	1.2	0.69	250	B				C	C		191311		01
21.3	**65.79**	0.55	233	1.1	0.59	250	B				C	C		171311		02
18.1	**77.23**	0.55	274	0.9	0.50	250	B				C	C		151311		03
16.0	**87.23**	0.37	207	1.2	0.45	250	B				C	C		19138		04
15.2	**92.18**	0.37	219	1.1	0.42	250	B				C	C		131311		05
13.9	**100.47**	0.37	238	1.0	0.39	250	B				C	C		19811		06
12.0	**116.45**	0.37	276	0.9	0.33	250	B				C	C		17811	**standard**	07
11.1	**125.82**	0.25	201	1.2	0.31	250	B				C	C		101311	**ø30**	08
9.9	**141.66**	0.25	227	1.1	0.28	250	B				C	C		13138		09
8.6	**163.16**	0.25	261	1.0	0.24	250	B				C	C		13811		10
7.8	**178.96**	0.18	219	1.1	0.22	250	B				C	C		1788	ø35	11
7.2	**193.36**	0.18	237	1.1	0.20	250	B				C	C		10138	On request	12
6.5	**216.84**	0.18	265	0.9	0.18	250	B				C	C		71311		13
5.5	**252.36**	0.12	200	1.3	0.15	250	B				C	C		9138		14
4.8	**290.67**	0.12	230	1.1	0.13	250	B				C	C		9811		15
4.2	**333.23**	0.12	263	0.9	0.12	250	B				C	C		7138		16
3.6	**383.82**	0.12	303	0.8	0.10	250	B				C	C		7811		17
3.1	**446.70**	0.12*	353	0.7	0.09	250	B				C	C		988		18
2.4	**589.85**	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 requiren 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.

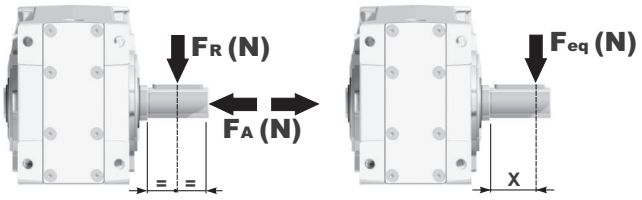
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
1.30 LT	1.55 LT	0.85 LT	1.45 LT	2.10 LT	1.25 LT	Ask
SHELL Omala S4 WE 320				**ENI** Telium VSF 320		

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

$$F_{eq} = F_R \cdot \frac{144.5}{X+114.5}$$



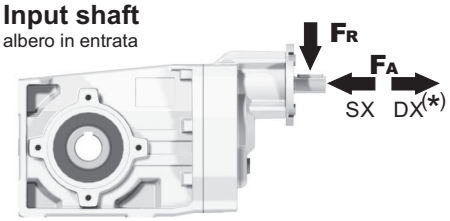
n_2 [min^{-1}]	FA	FR
250	600	3000
150	700	3500
100	800	4000

n_2 [min^{-1}]	FA	FR
75	820	4100
50	960	4800
25	1350	6750

n_2 [min^{-1}]	FA	FR
15	1660	8300

F_R 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 [min^{-1}]	FA [N]	FR [N]
1400	400	2000
900	440	2200
500	440	2200

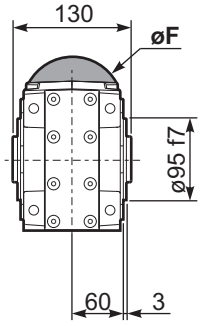
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

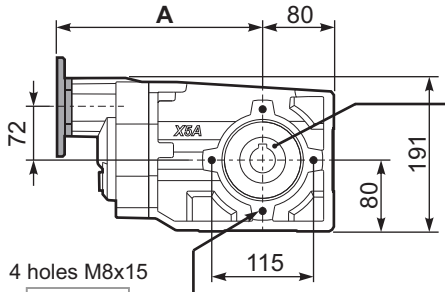
tab. 2

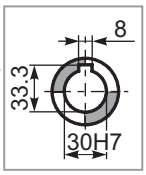
PX53AC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	12.65 kg

M. flanges	Kit code	øF	A
63B5	K063.4.041	140	246
71B5	K063.4.042	160	244
80/90B5	K063.4.043	200	246
71B14	K063.4.047	105	244
80B14	K063.4.046	120	246
90B14	K063.4.041	140	246

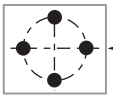




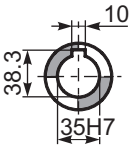


Standard
Hollow shaft

4 holes M8x15

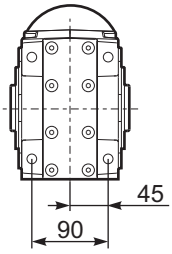


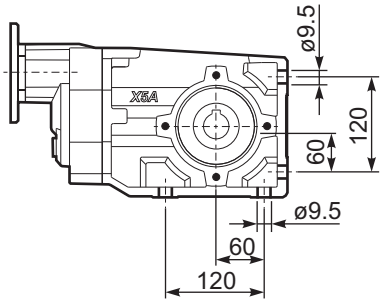
Mounting holes position
Posizione fori di montaggio



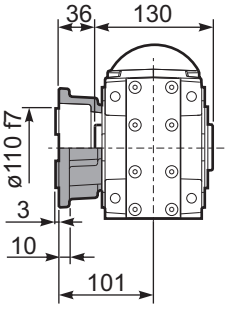
On request
A richiesta

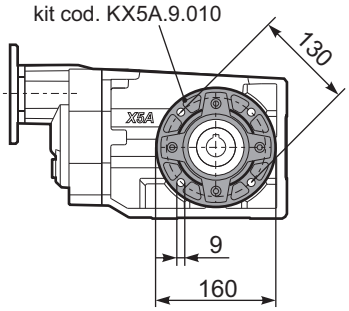
PX53A...FB.. Feet
Piedini



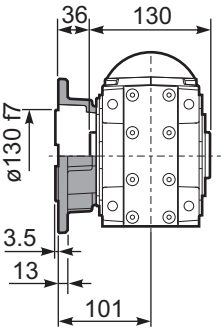


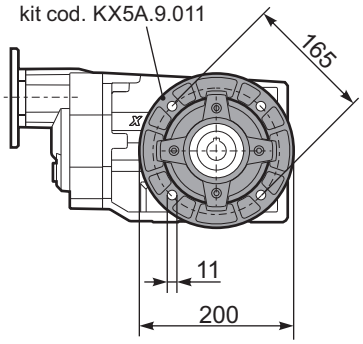
PX53A...-F2.. Output flange
Flangia uscita



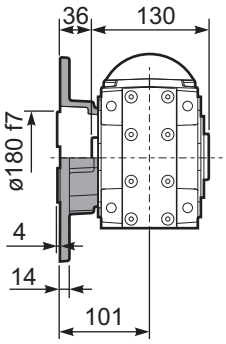


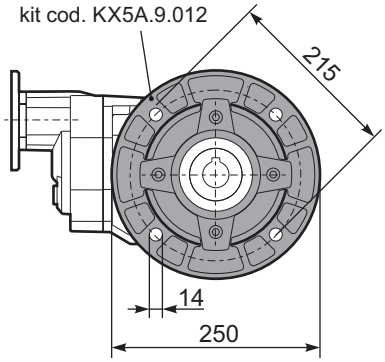
PX53A...-F3.. Output flange
Flangia uscita



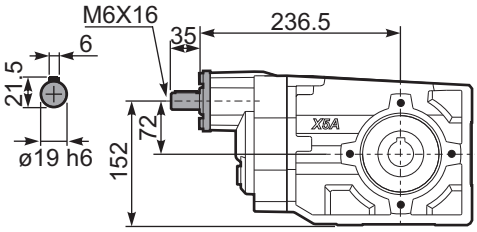


PX53A...-F4.. Output flange
Flangia uscita

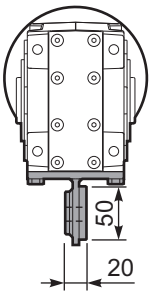


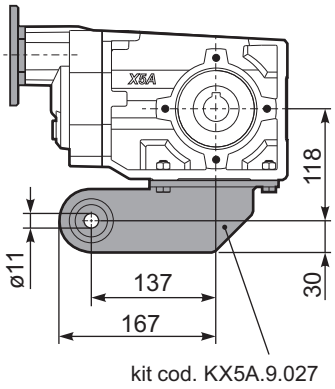


RX53A... Input shaft
Albero in entrata

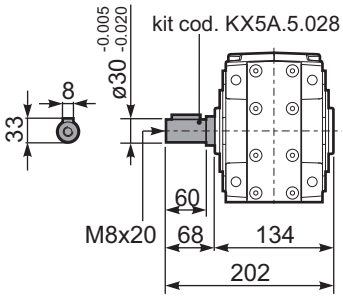


PX53A...BR.. Reaction Arm
Braccio di reazione





PX53AA.. Single output shaft
Albero semplice in uscita



▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.96** for all ratios

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft	Ratios code
232	**6.03**	5.5	211	1.1	6.1	240	B									3011		01
151	**9.26**	4	238	1.1	4.5	270	B									308		02
123	**11.36**	4	291	1.2	4.7	350	B									2011		03
91	**15.36**	4	394	1.0	3.8	385	B									1611		04
80	**17.46**	4	448	0.9	3.5	400	B									208	**standard**	05
70	**19.97**	3	386	1.1	3.1	410	B									1311	**ø35**	06
59	**23.60**	3	456	0.9	2.7	410	B									168		07
57	**24.45**	3	472	0.9	2.6	410	B									1111		08
45.6	**30.69**	2.2	436	0.9	2.0	410	B									138	ø40	09
39.6	**35.35**	1.5	346	1.2	1.8	410	B									811	On request	10
37.3	**37.57**	1.5	368	1.1	1.7	410	B									118		11
28.8	**48.68**	1.1	348	1.0	1.1	365	B									611		12
25.8	**54.33**	1.1	389	1.1	1.2	410	B									88		13
18.7	**74.81**	0.75	367	1.0	0.73	360	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 requiren 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.

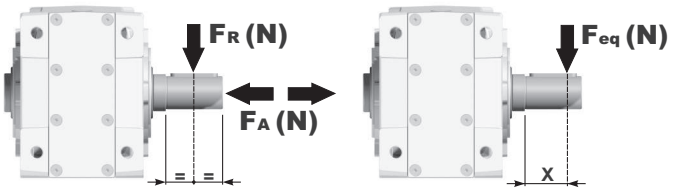
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
1.25 LT	1.70 LT	0.95 LT	1.60 LT	2.45 LT	1.50 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

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

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{168}{X+138}$$



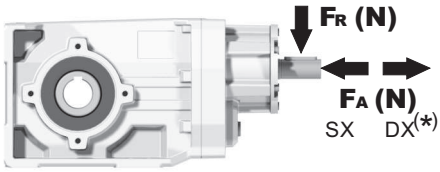
n_2 [min^{-1}]	FA	FR
250	600	3000
150	700	3500
100	780	3900

n_2 [min^{-1}]	FA	FR
75	890	4450
50	1140	5700
25	1330	6650

n_2 [min^{-1}]	FA	FR
15	1660	8300

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 [min^{-1}]	FA	FR
1400	450	2250
900	500	2500
500	600	3000

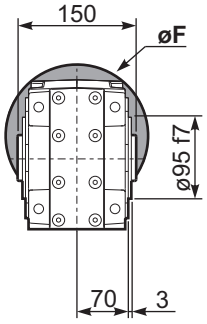
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

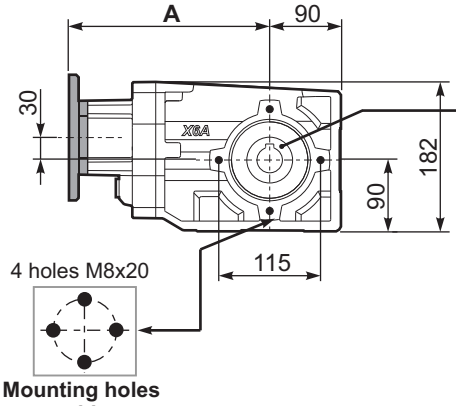
tab. 2

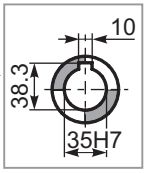
PX62AC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	15.80 kg

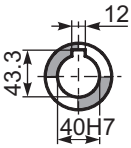
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	253
80/90B5	K023.4.042	200	255
100/112B5	K023.4.043	250	264
132B5	KC51.4.043	300	285
80B14	K085.4.046	120	255
90B14	K085.4.045	140	255
100/112B14	K085.4.047	160	264
132B14	KC51.4.041	200	285





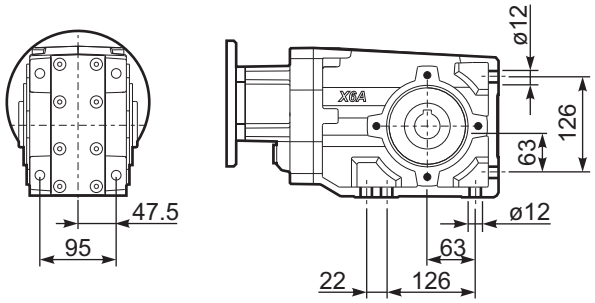


Standard
Hollow shaft

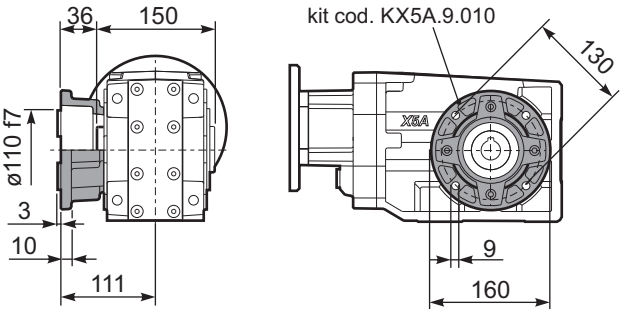


On request
A richiesta

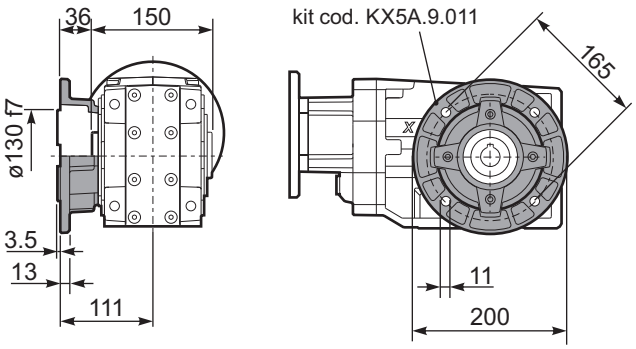
PX62A...FB.. Feet
Piedini



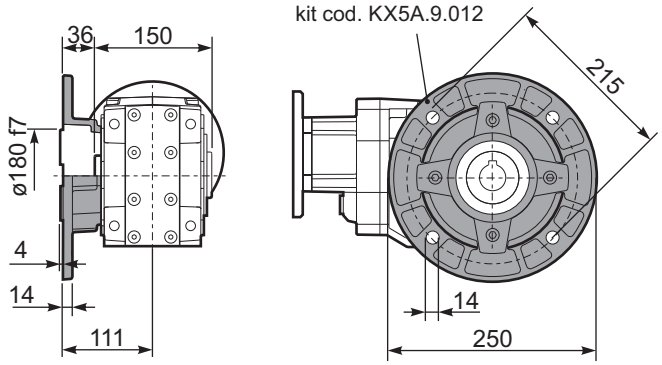
PX62A...-F2.. Output flange
Flangia uscita



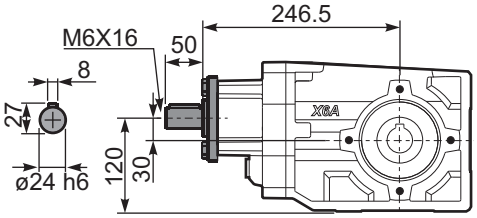
PX62A...-F3.. Output flange
Flangia uscita



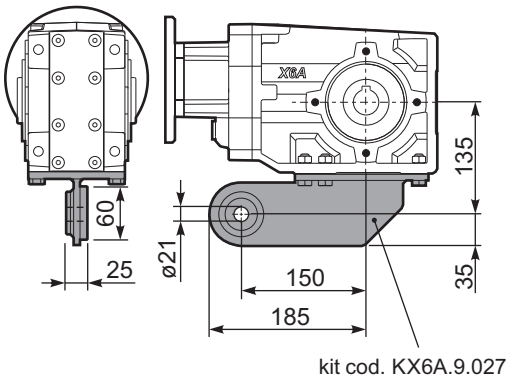
PX62A...-F4.. Output flange
Flangia uscita



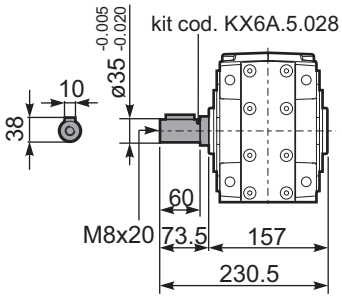
RX62A... Input shaft
Albero in entrata



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_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft	Ratios code
24.7	**56.76**	1.1	398	1.0	1.1	410	B				C	C		191311	standard ø35	01
21.3	**65.79**	0.75	316	1.3	0.97	410	B				C	C		171311		02
18.1	**77.23**	0.75	371	1.1	0.83	410	B				C	C		151311		03
16.0	**87.23**	0.75	420	1.0	0.73	410	B				C	C		19138		04
15.2	**92.18**	0.75	443	0.9	0.69	410	B				C	C		131311		05
13.9	**100.47**	0.55	357	1.2	0.64	410	B				C	C		19811		06
12.0	**116.45**	0.55	413	1.0	0.55	410	B				C	C		17811		07
11.1	**125.82**	0.55	446	0.9	0.51	410	B				C	C		101311		08
9.9	**141.66**	0.37	336	1.2	0.45	410	B				C	C		13138		09
8.6	**163.16**	0.37	387	1.1	0.39	410	B				C	C		13811	ø40 On request	10
7.8	**178.96**	0.37	424	1.0	0.36	410	B				C	C		1788		11
7.2	**193.36**	0.37	459	0.9	0.33	410	B				C	C		10138		12
6.5	**216.84**	0.25	347	1.2	0.29	410	B				C	C		71311		13
5.5	**252.36**	0.25	404	1.0	0.25	410	B				C	C		9138		14
4.8	**290.67**	0.25	465	0.9	0.22	410	B				C	C		9811		15
4.2	**333.23**	0.18	408	1.0	0.19	410	B				C	C		7138		16
3.6	**383.82**	0.18	470	0.9	0.17	410	B				C	C		7811		17
3.1	**446.70**	0.12	353	1.2	0.14	410	B				C	C		988		18
2.4	**589.85**	0.12	466	0.9	0.11	410	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 requiren 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
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			

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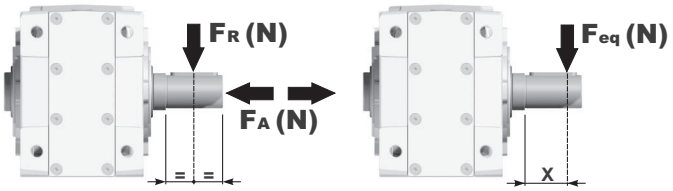
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{168}{X+138}$$



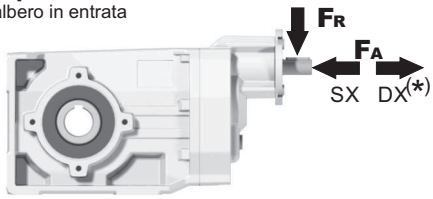
n_2 [min^{-1}]	FA	FR
250	600	3000
150	700	3500
100	780	3900

n_2 [min^{-1}]	FA	FR
75	890	4450
50	1140	5700
25	1330	6650

n_2 [min^{-1}]	FA	FR
15	1660	8300

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 [min^{-1}]	FA [N]	FR [N]
1400	400	2000
900	440	2200
500	440	2200

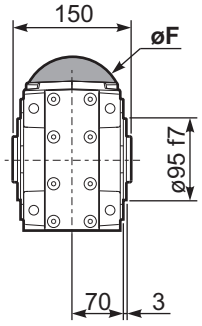
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

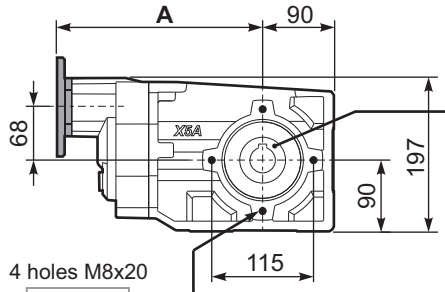
tab. 2

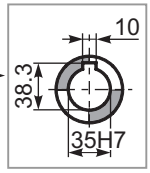
PX63AC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	15.98 kg

M. flanges	Kit code	øF	A
63B5	K063.4.041	140	265
71B5	K063.4.042	160	263
80/90B5	K063.4.043	200	265
71B14	K063.4.047	105	263
80B14	K063.4.046	120	265
90B14	K063.4.041	140	265

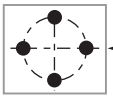




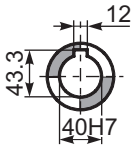


Standard
Hollow shaft

4 holes M8x20

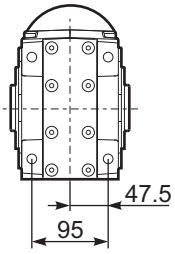


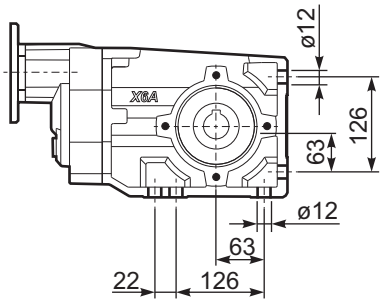
Mounting holes position
Posizione fori di montaggio



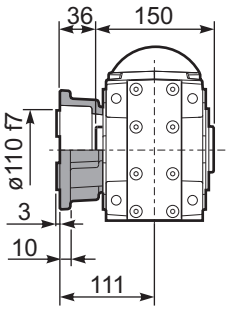
On request
A richiesta

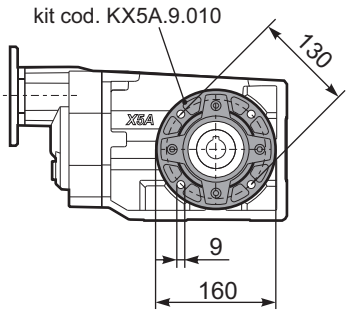
PX63A...FB.. Feet
Piedini



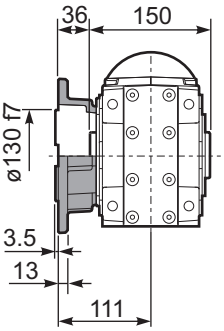


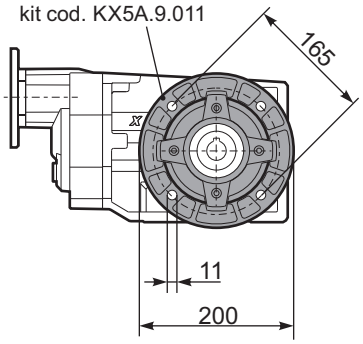
PX63A...-F2.. Output flange
Flangia uscita



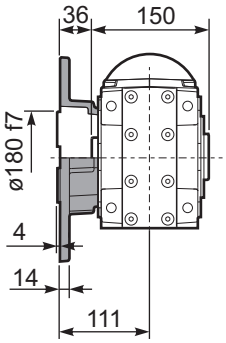


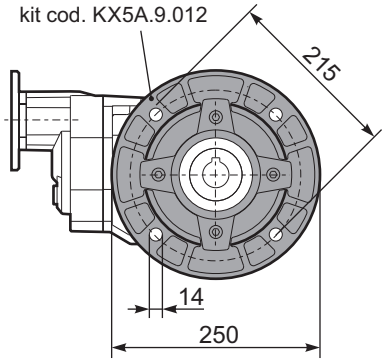
PX63A...-F3.. Output flange
Flangia uscita



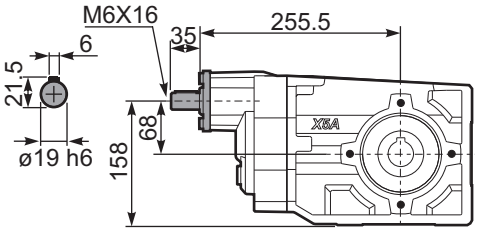


PX63A...-F4.. Output flange
Flangia uscita

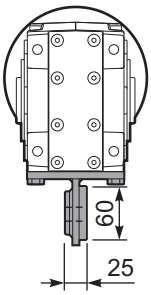


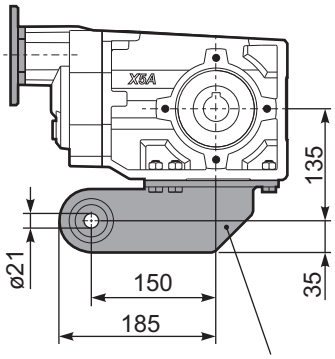


RX63A... Input shaft
Albero in entrata



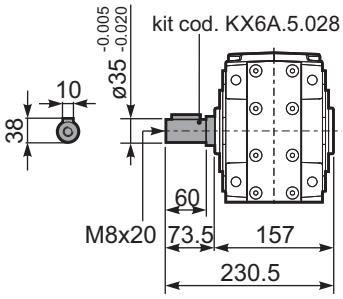
PX63A...BR.. Reaction Arm
Braccio di reazione





kit cod. KX6A.9.027

PX63A**A**.. Single output shaft
Albero semplice in uscita



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
176	**7.94**	7.5	369	1.0	7.5	380	B									302418	standard ø40	01
153	**9.13**	7.5	425	0.9	6.7	390	B									302416		02
131	**10.66**	5.5	366	1.1	6.0	410	B									302414		03
94	**14.97**	5.5	514	1.1	6.0	580	B									202418		04
81	**17.21**	5.5	591	1.0	5.4	600	B									202416		05
69	**20.24**	5.5	695	1.0	5.2	675	B									162418		06
60	**23.27**	4	585	1.2	4.5	675	B									162416		07
53	**26.31**	4	661	1.0	4.0	675	B									132418		08
46.3	**30.25**	4	760	0.9	3.5	675	B									132416		09
39.6	**35.32**	3	668	1.0	3.0	675	B									132414		10
37.8	**37.03**	3	701	1.0	2.8	675	B									112416		11
32.4	**43.23**	2.2	602	1.1	2.4	675	B									112414		12
30.1	**46.58**	2.2	649	1.0	2.3	675	B									82418		13
26.1	**53.55**	2.2	746	0.9	2.0	675	B									82416		14
22.4	**62.52**	1.5	600	1.1	1.7	675	B									82414		15
19.0	**73.75**	1.1	517	1.1	1.2	580	B									62416		16
16.3	**86.09**	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 requiren 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.

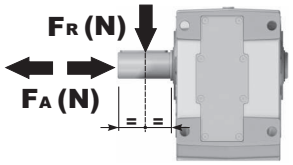
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
2.45 LT	2.55 LT	1.80 LT	1.95 LT	4.05 LT	2.55 LT	Ask
SHELL Omala S4 WE 320			**ENI** Telium VSF 320			

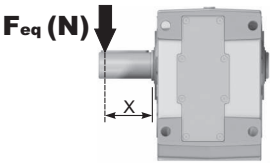
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

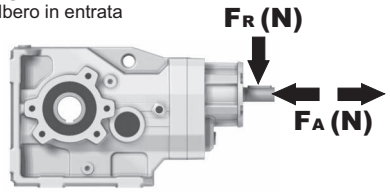
$$F_{eq} = F_R \cdot \frac{178.5}{X+143.5}$$





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

Input shaft
Albero in entrata



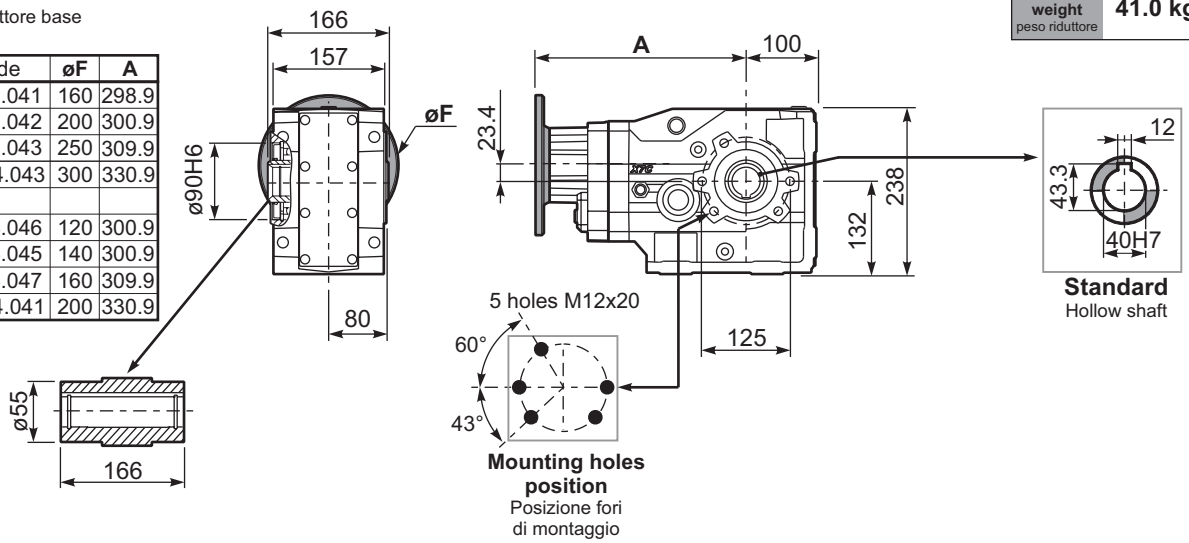
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

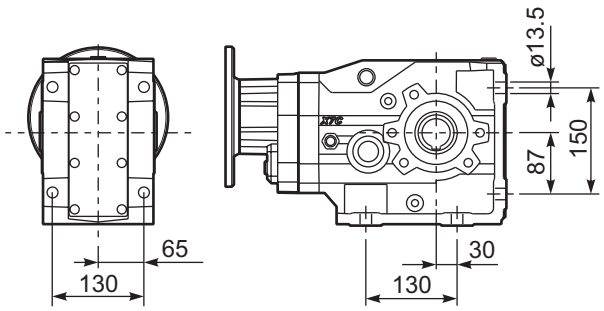
PX73CC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	41.0 kg

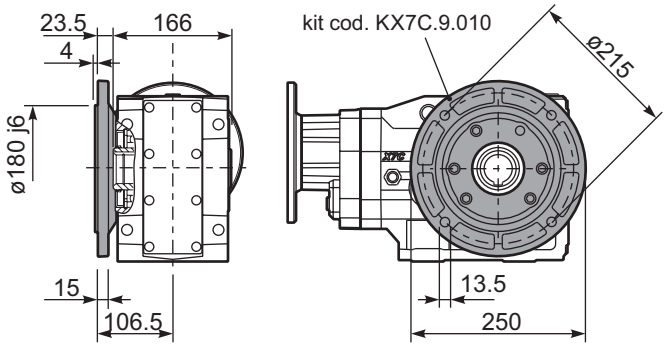
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	298.9
80/90B5	K023.4.042	200	300.9
100/112B5	K023.4.043	250	309.9
132B5	KC51.4.043	300	330.9
80B14	K085.4.046	120	300.9
90B14	K085.4.045	140	300.9
100/112B14	K085.4.047	160	309.9
132B14	KC51.4.041	200	330.9



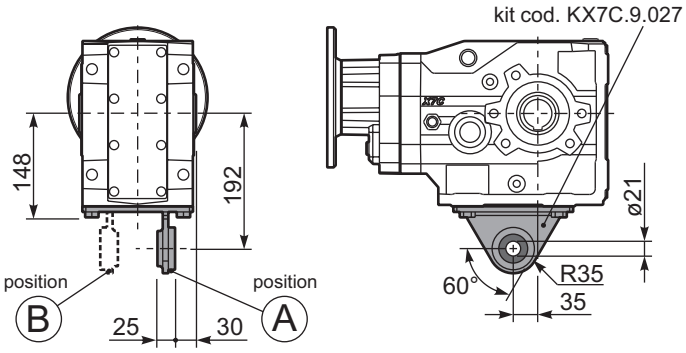
PX73C...FB.. Feet
Piedini



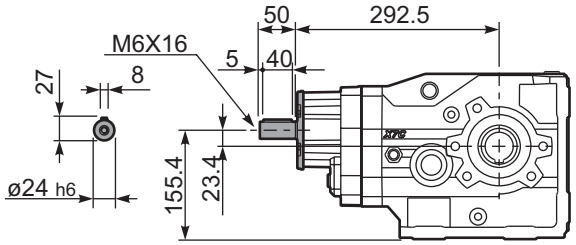
PX73C...-F4.. Output flange
Flangia uscita



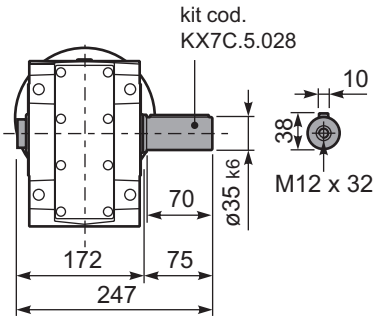
PX73C...BR.. Reaction Arm
Braccio di reazione



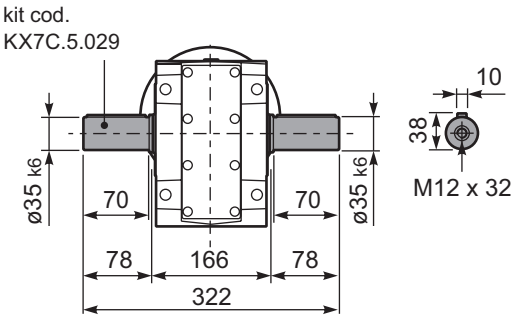
RX73C... Input shaft
Albero in entrata



PX73CA... Single shaft
Albero lento semplice



PX73CB... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
18.7	**74.79**	1.5	704	1.0	1.4	675	B				C	C		19132418	standard ø40	01
16.3	**85.99**	1.1	591	1.1	1.3	675	B				C	C		19132416		02
14.0	**99.66**	1.1	685	1.0	1.1	675	B				C	C		17132416		03
12.0	**116.35**	0.75	548	1.2	0.92	675	B				C	C		17132414		04
11.5	**121.45**	0.75	572	1.2	0.89	675	B				C	C		13132418		05
10.0	**139.64**	0.75	658	1.0	0.77	675	B				C	C		13132416		06
9.2	**152.21**	0.75	717	0.9	0.71	675	B				C	C		19082416		07
8.6	**163.02**	0.55	567	1.2	0.66	675	B				C	C		13132414		08
7.9	**177.69**	0.55	618	1.1	0.61	675	B				C	C		19082414		09
6.8	**205.95**	0.55	716	0.9	0.52	675	B				C	C		17082414		10
6.3	**222.52**	0.55	774	0.9	0.48	675	B				C	C		10132414		11
5.6	**248.76**	0.37	578	1.2	0.43	675	B				C	C		9132416		12
4.8	**290.41**	0.37	675	1.0	0.37	675	B				C	C		9132414		13
4.1	**337.39**	0.37	784	0.9	0.32	675	B				C	C		10082416		14
3.6	**393.88**	0.25	618	1.1	0.27	675	B				C	C		10082414		15
3.2	**440.33**	0.25	690	1.0	0.24	675	B				C	C		9082416		16
2.7	**514.06**	0.18	616	1.1	0.21	675	B				C	C		9082414		17
2.4	**581.44**	0.18	697	1.0	0.18	675	B				C	C		7082416		18
2.1	**678.79**	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 requiren 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
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		

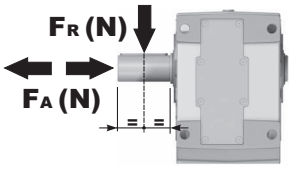
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

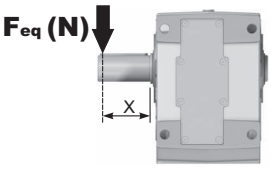
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

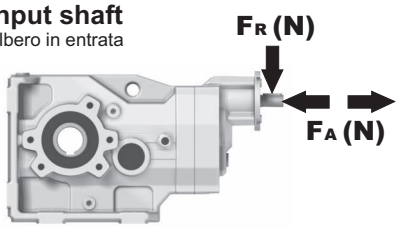
$$F_{eq} = F_R \cdot \frac{178.5}{X+143.5}$$





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

Input shaft
Albero in entrata



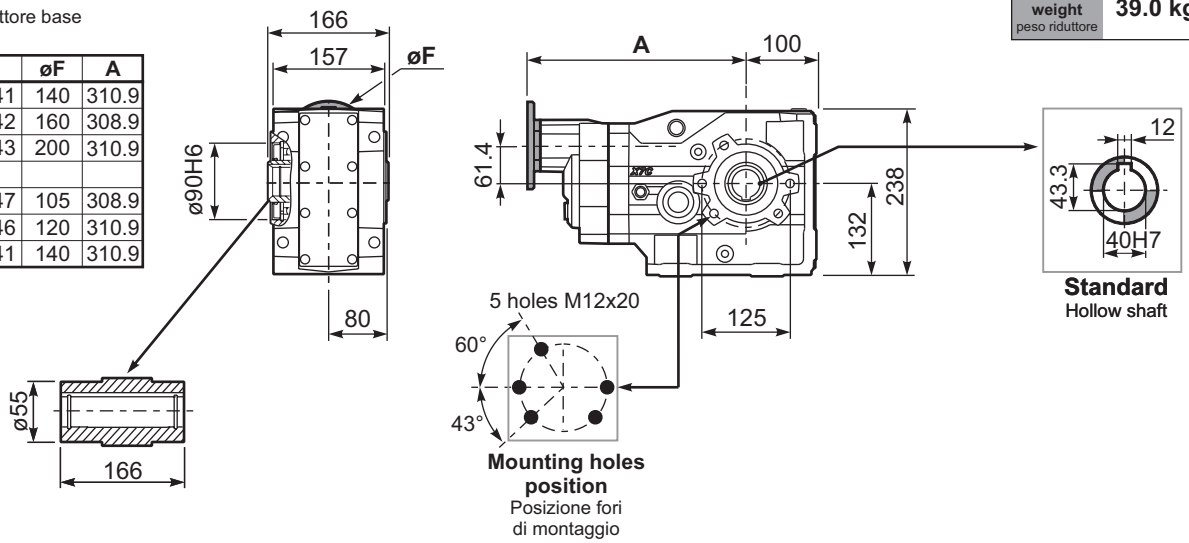
n_1	FA	FR
1400	240	1200
900	280	1400
500	310	1700

tab. 2

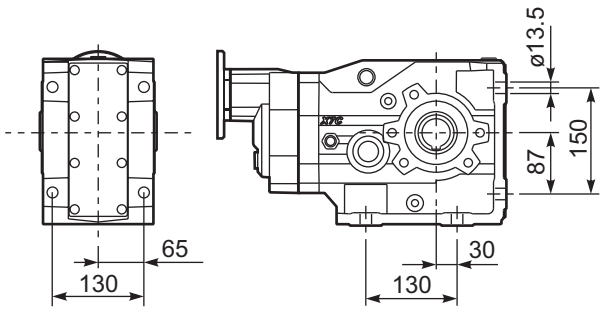
PX74CC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	39.0 kg

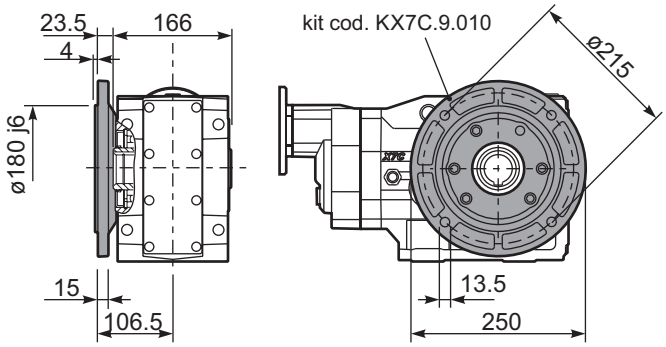
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	310.9
71B5	K063.4.042	160	308.9
80/90B5	K063.4.043	200	310.9
71B14	K063.4.047	105	308.9
80B14	K063.4.046	120	310.9
90B14	K063.4.041	140	310.9



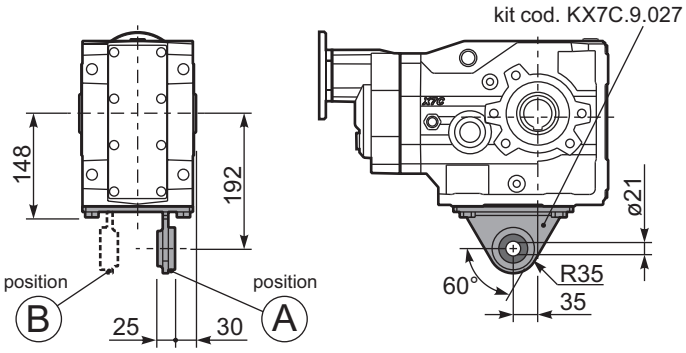
PX74C...FB.. Feet
Piedini



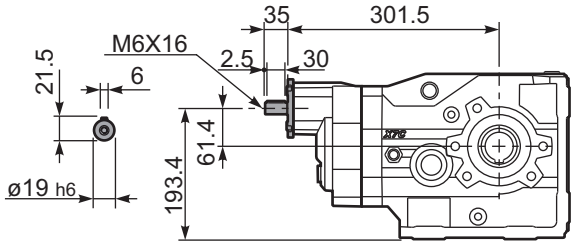
PX74C...-F4.. Output flange
Flangia uscita



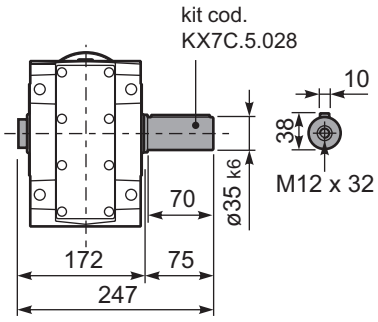
PX74C...BR.. Reaction Arm
Braccio di reazione



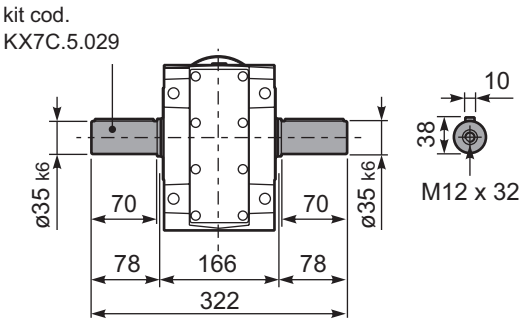
RX74C... Input shaft
Albero in entrata



PX74CA... Single shaft
Albero lento semplice



PX74CB... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
145	**9.69**	9	560	1.3	12.2	755	B									302418		01
126	**11.09**	9	641	1.1	9.6	680	B									302416		02
108	**12.90**	9	746	1.1	9.6	790	B									302414		03
77	**18.26**	7.5	849	1.1	8.0	935	B									202418		04
67	**20.91**	7.5	972	1.0	7.5	1000	B									202416		05
58	**24.32**	5.5	835	1.2	6.4	1000	B									202414		06
49.5	**28.27**	5.5	971	1.0	5.5	1000	B									162416		07
42.6	**32.88**	4	826	1.2	4.7	1000	B									162414	**standard**	08
38.1	**36.76**	4	924	1.1	4.2	1000	B									132416	**ø40**	09
32.7	**42.76**	3	809	1.2	3.6	1000	B									132414		10
31.1	**45.00**	3	851	1.2	3.5	1000	B									112416	ø45	11
26.8	**52.33**	3	990	1.0	3.0	1000	B									112414	on request	12
24.6	**56.82**	2.2	791	1.1	2.3	850	B									82418		13
21.5	**65.07**	2.2	906	1.1	2.3	975	B									82416		14
18.5	**75.68**	2.2	1054	0.9	2.1	1000	B									82414		15
15.6	**89.61**	1.1	628	1.1	1.2	710	B									62416		16
13.4	**104.22**	1.1	731	1.1	1.2	820	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.

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

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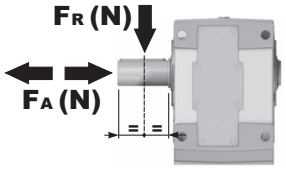
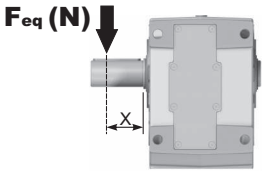
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

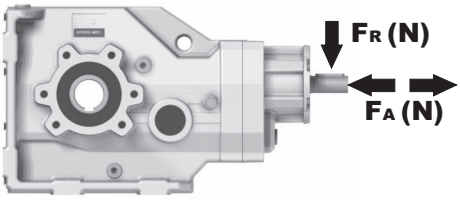
$$F_{eq} = F_R \cdot \frac{196.5}{X+156.5}$$





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

Input shaft
Albero in entrata



n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

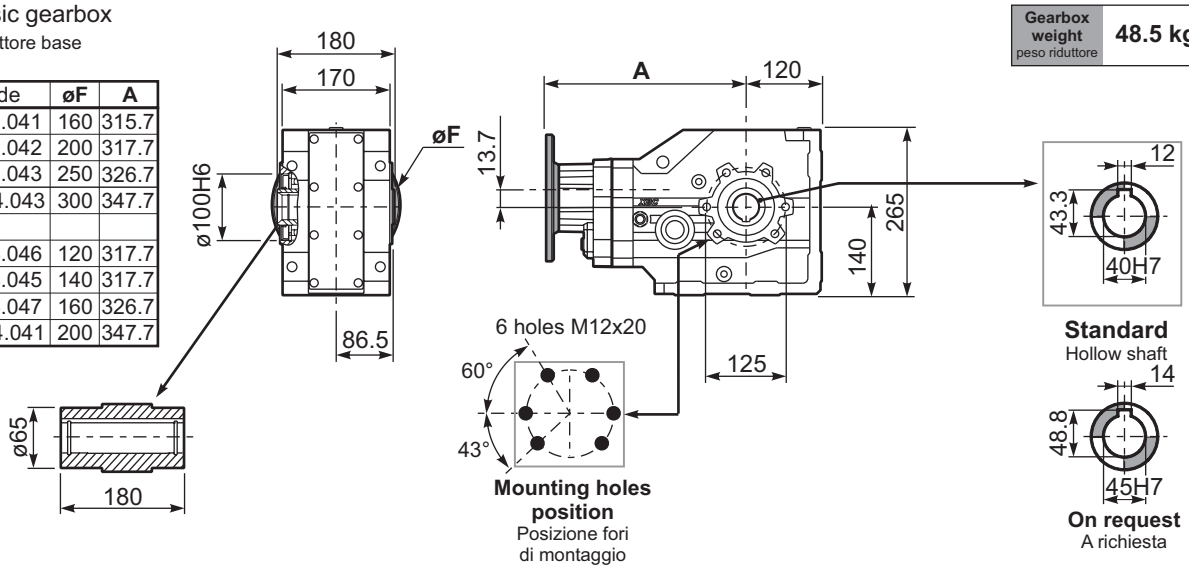
tab. 2

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.

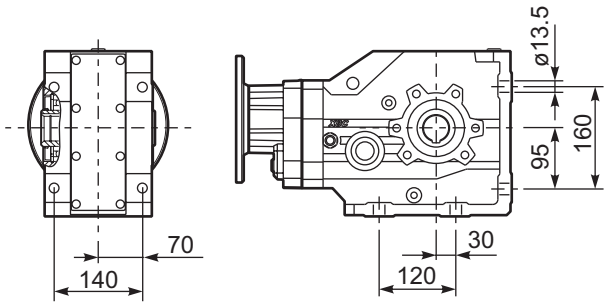
PX83CC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	48.5 kg

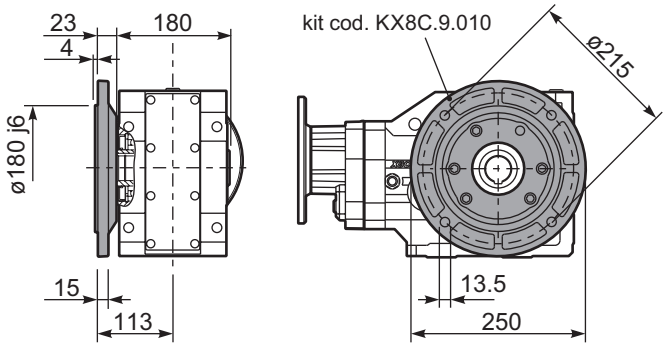
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	315.7
80/90B5	K023.4.042	200	317.7
100/112B5	K023.4.043	250	326.7
132B5	KC51.4.043	300	347.7
80B14	K085.4.046	120	317.7
90B14	K085.4.045	140	317.7
100/112B14	K085.4.047	160	326.7
132B14	KC51.4.041	200	347.7



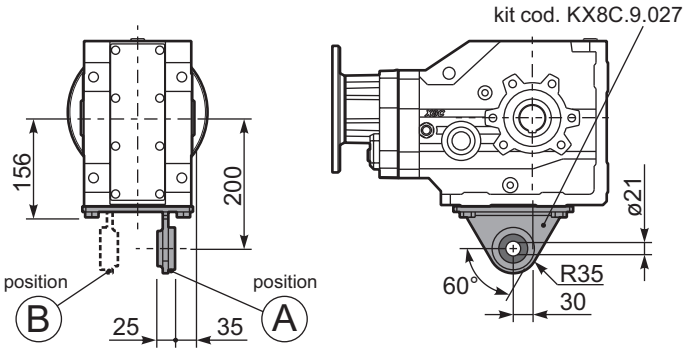
PX83C...FB.. Feet
Piedini



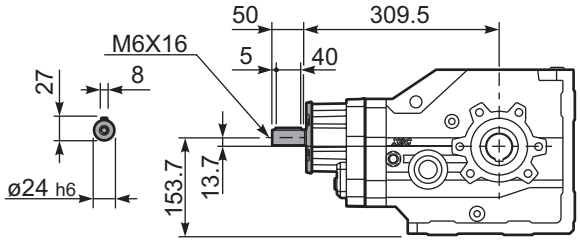
PX83C...-F4.. Output flange
Flangia uscita



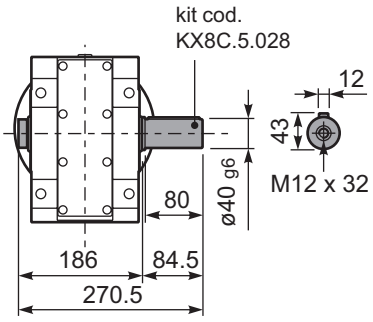
PX83C...BR.. Reaction Arm
Braccio di reazione



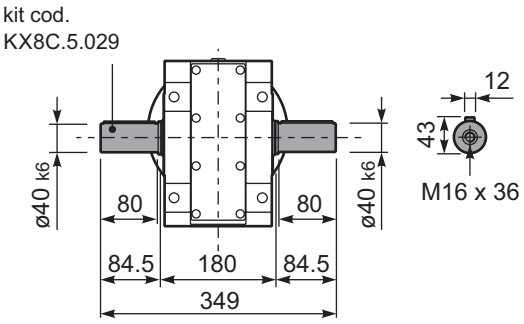
RX83C... Input shaft
Albero in entrata



PX83CA... Single shaft
Albero lento semplice



PX83CB... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
15.3	**91.23**	1.5	858	1.2	1.7	1000	B				C	C		19132418	standard ø40 ø45 on request	01
13.4	**104.48**	1.5	983	1.0	1.5	1000	B				C	C		19132416		02
11.6	**121.10**	1.5	1139	0.9	1.3	1000	B				C	C		17132416		03
9.9	**140.84**	1.1	968	1.0	1.1	1000	B				C	C		17132414		04
8.5	**165.32**	1.1	1136	0.9	0.96	1000	B				C	C		15132414		05
7.6	**184.94**	0.75	872	1.1	0.86	1000	B				C	C		19082416		06
7.1	**197.34**	0.75	930	1.1	0.81	1000	B				C	C		13132414		07
6.5	**215.10**	0.75	1014	1.0	0.74	1000	B				C	C		19082414		08
6.0	**231.60**	0.55	805	1.2	0.69	1000	B				C	C		10132416		09
5.6	**249.31**	0.55	867	1.2	0.64	1000	B				C	C		17082414		10
5.2	**269.37**	0.55	937	1.1	0.59	1000	B				C	C		10132414		11
4.8	**292.64**	0.55	1018	1.0	0.54	1000	B				C	C		15082414		12
4.6	**302.26**	0.55	1051	1.0	0.53	1000	B				C	C		9132416		13
4.0	**349.30**	0.37	812	1.2	0.46	1000	B				C	C		13082414		14
3.5	**399.12**	0.37	928	1.1	0.40	1000	B				C	C		7132416		15
2.9	**476.80**	0.37	1108	0.9	0.33	1000	B				C	C		10082414		16
2.2	**622.28**	0.25	976	1.0	0.26	1000	B				C	C		9082414		17
1.7	**821.70**	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

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

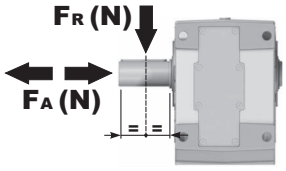
SHELL Omala S2 GX 460	**ENI** Blasia 460

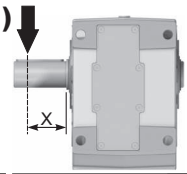
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

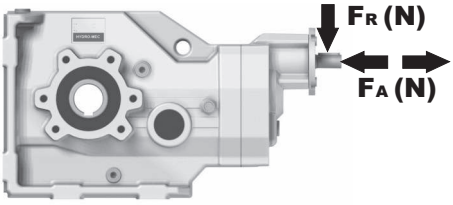
$$F_{eq} = F_R \cdot \frac{196.5}{X+156.5}$$





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

Input shaft
Albero in entrata



n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

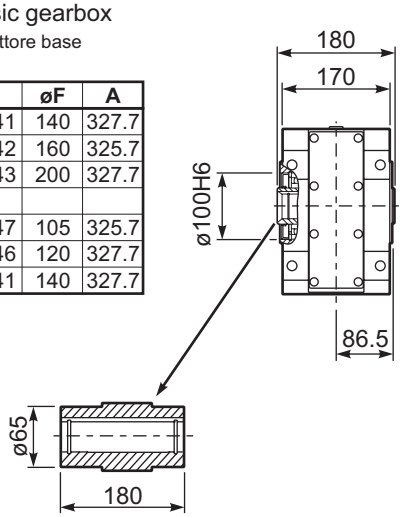
tab. 2

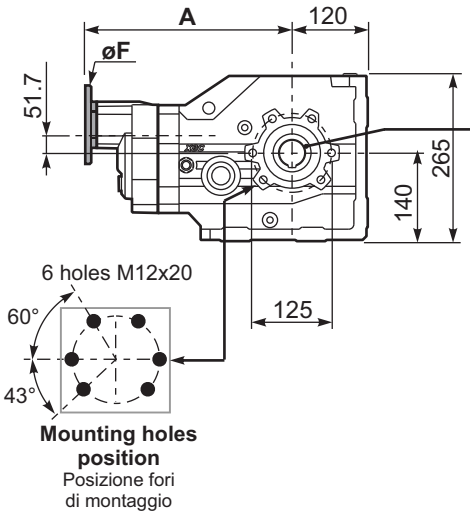
E El reductor tamaño **X84C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La 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.

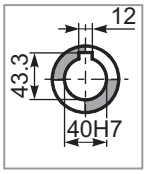
PX84CC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	46.5 kg

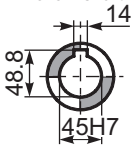
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	327.7
71B5	K063.4.042	160	325.7
80/90B5	K063.4.043	200	327.7
71B14	K063.4.047	105	325.7
80B14	K063.4.046	120	327.7
90B14	K063.4.041	140	327.7





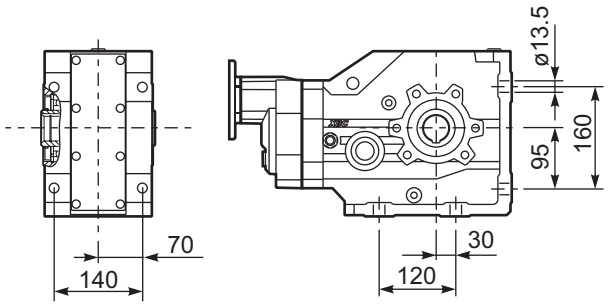


Standard
Hollow shaft

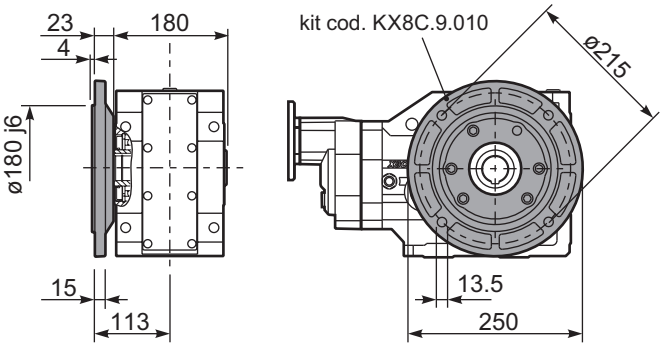


On request
A richiesta

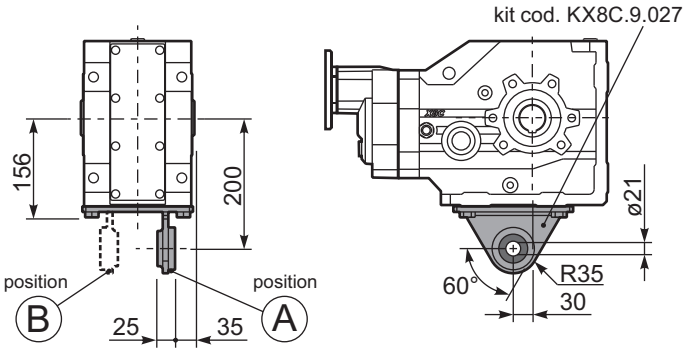
PX84C...FB.. Feet
Piedini



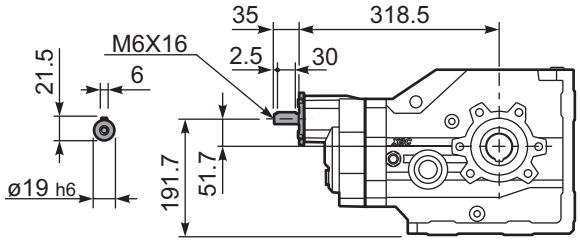
PX84C...-F4.. Output flange
Flangia uscita



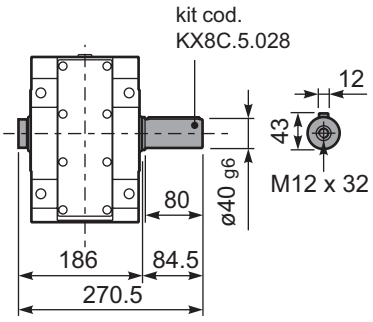
PX84C...BR.. Reaction Arm
Braccio di reazione



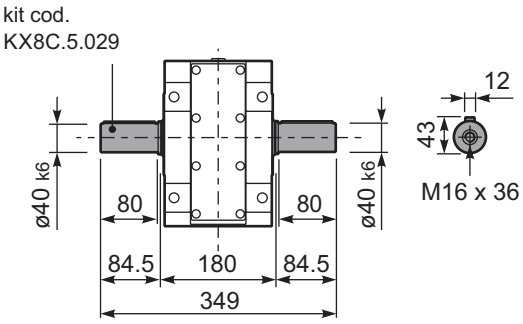
RX84C... Input shaft
Albero in entrata



PX84CA... Single shaft
Albero lento semplice



PX84CB... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B5 -I 180	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
236	**5.94**	22	806	1.0	21.0	800							302915		01
196	**7.13**	18.5	812	1.0	17.9	820							302913		02
163	**8.58**	18.5	977	1.0	17.3	950							302911		03
125	**11.20**	15	1033	1.0	13.9	1000							202915		04
104	**13.43**	15	1239	1.1	15.7	1350							202913		05
92	**15.15**	15	1397	1.0	14.4	1400							162915	**standard ø50**	06
87	**16.17**	15	1492	1.0	14.0	1450							202911		07
77	**18.16**	15	1675	0.9	13.3	1550							162913		08
71	**19.70**	11	1335	1.2	12.3	1550							132915	ø45 On request	09
64	**21.87**	11	1482	1.1	11.4	1600							162911		10
59	**23.62**	11	1600	1.0	10.6	1600							132913		11
48.4	**28.91**	9	1671	1.0	8.6	1600							112913		12
40.2	**34.81**	7.5	1618	1.0	7.2	1600							112911		13
33.5	**41.81**	5.5	1436	1.1	6.0	1600							82913		14
27.8	**50.34**	5.5	1729	0.9	5.0	1600							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.

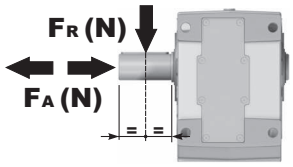
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
4.20 LT	3.60 LT	4.40 LT	5.10 LT	6.90 LT	5.00 LT	Ask
SHELL Omala S2 GX 460				**ENI** Blasia 460		

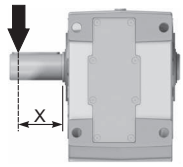
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

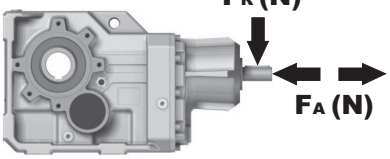
$$F_{eq} = F_R \cdot \frac{218}{X+168}$$





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



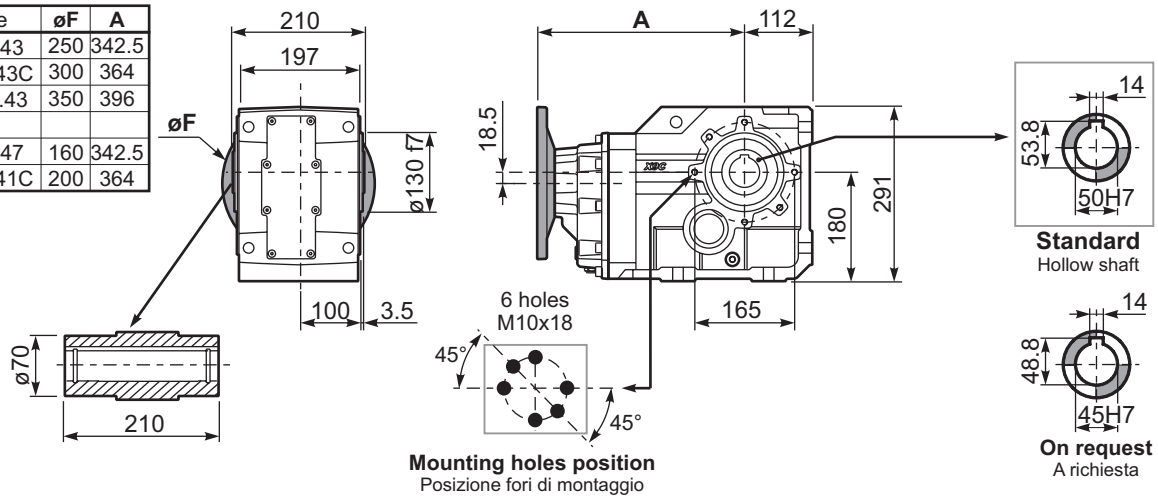
n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

tab. 2

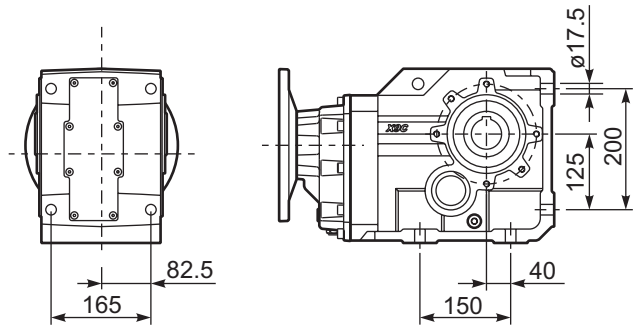
PX93CC... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	75.0 kg

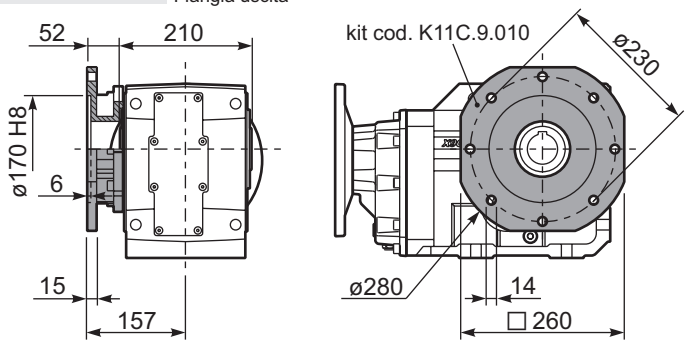
M. flanges	Kit code	øF	A
100/112B5	K023.4.043	250	342.5
132B5	KC51.4.043C	300	364
160/180B5	KC86.4.0.43	350	396
100/112B14	K085.4.047	160	342.5
132B14	KC51.4.041C	200	364



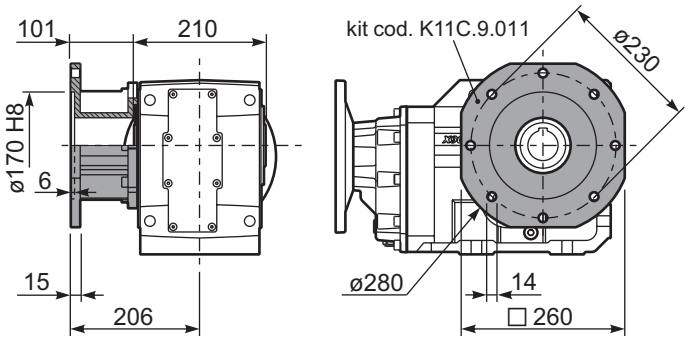
PX93C...FB.. Feet
Piedini



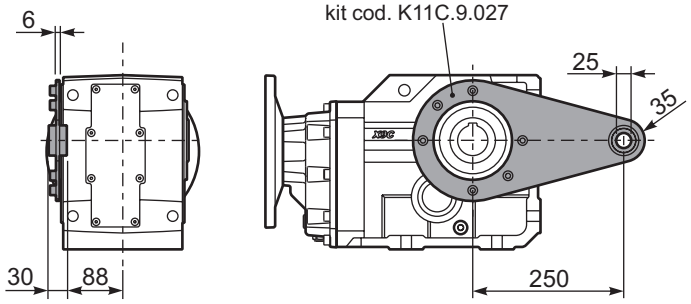
PX93C...-FC.. Output flange
Flangia uscita



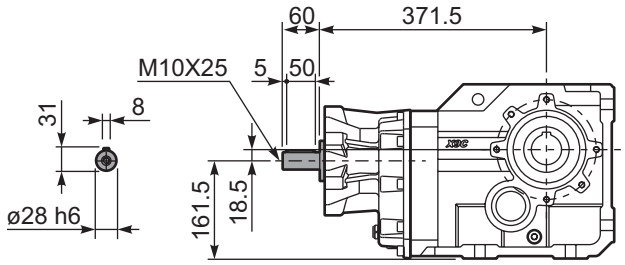
PX93C...-FL.. Output flange
Flangia uscita



PX93C...BR.. Reaction Arm
Braccio di reazione

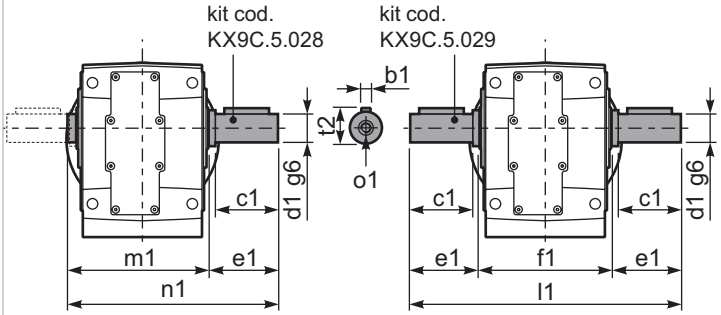


RX93C... Input shaft
Albero in entrata



PX93CA... Single shaft
Albero lento semplice

PX93CB... Double shaft
Albero lento bisp.



	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
Standard	14	100	50	105	210	420	218	323	53.5	M16
-	-	-	-	-	-	-	-	-	-	-

▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
45.6	**30.70**	7.5	1399	1.1	8.3	1600	B									30132913		01
37.9	**36.97**	7.5	1685	0.9	6.9	1600	B									30132911		02
29.0	**48.26**	5.5	1625	1.0	5.3	1600	B									20132915		03
24.2	**57.86**	4	1425	1.1	4.4	1600	B									20132913		04
21.5	**65.24**	4	1607	1.0	3.9	1600	B									16132915		05
20.1	**69.68**	4	1716	1.0	3.8	1650	B									20132911	**standard**	06
17.9	**78.23**	3	1450	1.1	3.4	1650	B									16132913	**ø50**	07
16.5	**84.85**	3	1573	1.0	3.0	1600	B									13132915		08
14.9	**94.20**	3	1747	0.9	2.8	1650	B									16132911		09
13.8	**101.74**	3	1886	0.9	2.6	1650	B									13132913	ø45	10
11.4	**122.51**	2.2	1672	1.0	2.1	1650	B									13132911	On request	11
9.3	**149.95**	1.5	1411	1.2	1.8	1650	B									11132911		12
7.8	**180.09**	1.5	1694	1.0	1.5	1650	B									8132913		13
6.8	**206.81**	1.1	1421	1.1	1.2	1600	B									6132915		14
6.5	**216.85**	1.1	1490	1.1	1.2	1650	B									8132911		15
5.6	**247.99**	1.1	1704	1.0	1.1	1650	B									6132913		16
4.7	**298.61**	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.

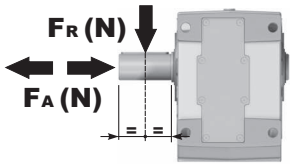
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
4.50 LT	3.80 LT	4.50 LT	5.30 LT	7.60 LT	5.30 LT	Ask
SHELL Omala S2 GX 460				**ENI** Blasia 460		

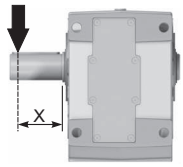
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

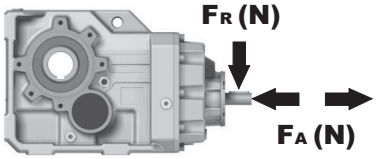
$$F_{eq} = F_R \cdot \frac{218}{X+168}$$





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



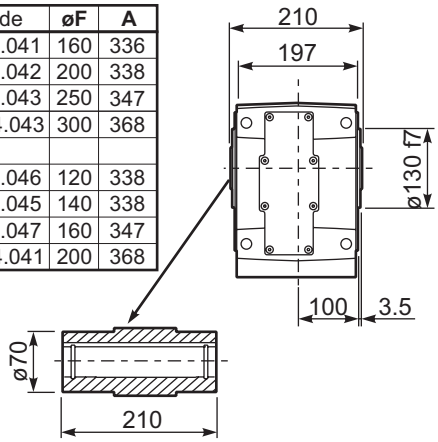
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

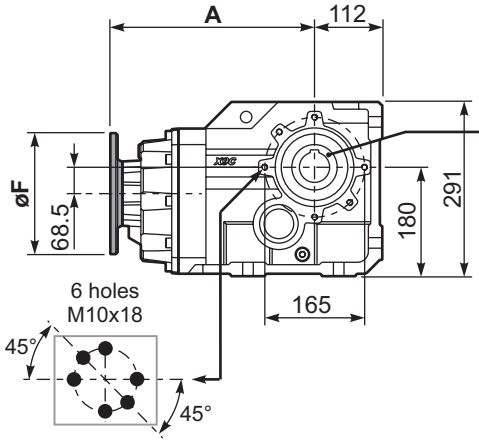
tab. 2

PX94CC... Basic Gearbox
Riduttore base

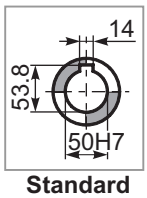
Gearbox weight peso riduttore	68.5 kg

M. flanges	Kit code	øF	A
71B5	K023.4.041	160	336
80/90B5	K023.4.042	200	338
100/112B5	K023.4.043	250	347
132B5	KC51.4.043	300	368
80B14	K085.4.046	120	338
90B14	K085.4.045	140	338
100/112B14	K085.4.047	160	347
132B14	KC51.4.041	200	368

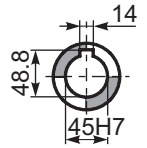




Mounting holes position
Posizione fori di montaggio

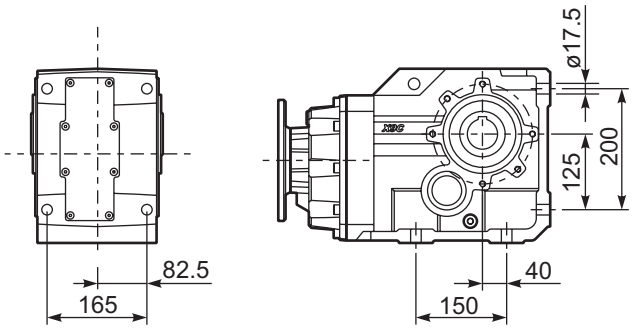


Standard
Hollow shaft

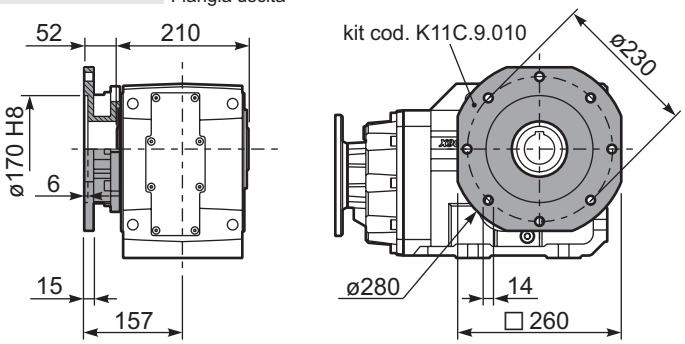


On request
A richiesta

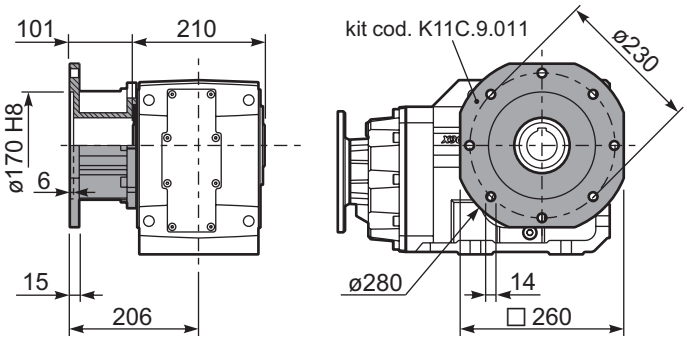
PX94C...FB.. Feet
Piedini



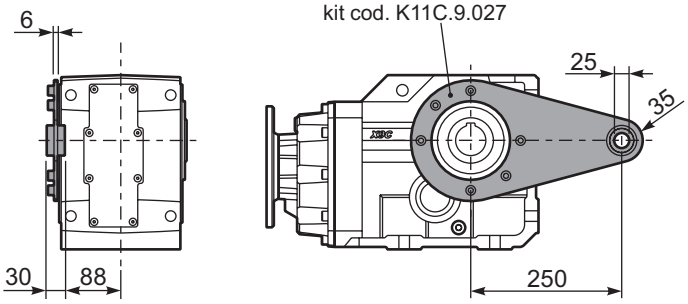
PX94C...-FC.. Output flange
Flangia uscita



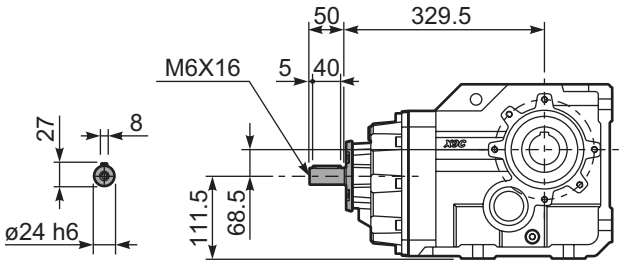
PX94C...-FL.. Output flange
Flangia uscita



PX94C...BR.. Reaction Arm
Braccio di reazione

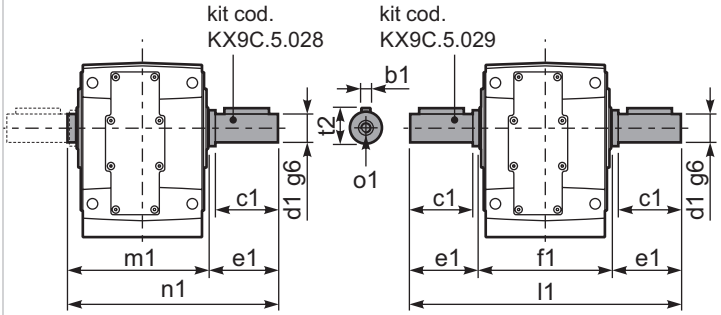


RX94C... Input shaft
Albero in entrata



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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -G 132	-H 160	-I 180	-L 200	B14 motor flanges - -	- -	- -	- -		Output Shaft ø	Ratios code
219	**6.39**	30	1180	1.1	**31.7**	**1300**									392914		01
200	**7.00**	30	1292	1.1	**31.2**	**1400**									392913		02
164	**8.55**	30	1578	1.0	**27.4**	**1500**									392911		03
140	**10.01**	22	1357	1.2	**24.9**	**1600**									302914		04
128	**10.97**	22	1486	1.1	**24.2**	**1700**									302913		05
105	**13.39**	22	1815	1.2	**24.5**	**2100**									302911		06
89	**15.71**	22	2130	1.0	**21.8**	**2200**									222914		07
81	**17.21**	22	2333	1.0	**20.8**	**2300**									222913		08
67	**21.02**	18.5	2394	1.0	**17.8**	**2400**					**not available**				222911	**standard ø60**	09
59	**23.73**	18.5	2703	1.0	**17.1**	**2600**									162914		10
54	**25.99**	18.5	2960	0.9	**16.8**	**2800**									162913		11
50	**27.93**	15	2576	1.1	**16.2**	**2900**									142914		12
45.8	**30.59**	15	2822	1.0	**14.8**	**2900**									142913		13
44.1	**31.74**	15	2928	1.0	**14.2**	**2900**									162911		14
37.5	**37.36**	11	2532	1.1	**12.1**	**2900**									142911		15
33.8	**41.37**	11	2804	1.0	**10.9**	**2900**									102914		16
30.9	**45.31**	9	2618	1.1	**10.0**	**2900**									102913		17
25.3	**55.33**	7.5	2573	1.2	**8.5**	**3000**									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 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 **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.

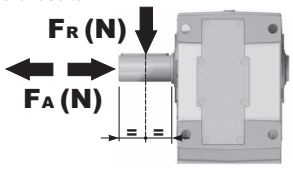
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3 ●	B6 ●	B7 ●	B8 ●	V5 ●	V6 ●	V8 ●
11.50 LT	5.50 LT	10.50 LT	7.50 LT	13.50 LT	9.50 LT	Ask
SHELL Omala S2 GX 460			**ENI** Blasia 460			

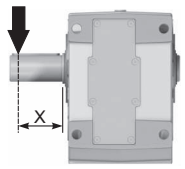
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

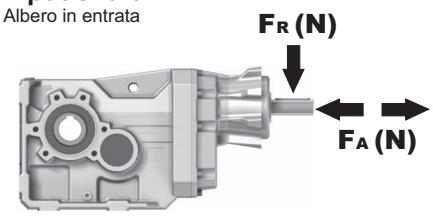
$$F_{eq} = F_R \cdot \frac{253}{X+193}$$





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
Albero in entrata



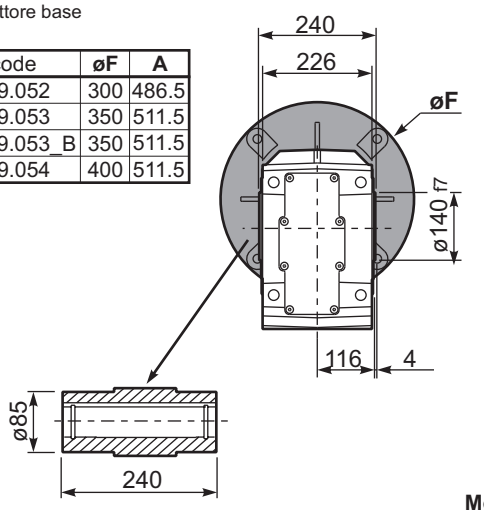
n_1	FA	FR
1400	1120	5600
900	1220	6100
500	1300	6500

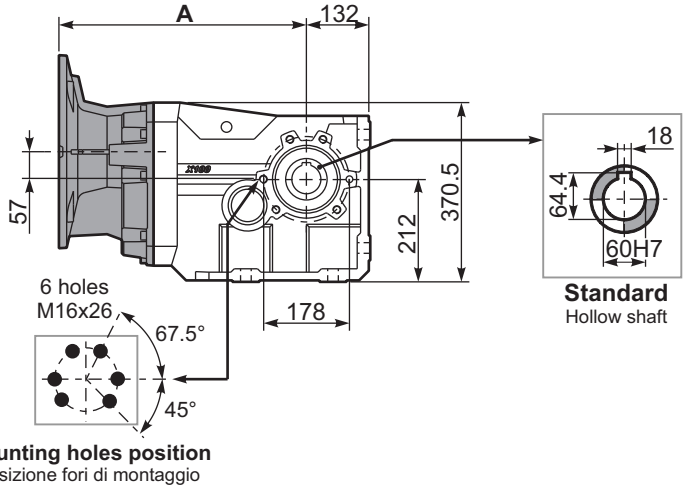
tab. 2

PX103C... Basic Gearbox
Riduttore base

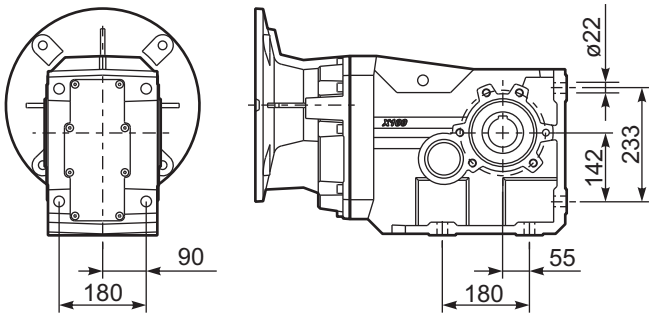
Gearbox weight peso riduttore	125 kg

M. flanges	Kit code	øF	A
132B5	KC110.9.052	300	486.5
160B5	KC110.9.053	350	511.5
180B5	KC110.9.053_B	350	511.5
200B5	KC110.9.054	400	511.5

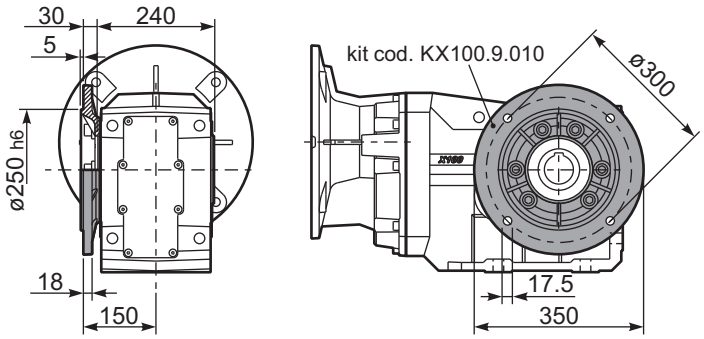




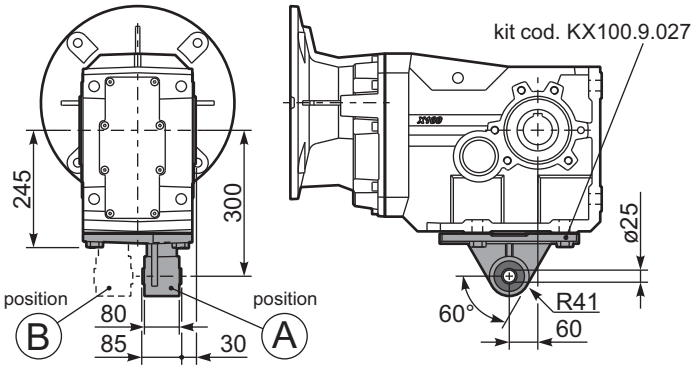
PX103...FB.. Feet
Piedini



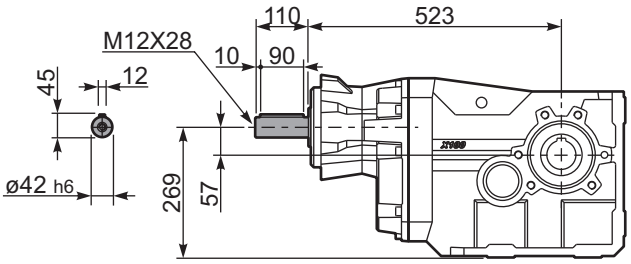
PX103...-F6.. Output flange
Flangia uscita



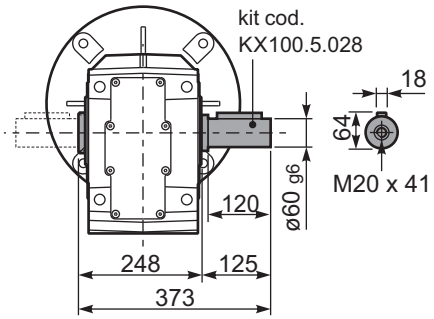
PX103...BR.. Reaction Arm
Braccio di reazione



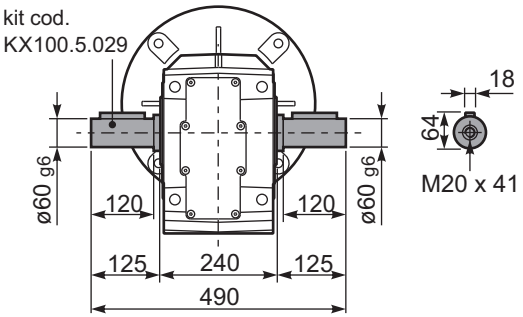
RX103... Input shaft
Albero in entrata



PX103A... Single shaft
Albero lento semplice



PX103B... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -F 100 112	Available B5 motor flanges -G 132	B14 motor flanges -U 100 112	B14 motor flanges -V 132		Output Shaft ø	Ratios code
28.8	**48.57**	9	2750	1.1	9.5	2900					30142911	standard ø60	01
20.5	**68.43**	7.5	3118	1.0	7.0	3000					20142914		02
18.7	**74.95**	5.5	2523	1.2	6.4	3000					20142913		03
15.1	**92.53**	5.5	3115	1.0	5.2	3000					16142914		04
13.8	**101.33**	4	2496	1.2	4.7	3000					16142913		05
11.6	**120.33**	4	2963	1.0	4.0	3000					13142914		06
11.3	**123.75**	4	3048	1.0	3.9	3000					16142911		07
10.6	**131.78**	4	3245	0.9	3.6	3000					13142913		08
9.5	**147.28**	3	2731	1.1	3.2	3000					11142914		09
8.7	**161.30**	3	2990	1.0	3.0	3000					11142913		10
7.1	**196.98**	2.2	2689	1.1	2.4	3000					11142911		11
6.6	**212.99**	2.2	2907	1.0	2.2	3000					8142914		12
6.0	**233.26**	2.2	3184	0.9	2.0	3000					8142913		13
4.9	**284.86**	2.2	3889	0.8	1.7	3000					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

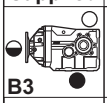
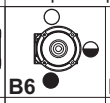
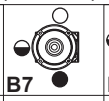
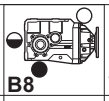
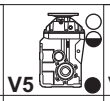
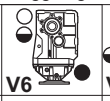
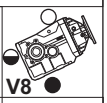
EN Unit **X104** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
See table 1 for lubrication and 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.

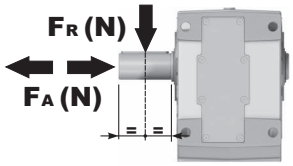
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 B3 ●	 B6 ●	 B7 ●	 B8 ●	 V5 ●	 V6 ●	 V8 ●
12.00 LT	6.00 LT	11.50 LT	8.00 LT	14.50 LT	11.00 LT	Ask
SHELL Omala S2 GX 460				**ENI** Blasia 460		

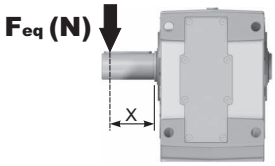
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

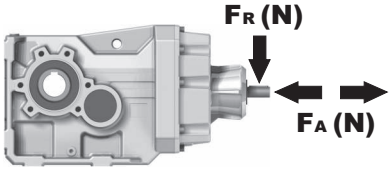
$$F_{eq} = F_R \cdot \frac{253}{X+193}$$





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
Albero in entrata



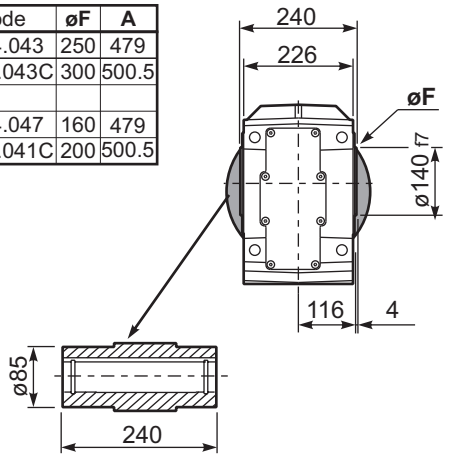
n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

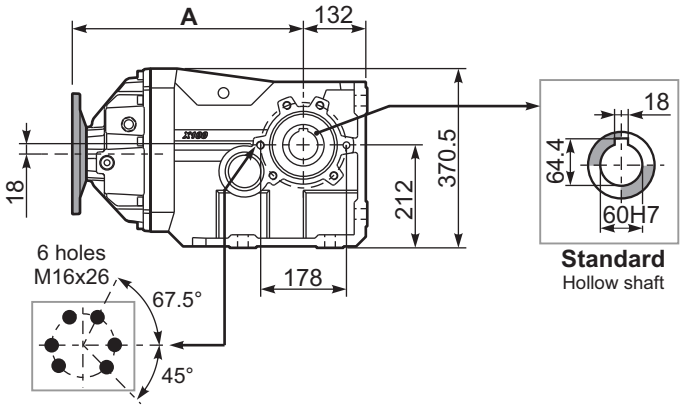
tab. 2

PX104C... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	118 kg

M. flanges	Kit code	øF	A
100/112B5	K023.4.043	250	479
132B5	KC51.4.043C	300	500.5
100/112B14	K085.4.047	160	479
132B14	KC51.4.041C	200	500.5

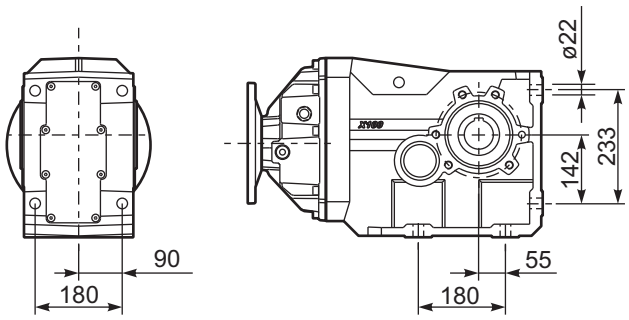




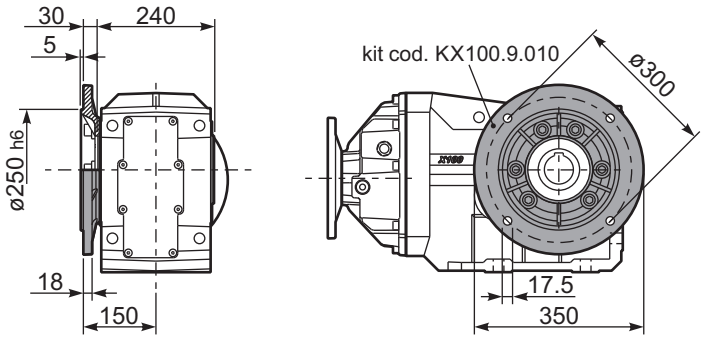
Standard
Hollow shaft

Mounting holes position
Posizione fori di montaggio

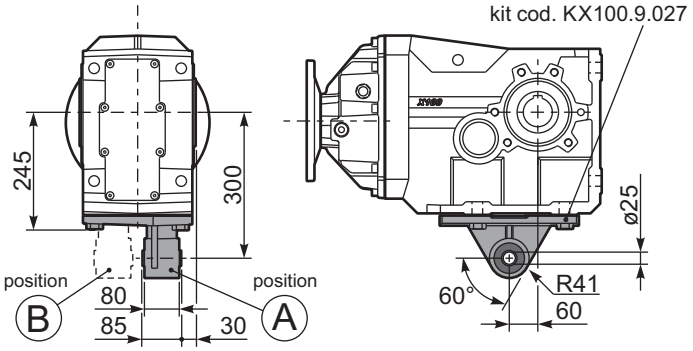
PX104...FB.. Feet
Piedini



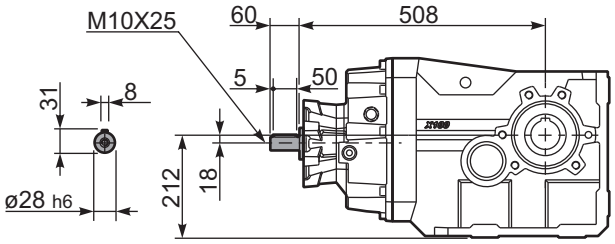
PX104...-F6.. Output flange
Flangia uscita



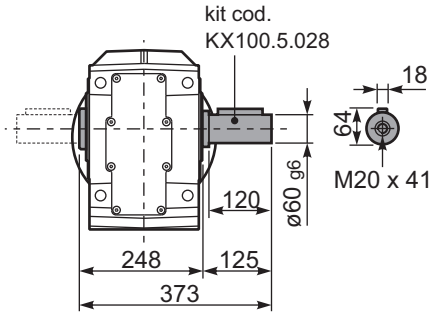
PX104...BR.. Reaction Arm
Braccio di reazione



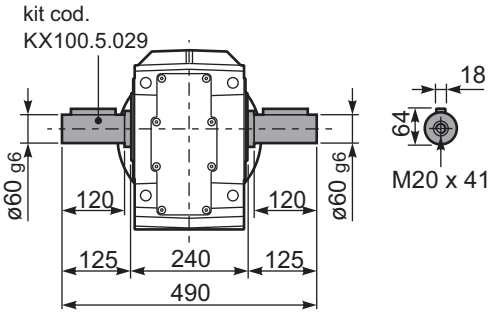
RX104... Input shaft
Albero in entrata



PX104A... Single shaft
Albero lento semplice



PX104B... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -G 132	-H 160	-I 180	-L 200	CA 225	B14 motor flanges – –	- -	- -		Output Shaft ø	Ratios code
219	**6.39**	45	1757	1.4	61.0	2500									392914		01
200	**7.00**	45	1925	1.4	59.0	2650									392913		02
164	**8.55**	45	2350	1.2	51.1	2800									392911		03
140	**10.01**	45	2752	1.2	49.8	3200									302914		04
128	**10.97**	45	3014	1.1	45.5	3200									302913		05
105	**13.39**	37	3025	1.1	39.6	3400									302911		06
89	**15.71**	37	3550	1.0	34.7	3500									222914		07
81	**17.21**	37	3888	1.0	33.5	3700									222913		08
67	**21.02**	30	3877	1.0	29.7	4000						**not available**			222911	**standard ø70**	09
59	**23.73**	30	4378	0.9	26.9	4100									162914		10
54	**25.99**	22	3523	1.2	25.8	4300									162913		11
50	**27.93**	22	3786	1.1	24.0	4300									142914		12
45.8	**30.59**	22	4146	1.1	22.9	4500									142913		13
44.1	**31.74**	22	4302	1.0	22.1	4500									162911		14
37.5	**37.36**	18.5	4255	1.1	18.8	4500									142911		15
33.8	**41.37**	18.5	4712	1.0	17.0	4500									102914		16
30.9	**45.31**	15	4179	1.1	15.5	4500									102913		17
25.3	**55.33**	11	3750	1.2	12.7	4500									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 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 **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.

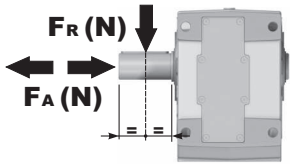
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3 ●	**B6** ●	**B7** ●	**B8** ●	**V5** ●	**V6** ●	**V8** ●
13.50 LT	8.00 LT	15.50 LT	14.50 LT	22.00 LT	13.00 LT	Ask
SHELL Omala S2 GX 460			**ENI** Blasia 460			

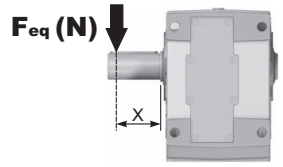
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

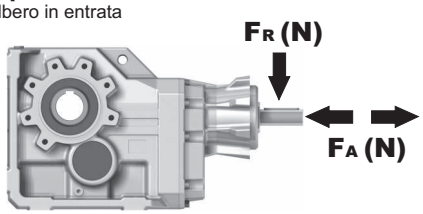
$$F_{eq} = F_R \cdot \frac{325.5}{X+255.5}$$





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



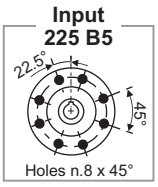
n_1	FA	FR
1400	1120	5600
900	1220	6100
500	1300	6500

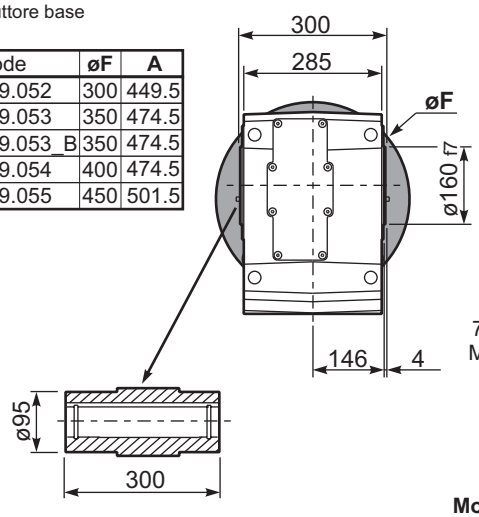
tab. 2

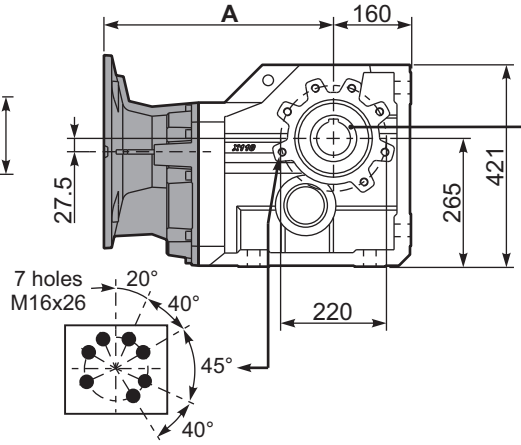
PX113C... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	170 kg

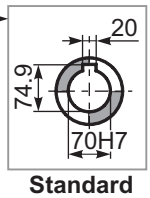
M. flanges	Kit code	øF	A
132B5	KC110.9.052	300	449.5
160B5	KC110.9.053	350	474.5
180B5	KC110.9.053_B	350	474.5
200B5	KC110.9.054	400	474.5
225B5	KC110.9.055	450	501.5





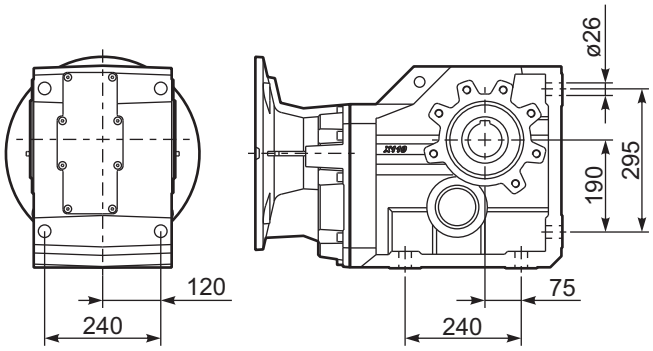


Mounting holes position
Posizione fori di montaggio

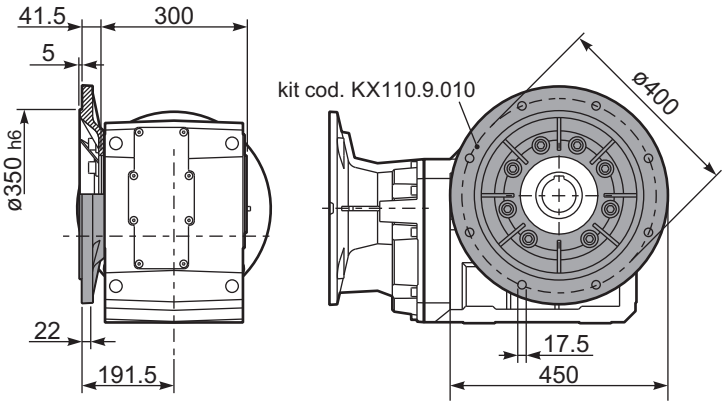


Standard
Hollow shaft

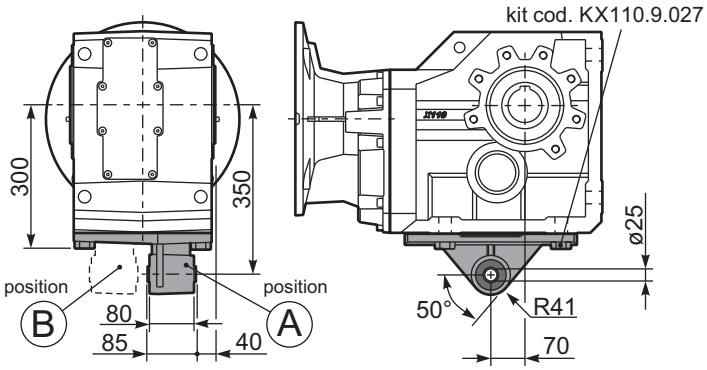
PX113...FB.. Feet
Piedini



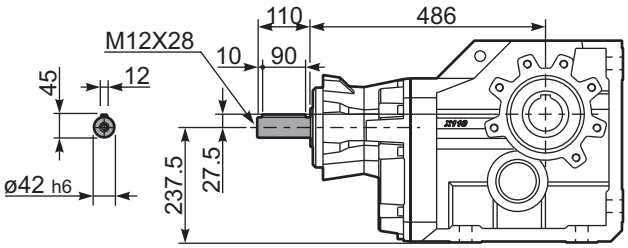
PX113...-F7.. Output flange
Flangia uscita



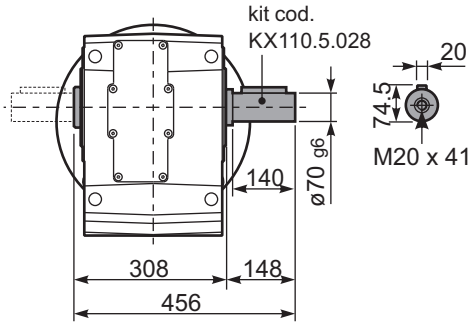
PX113...BR.. Reaction Arm
Braccio di reazione



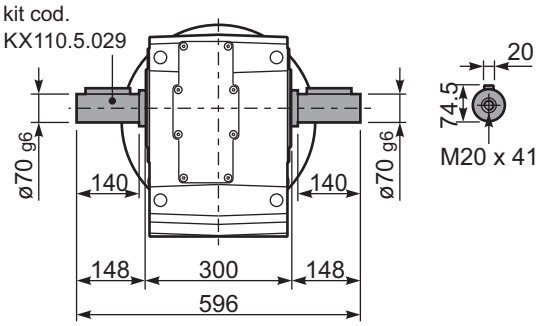
RX113... Input shaft
Albero in entrata



PX113A... Single shaft
Albero lento semplice



PX113B... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges -F 100 112	B5 -G 132	B5 -H 160	B14 motor flanges -U 100 112	B14 -V 132		Output Shaft ø	Ratios code
28.8	**48.57**	15	4390	1.0	14.8	4500						30142911	standard ø70	01
20.5	**68.43**	11	4545	1.0	10.7	4600						20142914		02
18.7	**74.95**	11	4977	0.9	9.8	4600						20142913		03
15.1	**92.53**	7.5	4216	1.1	7.9	4600						16142914		04
13.8	**101.33**	7.5	4617	1.0	7.2	4600						16142913		05
11.6	**120.33**	5.5	4051	1.1	6.1	4600						13142914		06
11.3	**123.75**	5.5	4166	1.1	5.8	4500						16142911		07
10.6	**131.78**	5.5	4436	1.0	5.6	4600						13142913		08
9.5	**147.28**	5.5	4958	0.9	5.0	4600						11142914		09
8.7	**161.30**	4	3972	1.2	4.5	4600						11142913		10
7.1	**196.98**	3	3652	1.2	3.6	4500						11142911		11
6.6	**212.99**	3	3949	1.2	3.4	4600						8142914		12
6.0	**233.26**	3	4324	1.1	3.1	4600						8142913		13
4.9	**284.86**	2.2	3889	1.2	2.5	4500						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.

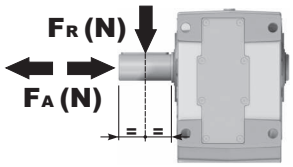
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6 ●	B7 ●	B8 ●	V5 ●	V6 ●	V8 ●
14.50 LT	8.50 LT	16.50 LT	16.00 LT	23.00 LT	14.50 LT	Ask
SHELL Omala S2 GX 460				**ENI** Blasia 460		

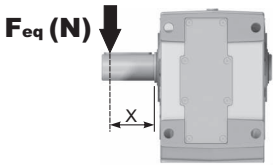
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

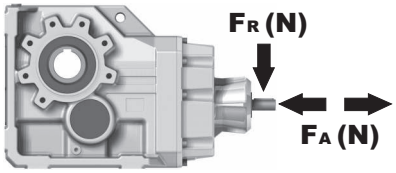
$$F_{eq} = F_R \cdot \frac{325.5}{X+255.5}$$





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



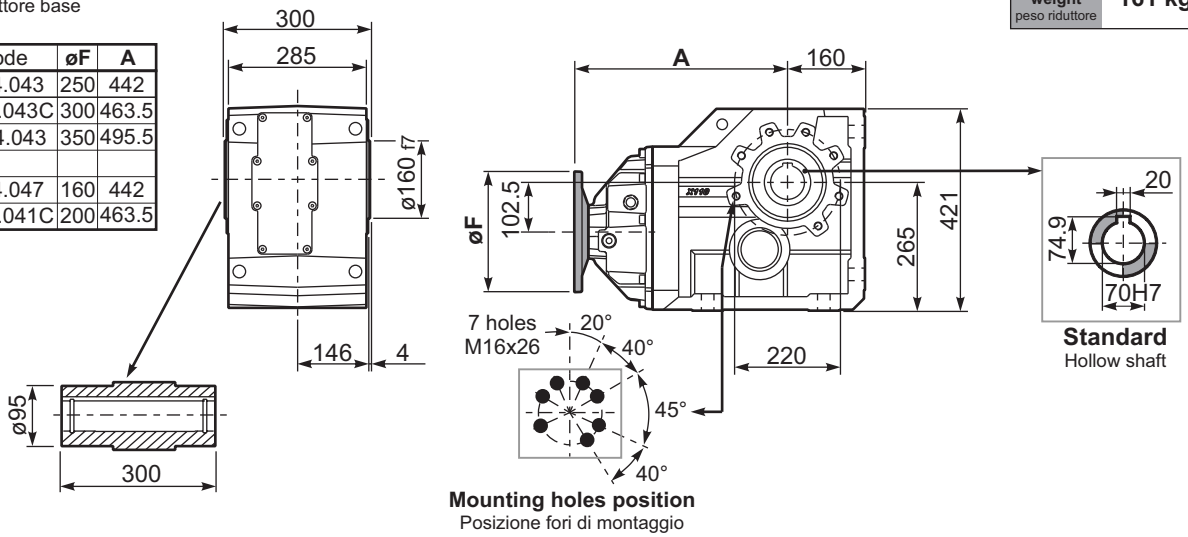
n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

tab. 2

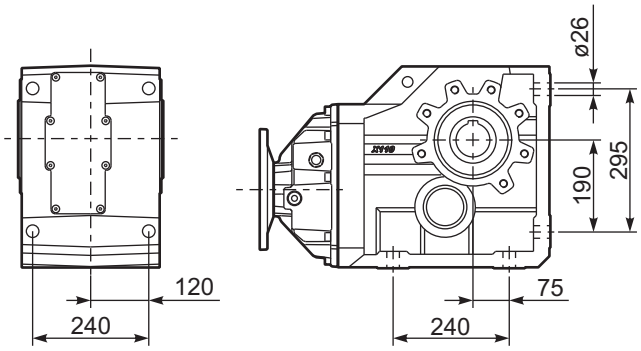
PX114C... Basic Gearbox
Riduttore base

Gearbox weight peso riduttore	161 kg

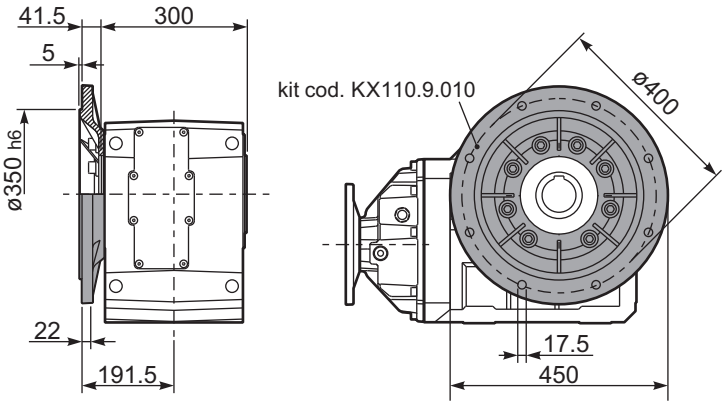
M. flanges	Kit code	øF	A
100/112B5	K023.4.043	250	442
132B5	KC51.4.043C	300	463.5
160B5	KC86.4.043	350	495.5
100/112B14	K085.4.047	160	442
132B14	KC51.4.041C	200	463.5



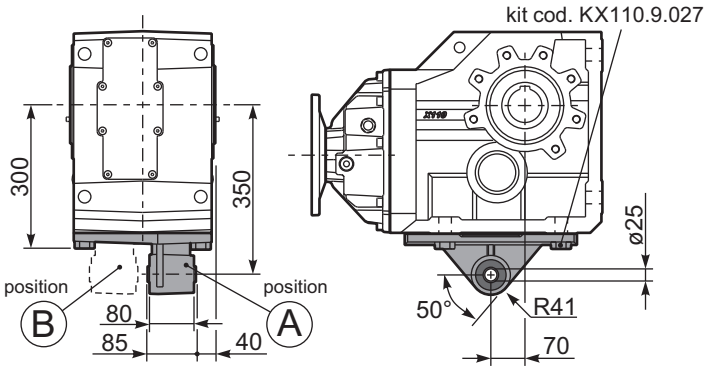
PX114...FB.. Feet
Piedini



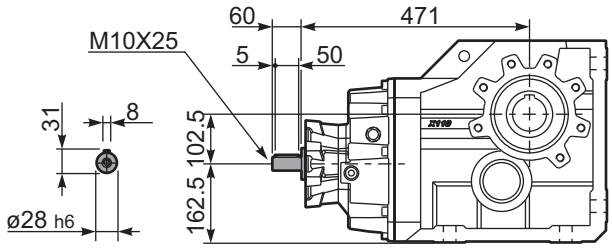
PX114...-F7.. Output flange
Flangia uscita



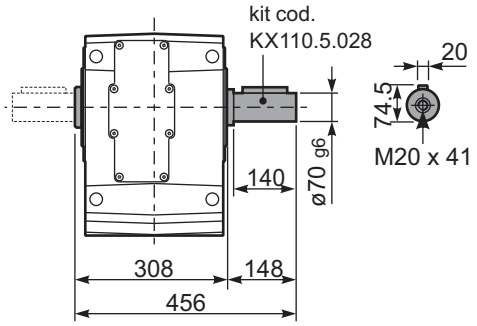
PX114...BR.. Reaction Arm
Braccio di reazione



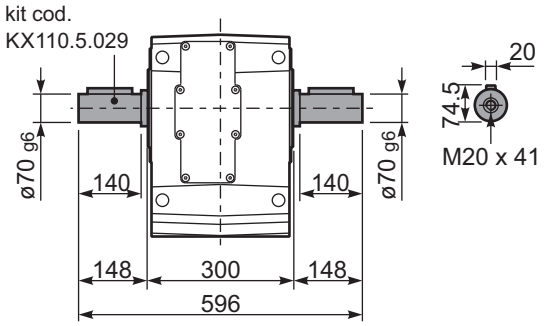
RX114... Input shaft
Albero in entrata



PX114A... Single shaft
Albero lento semplice



PX114B... Double shaft
Albero lento bisp.



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
176	**7.94**	7.5	369	1.0	7.5	380	B									302418		01
153	**9.13**	7.5	425	0.9	6.7	390	B									302416		02
131	**10.66**	5.5	366	1.1	6.0	410	B									302414		03
94	**14.97**	5.5	514	1.1	6.0	580	B									202418		04
81	**17.21**	5.5	591	1.0	5.4	600	B									202416		05
69	**20.24**	5.5	695	1.0	5.2	675	B									162418	**standard**	06
60	**23.27**	4	585	1.2	4.5	675	B									162416	**ø40**	07
53	**26.31**	4	661	1.0	4.0	675	B									132418		08
46.3	**30.25**	4	760	0.9	3.5	675	B									132416		09
39.6	**35.32**	3	668	1.0	3.0	675	B									132414	ø42	10
37.8	**37.03**	3	701	1.0	2.8	675	B									112416	On request	11
32.4	**43.23**	2.2	602	1.1	2.4	675	B									112414		12
30.1	**46.58**	2.2	649	1.0	2.3	675	B									82418		13
26.1	**53.55**	2.2	746	0.9	2.0	675	B									82416		14
22.4	**62.52**	1.5	600	1.1	1.7	675	B									82414		15
19.0	**73.75**	1.1	517	1.1	1.2	580	B									62416		16
16.3	**86.09**	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 requiren 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.

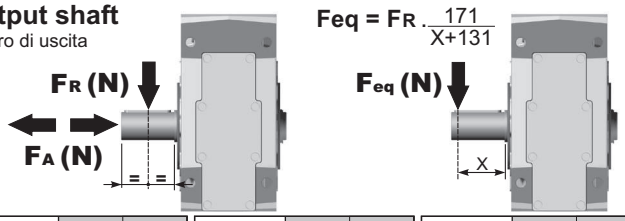
Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
4.00 LT	2.60 LT	2.60 LT	2.60 LT	5.15 LT	2.20 LT	Ask
SHELL Omala S4 WE 320				**ENI** Telium VSF 320		

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

Output shaft
Albero di uscita

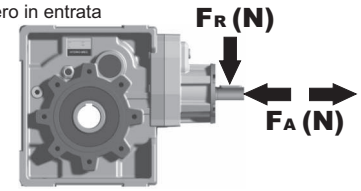
$$F_{eq} = F_R \cdot \frac{171}{X+131}$$



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



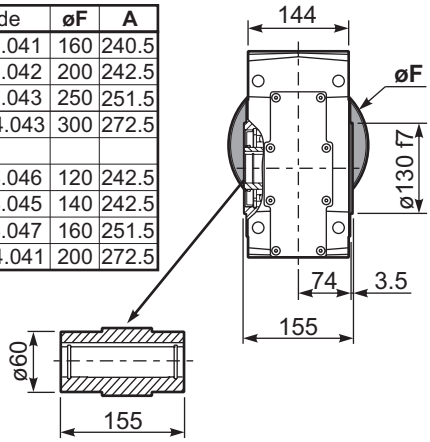
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

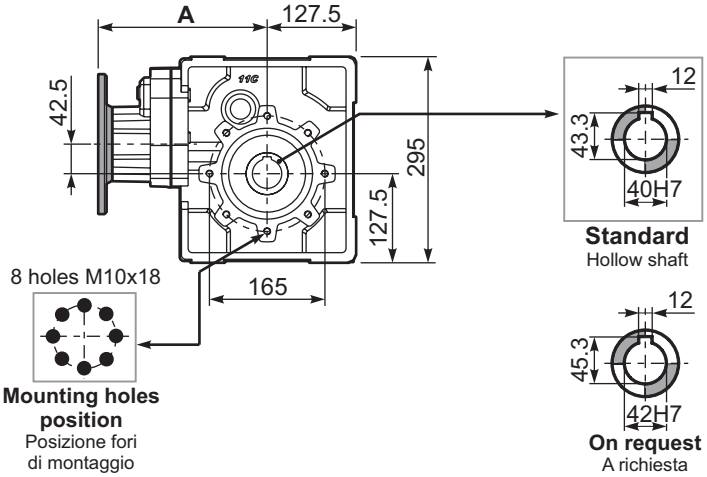
tab. 2

P113CC... Basic Gearbox
Riduttore base

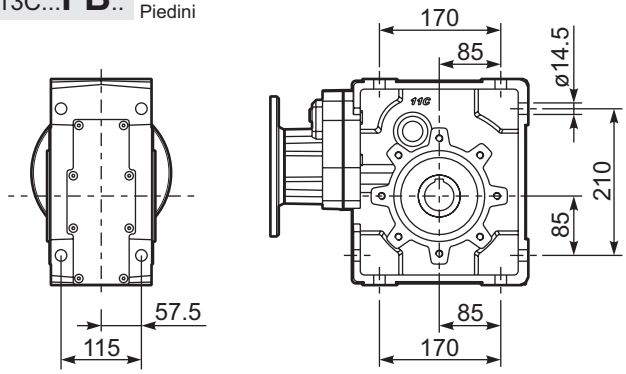
Gearbox weight peso riduttore	38.0 kg

M. flanges	Kit code	øF	A
71B5	K023.4.041	160	240.5
80/90B5	K023.4.042	200	242.5
100/112B5	K023.4.043	250	251.5
132B5	KC51.4.043	300	272.5
80B14	K085.4.046	120	242.5
90B14	K085.4.045	140	242.5
100/112B14	K085.4.047	160	251.5
132B14	KC51.4.041	200	272.5

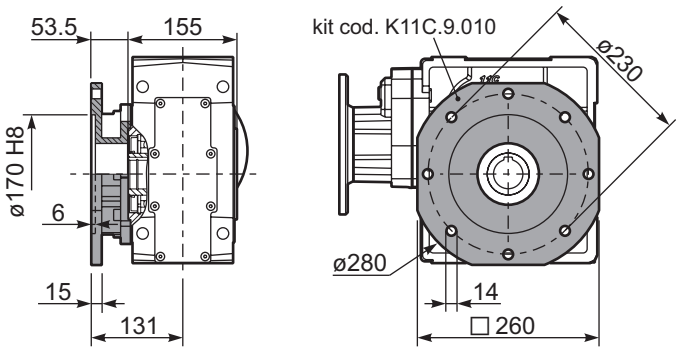




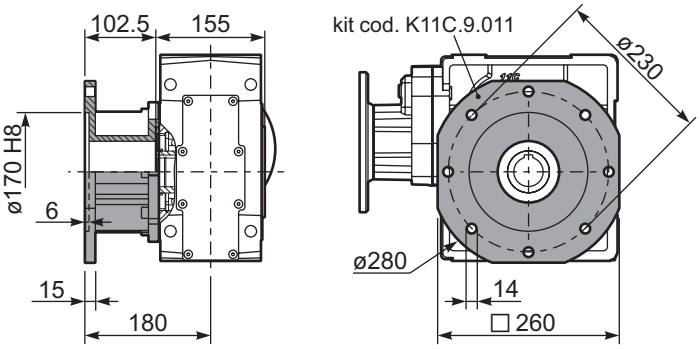
P113C...FB.. Feet
Piedini



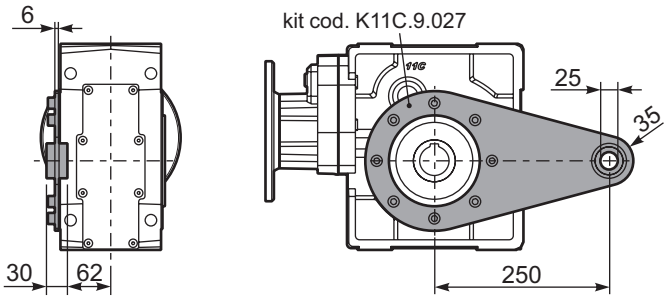
P113C...-FC.. Output flange
Flangia uscita



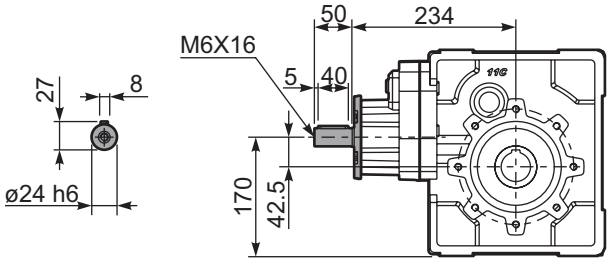
P113C...-FL.. Output flange
Flangia uscita



P113C...BR.. Reaction Arm
Braccio di reazione

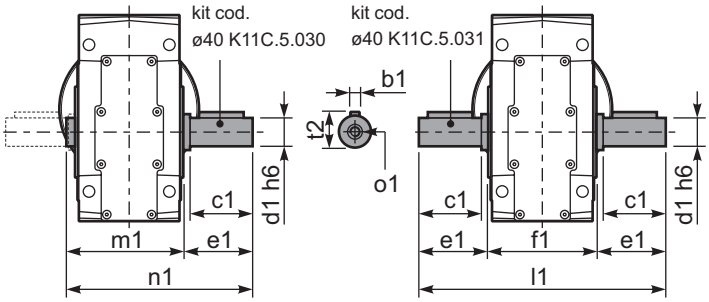


R113C... Input shaft
Albero in entrata



P113CA... Single shaft
Albero lento semplice

P113CB... Double shaft
Albero lento bisp.



	b1	c1	d1	e1	f1	l1	m1	n1	t2	o1
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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
18.7	**74.79**	1.5	704	1.0	1.4	675	B				C	C		19132418		01
16.3	**85.99**	1.1	591	1.1	1.3	675	B				C	C		19132416		02
14.0	**99.66**	1.1	685	1.0	1.1	675	B				C	C		17132416		03
12.0	**116.35**	0.75	548	1.2	0.92	675	B				C	C		17132414		04
11.5	**121.45**	0.75	572	1.2	0.89	675	B				C	C		13132418		05
10.0	**139.64**	0.75	658	1.0	0.77	675	B				C	C		13132416	**standard**	06
9.2	**152.21**	0.75	717	0.9	0.71	675	B				C	C		19082416	**ø40**	07
8.6	**163.02**	0.55	567	1.2	0.66	675	B				C	C		13132414		08
7.9	**177.69**	0.55	618	1.1	0.61	675	B				C	C		19082414		09
6.8	**205.95**	0.55	716	0.9	0.52	675	B				C	C		17082414	ø42	10
6.3	**222.52**	0.55	774	0.9	0.48	675	B				C	C		10132414	On request	11
5.6	**248.76**	0.37	578	1.2	0.43	675	B				C	C		9132416		12
4.8	**290.41**	0.37	675	1.0	0.37	675	B				C	C		9132414		13
4.1	**337.39**	0.37	784	0.9	0.32	675	B				C	C		10082416		14
3.6	**393.88**	0.25	618	1.1	0.27	675	B				C	C		10082414		15
3.2	**440.33**	0.25	690	1.0	0.24	675	B				C	C		9082416		16
2.7	**514.06**	0.18	616	1.1	0.21	675	B				C	C		9082414		17
2.4	**581.44**	0.18	697	1.0	0.18	675	B				C	C		7082416		18
2.1	**678.79**	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 **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 requiren 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**
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			

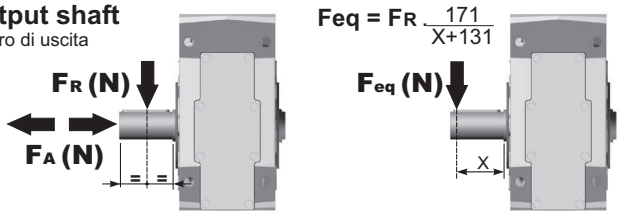
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

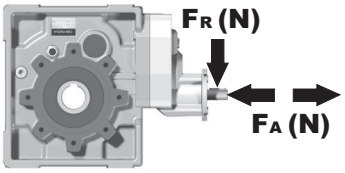
$$F_{eq} = F_R \cdot \frac{171}{X+131}$$



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



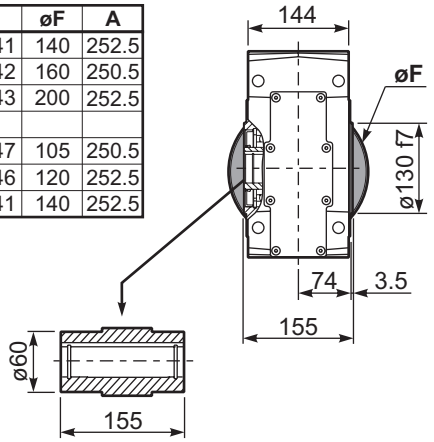
n_1	FA	FR
1400	240	1200
900	280	1400
500	310	1700

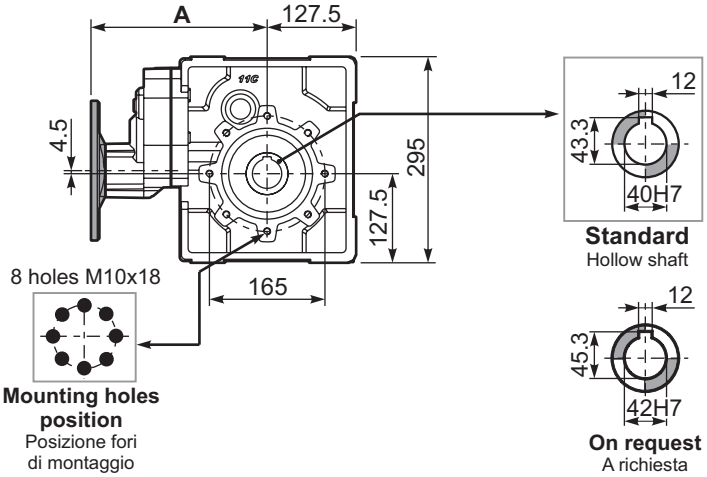
tab. 2

P114CC... Basic Gearbox
Riduttore base

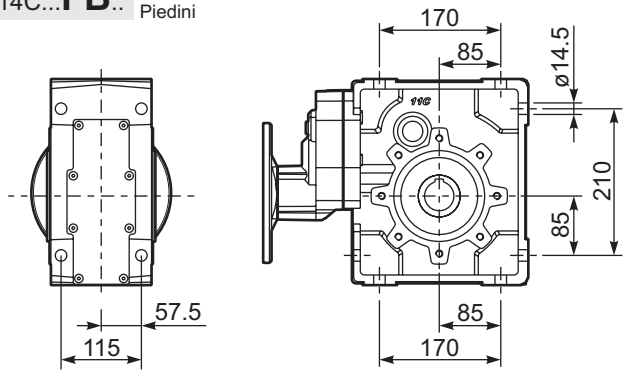
Gearbox weight peso riduttore	38.0 kg

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

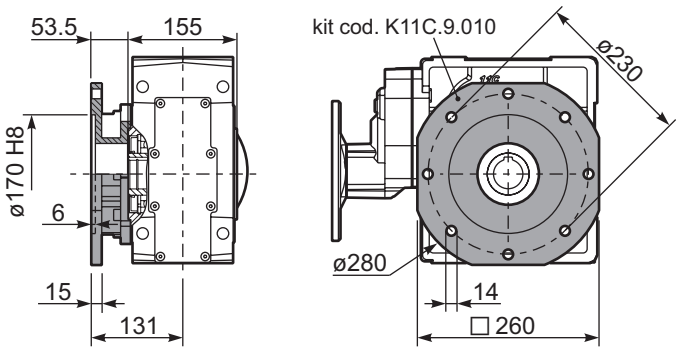




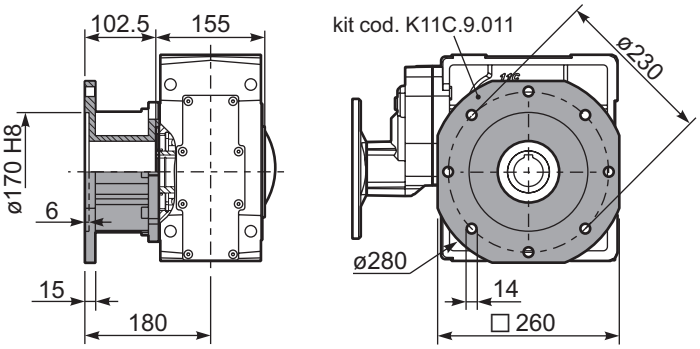
P114C...FB.. Feet
Piedini



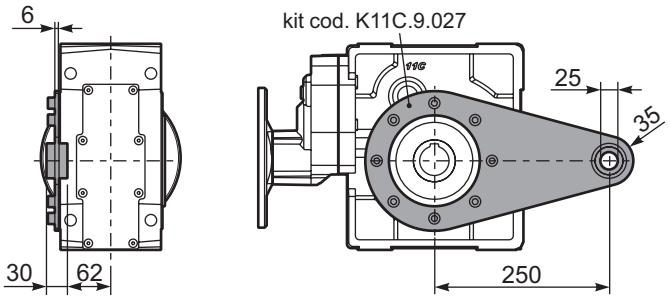
P114C...-FC.. Output flange
Flangia uscita



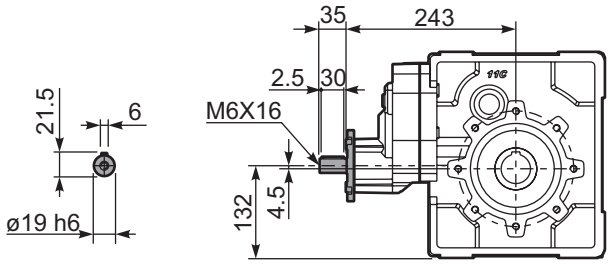
P114C...-FL.. Output flange
Flangia uscita



P114C...BR.. Reaction Arm
Braccio di reazione

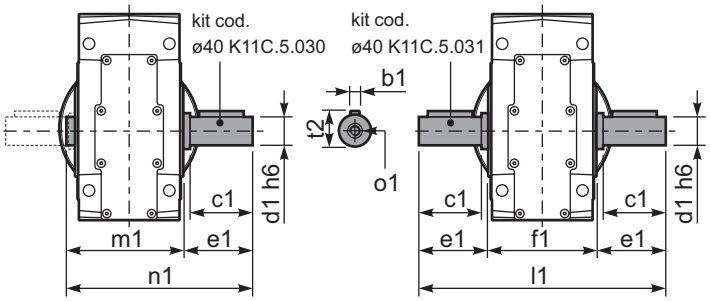


R114C... Input shaft
Albero in entrata



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^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -C 71	-D 80	-E 90	-F 100 112	-G 132	Available B14 motor flanges -R 80	-T 90	-U 100 112	-V 132		Output Shaft ø	Ratios code
145	**9.69**	9	560	1.3	12.2	755	B									302418	standard ø45	01
126	**11.09**	9	641	1.1	9.6	680	B									302416		02
108	**12.90**	9	746	1.1	9.6	790	B									302414		03
77	**18.26**	7.5	849	1.1	8.0	935	B									202418		04
67	**20.91**	7.5	972	1.0	7.5	1000	B									202416		05
58	**24.32**	5.5	835	1.2	6.4	1000	B									202414		06
49.5	**28.27**	5.5	971	1.0	5.5	1000	B									162416		07
42.6	**32.88**	4	826	1.2	4.7	1000	B									162414		08
38.1	**36.76**	4	924	1.1	4.2	1000	B									132416		09
32.7	**42.76**	3	809	1.2	3.6	1000	B									132414	ø40 on request	10
31.1	**45.00**	3	851	1.2	3.5	1000	B									112416		11
26.8	**52.33**	3	990	1.0	3.0	1000	B									112414		12
24.6	**56.82**	2.2	791	1.1	2.3	850	B									82418		13
21.5	**65.07**	2.2	906	1.1	2.3	975	B									82416		14
18.5	**75.68**	2.2	1054	0.9	2.1	1000	B									82414		15
15.6	**89.61**	1.1	628	1.1	1.2	710	B									62416		16
13.4	**104.22**	1.1	731	1.1	1.2	820	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.

B3	B6	B7	B8	V5	V6	V8
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 Blasia 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

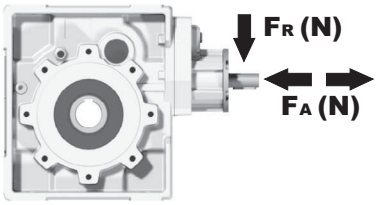
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{184.5}{X+144.5}$$

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

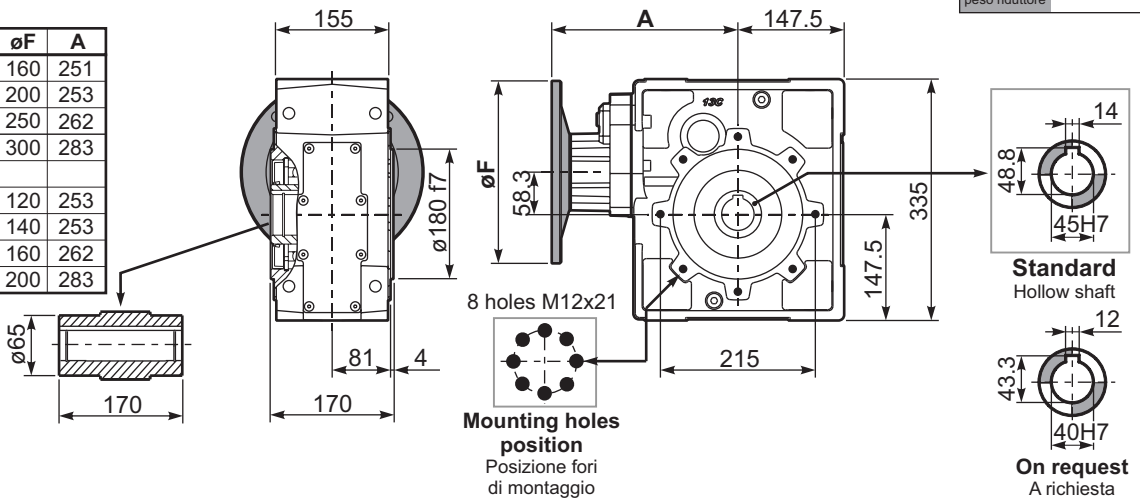
tab. 2

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.

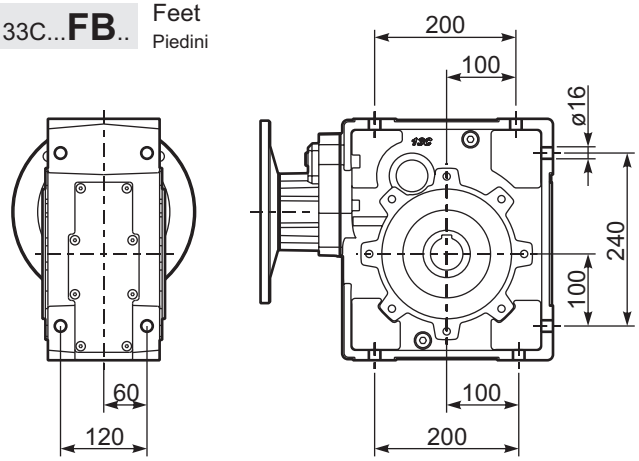
P133CC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	53.5 kg

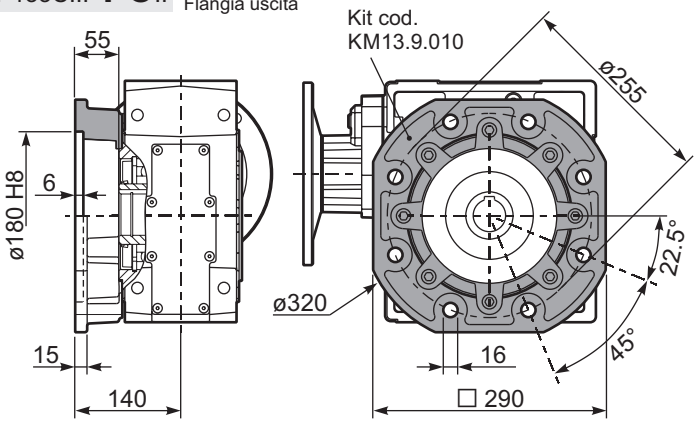
M. flanges	Kit code	øF	A
71B5	K023.4.041	160	251
80/90B5	K023.4.042	200	253
100/112B5	K023.4.043	250	262
132B5	KC51.4.043	300	283
80B14	K085.4.046	120	253
90B14	K085.4.045	140	253
100/112B14	K085.4.047	160	262
132B14	KC51.4.041	200	283



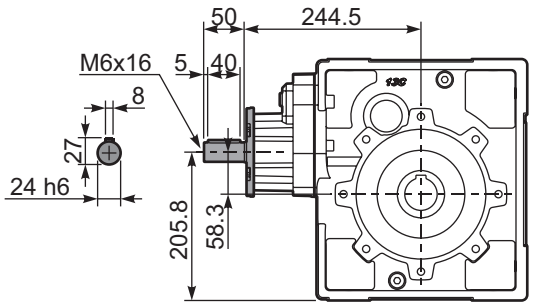
P133C...FB.. Feet
Piedini



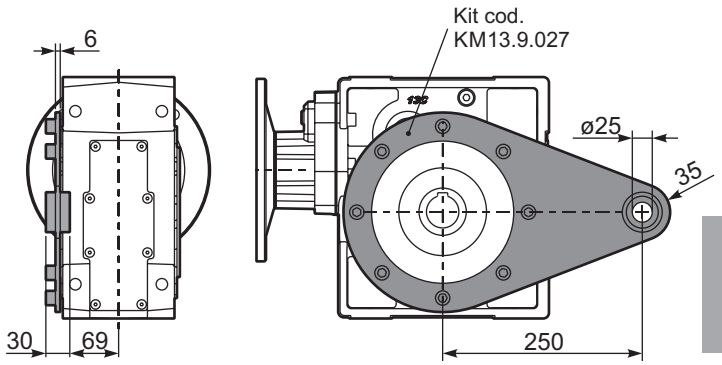
P133C...-FC.. Output flange
Flangia uscita



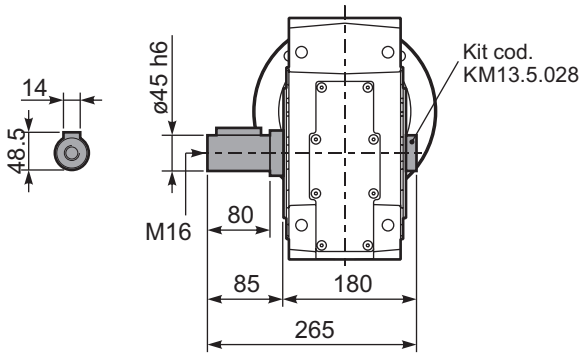
R133C... Input Shaft
Albero in entrata



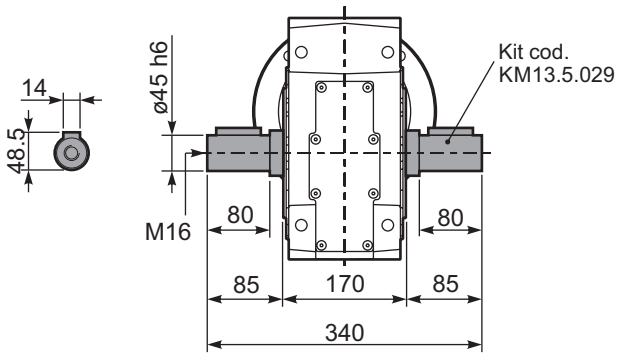
P133C...BR.. Reaction arm
Braccio di reazione



P133CA.. Single output Shaft
Albero lento semplice



P133CB.. Double Input Shaft
Albero lento bisporgente



▪ QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min^{-1}

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges -B 63	-C 71	-D 80	-E 90	Available B14 motor flanges -Q 71	-R 80	-T 90		Output Shaft ø	Ratios code
15.3	**91.23**	1.5	858	1.2	1.7	1000	B				C	C		19132418		01
13.4	**104.48**	1.5	983	1.0	1.5	1000	B				C	C		19132416		02
11.6	**121.10**	1.5	1139	0.9	1.3	1000	B				C	C		17132416		03
9.9	**140.84**	1.1	968	1.0	1.1	1000	B				C	C		17132414		04
8.5	**165.32**	1.1	1136	0.9	0.96	1000	B				C	C		15132414		05
7.6	**184.94**	0.75	872	1.1	0.86	1000	B				C	C		19082416		06
7.1	**197.34**	0.75	930	1.1	0.81	1000	B				C	C		13132414	**standard**	07
6.5	**215.10**	0.75	1014	1.0	0.74	1000	B				C	C		19082414	**ø45**	08
6.0	**231.60**	0.55	805	1.2	0.69	1000	B				C	C		10132416		09
5.6	**249.31**	0.55	867	1.2	0.64	1000	B				C	C		17082414		10
5.2	**269.37**	0.55	937	1.1	0.59	1000	B				C	C		10132414	ø40	11
4.8	**292.64**	0.55	1018	1.0	0.54	1000	B				C	C		15082414	on request	12
4.6	**302.26**	0.55	1051	1.0	0.53	1000	B				C	C		9132416		13
4.0	**349.30**	0.37	812	1.2	0.46	1000	B				C	C		13082414		14
3.5	**399.12**	0.37	928	1.1	0.40	1000	B				C	C		7132416		15
2.9	**476.80**	0.37	1108	0.9	0.33	1000	B				C	C		10082414		16
2.2	**622.28**	0.25	976	1.0	0.26	1000	B				C	C		9082414		17
1.7	**821.70**	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 **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.

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

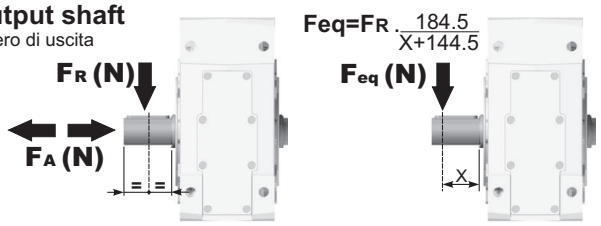
B3	B6	B7	B8	V5	V6	V8
6.10 LT	4.40 LT	4.40 LT	3.40 LT	7.50 LT	3.20 LT	Ask

SHELL Omala S2 GX 460 — **ENI** Blasia 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

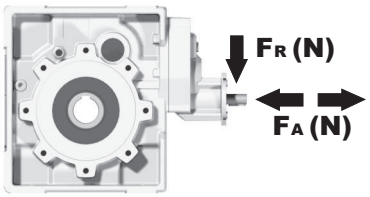


$$F_{eq}=F_R \cdot \frac{184.5}{X+144.5}$$

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	400	2000
900	440	2200
500	440	2200

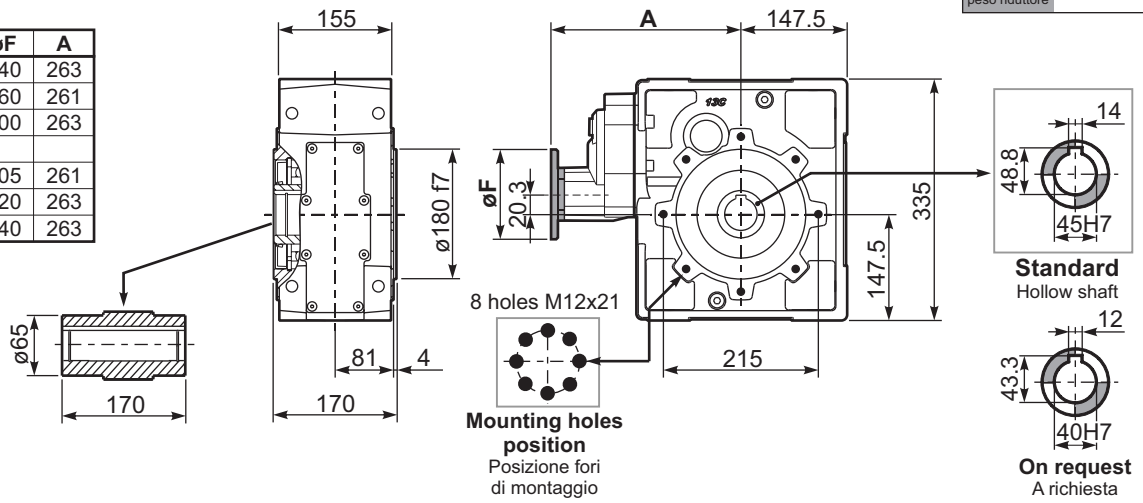
tab. 2

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.

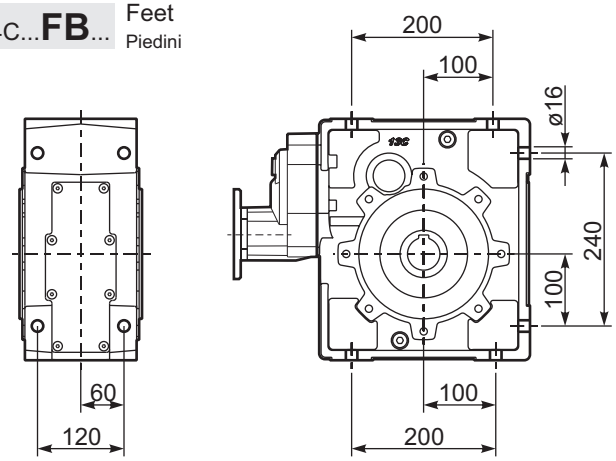
P134CC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	53.5 kg

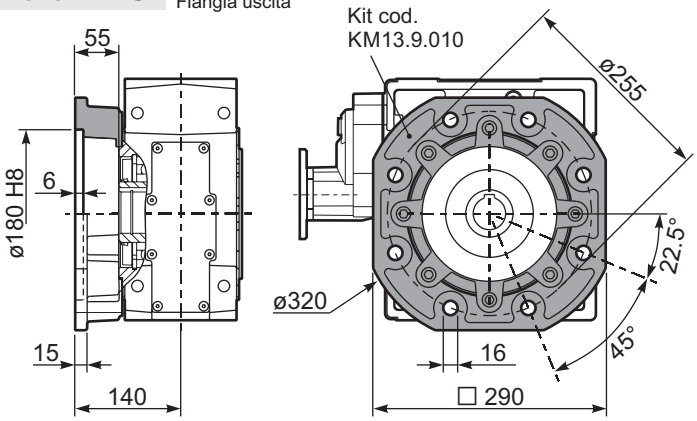
M. flanges	Kit code	øF	A
63B5	K063.4.041	140	263
71B5	K063.4.042	160	261
80/90B5	K063.4.043	200	263
71B14	K063.4.047	105	261
80B14	K063.4.046	120	263
90B14	K063.4.041	140	263



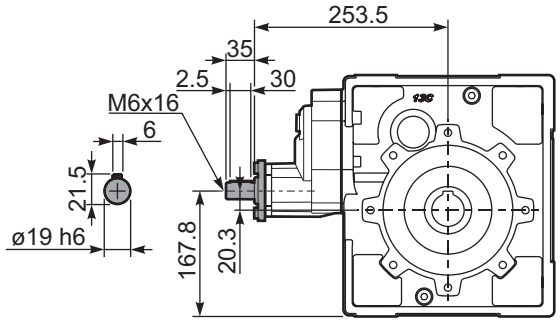
P134C...FB... Feet
Piedini



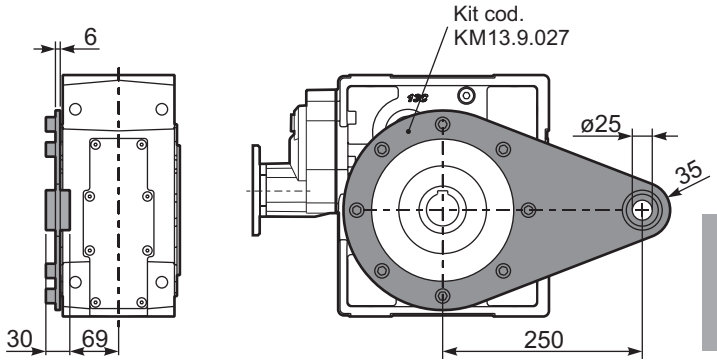
P134C...-FC.. Output flange
Flangia uscita



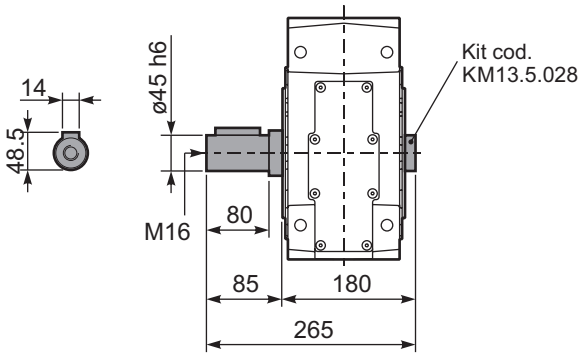
R134C... Input Shaft
Albero in entrata



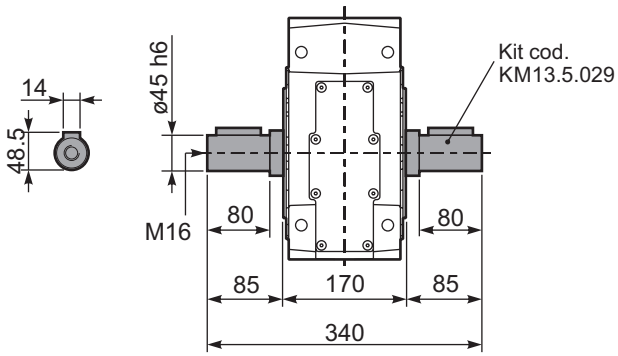
P134C...BR.. Reaction arm
Braccio di reazione



P134CA.. Single output Shaft
Albero lento semplice



P134CB.. Double Input Shaft
Albero lento bisporgente



UNIQUE FEATURES

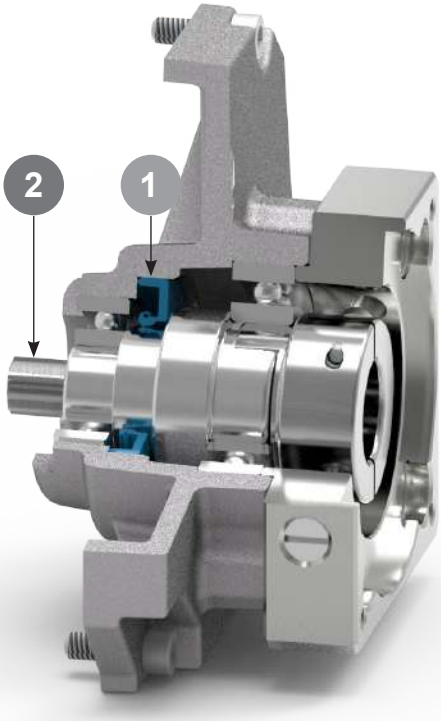
Special input shaft design with internal seal for Brushless applications.

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.

BRUSHLESS FLANGES FOR

Rightangle-Gear — **Worm gearboxes** Riduttori a vite senza fine — Page **B-1**

Square-Gear — **Square worm gearboxes** Riduttori a vite senza fine quadrati — Page **B-2**

Square-Gear — **Square worm gearboxes** Riduttori a vite senza fine quadrati — Page **B-3**

Coaxial-Gear — **Aluminum in-line gearboxes** Riduttori coassiali in alluminio — Page **B-4**

Compact-Gear — **Aluminum shaft mounted gearboxes** Riduttori ad assi paralleli in alluminio — Page **B-5**

Compact-Gear — **Cast iron shaft mounted gearboxes** Riduttori ad assi paralleli in ghisa — Page **B-6**

Cube-Gear — **Parallel shaft gearboxes** Riduttori ad assi paralleli — Page **B-7**

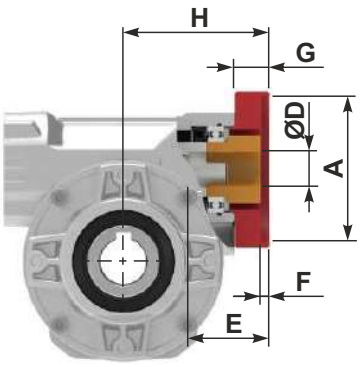
Angletech-Gear — **Aluminum Helical bevel gearboxes** Riduttori a coppia conica in alluminio — Page **B-8**

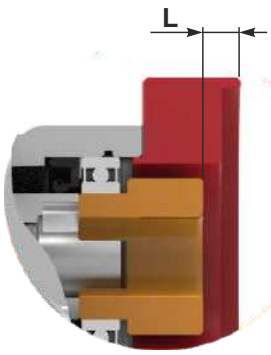
Angletech-Gear — **Cast Iron Helical bevel gearboxes** Riduttori a coppia conica in ghisa — Page **B-9**

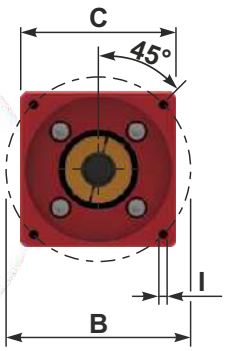
Available kit — **Reduction bushing, coupling, flanges.** Bussola di riduzione, giunto, flange. — Page **B-10**

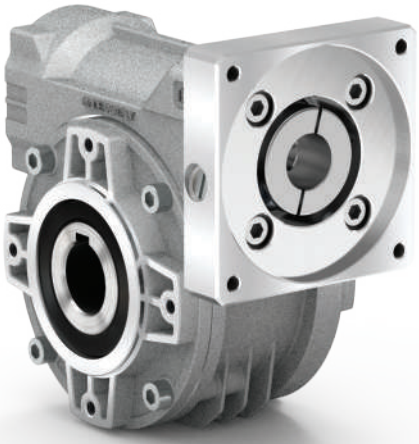
Important notes of selection — Page **B11÷B13**

Instructions — **Instructions for assembly of motor** Istruzioni per il montaggio del motore — Page **B15, B16**

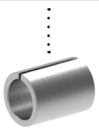






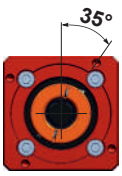


Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H
030 21Nm	**BA**	K0304071	KBR09/14G	K0305190L	Ø9	40	63	58	Ø14	30	4	20	4.7	M5x12	68
	BC	K0304072	KBR11/14G	K0305190L	Ø11	60	75	70	Ø14	30	4.5	20	4.7	M5x12	68
	BB	K0304073	-	K0305190L	Ø14	50	70	60	Ø14	32	4.5	28.5	13.2	M5x12	76.5
045 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
	BF	K0504075	-	KC355190L	Ø14	95	115	100	Ø14	44	4.5	23	9	M8x12	79
	BD	K0504078	-	KC355190L	Ø14	70	90	80	Ø14	44	4.5	23	9	M6x12	79
050 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 147Nm **63A** 191Nm	**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
	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	8	30	14	M8x14	109.5
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	58	4.5	25	9	M6x12	104.5
085 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	8	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

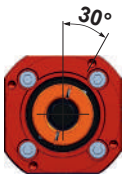


Supplied with reduction bushing
Fornito con bussola di riduzione

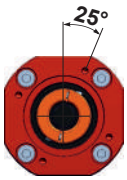
Coupling / Giunto



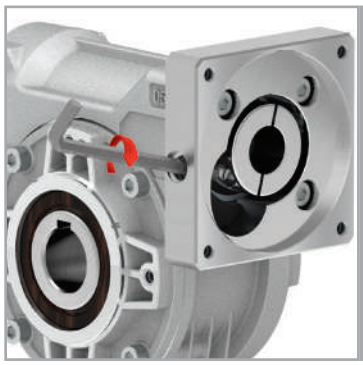
K0504072
Fixing holes shifted by 35°
Fori fissaggio motore ruotati a 35°



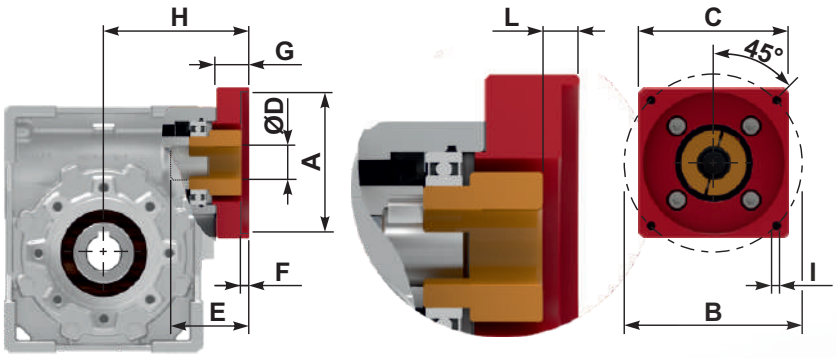
K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°



Coupling tightening
Serraggio del giunto

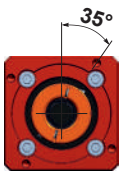


Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H
M30 21Nm	**BA**	K0304071	KBR09/14G	K0305190L	Ø9	40	63	58	Ø14	30	4	20	4.7	M5x12	68
	BC	K0304072	KBR11/14G	K0305190L	Ø11	60	75	70	Ø14	30	4.5	20	4.7	M5x12	68
	BB	K0304073	-	K0305190L	Ø14	50	70	60	Ø14	32	4.5	28.5	13.2	M5x12	76.5
M45 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
M50 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
	BD	K0504078	-	K0505190L	Ø19	70	90	80	Ø19	48	4.5	23	9	M6x12	88.5
M63 147Nm	**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
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	63	8	30	14	M8x14	105.5
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	58	4.5	25	9	M6x12	105.5
M75 270Nm	**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	8	30	13.5	M8x14	126
	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
M85 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	8	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

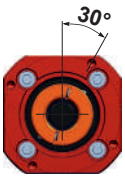
Supplied with reduction bushing
Fornito con bussola di riduzione

Coupling / Giunto

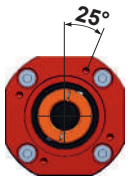
Coupling
Giunto



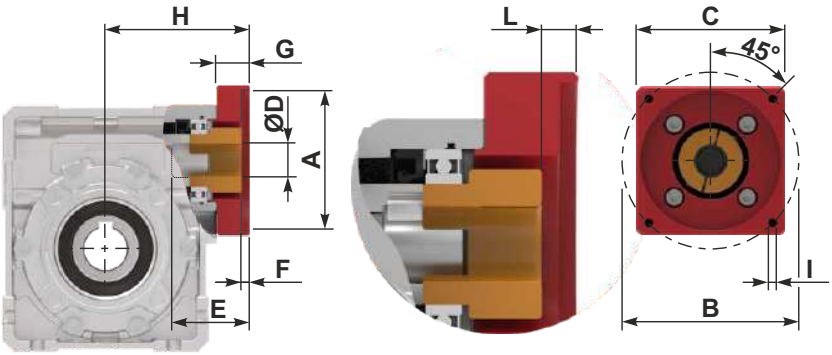
K0504072
Fixing holes shifted by 35°
Fori fissaggio motore ruotati a 35°

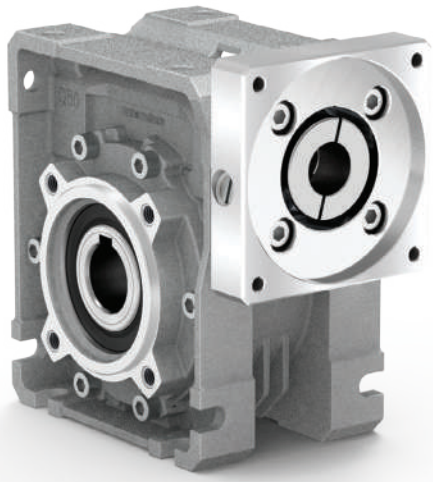


K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°

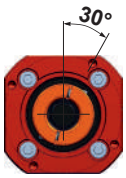




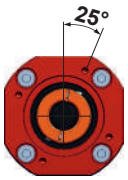
Type	Catalog Flange Code	Input Flanges Kit Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H
Q63 147Nm	BC	K0634072	K0634072	KBR14/22G	KC405190L	Ø14	60	75	90	Ø22	58	4.5	25	9	M5x12	104.5
	BB	K0634073	K0634073	KBR14/22G	KC405190L	Ø14	50	70	80	Ø22	58	4.5	25	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	8	30	14	M8x14	109.5
	BD	K0634078	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	58	4.5	25	9	M6x12	104.5
Q75 270Nm	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	8	30	13.5	M8x14	126
	BH	K0854077	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	60	5	26	9.5	M8x14	122
	BD	K0854078	K0854078	KBR19/24G	KC505190L	Ø19	70	90	95	Ø24	60	4.5	26	9.5	M6x14	122
Q85 347Nm	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	8	30	13.5	M8x14	128.5
	BH	K0854077	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	60	5	26	9.5	M8x14	124.5
	BD	K0854078	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

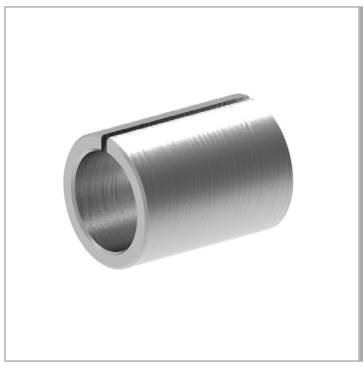
Coupling
Giunto



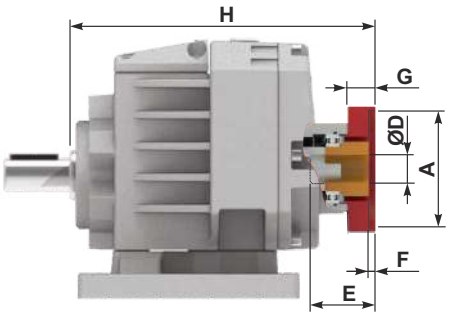
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°

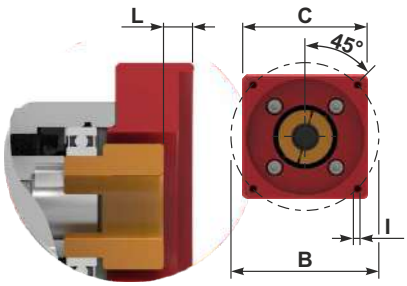


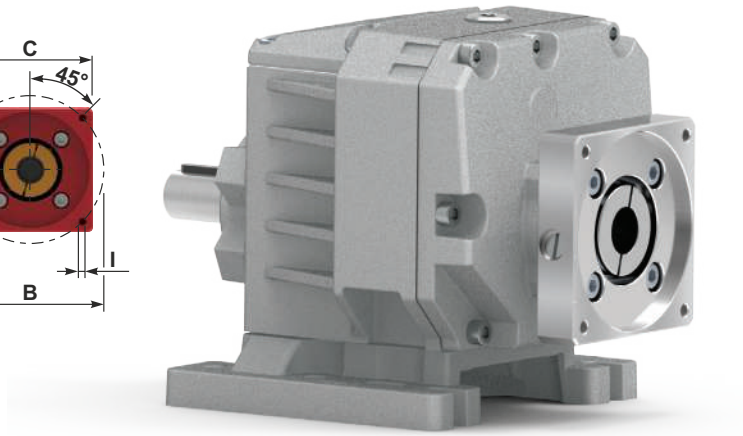
K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°



Reduction Bushing
Bussola di riduzione





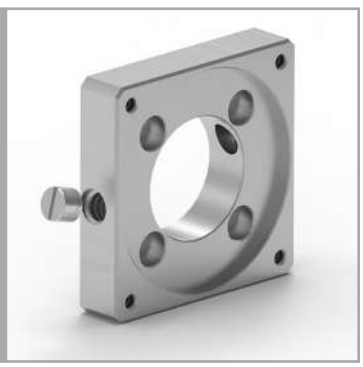


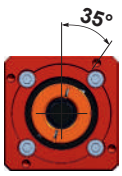
Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H		
413A 175Nm	**BC**	K0504072	KBR11/14G	KC355190L	Ø11	60	75	70	Ø14	38	4.5	23	9	M5x12	190.5		
	BC	K0504072	-	KC355190L	Ø14	60	75	70	Ø14	38	4.5	23	9	M5x12	190.5		
	BB	K0504073	-	KC355190L	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	513A	613A
412A 175Nm **513A** 360Nm **613A** 530Nm	**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
	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
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	60.5	8	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	612A	
512A 360Nm **612A** 530Nm	**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	8	30	13.5	M8x14	239.5	256	
	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	

Supplied with reduction bushing
Fornito con bussola di riduzione

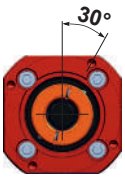
Coupling
Giunto

Flanges for servomotors
Flange per servomotori

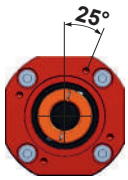




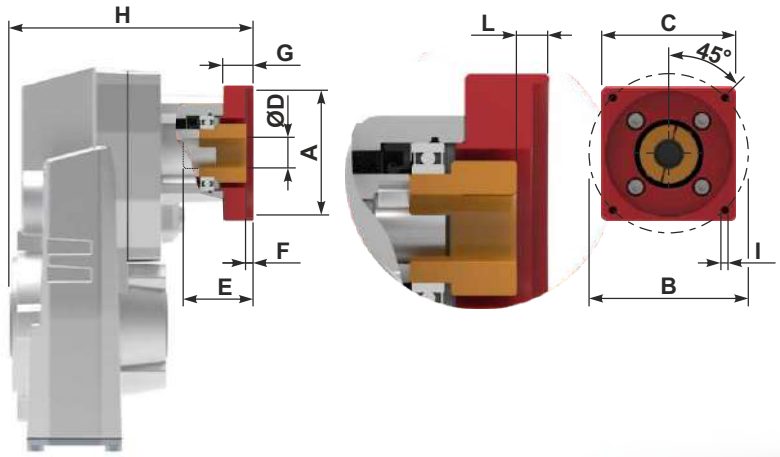
K0504072
Fixing holes shifted by 35°
Fori fissaggio motore ruotati a 35°

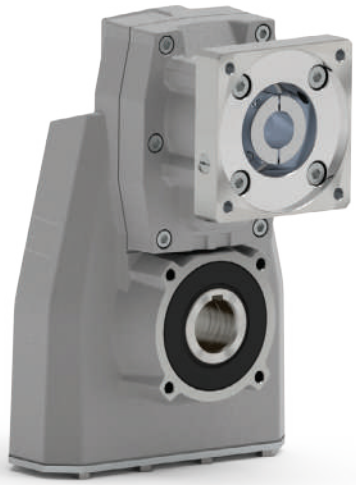


K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°

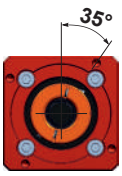




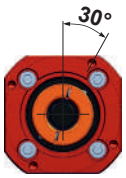
Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H		
															FA33	FA43	
FA33 150Nm	**BC**	K0504072	KBR11/14G	KC355190L	Ø11	60	75	70	Ø14	38	4.5	23	9	M5x12	180	180	
	BC	K0504072	-	KC355190L	Ø14	60	75	70	Ø14	38	4.5	23	9	M5x12	180	180	
FA43 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	FA42	FA53
FA32 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 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 490Nm	**BG**	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	60.5	8	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	
FA52 490Nm	**BF**	K0854075	KBR19/24G	KC505190L	Ø19	95	115	100	Ø24	58	4.5	26	9.5	M8x14		235	
	BG	K0854076	KBR22/24G	KC505190L	Ø22	110	145	130	Ø24	62	8	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	

Supplied with reduction bushing
Fornito con bussola di riduzione

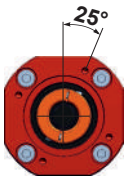
Coupling
Giunto



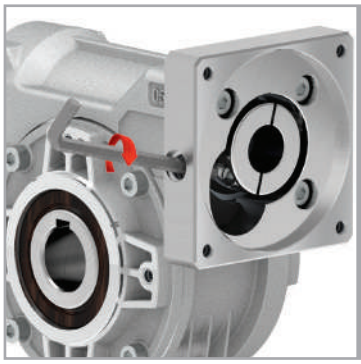
K0504072
Fixing holes shifted by 35°
Fori fissaggio motore ruotati a 35°



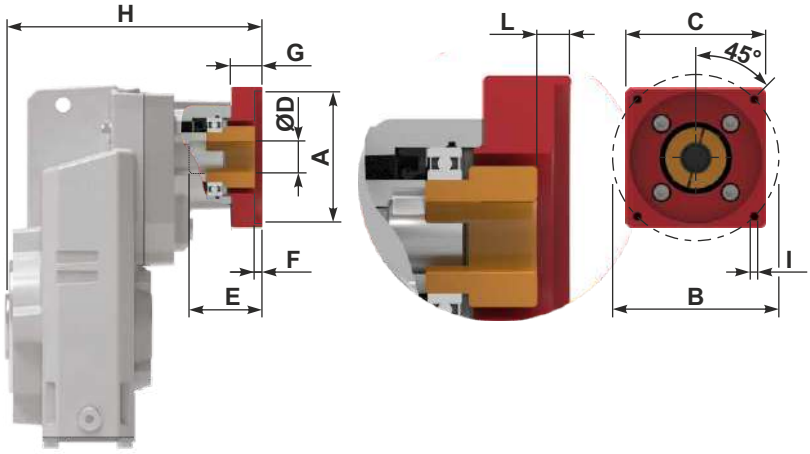
K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°

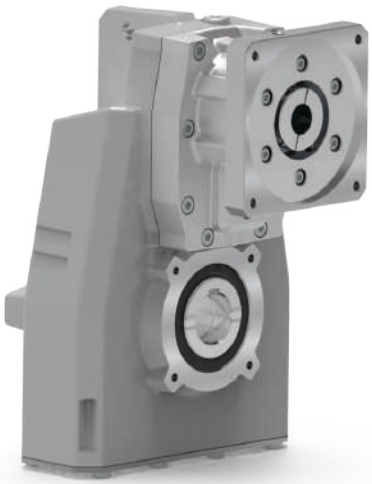


K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°



Coupling tightening
Serraggio del giunto



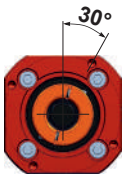


Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H	
															FC63	FC73
FC63 675Nm	BC	K0634072	KBR14/22G	KC405190L	Ø14	60	75	90	Ø22	51.5	4.5	25	9	M5x12	244	255.5
	BB	K0634073	KBR14/22G	KC405190L	Ø14	50	70	80	Ø22	51.5	4.5	25	9	M5x12	244	255.5
	BE	K0634074	KBR14/22G	KC405190L	Ø14	80	100	85	Ø22	51.5	4.5	25	9	M6x12	244	255.5
FC73 900Nm	BF	K0634075	KBR19/22G	KC405190L	Ø19	95	115	100	Ø22	51.5	4.5	25	9	M8x12	244	255.5
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	56.5	8	30	14	M8x14	249	260.5
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	51.5	4.5	25	9	M6x12	244	255.5
															FC62	FC72
FC62 675Nm	BF	K0854075	KBR19/24G	KC505190L	Ø19	95	115	100	Ø24	54	4.5	26	9.5	M8x14	235	246.5
	BG	K0854076	KBR22/24G	KC505190L	Ø22	110	145	130	Ø24	58	8	30	13.5	M8x14	239	251.5
FC72 900Nm	BH	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	54	5	26	9.5	M8x14	235	246.5
	BD	K0854078	KBR19/24G	KC505190L	Ø19	70	90	95	Ø24	54	4.5	26	9.5	M6x14	235	246.5

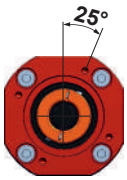
Supplied with reduction bushing
Fornito con bussola di riduzione

Coupling
Giunto

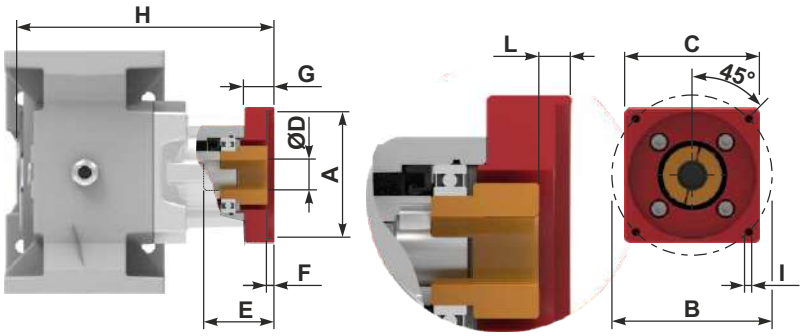
Reduction Bushing
Bussola di riduzione

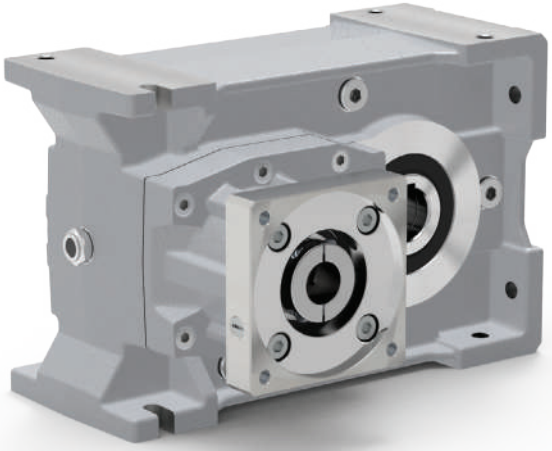


K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°

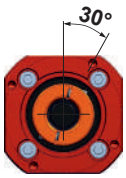




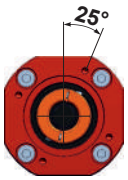
Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H	
															H63C	H73C
H63C 675Nm / H73C 900Nm	BC	K0634072	KBR14/22G	KC405190L	Ø14	60	75	90	Ø22	55.5	4.5	25	9	M5x12	244	255.5
	BB	K0634073	KBR14/22G	KC405190L	Ø14	50	70	80	Ø22	55.5	4.5	25	9	M5x12	244	255.5
	BE	K0634074	KBR14/22G	KC405190L	Ø14	80	100	85	Ø22	55.5	4.5	25	9	M6x12	244	255.5
	BF	K0634075	KBR19/22G	KC405190L	Ø19	95	115	100	Ø22	55.5	4.5	25	9	M8x12	244	255.5
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	60.5	8	30	14	M8x14	249	260.5
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	55.5	4.5	25	9	M6x12	244	255.5
															H62C	H72C
H62C 675Nm / H72C 900Nm	BF	K0854075	KBR19/24G	KC505190L	Ø19	95	115	100	Ø24	58	4.5	26	22	M8x14	235	246.5
	BG	K0854076	KBR22/24G	KC505190L	Ø22	110	145	130	Ø24	62	8	30	26	M8x14	239	250.5
	BH	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	58	5	26	22	M8x14	235	246.5
	BD	K0854078	KBR19/24G	KC505190L	Ø19	70	90	95	Ø24	58	4.5	26	22	M6x14	235	246.5

Supplied with reduction bushing
Fornito con bussola di riduzione

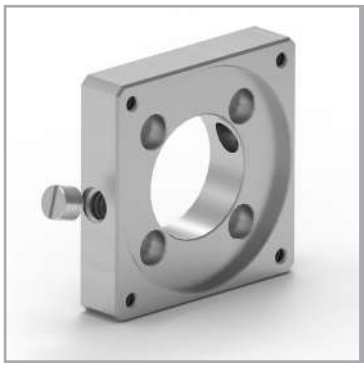
Coupling
Giunto



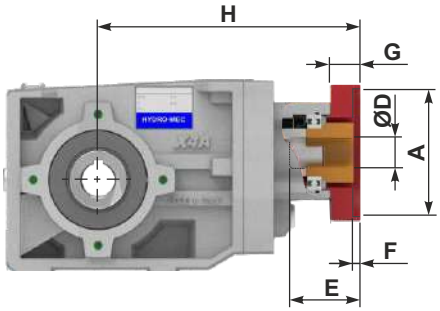
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°

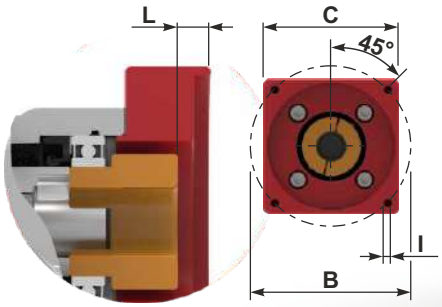


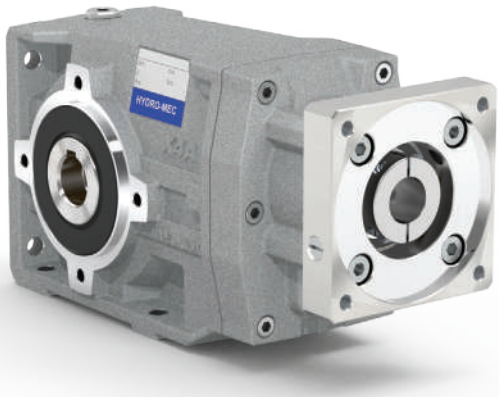
K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°



Flanges for servomotors
Flange per servomotori





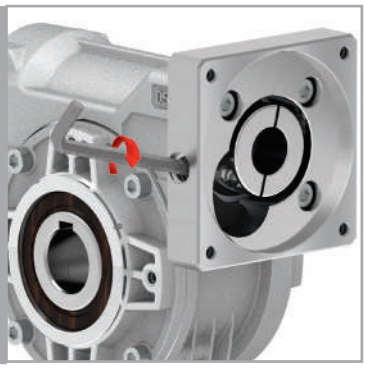


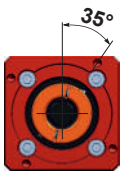
Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft ø	A	B	C	ØD	E	F	G	L	I	H		
															X22S	X33S	X43A
X22S 50Nm **X33S** 100Nm **X43A** 160Nm	**BC**	K0504072	KBR11/14G	KC355190L	Ø11	60	75	70	Ø14	38	4.5	23	9	M5x12	159.5	194.5	210
	BC	K0504072	-	KC355190L	Ø14	60	75	70	Ø14	38	4.5	23	9	M5x12	159.5	194.5	210
	BB	K0504073	-	KC355190L	Ø14	50	70	70	Ø14	38	4.5	23	9	M5x12	159.5	194.5	210
	BE	K0504074	-	KC355190L	Ø14	80	100	85	Ø14	38	4.5	23	9	M6x12	159.5	194.5	210
															X32S	X42A	X53A	X63A
X32S 90Nm **X42A** 150Nm **X53A** 250Nm **X63A** 410Nm	**BC**	K0634072	KBR14/22G	KC405190L	Ø14	60	75	90	Ø22	55.5	4.5	25	9	M5x12	189	204.5	251	270
	BB	K0634073	KBR14/22G	KC405190L	Ø14	50	70	80	Ø22	55.5	4.5	25	9	M5x12	189	204.5	251	270
	BE	K0634074	KBR14/22G	KC405190L	Ø14	80	100	85	Ø22	55.5	4.5	25	9	M6x12	189	204.5	251	270
	BF	K0634075	KBR19/22G	KC405190L	Ø19	95	115	100	Ø22	55.5	4.5	25	9	M8x12	189	204.5	251	270
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	60.5	8	30	14	M8x14	194	209.5	256	275
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	55.5	4.5	25	9	M6x12	189	204.5	251	270
															X52A	X62A	
X52A 250Nm **X62A** 410Nm	**BF**	K0854075	KBR19/24G	KC505190L	Ø19	95	115	100	Ø24	58	4.5	26	9.5	M8x14	242	261	
	BG	K0854076	KBR22/24G	KC505190L	Ø22	110	145	130	Ø24	62	8	30	13.5	M8x14	246	265	
	BH	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	58	5	26	9.5	M8x14	242	261	
	BD	K0854078	KBR19/24G	KC505190L	Ø19	70	90	95	Ø24	58	4.5	26	9.5	M6x14	242	261	

Supplied with reduction bushing
Fornito con bussola di riduzione

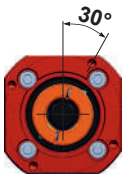
Coupling
Giunto

Coupling tightening
Serraggio del giunto

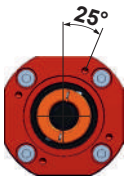




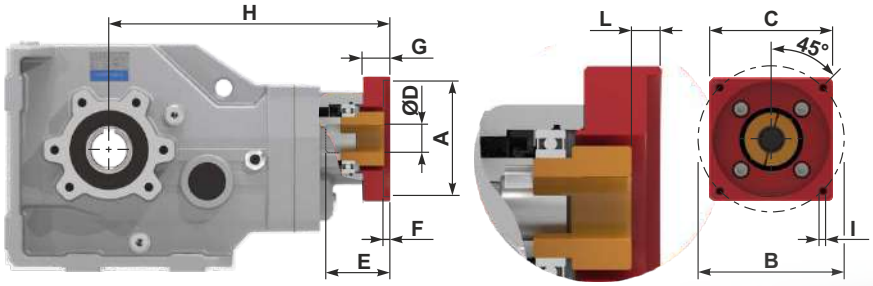
K0504072
Fixing holes shifted by 35°
Fori fissaggio motore ruotati a 35°

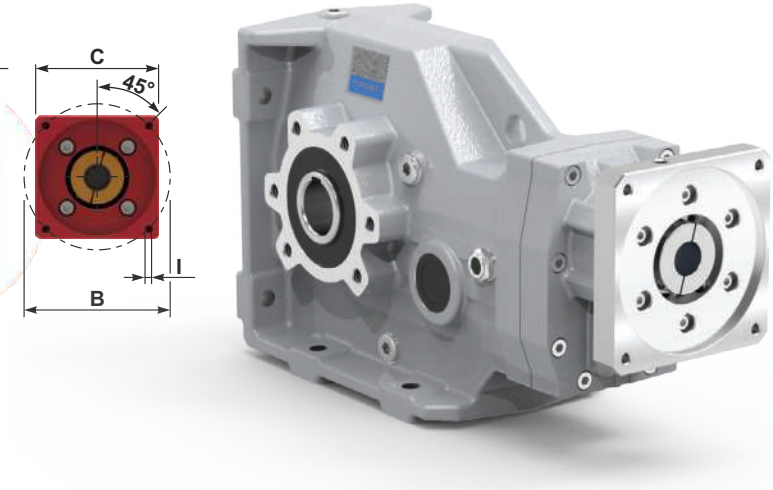


K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
K0634073
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°

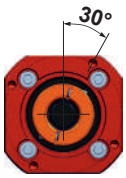




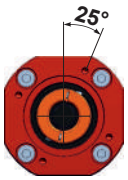
Type	Catalog Flange Code	Input Flanges Kit Code	Bushing Kit Code	Coupling Kit Code	Motor shaft Ø	A	B	C	ØD	E	F	G	L	I	H			
															X74C	X84C	114C	134C
X74C 100Nm **X84C** 160Nm **114C** 250Nm **134C** 410Nm	**BC**	K0634072	KBR14/22G	KC405190L	Ø14	60	75	90	Ø22	55.5	4.5	25	9	M5x12	316	333	257.5	268
	BB	K0634073	KBR14/22G	KC405190L	Ø14	50	70	80	Ø22	55.5	4.5	25	9	M6x12	316	333	257.5	268
	BE	K0634074	KBR14/22G	KC405190L	Ø14	80	100	85	Ø22	55.5	4.5	25	9	M6x12	316	333	257.5	268
	BF	K0634075	KBR19/22G	KC405190L	Ø19	95	115	100	Ø22	55.5	4.5	25	9	M8x12	316	333	257.5	268
	BG	K0634076	-	KC405190L	Ø22	110	145	130	Ø22	60.5	8	30	14	M8x14	321	338	262.5	273
	BD	K0634078	KBR19/22G	KC405190L	Ø19	70	90	90	Ø22	55.5	4.5	25	9	M6x12	316	333	257.5	268
															X73C	X83C	113C	133C
X73C 90Nm **X83C** 150Nm **113C** 250Nm **133C** 410Nm	**BF**	K0854075	KBR19/24G	KC505190L	Ø19	95	115	100	Ø24	58	4.5	26	9.5	M8x14	307	324	244.5	259
	BG	K0854076	KBR22/24G	KC505190L	Ø22	110	145	130	Ø24	62	8	30	13.5	M8x14	311	328	248.5	263
	BH	K0854077	-	KC505190L	Ø24	130	165	140	Ø24	58	5	26	9.5	M8x14	307	324	248.5	259
	BD	K0854078	KBR19/24G	KC505190L	Ø19	70	90	95	Ø24	58	5	26	9.5	M6x14	307	324	248.5	259

Supplied with reduction bushing
Fornito con bussola di riduzione

Coupling
Giunto



K0504073
K0634078
Fixing holes shifted by 30°
Fori fissaggio motore ruotati a 30°



K0634072
Fixing holes shifted by 25°
Fori fissaggio motore ruotati a 25°

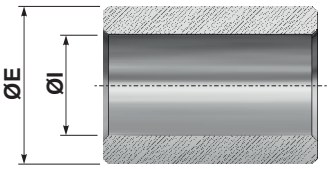
Coupling
Giunto

Available kits
Kit disponibili

Reduction bushings
Bussole di riduzione

Reduction bushing dimensions
Dimensioni bussola di riduzione

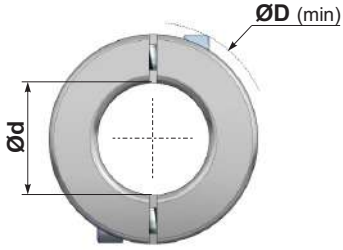
ØI	ØE	Code
Ø9	Ø14	KBR09/14G
Ø11	Ø14	KBR11/14G
Ø11	Ø19	KBR11/19G
Ø14	Ø19	KBR14/19G
Ø14	Ø22	KBR14/22G
Ø19	Ø22	KBR19/22G
Ø19	Ø24	KBR19/24G
Ø22	Ø24	KBR22/24G



Couplings
Giunti

Coupling dimensions
Dimensioni giunto

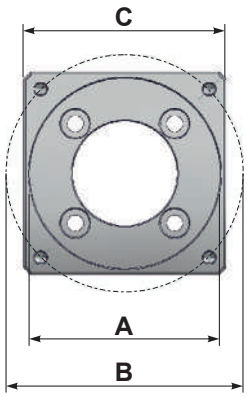
Ød	ØD (min)	Code
Ø9	Ø34	K0305190L
Ø14	Ø40	KC355190L
Ø19	Ø42	K0505190L
Ø22	Ø48	KC405190L
Ø24	Ø57	KC505190L



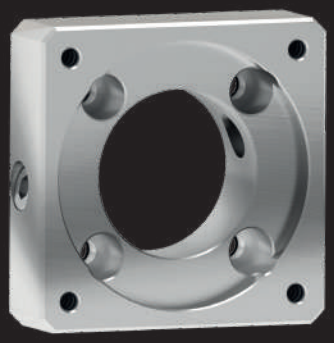
Flanges for servomotor
Flange per servomotore

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



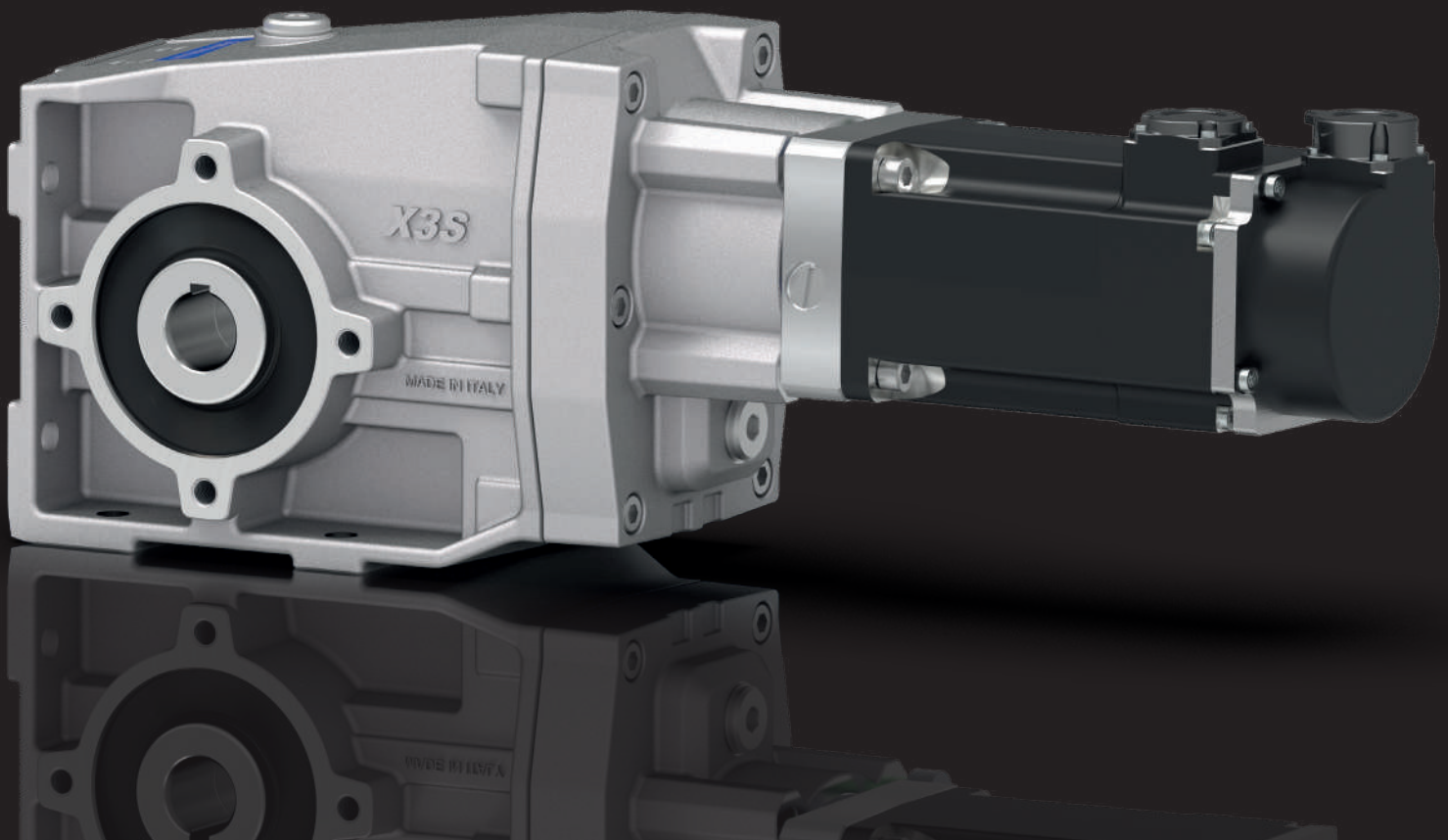
BRUSHLESS-TECH



Flange for servomotor
Flange per servomotore

Coupling
Giunto

Reduction bushing
Bussola di riduzione



Selecting a gearbox with brushless motor

Selezione di un riduttore con motore brushless

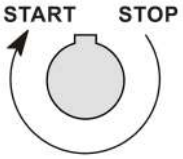
Several factors should be considered before selecting the appropriate gearbox for :

Diversi fattori devono essere considerati prima di selezionare il riduttore appropriato per:

1 **motor speeds from 0 to 1500 rpm, you can use the rating in our Hydro-Mec general catalog.**
Velocità del motore da 0 a 1500 giri/min, vedere la selezione nel nostro catalogo generale Hydro-Mec.

2 **Applications having frequent starts and stops.**
Applicazioni con avviamenti e arresti frequenti.

3 **Quick inversion of rotation.**
Veloci inversioni di rotazione.



030 Rightangle - Gear **21Nm** — Rating - Aluminum WORM GEARBOXES

1 ▪ **QUICK SELECTION** / Selezione veloce — **input speed (n_1) = 1400 min^{-1}**

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

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.

▪ **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

Service factor - Worm gears / Fattore di servizio - Ingranaggi a vite senza fine

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. <2 h	2 ÷ 8 h	8 ÷ 16 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	h ≤ 10	**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 Applicazione intermittente con n.ro operazioni/ora	h > 10	**Uniform** / Uniforme	1.25	1.5	1.75
		Moderate / Moderato	1.5	1.75	2
		Heavy / Forte	1.75	2	2.25

Service factor - Gears / Fattore di servizio - Ingranaggi

Type of load and starts per hour / Tipo di carico e avviamenti per ora			Oper. hours per day / Ore di funz. giorn. 3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	h ≤ 10	**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 Applicazione intermittente con n.ro operazioni/ora	h > 10	**Uniform** / Uniforme	1	1.25	1.5
		Moderate / Moderato	1.25	1.5	1.75
		Heavy / Forte	1.5	1.75	2.15

Add a second service factor for:

Aggiungere un secondo fattore di servizio per:

4 **Motor speeds from 1500 to 3000 rpm: Consider a reduction of the nominal torque M_{2R} of 20%.**
Velocità del motore da 1500 a 3000 giri/min: Considerare una riduzione della coppia nominale M_{2R} del 20%.

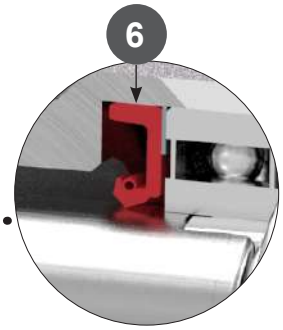
5 **Motor with speeds over 3000rpm please contact us.**
Velocità del motore oltre 3000 giri/min, contattateci.

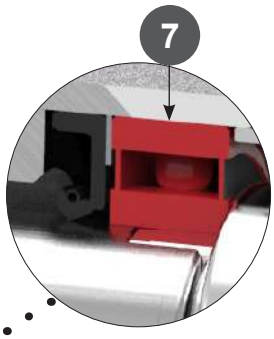
Special options on request on the gearbox

Opzioni speciali a richiesta sul riduttore

6 **ON REQUEST for speeds above 2000 rpm FKM oil seal are used on coupling configuration.**
A RICHIESTA per velocità al di sopra di 2000 giri/min in ingresso sul giunto usare anello di tenuta in FKM.

7 **With high speed C3 bearings are suggested.**
Con alte velocità si consigliano cuscinetti con gioco C3.





Suggested mounting position are as follows
Le posizioni di montaggio suggerite sono le seguenti

With high input speeds above 2000 rpm Oil breather plugs are suggested as internal pressure can rise. In some critical cases the oil quantity that are indicated in our website on the lubrication pages, may need to reduced. So please contact us.

Con velocità di ingresso elevate superiori a 2000 giri/min si consiglia l'uso di tappi di sfiato olio poiché la pressione interna può aumentare. In alcuni casi critici potrebbe essere necessario ridurre la quantità di olio indicata nel nostro sito relativa alla lubrificazione. Quindi per favore contattaci.

WORM GEARBOXES

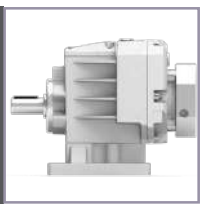
B3

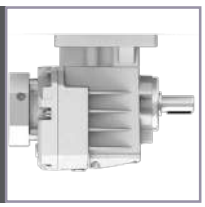
B8

B6

B7

COAXIAL GEARBOXES

B3


B8


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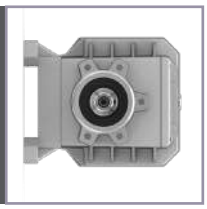

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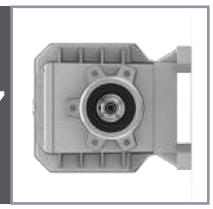


SHAFT MOUNTED GEARBOXES

H1

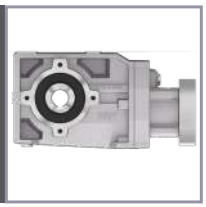
H2

H4

H3

HELICAL BEVEL GEARBOXES

B3

B8


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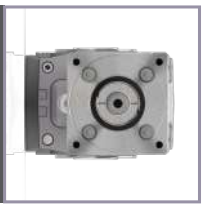

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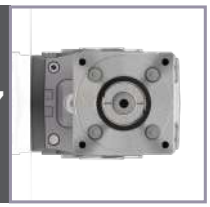


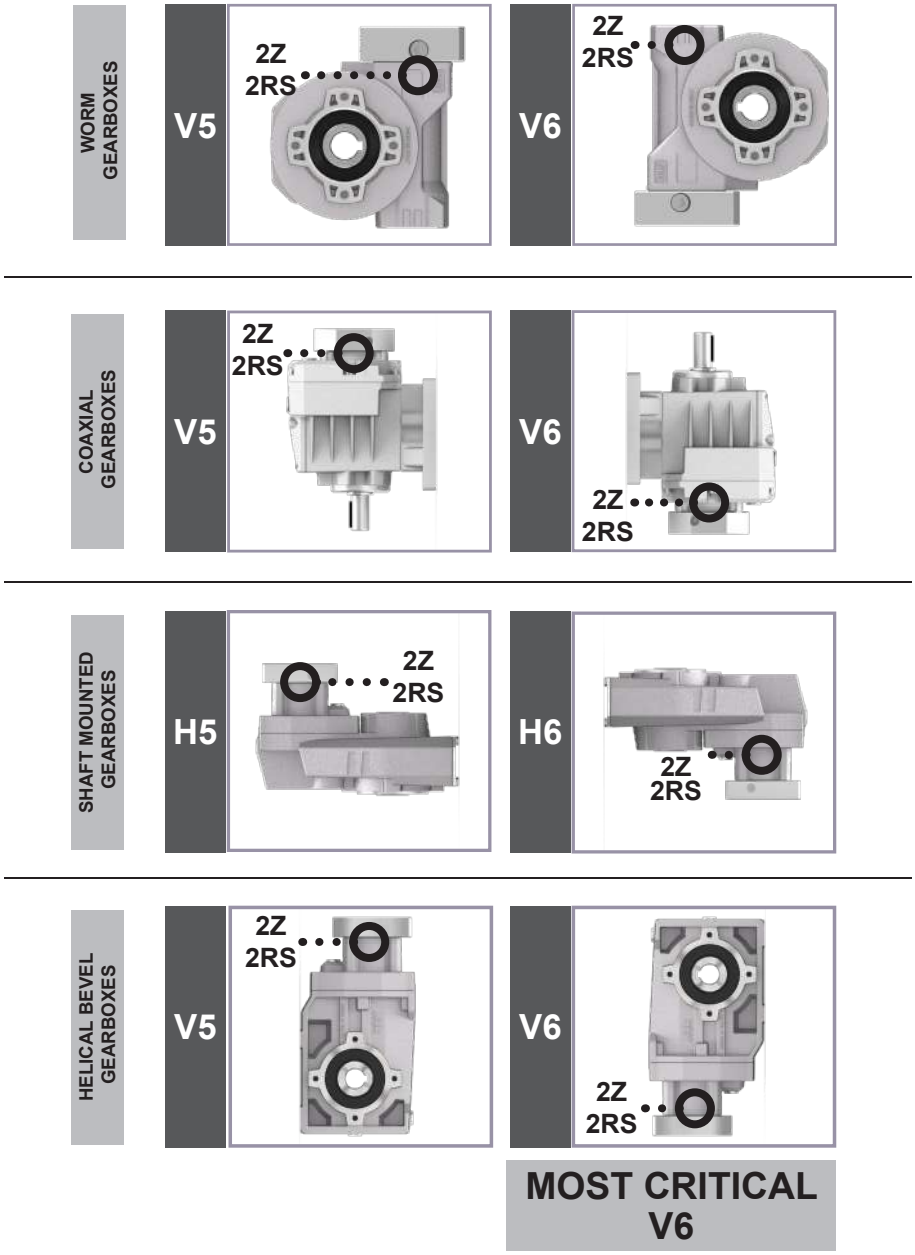
SUGGESTED POSITION

Vertical positions are critical
Le posizioni verticali sono critiche

These position required 2Z or 2RS bearings.
Queste posizioni richiedono l'utilizzo di cuscinetti 2Z o 2RS.

V6/H6
MOST CRITICAL

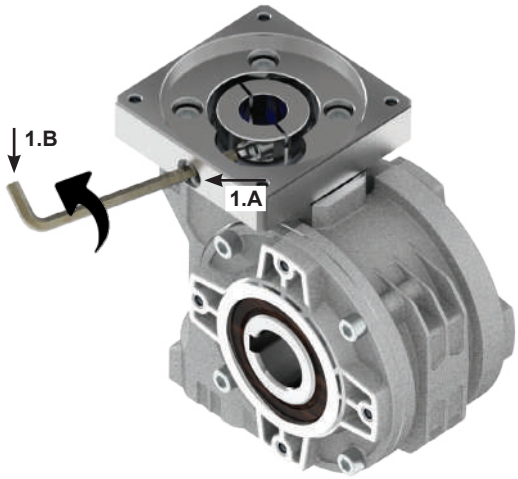
Continuous duty with high start and stop is not suggested. In this condition the correct functioning of lower oil seal becomes critical.
Il servizio continuo con avvii e arresti frequenti non è consigliato.
In questa condizione il corretto funzionamento dell'anello di tenuta inferiore diventa critico.



Instructions for motor assembly

Istruzioni per il montaggio del motore

1



1.A **Remove the protection screws on the input flange.**
Rimuoverele le viti di protezione sulla flangia motore.

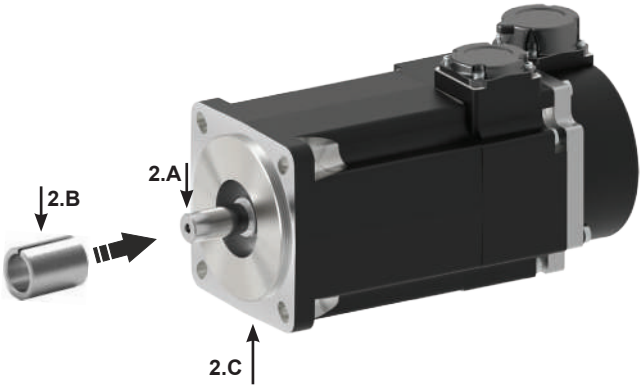
1.B **Loosen the fastening screws of the coupling.**
Allentare le viti di serraggio del giunto.

CHECK 2.A **Motor shaft without key.**
Albero motore senza linguetta.

2.B **Only if used with reduction bushing.**
Mount the reduction bushing with the rubber hammer.

Se prevista la bussola di riduzione.
Utilizzare un martello di gomma per il montaggio.

2

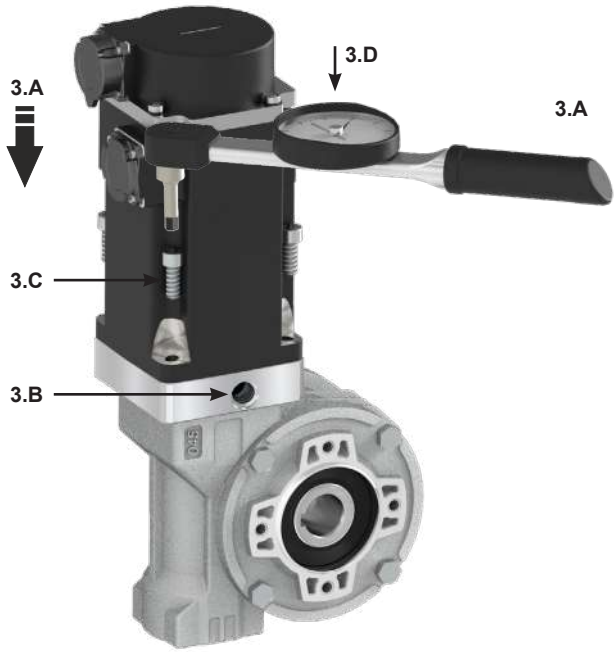


CHECK 2.C **Clean the contact surface on the motor flange and input flange.**
Pulire le superfici di contatto della flangia motore e flangia riduttore.

CHECK 3.A **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.

CHECK 3.B **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 vite del giunto sia allineata con il foro sulla flangia riduttore.

3

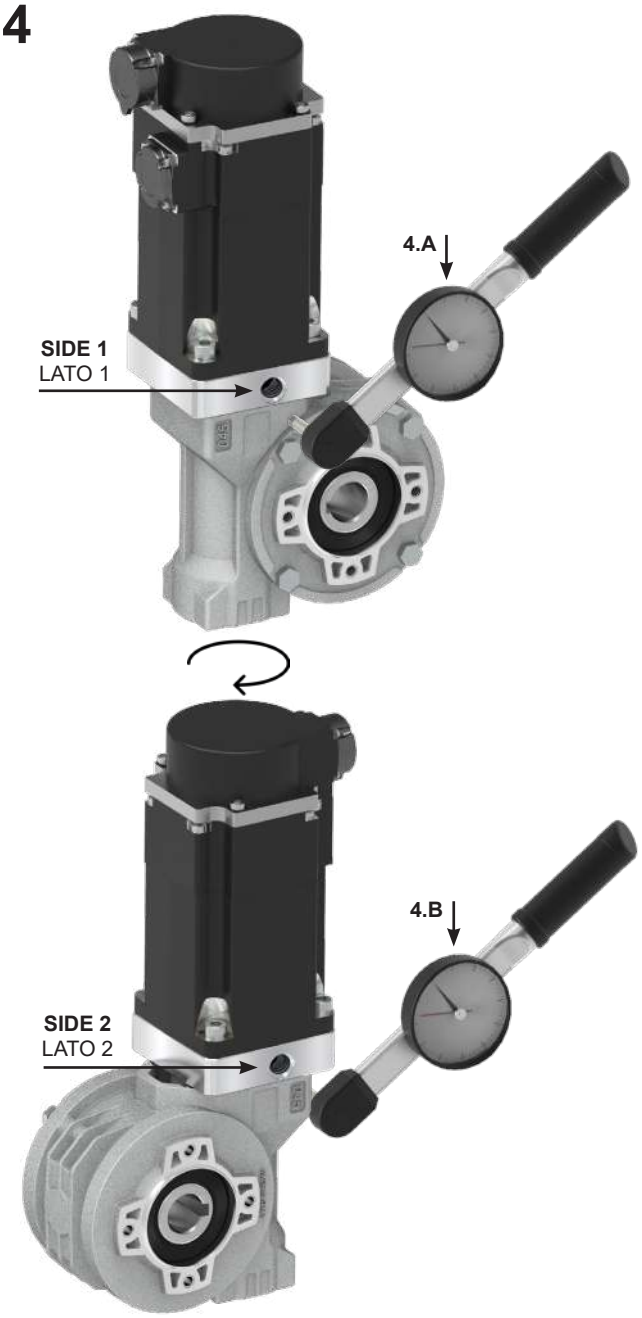


3.C **For fixing the motor, apply anti-loosening paste on screw thread, employ Arexons 52A70 strong thread lock or similar.**
Per il fissaggio del motore , applicare un prodotto anti-svitamento sui filetti delle viti, utilizzare un frena filetto forte tipo Arexons 52A70 o similare.

3.D **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 .

Screw Vite	TS [Nm]
M4	3
M5	6
M6	10
M8	25
M10	45

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.

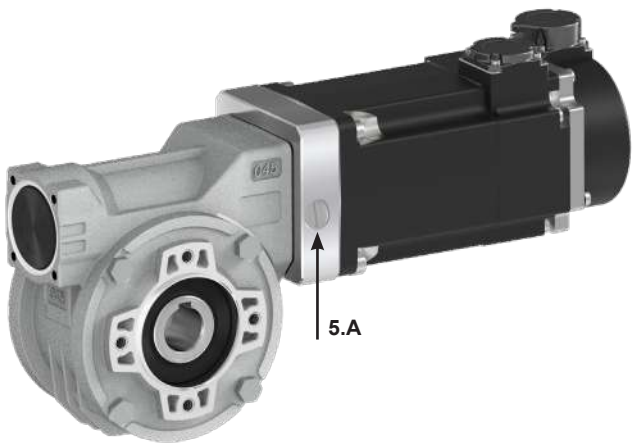
CHECK

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

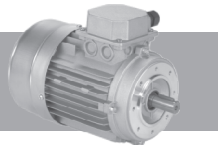
CHECK
5.A

Reset the protection screws.
Riposizionare le viti di protezione.

5

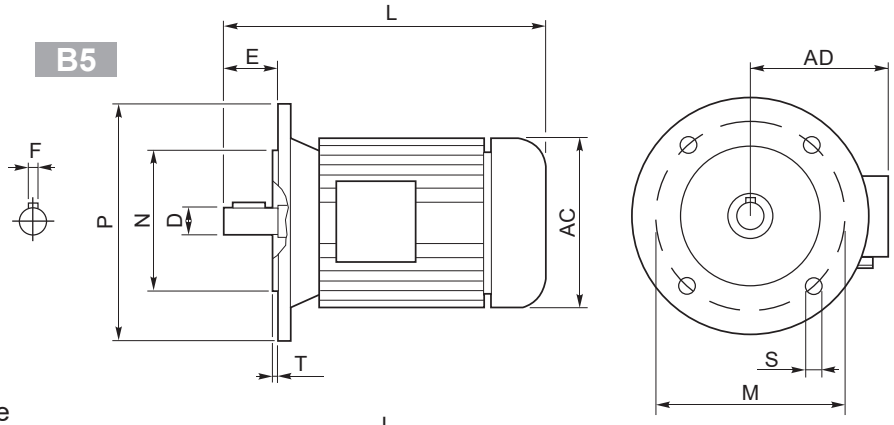


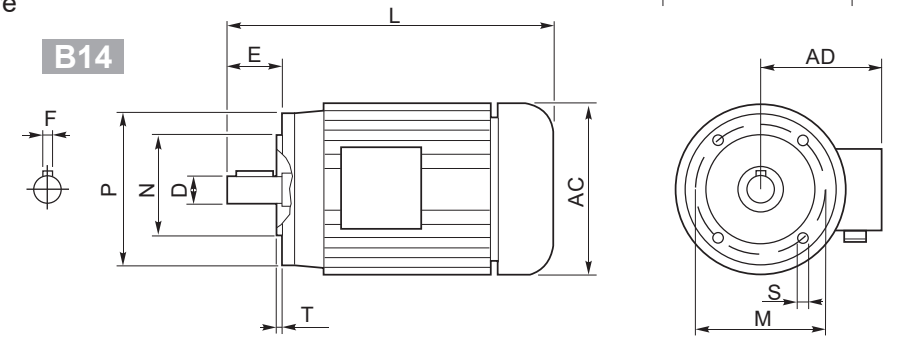
Aluminum IEC motors



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

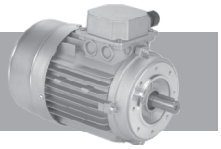
1) 230/400V - 50Hz motore trifase asincrono
2) Isolamento Classe F
3) S1 servizio continuo
4) Protezione IP 55
5) Non verniciato
6) Manicotto di protezione per l'albero motore





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 (400V)	kW	Nm	A (400V)	kW	Nm	A (400V)	D	F	E	L	AC	AD	N	M	P	S	T	N	M	P	S	T	
56 A	**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
56 B	**0.12**	0.42	0.46	**0.09**	0.67	0.37	**—**	—	—																	2.9
63 A	**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
63 B	**0.25**	0.87	0.76	**0.18**	1.30	0.69	**0.12**	1.32	0.74																	4.2
71 A	**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
71 B	**0.55**	1.90	1.54	**0.37**	2.52	1.14	**0.25**	2.72	1.10				255	141	107											6.5
80 A	**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
80 B	**1.1**	3.90	2.64	**0.75**	5.11	2.57	**0.55**	5.84	1.80																	10
90 S	**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
90 L	**2.2**	7.50	4.46	**1.5**	10.2	3.61	**1.1**	11.6	3.45				330													15
100 LA	**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
100 LB	**—**	—	—	**3.0**	20.1	6.66	**—**	—	—																	22
112 M	**4.0**	13.4	8.10	**4.0**	26.7	8.55	**2.2**	22.6	5.30				381	210	164											35
132 S	**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																							51
132 M	**—**	—	—	**7.5**	49.4	15.0	**4.0**	40.0	9.13				500													51
				9	61.4	18.5																				
160 M	**—**	—	—	**11**	72	21.5	**—**	—	—	42	12	110	613	335	246	250	300	350	18	5	**—**	—	—	—	—	79.2
160 L	**—**	—	—	**15**	98	29	**—**	—	—				657													97.5
180 M	**—**	—	—	**18.5**	121	35.5	**—**	—	—	48	14	110	712	366	266	250	300	350	19	5	**—**	—	—	—	—	170
180 L	**—**	—	—	**22**	144	42	**—**	—	—																	
200 L	**—**	—	—	**30**	196	53	**—**	—	—	55	16	110	780	405	341	300	350	400	19	5	**—**	—	—	—	—	240
225 S	**—**	—	—	**37**	240	69	**—**	—	—	60	18	140	888	463	360	350	400	450	19	5	**—**	—	—	—	—	305
225 M	**—**	—	—	**45**	292	84	**—**	—	—																	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 Isolierungsklas se 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.

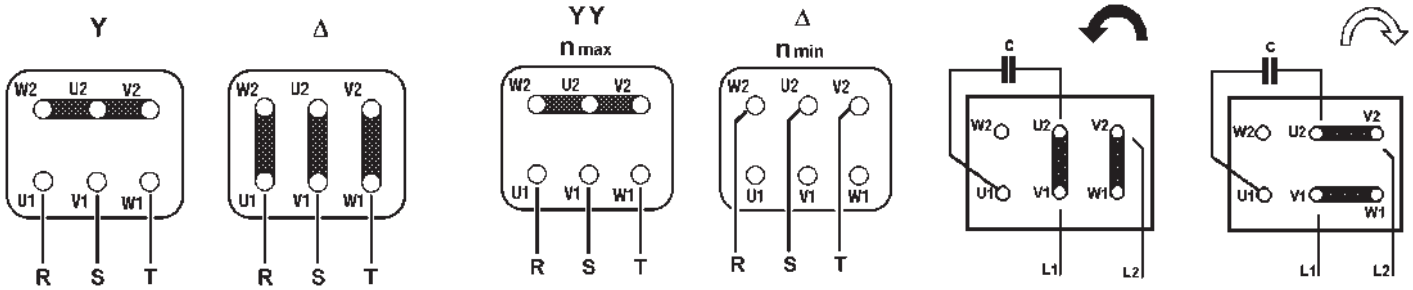
Insulation / Isolamento Isolierung /Aislamiento		E	B	F	H
Max. temp.	C°	120°	130°	155°	175°
	F*	248°	266°	311°	347°

Connections **Collegamenti** **Verbindungselemente** **Branchements** **Conexiones**

Threephase asyncronous single polarity
Asincrono trifase singola polarità
Asynchronmotor 3-ph eine Drehzahl
Moteur triphasé à une vitesse
Asincrono trifasico de una velocidad

Threephase asyncronous double polarity
Asincrono trifase doppia polarità
Asynchronmotor 3-ph doppelte Drehzahl
Moteur triphasé à deux vitesses
Asincrono trifasico de dos velocidades

Single phase asyncronous
Asincrono monofase
Einphasen-Asynchronmotor
Moteur monophasé
Asincrono monofasico



HYDROMEC SPA IS THE LEGAL RESPONSABLE FOR WARRANTY ISSUES.

PLEASE READ CAREFULLY

The following WARNING and CAUTION information are supplied to you for the proper functioning 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.

WARNING:

• **Written authorization is required to operate or use reducers in man lift or people moving devices**.

• Check to make sure that certain applications do not exceed the allowable load capacities published in the current catalog.

• 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.

• 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.

• 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.

• Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.

• 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.

• 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.

• 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.

• Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and not other associated attachments or motors.

• Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.

• Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and or shaft breakage from bending fatigue, it not sized properly.

SELLING CONDITIONS

Warranty for manufacturing defects will expire one-year after the invoicing date. Hydro-Mec s.p.a. will replace or repair defective parts but will not accept any further changes for direct or indirect damages of any kind. The warraty will become null and void if repairs or changes are carried out without our prior written authorization.

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.

If the process requires total protections the customers should consider additional measures to avoid any contaminations arising from the gearboxes.

All rights reserved.

All information shown in this catalogue are purely indicative;
Hydro-Mec s.p.a reserves the right to make any necessary variation without prior notice.

HYDROMEC SPA È LEGALMENTE IL RESPONSABILE DEI PROBLEMI DI GARANZIA.

LEGGERE ATTENTAMENTE

Le seguenti raccomandazioni sono fondamentali per un buon funzionamento del vostro prodotto.
Leggere attentamente tutte le istruzioni prima di azionare il riduttore.
L'inappropriata installazione, manutenzione o funzionamento del riduttore può causare incidenti al personale addetto edanni al riduttore stesso.

ATTENZIONE:

• **E' richiesta autorizzazione scritta per azionare riduttori in ascensori o dispositivi per il movimento delle persone.**

• Controllare che alcune applicazioni non eccedano la massima capacità di carico ammessa pubblicata in questo catalogo.

• 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.

• 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.

• Su riduttori installati in posizioni elevate utilizzare protezioni adeguate per qualsiasi distacco accidentale di parti nel caso di passaggio di persone al di sotto.

• Olio e riduttori bollenti possono causare gravi ustioni. Usare estrema cautela nella rimozione dei tappi e delle ventole.

• Assicurarsi 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.

• 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.

• 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.

• I dispositivi di sollevamento come le golfare devono essere usati solo per sollevare verticalmente il riduttore e non altri dispositivi associati o motori.

• 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.

• 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 larottura della vite a causa della resistenza alla flessione.

CONDIZIONI DI VENDITA

La garanzia relativa a difetti di costruzione ha la durata di un anno dalla data di fatturazione della merce. Tale garanzia comporta per Hydro-Mec s.p.a. l'onere della sostituzione o riparazione delle parti difettose ma non ammette ulteriori addebiti per eventuali danni diretti o indiretti di qualsiasi natura. La garanzia decade nel caso in cui siano state eseguite riparazioni o apportate modifiche senza nostro consenso scritto.

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.

Se il processo richiede una protezione totale, i clienti dovrebbero prendere in considerazione misure aggiuntive per evitare qualsiasi contaminazione derivante dai riduttori.

Tutti i diritti sono riservati. **Tutte le informazioni riportate nel presente catalogo sono puramente indicative; Hydro-Mec s.p.a si riserva il diritto di apportare qualsiasi variazione necessaria senza preavviso.**

NOTES / NOTE / AUFZEICHNUNG / NOTAS

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HYDRO • MEC

HIGH EFFICENCY GEARBOXES

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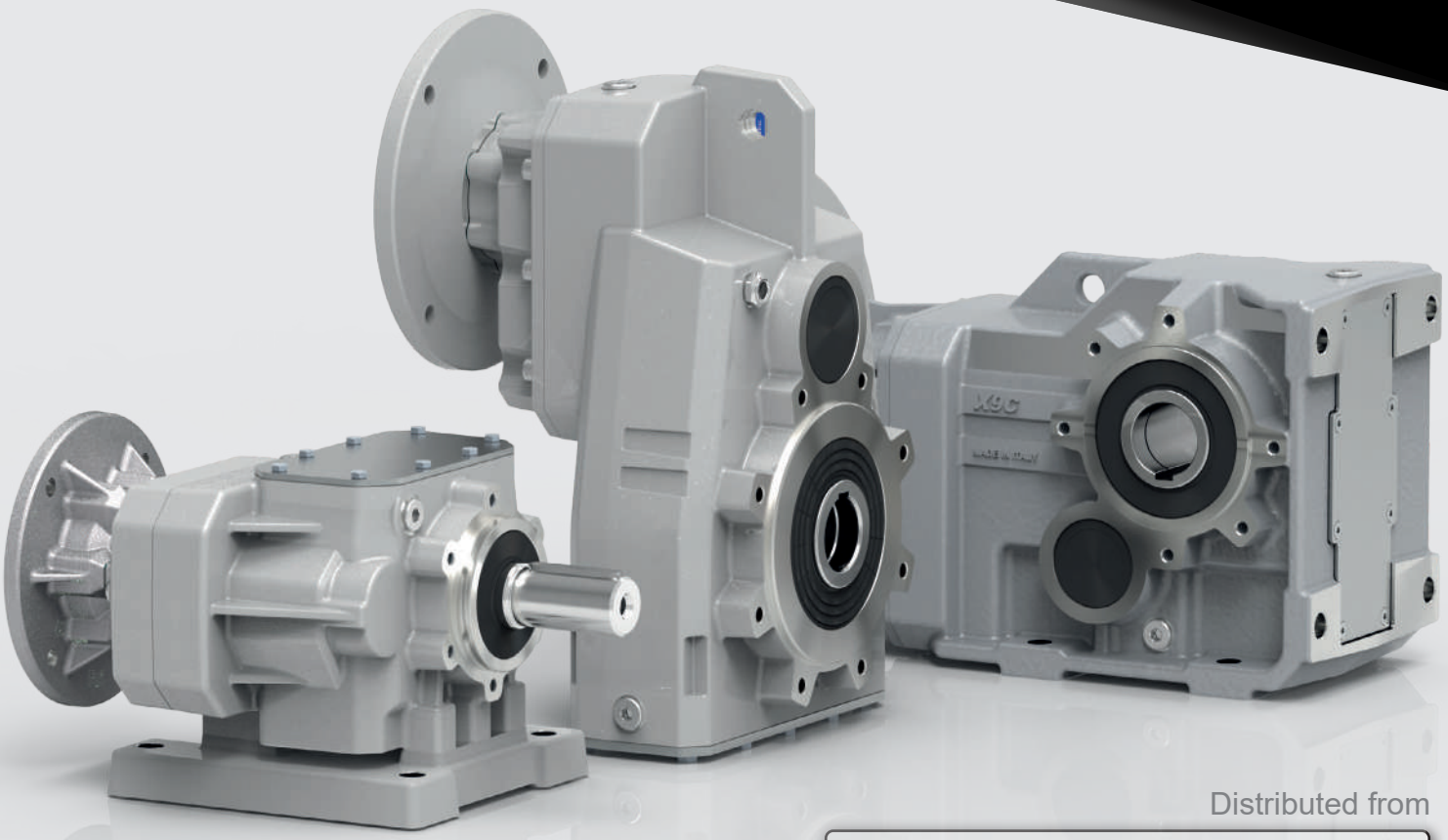
hydromec@hydromec.com



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