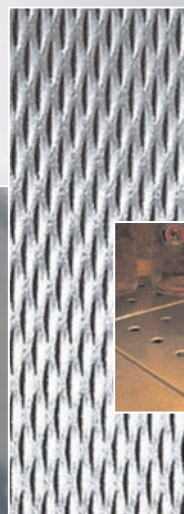


Stainlesssteel - Gears

Worm gearboxes and Coaxial gearboxes

Riduttori a vite senza fine e coassiali

Cat.: CT-SSM-I-HM010



Made in Italy



Worm gearboxes



Coaxial gearboxes



Patented

Stainless steel motors



HYDRO • MEC

Full Stainless steel - Worm gearboxes



Full stainless steel Wormgear boxes.
Vite senza fine completamente in acciaio inox.

See technical data table.

Vedi tabelle dati tecnici.

Paragraph 8

Full Stainless steel - Coaxial gearboxes



Full stainless steel Coaxial gearboxes.
Riduttori coassiali completamente in acciaio inox.

See technical data table.

Vedi tabelle dati tecnici.

Paragraph 9

Full Stainless steel electric motors



Full stainless steel IEC motors.
Motori IEC completamente in acciaio inox.

See technical data table.

Vedi tabelle dati tecnici.

Pag. M-3

Stainlesssteel Gears 130 ÷ 185

STANDARD FEATURES



Special housing designed to keep adequate lubrication with low Oil q.ty to avoid internal pressures.



Full Stainless Steel Housing.



Output seals (FPM-fkm) with external dust protection lips.

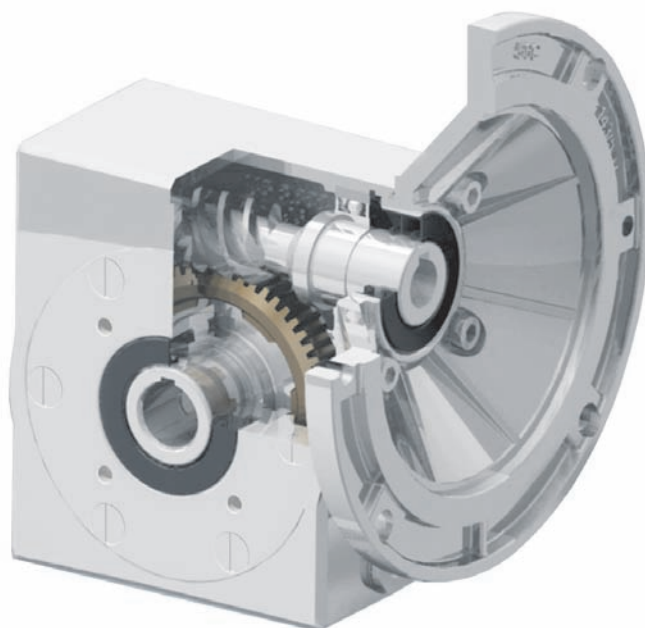


Stainless Steel Hollow shaft.

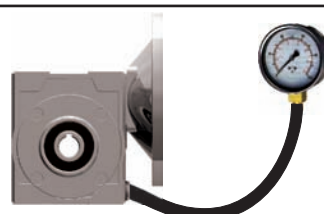
O-rings on all closing covers.



Life lubricated fully synthetic oil

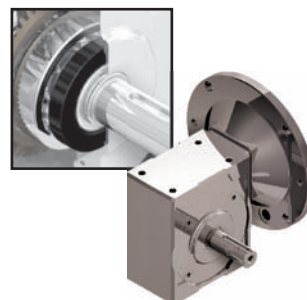


Optional interchangeable right or left hand output shafts available.



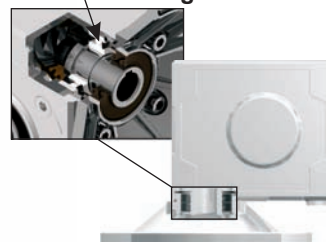
100 % Factory pressure leak test.

OPTIONS



Protective seals cup to stand high pressure cleaning for hollow or extended shaft version.

Second Bearing



Standard second bearing on motor flange side and two oil seals with vertical motor position.

TORQUE ARM





**Types / Tipi /
Arten / Tipos** →

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

8-5	8-7	8-9	8-11	8-13
I30 20Nm	I45 39Nm	I50 69Nm	I63 140Nm	I85 330Nm



**Types / Tipi /
Arten / Tipos** →

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

M-3							
63B 0.18kw 1/4cv	71A 0.25kw 1/3cv	71B 0.37kw 1/2cv	80A 0.55kw 3/4cv	80B 0.75kw 1cv	90S 1.1kw 1 1/2cv	90L 1.5kw 2cv	100LA 2.2kw 3cv

For : / Per : / Für : / Para :

Selection guide - fs
Guida alla selezione

Mounting pos. - Lubrication
Pos. di montaggio - lubrificazione

2 - 6 poles selection
Selezione 2 - 6 poli

Radial - axial loads
Carichi radiali e assiali

Reversibility
Reversibilità

Thermal limit
Limite termico

Atex certification
Certificazione Atex

Accessories
Accessori

Download 3D drawings
Download disegni 3D

Interchangeability
Intercambiabilità

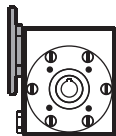
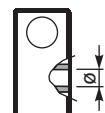
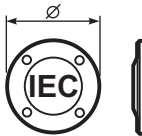
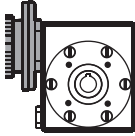
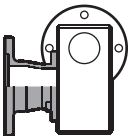
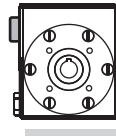
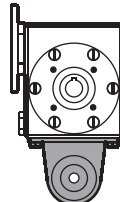
Installation and maintenance
Installazione, uso e manutenzione

Spare parts list
Liste parti di ricambio

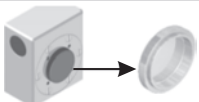
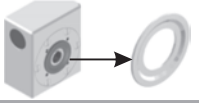
Use our web database to
get detailed informations,
always updated on
each type/size.

Features
Selection

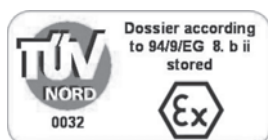


Type - Tipo Typ - Tipo	Size - Grandezza Grösse - Tamaño	Mounting - Montaggio Montage Tipo de montaje	Ratio - Rapporto Untersetzung Relación	Hub - Mozzo corona Hohlwelle Nucleo corona	Output shaft Albero lento Abtriebswelle Eje solida	Motor size Grandezza motore Motor Grösse Tamaño motor
P	I45	UN	10	I	S	Q
	I30 I45 I50 I63 I85		See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos			
P		UN				
						
M		FL		I STANDARD I30 ⇒ Ø14 I45 ⇒ Ø18 I50 ⇒ Ø25 I63 ⇒ Ø25 I85 ⇒ Ø35	Ø	I30 O P W 56B14 (Ø80) 63B14 (Ø90) 56C (Ø6.5")
				Z INCH I45 ⇒ Ø0.750" I50 ⇒ Ø1.000" I63 ⇒ Ø1.125" I85 ⇒ Ø1.500"	S	I45 P Q W 63B14 (Ø90) 71B14 (Ø105) 56C (Ø6.5")
B		BR Full stainless steel Torque arm				I50 P Q R 63B14 (Ø90) 71B14 (Ø105) 80B14 (Ø120)
						I63 Q R T 71B14 (Ø105) 80B14 (Ø120) 90B14 (Ø140)
						W X 56C (Ø6.5") 143/5TC (Ø6.5")
						I85 D E U 80B5 (Ø200) 90B5 (Ø200) 100-112B14 (Ø160)
						W X Y 56C (Ø6.5") 143/5TC (Ø6.5") 182/4TC (Ø8.88")

On request

A	Protective seals cup CLOSE TYPE	
B	Protective seals cup OPEN TYPE	
C	Food lube	
D	Nema input flanges	

M
without flange
Senza flangia



A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

REQUIRED POWER / POTENZA RICHIESTA / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / elevación

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

Rotation / rotazione / drehung / rotation

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

Linear movement / traslazione / linearbewegung / translacion

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

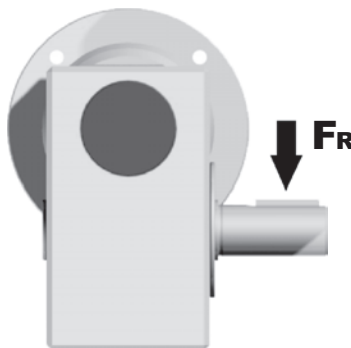
TORQUE / COPPIA / DREHMOMENT / PAR

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

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

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / 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.
- 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	Output torque / Momento torcente / Abtriebsdrehmoment / Par torsion		
d	Diam. of driving element / Diametro primitivo / Durchmesser der Abtriebseinheit / Diámetro primitivo		
f_k	Factor / Coefficiente di trasformazione / Faktor / Coefficiente de transmisión 1.15 Gearwheels / Ingranaggi / Zahnrad / Engranaje 1.25 Chain sprockets / Catena / Antriebskette / Cadena 1.75 Narrow v-belt pulley / Cinghia Trapezoidale / Keilriemen / Correa trapezoidal 2.50 Flat-belt pulley / Cinghia piatta / Flachzahnriem. / 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.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore
Wie wählt man ein Getriebe / Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Abtriebsdrehzahl
Velocidad de salida

Nominal power
Potenza nominale
Max. mögliche Leistung
Potencia nominal

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

Flange code
Codice flangia
Flanschttype
Código bridas

Dynamic efficiency
Rendimento dinamico
Dynamischer
Rendimiento dinámico

Input speed
Velocità in entrata
Eintriebsdrehzahl
Velocidad de entrada

145 Rightangle - Gear
39Nm

Rating - Stainlesssteel WORM GEARBOXES

QUICK SELECTION / Selezione veloce

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		Available B14 motor flanges			Dynamic efficiency RD	Tooth Module Mn	Ratios code
							B	C	O	P	Q			
200	7	0.37	14	2.1	0.76	29	B		B-C	B-C		80	2.2	01
140	10	0.37	20	1.5	0.54	29	B		B-C	B-C		79	2.2	02
100	14	0.37	27	1.1	0.39	29	B		B-C	B-C		77	2.4	03

C Ratio
Rapporto
Untersetzung
Relación

Transmitted torque
Momento torcente trasmesso
Mögliche Drehmomente
Par transmitido

Service factor
Fattore di servizio
Betriebsfaktor
Factor de servicio

Nominal module
Modulo nominale
Nenn modul
Módulo nominal

Notes
Note
Anmerkungen
Notas

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

D	Motor flange available Flange disponibili Erhältliche Motorflansche Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Reduzierhülsen Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-sockel Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Auch ohne Reduzierbuchse verfügbar 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	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	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	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)	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]	B5 motor flanges not available		Available B14 motor flanges		Dynamic efficiency	Tooth Module  Mn[mm]	Ratio code 
							-	-	O	P			
280	5	0.18	5	3.2	0.57	16			56	63	RD		
200	7	0.18	7	2.3	0.42	16			B-C		82	1.26	09
140	10	0.18	10	1.7	0.30	16			B-C		80	1.44	01
93	15	0.18	13	1.3	0.24	18			B-C		78	1.44	02
70	20	0.18	17	1.0	0.19	18			B-C		73	1.44	03
47	30	0.12	15	1.3	0.16	20			B-C		70	1.09	04
35	40	0.12	19	1.0	0.12	19			B-C		62	1.44	05
23	61	0.09	19	1.0	0.09	19			B-C		57	1.09	06
17.5	80	0.09	16	1.0	0.06	15			B-C		50	0.72	07
									B-C		48	0.56	08

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di 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 I30 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.
For complete documentation please visit our web site.

I Il riduttore tipo I30 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.
Per la documentazione completa consulta il nostro sito.

D Für die Lebensdauerschmierung ist das Getriebe der Größe I30 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.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño I30 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.
Para documentación completa, consultar nuestra Web.

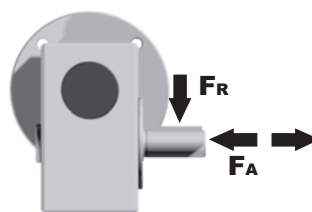
LUBRICATION I30 Oil Quantity 0.10 Lt.

AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

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

tab. 2

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e grandezza specifica nel sito web per la documentazione completa.

8-6



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 not available		Available B14 motor flanges		Dynamic efficiency	Tooth Module Mn[mm]	Ratios code
							-	-	P	Q			
200	7	0.37	14	2.1	0.76	29			B-C		80	2.2	01
140	10	0.37	20	1.5	0.54	29			B-C		79	2.2	02
100	14	0.37	27	1.1	0.39	29			B-C		77	2.4	03
67	21	0.37	36	1.1	0.41	39			B-C		67	1.6	04
50	28	0.25	31	1.3	0.31	39			B-C		65	2.5	05
38	37	0.25	40	1.0	0.25	39			B-C		63	1.8	06
30	46	0.25	46	0.8	0.21	39			B-C		59	1.5	07
23	60	0.18	41	0.9	0.17	39			B-C		56	1.2	08
20	70	0.12	31	0.9	0.11	29			B-C		54	1.0	09
13.7	102	0.09*	28	<0.8	0.08	28			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 I45 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.
For complete documentation please visit our web site.

I Il riduttore tipo I45 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.
Per la documentazione completa consulta il nostro sito.

D Für die Lebensdauerschmierung ist das Getriebe der Größe I45 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.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño I45 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.
Para documentación completa, consultar nuestra Web.

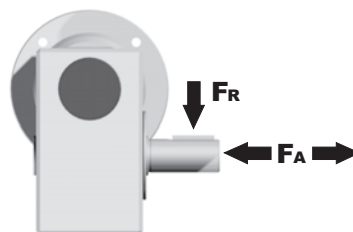
LUBRICATION I45 Oil Quantity 0.24 Lt.

AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

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

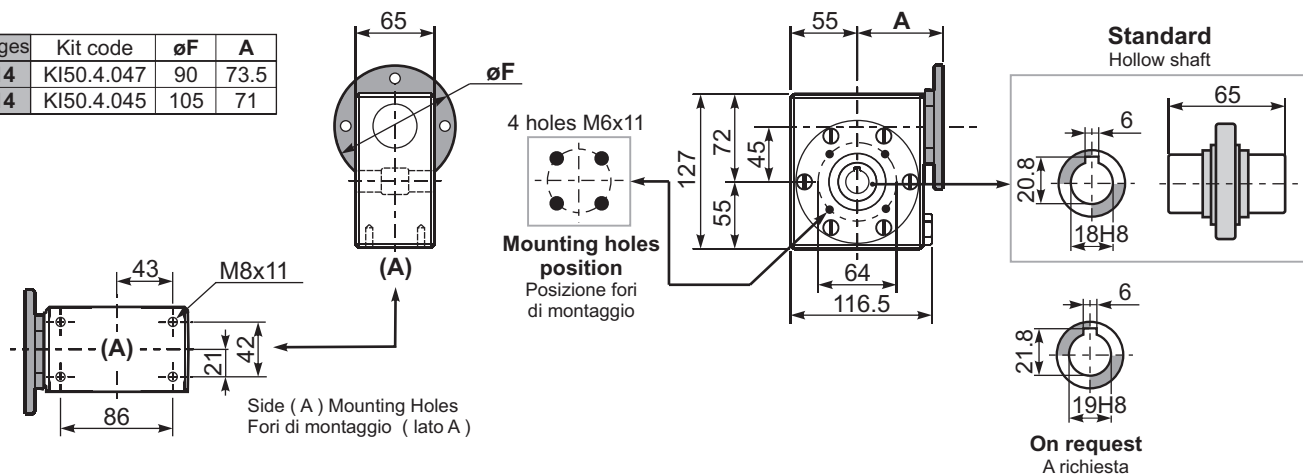
tab. 2

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

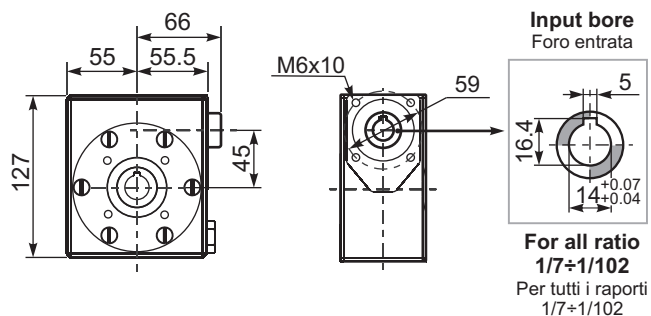
Gearbox weight
peso riduttore **5.0 kg**

PI45**UN**... Basic wormbox
Riduttore base

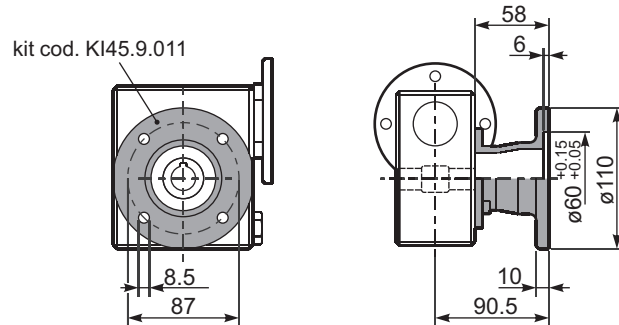
M. flanges	Kit code	øF	A
63B14	KI50.4.047	90	73.5
71B14	KI50.4.045	105	71



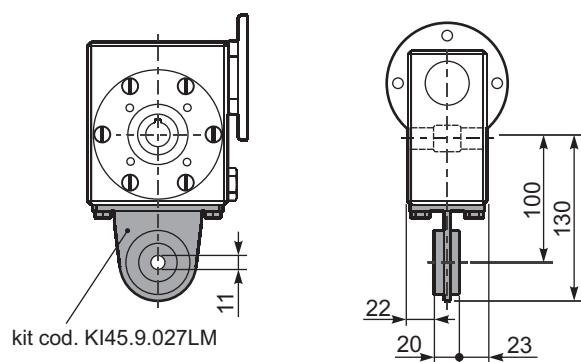
B145UN... Modular base
Base modulare



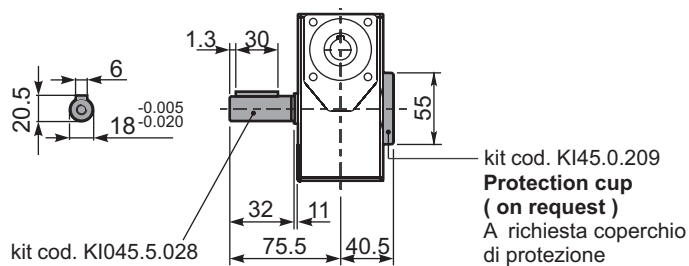
PI45**FL**... Output flange
Flangia uscita



PI45**BR**... Reaction arm
Braccio di reazione



PI45.....**S**... Single Shaft
Albero lento 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 not available		Available B14 motor flanges			Dynamic efficiency	Tooth Module Mn[mm]	Ratios code
							-	-	P	Q	R			
							-	-	63	71	80	RD		
200	7	0.75	29	1.8	1.4	54			B-C	B		82	2.5	01
140	10	0.75	41	1.4	1.1	59			B-C	B		80	2.4	02
100	14	0.75	57	1.1	0.86	65			B-C	B		79	2.6	03
78	18	0.55	51	1.2	0.64	59			B-C	B		75	2.0	04
54	26	0.55	67	0.9	0.51	63			B-C	B		69	2.7	05
39	36	0.37	63	1.1	0.41	69			B-C			69	2.1	06
33	43	0.37	72	0.9	0.34	65			B-C			66	1.8	07
23	60	0.25	59	1.0	0.25	59			B-C			58	1.3	08
21	68	0.25	66	0.8	0.21	55			B-C			57	1.2	09
17.5	80	0.18	53	1.0	0.18	54			B-C			54	1.0	10
14	100	0.12	41	1.2	0.14	49			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 I50 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.
For complete documentation please visit our web site.

I Il riduttore tipo I50 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.
Per la documentazione completa consulta il nostro sito.

D Für die Lebensdauerschmierung ist das Getriebe der Größe I50 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. Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño I50 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.
Para documentación completa, consultar nuestra Web.

LUBRICATION I50 Oil Quantity 0.38 Lt

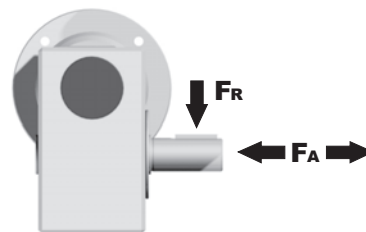
AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

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

tab. 2

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

ges	Kit code	$\varnothing F$	A
4	KI50.4.047	90	78
4	KI50.4.045	105	78
4	KI50.4.046	120	76

Side (A) Mounting Holes
Fori di montaggio (lato A)

Side (A) Mounting Holes
Fori di montaggio (lato A)

**Mounting holes
position**
Posizione fori
di montaggio

On request
A richiesta

Technical drawing of the front view of a square flange. The overall width and height are 141. The distance between the centers of the four outer holes is 68. The distance between the centers of the four inner holes is 60. The outer holes have a diameter of $\phi 12$ and the inner holes have a diameter of $\phi 8$. The flange has a thickness of 50.

M6x10

59

From 1/7 to 1/26
Dal 1/7 al 1/26

From 1/36 to 1/100
Dal 1/36 al 1/100

kit cod. KI50.9.011

[illegible]

kit cod. KI50.9.027LM

kit cod. KI050.5.028

— kit cod. KI50.0.209
**Protection cup
(on request)**
A richiesta coperchio
di protezione



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 not available		Available B14 motor flanges			Dynamic efficiency	Tooth Module Mn [mm]	Ratios code
							-	-	Q	R	T	RD		
200	7	1.8	71	1.7	3.0	119			B-C	B-C		83	3.1	01
140	10	1.8	99	1.3	2.3	128			B-C	B-C		81	3.1	02
93	15	1.5	121	1.1	1.6	131			B-C	B-C		79	3.1	03
74	19	1.1	111	1.2	1.3	131			B-C	B-C		78	2.6	04
58	24	1.1	135	1.0	1.1	135			B-C	B-C		75	2.0	05
47	30	1.1	167	0.8	0.92	139			B-C	B-C		74	3.2	06
39	36	0.75	125	1.1	0.84	140			B-C	B-C		68	2.7	07
31	45	0.55	111	1.2	0.63	129			B-C	C		66	2.1	08
21	67	0.55	151	0.8	0.43	118			B-C	C		60	1.5	09
17.5	80	0.37	115	1.0	0.36	113			B-C	C		57	1.3	10
14.9	94	0.37	123	0.9	0.34	113			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 I63 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.
For complete documentation please visit our web site.

I Il riduttore tipo I63 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.
Per la documentazione completa consulta il nostro sito.

D Für die Lebensdauerschmierung ist das Getriebe der Größe I63 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.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño I63 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.
Para documentación completa, consultar nuestra Web.

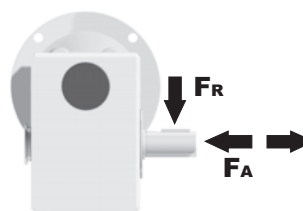
Standard		On request									
	B3		B6		B7		B8		V5		V6
0.98 LT		0.69 LT		0.69 LT		0.98 LT		0.98 LT		0.98 LT	
AGIP		KLUBER		SHELL		MOBIL					
Telium VSF 320		Syntheso D220 EP		Tivela Oil WB		Glygoyl 30 SHC 630					

tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



n_2	FA	FR
200	360	1800
150	400	2000
100	460	2300
75	500	2500
50	600	3000
25	700	3800
15	800	4000

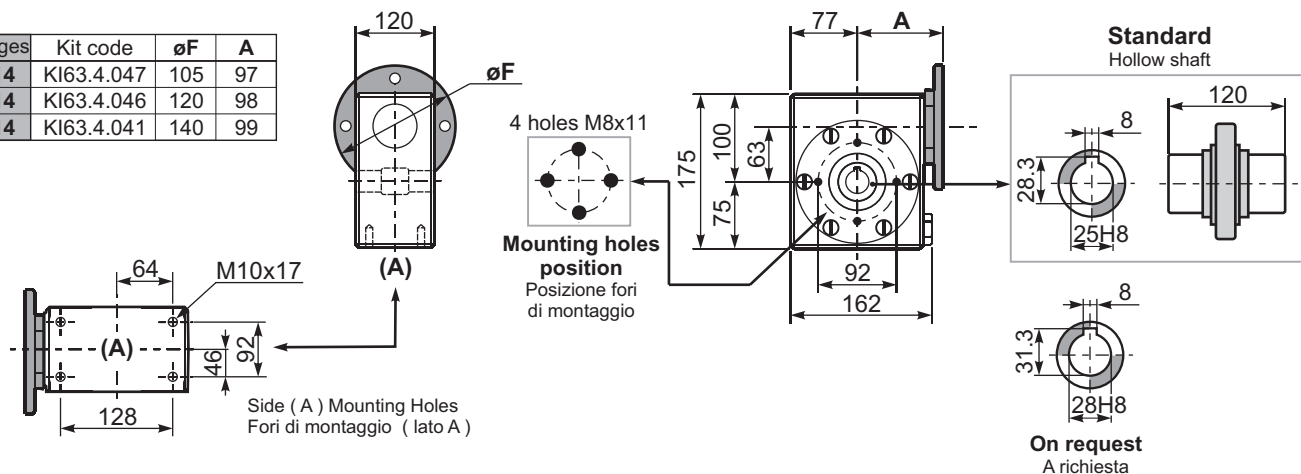
tab. 2

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

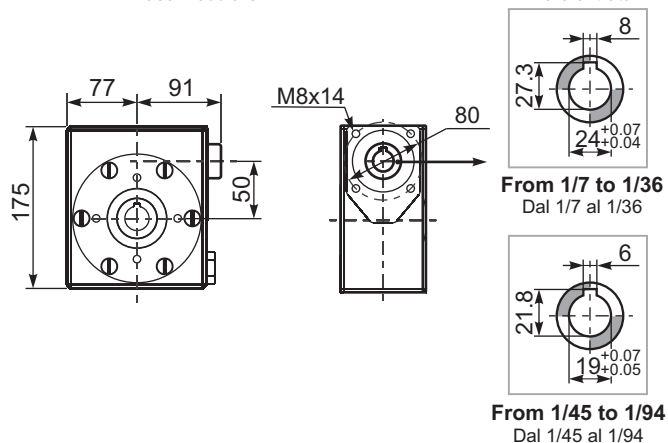
PI63UN... Basic wormbox
Riduttore base

Gearbox weight
peso riduttore **14.6 kg**

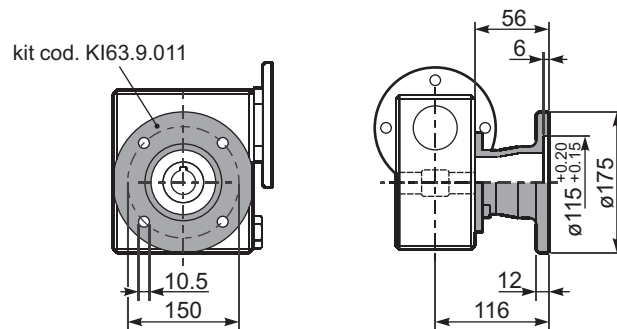
M. flanges	Kit code	øF	A
71B14	KI63.4.047	105	97
80B14	KI63.4.046	120	98
90B14	KI63.4.041	140	99



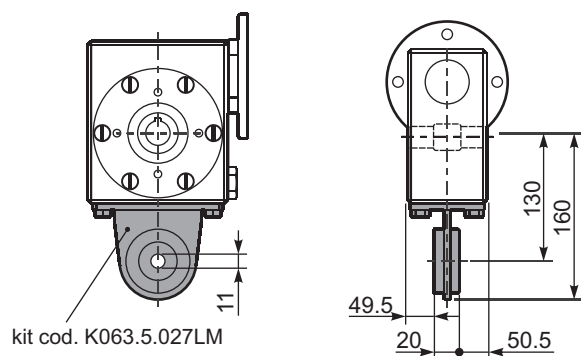
BI63UN... Modular base
Base modulare



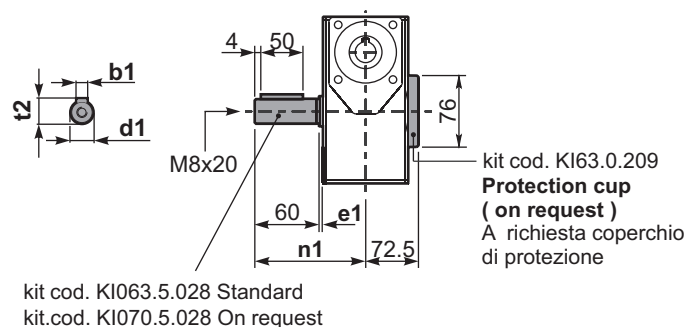
PI63FL... Output flange
Flangia uscita



PI63BR... Reaction arm
Braccio di reazione



PI63.....S... Single Shaft
Albero lento semplice



	b1	e1	d1	n1	t2
Standard	8	3.2	25 ^{-0.005/-0.020}	121.9	28
On request	8	3.5	28 ^{-0.005/-0.020}	122.2	31



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		Available B14 motor flanges	Dynamic efficiency RD	Tooth Module M_n [mm]	Ratios code
							D	E	U			
200	7	4.0	168	1.5	5.8	245	B	B		88	4.23	01
140	10	4.0	218	1.2	4.9	270	B	B		80	4.2	02
100	14	3.0	223	1.3	3.9	290	B	B		78	4.5	03
70	20	2.2	237	1.2	2.6	280	B	B		79	3.4	04
64	22	2.2	258	1.1	2.4	280	B	B		78	3.1	05
50	28	2.2	315	1.0	2.3	330	B	B		75	4.7	06
37	38	1.5	276	1.2	1.7	320	B	B		71	3.5	07
30	46	1.5	320	1.0	1.4	310	B	B		68	3.1	08
27	52	1.1	258	1.1	1.2	275	B			66	2.7	09
21	67	1.1	327	0.8	0.93	275	B			65	2.1	10
18.9	74	0.75	220	1.2	0.87	255	B			58	1.9	11
14.6	96	0.55	191	1.2	0.66	230	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 I85 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.
For complete documentation please visit our web site.

I Il riduttore tipo I85 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.
Per la documentazione completa consulta il nostro sito.

D Für die Lebensdauerschmierung ist das Getriebe der Größe I85 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.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño I85 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.
Para documentación completa, consultar nuestra Web.

Standard			On request		
B3	B6	B7	B8	V5	V6
2.10 LT	1.50 LT	1.50LT	2.10 LT	2.10 LT	2.10 LT
AGIP		KLUBER		SHELL	
Telium VSF 320		Syntheso D220 EP		Tivela Oil WB	
				MOBIL	
				Glygoyl 30 SHC 630	

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

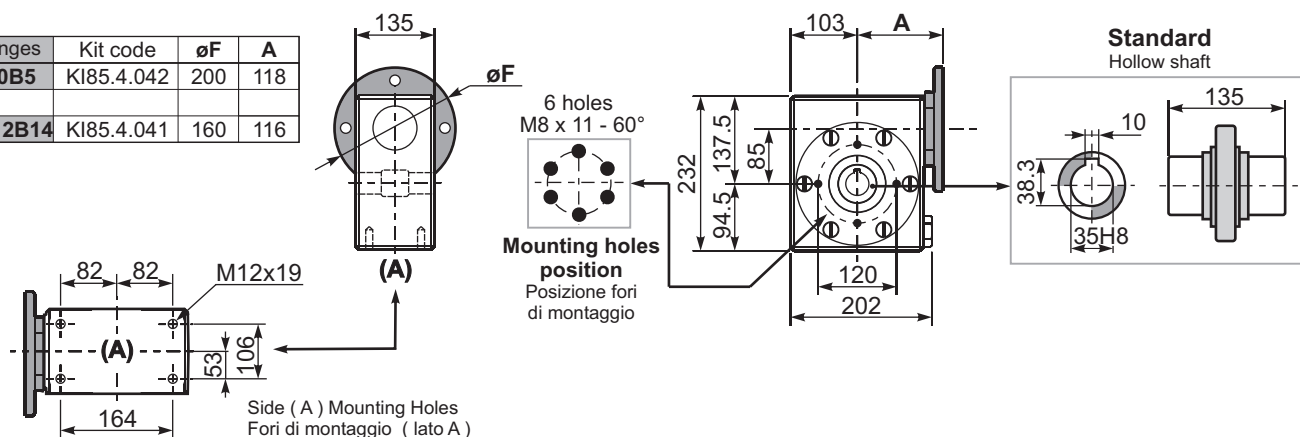
tab. 2

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e grandezza specifica nel sito web per la documentazione completa.

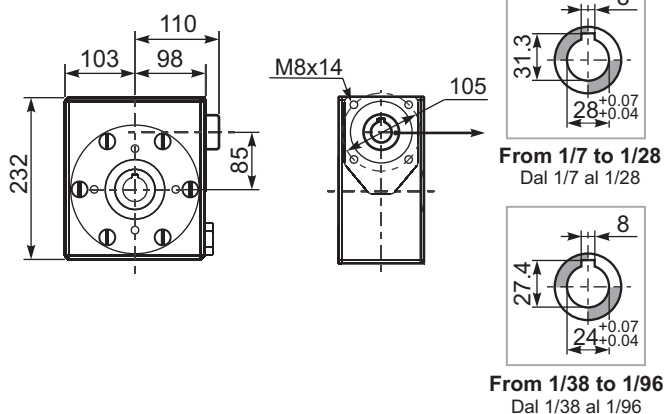
Gearbox weight
peso riduttore **23.3 kg**

PI85**UN**... Basic wormbox
Riduttore base

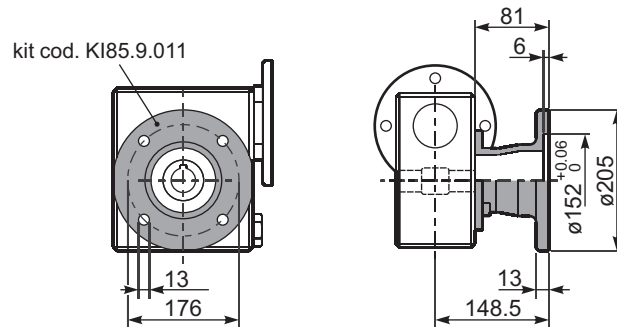
M. flanges	Kit code	øF	A
80-90B5	KI85.4.042	200	118
100-112B14	KI85.4.041	160	116



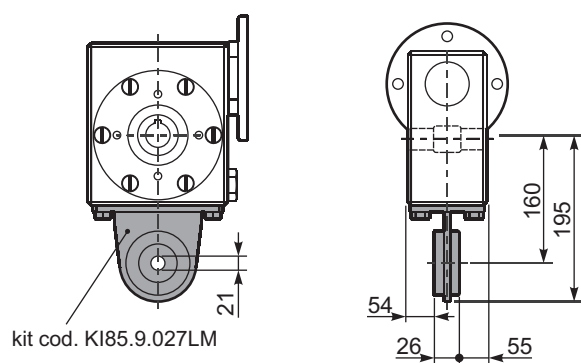
BI85UN... Modular base
Base modulare



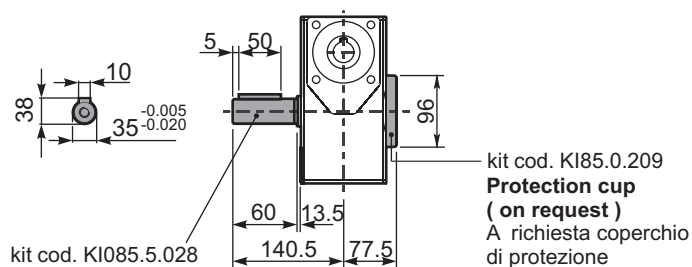
PI85**FL**... Output flange
Flangia uscita



PI85**BR**... Reaction arm
Braccio di reazione

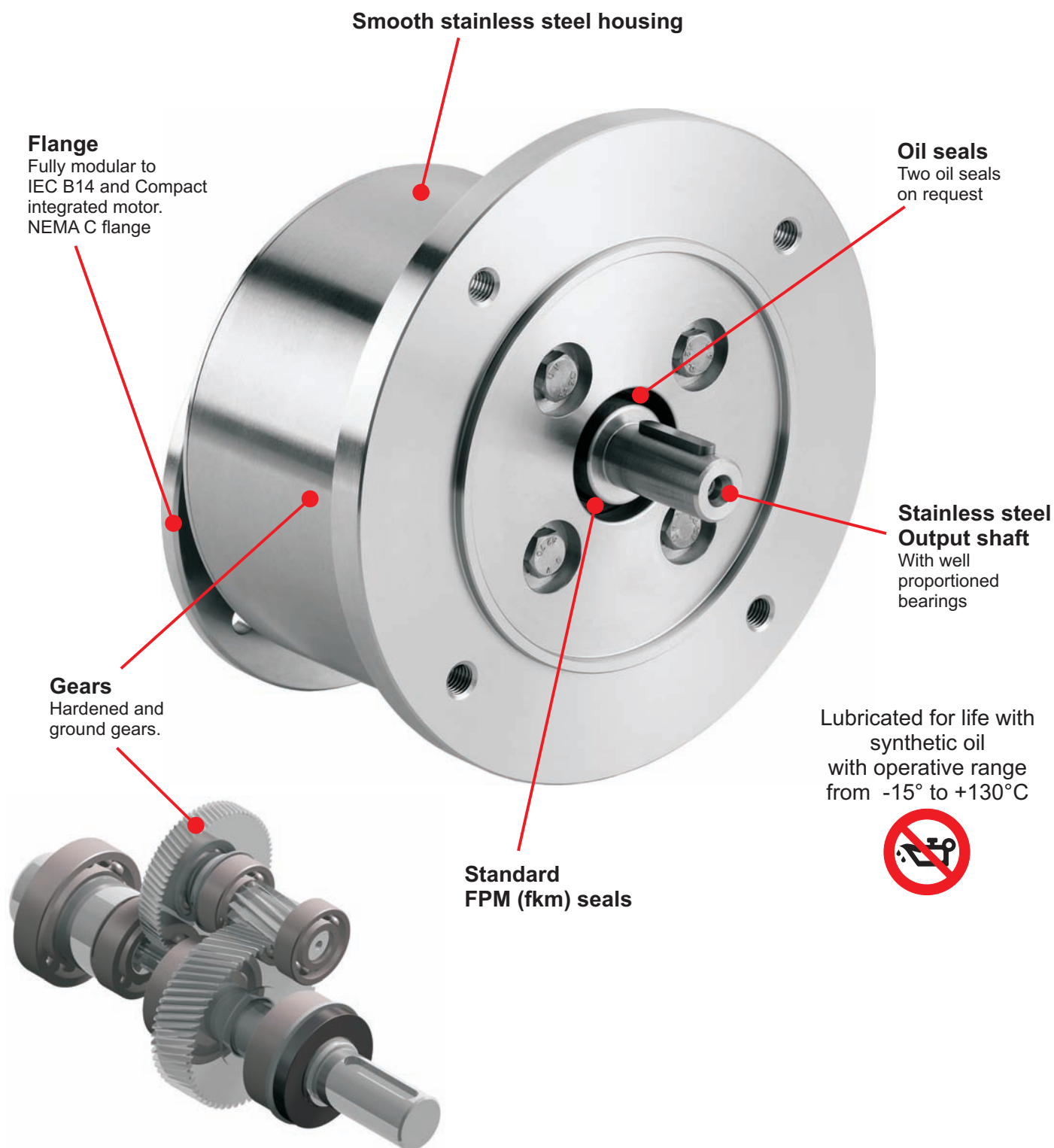


PI85.....**S**... Single Shaft
Albero lento semplice



Stainless steel in line gearboxes

A modular and compact product



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



Types / Tipi /
Arten / Tipos



9-5	9-6	9-7	9-8
411I 38Nm	511I 110Nm	402I 150Nm	602I 460Nm

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



Types / Tipi /
Arten / Tipos



M-3							
63B 0.18kw 1/4cv	71A 0.25kw 1/3cv	71B 0.37kw 1/2cv	80A 0.55kw 3/4cv	80B 0.75kw 1cv	90S 1.1kw 1 1/2cv	90L 1.5kw 2cv	100LA 2.2kw 3cv

For : / Per : / Für : / Para :

Selection guide - fs
Guida alla selezione

Mounting pos. - Lubrication
Pos. di montaggio - lubrificazione

2 - 6 poles selection
Selezione 2 - 6 poli

Radial - axial loads
Carichi radiali e assiali

Reversibility
Reversibilità

Thermal limit
Limite termico

Atex certification
Certificazione Atex

Accessories
Accessori

Download 3D drawings
Download disegni 3D

Interchangeability
Intercambiabilità

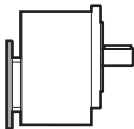
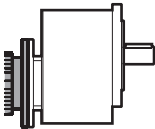
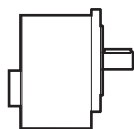
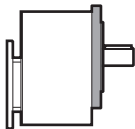
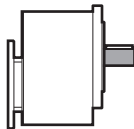
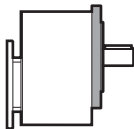
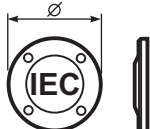
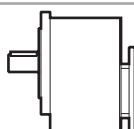
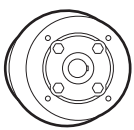
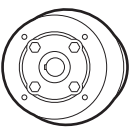
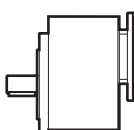
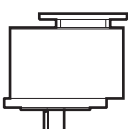
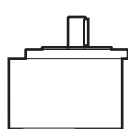
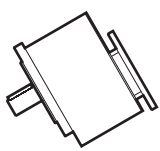
Installation and maintenance
Installazione, uso e manutenzione

Spare parts list
Liste parti di ricambio

Use our web database to
get detailed informations,
always updated on
each type/size.

Features
Selection



Type - Tipo Typ - Tipo	Size - Grandezza Grösse - Tomaño	Mounting Montaggio Montage Tipo de montaje	Ratio - Rapporto Untersetzung Relación	Output shaft Albero lento Abtriebswelle Eje solida	Output flange Flangia uscita Ausgangsflansch Brida en salida	Motor size Grandezza motore Motor Grösse Tamaño motor	Mounting position Posizione montaggio Einbaulage Position de montage
P	411I	-F	1.57	C	4	Q	B5
 P  M  B Only for local assembly	411I 511I 402I 602I	 -F Foot mounting is not available	See technical data table Vedi tabelle dati tecnici. Ver tabla datos técnicos	 → STANDARD 411I S ⇒ Ø14 C ⇒ Ø19 511I E ⇒ Ø24 G ⇒ Ø28 402I E ⇒ Ø24 602I I ⇒ Ø35	 411I 3 ⇒ Ø160 4 ⇒ Ø200 511I 4 ⇒ Ø200 5 ⇒ Ø250 402I 4 ⇒ Ø200 602I 5 ⇒ Ø250	 411I - 402I Q 71B14 (Ø105) R 80B14 (Ø120) T 90B14 (Ø140) 511I - 602I R 80B14 (Ø120) T 90B14 (Ø140) U 100-112 B14 (Ø160) Without flange Senza flangia 411I - 402I 1 ⇒ Ø14 (71B5) 2 ⇒ Ø19 (80B5) 3 ⇒ Ø24 (90B5) 511I - 602I 2 ⇒ Ø19 (80B5) 3 ⇒ Ø24 (90B5) 4 ⇒ Ø28 (100B5)	 B5 STANDARD  B6  B7  B8  V1  V3  V8

On request

A Double input / output oil seals

B Food lube

- B5 is supplied with standard oil quantity

- Please specify in the order if you required other mounting positions

[illegible]

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / elevación

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

Rotation / rotazione / drehung / rotation

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

Linear movement / traslazione / linearbewegung / translacion

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

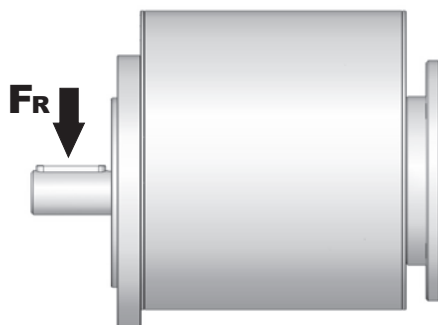
TORQUE / COPPIA / DREHMOMENT / PAR

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

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

RADIAL LOADS / CARICHI RADIALI / RADIALE - UND AXIALLASTEN / 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.
- Cargas radiales, generada por transmisiones externas, aplicadas sobre los ejes de entrada y/o salida



$F_R \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$		$F_R \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$	
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion		
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo		
f _k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / 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.
- En el caso en que una aplicación exija una carga radial superior a la especificada en el catálogo, consultar a nuestra oficinas técnica.

How to select a gearbox / Come selezionare un riduttore
Wie wählt man ein Getriebe / Cómo seleccionar un reductor

B Output speed
Velocità in uscita
Abtriebsdrehzahl
Velocidad de salida

Nominal power
Potenza nominale
Max. mögliche Leistung
Potencia nominal

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

Flange code
Codice flangia
Flanschttype
Código bridas

Input speed
Velocità in entrata
Eintriebsdrehzahl
Velocidad de entrada

Gear size
Grandezza riduttore
Getriebegröße
Tamaño reductor

Motor power
Potenza motore
Motorleistung
Potencia motor

4111 One step
38Nm

Rating - Stainlesssteel 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]	B5 motor flanges not available				Available B14 motor flanges			Output Shaft		
							-	-	-	-	Q	R	T			Ratios code
892	1.57	1.5	15.7	1.3	1.90	20	-	-	-	-	71	80	90			-
493	2.84	1.5	28.4	1.2	1.84	35	-	-	-	-	C	C		2844		
426	3.29	1.5	32.9	1.2	1.73	38	-	-	-	-	C	C		1954		
362	3.87	1.5	38.7	1.0	1.54	40	-	-	-	-	C	C		1756		
							-	-	-	-	C	C		1558		

C Ratio
Rapporto
Untersetzung
Relación

Transmitted torque
Momento torcente trasmesso
Mögliche Drehmomente
Par transmitido

Service factor
Fattore di servizio
Betriebsfaktor
Factor de servicio

Output shaft diam.
Diam. albero uscita
Durchmesser abtriebswelle
Diámetro eje de salida

Notes
Note
Anmerkungen
Notas

fs		Oper. hours per day Ore di funz. giorn.		
Type of load and starts per hour Tipo di carico e avviamenti per ora		3 h	10 h	24 h
Continuous or intermittent appl. with start / hour Applicazione cont. o interm. con n.ro operazioni/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Erhältliche Motorflansche Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccia di riduzione Reduzierhülsen Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-sockel Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccia Auch ohne Reduzierbuchse verfügbar 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	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	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	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)	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]	B5 motor flanges not available				Available B14 motor flanges			Output Shaft		Ratios code
							-	-	-	-	Q	R	T			
892	1.57	1.5	15.7	1.3	1.90	20					C	C		2844	standard ø19 On request ø14	-
493	2.84	1.5	28.4	1.2	1.84	35					C	C		1954		
426	3.29	1.5	32.9	1.2	1.73	38					C	C		1756		
362	3.87	1.5	38.7	1.0	1.54	40					C	C		1558		
303	4.62	1.5	46.1	1.0	1.54	47					C	C		1360		
222	6.30	1.1	46.0	1.0	1.10	46					C	C		1063		
170	8.22	0.55	30.4	1.2	0.69	38					C	C		974		
130	10.86	0.37	26.8	1.0	0.38	28					C	C		776		

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 **411I** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
For complete documentation please visit our web site.

I Il riduttore **411I** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **411I** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **411I** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Para documentación completa, consultar nuestra Web.

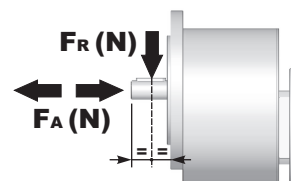
Life lubrication - Fully synthetic oil

Mounting position to be specified - B6-B7-B8-V1-V3-V8

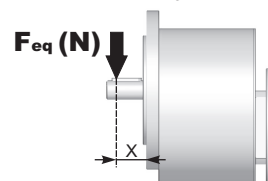
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



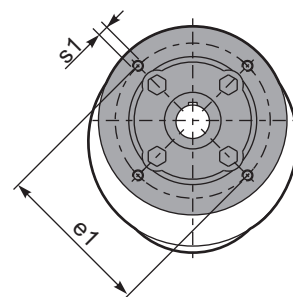
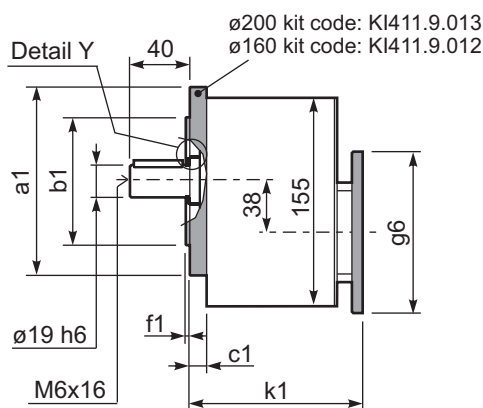
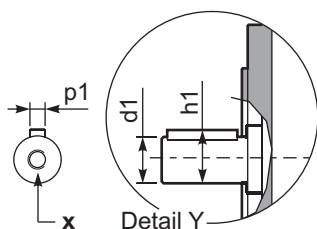
$$F_{eq} = FR \cdot \frac{40}{X+20}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	182	910	400	230	1150	200	290	1450
600	100	1000	300	250	1250	140	320	1600

P411I-F... Output flange
flangia di uscita

Gearbox weight
peso riduttore **8.2 kg**



Output shafts / albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16
*On request A richiesta	ø 14x30	5	16	M5x13

Output flanges / flange di uscita

	a1 ø	b1	c1	e1	f1	s1
Standard	200	130	12.5	165	3.5	M10x12
*On request A richiesta	160	110	12.5	130	3.5	M8x12

Input flanges / flange di entrata

g6	k1	kit code
105 (71B14)	127.5	KI63.4.047
120 (80B14)	128.5	KI63.4.046
140 (90B14)	129.5	KI63.4.041

* Please contact us for minimum quantity / Contattarci per quantità minima.

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e grandezza specifica nel sito web per la documentazione completa.



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]	motor flanges B5 not available				Available B14 motor flanges				Output Shaft		
							-	-	-	-	R	T	U	-			
							-	-	-	-	80	90	100	112			
1077	1.30	4	34	1.2	4.6	40									3039	standard ø28 On request ø24	-
571	2.45	4	64	1.1	4.3	70									2049		
423	3.31	4	87	1.0	4.1	90									1653		
325	4.31	4	113	1.0	3.8	110									1356		
266	5.27	3	104	1.1	3.1	110									1158		
184	7.63	2.2	111	1.0	2.2	110									861		
133	10.50	1.1	77	1.0	1.1	80									663		

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 511I is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
For complete documentation please visit our web site.

I Il riduttore 511I viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe 511I ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño 511I se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Para documentación completa, consultar nuestra Web.

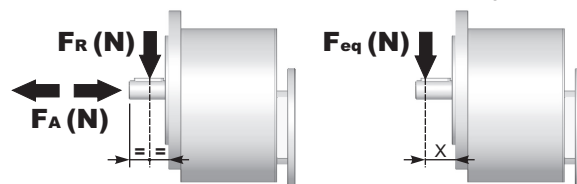
Life lubrication - Fully synthetic oil

Mounting position to be specified - B6-B7-B8-V1-V3-V8

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

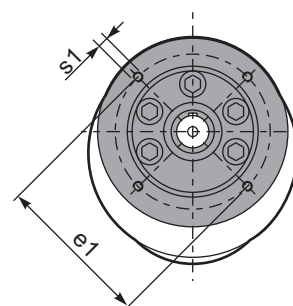
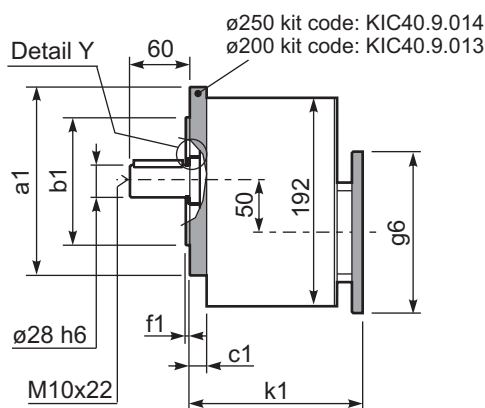
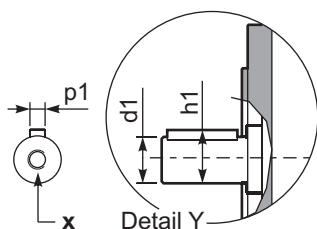
$$F_{eq} = F_R \cdot \frac{52.5}{X+22.5}$$



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

P511I-F... Output flange
flangia di uscita

Gearbox weight
peso riduttore **14.0 kg**



Output shafts / albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 28x60	8	31	M10x22
*On request A richiesta	ø 24x50	8	27	M6x16

Output flanges / flange di uscita

	a1 ø	b1	c1	e1	f1	s1
Standard	250	180	13.5	215	3.5	M12x13
*On request A richiesta	200	130	13.5	165	3.5	M10x13

Input flanges / flange di entrata

g6	k1	kit code
120 (80B14)	150.5	KIC50.4.046
140 (90B14)	150.5	KIC50.4.045
160 (100B14)	161.5	KIC50.4.047

* Please contact us for minimun quantity / Contattarci per quantità minima.

SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.



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 not available				Available B14 motor flanges				Output Shaft		
							-	-	-	-	Q	R	T	-			Ratios code
398	3.52	1.5	34	2.3	3.5	80					C	C					2821
320	4.37	1.5	43	2.1	3.1	90					C	C					2818
252	5.55	1.5	54	1.8	2.8	100					C	C					2813
220	6.36	1.5	62	1.5	2.3	95					C	C					1921
191	7.33	1.5	72	1.7	2.5	120					C	C					2812
177	7.89	1.5	77	1.6	2.3	120					C	C					1918
139	10.06	1.5	99	1.5	2.3	150					C	C					1913
120	11.66	1.5	114	1.5	2.3	174					C	C					1713
106	13.26	1.5	130	1.2	1.8	160					C	C					1912
102	13.68	1.5	134	1.1	1.6	144					C	C					1513
91	15.37	1.5	151	1.1	1.6	160					C	C					1712
86	16.20	1.5	159	0.9	1.3	138					C	C					1910
78	18.04	1.5	177	0.9	1.4	160					C	C					1512
74	18.80	1.1	135	1.0	1.1	138					C	C					1710
65	21.54	1.1	155	1.0	1.1	160					C	C					1312
63	22.29	1.1	161	1.0	1.1	167					C	C					1013
53	26.30	0.75	129	1.1	0.80	138					C	C					1310
47.6	29.40	0.75	144	1.1	0.83	160					C	C					1012
39	35.91	0.55	129	1.1	0.59	138					C	C					1010
36.5	38.37	0.55	138	1.2	0.64	160					C	C					912
29.9	46.86	0.55	169	0.8	0.45	138					C	C					910
27.6	50.67	0.37	123	1.1	0.40	132					C	C					712
22.6	61.88	0.37	150	0.9	0.34	138					C	C					710

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

Life lubrication - Fully synthetic oil

Mounting position to be specified - B6-B7-B8-V1-V3-V8

EN Unit 402I is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
For complete documentation please visit our web site.

I Il riduttore 402I viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Per la documentazione completa consulta il nostro sito.

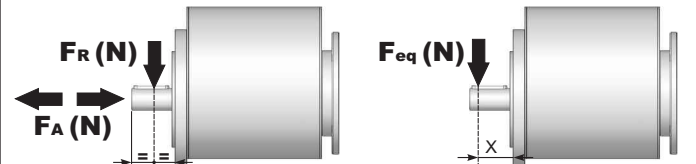
D Das Getriebe 402I ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño 402I se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna.
Para documentación completa, consultar nuestra Web.

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

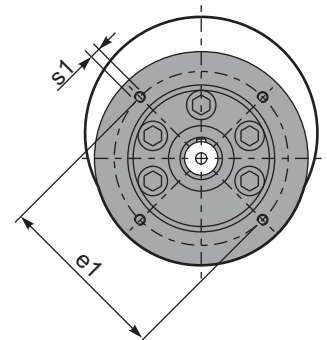
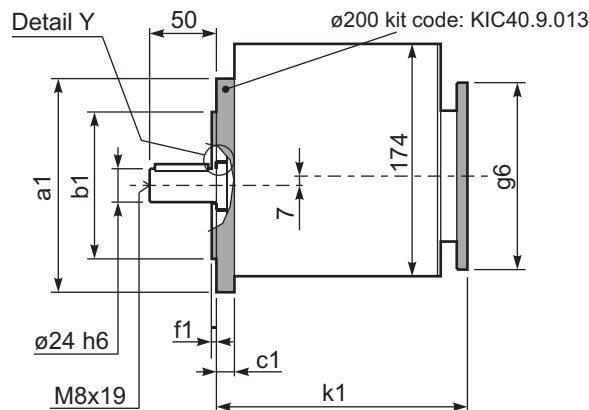
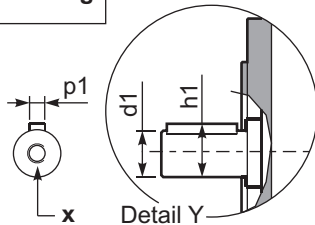
$$F_{eq} = F_R \cdot \frac{46}{X+21}$$



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

P402I-F... Output flange
flangia di uscita

Gearbox weight
peso riduttore
11.4 kg



Output shafts / albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 24x50	8	27	M8x19
*On request A richiesta	-	-	-	-

Output flanges / flange di uscita

	a1 ø	b1	c1	e1	f1	s1
Standard	200	130	13.5	165	3.5	M10x13
*On request A richiesta	-	-	-	-	-	-

Input flanges / flange di entrata

g6	k1	kit code
105 (71B14)	186	KI63.4.047
120 (80B14)	187	KI63.4.046
140 (90B14)	188	KI63.4.041



■ 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]	motor flanges B5 not available				Available B14 motor flanges				Output Shaft		
							-	-	-	-	R	T	U	-			Ratio code
							-	-	-	-	80	90	100	112			
388	3.61	4	93	1.8	7.0	165										3018	
331	4.23	4	108	1.8	7.2	200										3016	
279	5.01	4	129	1.9	7.3	240										3014	
231	6.07	4	156	1.7	6.8	270										3012	
206	6.81	4	174	1.9	7.6	340										2018	
176	7.96	4	204	1.8	7.1	370										2016	
148	9.45	4	242	1.7	6.5	400										2014	
122	11.43	4	293	1.4	5.3	400										2012	
99	14.21	4	372	1.1	4.3	400										2010	
84	16.62	4	435	1.2	4.6	501										1314	
70	20.10	4	527	0.9	3.8	499										1112	
57	24.61	3	483	1.0	3.1	492										1312	
56	24.98	3	491	0.8	2.4	400										1310	
47.6	29.41	2.2	424	1.0	2.3	440										814	
39.3	35.58	1.85	431	1.2	2.1	499										812	
34.6	40.50	1.1	292	1.1	1.2	310										614	
31.7	44.23	1.5	434	0.9	1.4	400										810	
28.6	49.00	1.1	353	1.0	1.1	368										612	
23.0	60.90	1.1	439	0.9	1.0	400										610	

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

■ Life lubrication - Fully synthetic oil

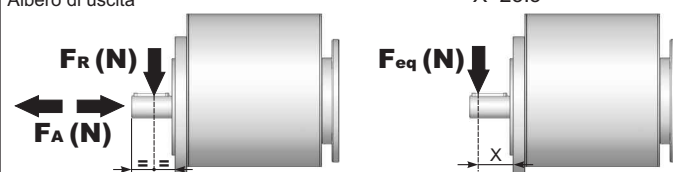
Mounting position to be specified - B6-B7-B8-V1-V3-V8

- EN** Unit 602I is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary.
For complete documentation please visit our web site.
- I** Il riduttore 602I viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Per la documentazione completa consulta il nostro sito.
- D** Das Getriebe 602I ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
Die komplette Dokumentation, Wartungs- und Inbetriebnahmeanleitungen finden Sie unter.
- E** El reductor tamaño 602I se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Para documentación completa, consultar nuestra Web.

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

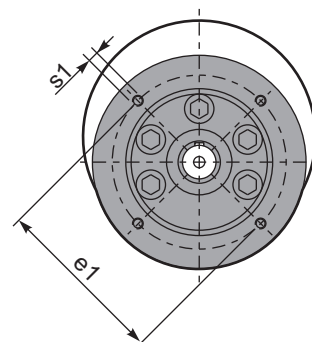
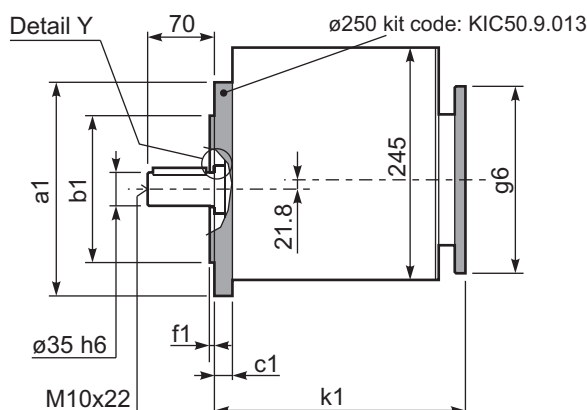
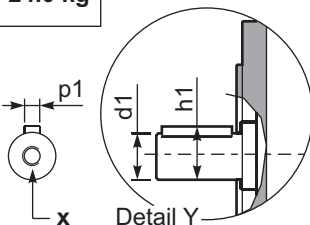
$$F_{eq} = F_R \cdot \frac{60.5}{X+25.5}$$



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

P602I-F ... Output flange
flangia di uscita

Gearbox weight
peso riduttore



Output shafts / albero di uscita

	Shaft - d1	p1	h1	x
Standard	Ø 35x70	10	38	M10x22
*On request A richiesta	-	-	-	-

Output flanges / flange di uscita

	a1 Ø	b1	c1	e1	f1	s1
Standard	250	180	19.5	215	4	M12x19
*On request A richiesta	-	-	-	-	-	-

Input flanges / flange di entrata

g6	k1	kit code
120 (80B14)	251	KIC50.4.046
140 (90B14)	251	KIC50.4.045
160 (100B14)	262	KIC50.4.047

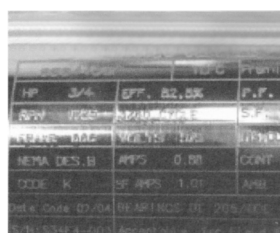
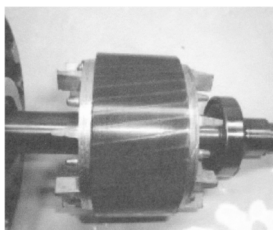
- SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

Stainlesssteel IEC B14 motors

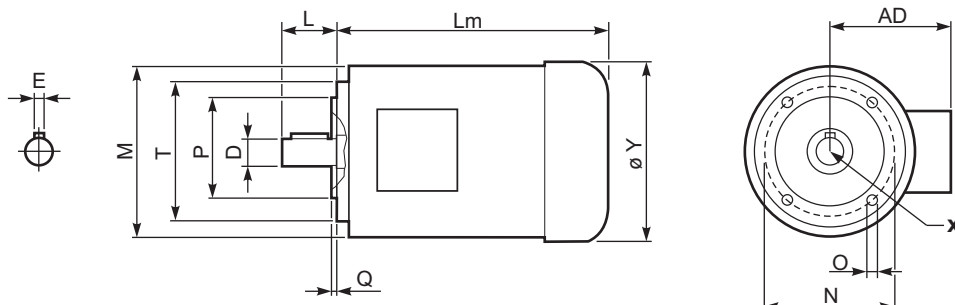


Features

- 1) 300 Series Stainless Steel Construction.
- 2) Inverter duty
- 3) Washdown Duty Applications.
- 4) BISSC Certified.
- 5) Corrosion Resistant.
- 6) Laser Etched Nameplate.
- 7) Oversized Bearings on both ends
c/w Locked Drive-end Bearing
Construction.
- 8) Oversized Conduit Box c/w Lead
Seal.
- 9) Drill & Tapped Drains.
- 10) T-Drain included.
- 11) Double Lip Contact Seals.



B14



Outside dimensions may be different according to manufacturers.

Le dimensioni esterne sono indicative, possono variare tra i vari costruttori.

	4 poli / poles																Kg
	kW	Nm	A (400V)	D	E	L	Lm	Y	AD	P	N	M	T	O	Q	X	
63	0.18	1.30	0.69	11	4	23.5	252	128	106	60	75	114	90	M5	2.5	-	8.2
71	0.25	1.70	0.91	14	5	30.5	228	146	115	70	85	134	105	M6	2.5	M5x20	8.3
	0.37	2.52	1.14				252										10.4
80	0.55	3.77	1.51	19	6	40	300	158	115	80	100	144	120	M6	3	M6x25	17.5
	0.75	5.11	2.57														
90	1.1	7.45	2.78	24	8	50	321	174	135	95	115	165	140	M8	3	M8x25	22.4
	1.5	10.2	3.61				367										27.6
100	2.2	14.8	5.07	28	8	60	374	203	150	110	130	190	160	M8	3.5	M10x25	33.5

Tecnical data

- Voltage: 230 / 400V
- Phase: 3
- Frequency: 50Hz
- Poles: 4
- International protections : IP 65
- Insulation class: F
- Duty: S1

Please Read Carefully

The following WARNING and CAUTION information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your product.

Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

WARNING:

- Written authorization 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.
- 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, if not sized properly.

Our company will not be responsible for any direct or indirect damages, caused by a wrong use of the products or for not observing the catalogue/web indication

Leggere attentamente

Le seguenti raccomandazioni sono fondamentali per la vostra protezione e per garantirvi molti anni di sicuro funzionamento del vostro prodotto senza alcun problema.

Leggere attentamente tutte le istruzioni prima di azionare il riduttore. L'inappropriata installazione, manutenzione o funzionamento del riduttore può causare incidenti al personale addetto e danni al riduttore stesso.

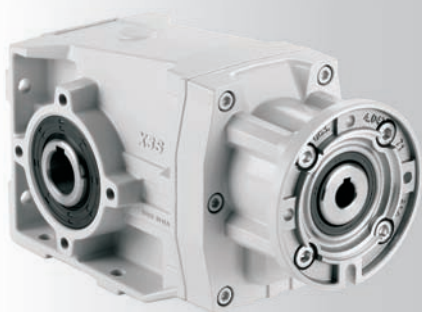
ATTENZIONE!

- 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.
- 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 la rottura della vite a causa della resistenza alla flessione.

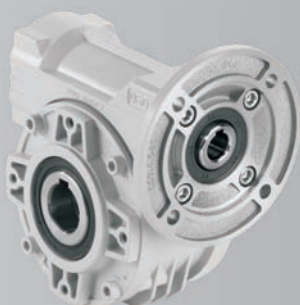
La nostra ditta non si ritiene responsabile per eventuali danni diretti o indiretti derivanti da un uso improprio dei prodotti e dalla mancata osservanza delle indicazioni riportate a catalogo o web..

Also available standard aluminum gearboxes with stainless steel output shaft and protective paint

Bevel gears



Worm gearboxes



Square gearboxes

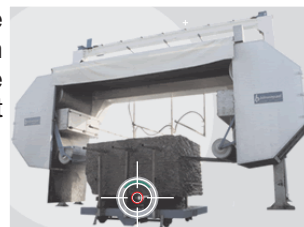


Applications field:

Conveyors industry



Machines where water can quickly rust the hollow shaft



Bottling industry



Car washing



Boat / fishing industry



Chemical processing industry



Food processing industry



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