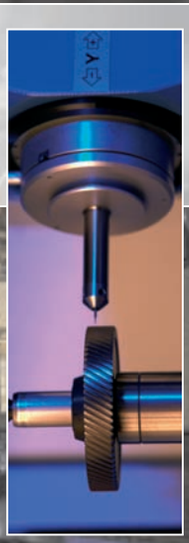
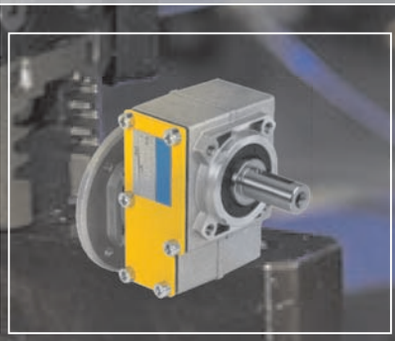
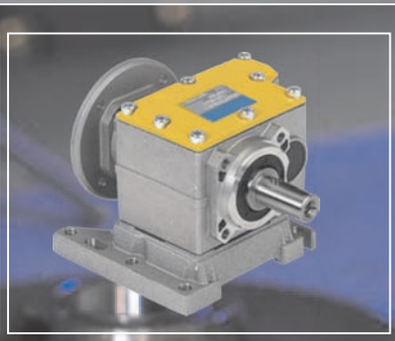
Coaxial Gears

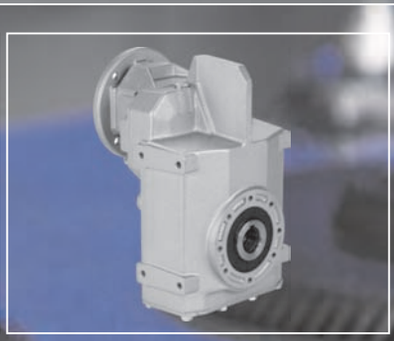


Cat.: **CT-RCM-WO-HM010**

Coaxial gearboxes
Riduttori Coassiali





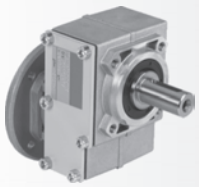


Made in Italy

HYDRO·MEC

IN THIS CATALOGUE

One Step-Gear

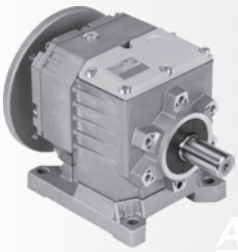


Compact aluminum in line gearboxes with one stage of reduction.
Riduttori coassiali in alluminio con uno stadio di riduzione.

See technical data table.
Vedi tabelle dati tecnici.

Paragraph ***4***

Coaxial-Gear



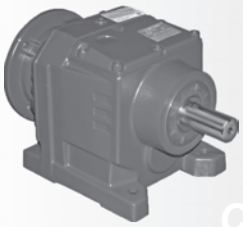
Aluminum

Compact aluminum in line gearboxes with two or three stages of reduction.
Riduttori coassiali in alluminio con due o tre stadi di riduzione.

See technical data table.
Vedi tabelle dati tecnici.

Paragraph ***5***

Coaxial-Gear



Cast iron

Cast iron in line gearboxes with two or three stages of reduction.
Riduttori coassiali in ghisa con due o tre stadi di riduzione.

See technical data table.
Vedi tabelle dati tecnici.

Paragraph ***6***

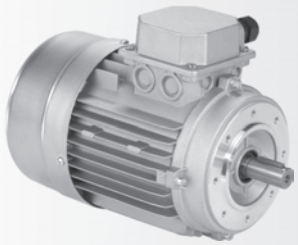
Compact-Gear

Aluminum and cast iron shaft mounted gearboxes with two or three stages of reduction.
Riduttori pendolari in alluminio e ghisa con due e tre stadi di riduzione.

See technical data table.
Vedi tabelle dati tecnici.

Paragraph ***7***

Aluminum electric motors



Metric electric motors are in aluminum.
On request they can be supplied with different Level of protection and painted with 2 or 3 level of anticorrosive paint.
I motori metrici sono in alluminio, su richiesta possono essere forniti con differenti livelli di protezione e verniciati con vernice anticorrosiva.

See technical data table.
Vedi tabelle dati tecnici.

Pag. M-1 ÷ M-2

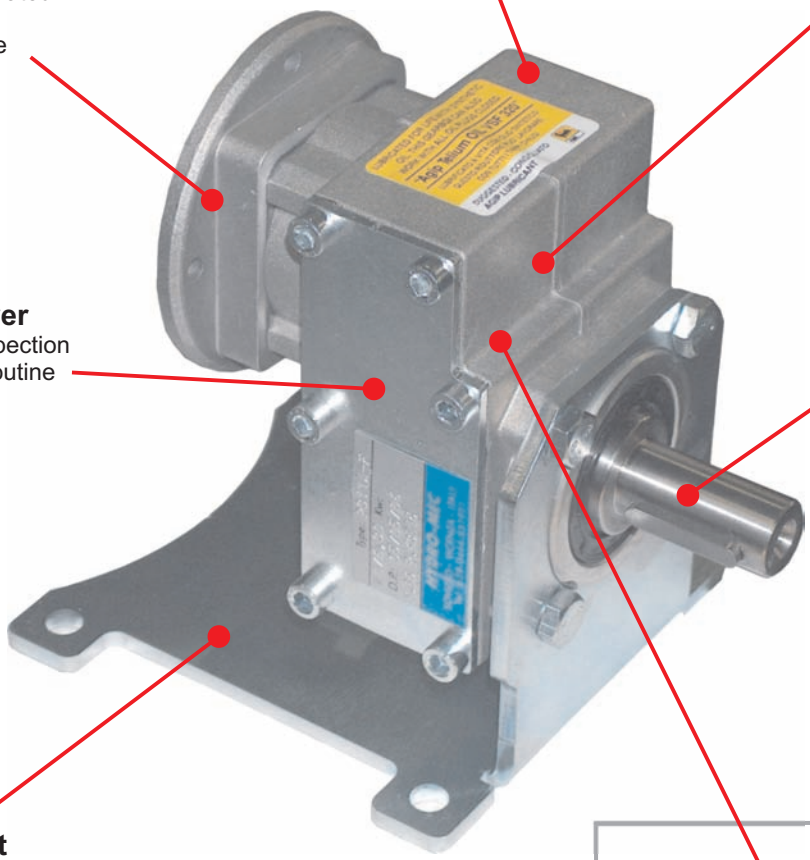
Aluminum one step gearboxes

A modular and compact product

Alloy housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

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

Gears
Hardened and ground gears.

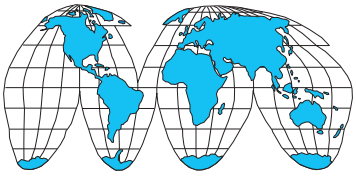


Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

Output shaft
With well proportioned bearings

Feet
Removable feet.

Single-piece aluminum alloy housing
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

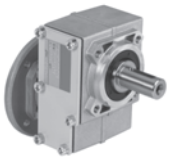


World wide sales network.

Lubricated for life with synthetic oil with operative range from -15° to +130°C

INDEX / INDICE / INHALTSVERZEICHNISS / INDICE

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



Types / Tipi / Arten / Tipos

4-5	4-7	4-9	4-11
211A 20Nm	**311A** 30Nm	**411A** 38Nm	**511A** 110Nm

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

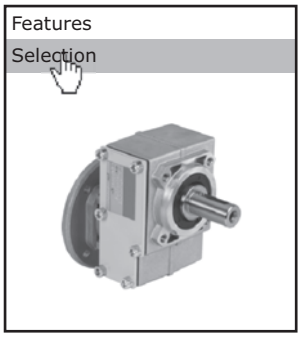
Types / Tipi / Arten / Tipos

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

For : / Per : / Für : / Para :

Selection guide - fs Guida alla selezione	**Atex certification** Certificazione Atex
Mounting pos. - Lubrication Pos. di montaggio - lubrificazione	**Accessories** Accessori
2 - 6 poles selection Selezione 2 - 6 poli	**Download 3D drawings** Download disegni 3D
Radial - axial loads Carichi radiali e assiali	**Interchangeability** Intercambiabilità
Reversibility Reversibilità	**Installation and maintenance** Installazione, uso e manutenzione
Thermal limit Limite termico	**Spare parts list** Liste parti di ricambio

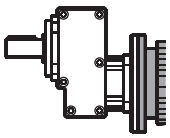
Use our web database to get detailed informations, always updated on each type/size.



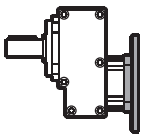
CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Type - Tipo - Typ - Tipo	**Size** - Grandezza Grösse - Tomaño	**Mounting** - Montaggio - Montage - Tipo de montaje
P	**311A**	**H1**

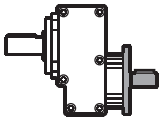
Aluminum one step gear
Riduttori in alluminio a uno stadio



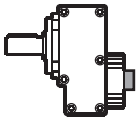
With IEC motor
M



With motor flange
P



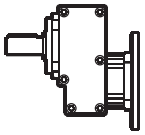
With male input shaft
R



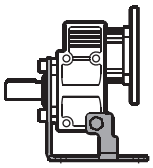
Modular Base
B

1 Stages
Riduzioni
Stufen
Etapas

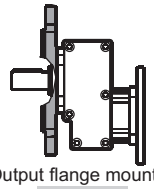
211A
311A
411A
511A



Without flange / feet
-N

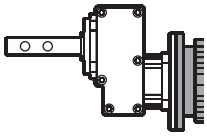


Mounted feet
H1



Output flange mounted
-F

Special output shaft
Albero uscita speciale



Only on request for Q.ty
A richiesta per quantità

Dossier according to 94/9/EG 8. b ii stored
0032

A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Ratio - Rapporto
Untersetzung
Relaciòn

2.84

See technical data table

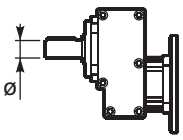
Vedi tabelle dati tecnici.

Technisches Datenblatt beachten.

Ver tabla datos técnicos

Output shaft
Albero uscita
Abtriebswelle
Eje en salida

S



➡ **STANDARD**

211A
S ➡ **ø14**

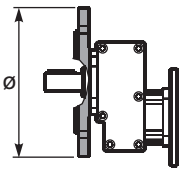
311A
S ➡ **ø14**
C ⇨ ø19
E ⇨ ø24

411A
S ⇨ ø14
C ➡ **ø19**
E ⇨ ø24

511A
C ⇨ ø19
E ⇨ ø24
G ➡ **ø28**

Output flange
Flangia uscita
Ausgangsflansch
Brida en salida

2



N Senza flangia
Without flange

311A
1 ⇨ ø120
2 ⇨ ø140
3 ➡ **ø160**
4 ⇨ ø200

411A
1 ⇨ ø120
2 ⇨ ø140
3 ⇨ ø160
4 ➡ **ø200**

511A
1 ⇨ ø120
2 ⇨ ø140
3 ⇨ ø160
4 ⇨ ø200
5 ➡ **ø250**

Motor size
Grandezza motore
Motor Grösse
Tamaño motor

C

Standard Flange
Flangia Standard

B5	B14
A=56 (ø120)	**O**=56 (ø80)
B=63 (ø140)	**P**=63 (ø90)
C=71 (ø160)	**Q**=71 (ø105)
D=80 (ø200)	**R**=80 (ø120)
E=90 (ø200)	**T**=90 (ø140)
F=100÷112 (ø250)	**U**=100÷112 (ø160)
	V=132 (ø200)

Type R / Tipo R

211A
311A
1 ➡ ø14

511A
3 ➡ ø24

411A
2 ➡ ø19

Without flange / Senza flangia

211A
311A
Z ⇨ ø9 (56B5)
0 ⇨ ø11 (63B5)
1 ➡ ø14 (71B5)

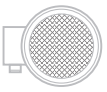
411A
1 ⇨ ø14 (71B5)
2 ⇨ ø19 (80B5)
3 ➡ ø24 (90B5)

511A
2 ⇨ ø19 (80B5)
3 ⇨ ø24 (90B5)
4 ➡ ø28 (100B5)

➡ **STANDARD**

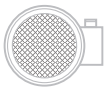
Terminal box position
Posizione morsettiera
Klemmkastenlage
Posición caja de bornes

B



A

B
STANDARD

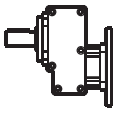


C

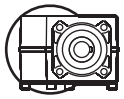
D

Mounting position
Posizione montaggio
Einbaulage
Posición de montaje

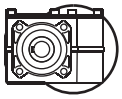
B3



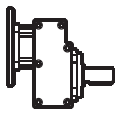
B3
STANDARD



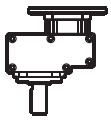
B6



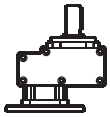
B7



B8



V5



V6

Specify only for vertical positions

Specificare solo per posizione verticale

FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELIN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

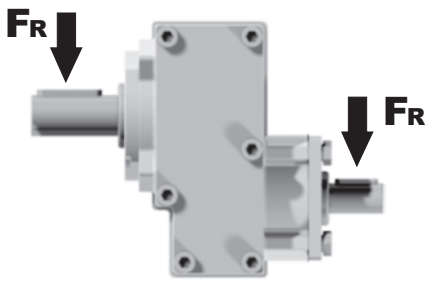
Lifting / sollevamento /hubantriebe / elevactión	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotaction	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translacion	$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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



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

M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal **2.50** Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana

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

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

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

Gear size / Grandezza riduttore / Getriebegröße / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Potencia motor

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

Flange code / Codice flangia / Flanschtype / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Velocidad de entrada

311A One step 30Nm

Rating - Alluminum ONE STEP GEARBOXES

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Output Shaft	Ratios code
							63	71	56	63	71			
892	**1.57**	0.37	3.9	3.3	1.24	13			C	C		2844		-
493	**2.84**	0.37	7.0	3.3	1.21	23			C	C		1954		
426	**3.29**	0.37	8.1	3.2	1.18	26			C	C		1756	**standard ø14**	
362	**3.87**	0.37	9.6	2.9	1.08	28			C	C		1558		

C Ratio / Rapporto / Untersetzung / Relación

Transmitted torque / Momento torcente trasmesso / Mögliche Drehmomente / Par transmitido

Service factor / Fattore di servizio / Betriebsfaktor / Factor de servicio

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

Notes / Note / Anmerkungen / Notas

fs

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

D Motor flange available / Flange disponibili / Erhältliche Motorflansche / Bridas disponibles

B) Mounting with reduction ring / Montaggio con boccola di riduzione / Reduzierhülsen / Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position / Posizione fori flangia/basetta motore / Bohrungsposition am Motorflansch/-sockel / Posición agujeros brida / base motor

B) Available without reduction bushes / Disponibile anche senza boccola / Auch ohne Reduzierbuchse verfügbar / Disponible tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)

211A Coaxial - Gear 20Nm

Rating - Alluminum ONE STEP GEARBOXES

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges O	P	Q	R		Output Shaft ø	Ratios code
							63	71	80	90	56	63	71	80			
682.1	**2.05**	0.37	5.1	2.0	**0.73**	**10**					C	C			1939		-
595.0	**2.35**	0.37	5.8	2.1	**0.76**	**12**					C	C			1740		
500.0	**2.80**	0.37	6.9	2.0	**0.75**	**14**					C	C			1542		
413.6	**3.38**	0.37	8.4	2.0	**0.75**	**17**					C	C			1344	**standard**	
297.9	**4.70**	0.37	11.6	1.7	**0.64**	**20**					C	C			1047	**ø14**	
225.0	**6.22**	0.37	15.4	1.5	**0.54**	**23**					C	C			956		
169.0	**8.28**	0.37	20.5	1.0	**0.37**	**20**					C	C			758		
142.4	**9.83**	0.25	16.4	1.0	**0.25**	**16**					C	C			659		

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available
Flange Motore Disponibili

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

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

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

EN Unit **211A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **211A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **211A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **211A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

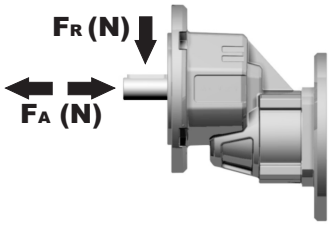
▪ LUBRICATION 211A Oil Quantity 0.05 Lt.

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

tab. 1

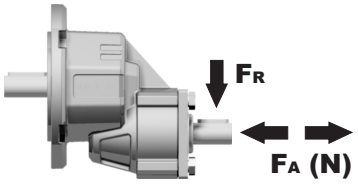
▪ RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n_2	FA	FR
700	101	504
600	120	600
400	138	696
300	151	756
200	175	876
140	192	960

Input shaft
albero in entrata



n_2	FA	FR
1400	168	840
900	192	960

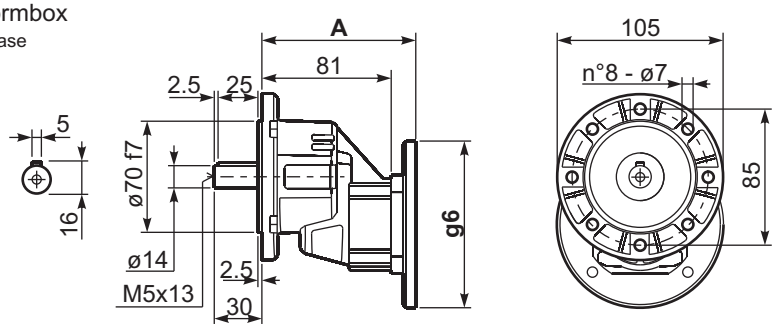
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

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

P211A-**F**... Basic wormbox
Riduttore base

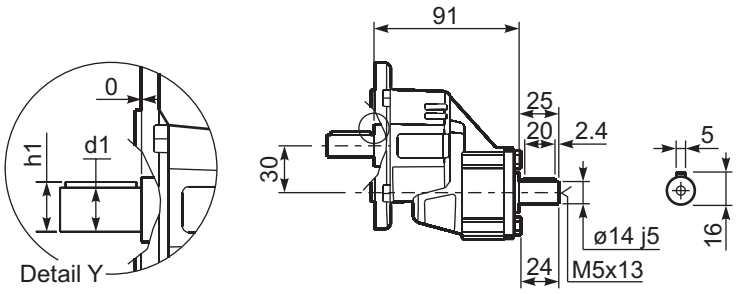
Gearbox weight peso riduttore	1.40 kg



B5 Motor Flanges	A	g6	kit code
63 B5	97.5	138	K050.4.041
71 B5	95.5	160	K050.4.042

B14 Motor Flanges	A	g6	kit code
56 B14	97	80	KC40.4.049
63 B14	99	90	K050.4.047
71 B14	97	105	K050.4.045

R211A-F... Basic wormbox
Riduttore base



***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 14x30	5	16	M5x13

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Output Shaft	Ratios code
							63	71	56	63	71		ø	
892	**1.57**	0.37	3.9	3.3	**1.24**	**13**			C	C		2844	**standard ø14**	-
493	**2.84**	0.37	7.0	3.3	**1.21**	**23**			C	C		1954		
426	**3.29**	0.37	8.1	3.2	**1.18**	**26**			C	C		1756		
362	**3.87**	0.37	9.6	2.9	**1.08**	**28**			C	C		1558		
303	**4.62**	0.37	11.4	2.6	**0.97**	**30**			C	C		1360	On request ø11 ø19	
222	**6.30**	0.37	15.6	2.2	**0.83**	**35**			C	C		1063		
170	**8.22**	0.37	20.3	1.9	**0.69**	**38**			C	C		974		
130	**10.86**	0.37	26.8	1.0	**0.38**	**28**			C	C		776		

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **311A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **311A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **311A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **311A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 311A Oil Quantity 0.10 Lt.

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

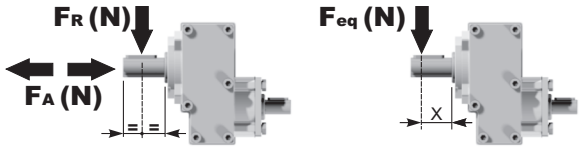
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

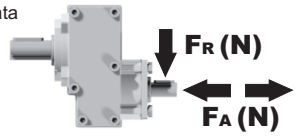
$$Feq = FR \cdot \frac{38.5}{X+18.5}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	120	640	**400**	160	800	**200**	200	1020
600	140	700	**300**	175	880	**140**	225	1120

Input shaft

Albero in entrata



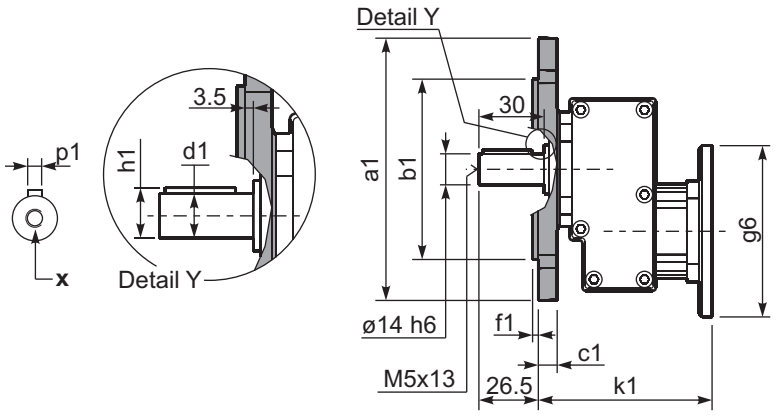
n_1	FA	FR
1400	180	860
900	200	980

tab. 2

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

Gearbox weight peso riduttore	2.50 kg

P311-F... Output flange
flange di uscita



***Available output shaft** / Albero di uscita

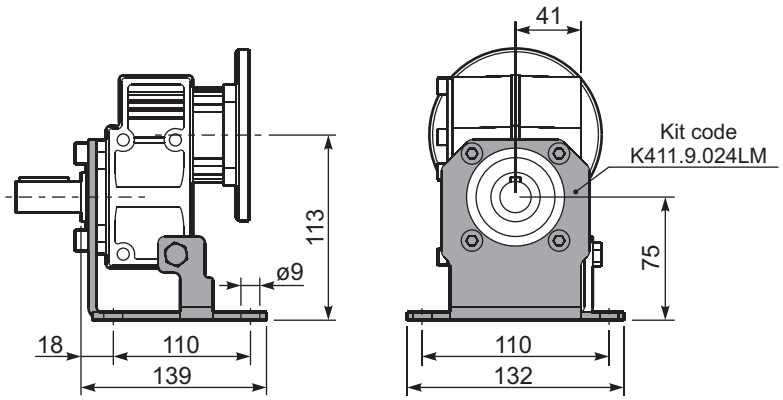
	Shaft - d1	p1	h1	x
Standard	ø 14x30	5	16	M5x13
On request A richiesta	ø 19x40 ø 24x40	6 8	21.5 27	M6x16 M6x16

Available output flanges / flange di uscita

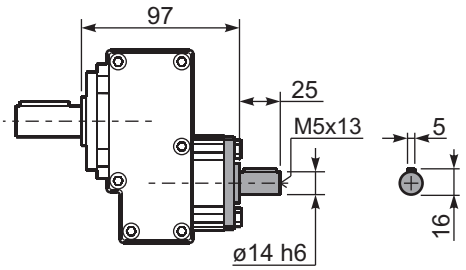
a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

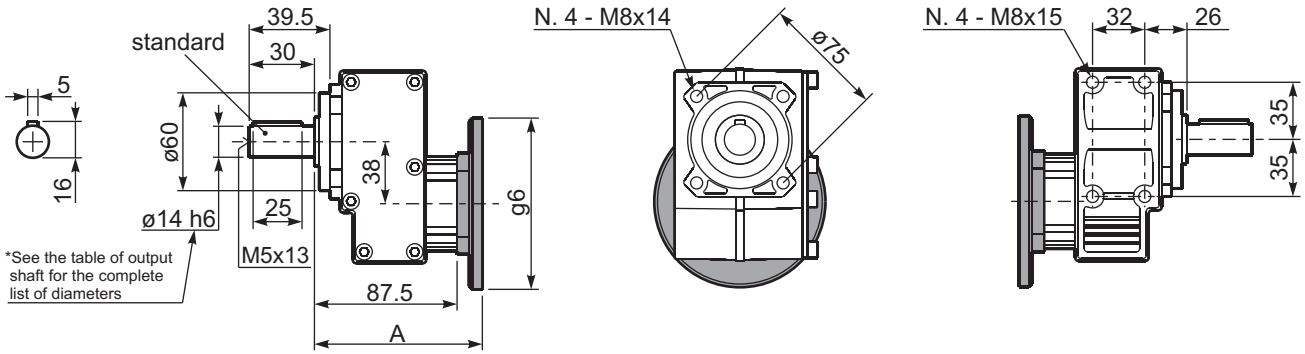
P311-H1... With feet
Con piedini



R311-N... Input Shaft
Albero in entrata



P311-N... Basic gearbox
Riduttore base



B14 Motor Flanges	A	g6	k1	kit code
56 B14	107.5	80	111	KC40.4.049
63 B14	105.5	90	109	K050.4.047
71 B14	103	105	106.5	K050.4.045

B5 Motor Flanges	A	g6	k1	kit code
63 B5	103.5	138	107	K050.4.041
71 B5	101.5	160	105	K050.4.042

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft	Ratios code
							63	71	80	90	71	80	90			
892	**1.57**	1.5	15.7	1.3	**1.90**	**20**	B				C	C		2844		-
493	**2.84**	1.5	28.4	1.2	**1.84**	**35**	B				C	C		1954	**standard ø19**	
426	**3.29**	1.5	32.9	1.2	**1.73**	**38**	B				C	C		1756		
362	**3.87**	1.5	38.7	1.0	**1.54**	**40**	B				C	C		1558		
303	**4.62**	1.5	46.1	1.0	**1.54**	**47**	B				C	C		1360	On request ø14 ø24	
222	**6.30**	1.1	46.0	1.0	**1.10**	**46**	B				C	C		1063		
170	**8.22**	0.55	30.4	1.2	**0.69**	**38**	B				C	C		974		
130	**10.86**	0.37	26.8	1.0	**0.38**	**28**	B				C	C		776		

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **411A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **411A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **411A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **411A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 411A Oil Quantity 0.20 Lt.

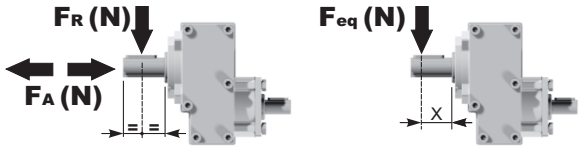
AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

tab. 1

RADIAL AND AXIAL LOADS

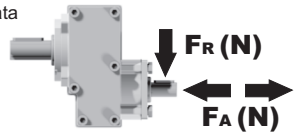
Output shaft
Albero di uscita

$$Feq = F_R \cdot \frac{40}{X+20}$$



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

Input shaft
Albero in entrata



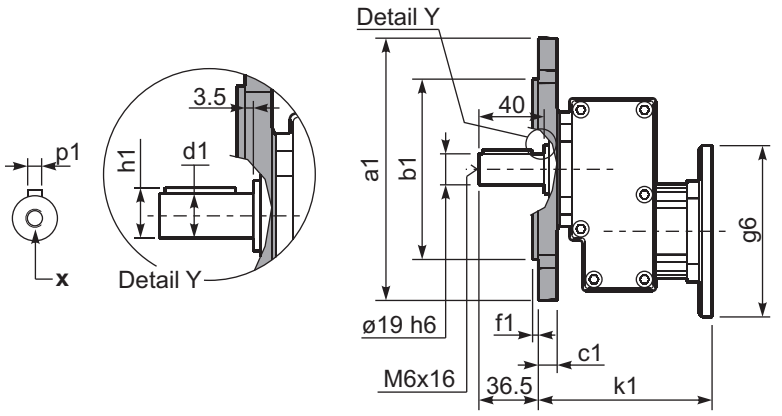
n_1	FA	FR
1400	240	1200
900	280	1400

tab. 2

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

Gearbox weight peso riduttore **3.20 kg**

P411-F... Output flange
flange di uscita



***Available output shaft** / Albero di uscita

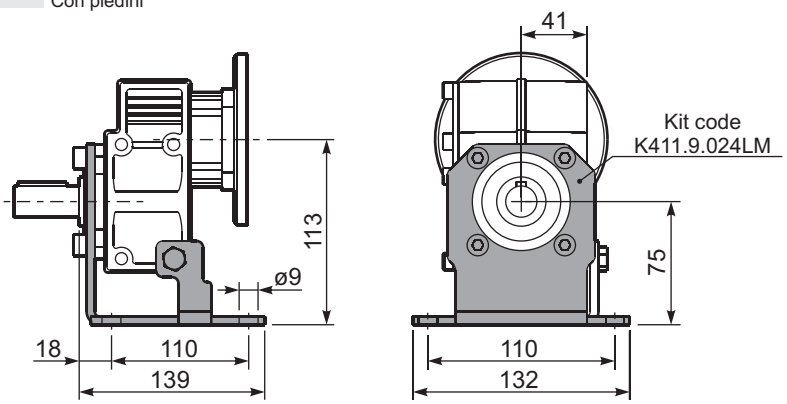
	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16
On request A richiesta	ø 14x30 ø 24x40	5 8	16 27	M5x13 M6x16

Available output flanges / flange di uscita

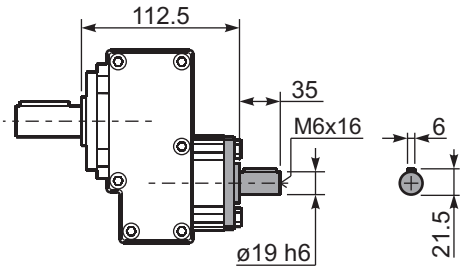
a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

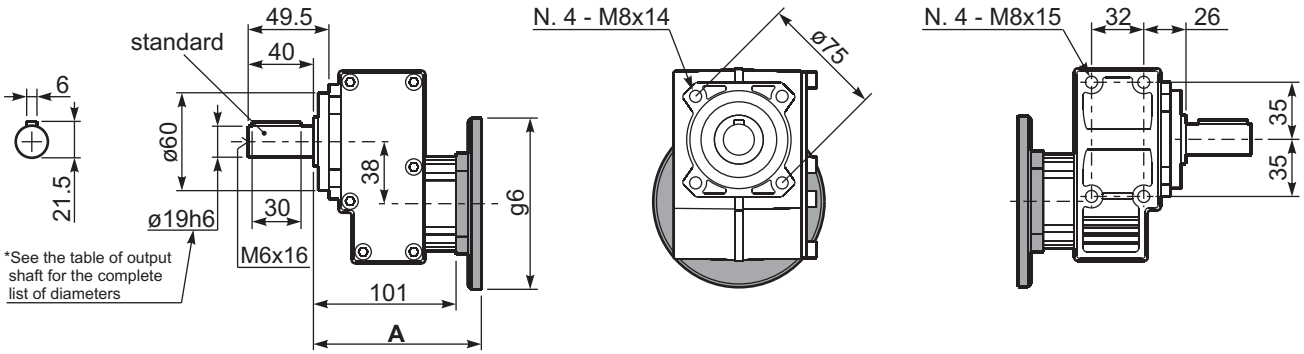
P411-H1... With feet
Con piedini



R411-N... Input Shaft
Albero in entrata



P411-N... Basic gearbox
Riduttore base



B5 Motor Flanges	A	g6	k1	kit code
63 B5	121.5	140	125	K063.4.041
71 B5	119.5	160	123	K063.4.042
80/90 B5	121.5	200	125	K063.4.043

B14 Motor Flanges	A	g6	k1	kit code
71 B14	119.5	105	123	K063.4.047
80 B14	120.5	120	124	K063.4.046
90 B14	121.5	140	125	K063.4.041
100/112 B14	119.5	160	123	KC40.4.041

511A One step 110Nm

Rating - Alluminum ONE STEP GEARBOXES

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C (71)	D (80)	E (90)	F (100 112)	Available B14 motor flanges R (80)	T (90)	U (100 112)	V (132)		Output Shaft	Ratios code
1077	**1.30**	4	34	1.2	**4.6**	**40**	B								3039	**standard ø28**	-
571	**2.45**	4	64	1.1	**4.3**	**70**	B								2049		
423	**3.31**	4	87	1.0	**4.1**	**90**	B								1653		
325	**4.31**	4	113	1.0	**3.8**	**110**	B								1356	On request ø19 ø24	
266	**5.27**	3	104	1.1	**3.1**	**110**	B								1158		
184	**7.63**	2.2	111	1.0	**2.2**	**110**	B								861		
133	**10.50**	1.1	77	1.0	**1.1**	**80**	B								663		

The dynamic efficiency is **0.98** for all ratios

Motor Flanges Available / Flange Motore Disponibili

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

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

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

EN Unit **511A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **511A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **511A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **511A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 511A Oil Quantity 0.29 Lt.

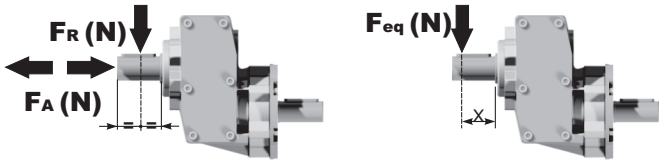
AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

tab. 1

RADIAL AND AXIAL LOADS

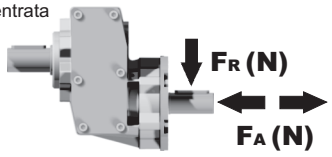
Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{52.5}{X+22.5}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
700	294	1470	**400**	370	1850	**200**	460	2300
600	320	1600	**300**	400	2000	**140**	510	2550

Input shaft
Albero in entrata



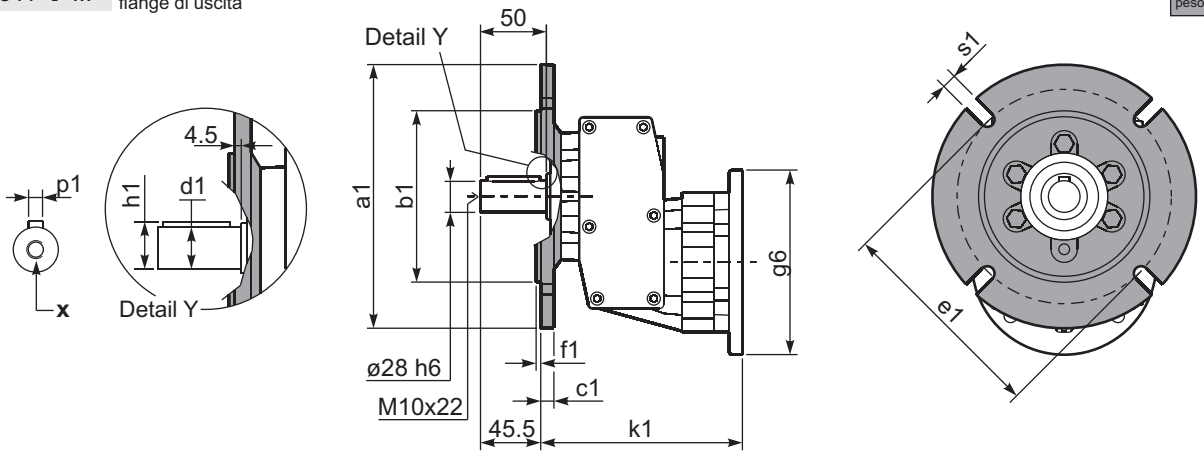
n_1	FA	FR
1400	400	2000
900	440	2200

tab. 2

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

Gearbox weight peso riduttore	5.00 kg

P511-F... Output flanges
flange di uscita



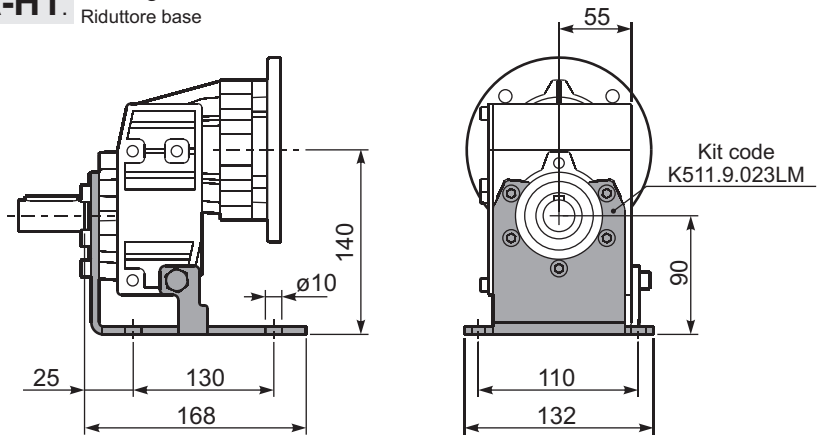
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 28x50	8	31	M10x22
On request A richiesta	ø 24x50 ø 19x40	8 6	27 21.5	M8x19 M6x16

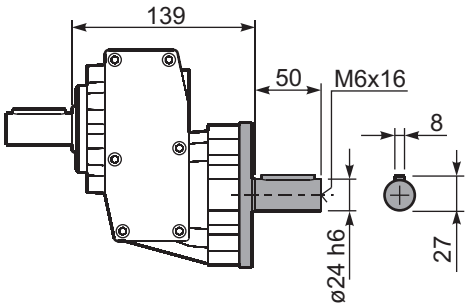
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3	9	KC40.9.012
200	130	11	165	3.5	11	KC40.9.013
250	180	11.5	215	3.5	14	KC40.9.014

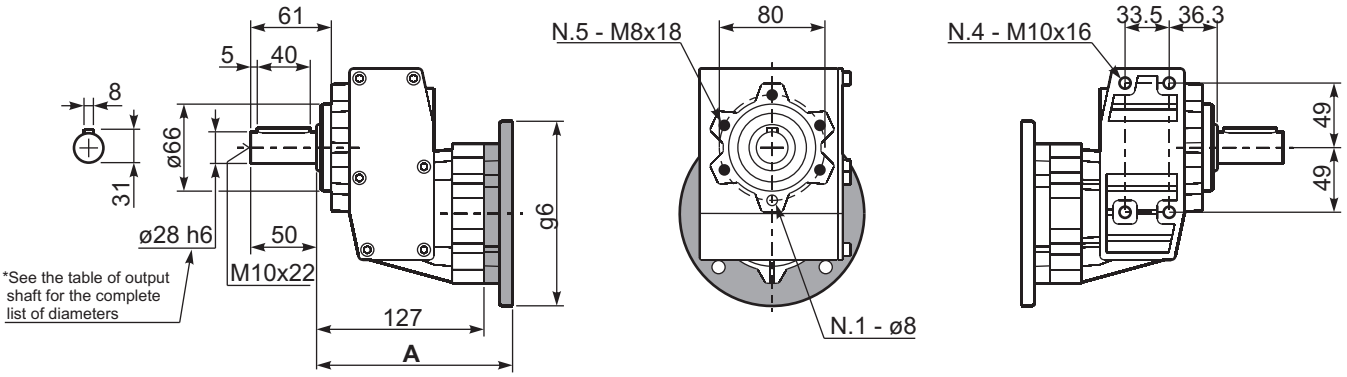
P511A-H1. Basic gearbox
Riduttore base



R511A-N... Input Shaft
Albero in entrata



P511-N... Basic gearbox
Riduttore base



B5 Motor Flanges	A	g6	k1	kit code
71 B5	145	160	149.5	KC023.4.041
80/90 B5	147	200	151.5	KC023.4.042
100/112 B5	153	250	157.5	KC023.4.043

B14 Motor Flanges	A	g6	k1	kit code
80 B14	145	120	149.5	KC085.4.046
90 B14	145	140	149.5	KC085.4.045
100/112 B14	145	160	149.5	KC085.4.047
132 B14	175	200	188	KC50.4.041

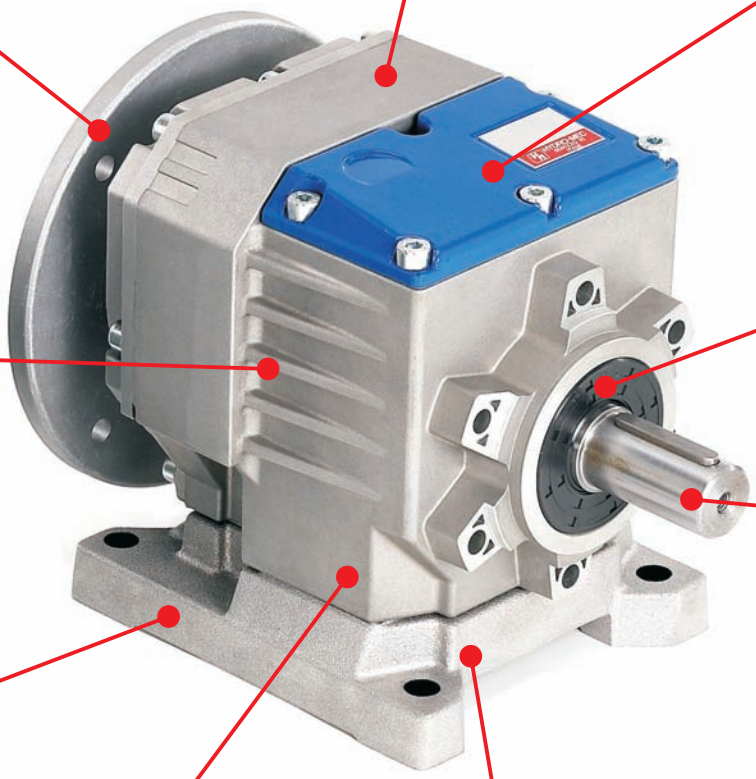
Aluminum in line gearboxes

A modular and compact product

Alloy housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint

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

Removable inspection cover
Allows periodic inspection of gearing during routine maintenance



Oil seals
Two oil seals on request

Gears
Hardened and ground gears.

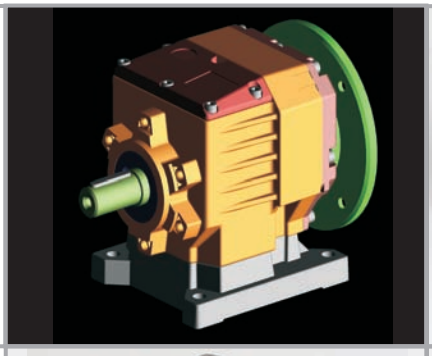
Output shaft
With well proportioned bearings

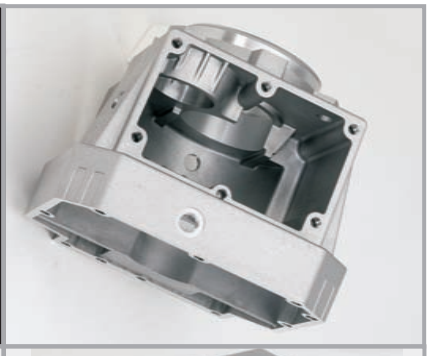
Feet
Removable feet.
With patented locking system.

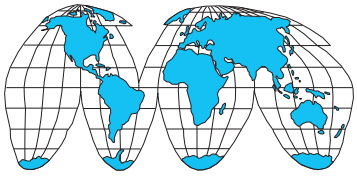
Foot prints
Compatible to the main standard of the market.

Lubricated for life with synthetic oil
with operative range
from -15° to +130°C

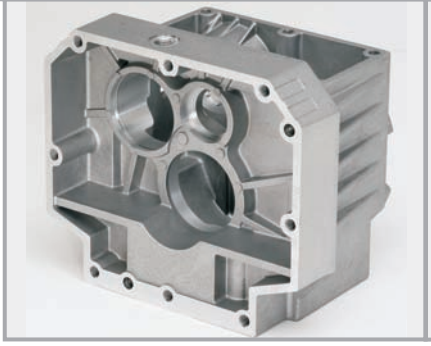
Single-piece aluminum alloy housing
Combines light weight with high tensile strength.
Precision machined for alignment of bearings and gearing

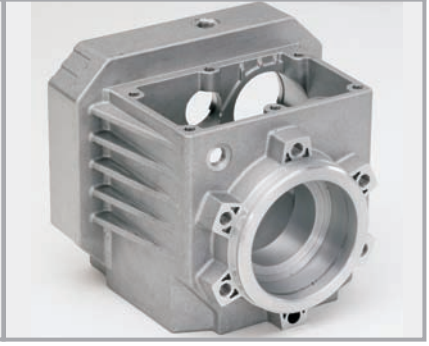




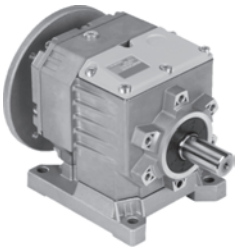


World wide sales network.





INDEX / INDICE / INHALTSVERZEICHNISS / INDICE



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

5-5	5-7	5-9	5-11	5-13	5-15	5-17	5-19	5-21

Types / Tipi / Arten / Tipos

202A	302A	402A	403A	452A	502A	503A	602A	603A
70Nm	120Nm	150Nm	150Nm	300Nm	320Nm	320Nm	460Nm	460Nm

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

M-1

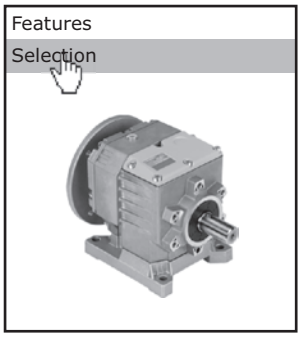
Types / Tipi / Arten / Tipos

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

For : / Per : / Für : / Para :

Selection guide - fs Guida alla selezione	**Atex certification** Certificazione Atex
Mounting pos. - Lubrication Pos. di montaggio - lubrificazione	**Accessories** Accessori
2 - 6 poles selection Selezione 2 - 6 poli	**Download 3D drawings** Download disegni 3D
Radial - axial loads Carichi radiali e assiali	**Interchangeability** Intercambiabilità
Reversibility Reversibilità	**Installation and maintenance** Installazione, uso e manutenzione
Thermal limit Limite termico	**Spare parts list** Liste parti di ricambio

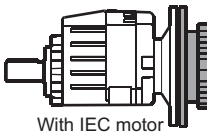
Use our web database to get detailed informations, always updated on each type/size.



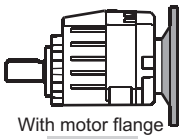
CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Type - Tipo - Typ - Tipo	**Size** - Grandezza Grösse - Tomaño	**Mounting** - Montaggio - Montage - Tipo de montaje
P	**402A**	**B2**

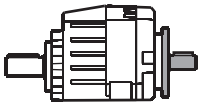
Aluminum coaxial gear boxes
Riduttori coassiali in alluminio



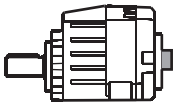
With IEC motor
M



With motor flange
P



With male input shaft
R



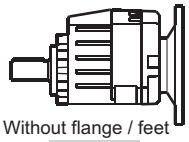
Modular base
B

2 Stages Riduzioni Stufen Etapas

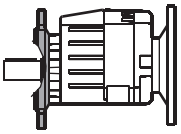
202A
302A
402A
452A
502A
602A

3 Stages Riduzioni Stufen Etapas

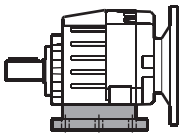
403A
503A
603A



Without flange / feet
-N



Output flange mounted
-F



Mounted feet
B..

Feet / piedini

Feet Code	Market reference	G	H	R	L	L1	S
B1	112	18	85	110	87	50	
B2	212/3	18	100	130	107.5		
S1	17	18	75	110	90+20		
S2	27	25	90	110	130		
M1	42/3	25	80	110÷120	85		
L4	04	13	80	105			
L5	05	16	100	125			

You see feet code in the chart of the dimensions
Vedi codice piede nella tabella delle dimensioni

TÜV NORD 0032 — Dossier according to 94/9/EG 8. b ii stored

A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Ratio - Rapporto
Untersetzung
Relaciòn

7.33

See technical data table

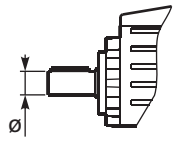
Vedi tabelle dati tecnici.

Technisches Datenblatt beachten.

Ver tabla datos técnicos

Output shaft
Albero lento
Abtriebswelle
Eje en solida

V



➡ **STANDARD**

202A

S ⇨ Ø14
B ➡ **Ø16**
D ⇨ Ø20
V ⇨ Ø25

302A

S ⇨ ø14
B ⇨ ø16
C ⇨ ø19
D ➡ **ø20**
E ⇨ ø24
V ⇨ ø25
G ⇨ ø28

402A 403A

S ⇨ ø14
B ⇨ ø16
C ⇨ ø19
D ⇨ ø20
E ⇨ ø24
V ➡ **ø25**

452A 502A 503A

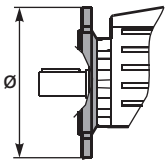
E ⇨ ø24
V ⇨ ø25
G ⇨ ø28
H ➡ **ø30**
I ⇨ ø35

602A 603A

G ⇨ ø28
H ⇨ ø30
I ➡ **ø35**
L ⇨ ø38
M ⇨ ø40

Output flange
Flangia uscita
Ausgangsflansch
Brida en salida

2



N Senza flangia
Without flange

202A 302A 402A 403A

1 ⇨ ø120
2 ➡ **ø140**
3 ⇨ ø160
4 ⇨ ø200

452A 502A 503A

3 ⇨ ø160
4 ➡ **ø200**
5 ⇨ ø250

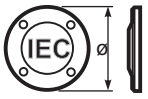
602A 603A

3 ⇨ ø160
4 ⇨ ø200
5 ➡ **ø250**

Motor size
Grandezza motore
Motor Grösse
Tamaño motor

C

Standard Flange
Flangia Standard



B5	B14
A=56 (ø120)	**O**=56 (ø80)
B=63 (ø140)	**P**=63 (ø90)
C=71 (ø160)	**Q**=71 (ø105)
D=80 (ø200)	**R**=80 (ø120)
E=90 (ø200)	**T**=90 (ø140)
F=100÷112 (ø250)	**U**=100÷112 (ø160)
	V=132 (ø200)

Type R / Tipo R

202A 403A

1 ➡ ø14

302A 402A 503A 603A

2 ➡ ø19

452A 502A 602A

3 ➡ ø24

Without flange / Senza flangia

202A 403A

Z ⇨ ø9 (56B5)
0 ⇨ ø11 (63B5)
1 ➡ ø14 (71B5)

302A 402A 503A 603A

1 ⇨ ø14 (71B5)
2 ⇨ ø19 (80B5)
3 ➡ ø24 (90B5)

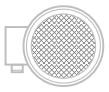
452A 502A 602A

2 ⇨ ø19 (80B5)
3 ⇨ ø24 (90B5)
4 ➡ ø28 (100B5)

➡ **STANDARD**

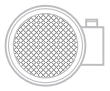
Terminal box position
Posizione morsettiera
Klemmkastenlage
Posición caja de bornes

B



A

B
STANDARD

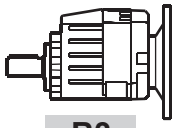


C

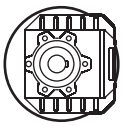
D

Mounting position
Posizione montaggio
Einbaulage
Position de montaje

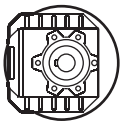
B3



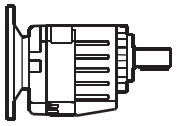
B3
STANDARD



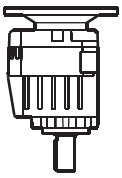
B6



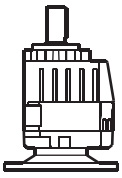
B7



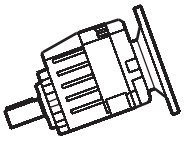
B8



V5



V6



V8

Specify only for vertical positions

Specificare solo per posizione verticale

FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELIN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

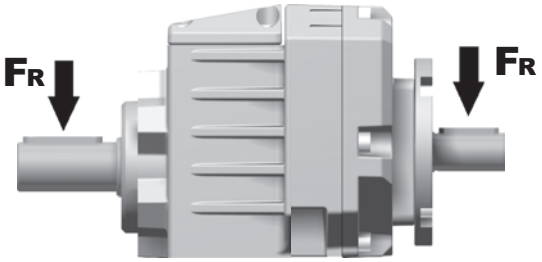
Lifting / sollevamento /hubantriebe / elevactión	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotaction	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translacion	$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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



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

M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo
fk	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal **2.50** Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana

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

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

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

Gear size / Grandezza riduttore / Getriebegröße / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Potencia motor

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

Flange code / Codice flangia / Flanschtype / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Velocidad de entrada

402A Coaxial - Gear 150Nm

Rating - Alluminum COAXIAL GEARBOXES

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft ø	Ratios code
							63	71	80*	90*	71	80	90	100 112			
398	**3.52**	3	69	1.2	3.5	80	B				C	C			2821		-
320	**4.37**	3	86	1.0	3.1	90	B				C	C			2818		
252	**5.55**	3	109	0.9	2.8	100	B				C	C			2813		
220	**6.36**	2.2	92	1.0	2.3	95	B				C	C			1921		
191	**7.33**	2.2	106	1.1	2.5	120	B				C	C			2812		

C Ratio / Rapporto / Untersetzung / Relación

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

Notes / Note / Anmerkungen / Notas

Transmitted torque / Momento torcente trasmesso / Mögliche Drehmomente / Par transmitido

Service factor / Fattore di servizio / Betriebsfaktor / Factor de servicio

fs

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

D Motor flange available / Flange disponibili / Erhältliche Motorflansche / Bridas disponibles

B) Mounting with reduction ring / Montaggio con boccola di riduzione / Reduzierhülsen / Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position / Posizione fori flangia/basetta motore / Bohrungsposition am Motorflansch/-sockel / Posición agujeros brida / base motor

B) Available without reduction bushes / Disponibile anche senza boccola / Auch ohne Reduzierbuchse verfügbar / Disponible tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)

▪ QUICK SELECTION / Selezione veloce

The dynamic efficiency is **0.96** for all ratios

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Output Shaft	Ratios code
							63	71*	56	63	71			
407	**3.44**	0.55**	12	2.0	**1.11**	**25**			C	C		2821		-
327	**4.28**	0.55**	15	1.9	**1.07**	**30**			C	C		2818		
257	**5.45**	0.55**	20	2.0	**1.12**	**40**			C	C		2815		
225	**6.23**	0.55**	22	2.0	**1.10**	**45**			C	C		1921		
194	**7.20**	0.55**	26	1.9	**1.06**	**50**			C	C		2812		
181	**7.74**	0.55**	28	1.8	**0.99**	**50**			C	C		1918		
142	**9.85**	0.55**	35	1.7	**0.93**	**60**			C	C		1915	**standard ø16**	
123	**11.42**	0.55**	41	1.5	**0.80**	**60**			C	C		1715		
107	**13.03**	0.55**	47	1.3	**0.70**	**60**			C	C		1912		
93	**15.10**	0.37	37	1.6	**0.61**	**60**			C	C		1712	ø14	
86	**16.20**	0.37	39	1.5	**0.57**	**60**			C	C		1910	ø20	
75	**18.78**	0.37	46	1.3	**0.49**	**60**			C	C		1710	ø25	
66	**21.15**	0.37	51	1.2	**0.43**	**60**			C	C		1312	On request	
64	**21.84**	0.37	53	1.1	**0.42**	**60**			C	C		1015		
53	**26.31**	0.37	64	0.9	**0.35**	**60**			C	C		1310		
48.5	**28.88**	0.37	70	1.0	**0.37**	**70**			C	C		1012		
39	**35.91**	0.37	87	0.8	**0.30**	**70**			C	C		1010		
37.1	**37.69**	0.25	62	1.1	**0.28**	**70**			C	C		912		
29.9	**46.87**	0.25	77	0.9	**0.23**	**70**			C	C		910		
28.1	**49.76**	0.25	81	0.9	**0.21**	**70**			C	C		712		
22.6	**61.89**	0.18	73	1.0	**0.17**	**70**			C	C		710		

**** Concerning a reduced dimensions electric motor.** Riferito a motore con grandezza ridotta

* Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14

* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **202A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **202A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **202A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **202A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 202A Oil Quantity 0.15 Lt.

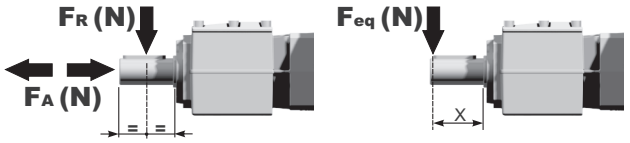
AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

RADIAL AND AXIAL LOADS

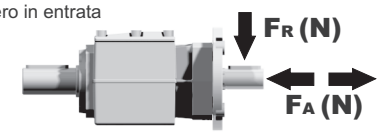
Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{35.7}{X+20.7}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	140	700	**140**	246	1320	**70**	340	1700
250	151	756	**120**	270	1350	**40**	380	1900
200	185	924	**85**	300	1500	**15**	-	-

Input shaft
Albero in entrata



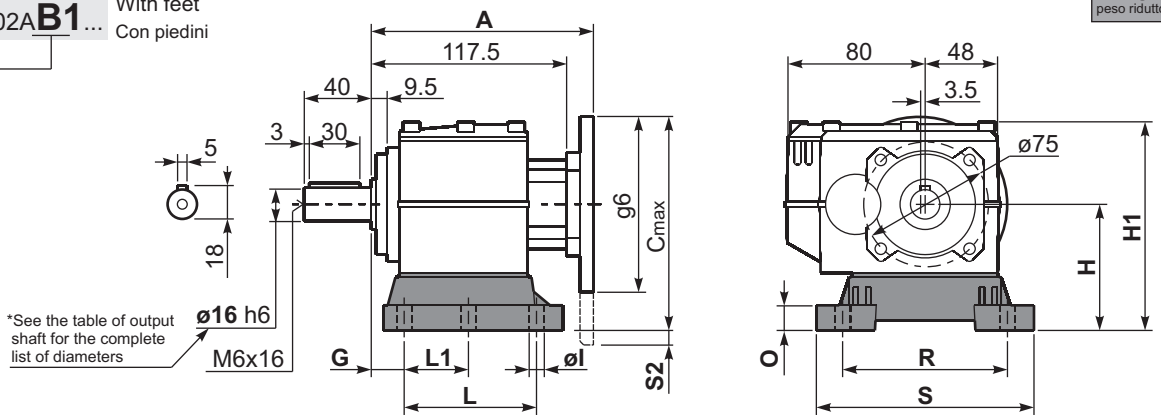
n_1	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

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

Gearbox weight peso riduttore	With flange **3.3 kg**
	With feet **3.7 Kg**

P202A**B1**... With feet / Con piedini



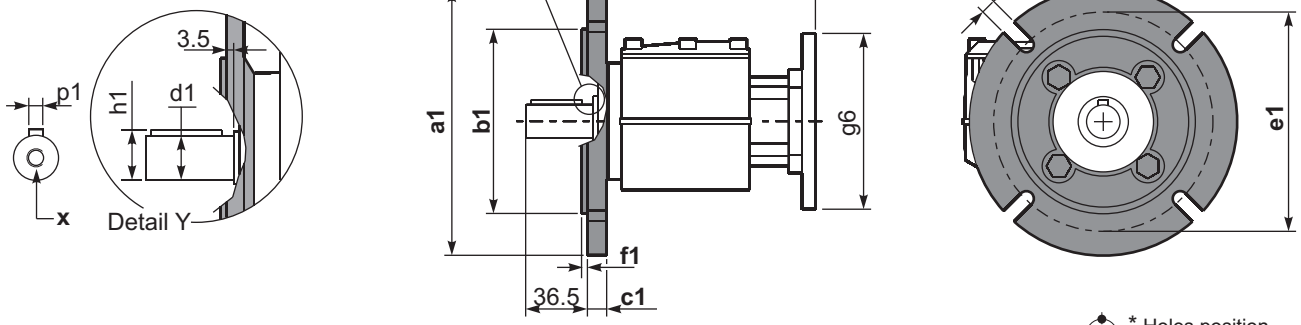
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	125	15	9	5 71B5		KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11			KC30.9.023LM
S1	17-32	18	75	110	110	50	130	115.5	15	9		63B5	KC30.9.024
L3	03	12.5	65	91	60	-	105	149	5	9	11.5 71B5		KC30.9.026LM
L4	04	13	80	105	76	-	132	165	5	9			KC30.9.027LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P202A-**F**... Output flanges / flange di uscita



* Holes position
Posizione fori

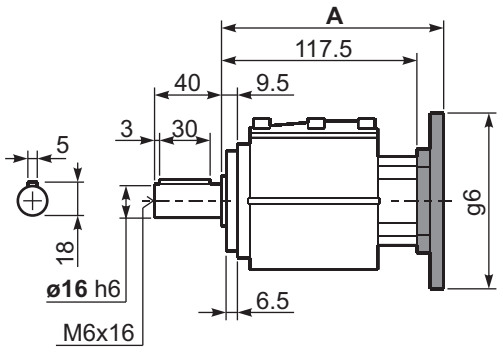
***Available output shaft** / Albero di uscita

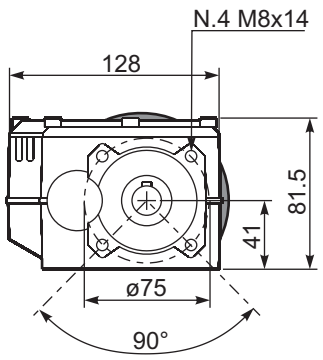
	Shaft - d1	p1	h1	x
Standard	ø 16x40	5	18	M6x16
On request A richiesta	ø 14x30	5	16	M6x16
	ø 20x40	6	22.5	M8x19
	ø 25x50	8	28	M8x19

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
120	80	11.5	100	3	9*	KC30.9.010	With flange and feet only on request. Ask for compatibility
140	95	11.5	115	3	9	KC30.9.011	
160	110	11.5	130	3.5	9	KC30.9.012	
200	130	11.5	165	3.5	11	KC40.9.013	

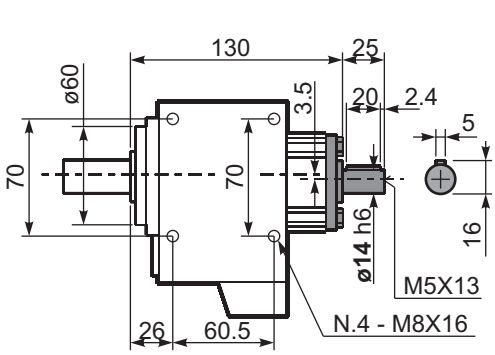
P202A-**N**... Basic gearbox / Riduttore base





B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	133.2	170	140	136.7	K050.4.041
71 B5	131.2	180	160	134.7	K050.4.042

R202A-**N**... Input Shaft / Albero in entrata



B14 Motor Flanges	A	C_{max}	g6	k1	kit code
56 B14	132.7	139	80	136.2	KC40.4.049
63 B14	135.2	146	90	138.7	K050.4.047
71 B14	132.7	152.5	105	136.2	K050.4.045

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft	Ratios code
							63	71*	80*	90*	71	80	90			
407	**3.44**	1.5	34	1.0	**1.5**	**35**	B				C	C		2821		-
327	**4.28**	1.5	42	1.0	**1.4**	**40**	B				C	C		2818		
257	**5.45**	1.5	54	1.0	**1.4**	**52**	B				C	C		2815		
225	**6.23**	1.5	61	1.1	**1.7**	**70**	B				C	C		1921		
194	**7.20**	1.5	71	1.0	**1.5**	**70**	B				C	C		2812		
181	**7.74**	1.5	76	1.1	**1.6**	**80**	B				C	C		1918	**standard**	
142	**9.85**	1.5	97	1.0	**1.5**	**95**	B				C	C		1915	**ø20**	
123	**11.42**	1.5	112	1.0	**1.5**	**115**	B				C	C		1715		
107	**13.03**	1.1	94	1.2	**1.3**	**114**	B				C	C		1912	ø14	
93	**15.10**	1.1	109	1.0	**1.2**	**114**	B				C	C		1712	ø16	
86	**16.20**	0.75	80	1.3	**1.0**	**107**	B				C	C		1910	ø19	
75	**18.78**	0.75	92	1.2	**0.87**	**107**	B				C	C		1710	ø20	
66	**21.15**	0.75	104	1.1	**0.82**	**114**	B				C	C		1312	ø24	
64	**21.84**	0.75	107	1.1	**0.83**	**119**	B				C	C		1015	ø25	
53	**26.31**	0.55	95	1.1	**0.62**	**107**	B				C	C		1310	ø28	
48.5	**28.88**	0.55	104	1.1	**0.60**	**114**	B				C	C		1012	On request	
39	**35.91**	0.37	87	1.2	**0.46**	**107**	B				C	C		1010		
37.1	**37.69**	0.37	91	1.1	**0.41**	**102**	B				C	C		912		
29.9	**46.87**	0.37	114	0.9	**0.35**	**107**	B				C	C		910		
28.1	**49.76**	0.25	81	1.2	**0.31**	**101**	B				C	C		712		
22.6	**61.89**	0.25	101	1.1	**0.26**	**107**	B				C	C		710		

The dynamic efficiency is **0.96** for all ratios

*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14
* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **302A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **302A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **302A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **302A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 302A Oil Quantity 0.15 Lt.

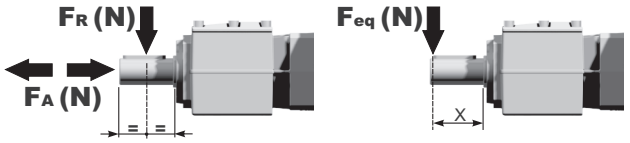
AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

RADIAL AND AXIAL LOADS

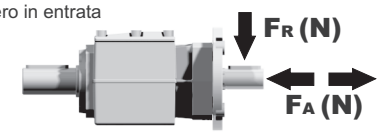
Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{35.7}{X+20.7}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	140	700	**140**	246	1320	**70**	340	1700
250	151	756	**120**	270	1350	**40**	380	1900
200	185	924	**85**	300	1500	**15**	-	-

Input shaft
Albero in entrata



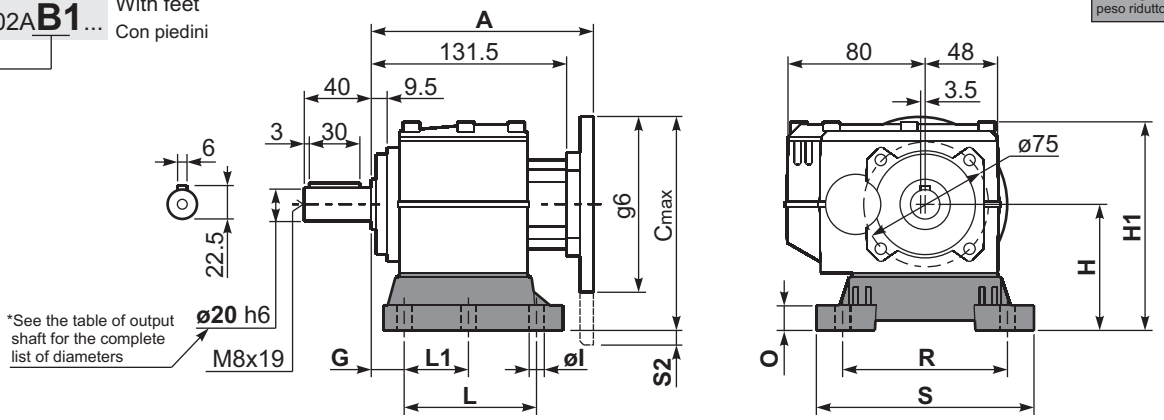
n_1	FA	FR
1400	226	1130
900	264	1320
500	322	1610

tab. 2

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

Gearbox weight peso riduttore	With flange **3.5 kg**
	With feet **4.0 Kg**

P302A**B1**... With feet / Con piedini



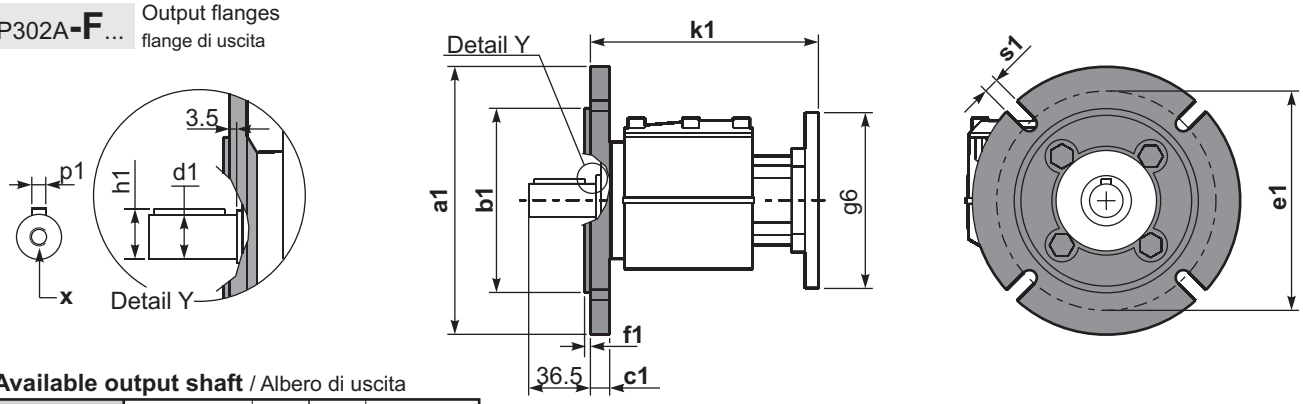
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	125	15	9	15 80/90B5		KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	3.5 80/90B5		KC30.9.023LM
S1	17-32	18	75	110	110	50	130	115.5	15	9	5 71B5	71B5	KC30.9.024
S2	27	25	90	110	130	-	130	135	5	9			KC30.9.025LM
L3	03	12.5	65	91	60	-	105	149	5	9	31.5 80/90B5		KC30.9.026LM
L4	04	13	80	105	76	-	132	165	5	9	16.5 80/90B5		KC30.9.027LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P302A-**F**... Output flanges / flange di uscita



***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 20x40	6	22.5	M8x19
On request A richiesta	ø 14x30	5	16	M6x16
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x50	8	31	M8x19

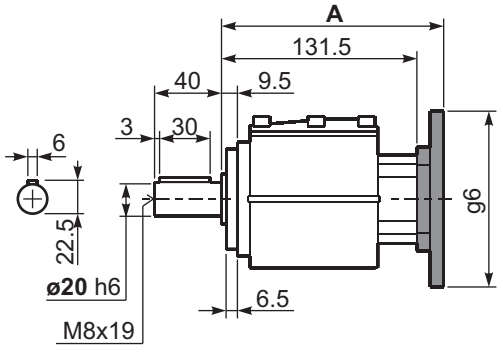
* Holes position
Posizione fori

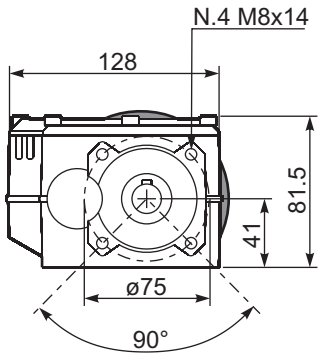
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC40.9.013

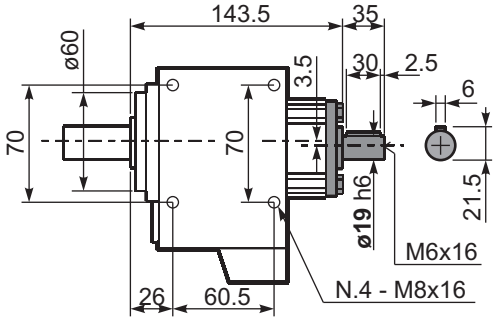
With flange and feet only on request. Ask for compatibility

P302A-**N**... Basic gearbox / Riduttore base





R302A-**N**... Input Shaft / Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	151.7	170	140	155.2	K063.4.041
71 B5	152.2	180	160	155.7	K063.4.042
80/90 B5	151.2	200	200	154.7	K063.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B14	149.7	152.5	105	153.2	K063.4.047
80 B14	150.7	160	120	154.2	K063.4.046
90 B14	151.7	170	140	155.2	K063.4.041

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B 63	C 71	D 80*	E 90*	Available B14 motor flanges Q 71	R 80	T 90	U 100 112		Output Shaft ø	Ratios code
398	**3.52**	3	69	1.2	**3.5**	**80**	B				C	C			2821		-
320	**4.37**	3	86	1.0	**3.1**	**90**	B				C	C			2818		
252	**5.55**	3	109	0.9	**2.8**	**100**	B				C	C			2813		
220	**6.36**	2.2	92	1.0	**2.3**	**95**	B				C	C			1921		
191	**7.33**	2.2	106	1.1	**2.5**	**120**	B				C	C			2812		
177	**7.89**	2.2	114	1.1	**2.3**	**120**	B				C	C			1918		
139	**10.06**	2.2	145	1.0	**2.3**	**150**	B				C	C			1913		
120	**11.66**	1.5	114	1.5	**2.3**	**174**	B				C	C			1713	**standard ø25**	
106	**13.26**	1.5	130	1.2	**1.8**	**160**	B				C	C			1912		
102	**13.68**	1.5	134	1.1	**1.6**	**144**	B				C	C			1513	ø14	
91	**15.37**	1.5	151	1.1	**1.6**	**160**	B				C	C			1712	ø16	
86	**16.20**	1.5	159	0.9	**1.3**	**138**	B				C	C			1910	ø19	
78	**18.04**	1.5	177	0.9	**1.4**	**160**	B				C	C			1512	ø20	
74	**18.80**	1.1	135	1.0	**1.1**	**138**	B				C	C			1710	ø24	
65	**21.54**	1.1	155	1.0	**1.1**	**160**	B				C	C			1312	On request	
63	**22.29**	1.1	161	1.0	**1.1**	**167**	B				C	C			1013		
53	**26.30**	0.75	129	1.1	**0.80**	**138**	B				C	C			1310		
47.6	**29.40**	0.75	144	1.1	**0.83**	**160**	B				C	C			1012		
39	**35.91**	0.55	129	1.1	**0.59**	**138**	B				C	C			1010		
36.5	**38.37**	0.55	138	1.2	**0.64**	**160**	B				C	C			912		
29.9	**46.86**	0.55	169	0.8	**0.45**	**138**	B				C	C			910		
27.6	**50.67**	0.37	123	1.1	**0.40**	**132**	B				C	C			712		
22.6	**61.88**	0.37	150	0.9	**0.34**	**138**	B				C	C			710		

The dynamic efficiency is **0.96** for all ratios

*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14
* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **402A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **402A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **402A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **402A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.25 LT	0.30 LT	0.40 LT	0.40 LT	0.40 LT	0.50 LT	0.40 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

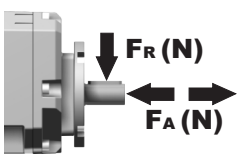
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	310	1550	**140**	406	2030	**70**	540	2700
250	330	1650	**120**	448	2240	**40**	600	3000
200	360	1800	**85**	480	2400	**15**	600	3000

Input shaft
Albero in entrata



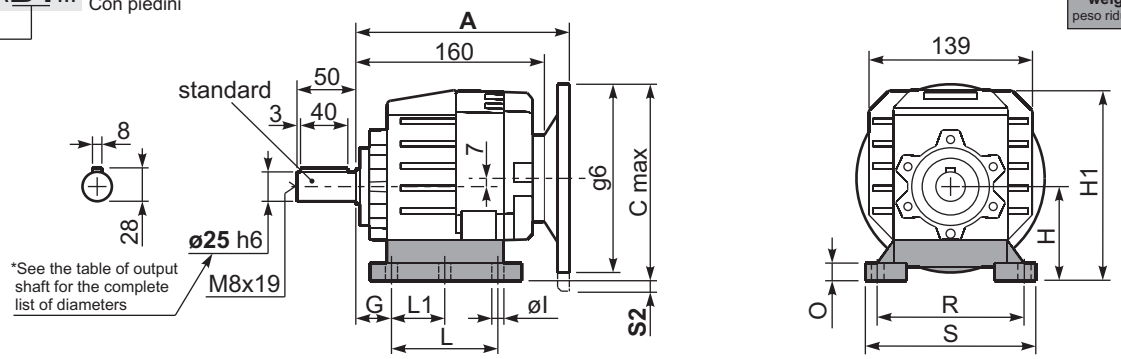
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

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

P402A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	With flange **5.7 kg**
	With feet **5.9 Kg**



Feet / piedini

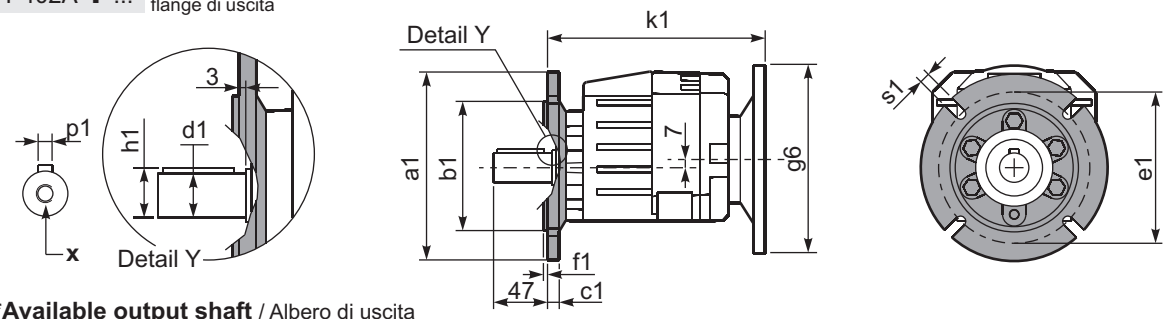
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167	15	-	8 80/90B5	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	-	-	KC40.9.025
S1	17	18	75	110	90÷110	50	145	155	15	9	18 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172	20	9	3 80/90B5	-	KC40.9.024
M1	42/3	25	80	110÷120	85	-	145	162	15	9	13 80/90B5	-	KC40.9.023
L4	04	13	80	105	76	-	132	162	5	10	13 80/90B5	-	KC35.9.023LM
L5	05	16	100	125	90	-	150	182	6	12	-	-	KC40.9.027LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P402A**-F**... Output flanges
flange di uscita

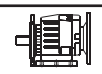


***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 20x40	6	22.5	M8x19
	ø 24x50	8	27	M8x19

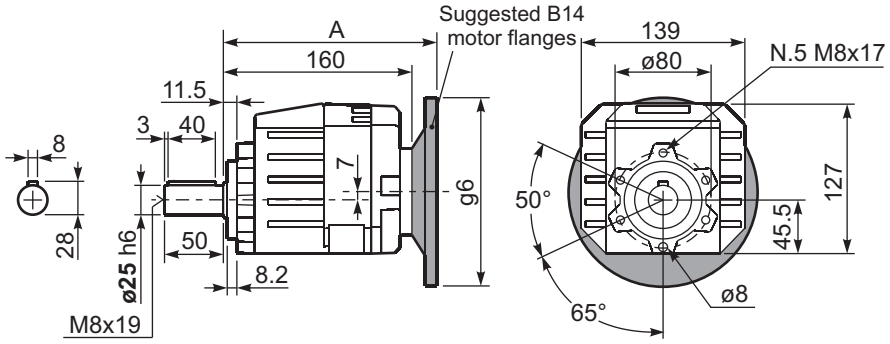
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3	9	KC40.9.012
200	130	11	165	3.5	11	KC40.9.013
250	180	11.5	215	3.5	14	KC40.9.014

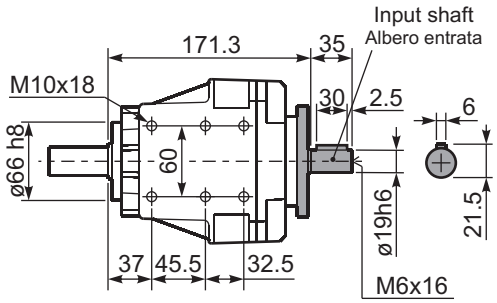


With flange and feet only on request. Ask for compatibility

P402A**-N**... Basic gearbox
Riduttore base



R402A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	180.5	162	140	183.5	K063.4.041
71 B5	178.5	170	160	181.5	K063.4.042
80/90 B5	180.5	190	200	183.5	K063.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B14	178.5	142.5	105	181.5	K063.4.047
80 B14	179.5	150	120	182.5	K063.4.046
90 B14	180.5	160	140	183.5	K063.4.041
100/112 B14	196.5	170	160	199.5	KC40.4.041

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Output Shaft ø	Ratios code
							63	71	56	63	71			
36.5	**38.40**	0.37	90	1.9	**0.72**	**175**			C	C		171713		-
32.0	**43.69**	0.37	103	1.5	**0.54**	**149**			C	C		191712		
27.6	**50.64**	0.37	119	1.3	**0.50**	**160**			C	C		171712		
26.2	**53.36**	0.37	125	1.1	**0.41**	**138**			C	C		191710		
22.9	**61.22**	0.37	144	1.1	**0.41**	**160**			C	C		191312	**standard ø25**	
22.6	**61.90**	0.37	146	0.9	**0.35**	**138**			C	C		171710		
19.7	**70.95**	0.37	167	1.0	**0.36**	**160**			C	C		131712	ø14	
19.1	**73.43**	0.37	172	1.0	**0.38**	**175**			C	C		101713	ø16	
18.8	**74.77**	0.25	118	1.2	**0.29**	**138**			C	C		191310	ø19	
16.1	**86.66**	0.25	138	1.0	**0.25**	**138**			C	C		131710	ø20	
14.5	**96.85**	0.25	154	1.0	**0.26**	**160**			C	C		101712	ø24	
13.6	**102.89**	0.25	163	1.1	**0.28**	**180**			C	C		101313	On request	
11.1	**126.40**	0.25	200	0.8	**0.20**	**160**			C	C		91712		
10.3	**135.69**	0.25	215	0.7	**0.19**	**160**			C	C		101312		
8.5	**165.70**	0.12	126	1.1	**0.13**	**138**			C	C		101310		
7.9	**177.09**	0.12	135	1.2	**0.14**	**160**			C	C		91312		
6.5	**216.30**	0.12	164	0.8	**0.10**	**138**			C	C		91310		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **403A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **403A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **403A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **403A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

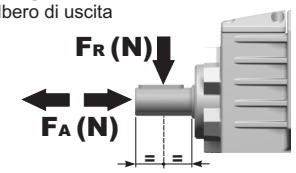
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 **B3**	 **B6**	 **B7**	 **B8**	 **V5**	 **V6**	 **V8**
0.30 LT	0.35 LT	0.45 LT	0.45 LT	0.45 LT	0.55 LT	0.45 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

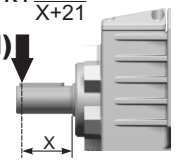
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

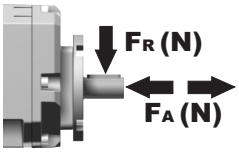


$F_{eq} = F_R \cdot \frac{46}{X+21}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	310	1550	**140**	406	2030	**70**	540	2700
250	330	1650	**120**	448	2240	**40**	600	3000
200	360	1800	**85**	480	2400	**15**	600	3000

Input shaft
Albero in entrata



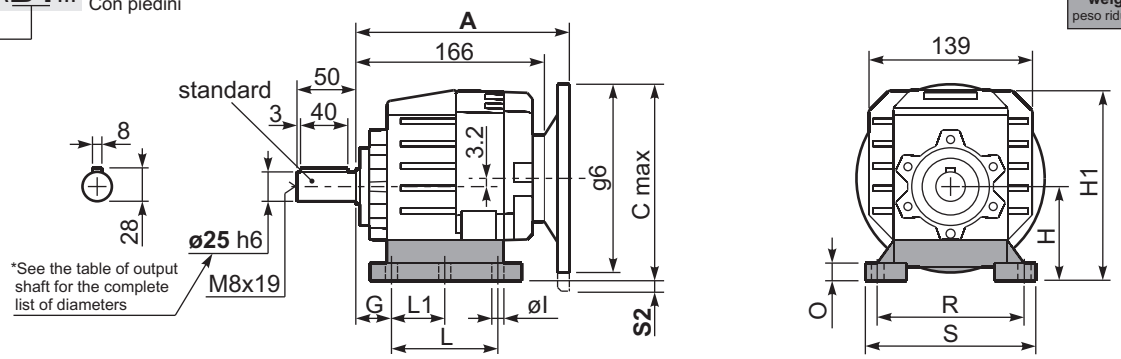
n_1	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

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

P403A**B1**... With feet
Con piedini

Gearbox weight peso riduttore	With flange **6.1 kg**
	With feet **6.3 Kg**



Feet / piedini

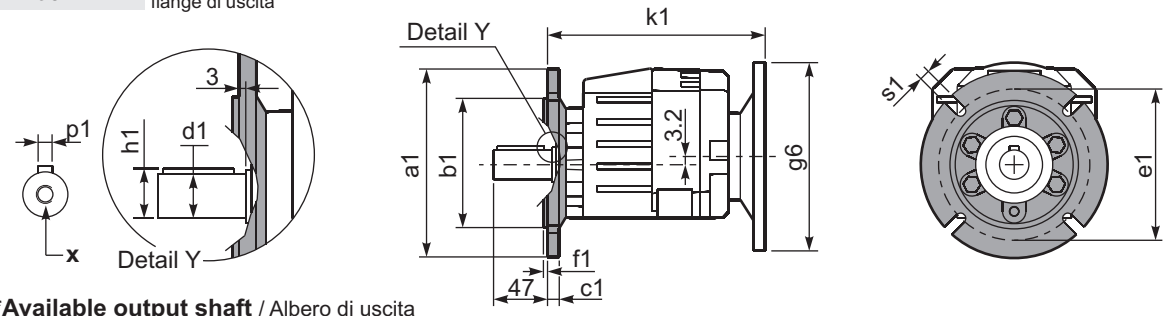
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167	15	-	8 80/90B5	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	-	-	KC40.9.025
S1	17	18	75	110	90÷110	50	145	155	15	9	18 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172	20	9	3 80/90B5	-	KC40.9.024
M1	42/3	25	80	110÷120	85	-	145	162	15	9	13 80/90B5	-	KC40.9.023
L4	04	13	80	105	76	-	132	162	5	10	13 80/90B5	-	KC35.9.023LM
L5	05	16	100	125	90	-	150	182	6	12	-	-	KC40.9.027LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P403A**-F**... Output flanges
flange di uscita



***Available output shaft** / Albero di uscita

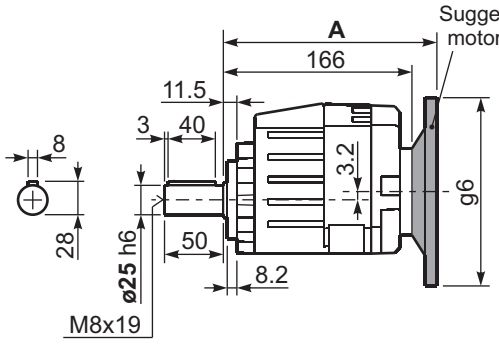
	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 20x40	6	22.5	M8x19
	ø 24x50	8	27	M8x19

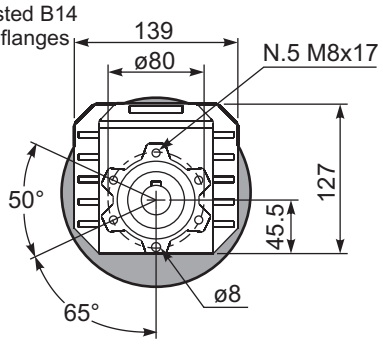
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3	9	KC40.9.012
200	130	11	165	3.5	11	KC40.9.013
250	180	11.5	215	3.5	14	KC40.9.014

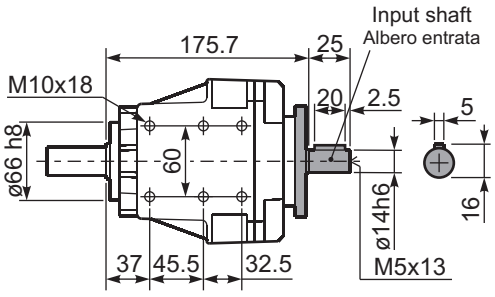
With flange and feet only on request. Ask for compatibility

P403A**-N**... Basic gearbox
Riduttore base





R403A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	182.5	201.2	140	185.5	K050.4.041
71 B5	180.5	211.2	160	183.5	K050.4.042

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
56 B14	186.5	170.2	80	189.5	KC40.4.049
63 B14	181.5	176.2	90	184.5	K050.4.047
71 B14	182	183.7	105	185	K050.4.045

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C 71	D 80	E 90	F 100* 112	Available B14 motor flanges R 80	T 90	U 100 112	V 132		Output Shaft ø	Ratios code
388	**3.61**	4	95	1.6	6.3	150	B								3018		-
331	**4.23**	4	111	1.5	6.1	170	B								3016		
279	**5.01**	4	131	1.5	6.1	200	B								3014		
231	**6.07**	4	159	1.6	6.3	250	B								3012		
206	**6.81**	4	178	1.6	6.2	277	B								2018		
176	**7.96**	4	209	1.4	5.8	300	B								2016	**standard ø30**	
148	**9.45**	4	248	1.2	4.9	304	B								2014		
122	**11.43**	4	299	1.0	4.0	300	B								2012		
99	**14.21**	3	279	0.9	2.8	265	B								2010	ø24	
84	**16.62**	3	327	0.9	2.8	304	B								1314	ø25	
70	**20.10**	2.2	290	1.0	2.3	300	B								1312	ø28	
56	**24.98**	1.85	303	0.9	1.6	265	B								1310	ø35	
47.6	**29.41**	1.5	289	1.1	1.6	304	B								814	On request	
39.3	**35.58**	1.5	349	0.9	1.3	300	B								812		
34.6	**40.50**	1.1	292	1.0	1.1	290	B								614		
31.7	**44.22**	1.1	319	0.8	0.92	265	B								810		
28.6	**49.00**	0.75	241	1.2	0.93	300	B								612		
23.0	**60.90**	0.75	299	0.9	0.66	265	B								610		

The dynamic efficiency is **0.96** for all ratios

*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14
* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

Motor Flanges Available Flange Motore Disponibili

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

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

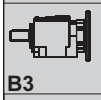
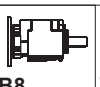
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **452A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **452A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **452A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **452A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

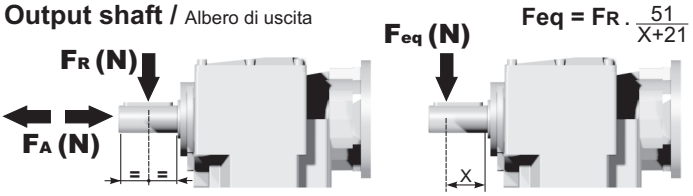
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 **B3**	 **B6**	 **B7**	 **B8**	 **V5**	 **V6**	 **V8**
0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT
AGIP Telium VSF 320	**BP** Energol SGXP220	**SHELL** Tivela Oil WB	**KLUBER** Syntheso D220 EP	**MOBIL** Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

Feq = FR . 51/(X+21)

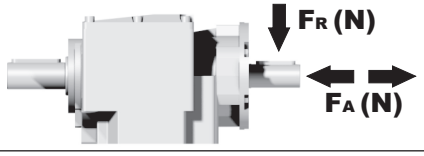


n_2	FA	FR
300	415	2070
250	430	2160
200	470	2340

n_2	FA	FR
140	540	2700
120	560	2790
85	630	3150

n_2	FA	FR
70	700	3510
40	810	4050
15	900	4500

Input shaft / Albero in entrata

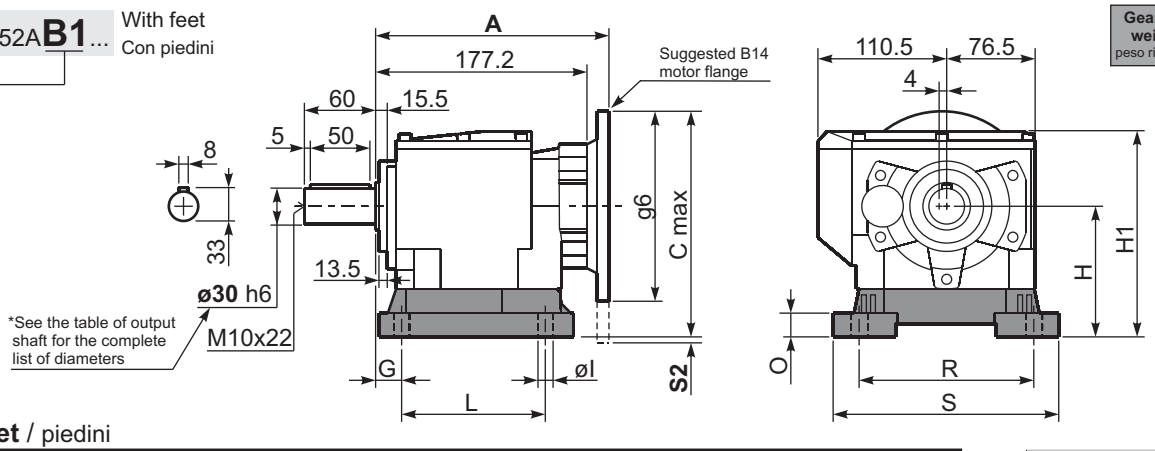


n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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

P452A**B1**... With feet
Con piedini



Gearbox weight / peso riduttore: With flange **8.7 kg**, With feet **8.9 Kg**

Feet / piedini

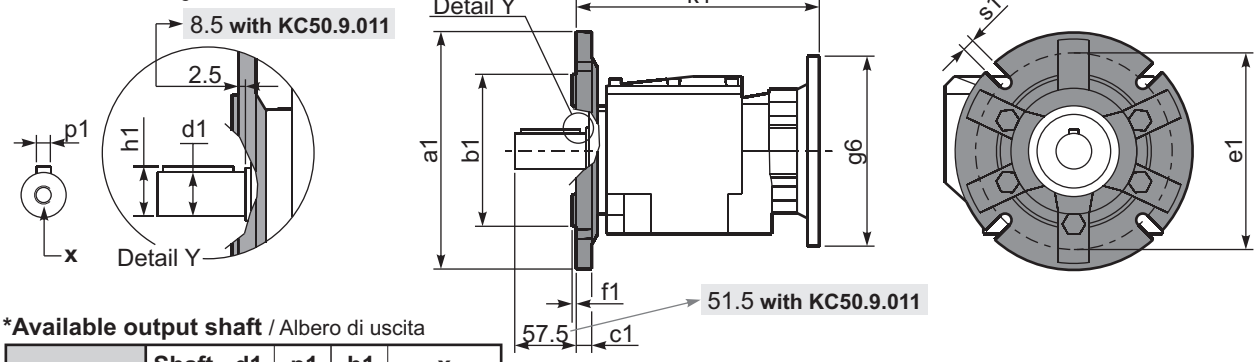
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	162	20	11	15 100/112B5		KC50.9.024
B4	30/35	20	130	180	149.5	216	182	18	14			KC60.9.024
S4	47-57	30	115	135	165	170	167	24	13.5		80/90B5	KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14			KC50.9.025
M2	52/3	30	110	135÷150	100	190	162	18	11	15 100/112B5		KC50.9.023
L6	06	19	125	160	106	205	177	8	14			KC50.9.026LM
E2	2202/3	13	100	135	192	164	152	6	14		71B5	KC50.9.027LM
P4	142	35	142	130	145	160	194	8	14		80/90B5	KC50.9.028LM
J3	4100-05G	25	100	150	90	180	152	8	14	25 100/112B5		KC50.9.029LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P452A-**F**... Output flanges
flange di uscita



***Available output shaft** / Albero di uscita

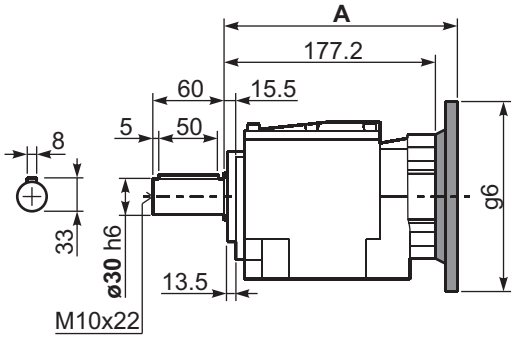
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

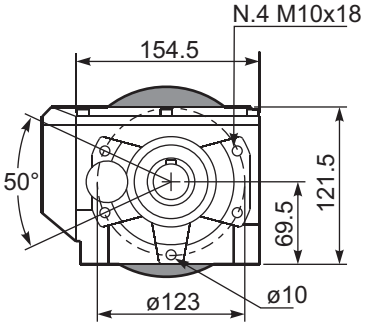
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

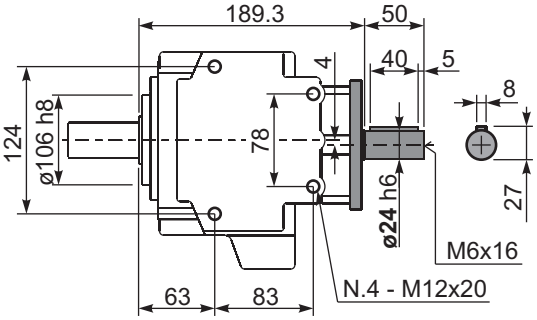
With flange and feet only on request. Ask for compatibility

P452A-**N**... Basic gearbox
Riduttore base





R452A-**N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
71 B5	195.7	222	160	198.2	KC023.4.041	204.2
80/90 B5	197.7	242	200	200.2	KC023.4.042	206.2
100/112 B5	203.7	267	250	206.2	KC023.4.043	212.2

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
80 B14	195.7	202	120	198.2	KC085.4.046	204.2
90 B14	195.7	212	140	198.2	KC085.4.045	204.2
100/112 B14	206.7	222	160	209.2	KC085.4.047	215.2
132 B14	225.2	242	200	227.7	KC50.4.041	233.7

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C 71	D 80	E 90	F 100* 112	Available B14 motor flanges R 80	T 90	U 100 112	V 132		Output Shaft ø	Ratios code
388	**3.61**	5.5	130	1.2	6.3	150	B								3018		-
331	**4.23**	5.5	152	1.1	6.1	170	B								3016		
279	**5.01**	5.5	180	1.1	6.1	200	B								3014		
231	**6.07**	5.5	219	1.1	6.3	250	B								3012		
206	**6.81**	5.5	245	1.2	6.7	300	B								2018		
176	**7.96**	5.5	287	1.2	6.3	330	B								2016		
148	**9.45**	5.5	340	1.0	5.7	354	B								2014	**standard ø30**	
122	**11.43**	4	299	1.1	4.4	326	B								2012		
99	**14.21**	3	279	0.9	2.7	250	B								2010		
84	**16.62**	3	327	1.1	3.3	354	B								1314	ø24	
70	**20.10**	2.2	290	1.1	2.5	326	B								1312	ø25	
57	**24.61**	2.2	354	0.9	2.0	326	B								1112	ø28	
56	**24.98**	1.5	245	1.0	1.5	250	B								1310	ø35	
47.6	**29.41**	1.5	289	1.2	1.8	354	B								814	On request	
39.3	**35.58**	1.5	349	0.9	1.4	326	B								812		
34.6	**40.50**	1.1	292	1.0	1.1	295	B								614		
31.7	**44.23**	1.1	319	0.8	0.86	250	B								810		
28.6	**49.00**	1.1	353	0.9	1.0	326	B								612		
23.0	**60.90**	0.75	299	0.8	0.63	250	B								610		

The dynamic efficiency is **0.96** for all ratios

*Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14
* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **502A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **502A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **502A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **502A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.45 LT	0.55 LT	1.00 LT	1.10 LT	1.10 LT	1.15 LT	1.10 LT

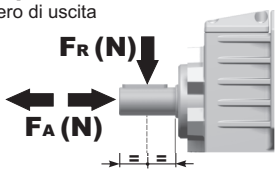
AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

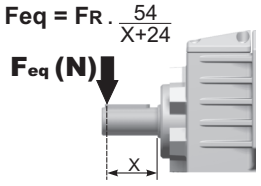
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{54}{X+24}$$



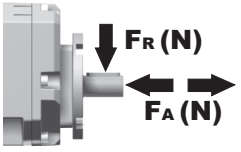


n_2	FA	FR
300	460	2300
250	480	2400
200	520	2600

n_2	FA	FR
140	600	3000
120	620	3100
85	700	3500

n_2	FA	FR
70	780	3900
40	900	4500
15	1000	5000

Input shaft
Albero in entrata



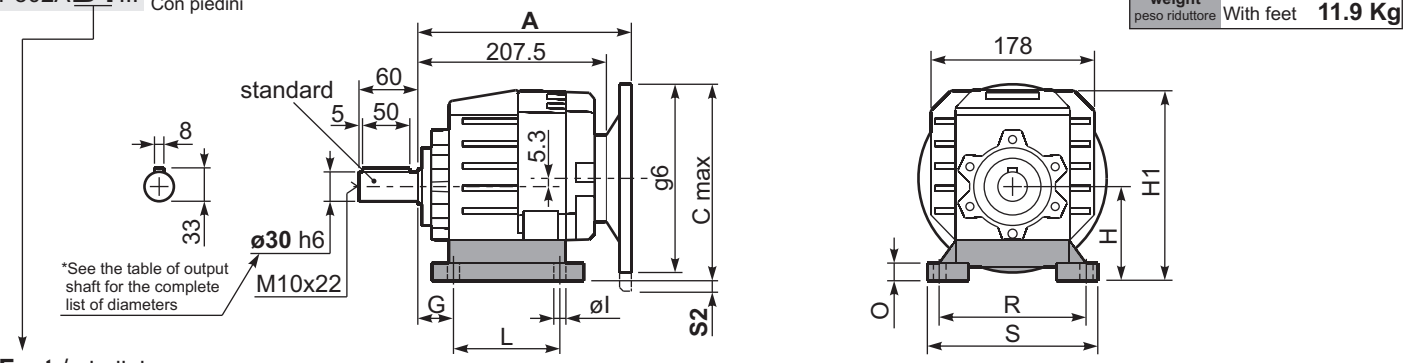
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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

P502A**B1**... With feet / Con piedini

Gearbox weight / peso riduttore: With flange **11.7 kg** / With feet **11.9 Kg**



Feet / piedini

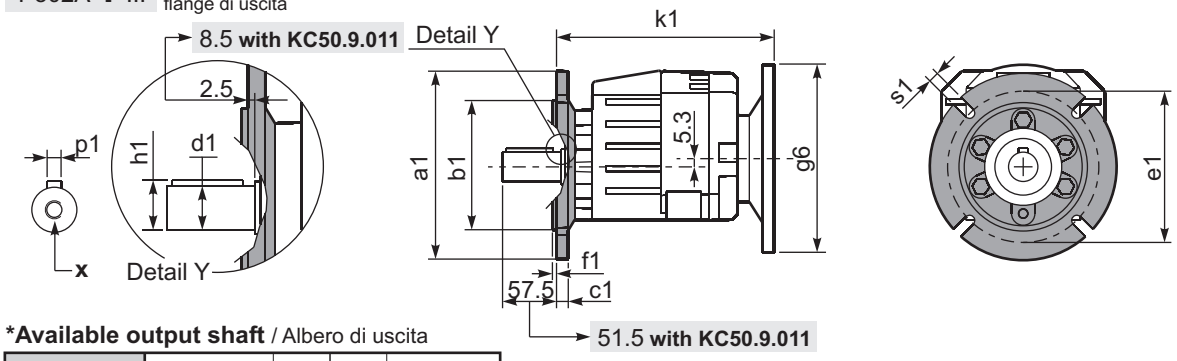
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	10 100/112B5		KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14			KC60.9.024
S4	47-57	30	115	135	165	170	216.5	24	13.5	5 100/112B5		KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14			KC50.9.025
M2	52/3	30	110	135÷150	100	190	226.5	18	11			KC50.9.023
L6	06	19	125	160	106	205	201.5	8	14		80/90B5	KC50.9.026LM
E2	2202/3	13	100	135	192	164	201.5	6	14	10 100/112B5		KC50.9.027LM
P4	142	35	142	130	145	160	243.5	8	14			KC50.9.028LM
J3	4100-05G	25	100	150	90	180	201.5	8	14	20 100/112B5		KC50.9.029LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P502A-**F**... Output flanges / flange di uscita



***Available output shaft** / Albero di uscita

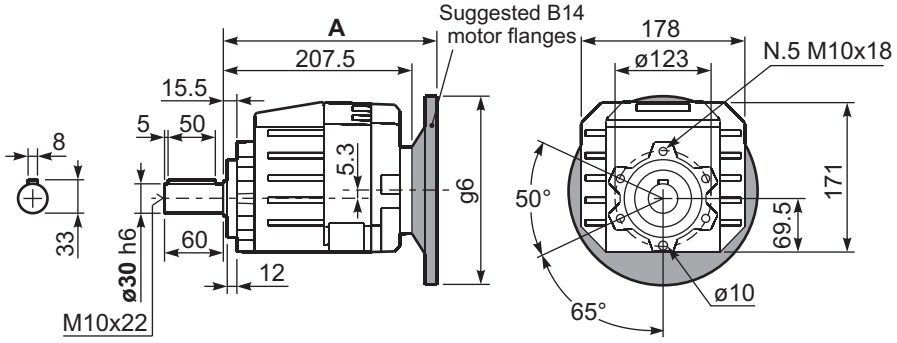
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request / A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

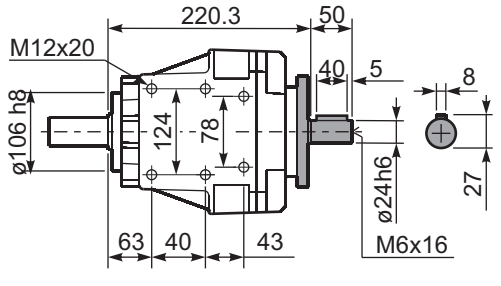
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request. Ask for compatibility

P502A-**N**... Basic gearbox / Riduttore base



R502A-**N**... Input Shaft / Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
71 B5	226	227.3	160	228.5	KC023.4.041	234.5
80/90 B5	228	247.3	200	230.5	KC023.4.042	236.5
100/112 B5	234	272.3	250	236.5	KC023.4.043	242.5

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
80 B14	226	207.3	120	228.5	KC085.4.046	234.5
90 B14	226	217.3	140	228.5	KC085.4.045	234.5
100/112 B14	240.7	227.3	160	243.2	KC085.4.047	249.2
132 B14	261.5	247	200	264	KC50.4.041	270

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B 63	C 71	D 80	E 90	Available B14 motor flanges Q 71	R 80	T 90		Output Shaft ø	Ratios code
35.2	**39.79**	1.1	278	1.3	**1.5**	373	B				C	C		191316		-
29.6	**47.22**	1.1	330	1.1	**1.2**	354	B				C	C		191314		
25.6	**54.73**	1.1	382	0.9	**1.0**	354	B				C	C		171314		
21.1	**66.22**	0.75	315	1.0	**0.78**	326	B				C	C		171312		
18.3	**76.69**	0.75	365	1.0	**0.73**	354	B				C	C		131314		
16.7	**83.59**	0.55	292	1.2	**0.67**	354	B				C	C		190814	**standard ø30**	
15.1	**92.78**	0.55	324	1.0	**0.55**	326	B				C	C		131312		
13.4	**104.67**	0.55	365	1.0	**0.53**	354	B				C	C		101314		
11.9	**117.22**	0.37	275	1.2	**0.44**	326	B				C	C		170812	ø24	
11.1	**126.65**	0.37	297	1.1	**0.41**	326	B				C	C		101312	ø25	
10.2	**136.62**	0.37	321	1.1	**0.41**	354	B				C	C		91314	ø28	
8.5	**165.29**	0.25	262	1.2	**0.31**	326	B				C	C		91312	ø35	
7.8	**180.40**	0.25	286	1.2	**0.31**	354	B				C	C		71314	On request	
6.4	**218.26**	0.25	346	0.9	**0.24**	326	B				C	C		71312		
5.8	**241.82**	0.25	384	0.9	**0.23**	354	B				C	C		90814		
4.8	**292.57**	0.18	334	1.0	**0.18**	326	B				C	C		90812		
4.4	**319.32**	0.18	365	1.0	**0.17**	354	B				C	C		70814		
3.6	**386.33**	0.18	441	0.7	**0.13**	326	B				C	C		70812		
2.9	**480.16**	0.18	548	0.5	**0.08**	250	B				C	C		70810		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **503A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **503A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **503A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **503A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

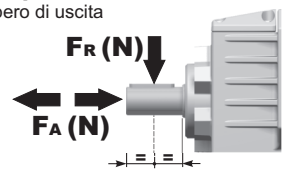
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.75 LT	0.75 LT	1.05 LT	1.15 LT	1.20 LT	1.20 LT	1.20 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

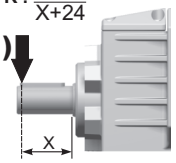
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$Feq = FR \cdot \frac{54}{X+24}$

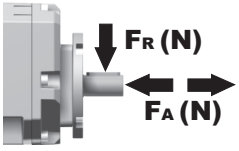


n_2	FA	FR
300	460	2300
250	480	2400
200	520	2600

n_2	FA	FR
140	600	3000
120	620	3100
85	700	3500

n_2	FA	FR
70	780	3900
40	900	4500
15	1000	5000

Input shaft
Albero in entrata



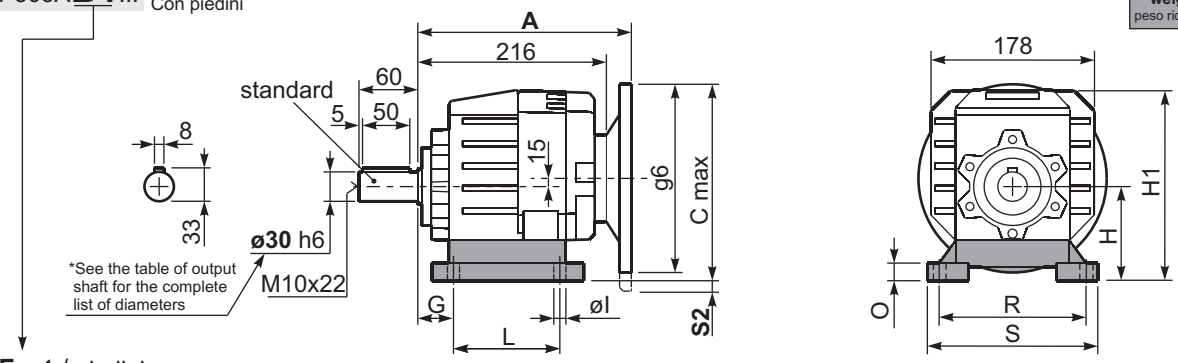
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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

P503A**B1**... With feet / Con piedini

Gearbox weight / peso riduttore	
With flange	**11.9 kg**
With feet	**12.1 Kg**



Feet / piedini

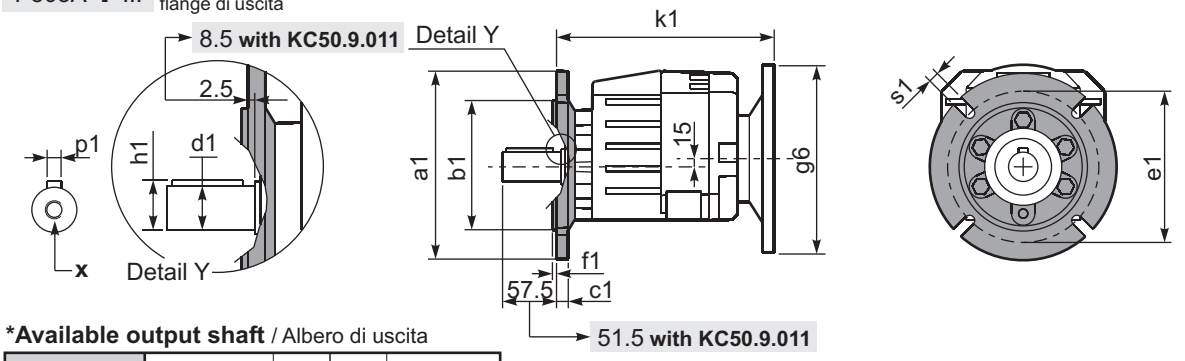
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	10 100/112B5		KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14			KC60.9.024
S4	47-57	30	115	135	165	170	216.5	24	13.5	5 100/112B5		KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14			KC50.9.025
M2	52/3	30	110	135÷150	100	190	226.5	18	11			KC50.9.023
L6	06	19	125	160	106	205	201.5	8	14		80/90B5	KC50.9.026LM
E2	2202/3	13	100	135	192	164	201.5	6	14	10 100/112B5		KC50.9.027LM
P4	142	35	142	130	145	160	243.5	8	14			KC50.9.028LM
J3	4100-05G	25	100	150	90	180	201.5	8	14	20 100/112B5		KC50.9.029LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P503A**-F**... Output flanges / flange di uscita



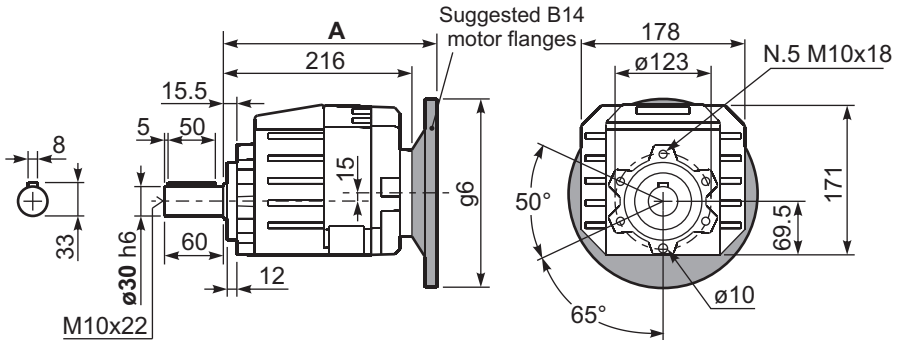
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request / A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

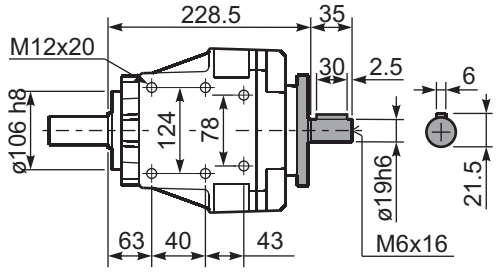
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	9	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P503A**-N**... Basic gearbox / Riduttore base



R503A**-N**... Input Shaft / Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
63 B5	236.5	227	140	239	K063.4.041	245
71 B5	234.5	237	160	237	K063.4.042	243
80/90 B5	236.5	257	200	239	K063.4.043	245

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
71 B14	234.5	209.5	105	237	K063.4.047	243
80 B14	235.5	217	120	238	K063.4.046	244
90 B14	236.5	227	140	239	K063.4.041	245

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C 71	D 80	E 90	F 100 112	Available B14 motor flanges R 80	T 90	U 100 112	V 132		Output Shaft ø	Ratios code
388	**3.61**	7.5	177	0.9	**7.0**	**165**	B								3018		-
331	**4.23**	7.5	208	1.0	**7.2**	**200**	B								3016		
279	**5.01**	7.5	246	1.0	**7.3**	**240**	B								3014		
231	**6.07**	7.5	298	0.9	**6.8**	**270**	B								3012		
206	**6.81**	5.5	245	1.4	**7.6**	**340**	B								2018		
176	**7.96**	5.5	287	1.3	**7.1**	**370**	B								2016		
148	**9.45**	5.5	340	1.2	**6.5**	**400**	B								2014	**standard ø35**	
122	**11.43**	5.5	412	1.0	**5.3**	**400**	B								2012		
99	**14.21**	4	372	1.1	**4.3**	**400**	B								2010		
84	**16.62**	4	435	1.2	**4.6**	**501**	B								1314	ø28 ø30 ø38 ø40	
70	**20.10**	4	527	0.9	**3.8**	**499**	B								1112		
57	**24.61**	3	483	1.0	**3.1**	**492**	B								1312		
56	**24.98**	3	491	0.8	**2.4**	**400**	B								1310	On request	
47.6	**29.41**	2.2	424	1.0	**2.3**	**440**	B								814		
39.3	**35.58**	1.85	431	1.2	**2.1**	**499**	B								812		
34.6	**40.50**	1.1	292	1.1	**1.2**	**310**	B								614		
31.7	**44.23**	1.5	434	0.9	**1.4**	**400**	B								810		
28.6	**49.00**	1.1	353	1.0	**1.1**	**368**	B								612		
23.0	**60.90**	1.1	439	0.9	**1.0**	**400**	B								610		

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **602A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **602A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **602A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **602A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

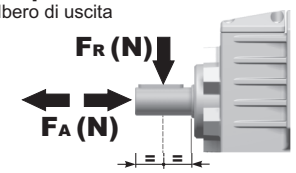
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.55 LT	0.85 LT	1.10 LT	1.20 LT	1.20 LT	1.25 LT	1.20 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

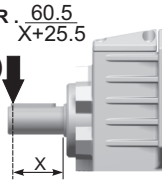
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

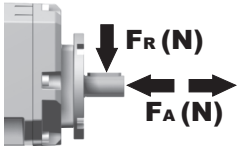


$Feq = FR \cdot \frac{60.5}{X+25.5}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	560	2800	**140**	740	3700	**70**	890	4200
250	600	3000	**120**	760	3800	**40**	1160	5800
200	640	3200	**85**	840	4000	**15**	1300	6500

Input shaft
Albero in entrata



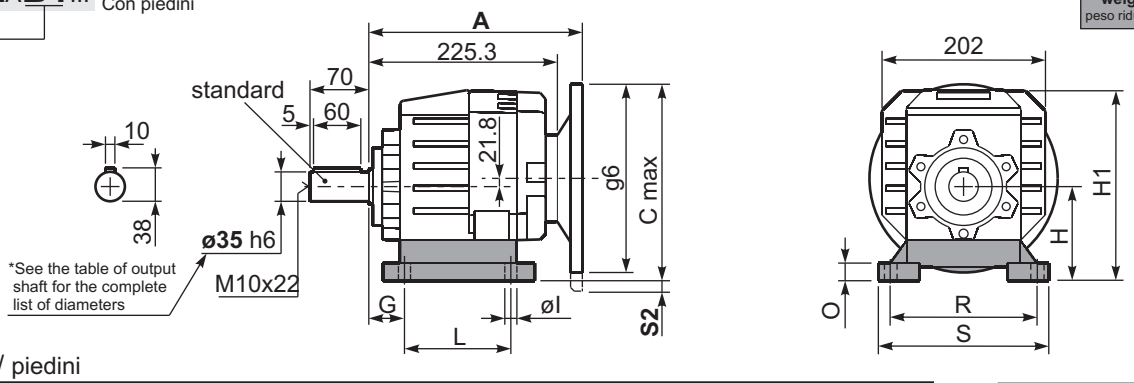
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

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

P602A**B1**... With feet
Con piedini

Gearbox weight / peso riduttore: With flange **14.1 kg**, With feet **14.5 Kg**



Feet / piedini

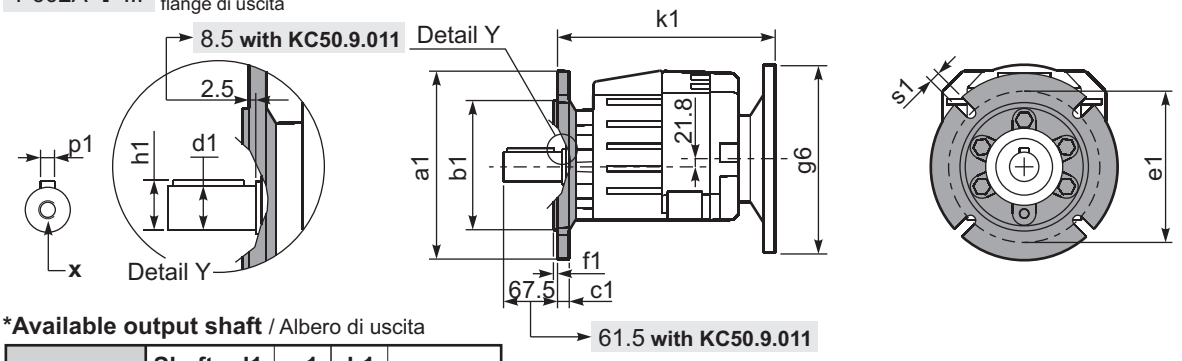
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	233	18	14	-		KC60.9.024
S4	47-57	30	115	135	165	170	218	24	13.5	-		KC50.9.022
M3	62/3	35	120	170÷185	110	230	223	20	14	-		KC60.9.023
S7	77	35	140	170	205	204	243	8	14	-		KC60.9.029LM
H4	024-243	35	155	170	150	225	258	30	14	-	100/112 B5	KC60.9.025
L6	06	19	125	160	106	205	228	8	14	-		KC50.9.026LM
E3	2302/3	19.5	125	170	240	205	228	8	14	-		KC60.9.026LM
P6	162	40	162	160	205	200	265	8	14	-		KC60.9.027LM
J4	4110G	27	120	190	115	225	223	8	14	-		KC60.9.028LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P602A**-F**... Output flanges
flange di uscita



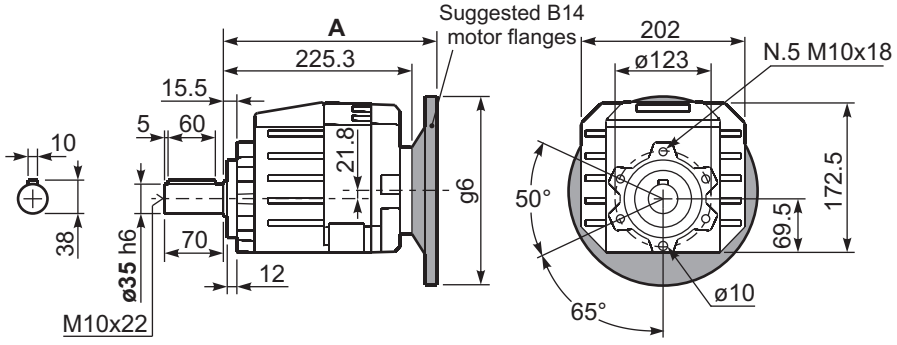
***Available output shaft** / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

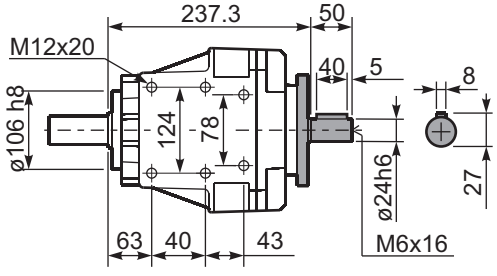
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	9	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P602A**-N**... Basic gearbox
Riduttore base



R602A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
71 B5	243.8	263.8	160	246.3	KC023.4.041	252.3
80/90 B5	245.8	283.8	200	248.3	KC023.4.042	254.3
100/112 B5	251.8	308.8	250	254.3	KC023.4.043	260.3

B14 Motor Flanges	A	C_{max}	g6	k1	kit code	**k1** with KC50.9.011
80 B14	243.8	243.8	120	246.3	KC085.4.046	252.3
90 B14	243.8	253.8	140	246.3	KC085.4.045	252.3
100/112 B14	258.5	263.8	160	261	KC085.4.047	267
132 B14	279.5	283.8	200	282	KC50.4.041	288

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft ø	Ratios code
							63	71	80	90	71	80	90			
35.2	**39.79**	1.5	379	1.1	1.7	434	B				C	C		191316		-
29.6	**47.22**	1.5	449	1.1	1.7	501	B				C	C		191314		
25.6	**54.73**	1.5	521	1.0	1.4	501	B				C	C		171314		
24.5	**57.13**	1.1	399	1.3	1.4	500	B				C	C		191312		
21.1	**66.22**	1.1	462	1.1	1.2	500	B				C	C		171312		
19.7	**71.01**	1.1	496	0.9	0.97	435	B				C	C		191310		
18.3	**76.69**	1.1	535	0.9	1.0	501	B				C	C		131314		
17.0	**82.30**	0.75	392	1.1	0.83	435	B				C	C		171310		
16.7	**83.59**	0.75	398	1.1	0.83	441	B				C	C		190814	**standard ø35**	
15.1	**92.78**	0.75	441	1.1	0.85	500	B				C	C		131312		
13.4	**104.68**	0.75	498	1.0	0.75	501	B				C	C		101314	ø28	
11.9	**117.22**	0.55	409	1.2	0.67	500	B				C	C		170812	ø30	
11.1	**126.65**	0.55	442	1.1	0.62	500	B				C	C		101312	ø38	
10.3	**135.74**	0.37	319	1.4	0.51	441	B				C	C		130814	ø40	
9.6	**145.68**	0.37	342	1.3	0.47	435	B				C	C		170810	On request	
8.9	**157.40**	0.37	369	1.2	0.44	435	B				C	C		101310		
8.5	**165.29**	0.37	388	1.3	0.48	500	B				C	C		91312		
7.6	**185.29**	0.37	435	1.0	0.38	441	B				C	C		100814		
6.8	**205.43**	0.37	482	0.9	0.33	435	B				C	C		91310		
6.2	**224.18**	0.37	526	1.0	0.35	500	B				C	C		100812		
5.8	**241.82**	0.25	384	1.1	0.29	441	B				C	C		90814		
5.0	**278.62**	0.25	442	1.0	0.25	435	B				C	C		100810		
4.8	**292.57**	0.25	464	1.1	0.27	500	B				C	C		90812		
3.9	**363.63**	0.18	415	1.0	0.19	435	B				C	C		90810		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

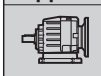
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **603A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **603A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **603A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **603A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

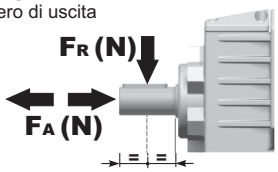
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.75 LT	0.90 LT	1.15 LT	1.25 LT	1.30 LT	1.35 LT	1.30 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

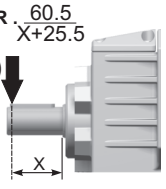
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$$Feq = FR \cdot \frac{60.5}{X+25.5}$$

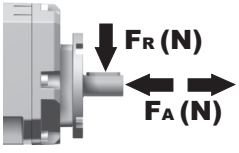


n_2	FA	FR
300	560	2800
250	600	3000
200	640	3200

n_2	FA	FR
140	740	3700
120	760	3800
85	840	4000

n_2	FA	FR
70	890	4200
40	1160	5800
15	1300	6500

Input shaft
Albero in entrata



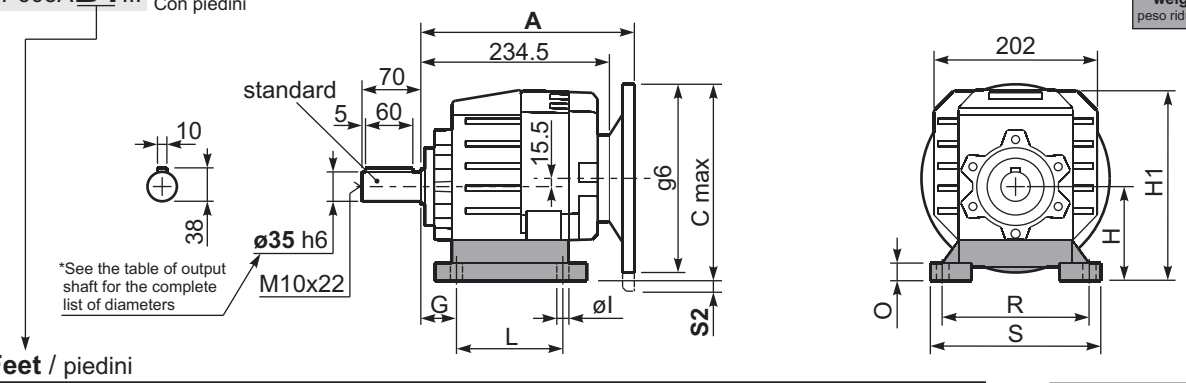
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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

P603A**B1**... With feet
Con piedini

Gearbox weight peso riduttore: With flange **14.3 kg**, With feet **14.7 Kg**



Feet / piedini

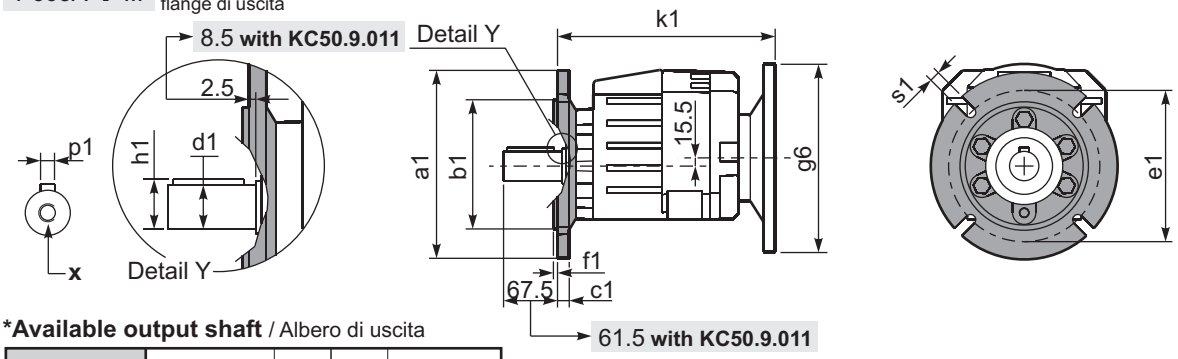
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	233	18	14	-	100/112 B5	KC60.9.024
S4	47-57	30	115	135	165	170	218	24	13.5	-		KC50.9.022
M3	62/3	35	120	170÷185	110	230	223	20	14	-		KC60.9.023
S7	77	35	140	170	205	204	243	8	14	-		KC60.9.029LM
H4	024-243	35	155	170	150	225	258	30	14	-		KC60.9.025
L6	06	19	125	160	106	205	228	8	14	-		KC50.9.026LM
E3	2302/3	19.5	125	170	240	205	228	8	14	-		KC60.9.026LM
P6	162	40	162	160	205	200	265	8	14	-		KC60.9.027LM
J4	4110G	27	120	190	115	225	223	8	14	-		KC60.9.028LM

Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P603A**-F**... Output flanges
flange di uscita



***Available output shaft** / Albero di uscita

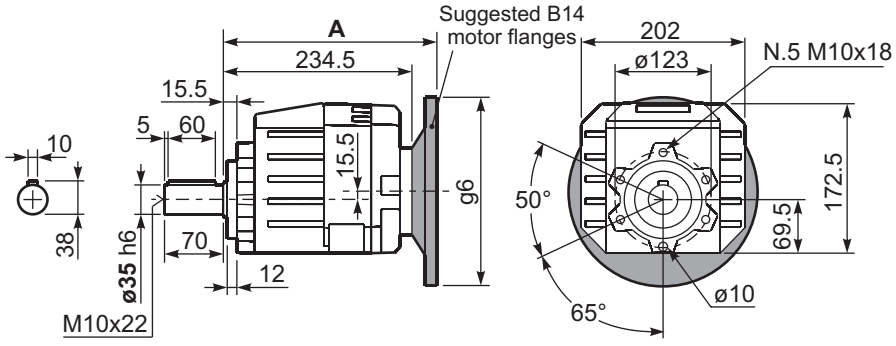
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

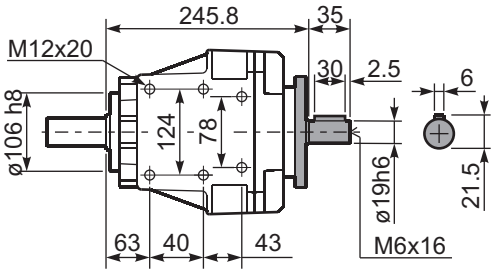
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request. Ask for compatibility

P603A**-N**... Basic gearbox
Riduttore base



R603A**-N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
63 B5	255	247.5	140	257.5	K063.4.041	263.5
71 B5	253	257.5	160	255.5	K063.4.042	261.5
80/90 B5	255	277.5	200	257.5	K063.4.043	263.5

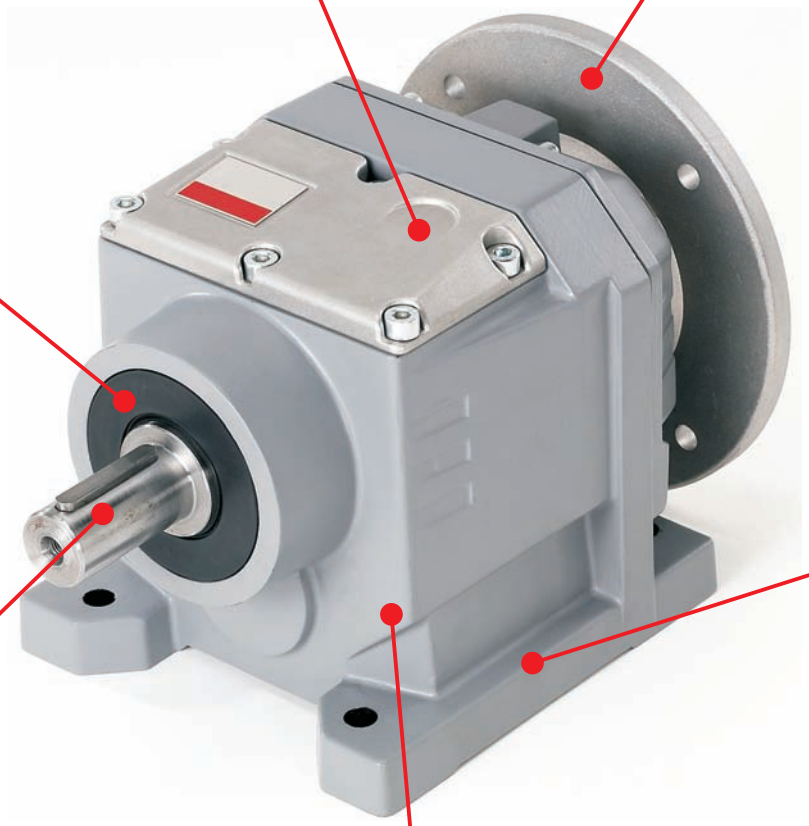
B14 Motor Flanges	A	C_{max}	g6	k1	kit code	k1 with KC50.9.011
71 B14	253	230	105	255.5	K063.4.047	261.5
80 B14	254	237.5	120	256.5	K063.4.046	262.5
90 B14	255	247.5	140	257.5	K063.4.041	263.5

Cast iron in line gearboxes

A modular and compact product

Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

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

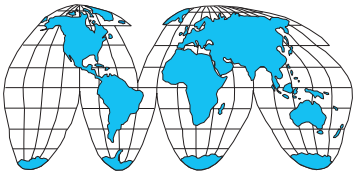


Oil seals
Two oil seals on request.

Rigid and integrated foot prints
Compatible to the main standard of the market.

Output shaft
With well proportioned bearings

Housing
Robust cast iron housing

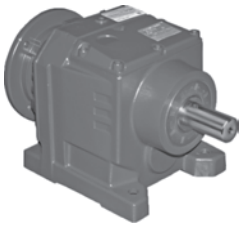


World wide sales network.

Lubricated for life with synthetic oil with operative range from -15° to +130°C

INDEX / INDICE / INHALTSVERZEICHNISS / INDICE

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



Types / Tipi / Arten / Tipos

6-5	6-7	6-9	6-11
402C 195Nm	**403C** 195Nm	**602C** 460Nm	**603C** 460Nm

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

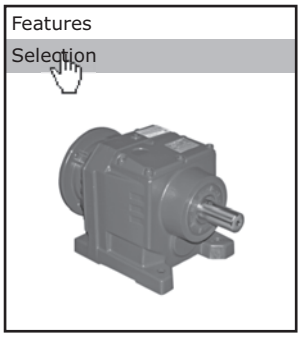
Types / Tipi / Arten / Tipos

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

For : / Per : / Für : / Para :

Selection guide - fs Guida alla selezione	**Atex certification** Certificazione Atex
Mounting pos. - Lubrication Pos. di montaggio - lubrificazione	**Accessories** Accessori
2 - 6 poles selection Selezione 2 - 6 poli	**Download 3D drawings** Download disegni 3D
Radial - axial loads Carichi radiali e assiali	**Interchangeability** Intercambiabilità
Reversibility Reversibilità	**Installation and maintenance** Installazione, uso e manutenzione
Thermal limit Limite termico	**Spare parts list** Liste parti di ricambio

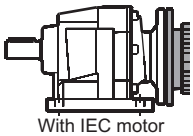
Use our web database to get detailed informations, always updated on each type/size.

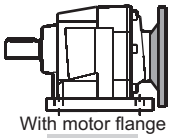


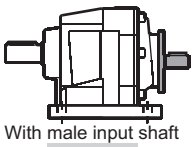
CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

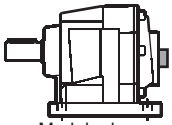
Type - Tipo - Typ - Tipo	**Size** - Grandezza Grösse - Tomaño	**Mounting** - Montaggio - Montage - Tipo de montaje
P	**402C**	**-F**

Cast iron coaxial gear boxes
Riduttori coassiali in ghisa


With IEC motor
M

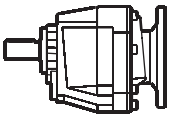

With motor flange
P

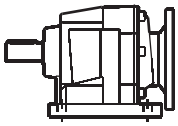

With male input shaft
R

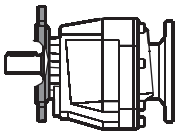

Modular base
B

2 Stages Riduzioni Stufen Etapas
402C
602C

3 Stages Riduzioni Stufen Etapas
403C
603C


Without flange/feet
-N


Integral feet
SP


Output flange mounted
-F

Dossier according to 94/9/EG 8. b ii stored

A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Ratio - Rapporto
Untersetzung
Relaciòn

7.33

See technical data table

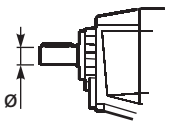
Vedi tabelle dati tecnici.

Technisches Datenblatt beachten.

Ver tabla datos técnicos

Output shaft
Albero lento
Abtriebswelle
Eje en solida

V



➡ **STANDARD**

402C 403C

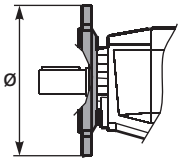
S	⇨ ø14
B	⇨ ø16
C	⇨ ø19
D	⇨ ø20
E	⇨ ø24
V	➡ **ø25**

602C 603C

G	⇨ ø28
H	⇨ ø30
I	➡ **ø35**
L	⇨ ø38
M	⇨ ø40

Output flange
Flangia uscita
Ausgangsflansch
Brida en salida

2



N Senza flangia
Without flange

402C 403C

1	⇨ ø120
2	➡ **ø140**
3	⇨ ø160
4	⇨ ø200

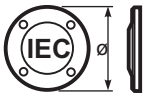
602C 603C

3	⇨ ø160
4	⇨ ø200
5	➡ **ø250**

Motor size
Grandezza motore
Motor Grösse
Tamaño motor

C

Standard Flange
Flangia Standard



B5	B14
A=56 (ø120)	**O**=56 (ø80)
B=63 (ø140)	**P**=63 (ø90)
C=71 (ø160)	**Q**=71 (ø105)
D=80 (ø200)	**R**=80 (ø120)
E=90 (ø200)	**T**=90 (ø140)
F=100÷112 (ø250)	**U**=100÷112 (ø160)
	V=132 (ø200)

Type R / Tipo R

402C 403C 603C

2	➡ ø19

602C

3	➡ ø24

Without flange / Senza flangia

402C 403C 603C

1	⇨ ø14 (71B5)
2	⇨ ø19 (80B5)
3	➡ ø24 (90B5)

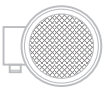
602C

2	⇨ ø19 (80B5)
3	⇨ ø24 (90B5)
4	➡ ø28 (100B5)

➡ **STANDARD**

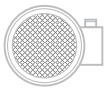
Terminal box position
Posizione morsettiera
Klemmkastenlage
Posición caja de bornes

B



A

B
STANDARD

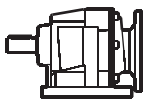


C

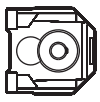
D

Mounting position
Posizione montaggio
Einbaulage
Position de montaje

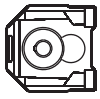
B3



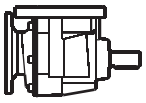
B3
STANDARD



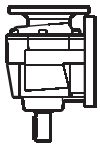
B6



B7

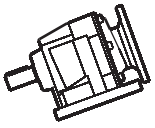


B8



V5

V6



V8

Specify only for vertical positions

Specificare solo per posizione verticale

FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELIN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

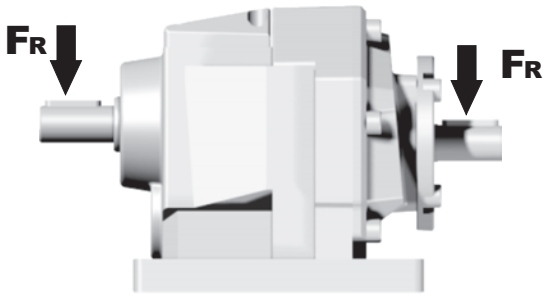
Lifting / sollevamento /hubantriebe / elevactión	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotaction	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translacion	$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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



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

M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal **2.50** Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana

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

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

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

Gear size / Grandezza riduttore / Getriebegröße / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Potencia motor

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

Flange code / Codice flangia / Flanschtype / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Velocidad de entrada

402C Coaxial - Gear 195Nm

Rating - Cast Iron COAXIAL GEARBOXES

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft ø	Ratios code
							63	71	80*	90*	71	80	90	100 112			
398	**5.55**	3	109	1.1	3.5	120	B				C	C			2821		-
320	**7.33**	3	144	1.0	3.1	150	B				C	C			2812		
252	**8.96**	3	176	0.9	2.8	160	B				C	C			2810		
220	**10.04**	2.2	145	1.0	2.3	150	B				C	C			1915		
191	**11.64**	2.2	168	1.0	2.5	160	B				C	C			1715		

C Ratio / Rapporto / Untersetzung / Relación

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

Notes / Note / Anmerkungen / Notas

Transmitted torque / Momento torcente trasmesso / Mögliche Drehmomente / Par transmitido

Service factor / Fattore di servizio / Betriebsfaktor / Factor de servicio

fs

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

D Motor flange available / Flange disponibili / Erhältliche Motorflansche / Bridas disponibles

B) Mounting with reduction ring / Montaggio con boccola di riduzione / Reduzierhülsen / Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position / Posizione fori flangia/basetta motore / Bohrungsposition am Motorflansch/-sockel / Posición agujeros brida / base motor

B) Available without reduction bushes / Disponibile anche senza boccola / Auch ohne Reduzierbuchse verfügbar / Disponible tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft ø	Ratios code
							63	71	80*	90*	71	80	90	100 112			
252	**5.55**	3	109	1.1	**3.3**	**120**	B				C	C			2815		-
191	**7.33**	3	144	1.0	**3.1**	**150**	B				C	C			2812		
156	**8.96**	3	176	0.9	**2.7**	**160**	B				C	C			2810		
139	**10.04**	2.2	145	1.0	**2.3**	**150**	B				C	C			1915		
120	**11.64**	2.2	168	1.0	**2.1**	**160**	B				C	C			1715	**standard ø25**	
106	**13.26**	2.2	191	0.9	**2.1**	**180**	B				C	C			1912		
91	**15.37**	1.5	151	1.3	**1.9**	**196**	B				C	C			1712		
86	**16.20**	1.5	159	1.1	**1.6**	**170**	B				C	C			1910	ø14	
75	**18.78**	1.5	184	0.9	**1.4**	**170**	B				C	C			1710	ø16	
65	**21.54**	1.1	155	1.3	**1.4**	**196**	B				C	C			1312	ø19	
63	**22.26**	1.1	160	1.0	**1.1**	**155**	B				C	C			1015	ø20	
53	**26.31**	0.75	129	1.3	**1.0**	**170**	B				C	C			1310	ø24	
47.6	**29.40**	0.75	144	1.4	**1.0**	**196**	B				C	C			1012	On request	
39	**35.91**	0.75	176	1.0	**0.72**	**170**	B				C	C			1010		
36.5	**38.37**	0.55	138	1.3	**0.72**	**180**	B				C	C			912		
29.9	**46.87**	0.55	169	1.0	**0.55**	**170**	B				C	C			910		
27.6	**50.67**	0.37	123	1.2	**0.45**	**150**	B				C	C			712		
22.6	**61.89**	0.37	150	1.1	**0.42**	**170**	B				C	C			710		

The dynamic efficiency is **0.96** for all ratios

*With "P" mounting, it's not possible to use these flanges; possibly, mount a B14 flange
Nel montaggio P non è possibile utilizzare queste flange; eventualmente utilizzare la flangia B14

Motor Flanges Available Flange Motore Disponibili

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

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

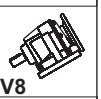
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **402C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **402C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **402C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **402C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

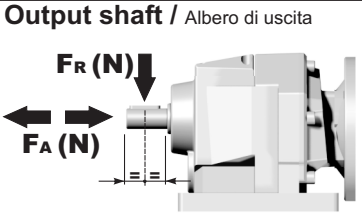
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 **B3**	 **B6**	 **B7**	 **B8**	 **V5**	 **V6**	 **V8**
0.50 LT	0.50 LT	0.50 LT	0.50 LT	0.65 LT	0.85 LT	0.65 LT
AGIP Telium VSF 320	**BP** Energol SGXP220	**SHELL** Tivela Oil WB	**KLUBER** Syntheso D220 EP	**MOBIL** Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

Feq = FR . 46/(X+21)

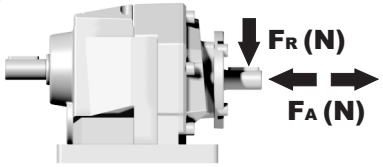


n_2	FA	FR
300	400	2000
250	440	2200
200	470	2350

n_2	FA	FR
140	540	2700
120	590	2900
85	680	3400

n_2	FA	FR
70	760	3800
40	860	4300
15	860	4300

Input shaft / Albero in entrata



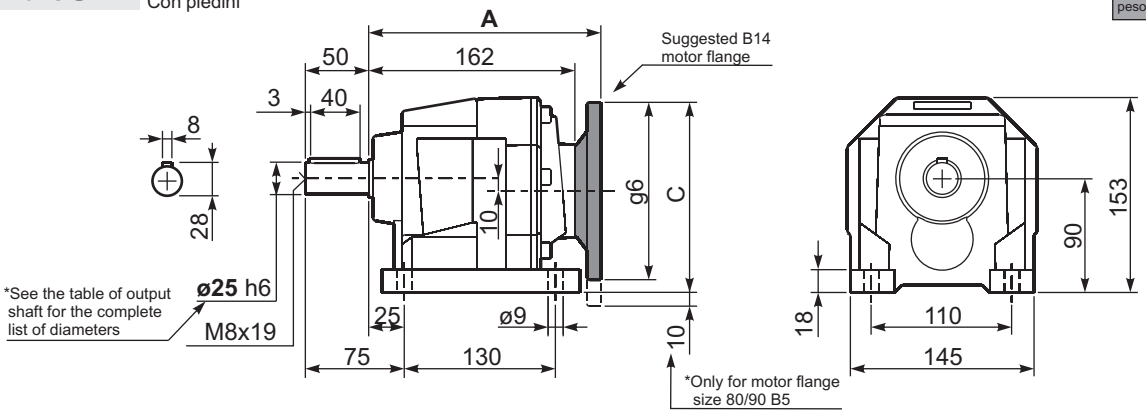
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

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

P402C**SP**... With feet
Con piedini

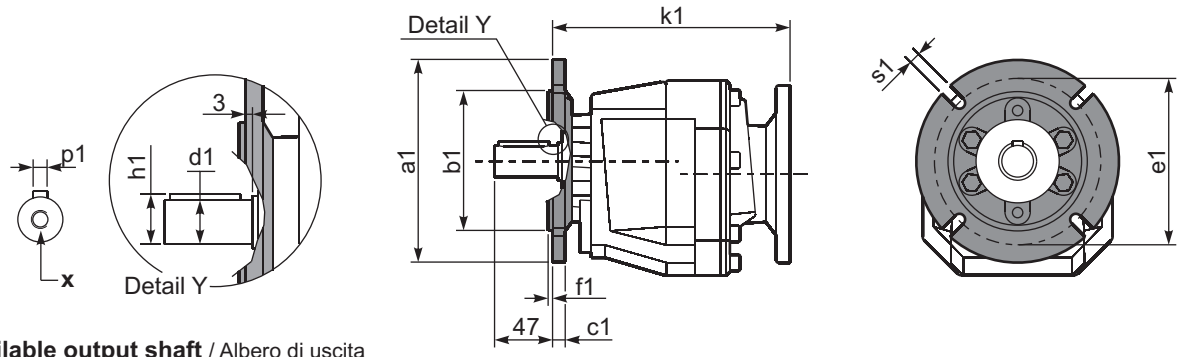
Gearbox weight peso riduttore	With flange **8.2 kg**
	With feet **9.5 Kg**



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	182.5	150	140	185.5	K063.4.041
71 B5	180.5	160	160	183.5	K063.4.042
80/90 B5	182.5	190	200	185.5	K063.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B14	180.5	133	105	183.5	K063.4.047
80 B14	181.5	140	120	184.5	K063.4.046
90 B14	182.5	150	140	185.5	K063.4.041
100/112 B14	198.5	160	160	201.5	KC40.4.041

P402C**-F**... Output flanges
flange di uscita



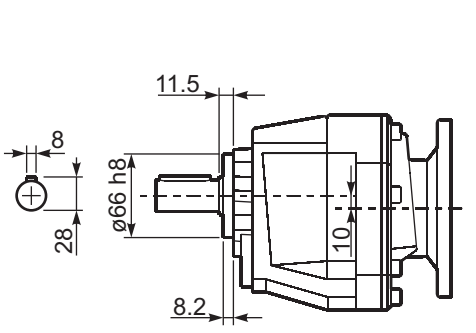
***Available output shaft** / Albero di uscita

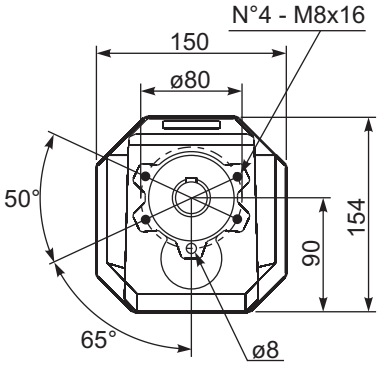
	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 20x40	6	22.5	M8x19
	ø 24x50	8	27	M8x19

Available output flanges / flange di uscita

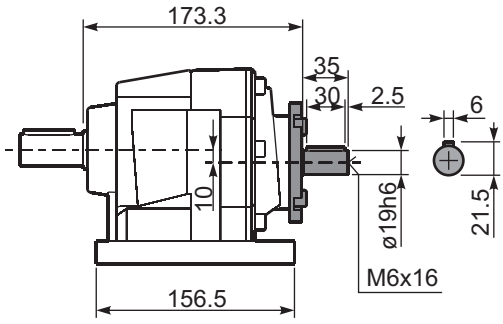
a1 ø	b1	c1	e1	f1	s1	kit code	
120	80	10	100	3	9	KC40.9.010C	With flange and feet only on request. Ask for compatibility
140	95	10	115	3	9	KC40.9.011C	
160	110	10	130	3	9	KC40.9.012C	
200	130	11	165	3.5	11	KC40.9.013C	

P402C**-N**... Basic gearbox
Riduttore base





R402C SP... Input Shaft
Albero in entrata



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft ø	Ratios code
							63	71	80*	90*	71	80	90			
36.5	**38.34**	0.75	182	1.0	**0.72**	**175**	B				C	C		171715	**standard ø25**	-
32.0	**43.69**	0.75	208	0.9	**0.70**	**195**	B				C	C		191712		
27.6	**50.64**	0.37	119	1.6	**0.61**	**195**	B				C	C		171712		
22.5	**62.22**	0.37	146	1.3	**0.49**	**195**	B				C	C		191312	ø14	
19.7	**70.95**	0.37	167	1.2	**0.43**	**195**	B				C	C		131712	ø16	
18.7	**74.77**	0.37	176	1.0	**0.37**	**175**	B				C	C		191310	ø19	
16.2	**86.66**	0.37	203	0.9	**0.32**	**175**	B				C	C		131710	ø20	
14.5	**96.85**	0.25	154	1.3	**0.32**	**195**	B				C	C		101712	ø24	
11.8	**118.29**	0.25	188	0.9	**0.23**	**175**	B				C	C		101710	On request	
10.3	**135.69**	0.18	155	1.3	**0.23**	**195**	B				C	C		101312		
8.4	**165.74**	0.18	189	0.9	**0.17**	**175**	B				C	C		101310		

The dynamic efficiency is **0.93** for all ratios

*With "P" mounting, it's not possible to use these flanges; possibly, mount a B14 flange
Nel montaggio P non è possibile utilizzare queste flange; eventualmente utilizzare la flangia B14

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **403C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **403C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **403C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **403C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
						
B3	**B6**	**B7**	**B8**	**V5**	**V6**	**V8**
0.55 LT	0.55 LT	0.55 LT	0.55 LT	0.70 LT	0.90 LT	0.70 LT

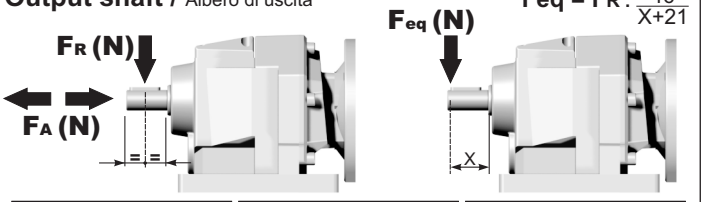
AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

RADIAL AND AXIAL LOADS

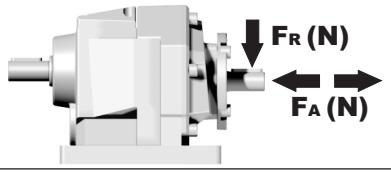
Output shaft / Albero di uscita

Feq = FR . 46 / X+21



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	400	2000	**140**	540	2700	**70**	760	3800
250	440	2200	**120**	590	2900	**40**	860	4300
200	470	2350	**85**	680	3400	**15**	860	4300

Input shaft / Albero in entrata



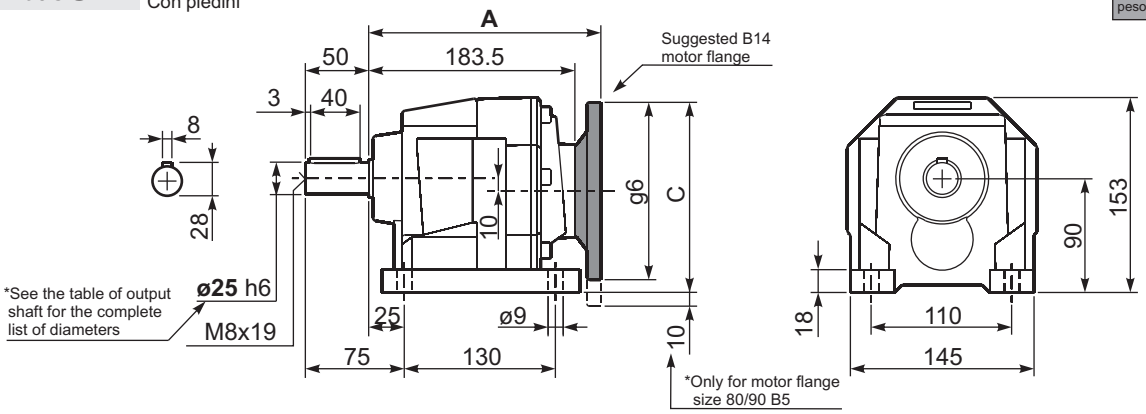
n_1	FA	FR
1400	240	1200
900	280	1400
500	340	1700

tab. 2

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

P403C**SP**... With feet / Con piedini

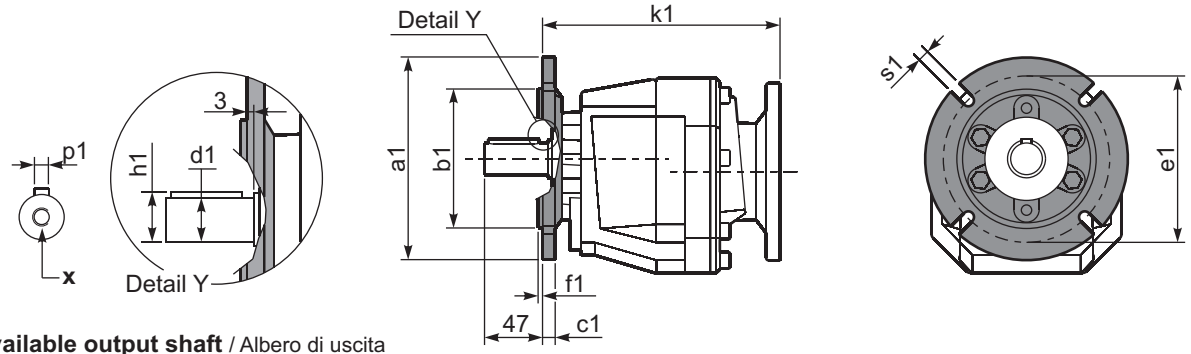
Gearbox weight / peso riduttore: With flange **8.7 kg** / With feet **10.0 Kg**



B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	204	150	140	207	K063.4.041
71 B5	202	160	160	205	K063.4.042
80/90 B5	203	190	200	206	K063.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B14	202	133	105	205	K063.4.047
80 B14	203	140	120	206	K063.4.046
90 B14	204	150	140	207	K063.4.041

P403C-**F**... Output flanges / flange di uscita



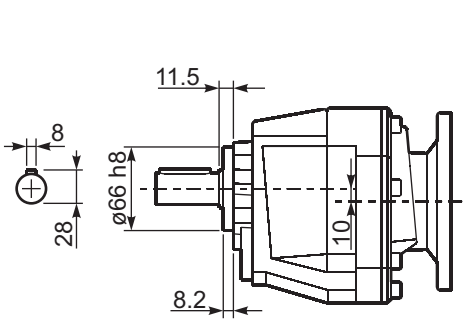
***Available output shaft** / Albero di uscita

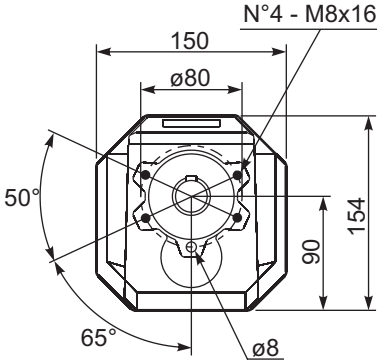
	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 20x40	6	22.5	M8x19
	ø 24x50	8	27	M8x19

Available output flanges / flange di uscita

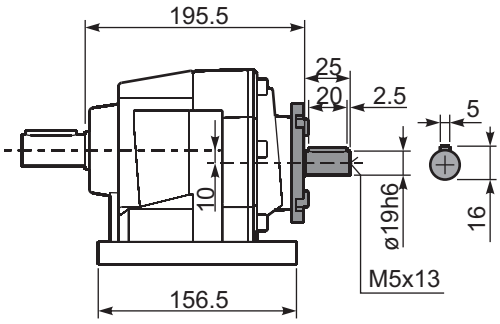
a1 ø	b1	c1	e1	f1	s1	kit code	
120	80	10	100	3	9	KC40.9.010C	With flange and feet only on request. Ask for compatibility
140	95	10	115	3	9	KC40.9.011C	
160	110	10	130	3	9	KC40.9.012C	
200	130	11	165	3.5	11	KC40.9.013C	

P403C-**N**... Basic gearbox / Riduttore base





R403C SP... Input Shaft / Albero in entrata



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C 71	D 80	E 90	F 100 112	Available B14 motor flanges R 80	T 90	U 100 112	V 132		Output Shaft ø	Ratios code
388	**3.61**	7.5	177	0.9	**7.0**	**165**	B								3018		-
331	**4.23**	7.5	208	1.0	**7.2**	**200**	B								3016		
279	**5.01**	7.5	246	1.0	**7.3**	**240**	B								3014		
231	**6.07**	7.5	298	0.9	**6.8**	**270**	B								3012		
206	**6.81**	5.5	245	1.4	**7.6**	**340**	B								2018		
176	**7.96**	5.5	287	1.3	**7.1**	**370**	B								2016	**standard ø35**	
148	**9.45**	5.5	340	1.2	**6.5**	**400**	B								2014		
122	**11.43**	5.5	412	1.0	**5.3**	**400**	B								2012		
99	**14.21**	4	372	1.2	**4.7**	**435**	B								2010	ø28	
84	**16.62**	4	435	1.2	**4.6**	**501**	B								1314	ø30	
70	**20.10**	4	527	0.9	**3.8**	**499**	B								1312	ø38	
56	**24.98**	3	491	0.9	**2.7**	**435**	B								1310	ø40	
47.6	**29.41**	2.2	424	1.0	**2.3**	**440**	B								0814	On request	
39.3	**35.58**	1.85	431	1.2	**2.1**	**499**	B								0812		
34.6	**40.50**	1.1	292	1.1	**1.2**	**310**	B								0614		
31.7	**44.23**	1.5	434	1.0	**1.5**	**435**	B								0810		
28.6	**49.00**	1.1	353	1.0	**1.1**	**368**	B								0612		
23.0	**60.90**	1.1	439	1.0	**1.1**	**435**	B								0610		

The dynamic efficiency is **0.96** for all ratios

*With "P" mounting, it's not possible to use these flanges; possibly, mount a B14 flange
Nel montaggio P non è possibile utilizzare queste flange; eventualmente utilizzare la flangia B14

Motor Flanges Available Flange Motore Disponibili

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

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

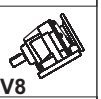
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **602C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **602C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **602C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

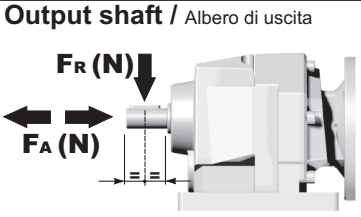
E El reductor tamaño **602C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 **B3**	 **B6**	 **B7**	 **B8**	 **V5**	 **V6**	 **V8**
1.00 LT	1.50 LT	1.50 LT	1.50 LT	2.00 LT	2.00 LT	2.00 LT
AGIP Telium VSF 320	**BP** Energol SGXP220	**SHELL** Tivela Oil WB	**KLUBER** Syntheso D220 EP	**MOBIL** Glygoyle 30		

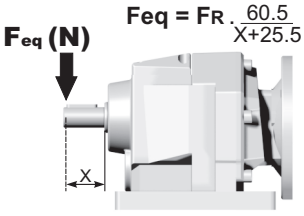
tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita



Feq = FR . 60.5 / X+25.5

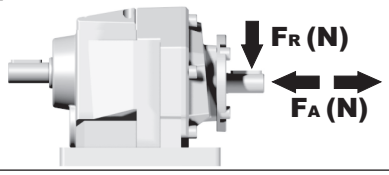


n_2	FA	FR
300	580	2900
250	620	3100
200	660	3300

n_2	FA	FR
140	760	3800
120	800	4000
85	960	4800

n_2	FA	FR
70	1000	5000
40	1200	6000
15	1450	7260

Input shaft / Albero in entrata



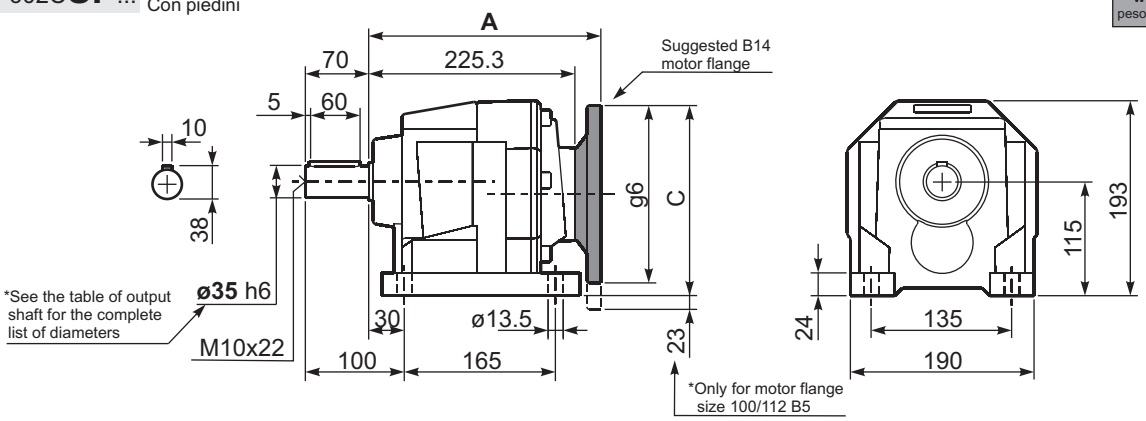
n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

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

P602C**SP**... With feet / Con piedini

Gearbox weight / peso riduttore — With flange **21.4 kg** — With feet **21.3 Kg**

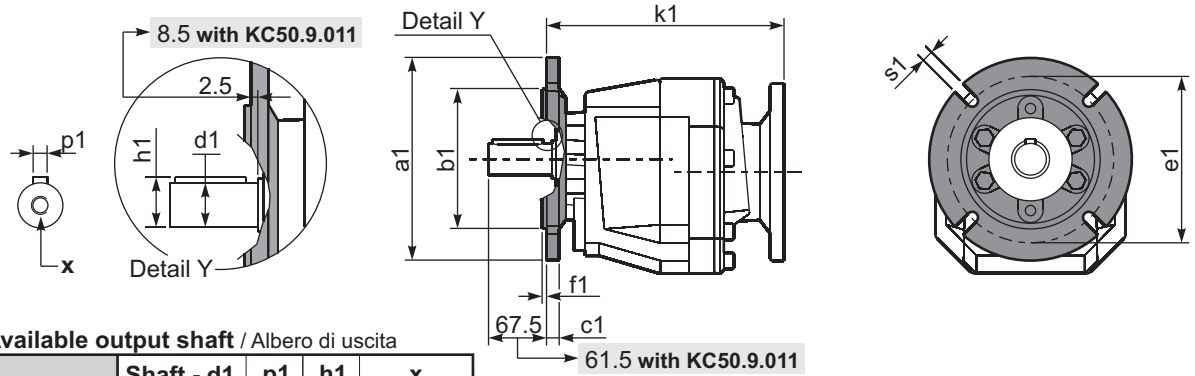


B5 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B5	243.5	182	160	246	K023.4.041
80/90 B5	245.5	202	200	248	K023.4.042
100/112 B5	251.5	227	250	254	K023.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
80 B14	243.5	162	120	246	K085.4.046
90 B14	243.5	172	140	246	K085.4.045
100/112 B14	258.2	182	160	260.7	K085.4.047
132 B14	279.5	215	200	282	KC50.4.041

k1 with KC50.9.011
252
252
266.7
288

P602C**-F**... Output flanges / flange di uscita



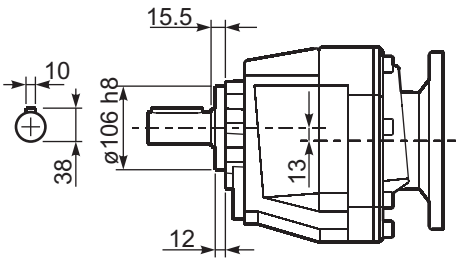
***Available output shaft** / Albero di uscita

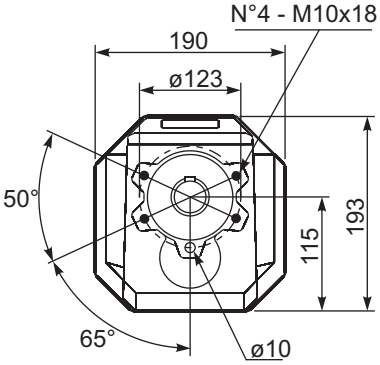
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request / A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

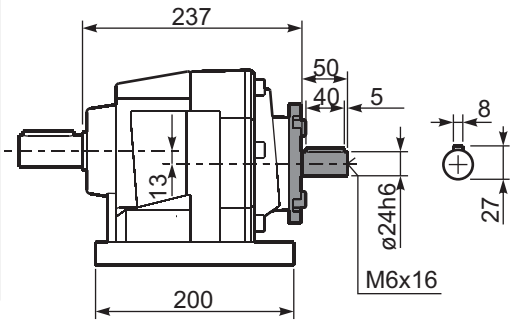
a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	9	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P602C**-N**... Basic gearbox / Riduttore base





R602C SP... Input Shaft / Albero in entrata



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft ø	Ratios code
							63	71	80	90	71	80	90			
35.2	**39.79**	1.5	379	1.1	1.7	434	B				C	C		191318		-
29.6	**47.22**	1.5	449	1.1	1.7	501	B				C	C		191316		
25.6	**54.73**	1.5	521	1.0	1.4	501	B				C	C		191314		
24.5	**57.13**	1.1	399	1.3	1.4	500	B				C	C		171314		
21.1	**66.22**	1.1	462	1.1	1.2	500	B				C	C		191312		
19.7	**71.01**	1.1	496	0.9	0.97	435	B				C	C		171312		
18.3	**76.69**	1.1	535	0.9	1.0	501	B				C	C		191312	**standard ø35**	
17.0	**82.30**	0.75	392	1.1	0.83	435	B				C	C		131314		
16.7	**83.59**	0.75	398	1.1	0.83	441	B				C	C		171310		
15.1	**92.78**	0.75	441	1.1	0.85	500	B				C	C		190814	ø28	
13.4	**104.68**	0.75	498	1.0	0.75	501	B				C	C		131312	ø30	
11.9	**117.22**	0.55	409	1.2	0.67	500	B				C	C		101314	ø38	
11.1	**126.65**	0.55	442	1.1	0.62	500	B				C	C		170812	ø40	
10.3	**135.74**	0.37	319	1.4	0.51	441	B				C	C		101312	On request	
9.6	**145.68**	0.37	342	1.3	0.47	435	B				C	C		130814		
8.9	**157.40**	0.37	369	1.2	0.44	435	B				C	C		170810		
8.5	**164.23**	0.37	385	1.3	0.48	500	B				C	C		101310		
7.6	**185.29**	0.37	435	1.0	0.38	441	B				C	C		130812		
6.9	**204.16**	0.37	479	0.9	0.34	435	B				C	C		100814		
6.2	**224.18**	0.37	526	1.0	0.35	500	B				C	C		130810		
5.0	**278.62**	0.25	442	1.0	0.25	435	B				C	C		100812		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

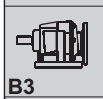
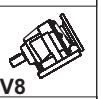
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **603C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **603C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **603C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **603C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

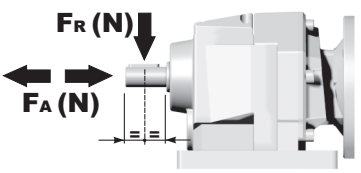
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio					
 **B3**	 **B6**	 **B7**	 **B8**	 **V5**	 **V6**	 **V8**
1.30 LT	1.50 LT	1.50 LT	1.50 LT	2.10 LT	2.00 LT	2.10 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

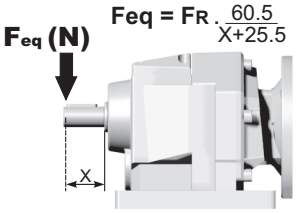
tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita



Feq = FR . 60.5 / X+25.5

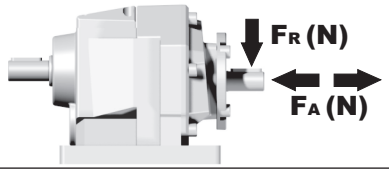


n_2	FA	FR
300	580	2900
250	620	3100
200	660	3300

n_2	FA	FR
140	760	3800
120	800	4000
85	960	4800

n_2	FA	FR
70	1000	5000
40	1200	6000
15	1450	7260

Input shaft / Albero in entrata



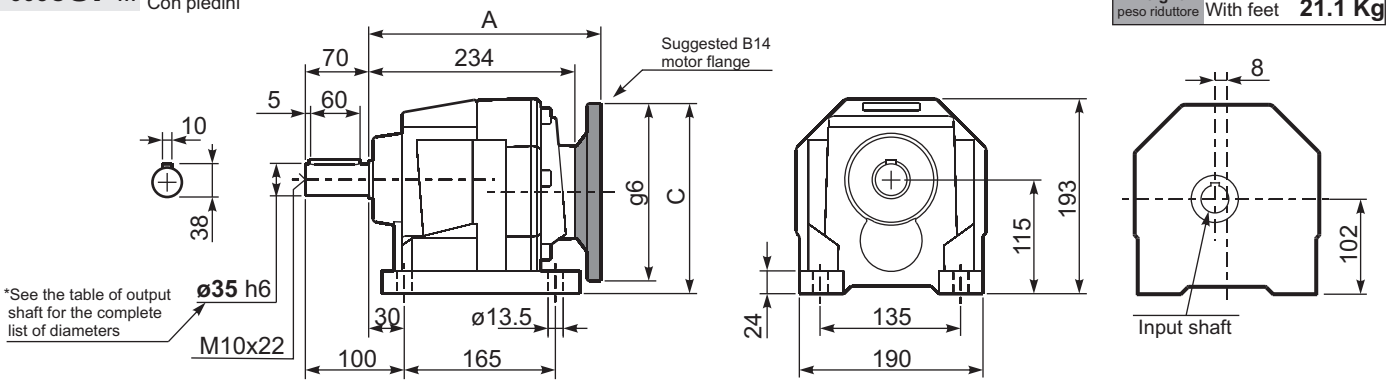
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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

P603C**SP**... With feet / Con piedini

Gearbox weight / peso riduttore	
With flange	**21.2 kg**
With feet	**21.1 Kg**

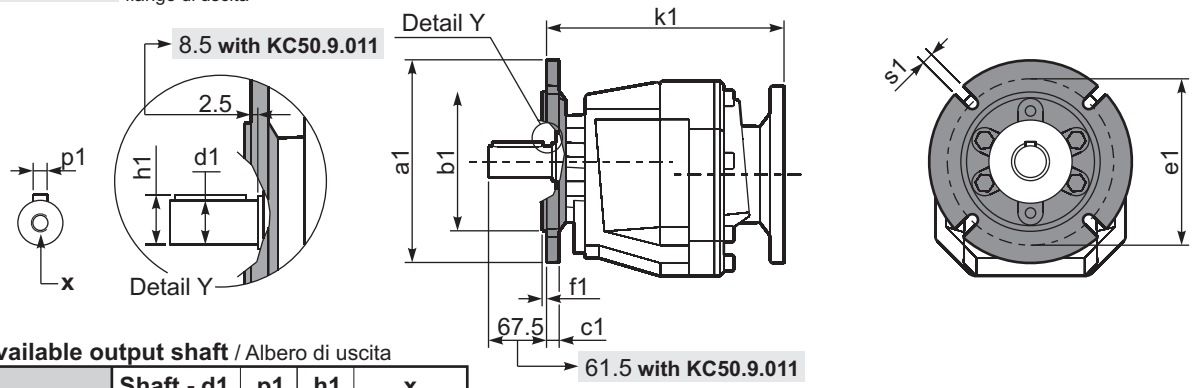


B5 Motor Flanges	A	C_{max}	g6	k1	kit code
63 B5	253.3	172	140	255.8	K063.4.041
71 B5	254.3	182	160	256.8	K063.4.042
80/90 B5	253.3	202	200	255.8	K063.4.043

B14 Motor Flanges	A	C_{max}	g6	k1	kit code
71 B14	251.3	156	105	253.8	K063.4.047
80 B14	252.3	162	120	254.8	K063.4.046
90 B14	253.3	172	140	255.8	K063.4.041

k1 with KC50.9.011
259.8
260.8
261.8

P603C-**F**... Output flanges / flange di uscita



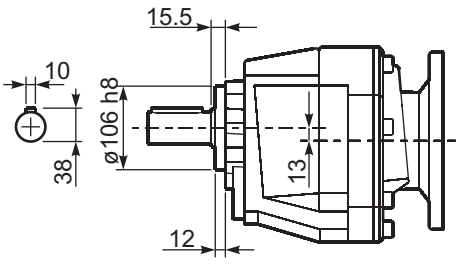
***Available output shaft** / Albero di uscita

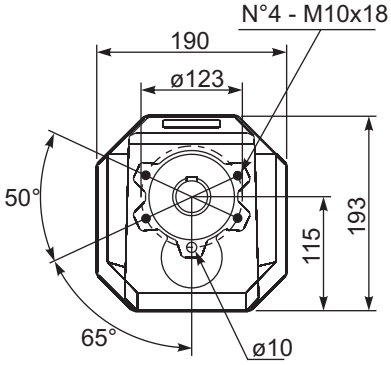
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request / A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

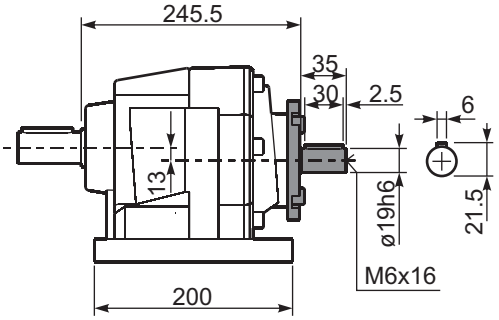
a1 ø	b1	c1	e1	f1	s1	kit code	
160	110	14	130	3.5	9	KC50.9.011	With flange and feet only on request. Ask for compatibility
200	130	13	165	3.5	11	KC50.9.012	
250	180	15.5	215	4	14	KC50.9.013	

P603C-**N**... Basic gearbox / Riduttore base





R603C SP... Input Shaft / Albero in entrata

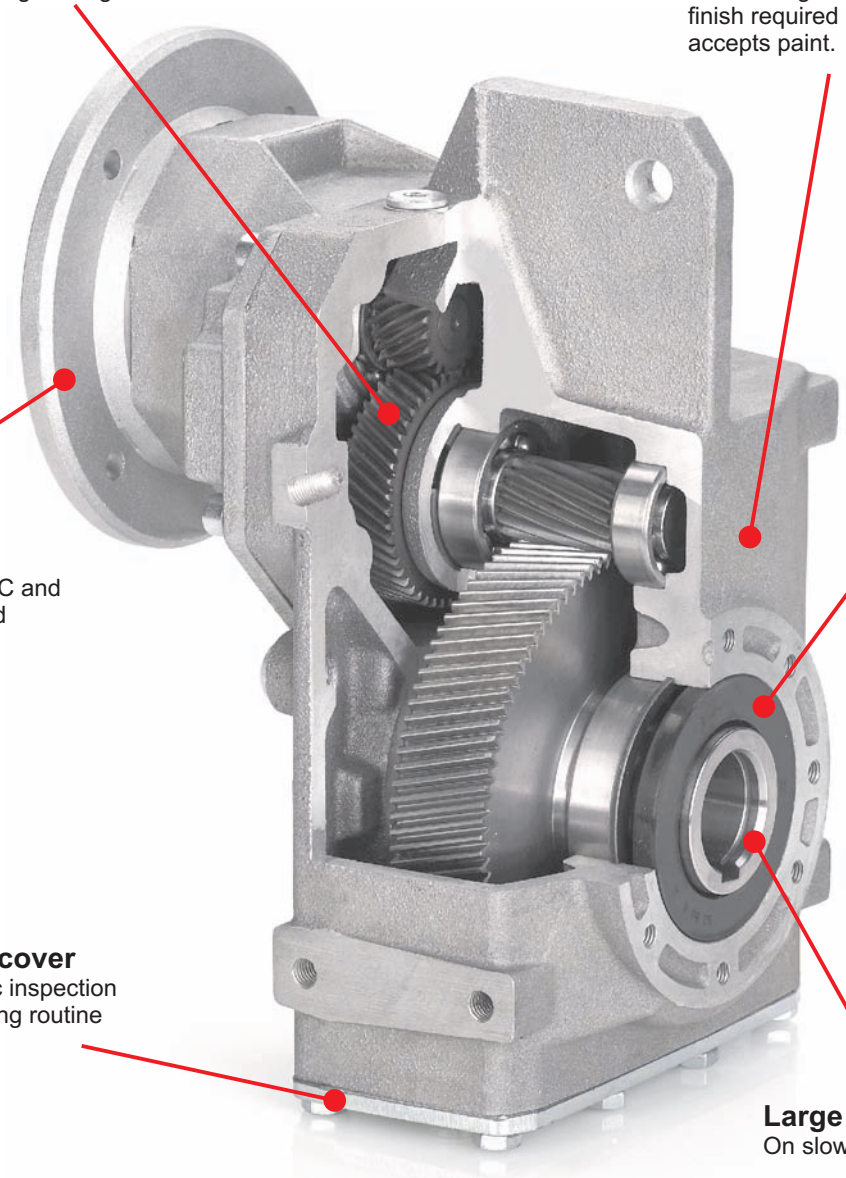


Aluminum & cast iron shaft mounted gearboxes

A modular and compact product

Gears
Hardened and ground gears

Alloy housing
Is vacuum impregnated (MIL-STD 276) for protection and sealing. No secondary finish required but readily accepts paint.



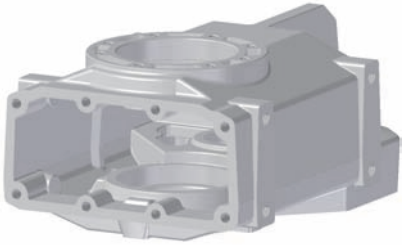
Flange
Fully modular to IEC and Compact integrated motor.
NEMA C flange

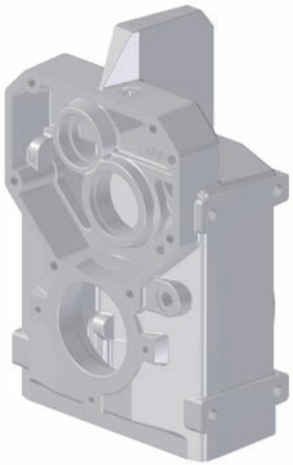
Oil seals
Two oil seals on request

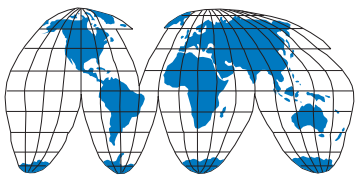
Removable inspection cover
Allows periodic inspection of gearing during routine maintenance

Large center distance
On slow gears

Single-piece aluminum / Cast Iron housing
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing





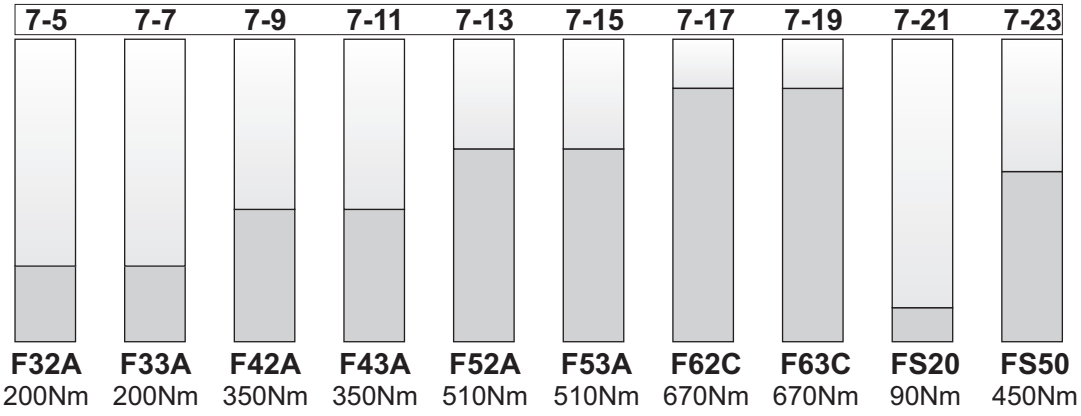


World wide sales network.

INDEX / INDICE / INHALTSVERZEICHNISS / INDICE

Types / Tipi / Arten / Tipos

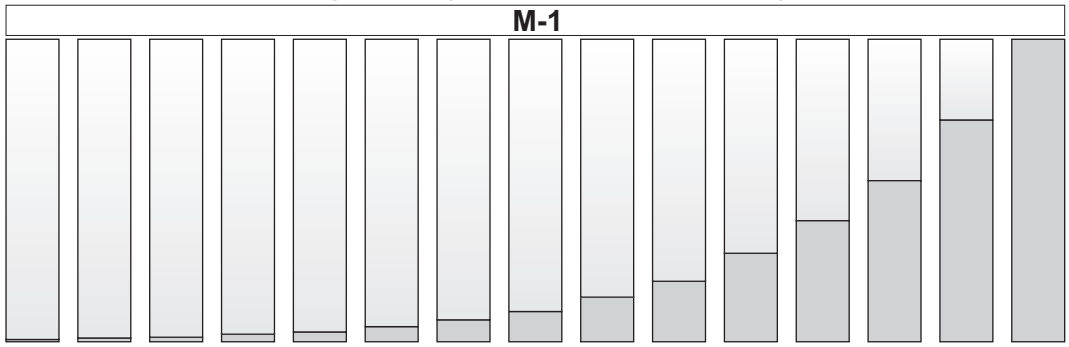
On page / A pagina / Auf Seite / En la página



F32A	F33A	F42A	F43A	F52A	F53A	F62C	F63C	FS20	FS50
200Nm	200Nm	350Nm	350Nm	510Nm	510Nm	670Nm	670Nm	90Nm	450Nm

Types / Tipi / Arten / Tipos

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

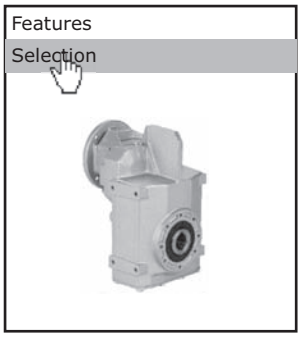


56A	56B	63A	63B	71A	71B	80A	80B	90S	90L	100LA	100LB	112M	132S	132M

For : / Per : / Für : / Para :

Selection guide - fs Guida alla selezione	**Atex certification** Certificazione Atex
Mounting pos. - Lubrication Pos. di montaggio - lubrificazione	**Accessories** Accessori
2 - 6 poles selection Selezione 2 - 6 poli	**Download 3D drawings** Download disegni 3D
Radial - axial loads Carichi radiali e assiali	**Interchangeability** Intercambiabilità
Reversibility Reversibilità	**Installation and maintenance** Installazione, uso e manutenzione
Thermal limit Limite termico	**Spare parts list** Liste parti di ricambio

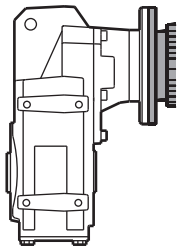
Use our web database to get detailed informations, always updated on each type/size.



CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

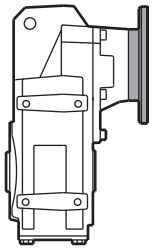
Type - Tipo - Typ - Tipo	**Size** - Grandezza Grösse - Tomaño	**Mounting** - Montaggio Montage - Tipo de montaje	**Rapporto** - Ratio Untersetzung - Relacion
M	**F32A**	**C**	**10.40**

Shaft mounted helical
Riduttori ad assi paralleli



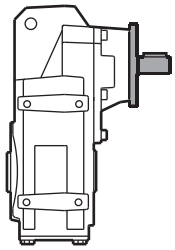
With IEC motor

M



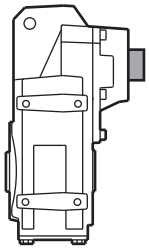
With motor flange

P



With male input shaft

R



Modular base

B

2 Stages Riduzioni Stufen Etapas

3 Stages Riduzioni Stufen Etapas

Aluminum
Alluminio
Aluminium
Aluminio

F32A
F42A
F52A

FS20

F33A
F43A
F53A

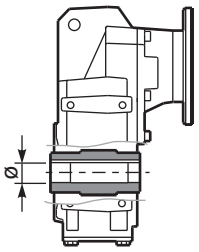
Cast Iron
Ghisa
Grauguss
Fundicion

F62C

F63C

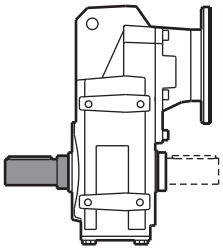
Special
Speciale
Sonderausgabe
especial

FS50 **pag. 7-23**



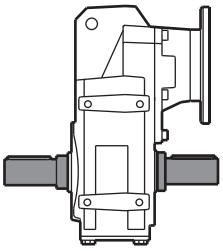
Hollow outpu shaft

C



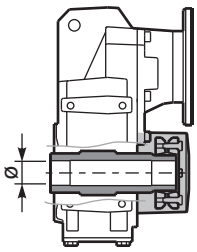
Single output shaft

A



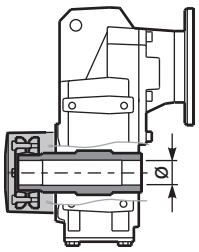
Double output shaft

B



Shrink Disk

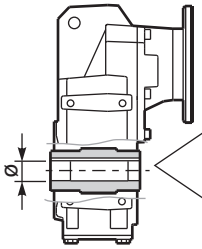
D



Shrink Disk

S

Only on request for Q.ty / A richiesta per quantità



Stainless steel hub

I

On request for q.ty

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

See technical data table

Vedi tabelle dati tecnici.

Technisches Datenblatt beachten.

Ver tabla datos técnicos

Dossier according to 94/9/EG 8. b ii stored

TÜV NORD 0032

A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

On request we can deliver our products according to the ATEX

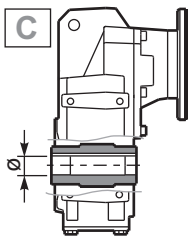
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern

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

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Output shaft
Albero uscita
Ausgangsflansch
Brida en solida

B



* Reduced Key
➡ **STANDARD**

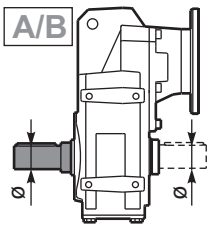
FS20
B ➡ ø20

F32A F33A
B ⇨ ø20
C ➡ **ø25**
D ⇨ ø30*

F42A F43A
C ⇨ ø25
D ➡ **ø30**
E ⇨ ø35*

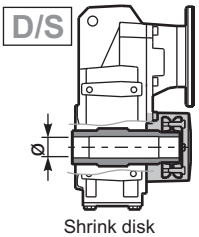
F52A F53A
D ⇨ ø30
E ➡ **ø35**
F ⇨ ø40*

F62C F63C
E ⇨ ø35
F ➡ **ø40**



Single/Double output shaft

L F32/3A ⇨ ø25
M F42/3A ⇨ ø30
N F52/3A ⇨ ø35
O F62/3C ⇨ ø40

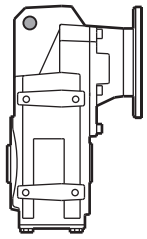


Shrink disk

P F32/3A ⇨ ø25
Q F42/3A ⇨ ø30
R F52/3A ⇨ ø35
S F62/3C ⇨ ø40

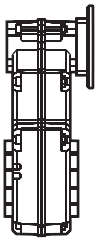
Type - Tipo
Typ - Tipo

ST



ST

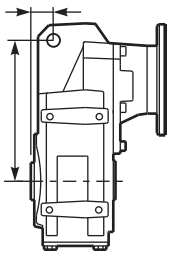
Foro standard
Standard bore



only for FS20

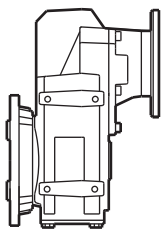
ST

Senza braccio
di reazione
Without reaction arm



Available torque arms, see our web site.
Bracci di reazione disponibili, vedi il nostro sito web.

S.. **B..**
N.. **LZ..**

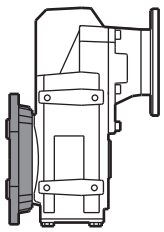


-F

Whit output flange
con flangia uscita

Output flange
Flangia di uscita
Ausgangs Flansch
Brida en salida

N



N Senza flangia
Without flange

FS20
1 ➡ **ø140**

F32A F33A
2 ➡ **ø160**
3 ⇨ ø200

F42A F43A
2 ➡ **ø160**
3 ⇨ ø200

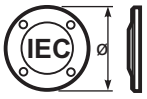
F52A F53A
3 ➡ **ø200**
4 ⇨ ø250

F62C F63C
3 ⇨ ø200
4 ➡ **ø250**

Motor size
Grandezza motore
Motor Grösse
Tamaño motor

C

Standard Flange
Flangia Standard



B5	B14
A=56 (ø120)	**O**=56 (ø80)
B=63 (ø140)	**P**=63 (ø90)
C=71 (ø160)	**Q**=71 (ø105)
D=80 (ø200)	**R**=80 (ø120)
E=90 (ø200)	**T**=90 (ø140)
F=100÷112 (ø250)	**U**=100÷112 (ø160)
	V=132 (ø200)

Type R / Tipo R

FS20 FS50 F33A F43A (From 1/107.22 to 1/320.70)
1 ➡ ø14

F52A F62C
3 ➡ ø24

F32A F43A F42A F53A F63C (From 1/33.13 to 1/97.30)
2 ➡ ø19

Without flange / Senza flangia

FS20 F33A F43A (From 1/107.22 to 1/320.70)
Z ⇨ ø9 (56B5)
0 ⇨ ø11 (63B5)
1 ➡ ø14 (71B5)

F52A F62C
2 ⇨ ø19 (80B5)
3 ⇨ ø24 (90B5)
4 ➡ ø28 (100B5)

F32A F43A F42A F43A F52A F63C (From 1/33.13 to 1/97.30)
1 ⇨ ø14 (71B5)
2 ⇨ ø19 (80B5)
3 ➡ ø24 (90B5)

➡ **STANDARD**

Terminal box position
Posizione morsettiera
Klemmkastenlage
Posición caja de bornes

B

A

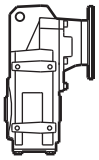
B
STANDARD

C

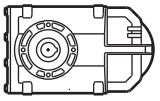
D

Mounting position
Posizione montaggio
Einbaulage
Position de montaje

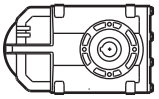
H1



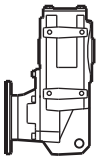
H1
STANDARD



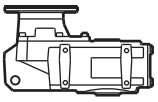
H4



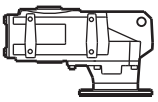
H3



H2



H5



H6

Specify only for vertical positions

Specificare solo per posizione verticale

FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELIN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

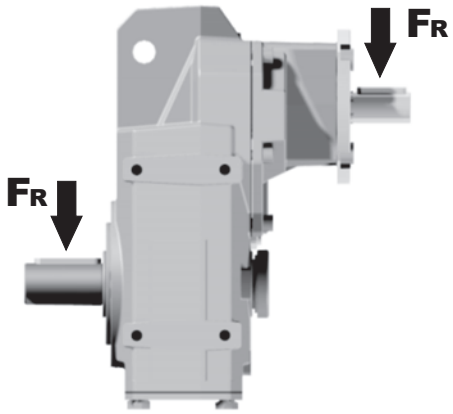
Lifting / sollevamento /hubantriebe / elevactión	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Kg] \cdot \mathbf{g}\ [9.81] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$
Rotation / rotazione / drehung / rotaction	$\mathbf{P}\ [KW] = \frac{\mathbf{M}\ [Nm] \cdot \mathbf{n}\ [rpm]}{\mathbf{9550}}$
Linear movement / traslazione / linearbewegung / translacion	$\mathbf{P}\ [KW] = \frac{\mathbf{F}\ [N] \cdot \mathbf{v}\ [m/s]}{\mathbf{1000}}$

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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



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

M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión **1.15** Ingranaggi / Gearwheels / Zahnrad / Engranaje **1.25** Catena / Chain sprochets / Antriebskette / Cadena **1.75** Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal **2.50** Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana

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

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

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

Gear size / Grandezza riduttore / Getriebegröße / Tamaño reductor

Motor power / Potenza motore / Motorleistung / Potencia motor

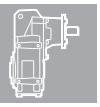
A Nominal torque / Momento torcente nominale / Nenn Drehmoment / Par de torsión nominal

Flange code / Codice flangia / Flanschtype / Código bridas

Input speed / Velocità in entrata / Eintriebsdrehzahl / Velocidad de entrada

F42A Compact- Gear 350Nm

Rating - Alluminum SHAFT MOUNTED HELICAL



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B 63	C 71	D 80	E 90	Available B14 motor flanges Q 71	R 80	T 90	U 100 112		Output Shaft ø	Ratios code
172	**8.12**	3.0	160	1.2	**3.57**	**190**	B				C	C			2818		-
139	**10.06**	3.0	198	1.0	**3.04**	**200**	B				C	C			2815		
82	**17.02**	2.2	245	1.0	**2.24**	**250**	B				C	C			1718		
77	**18.19**	2.2	262	1.0	**2.18**	**260**	B				C	C			1915		

C Ratio / Rapporto / Untersetzung / Relación

Transmitted torque / Momento torcente trasmesso / Mögliche Drehmomente / Par transmitido

Service factor / Fattore di servizio / Betriebsfaktor / Factor de servicio

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

Notes / Note / Anmerkungen / Notas

fs

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

D Motor flange available / Flange disponibili / Erhältliche Motorflansche / Bridas disponibles

B) Mounting with reduction ring / Montaggio con boccola di riduzione / Reduzierhülsen / Montaje con casquillo de reducción

C) Motor flangeholes position/terminal box position / Posizione fori flangia/basetta motore / Bohrungsposition am Motorflansch/-sockel / Posición agujeros brida / base motor

B) Available without reduction bushes / Disponibile anche senza boccola / Auch ohne Reduzierbuchse verfügbar / Disponible tambien sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select ouput speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeuntersetzung	En la línea correspondiente al motor preseleccionado es posible encontrar la relación de reducción
D	Select motor flange available (if requested)	Scegli la flangia disponibile (se richiesta)	Erhältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)

F32A Compact- Gear 200Nm

Rating - Alluminum SHAFT MOUNTED HELICAL

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T		Output Shaft	Ratios code
							63	71	80	90	71	80	90			
174	**8.03**	1.5	79	2.2	**3.2**	**170**	B				C	C		2818		-
135	**10.40**	1.5	102	1.8	**2.7**	**185**	B				C	C		2813		
96	**14.53**	1.5	143	1.4	**2.1**	**200**	B				C	C		1918		
83	**16.84**	1.5	165	1.2	**1.8**	**200**	B				C	C		1718		
71	**19.76**	1.5	194	1.0	**1.5**	**200**	B				C	C		1518	**standard ø25**	
59	**23.59**	1.1	170	1.2	**1.3**	**200**	B				C	C		1318		
55	**25.58**	1.1	184	1.1	**1.2**	**200**	B				C	C		1513		
43.5	**32.20**	0.75	158	1.3	**0.9**	**200**	B				C	C		1018	On request ø20 ø30	
35.8	**39.05**	0.55	141	1.2	**0.7**	**170**	B				C	C		1510		
33.6	**41.68**	0.55	150	1.3	**0.7**	**200**	B				C	C		1013		
25.7	**54.39**	0.37	132	1.5	**0.6**	**200**	B				C	C		913		
19.5	**71.82**	0.37	174	1.0	**0.38**	**180**	B				C	C		713		
16.9	**83.04**	0.25	136	1.3	**0.31**	**170**	B				C	C		910		
12.8	**109.66**	0.25	180	0.9	**0.24**	**170**	B				C	C		710		

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

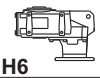
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F32A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F32A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F32A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F32A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

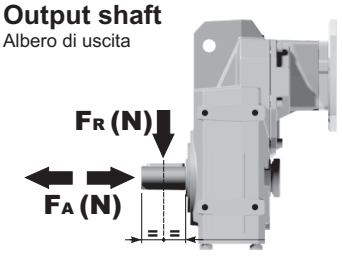
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.00 LT	0.65 LT	0.50 LT	0.70 LT	1.00 LT	0.70 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

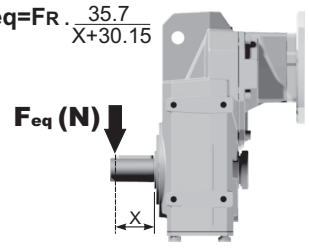
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

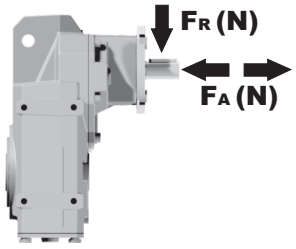


$$Feq = FR \cdot \frac{35.7}{X+30.15}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	240	1200	**85**	312	1562	**15**	420	2100
140	267	1335	**70**	327	1635	**-**	-	-
120	282	1410	**40**	401	2003	**-**	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	194	967
900	195	975
500	195	975

tab. 2

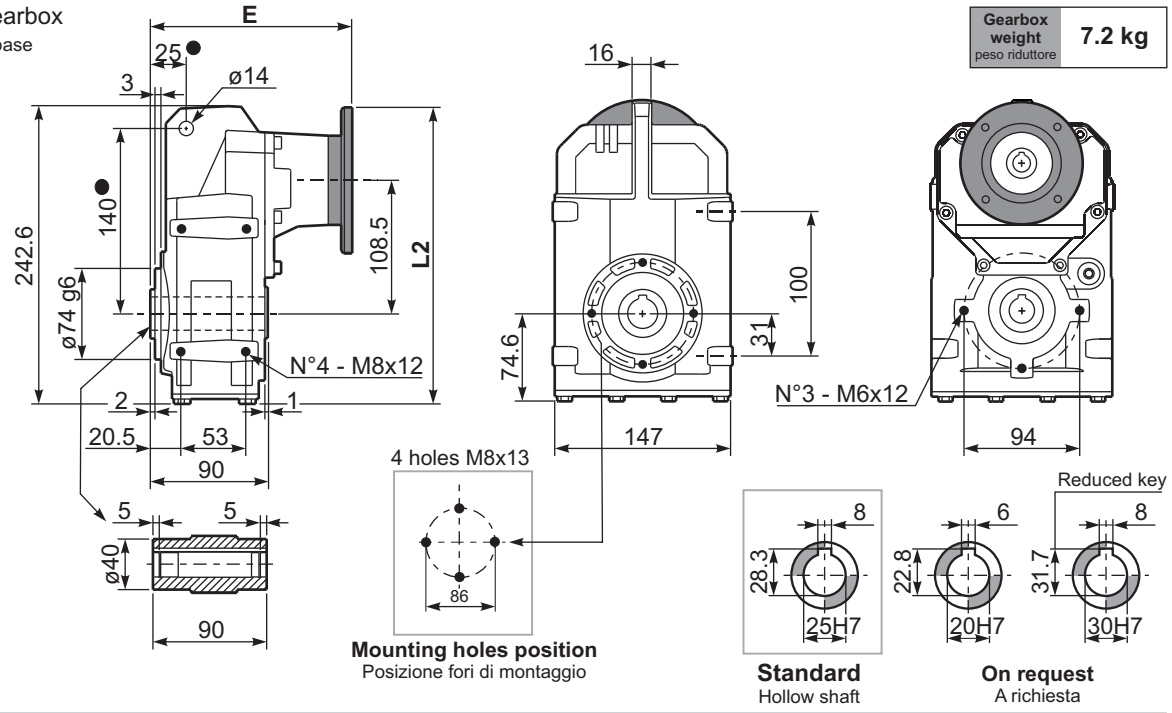
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

PF32AC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore: **7.2 kg**

Motor Flange

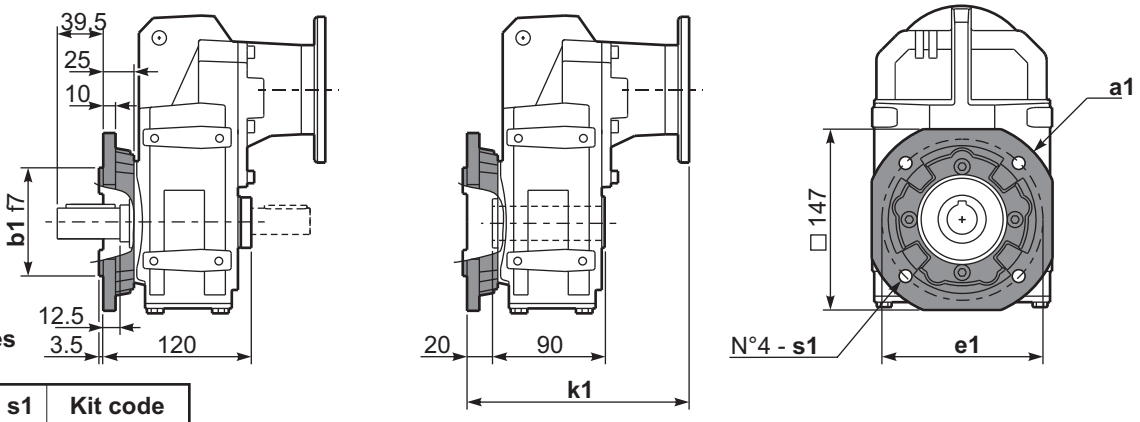
Motor Flange	E	L2
63 B5	161	253
71 B5	159	264
80/90 B5	161	284
71 B14	159	235.5
80 B14	160	243
90 B14	161	253



- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web

PF32A...**-F**... Output flange
Flangia uscita

Motor Flange	k1
63 B5	181
71 B5	179
80/90 B5	181
71 B14	179
80 B14	180
90 B14	181

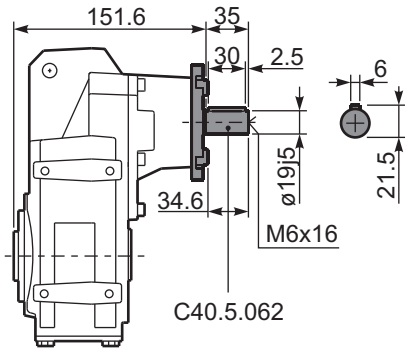


Available output flanges
Flange di uscita

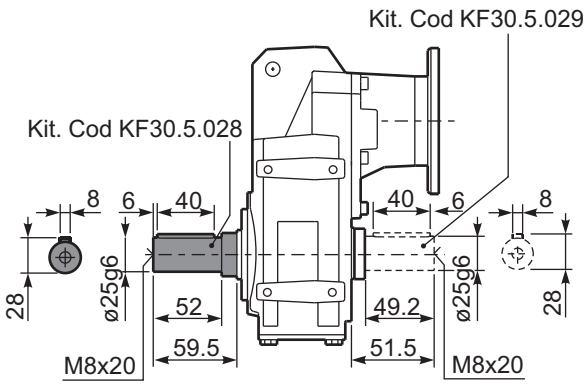
a1 ø	b1	e1	s1	Kit code
160*	110	130	8.5	KF30.9.010
200	130	165	11	KF30.9.011

* Standard output flange / Flangia uscita standard

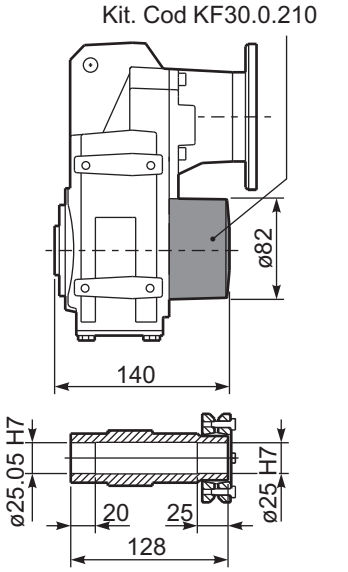
RF32AC... Input Shaft
Albero in entrata



PF32A **A/B**... Single and Double output shaft
Albero uscita semplie e doppio



PF32A**D/S**... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Output Shaft	Ratios code
							63	71	56	63	71			
13.2	**106.07**	0.25	168	1.2	**0.3**	**200**			C	C		101718	**standard ø25**	-
11.9	**118.06**	0.25	187	1.1	**0.3**	**200**			C	C		151313		
10.1	**138.43**	0.25	220	0.9	**0.2**	**200**			C	C		91718		
9.9	**140.92**	0.18	161	1.2	**0.2**	**200**			C	C		131313		
7.7	**182.80**	0.18	209	1.0	**0.2**	**200**			C	C		71718		
7.3	**192.36**	0.18	220	0.9	**0.2**	**200**			C	C		101313	On request ø20 ø30	
5.5	**256.12**	0.12	195	1.0	**0.1**	**200**			C	C		71318		
4.2	**331.50**	0.12	252	0.8	**0.1**	**200**			C	C		71313		
3.9	**361.22**	0.12	275	0.5	**0.1**	**140**			C	C		71710		
2.8	**506.11**	0.12	385	0.4	**0.1**	**170**			C	C		71310		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **F33A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F33A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
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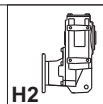
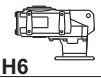
D Das Getriebe **F33A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F33A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

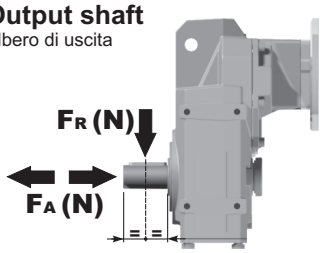
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.05 LT	0.70 LT	0.55 LT	0.75 LT	1.05 LT	0.75 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

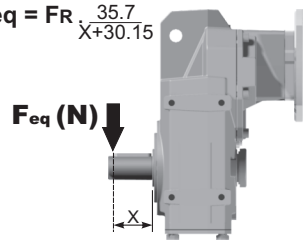
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$F_{eq} = F_R \cdot \frac{35.7}{X+30.15}$

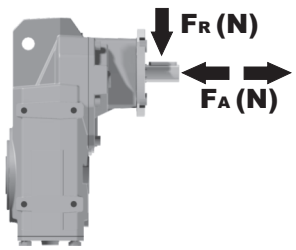


n_2	FA	FR
200	240	1200
140	267	1335
120	282	1410

n_2	FA	FR
85	312	1562
70	327	1635
40	401	2003

n_2	FA	FR
15	420	2100
-	-	-
-	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	194	967
900	195	975
500	195	975

tab. 2

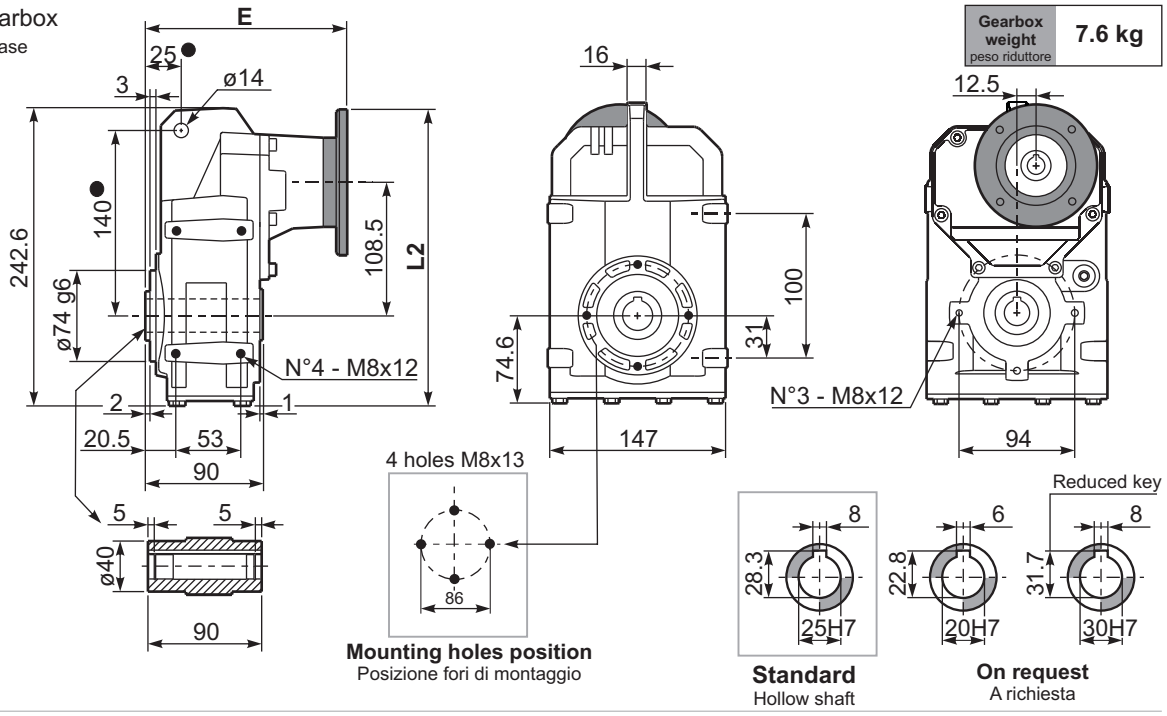
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

PF33AC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore **7.6 kg**

Motor Flange

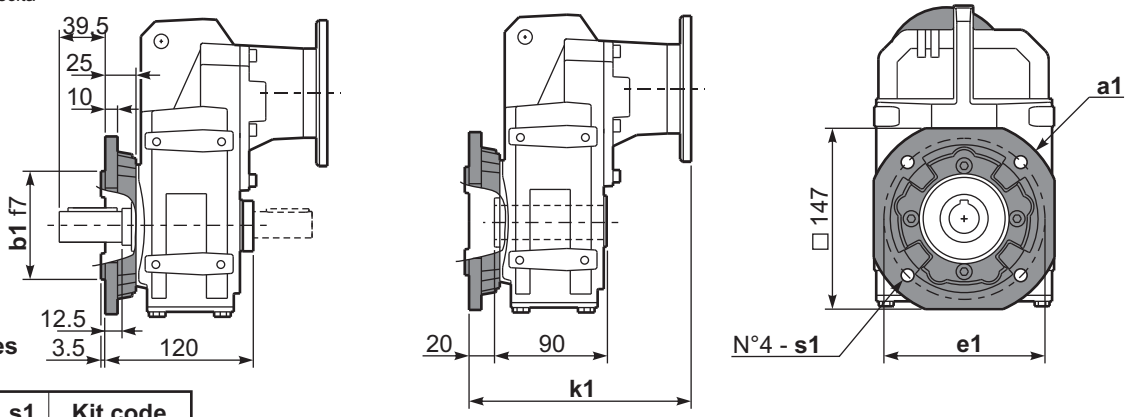
Motor Flange	E	L2
63 B5	163	253
71 B5	161	264
56B14	166.5	222
63B14	165.5	228
71B14	162.5	235.5



- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web

PF32A...**-F**... Output flange
Flangia uscita

Motor Flange	k1
63 B5	183
71 B5	181
56B14	186.5
63B14	185.5
71B14	182.5

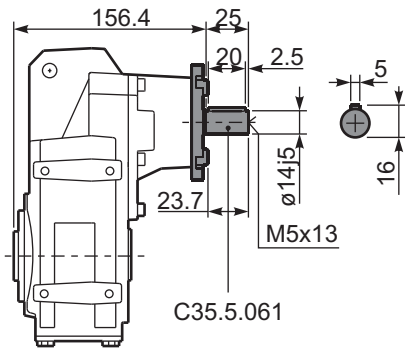


Available output flanges
Flange di uscita

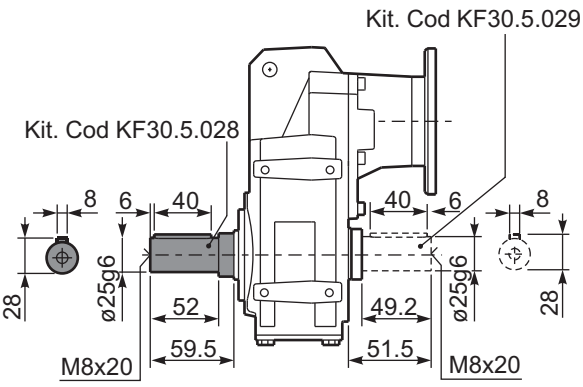
a1 ø	b1	e1	s1	Kit code
160*	110	130	8.5	KF30.9.010
200	130	165	11	KF30.9.011

* Standard output flange / Flangia uscita standard

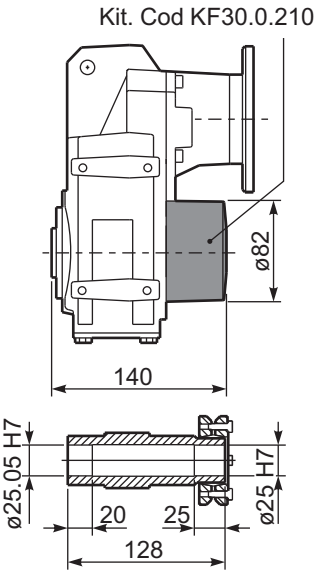
RF33AC... Input Shaft
Albero in entrata

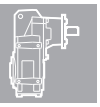


PF33A**A/B**... Single and Double output shaft
Albero uscita semplie e doppio



PF33A**D/S**... Shrink disk
Calettatore





▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft ø	Ratios code
							63	71	80	90	71	80	90	100 112			
172	**8.12**	3.0	160	1.2	3.57	190	B				C	C			2818		-
139	**10.06**	3.0	198	1.0	3.04	200	B				C	C			2815		
82	**17.02**	2.2	245	1.0	2.24	250	B				C	C			1718		
77	**18.19**	2.2	262	1.0	2.18	260	B				C	C			1915		
66	**21.08**	1.5	207	1.5	2.29	316	B				C	C			1715	**standard ø30**	
57	**24.75**	1.5	243	1.2	1.83	297	B				C	C			1515		
47.4	**29.54**	1.5	290	1.1	1.60	310	B				C	C			1315		
43	**32.55**	1.1	234	1.0	1.14	244	B				C	C			1018	On request ø25 ø35	
34.7	**40.32**	1.1	290	1.0	1.14	300	B				C	C			1015		
33	**42.48**	0.75	209	1.0	0.72	200	B				C	C			918		
26.6	**52.62**	0.75	258	1.0	0.72	247	B				C	C			915		
20.1	**69.49**	0.37	168	1.1	0.42	190	B				C	C			715		

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available / Flange Motore Disponibili

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

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

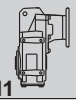
C) **Motor Flange Holes Position** / Posizione Fori Flangia Motore

EN Unit **F42A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F42A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F42A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F42A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

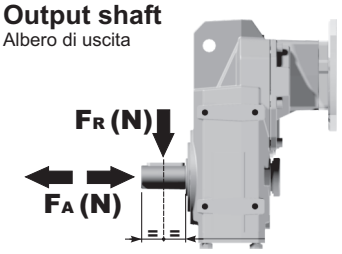
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.20 LT	0.80 LT	0.60 LT	0.80 LT	1.20 LT	0.85 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

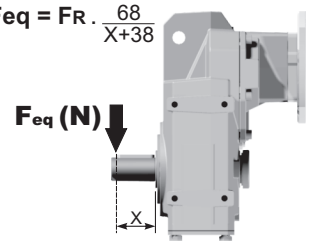
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$F_{eq} = F_R \cdot \frac{68}{X+38}$

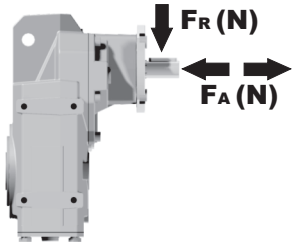


n_2	FA	FR
200	384	1920
140	427	2136
120	451	2256

n_2	FA	FR
85	500	2498
70	523	2616
40	641	3204

n_2	FA	FR
15	672	3360
-	-	-
-	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	310	1548
900	312	1560
500	312	1560

tab. 2

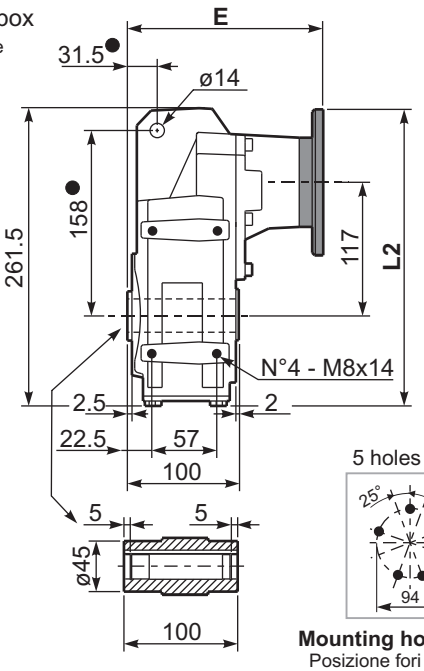
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

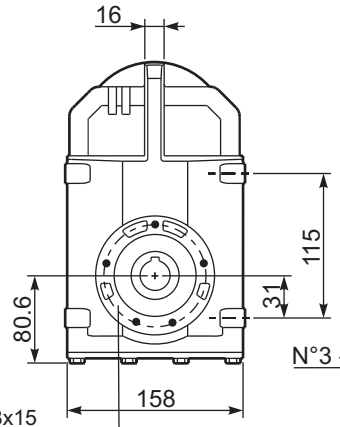
PF42AC... Basic gearbox
Riduttore base

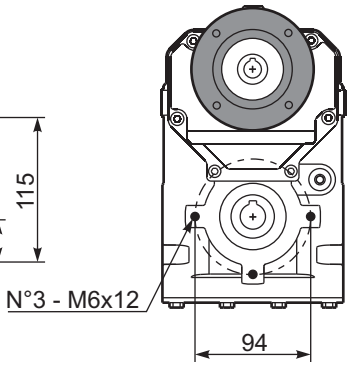
Gearbox weight / peso riduttore	7.8 kg

Motor Flange

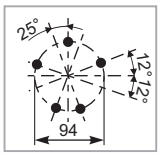
Motor Flange	E	L2
63 B5	170	267.5
71 B5	168	277.5
80/90 B5	170	297.5
71 B14	168	250
80 B14	169	257.5
90 B14	170	267.5
100/112B14	186	277.5



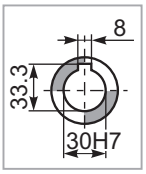




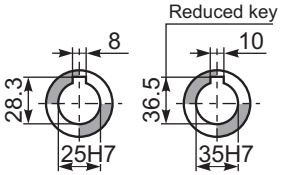
- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web



Mounting holes position
Posizione fori di montaggio



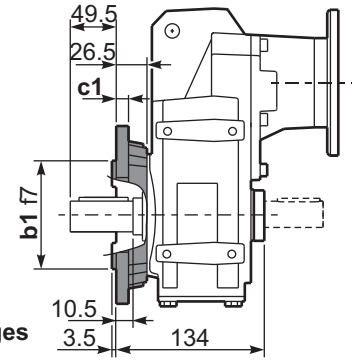
Standard
Hollow shaft

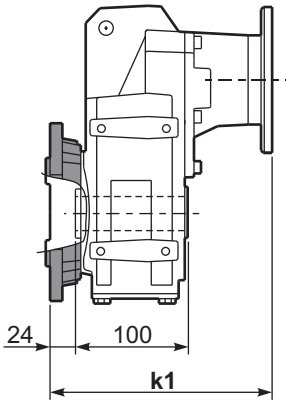


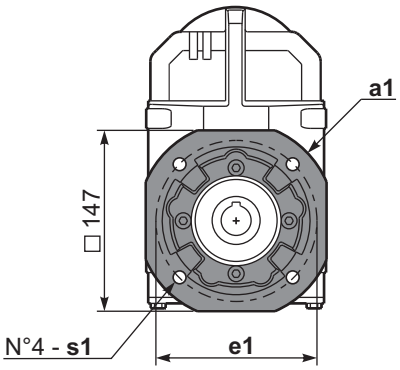
On request
A richiesta

PF42A...-F... Output flange
Flangia uscita

Motor Flange	k1
63 B5	194
71 B5	192
80/90 B5	194
71 B14	194
80 B14	193
90 B14	194
100/112B14	210





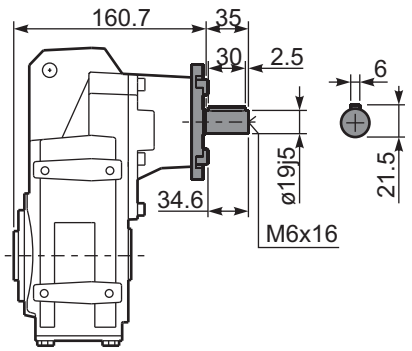


Available output flanges
Flange di uscita

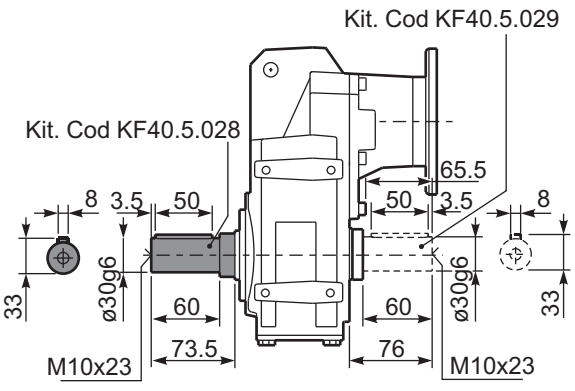
a1 ø	b1	c1	e1	s1	Kit code
160*	110	10	130	8.5	KF40.9.010
200	130	11	165	11	KF40.9.011

*Standard output flange / Flangia uscita standard

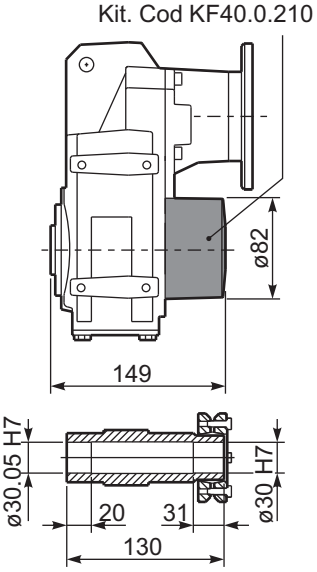
RF42AC... Input Shaft
Albero in entrata



PF42A**A/B**... Single and Double output shaft
Albero uscita semplie e doppio

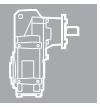


PF42A**D/S**... Shrink disk
Calettatore



F43A Compact- Gear 350Nm

Rating - Alluminum SHAFT MOUNTED HELICAL



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B 63	C 71	D 80	E 90	Available B14 motor flanges O 56	P 63	Q 71	R 80	T 90		Output Shaft
42.3	**33.13**	1.5	315	1.1	**1.6**	**337**	B						C	C		281715	
37.4	**37.47**	1.1	261	1.0	**1.1**	**250**	B						C	C		281318	
28.9	**48.37**	0.75	230	1.2	**0.9**	**272**	B						C	C		191718	
23.4	**59.92**	0.75	285	1.2	**0.9**	**337**	B						C	C		191715	
21.3	**65.81**	0.75	313	0.9	**0.7**	**272**	B						C	C		151718	
20.2	**69.45**	0.75	330	1.0	**0.8**	**337**	B						C	C		171715	**standard ø30**
17.2	**81.52**	0.55	284	1.2	**0.7**	**337**	B						C	C		151715	
14.4	**97.30**	0.55	339	1.0	**0.5**	**337**	B						C	C		131715	On request ø25 ø35
13.1	**107.22**	0.37	252	1.1	**0.4**	**272**					C	C				101718	
12.3	**114.21**	0.37	268	1.2	**0.4**	**310**					C	C				151315	
10.3	**136.33**	0.37	320	1.0	**0.4**	**310**					C	C				131315	
7.5	**186.09**	0.25	295	1.1	**0.3**	**310**					C	C				101315	
6.1	**228.89**	0.25	363	0.9	**0.23**	**337**					C	C				71715	
5.8	**242.87**	0.18	277	1.1	**0.20**	**310**					C	C				91315	
4.4	**320.70**	0.18	366	0.8	**0.15**	**310**					C	C				71315	

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

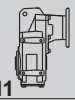
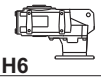
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F43A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F43A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F43A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F43A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

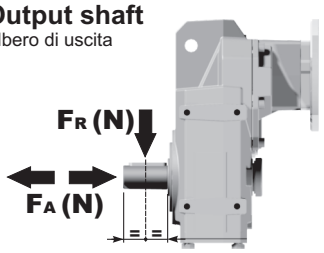
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.25 LT	0.85 LT	0.65 LT	0.85 LT	1.25 LT	0.90 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

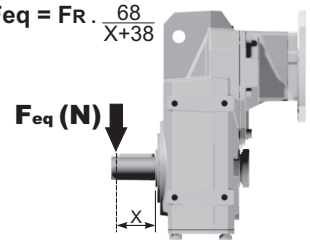
tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



$Feq = FR \cdot \frac{68}{X+38}$

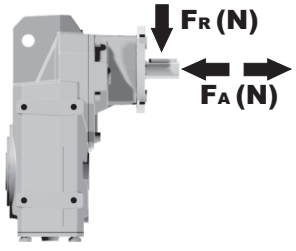


n_2	FA	FR
200	384	1920
140	427	2136
120	451	2256

n_2	FA	FR
85	500	2498
70	523	2616
40	641	3204

n_2	FA	FR
15	672	3360
-	-	-
-	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	310	1548
900	312	1560
500	312	1560

tab. 2

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

PF43AC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	8.2 kg

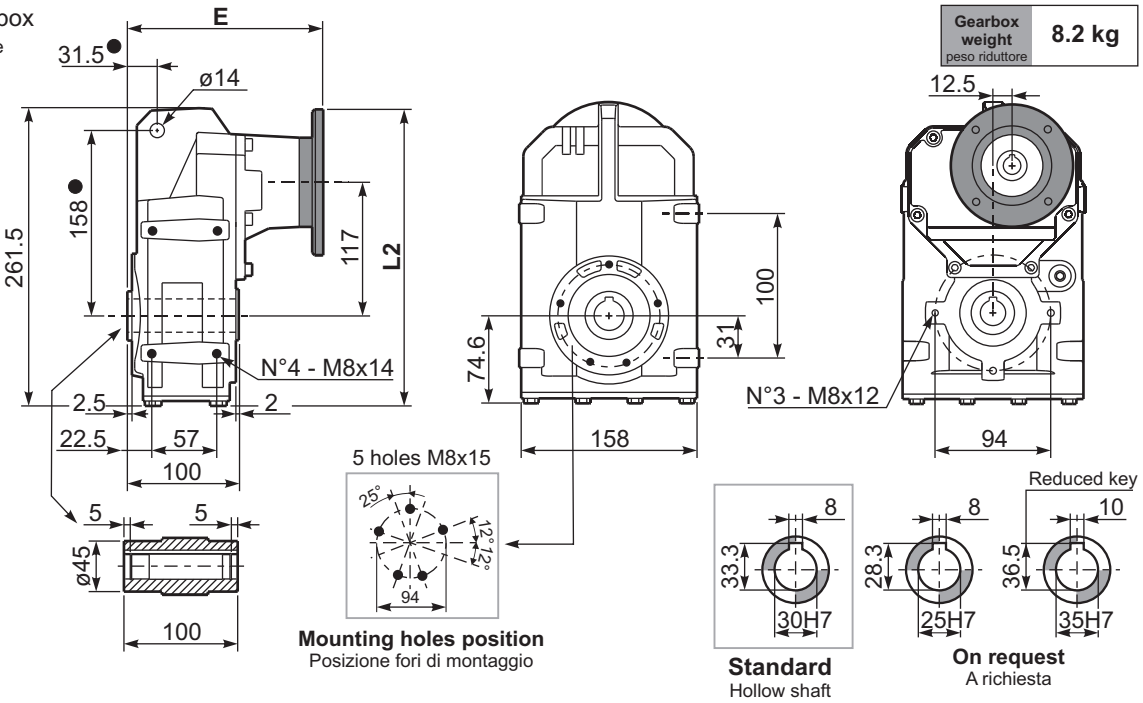
Ratio 33.13÷97.30 IEC80

Motor Flange	E	L2
63B5	191	267.5
71B5	189	277.5
80-90B5	191	297.5
71B14	189	250
80B14	190	257.5
90B14	191	267.5

Ratio 107.22÷320.70 IEC71

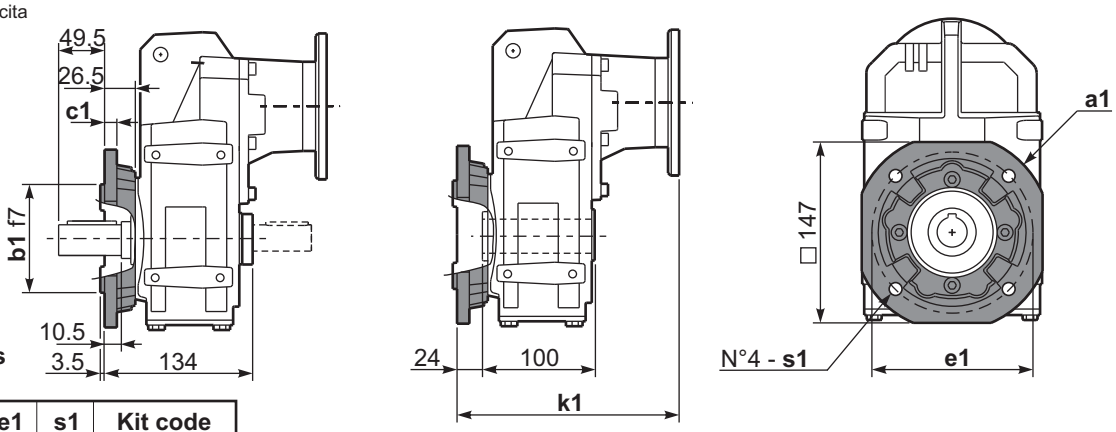
Motor Flange	E	L2
63 B5	172	267.5
71 B5	170	264
56B14	175.5	236.5
63B14	174.5	242.5
71B14	171.5	250

- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web



PF43A...-F... Output flange
Flangia uscita

Motor Flange	k1 IEC71	k1 IEC80
63 B5	196	215
71 B5	194	213
80/90 B5	-	215
56B14	199.5	-
63B14	198.5	-
71B14	195.5	213
80B14	-	214
90B14	-	215

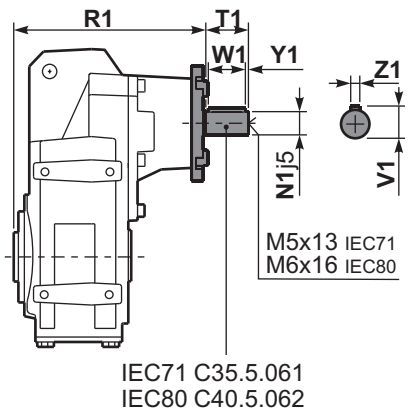


Available output flanges
Flange di uscita

a1 ø	b1	c1	e1	s1	Kit code
160*	110	10	130	8.5	KF40.9.010
200	130	11	165	11	KF40.9.011

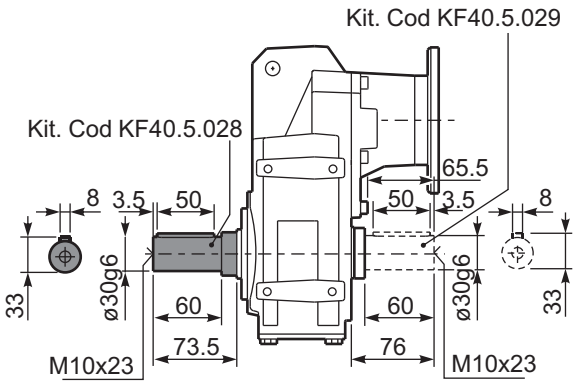
* Standard Output flange / Flangia uscita standard

RF43AC... Input Shaft
Albero in entrata

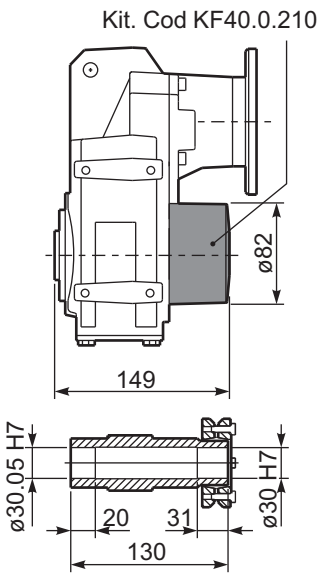


Input shaft	N1 j5	R1	T1	V1	Z1	W1	Y1
IEC71	ø14	165.4	25	16	5	20	2.4
IEC80	ø19	181.9	35	21.5	6	30	2.5

PF43AA/B... Single and Double output shaft
Albero uscita semplie e doppio



PF43AD/S... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C (71)	D (80)	E (90)	F (100 112)	Available B14 motor flanges R (80)	T (90)	U (100 112)	V (132)		Output Shaft	Ratios code
213	**6.57**	5.5	237	1.2	6.74	290	B								3018		-
185	**7.56**	5.5	272	1.1	6.06	300	B								3016		
159	**8.82**	5.5	318	1.2	6.58	380	B								3014		
113	**12.39**	5.5	446	0.9	4.93	400	B								2018		
98	**14.24**	4	373	1.1	4.50	420	B								2016		
84	**16.63**	4	435	1.1	4.55	495	B								2014		
73	**19.25**	4	504	1.0	3.97	500	B								1616	**standard ø35**	
64	**21.78**	3	428	1.2	3.54	505	B								1318		
62	**22.48**	3	442	1.1	3.36	495	B								1614	On request ø30 ø40	
56	**25.04**	3	492	1.0	3.05	500	B								1316		
47.9	**29.23**	2.2	421	1.2	2.59	495	B								1314		
45.7	**30.65**	2.2	442	1.1	2.5	500	B								1116		
39.1	**35.78**	2.2	515	1.0	2.1	430	B								1114		
36.3	**38.55**	1.5	379	1.2	1.8	455	B								818		
31.6	**44.32**	1.5	435	1.1	1.7	500	B								816		
27.1	**51.74**	1.5	508	1.0	1.5	495	B								814		
22.9	**61.03**	1.1	440	1.0	1.1	420	B								616		
19.6	**71.25**	1.1	513	0.8	0.9	430	B								614		

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

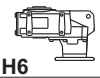
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F52A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F52A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F52A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F52A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

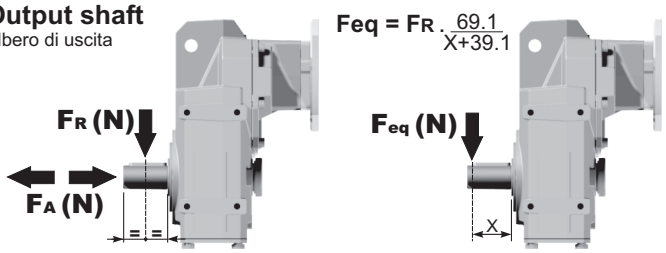
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
					
H1	**H4**	**H3**	**H2**	**H5**	**H6**
1.80 LT	1.20 LT	0.90 LT	1.25 LT	1.80 LT	1.25 LT

AGIP	**BP**	**SHELL**	**KLUBER**	**MOBIL**
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

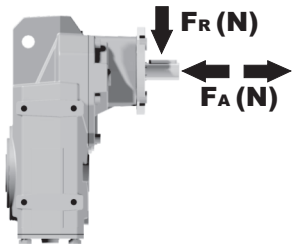
Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{69.1}{X+39.1}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	420	2100	**85**	568	2376	**15**	960	4800
140	466	2328	**70**	590	2952	**-**	-	-
120	554	2772	**40**	706	3528	**-**	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	300	1500
900	377	1884
500	493	2466

tab. 2

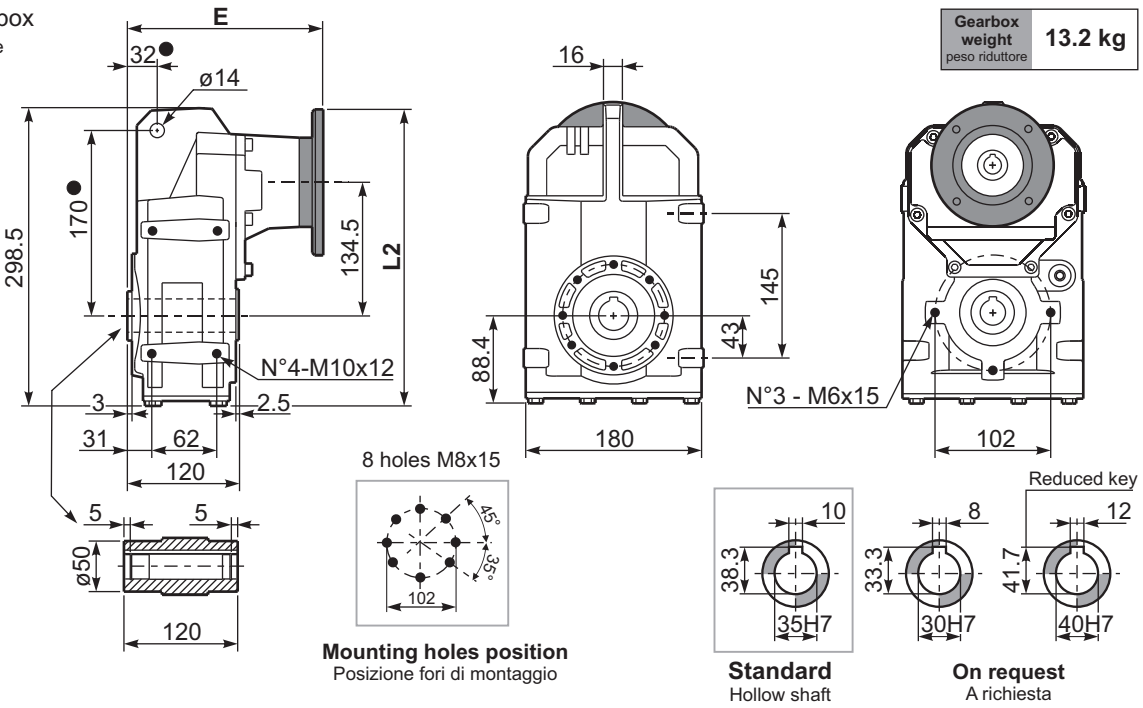
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

PF52AC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore **13.2 kg**

Motor Flange

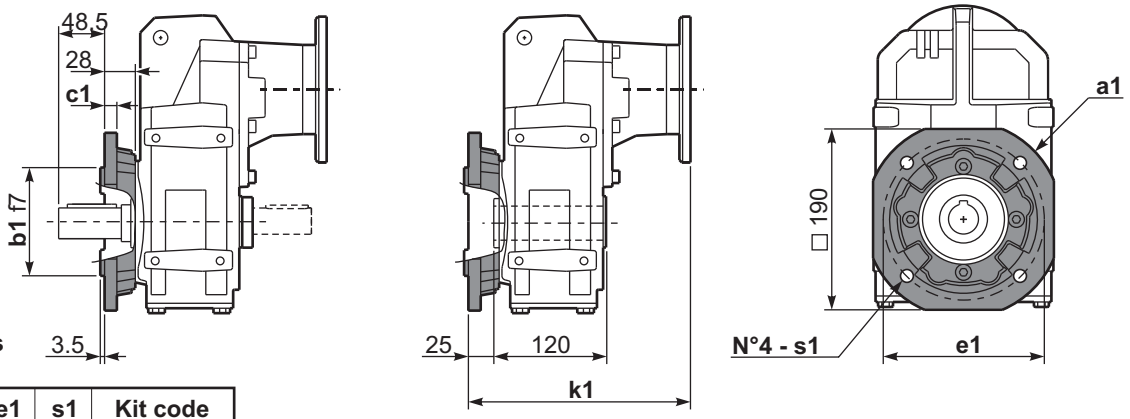
Motor Flange	E	L2
71 B5	201.5	303
80/90 B5	203.5	323
100/112B5	203.5	348
80 B14	202	283.5
90 B14	205	294
100/112B14	201.5	303
132B14	220	323



- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web

PF52A...-F... Output flange
Flangia uscita

Motor Flange	E
71 B5	226.5
80/90 B5	228.5
100/112B5	228.5
80 B14	227
90 B14	230
100/112B14	226.5
132B14	245

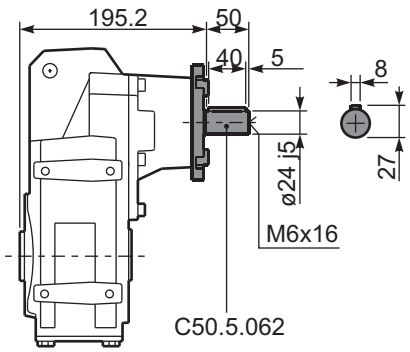


Available output flanges
Flange di uscita

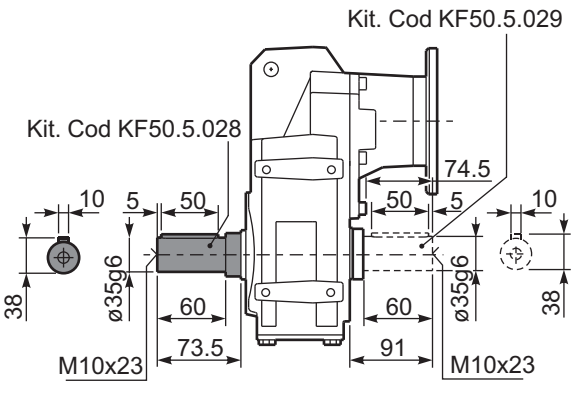
a1 ø	b1	c1	e1	s1	Kit code
200*	130	10	165	11	KF50.9.010
250	180	15	215	13.5	KF50.9.011

* Standard output flange / Flangia uscita standard

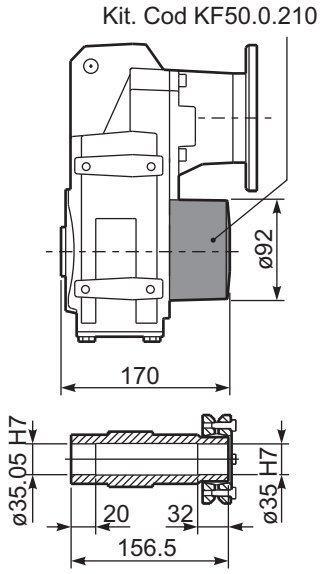
RF52AC... Input Shaft
Albero in entrata



PF52AA/B... Single and Double output shaft
Albero uscita semplie e doppio



PF52AD/S... Shrink disk
Calettatore



F53A Compact- Gear 510Nm

Rating - Alluminum SHAFT MOUNTED HELICAL

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft	Ratios code
							63	71	80	90	71	80	90	100 112			
35.6	**39.30**	1.5	374	1.4	2.0	510	B				C	C			281316		-
30.5	**45.93**	1.5	437	1.1	1.7	500	B				C	C			281314		
22.6	**61.89**	1.1	432	1.2	1.3	530	B				C	C			191318		
19.7	**71.16**	1.1	497	1.0	1.1	510	B				C	C			191316		
17	**82.48**	0.75	392	1.3	1.0	510	B				C	C			171316		
14.5	**96.82**	0.75	461	1.1	0.8	510	B				C	C			151316		
12.1	**115.56**	0.55	403	1.3	0.7	510	B				C	C			131316	**standard ø35**	
10.2	**137.20**	0.55	479	1.1	0.6	530	B				C	C			101318		
8.9	**157.74**	0.55	550	0.9	0.5	510	B				C	C			101316		
7.8	**179.06**	0.37	420	1.3	0.5	530	B				C	C			91318	On request ø30 ø40	
7.6	**184.15**	0.37	432	1.2	0.4	500	B				C	C			101314		
6.8	**205.87**	0.37	483	1.1	0.4	510	B				C	C			91316		
5.8	**240.34**	0.25	381	1.3	0.3	500	B				C	C			91314		
5.1	**271.85**	0.25	431	1.2	0.3	510	B				C	C			71316		
4.4	**317.36**	0.25	503	1.0	0.2	500	B				C	C			71314		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

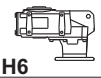
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F53A** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F53A** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F53A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F53A** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

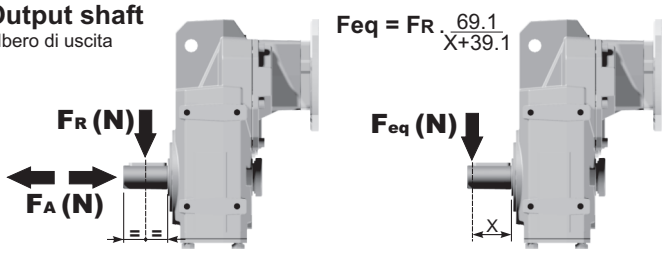
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.90 LT	1.30 LT	1.00 LT	1.35 LT	1.90 LT	1.35 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

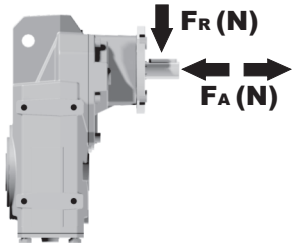
Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{69.1}{X+39.1}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	420	2100	**85**	568	2376	**15**	960	4800
140	466	2328	**70**	590	2952	**-**	-	-
120	554	2772	**40**	706	3528	**-**	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	300	1500
900	377	1884
500	493	2466

tab. 2

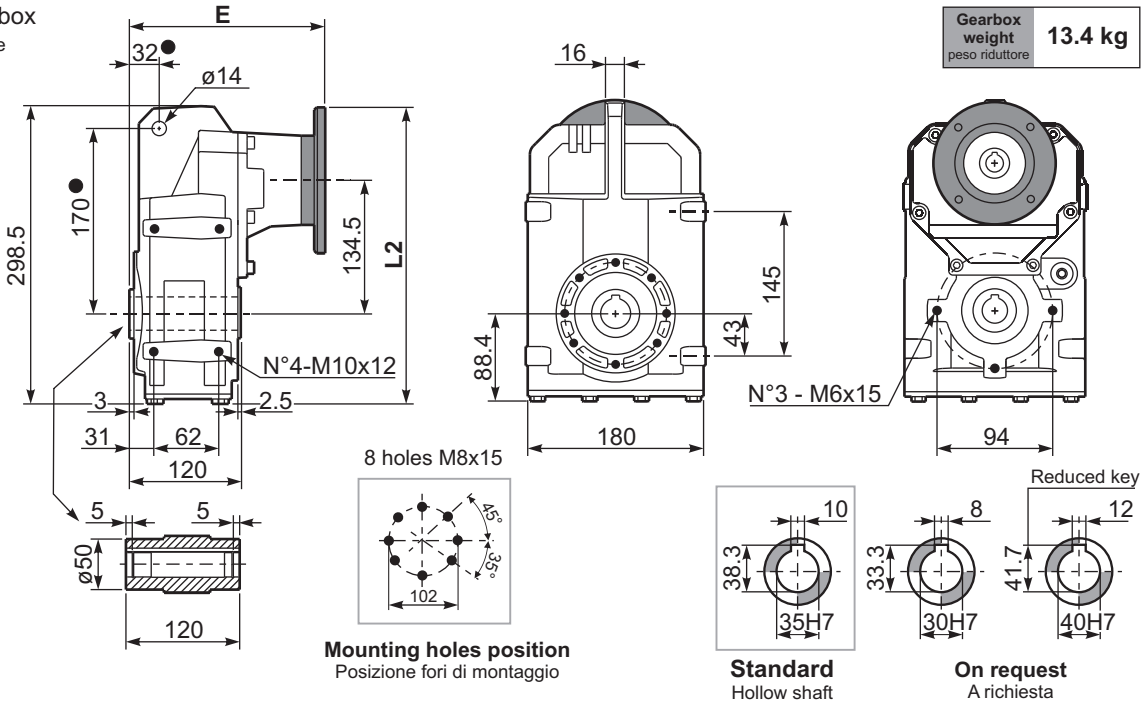
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

PF53AC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore **13.4 kg**

Motor Flange

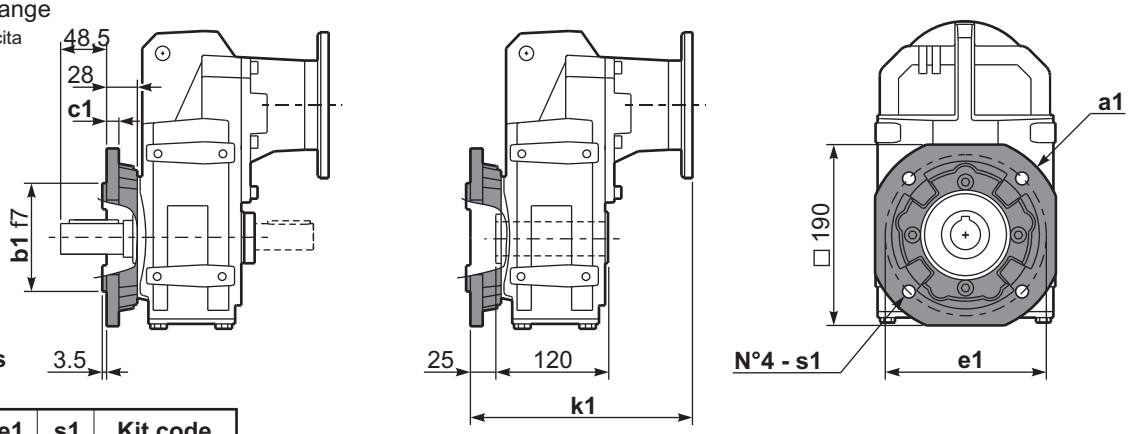
Motor Flange	E	L2
63 B5	211.5	293.5
71 B5	212.5	303.5
80/90 B5	211.5	323.5
71 B14	209.5	276
80 B14	210.5	283.5
90 B14	211.5	293.5
100/112B14	227.5	303.5



- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web

PF53A...**-F**... Output flange
Flangia uscita

Motor Flange	k1
63 B5	236.5
71 B5	237.5
80/90 B5	236.5
71 B14	234.5
80 B14	235.5
90 B14	236.5
100/112B14	252.5

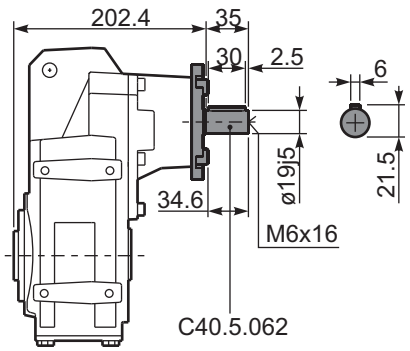


Available output flanges
Flange di uscita

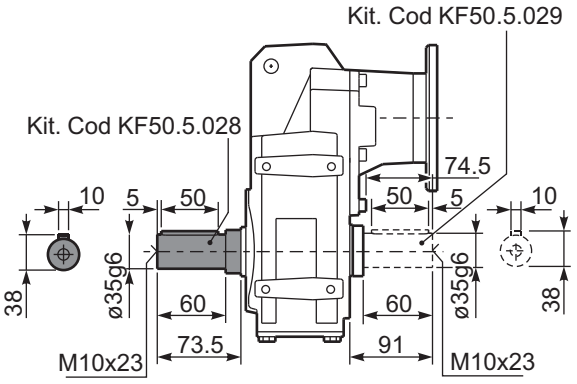
a1 ø	b1	c1	e1	s1	Kit code
200*	130	10	165	11	KF50.9.010
250	180	15	215	13.5	KF50.9.011

* Standard output flange / Flangia uscita standard

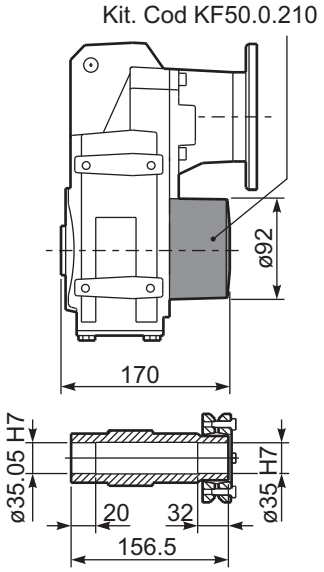
RF53AC... Input Shaft
Albero in entrata



PF53A**A/B**... Single and Double output shaft
Albero uscita semplie e doppio



PF53A**D/S**... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges C (71)	D (80)	E (90)	F (100 112)	Available B14 motor flanges R (80)	T (90)	U (100 112)	V (132)		Output Shaft	Ratios code
225	**6.21**	7.5	305	1.0	**7.9**	**320**	B								3018		-
196	**7.15**	7.5	351	1.0	**7.9**	**369**	B								3016		
168	**8.36**	7.5	410	1.0	**7.9**	**431**	B								3014		
120	**11.71**	7.5	575	1.0	**7.6**	**585**	B								2018		
104	**13.48**	5.5	485	1.3	**7.0**	**620**	B								2016		
89	**15.75**	5.5	567	1.1	**6.0**	**617**	B								2014		
77	**18.22**	4	477	1.3	**5.2**	**620**	B								1616	**standard ø40**	
68	**20.58**	4	539	1.1	**4.2**	**566**	B								1318		
66	**21.29**	4	558	1.1	**4.4**	**617**	B								1614		
59	**23.69**	4	621	1.0	**4.0**	**620**	B								1316	On request ø35	
51	**27.69**	3	544	1.1	**3.4**	**617**	B								1314		
48.3	**29.00**	3	570	1.0	**3.1**	**580**	B								1116		
41.3	**33.90**	3	666	0.9	**2.8**	**617**	B								1114		
38.4	**36.43**	2.2	525	1.0	**2.3**	**550**	B								818		
33.4	**41.94**	1.5	412	1.5	**2.3**	**620**	B								816		
28.6	**49.02**	1.5	481	1.3	**1.9**	**617**	B								814		
24.2	**57.75**	1.1	416	1.1	**1.2**	**440**	B								616		
20.7	**67.50**	1.1	486	1.0	**1.1**	**507**	B								614		

The dynamic efficiency is **0.96** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

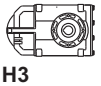
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F62C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F62C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F62C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **F62C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

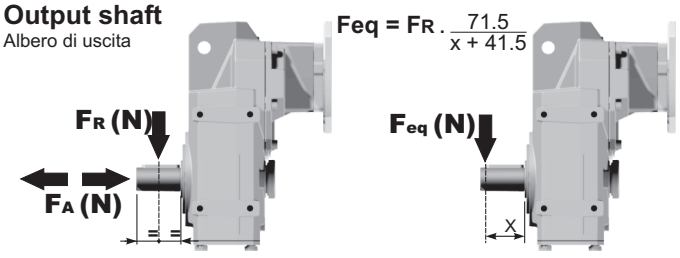
Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
1.90 LT	1.40 LT	1.05 LT	1.50 LT	1.90 LT	1.40 LT

AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

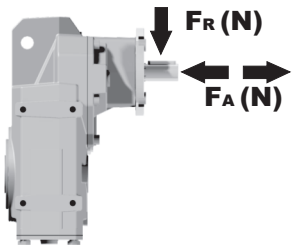
Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{71.5}{x + 41.5}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	834	4169	**85**	1122	5610	**15**	1430	7150
140	937	4686	**70**	1188	5940	**-**	-	-
120	990	4950	**40**	1430	7150	**-**	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	120	602
900	245	1227
500	385	1925

tab. 2

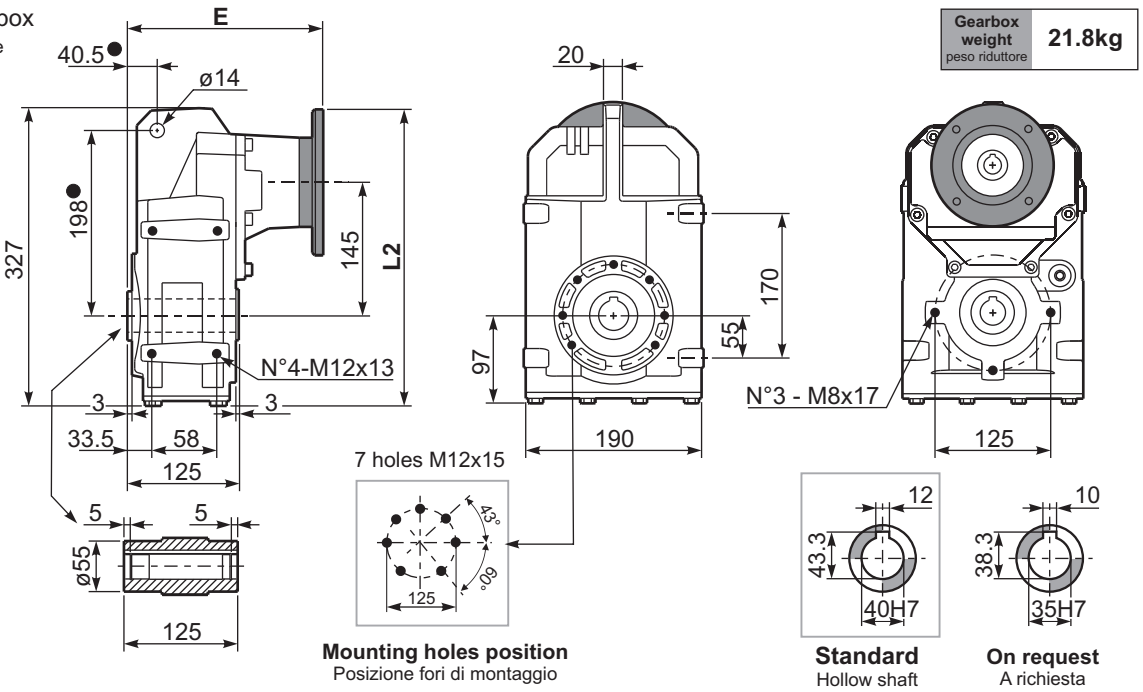
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

PF62CC... Basic gearbox
Riduttore base

Gearbox weight peso riduttore **21.8kg**

Motor Flange

Motor Flange	E	L2
71 B5	212.5	321
80/90 B5	214.5	341
100/112B5	214.5	366
80 B14	212.5	301
90 B14	215.5	311
100 B14	212	321
132 B14	245.5	341



- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web

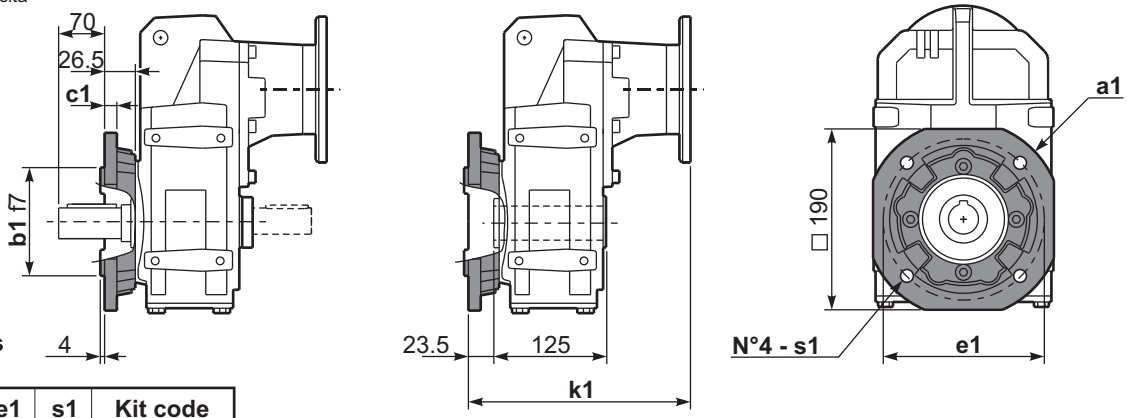
Mounting holes position
Posizione fori di montaggio

Standard
Hollow shaft

On request
A richiesta

PF62C...-F... Output flange
Flangia uscita

Motor Flange	K1
71 B5	236
80/90 B5	238
100/112B5	238
80 B14	236
90 B14	239
100/112B14	235.5
132B14	254

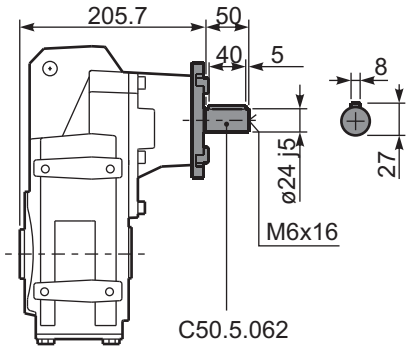


Available output flanges
Flange di uscita

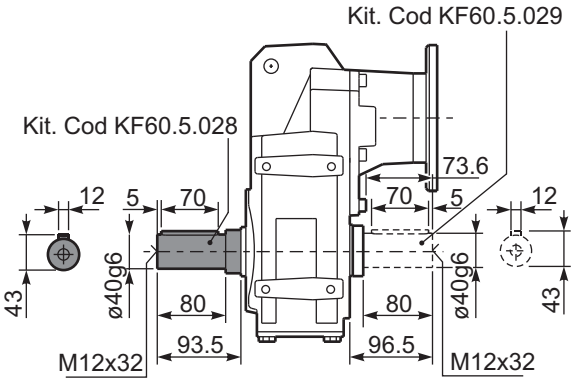
a1 ø	b1	c1	e1	s1	Kit code
200	130	10	165	11	KF60.9.010
250*	180	15	215	13.5	KF60.9.011

* Standard output flange / Flangia uscita standard

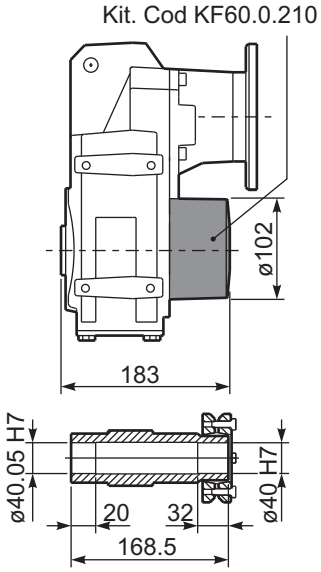
RF62CC... Input Shaft
Albero in entrata



PF62CA/B... Single and Double output shaft
Albero uscita semplie e doppio



PF62CD/S... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	C	D	E	Available B14 motor flanges Q	R	T	U		Output Shaft	Ratios code
							63	71	80	90	71	80	90	100 112			
37.6	**37.23**	1.5	354	1.8	2.8	652	B				C	C			281316		-
32.2	**43.52**	1.5	414	1.6	2.3	648	B				C	C			281314		
23.9	**58.49**	1.5	557	1.0	1.6	576	B				C	C			191318		
20.8	**67.34**	1.5	641	1.0	1.53	652	B				C	C			191316		
17.9	**78.05**	1.1	545	1.2	1.32	652	B				C	C			171316		
15.3	**91.61**	1.1	639	1.0	1.12	652	B				C	C			151316	**standard ø40**	
12.8	**109.35**	0.75	520	1.3	0.94	652	B				C	C			131316		
10.8	**129.66**	0.75	617	0.9	0.70	576	B				C	C			101318		
9.4	**149.26**	0.55	521	1.3	0.69	652	B				C	C			101316	On request ø35	
8.3	**169.22**	0.55	590	1.0	0.54	576	B				C	C			91318		
8.0	**174.46**	0.55	609	1.1	0.59	648	B				C	C			101314		
7.2	**194.80**	0.55	680	1.0	0.53	652	B				C	C			91316		
6.1	**227.69**	0.37	534	1.2	0.45	648	B				C	C			91314		
5.4	**257.23**	0.37	604	1.1	0.40	652	B				C	C			71316		
4.7	**300.66**	0.25	477	1.4	0.34	648	B				C	C			71314		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

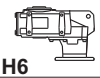
C) **Motor Flange Holes Position** Posizione Fori Flangia Motore

EN Unit **F63C** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **F63C** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **F63C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

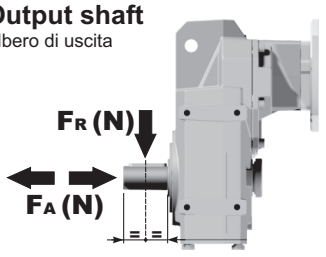
E El reductor tamaño **F63C** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
2.00 LT	1.50 LT	1.15 LT	1.60 LT	2.00 LT	1.50 LT

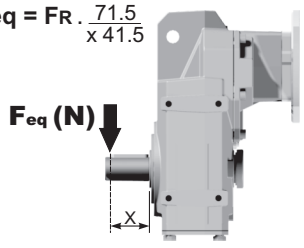
AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

Output shaft
Albero di uscita

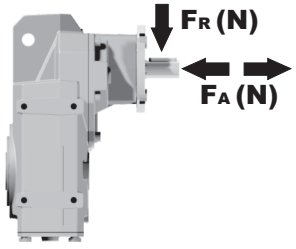


$Feq = FR \cdot \frac{71.5}{x\ 41.5}$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	834	4169	**85**	1122	5610	**15**	1430	7150
140	937	4686	**70**	1188	5940	**-**	-	-
120	990	4950	**40**	1430	7150	**-**	-	-

Input shaft
Albero in entrata



n_1	FA	FR
1400	120	602
900	245	1227
500	385	1925

tab. 2

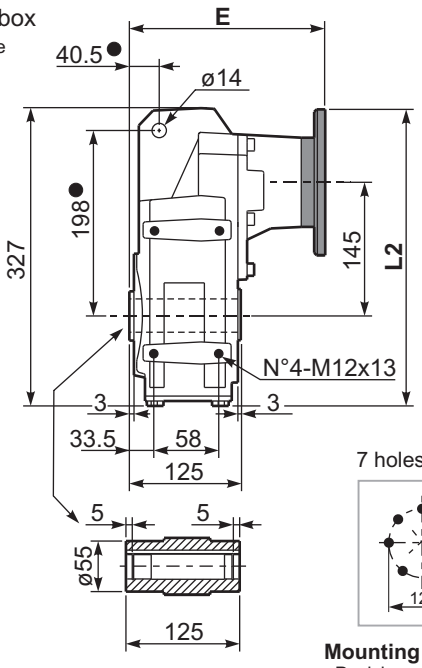
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

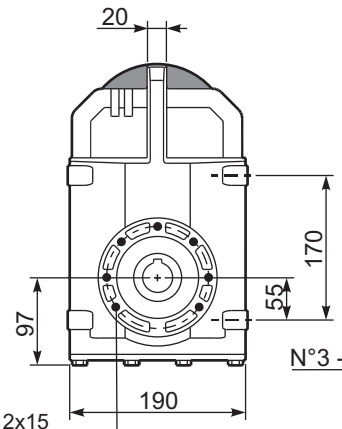
PF63CC... Basic gearbox
Riduttore base

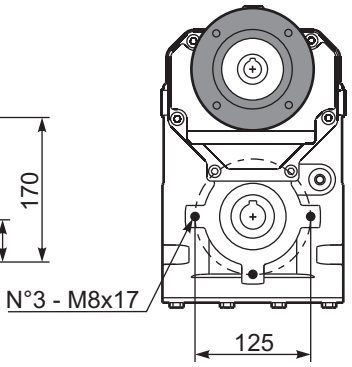
Gearbox weight peso riduttore **22.0kg**

Motor Flange

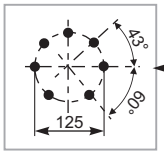
Motor Flange	E	L2
63 B5	222.5	312
71 B5	223.5	322
80/90 B5	222.5	342
71 B14	220.5	294.5
80 B14	221.5	302
90 B14	222.5	312
100/112B14	238.5	322



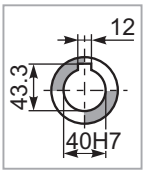




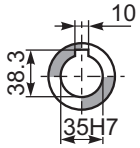
- Available torque arms, see our web site
  Bracci di reazione disponibili, consulta il nostro sito web



Mounting holes position
Posizione fori di montaggio



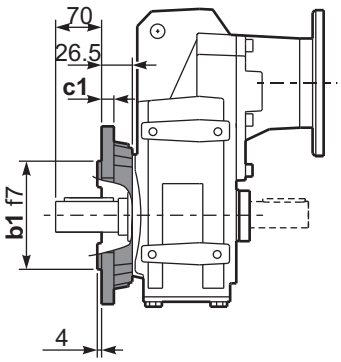
Standard
Hollow shaft

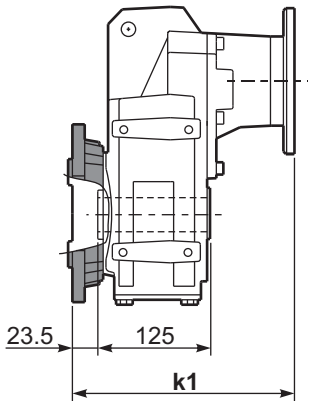


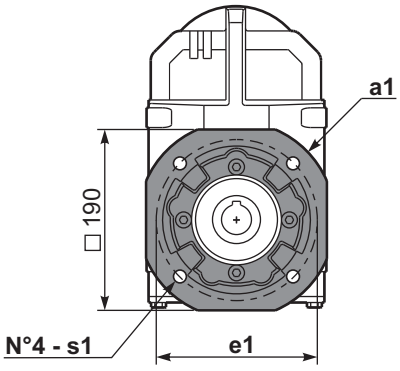
On request
A richiesta

PF63C...-F... Output flange
Flangia uscita

Motor Flange	k1
63 B5	246
71 B5	247
80/90 B5	246
71 B14	243.5
80 B14	244.5
90 B14	245.5
100/112B14	261.5





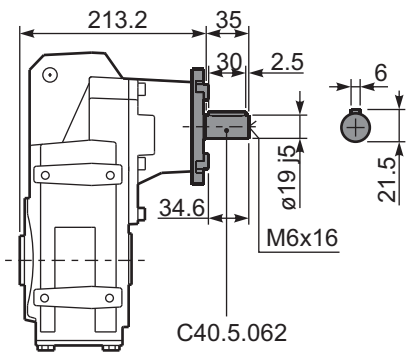


Available output flanges
Flange di uscita

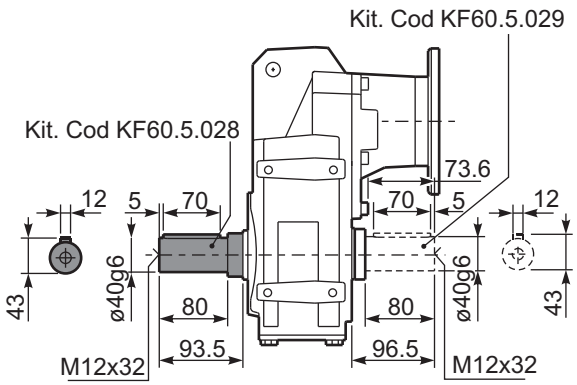
a1 ø	b1	c1	e1	s1	Kit code
200	130	10	165	11	KF60.9.010
250*	180	15	215	13.5	KF60.9.011

* Standard output flange / Flangia uscita standard

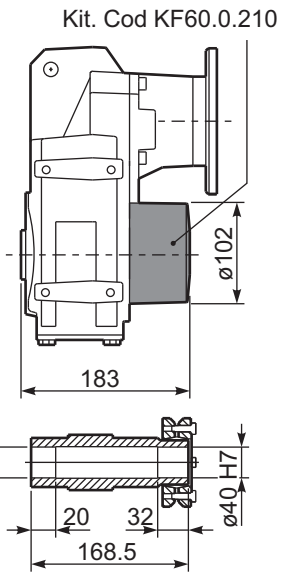
RF63CC... Input Shaft
Albero in entrata



PF63CA/B... Single and Double output shaft
Albero uscita semplie e doppio



PF63CD/S... Shrink disk
Calettatore



▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Hollow Shaft	Ratios code
							63	71	56	63	71			
24.2	**57.9**	0.25	98	0.9	**0.24**	**90**			C	C		2844		-
13.4	**104.8**	0.12	89	1.0	**0.13**	**90**			C	C		1954		
11.5	**121.5**	0.12	103	0.9	**0.11**	**90**			C	C		1756		
9.8	**142.6**	0.12	121	0.7	**0.10**	**90**			C	C		1558	**standard ø20**	
8.2	**170.2**	0.12	145	*	**0.08**	**90**			C	C		1360		
6.0	**232.3**	0.12	198	*	**0.06**	**90**			C	C		1063		
4.6	**303.2**	0.12	258	*	**0.04**	**90**			C	C		974		
3.5	**400.4**	0.12	341	*	**0.03**	**90**			C	C		776		

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

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

EN Unit **FS20** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **FS20** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **FS20** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **FS20** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

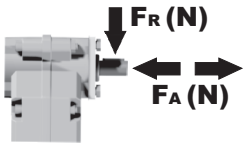
▪ LUBRICATION FS20 Oil Quantity 0.50 Lt.

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

tab. 1

RADIAL LOADS

Input shaft
Albero in entrata



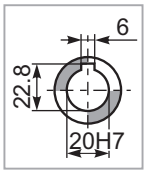
n_1	FA	FR
1400	140	700
900	160	800

tab. 2

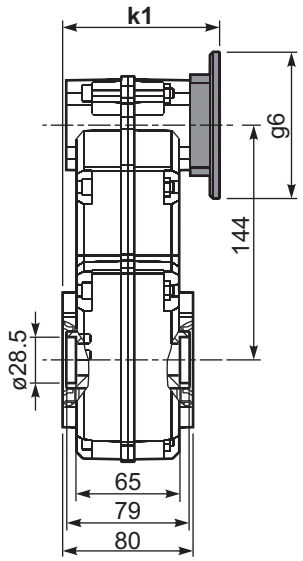
▪ **SELECT THIS TYPE AND THIS SPECIFIC SIZE ON THE WEB PAGES TO GET COMPLETE TECHNICAL DATA.**
Selezionare tipo e gandezza specifica nel sito web per la documentazione completa.

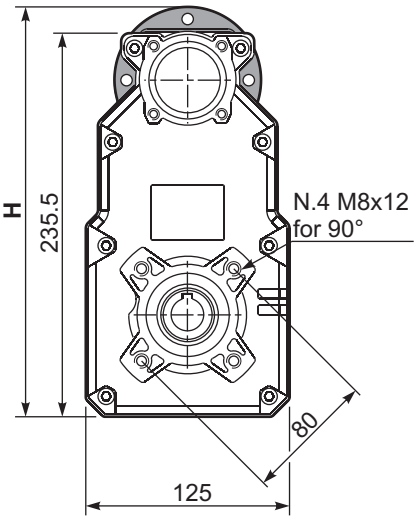
PFS20... Basic gearbox
Riduttore base

Gearbox weight peso riduttore	4.3 kg



Standard
Hollow shaft

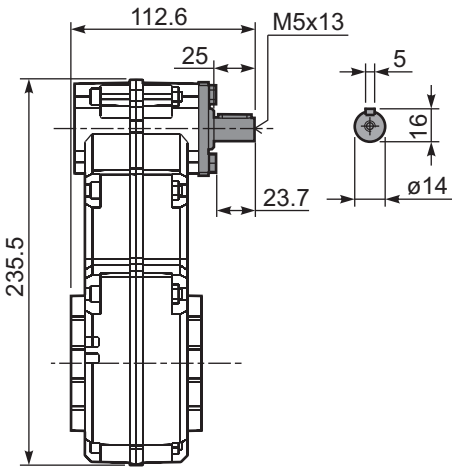




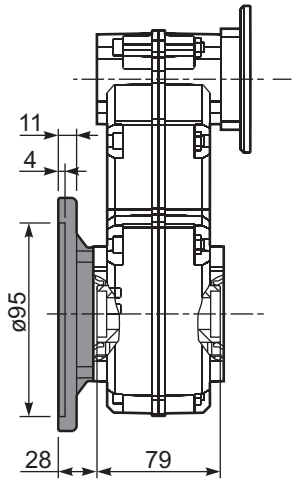
B14 Motor Flanges	H	g6	k1	kit code
56 B14	245.5	80	94.2	KC40.4.049
63 B14	251.5	90	96.7	K050.4.047
71 B14	259	105	94.2	K050.4.045

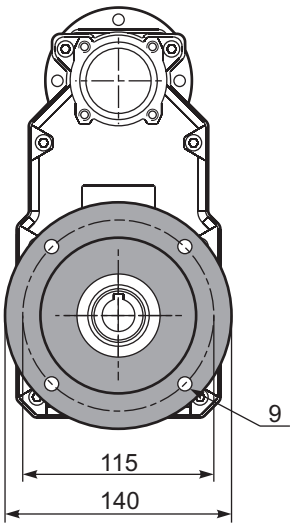
B5 Motor Flanges	H	g6	k1	kit code
63 B5	276.5	138	94.7	K050.4.041
71 B5	286.5	160	92.7	K050.4.042

RFS20... Input Shaft
Albero in entrata

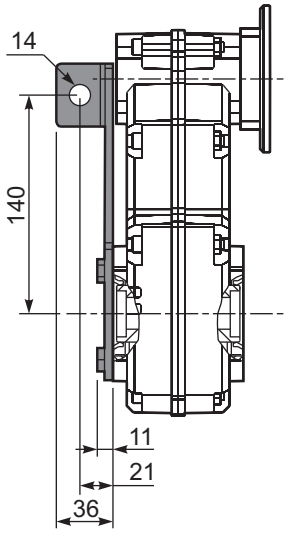


PFS20-F Output flange
flangia di uscita





PFS20BR Reaction arm
Braccio di reazione



FS50 Compact- Gear 450Nm Rating - Alluminum SHAFT MOUNTED HELICAL

▪ QUICK SELECTION / Selezione veloce

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

Output Speed n_2 [min^{-1}]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges B	Available B5 motor flanges C	Available B14 motor flanges O	Available B14 motor flanges P	Available B14 motor flanges Q		Hollow Shaft	Ratios code
							63	71	56	63	71			
29.3	**47.7**	1.10	333	1.4	**1.48**	**450**			C	C		-		-
16.2	**86.3**	0.75	409	1.1	**0.82**	**450**			C	C				
14.0	**100.0**	0.75	474	1.0	**0.70**	**450**			C	C			**standard ø30**	
11.9	**117.4**	0.55	415	1.1	**0.60**	**450**			C	C				
10.0	**140.1**	0.37	339	1.3	**0.50**	**450**			C	C				
7.3	**191.2**	0.37	462	1.0	**0.37**	**450**			C	C			On request ø35	
5.6	**249.6**	0.25	404	1.1	**0.28**	**450**			C	C				
4.2	**329.6**	0.25	533	0.8	**0.21**	**450**			C	C				

The dynamic efficiency is **0.93** for all ratios

Motor Flanges Available Flange Motore Disponibili

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

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

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

EN Unit **FS50** is supplied with synthetic oil for lifetime lubrification, no maintenance is necessary.
See table 1 for lubrication and recommended quantity.
In table 2 please see possible radial loads and axial loads on the gearbox.
For complete documentation please visit our web site.

I Il riduttore **FS50** viene fornito completo di olio sintetico per la lubrificazione permanente e non necessita di alcuna manutenzione.
Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.
Per la documentazione completa consulta il nostro sito.

D Das Getriebe **FS50** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert.
In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.
Die komplette Dokumentation, Wartungs - und Inbetriebnahmeanleitungen finden Sie unter.

E El reductor tamaño **FS50** se suministra, lubricado de por vida con aceite sintético y no requiren mantenimiento alguna.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

Standard supplied	**For these mounting position specify in the order or add oil** Per queste posizioni specificare in fase d'ordine o aggiungere olio				
 **H1**	 **H4**	 **H3**	 **H2**	 **H5**	 **H6**
0.95 LT	0.50 LT	0.50 LT	0.70 LT	0.95 LT	0.95 LT

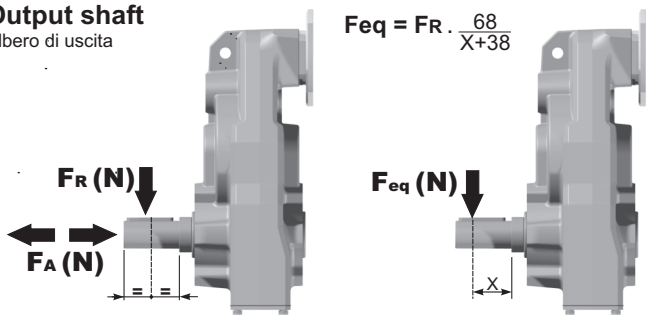
AGIP	BP	SHELL	KLUBER	MOBIL
Telium VSF 320	Energol SGXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30

tab. 1

RADIAL AND AXIAL LOADS

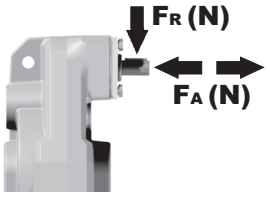
Output shaft
Albero di uscita

$$Feq = FR \cdot \frac{68}{X+38}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
200	384	1920	**85**	500	2498	**15**	672	3360
140	427	2136	**70**	523	2616	**-**	-	-
120	451	2256	**40**	641	3204	**-**	-	-

Input shaft
Albero in entrata



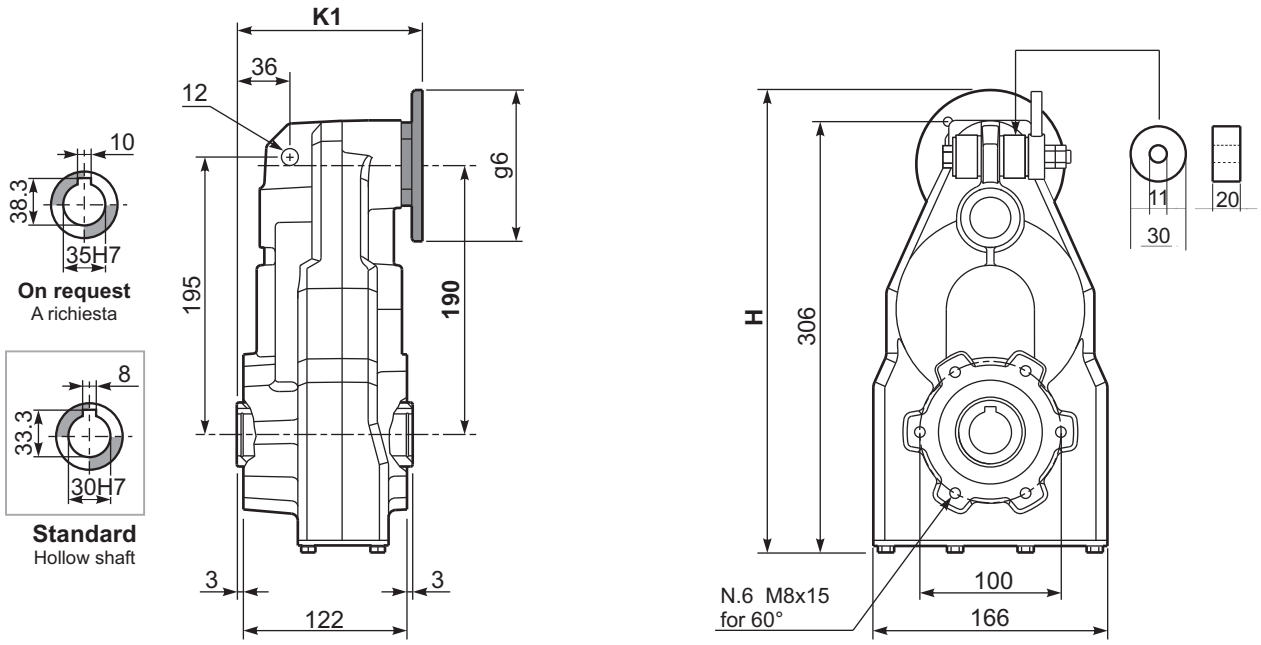
n_1	FA	FR
1400	140	700
900	160	800

tab. 2

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

PFS50C... Basic gearbox
Riduttore base

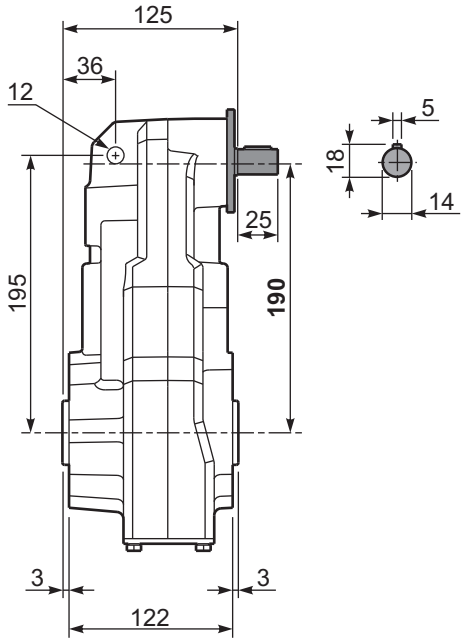
Gearbox weight peso riduttore	11.5 kg

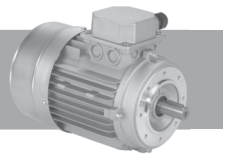


B14 Motor Flanges	H	g6	k1	kit code
56 B14	314	80	130.5	KC40.4.049
63 B14	320	90	133	K050.4.047
71 B14	328	105	130.5	K050.4.045

B5 Motor Flanges	H	g6	k1	kit code
63 B5	345	140	131	K050.4.041
71 B5	355	160	129	K050.4.042

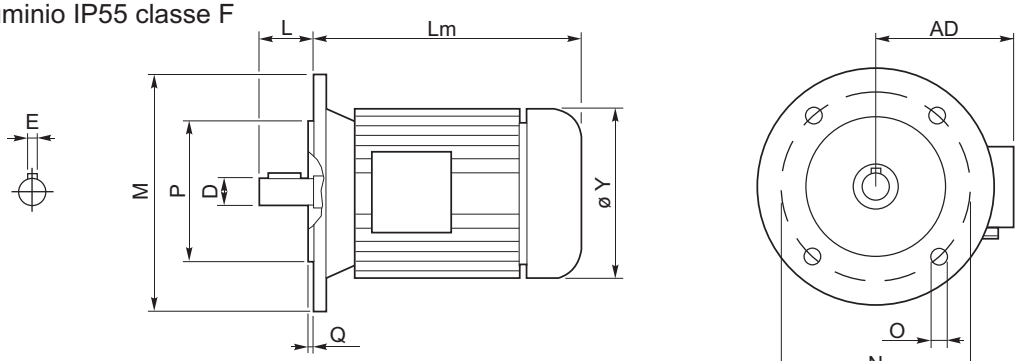
RFS50C... Input shaft
Albero in entrata



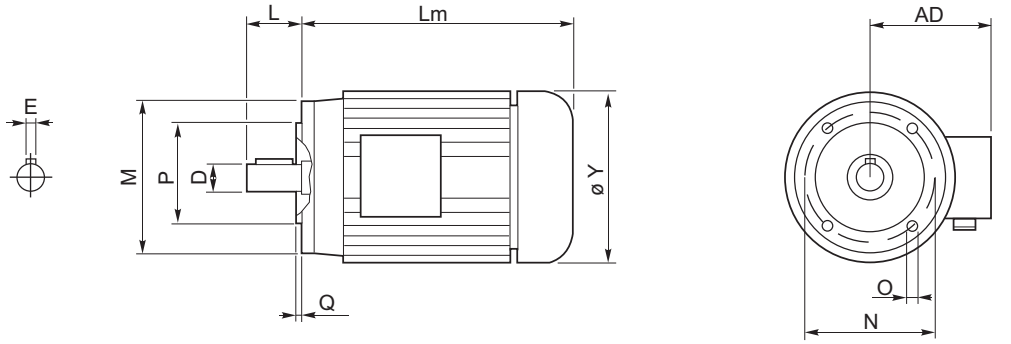


Aluminum motor IP55 class F
Motori solo in alluminio IP55 classe F

B5



B14

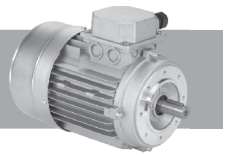


Outside dimensions may be different according to manufacturers.
Le dimensioni esterne sono indicative, possono variare tra i vari costruttori.

	2 poli / poles			4 poli / poles			6 poli / poles			B5-B14						B5					B14					Kg
	kW	Nm	A (400V)	kW	Nm	A (400V)	kW	Nm	A (400V)	D	E	L	Lm	Y	AD	P	N	M	O	Q	P	N	M	O	Q	
56 A	**0.09**	0.32	0.38	**0.06**	0.44	0.27	**—**	—	—	9	3	20	179	108	96	80	100	120	7	2.5	50	65	80	M5	2.5	2.7
56 B	**0.12**	0.42	0.46	**0.09**	0.67	0.37	**—**	—	—																	2.9
63 A	**0.18**	0.63	0.60	**0.12**	0.84	0.50	**0.09**	0.99	0.57	11	4	23	185	120	99	95	115	140	9.5	3	60	75	90	M5	2.5	3.8
63 B	**0.25**	0.87	0.76	**0.18**	1.30	0.69	**0.12**	1.32	0.74																	4.2
71 A	**0.37**	1.30	1.00	**0.25**	1.70	0.91	**0.18**	1.90	0.80	14	5	30	-	130	104	110	130	160	9.5	3.5	70	85	105	M6	2.5	5.9
71 B	**0.55**	1.90	1.54	**0.37**	2.52	1.14	**0.25**	2.72	1.10				225	141	107											6.5
80 A	**0.75**	2.60	1.85	**0.55**	3.77	1.51	**0.37**	3.84	1.18	19	6	40	256	159	127	130	165	200	11.5	3.5	80	100	120	M6	3	8.5
80 B	**1.1**	3.90	2.64	**0.75**	5.11	2.57	**0.55**	5.84	1.80																	10
90 S	**1.5**	5.00	3.31	**1.1**	7.45	2.78	**0.75**	7.92	2.32	24	8	50	-	170	135	130	165	200	11.5	3.5	95	115	140	M8	3	12.5
90 L	**2.2**	7.50	4.46	**1.5**	10.2	3.61	**1.1**	11.6	3.45				280													15
100 LA	**3.0**	10.0	6.28	**2.2**	14.8	5.07	**1.5**	15.4	3.88	28	8	60	-	190	148	180	215	250	13	4	110	130	160	M8	3.5	20
100 LB	**—**	—	—	**3.0**	20.1	6.66	**—**	—	—																	22
112 M	**4.0**	13.4	8.10	**4.0**	26.7	8.55	**2.2**	22.6	5.30				321	210	164											35
132 S	**5.5**	18.3	11.2	**5.5**	36.5	11.4	**3.0**	30.2	7.20	38	10	80	375	244	180	230	265	300	14	4	130	165	200	M10	4	41
	7.5	24.9	15.3																							51
132 M	**—**	—	—	**7.5**	49.4	15.0	**4.0**	40.0	9.13				420													51
				9.2	61.4	18.5																				
160 M	**—**	—	—	**11**	72	21.5	**—**	—	—	42	12	110	503	335	246	250	300	350	18	5	**—**	—	—	—	—	79.2
160 L	**—**	—	—	**15**	98	29	**—**	—	—				547													97.5
180 M	**—**	—	—	**18.5**	121	35.5	**—**	—	—	48	14	110	602	366	266	250	300	350	19	5	**—**	—	—	—	—	170
180 L	**—**	—	—	**22**	144	42	**—**	—	—																	

Metric electric motors are in aluminum. On request they can be supplied with different Level of protection and painted with 2 or 3 level of anticorrosive paint.

I motori metrici sono in alluminio, su richiesta possono essere forniti con differenti livelli di protezione e verniciati con vernice anticorrosiva.



Protection
Standard IP55
Please specify on purchase orders if you need a higher IP protection class.

Grado di protezione
IP55 Standard
Specificare in sede di ordinazione per IP superiore.

Schutzart
IP55 Standard.
Höheren IP Grad bitte im Auftrag angeben.

Grado de protección
IP55 standard.
Especificar en el pedido cuando necesiten protección IP superior.

Insulation
Standard CI.F
To be specified upon placing the order if different insulation is required.

Isolamento
CI.F Standard
Specificare in sede di ordinazione classe di isolamento diversa

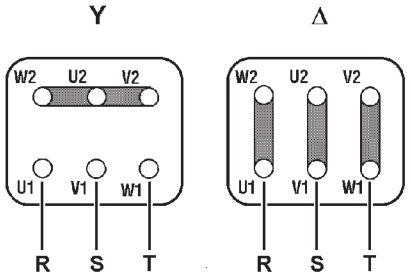
Isolierung
CI.F Standard.
Davon abweichende Isolierungsklas se im Auftrag angeben

Aislamiento
CI.F standard.
Especificar al efectuar el pedido la clase diferente de aislamiento.

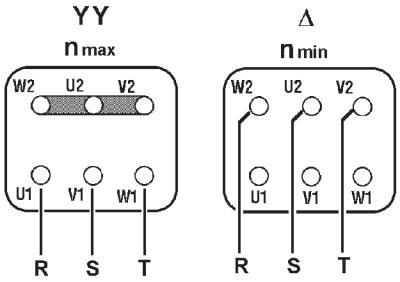
Insulation / Isolamento Isolierung /Aislamiento		E	B	F	H
Max. temp.	C°	120°	130°	155°	175°
	F*	248°	266°	311°	347°

Connections **Collegamenti** **Verbindungselemente** **Conexiones**

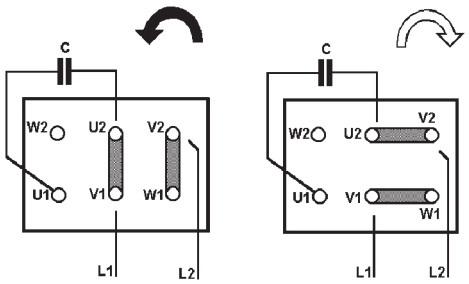
Threephase asyncronous single polarity
Asincrono trifase singola polarità
Asynchronmotor 3-ph eine Drehzahl
Asincrono trifasico de una velocidad



Threephase asyncronous double polarity
Asincrono trifase doppia polarità
Asynchronmotor 3-ph doppelte Drehzahl
Asincrono trifasico de dos velocidades



Single phase asyncronous
Asincrono monofase
Einphasen-Asynchronmotor
Asincrono monofasico



Please Read Carefully
The following WARNING and CAUTION information is supplied to you for your protection and to provide you with many years of trouble free and safe operation of your product.
Read ALL instructions prior to operating reducer. Injury to personnel or reducer failure may be caused by improper installation, maintenance or operation.

WARNING:

• Written authorization required to operate or use reducers in man lift or people moving devices.
• Check to make sure that certain applications do not exceed the allowable load capacities published in the current catalog.
• Buyer shall be solely responsible for determining the adequacy of the product for any and all uses to which Buyer shall apply the product. The application by Buyer shall not be subject to any implied warranty of fitness for a particular purpose.
• For safety, Buyer or User should provide protective guards over all shaft extensions and any moving apparatus mounted thereon. The User is responsible for checking all applicable safety codes in his area and providing suitable guards. Failure to do so may result in bodily injury and/or damage to equipment.
• Hot oil and reducers can cause severe burns. Use extreme care when removing lubrication plugs and vents.
• Make certain that the power supply is disconnected before attempting to service or remove any components. Lock out the power supply and tag it to prevent unexpected application power.
• Reducers are not to be considered fail safe or self-locking devices. If these features are required, a properly sized, independent holding device should be utilized. Reducers should not be used as a brake.
• Any brakes that are used in conjunction with a reducer must be sized or positioned in such a way so as to not subject the reducer to loads beyond the catalog rating.
• Lifting supports including eyebolts are to be used for vertically lifting the gearbox only and not other associated attachments or motors.
• Use of an oil with an EP additive on units with backstops may prevent proper operation of the backstop. Injury to personnel, damage to the reducer or other equipment may result.
• Overhung loads subject shaft bearings and shafts to stress which may cause premature bearing failure and or shaft breakage from bending fatigue, it not sized properly.

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

Leggere attentamente
Le seguenti raccomandazioni sono fondamentali per la vostra protezione e per garantirvi molti anni di sicuro funzionamento del vostro prodotto senza alcun problema.
Leggere attentamente tutte le istruzioni prima di azionare il riduttore. L'inappropriata installazione, manutenzione o funzionamento del riduttore può causare incidenti al personale addetto e danni al riduttore stesso.

ATTENZIONE!

• E' richiesta autorizzazione scritta per azionare riduttori in ascensori o dispositivi per il movimento delle persone.
• Controllare che alcune applicazioni non eccedano la massima capacità di carico ammessa pubblicata in questo catalogo.
• L'acquirente è l'unico responsabile per la determinazione dell'adeguatezza del prodotto per qualcuna o tutte le utilizzazioni che l'acquirente stesso farà del riduttore. L'applicazione dell'acquirente non potrà essere soggetta ad alcuna implicita garanzia di montaggio per uno scopo particolare.
• Per ragioni di sicurezza l'acquirente dovrà provvedere a porre protezioni adeguate su tutta la lunghezza dell'albero a tutti gli organi in movimento. L'utilizzatore è responsabile del controllo di tutti i codici di sicurezza e la predisposizione di protezioni adeguate. In assenza di tali precauzioni si possono verificare incidenti alle persone e danni agli apparati.
• Olio e riduttori bollenti possono causare gravi ustioni. Usare estrema cautela nella rimozione dei tappi e delle ventole.
• Assicurarsi che la corrente di alimentazione sia scollegata prima di riparare o rimuovere alcun componente. Chiudere l'alimentazione e contrassegnare tale operazione per evitare accensioni accidentali.
• I riduttori non devono essere considerati esenti da guasti o a bloccaggio automatico. Se sono indispensabili queste caratteristiche, deve essere utilizzato un dispositivo indipendente della dimensione adatta. I riduttori non devono essere utilizzati come freni.
• Qualsiasi freno sia utilizzato insieme al riduttore deve essere della giusta grandezza e posizionato in modo da non causare carichi eccessivi non previsti dai dati forniti nel catalogo.
• I dispositivi di sollevamento come le golfare devono essere usati solo per sollevare verticalmente il riduttore e non altri dispositivi associati o motori.
• L'utilizzo di un olio con un additivo EP su gruppi provvisti di dispositivo di arresto possono inficiare l'uso corretto del freno e provocare danni alle persone, alle cose ed al riduttore stesso nonché ad altri apparecchi.
• I Carichi sospesi assoggettano i cuscinetti della vite e la vite stessa a sollecitazioni che possono causare, se non adeguatamente dimensionati, l'usura prematura dei cuscinetti e/o la rottura della vite a causa della resistenza alla flessione.

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

NOTES / NOTE / AUFZEICHNUNG / NOTAS

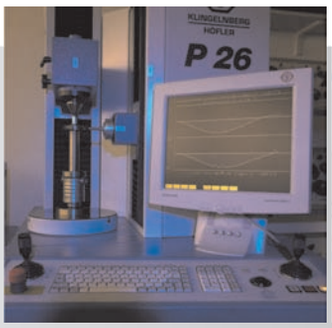
NOTES / NOTE / AUFZEICHNUNG / NOTAS

HYDRO-MEC A modern production of Modular products

Worm gearboxes
Rid. a vite senza fine

Square worm gearboxes
Rid. a vite senza fine quadro

Stainlessteel worm gearboxes
Rid. a vite senza fine Inox



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