



VATHAUER
 INDUSTRIAL TECHNOLOGY

HYGIENICS

Edelstahl | Aluminium
 stainless steel | aluminum

Motore | Frequenzumrichter | Gehäuse | Sonderlösungen
 motors | frequency inverter | casings | special solutions

HYGIENICS - eine klare Entscheidung

Hygienics - a clear decision



EIGENSCHAFTEN / CHARACTERISTICS

korrosionsbeständig / corrosion-resistant

hygienisch / hygienic

langlebig / durable

rostfrei / stainless

robust / robust

EINSATZBEREICHE / APPLICATIONS

Nahrungsmittelindustrie / food industry

Getränkeverarbeitung / beverage processing

Medizintechnik / medical industry

Pharmacie / pharmacie

Seefahrt / seafaring

Chemie / chemistry

uvm. / and many more

HYGIENICS

EDELSTAHL
STAINLESS STEEL

ALUMINIUM
ALUMINUM

immer eine gute Wahl

always a good choice



Mit der CE-Kennzeichnung der Produkte erklärt der Hersteller die Konformität des Bauteils mit den in den europäischen Vorschriften festgelegten Sicherheitsanforderungen. Dies bedeutet, dass das Produkt allen Richtlinien der Europäischen Gemeinschaft in Bezug auf seine Verwendung, von der Entwicklung und Herstellung bis zur Markteinführung, der Funktion und dem Recycling entspricht.



Die Abkürzung, die für "Atmosphäre Explosible" steht, bezeichnet die Richtlinie 2014/34/UE welche die bisherige 94/9/CE. Der Anwendungsbereich der ATEX-Richtlinie erstreckt sich auf alle Geräte, die in einer explosionsgefährdeten Umgebung auf dem Gebiet der Europäischen Union betrieben werden. Die ATEX-Richtlinie bezeichnet die benannten europäischen Stellen (CESI, TÜV, KEMA, INERIS, Nemko, etc.) Qualifiziert für die Prüfung und Verifizierung von technischen Unterlagen, Sonderprüfungen und die Einreichung entsprechender Unterlagen. Nach erfolgreichem Abschluss dieses Verfahrens ist ein Hersteller berechtigt, die Konformität seiner Produkte mit ATEX zu erklären und sie mit dem ATEX-Zeichen zu kennzeichnen.

Allgemeine Informationen & technische Daten

General information & technical Data

„Hygienics“ ALUMINIUM - 3-Phasen Motor

„Hygienics“ aluminum - 3-Phase motor



ALUMINIUM - Schneckengetriebe

Aluminum - Worm gearboxes



ALUMINIUM - Stirnradstufe

Aluminum - ratio multiplier



„Hygienics“ EDELSTAHL - 3-Phasen Motor

„Hygienics“ stainless steel - 3-Phase motor



EDELSTAHL - Stirnkegelrad

Stainless steel - helical bevel gearbox



Aluminium

Aluminium

Aluminium

Edelstahl

Edelstahl

EDELSTAHL - Stirnkegelrad

Stainless steel - shielded helical bevel gearbox



harsh environment

EDELSTAHL - Schneckengetriebe

Stainless steel - Worm gearbox



EDELSTAHL - Stirnradstufe

Stainless steel - shielded ratio multiplier



EDELSTAHL - Koaxialgetriebe

Stainless steel - shielded coaxial gearbox



EDELSTAHL - Geber / Encoder

Stainless steel - encoder



Sonderlösungen | Motore | Frequenzumrichter | Gehäuse

Special solutions | Motors | Frequency Inverter | Casing



Edelstahl

Edelstahl

Edelstahl

Edelstahl

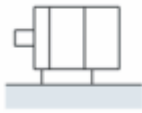
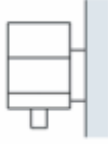
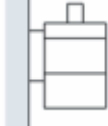

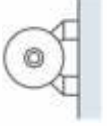

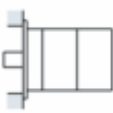


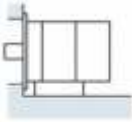

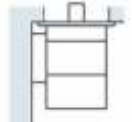
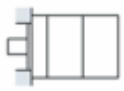
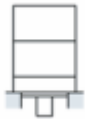

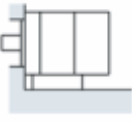

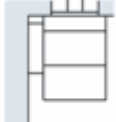
Edelstahl

Aluminium

Sonderlösungen

Konstruktionen und Montageanordnungen

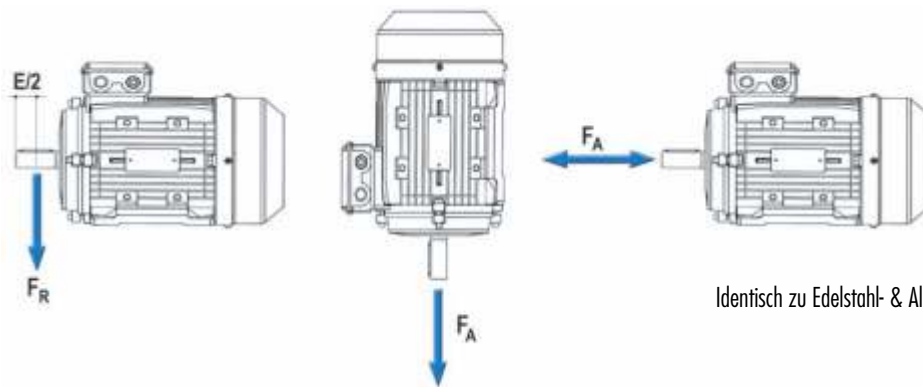
Types of constructions and mounting arrangements

Type of Construction		Mounting Arrangements					
							
Code I		IM B3	IM V5	IM V6	IM B6	IM B7	IM B8
Code II		IM 1001	IM 1011	IM 1031	IM 1051	IM 1061	IM 1071
H 56..160		●	●	●	●	●	●
H 180..225		●	-	-	-	-	-
H 250..315		●	-	-	-	-	-
Type of Construction		Mounting Arrangements					
							
Code I		IM B5	IM V1	IM V3	IM B35	IM V15	IM V36
Code II		IM 3001	IM 3011	IM 3031	IM 2001	IM 2011	IM 2031
H 56..160		●	●	●	●	●	●
H 180..225		●	●	-	●	-	-
H 250 315		-	●	-	●	-	-
Type of Construction		Mounting Arrangements					
							
Code I		IM B14	IM V18	IM V19	IM B34	IM V15	IM V36
Code II		IM 3601	IM 3611	IM 3631	IM 2101	IM 2111	IM 2131
H 56..160		●	●	●	●	●	●
H 180..225		-	-	-	-	-	-
H 250..315		-	-	-	-	-	-

Technische Daten - Motore

Technical Data - motors

Size	Bearings		F_R max [Nm] - 50Hz, $F_R/F_A < 0,2$			F_A max [Nm] - 50Hz, $F_R=0$					
	DE	NDE	2P	4P	6P	2P		4P		6P	
						B5	V1	B5	V1	B5	V1
63	6202 2RZ	6202 2RZ	410	520	600	410	330	540	440	640	560
71	6202 2RZ	6202 2RZ	410	520	600	410	330	540	440	640	560
80	6205 2RZ	6203 2RZ	720	900	1050	490	550	610	730	720	880
90S/L	6205 2RZ	6203 2RZ	720	900	1050	490	550	610	730	720	880



Identisch zu Edelstahl- & Aluminiumglattmotore

Symbolbedeutung / Agenda

Meaning of the symbols

P_N [kW]	=	Nennleistung / rated power
n_N [min ⁻¹]	=	Nenndrehzahl / rated speed
M_N [Nm]	=	Nenndrehmoment / rated torque
I_N [A]	=	Bemessungsstrom / rated current
$\cos\varphi$	=	Nennleistungsfaktor / rated power factor
$\eta\%$	=	Wirkungsgrad bei 100%, 75%, 50% der Nennlast / efficiency at 100%, 75%, 50% of the rated load
100% 75% 50%		
M_S/M_N	=	Verhältnis zwischen Anlaufmoment und Nennmoment / ratio between starting torque and rated torque
M_{MAX}/M_N	=	Verhältnis zwischen maximalem Drehmoment und Nenndrehmoment / ratio between maximum torque and rated torque
I_S/I_N	=	Verhältnis zwischen Anlaufstrom und Nennstrom / ratio between starting current and rated current
J_0 [kgm ²]	=	Tägheitsmoment / moment of inertia
W [kg]	=	Motorgewicht / motor weight
M_f [Nm]	=	Bremsmoment / braking moment

IP-Schutzarten

IP Degree of protection

IP	ERSTE ZIFFER / FIRST DIGIT	IP	ZWEITE ZIFFER / SECOND DIGITSE
0	nicht geschützt non-protected	0	nicht geschützt non-protected
1	Schutz gegen solide Objekte größer als 50mm. (z.B. versehentlicher Kontakt mit der Hand) Protection against solid objects larger than 50mm. (e.g. accidental contact with hand)	1	Schutz gegen senkrecht fallende Wassertropfen Protection against vertical falling waterdrops
2	Schutz gegen solide Objekte größer als 12mm. (z.B. versehentlicher Kontakt mit den Fingern) Protection against solid objects larger than 12mm. (e.g. accidental contact with fingers)	2	Schutz gegen fallende Wassertropfen bis zu 15° von der Vertikalen Protection against falling waterdrops at up to 15° from the vertical
3	Schutz gegen solide Objekte größer als 1mm. (z.B. Werkzeuge, Drähte) Protection against solid objects larger than 1mm. (e.g. tools, wires)	3	Schutz gegen Spritzwasser bis zu 60° von der Vertikalen (Regen) Protection against spraying water at up to 60° from the vertical (rain)
4	Schutz gegen feste Gegenstände, die größer als 1 mm sind. Protection against solid objects larger than 1mm.	4	Schutz gegen Spritzwasser aus allen Richtungen Protection against splashing water from all directions
5	Staubschutz (keine schädlichen Ablagerungen) Protection against dust (no harmful deposits)	5	Schutz gegen Wasserstrahlen aus allen Richtungen Protection against jets of water from all directions
6	komplett staubgeschützt completely protection against dust	6	Schutz vor Wasser, ähnlich wie bei schwerer See Protection against jets of water similar to heavy seas
		7	Schutz gegen die Auswirkungen des Eintauchens (<1 m) Protection against the effects of immersion (<1m)
		8	Schutz gegen die Auswirkungen des Untertauchens Protection against the effects of submersion

Gemäß der Norm IEC60034-5 ist die Schutzart IP gefolgt von zwei Ziffern mit Eigenschaften (erste Ziffer = Berührungsschutz und Eindringen von Festkörpern, zweite Ziffer = Schutz gegen das Eindringen von Flüssigkeiten). Motoren der Serien „Hygienics“ Aluminium und „Hygienics“ Edelstahl haben standardmäßig die Schutzart IP69K.

According to the standard IEC60034-5, the degree of protection is labeled IP followed by two digits characteristics (first digit = protection against contact and ingress of solid, second digit = protection against the ingress of liquids). Motors of the series „Hygienics“ aluminum and „Hygienics“ stainless steel have as standard degree of protection IP69K.

Was bedeutet IP69K?

What does IP69K mean?

Die Schutzart IP69K eignet sich für Anwendungen, bei denen Hochdruck- und Hochtemperatur-Waschvorgänge verwendet werden und oder Geräte desinfiziert werden müssen. Die IP69K-Testspezifikation wurde ursprünglich speziell für Straßenfahrzeuge entwickelt, die regelmäßig einer intensiven Reinigung bedürfen (Kipper, Betonmischer, etc.). Jedoch werden die Produkte mit dieser Schutzart weithin in der Lebensmittel- und Getränkeindustrie für Produkte und in Maschinenanlagen eingesetzt, die einer hygienischen Abwaschung standhalten müssen.

Im IEC 60529-Bewertungssystem bezieht sich IP6 auf die Fähigkeit des Produkts, dem Eindringen von Staub zu widerstehen. 69K bezeichnet die Fähigkeit des Produkts, dem Eindringen von Wasser mit hoher Temperatur (Dampf) und hohem Druck Stand zu halten. Die Produkte mit Schutzart IP69K sind hochdruck- und dampfbeständig in ihrer Reinigung. Der Test spezifiziert das Produkt mittels einer Testsprühdüse, die mit 80 °C warmem Wasser bei 80-100 bar (1160-1450) gespeist wird und einer Affow-Rate von 14-16 l / min. Die Düse wird an das getestete Gerät in einem Abstand von 10-15cm und einem Winkeln von 0 °, 30 °, 60 ° und 90 ° für jeweils 30 Sekunden gehalten.

The IP69K rating is for applications where high pressure and high temperature washdown is used to sanitize equipment. The IP69K test specification was initially developed for road vehicles, especially those that need regular intensive cleaning (dump truck, cement mixers, ...) but has been widely adopted in the Food & Beverage industrie as a test of products to withstand sanitary washdown. In the IEC 60529 rating system, IP6 refers to product's ability to resist ingress of dust. The 69K refers to product's ability to resist ingress of high temperature (steam) / high pressure water. Products rated to IP69K are certified to be able to withstand high-pressure and steam cleaning. The test specifies a spray nozzle that is fed with 80°C water at 80-100 bar (1160-1450) and affow rate of 14-16 L/min. The nozzle is held 10-15cm. From the tested device at angles of 0°, 30°, 60° and 90° for 30 seconds each.





„Hygienics“ Aluminiummotor mit «Hi-Cleaning», NTT®-Beschichtung, IP69K für Lebensmittelverarbeitung, Pharmazie und andere Anwendungen, die extreme Sauberkeit erfordern und für häufiges Abwaschen

„Hygienics“ aluminum motor with «Hi-Cleaning», NTT® coating, IP69K for food processing, pharmaceutical and other applications requiring extreme cleanliness and frequent washdowns



Die Aluminiummotoren werden als Alternative zu dem vorgeschlagen „Twin“ der Edelstahl-Baureihe gesehen, bei der keine extremen Bedingungen erforderlich sind. Diese benötigen ausschließlich eine Edelstahllösung. Sie werden in Branchen von Lebensmitteln, Getränken oder pharmazeutischen Produktionsanlagen eingesetzt, in denen die Motore zusammen mit anderen Teilen verbaut sind, welche oft Hochdruckwasserstrahlen ausgesetzt sind (manchmal bei hohen Temperaturen) oder noch aggressiveren Reinigungsmitteln. Dies kann bei anderen Motoren zu Beschädigung oder sogar zu Schäden führen und das Endprodukt verunreinigen. Das Aluminium-Sortiment hat keine Kühlrippen und ist mit einer innovativen „Hi-Cleaning“ - Beschichtung ausgestattet. Dies macht die Oberfläche sehr pflegeleicht und widerstandsfähig gegen z.B. aggressive Reinigungsmittel, welche bei der Desinfektion eingesetzt werden.

The aluminum motors are proposed as an alternative to the “twin” stainless steel series, where there are no extreme conditions require solely a stainless steel solution. They are used in food, beverage or pharmaceutical production plants where the motors - along with other parts - are often subjected to high pressure water jets (sometimes at high temperatures) or even more aggressive cleaning agents, that on the contrary can cause damage to other kind of motor, or even contaminate the end product. The aluminum range has no cooling fins and it is painted with an innovative “Hi-Cleaning” coating, which makes the surface very easy to clean and resistant to major aggressive used in sanitizing.

Dank der Schutzart IP69K ist die Aluminiummotorenreihe ein bewährtes Design für Washdown-Situationen. Alle externen Komponenten sind aus Aluminium gefertigt, die Motorwelle aus 420 Edelstahl mit magnetischen Eigenschaften, alle Schrauben aus 316L Edelstahl. Die Motore sind lackiert mit einer innovativen „Hy-Cleaning“-Beschichtung mit Nanopartikeln. Die Oberfläche ist völlig glatt. Somit ergibt sich eine ausgezeichnete Korrosionsbeständigkeit, die eine zuverlässige und dauerhafte Lösung darstellt, bei der eine leichte Reinigung möglich ist, wo Hygiene unerlässlich ist. Aluminiummotoren sind vollständig geschlossen, nicht belüftet (IC410) und erfüllen die höchsten Anforderungen auf ultra-hygienischer Linie. Die Oberflächentemperatur ist dank genauer Elektromagnete begrenzt. Die Motore der Klasse F sind für Dauerbetrieb S1 und Überhitzung in der Klasse B / F ausgelegt. Die Effizienzklasse (0,75 kW IEC / EN60034-30) IE4: Motore sind für den Umrichterbetrieb geeignet, d.h. ein großer Bereich bei konstantem Drehmoment.

Thanks to the IP69K degree of protection, the aluminum motor range is a proven design for washdown situations. All external components are manufactured in aluminum, motor shaft is in 420 stainless steel with magnetic properties , all screws in 316L stainless steel. Motors are painted with an innovative “Hy-Cleaning” coating with nano-particles. The surfaces are completely smooth. This gives excellent resistance to corrosion and represents a reliable and durable solution where an easy cleanability and sanitation are essential.

Aluminum motors are totally enclosed non ventilated (IC410), able to satisfy the highest needs on ultra-hygienic clean lines. The surface temperature is limited thanks to an accurate electromagnetic design and the additional internal active material.

The motors are class F designed for continuous duty S1 and overheating in class B/F, the energy efficiency class (0,75kW IEC / EN60034-30) is IE4. Motors are suitable for inverter operation with large range at constant torque.



Anschlussspannung	230 V 400 V
Netzfrequenz	50 Hz
ISO-Klasse	F
Schutzart	IP69K nach IC410
Betriebsart	S1
Bauform	B14 B5
Baugröße	63 - 90
Leistung	0,12 - 1,5 kW
Drehzahl	1500 oder 3000
Energieeffizienzklasse	IE4 nach IEC60034-30, IEC60034-2-1
Material	Aluminium



Anwendungsbereiche / Application fields

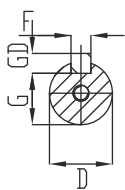
- Bäckerei / Bakery
- Abfüllung / Bottling
- Getränke / Beverage
- Tabak / Tobacco

2 poles 3000min-1

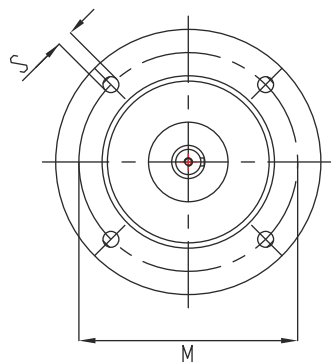
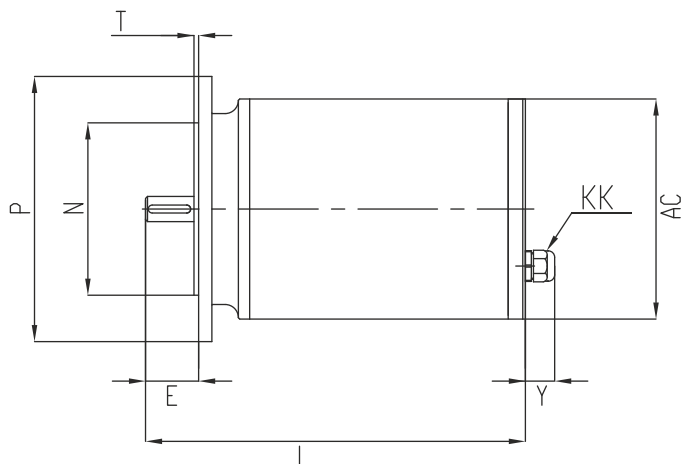
P_N [kW]	Motor	n_N [min ⁻¹]	M_N [Nm]	I_N [A]	$\cos \varphi$	η			M_S/M_N	M_{max}/M_N	I_S/I_N	J_0 [kg m ²]	WB14 [kg]		
						100 %	75 %	50 %							
0,18	HC W 63 A	2	284 0	0,61	0,42	0,81	-	77 0	-	-	3,5	3,9	6,5	0,000 8	6,3
0,25	HC W 63 B	2	284 0	0,84	0,56	0,83	-	77 6	-	-	3,5	3,9	6,7	0,001 1	7,5
0,37	HC W 71 A	2	284 0	1,24	0,8	0,83	-	80 0	-	-	4,4	4,6	8,2	0,001 4	8,9
0,55	HC W 71 B	2	284 0	1,85	1,2	0,85	-	81 5	-	-	4,5	4,7	8,7	0,001 7	10 6
0,75	HC W 80 A	2	292 0	2,45	1,6	0,82	IE4	87 0	87 6	85 8	4,1	4,6	11 0	0,003 1	14 6
1,1	HC W 80 B	2	292 0	3,60	2,3	0,84	IE4	87 5	88 0	86 2	4,2	5,0	11 5	0,004 0	18 1

4 poli / poles 1500min-1

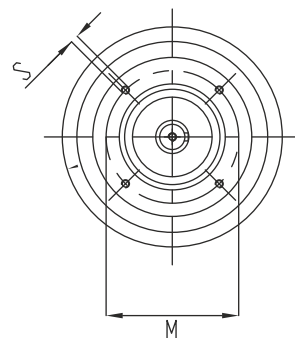
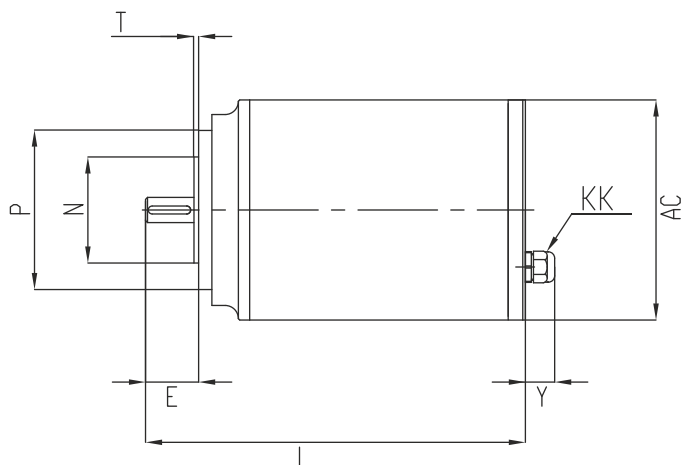
P_N [kW]	Motor	n_N [min ⁻¹]	M_N [Nm]	I_N [A]	$\cos \varphi$	η			M_S/M_N	M_{max}/M_N	I_S/I_N	J_0 [kg m ²]	WB14 [kg]		
						100 %	75 %	50 %							
0,12	HC W 63 A	4	144 0	0,80	0,32	0,69	-	77 0	-	-	2,4	3,1	5,6	0,001 1	6,3
0,18	HC W 63 B	4	144 0	1,2	0,47	0,71	-	77 5	-	-	2,4	3,1	5,8	0,001 5	7,5
0,25	HC W 71 A	4	144 0	1,7	0,6	0,74	-	79 0	-	-	2,7	3,0	6,1	0,001 8	8,9
0,37	HC W 71 B	4	144 0	2,5	0,9	0,76	-	81 1	-	-	3,2	3,4	6,9	0,002 3	10 6
0,55	HC W 80 A	4	146 0	3,6	1,3	0,72	-	83 9	-	-	3,7	4,8	9,1	0,004 1	14 6
0,75	HC W 80 B	4	146 0	4,9	1,7	0,73	IE4	87 0	86 5	83 8	4,2	5,0	10 0	0,005 3	18 1
1,1	HC W 90 S	4	146 0	7,2	2,4	0,77	IE4	87 2	87 3	85 4	4,0	4,7	10 1	0,007 5	22 1
1,5	HC W 90 L	4	146 0	9,8	3,2	0,77	IE4	88 2	88 1	86 4	4,5	5,1	10 8	0,01 0	27 9



B5



B14



Size	Bearings		CableGlands	IM B5 (*)						IM B14					
	D	NDE	KK	M	N	P	R	n x S	T	M	N	P	R	n x S	T
63	6202 2RZ	6202 2RZ	M16X1.5	115	95 j6	140	0	4x10	3	75	60 j6	90	0	4xM5	2,5
7	6202 2RZ	6202 2RZ	M20X1.5	130	110 j6	160	0	4x10	3,5	85	70 j6	105	0	4xM6	2,5
80	6205 2RZ	6203 2RZ	M20X1.5	165	130 j6	200	0	4x12	3,5	100	80 j6	120	0	4xM6	3
90S/L	6205 2RZ	6203 2RZ	M25X1.5	165	130 j6	200	0	4x12	3,5	115	95 j6	140	0	4xM8	3

Size	Shaft					General		
	D	E	F	G	GD	AC	Y	L
63A	11 j6 M4	23	4	8,5	4 E	131	22	228
63B								243
71A	14 j6 M5	30	5	11	5	131	25	265
71B								285
80A	19 i6 M6	40	6	15,5	6	166	25	268
80B								288
90S	24 j6 M8 0	5	8	20	7	166	30	333
90L								373

(*) only HYW series

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

This range is



certified



ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
Z30	21 Nm	30 mm	0.06 ÷ 0.18 kW	ø14 mm
Z45	41 Nm	45 mm	0.09 ÷ 0.37 kW	ø18 mm
Z50	72 Nm	50 mm	0.12 ÷ 0.75 kW	ø25 mm
Z63	147 Nm	63 mm	0.37 ÷ 1.8 kW	ø25 mm
Z85	347 Nm	85 mm	0.55 ÷ 4.0 kW	ø35 mm



This product is:



Twin viton seals with stainless steel 316L shield.



NTT™ stands for a special surface treatment which results in modified external properties of the complete unit in order to get a smooth surface and an higher corrosion resistance.



Output shaft and hollow shaft in AISI 316L.



All stainless steel 316L hardware.



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.



Housing with special smooth surfaces.

Z30

21 nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

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		B14 motor flanges		Dynamic efficiency r_d	Tooth module $[mm]$	ratio code
							-	-	-O	-p			
280	5	0.18	5	3.3	0.60	17	-	-	-O	-p	rd		
200	7	0.18	7	2.4	0.44	17	-	-	56	63			
140	10	0.18	10	1.8	0.32	17			c				
93	15	0.18	13	1.4	0.25	19			c				
70	20	0.18	17	1.1	0.20	19			c				
47	30	0.12	15	1.4	0.17	21			c				
35	40	0.12	19	1.1	0.13	20			c				
23	61	0.09	19	1.1	0.10	20			c				
17.5	80	0.06	16	1.0	0.06	16			c				
14	100	0.06*	16	0.5	0.03	8			c				

* 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

Lubrication

Lubrificazione

ø

unit Z30 is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z30 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions: 0.025Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.025Lt.		

Tab. 1

radial and axial loads

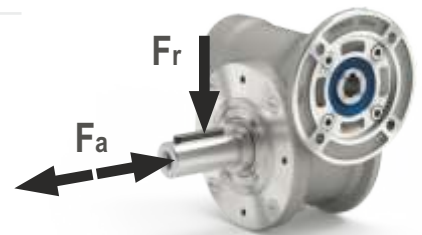
Carichi radiali e assiali

ø

Output shaft

Albero di uscita

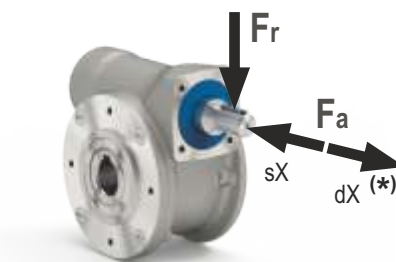
n_2 [min ⁻¹]	F_A [n]	F_R [n]
200	120	600
150	140	700
100	160	800
75	180	900
50	200	1000
25	250	1250
15	280	1400



Input shaft

Albero in entrata

n_1 [min ⁻¹]	F_A [n]	F_R [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

21
nm

Z30

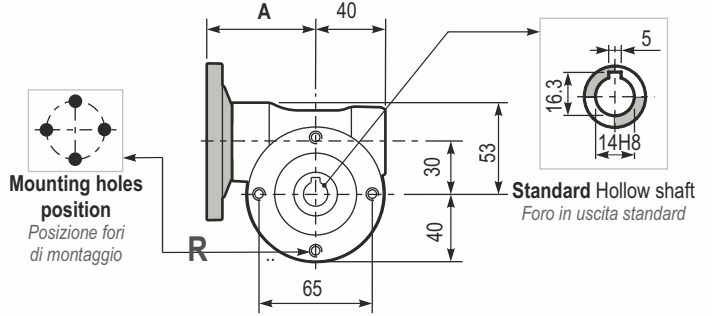
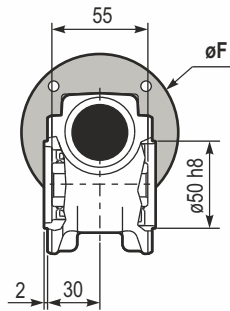
1.25 kg

Aluminium

PZ30UN.. **Basic gearbox** *base*
Riduttore

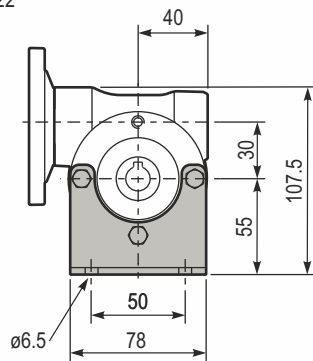
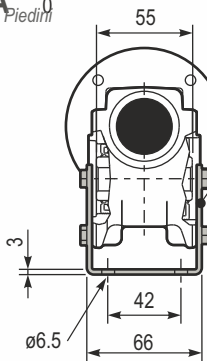
Gearbox weight
Peso riduttore

M. flanges	Kit code	øF	A
56B14	KZ304046	80	62
63B14	KZ304045	90	63

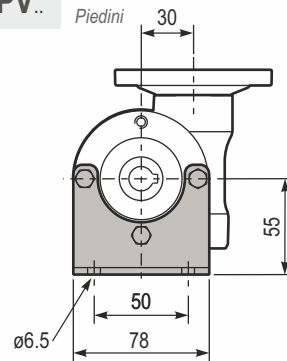


PZ30P.. **Feet**
Piedini

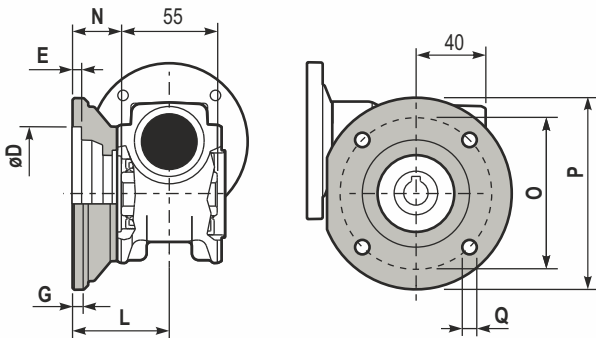
kit cod. KIZ309022



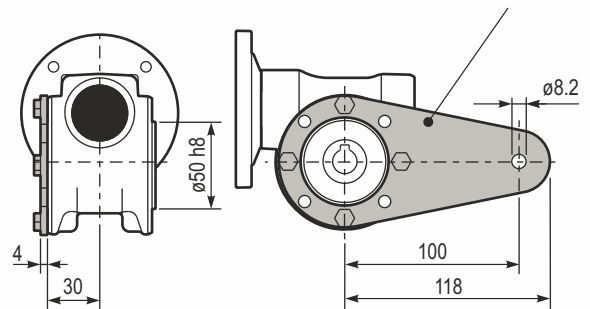
PZ3 PV.. **Feet**
Piedini



FC.. **Output flange** *uscita* cod. KIZ459027
Flangia



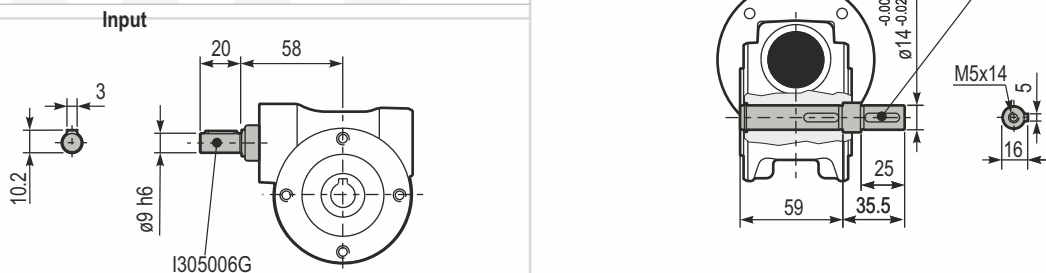
PZ3 BR.. **Reaction arm** *di reazione* **shaft** *in entrata*
Braccio *Albero*



Type	øD	E	G	L	N	O	P	Q	Kit code
FC	50 ^{+0.15} / _{+0.05}	6	6	50.5	23	68	80	7 0	KZ309010
FL	60 ^{+0.15} / _{+0.05}	6	6	55.5	28	87	110	8.5	KZ459010

S.. **Single output shaft** *semplice in uscita* Z30..
Albero

kit cod. KI0305028



Z45

41 nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Aluminium

Input speed (n₁) = 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		B14 motor flanges			Dynamic efficiency rd	Tooth module [mm]	ratio code
							-	-	-O	-p	-Q			
200	7	0.37	14	2.2	0.80	30	-	-	56	63	71	80	2.2	01
140	10	0.37	20	1.5	0.57	30	-	-	c	c		79	2.2	02
100	14	0.37	27	1.1	0.41	30	-	-	c	c		77	2.4	03
67	21	0.37	36	1.2	0.43	41	-	-	c	c		67	1.6	04
50	28	0.25	31	1.3	0.33	41	-	-	c	c		65	2.5	05
38	37	0.25	40	1.0	0.26	41	-	-	c	c		63	1.8	06
30	46	0.25	46	0.9	0.22	41	-	-	c	c		59	1.6	07
23	60	0.18	41	1.0	0.18	41	-	-	c	c		56	1.2	08
20	70	0.12	31	1.0	0.12	30	-	-	c	c		54	1.0	09
13.7	102	0.09	31	1.0	0.09	29	-	-	c	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

Lubrication

Lubrificazione

unit Z45 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z45 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions:
0.08Lt.

Quantità olio per tutte le posizioni: 0.08Lt.

Agip
Telium VSF 320

Shell
Omala S4 WE 320

Tab. 1

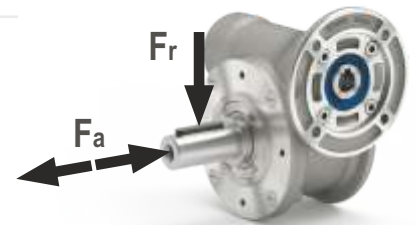
radial and axial loads

Carichi radiali e assiali

Output shaft

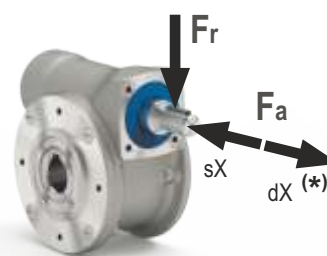
Albero di uscita

n ₂ [min ⁻¹]	F _A [n]	F _R [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]	F _A [n]	F _R [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

41
nm

Z45

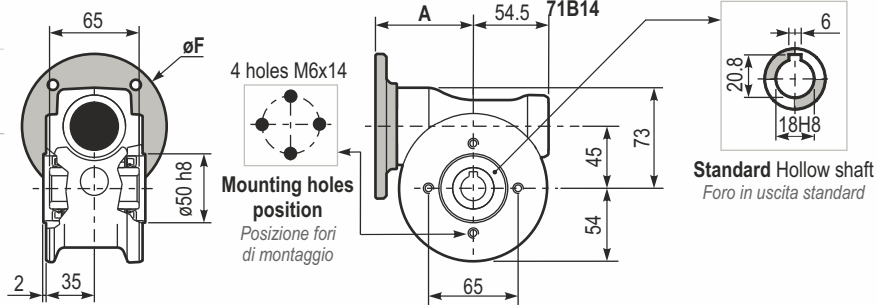
2.50 kg

Aluminium

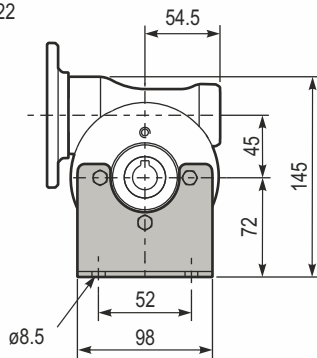
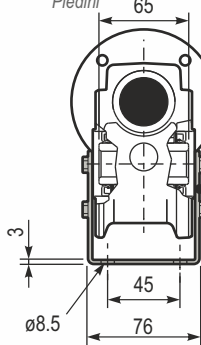
PZ45UN.. Basic gearbox
Riduttore base

Gearbox weight
Peso riduttore

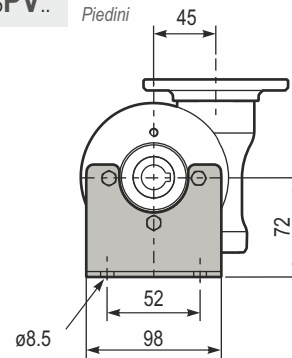
M. flanges	Kit code	øF	A
56B14	KZ454049	80	71.5
63B14	KZ454047	90	74
	KZ454045	105	71.5



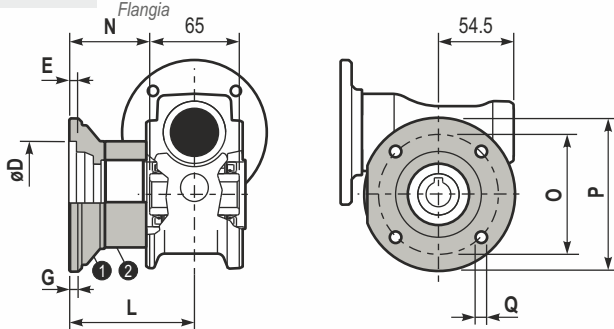
PZ45P.. A Feet
Piedini kit cod. KIZ459022



PZ45PV.. Feet
Piedini

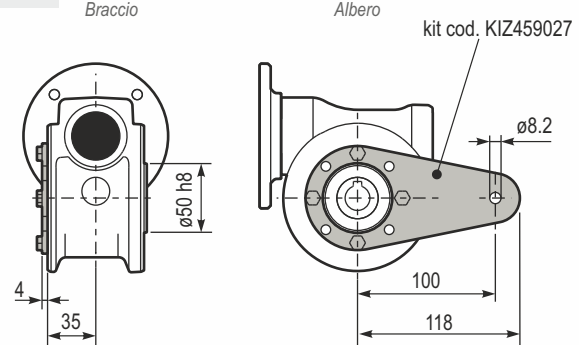


PZ45FC.. Output flange
Flangia uscita

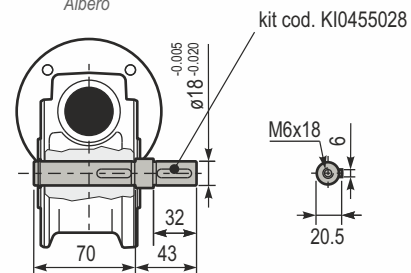


Type	øD	EG	L	N	O	P	Q	Kit code
FC	60 ^{+0.15} / _{-0.05}	9	9	60.5	28	87	110	1 KZ459010 2
FL	60 ^{+0.15} / _{-0.05}	9	9	90.5	58	87	110	1 KZ459010 2 KZ450200

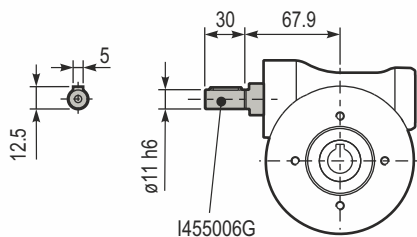
BR.. Reaction arm
Braccio di reazione P output shaft
Albero semplice in uscita Z45..



S..R Input Single shaft
Albero in entrata



Z45UN



Z50

72 nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

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			B14 motor flanges				Dynamic efficiency η_d	Tooth module m [mm]	ratio code
							-	-	-	-O	-p	-Q	-r			
200	7	0.75	29	1.9	1.5	57	-	-	-	56	63	71	80	82	2.5	01
140	10	0.75	41	1.5	1.1	62	-	-	-		c			80	2.4	02
100	14	0.75	57	1.2	0.90	68	-	-	-		c			79	2.6	03
78	18	0.55	51	1.2	0.67	62	-	-	-		c			75	2.0	04
54	26	0.55	67	1.0	0.54	66	-	-	-		c			69	2.7	05
47	30	0.55	79	0.9	0.50	72	-	-	-		c			70	2.5	12
39	36	0.37	63	1.2	0.43	72	-	-	-	c	c			69	2.1	06
33	43	0.37	72	1.0	0.35	68	-	-	-	c	c			66	1.8	07
28	50	0.25	53	1.2	0.31	66	-	-	-	c	c			62	1.5	13
23	60	0.25	59	1.0	0.26	62	-	-	-	c	c			58	1.3	08
21	68	0.25	66	0.9	0.22	58	-	-	-	c	c			57	1.2	09
17.5	80	0.18	53	1.1	0.19	57	-	-	-	c	c			54	1.0	10
14	100	0.12	41	1.3	0.15	51	-	-	-	c	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

Lubrication

Lubrificazione

unit Z50 is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z50 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions:

0.12Lt.

Quantità olio per tutte le posizioni: 0.12Lt.

Agip

Telium VSF 320

Shell

Omala S4 WE 320

Tab. 1

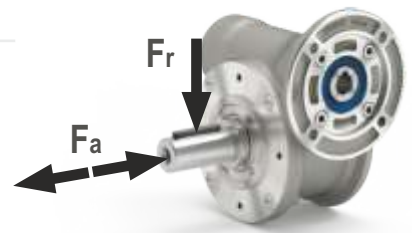
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [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]	F_A [n]	F_R [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

72
mm

Z50

PZ50UN..

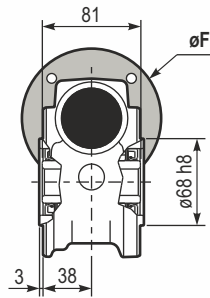
Basic gearbox
Riduttore

base

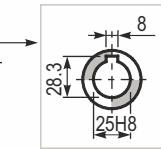
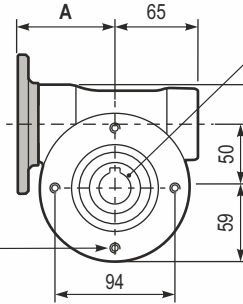
Gearbox weight
Peso riduttore

3.70 kg

M. flanges	Kit code 56B14	øF	A
63B14	KZ504049	80	76
71B14	KZ504047	90	78.5
71B14	KZ504045	105	76
80B14	KZ504046	120	76.5



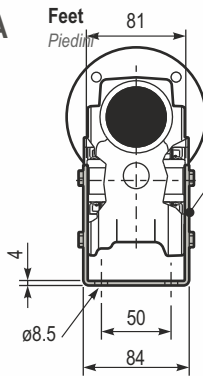
4 holes M6x9
Mounting holes
position
Posizione fori
di montaggio



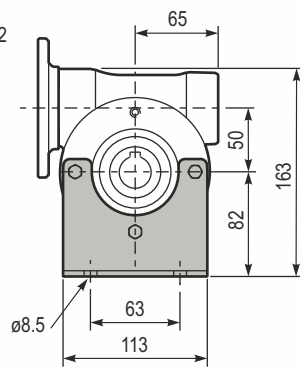
Standard Hollow shaft
Foro in uscita standard

PZ50P .. A

Feet
Piedini

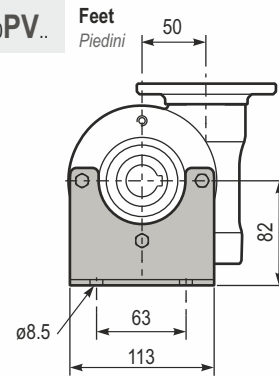


kit cod. KIZ509022



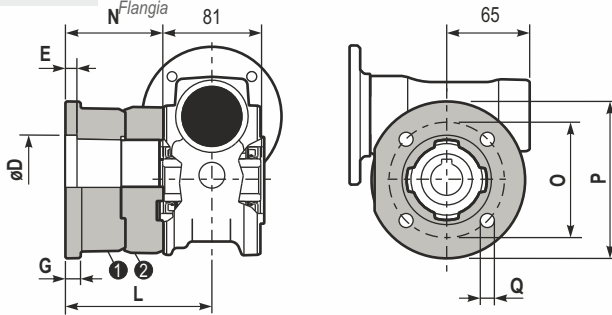
PZ50PV..

Feet
Piedini



FC

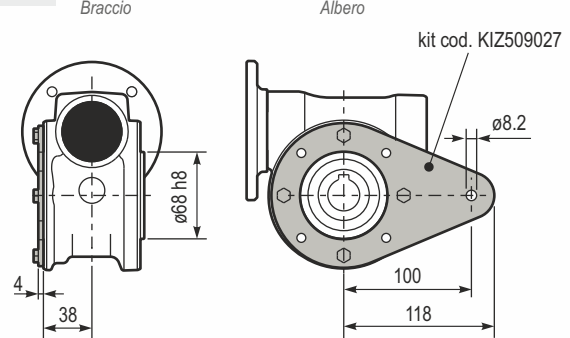
Output
flange
uscita



Type	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	● KZ509010 ● KZ509010 ● KZ500200
FL	70 ^{+0.20} / _{+0.15}	9	12	114.5	74	90	123	10.5	

BR..

Reaction
arm
di reazione
P output shaft
semplice in uscita Z50..

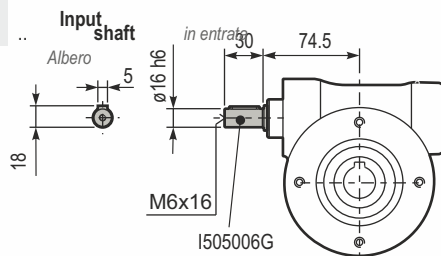


kit cod. KIZ509027

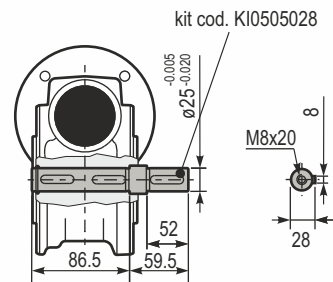
Single

S.R

Input
shaft
Albero



M6x16
I505006G



kit cod. KI0505028

Aluminium

Z63

147 nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Input speed (n₁) = 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			B14 motor flanges			Dynamic efficiency rd	Tooth module [mm]	ratio code
							-	-	-	-Q	-r	-T			
200	7	1.8	71	1.8	3.2	125	-	-	-	71	80	90	83	3.1	01
140	10	1.8	99	1.4	2.4	134	-	-	-	c	c		81	3.1	02
93	15	1.5	121	1.1	1.7	138	-	-	-	c	c		79	3.1	03
74	19	1.1	111	1.2	1.4	138	-	-	-	c	c		78	2.6	04
58	24	1.1	135	1.0	1.2	142	-	-	-	c	c		75	2.0	05
47	30	1.1	167	0.9	0.96	146	-	-	-	c	c		74	3.2	06
39	36	0.75	125	1.2	0.88	147	-	-	-	c	c		68	2.7	07
35	40	0.75	135	1.0	0.78	140	-	-	-	c	c		66	2.5	13
31	45	0.55	111	1.2	0.67	135	-	-	-	c	c		66	2.1	08
23	60	0.55	140	0.9	0.51	130	-	-	-	c	c		62	1.6	12
21	67	0.55	151	0.8	0.45	124	-	-	-	c	c		60	1.5	09
17.5	80	0.37	115	1.0	0.38	119	-	-	-	c	c		57	1.3	10
14.9	94	0.37	123	1.0	0.36	119	-	-	-	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

Lubrication

Lubrificazione

unit Z63 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z63 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions: 0.30Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.30Lt.		

Tab. 1

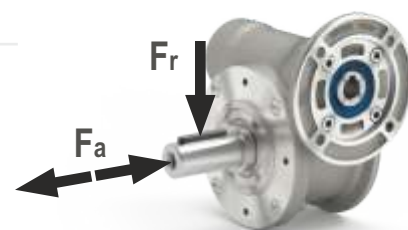
radial and axial loads

Carichi radiali e assiali

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

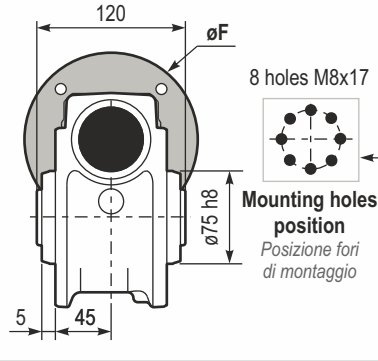
147
nm

Z63

PZ63UN.. Basic gearbox
Riduttore

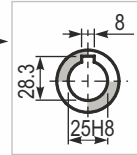
M. flanges	Kit code	øF	A
	71B14	105	97.5
80B14	KZ634046	120	99.5
90B14	KZ634041	140	

base

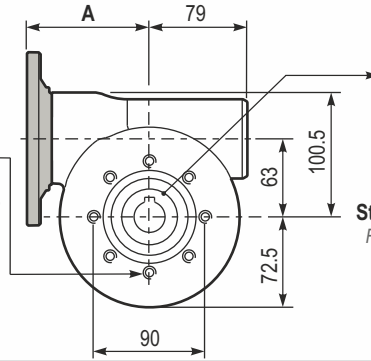


Gearbox weight
Peso riduttore

6.70 kg

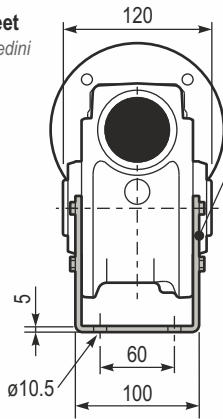


Standard Hollow shaft
Foro in uscita standard

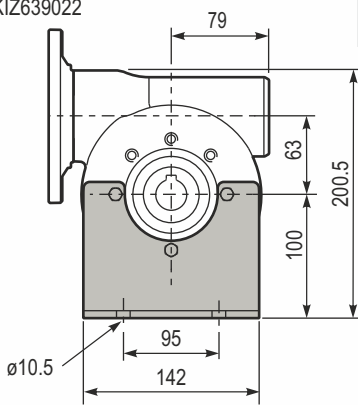


PZ63P.. A Feet

Piedini

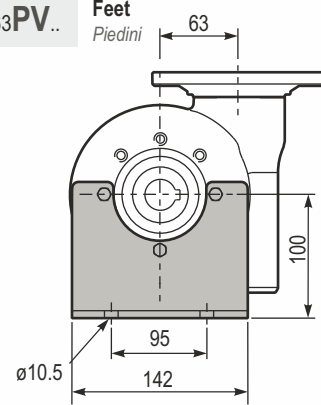


kit cod. KIZ639022



PZ63PV.. Feet

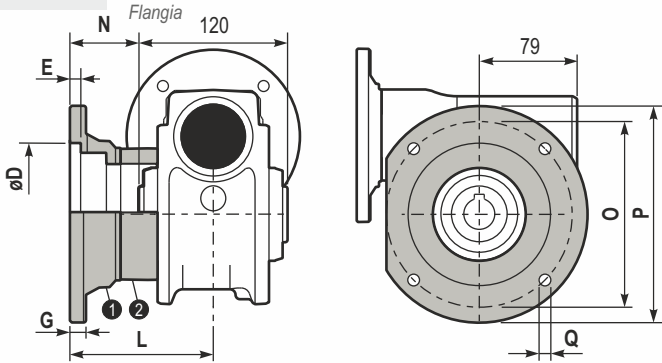
Piedini



PZ63 Output flange

Flangia

uscita



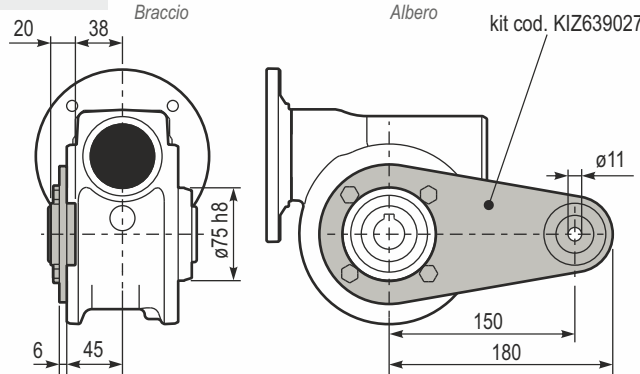
BR.. Reaction arm

Braccio

di reazione

Albero

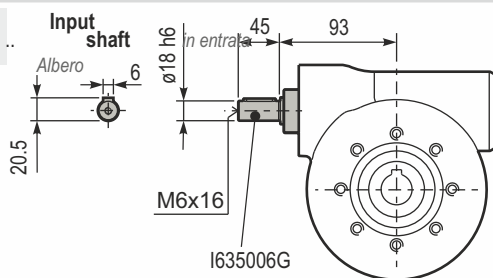
output shaft semplice in uscita Z63..



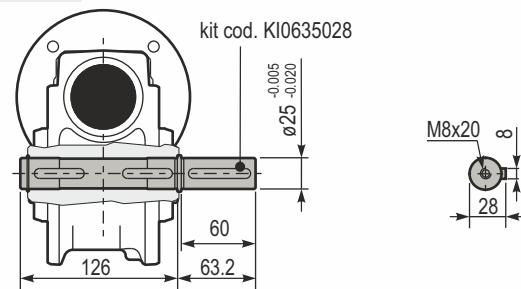
Type	øD	E	G	L	N	O	P	Q	Kit code
FC	1 ^{+0.20} / _{+0.15}	7	13	86	26	150	175	11	① KZ639010 ② - 15
FL	115 ^{+0.20} / _{+0.15}	7	13	116	56	150	175	11	① KZ639010 ② KZ630200

S.R

Input shaft



Single



Aluminium

Z85

347 Nm

ALUMINIUM - Schneckengetriebe

Aluminum worm gearboxes

Aluminium

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			B14 motor flanges			Dynamic efficiency RD	Tooth module [mm]	Ratio code
							-	-	-	-R	-T	-U			
200	7	4.0	168	1.5	6.1	257	-	-	-	-R	-T	-U	88	4.23	01
140	10	4.0	218	1.3	5.2	284	-	-	-	80	90	100 112	80	4.2	02
100	14	3.0	223	1.4	4.1	305	-	-	-	-	-	-	78	4.5	03
70	20	2.2	237	1.2	2.7	294	-	-	-	-	-	-	79	3.4	04
64	22	2.2	258	1.1	2.5	294	-	-	-	-	-	-	78	3.1	05
50	28	2.2	315	1.1	2.4	347	-	-	-	-	-	-	75	4.7	06
37	38	1.5	276	1.2	1.8	336	-	-	-	-	-	-	71	3.5	07
30	46	1.5	320	1.0	1.5	326	-	-	-	-	-	-	68	3.1	08
27	52	1.1	258	1.1	1.2	289	-	-	-	-	-	-	66	2.7	09
21	67	1.1	327	0.9	0.97	289	-	-	-	-	-	-	65	2.1	10
18.9	74	0.75	220	1.2	0.91	268	-	-	-	-	-	-	58	1.9	11
14.6	96	0.55	191	1.3	0.70	242	-	-	-	-	-	-	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

Lubrication

Lubrificazione

Unit Z85 is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo Z85 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

all positions: 0.95Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.95Lt.		

Tab. 1

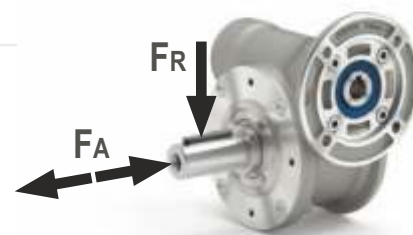
Radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

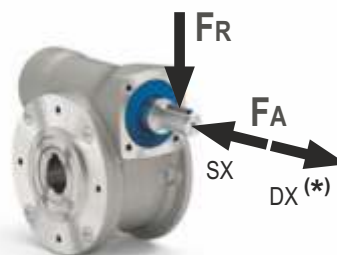
n_2 [min ⁻¹]	F_A [N]	F_R [N]
200	500	2500
150	580	2900
100	600	3000
75	700	3500
50	800	4000
25	1000	5000
15	1160	5800



Input shaft

Albero in entrata

n_1 [min ⁻¹]	F_A [N]	F_R [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

347
Nm

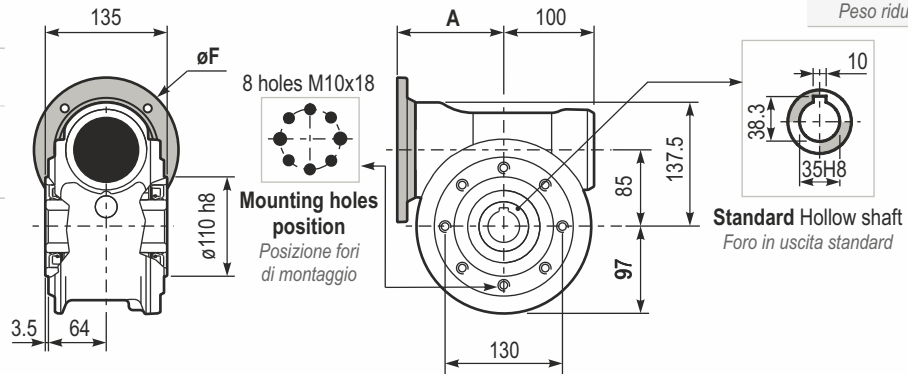
Z85

Aluminium

PZ85UN.. Basic gearbox
Riduttore base

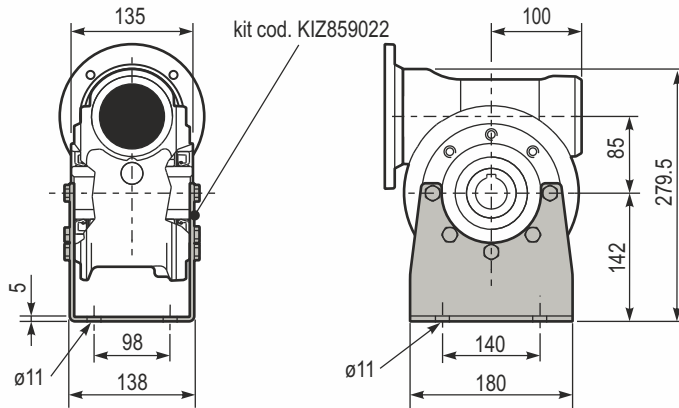
Gearbox weight
Peso riduttore 13.00 kg

M. flanges	Kit code	øF	A
80B14	KZ854046	120	118.5
90B14	KZ854045	140	118.5
100/112B14	KZ854047	160	127.5

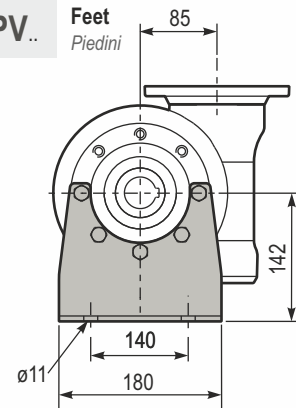


PZ85PA.. Feet
Piedini

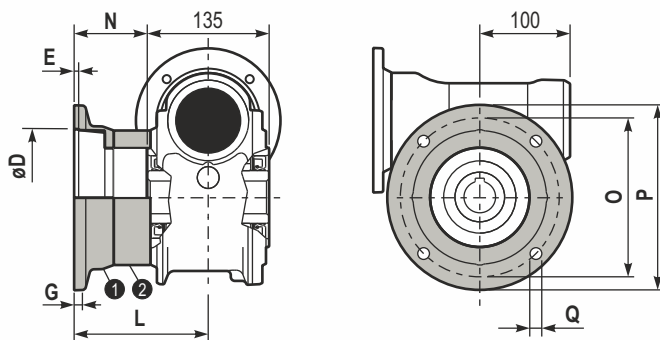
kit cod. KIZ859022



PZ85PV.. Feet
Piedini

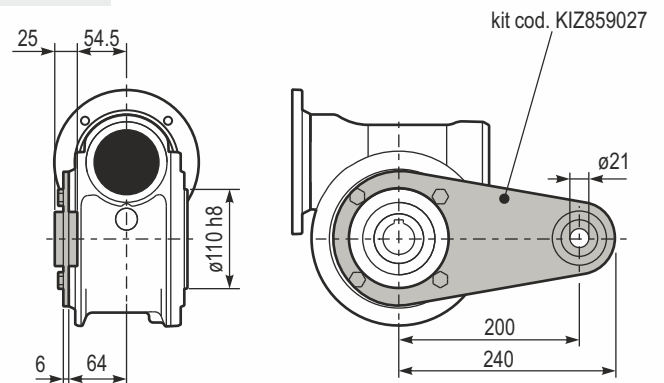


PZ85FC.. Output flange
Flangia uscita

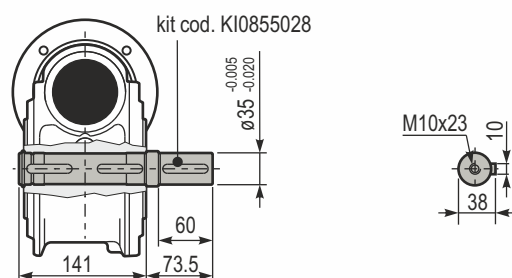


Type	øD	E	G	L	N	O	P	Q	Kit code
FC	152 ^{+0.06} / _{-0.00}	5	16	108	40.5	176	205	13	1 KZ859010 2 -
FL	152 ^{+0.06} / _{-0.00}	5	16	148.5	81	176	205	13	3 KZ859010 4 KZ850201

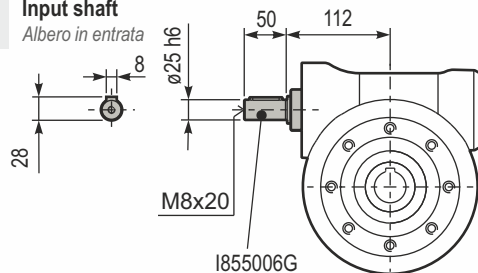
PZ85BR.. Reaction arm
Braccio di reazione



PZ85..S.. Single output shaft
Albero semplice in uscita



RZ85UN.. Input shaft
Albero in entrata



ALUMINIUM - Stirnradstufe

Aluminum ratio multipliers

This range is



certified



ALUMINIUM - Stirradstufe

Aluminum ratio multipliers

t	torque <i>Coppia</i> type <i>Tipo</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Output shaft <i>Albero in uscita</i>
211Z	20 Nm	30 mm	0.25 ÷ 0.37 kW	ø14 mm



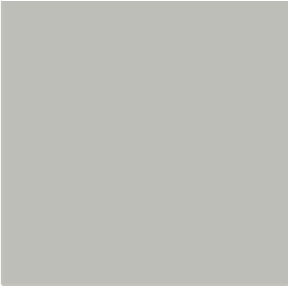
this product is:



Stainless steel output shaft.



Ntt™ stands for a special surface treatment which results in modified external properties of the complete unit in order to get a smooth surface and an higher corrosion resistance.



Fully modular IEC flanges and compact NEMA C motor flanges.



Standard FPM (fkm) seals are used, since seals will be in a closed area.



Hardened and ground gears.

211Z



20 Nm

ALUMINIUM - Stirnradstufe

Aluminum ratio multipliers

The dynamic efficiency is **0.98** 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]	B5 motor flanges		B14 motor flanges			Output shaft 	Ratios code 	
							-	-	-O	-P	-Q			
682	2.05	0.37	5	2.0	0.73	10	-	-	-O	-P	-Q	standard ø14	01	
595	2.35	0.37	6	2.1	0.76	12	-	-	56	63	71		1939	02
500	2.80	0.37	7	2.0	0.75	14	-	-	C	C			1740	03
414	3.38	0.37	8	2.0	0.75	17	-	-	C	C			1542	04
298	4.70	0.37	12	1.7	0.64	20	-	-	C	C			1344	05
225	6.22	0.37	15	1.5	0.55	23	-	-	C	C			1047	06
169	8.29	0.37	20	1.0	0.36	20	-	-	C	C			956	07
142	9.83	0.25	16	1.0	0.24	16	-	-	C	C			758	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

Lubrication

Lubrificazione

Unit 211Z is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 211Z viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions:
0.05Lt.

Quantità olio per tutte le posizioni: 0.05Lt

Agip
Telium VSF 320

Shell
Omala S4 WE 320

Radial and axial loads

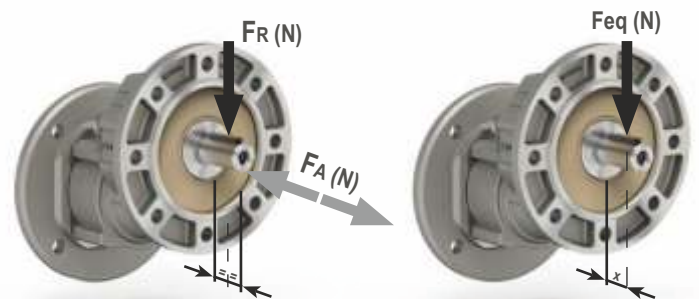
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [N]
700	101	504
600	120	600
400	138	696
300	151	756
200	175	876
140	192	960

$$F_{eq} = F_R \cdot \frac{34.5}{X + 19.5}$$



Tab. 1

Tab. 2

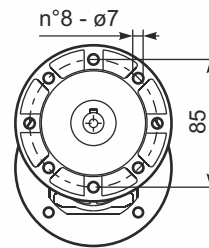
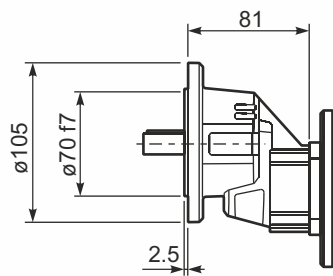
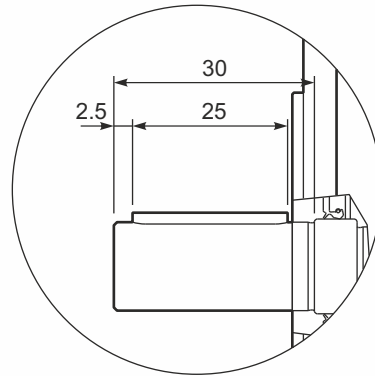
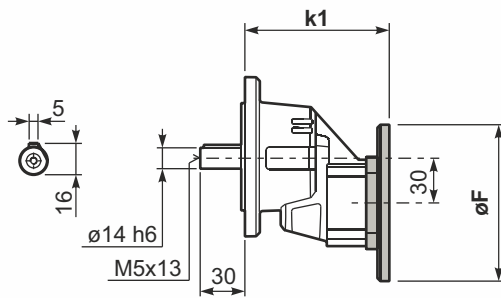
20
Nm

211Z

P211Z-F... **Basic gearbox**
Riduttore base

Gearbox weight 1.40 kg
Peso riduttore

M. flanges	Kit code	k1	øF
56 B14	KZ504049	97	80
63 B14	KZ504047	99.5	90
71 B14	KZ504045	97	105



Aluminium



EDELSTAHL
stainless steel



„Hygienics“ Edelstahlmotoren aus rostfreiem Stahl 316L, IP69K für die Lebensmittelverarbeitung, Pharmazie und andere Anwendungen für extreme Sauberkeit und häufiges Abwaschen

„Hygienics“ stainless steel Motors 316L, IP69K
for food processing, pharmaceutical and other applications requiring extreme cleanliness and frequent washdowns



Bei Lebensmittel-, Getränke- oder chemisch-pharmazeutischen Produktionsanlagen sind die Motoren, zusammen mit anderen Teilen, oft Hochdruckwasserstrahlen ausgesetzt (manchmal auch bei hohen Temperaturen) oder noch aggressiveren Reinigungsmitteln. Edelstahlmotoren können diesen Betriebszustand aushalten, wozu im Gegensatz Motoren anderer Art beschädigt oder sogar verschmutzt werden. Im Gegensatz zu Standardmotoren hat die Edelstahl-Baureihe keine Kühlung, keine Farbe, die abplatzt und keine Oberfläche, die rosten kann. Dies bedeutet, dass Abfallprodukte leicht weggespült werden können und keine Rückstände am Gerät entstehen und der Motor ohne Bedenken in der Lebensmittelverarbeitung eingesetzt werden kann. Sogar das Typenschild ist auf dem Außengehäuse eingraviert.

When food, beverage or chemical-pharmaceutical production plants are washed down, the motors, along with other parts, are often subjected to high pressure water jets (sometimes at high temperatures) or even more aggressive cleaning agents. Stainless steel motors can withstand this operating condition, that on the contrary can cause damage to other kind of motor, or even contaminate the end product. Unlike standard motors, the stainless steel range has no coolings, no paint to chip or flake and no surface that will rust. This means that waste products can be washed away easily leaving no residue and the motor can be used with confidence in food processing areas, even the rating plate is engraved on the outer casing to.

Dank der Schutzart IP69K ist die Edelstahlmotorenreihe ein bewährtes Design für Washdown-Situationen.

Alle externen Komponenten sind aus Edelstahl AISI 316L gefertigt, die Motorwelle aus Edelstahl AISI 420 mit magnetischen Eigenschaften. Es gibt keine Farbe zum Abplatzen. Dies ermöglicht eine ausgezeichnete Beständigkeit gegen Korrosion und stellt eine zuverlässige und dauerhafte Lösung dar, bei der Hygiene eine wesentliche Rolle spielt. Edelstahlmotoren sind vollständig geschlossen, nicht belüftet (IC410) und erfüllen die höchsten Anforderungen an hygienisch einwandfreie Linien. Die Oberflächentemperatur ist begrenzt und das elektromagnetische Design und das zusätzliche interne aktive Material begünstigen dies. Die Effizienzklasse IE3: Die Motoren der Klasse F sind für Dauerbetrieb S1 und Überhitzung in der Klasse B / F ausgelegt. Die Effizienzklasse (0,75 kW IEC / EN60034-30) IE4: Motoren sind für den Umrichterbetrieb geeignet, d.h. für einen großen Bereich bei konstantem Drehmoment. Die Kabelverschraubung ist aus Edelstahl, die Öldichtungen aus Viton. Sämtliche Angaben sind auf der Rückseite lasergraviert. Die Oberfläche ist völlig glatt.

Thanks to the IP69K degree of protection, the stainless steel motor range is a proven design for washdown situations.

All external components are manufactured in AISI 316L stainless steel, motor shaft is in AISI 420 stainless steel with magnetic properties. There is no paint to flake off. This gives excellent resistance to corrosion and represents a reliable and durable solution where hygiene is essential.

The stainless steel motor range are totally enclosed non ventilated (IC410), able to satisfy the highest needs on ultra-hygienic clean lines. The surface temperature is limited thanks to an accurate electromagnetic design and the additional internal active material. The efficiency class is IE3.

The motors are class F designed for continuous duty S1 and overheating in class B/F, the energy efficiency class (0,75kW IEC / EN60034-30) is IE4. Motors are suitable for inverter operation with large range at constant torque.

The cable gland is in stainless steel, the oils seals are in viton.

The ratings are laser engraved on the back cover.

The surfaces are completely smooth.



Anschlussspannung	230 V 400 V
Netzfrequenz	50 Hz
ISO-Klasse	F
Schutzart	IP69K nach IC410
Betriebsart	S1
Bauform	B14 B5
Baugröße	63 - 90
Leistung	0,12 - 1,5 kW
Drehzahl	1500 oder 3000
Energieeffizienzklasse	IE4 nach IEC60034-30, IEC60034-2-1
Material	Edelstahl AISI316L



Anwendungsbereiche / Application fields

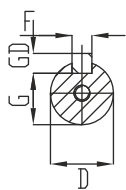
- Geflügel / Poultry
- Fleisch / Meat
- Meeresfrüchte / Seafood
- Milchverarbeitung / Dairy Processing
- Bäckerei / Bakery
- Abfüllung / Bottling
- Getränke / Beverage
- Pharmazeutische Industrie, Kosmetik / Pharmaceutical Industry ,cosmetics
- Chemische Herstellung / Chemical manufacture
- Tabak / Tobacco

2 poles 3000min⁻¹

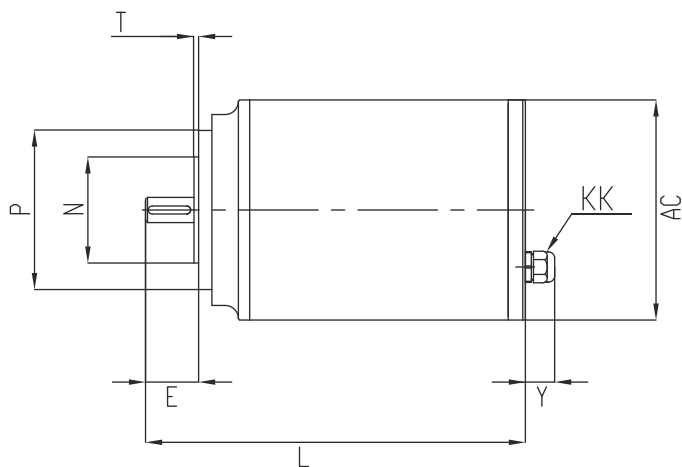
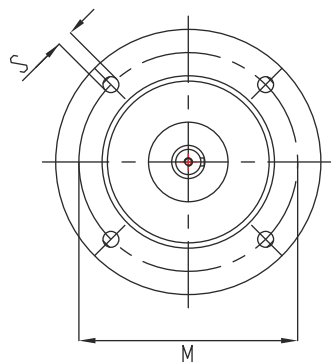
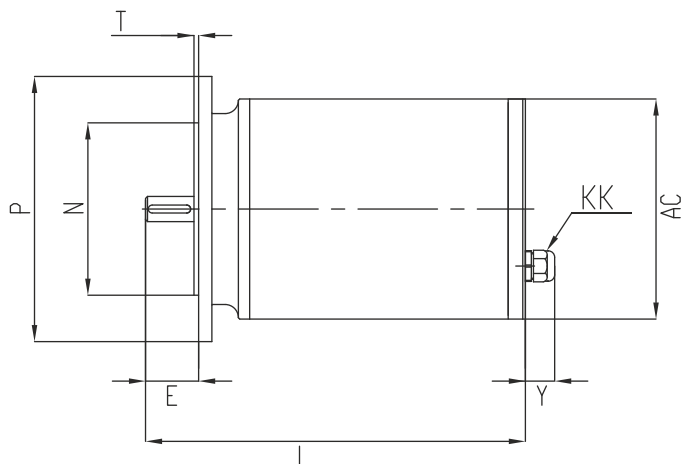
P _N [kW]	Motor	n _N [min ⁻¹]	M _N [Nm]	I _N [A]	cos φ	η			M _s /M _N	M _{max} /M _N	I _s /I _N	J ₀ [kg m ²]	WB14 [kg]	WB5 [kg]	
						100 %	75 %	50 %							
0,18	HY W 63 A 2	284 0	0,61	0,42	0,81	-	77 0	-	3,5	3,9	6,5	0,000 8	8,7	9,4	
0,25	HY W 63 B 2	284 0	0,84	0,56	0,83	-	77 6	-	3,5	3,9	6,7	0,001 1	10	10 7	
0,37	HY W 71 A 2	284 0	1,24	0,8	0,83	-	80 0	-	4,4	4,6	8,2	0,001 4	11 6	12 5	
0,55	HY W 71 B 2	284 0	1,85	1,2	0,85	-	81 5	-	4,5	4,7	8,7	0,001 7	13 5	14 4	
0,75	HY W 80 A 2	292 0	2,45	1,6	0,82	IE4	87 0	87 6	85 8	4,1	4,6	11 0	0,003 1	19	21
1,1	HY W 80 B 2	292 0	3,60	2,3	0,84	IE4	87 5	88 0	86 2	4,2	5,0	11 5	0,004 0	22	24

4 poli / poles 1500min⁻¹

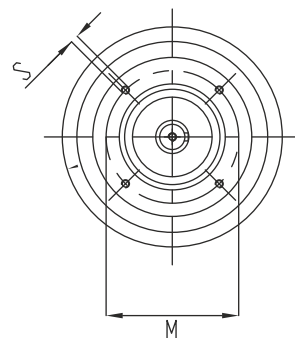
P _N [kW]	Motor	n _N [min ⁻¹]	M _N [Nm]	I _N [A]	cos φ	η			M _s /M _N	M _{max} /M _N	I _s /I _N	J ₀ [kg m ²]	WB14 [kg]	WB5 [kg]	
						100 %	75 %	50 %							
0,12	HY W 63 A 4	144 0	0,80	0,32	0,69	-	77 0	-	2,4	3,1	5,6	0,001 1	8,7	9,4	
0,18	HY W 63 B 4	144 0	1,2	0,47	0,71	-	77 5	-	2,4	3,1	5,8	0,001 5	10	10 7	
0,25	HY W 71 A 4	144 0	1,7	0,6	0,74	-	79 0	-	2,7	3,0	6,1	0,001 8	11 6	12 5	
0,37	HY W 71 B 4	144 0	2,5	0,9	0,76	-	81 1	-	3,2	3,4	6,9	0,002 3	13 5	14 4	
0,55	HY W 80 A 4	146 0	3,6	1,3	0,72	-	83 9	-	3,7	4,8	9,1	0,004 1	19	21	
0,75	HY W 80 B 4	146 0	4,9	1,7	0,73	IE4	87 0	86 5	83 8	4,2	5,0	10 0	0,005 3	22	24
1,1	HY W 90 S 4	146 0	7,2	2,4	0,77	IE4	87 2	87 3	85 4	4,0	4,7	10 1	0,007 5	27	28 5
1,5	HY W 90 L 4	146 0	9,8	3,2	0,77	IE4	88 2	88 1	86 4	4,5	5,1	10 8	0,01 0	33	34 5



B5



B14



Size	Bearings		CableGlands	IM B5 (*)						IM B14					
	D	NDE	KK	M	N	P	R	n x S	T	M	N	P	R	n x S	T
63	6202 2RZ	6202 2RZ	M16X1.5	115	95 j6	140	0	4x10	3	75	60 j6	90	0	4xM5	2,5
7	6202 2RZ	6202 2RZ	M20X1.5	130	110 j6	160	0	4x10	3,5	85	70 j6	105	0	4xM6	2,5
80	6205 2RZ	6203 2RZ	M20X1.5	165	130 j6	200	0	4x12	3,5	100	80 j6	120	0	4xM6	3
90S/L	6205 2RZ	6203 2RZ	M25X1.5	165	130 j6	200	0	4x12	3,5	115	95 j6	140	0	4xM8	3

Size	Shaft					General		
	D	E	F	G	GD	AC	Y	L
63A	11 j6 M4	23	4	8,5	4 E	131	22	228
63B								243
71A	14 j6 M5	30	5	11	5	131	25	265
71B								285
80A	19 i6 M6	40	6	15,5	6	166	25	268
80B								288
90S	24 j6 M8 0	5	8	20	7	166	30	333
90L								373

(*) only HYW series

EDELSTAHL - Stirnkegelrad

Full stainless steel helical bevel gearboxes

This range is ip69K   nsF_o certified
component



EDELSTAHL - Stirnkegelrad

Full stainless steel helical bevel gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
X62I	410 Nm	-	0.75 ÷ 4.0 kW	ø35



This product is:



Output shaft in AISI 316L and special cover for full seals protection.



Closed protection cap with o-ring in AISI 316L.



Special high tech full stainless steel housing with accurate finishing and strong rigidity.



Fully modular IEC flanges and compact NEMA C motor flanges.



Stainless steel 316L hollow input/output shaft. Viton seals with stainless steel 316L shield.



Hardened and ground gears.

X62I

410 Nm

EDELSTAHL - Stirnkegelrad

Full stainless steel helical bevel gearboxes

The dynamic efficiency is

Input speed (n₁) = 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			B14 motor flanges		Output shaft ø	Ratio code
							-	-	-U	-R	-T		
232	6.03	4	155	1.6	6.1	240	-	-	-U	-R	-T	3011	01
151	9.26	4	238	1.1	4.5	270	-	-	-100-112	80	90	308	02
123	11.36	4	291	1.2	4.7	350						2011	03
91	15.36	4	394	1.0	3.8	385						1611	04
80	17.46	4	448	0.9	3.5	400						208	05
70	19.97	3	386	1.1	3.1	410						1311	06
59	23.60	3	456	0.9	2.7	410						168	Standard 07
57	24.45	3	472	0.9	2.6	410						1111	08
45.6	30.69	2.2	436	0.9	2.0	410						138	09
39.6	35.35	1.5	346	1.2	1.8	410						811	10
37.3	37.57	1.5	368	1.1	1.7	410						118	11
28.8	48.68	1.1	348	1.0	1.1	365						611	12
25.8	54.33	1.1	389	1.1	1.2	410						88	13
18.7	74.81	0.75	367	1.0	0.73	360						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

Lubrication

Lubrificazione

Unit X62I is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X62I viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip Tellium VSF 320	Shell Omala S4 WE 320	V8 On request ASK	
B3 Standard 1.85 LT		B8 On request 2.00 LT	
B6 On request 2.00 LT		V5 On request 3.35 LT	
B7 On request 1.70 LT		V6 On request 2.30 LT	

0.96 for all ratios

For more 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

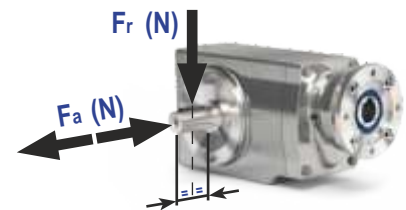
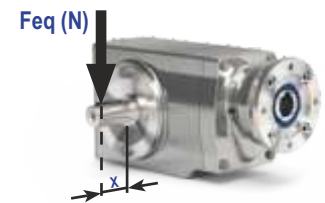
Carichi radiali e assiali

Output shaft

Albero di uscita

n ₂ [min ⁻¹]	F _A [N]	F _R [N]
250	600	3000
150	700	3500
100	780	3900
75	890	4450
50	1140	5700
25	1330	6650
15	1660	8300

$$F_{eq} = F_r \cdot \frac{69}{X + 39}$$



Tab. 2

Edelstahl

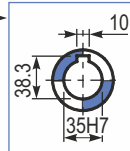
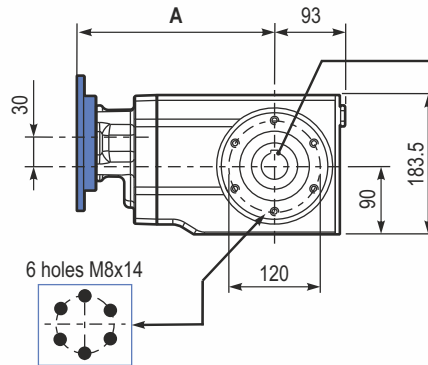
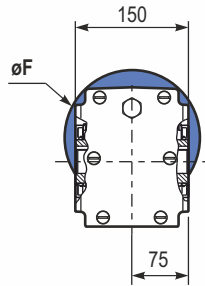
410
Nm

X62I

PX62II... Basic gearbox
Riduttore base

Gearbox weight
peso riduttore **25.8 kg**

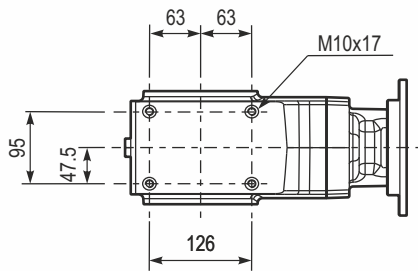
M. flanges	Kit code	øF	A
80B14	KI854046	120	255
90B14	KI854045	140	255
100-112B14	KI854041	160	264



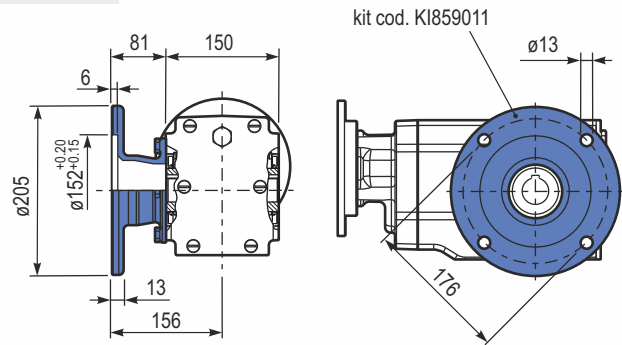
Standard Hollow shaft
Foro in uscita standard

Mounting holes position
Posizione fori di montaggio

PX62I-FB.. Feet
Piedini

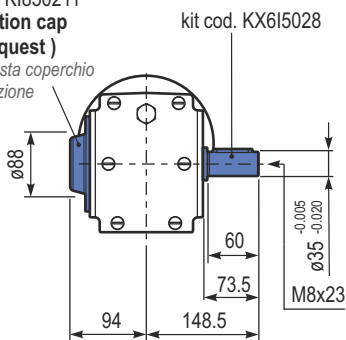


PX62I-FL.. Output flange
Flangia uscita

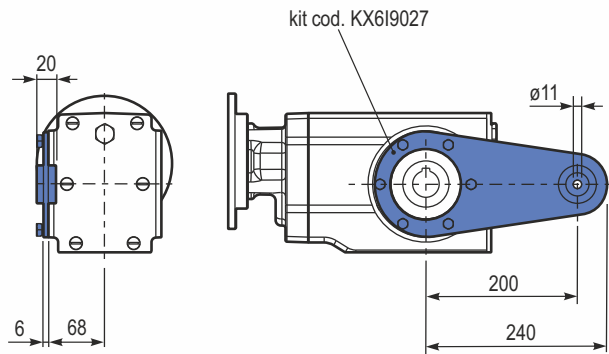


PX62I..A.. Single output shaft
Albero semplice in uscita

kit cod. KI850211
Protection cap (on request)
A richiesta coperchio di protezione



PX62I BR.. Reaction Arm
Braccio di reazione



EDELSTAHL - Stirnkegelrad harsh environment

stainless steel shielded helical bevel gearboxes

This range is  ip69K  CE  nsF component certified



EDELSTAHL - Stirnkegelrad harsh environment

stainless steel shielded helical bevel gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
X22L	50 Nm	-	0.12 ÷ 0.37 kW	ø20
X32L	90 Nm	-	0.25 ÷ 1.5 kW	ø20
X42L	150 Nm	-	0.25 ÷ 1.5 kW	ø25
X52L	250 Nm	-	0.55 ÷ 3.0 kW	ø30
X62L	410 Nm	-	0.75 ÷ 4.0 kW	ø35



This product is:



The "L" series is an already totally enclosed aluminum gearboxes, that is shielded and sealed by stainless steel 316L case.



Output shaft is produced in AISI 316L.



Protection cap in AISI 316L.



Fully modular IEC flanges and compact NEMA C motor flanges.



Stainless steel 316L hollow output shaft.
Viton seals with stainless steel 316L shield.



Hardened and ground gears.

X22L


50 nm

EDELSTAHL - Stirnkegelrad

harsh environment
stainless steel shielded helical bevel gearboxes

The dynamic efficiency is

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		B14 motor flanges		Output shaft 	ratio code
							-	-	-p	-Q		
290	4.83	0.37	12	2.6	0.95	30	63-	-	c	71	289	01
189	7.40	0.37	18	1.7	0.62	30	-	-	c	-	287	02
146	9.58	0.37	23	1.7	0.64	40	-	-	c	-	199	03
128	10.98	0.37	27	1.7	0.63	45	-	-	c	-	179	04
107	13.07	0.37	32	1.4	0.53	45	-	-	c	-	159	05
95	14.66	0.37	35	1.3	0.47	45	-	-	c	-	197	06
89	15.79	0.37	38	1.2	0.44	45	-	-	c	-	139	07
83	16.81	0.37	41	1.1	0.41	45	-	-	c	-	177	08
70	20.00	0.37	48	1.0	0.37	48	-	-	c	-	157	09
64	21.93	0.37	53	0.9	0.35	50	-	-	c	-	109	10
58	24.18	0.25	39	1.3	0.32	50	-	-	c	-	137	11
48.2	29.04	0.25	47	1.1	0.26	50	-	-	c	-	99	12
41.7	33.57	0.18	42	1.2	0.23	50	-	-	c	-	107	13
36.2	38.67	0.18	48	1.0	0.20	50	-	-	c	-	79	14
31.5	44.44	0.18	55	0.9	0.17	50	-	-	c	-	97	15
23.7	59.18	0.12	48	1.0	0.13	50	-	-	c	-	77	16
19.9	70.24	0.12	57	0.9	0.11	50	-	-	c	-	67	17

Motor flanges available
Flange motore disponibili

B) Fornito con bussola di riduzione

B) Available on request without reduction bushing
Disponibile a richiesta senza bussola di riduzione

C) Motor flange holes position
Posizione fori flangia motore

Lubrication

Lubrificazione

Always specify the mounting position
Specificare sempre la posizione di montaggio

unit X22L is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

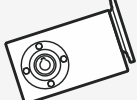
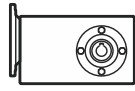
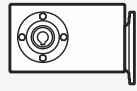

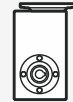


See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X22L viene fornito con olio sintetico e lubrificazione tipo "long life".
Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip Telium VSF 320	Shell Omala S4 WE 320	V8 On request asK	
B3 Standard 0.25 LT		B8 On request 0.25 LT	
B6 On request 0.25 LT		V5 On request 0.43 LT	
B7 On request 0.25 LT		V6 On request 0.31 LT	

0.96 for all ratios

Tab. 1

radial and axial loads

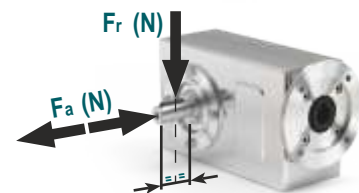
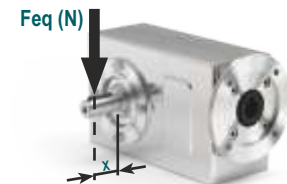
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [n]
400	360	1800
250	380	1900
150	420	2100
100	440	2200
75	440	2200
50	440	2200
25	440	2200
15	440	2200

$$F_{eq} = F_r \cdot \frac{42}{x + 23}$$



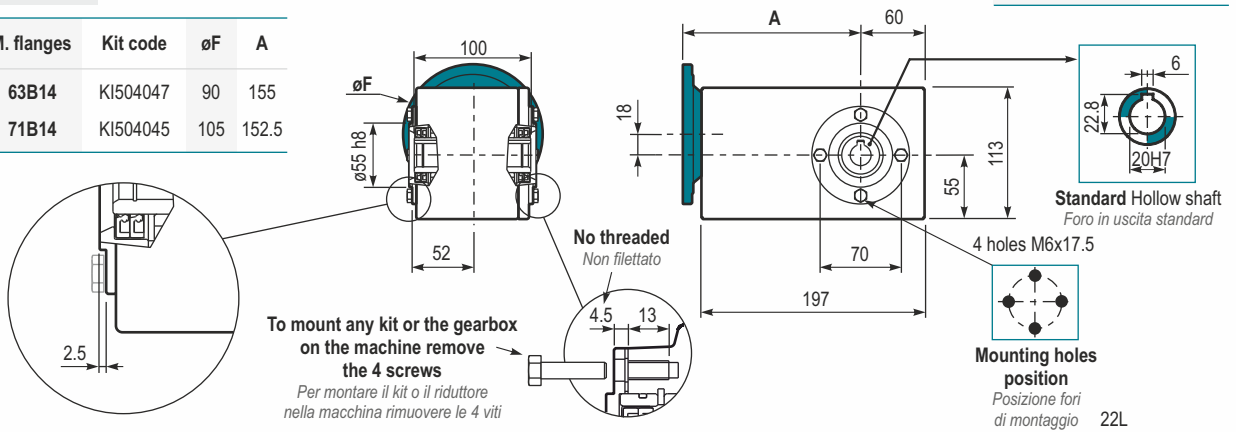
Tab. 2

50
nm

X22L

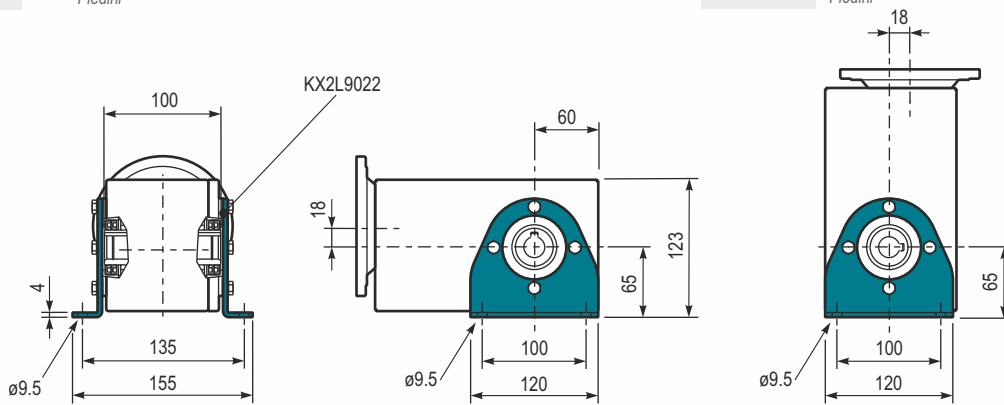
PX22L...

M. flanges	Kit code	øF	A
63B14	KI504047	90	155
71B14	KI504045	105	152.5



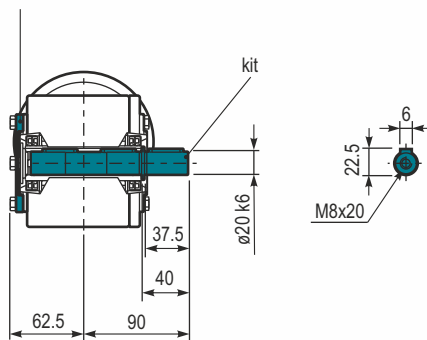
PX **P** .. **A** Feet Piedini 22L...

PX22L**PV** .. Feet Piedini

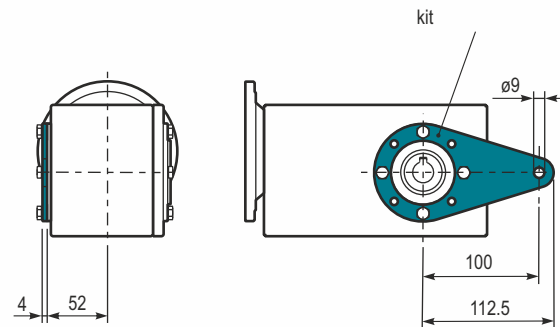


PX**A**.. cod. KIX2S5028

cod. X2L0209
Protection cap (on request)
A



BR.. Reaction cod. KX2L9027



X32L



90
nm

EDELSTAHL - Stirnkegelrad harsh environment

stainless steel shielded helical bevel gearboxes

The dynamic efficiency is

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			B14 motor flanges			Output shaft 	ratio code 
							-	-	-	-Q	-r	-T		
191	7.33	1.5	72	1.0	1.5	70				c	c		289	01
125	11.22	1.1	80	1.1	1.2	85				c	c		287	02
106	13.26	1.1	95	0.9	0.98	85				c	c		199	03
91	15.37	1.1	110	0.8	0.89	90				c	c		179	04
78	18.04	0.75	89	1.0	0.76	90				c	c		159	05
69	20.30	0.75	100	0.9	0.68	90				c	c		197	06
65	21.54	0.75	106	0.9	0.64	90				c	c		139	07
59	23.53	0.55	85	1.1	0.58	90				c	c	standard ø20	177	08
51	27.62	0.55	100	0.9	0.50	90				c	c		157	09
47.6	29.40	0.55	106	0.8	0.47	90				c	c	109	10	
42.5	32.97	0.37	80	1.1	0.42	90				c	c	137	11	
36.5	38.37	0.37	93	1.0	0.36	90				c	c	99	12	
31.1	45.00	0.25	73	1.2	0.31	90				c	c	107	13	
27.6	50.67	0.25	83	1.1	0.27	90				c	c	79	14	
23.8	58.73	0.25	96	0.9	0.23	90				c	c	97	15	
18.1	77.55	0.25*	127	0.7	0.18	90				c	c	77	16	

* 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) Fornito con bussola di riduzione

B) Available on request without reduction bushing
Disponibile a richiesta senza bussola di riduzione



C) Motor flange holes position
Posizione fori flangia motore

Lubrication

Lubrificazione

Always specify the mounting position

Specificare sempre la posizione di montaggio

unit X32L is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.


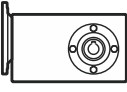
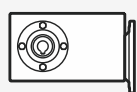




See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X32L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip	Shell	V8	
Telium VSF 320	Omala S4 WE 320	On request asK	
B3		B8	
Standard 0.40 IT		On request 0.60 IT	
B6		V5	
On request 0.60 IT		On request 0.85 LT	
B7		V6	
On request 0.40 IT		On request 0.60 IT	

Tab. 1

radial and axial loads

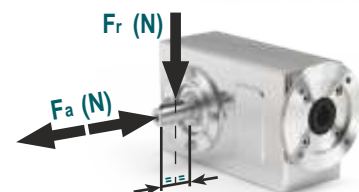
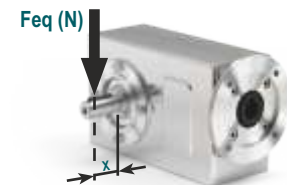
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [n]
250	400	2000
150	450	2250
100	500	2500
75	560	2800
50	560	2800
25	560	2800
15	560	2800

$$F_{eq} = F_r \cdot \frac{47.5}{X + 28.5}$$



0.96 for all ratios

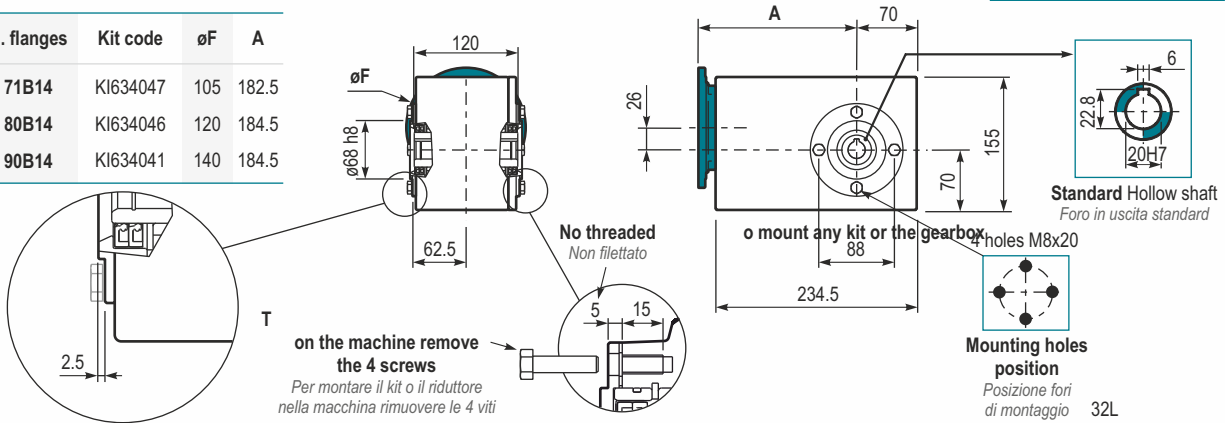
Tab. 2

90
nm

X32L

PX32L...

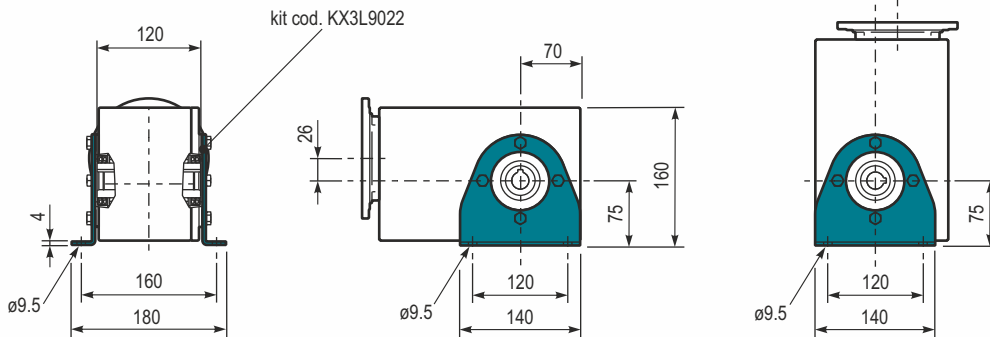
M. flanges	Kit code	øF	A
71B14	KI634047	105	182.5
80B14	KI634046	120	184.5
90B14	KI634041	140	



Gearbox weight
Peso riduttore

PX **P** .. **A** Feet
Piedini 32L...

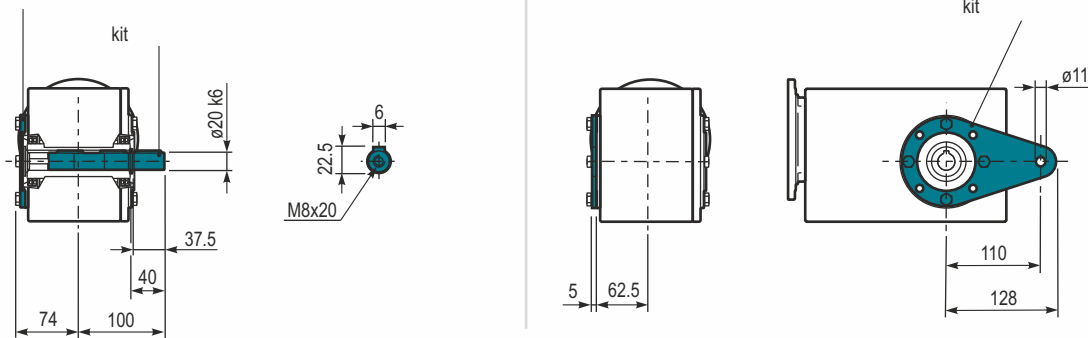
PX32L**PV**.. Feet
Piedini output shaft



PX**A**.. Single
cod. KIX3S5028
cod.

BR.. Reaction
cod. KX3L9027

Protection cap (on request) richiesta coperchio di protezione X3L0209
A



X42L



150 nm

EDELSTAHL - Stirnkegelrad

harsh environment
stainless steel shielded helical bevel gearboxes

The dynamic efficiency is

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			B14 motor flanges			Output shaft 	ratio code 	
							-	-	-	-Q	-r	-T			
192	7.29	1.5	71	1.3	2.0	95	-	-	-	-Q	-r	-T	standard ø25	01	
125	11.20	1.5	110	1.4	2.0	150	-	-	-	71	80	90		2811	02
106	13.18	1.5	129	1.2	1.7	150	-	-	-	c	c	c		288	03
92	15.27	1.1	109	1.4	1.5	150	-	-	-	c	c	c		1911	04
78	17.93	1.1	128	1.2	1.3	150	-	-	-	c	c	c		1711	05
69	20.25	1.1	145	1.0	1.1	150	-	-	-	c	c	c		1511	06
65	21.40	1.1	153	1.0	1.1	150	-	-	-	c	c	c		198	07
60	23.47	0.75	115	1.3	0.98	150	-	-	-	c	c	c		1311	08
51	27.55	0.75	135	1.1	0.83	150	-	-	-	c	c	c		178	09
47.9	29.21	0.75	143	1.0	0.78	150	-	-	-	c	c	c		158	10
42.6	32.88	0.75	161	0.9	0.70	150	-	-	-	c	c	c		1011	11
36.7	38.12	0.55	138	1.1	0.60	150	-	-	-	c	c	c		138	12
31.2	44.89	0.55	163	0.9	0.51	150	-	-	-	c	c	c		911	13
27.8	50.34	0.37	122	1.1	0.40	131	-	-	-	c	c	c		108	14
23.9	58.58	0.37	142	1.1	0.39	150	-	-	-	c	c	c		711	15
18.1	77.36	0.25	126	1.2	0.30	150	-	-	-	c	c	c		98	16
							-	-	-	c	c	c	78	16	

Motor flanges available
Flange motore disponibili

 B) Fornito con bussola di riduzione

 B) Available on request without reduction bushing
Disponibile a richiesta senza bussola di riduzione

 C) Motor flange holes position
Posizione fori flangia motore

Lubrication

Lubrificazione

Always specify the mounting position
Specificare sempre la posizione di montaggio

unit X42L is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

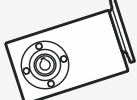
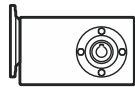
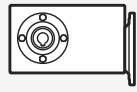

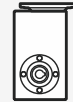

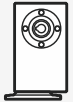
See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X42L viene fornito con olio sintetico e lubrificazione tipo "long life".
Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip Telium VSF 320	Shell Omala S4 WE 320	V8 On request asK	
B3 Standard 0.60 IT		B8 On request 0.70 LT	
B6 On request 0.75 LT		V5 On request 1.10 LT	
B7 On request 0.50 LT		V6 On request 0.60 IT	

0.96 for all ratios

Tab. 1

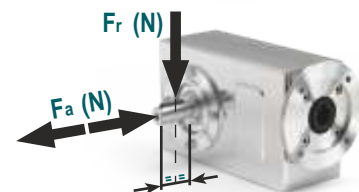
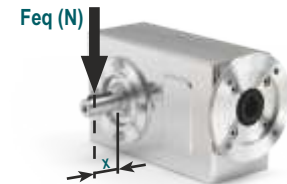
radial and axial loads

Carichi radiali e assiali

Output shaft
Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [n]
250	500	2500
150	600	3000
100	700	3500
75	800	4000
50	960	4800
25	960	4800
15	960	4800

$$F_{eq} = F_r \cdot \frac{54}{x + 28}$$



Tab. 2

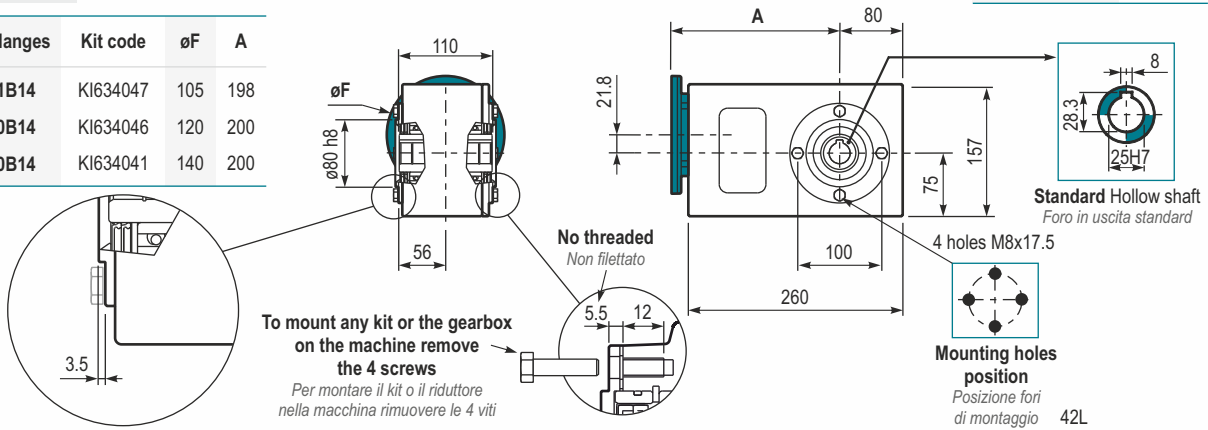
150
nm

X42L

PX42L...

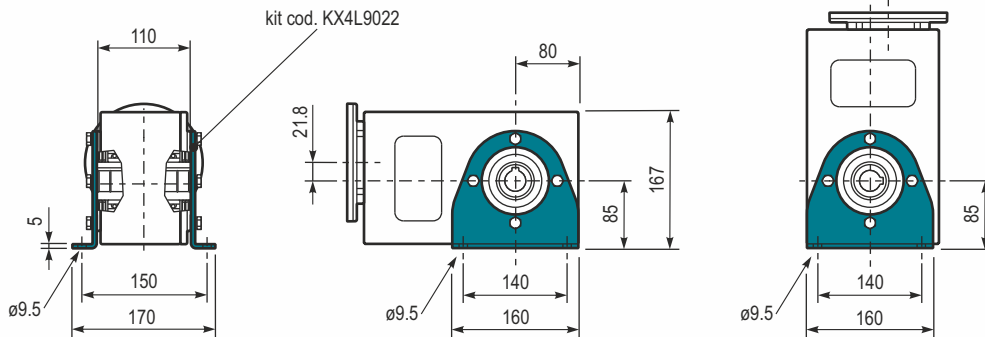
M. flanges	Kit code	øF	A
71B14	KI634047	105	198
80B14	KI634046	120	200
90B14	KI634041	140	200

Gearbox weight
Peso riduttore



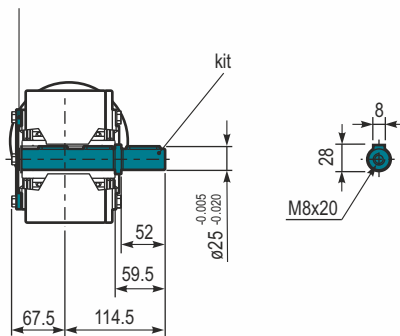
PX P .. A Feet
Piedini 42L..

PX42LPV.. Feet
Piedini output shaft

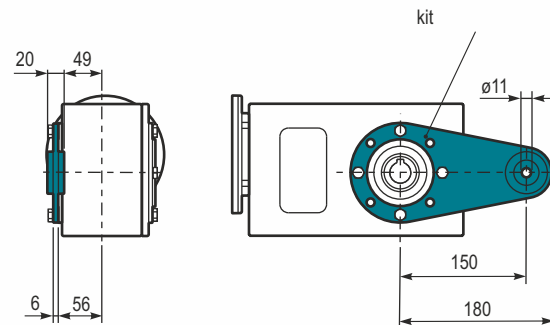


PXA.. Single
cod. KX4I5028
cod.

Protection cap (on request) richiesta coperchio di protezione X4L0209
A



BR.. Reaction
cod. KX4L9027



X52L




250 Nm

EDELSTAHL - Stirnkegelrad harsh environment


Stainless steel shielded helical bevel gearboxes

The dynamic efficiency is

Input speed (n₁) = 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			B14 motor flanges				Output shaft 	Ratio code 
							-	-	-	-R	-T	-U			
232	6.03	3	116	1.2	3.4	135							3011	01	
151	9.26	3	179	0.9	2.6	155							308	02	
123	11.36	3	219	1.0	3.1	230							2011	03	
91	15.36	2.2	218	1.1	2.5	250							1611	04	
80	17.46	2.2	248	1.0	2.2	250							208	05	
70	19.97	2.2	284	0.9	1.9	250							1311	06	
59	23.60	1.5	231	1.1	1.6	250							168	07	
57	24.45	1.5	239	1.0	1.6	250							1111	08	
45.6	30.69	1.1	220	1.1	1.2	250							138	09	
39.6	35.35	1.1	253	1.0	1.1	250							811	10	
37.3	37.57	1.1	269	0.9	1.0	250							118	11	
28.8	48.68	0.75	239	1.0	0.78	250							611	12	
25.8	54.33	0.75	267	0.9	0.70	250							88	13	
18.7	74.81	0.55	271	0.8	0.43	210							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

Lubrication

Lubrificazione

Always specify the mounting position

Specificare sempre la posizione di montaggio

Unit X52L is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

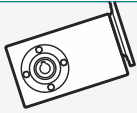
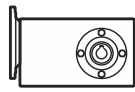
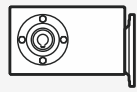

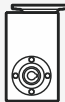

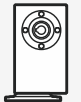
See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X52L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip	Shell	V8	
Telium VSF 320	Omala S4 WE 320	On request ASK	
B3		B8	
Standard 0.90 LT		On request 1.40 LT	
B6		V5	
On request 1.50 LT		On request 1.95 LT	
B7		V6	
On request 0.75 LT		On request 1.15 LT	

0.96 for all ratios

Radial and axial loads

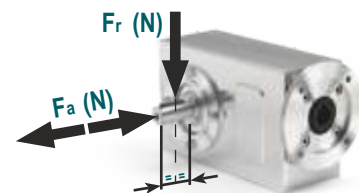
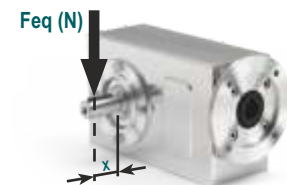
Carichi radiali e assiali

Output shaft

Albero di uscita

n ₂ [min ⁻¹]	F _A [N]	F _R [N]
250	600	3000
150	700	3500
100	800	4000
75	820	4100
50	960	4800
25	1350	6750
15	1660	8300

$$F_{eq} = F_r \cdot \frac{61.5}{X + 31}$$



Tab. 1

Tab. 2

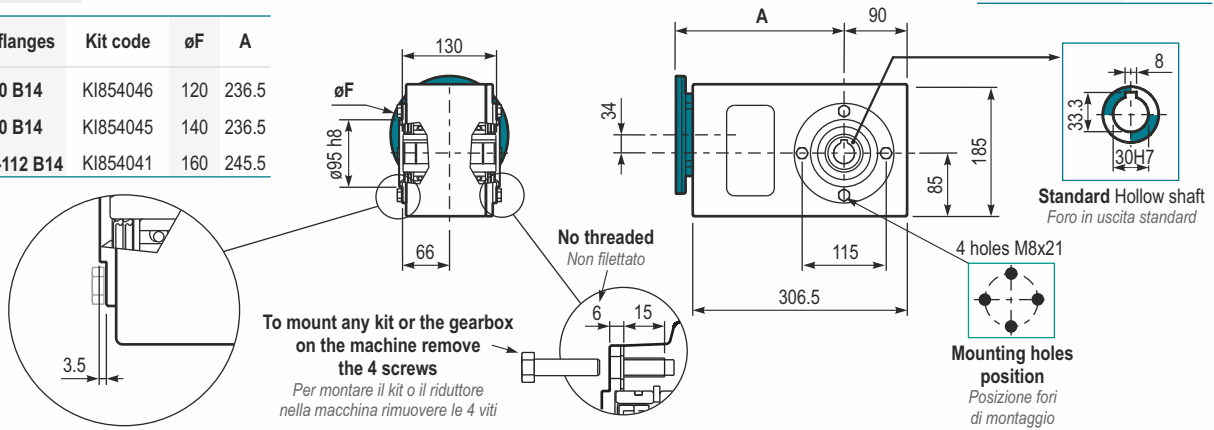
250
Nm

X52L

PX52L... Basic gearbox
Riduttore base

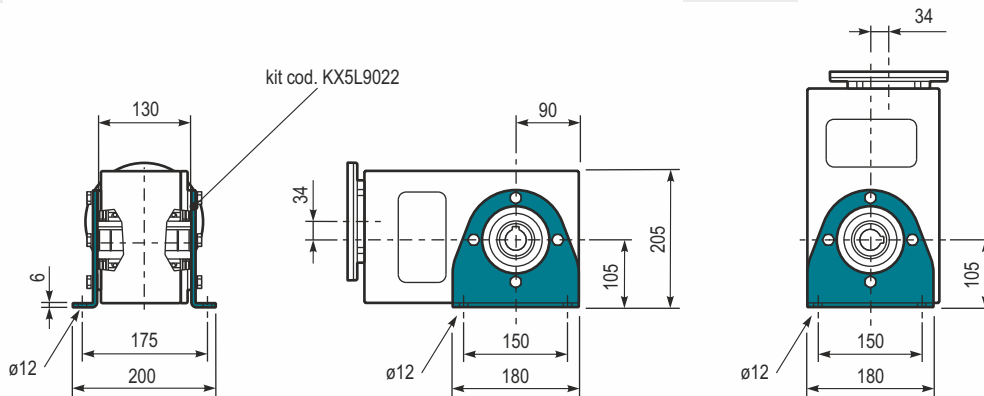
Gearbox weight 15.8 kg
Peso riduttore

M. flanges	Kit code	øF	A
80 B14	KI854046	120	236.5
90 B14	KI854045	140	236.5
100-112 B14	KI854041	160	245.5



PX52LPA.. Feet
Piedini

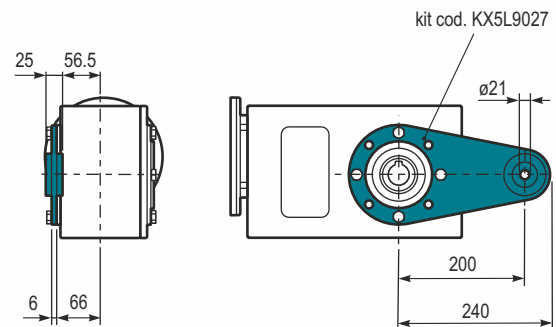
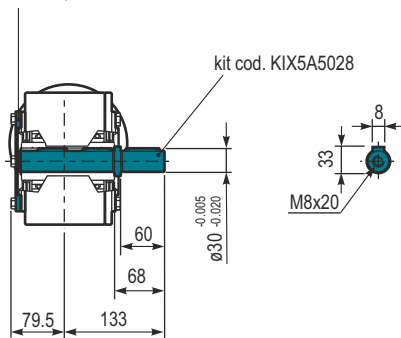
PX52LPV.. Feet
Piedini



PX52L..A.. Single output shaft
Albero semplice in uscita

PX52LBR.. Reaction Arm
Braccio di reazione

cod. X5L0209
Protection cap (on request)
A richiesta coperchio di protezione



X62L


410 Nm

EDELSTAHL - Stirnkegelrad harsh environment

Stainless steel shielded helical bevel gearboxes

The dynamic efficiency is

Input speed (n₁) = 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			B14 motor flanges			Output shaft 	Ratio code
							-	-	-	-R	-T	-U		
232	6.03	4	155	1.6	6.1	240	-	-	-	-R	-T	-U	3011	01
151	9.26	4	238	1.1	4.5	270	-	-	-	80	90	100-112	308	02
123	11.36	4	291	1.2	4.7	350	-	-	-	-	-	-	2011	03
91	15.36	4	394	1.0	3.8	385	-	-	-	-	-	-	1611	04
80	17.46	4	448	0.9	3.5	400	-	-	-	-	-	-	208	05
70	19.97	3	386	1.1	3.1	410	-	-	-	-	-	-	1311	06
59	23.60	3	456	0.9	2.7	410	-	-	-	-	-	-	168	07
57	24.45	3	472	0.9	2.6	410	-	-	-	-	-	-	1111	08
45.6	30.69	2.2	436	0.9	2.0	410	-	-	-	-	-	-	138	09
39.6	35.35	1.5	346	1.2	1.8	410	-	-	-	-	-	-	811	10
37.3	37.57	1.5	368	1.1	1.7	410	-	-	-	-	-	-	118	11
28.8	48.68	1.1	348	1.0	1.1	365	-	-	-	-	-	-	611	12
25.8	54.33	1.1	389	1.1	1.2	410	-	-	-	-	-	-	88	13
18.7	74.81	0.75	367	1.0	0.73	360	-	-	-	-	-	-	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

Lubrication

Lubrificazione

Always specify the mounting position

Specificare sempre la posizione di montaggio

Unit X62L is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.


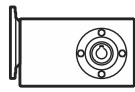
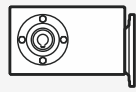




See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo X62L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip	Shell	V8	
Telium VSF 320	Omala S4 WE 320	On request ASK	
B3		B8	
Standard 1.25 LT		On request 1.60 LT	
B6		V5	
On request 1.70 LT		On request 2.45 LT	
B7		V6	
On request 0.95 LT		On request 1.50 LT	

0.96 for all ratios

Radial and axial loads

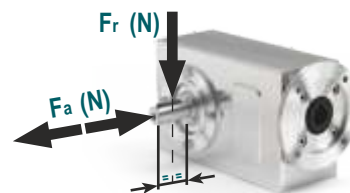
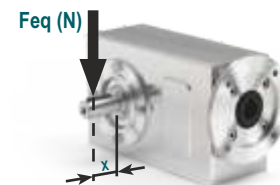
Carichi radiali e assiali

Output shaft

Albero di uscita

n ₂ [min ⁻¹]	F _A [N]	F _R [N]
250	600	3000
150	700	3500
100	780	3900
75	890	4450
50	1140	5700
25	1330	6650
15	1660	8300

$$F_{eq} = F_r \cdot \frac{69}{X + 39}$$



Tab. 1

Tab. 2

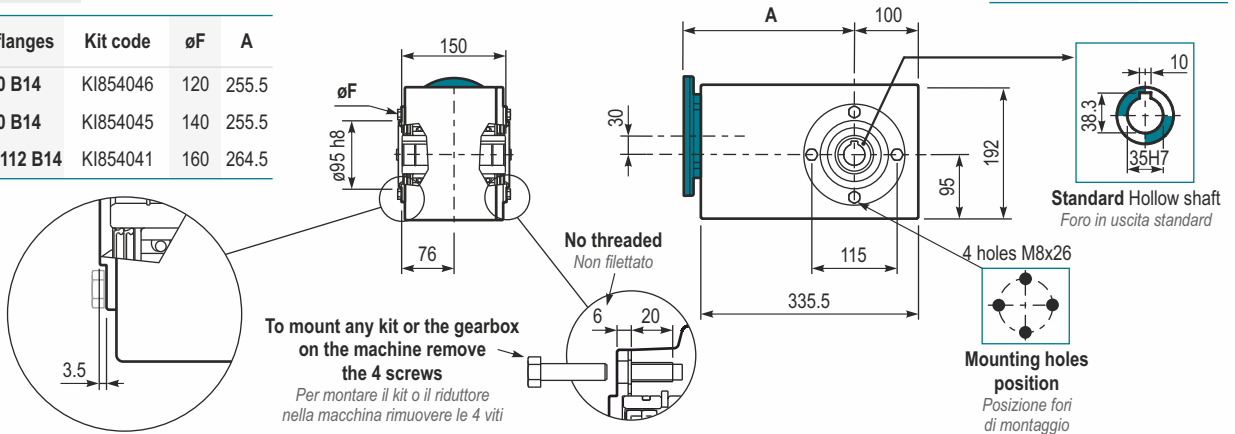
410
Nm

X62L

P_{X62L}... Basic gearbox
Riduttore base

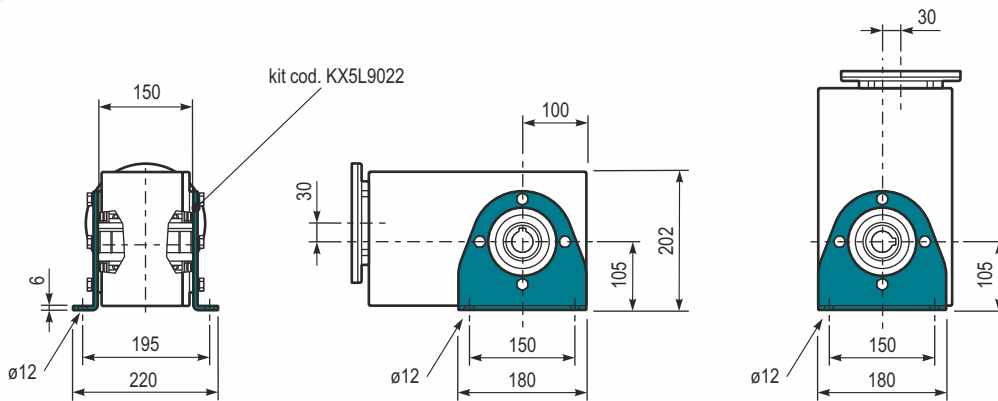
M. flanges	Kit code	øF	A
80 B14	KI854046	120	255.5
90 B14	KI854045	140	255.5
100-112 B14	KI854041	160	264.5

Gearbox weight 19.5 kg
Peso riduttore



PX62LPA.. Feet
Piedini

PX62LPV.. Feet
Piedini

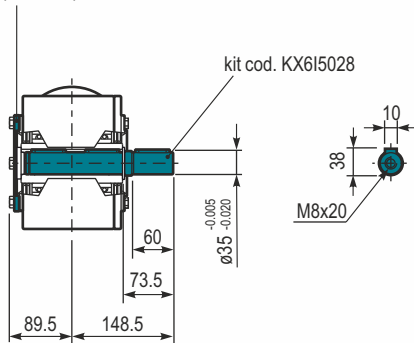


PX62LA.. Single output shaft
Albero semplice in uscita

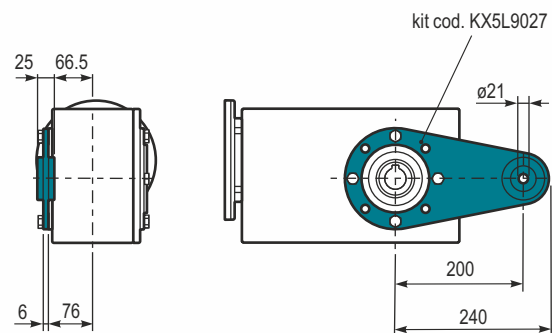
cod. X5L0209

Protection cap (on request)

A richiesta coperchio di protezione



PX62LBR.. Reaction Arm
Braccio di reazione



EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

This range is



certified



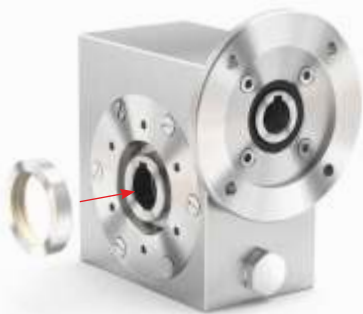
EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
I30	21 Nm	30 mm	0.06 ÷ 0.18 kW	ø14 mm
I45	41 Nm	45 mm	0.12 ÷ 0.37 kW	ø18 mm ø19 mm
I50	72 Nm	50 mm	0.12 ÷ 0.75 kW	ø25 mm ø24 mm
I63	147 Nm	63 mm	0.37 ÷ 1.8 kW	ø25 mm ø28 mm
I85	347 Nm	85 mm	0.55 ÷ 4.0 kW	ø35 mm
I11	651 Nm	110 mm	1.1 ÷ 4.0 kW	ø42 mm



This product is:



Twin viton seals with stainless steel 316L shield.



Mounting holes on both sides of the housing for versatile mounting.



Output shaft is produced in AISI 316L.
Special cover assures full protection of oil seals.



Closed protection cap in AISI 316L with o-ring.



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.



Special high tech full stainless steel housing with accurate finishing and strong rigidity.


130

21 nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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		B14 motor flanges		Dynamic efficiency η	Tooth module m [mm]	ratios code 
							-	-	-O	-p			
280	5	0.18	5	3.3	0.60	17	-	-	-O	-p	rd		
200	7	0.18	7	2.4	0.44	17			56	63			
140	10	0.18	10	1.8	0.32	17			B-C				
93	15	0.18	13	1.4	0.25	19			B-C				
70	20	0.18	17	1.1	0.20	19			B-C				
47	30	0.12	15	1.4	0.17	21			B-C				
35	40	0.12	19	1.1	0.13	20			B-C				
23	61	0.09	19	1.1	0.10	20			B-C				
17.5	80	0.06	16	1.0	0.06	16			B-C				
14	100	0.06*	16	0.5	0.03	8			B-C				

* 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
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Lubrication

Lubrificazione

unit 130 is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 130 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions: 0.06Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.06Lt		

* For more details on lubrication and plugs check our website.

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

Tab. 1

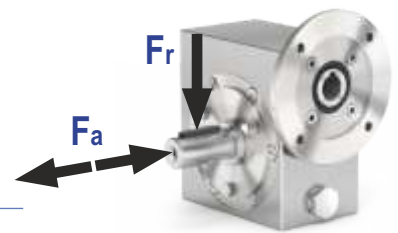
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [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]	F_A [n]	F_R [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

21
nm

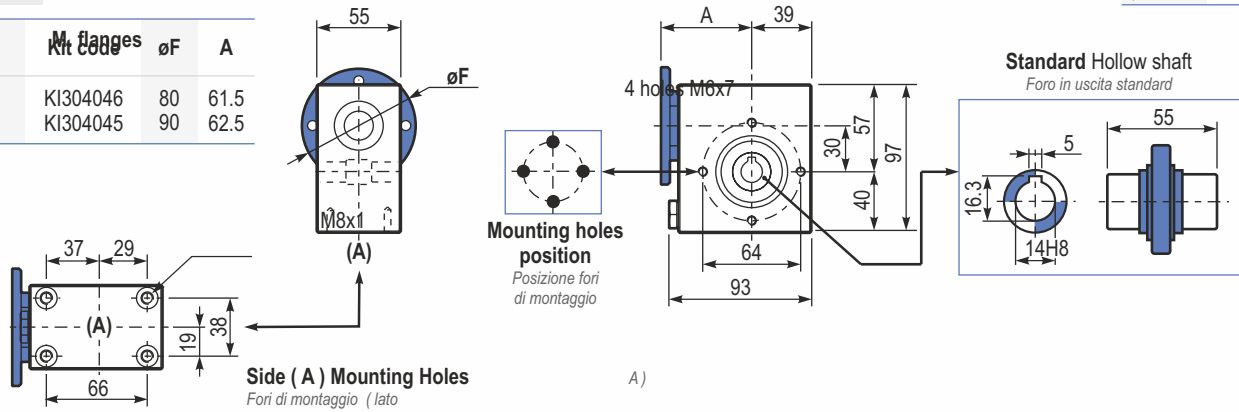
130

UN... PI **Basic gearbox**
Riduttore

base

Gearbox weight
peso riduttore **2.5 kg**

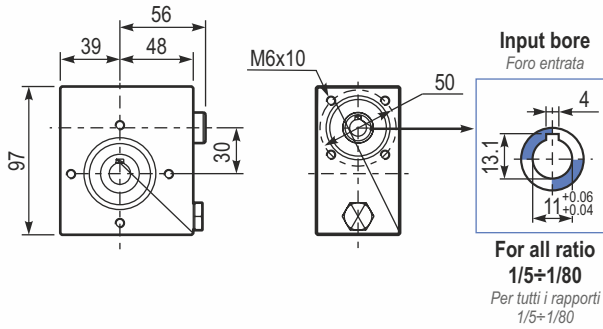
	Kit code	øF	A
56B14	KI304046	80	61.5
63B14	KI304045	90	62.5



B130UN...

Modular base
Base

modulare 30

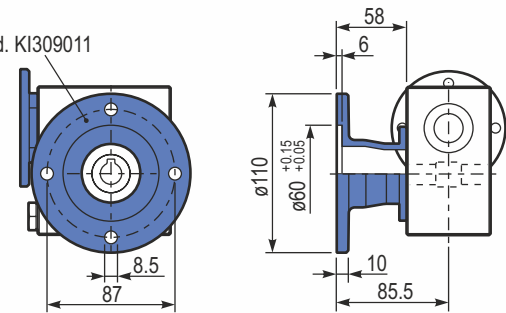


PI30FL...

Output flange
Flangia

uscita 1

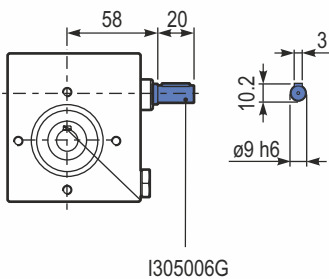
kit cod. KI309011



R130UN...

Input shaft
Albero

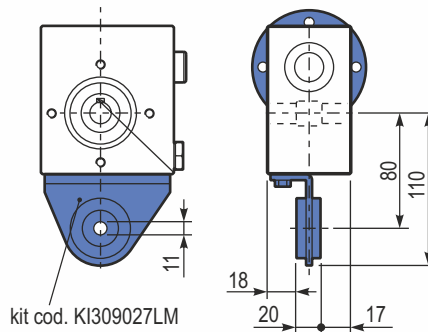
in entrata 30....



PI30BR...

Reaction arm
Braccio

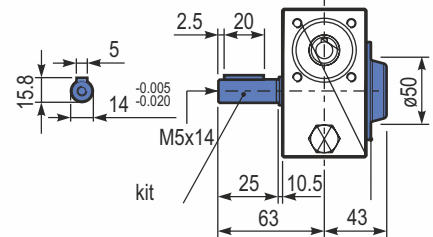
di reazione



SPI...

Single Shaft
Albero

lento semplice cod. KI0305028



kit cod. KI450211
Protection cap (on request)
A
di protezione *richiesta coperchio*

I45

41 nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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		B14 motor flanges		Dynamic efficiency rd	Tooth module [mm]	ratios code
							-	-	-p 63	-Q 71			
200	7	0.37	14	2.2	0.80	30			B-c		80	2.2	01
140	10	0.37	20	1.5	0.57	30			B-c		79	2.2	02
100	14	0.37	27	1.1	0.41	30			B-c		77	2.4	03
67	21	0.37	36	1.2	0.43	41			B-c		67	1.6	04
50	28	0.25	31	1.3	0.33	41			B-c		65	2.5	05
38	37	0.25	40	1.0	0.26	41			B-c		63	1.8	06
30	46	0.25	46	0.9	0.22	41			B-c		59	1.6	07
23	60	0.18	41	1.0	0.18	41			B-c		56	1.2	08
20	70	0.12	31	1.0	0.12	30			B-c		54	1.0	09
13.7	102	0.12	41	0.7	0.09	29			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

Lubrication

Lubrificazione

unit I45 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo I45 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip

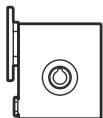
Telium VSF 320

Shell

Omala S4 WE 320

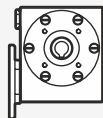
B3

Standard
0.15 LT



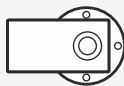
B8

On request
0.15 LT



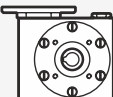
B6

On request
0.15 LT



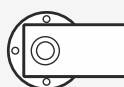
V5

On request
0.15 LT



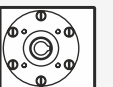
B7

On request
0.20 IT



V6

On request
0.15 LT



For more details on lubrication and plugs check our website.

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

Tab. 1

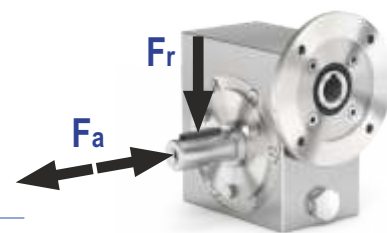
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

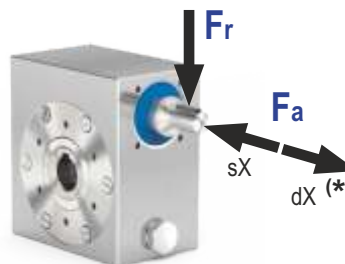
n_2 [min ⁻¹]	F_A [n]	F_R [n]
200	180	900
150	200	1000
100	220	1100
75	240	1200
50	260	1400
25	300	1800
15	400	2000



Input shaft

Albero in entrata

n_1 [min ⁻¹]	F_A [n]	F_R [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

41
nm

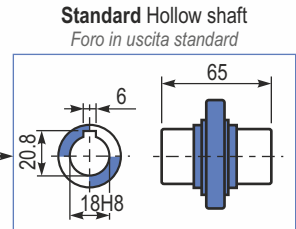
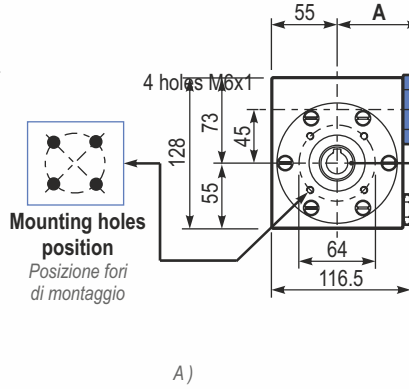
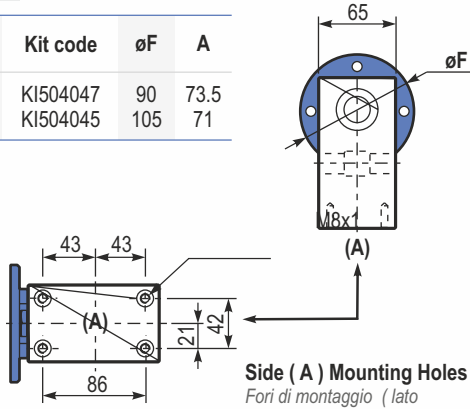
145

UN... **PI Basic gearbox**
Riduttore

base 1

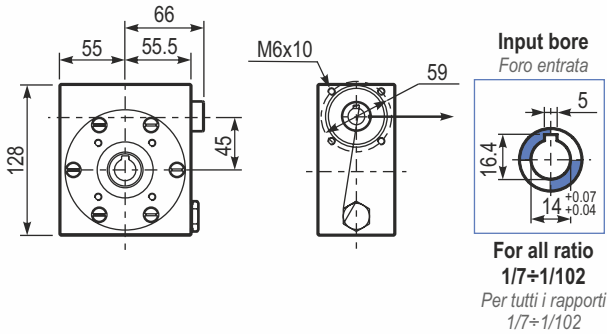
Gearbox weight
peso riduttore **5.0 kg**

M. flanges	Kit code	øF	A
63B14	KI504047	90	73.5
71B14	KI504045	105	



BI45UN...

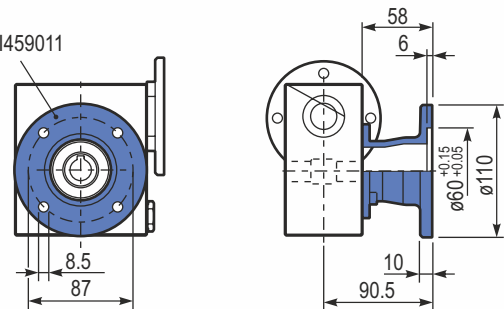
Modular base
modulare 45



PI45FL...

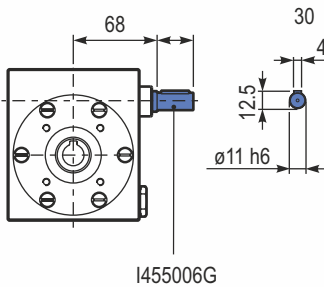
Output flange
Flangia uscita 1

kit cod. KI459011



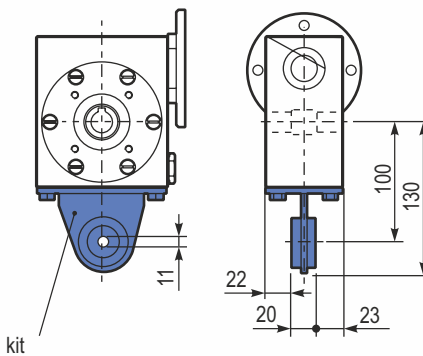
R45UN...

Input shaft
Albero in entrata 45.....

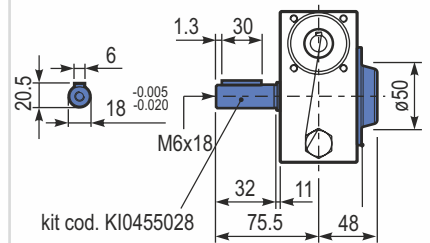


PI BR...

Reaction arm
Braccio di reazione



S...PI 45



kit cod. KI450211
Protection cap
(on request) richiesta di
di protezione cod. KI459

150

72 nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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			B14 motor flanges			Dynamic efficiency η	Tooth module m [mm]	ratios code
							-	-	-	-p	-Q	-r			
200	7	0.75	29	1.9	1.5	57	-	-	-	B-C	B		82	2.5	01
140	10	0.75	41	1.5	1.1	62	-	-	-	B-C	B		80	2.4	02
100	14	0.75	57	1.2	0.90	68	-	-	-	B-C	B		79	2.6	03
78	18	0.55	51	1.2	0.67	62	-	-	-	B-C	B		75	2.0	04
54	26	0.55	67	1.0	0.54	66	-	-	-	B-C	B		69	2.7	05
47	30	0.55	79	0.9	0.50	72	-	-	-	B-C	B		70	2.5	12
39	36	0.37	63	1.2	0.43	72	-	-	-	B-C			69	2.1	06
33	43	0.37	72	1.0	0.35	68	-	-	-	B-C			66	1.8	07
28	50	0.25	53	1.2	0.31	66	-	-	-	B-C			62	1.5	13
23	60	0.25	59	1.0	0.26	62	-	-	-	B-C			58	1.3	08
21	68	0.25	66	0.9	0.22	58	-	-	-	B-C			57	1.2	09
17.5	80	0.18	53	1.1	0.19	57	-	-	-	B-C			54	1.0	10
14	100	0.12	41	1.3	0.15	51	-	-	-	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

Lubrication

Lubrificazione

unit 150 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 150 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip

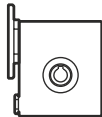
Tellium VSF 320

Shell

Omala S4 WE 320

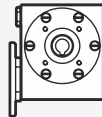
B3

Standard
0.22 IT



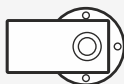
B8

On request
0.22 IT



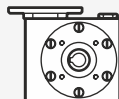
B6

On request
0.22 IT



V5

On request
0.22 IT



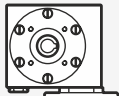
B7

On request
0.28 LT



V6

On request
0.22 IT



For more details on lubrication and plugs check our website.

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

Tab. 1

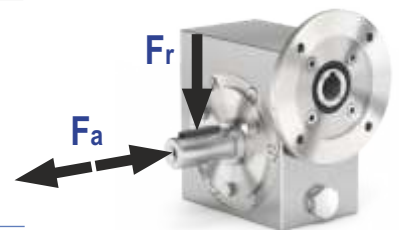
radial and axial loads

Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [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]	F_A [n]	F_R [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

72
nm

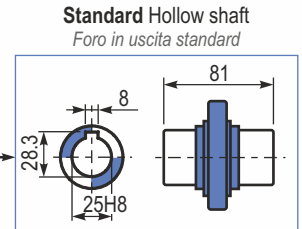
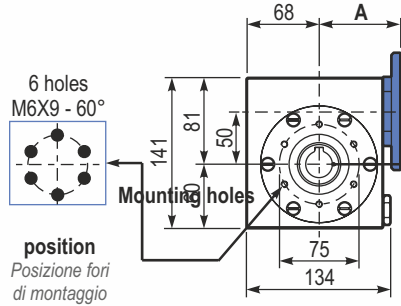
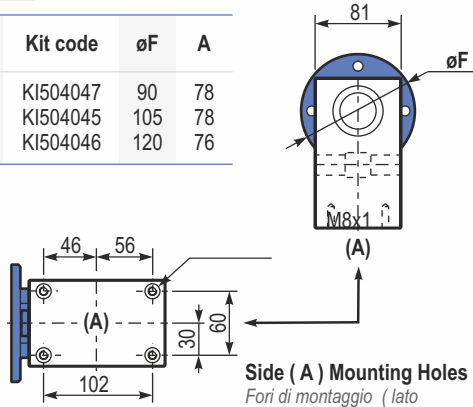
150

UN...PI Basic gearbox
Riduttore

base

Gearbox weight
peso riduttore **7.3 kg** d. KI500211

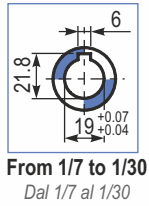
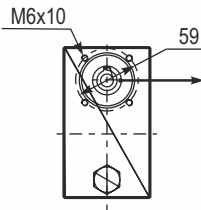
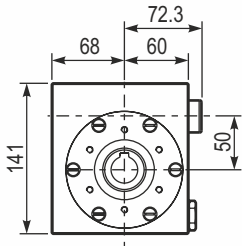
M. flanges	Kit code	øF	A
63B14	KI504047	90	78
71B14	KI504045	105	78
80B14	KI504046	120	76



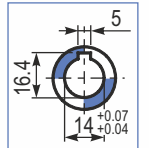
BI50UN... Modular base
Base

modulare 50

Input bore
Foro entrata



From 1/7 to 1/30
Dal 1/7 al 1/30

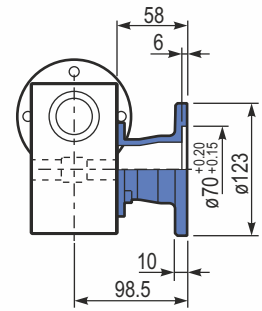
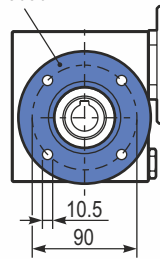


From 1/36 to 1/100
Dal 1/36 al 1/100

PI50FL... Output flange
Flangia

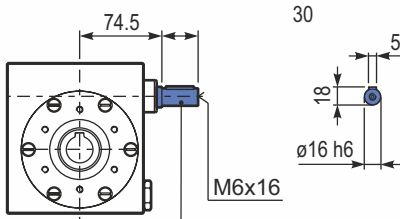
uscita 1

kit cod. KI509011



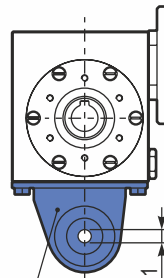
R50UN... Input shaft
Albero

in entrata 50...

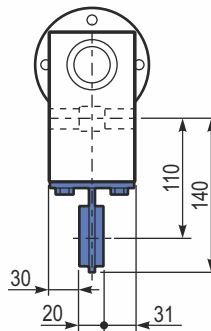


I505006G

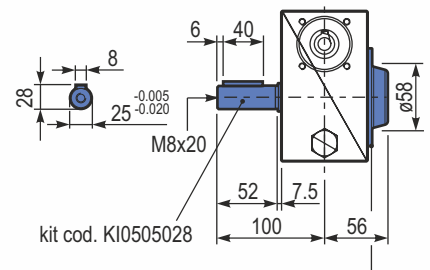
PI BR... Reaction arm
Braccio



kit cod. KI509027LM



.S.P.1.50



kit cod. KI0505028

kit
Protection cap
(on request)
A richiesta coperchio
di protezione

I63

147 nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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			B14 motor flanges			Dynamic efficiency rd	Tooth module [mm]	ratios code
							-	-	-	-Q	-r	-T			
200	7	1.8	71	1.8	3.2	125	-	-	-	71	80	90	83	3.1	01
140	10	1.8	99	1.4	2.4	134	-	-	-	71	80	90	81	3.1	02
93	15	1.5	121	1.1	1.7	138	-	-	-	71	80	90	79	3.1	03
74	19	1.1	111	1.2	1.4	138	-	-	-	71	80	90	78	2.6	04
58	24	1.1	135	1.0	1.2	142	-	-	-	71	80	90	75	2.0	05
47	30	1.1	167	0.9	0.96	146	-	-	-	71	80	90	74	3.2	06
39	36	0.75	125	1.2	0.88	147	-	-	-	71	80	90	68	2.7	07
35	40	0.75	135	1.0	0.78	140	-	-	-	71	80	90	66	2.5	13
31	45	0.55	111	1.2	0.67	135	-	-	-	71	80	90	66	2.1	08
23	60	0.55	140	0.9	0.51	130	-	-	-	71	80	90	62	1.6	12
21	67	0.55	151	0.8	0.45	124	-	-	-	71	80	90	60	1.5	09
17.5	80	0.37	115	1.0	0.38	119	-	-	-	71	80	90	57	1.3	10
14.9	94	0.37	123	1.0	0.36	119	-	-	-	71	80	90	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

Lubrication

Lubrificazione

unit I63 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo I63 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip

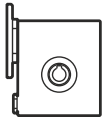
Telium VSF 320

Shell

Omala S4 WE 320

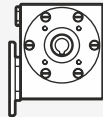
B3

Standard
0.60 IT



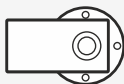
B8

On request
0.60 IT



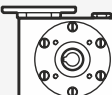
B6

On request
0.60 IT



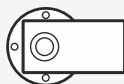
V5

On request
0.60 IT



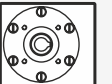
B7

On request
0.82 LT



V6

On request
0.60 IT



For more details on lubrication and plugs check our website.

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

Tab. 1

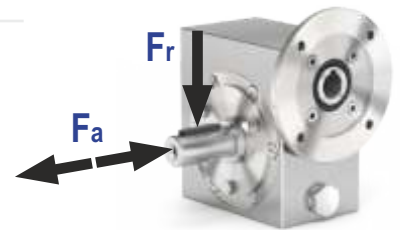
radial and axial loads

Carichi radiali e assiali

Output shaft

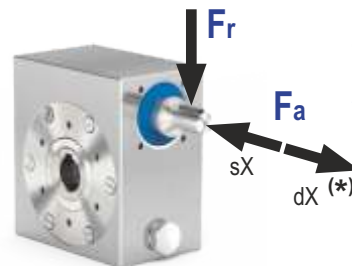
Albero di uscita

n_2 [min ⁻¹]	F_A [n]	F_R [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]	F_A [n]	F_R [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

147
nm

163

UN...

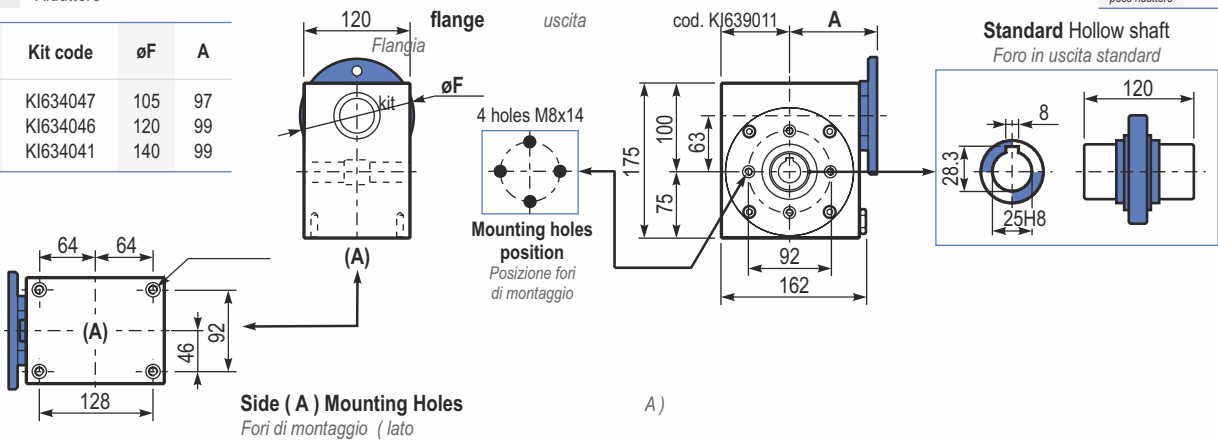
Basic gearbox
Riduttore

base

PI

Gearbox weight
peso riduttore 14.6 kg

M. flanges	Kit code	øF	A
71B14	KI634047	105	97
80B14	KI634046	120	99
90B14	KI634041	140	99

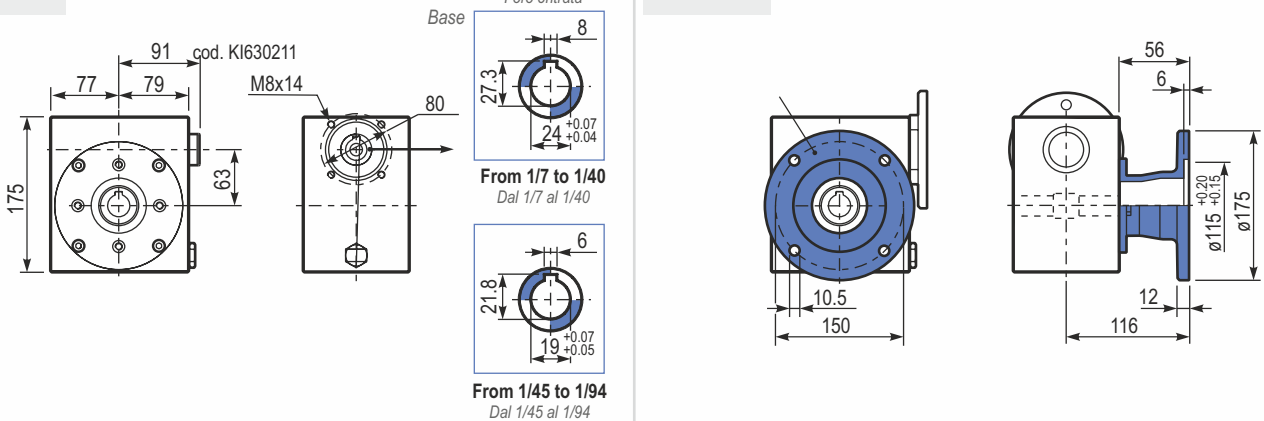


B163UN...

Modular

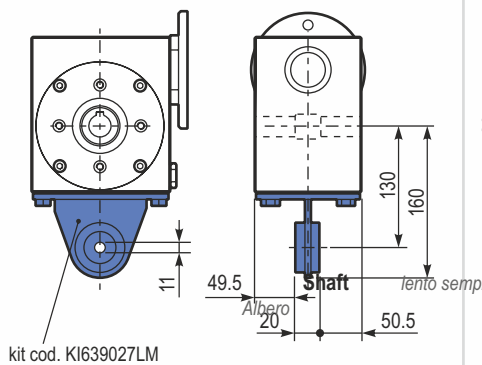
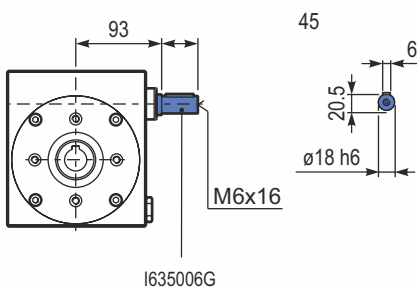
Input bore base
base entrata modulare B163FL...

Output

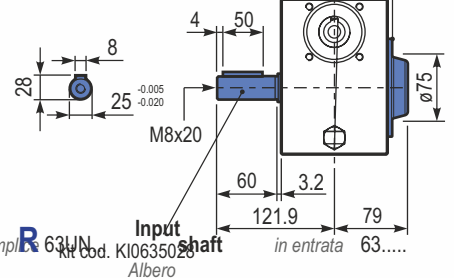


PI BR... Reaction arm
Braccio di reazione

S... Single
63



kit
Protection cap (on request)
A richiesta coperchio di protezione



185

347 Nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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			B14 motor flanges			Dynamic efficiency RD	Tooth module [mm]	Ratios code
							-	-	--U -	-R	-T				
200	7	4.0	168	1.5	6.1	257				B	B		88	4.23	01
140	10	4.0	218	1.3	5.2	284				B	B		80	4.2	02
100	14	3.0	223	1.4	4.1	305				B	B		78	4.5	03
70	20	2.2	237	1.2	2.7	294				B	B		79	3.4	04
64	22	2.2	258	1.1	2.5	294				B	B		78	3.1	05
50	28	2.2	315	1.1	2.4	347				B	B		75	4.7	06
37	38	1.5	276	1.2	1.8	336				B			71	3.5	07
30	46	1.5	320	1.0	1.5	326				B			68	3.1	08
27	52	1.1	258	1.1	1.2	289				B			66	2.7	09
21	67	1.1	327	0.9	0.97	289				B			65	2.1	10
18.9	74	0.75	220	1.2	0.91	268				B			58	1.9	11
14.6	96	0.55	191	1.3	0.70	242				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

Lubrication

Lubrificazione

Unit I85 is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo I85 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

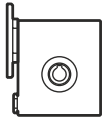
Agip

Telium VSF 320

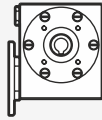
Shell

Omala S4 WE 320

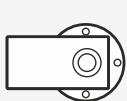
B3
Standard
1.40 LT



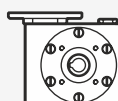
B8
On request
1.40 LT



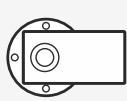
B6
On request
1.40 LT



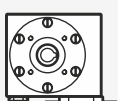
V5
On request
1.40 LT



B7
On request
1.70 LT



V6
On request
1.40 LT



For more details on lubrication and plugs check our website.

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

Tab. 1

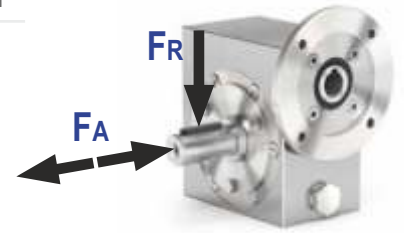
Radial and axial loads

Carichi radiali e assiali

Output shaft

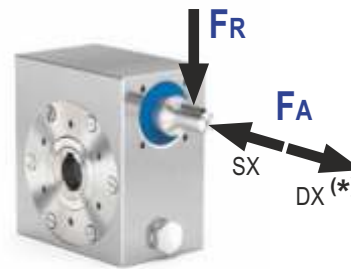
Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [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]	F_A [N]	F_R [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

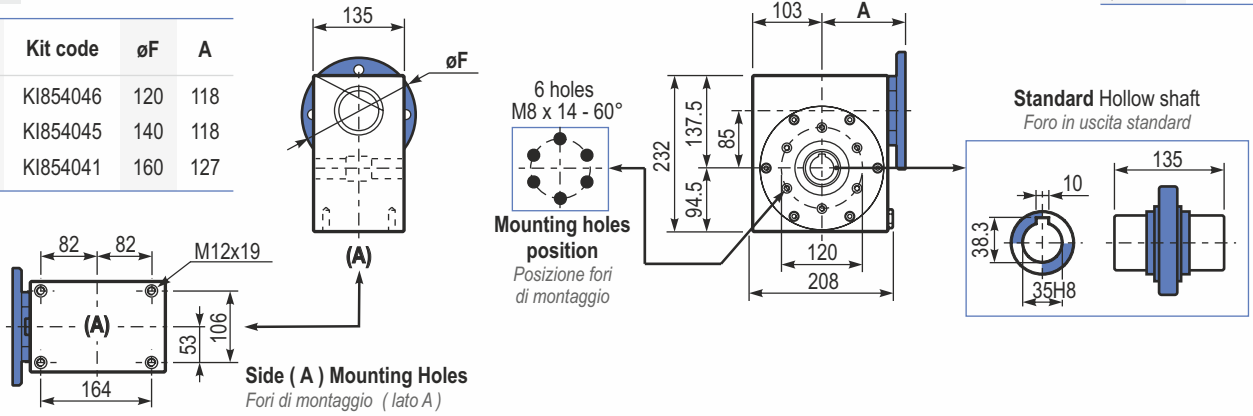
347
Nm

185

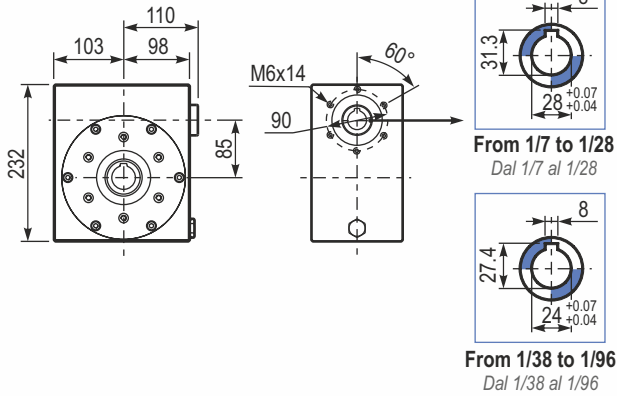
Gearbox weight
peso riduttore **23.3 kg**

PI85UN... **Basic gearbox**
Riduttore base

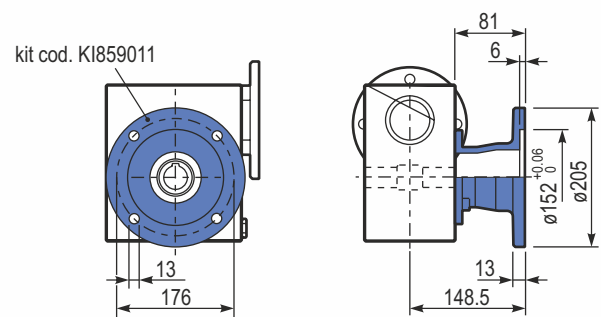
M. flanges	Kit code	øF	A
80B14	KI854046	120	118
90B14	KI854045	140	118
100-112B14	KI854041	160	127



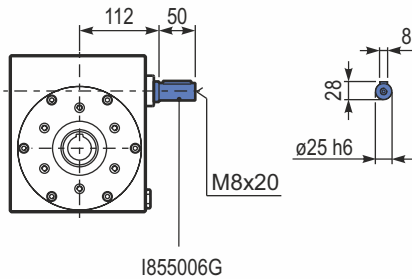
BI85UN... **Modular base**
Base modulare



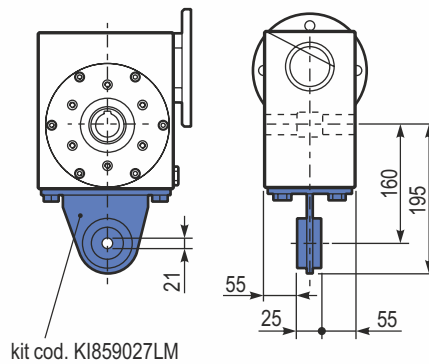
PI85FL... **Output flange**
Flangia uscita



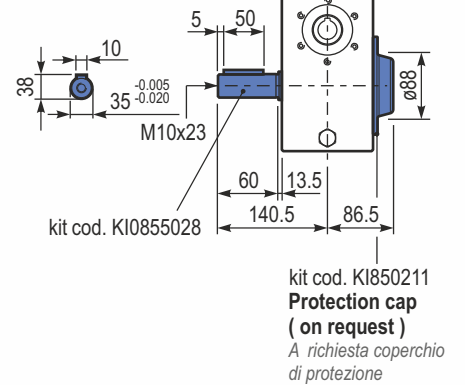
RI85UN... **Input shaft**
Albero in entrata



PI85BR... **Reaction arm**
Braccio di reazione



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



I11

651 Nm

EDELSTAHL - Schneckengetriebe

Full stainless steel worm gearboxes

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			B14 motor flanges			Dynamic efficiency RD	Tooth module [mm]	Ratios code
							-	-	-	-R	-T	-U			
200	7	4.0	168	2.9	11.5	483	-	-	-	B	B		88	5.5	01
140	10	4.0	235	2.2	9.0	525	-	-	-	B	B		86	5.4	02
88	16	4.0	358	1.5	6.0	536	-	-	-	B	B		82	5.3	03
70	20	4.0	447	1.2	4.9	546	-	-	-	B	B		82	4.5	04
61	23	3.0	377	1.4	4.1	515	-	-	-	B	B		80	3.9	05
47	30	3.0	467	1.4	4.2	651	-	-	-	B	B		76	5.6	06
37	38	3.0	583	1.1	3.3	641	-	-	-	B	B		75	4.7	07
31	45	2.2	493	1.2	2.7	599	-	-	-	B	B		73	4.0	08
26	53	2.2	557	1.1	2.5	620	-	-	-	B	B		70	3.5	09
22	64	1.5	452	1.2	1.8	536	-	-	-	B			69	2.9	10
16.7	84	1.1	410	1.2	1.3	494	-	-	-	B			65	2.2	11
14.1	99	1.1	446	1.1	1.2	483	-	-	-	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

Lubrication

Lubrificazione

Unit I11 is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo I11 viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

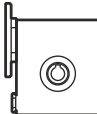
Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

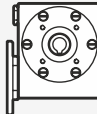
Agip
Telium VSF 320

Shell
Omala S4 WE 320

B3
Standard
3.50 LT



B8
On request
2.10 LT



B6
On request
2.50 LT



V5
On request
1.60 LT



B7
On request
2.50 LT



V6
On request
1.60 LT



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

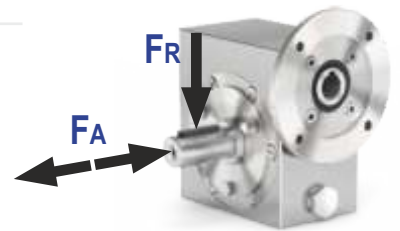
Tab. 1

Radial and axial loads

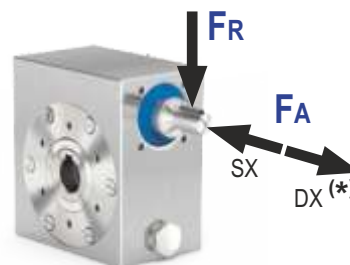
Carichi radiali e assiali

Output shaft
Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [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]	F_A [N]	F_R [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

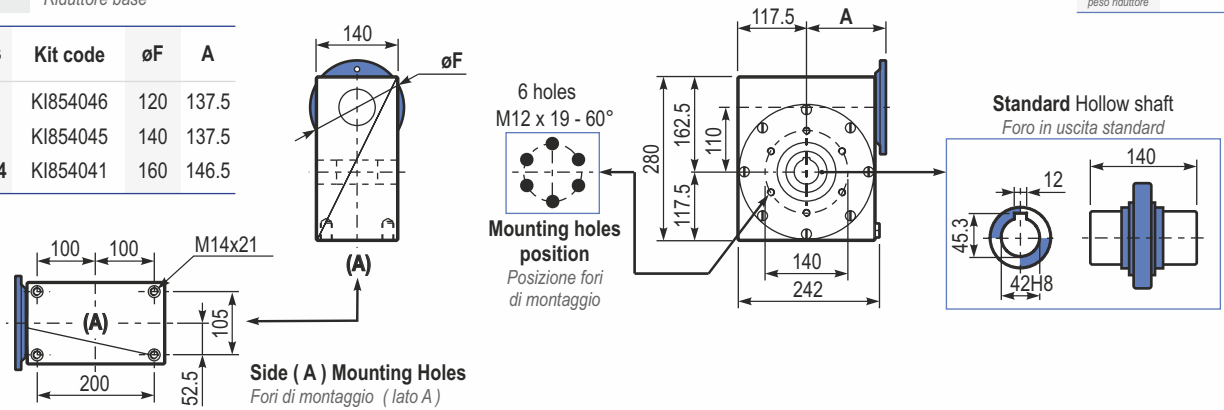
651
Nm

111

Gearbox weight
peso riduttore 38.5 kg

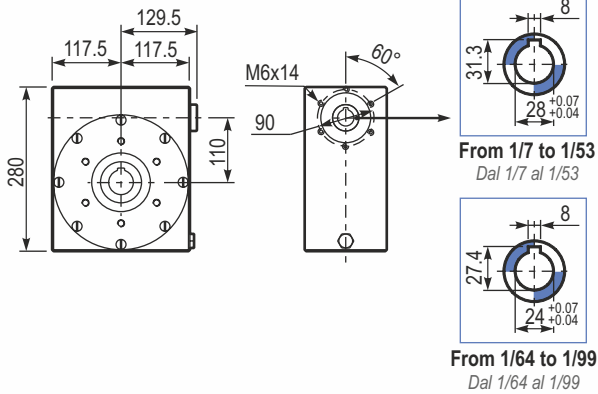
PI11UN... Basic gearbox
Riduttore base

M. flanges	Kit code	øF	A
80B14	KI854046	120	137.5
90B14	KI854045	140	137.5
100-112B14	KI854041	160	146.5

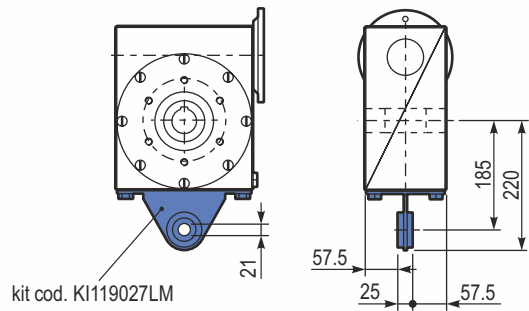


Side (A) Mounting Holes
Fori di montaggio (lato A)

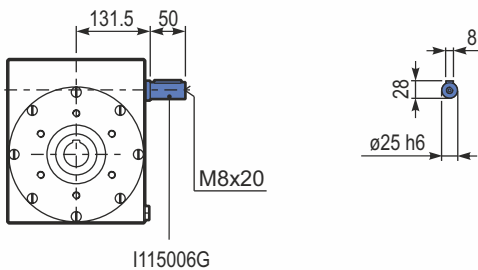
BI11UN... Modular base
Base modulare



PI11BR... Reaction arm
Braccio di reazione





RI11UN... Input shaft
Albero in entrata



EDELSTAHL - Stirnradstufe

Stainless steel shielded ratio multipliers

This range is   certified



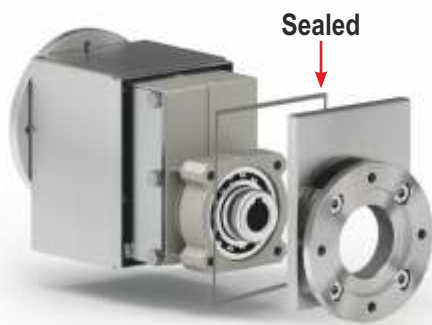
EDELSTAHL - Stirnradstufe

Stainless steel shielded ratio multipliers

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
411L	38 Nm	38 mm	0.37 ÷ 1.5 kW	ø19 mm
511L	110 Nm	50 mm	1.1 ÷ 4.0 kW	ø28 mm



This product is:



The "L" series is an already totally enclosed aluminum gearboxes, that is shielded and sealed by stainless steel 316L case.



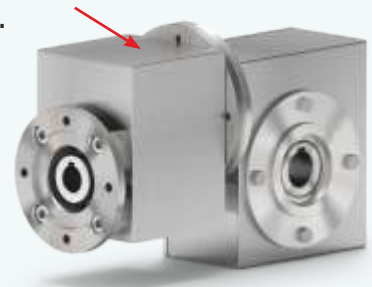
Output shaft is produced in AISI 316L.



Fully modular IEC flanges and compact NEMA C motor flanges.



Standard FPM (FKM) seals are used, since seals will be in a closed area.



Hardened and ground gears.

411L


38 Nm

EDELSTAHL - Stirnradstufe

Stainless steel shielded ratio multipliers

The dynamic efficiency is **0.98** 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]	B5 motor flanges		B14 motor flanges			Output shaft 	Ratios code
							-	-	-Q	-R	-T		
							-	-	71	80	90		
891	1.57	1.5	16	1.3	1.9	20			C	C		2844	01
493	2.84	1.5	28	1.2	1.8	35			C	C		1934	02
425	3.29	1.5	33	1.2	1.7	38			C	C		1756	03
362	3.87	1.5	39	1.0	1.5	40			C	C		1558	04
303	4.62	1.5	46	1.0	1.5	47			C	C		1360	05
222	6.30	1.1	46	1.0	1.1	46			C	C		1063	06
170	8.22	0.55	30	1.3	0.69	38			C	C		974	07
129	10.86	0.37	27	1.0	0.39	28			C	C		776	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

Lubrication

Lubrificazione

Unit 411L is supplied with synthetic oil to assure long life lubrication.

Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 411L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions: 0.10Lt.	Agip Telium VSF 320	Shell Omala S4 WE 320
Quantità olio per tutte le posizioni: 0.10Lt		

Radial and axial loads

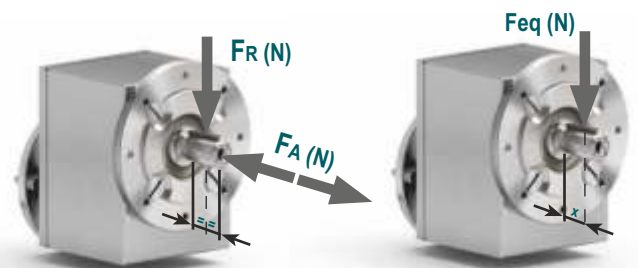
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [N]
700	182	910
600	200	1000
400	230	1150
300	250	1250
200	290	1450
140	320	1600

$$F_{eq} = F_R \cdot \frac{41}{X + 21}$$



Tab. 1

Tab. 2

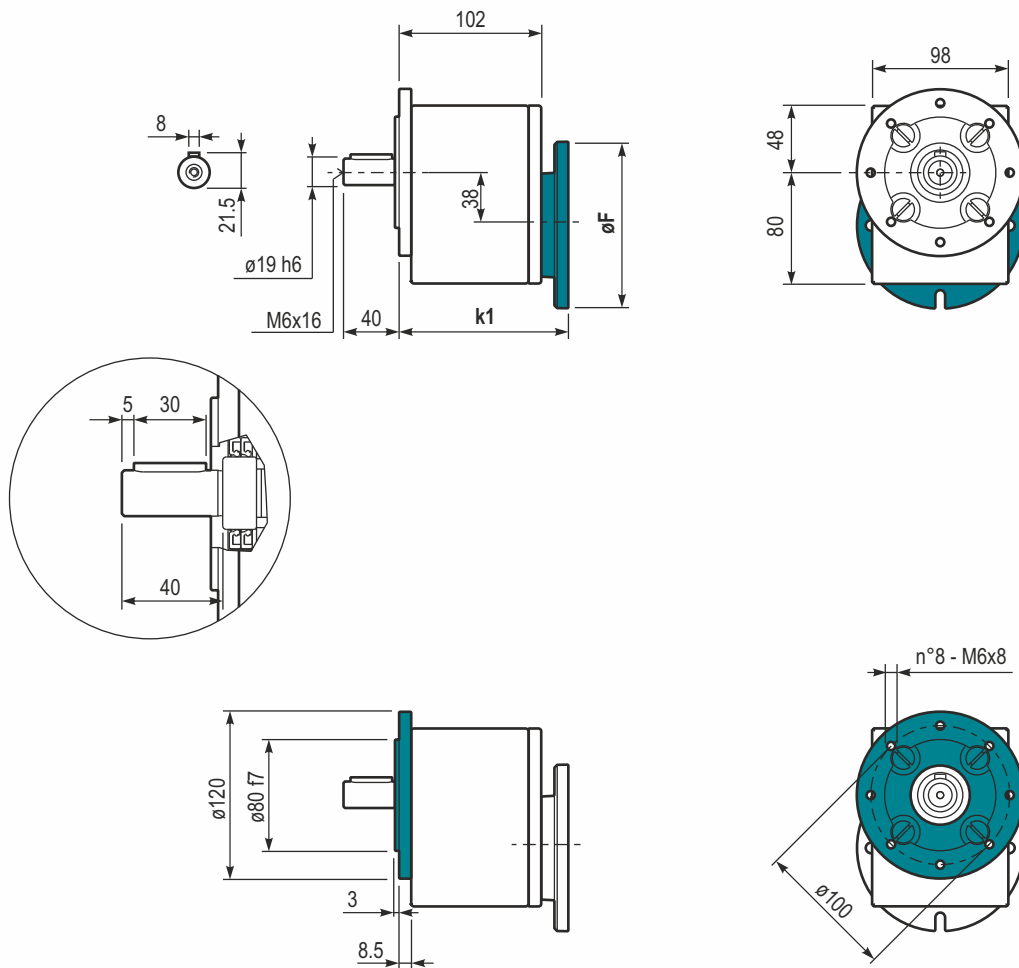
38
Nm

411L

P411L-F... **Basic gearbox**
Riduttore base

Gearbox weight 5.0 kg
Peso riduttore

M. flanges	Kit code	øF	k1
71 B14	KI634047	105	120
80 B14	KI634046	120	122
90 B14	KI634041	140	122



Edelstahl

511L




110 Nm

EDELSTAHL - Stirnradstufe

Stainless steel shielded ratio multipliers

The dynamic efficiency is **0.98** 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]	B5 motor flanges			B14 motor flanges				Output shaft 	Ratios code 
							-	-	-	-R	-T	-U			
1077	1.30	4	34	1.2	4.6	40	-	-	-	-R	-T	-U	3039	standard ø28	01
571	2.45	4	64	1.1	4.3	70	-	-	-	80	90	100-112	2049		02
423	3.31	4	87	1.0	4.1	90	-	-	-	-	-	-	1653		03
325	4.31	4	113	1.0	3.8	110	-	-	-	-	-	-	1356		04
266	5.27	3	104	1.1	3.1	110	-	-	-	-	-	-	1158		05
184	7.63	2.2	111	1.0	2.2	110	-	-	-	-	-	-	861		06
133	10.50	1.1	77	1.0	1.1	80	-	-	-	-	-	-	663		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

Lubrication

Lubrificazione

Unit 511L is supplied with synthetic oil to assure long life lubrication. Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.

See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 511L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Oil quantity for all positions:
0.29Lt.

Quantità olio per tutte le posizioni: 0.29Lt

Agip
Telium VSF 320

Shell
Omala S4 WE 320

Radial and axial loads

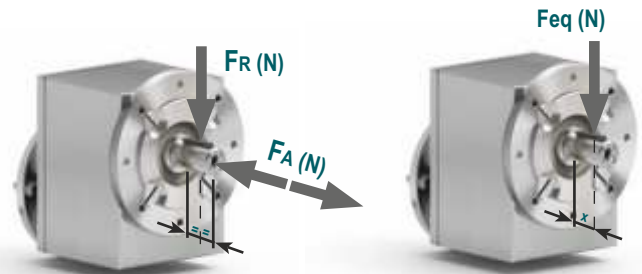
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [N]
700	294	1470
600	320	1600
400	370	1850
300	400	2000
200	460	2300
140	510	2550

$$F_{eq} = F_R \cdot \frac{47.5}{X + 22.5}$$



Tab. 1

Tab. 2

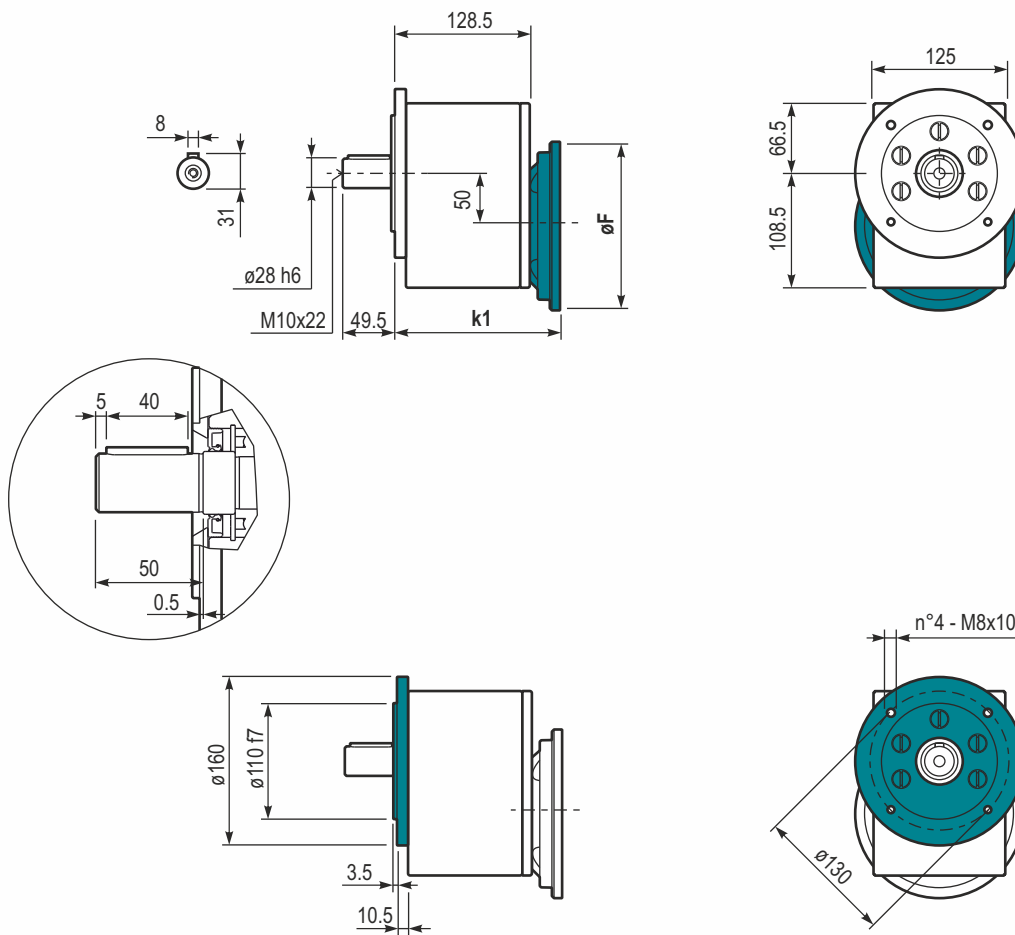
110
Nm

511L

P511L-F... **Basic gearbox**
Riduttore base

Gearbox weight 9.0 kg
Peso riduttore

M. flanges	Kit code	øF	k1
80 B14	KI854046	120	148.5
90 B14	KI854045	140	148.5
100-112 B14	KI854041	160	157.5



Edelstahl

EDELSTAHL - Koaxialgetriebe

stainless steel shielded coaxial gearboxes

This range is   certified



EDELSTAHL - Koaxialgetriebe

Stainless steel shielded coaxial gearboxes

Type <i>Tipo</i>	Torque <i>Coppia</i>	Center distance <i>Interasse</i>	Input power <i>Potenza in entrata</i>	Hollow output shaft <i>Albero cavo in uscita</i>
402L	160 Nm	-	0.37 ÷ 1.5 kW	ø25 mm
602L	520 Nm	-	1.1 ÷ 4.0 kW	ø35 mm



This product is:



The "L" series is an already totally enclosed aluminum gearboxes, that is shielded and sealed by stainless steel 316L case.



Output shaft is produced in alsI 316L.



Fully modular IEC flanges and compact NEMA C motor flanges.



Standard FPM (FKM) seals.



Hardened and ground gears.

402L


160 Nm

EDELSTAHL - Koaxialgetriebe

Stainless steel shielded coaxial gearboxes

The dynamic efficiency is

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		B14 motor flanges			Output shaft 	Ratio code
							-	-	-Q 71	-R 80	-T 90		
398	3.52	1.5	34	2.3	3.5	80	-	-	C	C	2821	01	
321	4.37	1.5	43	2.1	3.1	90	-	-	C	C	2848	02	
252	5.56	1.5	54	1.8	2.7	100	-	-	C	C	2813	03	
220	6.36	1.5	62	1.5	2.3	95	-	-	C	C	1921	04	
191	7.33	1.5	72	1.7	2.5	120	-	-	C	C	2812	05	
177	7.89	1.5	77	1.6	2.3	120	-	-	C	C	1918	06	
139	10.06	1.5	99	1.5	2.3	150	-	-	C	C	1913	08	
120	11.66	1.5	114	1.5	2.3	174	-	-	C	C	1713	09	
106	13.26	1.5	130	1.2	1.8	160	-	-	C	C	1912	10	
102	13.68	1.5	134	1.1	1.6	144	-	-	C	C	1513	25	
91	15.37	1.5	151	1.1	1.6	160	-	-	C	C	1712	11	
86	16.20	1.5	159	0.9	1.3	138	-	-	C	C	1910	12	
78	18.04	1.5	177	0.9	1.4	160	-	-	C	C	1512	23	
75	18.78	1.1	134	1.0	1.1	138	-	-	C	C	1710	24	
65	21.54	1.1	154	1.0	1.1	160	-	-	C	C	1312	14	
63	22.29	1.1	160	1.0	1.1	167	-	-	C	C	1013	15	
53	26.31	0.75	129	1.1	0.80	138	-	-	C	C	1310	16	
47.6	29.40	0.75	144	1.1	0.83	160	-	-	C	C	1012	17	
39	35.91	0.55	130	1.1	0.59	138	-	-	C	C	1010	18	
36.5	38.37	0.55	139	1.2	0.64	160	-	-	C	C	912	19	
29.9	46.87	0.55	170	0.8	0.45	138	-	-	C	C	910	20	
27.6	50.67	0.37	123	1.1	0.40	132	-	-	C	C	712	21	
22.6	61.89	0.37	150	0.9	0.34	138	-	-	C	C	710	22	

Motor flanges available
Flange motore disponibili

 B) Fornito con bussola di riduzione

B) Available on request without reduction bushing
Disponibile a richiesta senza bussola di riduzione

 C) Motor flange holes position
Posizione fori flangia motore

Lubrication

Lubrificazione

Always specify the mounting position
Specificare sempre la posizione di montaggio

Unit 402L is supplied with synthetic oil to assure long life lubrication.
Food grade oil is available on request.

See Table 1 for lubrication and recommended quantity.


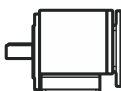
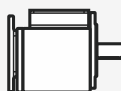




See Table 2 for possible radial and axial loads on the gearbox.

Il riduttore tipo 402L viene fornito con olio sintetico e lubrificazione tipo "long life".

Disponibile a richiesta olio alimentare.

Vedi Tabella 1 per oli e quantità consigliati.

Vedi Tabella 2 per i carichi radiali e assiali applicabili al riduttore.

Agip	Shell	V8	
Telium VSF 320	Omala S4 WE 320	On request ASK	
B3		B8	
Standard 0.25 LT		On request 0.40 LT	
B6		V5	
On request 0.30 LT		On request 0.40 LT	
B7		V6	
On request 0.40 LT		On request 0.50 LT	

0.96 for all ratios

Tab. 1

Radial and axial loads

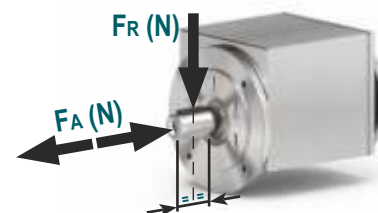
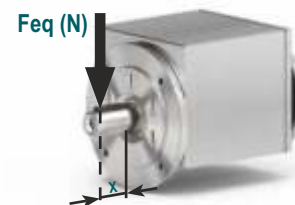
Carichi radiali e assiali

Output shaft

Albero di uscita

n_2 [min ⁻¹]	F_A [N]	F_R [N] $X + 21$
300	310	1550
250	330	1650
200	360	1800
140	406	2030
120	448	2240
85	480	2400
70	540	2700
40	600	3000
15	600	3000

$$F_{eq} = F_R \cdot \frac{51}{X}$$



Tab. 2

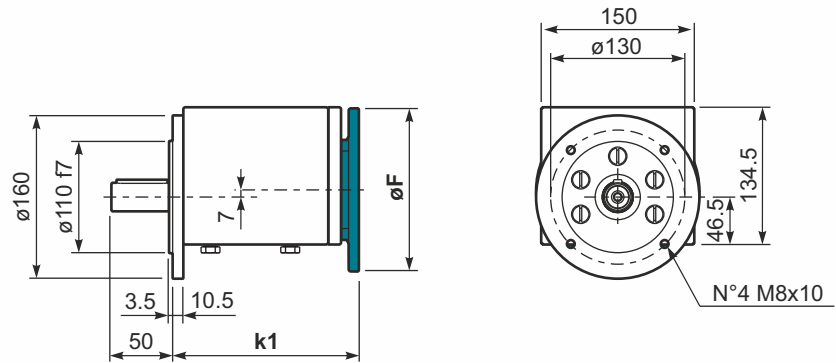
160
Nm

402L

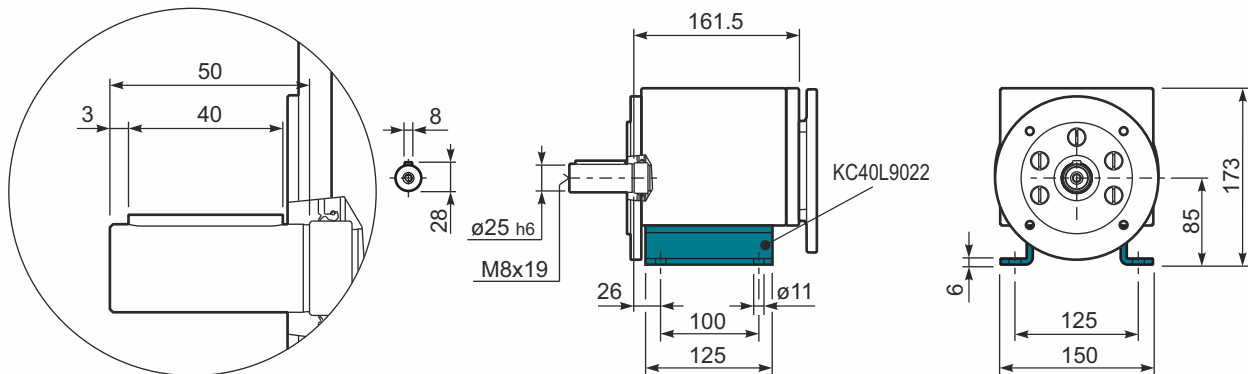
P402L-F.. Basic gearbox
Riduttore base

Gearbox weight 9.2 kg
Peso riduttore

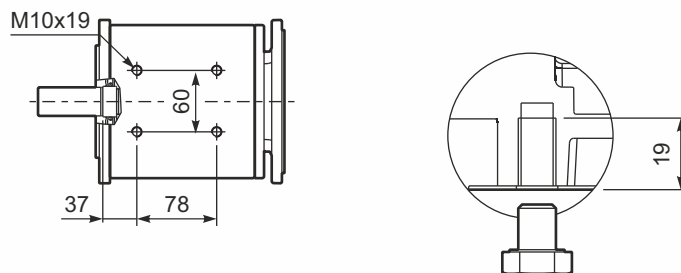
M. flanges	Kit code	øF	k1
71B14	KI634047	105	179.5
80B14	KI634046	120	180.5
90B14	KI634041	140	181.5



P402LH1.. Feet
Piedini



P402L-F.. Basic gearbox
Riduttore base



For direct mounting
of the gearboxes
remove the 4 screws
Per un montaggio diretto
con il riduttore rimuovere le 4 viti

Geber

encoder



Aluminium

Edelstahl

Geber / Encoder für Edelstahl- und Aluminiummotore

Die kompakte Bauform des Gebers sowie die Beibehaltung der Schutzart IP69K, verbunden mit den typischen Vorteilen der Magnettechnologie eignet sich dieser magnetische Encoder besonders für den Einsatz an Edelstahlmotore und an Aluminiummotore.



Vorteile

- Keine Störung durch mechanische Einwirkungen (Vibrationen, Stöße oder schmutzige Umgebungsbedingungen)
- Hervorragend geeignet für raue Umgebungsbedingungen
- Hohe Schutzart IP69K
- Nachrüstbar in alle Edelstahl- und Aluminiummotore in den Baugrößen 56 bis 112
- IEC Norm wird eingehalten

Bei einer Bewegung erzeugt der Sensor zwei Ausgangssignale A und B die um 90° verschoben sind. Wenn sich Motor nach rechts bewegt, ist das Signal von Kanal A um 90° gegenüber Kanal B verschoben. In der anderen Richtung ist das Signal von Kanal A dem von Kanal B um entgegengesetzt 90° verschoben. Die vier verschiedenen Zustände von A und B werden jedes Mal wiederholt, wenn der Motor dreht.

Geber / Encoder für Edelstahl- und Aluminiummotore

Aluminium

Edelstahl

Spezifikation	
Impulse	1-1024 (6000 upm) oder 1-2048 (3000 upm)
Ausgangssignal	A, B, -A, -B
Ausgangsspannung	10-24Vdc und 5Vdc TTL
IEC Baugröße	56 bis 112
Motorbauform	IEC B14
Material	Edelstahl AISI 316L oder Aluminium
Schutzart	IP 69K
Flanschtiefe	7mm bis 15mm. Baugrößenabhängig
Kabellänge	2m abgeschirmtes Kabel. Andere Längen und Steckverbindungen sind auf Anfrage lieferbar
Anschlussspannung	5Vdc bis 24Vdc
Max. Impulsfrequenz	≤100 kHz
Ausgangssignal	Rechteckimpuls
Signal level	$U_{high} \geq U_b - 0.7V$ bei $I_{last} \leq 10 \text{ mA}$ $U_{low} \leq U_b - 0.7V$ bei $I_{last} \leq 10 \text{ mA}$
Ausgangskapazität	≤ 30mA bei $U_b = 10Vdc$ ≤ 20mA bei $U_b = 24Vdc$
Schaltungsrichtung	NPN / PNP
Umgebungstemperatur	-30°C bis 100°C
Anschlusskabel	PUR 6 x 0.14 abgeschirmt (A, B, -A, -B) Länge: 2m liches Maß
Platzsparende und schützende Montage zwischen Motor und Getriebe mit epoxidharzgedichteter Encoder-Elektronik	



SONDERLÖSUNGEN

special solutions



Sonderlösungen | Motore | Frequenzumrichter | Gehäuse

special solutions | motors | frequency inverter | casings

SONDERLÖSUNGEN Edelstahl - Nicht standardisiertes Design und Zubehör

SPECIAL SOLUTIONS stainless steel - Non standard designs and accessories

Beispielhafte Modelländerungen/-erweiterungen

- Spannung und Frequenz / Non standard voltage and frequency
 - Montageanordnung / Mounting arrangement B35, B34
 - Montageanordnung mit seitlichem Anschlusskasten / B3 mounting arrangement with lateral terminal box
 - Zweite Endwelle / Second end shaft
 - Erhöhte Isolationsschutzklasse (ISO) / Increased insulation protection class
 - PT100-Sonden, Antikondensationsheizung / PT100 probes, anticondensation heaters
 - Verlängerte Antriebswelle / extended drive shaft
 - Sonderwellenmaße / Special shaft dimensions
 - Sonderlackierung / Special painting
 - Sonderflansch / special flange
- weitere Sonderlösungen jederzeit auf Anfrage



Keine passende Standardlösung gefunden? Für uns gar kein Problem!
Bei uns erhalten Sie Ihre individuelle, maßgeschneiderte Edelstahllösung
für Ihre speziellen Anforderungen.

- Ihre Sonderlösung ist unser Standard -

No suitable standard solution found? No problem for us!
With us you get your individual, customized stainless steel solution
for your special requirements.

- Your special solution is our standard -

Frequenzumrichter zum Einbau in Edelstahlgehäuse

Frequency inverter for installation in stainless steel housing

Im Folgenden finden Sie einen Ausschnitt unserer Frequenzumrichter samt technischer Daten, die nach Ihren individuellen Wünschen und Bedürfnissen sowie Gegebenheiten Ihrer Anlage in Edelstahlgehäuse eingebaut werden können.

Die fotografischen Abbildungen sind nur beispielhafte Darstellungen von technischen Umsetzungen der verschiedenen Modelle. Weitere Bauarten der Frequenzumrichter zum Einbau in Edelstahlgehäuse, lassen sich individuell auf Ihre Bedürfnisse und Anfrage umsetzen.

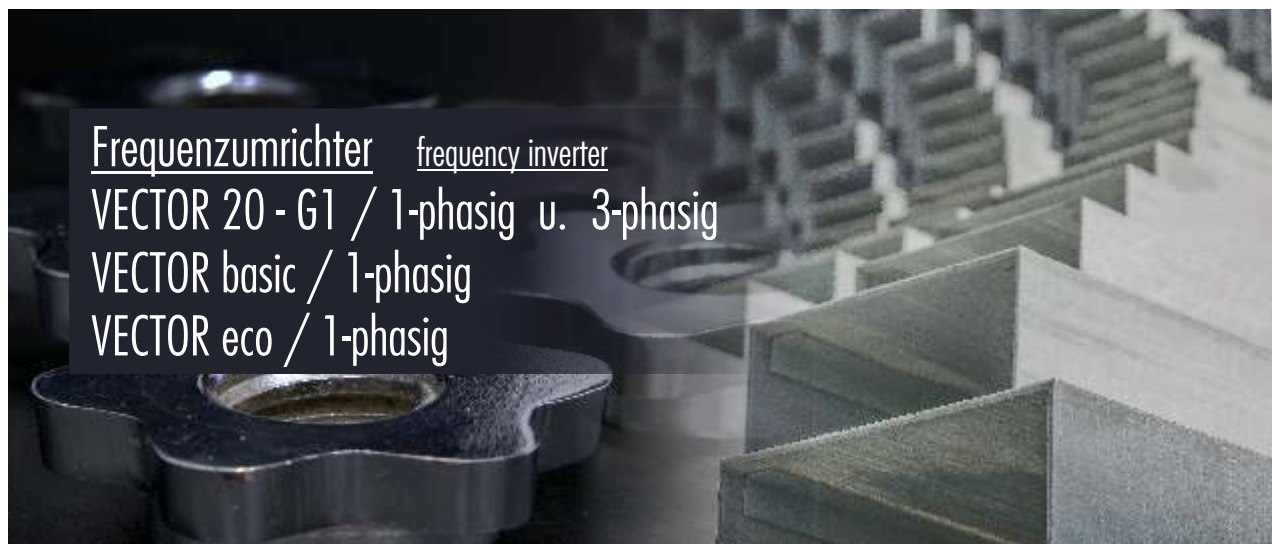
Below you will find a selection of our frequency inverters, including technical data, which is listed below. Your individual wishes and needs as well as the conditions of your system in stainless steel housing can be installed.

The photographic illustrations are only examples of technical implementations of the different models. Other types of frequency inverters for installation in stainless steel housings, can be installed individually to your needs.



Beispielhafte Abbildung eines kundenspezifischen Edelstahlgehäuses für einen Frequenzumrichter.

Exemplary illustration of a custom stainless steel housing for a frequency inverter.



Frequenzumrichter frequency inverter
VECTOR 20 - G1 / 1-phasig u. 3-phasig
VECTOR basic / 1-phasig
VECTOR eco / 1-phasig

Frequenzumrichter VECTOR 20 - G1



Frequenzumrichter VECTOR 20

Bei dem VECTOR 20 - G1 handelt es sich um einen Frequenzumrichter mit integrierter Vectorregelung. Durch seinen modularen Aufbau sorgt er für ein optimales Preis- Leistungsverhältnis. Durch die Verwendung von Zusatzmodulen erlangt der VECTOR 20 - G1 Eigenschaften, die einen geregelten Antrieb mit dynamischen AC-Servomotoren oder Positionierungsaufgaben erlauben.

Der Frequenzumrichter VECTOR 20 - G1 ist in folgenden Varianten erhältlich

- 0,09 KW bis 2,2 KW 1-phasig (230 V)
- 0,75 KW bis 3 KW 3-phasig (400 V)

Folgende aufsteckbaren Zusatzmodule sind erhältlich:



Aufsteckbares mehrsprachiges Klartext - Bedieninterface



WICHTIG:

Die Abmessungen des Edelstahlgehäuses variieren je nach individuell erstelltem Gehäuse und Maß.

IMPORTANT:

The dimensions of the stainless steel housing vary depending on the individually created housing and dimension.

Frequenzumrichter VECTOR 20 - G1

Typ	Vector 90	Vector 120	Vector 180	Vector 250	Vector 370
Ausgangsleistung	0,2 kVA	0,25 kVA	0,35 kVA	0,45 kVA	0,85 kVA
Motorleistung	0,09 kW	0,12 kW	0,18 kW	0,25 kW	0,37 kW
Nennstrom	1 A	1,1 A	1,3 A	1,5 A	2,2 A
Ausgangsspannung	3 x 230 V	3 x 230 V	3 x 230 V	3 x 230 V	3 x 230 V
Ausgangsfrequenz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz
Netz-/ Motordrossel	intern	intern	intern	intern	intern
Nennspannung	230 V	230 V	230 V	230 V	230 V
Schutzart	IP 65	IP 65	IP 65	IP 65	IP 65
Umgebungstemperatur	40 °C	40 °C	40 °C	40 °C	40 °C

Typ	Vector 550	Vector 750	Vector 1100	Vector 1500	Vector 2200
Ausgangsleistung	1,3 kVA	1,6 kVA	2,2 kVA	2,7 kVA	3,9 kVA
Motorleistung	0,55 kW	0,75 kW	1,1 kW	1,5 kW	2,2 kW
Nennstrom	3,4 A	4,0 A	5,5 A	7,0 A	10 A
Ausgangsspannung	3 x 230 V	3 x 230 V	3 x 230 V	3 x 230 V	3 x 230 V
Ausgangsfrequenz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz
Netz-/ Motordrossel	intern	intern	intern	intern	intern
Nennspannung	230 V	230 V	230 V	230 V	230 V
Schutzart	IP 65	IP 65	IP 65	IP 65	IP 65
Umgebungstemperatur	40 °C	40 °C	40 °C	40 °C	40 °C

Typ	Vector 750 / 3	Vector 1100 / 3	Vector 1500 / 3	Vector 2200 / 3	Vector 3000 / 3
Ausgangsleistung	1,6 kVA	2,0 kVA	2,8 kVA	4,0 kVA	5,3 kVA
Motorleistung	0,75 kW	1,1 kW	1,5 kW	2,2 kW	3 kW
Nennstrom	2,3 A	3,5 A	4,1 A	5,8 A	7,6 A
Ausgangsspannung	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V
Ausgangsfrequenz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz	0 - 400 Hz
Ein-/ Ausgangsdrossel	Intern	Intern	Intern	Intern	Intern
Netzspannung	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V	3 x 400 V
Schutzart	IP 65	IP 65	IP 65	IP 65	IP 65
Umgebungstemperatur	40 °C	40 °C	40 °C	40 °C	40 °C

LOGO-CARD für Frequenzumrichter VECTOR 20 - G1

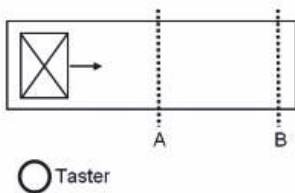
Prozessabläufe ohne Anlagensteuerung realisieren



Der Frequenzumrichter VECTOR 20 - G1 mit der integrierte LOGO-CARD realisiert Prozessabläufe in Maschinen und Anlagen ohne eine übergeordnete Anlagensteuerung. Die in der LOGO-CARD gespeicherten Prozessabläufe decken eine Vielzahl von Standardprozessen für den fördertechnischen Bereich ab. Über einen Auswahlschalter werden insgesamt 8 Abgespeicherte Prozessabläufe abgerufen. Weitere kundenspezifische Prozessabläufe speziell für Ihre Anwendungen können ebenfalls erstellt und in der LOGO-CARD abgespeichert werden.

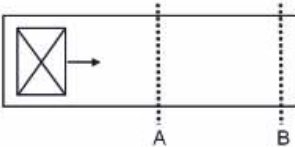
Folgende Standardprozesse sind abrufbar

Ablauf 1



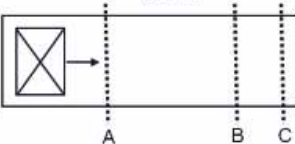
Nach dem Einschalten läuft das Förderband in Förderrichtung. Erreicht das Fördergut die Lichtschranke A, stoppt das Förderband. Nachdem mit dem Taster quittiert wurde, fördert das Förderband in Förderrichtung bis Lichtschranke B erreicht. Erreicht das Fördergut Lichtschranke B, stoppt das Förderband, bis Lichtschranke B wieder frei ist.

Ablauf 2



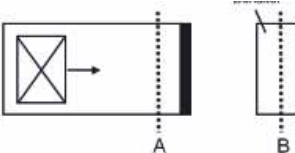
Nach dem Einschalten läuft das Förderband in Förderrichtung. Erreicht das Fördergut die Lichtschranke A, läuft das Förderband in einer geringeren Geschwindigkeit bis Lichtschranke B erreicht ist. Erreicht das Fördergut Lichtschranke B, stoppt das Förderband bis Lichtschranke B wieder frei ist.

Ablauf 3



Nach dem Einschalten läuft das Förderband in Förderrichtung. Erreicht das Fördergut die Lichtschranke A, läuft das Förderband in einer höheren Geschwindigkeit bis Lichtschranke B erreicht ist. Erreicht das Fördergut Lichtschranke B, läuft das Förderband in einer geringeren Geschwindigkeit bis Lichtschranke C erreicht ist. Erreicht das Fördergut Lichtschranke C, stoppt das Förderband bis Lichtschranke C wieder frei ist.

Ablauf 4



Nach dem Einschalten läuft das Förderband in Förderrichtung. Wenn 10x ein Fördergut durch die Lichtschranke A fährt stoppt das Förderband. Wird der Behälter aus Lichtschranke B herausgenommen und ein neuer Behälter in Lichtschranke B hineingestellt fördert das Förderband weiter in Förderrichtung.

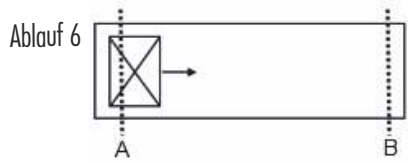
Ablauf 5



Nach dem Einschalten läuft das Förderband in Förderrichtung. Erreicht das Fördergut Lichtschranke A, stoppt das Förderband und eine Eingestellte Zeit läuft ab (Zeit lässt sich über Poti zwischen 0...30sek einstellen). Nachdem die Zeit abgelaufen ist fördert das Förderband bis Lichtschranke B erreicht. Erreicht das Fördergut Lichtschranke B, stoppt das Förderband solange bis Lichtschranke B wieder frei ist.

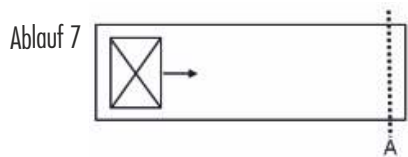
LOGO-CARD für Frequenzumrichter VECTOR 20 - G1

Prozessabläufe ohne Anlagensteuerung

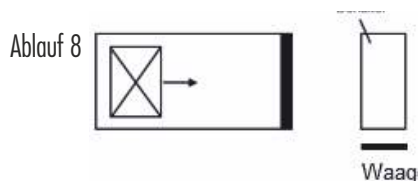


Nach dem Einschalten bleibt das Förderband weiterhin stehen. Wenn ein Fördergut in Lichtschranke A gelegt wird, fördert das Förderband in Förderrichtung bis Lichtschranke B erreicht ist.

Erreicht das Fördergut Lichtschranke B, stoppt das Förderband. Durch einen externen Schalter kann die Drehrichtung umgeschaltet werden, dadurch fördert das Förderband, wenn Lichtschranke B belegt ist und stoppt bei Lichtschranke A.



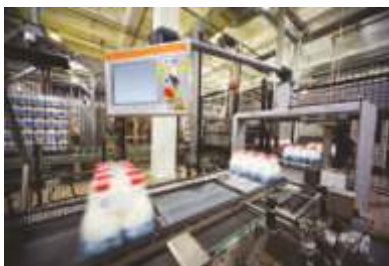
Nach dem Einschalten fördert das Förderband in Förderrichtung. Erreicht das Fördergut Lichtschranke A stoppt das Förderband. Sollte innerhalb einer eingestellten Zeit Lichtschranke A nicht bedämpft werden, fällt das Förderband in einen „Sleep – Mode“ (Zeit lässt sich über Potii zwischen 0...30sek einstellen). Durch betätigen eines Taster oder einer weiteren Lichtschranke wird das Förderband aufgeweckt und fördert in Förderrichtung.



Nach dem Einschalten fördert das Förderband in Förderrichtung. Durch einen extern eingele- senen Analogen Wert, beispielsweise durch eine Waage wird solange gefördert, bis ein bestimmter Wert erreicht ist. Erreicht der analoge Wert eine Schwelle, stoppt das Förderband. Wahlweise durch betätigen eines Taster oder durch eine weitere Lichtschranke kann der Ablauf wieder neu gestartet werden.

Darüber hinaus können weitere kundenspezifische Prozessabläufe abgespeichert und über einen internen Drehschalter abgerufen werden. Die Programmierung wird in Absprache mit Ihnen oder Ihrem Endkunden von unseren Softwareingenieuren vorgenommen.

Anwendungsbeispiele



Verpackungsanlagen



Verpackungsanlagen



Förderanlagen



Förderanlagen

Frequenzumrichter VECTOR basic / 1-phasig



Der Netz- und Motoranschluss

Auf einen schnellen und sicheren Anschluss der Netzversorgung von 230Vac wurde mittels Kabeldurchführungen auf interne PUSH-IN Federkraftklemmen geachtet. Das verkürzt die Anschlusszeiten und ist ohne Spezialwerkzeug durchführbar.

Die Motorleitung wird ebenfalls auf PUSH-IN Federkraftklemmen angeschlossen. Die Zugentlastung wird auch hierbei durch Kabeldurchführungen realisiert.

Durch die im Gerät standardmäßigen und optimierten EMV Filter ist es möglich, **OHNE abgeschirmte Motorleitungen bis zu einer max. Länge von 1m** jeden Asynchronmotor anzuschließen. Das spart nicht nur Arbeitszeit, sondern auch Kosten für die Motorleitungen. Jede Standardleitung kann hier verwendet werden. Für eine abgeschirmte Motorleitung steht ein EMV-Set zur nachträglichen Montage zur Verfügung. Die integrierte Motorschutzfunktion schützt Ihren Motor vor Übertemperatur. Hierbei kann sowohl ein PTO und auch ein PTC eingesetzt werden.

Die Geräteeinstellungen

Die Geräteeinstellungen werden über ein im Gehäuse integriertes 2-Knopf Bedienkonzept ermöglicht. Durch die eingebaute 7-Segment LED Anzeige werden alle Geräteeinstellungen angezeigt. Vorteil dieses Bedienkonzepts ist die einfache und sichere Lesbarkeit der Anzeige und Bedienbarkeit, auch bei verstecktem und unzugänglichem Einbau des Geräts in der Anwendung.

Alle erforderlichen Geräteparameter können in vorgegebenen Wertebereichen individuell an die Anforderungen angepasst und im Gerät abgespeichert werden. Die Motorgeschwindigkeit wird ebenfalls durch das 2-Knopf Bedienkonzept eingestellt. Die dadurch eingestellte Motorgeschwindigkeit wird im Gerät abgespeichert und bei Netzausfall reproduzierbar abgerufen.

Die im Gerät voreingestellten Geräteparameter gewährleisten einen sofortigen Betrieb nach Anschluss der Versorgungsspannung und des Motors.

Wiederanlauf-Stopp

Die integrierte Funktion des Wiederanlauf-Stopp verhindert einen Wiederanlauf nach Verlust der Netzspannung durch einen NOT-AUS Schalter. Bei Wiederaufnahme der Netzspannung muss der Frequenzumrichter durch die Power-Taste wieder vom Bediener eingeschaltet werden. Somit erfüllt dieses Gerät die erforderliche Maschinenrichtlinie ohne Aufpreis.

Frequenzumrichter VECTOR basic / 1-phasig



Integrierter NOT-AUS Schalter

Der integrierte NOT-AUS Schalter gewährleistet ein sicheres Abschalten der Netzspannung.

In Verbindung mit dem standardmäßigen Wiederanlaufstop muss der Antrieb nach entriegelung des NOT-AUS über die Power-Teste wieder eingeschaltet werden. Somit unterstützt der VECTOR basic die aktuellen Maschinenrichtlinien.



Integriertes Sollwert-Potentiometer

Mit dem integrierten Potentiometer wird die gewünschte Drehzahl des Motors eingestellt. Eine Einstellskala zeigt die aktuelle Einstellung an. Auf der 7-Segmentanzeige des Geräts wird der aktuelle Sollwert angezeigt.

Zubehör

1. Bei Verwendung einer abgeschirmten Motorleitung muss optional das EMV-Set VECTOR basic zusätzlich bestellt und an den Frequenzumrichter montiert werden.
2. Auf Wunsch wird der VECTOR basic mit einem entsprechenden Kabelsatz, bestehend aus Netzleitung und 1m Motorleitung geliefert.

Typ	Vector basic
Ausgangsleistung	0,85 kVA
Max. Motorleistung	0,37 kW
Nennspannung	230 V 50/60 Hz
Nennstrom	2,2 A
Ausgangsspannung	3 x 230 V
Ausgangsfrequenz	0 – 99 Hz
Ein-/ Ausgangsfilter	Intern
Schutzart	IP 65
Umgebungstemperatur	0 – 40 °C
Anschluss Netz- und Motorleitungen	PUSH-IN Klemmen
Gehäuse	Edelstahl
Artikelnummer VECTOR basic	10 100001 0314
Arikelnummer VECTOR basic mit Drehpotentiometer	10 100001 0315
Arikelnummer VECTOR basic mit NOT-AUS Schalter	10 100001 0318
Artikelnummer EMV-Set	10 100001 0316

Frequenzumrichter VECTOR eco / 1-phasig



Frequenzumrichter VECTOR eco

Der Frequenzumrichter VECTOR eco ist für Flach-, Steig-, Knick- und Z-Förderbänder sowie für Kleinförderbänder, Bunker und Rollenbahnen entwickelt worden. Er besticht durch sein optimales Preis-Leistungsverhältnis.

Der VECTOR eco ist in den Leistungen von 0,09 kW bis 0,75 kW lieferbar.

Mittels seiner integrierten Bedienelemente kann die Geschwindigkeit reguliert oder das Gerät ausgeschaltet werden.

Ein umfassender thermischer Schutz des Motors ist mittels im Motor eingebauter Temperaturfühler (z.B. Kaltleiter oder Bimetallschalter) erreichbar.

Zubehör

- Angeschlossenes Netzkabel
- Angeschlossenes abgeschirmtes Motorkabel mit oder ohne PTC
- Angeschlossene Steuerleitungen

Typ	VECTOR eco 090	VECTOR eco 120	VECTOR eco 180	VECTOR eco 250	VECTOR eco 370	VECTOR eco 550	VECTOR eco 750
Ausgangsgräteleistung	0,2 kVA	0,33 kVA	0,45 kVA	0,55 kVA	0,85 kVA	1,3 kVA	1,6 kVA
Motorleistung	0,09 kW	0,12 kW	0,18 kW	0,25 kW	0,37 kW	0,55 kW	0,75 kW
Ausgangsnennstrom	1 A	1,1 A	1,3 A	1,5 A	2,2 A	3,4 A	4 A
Nennspannung	230V	230V	230V	230V	230V	230V	230V
Netzfrequenz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz	50 Hz
Schutzart	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65	IP 65
Umgebungstemperatur	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C	40 °C

Technische Änderungen vorbehalten

WICHTIG:

Die Abmessungen des Edelstahlgehäuses variieren je nach individuell erstelltem Gehäuse und Maß.

IMPORTANT:

The dimensions of the stainless steel housing vary depending on the individually created housing and dimension.

Sonderlösungen | Motore | Frequenzumrichter | Gehäuse

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Sie benötigen eine individuelle Sonderlösung für Ihre Anlage? Gerne stehen wir Ihnen beratend zur Seite und entwickeln nach Ihren Vorgaben und Begebenheiten eine für Sie kompakte, ideale und individualisierte Sonderlösung.

You need an individual special solution for your machine? We are glad to provide you with advice and develop according to your specifications an ideal and individualized special solution for you.

Das Team von MSF-Vathauer trägt gerne mit seinem umfassenden Angebot an Entwicklungs- und Produktionsleistungen zu Ihrem Erfolg bei.

The MSF-Vathauer team is glad to contribute with its comprehensive range of development services and production services to your success.

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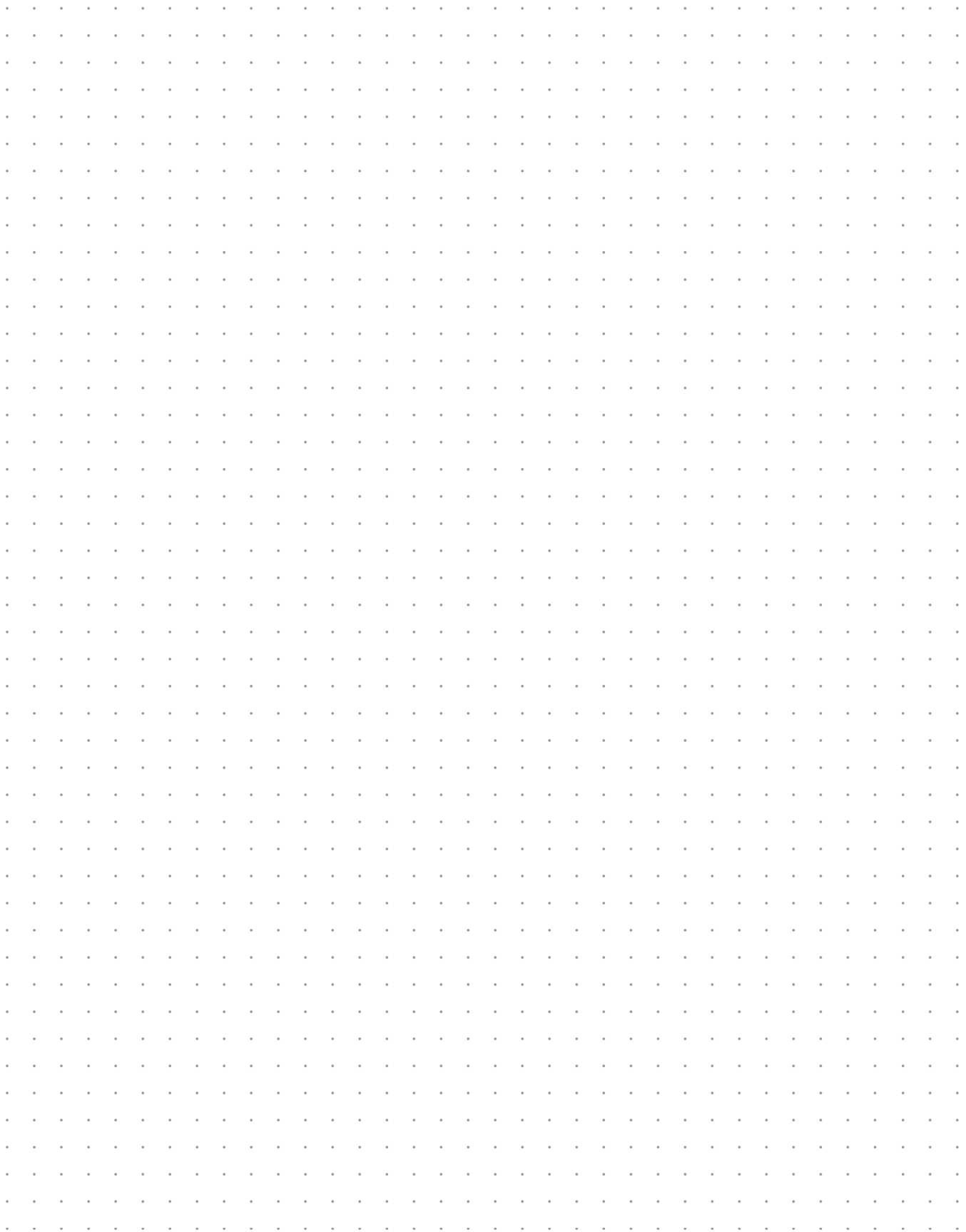
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MSF-Vathauer Antriebstechnik GmbH & Co. KG
Am Hessentuch 6-10
32758 Detmold

Tel: +49 (0) 5231 - 63030
Fax: +49 (0) 5231 - 66856

info@msf-technik.de
www.msf-technik.de

