



REDUCTOR COAXIAL ALUMINIO

Suministros Industriales del Tajo S.A.

C/ del Río Jarama 52 - 45007, Toledo - Spain

Tel.: 925 23 22 00 - Fax: 925 23 21 47

Email: sitasa@sitasa.com

www.sitasa.com

Aluminum one step gearboxes

A modular and compact product

Flange

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

Alloy housing

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

Gears

Hardened and ground gears.

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Output shaft

With well proportioned bearings

Feet

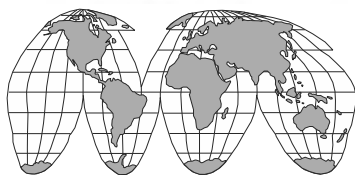
Removable feet.

Single-piece aluminum alloy housing

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

Ideal for use as first step with wormgearboxes.

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



World wide sales network.



Specific type datasheet on page...

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



Types / Tipi
Tipen / Types
Tipos

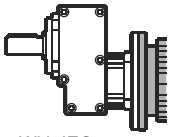
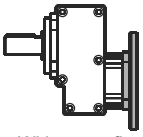
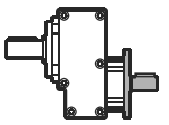
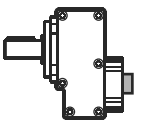
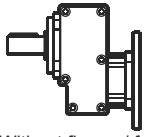
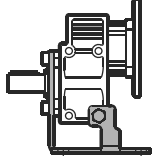
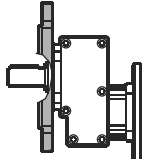
5-5	5-7	5-9	5-11
211A 20Nm	311A 30Nm	411A 38Nm	511A 110Nm

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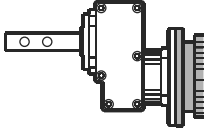
Types / Tipi
Tipen / Types
Tipos

M-1									
56A 56B	63A 63B	71A 71B	80A 80B	90S 90L	100LA 100LB	112M	132S 132M	160M 160L	180M 180L

Type - Tipo - Typ Type - Tipo	Size - Grandezza - Grösse Taille - Tomano	Mounting - Montaggio Montage - Fixation Tipo de montaje
P	311A	H1
<p>Aluminum one step gear Riduttori in alluminio a uno stadio</p> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  With IEC motor M </div> <div style="text-align: center;">  With motor flange P </div> </div> <div style="display: flex; justify-content: space-around; margin-top: 20px;"> <div style="text-align: center;">  With male input shaft R </div> <div style="text-align: center;">  Modular Base B </div> </div>	<p>1 Stages Riduzioni Stufen Trains Etapas</p> <div style="border: 1px solid black; padding: 5px; margin: 10px auto; width: 80px; text-align: center;"> 211A 311A 411A 511A </div>	<div style="display: flex; justify-content: space-around;"> <div style="text-align: center;">  Without flange / feet -N </div> <div style="text-align: center;">  Mounted feet H1 </div> </div> <div style="text-align: center; margin-top: 20px;">  Output flange mounted -F </div>

5

Special output shaft
Albero uscita speciale

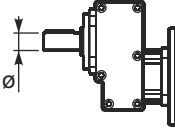
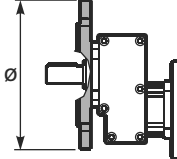







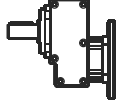
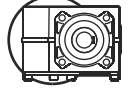
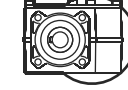
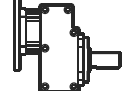
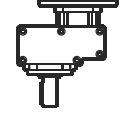
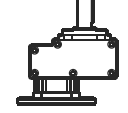


Only on request for Q.ty
A richiesta per quantità



On request we can deliver our products according to the ATEX
 A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
 Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern
 Sur demande nos produits peuvent se conformer à la réglementation ATEX
 A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

Ratio - Rapporto Untersetzung Reduction Relación	Output shaft Albero uscita Abtriebswelle Arbre de sortie Eje en salida	Output flange Flangia uscita Ausgangsflansch Bride de sortie Brida en salida	Motor size - Grandezza motore Motor Grösse Grandeur moteur - Tamaño motor	Terminal box position Posizione morsetti Klemmkastenlage Position boîte à bornes Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Position de montage Posición de montaje																																								
2.84	S	2	-C	B	B3																																								
<p>See technical data table</p> <p>Vedi tabella dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p>	 <p>STANDARD</p> <p>211A</p> <p>S → Ø14</p> <p>311A</p> <p>S → Ø14</p> <p>C → Ø19</p> <p>E → Ø24</p> <p>411A</p> <p>S → Ø14</p> <p>C → Ø19</p> <p>E → Ø24</p> <p>511A</p> <p>C → Ø19</p> <p>E → Ø24</p> <p>G → Ø28</p>	 <p>N Senza flangia Without flange</p> <p>311A</p> <p>1 → Ø120</p> <p>2 → Ø140</p> <p>3 → Ø160</p> <p>4 → Ø200</p> <p>411A</p> <p>1 → Ø120</p> <p>2 → Ø140</p> <p>3 → Ø160</p> <p>4 → Ø200</p> <p>511A</p> <p>1 → Ø120</p> <p>2 → Ø140</p> <p>3 → Ø160</p> <p>4 → Ø200</p> <p>5 → Ø250</p>	<p>Standard Flange Flangia Standard</p>  <table border="1"> <tr> <td data-bbox="670 459 837 504">B5</td> <td data-bbox="845 459 1013 504">B14</td> </tr> <tr> <td data-bbox="670 504 837 560">-A=56 (Ø120)</td> <td data-bbox="845 504 1013 560">-O=56 (Ø80)</td> </tr> <tr> <td data-bbox="670 560 837 616">-B=63 (Ø140)</td> <td data-bbox="845 560 1013 616">-P=63 (Ø90)</td> </tr> <tr> <td data-bbox="670 616 837 672">-C=71 (Ø160)</td> <td data-bbox="845 616 1013 672">-Q=71 (Ø105)</td> </tr> <tr> <td data-bbox="670 672 837 728">-D=80 (Ø200)</td> <td data-bbox="845 672 1013 728">-R=80 (Ø120)</td> </tr> <tr> <td data-bbox="670 728 837 784">-E=90 (Ø200)</td> <td data-bbox="845 728 1013 784">-T=90 (Ø140)</td> </tr> <tr> <td data-bbox="670 784 837 840">-F=100+112 (Ø250)</td> <td data-bbox="845 784 1013 840">-U=100+112 (Ø160)</td> </tr> <tr> <td data-bbox="670 840 837 896">-G=132 (Ø300)</td> <td data-bbox="845 840 1013 896">-V=132 (Ø200)</td> </tr> </table> <p>Type R / Tipo R</p>  <table border="1"> <tr> <td data-bbox="670 1064 837 1108">211A 311A</td> <td data-bbox="845 1064 1013 1108">511A</td> </tr> <tr> <td data-bbox="670 1108 837 1164">-1 → Ø14</td> <td data-bbox="845 1108 1013 1164">-3 → Ø24</td> </tr> <tr> <td data-bbox="670 1164 837 1220">411A</td> <td></td> </tr> <tr> <td data-bbox="670 1220 837 1276">-2 → Ø19</td> <td></td> </tr> </table> <p>Without flange / Senza flangia</p>  <table border="1"> <tr> <td data-bbox="670 1332 837 1377">211A 311A</td> <td data-bbox="845 1332 1013 1377">411A</td> </tr> <tr> <td data-bbox="670 1377 837 1433">-Z → Ø9 (56B5)</td> <td data-bbox="845 1377 1013 1433">-1 → Ø14 (71B5)</td> </tr> <tr> <td data-bbox="670 1433 837 1489">-0 → Ø11 (63B5)</td> <td data-bbox="845 1433 1013 1489">-2 → Ø19 (80B5)</td> </tr> <tr> <td data-bbox="670 1489 837 1545">-1 → Ø14 (71B5)</td> <td data-bbox="845 1489 1013 1545">-3 → Ø24 (90B5)</td> </tr> <tr> <td data-bbox="670 1545 837 1601">511A</td> <td></td> </tr> <tr> <td data-bbox="670 1601 837 1657">-2 → Ø19 (80B5)</td> <td></td> </tr> <tr> <td data-bbox="670 1657 837 1713">-3 → Ø24 (90B5)</td> <td></td> </tr> <tr> <td data-bbox="670 1713 837 1769">-4 → Ø28 (100B5)</td> <td></td> </tr> </table> <p>STANDARD</p>	B5	B14	-A =56 (Ø120)	-O =56 (Ø80)	-B =63 (Ø140)	-P =63 (Ø90)	-C =71 (Ø160)	-Q =71 (Ø105)	-D =80 (Ø200)	-R =80 (Ø120)	-E =90 (Ø200)	-T =90 (Ø140)	-F =100+112 (Ø250)	-U =100+112 (Ø160)	-G =132 (Ø300)	-V =132 (Ø200)	211A 311A	511A	-1 → Ø14	-3 → Ø24	411A		-2 → Ø19		211A 311A	411A	-Z → Ø9 (56B5)	-1 → Ø14 (71B5)	-0 → Ø11 (63B5)	-2 → Ø19 (80B5)	-1 → Ø14 (71B5)	-3 → Ø24 (90B5)	511A		-2 → Ø19 (80B5)		-3 → Ø24 (90B5)		-4 → Ø28 (100B5)		 <p>A</p>  <p>B STANDARD</p>  <p>C</p>  <p>D</p>	 <p>B3 STANDARD</p>  <p>B6</p>  <p>B7</p>  <p>B8</p>  <p>V5</p>  <p>V6</p> <p>Specify only for vertical positions</p> <p>Specificare solo per posizione verticale</p>
B5	B14																																												
-A =56 (Ø120)	-O =56 (Ø80)																																												
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POTENZA RICHIESTA / REQUIRED POWER / ERFORDERLICHE LEISTUNG / PUISSANCE NECESSAIRE / POTENCIA NECESARIA

Lifting / sollevamento / hubantriebe / levage / elevación

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

Rotation / rotazione / drehung / rotation / rotation

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

Linear movement / traslazione / linearbewegung / translation / translacion

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

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

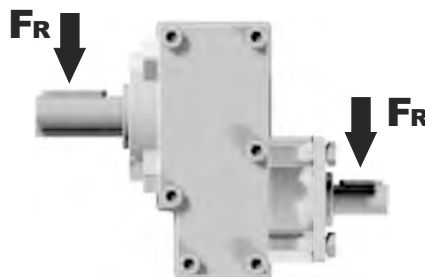
$$M \text{ [Nm]} = \frac{9550 \cdot P \text{ [KW]}}{n \text{ [rpm]}}$$

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

5

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

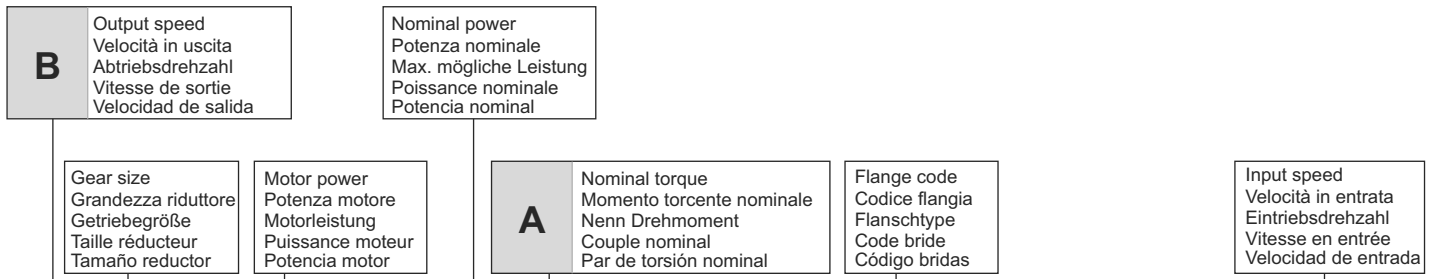
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée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



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

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

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



311A One step
30Nm

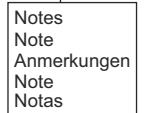
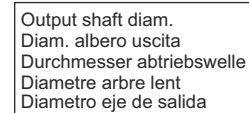
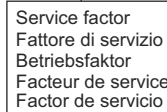
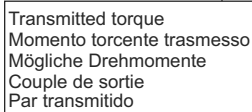
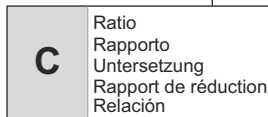
Rating - Aluminum ONE STEP GEARBOXES



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 _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft 	Output Shaft Ø	Ratios code
							B	C	O	P	Q			
892	1.57	0.37	3.9	3.3	1.24	13			C	C		2844	standard Ø14	01
493	2.84	0.37	7.0	3.3	1.21	23			C	C		1954		02
426	3.29	0.37	8.1	3.2	1.18	26			C	C		1756		03
362	3.87	0.37	9.6	2.9	1.08	28			C	C		1558		04



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 Brides disponibles Bridas disponibles	
B)	Mounting with reduction ring Montaggio con boccolla di riduzione Reduzierhülsen Montage avec douille de réduction Montaje con casquillo de reducción	
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-socket Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor	
B)	Available without reduction bushes Disponibile anche senza boccolla Auch ohne Reduzierbuchse verfügbar Disponible aussi sans douille de réduction Disponible tambien sin casquillo	

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



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft standard ø14	Ratios code
							B	C	D	E	O	P	Q	R		
							63	71	80	90	56	63	71	80		
682	2.05	0.37	5	2.0	0.73	10					C	C			1939	01
595	2.35	0.37	6	2.1	0.76	12					C	C			1740	02
500	2.80	0.37	7	2.0	0.75	14					C	C			1542	03
414	3.38	0.37	8	2.0	0.75	17					C	C			1344	04
298	4.70	0.37	12	1.7	0.64	20					C	C			1047	05
225	6.22	0.37	15	1.5	0.55	23					C	C			956	06
169	8.29	0.37	20	1.0	0.36	20					C	C			758	07
142	9.83	0.25	16	1.0	0.24	16					C	C			659	08

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

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

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

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

D Das Getriebe **211A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **211A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **211A** se suministra, lubricado de por vida con aceite sintético y no 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.

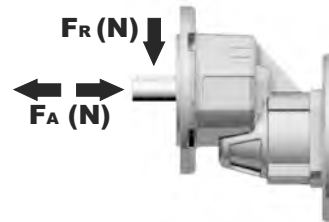
LUBRICATION 211A Oil Quantity 0.05 Lt.

AGIP Telium VSF 320	SHELL Omala S4 WE 320
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For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

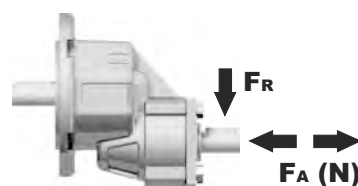
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



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

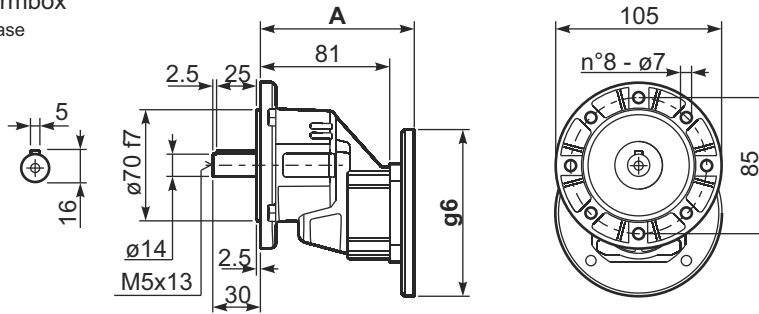
tab. 2

Coaxial - Gear
20Nm 211A

3D dimensions on the Web

P211A-F... Basic wormbox
Riduttore base

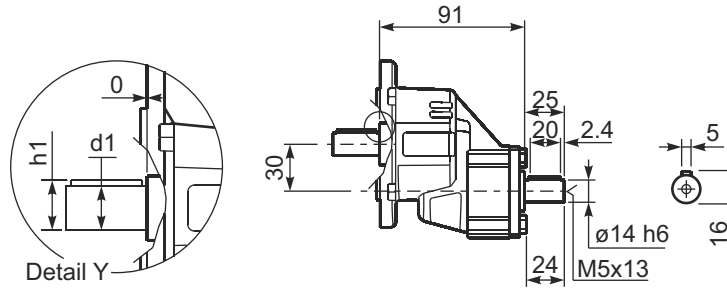
Gearbox weight
peso riduttore **1.40 kg**



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

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

R211A-F... Basic wormbox
Riduttore base



*Available output shaft / Albero di uscita

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


QUICK SELECTION / Selezione veloce

 input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft 	Ratios code	
							B	C	O	P	Q			
891	1.57	0.37	4	3.3	1.2	13			C	C		2844	standard ø14 On request ø19 ø24	01
493	2.84	0.37	7	3.3	1.2	23			C	C		1954		02
425	3.29	0.37	8	3.2	1.2	26			C	C		1756		03
362	3.87	0.37	10	2.9	1.1	28			C	C		1558		04
303	4.62	0.37	11	2.6	0.97	30			C	C		1360		05
222	6.30	0.37	16	2.2	0.83	35			C	C		1063		06
170	8.22	0.37	20	1.9	0.69	38			C	C		974		07
129	10.86	0.37	27	1.0	0.39	28			C	C		776		08

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

 Motor Flanges Available
Flange Motore Disponibili

 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 **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.

LUBRICATION 311A Oil Quantity 0.10 Lt.
AGIP Telium VSF 320

SHELL Omala S4 WE 320

For all details on lubrication and plugs check our website

tab. 1

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

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

D Das Getriebe **311A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **311A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **311A** se suministra, lubricado de por vida con aceite sintético y no 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.

RADIAL AND AXIAL LOADS
Output shaft

Albero di uscita

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



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

Input shaft

Albero in entrata

n_1	FA	FR
1400	180	860
900	200	980

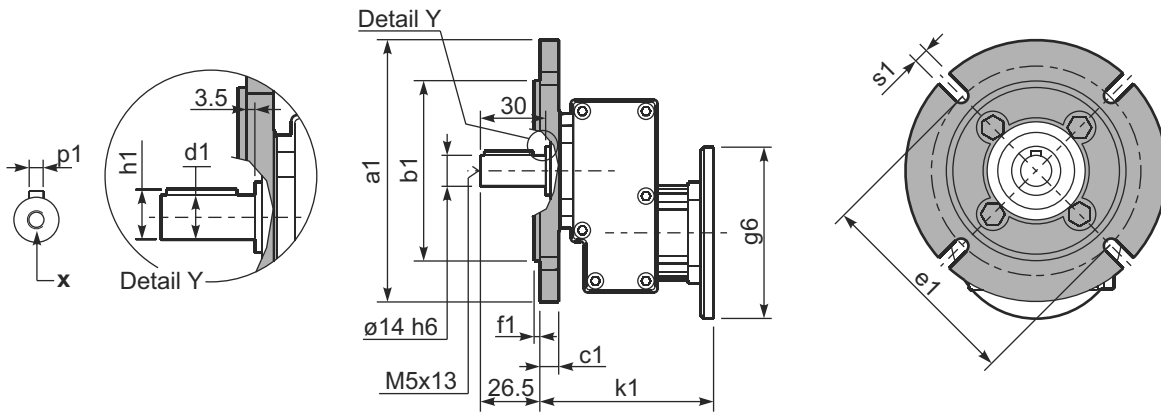
tab. 2

3D dimensions on the Web

One step
30Nm 311A

P311-F... Output flange
flange di uscita

Gearbox weight
peso riduttore **2.50 kg**



*Available output shaft / Albero di uscita

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

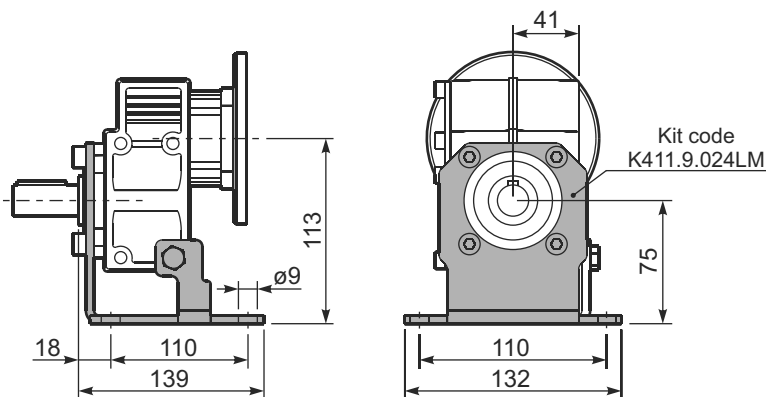
Available output flanges / flange di uscita

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

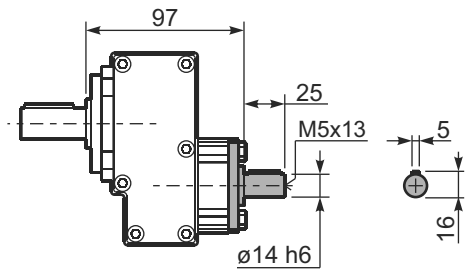
*Holes position
posizione fori



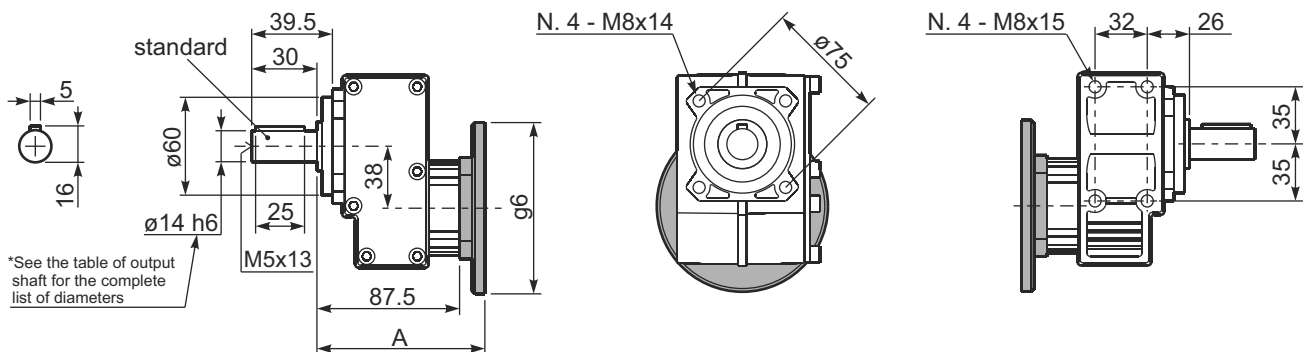
P311-H1... With feet
Con piedini



R311-N... Input Shaft
Albero in entrata



P311-N... Basic gearbox
Riduttore base



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

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



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

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	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			
891	1.57	1.5	16	1.3	1.9	20	B				C	C		2844	standard ø19 On request ø14 ø24	01
493	2.84	1.5	28	1.2	1.8	35	B				C	C		1954		02
425	3.29	1.5	33	1.2	1.7	38	B				C	C		1756		03
362	3.87	1.5	39	1.0	1.5	40	B				C	C		1558		04
303	4.62	1.5	46	1.0	1.5	47	B				C	C		1360		05
222	6.30	1.1	46	1.0	1.1	46	B				C	C		1063		06
170	8.22	0.55	30	1.3	0.69	38	B				C	C		974		07
129	10.86	0.37	27	1.0	0.39	28	B				C	C		776		08

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

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

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.

LUBRICATION 411A Oil Quantity 0.20 Lt.

AGIP Telium VSF 320	SHELL Omala S4 WE 320
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For all details on lubrication and plugs check our website tab. 1
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

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.

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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

Input shaft
Albero in entrata

n ₁	FA	FR
1400	240	1200
900	280	1400

tab. 2

D Das Getriebe **411A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **411A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

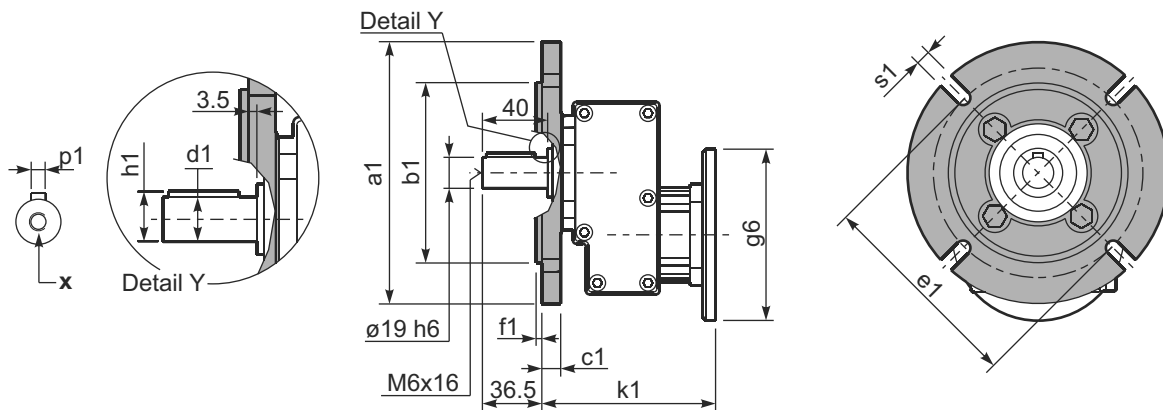
E El reductor tamaño **411A** se suministra, lubricado de por vida con aceite sintético y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

3D dimensions on the Web

One step
38Nm 411A

P411-F... Output flange
flange di uscita

Gearbox weight
peso riduttore **3.20 kg**



***Available output shaft / Alberi di uscita**

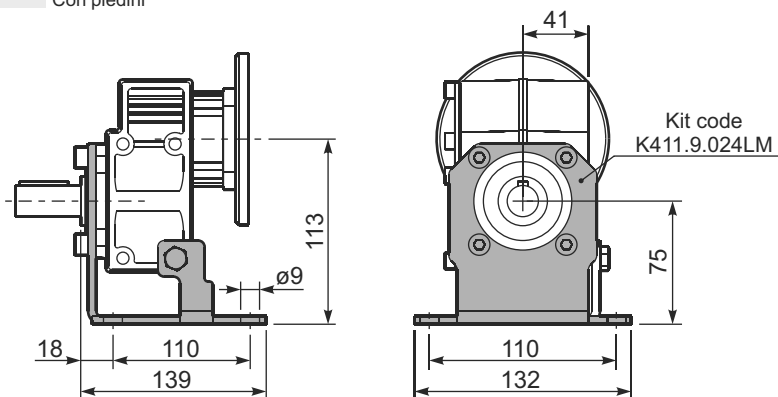
	Shaft - d1	p1	h1	x
Standard	∅ 19x40	6	21.5	M6x16
On request A richiesta	∅ 14x30 ∅ 24x40	5 8	16 27	M5x13 M6x16

Available output flanges / flange di uscita

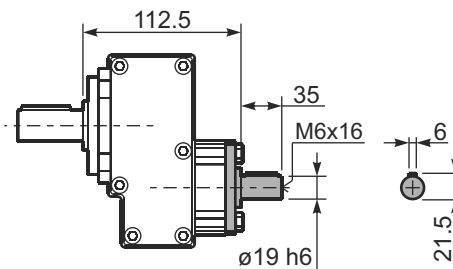
a1 ∅	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

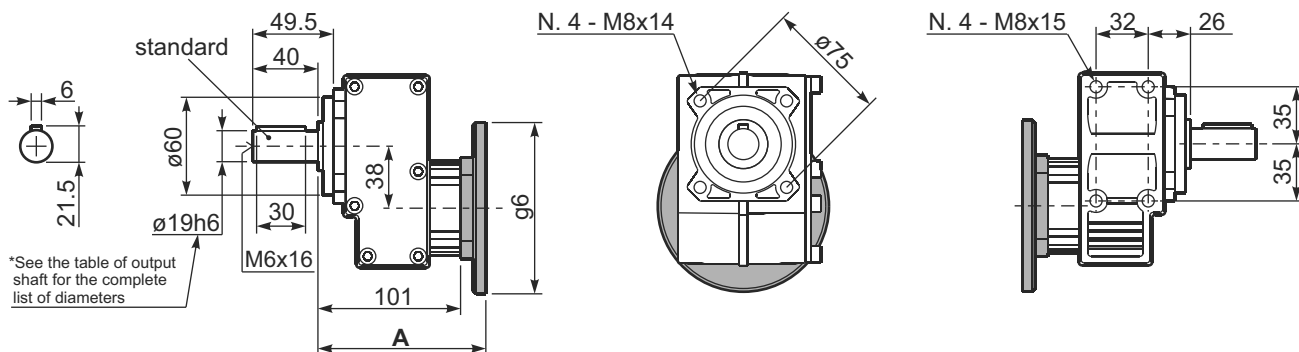
P411-H1... With feet
Con piedini



R411-N... Input Shaft
Albero in entrata



P411-N... Basic gearbox
Riduttore base



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

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


QUICK SELECTION / Selezione veloce

 input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft 	Ratios code			
							C	D	E	F	G	R	T	U	V					
							71	80	90	100 112	132	80	90	100 112	132					
1077	1.30	4	34	1.2	4.6	40	B										3039	standard ø28	01	
571	2.45	4	64	1.1	4.3	70	B										2049		02	
423	3.31	4	87	1.0	4.1	90	B										1653		03	
325	4.31	4	113	1.0	3.8	110	B										1356		04	
266	5.27	3	104	1.1	3.1	110	B										1158		On request	05
184	7.63	2.2	111	1.0	2.2	110	B										861		ø19	06
133	10.50	1.1	77	1.0	1.1	80	B										663		ø24	07

 The dynamic efficiency is **0.98** 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 **511A** is supplied with synthetic oil for lifetime lubrication, no maintenance is necessary. See table 1 for lubrication and recommended quantity. In table 2 please see possible radial loads and axial loads on the gearbox.

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

D Das Getriebe **511A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **511A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **511A** se suministra, lubricado de por vida con aceite sintético y no 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.

LUBRICATION 511A Oil Quantity 0.29 Lt.
AGIP Telium VSF 320

SHELL Omala S4 WE 320

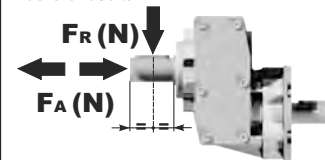
For all details on lubrication and plugs check our website

tab. 1

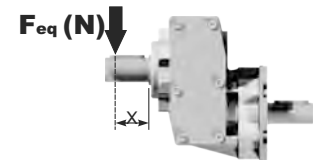
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS
Output shaft

Albero di uscita



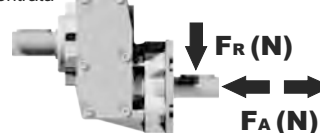
$$F_{eq} = F_R \cdot \frac{52.5}{X+22.5}$$



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

Input shaft

Albero in entrata

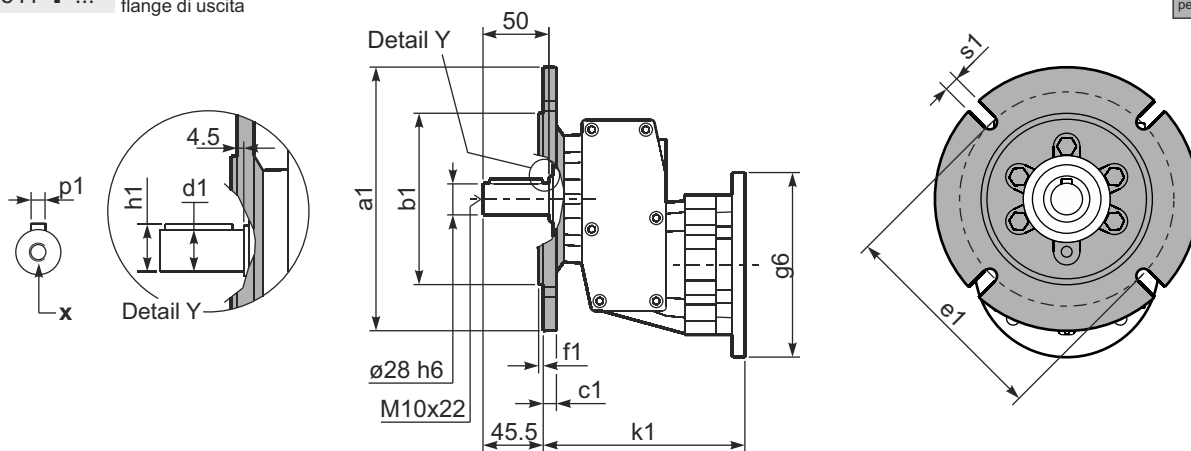


n_1	FA	FR
1400	400	2000
900	440	2200

tab. 2

P511-F... Output flanges
flange di uscita

Gearbox weight
peso riduttore **5.00 kg**



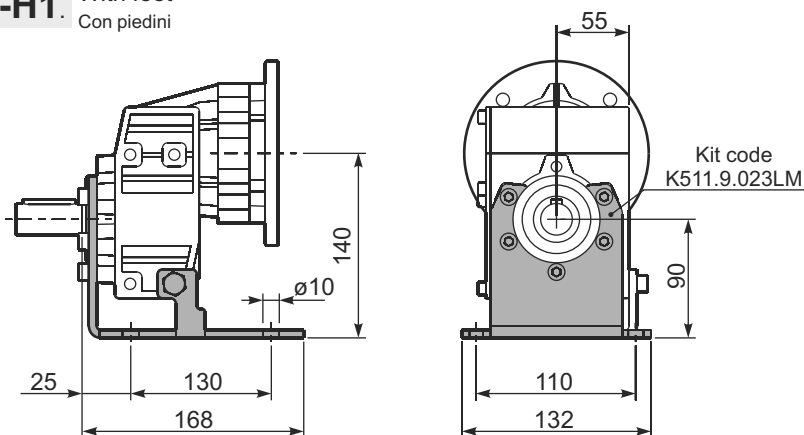
***Available output shaft / Albero di uscita**

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

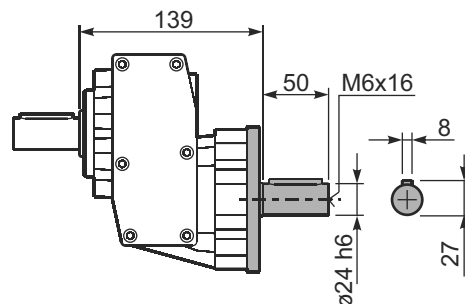
Available output flanges / flange di uscita

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

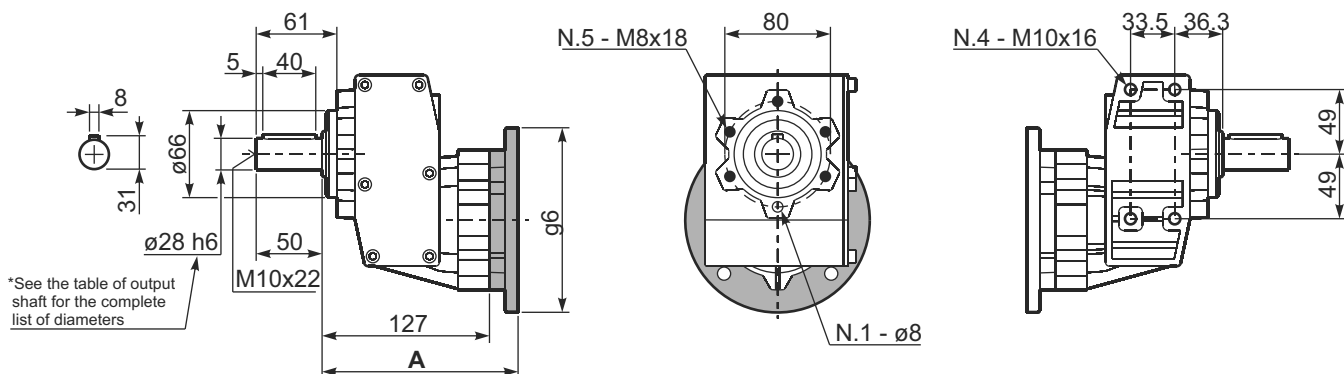
P511A-H1. With feet
Con piedini



R511A-N... Input Shaft
Albero in entrata



P511-N... Basic gearbox
Riduttore base



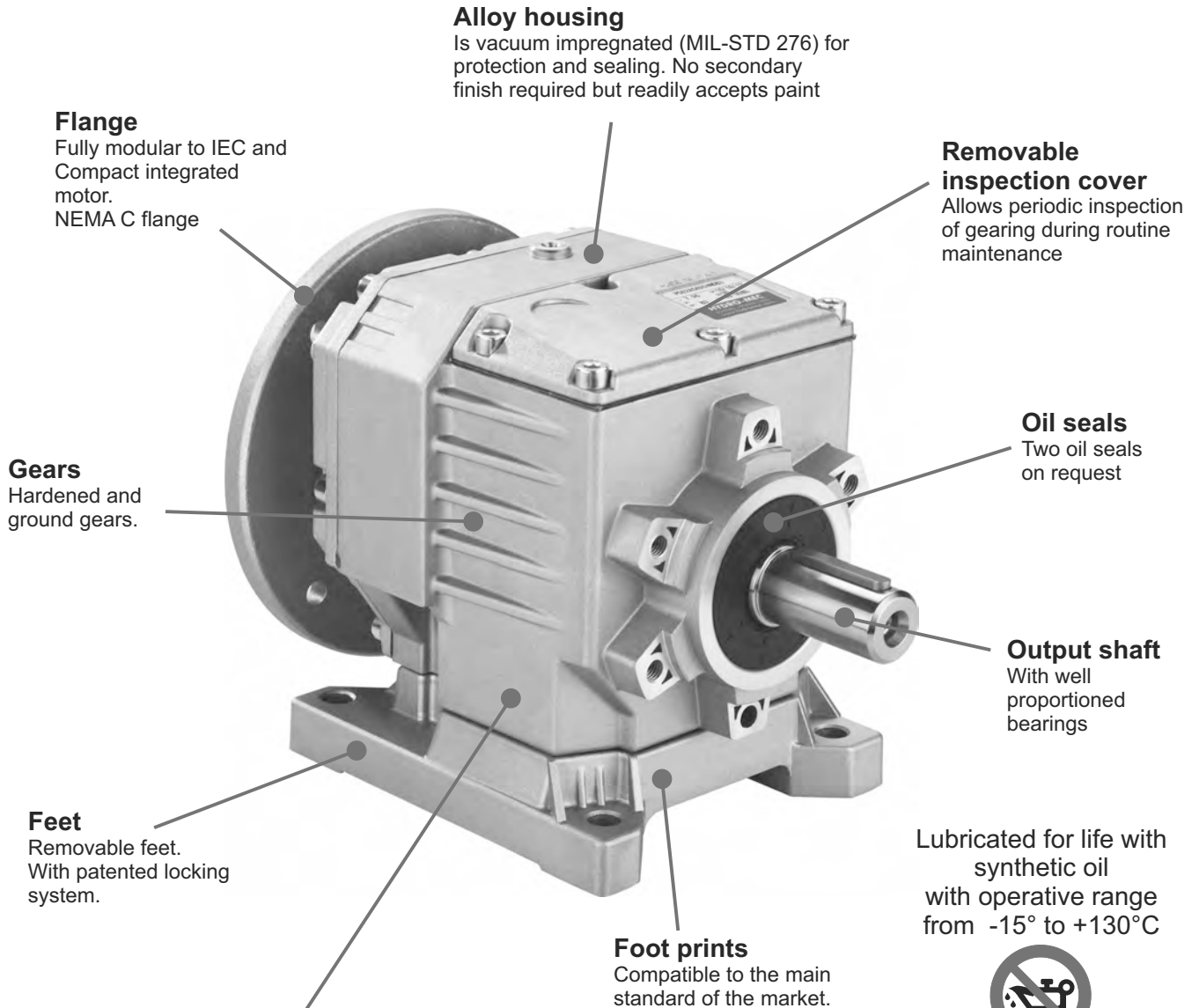
*See the table of output shaft for the complete list of diameters

B5 Motor Flanges	A	g6	k1	kit code
71 B5	145	160	149.5	KC023.4.041
80/90 B5	147	200	151.5	KC023.4.042
100/112 B5	153	250	157.5	KC023.4.043
132 B5	175	300	188	KC50.4.043

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

Aluminum in line gearboxes

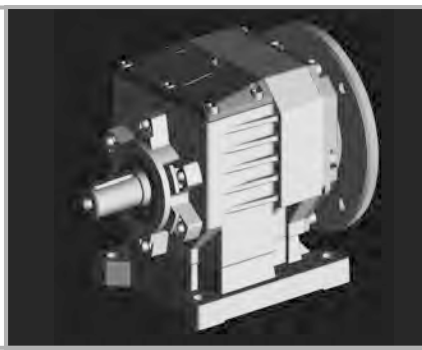
A modular and compact product



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



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



Specific type datasheet on page...

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



Types / Tipi
Tipen / Types
Tipos

6-5	6-7	6-9	6-11	6-13	6-15	6-17	6-19	6-21
202A 70Nm	302A 120Nm	402A 160Nm	403A 160Nm	452A 300Nm	502A 350Nm	503A 350Nm	602A 520Nm	603A 520Nm

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



Types / Tipi
Tipen / Types
Tipos

M-1									
56A 56B	63A 63B	71A 71B	80A 80B	90S 90L	100LA 100LB	112M	132S 132M	160M 160L	180M 180L

Type - Tipo - Typ
Type - Tipo

Size - Grandezza - Grösse
Taille - Tomano

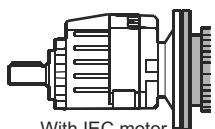
Mounting - Montaggio
Montage - Fixation
Tipo de montaje

P

402A

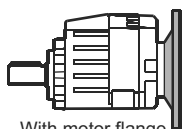
B2

Aluminum coaxial gear boxes
Riduttori coassiali in alluminio



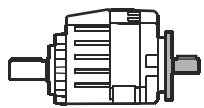
With IEC motor

M



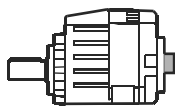
With motor flange

P



With male input shaft

R



Modular base

B

2 Stages
Riduzioni
Stufen
Trains
Etapas

3 Stages
Riduzioni
Stufen
Trains
Etapas

202A

302A

402A

452A

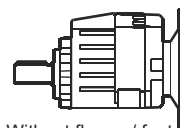
502A

602A

403A

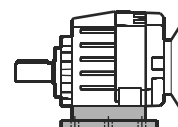
503A

603A



Without flange / feet

-N

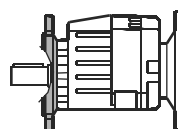


Mounted feet

B..

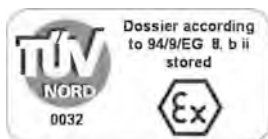
Feet / piedini	Market reference	G	H	R	L	L1	S
B1	112	18	85	110	87	50	
B2	212/3	18	100	130	107.5		
S1	17	18	75	110	90+20		
S2	27	25	90	110	130		
M1	42/3	25	80	110+120	85		
L4	04	13	80	105			
L5	05	16	100	125			

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



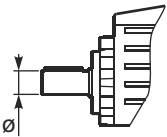
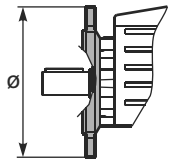
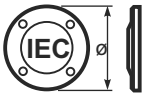


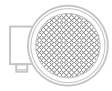



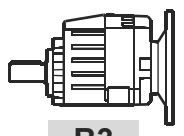
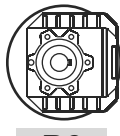
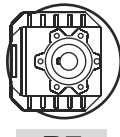
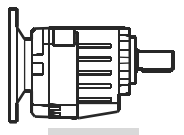
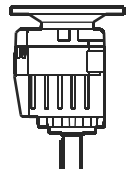
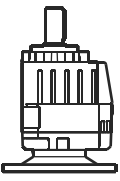
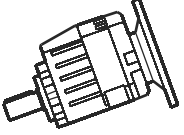
Output flange mounted

-F



On request we can deliver our products according to the ATEX
A richiesta possiamo fornire i nostri prodotti secondo le normative ATEX
Auf Anfrage können wir unsere Produkte den Richtlinien ATEX entsprechend liefern
Sur demande nos produits peuvent se conformer à la réglementation ATEX
A pedido, se pueden enviar nuestros productos de acuerdo con las normas ATEX.

CODIFICA / HOW TO ORDER / TYPENBEZEICHNUNGEN / CODIFICATION / CODIFICACIÓN

Ratio - Rapporto Untersetzung Reduction Relación	Output shaft Albero uscita Abtriebswelle Arbre de sortie Eje en salida	Output flange Flangia uscita Ausgangsflansch Bride de sortie Brida en salida	Motor size - Grandezza motore Motor Grösse Grandeur moteur - Tamaño motor	Terminal box position Posizione morsetteria Klemmkastenlage Position boîte à bornes Posición caja de bornes	Mounting position Posizione montaggio Einbaulage Position de montage Posición de montaje
7.33	V	2	-C	B	B3
See technical data table Vedi tabella dati tecnici Technisches Datenblatt beachten Voir Tableau données techniques 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 G ⇒ Ø28 402A 403A S ⇒ Ø14 B ⇒ Ø16 C ⇒ Ø19 D ⇒ Ø20 E ⇒ Ø24 V ⇒ Ø25 452A 502A 503A E ⇒ Ø24 V ⇒ Ø25 G ⇒ Ø28 H ⇒ Ø30 I ⇒ Ø35 602A 603A G ⇒ Ø28 H ⇒ Ø30 I ⇒ Ø35 L ⇒ Ø38 M ⇒ Ø40	 N Senza flangia Without flange 202A 302A 1 ⇒ Ø120 2 ⇒ Ø140 3 ⇒ Ø160 4 ⇒ Ø200 402A 403A 1 ⇒ Ø120 2 ⇒ Ø140 3 ⇒ Ø160 4 ⇒ Ø200 5 ⇒ Ø250 452A 502A 503A 3 ⇒ Ø160 4 ⇒ Ø200 5 ⇒ Ø250 602A 603A 3 ⇒ Ø160 4 ⇒ Ø200 5 ⇒ Ø250	Standard Flange Flangia Standard  B5 -A =56 (Ø120) -B =63 (Ø140) -C =71 (Ø160) -D =80 (Ø200) -E =90 (Ø200) -F =100+112 (Ø250) -G =132 (Ø300) B14 -O =56 (Ø80) -P =63 (Ø90) -Q =71 (Ø105) -R =80 (Ø120) -T =90 (Ø140) -U =100+112 (Ø160) -V =132 (Ø200) Type R / Tipo R  202A 403A -1 ⇒ Ø14 302A 402A 503A 603A -2 ⇒ Ø19 452A 502A 602A -3 ⇒ Ø24 Without flange / Senza flangia  202A 403A -Z ⇒ Ø9 (56B5) -0 ⇒ Ø11 (63B5) -1 ⇒ Ø14 (71B5) 452A 502A 602A -2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5) -4 ⇒ Ø28 (100B5) 302A 402A 503A 603A -1 ⇒ Ø14 (71B5) -2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5) → STANDARD	 A  B STANDARD  C  D	 B3 STANDARD  B6  B7  B8  V5  V6  V8 Specify only for vertical positions Specificare solo per posizione verticale

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

Lifting / sollevamento / hubantriebe / levage / elevación

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

Rotation / rotazione / drehung / rotation / rotation

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

Linear movement / traslazione / linearbewegung / translation / translacion

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

TORQUE / COPPIA / DREHMOMENT / COUPLE / 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 / CHARGES RADIALES / CARGA RADIAL Y AXIAL

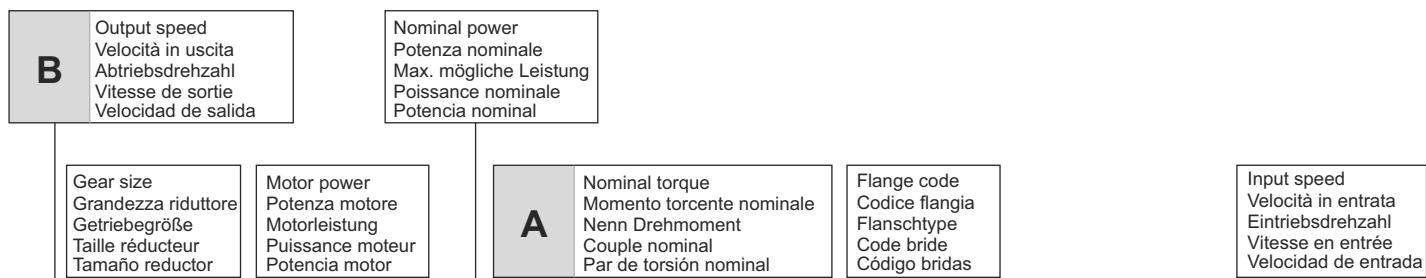
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée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



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

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

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



402A

Coaxial - Gear 160Nm

Rating - Aluminum COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft 	Ratios code
							B	C	D	E	Q	R	T	U		
398	3.52	3	69	1.2	3.5	80	B				C	C			2821	01
320	4.37	3	86	1.0	3.1	90	B				C	C			2818	02
252	5.55	3	109	0.9	2.8	100	B				C	C			2813	03
220	6.36	2.2	92	1.0	2.3	95	B				C	C			1921	04
191	7.33	2.2	106	1.1	2.5	120	B				C	C			2812	05

C Ratio
Rapporto
Untersetzung
Rapport de réduction
Relación

Transmitted torque
Momento torcente trasmesso
Mögliche Drehmomente
Couple de sortie
Par transmitido

Service factor
Fattore di servizio
Betriebsfaktor
Facteur de service
Factor de servicio

Output shaft diam.
Diam. albero uscita
Durchmesser abtriebswelle
Diametre arbre lent
Diametro eje de salida

Notes
Note
Anmerkungen
Note
Notas

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 Brides disponibles Bridas disponibles
B)	Mounting with reduction ring Montaggio con boccolla di riduzione Reduzierhülsen Montage avec douille de réduction Montaje con casquillo de reducción
C)	Motor flangeholes position/terminal box position Posizione fori flangia/basetta motore Bohrungsposition am Motorflansch/-socket Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor
B)	Available without reduction bushes Disponibile anche senza boccolla Auch ohne Reduzierbuchse verfügbar Disponible aussi sans douille de réduction Disponible tambien sin casquillo

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



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

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	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	1.1	25			C	C		2821	01
327	4.28	0.55**	15	1.9	1.1	30			C	C		2818	02
257	5.45	0.55**	20	2.0	1.1	40			C	C		2815	03
225	6.23	0.55**	22	2.0	1.1	45			C	C		1921	04
194	7.20	0.55**	26	1.9	1.1	50			C	C		2812	05
181	7.74	0.55**	28	1.8	0.99	50			C	C		1918	06
142	9.85	0.55**	35	1.7	0.93	60			C	C		1915	07
123	11.42	0.55**	41	1.5	0.80	60			C	C		1715	08
107	13.03	0.55**	47	1.3	0.70	60			C	C		1912	09
93	15.10	0.37	37	1.6	0.61	60			C	C		1712	10
86	16.20	0.37	39	1.5	0.57	60			C	C		1910	11
75	18.78	0.37	46	1.3	0.49	60			C	C		1710	12
66	21.15	0.37	51	1.2	0.43	60			C	C		1312	13
64	21.84	0.37	53	1.1	0.42	60			C	C		1015	14
53	26.31	0.37	64	0.9	0.35	60			C	C		1310	15
48.5	28.88	0.37	70	1.0	0.37	70			C	C		1012	16
39	35.91	0.37	87	0.8	0.30	70			C	C		1010	17
37.1	37.69	0.25	62	1.1	0.28	70			C	C		912	18
29.9	46.87	0.25	77	0.9	0.23	70			C	C		910	19
28.1	49.76	0.25	81	0.9	0.21	70			C	C		712	20
22.6	61.89	0.18	73	1.0	0.17	70			C	C		710	21

** Concerning a reduced dimensions electric motor. * Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14 Riferito a motore con grandezza ridotta * In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

D) Motor Flange Holes Position
Posizione Fori Flangia Motore

6

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

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

D Das Getriebe **202A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **202A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **202A** se suministra, lubricado de por vida con aceite sintético y no 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.

LUBRICATION 202A Oil Quantity 0.15 Lt.

AGIP Telium VSF 320

SHELL Omala S4 WE 320

For all details on lubrication and plugs check our website

tab. 1

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

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

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



n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	140	700	140	246	1320	70	340	1700
250	151	756	120	270	1350	40	380	1900
200	185	924	85	300	1500	15	-	-

Input shaft

Albero in entrata



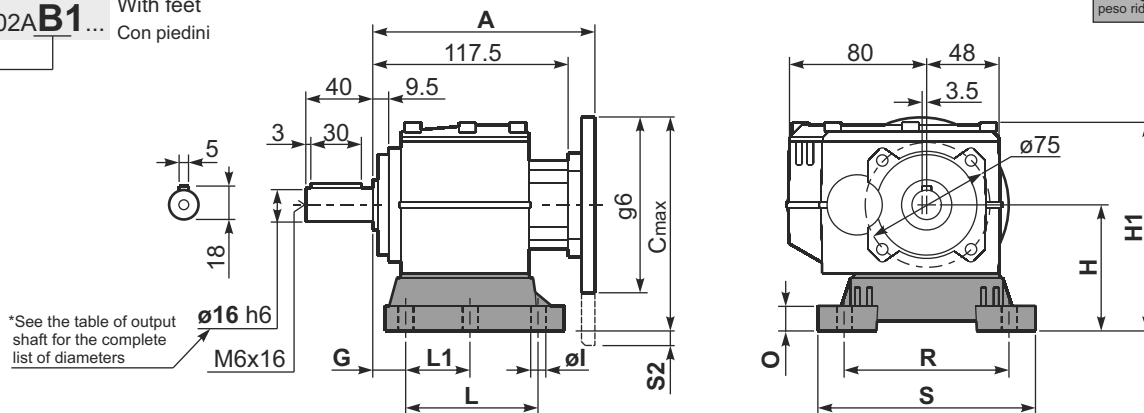
n ₁	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

Gearbox weight
peso reductore

With flange **3.3 kg**
With feet **3.7 kg**

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



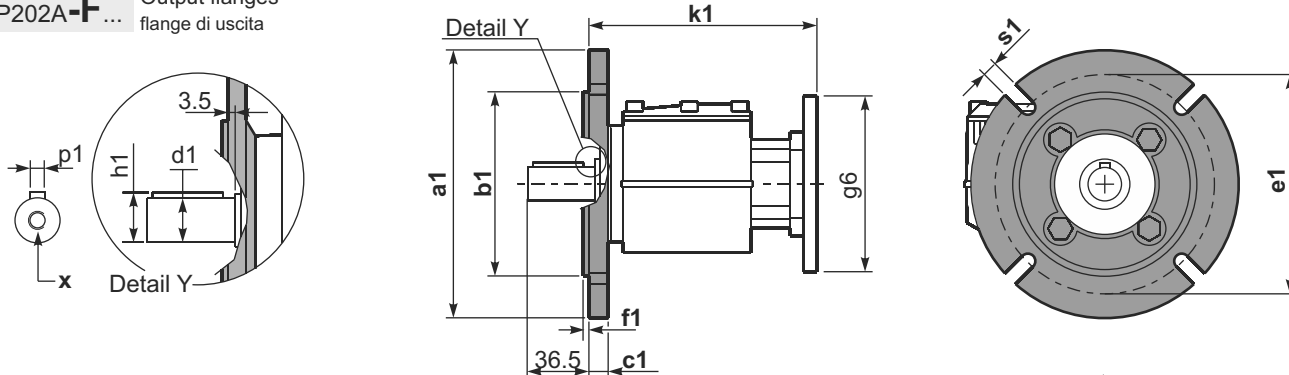
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	Ø	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	125	15	9	-	-	KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	-	-	KC30.9.023LM
S1	17-32	18	75	110	110	50	130	115.5	15	9	-	63B5	KC30.9.024
L3	03	12.5	65	91	60	-	105	149	5	9	11.5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

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

A see on page bottom

Most popular types
Tipi più diffusi

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



*Available output shaft / Alberi di uscita

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

Available output flanges / flange di uscita

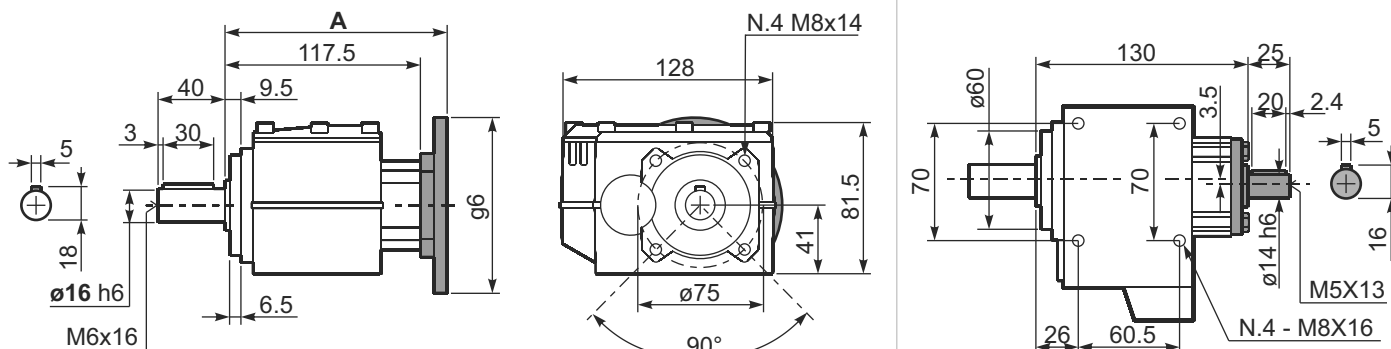
a1 Ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC40.9.013

* Holes position
Posizione fori

With flange and feet only on request.
Ask for compatibility

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

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



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

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



QUICK SELECTION / Selezione veloce

input speed (n₁) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft		
							B	C	D	E	Q	R	T			Ratios code
							63	71*	80*	90*	71	80	90	ø		
407	3.44	1.5	34	1.0	1.5	35	B				C	C		2821		01
327	4.28	1.5	42	1.0	1.4	40	B				C	C		2818		02
257	5.45	1.5	54	1.0	1.4	52	B				C	C		2815		03
225	6.23	1.5	61	1.1	1.7	70	B				C	C		1921		04
194	7.20	1.5	71	1.0	1.5	70	B				C	C		2812		05
181	7.74	1.5	76	1.1	1.6	80	B				C	C		1918	standard ø20	06
142	9.85	1.5	97	1.0	1.5	95	B				C	C		1915		07
123	11.42	1.5	112	1.0	1.5	115	B				C	C		1715		08
107	13.03	1.1	94	1.2	1.3	114	B				C	C		1912	ø14	09
93	15.10	1.1	109	1.0	1.2	114	B				C	C		1712	ø16	10
86	16.20	0.75	80	1.3	1.0	107	B				C	C		1910	ø19	11
75	18.78	0.75	92	1.2	0.87	107	B				C	C		1710	ø20	12
66	21.15	0.75	104	1.1	0.82	114	B				C	C		1312	ø24	13
64	21.84	0.75	107	1.1	0.83	119	B				C	C		1015	ø25	14
53	26.31	0.55	95	1.1	0.62	107	B				C	C		1310	ø28	15
48.5	28.88	0.55	104	1.1	0.60	114	B				C	C		1012	On request	16
39	35.91	0.37	87	1.2	0.46	107	B				C	C		1010		17
37.1	37.69	0.37	91	1.1	0.41	102	B				C	C		912		18
29.9	46.87	0.37	114	0.9	0.35	107	B				C	C		910		19
28.1	49.76	0.25	81	1.2	0.31	101	B				C	C		712		20
22.6	61.89	0.25	101	1.1	0.26	107	B				C	C		710		21

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

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

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

D) Motor Flange Holes Position
Posizione Fori Flangia Motore

6

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

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

D Das Getriebe **302A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **302A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **302A** se suministra, lubricado de por vida con aceite sintético y no 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.

LUBRICATION 302A Oil Quantity 0.15 Lt.

AGIP Telium VSF 320

SHELL Omala S4 WE 320

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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



n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	140	700	140	246	1320	70	340	1700
250	151	756	120	270	1350	40	380	1900
200	185	924	85	300	1500	15	-	-

Input shaft
Albero in entrata



n ₁	FA	FR
1400	226	1130
900	264	1320
500	322	1610

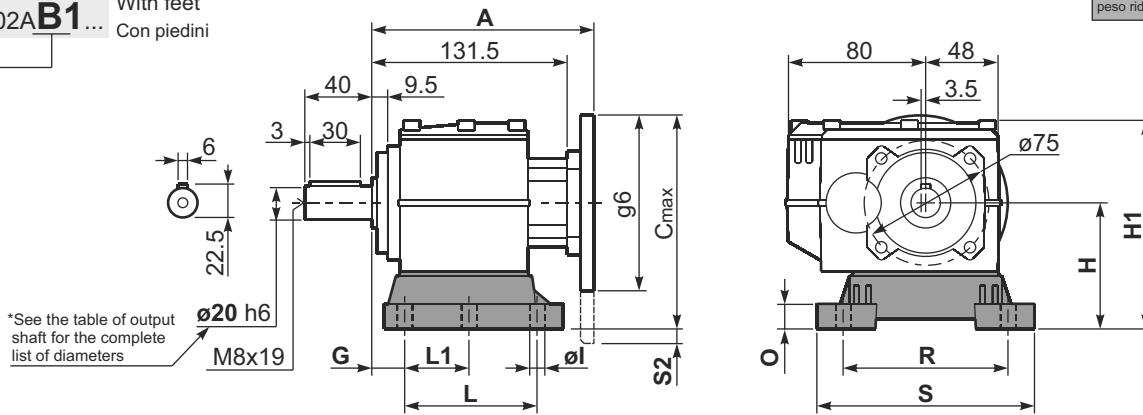
tab. 2

Coaxial - Gear
120Nm 302A

3D dimensions on the Web

P302A-B1... With feet
Con piedini

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



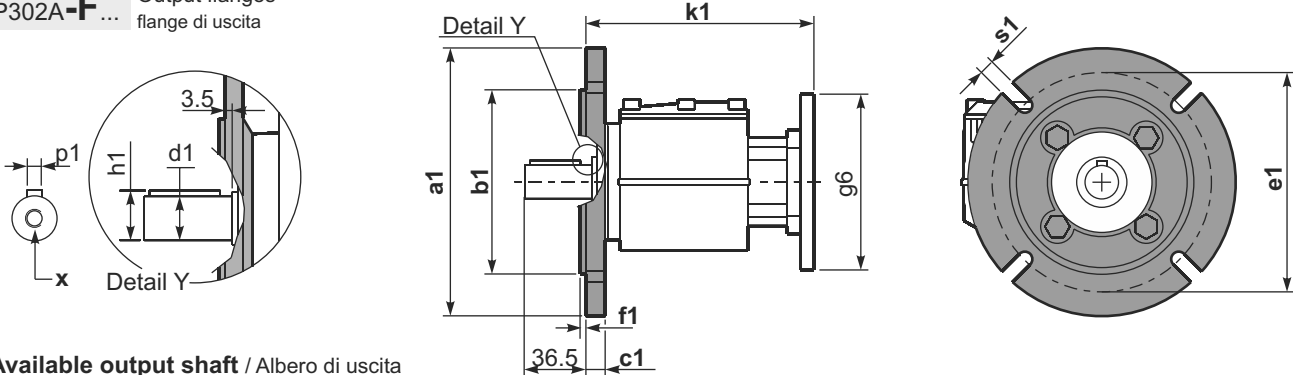
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	ø1	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	125	15	9	15 80/90B5	-	KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	3.5 80/90B5	-	KC30.9.023LM
S1	17-32	18	75	110	110	50	130	115.5	15	9	5 71B5	71B5	KC30.9.024
S2	27	25	90	110	130	-	130	135	5	9	-	71B5	KC30.9.025LM
L3	03	12.5	65	91	60	-	105	149	5	9	31.5 80/90B5	-	KC30.9.026LM
L4	04	13	80	105	76	-	132	165	5	9	16.5 80/90B5	-	KC30.9.027LM

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

A see on page bottom

Most popular types
Tipi più diffusi

P302A-F... Output flanges
flange di uscita



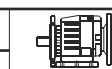
*Available output shaft / Albero di uscita

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

Available output flanges / flange di uscita

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

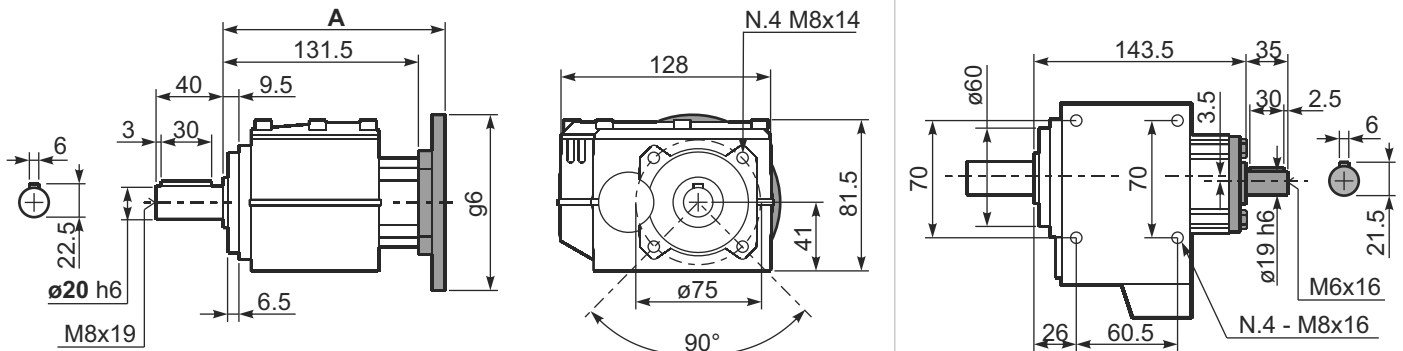
* Holes position
Posizione fori



With flange and feet only on request. Ask for compatibility

P302A-N... Basic gearbox
Riduttore base

R302A-N... Input Shaft
Albero in entrata



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

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

402A Coaxial - Gear

160Nm

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 _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft		
							B	C	D	E	F	Q	R	T	U	Ratio code		
							63	71	80*	90*	100*	112	71	80	90		100	112
398	3.52	3	69	1.2	3.5	80	B					C	C			2821	standard ø25	01
320	4.37	3	86	1.0	3.1	90	B					C	C			2818		02
252	5.55	3	109	0.9	2.8	100	B					C	C			2813		03
220	6.36	2.2	92	1.0	2.3	95	B					C	C			1921		04
191	7.33	2.2	106	1.1	2.5	120	B					C	C			2812		05
177	7.89	2.2	114	1.1	2.3	120	B					C	C			1918		06
139	10.06	2.2	145	1.0	2.3	150	B					C	C			1913		07
120	11.66	1.5	114	1.5	2.3	174	B					C	C			1713		08
106	13.26	1.5	130	1.2	1.8	160	B					C	C			1912		09
102	13.68	1.5	134	1.1	1.6	144	B					C	C			1513		10
91	15.37	1.5	151	1.1	1.6	160	B					C	C			1712		11
86	16.20	1.5	159	0.9	1.3	138	B					C	C			1910		12
78	18.04	1.5	177	0.9	1.4	160	B					C	C			1512		13
74	18.80	1.1	135	1.0	1.1	138	B					C	C			1710		14
65	21.54	1.1	155	1.0	1.1	160	B					C	C			1312		15
63	22.29	1.1	161	1.0	1.1	167	B					C	C			1013		16
53	26.30	0.75	129	1.1	0.80	138	B					C	C			1310		17
47.6	29.40	0.75	144	1.1	0.83	160	B					C	C			1012		18
39	35.91	0.55	129	1.1	0.59	138	B					C	C			1010		19
36.5	38.37	0.55	138	1.2	0.64	160	B					C	C			912		20
29.9	46.86	0.55	169	0.8	0.45	138	B					C	C			910		21
27.6	50.67	0.37	123	1.1	0.40	132	B					C	C			712		22
22.6	61.88	0.37	150	0.9	0.34	138	B					C	C			710		23

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

6

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.

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.

D Das Getriebe **402A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **402A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

Standard supplied	For these mounting position specify in the order or add oil					
	Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.25 LT	0.30 LT	0.40 LT	0.40 LT	0.40 LT	0.50 LT	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

$F_{eq} (N)$

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

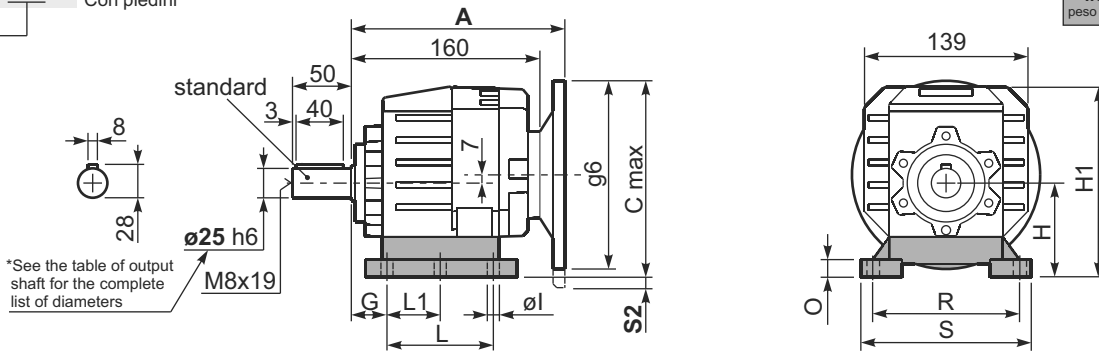
tab. 2

Coaxial - Gear
160Nm 402A

3D dimensions on the Web

P402A-B1 ... With feet
Con piedini

Gearbox weight / peso reductore: With flange **5.7 kg**
With feet **5.9 Kg**



Feet / piedini

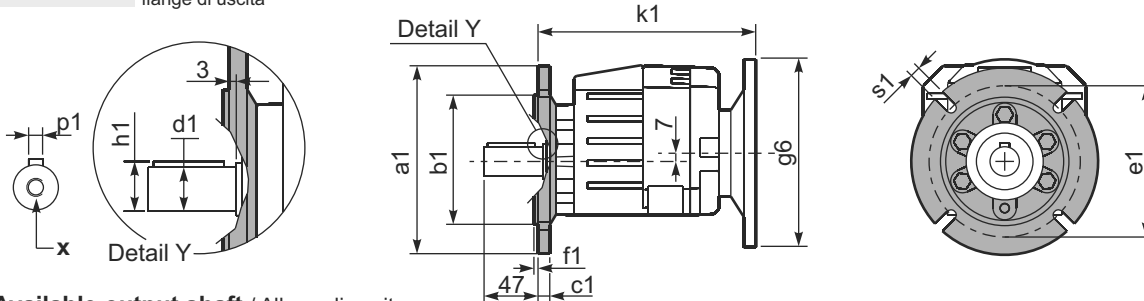
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øI	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167	15	-	8 33	80/90B5 100/112B5	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	18	100/112B5	KC40.9.025
S1	17	18	75	110	90+110	50	145	155	15	9	18 43	80/90B5 100/112B5	KC40.9.022
S2	27	25	90	110	130	-	145	172	20	9	3 28	80/90B5 100/112B5	KC40.9.024
H2	022-223	25	100	110	115	-	145	182	20	9	18	100/112B5	KC40.9.026
M1	42/3	25	80	110+120	85	-	145	162	15	9	13 38	80/90B5 100/112B5	KC40.9.023
L4	04	13	80	105	76	-	132	162	5	10	13 38	80/90B5 100/112B5	KC35.9.023LM
L5	05	16	100	125	90	-	150	182	6	12	18	100/112B5	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

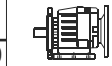


*Available output shaft / Alberi di uscita

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

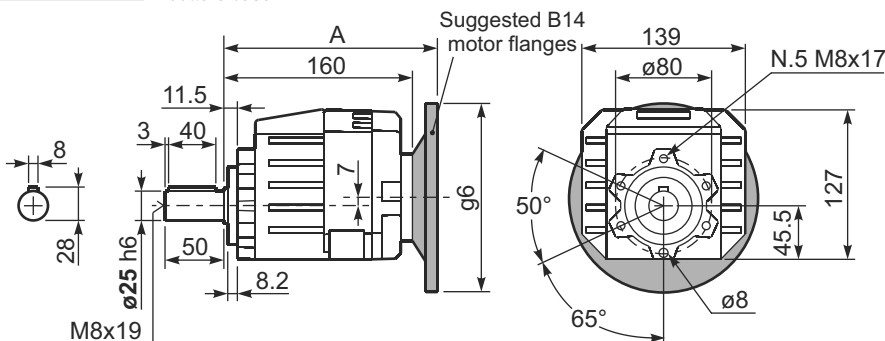
Available output flanges / flange di uscita

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

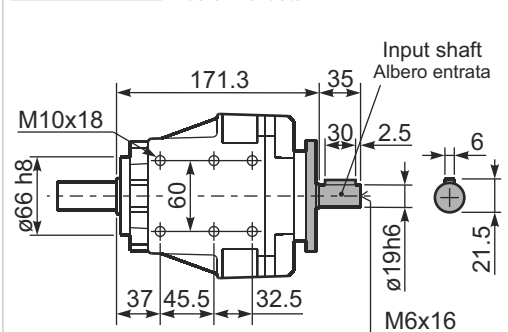


With flange and feet only on request. Ask for compatibility

P402A-N ... Basic gearbox
Riduttore base



R402A-N ... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	180.5	177	140	183.5	K063.4.041
71 B5	178.5	187	160	181.5	K063.4.042
80/90 B5	180.5	207	200	183.5	K063.4.043
100/112 B5	196.5	232	250	199.5	KC40.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	178.5	159.5	105	181.5	K063.4.047
80 B14	179.5	167	120	182.5	K063.4.046
90 B14	180.5	177	140	183.5	K063.4.041
100/112 B14	196.5	187	160	199.5	KC40.4.041



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 _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft			
							B	C	O	P	Q			Ratios code	
							63	71	56	63	71				
36.5	38.40	0.37	90	1.9	0.72	175			C	C		171713		01	
32.0	43.69	0.37	103	1.5	0.54	149			C	C		191712		02	
27.6	50.64	0.37	119	1.3	0.50	160			C	C		171712		03	
26.2	53.36	0.37	125	1.1	0.41	138			C	C		191710		04	
22.9	61.22	0.37	144	1.1	0.41	160			C	C		191312	standard ø25	05	
22.6	61.90	0.37	146	0.9	0.35	138			C	C		171710			06
19.7	70.95	0.37	167	1.0	0.36	160			C	C		131712			07
19.1	73.43	0.37	172	1.0	0.38	175			C	C		101713		ø14	08
18.8	74.77	0.25	118	1.2	0.29	138			C	C		191310		ø16	09
16.1	86.66	0.25	138	1.0	0.25	138			C	C		131710		ø19	10
14.5	96.85	0.25	154	1.0	0.26	160			C	C		101712	ø20	11	
13.6	102.89	0.25	163	1.1	0.28	180			C	C		101313	ø24	12	
11.1	126.40	0.25	200	0.8	0.20	160			C	C		91712	On request	13	
10.3	135.69	0.25	215	0.7	0.19	160			C	C		101312		14	
8.5	165.70	0.12	126	1.1	0.13	138			C	C		101310		15	
7.9	177.09	0.12	135	1.2	0.14	160			C	C		91312		16	
6.5	216.30	0.12	164	0.8	0.10	138			C	C		91310		17	

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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



C) Motor Flange Holes Position
Posizione Fori Flangia Motore

6

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.

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.

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.

F Le réducteur **403A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
0.30 LT	0.35 LT	0.45 LT	0.45 LT	0.45 LT	0.55 LT	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

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

$F_{eq} (N)$

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 di entrata

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

n ₁	FA	FR
1400	140	700
900	160	800
500	190	950

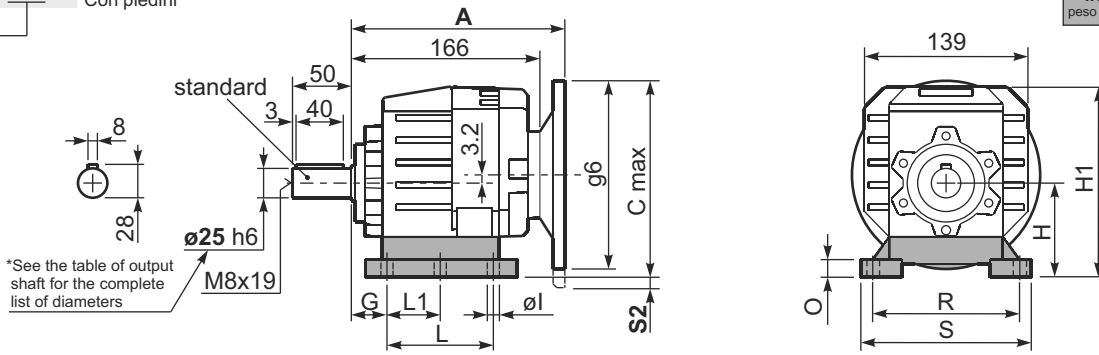
tab. 2

Coaxial - Gear
160Nm 403A

3D dimensions on the Web

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

Gearbox weight / peso reductore: With flange **6.1 kg**
With feet **6.3 kg**



Feet / piedini

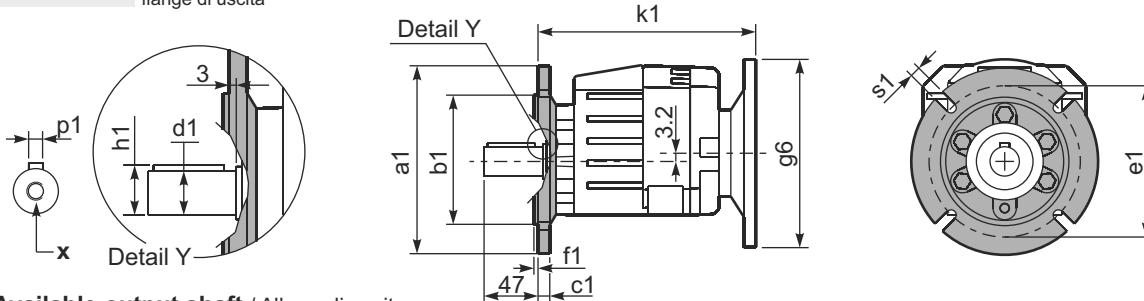
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	∅l	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167	15	-	-	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182	17	11	-	-	KC40.9.025
S1	17	18	75	110	90+110	50	145	155	15	9	2 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172	20	9	-	-	KC40.9.024
H2	022-223	25	100	110	115	-	145	182	20	9	-	-	KC40.9.026
M1	42/3	25	80	110+120	85	-	145	162	15	9	-	-	KC40.9.023
L4	04	13	80	105	76	-	132	162	5	10	-	-	KC35.9.023LM
L5	05	16	100	125	90	-	150	182	6	12	-	-	KC40.9.027LM

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

A see on page bottom

Most popular types
Tipi più diffusi

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

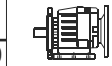


*Available output shaft / Albero di uscita

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

Available output flanges / flange di uscita

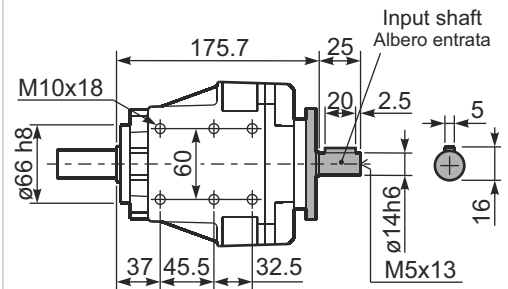
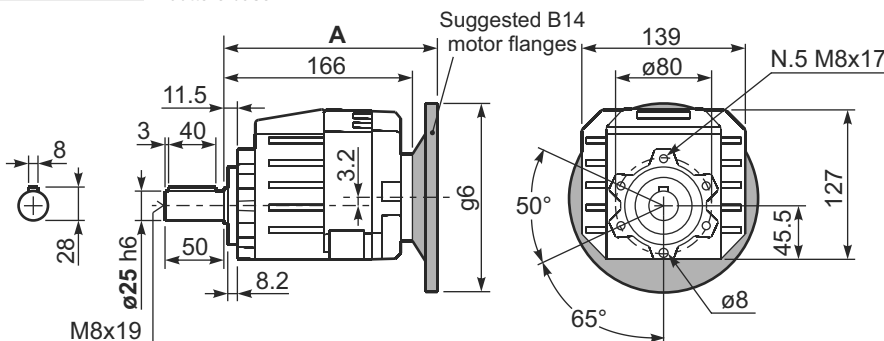
a1 ∅	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	9	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3	9	KC40.9.012
200	130	11	165	3.5	11	KC40.9.013
250	180	11.5	215	3.5	14	KC40.9.014



With flange and feet only on request. Ask for compatibility

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

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



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	182.5	173.2	140	185.5	K050.4.041
71 B5	180.5	183.2	160	183.5	K050.4.042

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
56 B14	186.5	143.2	80	189.5	KC40.4.049
63 B14	181.5	148.2	90	184.5	K050.4.047
71 B14	182	155.7	105	185	K050.4.045



QUICK SELECTION / Selezione veloce

 input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft 	Ratios code
							C	D	E	F	G	R	T	U	V		
							71	80	90	100* 112	132*	80	90	100 112	132		
388	3.61	4	95	1.6	6.3	150	B									3018	01
331	4.23	4	111	1.5	6.1	170	B									3016	02
279	5.01	4	131	1.5	6.1	200	B									3014	03
231	6.07	4	159	1.6	6.3	250	B									3012	04
206	6.81	4	178	1.6	6.2	277	B									2018	05
176	7.96	4	209	1.4	5.8	300	B									2016	06
148	9.45	4	248	1.2	4.9	304	B									2014	07
122	11.43	4	299	1.0	4.0	300	B									2012	08
99	14.21	3	279	0.9	2.8	265	B									2010	09
84	16.62	3	327	0.9	2.8	304	B									1314	10
70	20.10	2.2	290	1.0	2.3	300	B									1312	11
56	24.98	1.85	303	0.9	1.6	265	B									1310	12
47.6	29.41	1.5	289	1.1	1.6	304	B									814	13
39.3	35.58	1.5	349	0.9	1.3	300	B									812	14
34.6	40.50	1.1	292	1.0	1.1	290	B									614	15
31.7	44.22	1.1	319	0.8	0.92	265	B									810	16
28.6	49.00	0.75	241	1.2	0.93	300	B									612	17
23.0	60.90	0.75	299	0.9	0.66	265	B									610	18

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

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

 Motor Flanges Available
Flange Motore Disponibili

 B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

 C) Motor Flange Holes Position
Posizione Fori Flangia Motore

6

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

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

D Das Getriebe **452A** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die zulässigen Radial- und Axialbelastungen des Getriebes aufgeführt.

F Le réducteur **452A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **452A** se suministra, lubricado de por vida con aceite sintético y no 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.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio						
0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	Ask	
AGIP Telium VSF 320				SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS											
Output shaft / Albero di uscita					Input shaft / Albero in entrata						
					$F_{eq} = FR \cdot \frac{51}{X+21}$						
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR	n_1	FA	FR
300	415	2070	140	540	2700	70	700	3510	1400	400	2000
250	430	2160	120	560	2790	40	810	4050	900	440	2200
200	470	2340	85	630	3150	15	900	4500	500	440	2200

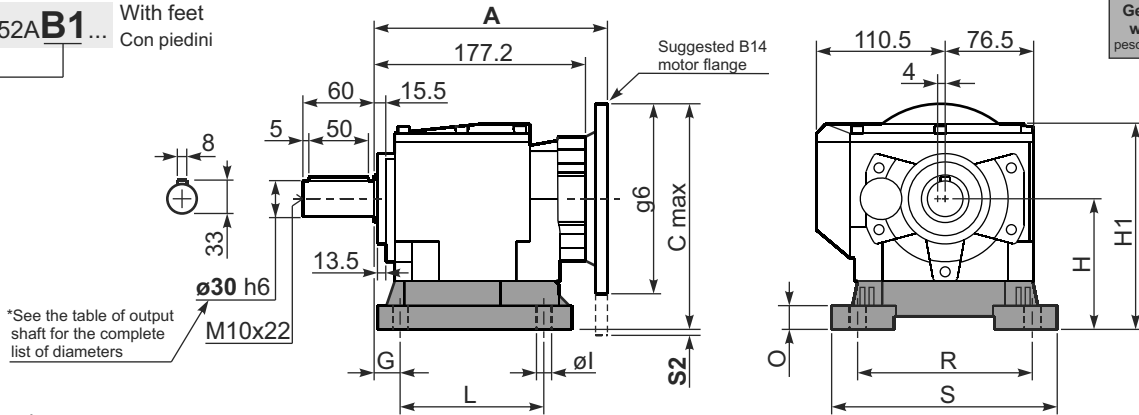
tab. 2

3D dimensions on the Web

Coaxial - Gear **300Nm 452A**

P452A B1 ... With feet
Con piedini

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



Feet / piedini

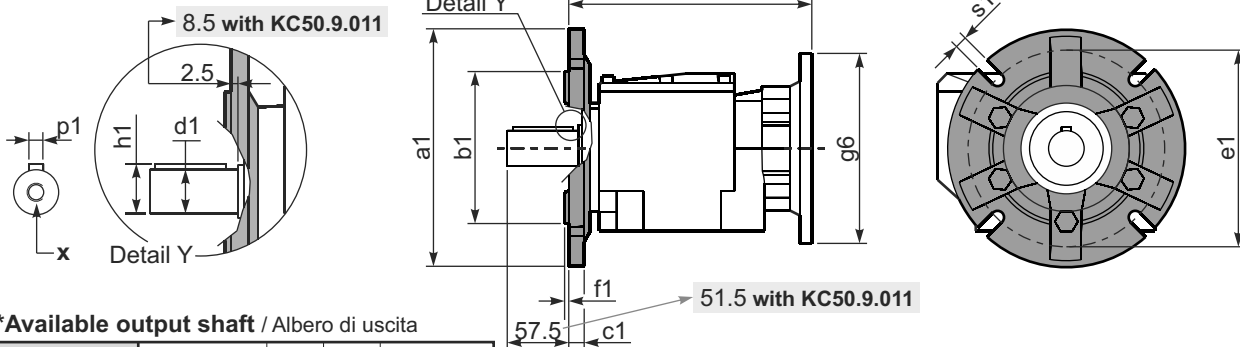
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	162	20	11	15 100/112B5 40 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	182	18	14	20 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	167	24	13.5	-	80/90B5	KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14	20 132B5	-	KC50.9.025
M2	52/3	30	110	135+150	100	190	162	18	11	15 100/112B5 40 132B5	-	KC50.9.023
L6	06	19	125	160	106	205	177	8	14	25 132B5	-	KC50.9.026LM
E2	2202/3	13	100	135	192	164	152	6	14	-	71B5	KC50.9.027LM
P4	142	35	142	130	145	160	194	8	14	8 132B5	-	KC50.9.028LM

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

P452A-F ... Output flanges
flange di uscita



*Available output shaft / Alberi di uscita

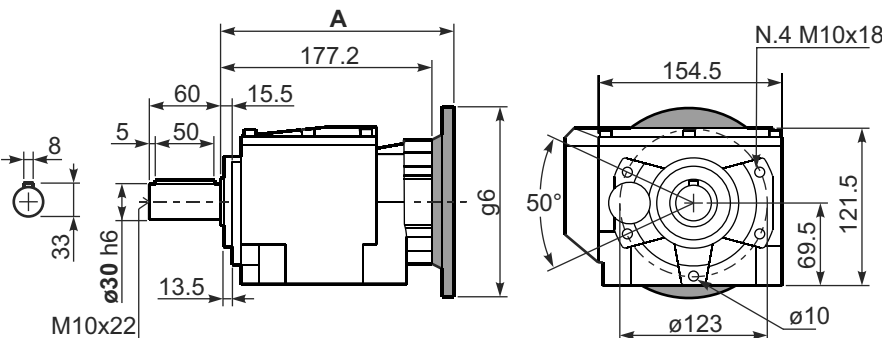
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

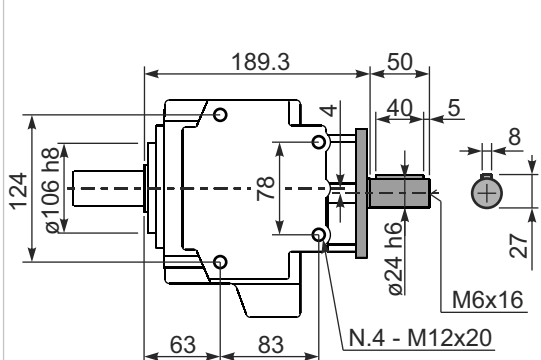
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request. Ask for compatibility

P452A-N ... Basic gearbox
Riduttore base



R452A-N ... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011	B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	195.7	222	160	198.2	KC023.4.041	204.2	80 B14	195.7	202	120	198.2	KC085.4.046	204.2
80/90 B5	197.7	242	200	200.2	KC023.4.042	206.2	90 B14	195.7	212	140	198.2	KC085.4.045	204.2
100/112 B5	203.7	267	250	206.2	KC023.4.043	212.2	100/112 B14	206.7	222	160	209.2	KC085.4.047	215.2
132 B5	225.2	292	300	227.7	KC50.4.043	233.7	132 B14	225.2	242	200	227.7	KC50.4.041	233.7



■ QUICK SELECTION / Selezione veloce							input speed (n ₁) = 1400 min ⁻¹													
Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft				
							C	D	E	F	G	R	T	U	V					
							71	80	90	100*	112	132*	80	90	100	112	132			
388	3.61	5.5	130	1.2	6.3	150	B										3018		01	
331	4.23	5.5	152	1.1	6.1	170	B										3016		02	
279	5.01	5.5	180	1.1	6.1	200	B										3014		03	
231	6.07	5.5	219	1.1	6.3	250	B										3012		04	
206	6.81	5.5	245	1.2	6.7	300	B										2018		05	
176	7.96	5.5	287	1.2	6.3	330	B										2016		06	
148	9.45	5.5	340	1.0	5.7	354	B										2014	standard	07	
122	11.43	4	299	1.1	4.4	326	B										2012	ø30	08	
99	14.21	3	279	0.9	2.7	250	B										2010		09	
84	16.62	3	327	1.1	3.3	354	B										1314	ø24	10	
70	20.10	2.2	290	1.1	2.5	326	B										1312	ø25	11	
57	24.61	2.2	354	0.9	2.0	326	B										1112	ø28	12	
56	24.98	1.5	245	1.0	1.5	250	B										1310	ø35	13	
47.6	29.41	1.5	289	1.2	1.8	354	B										814	On request	14	
39.3	35.58	1.5	349	0.9	1.4	326	B										812		15	
34.6	40.50	1.1	292	1.0	1.1	295	B										614		16	
31.7	44.23	1.1	319	0.8	0.86	250	B										810		17	
28.6	49.00	1.1	353	0.9	1.0	326	B										612		18	
23.0	60.90	0.75	299	0.8	0.63	250	B										610		19	

The dynamic efficiency is **0.96** for all ratios *Nel montaggio P la flangia può superare l'ingombro massimo dei piedi. Eventualmente utilizzare la flangia B14
* In the P mounting the B5 motor flange can exceed the foot maximum dimensions. Possibly use the flange B14

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

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.

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.

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.

F Le réducteur **502A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.45 LT	0.55 LT	1.00 LT	1.10 LT	1.10 LT	1.15 LT	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

Input shaft
Albero in entrata

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

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

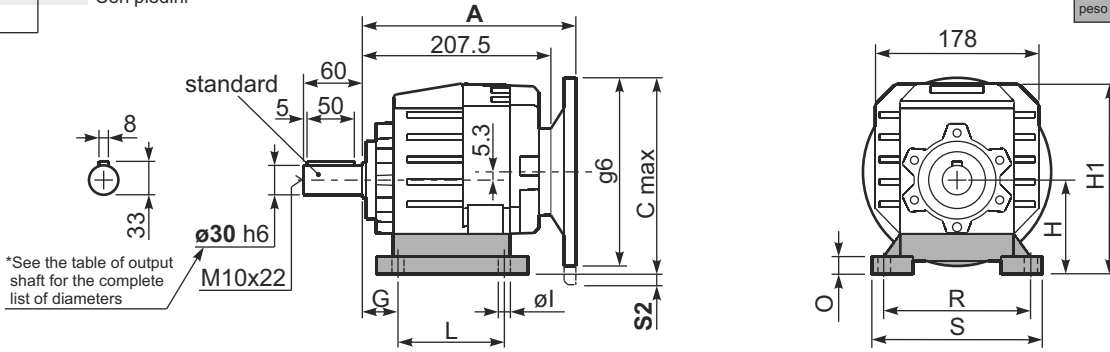
tab. 2

Coaxial - Gear
350Nm 502A

3D dimensions on the Web

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

Gearbox weight
peso riduttore With flange **11.7 kg**
With feet **11.9 kg**



Feet / piedini

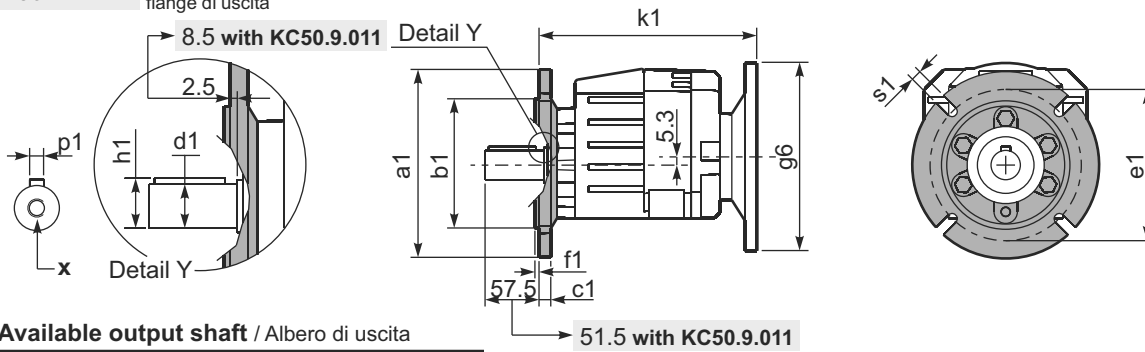
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	10 100/112B5 35 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14	15 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	216.5	24	13.5	5 100/112B5 30 132B5	-	KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	14	15 132B5	-	KC50.9.025
M2	52/3	30	110	135-150	100	190	226.5	18	11	10 100/112B5 35 132B5	-	KC50.9.023
L6	06	19	125	160	106	205	201.5	8	14	20 132B5	-	KC50.9.026LM
E2	2202/3	13	100	135	192	164	201.5	6	14	20 100/112B5 45 132B5	-	KC50.9.027LM
P4	142	35	142	130	145	160	243.5	8	14	3 132B5	-	KC50.9.028LM

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

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



*Available output shaft / Alberi di uscita

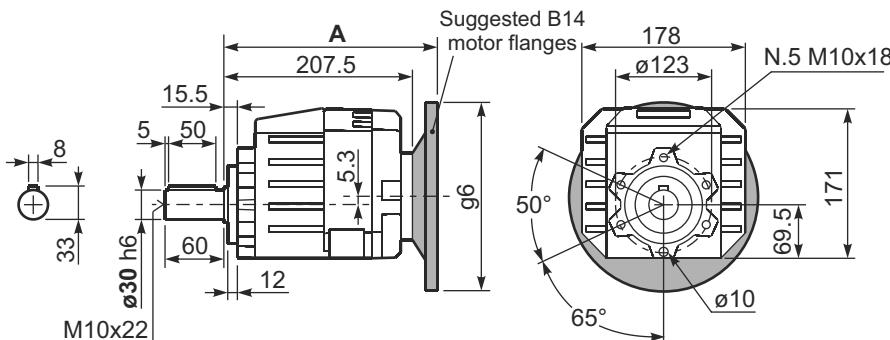
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

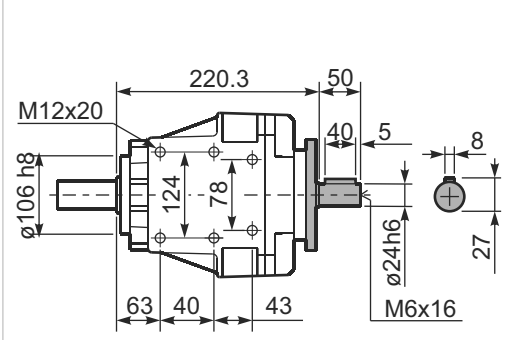
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request. Ask for compatibility

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



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



B5 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011	B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	226	227.3	160	228.5	KC023.4.041	234.5	80 B14	226	207.3	120	228.5	KC085.4.046	234.5
80/90 B5	228	247.3	200	230.5	KC023.4.042	236.5	90 B14	226	217.3	140	228.5	KC085.4.045	234.5
100/112 B5	234	272.3	250	236.5	KC023.4.043	242.5	100/112 B14	240.7	227.3	160	243.2	KC085.4.047	249.2
132 B5	261.5	297.3	300	264	KC50.4.043	270	132 B14	261.5	247	200	264	KC50.4.041	270



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 _{1R} [kW]	Nominal torque M _{2R} [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	1.1	278	1.3	1.5	373	B				C	C		191316	01
29.6	47.22	1.1	330	1.1	1.2	354	B				C	C		191314	02
25.6	54.73	1.1	382	0.9	1.0	354	B				C	C		171314	03
21.1	66.22	0.75	315	1.0	0.78	326	B				C	C		171312	04
18.3	76.69	0.75	365	1.0	0.73	354	B				C	C		131314	05
16.7	83.59	0.55	292	1.2	0.67	354	B				C	C		190814	06
15.1	92.78	0.55	324	1.0	0.55	326	B				C	C		131312	07
13.4	104.67	0.55	365	1.0	0.53	354	B				C	C		101314	08
11.9	117.22	0.37	275	1.2	0.44	326	B				C	C		170812	09
11.1	126.65	0.37	297	1.1	0.41	326	B				C	C		101312	10
10.2	136.62	0.37	321	1.1	0.41	354	B				C	C		91314	11
8.5	165.29	0.25	262	1.2	0.31	326	B				C	C		91312	12
7.8	180.40	0.25	286	1.2	0.31	354	B				C	C		71314	13
6.4	218.26	0.25	346	0.9	0.24	326	B				C	C		71312	14
5.8	241.82	0.25	384	0.9	0.23	354	B				C	C		90814	15
4.8	292.57	0.18	334	1.0	0.18	326	B				C	C		90812	16
4.4	319.32	0.18	365	1.0	0.17	354	B				C	C		70814	17
3.6	386.33	0.18	441	0.7	0.13	326	B				C	C		70812	18
2.9	480.16	0.18	548	0.5	0.08	250	B				C	C		70810	19

The dynamic efficiency is **0.94** for all ratios

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

6

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.

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.

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.

F Le réducteur **503A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

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	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

$F_{eq} (N)$

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 in entrata

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

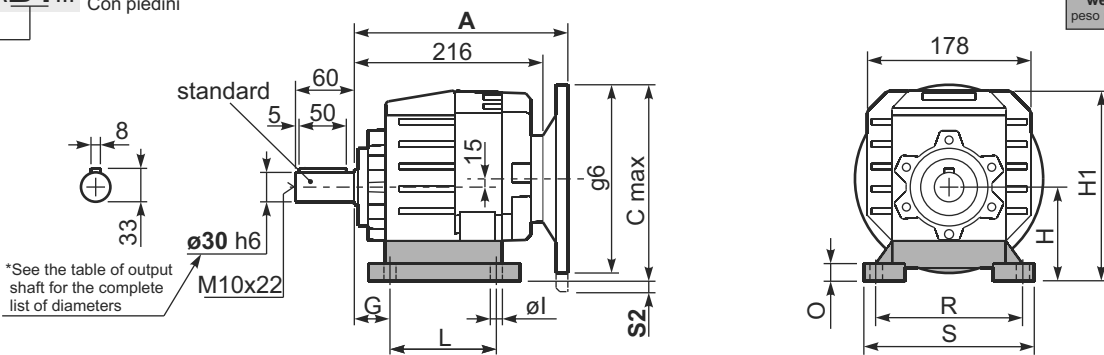
tab. 2

Coaxial - Gear 350Nm **503A**

3D dimensions on the Web

P503A-B1... With feet
Con piedini

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



Feet / piedini

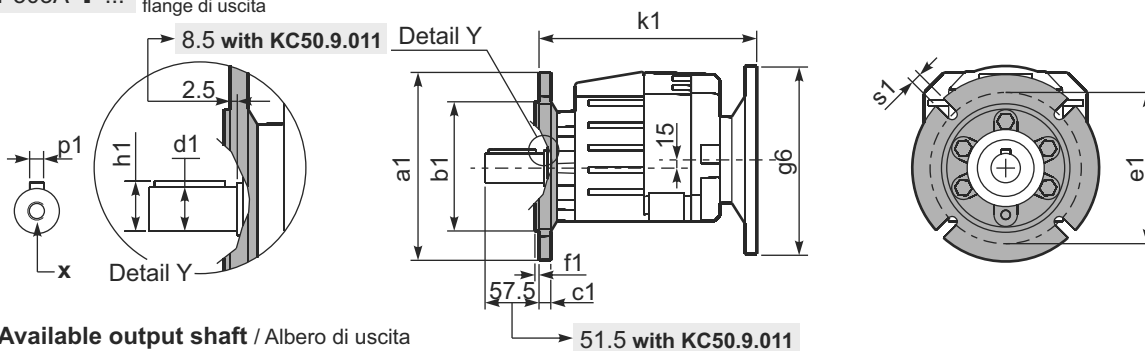
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211.5	20	11	-	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231.5	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	216.5	24	13.5	-	-	KC50.9.022
H3	023-233	30	130	135	135	185	231.5	25	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	-	-	KC50.9.026LM
E2	2202/3	13	100	135	192	164	201.5	6	14	-	-	KC50.9.027LM
P4	142	35	142	130	145	160	243.5	8	14	-	-	KC50.9.028LM

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

P503A-F... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

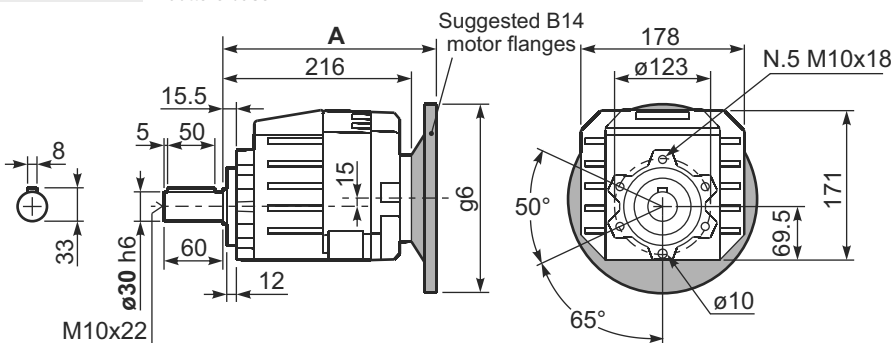
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

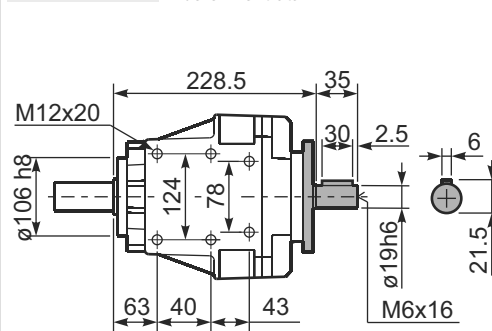
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

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	k1 with KC50.9.011	B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
63 B5	236.5	227	140	239	K063.4.041	245	71 B14	234.5	209.5	105	237	K063.4.047	243
71 B5	234.5	237	160	237	K063.4.042	243	80 B14	235.5	217	120	238	K063.4.046	244
80/90 B5	236.5	257	200	239	K063.4.043	245	90 B14	236.5	227	140	239	K063.4.041	245

602A Coaxial - Gear 520Nm

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 _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft			
							C	D	E	F	G	R	T	U	V			Ratios code	
							71	80	90	100 112	132*	80	90	100 112	132				
388	3.61	7.5	171	1.1	7.6	180	B										3018	standard ø35	01
331	4.23	7.5	200	1.1	8.0	220	B										3016		02
279	5.01	7.5	238	1.1	7.9	260	B									3014	03		
231	6.07	7.5	288	1.0	7.6	300	B									3012	04		
206	6.81	7.5	323	1.1	7.9	350	B									2018	05		
176	7.96	7.5	378	1.0	7.1	370	B									2016	06		
148	9.45	5.5	331	1.2	6.5	400	B									2014	07		
122	11.43	5.5	401	1.0	5.5	415	B									2012	08		
100	14.00	4	359	1.2	4.7	435	B									1316	09		
84	16.62	4	426	1.2	4.7	515	B									1314	10		
70	20.10	4	515	1.0	4.0	520	B									1312	11		
57	24.61	3	475	1.1	3.2	520	B									1112	12		
47.6	29.41	2.2	418	1.1	2.3	450	B									814	13		
39.3	35.58	1.85	431	1.2	2.2	520	B									812	14		
34.6	40.50	1.1	290	1.1	1.2	320	B									614	15		
31.7	44.23	1.5	433	0.9	1.4	400	B									810	16		
28.6	49.00	1.1	351	1.1	1.2	400	B									612	17		
23.0	60.90	1.1	436	0.9	1.0	400	B									610	18		

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

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

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

D) 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.

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.

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.

F Le réducteur **602A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

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	0.85 LT	1.10 LT	1.20 LT	1.20 LT	1.25 LT	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

$F_{eq} (N)$

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

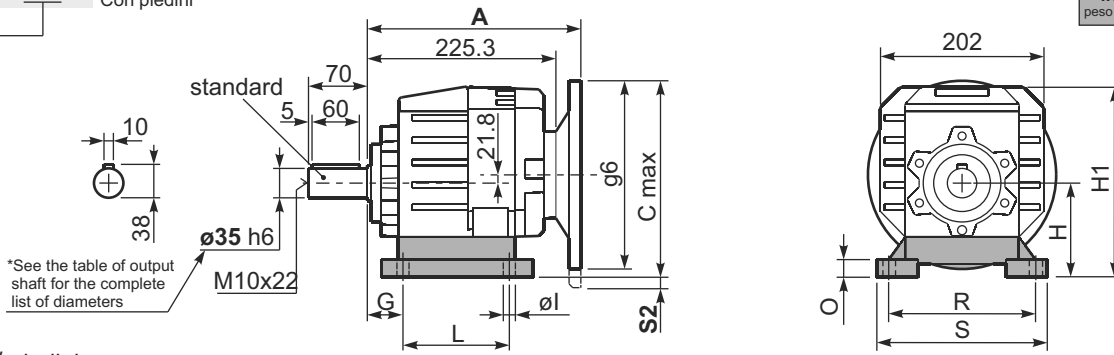
tab. 2

Coaxial - Gear
520Nm 602A

3D dimensions on the Web

P602A-B1... With feet
Con piedini

Gearbox weight
peso riduttore With flange **14.1 kg**
With feet **14.5 kg**



Feet / piedini

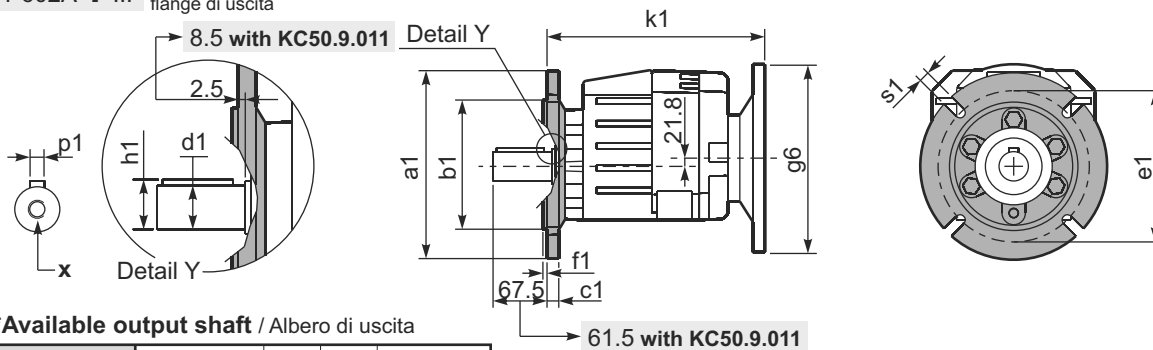
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	233	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	218	24	13.5	13 132B5	-	KC50.9.022
M3	62/3	35	120	170-185	110	230	223	20	14	8 132B5	-	KC60.9.023
S7	77	35	140	170	205	204	243	8	14	-	-	KC60.9.029LM
H4	024-243	35	155	170	150	225	258	30	14	-	-	KC60.9.025
L6	06	19	125	160	106	205	228	8	14	3 132B5	-	KC50.9.026LM
E3	2302/3	19.5	125	170	240	205	228	8	14	-	100/112B5	KC60.9.026LM
P6	162	40	162	160	205	200	265	8	14	-	-	KC60.9.027LM
B5	352/3	23.5	115	170	130	205	218	8	14	13 132B5	-	KC60.9.021LM

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

A see on page bottom

Most popular types
Tipi più diffusi

P602A-F... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

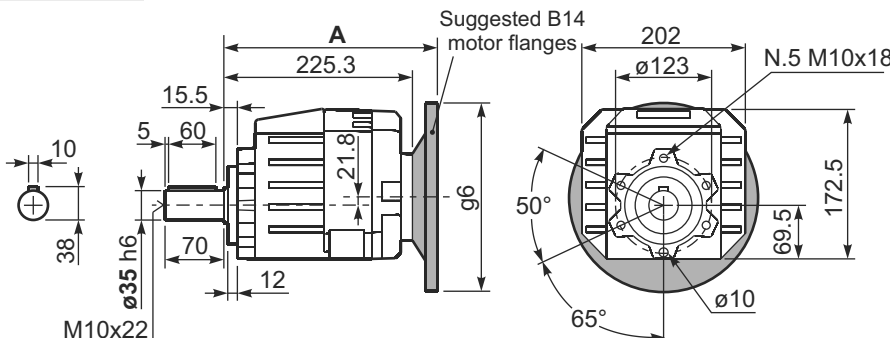
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

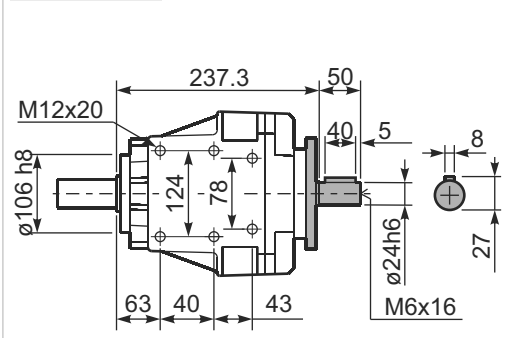
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	9	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request.
Ask for compatibility

P602A-N... Basic gearbox
Riduttore base



R602A-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011	B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
71 B5	243.8	263.8	160	246.3	KC023.4.041	252.3	80 B14	243.8	243.8	120	246.3	KC085.4.046	252.3
80/90 B5	245.8	283.8	200	248.3	KC023.4.042	254.3	90 B14	243.8	253.8	140	246.3	KC085.4.045	252.3
100/112 B5	251.8	308.8	250	254.3	KC023.4.043	260.3	100/112 B14	258.5	263.8	160	261	KC085.4.047	267
132 B5	279.5	333.8	300	282	KC50.4.043	288	132 B14	279.5	283.8	200	282	KC50.4.041	288

603A Coaxial - Gear

520Nm

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 _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges				Available B14 motor flanges			Output Shaft 	Ratios code
							B	C	D	E	Q	R	T		
							63	71	80	90	71	80	90		
35.2	39.79	1.5	382	1.1	1.7	434	B				C	C		191316	01
29.6	47.22	1.5	453	1.1	1.7	515	B				C	C		191314	02
25.6	54.73	1.5	525	1.0	1.5	515	B				C	C		171314	03
24.5	57.13	1.5	548	0.9	1.4	520	B				C	C		191312	04
21.1	66.22	1.1	464	1.1	1.2	520	B				C	C		171312	05
19.7	71.01	1.1	498	0.9	0.96	435	B				C	C		191310	06
18.3	76.69	1.1	538	1.0	1.0	515	B				C	C		131314	07
17.0	82.30	0.75	396	1.1	0.82	435	B				C	C		171310	08
16.7	83.59	0.75	402	1.1	0.82	440	B				C	C		190814	09
15.1	92.78	0.75	446	1.2	0.87	520	B				C	C		131312	10
13.4	104.68	0.75	503	1.0	0.77	515	B				C	C		101314	11
11.9	117.22	0.75	564	0.9	0.69	520	B				C	C		170812	12
11.1	126.65	0.55	449	1.2	0.64	520	B				C	C		101312	13
10.3	135.74	0.55	482	0.9	0.51	440	B				C	C		130814	14
9.6	145.68	0.37	346	1.3	0.47	435	B				C	C		170810	15
8.9	157.40	0.37	373	1.2	0.43	435	B				C	C		101310	16
8.5	165.29	0.37	392	1.3	0.49	520	B				C	C		91312	17
7.6	185.29	0.37	439	1.0	0.37	440	B				C	C		100814	18
6.8	205.43	0.37	487	0.9	0.33	435	B				C	C		91310	19
6.2	224.18	0.37	532	1.0	0.36	520	B				C	C		100812	20
5.8	241.82	0.25	387	1.1	0.28	440	B				C	C		90814	21
5.0	278.62	0.25	446	1.0	0.24	435	B				C	C		100810	22
4.8	292.57	0.25	468	1.1	0.28	520	B				C	C		90812	23
3.9	363.63	0.18	445	1.0	0.19	435	B				C	C		90810	24

The dynamic efficiency is **0.94** for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

6

EN 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.

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.

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.

F Le réducteur **603A** est fourni complet avec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantités conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **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.

Standard supplied	For these mounting position specify in the order or add oil Per queste posizioni specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.75 LT	0.90 LT	1.15 LT	1.25 LT	1.30 LT	1.35 LT	Ask
AGIP Telium VSF 320			SHELL Omala S4 WE 320			

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

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

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

n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	560	2800	140	740	3700	70	890	4200
250	600	3000	120	760	3800	40	1160	5800
200	640	3200	85	840	4000	15	1300	6500

Input shaft
Albero in entrata

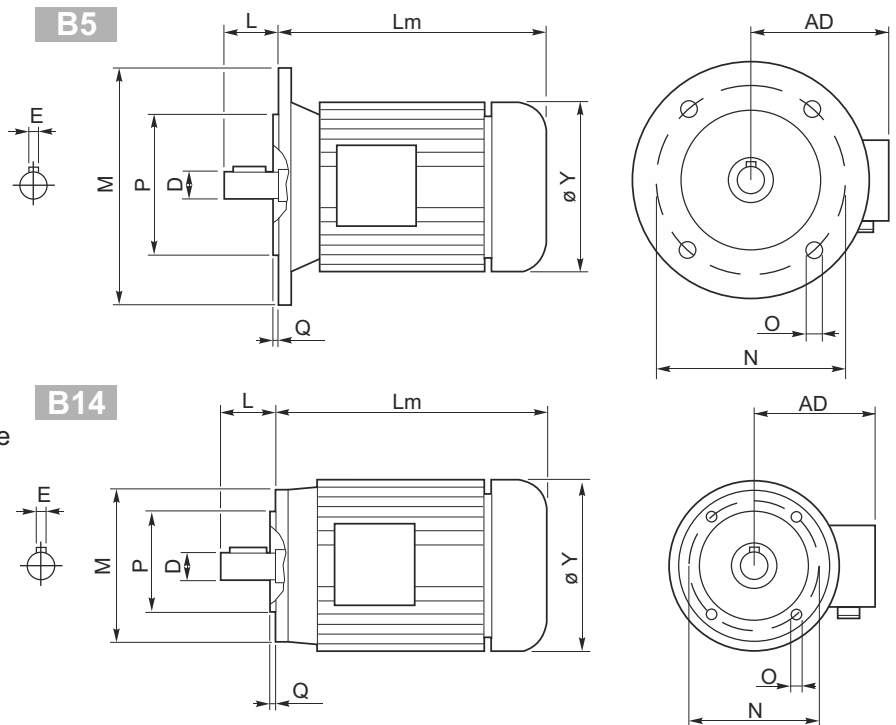
n ₁	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2



- 1) 230/400V - 50Hz three-phase asynchronous induction motor
- 2) Class F insulation
- 3) S1 duty
- 4) IP 55 protection
- 5) Not painted
- 6) Hard plastic sleeve to protect output shaft during the transportation

- 1) 230/400V - 50Hz motore trifase asincrono
- 2) Isolamento Classe F
- 3) S1 servizio continuo
- 4) Protezione IP 55
- 5) Non verniciato
- 6) Manicotto di protezione per l'albero motore



Outside dimensions may be different according to manufacturers.

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

	2 poli / poles			4 poli / poles			6 poli / poles			B5-B14						B5					B14					Kg
	kW	Nm	A (400V)	kW	Nm	A (400V)	kW	Nm	A (400V)	D	E	L	Lm	Y	AD	P	N	M	O	Q	P	N	M	O	Q	
56 A	0.09	0.32	0.38	0.06	0.44	0.27	—	—	—	9	3	20	179	108	96	80	100	120	7	2.5	50	65	80	M5	2.5	2.7
56 B	0.12	0.42	0.46	0.09	0.67	0.37	—	—	—	9	3	20	179	108	96	80	100	120	7	2.5	50	65	80	M5	2.5	2.9
63 A	0.18	0.63	0.60	0.12	0.84	0.50	0.09	0.99	0.57	11	4	23	185	120	99	95	115	140	9.5	3	60	75	90	M5	2.5	3.8
63 B	0.25	0.87	0.76	0.18	1.30	0.69	0.12	1.32	0.74	11	4	23	185	120	99	95	115	140	9.5	3	60	75	90	M5	2.5	4.2
71 A	0.37	1.30	1.00	0.25	1.70	0.91	0.18	1.90	0.80	14	5	30	-	130	104	110	130	160	9.5	3.5	70	85	105	M6	2.5	5.9
71 B	0.55	1.90	1.54	0.37	2.52	1.14	0.25	2.72	1.10	14	5	30	225	141	107	110	130	160	9.5	3.5	70	85	105	M6	2.5	6.5
80 A	0.75	2.60	1.85	0.55	3.77	1.51	0.37	3.84	1.18	19	6	40	256	159	127	130	165	200	11.5	3.5	80	100	120	M6	3	8.5
80 B	1.1	3.90	2.64	0.75	5.11	2.57	0.55	5.84	1.80	19	6	40	256	159	127	130	165	200	11.5	3.5	80	100	120	M6	3	10
90 S	1.5	5.00	3.31	1.1	7.45	2.78	0.75	7.92	2.32	24	8	50	-	170	135	130	165	200	11.5	3.5	95	115	140	M8	3	12.5
90 L	2.2	7.50	4.46	1.5	10.2	3.61	1.1	11.6	3.45	24	8	50	280	170	135	130	165	200	11.5	3.5	95	115	140	M8	3	15
100 LA	3.0	10.0	6.28	2.2	14.8	5.07	1.5	15.4	3.88	28	8	60	-	190	148	180	215	250	13	4	110	130	160	M8	3.5	20
100 LB	—	—	—	3.0	20.1	6.66	—	—	—	28	8	60	-	190	148	180	215	250	13	4	110	130	160	M8	3.5	22
112 M	4.0	13.4	8.10	4.0	26.7	8.55	2.2	22.6	5.30	28	8	60	321	210	164	180	215	250	13	4	110	130	160	M8	3.5	35
132 S	5.5	18.3	11.2	5.5	36.5	11.4	3.0	30.2	7.20	38	10	80	375	244	180	230	265	300	14	4	130	165	200	M10	4	41
	7.5	24.9	15.3																							51
132 M	—	—	—	7.5	49.4	15.0	4.0	40.0	9.13	38	10	80	420	244	180	230	265	300	14	4	130	165	200	M10	4	51
	9	61.4	18.5	51																						
160 M	—	—	—	11	72	21.5	—	—	—	42	12	110	503	335	246	250	300	350	18	5	—	—	—	—	—	79.2
160 L	—	—	—	15	98	29	—	—	—	42	12	110	547	335	246	250	300	350	18	5	—	—	—	—	—	97.5
180 M	—	—	—	18.5	121	35.5	—	—	—	48	14	110	602	366	266	250	300	350	19	5	—	—	—	—	—	170
180 L	—	—	—	22	144	42	—	—	—	48	14	110	602	366	266	250	300	350	19	5	—	—	—	—	—	170



Metric electric motors are in aluminum.
On request they can be supplied with different
Level of protection and painted with 2 or 3
level of anticorrosive paint.

I motori metrici sono in alluminio,
su richiesta possono essere forniti
con differenti livelli di protezione e
verniciati con vernice
anticorrosiva.


Protection

Standard IP55
Please specify on purchase orders if you need a higher IP protection class.

Grado di protezione

IP55 Standard
Specificare in sede di ordinazione per IP superiore.

Schutzart

IP55 Standard.
Höheren IP Grad bitte im Auftrag angeben.

Degré de protection

IP55 standard.
Au moment de la commande, spécifiez si vous souhaitez IP supérieur.

Grado de protección
IP55 standard.
Especificar en el pedido cuando necesiten protección IP superior.

Insulation

Standard Cl.F
To be specified upon placing the order if different insulation is required.

Isolamento

Cl.F Standard
Specificare in sede di ordinazione classe di isolamento diversa.

Isolierung

Cl.F Standard.
Davon abweichende Isolierungsklasse im Auftrag angeben.

Isolement

Cl.F Standard.
Au moment de la commande, spécifiez une classe d'isolement différente.

Aislamiento

Cl.F standard.
Especificar al efectuar el pedido la clase diferente de aislamiento.

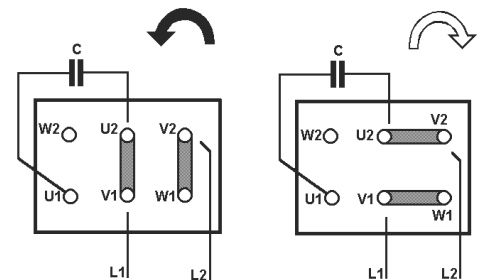
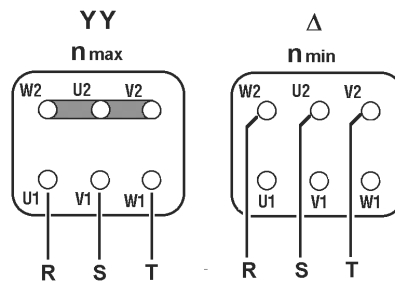
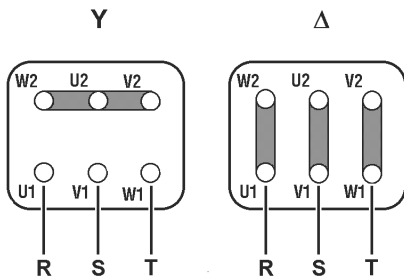
Insulation / Isolamento Isolierung /Aislamiento		E	B	F	H
Max. temp.	C°	120°	130°	155°	175°
	F*	248°	266°	311°	347°

Connections
Collegamenti
Verbindungselemente
Branchements
Conexiones

Threephase asynchronous single polarity
Asincrono trifase singola polarità
Asynchronmotor 3-ph eine Drehzahl
Moteur triphasé à une vitesse
Asincrono trifasico de una velocidad

Threephase asynchronous double polarity
Asincrono trifase doppia polarità
Asynchronmotor 3-ph doppelte Drehzahl
Moteur triphasé à deux vitesses
Asincrono trifasico de dos velocidades

Single phase asynchronous
Asincrono monofase
Einphasen-Asynchronmotor
Moteur monophasé
Asincrono monofasico





Suministros Industriales del Tajo, S.A.

C/ Jarama 52, Polígono Industrial, 45007 Toledo (Spain)

Telf: (34) 925 23 22 00

Fax: (34) 925 23 21 47

sitasa@sitasa.com

www.sitasa.com

