

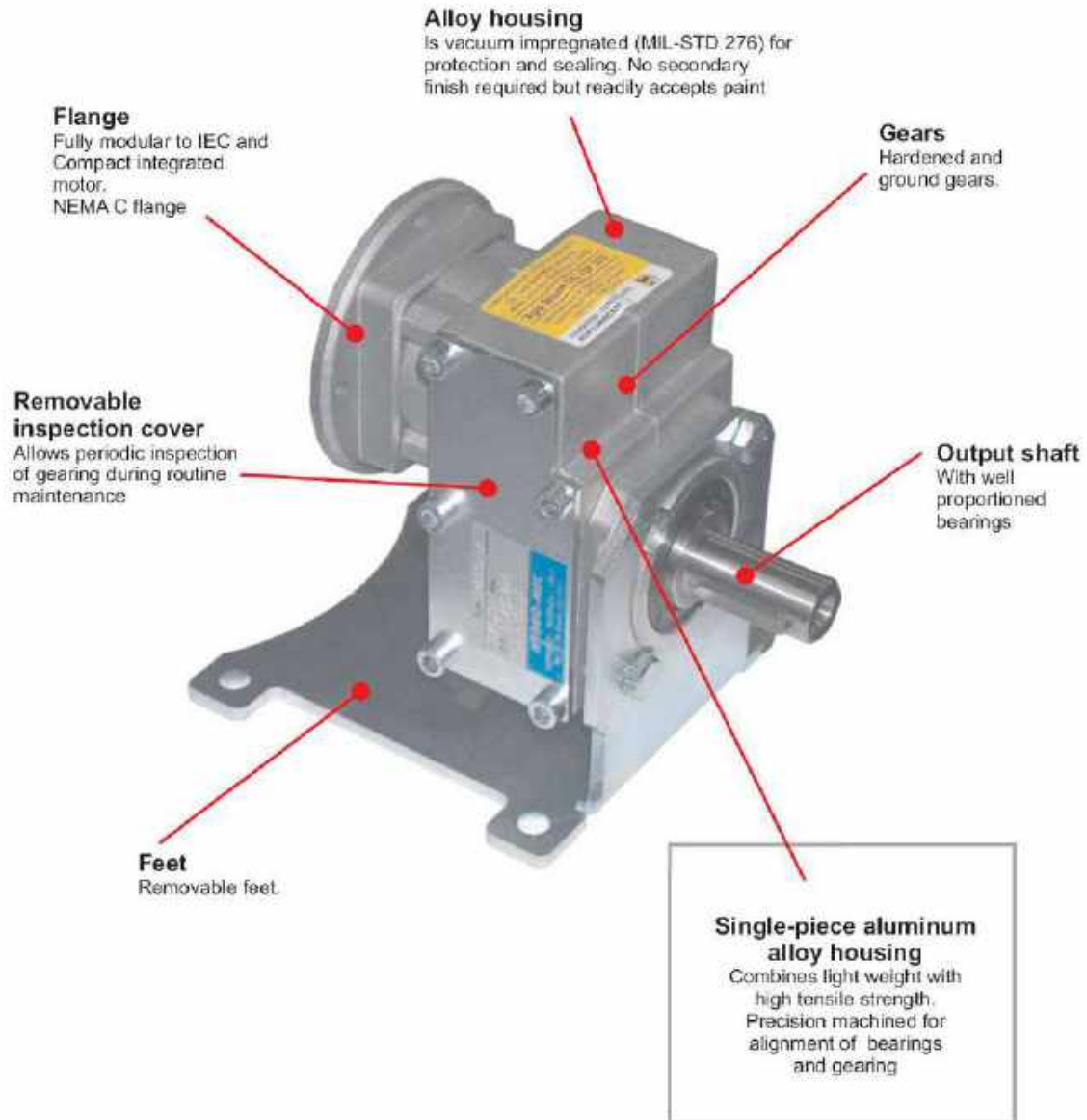
Stirradgetriebe / Axial gearboxes

MS HY 211A – 511A



Aluminum one step gearboxes

A modular and compact product



Lubricated for life with synthetic oil with operative range from -15° to $+130^{\circ}\text{C}$



CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN		
Type - Tipo - Typ - Tipo	Size - Grandezza Größe - Tamaño	Mounting - Montaggio - Montage - Tipo de montaje
P	311A	H1
<p>Aluminum one step gear Riduttori in alluminio a uno stadio</p> <p>With IEC motor M</p> <p>With motor flange P</p> <p>With male input shaft R</p> <p>Modular Base B</p>	<p>1 Stages Riduzioni Stufen Etapas</p> <p>211A 311A 411A 511A</p>	<p>Without flange / feet -N</p> <p>Mounted feet H1</p> <p>Output flange mounted -F</p>
<p>Special output shaft Albero uscita speciale</p> <p>Only on request for Q.ty A richiesta per quantità</p>		



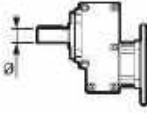
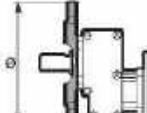











A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

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 Unterbrechung Relación	Output shaft Albero uscita Abtriebswelle Eje en salida	Output flange Flangia uscita Ausgangsflansch Brida en salida	Motor size Grandezza motore Motor Grösse Tamaño motor	Terminal box position Posizione morsetteria Klemmkastenlage Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Posición de montaje																																												
2.84	S	2	C	B	B3																																												
See technical data table Vedi tabella dati tecnici. Technisches Datenblatt beachten. Ver tabla datos técnicos	 <p>→ STANDARD</p> <p>211A</p> <p>S → ∅14</p> <p>311A</p> <p>S → ∅14</p> <p>C → ∅19</p> <p>E → ∅24</p> <p>411A</p> <p>S → ∅14</p> <p>C → ∅19</p> <p>E → ∅24</p> <p>511A</p> <p>C → ∅19</p> <p>E → ∅24</p> <p>G → ∅28</p>	 <p>N Senza flangia Without flange</p> <p>311A</p> <p>1 ⇔ ∅120</p> <p>2 ⇔ ∅140</p> <p>3 → ∅160</p> <p>4 ⇔ ∅200</p> <p>411A</p> <p>1 ⇔ ∅120</p> <p>2 ⇔ ∅140</p> <p>3 ⇔ ∅160</p> <p>4 ⇔ ∅200</p> <p>511A</p> <p>1 ⇔ ∅120</p> <p>2 ⇔ ∅140</p> <p>3 ⇔ ∅160</p> <p>4 → ∅200</p> <p>5 → ∅250</p>	<p>Standard Flange / Flangia Standard</p>  <table border="1"> <tr> <td>B5</td> <td>B14</td> </tr> <tr> <td>A=56 (∅120)</td> <td>O=56 (∅80)</td> </tr> <tr> <td>B=63 (∅140)</td> <td>P=63 (∅90)</td> </tr> <tr> <td>C=71 (∅160)</td> <td>Q=71 (∅105)</td> </tr> <tr> <td>D=80 (∅200)</td> <td>R=80 (∅120)</td> </tr> <tr> <td>E=90 (∅200)</td> <td>T=90 (∅140)</td> </tr> <tr> <td>F=100+112 (∅250)</td> <td>U=100+112 (∅160)</td> </tr> <tr> <td></td> <td>V=132 (∅200)</td> </tr> </table> <p>Reduced flange / Flangia ridotta</p> <p>411A</p> <table border="1"> <tr> <td>7 ⇔ ∅19 (71B5)</td> <td>9 ⇔ ∅28 (90B5)</td> </tr> <tr> <td>8 ⇔ ∅24 (80B5)</td> <td></td> </tr> </table> <table border="1"> <tr> <td>211A 311A</td> <td>511A</td> </tr> <tr> <td>5 ⇔ ∅11 (58B5)</td> <td>8 ⇔ ∅24 (80B5)</td> </tr> <tr> <td>6 ⇔ ∅14 (63B5)</td> <td>9 ⇔ ∅28 (90B5)</td> </tr> <tr> <td>7 ⇔ ∅19 (63B5)</td> <td></td> </tr> </table> <p>Type R / Tipo R</p> <table border="1"> <tr> <td>211A 311A</td> <td>511A</td> </tr> <tr> <td>1 → ∅14</td> <td>3 → ∅24</td> </tr> </table> <p>411A</p> <p>2 → ∅19</p> <p>Without flange / Senza flangia</p> <table border="1"> <tr> <td>211A 311A</td> <td>411A</td> </tr> <tr> <td>Z ⇔ ∅9 (58B5)</td> <td>1 ⇔ ∅14 (71B5)</td> </tr> <tr> <td>0 ⇔ ∅11 (63B5)</td> <td>2 ⇔ ∅19 (80B5)</td> </tr> <tr> <td>1 → ∅14 (71B5)</td> <td>3 → ∅24 (90B5)</td> </tr> </table> <p>511A</p> <table border="1"> <tr> <td>2 ⇔ ∅19 (80B5)</td> <td>3 ⇔ ∅24 (90B5)</td> </tr> <tr> <td>4 → ∅28 (100B5)</td> <td></td> </tr> </table> <p>→ STANDARD</p>	B5	B14	A =56 (∅120)	O =56 (∅80)	B =63 (∅140)	P =63 (∅90)	C =71 (∅160)	Q =71 (∅105)	D =80 (∅200)	R =80 (∅120)	E =90 (∅200)	T =90 (∅140)	F =100+112 (∅250)	U =100+112 (∅160)		V =132 (∅200)	7 ⇔ ∅19 (71B5)	9 ⇔ ∅28 (90B5)	8 ⇔ ∅24 (80B5)		211A 311A	511A	5 ⇔ ∅11 (58B5)	8 ⇔ ∅24 (80B5)	6 ⇔ ∅14 (63B5)	9 ⇔ ∅28 (90B5)	7 ⇔ ∅19 (63B5)		211A 311A	511A	1 → ∅14	3 → ∅24	211A 311A	411A	Z ⇔ ∅9 (58B5)	1 ⇔ ∅14 (71B5)	0 ⇔ ∅11 (63B5)	2 ⇔ ∅19 (80B5)	1 → ∅14 (71B5)	3 → ∅24 (90B5)	2 ⇔ ∅19 (80B5)	3 ⇔ ∅24 (90B5)	4 → ∅28 (100B5)		 <p>A</p>  <p>B</p> <p>STANDARD</p>  <p>C</p>  <p>D</p>	 <p>B3</p> <p>STANDARD</p>  <p>B6</p>  <p>B7</p>  <p>B8</p>  <p>V5</p>  <p>V6</p> <p>Specify only for vertical positions Specificare solo per posizione verticale</p>
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FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

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

Rotation / rotazione / drehung / rotation $P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$

Linear movement / traslazione / linearbewegung / translación $P [KW] = \frac{F [N] \cdot v [m / s]}{1000}$

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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

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

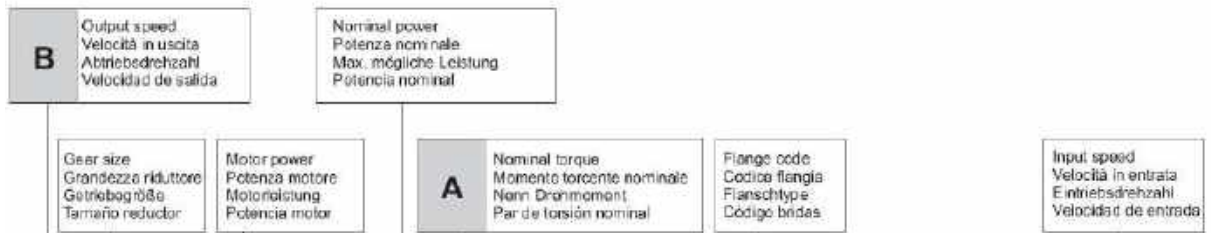


	$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$	$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion	
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diametro primitivo	
f_k	Coefficiente di trasformazione / Factor / Faktor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana	

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



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



311A One step **30Nm** Rating - Alluminum ONE STEP GEARBOXES

QUICK SELECTION / Selección veloce

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{in} [kW]	Output torque M_{out} [Nm]	Service factor f_s	Nominal power P_{sc} [kW]	Nominal torque M_{sc} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft $\varnothing 14$ Ratio code
							B 63	C 71	O 56	P 63	Q 71	
892	1.57	0.37	3.9	3.3	1.24	13			C	C		standard $\varnothing 14$
493	2.84	0.37	7.0	3.3	1.21	23			C	C		
426	3.29	0.37	8.1	3.2	1.18	26			C	C		
362	3.87	0.37	9.6	2.9	1.08	28			C	C		



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	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D	Motor flange available Flange disponibili Erhältliche Motorflansche Bridas disponibles	
B)	Mounting with reduction ring Montaggio con boccola di riduzione Reduzierhülsen Montaje con casquillo de reducción	
C)	Motor flange holes position / terminal box position Posizione for flangia/cassetta 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 (sording to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulle righe corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeübersetzung	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 (n₁) = 1400 min⁻¹

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

The dynamic efficiency is 0.98 for all ratios.

A Motor Flanges Available
Flangi Motore Disponibili

B Supplied with Reduction Bushing
Fornito con Buscchia di Riduzione

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

C Motor Flange Holes Position
Posizione Fori Flangi Motore

EN Unit 211A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.
Para documentación completa, consultar nuestra Web.

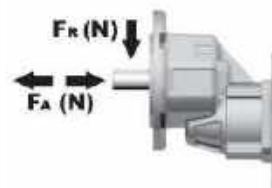
LUBRICATION 211A Oil Quantity 0.05 Lt.

AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Syntheso D220 EP	Trivela 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

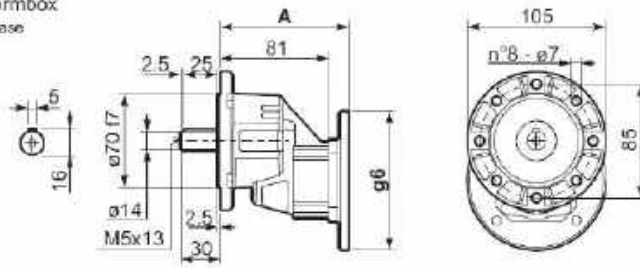


3D dimensions on the Web

Coaxial - Gear
20Nm 211A

P211A-F Basic wormbox
Riduttore base

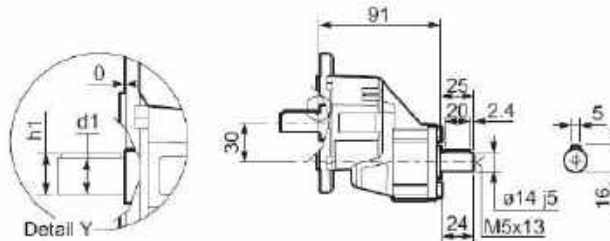
Wormbox weight
peso riduttore base **1.40 kg**



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



311A One step 30Nm

Rating - Alluminum ONE STEP GEARBOXES



QUICK SELECTION / Selezione veloce input speed (n_i) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{TM} [kW]	Output torque M _{TM} [Nm]	Service factor f.s.	Nominal power P _{IN} [kW]	Nominal torque M _{IN} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft		
							B	C	O	P	Q	Key	Shaft	Ratio code
892	1.57	0.37	3.9	3.3	1.24	13			C	C		2844	standard ø14 On request ø11 ø19	-
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		
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. For complete documentation please visit our web site.

LUBRICATION 311A Oil Quantity 0.10 Lt.

AGIP	KLUBER	SHELL	MOBIL
Tellium VSF 320	Syntheso D220 EP	Tivela Oil W6	Glygoyl 30 SHC 630

tab. 1

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RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$F_R (N)$
 $F_A (N)$

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

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
700	84	420	400	115	580	200	146	730
600	100	500	300	126	630	140	160	800

Input shaft
Albero in entrata

$F_R (N)$
 $F_A (N)$

n ₁	FA	FR
1400	140	700
900	160	800

tab. 2

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.

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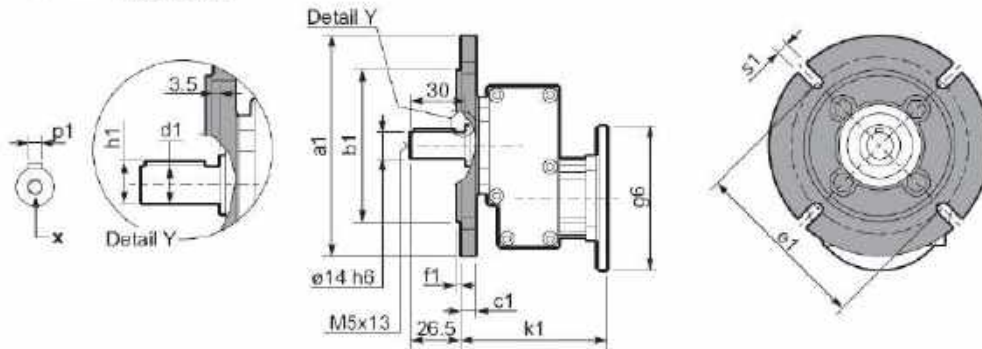


3D dimensions on the Web

One step
30Nm **311A**

P311-F... Output flange
flange di uscita

Wormbox weight
peso in kg. box 2.50 kg



*Available output shaft / Albero di uscita

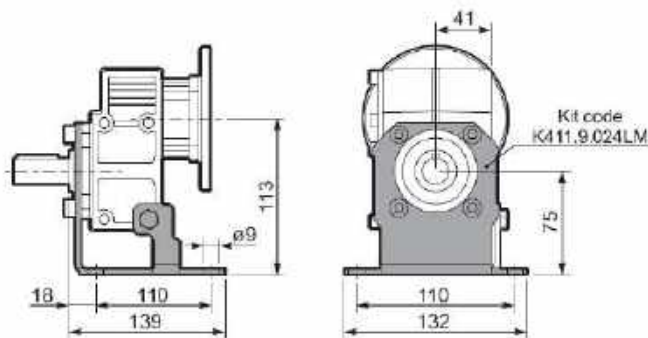
	Shaft - d1	p1	h1	x
Standard	ø 14x30	5	16	M5x13
On request A richiesta	ø 11x23	4	12.5	M5x13
	ø 19x40	6	21.5	M6x16

Available output flanges / flange di uscita

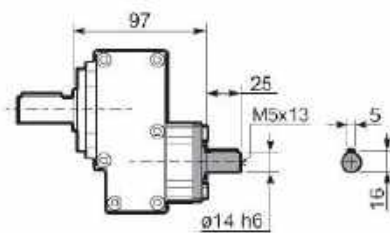
a1	e	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	9*	KC30.9.010
140	95	11.5	115	3	9	9	KC30.9.011
160	110	11.5	130	3.5	9	9	KC30.9.012
200	130	11.5	165	3.5	11	11	KC30.9.013

*Holes position
posizione fori

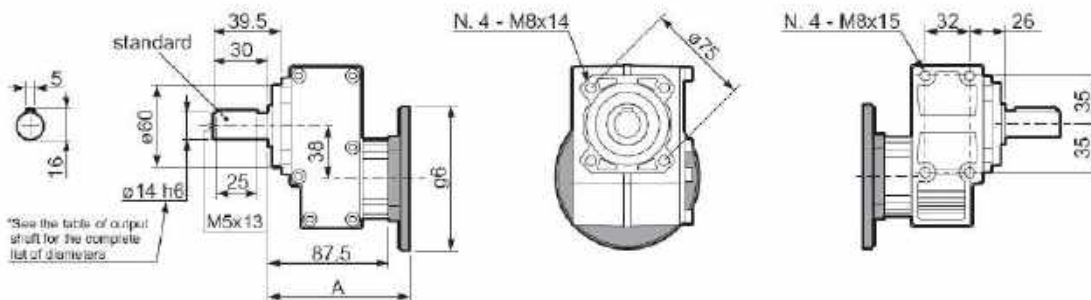
P311-H1... With feet
Con piedini



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



411A One step 38Nm

Rating - Alluminum ONE STEP GEARBOXES



▪ QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{TM} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1N} [kW]	Nominal torque M _{1N} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft Ø	Ratios code
							B	C	D	E	Q	R	T		
							63	71	80	90	71	80	90		
892	1.57	1.5	15.7	1.3	1.90	20	B				C	C		2844	standard ø19 On request ø14 ø24
493	2.84	1.5	28.4	1.2	1.84	35	B			C	C		1954		
428	3.29	1.5	32.9	1.2	1.73	38	B			C	C		1758		
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		
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

▪ LUBRICATION 411A Oil Quantity 0.20 Lt.

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

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
700	182	910	400	230	1150	200	290	1450
600	100	1000	300	250	1250	140	320	1600

Input shaft
Albero in entrata

n ₁	FA	FR
1400	240	1200
900	280	1400

tab. 2

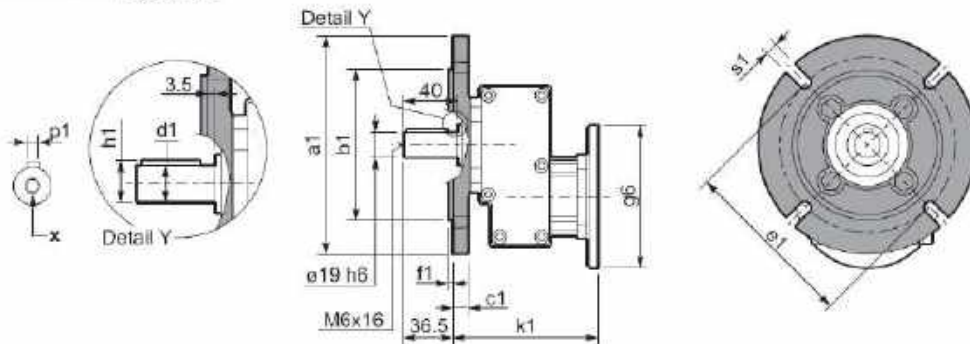


3D dimensions on the Web

One step
38Nm **411A**

P411-F... Output flange
frange di uscita

Wormbox weight
peso - motore **3.20 kg**



*Available output shaft / Albero di uscita

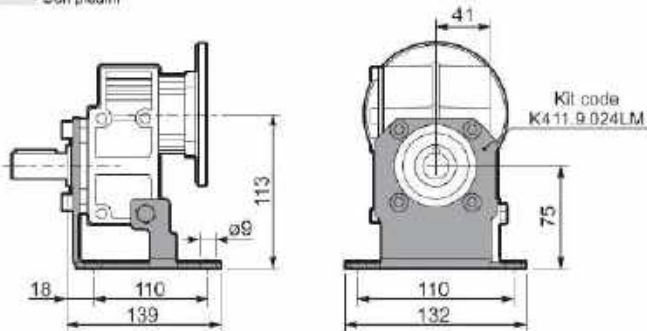
	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16
On request A richiesta	ø 14x30	5	16	M5x13
	ø 24x40	8	27	M8x19

Available output flanges / frange di uscita

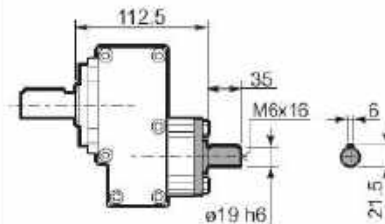
a1	e	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	9	KC30.9.010
140	95	11.5	115	3	9	9	KC30.9.011
160	110	11.5	130	3.5	9	9	KC30.9.012
200	130	11.5	165	3.5	11	9	KC30.9.013

*Holes position
posizione fori

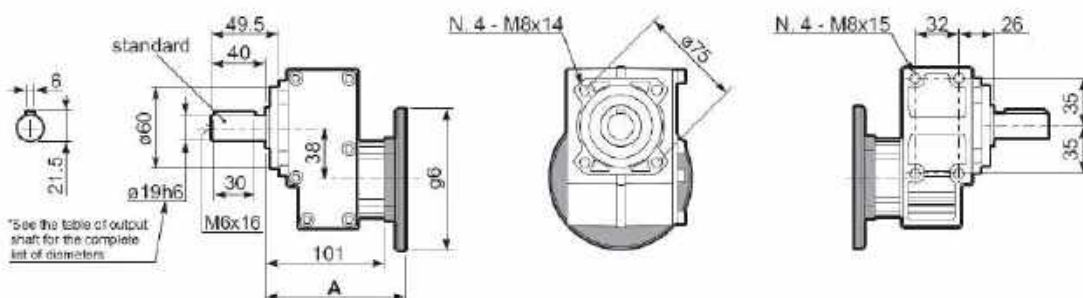
P411-H1... With feet
Con piedini



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 (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _M [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1N} [kW]	Nominal torque M _{2N} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft Ratio's code	
							C	D	E	F	R	T	U	V		
							71	80	90	100 112	80	90	100 112	132		
1077	1.30	4	34	1.2	4.6	40	B								3039	standard ø28 On request ø19 ø24
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		
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. For complete documentation please visit our web site.

LUBRICATION 511A Oil Quantity 0.29 Lt.

AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Synthese D220 EP	Tivela Oil V63	Glygyl 30 SHC 630

tab. 1

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.

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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 di entrata

n ₁	FA	FR
1400	400	2000
900	440	2200

tab. 2

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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

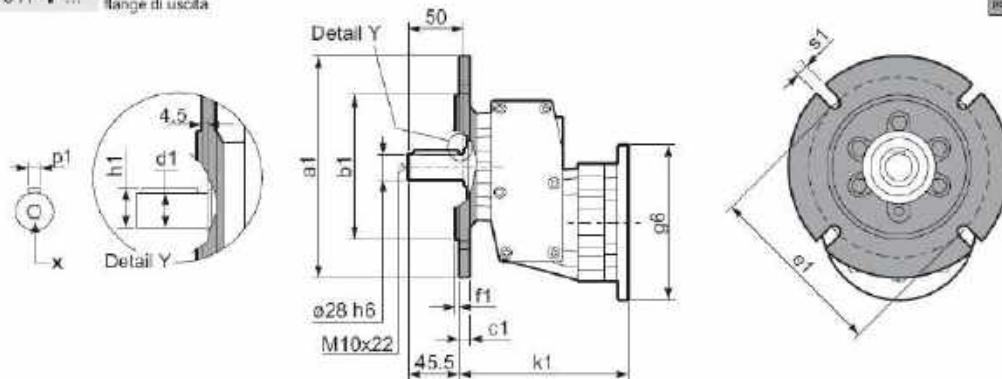


3D dimensions on the Web

One step
118Nm **511A**

P511-F... Output flanges
flange di uscita

Wormbox weight gear outside
5.00 kg



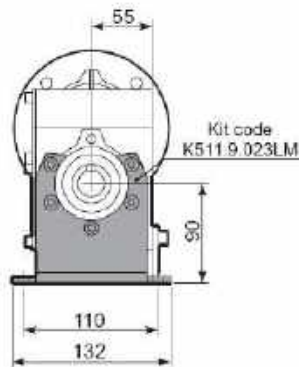
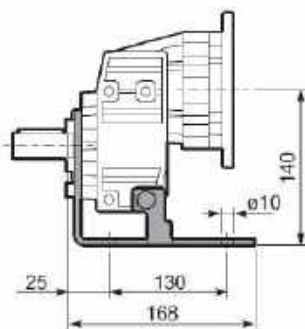
*Available output shaft / Albero di uscita

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

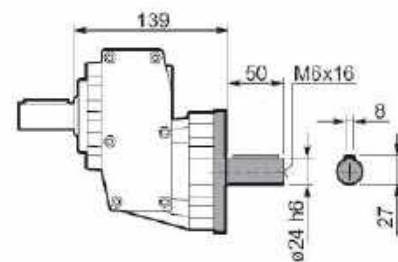
Available output flanges / flange di uscita

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

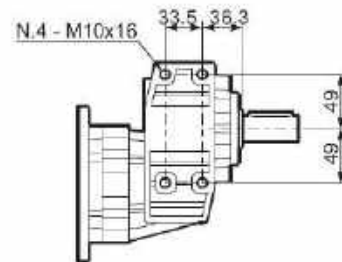
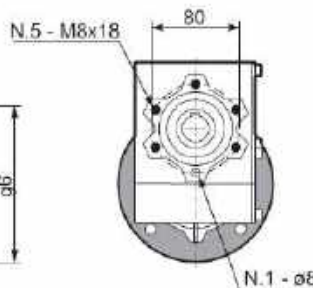
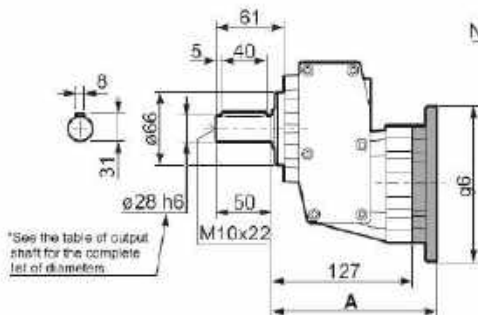
P511A-H1. Basic gearbox
Riduttore base



R511A-N... Input Shaft
Albero in entrata



P511-N... Basic gearbox
Riduttore base



*See the table of output shaft for the complete list of diameters.

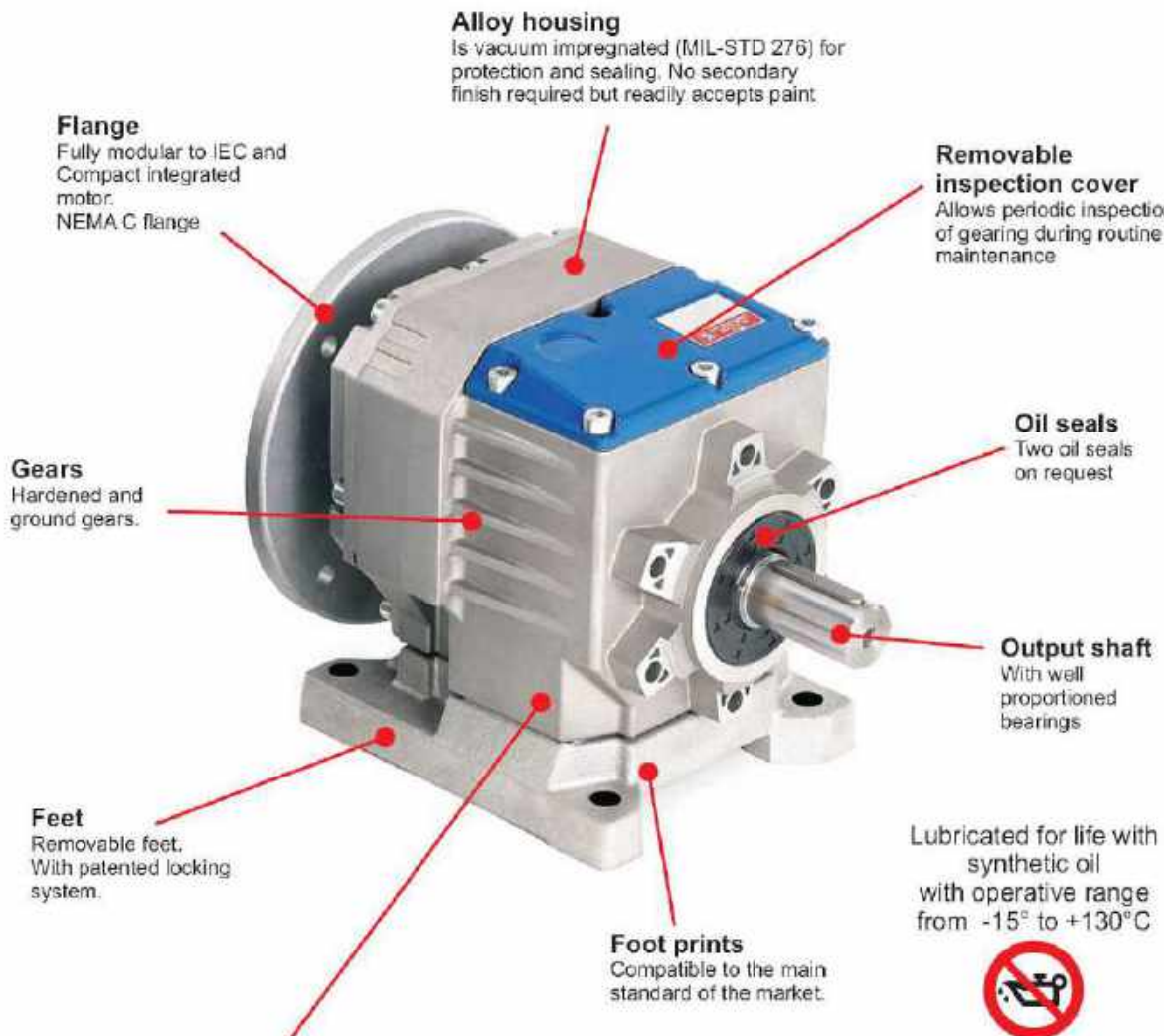
B5 Motor Flanges	A	g6	k1	kit code
71 B5	145	160	149.5	K023.4.041
80/90 B5	147	200	151.5	K023.4.042
100/112 B5	153	250	157.5	K023.4.043

B14 Motor Flanges	A	g6	k1	kit code
80 B14	145	120	149.5	K085.4.046
90 B14	145	140	149.5	K085.4.045
100/112 B14	145	160	149.5	K085.4.047
132 B14	175	200	188	KC50.4.041



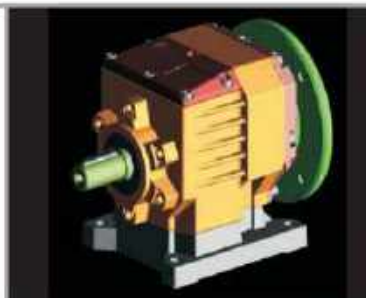
Aluminum in line gearboxes

A modular and compact product



Single-piece aluminum alloy housing

Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing




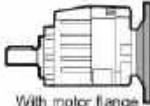
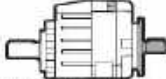

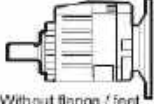
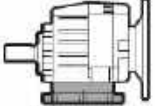
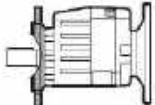
World wide sales network.



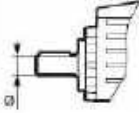
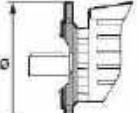




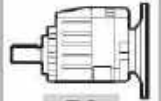


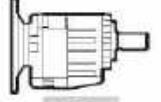

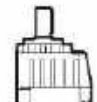

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Email: info@msf-technik.de www.msf-technik.de

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN																																																																																																																																																																																		
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<p>Aluminum coaxial gear boxes Riduttori coaxiali in alluminio</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>With IEC motor M</p> </div> <div style="text-align: center;">  <p>With motor flange P</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>With male input shaft R</p> </div> <div style="text-align: center;">  <p>Modular base B</p> </div> </div>	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"> <p>2 Stages Riduzioni Stufen Etapas</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>202A 302A 402A 452A 502A 602A</p> </div> </div> <div style="text-align: center;"> <p>3 Stages Riduzioni Stufen Etapas</p> <div style="border: 1px solid black; padding: 5px; margin: 5px;"> <p>403A 503A 603A</p> </div> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>Without flange / feet -N</p> </div> <div style="text-align: center;">  <p>Mounted feet B..</p> </div> </div> <div style="margin-top: 10px;">  <p>Output flange mounted -F</p> </div> <div style="margin-top: 10px;"> <p>Feet / piedi</p> <table border="1"> <thead> <tr> <th>Feet / piedi</th> <th>Series</th> <th>G</th> <th>H</th> <th>R</th> <th>L</th> <th>Lt</th> <th>G</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>10</td> <td>35</td> <td>110</td> <td>67</td> <td>34</td> <td></td> <td></td> </tr> <tr> <td>12</td> <td>12</td> <td>38</td> <td>120</td> <td>72</td> <td>36</td> <td></td> <td></td> </tr> <tr> <td>15</td> <td>15</td> <td>42</td> <td>130</td> <td>78</td> <td>38</td> <td></td> <td></td> </tr> <tr> <td>17</td> <td>17</td> <td>45</td> <td>140</td> <td>84</td> <td>40</td> <td></td> <td></td> </tr> <tr> <td>20</td> <td>20</td> <td>50</td> <td>150</td> <td>90</td> <td>42</td> <td></td> <td></td> </tr> <tr> <td>25</td> <td>25</td> <td>55</td> <td>160</td> <td>96</td> <td>44</td> <td></td> <td></td> </tr> <tr> <td>30</td> <td>30</td> <td>60</td> <td>170</td> <td>102</td> <td>46</td> <td></td> <td></td> </tr> <tr> <td>35</td> <td>35</td> <td>65</td> <td>180</td> <td>108</td> <td>48</td> <td></td> <td></td> </tr> <tr> <td>40</td> <td>40</td> <td>70</td> <td>190</td> <td>114</td> <td>50</td> <td></td> <td></td> </tr> <tr> <td>45</td> <td>45</td> <td>75</td> <td>200</td> <td>120</td> <td>52</td> <td></td> <td></td> </tr> <tr> <td>50</td> <td>50</td> <td>80</td> <td>210</td> <td>126</td> <td>54</td> <td></td> <td></td> </tr> <tr> <td>55</td> <td>55</td> <td>85</td> <td>220</td> <td>132</td> <td>56</td> <td></td> <td></td> </tr> <tr> <td>60</td> <td>60</td> <td>90</td> <td>230</td> <td>138</td> <td>58</td> <td></td> <td></td> </tr> <tr> <td>65</td> <td>65</td> <td>95</td> <td>240</td> <td>144</td> <td>60</td> <td></td> <td></td> </tr> <tr> <td>70</td> <td>70</td> <td>100</td> <td>250</td> <td>150</td> <td>62</td> <td></td> <td></td> </tr> <tr> <td>75</td> <td>75</td> <td>105</td> <td>260</td> <td>156</td> <td>64</td> <td></td> <td></td> </tr> <tr> <td>80</td> <td>80</td> <td>110</td> <td>270</td> <td>162</td> <td>66</td> <td></td> <td></td> </tr> <tr> <td>85</td> <td>85</td> <td>115</td> <td>280</td> <td>168</td> <td>68</td> <td></td> <td></td> </tr> <tr> <td>90</td> <td>90</td> <td>120</td> <td>290</td> <td>174</td> <td>70</td> <td></td> <td></td> </tr> <tr> <td>95</td> <td>95</td> <td>125</td> <td>300</td> <td>180</td> <td>72</td> <td></td> <td></td> </tr> <tr> <td>100</td> <td>100</td> <td>130</td> <td>310</td> <td>186</td> <td>74</td> <td></td> <td></td> </tr> </tbody> </table> <p>You see feet code in the chart of the dimensions Vedi codice piede nella tabella delle dimensioni!</p> </div>	Feet / piedi	Series	G	H	R	L	Lt	G	10	10	35	110	67	34			12	12	38	120	72	36			15	15	42	130	78	38			17	17	45	140	84	40			20	20	50	150	90	42			25	25	55	160	96	44			30	30	60	170	102	46			35	35	65	180	108	48			40	40	70	190	114	50			45	45	75	200	120	52			50	50	80	210	126	54			55	55	85	220	132	56			60	60	90	230	138	58			65	65	95	240	144	60			70	70	100	250	150	62			75	75	105	260	156	64			80	80	110	270	162	66			85	85	115	280	168	68			90	90	120	290	174	70			95	95	125	300	180	72			100	100	130	310	186	74		
Feet / piedi	Series	G	H	R	L	Lt	G																																																																																																																																																																											
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CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN					
Ratio - Rapporto Untersetzung Relacion	Output shaft Albero lento Abtriebswelle Eje en salida	Output flange Flangia usata Ausgangsflansch Brida en salida	Motor size Grandezza motore Motor Größe Tamaño motor	Terminal box position Posizione morsetteria Klemmkastenlage Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Posición de montaje
7.33	V	2	C	B	B3
See technical data table Vedi tabella dati tecnici Technisches Datenblatt beachten. Ver tabla datos técnicos	 → STANDARD 202A S ⇔ Ø14 B → Ø16 D ⇔ Ø20 V ⇔ Ø25 302A S ⇔ Ø14 B ⇔ Ø16 C ⇔ Ø19 D → Ø20 E ⇔ Ø24 V ⇔ Ø25 402A 403A S ⇔ Ø14 B ⇔ Ø16 C ⇔ Ø19 D ⇔ Ø20 E ⇔ Ø24 V → Ø25 452A 502A 503A E ⇔ Ø24 V ⇔ Ø25 G H → Ø30 I ⇔ Ø35 602A 603A 602C 603C G ⇔ Ø28 H ⇔ Ø30 I → Ø35 L ⇔ Ø38 M ⇔ Ø40	 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	Standard Flange / Flangia Standard IEC B5 A=56 (ø120) B=63 (ø140) C=71 (ø160) D=80 (ø200) E=90 (ø200) F=100+112 (ø250) B14 O=56 (ø80) P=63 (ø90) Q=71 (ø105) R=80 (ø120) T=90 (ø140) U=100+112 (ø160) V=132 (ø200) Reduced flange / Flangia ridotta 302A 402A 503A 603A 7 ⇔ Ø19 (71B5) 8 ⇔ Ø24 (80B5) 202A 403A 5 ⇔ Ø11 (58B5) 6 ⇔ Ø14 (63B5) 7 ⇔ Ø19 (80B5) 452A 502A 502A 8 ⇔ Ø24 (80B5) 9 ⇔ Ø28 (90B5) Type R / Tipo R 202A 302A 402A 403A 603A 603A 1 → Ø14 2 → Ø19 452A 502A 602A 3 → Ø24 Without flange / Senza flangia 202A 302A 402A 403A 603A 603A Z ⇔ Ø9 (58B5) 0 ⇔ Ø11 (63B5) 1 → Ø24 (90B5) 452A 502A 602A 2 ⇔ Ø19 (80B5) 3 ⇔ Ø24 (90B5) 4 → Ø28 (100B5) STANDARD	 A  B STANDARD  C  D	 B3 STANDARD  B6  B7  B8  V5  V6  V8 Specify only for vertical positions Specificare solo per posizione verticale



FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / elevación

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

Rotation / rotazione / drehung / rotation

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

Linear movement / traslazione / linearbewegung / translación

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

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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

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

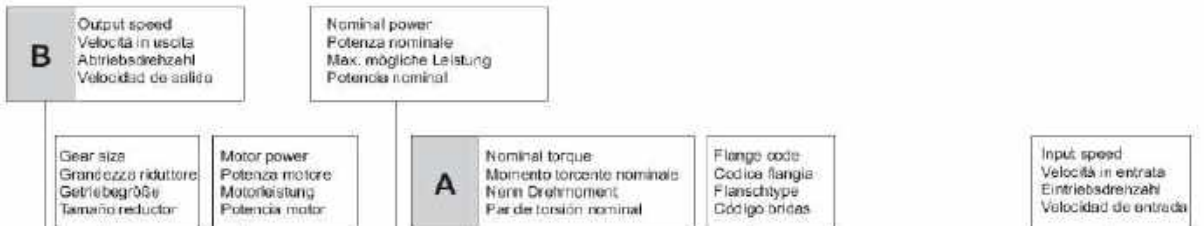


	$F_r \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_c$	$F_r \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_c$
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion	
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo	
f_k	Coefficiente di trasformazione / Factor / Faktor / Coefficiente de transmisión: 1.15 Ingranaggi / Gearwheels / Zahnrad / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana	

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



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



402A Coaxial - Gear **150Nm** Rating - Alluminum COAXIAL GEARBOXES

QUICK SELECTION / Selezione veloce input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{in} [kW]	Output torque M _{out} [Nm]	Service factor f.s.	Nominal power P _{in} [kW]	Nominal torque M _{in} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft	Ratio code
							B 83	C 71	D 80*	E 90*	Q 71	R 80	T 90	U 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	



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	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazioni/ora	Uniform / Uniforme	1	1.25	1.5
	Moderate / Moderato	1.25	1.5	1.75
	Heavy / Forte	1.5	1.75	2.15

D Motor flange available
Flange disponibili
Erbältliche Motorflansche
Bridas disponibles

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

C) Motor flange holes position / terminal box position
Posizione fori flangia / base motor
Bohrungsposition am Motorflansch / socket
Posición agujeros brida / base motor

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

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected gear/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 flange disponibile (se richiesta)	Erbältliche Motorflansche (auf Anfrage)	Seleccionar la brida disponible (sobre pedido)



202A

Coaxial - Gear
70Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce The dynamic efficiency is 0.96 for all ratios **input speed (n₁) = 1400 min⁻¹**

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _M [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1N} [kW]	Nominal torque M _{1N} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft 	Ratios code
							B	C	O	P	Q		
							63	71*	56	63	71		
407	3.44	0.55**	12	2.0	1.11	25			C	C		2621	standard ø16
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	1.9	0.99	50			C	C		1918	
142	9.85	0.55**	35	1.7	0.93	60			C	C		1915	
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	
86	16.20	0.37	39	1.5	0.57	60			C	C		1910	
75	18.78	0.37	46	1.3	0.49	60			C	C		1710	
66	21.15	0.37	51	1.2	0.43	60			C	C		1312	
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. * Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14. Referire a motore con grandezza ridotta. * 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 Bussole di Riduzione B) Available on Request without reduction bushing: Disponibile a Richiesta senza Bussole di Riduzione C) Motor Flange Holes Position: Posizione Fori Flangia Motore

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

LUBRICATION 202A Oil Quantity 0.15 Lt.

AGIP	BP	SHELL	KLUBER	MOBIL
Tellium VSF 320	Energol SGXP220	Tivella Oil WB	Syntheso D220 EP	Glygole 30

tab. 1

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.

RADIAL AND AXIAL LOADS

Output shaft: Albero di uscita

Eq = FR * 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	360	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

D Das Getriebe 202A ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.



302A

Coaxial - Gear
120Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1N} [kW]	Output torque M _{2N} [Nm]	Service factor f.s.	Nominal power P _{1N} [kW]	Nominal torque M _{2N} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft			
							B	C	D	E	Q	R	T				
							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 ø20		
142	9.85	1.5	97	1.0	1.5	95	B				C	C		1915			
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 Busola di Riduzione **B)** Available on Request without reduction bushing Disponibile a Richiesta senza Busola di Riduzione **C)** Motor Flange Holes Position Posizione Fori Flangia Motore

EN Unit 302A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 vicia con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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

$F_{eq} = F_R \cdot \frac{35.7}{X+20.7}$

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	140	700	140	248	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

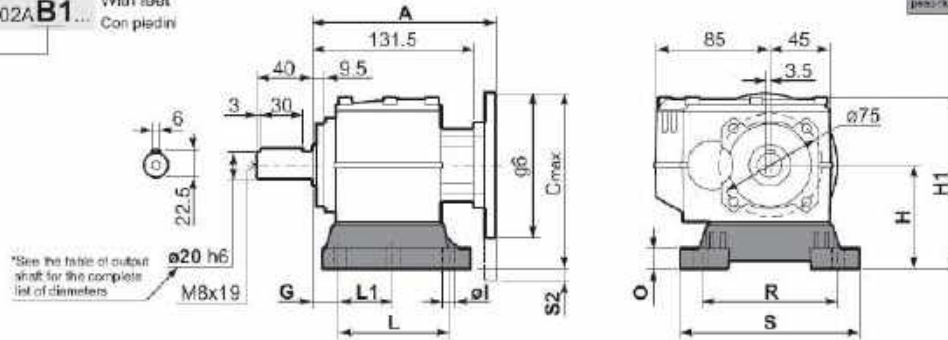


3D dimensions on the Web

Coaxial - Gear
120Nm 302A

Wormbox weight
peso scatola
With flange 3.5 kg
With feet 4.0 Kg

P302A-B1... With feet
Con piedini



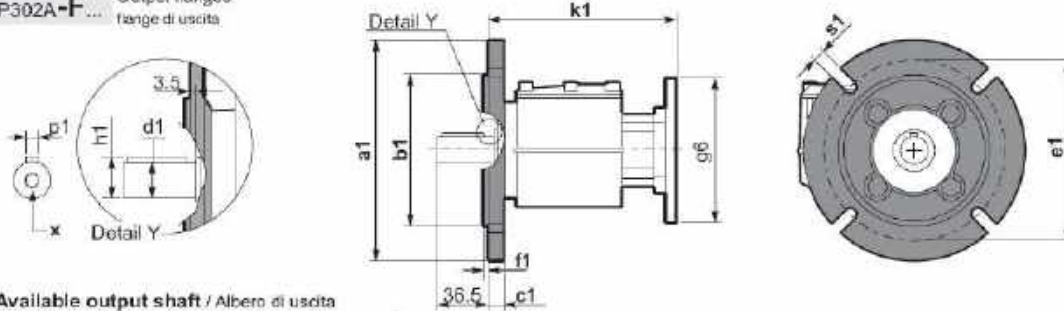
*See the table of output shaft for the complete list of diameters

Feet Code	Market reference	G	H	R	L	L1	S	H1	O	ø1	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	80	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	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
fianze 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

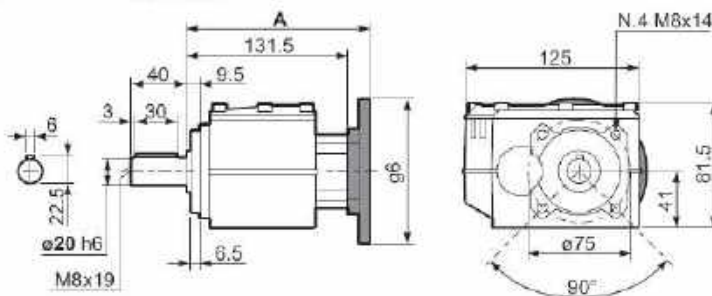
Available output flanges / fianze di uscita

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

* Holes position
Posizione fori

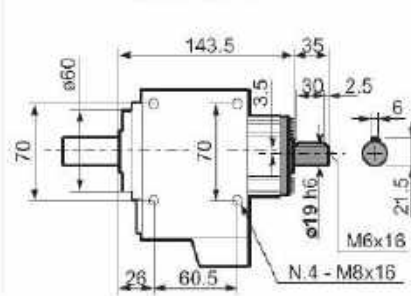


P302A-N... Basic gearbox
Riduttore base



B5 Motor Flanges	A	C _{max}	ø6	k1	kit code
63 B5	151.7	170	140	156.2	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

R302A-N... Input Shaft
Albero in entrata



B14 Motor Flanges	A	C _{max}	ø6	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



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_{Mw} [kW]	Output torque M_{Tw} [Nm]	Service factor f_s	Nominal power P_{Nw} [kW]	Nominal torque M_{Nw} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft			
							B	C	D	E	Q	R	T	U				
							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		
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	
106	13.26	1.5	130	1.2	1.8	160	B				C	C				1912	ø25	
102	13.68	1.5	134	1.1	1.6	144	B				C	C				1513		
91	15.37	1.5	151	1.1	1.6	160	B				C	C				1712	ø14	
86	16.20	1.5	159	0.9	1.3	138	B				C	C				1910	ø16	
78	18.04	1.5	177	0.9	1.4	160	B				C	C				1512	ø19	
74	18.80	1.1	135	1.0	1.1	138	B				C	C				1710	ø20	
65	21.54	1.1	155	1.0	1.1	160	B				C	C				1312	ø22	
63	22.29	1.1	161	1.0	1.1	167	B				C	C				1013	ø24	
53	26.30	0.75	129	1.1	0.80	138	B				C	C				1310	On request	
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
- Supplied with Reduction Bushing / Fornito con Giussola di Riduzione
- Available on Request without reduction bushing / Disponibile a Richiesta senza Giussola di Riduzione
- Motor Flange Holes Position / Posizione Fori Flangia Motore

EN Unit 402A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

Standard For these mounting position specify in the order or add oil supplied / Per questa posizioni specificare in fase d'ordine o aggiungere olio

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		
Tellium VSF 320	Energol S-GXP220	Tivela Oil WB	Syntheso D220 EP	Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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

Input shaft
Albero in entrata

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

tab. 2

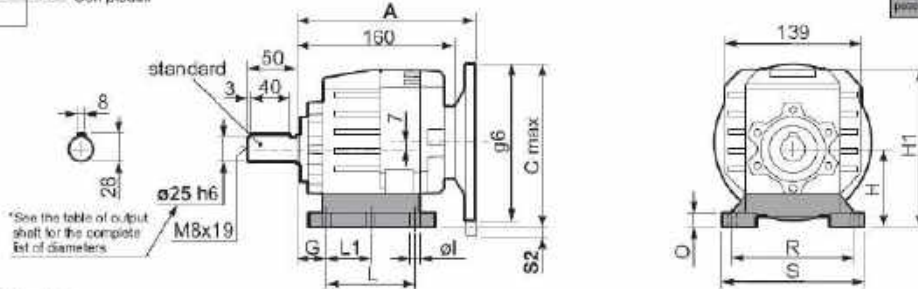


3D dimensions on the Web

Coaxial - Gear
150Nm 402A

P402A-B1... With feet
Con piedini

Wormbox weight
peso motore With flange **5.7 kg**
With feet **5.9 Kg**



Feet / piedini

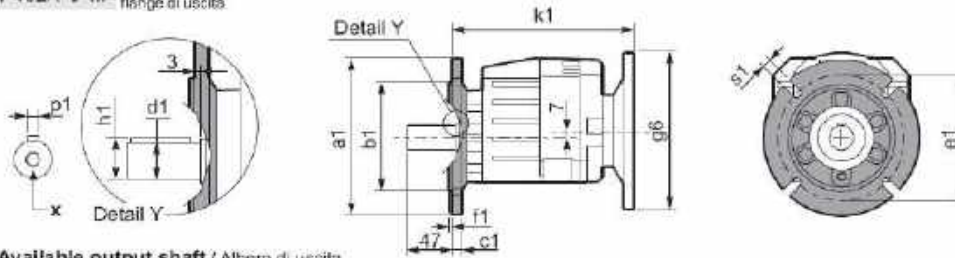
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øI	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167	15	-	8 80/90B5	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	-	-	KC40.9.025
S1	17	18	75	110	90+110	50	145	155	15	9	18 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	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

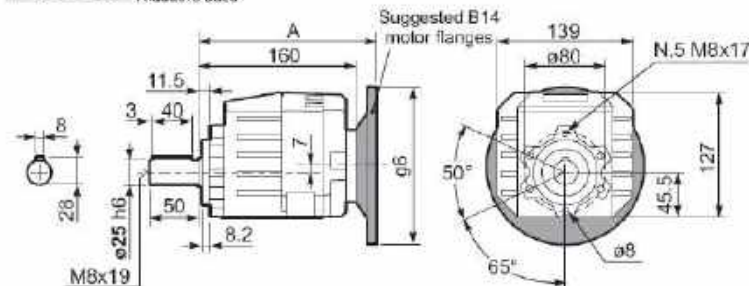
	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	18	M6x16
	ø 19x40	6	21.5	M6x16
	ø 20x40	6	22.5	M8x19
	ø 22x40	6	24.5	M8x19
	ø 24x50	8	27	M8x19

Available output flanges / flange di uscita

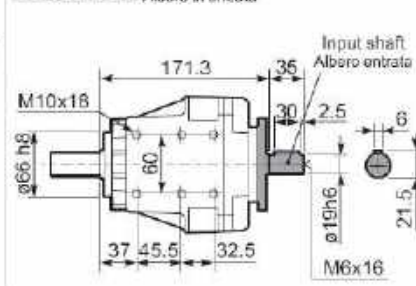
a1	ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	9	KC40.9.010
140	95	10	115	3	9	9	KC40.9.011
160	110	10	130	3	9	9	KC40.9.012
200	130	11	165	3.5	11	11	KC40.9.013
250	180	11.5	215	3.5	14	14	KC40.9.014

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	K063.4.048
90 B14	180.5	160	140	183.5	K063.4.041
100/112 B14	196.5	170	160	199.5	KC40.4.041



403A Coaxial - Gear 150Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{in} [kW]	Output torque M_{out} [Nm]	Service factor f_s	Nominal power P_{rn} [kW]	Nominal torque M_{rn} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft 	Ratios code
							B	C	O	P	Q		
							63	71	56	63	71		
36.5	38.40	0.37	90	1.9	0.72	175			C	C		171713	standard ø25 ø14 ø16 ø19 ø20 ø22 ø24 On request
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	
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	
19.1	73.43	0.37	172	1.0	0.38	175			C	C		101713	
18.8	74.77	0.25	118	1.2	0.29	138			C	C		191310	
16.1	86.66	0.25	138	1.0	0.25	138			C	C		131710	
14.5	96.85	0.25	154	1.0	0.26	160			C	C		101712	
13.6	102.89	0.25	163	1.1	0.28	180			C	C		101313	
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
- Supplied with Reduction Bushing / Fornito con Bussola di Riduzione
- Available on Request without reduction bushing / Disponibile a Richiesta senza Bussola di Riduzione
- Motor Flange Holes Position / Posizione Fori Flangia Motore

EN Unit 403A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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	Gygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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

Input shaft
Albero in entrata

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

tab. 2

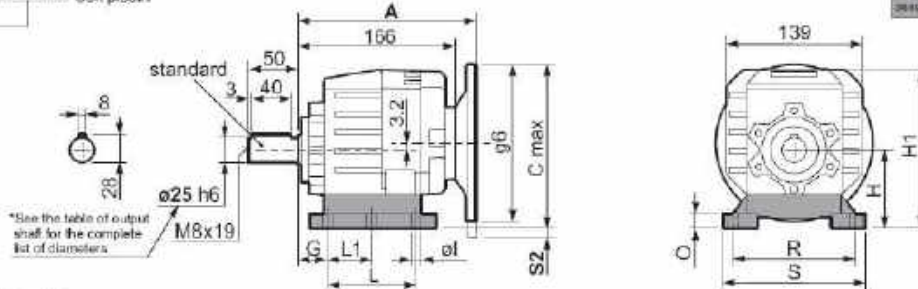


3D dimensions on the Web

Coaxial - Gear
150Nm 403A

P403A-B1... With feet
Con piedini

Wormbox weight: 6.1 kg
With flange
With feet: 6.3 kg



Feet / piedini

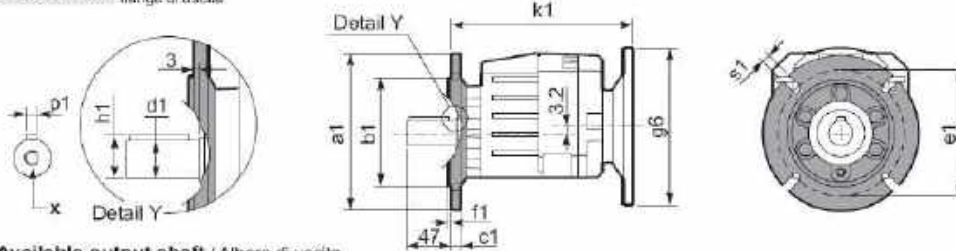
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øI	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	187	15	-	8	80/90B5	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	-	-	KC40.9.025
S1	17	18	75	110	90-110	50	145	155	15	9	18	80/90B5	KC40.9.022
S2	27	25	90	110	130	-	145	172	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 / Alberi di uscita

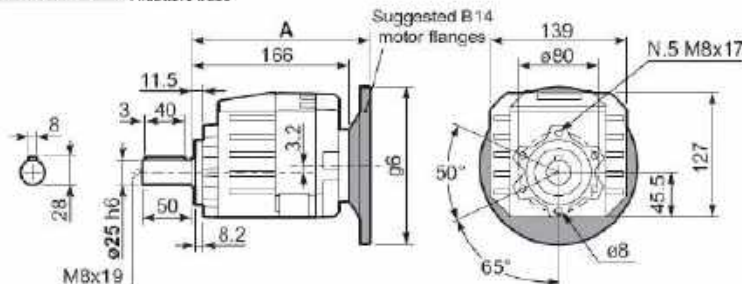
	Shaft - d1	p1	h1	x
Standard	ø 25x50	8	28	M8x19
On request A richiesta	ø 14x40	5	16	M5x13
	ø 16x40	5	16	M6x16
	ø 19x40	6	21.5	M8x16
	ø 20x40	6	22.5	M8x19
	ø 22x40	6	24.5	M8x19
	ø 24x50	8	27	M8x19

Available output flanges / flange di uscita

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

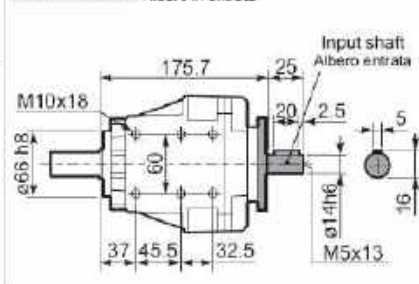
With flange and feet only on request. Ask for compatibility

P403A-N... Basic gearbox
Riduttore base



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

R403A-N... Input Shaft
Albero in entrata



B14 Motor Flanges	A	C _{max}	g6	k1	kit code
56 B14	185.5	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



452A

Coaxial - Gear
300Nm

Rating - Alluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{TM} [kW]	Output torque M _{TM} [Nm]	Service factor f.s.	Nominal power P ₁₀ [kW]	Nominal torque M ₁₀ [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft		
							C	D	E	F	R	T	U	V	Output Shaft ø	Ratios code	
							71	80	90	100* 112	80	90	100 112	132			
388	3.61	4	95	1.6	6.3	150	B									3018	standard ø30
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	
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	
84	16.62	3	327	0.9	2.8	304	B									1314 ø24	
70	20.10	2.2	290	1.0	2.3	300	B									1312 ø25	
56	24.98	1.85	303	0.9	1.6	265	B									1310 ø28	
47.6	29.41	1.5	289	1.1	1.6	304	B									814 ø35	
39.3	35.58	1.5	349	0.9	1.3	300	B									812 On request	
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 Motori Disponibili B Supplied with Reduction Bushing Fornito con Bussola di Riduzione B Available on Request without reduction bushing Disponibile a Richiesta senza Bussola di Riduzione C Motor Flange Holes Position Posizione Fori Flange Motore

EN Unit 452A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

Standard supplied For these mounting position specify in the order or add oil
Per questa posizioni specificare in fase d'ordine o aggiungere olio

0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT
AGIP Tatum V5F 320	BP Energol SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygocole 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

F_R (N) F_{eq} (N) $F_{eq} = F_R \cdot \frac{51}{X+21}$

F_A (N)

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	415	2070	140	540	2700	70	700	3510
250	430	2160	120	560	2790	40	810	4050
200	470	2340	85	630	3150	15	900	4500

Input shaft / Albero in entrata

F_R (N) F_A (N)

n ₁	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2



502A

Coaxial - Gear
320Nm

Rating - Aluminum COAXIAL GEARBOXES



• QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P ₁₀ [kW]	Output torque M ₂₀ [Nm]	Service factor f.s.	Nominal power P ₁₀ [kW]	Nominal torque M ₂₀ [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft		
							C	D	E	F	R	T	U	V	Output Shaft Ø	Ratios code	
							71	80	90	100* 112	80	90	100 112	132			
388	3.61	5.5	130	1.2	6.3	150	B									3018	standard ø30 ø24 ø25 ø28 ø35 On request
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	
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	
70	20.10	2.2	290	1.1	2.5	326	B									1312	
57	24.61	2.2	354	0.9	2.0	326	B									1112	
56	24.98	1.5	245	1.0	1.5	250	B									1310	
47.6	29.41	1.5	289	1.2	1.8	354	B									814	
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									610	
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 Inbetriebnahmanleitungen finden Sie unter.

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

Standard supplied For these mounting position specify in the order or add oil

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		
Tellium VSF 320	Energol SGXP220	Tivela Oil WB	Synthiso D220 EF	Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	460	2300	140	600	3000	70	780	3900
250	480	2400	120	620	3100	40	900	4500
200	520	2600	85	700	3500	15	1000	5000

Input shaft
Albero in entrata

n ₁	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

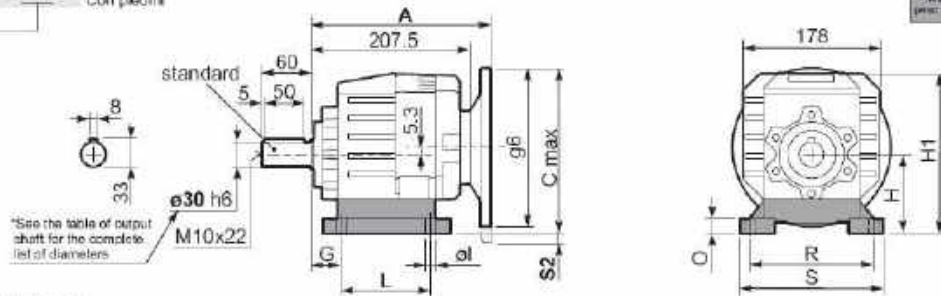


3D dimensions on the Web

Coaxial - Gear **320Nm 502A**

P502A-B1... With feet
Con piedini

Wormbox weight
gear reduction
With flange **11.7 kg**
With feet **11.9 Kg**



Feet / piedini

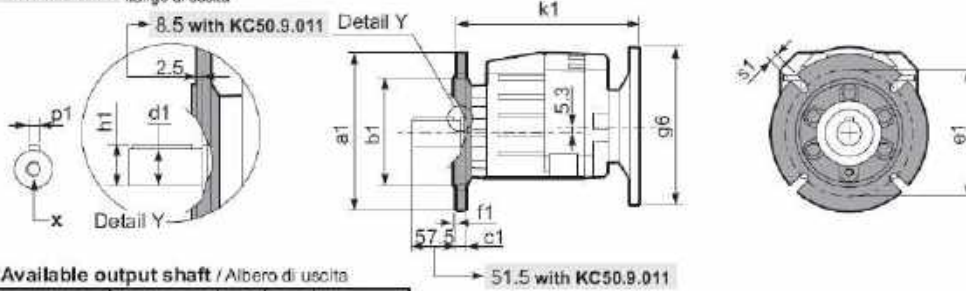
Feet Code	Market reference	G	H	R	L	S	H1	O	øI	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	10	100/112B5	KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14			KC60.9.024
S4	47-57	30	115	135	165	170	216.5	24	13.5	5	100/112B6	KC50.9.022
H3	023-233	30	130	135	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		60/90B5	KC50.9.026LM
E2	2202/3	13	100	135	192	164	201.5	6	14	10	100/112B6	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

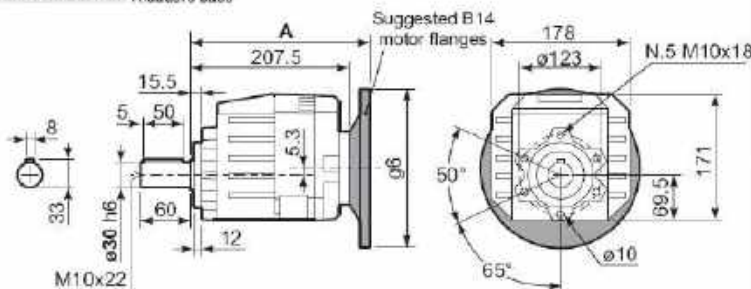
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

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

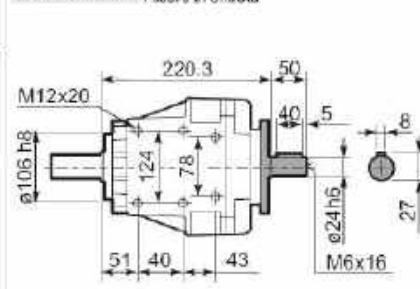


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B5	226	227.3	160	228.5	K023.4.041
80/90 B5	226	247.3	200	230.5	K023.4.042
100/112 B5	234	272.3	250	236.5	K023.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
80 B14	226	207.3	120	228.5	K085.4.046
90 B14	226	217.3	140	228.5	K085.4.045
100/112 B14	240.7	227.3	160	243.2	K085.4.047
132 B14	261.5	247	200	264	KC50.4.041

k1 with KC50.9.011
234.5
234.5
249.2
270

R502A-N... Input Shaft
Albero in entrata



503A Coaxial - Gear 320Nm

Rating - Alluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _M [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P ₁₀ [kW]	Nominal torque M ₂₀ [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft		
							B	C	D	E	Q	R	T	e	Radios code	
							63	71	80	90	71	80	90			
35.2	39.79	1.1	278	1.3	1.5	373	B				C	C		191316	standard ø30 ø24 ø25 ø28 ø35 On request	-
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		
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		
11.1	126.65	0.37	297	1.1	0.41	326	B				C	C		101312		
10.2	136.62	0.37	321	1.1	0.41	354	B				C	C		91314		
8.5	165.29	0.25	262	1.2	0.31	326	B				C	C		91312		
7.8	180.40	0.25	286	1.2	0.31	354	B				C	C		71314		
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	0.06	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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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					
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 SGXP20	Tiveia Oil WB	Syntheso D220 EP	Glycyole 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$F_R (N)$
 $F_A (N)$

$F_{eq} = F_R \cdot \frac{54}{X+24}$
 $F_{eq} (N)$

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	460	2300	140	600	3000	70	780	3900
250	480	2400	120	620	3100	40	900	4500
200	520	2600	85	700	3500	15	1000	5000

Input shaft
Albero di entrata

$F_R (N)$
 $F_A (N)$

n ₁	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

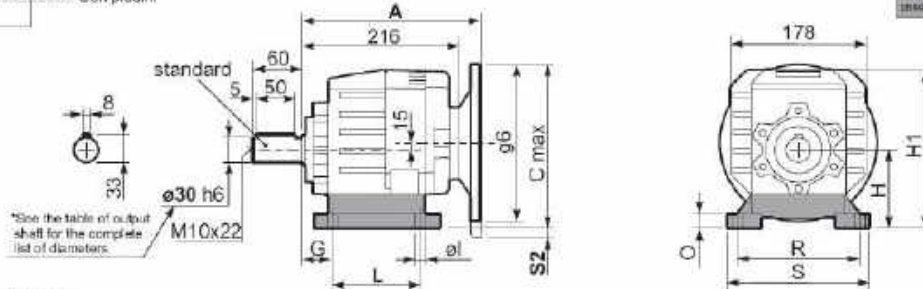


3D dimensions on the Web

Coaxial - Gear **320Nm 503A**

P503A-B1... With feet
Con piedini

Wormbox weight (base unit) With flange **11.9 kg**
With feet **12.1 Kg**



Feet / piedini

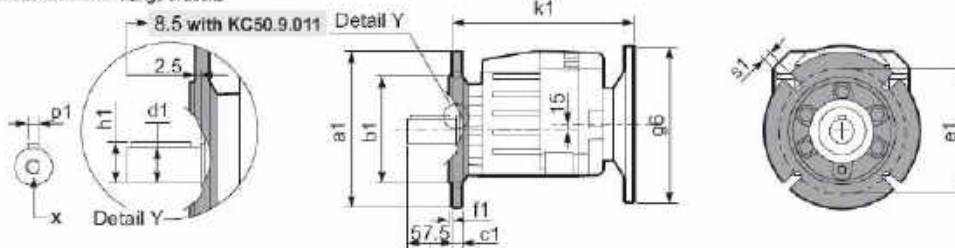
Foot Code	Market reference	G	H	R	L	S	H1	O	ø1	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	10 100/112B5		KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14			KC60.9.024
S4	47-67	30	115	135	165	170	218.5	24	13.5	5 100/112B5		KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14			KC60.9.025
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

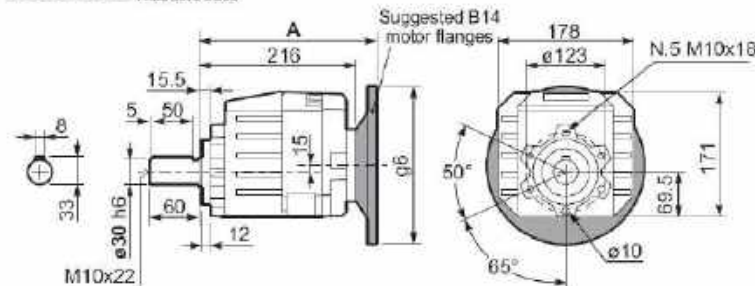
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

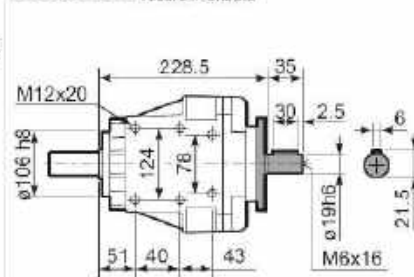
a1	ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9		KC50.9.011
200	130	13	165	3.5	11		KC50.9.012
250	180	15.5	215	4	14		KC50.9.013

With flange and feet only on request.
Ask for compatibility

P503A-N... Basic gearbox
Riduttore base



R503A-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	236.5	227	140	239	K063.4.041
71 B5	234.5	237	160	237	K063.4.042
80/90 B5	236.5	257	200	239	K063.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	234.5	209.5	105	237	K063.4.047
80 B14	235.5	217	120	236	K063.4.046
90 B14	236.5	227	140	239	K063.4.041

k1 with KC50.9.011
243
244
245



602A

Coaxial - Gear
460Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{tw} [kW]	Output torque M _{tw} [Nm]	Service factor f.s.	Nominal power P _{rn} [kW]	Nominal torque M _{rn} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft					
							C	D	E	F	R	T	U	V	Key	Shaft diameter ø	Ratio code			
							71	80	90	100 112	80	90	100 112	132						
388	3.61	7.5	177	0.9	7.0	165	B										3018	standard ø35	-	
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			
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
70	20.10	4	527	0.9	3.8	499	B										1112			ø30
57	24.61	3	483	1.0	3.1	492	B										1312			ø38
56	24.98	3	491	0.8	2.4	400	B										1310			ø40
47.6	29.41	2.2	424	1.0	2.3	440	B										814			On request
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 Motori Disponibili B) Supplied with Reduction Bushing / Fornito con Buscopia di Riduzione C) Available on Request without reduction bushing / Disponibile a Richiesta senza Buscopia di Riduzione Motor Flange Holes Position / Posizione Fori Flangia Motore

EN Unit 602A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

Standard supplied For these mounting position specify in the order or add oil
Par queste posizioni specificare in fase d'ordine o aggiungere olio

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		
Tellum V5F 320	Energol SGXP220	Tivela Oil WB	Synthesis D220 EP	Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

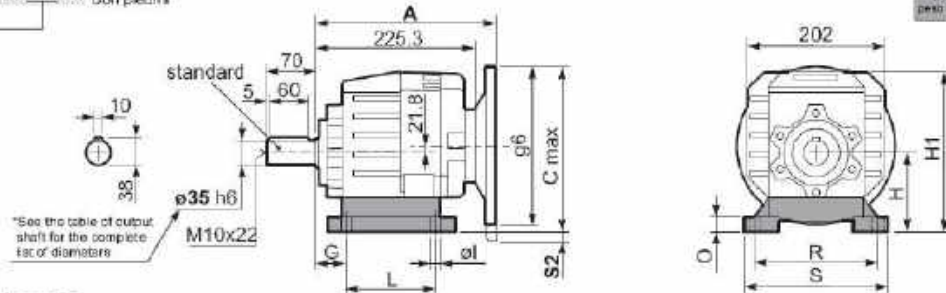


3D dimensions on the Web

Coaxial - Gear
460Nm 602A

P602A-B1... With feet
Con piedini

Wormbox weight
peso scatola With flange **14.1 kg**
With feet **14.5 Kg**



*See the table of output shaft for the complete list of diameters

Feet / piedini

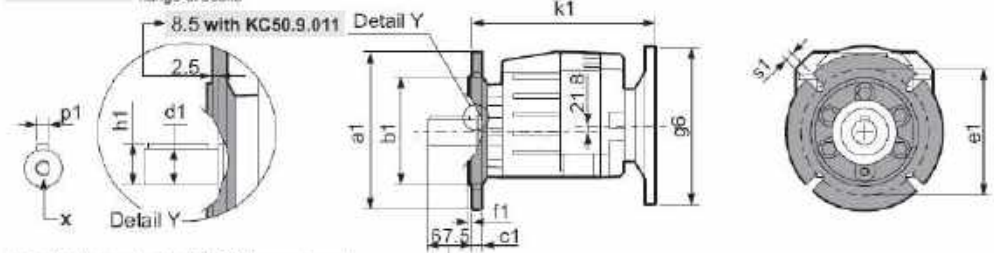
Feet Code	Market reference	G	H	R	L	S	H1	O	d1	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	233	18	14	-		KC60.9.024
S4	47-57	30	115	135	185	170	218	24	13.5	-		KC50.9.022
M3	62/3	35	120	170-185	110	230	223	20	14	-		KC60.9.023
S7	77	35	140	170	205	204	243	8	14	-	100/112 B5	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	-		KC60.9.028LM
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

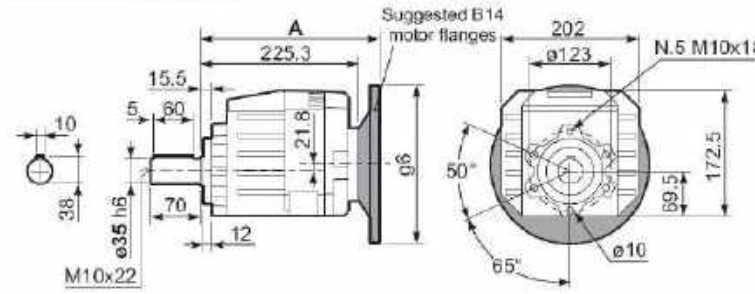
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

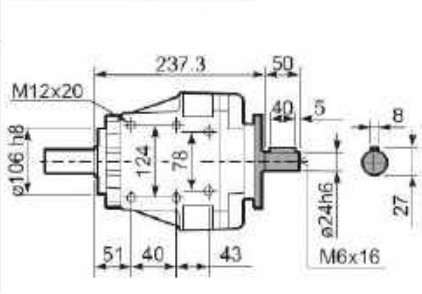
a1	ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	9	KC50.9.011
200	130	13	165	3.5	11	11	KC50.9.012
250	180	15.5	215	4	14	14	KC50.9.013

With flange and feet only on request. Ask for compatibility

P602A-N... Basic gearbox
Riduttore base



R602A-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B5	243.8	263.8	160	246.3	K023.4.041
80/90 B5	245.8	283.8	200	248.3	K023.4.042
100/112 B5	251.8	308.8	250	254.3	K023.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
80 B14	243.8	243.8	120	246.3	K085.4.046
90 B14	243.8	253.8	140	246.3	K085.4.045
100/112 B14	258.5	263.8	160	261	K085.4.047
132 B14	279.5	283.8	200	282	KC50.4.041

k1 with KC50.9.011
252.3
252.3
267
288



603A Coaxial - Gear 460Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

Input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P ₁₀ [kW]	Output torque M ₁₀ [Nm]	Service factor f.s.	Nominal power P ₁₀ [kW]	Nominal torque M ₁₀ [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft	Ratio code
							B	C	D	E	Q	R	T		
							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
15.1	92.78	0.75	441	1.1	0.85	500	B				C	C		131312	ø35
13.4	104.68	0.75	498	1.0	0.75	501	B				C	C		101314	
11.9	117.22	0.55	409	1.2	0.67	500	B				C	C		170812	ø28
11.1	126.65	0.55	442	1.1	0.62	500	B				C	C		101312	ø30
10.3	135.74	0.37	319	1.4	0.51	441	B				C	C		130814	ø38
9.6	145.68	0.37	342	1.3	0.47	435	B				C	C		170810	ø40
8.9	157.40	0.37	369	1.2	0.44	435	B				C	C		101310	On request
8.5	165.29	0.37	388	1.3	0.48	500	B				C	C		91312	
7.8	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	525	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 Motor Flange Holes Position Posizione Fori Flange Motore

E Unit 603A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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

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

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

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	400	2000
900	440	2200
500	440	2200

tab. 2

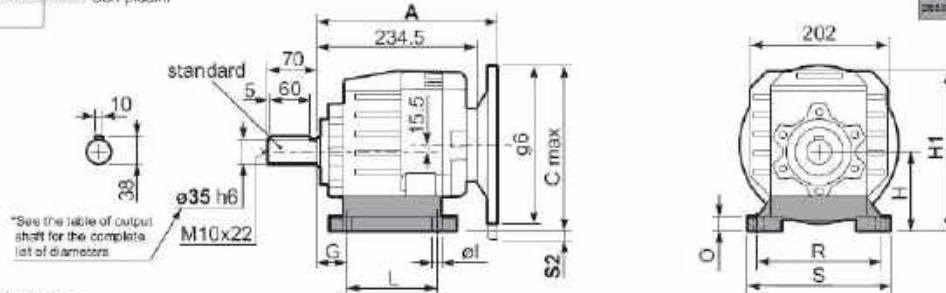


3D dimensions on the Web

Coaxial - Gear **460Nm 603A**

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

Wormbox weight gear output: With flange 14.3 kg
With feet 14.7 Kg



Feet / piedini

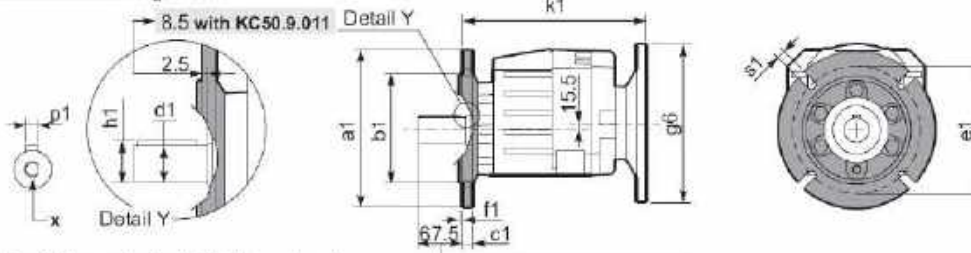
Feet Code	Market reference	G	H	R	L	S	H1	O	ø1	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	233	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	218	24	13.5	-	-	KC50.9.022
M3	62/3	35	120	170-185	110	230	223	20	14	-	-	KC60.9.023
S7	77	35	140	170	205	204	243	8	14	-	-	KC60.9.026LM
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

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



*Available output shaft / Albero di uscita

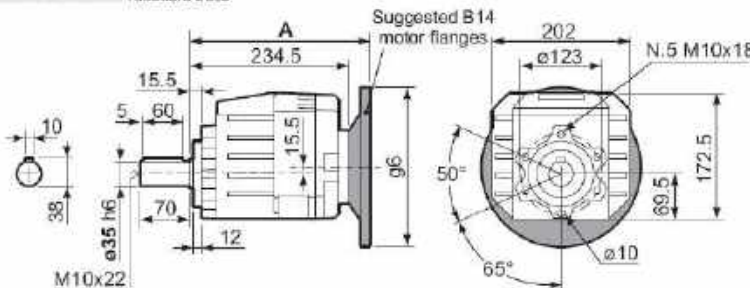
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

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

With flange and feet only on request.
Ask for compatibility

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

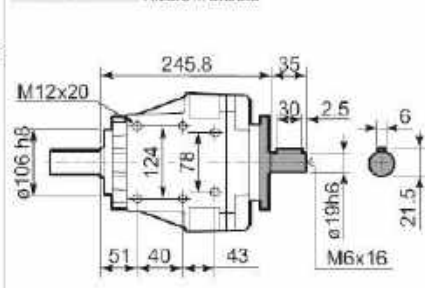


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	255	247.5	140	257.5	K063.4.041
71 B5	253	257.5	160	255.5	K063.4.042
80/90 B5	255	277.5	200	257.5	K063.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	253	230	105	255.5	K063.4.047
80 B14	254	237.5	120	256.5	K063.4.046
90 B14	255	247.5	140	257.5	K063.4.041

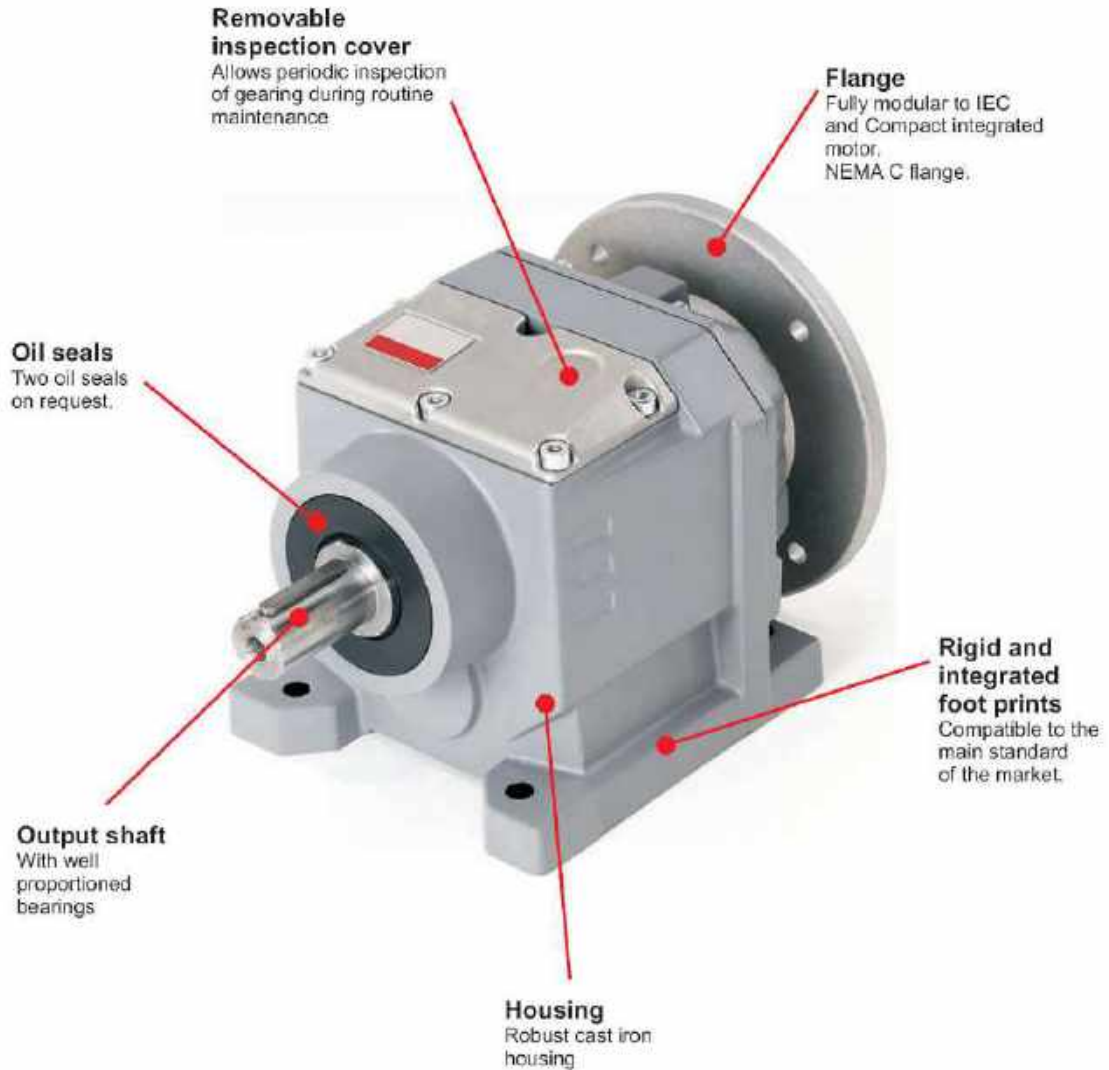
k1 with KC50.9.011
261.5
262.5
263.5

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



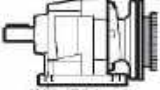
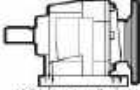
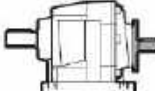
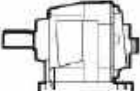
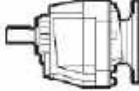
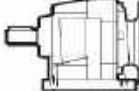
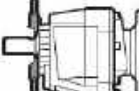
Cast iron in line gearboxes

A modular and compact product



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



CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN		
Type - Tipo - Typ - Tipo	Size - Grandezza Grosse - Tamaño	Mounting - Montaggio - Montage - Tipo de montaje
P	402C	-F
<p>Cast iron coaxial gear boxes Reduzioni coaxiali in ghisa</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  <p>With IEC motor M</p> </div> <div style="text-align: center;">  <p>With motor flange P</p> </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> <div style="text-align: center;">  <p>With male input shaft R</p> </div> <div style="text-align: center;">  <p>Modular base B</p> </div> </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <p>2 Stages Riduzioni Stufen Etapas</p> <div style="background-color: #cccccc; padding: 5px; margin: 5px;">402C</div> <div style="background-color: #cccccc; padding: 5px; margin: 5px;">602C</div> </div> <div style="text-align: center;"> <p>3 Stages Riduzioni Stufen Etapas</p> <div style="background-color: #cccccc; padding: 5px; margin: 5px;">403C</div> <div style="background-color: #cccccc; padding: 5px; margin: 5px;">603C</div> </div> </div>	<div style="display: flex; justify-content: space-around; margin-bottom: 20px;"> <div style="text-align: center;">  <p>Without flange/feet -N</p> </div> <div style="text-align: center;">  <p>Integral feet SP</p> </div> </div> <div style="text-align: center;">  <p>Output flange mounted -F</p> </div>



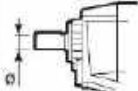






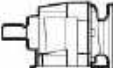






A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

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 Relación	Output shaft Albero lento Abtriebswelle Eje en salida	Output flange Flangia usata Ausgangsfanach Brida en salida	Motor size Grandezza motore Motor Grösse Tamaño motor	Terminal box position Posizione morsetiera Klemmkastenlage Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Posición de montaje
7.33	V	2	C	B	B3
See technical data table Vedi tabella dati tecnici. Technisches Datenblatt beachten. Ver tabla datos técnicos	 → STANDARD 402C 403C S ⇒ Ø 14 B ⇒ Ø 16 C ⇒ Ø 19 D ⇒ Ø 20 E ⇒ Ø 24 V ⇒ Ø 25 602C 603C H ⇒ Ø 30 I ⇒ Ø 35 L ⇒ Ø 38 M ⇒ Ø 40	 N Senza flangia Without flange 402C 403C 1 ⇒ Ø 120 2 ⇒ Ø 140 3 ⇒ Ø 160 4 ⇒ Ø 200 602C 603C 3 ⇒ Ø 160 4 ⇒ Ø 200 5 ⇒ Ø 250	Standard Flange / Flangia Standard  B5 A=56 (ø120) B=63 (ø140) C=71 (ø160) D=80 (ø200) E=90 (ø200) F=100+112 (ø250) B14 O=56 (ø80) P=63 (ø90) Q=71 (ø105) R=80 (ø120) T=90 (ø140) U=100+112 (ø160) V=132 (ø200) Reduced flange / Flangia ridotta 402C 403C 603C 7 ⇒ Ø 19 (71B5) 8 ⇒ Ø 24 (80B5) 602C 8 ⇒ Ø 24 (80B5) 9 ⇒ Ø 28 (90B5) Type R / Tipo R 402C 403C 603C 2 ⇒ Ø 19 602C 3 ⇒ Ø 24 Without flange / Senza flangia 402C 403C 603C 1 ⇒ Ø 14 (71B5) 2 ⇒ Ø 19 (80B5) 3 ⇒ Ø 24 (90B5) 602C 2 ⇒ Ø 19 (80B5) 3 ⇒ Ø 24 (90B5) 4 ⇒ Ø 28 (100B5) → STANDARD	 A  B STANDARD  C  D	 B3 STANDARD  B6  B7  B8  V5  V6  V8 Specify only for vertical positions Specificare solo per posizione verticale

FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

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

TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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

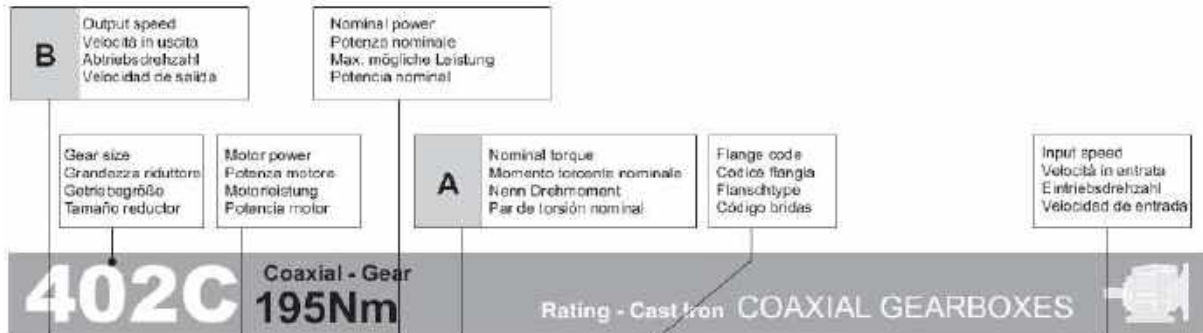


	$F_r [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$	$F_r [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion	
d	Diámetro primitivo / Diam. of driving element / Durchmesser der Abtriebseinheit / Diámetro primitivo	
f_k	Coeficiente di trasformazione / Factor / Faktor / Coeficiente de transmisión 1.15 Ingranaggi / Gearwheels / Zahnrad / Engranaje 1.25 Catena / Chain sprockets / Antriebskette / Cadena 1.75 Cinghia Trapezoidale / Narrow v-belt pulley / Keilriemen / Correa trapezoidal 2.50 Cinghia piatta / Flat-belt pulley / Flachzahnriem. / Correa plana	

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



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



QUICK SELECTION / Selezione veloce input speed (n_i) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P ₂ [kW]	Output torque M ₂ [Nm]	Service factor f.s.	Nominal power P _{2N} [kW]	Nominal torque M _{2N} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft E.g. Ratios code
							B	C	D	E	Q	R	T	U	
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



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
Intermittent application with start / hour Applicazione intermitente 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
Reduzerhülse
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 también sin casquillo

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	Seleccionar el par deseado (incluyendo el factor de servicio)
B	Select output speed	Seleziona la velocità in uscita	Ausgewählte Abtriebsdrehzahl	Seleccionar la velocidad de salida
C	On the same line of selected geared motor, you can find the gear ratio	Sulla riga corrispondente alla motorizzazione prescelta si può rilevare il rapporto di riduzione	Auf der gleichen Linie wie die ausgewählte Motorleistung steht auch die Getriebeübersetzung	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)



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_M [kW]	Output torque M_{20} [Nm]	Service factor f_s	Nominal power P_{10} [kW]	Nominal torque M_{10} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft \varnothing	Ratios code
							B	C	D	E	Q	R	T	U		
							63	71	80*	90*	71	80	90	100 112		
252	5.55	3	109	1.1	3.3	120	B				C	C			2815	standard ø25
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	
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	
75	18.78	1.5	184	0.9	1.4	170	B				C	C			1710	
65	21.54	1.1	155	1.3	1.4	196	B				C	C			1312	
63	22.26	1.1	160	1.0	1.1	155	B				C	C			1015	
53	26.31	0.75	129	1.3	1.0	170	B				C	C			1310	
47.6	29.40	0.75	144	1.4	1.0	196	B				C	C			1012	
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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					
0.60 LT	0.50 LT	0.50 LT	0.50 LT	0.65 LT	0.85 LT	0.65 LT
AGIP Tetium VSF 320	BP Energot SGXP230	SHELL Tivela Oil WB		KLUBER Syntheso D220 EP	MOBIL Glygoyle 30	

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

$F_R (N)$
 $F_A (N)$

$F_{eq} (N)$

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

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 di entrata

$F_R (N)$
 $F_A (N)$

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

tab. 2

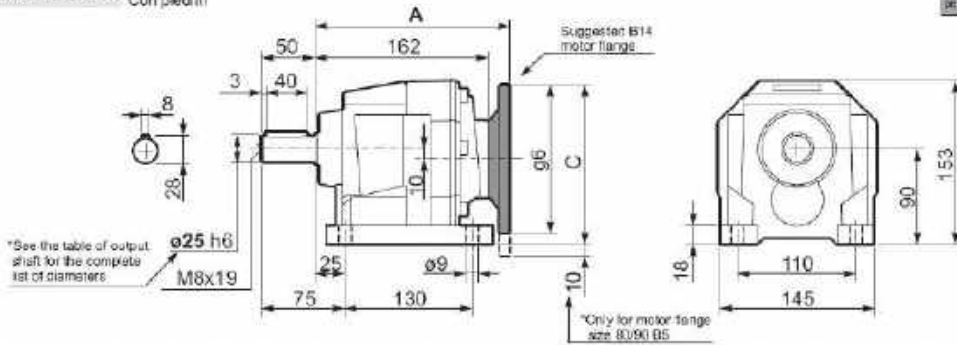


3D dimensions on the Web

Coaxial - Gear
195Nm **402C**

P402C SP ... With feet
Con piedini

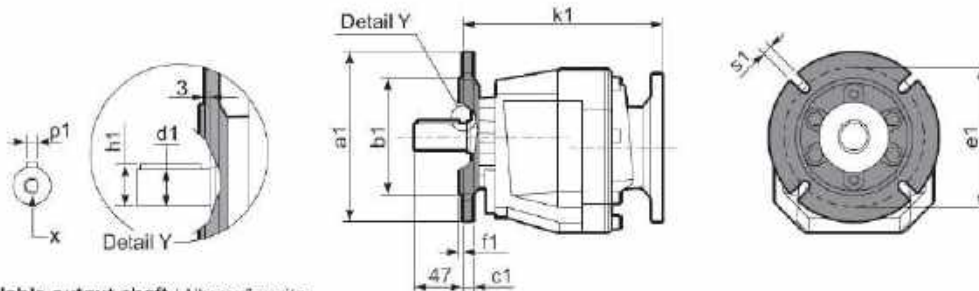
Weight: **8.2 kg** With flange
peso: **9.5 Kg** With feet



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

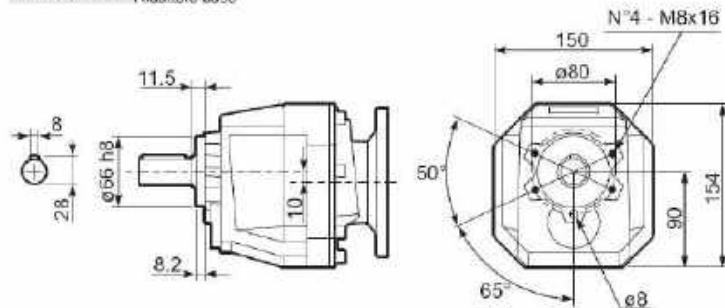
	Shaft - d1	p1	h1	x
Standard	$\phi 25 \times 50$	8	28	M8x19
On request A richiesta	$\phi 14 \times 40$	5	16	M5x13
	$\phi 16 \times 40$	5	18	M6x16
	$\phi 19 \times 40$	6	21.5	M6x16
	$\phi 20 \times 40$	6	22.5	M8x19
	$\phi 22 \times 40$	6	24.5	M8x19
	$\phi 24 \times 50$	8	27	M8x19

Available output flanges / flange di uscita

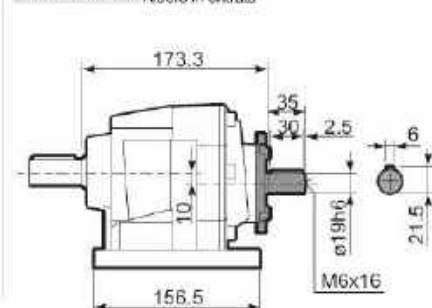
a1	e	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	9	KC40.9.010C
140	95	10	115	3	9	9	KC40.9.011C
160	110	10	130	3	9	9	KC40.9.012C
200	130	11	165	3.5	11	11	KC40.9.013C

With flange and feet only on request. Ask for compatibility.

P402C-N ... Basic gearbox
Riduttore base



R402C SP ... Input Shaft
Albero in entrata



403C

Coaxial - Gear
195Nm

Rating - Cast Iron COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{in} [kW]	Output torque M _{out} [Nm]	Service factor f.s.	Nominal power P _{in} [kW]	Nominal torque M _{in} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft e	Ratio's code
							B	C	D	E	Q	R	T		
							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	
19.7	70.95	0.37	167	1.2	0.43	195	B				C	C		131712	
18.7	74.77	0.37	176	1.0	0.37	175	B				C	C		191310	
16.2	86.66	0.37	203	0.9	0.32	175	B				C	C		131710	
14.5	96.85	0.25	154	1.3	0.32	195	B				C	C		101712	
11.8	118.29	0.25	188	0.9	0.23	175	B				C	C		101710	
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.
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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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					
0.55 LT	0.55 LT	0.55 LT	0.55 LT	0.70 LT	0.90 LT	0.70 LT
AGIP Tellium VSF 320	BP Energel SGP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

$F_R(N)$ $F_A(N)$ $F_{eq}(N)$ $F_{eq} = F_R \cdot \frac{46}{X+21}$

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



602C

Coaxial - Gear
460Nm

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_{10} [kW]	Output torque M_{20} [Nm]	Service factor f_s	Nominal power P_{10} [kW]	Nominal torque M_{20} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft 	Ratios code
							C	D	E	F	R	T	U	V		
							71	80	90	100 112	80	90	100 112	132		
388	3.61	7.5	177	0.9	7.0	165	B								3018	standard ø35 ø28 ø30 ø38 ø40 On request
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	
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	
84	16.62	4	435	1.2	4.6	501	B								1314	
70	20.10	4	527	0.9	3.8	499	B								1312	
56	24.98	3	491	0.9	2.7	435	B								1310	
47.8	29.41	2.2	424	1.0	2.3	440	B								0814	
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) Supplied with Reduction Bushing (Fornito con Bustola di Riduzione) Available on Request without reduction bushing (Disponibile a Richiesta senza Bustola di Riduzione) Motor Flange Holes Position (Posizioni Fori Flangia Motore)

EN Unit 602C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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					
1.00 LT	1.50 LT	1.50 LT	1.50 LT	2.00 LT	2.00 LT	2.00 LT
AGIP Teflum VSF 320	BP Energol SGM/P220	SHELL Tivela OI WB		KLUBER Syntheso D220 EP	MOBIL Glygoyle 30	

tab. 1

RADIAL AND AXIAL LOADS

Output shaft / Albero di uscita

F_R (N)
 F_A (N)

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

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	580	2900	140	760	3800	70	1000	5000
250	620	3100	120	800	4000	40	1200	6000
200	660	3300	85	960	4800	15	1450	7260

Input shaft / Albero in entrata

F_R (N)
 F_A (N)

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

tab. 2

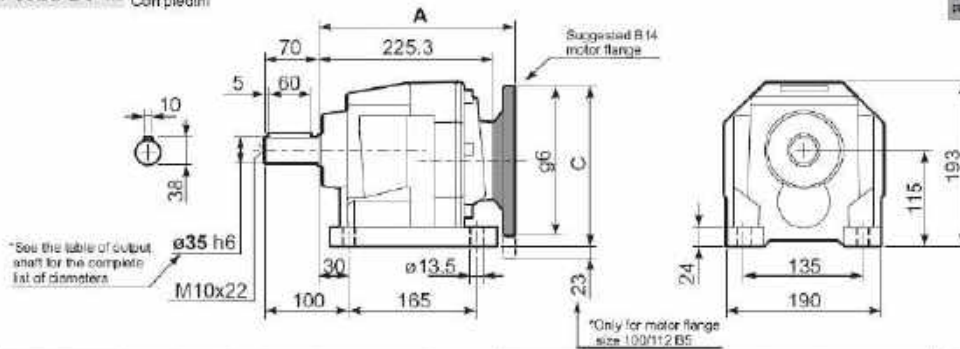


3D dimensions on the Web

Coaxial - Gear
460Nm 602C

P602C-SP ... With feet
Con piedini

Wormbox weight peso scatola
With flange 21.4 kg
With feet 21.3 Kg

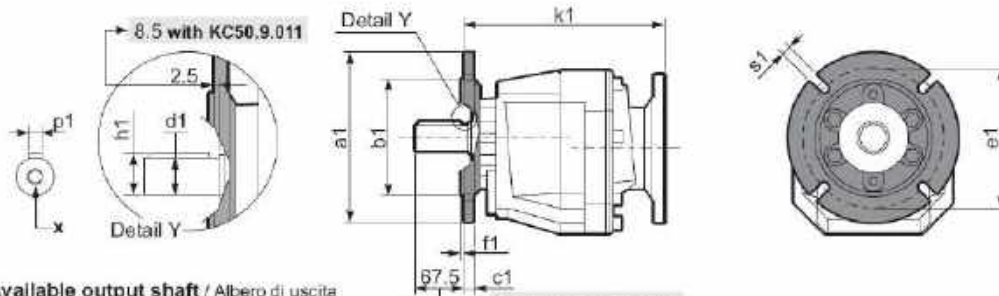


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B5	243.5	182	160	246	K023.4.041
80/90 B5	245.5	202	200	248	K023.4.042
100/112 B5	251.5	227	250	254	K023.4.043

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	248	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	$\varnothing 35 \times 70$	10	38	M10x22
On request A richiesta	$\varnothing 28 \times 60$	8	31	M8x20
	$\varnothing 30 \times 60$	8	33	M10x22
	$\varnothing 38 \times 70$	10	41	M10x25
	$\varnothing 40 \times 80$	12	43	M12x28

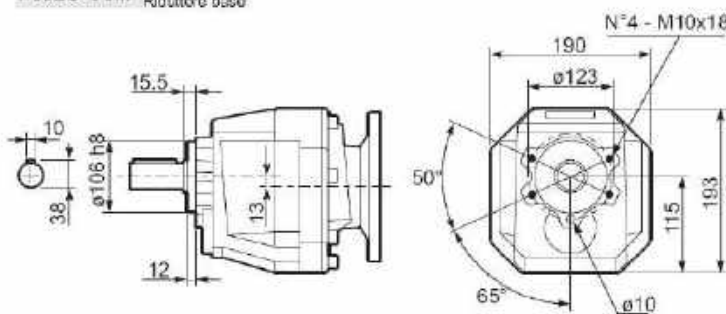
81.5 with KC50.9.011

Available output flanges / flange di uscita

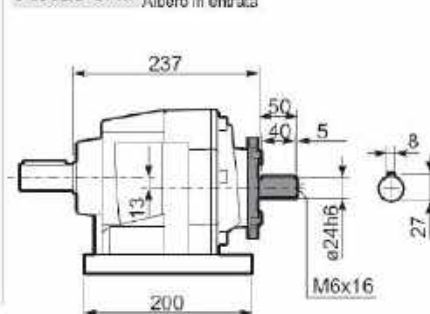
a1	e	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9		KC50.9.011
200	130	13	165	3.5	11		KC50.9.012
250	180	15.5	215	4	14		KC50.9.013

With flange and feet only on request. Ask for compatibility

P602C-N ... Basic gearbox
Riduttore base



R602C-SP ... Input Shaft
Albero in entrata



603C Coaxial - Gear 460Nm

Rating - Cast Iron COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{in} [kW]	Output torque M ₂₀ [Nm]	Service factor f.s.	Nominal power P _{in} [kW]	Nominal torque M ₂₀ [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft	Ratios code
							B	C	D	E	Q	R	T		
							63	71	80	90	71	80	90		
35.2	39.79	1.5	379	1.1	1.7	434	B				C	C		191318	standard e35 ø28 ø30 ø38 ø40 On request
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	
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	
13.4	104.68	0.75	498	1.0	0.75	501	B				C	C		131312	
11.9	117.22	0.55	409	1.2	0.67	500	B				C	C		101314	
11.1	126.65	0.55	442	1.1	0.62	500	B				C	C		170812	
10.3	135.74	0.37	319	1.4	0.51	441	B				C	C		101312	
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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						
1.30 LT	1.50 LT	1.50 LT	1.50 LT	2.10 LT	2.00 LT	2.10 LT	
AGIP Tollum 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								
			F _R (N)			F _{eq} (N)		
			F _A (N)			F _{eq} = F _R · $\frac{60.5}{X+25.5}$		
n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	580	2900	140	760	3800	70	1000	5000
250	620	3100	120	800	4000	40	1200	6000
200	660	3300	85	960	4800	15	1450	7260
Input shaft / Albero in entrata								
n ₁	FA	FR						
1400	400	2000						
900	440	2200						
500	440	2200						

tab. 2

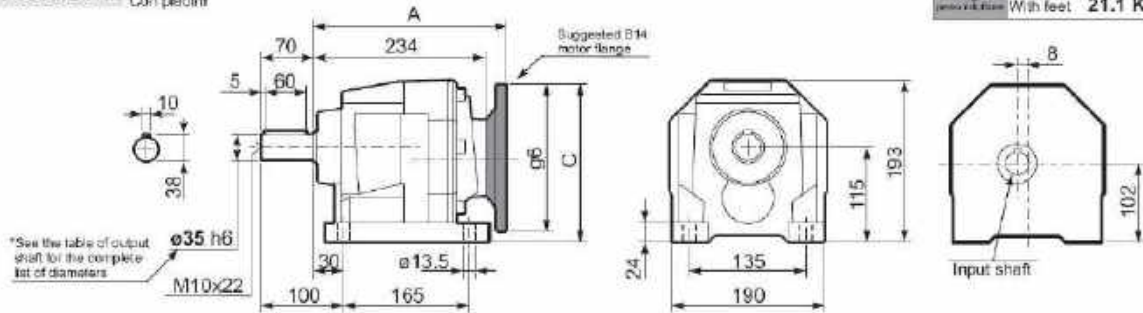


3D dimensions on the Web

Coaxial - Gear
460Nm 603C

P603C SP... With feet
Con piedini

With flange **21.2 kg**
With feet **21.1 Kg**

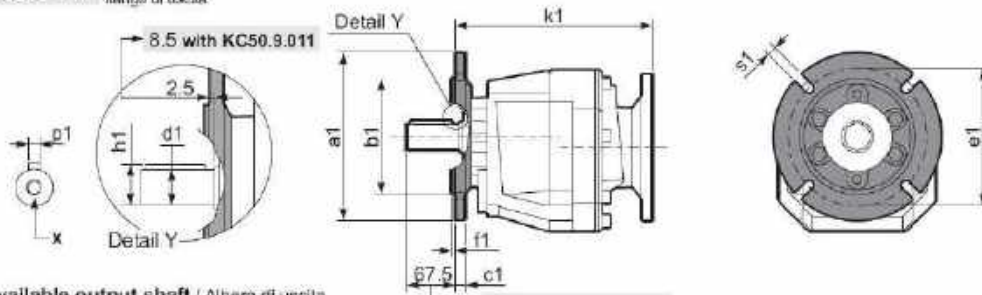


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	253.3	172	140	255.8	K063.4.041
71 B5	254.3	182	160	256.8	K063.4.042
80/90 B5	253.3	202	200	255.8	K063.4.043

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

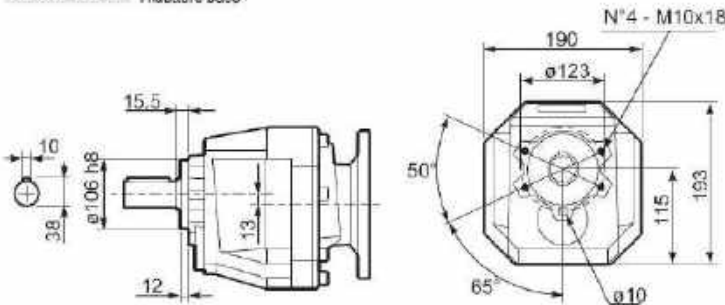
	Shaft - d1	p1	h1	x
Standard	e 35x70	10	38	M10x22
On request A richiesta:	e 28x60	8	31	M8x20
	e 30x60	8	33	M10x22
	e 38x70	10	41	M10x25
	e 40x80	12	43	M12x28

Available output flanges / flange di uscita

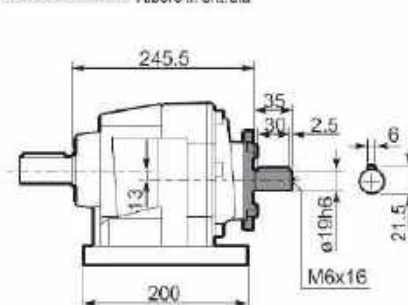
a1	ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	9	KC50.9.011
200	130	13	165	3.5	11	11	KC50.9.012
250	180	15.5	215	4	14	14	KC50.9.013

With flange and feet only on request. Ask for compatibility.

P603C-N... Basic gearbox
Riduttore base

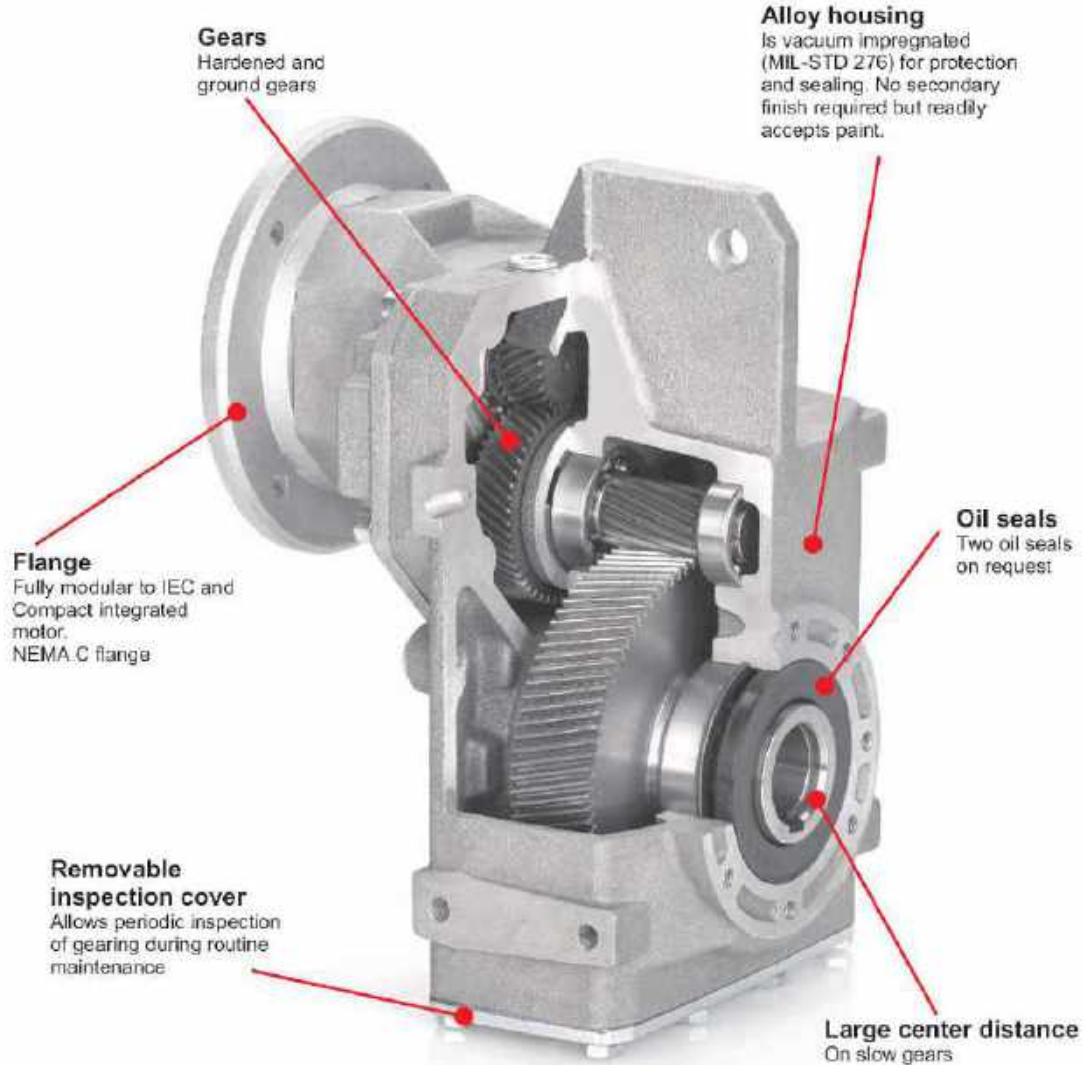


R603C SP... Input Shaft
Albero in entrata



Aluminum & cast iron shaft mounted gearboxes

A modular and compact product



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.

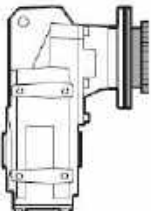

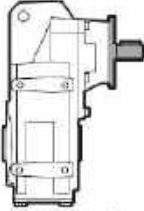

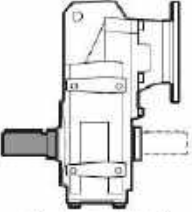
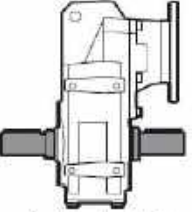
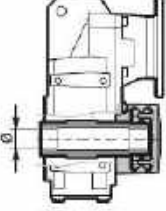
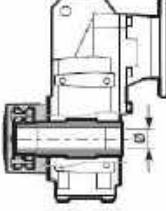
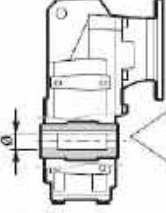


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Email: info@msf-technik.de www.msf-technik.de

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICACIÓN

Type - Tipo - Typ - Tipo	Size - Grandezza Größe - Tamaño	Mounting - Montaggio Montage - Tipo de montaje	Rapporto - Ratio Untersetzung - Relación
M	F32A	C	10.40
<p>Shaft mounted helical Riduttori ad asse paralleli</p>  <p>With IEC motor M</p>  <p>With motor flange P</p>  <p>With male input shaft R</p>  <p>Modular base B</p>	<p>2 Stages Riduzioni Stufen Etapas</p> <p>3 Stages Riduzioni Stufen Etapas</p> <p>Aluminum Alluminio Aluminium Aluminio</p> <p>FS20</p> <p>F32A F42A F52A</p> <p>F33A F43A F53A</p> <p>Cast Iron Ghisa Grauguss Fundición</p> <p>F62C</p> <p>F63C</p> <p>Special Speciale Sonderausgabe especial</p> <p>FS50 pag. 7-23</p>	<p>Hollow output shaft C</p>  <p>Single output shaft A</p>  <p>Double output shaft B</p>  <p>Shrink Disk D</p>  <p>Shrink Disk S</p> <p>Only on request for Q.ty / A richiesta per quantità</p>  <p>Stainless steel hub I</p> <p>On request for q.ty</p> <p>Stainless steel hub Mozzo in acciaio Inox Edelstahlhohlwelle Núcleo corona de acero Inox</p>	<p>See technical data table</p> <p>Vedi tabella dati tecnicì</p> <p>Technisches Datenblatt beachten.</p> <p>Ver tabla datos tecnicos.</p>



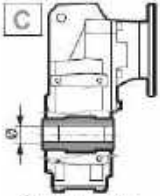
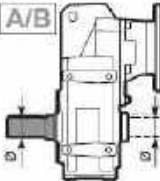
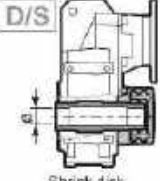
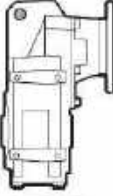
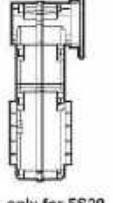
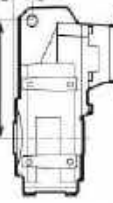
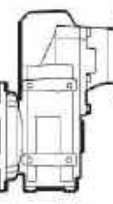
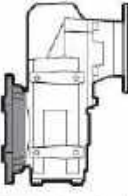
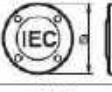




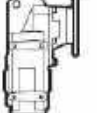
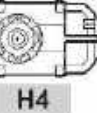
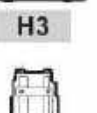
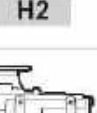


A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX

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	Type - Tipo Typ - Tipe	Output flange Flangia di uscita Ausgangs Flansch Brida en salida	Motor size Grandezza motore Motor Größe Tamaño motor	Terminal box position Posizione morsettiere Klemmkastenlage Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Posición de montaje																																																				
B	ST	N	C	B	H1																																																				
 <p>* Reduced Key → STANDARD</p> <p>F820</p> <p>B → $\varnothing 20$</p> <p>F32A F33A</p> <p>B → $\varnothing 20$</p> <p>C → $\varnothing 25$</p> <p>D → $\varnothing 30^*$</p> <p>F42A F43A</p> <p>C → $\varnothing 25$</p> <p>D → $\varnothing 30$</p> <p>E → $\varnothing 35^*$</p> <p>F52A F53A</p> <p>D → $\varnothing 30$</p> <p>E → $\varnothing 35$</p> <p>F → $\varnothing 35^*$</p> <p>F62C F63C</p> <p>E → $\varnothing 35$</p> <p>F → $\varnothing 40$</p> <p>A/B</p>  <p>Singl e/Double output shaft</p> <p>L F32/3A → $\varnothing 25$</p> <p>M F42/3A → $\varnothing 30$</p> <p>N F52/3A → $\varnothing 35$</p> <p>O F62/3C → $\varnothing 40$</p> <p>D/S</p>  <p>Shrink disk</p> <p>P F32/3A → $\varnothing 25$</p> <p>Q F42/3A → $\varnothing 30$</p> <p>R F52/3A → $\varnothing 35$</p> <p>S F62/3C → $\varnothing 40$</p>	 <p>ST</p> <p>Foto standard Standard bore</p>  <p>only for FS20</p> <p>ST</p> <p>Senza braccio di reazione Without reaction arm</p>  <p>Available torque arms, see our web site. Bracci di reazione disponibili, vedi il nostro sito web.</p> <p>S.. B..</p> <p>N.. LZ..</p>  <p>-F</p> <p>With output flange con flangia uscita</p>	 <p>N Senza flangia Without flange</p> <p>F820</p> <p>1 → $\varnothing 140$</p> <p>F32A F33A</p> <p>2 → $\varnothing 160$</p> <p>3 → $\varnothing 200$</p> <p>F42A F43A</p> <p>2 → $\varnothing 160$</p> <p>3 → $\varnothing 200$</p> <p>F52A F53A</p> <p>3 → $\varnothing 200$</p> <p>4 → $\varnothing 250$</p> <p>F62C F63C</p> <p>3 → $\varnothing 200$</p> <p>4 → $\varnothing 250$</p>	<p>Standard Flange Flangia Standard</p>  <table border="1"> <tr> <td>B5</td> <td>B14</td> </tr> <tr> <td>A=56 ($\varnothing 120$)</td> <td>O=56 ($\varnothing 80$)</td> </tr> <tr> <td>B=63 ($\varnothing 140$)</td> <td>P=63 ($\varnothing 90$)</td> </tr> <tr> <td>C=71 ($\varnothing 160$)</td> <td>Q=71 ($\varnothing 105$)</td> </tr> <tr> <td>D=80 ($\varnothing 200$)</td> <td>R=80 ($\varnothing 120$)</td> </tr> <tr> <td>E=90 ($\varnothing 200$)</td> <td>T=90 ($\varnothing 140$)</td> </tr> <tr> <td>F=100+112 ($\varnothing 250$)</td> <td>U=100+112 ($\varnothing 160$)</td> </tr> <tr> <td></td> <td>V=132 ($\varnothing 200$)</td> </tr> </table> <p>Reduced flange / Flangia ridotta</p> <table border="1"> <tr> <td>F32A F43A From 1100 11 to 1100 12</td> <td>F42A F53A F63C</td> </tr> <tr> <td>7 → $\varnothing 19$ (71B5)</td> <td>9 → $\varnothing 28$ (90B5)</td> </tr> <tr> <td>8 → $\varnothing 24$ (80B5)</td> <td></td> </tr> <tr> <td>F33A F43A From 1100 22 to 1100 23</td> <td>F52A F62C</td> </tr> <tr> <td>5 → $\varnothing 11$ (56B5)</td> <td>8 → $\varnothing 24$ (80B5)</td> </tr> <tr> <td>6 → $\varnothing 14$ (63B5)</td> <td>9 → $\varnothing 28$ (90B5)</td> </tr> </table> <p>Type R / Tipo R</p> <table border="1"> <tr> <td>FS20 FS50 F33A F43A From 1100 22 to 1100 23</td> <td>F32A F43A F42A F53A F63C</td> </tr> <tr> <td>1 → $\varnothing 14$</td> <td>2 → $\varnothing 19$</td> </tr> <tr> <td>F52A F62C</td> <td></td> </tr> <tr> <td>3 → $\varnothing 24$</td> <td></td> </tr> </table> <p>Without flange / Senza flangia</p> <table border="1"> <tr> <td>FS20 F33A F43A From 1100 22 to 1100 23</td> <td>F32A F43A F42A F52A F63C</td> </tr> <tr> <td>Z → $\varnothing 9$ (56B5)</td> <td>1 → $\varnothing 14$ (71B5)</td> </tr> <tr> <td>0 → $\varnothing 11$ (63B5)</td> <td>2 → $\varnothing 19$ (80B5)</td> </tr> <tr> <td>1 → $\varnothing 14$ (71B5)</td> <td>3 → $\varnothing 24$ (90B5)</td> </tr> <tr> <td>F52A F62C</td> <td></td> </tr> <tr> <td>2 → $\varnothing 19$ (80B5)</td> <td></td> </tr> <tr> <td>3 → $\varnothing 24$ (90B5)</td> <td></td> </tr> <tr> <td>4 → $\varnothing 28$ (100B5)</td> <td></td> </tr> </table> <p>STANDARD</p>	B5	B14	A=56 ($\varnothing 120$)	O=56 ($\varnothing 80$)	B=63 ($\varnothing 140$)	P=63 ($\varnothing 90$)	C=71 ($\varnothing 160$)	Q=71 ($\varnothing 105$)	D=80 ($\varnothing 200$)	R=80 ($\varnothing 120$)	E=90 ($\varnothing 200$)	T=90 ($\varnothing 140$)	F=100+112 ($\varnothing 250$)	U=100+112 ($\varnothing 160$)		V=132 ($\varnothing 200$)	F32A F43A From 1100 11 to 1100 12	F42A F53A F63C	7 → $\varnothing 19$ (71B5)	9 → $\varnothing 28$ (90B5)	8 → $\varnothing 24$ (80B5)		F33A F43A From 1100 22 to 1100 23	F52A F62C	5 → $\varnothing 11$ (56B5)	8 → $\varnothing 24$ (80B5)	6 → $\varnothing 14$ (63B5)	9 → $\varnothing 28$ (90B5)	FS20 FS50 F33A F43A From 1100 22 to 1100 23	F32A F43A F42A F53A F63C	1 → $\varnothing 14$	2 → $\varnothing 19$	F52A F62C		3 → $\varnothing 24$		FS20 F33A F43A From 1100 22 to 1100 23	F32A F43A F42A F52A F63C	Z → $\varnothing 9$ (56B5)	1 → $\varnothing 14$ (71B5)	0 → $\varnothing 11$ (63B5)	2 → $\varnothing 19$ (80B5)	1 → $\varnothing 14$ (71B5)	3 → $\varnothing 24$ (90B5)	F52A F62C		2 → $\varnothing 19$ (80B5)		3 → $\varnothing 24$ (90B5)		4 → $\varnothing 28$ (100B5)		 <p>A</p>  <p>B STANDARD</p>  <p>C</p>  <p>D</p>	 <p>H1 STANDARD</p>  <p>H4</p>  <p>H3</p>  <p>H2</p>  <p>H5</p>  <p>H6</p> <p>Specify only for vertical positions Specificare solo per posizione verticale</p>
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FORMULE UTILI / USEFUL FORMULAS / NÜTZLICHE FORMELIN / FÓRMULAS ÚTILES

POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / POTENCIA NECESARIA

Lifting / sollevamento / hubantrieb / elevación

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

Rotation / rotazione / drehung / rotation

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

Linear movement / traslazione / linearbewegung / translacion

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

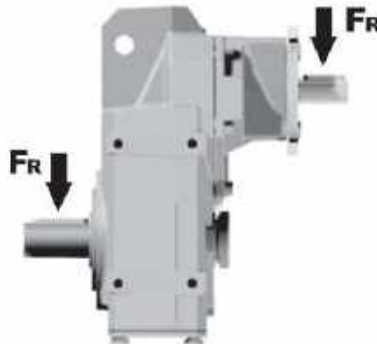
TORQUE / COPPIA / DREHMOMENT / PAR

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

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

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

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

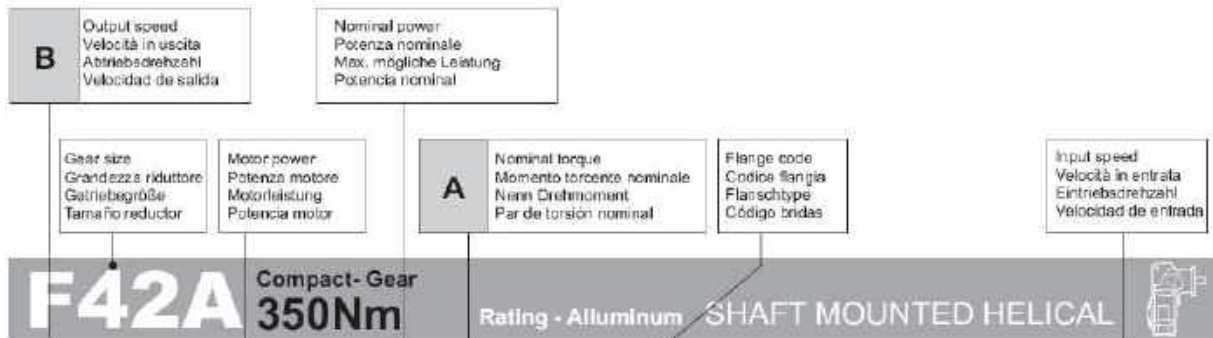


	$F_r \text{ [N]} = \frac{M \text{ [Nm]} \cdot 2000}{d \text{ [mm]}} \cdot f_k$	$F_r \text{ [N]} = \frac{M \text{ [lb in]} \cdot 8.9}{d \text{ [in]}} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / Par torsion	
d	Diametro primitivo / Diam. of driving element / Durchmesser der Abtriebs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



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



QUICK SELECTION / Selezione veloce input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _M [kW]	Output torque M _{2N} [Nm]	Service factor f.s.	Nominal power P _{1N} [kW]	Nominal torque M _{1N} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft	
							B	C	D	E	Q	R	T	U		Ratio code
							63	71	80	90	71	80	90	100		
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	252*	1.0*	2.18	260	B				C	C			1915	



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 intermitt. con n.ro operazion/ora	Uniform / Uniforme	0.8	1	1.25
	Moderate / Moderato	1	1.25	1.5
	Heavy / Forte	1.25	1.5	1.75
Intermittent application with start / hour Applicazione intermittente con n.ro operazion/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 Flango disponibili Erhältliche Motorflansche Bridas disponibles	
B) Mounting with reduction ring Montaggio con boccola di riduzione Reduzierhülse Montaje con casquillo de reducción	
C) Motor flangeholes position/terminal box position Posizione for flangia/basetta motore Bohrungsposition am Motorflanschi-socket Posición agujeros brida / base motor	
B) Available without reduction bushes Disponibile anche senza boccola Auch ohne Reduzierbuchse verfügbar Disponibile también sin casquillo	

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



F32A Compact-Gear 200Nm

Rating - Aluminum SHAFT MOUNTED HELICAL



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{in} [kW]	Output torque M_{out} [Nm]	Service factor f_s	Nominal power P_{N} [kW]	Nominal torque M_{N} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft \varnothing	Ratios code
							B	C	D	E	Q	R	T		
							63	71	80	90	71	80	90		
174	8.03	1.5	79	2.2	3.2	170	B				C	C		2816	standard ø25 On request ø20 ø30
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	
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	
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)
 Supplied with Reduction Bushing (Fornito con Bussole di Riduzione)
 Available on Request without reduction bushing (Disponibile a Richiesta senza Bussole di Riduzione)
 Motor Flange Holes Position (Posizione Fori Flangia Motore)

EN Unit F32A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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				
1.00 LT	0.65 LT	0.50 LT	0.70 LT	1.00 LT	0.70 LT
AGIP Tollium VSF 320	BP Energel SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygolye 30	

tab. 1

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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



F33A 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_M [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{2N} [kW]	Nominal torque M_{2N} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft 	Ratios code
							B	C	O	P	Q		
13.2	106.07	0.25	168	1.2	0.3	200	63	71	C	C		101718	standard ø25 On request ø20 ø30
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	
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 Disponibile
 Supplied with Reduction Bushing Fornito con Buscola di Riduzione
 Available on Request without reduction bushing Disponibile a Richiesta senza Buscola di Riduzione
 Motor Flange Holes Position Posizione Fori Flangia Motore

EN Unit F33A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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. Per la documentazione completa consulta il nostro sito.

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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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.					
1.05 LT	0.70 LT	0.55 LT	0.75 LT	1.05 LT	0.75 LT	
AGIP Tellium VSF 320	BP Energiol SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygoyle 30		

tab. 1

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \frac{95.7}{X+30.15}$					
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



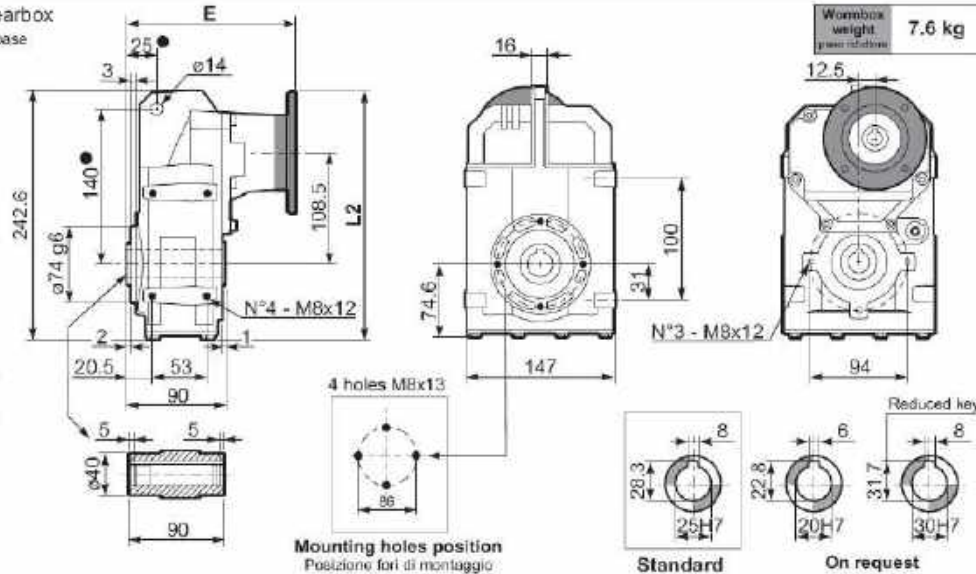
3D dimensions on the Web

Compact - Gear
200Nm **F33A**

PF33AC... Basic gearbox
Riduttore base

Motor Flange

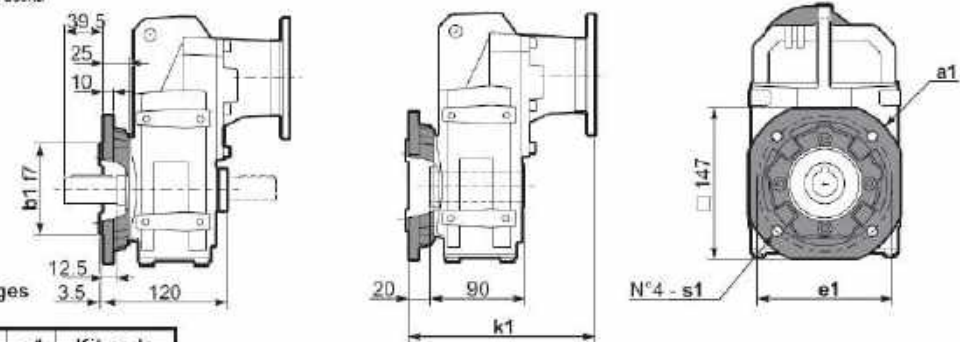
Motor Flange	E	L2
63 B5	163	253
71 B5	161	264
66B14	166.5	222
63B14	165.5	228
71B14	162.5	235.5



• 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
66B14	186.5
63B14	185.5
71B14	182.5

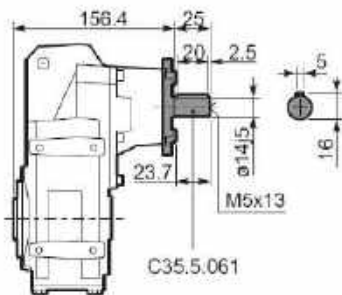


Available output flanges
Flange di uscita

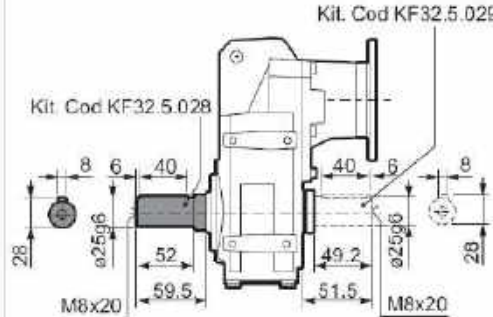
a1	e	b1	e1	s1	Kit code
160*	110	130	8.5	8.5	KF30.9.010
200	130	165	11	11	KF30.9.011

* Standard output flange / Flangia uscita standard

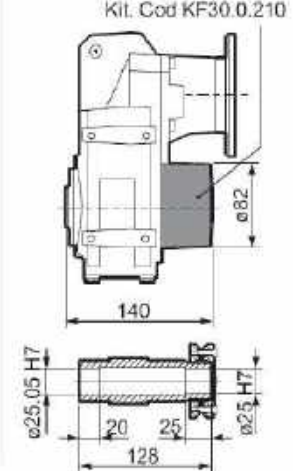
RF33AC... Input Shaft
Albero in entrata



PF33A/B... Single and Double output shaft
Albero uscita semplice e doppio




PF33A/D/S... Shrink disk
Caleflettore







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_{10} [kW]	Output torque M_{20} [Nm]	Service factor f.s.	Nominal power P_{10} [kW]	Nominal torque M_{20} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft 	Ratio code
							B	C	D	E	Q	R	T	U		
							63	71	80	90	71	80	90	100		
172	8.12	3.0	160	1.2	3.57	190	B				C	C			2818	standard e30 On request e25 e35
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	318	B				C	C			1715	
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	
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  Supplied with Reduction Bushing / Fornito con Bussole di Riduzione  Available on Request without reduction bushing / Disponibile a Richiesta senza Bussole di Riduzione  Motor Flange Holes Position / Posizione Fori Flangia Motore

EN Unit F42A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

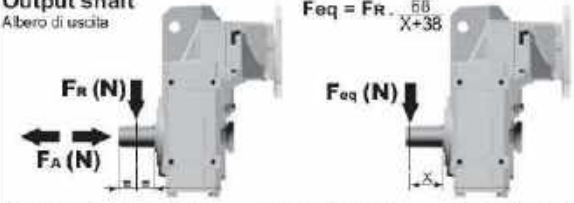
Standard supplied	For these mounting position specify in the order or add oil				
	Per queste posizioni specificare in fase d'ordine o aggiungere olio				
					
1.20 LT	0.80 LT	0.60 LT	0.80 LT	1.20 LT	0.85 LT
AGIP Tellium VSF 320	BP Energel SGP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygolye 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	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	310	1548
900	312	1560
500	312	1560

tab. 2



3D dimensions on the Web

Compact - Gear
350Nm **F42A**

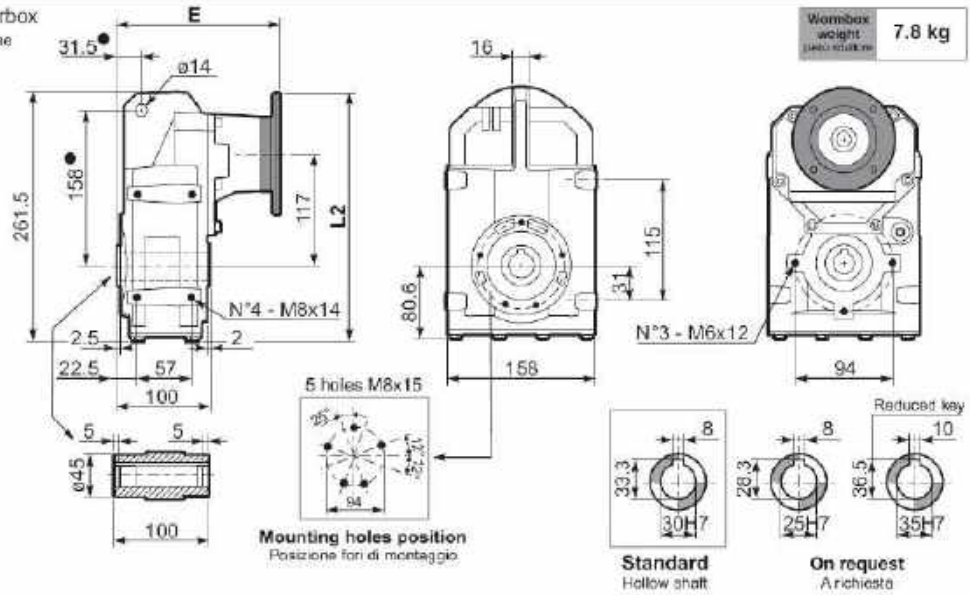
PF42AC... Basic gearbox
Riduttore base

Wormbox weight
Peso scatole 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



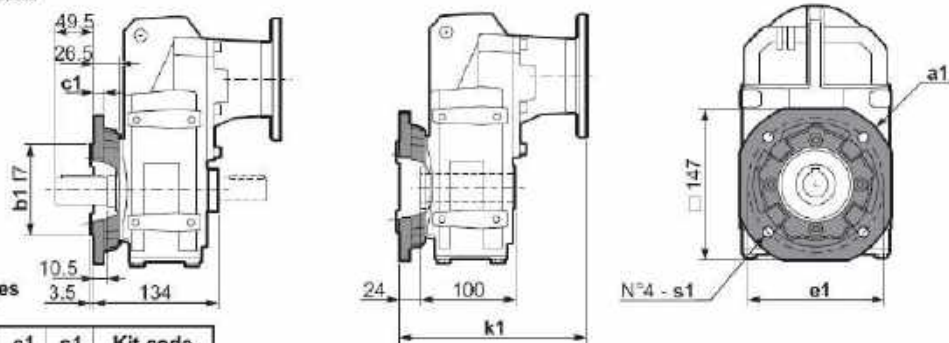
PF42A...-F... Output flange
Flangia uscita

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

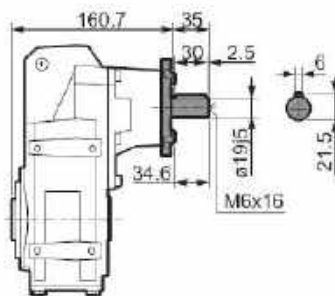
Available output flanges
Flange di uscita

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

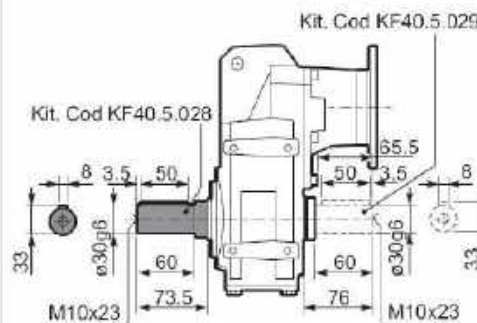
*Standard output flange / Flangia uscita standard



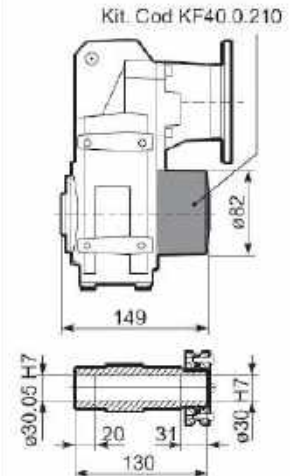
RF42AC... Input Shaft
Albero in entrata



PF42A/B... Single and Double output shaft
Albero uscita semplice e doppio



PF42AD/S... Shrink disk
Calestatore



F43A Compact-Gear 350Nm

Rating - Aluminum SHAFT MOUNTED HELICAL

QUICK SELECTION / Selezione veloce input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _M [kW]	Output torque M _{2N} [Nm]	Service factor f _s	Nominal power P _N [kW]	Nominal torque M _{2N} [Nm]	Available B5 motor flanges				Available B14 motor flanges					Output Shaft				
							B	C	D	E	O	P	Q	R	T					
							63	71	80	90	56	63	71	80	90					
42.3	33.13	1.5	315	1.1	1.6	337	B													
37.4	37.47	1.1	261	1.0	1.1	250	B													
28.9	48.37	0.75	230	1.2	0.9	272	B													
23.4	59.92	0.75	285	1.2	0.9	337	B													
21.3	65.81	0.75	313	0.9	0.7	272	B													
20.2	69.45	0.75	330	1.0	0.8	337	B													
17.2	81.52	0.55	284	1.2	0.7	337	B													
14.4	97.30	0.55	339	1.0	0.5	337	B													
13.1	107.22	0.37	252	1.1	0.4	272														
12.3	114.21	0.37	268	1.2	0.4	310														
10.3	136.33	0.37	320	1.0	0.4	310														
7.5	186.09	0.25	295	1.1	0.3	310														
6.1	228.89	0.25	363	0.9	0.23	337														
5.8	242.87	0.18	277	1.1	0.20	310														
4.4	320.70	0.18	368	0.8	0.15	310														

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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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 Tetium VSF 320	BP Energel SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL 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	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	310	1548
900	312	1560
500	312	1560

tab. 2



3D dimensions on the Web

Compact - Gear **350Nm F43A**

PF43AC... Basic gearbox
Riduttore base

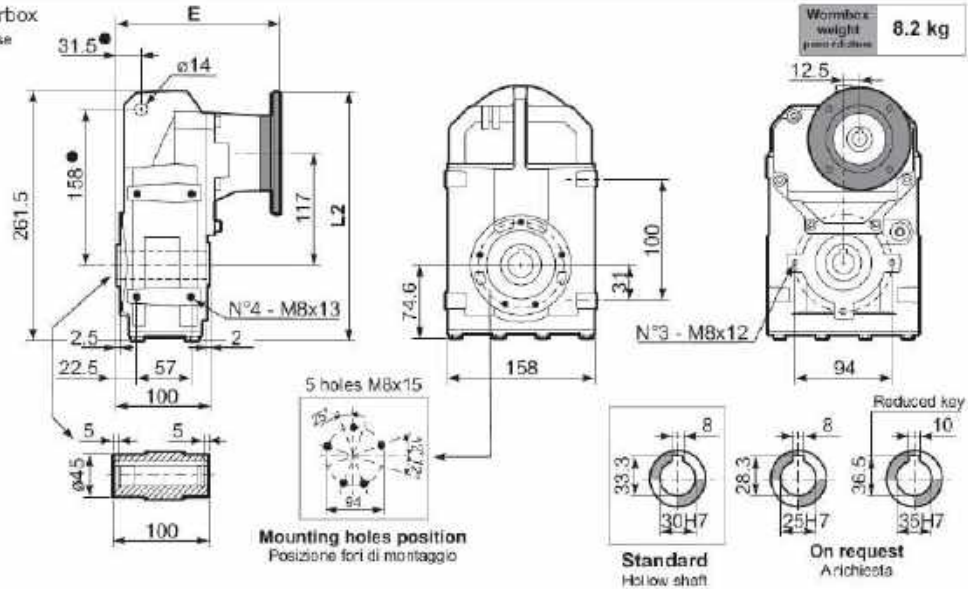
Ratio 33.13+97.30 IEC80

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	284
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



Wormbox weight
peso riduttore **8.2 kg**

Mounting holes position
Posizione fori di montaggio

Standard
Hollow shaft

Reduced key
On request
A richiesta

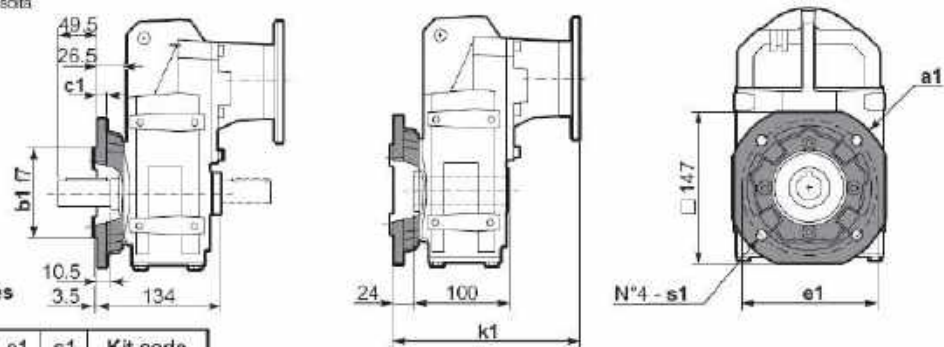
PF43A...-F... Output flange
Flangia uscita

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

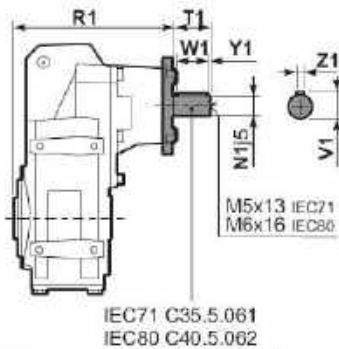
Available output flanges
Flange di uscita

a1 e	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

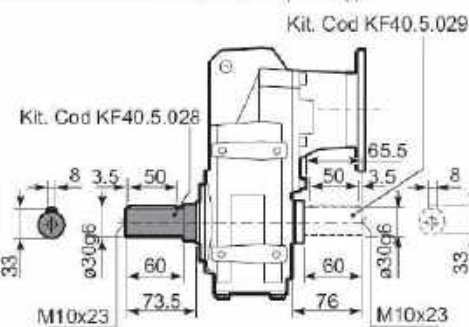


RF43AC... Input Shaft
Albero in entrata

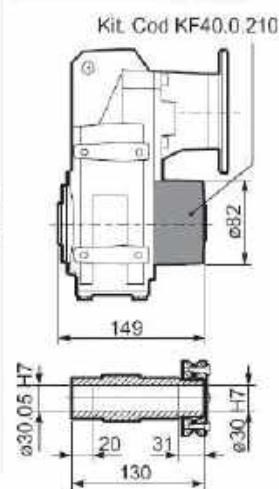


Input shaft	N1 js	R1	T1	V1	Z1	W1	Y1
IEC71	ø14	165.4	25	16	5	20	2.4
IEC80	ø19	181.9	35	21.5	5	30	2.5

PF43A/B... Single and Double output shaft
Albero uscita semplice e doppio



PF43A/D/S... Shrink disk
Calatratore





F52A Compact-Gear 510Nm

Rating - Aluminum SHAFT MOUNTED HELICAL







QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{IN} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P ₁₀ [kW]	Nominal torque M _{2N} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft 	Ratio code 
							C	D	E	F	R	T	U	V		
							71	80	90	100 112	80	90	100 112	132		
213	6.57	5.5	237	1.2	6.74	290	B								3018	standard ø35 On request ø30 ø40
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								1816	
64	21.78	3	428	1.2	3.54	505	B								1318	
62	22.48	3	442	1.1	3.36	495	B								1814	
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 lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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				
					
1.80 LT	1.20 LT	0.90 LT	1.25 LT	1.80 LT	1.25 LT
AGIP Tellium VSF 320	BP Enersol 50XP220	SHELL Tivea Oil WB	KLUBER Syntheco D220 EP	MOBIL Glygoyle 30	

tab. 1

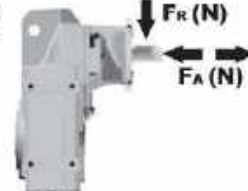
Output shaft
Albero di uscita

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



n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
200	420	2100	85	568	2376	15	980	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



3D dimensions on the Web

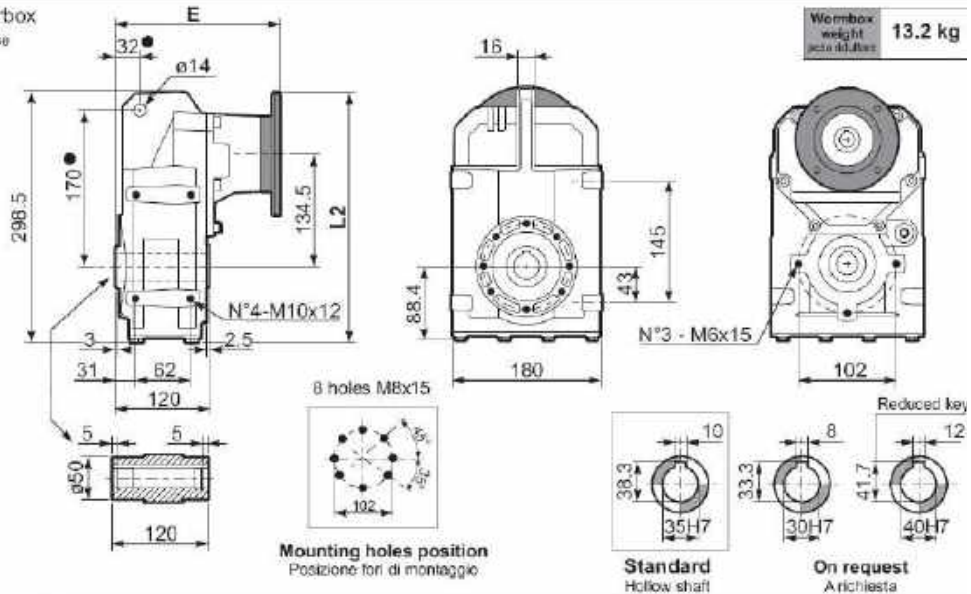
Compact - Gear
510Nm F52A

PF52AC... Basic gearbox
Riduttore base

Wormbox weight
peso del base **13.2 kg**

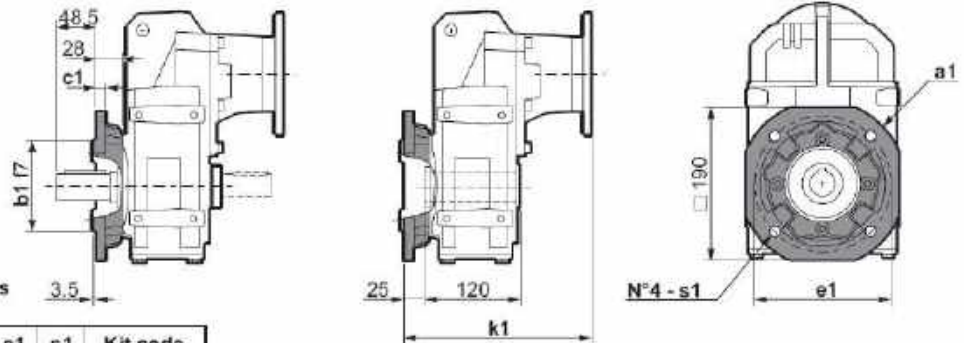
Motor Flange

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



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

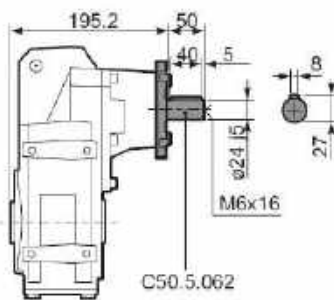


Available output flanges
Flange di uscita

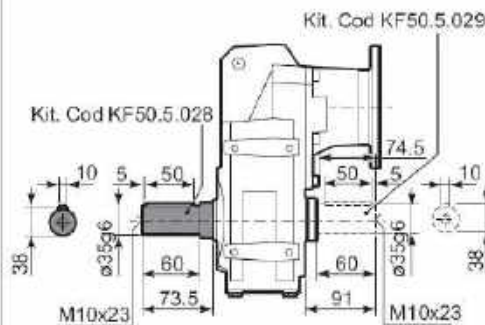
a1 ø	b1	c1	e1	s1	Kit code
200*	130	10	165	11	KF50.9.010
250	180	15	215	13.5	KF50.9.011

* Standard output flange / Flangia uscita standard

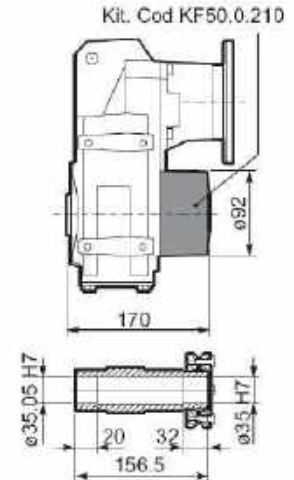
RF52AC... Input Shaft
Albero in entrata



PF52A/B... Single and Double output shaft
Albero uscita semplice e doppio



PF52A/D/S... Shrink disk
Calelettatore



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_{10} [kW]	Output torque M_{20} [Nm]	Service factor f_s	Nominal power P_{10} [kW]	Nominal torque M_{20} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft \varnothing	Ratio code
							B	C	D	E	Q	R	T	U		
							63	71	80	90	71	80	90	100		
35.6	39.30	1.5	374	1.4	2.0	510	B				C	C			281316	standard ø35 On request ø30 ø40
30.5	45.93	1.5	437	1.1	1.7	500	B				C	C	C		281314	
22.6	61.89	1.1	432	1.2	1.3	530	B				C	C	C		191318	
19.7	71.16	1.1	497	1.0	1.1	510	E				C	C	C		191316	
17	82.48	0.75	392	1.3	1.0	510	B				C	C	C		171316	
14.5	96.82	0.75	461	1.1	0.8	510	B				C	C	C		151316	
12.1	115.56	0.55	403	1.3	0.7	510	B				C	C	C		131316	
10.2	137.20	0.55	479	1.1	0.6	530	B				C	C	C		101318	
8.9	157.74	0.55	550	0.9	0.5	510	B				C	C	C		101316	
7.8	179.06	0.37	420	1.3	0.5	530	B				C	C	C		91318	
7.6	184.15	0.37	432	1.2	0.4	500	B				C	C	C		101314	
6.8	205.87	0.37	483	1.1	0.4	510	B				C	C	C		91316	
5.8	240.34	0.25	381	1.3	0.3	500	B				C	C	C		91314	
5.1	271.85	0.25	431	1.2	0.3	510	B				C	C	C		71316	
4.4	317.36	0.25	503	1.0	0.2	500	B				C	C	C		71314	

The dynamic efficiency is 0.93 for all ratios.

Motor Flanges Available / Flange Motori Disponibili B) Supplied with Reduction Bushing / Fornito con Bussola di Riduzione B) Available on Request without reduction bushing / Disponibile a Richiesta senza Bussola di Riduzione C) Motor Flange Holes Position / Posizione Fori Flange Motore

EN Unit F53A is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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				
1.90 LT	1.30 LT	1.00 LT	1.35 LT	1.90 LT	1.35 LT
AGIP Tetium VSF 320	BP Energol SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygoyle 30	

tab. 1

Output shaft Albero di uscita			F _{eq} = F _R · 69,1 / X+39,1		
n_2	FA	FR	n_2	FA	FR
200	420	2100	85	568	2376
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



3D dimensions on the Web

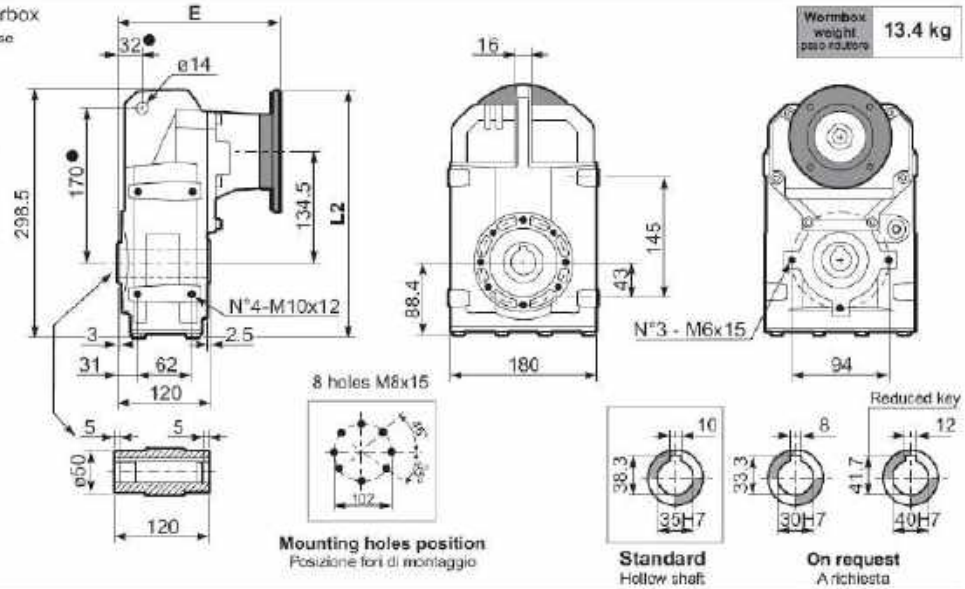
Compact - Gear
510Nm F53A

PF53AC... Basic gearbox
Riduttore base

Wormbox weight
peso riduttore **13.4 kg**

Motor Flange

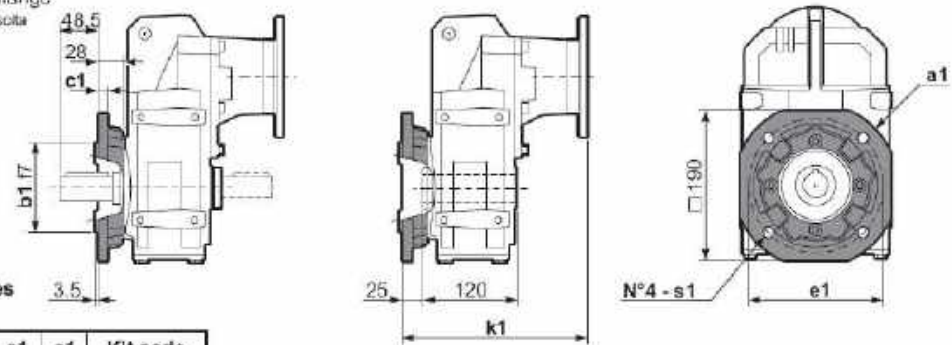
Motor Flange	E	L2
63 B5	211.5	293.5
71 B5	212.5	303.5
80/90 B5	211.5	323.5
71 B14	209.5	278
80 B14	210.5	283.5
90 B14	211.5	293.5
100/112B14	227.5	303.5



• 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

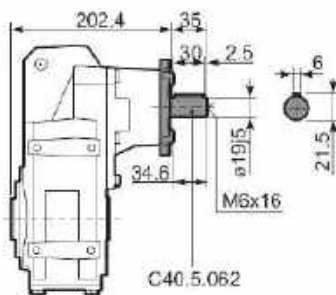


Available output flanges
Flange di uscita

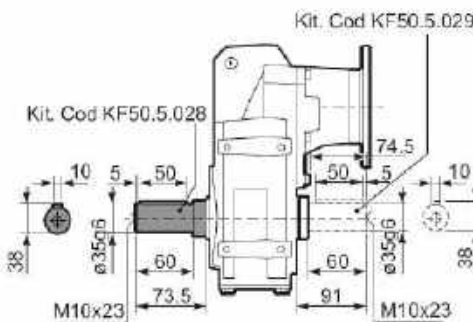
a1	ø	b1	c1	e1	s1	Kit code
200*		130	10	165	11	KF50.9.010
250		180	15	215	13.5	KF50.9.011

* Standard output flange / Flangia uscita standard

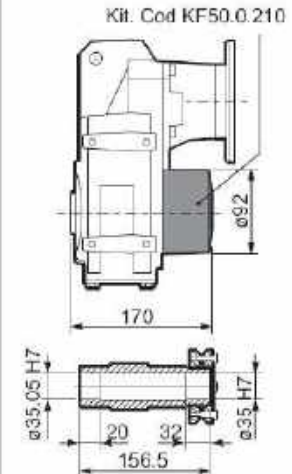
RF53AC... Input Shaft
Albero in entrata



PF53A/A/B Single and Double output shaft
Albero uscita semplice e doppio



PF53A/D/S Shrink disk
Calettatoma



F62C Compact- Gear 670Nm

Rating - Cast Iron SHAFT MOUNTED HELICAL



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{in} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1.5} [kW]	Nominal torque M _{2B} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft ø	Ratios o:z:z	
							C	D	E	F	R	T	U	V			
							71	80	90	100 112	80	90	100 112	132			
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	
188	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	
68	20.58	4	539	1.1	4.2	566	B									1318	standard ø40
66	21.29	4	558	1.1	4.4	617	B									1614	On request ø35
59	23.69	4	621	1.0	4.0	620	B									1316	
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 | C) Motor Flange Holes Position / Posizione Fori Flange Motore

EN Unit F62C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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				
1.90 LT	1.40 LT	1.05 LT	1.50 LT	1.90 LT	1.40 LT
AGIP Tellium VSF 320	BP Energol SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygoyle 30	

tab. 1

Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{71.5}{x + 41.5}$

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



3D dimensions on the Web

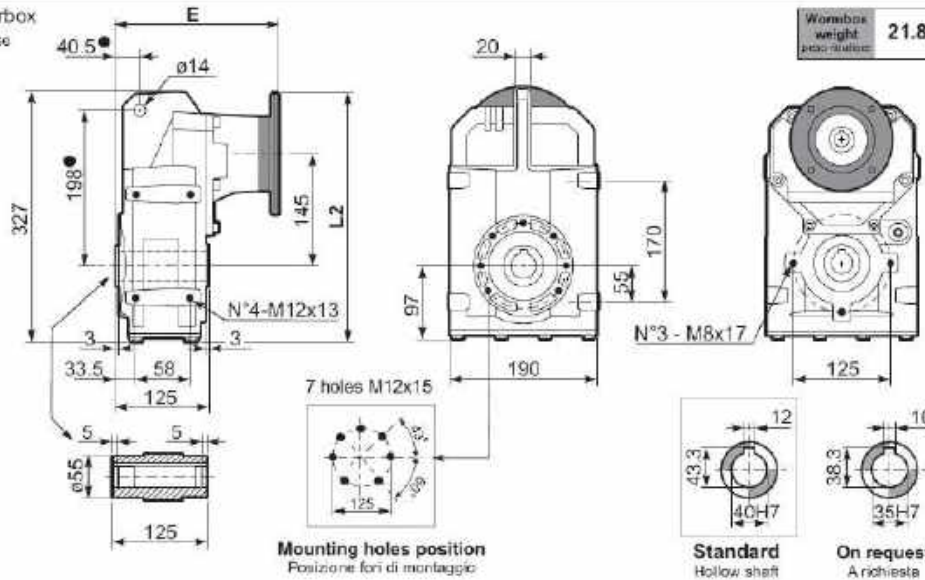
Compact - Gear
670Nm **F62C**

PF62CC... Basic gearbox
Riduttore base

Wormbox weight
peso riduttore: **21.8kg**

Motor Flange

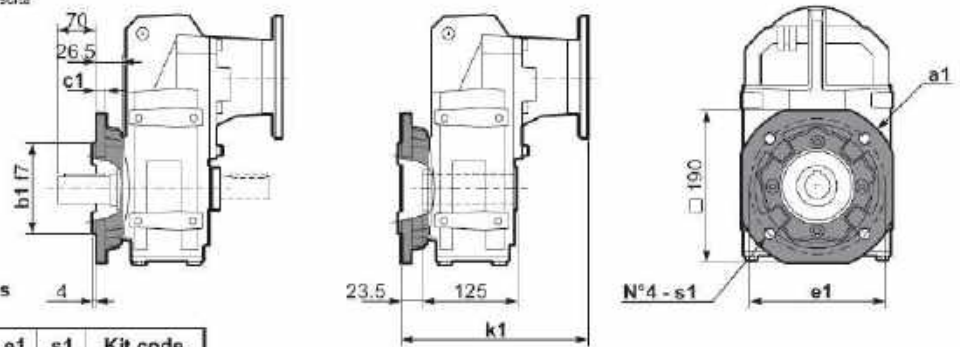
Motor Flange	E	L2
71 B5	212.5	321
80/90 B5	214.5	341
100/112B5	214.5	356
80 B14	212.5	301
90 B14	215.5	311
100 B14	212	321
132 B14	245.5	341



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

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

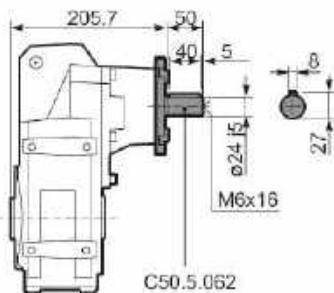


Available output flanges
Flange di uscita

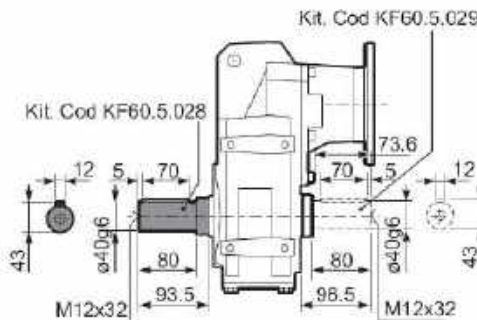
a1 ø	b1	c1	e1	s1	Kit code
200	130	10	165	11	KF60.9.010
250*	180	15	215	13.5	KF60.9.011

* Standard output flange / Flangia uscita standard

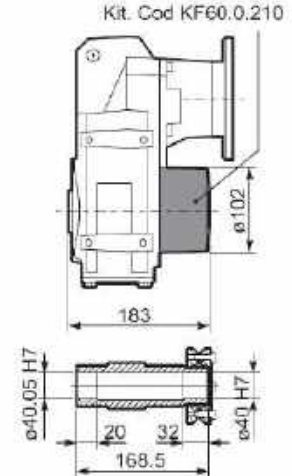
RF62CC... Input Shaft
Albero in entrata



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



PF62CD/S... Shrink disk
Calelabre



F63C Compact- Gear 670Nm

Rating - Cast Iron 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_{in} [kW]	Output torque M_{out} [Nm]	Service factor f_s	Nominal power P_{nom} [kW]	Nominal torque M_{nom} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft	Ratio code
							B	C	D	E	Q	R	T	U		
							63	71	80	90	71	80	90	100		
37.6	37.23	1.5	354	1.8	2.8	652	B				C	C			281316	standard ø40 On request ø35
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	
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	
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 Bussole di Riduzione B) Available on Request without reduction bushing / Disponibile a Richiesta senza Bussole di Riduzione C) Motor Flange Holes Position / Posizione Fori Flangia Motore

EN Unit F63C is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. 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				
2.00 LT	1.50 LT	1.15 LT	1.60 LT	2.00 LT	1.50 LT
AGIP Tatum VSF 320	BP Energel SGXP220	SHELL Tivela Oil WB	KLUBER Syntheso D220 EP	MOBIL Glygoyle 30	

tab. 1

Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{71.5}{x \cdot 41.5}$

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



3D dimensions on the Web

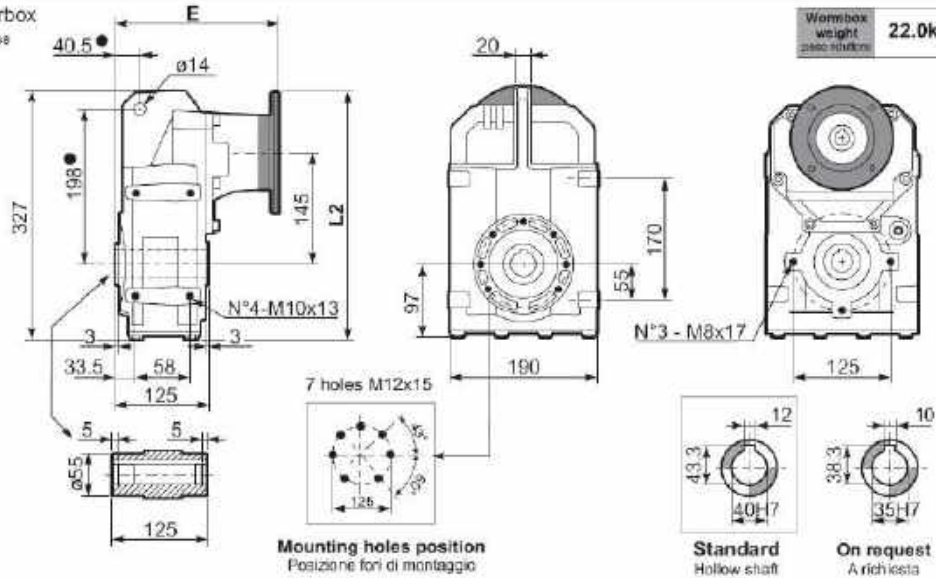
Compact - Gear
670Nm **F63C**

PF63CC... Basic gearbox
Riduttore base

Wormbox weight
Peso scatole 22.0kg

Motor Flange

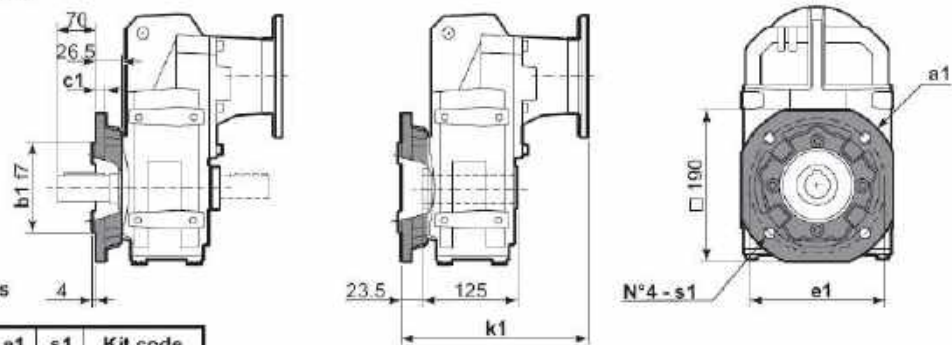
Motor Flange	E	L2
63 B5	222.5	312
71 B5	223.5	322
80/90 B5	222.5	342
71 B14	220.5	294.5
80 B14	221.5	302
90 B14	222.5	312
100/112B14	238.5	322



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

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

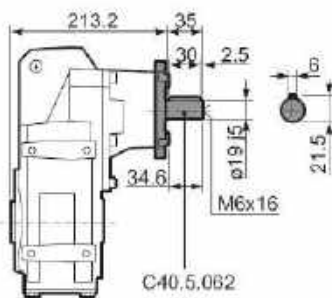


Available output flanges
Flange di uscita

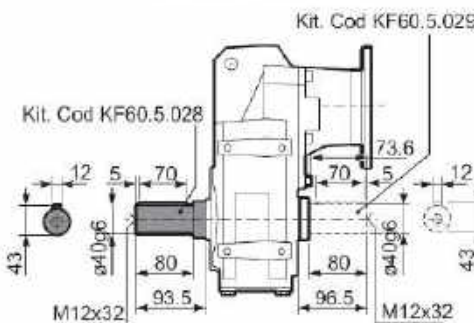
a1	e	b1	c1	e1	s1	Kit code
200	130	10	165	11		KF60.9.010
250*	180	15	215	13.5		KF60.9.011

* Standard output flange / Flangia uscita standard

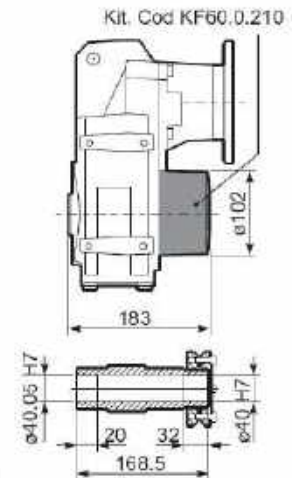
RF63CC... Input Shaft
Albero in entrata



PF63CA/B... Single and Double output shaft
Albero uscita semplice e doppio



PF63CD/S... Shrink disk
Calettatore





FS20 Compact-Gear 90Nm

Rating - Aluminum SHAFT MOUNTED HELICAL







QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{sw} [kW]	Output torque M_{sw} [Nm]	Service factor f.s.	Nominal power P_{rn} [kW]	Nominal torque M_{rn} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Hollow Shaft 	Ratio code 
							B	C	Q	P	Q		
24.2	57.9	0.25	98	0.9	0.24	90							
13.4	104.8	0.12	89	1.0	0.13	90							
11.5	121.5	0.12	103	0.9	0.11	90							
9.8	142.6	0.12	121	0.7	0.10	90							
8.2	170.2	0.12	145	*	0.08	90							
6.0	232.3	0.12	198	*	0.06	90							
4.6	303.2	0.12	258	*	0.04	90							
3.5	400.4	0.12	341	*	0.03	90							

The dynamic efficiency is 0.93 for all ratios

 Motor Flanges Available
 Supplied with Reduction Bushing
 Available on Request without reduction bushing
 Motor Flange Holes Position

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

EN Unit FS20 is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. For complete documentation please visit our web site.

- LUBRICATION FS20 Oil Quantity 0.50 Lt.


AGIP	KLUBER	SHELL	MOBIL
Tellium VSF 320	Syntheso D220 EP	Tivela Oil WB	Glygoyl 30 SHC 63

tab.

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.

RADIAL LOADS

Input shaft
Albero in entrata



n_1	FA	FR
1400	140	700
900	160	800

tab. 1

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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

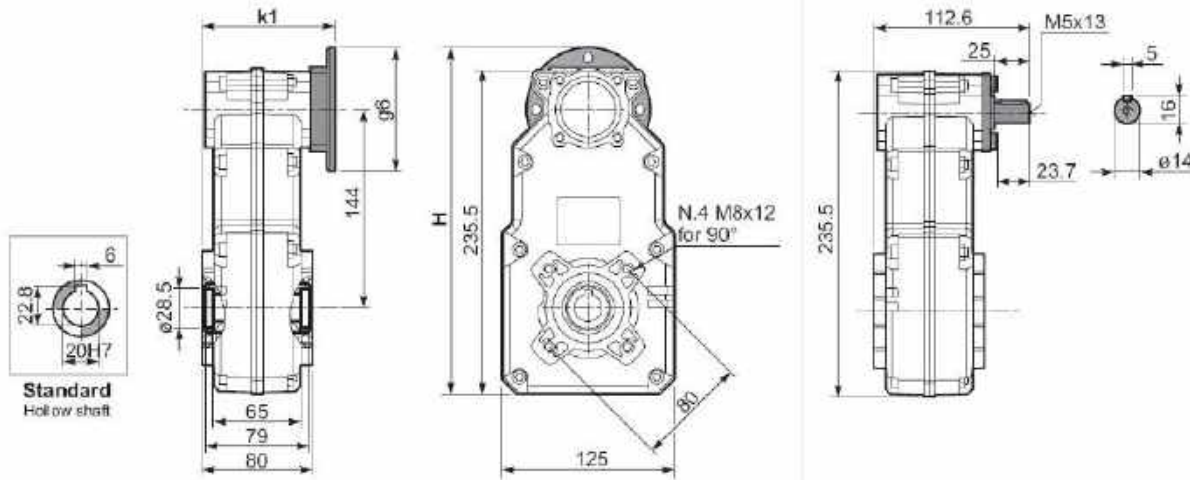


Compact - Gear
90Nm FS20

PFS20... Basic gearbox
Riduttore base

Wormbox weight
peso scatola 4.3 kg

RFS20... Input Shaft
Albero in entrata

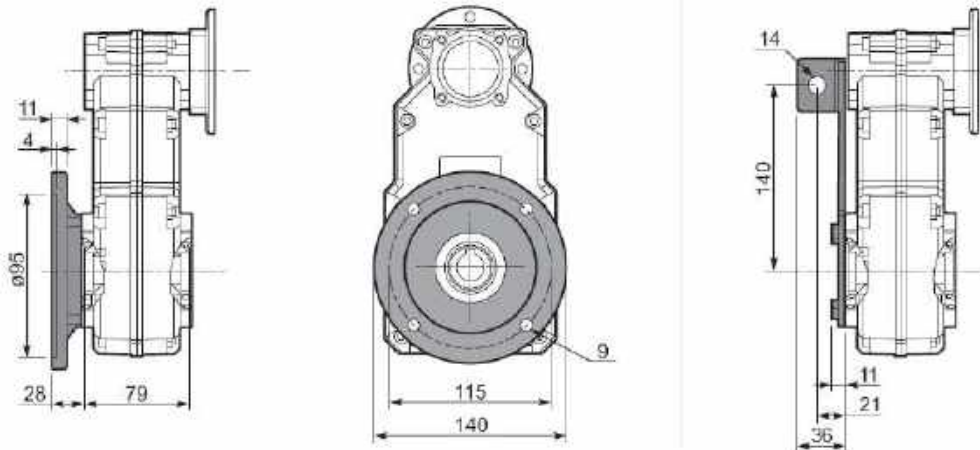


B14 Motor Flanges	H	g6	k1	kit code
56 B14	245.5	80	94.2	KC40.4.049
63 B14	251.5	90	96.7	K050.4.047
71 B14	259	105	94.2	K050.4.045

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

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 (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{IN} [kW]	Output torque M _{OUT} [Nm]	Service factor f.s.	Nominal power P _{IN} [kW]	Nominal torque M _{OUT} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Hollow Shaft 	Ratios code 
							B	C	Q	P	Q		
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			
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			
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 Bussole di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit FS50 is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox. 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 requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor. Para documentación completa, consultar nuestra Web.

LUBRICATION FS50 Oil Quantity 0.95 Lt.


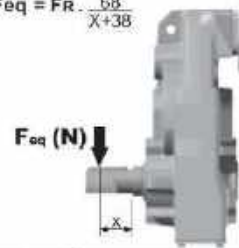
AGIP	KLUBER	SHELL	MOBIL
Telium VSF 320	Synthese D220 EP	Tivela Oil WB	Glygoyl 30 SHC 630

tab. 1

RADIAL AND AXIAL LOADS


Output shaft
Albero di uscita

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

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
200	384	1920	85	500	2498	15	672	3380
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

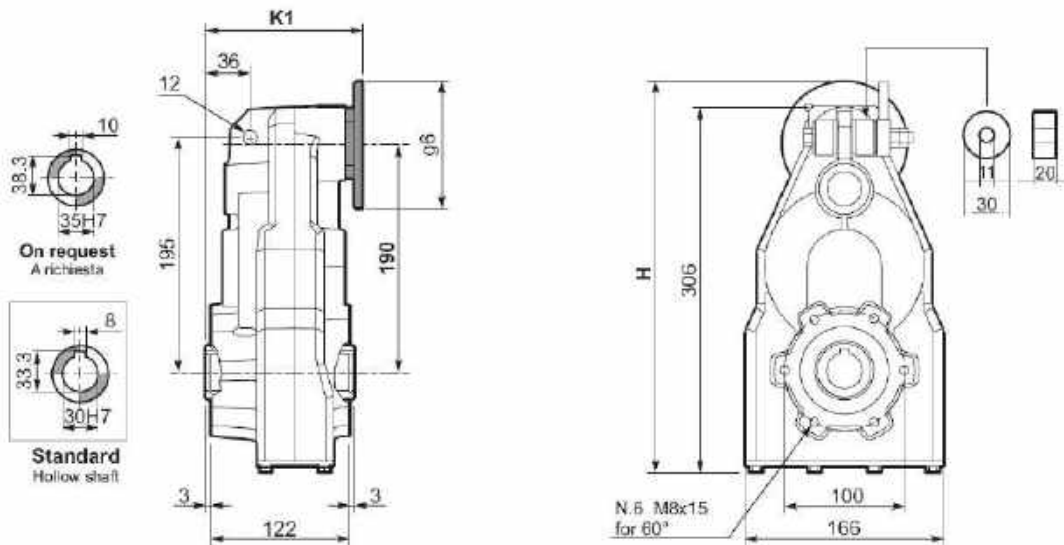


3D dimensions on the Web

Compact - Gear
450Nm FS50

PFS50C... Basic gearbox
Riduttore base

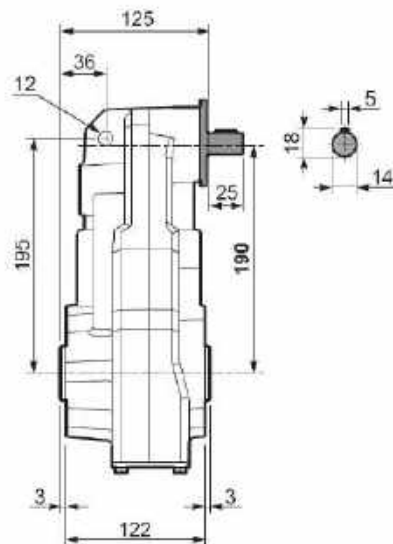
Wormbox weight
peso riduttore **11.5 kg**



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

65 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



PFS50A... Output shaft
Albero in uscita

