

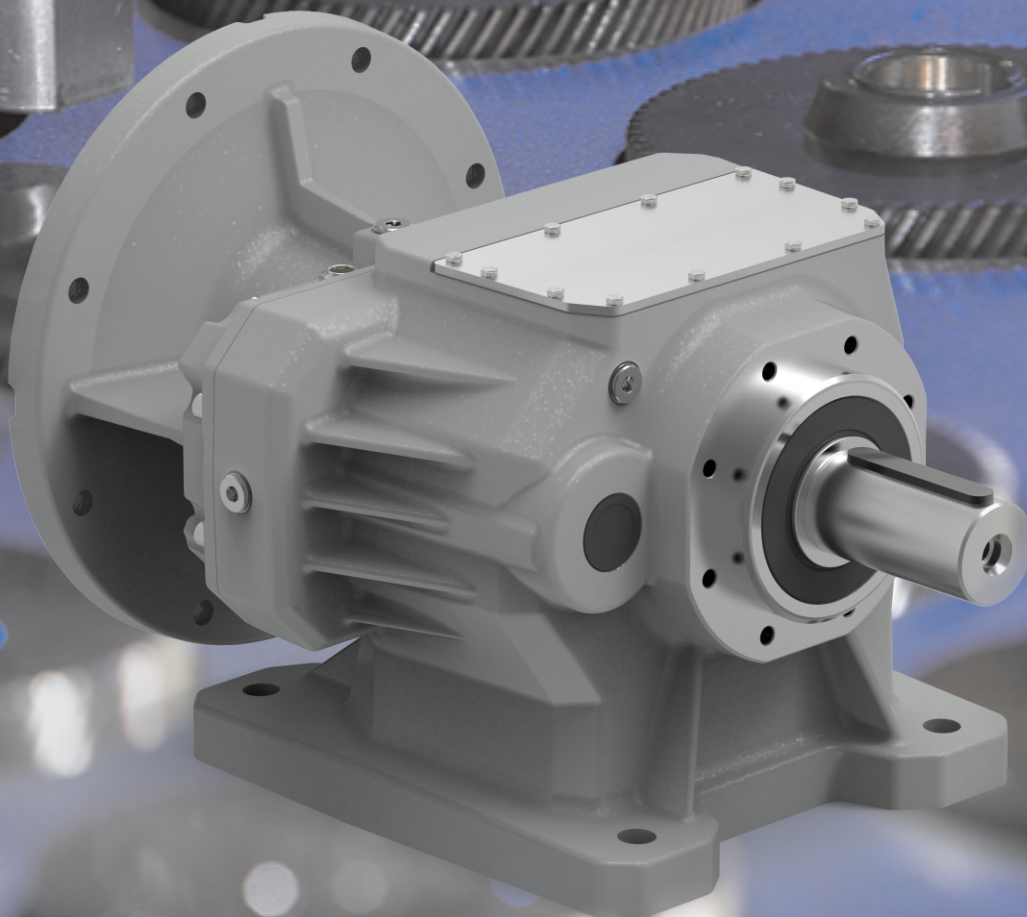
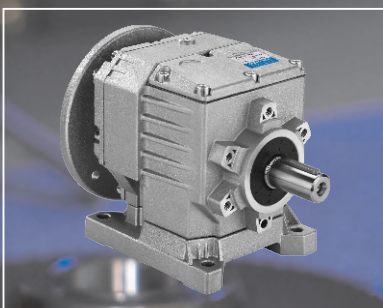
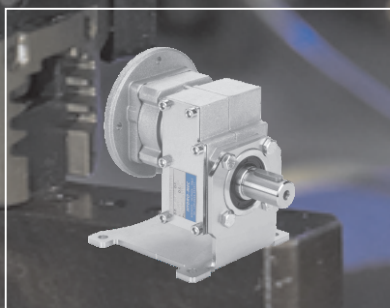
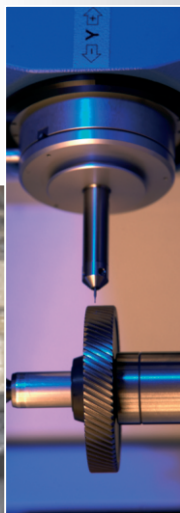
Coaxial

Gears

Cat.: CT-RCM-WO-HM017

Coaxial gearboxes

Riduttori Coassiali
0.12 ÷ 45kW



Made in Italy



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



HYDRO · MEC

Aluminum one step gearboxes

A modular and compact product

4

Alloy housing

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

Flange

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

Gears

Hardened and ground gears.

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Output shaft

With well proportioned bearings

Feet

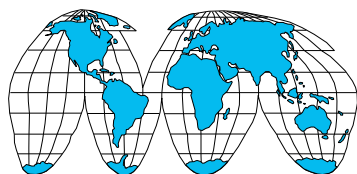
Removable feet.

Single-piece aluminum alloy housing

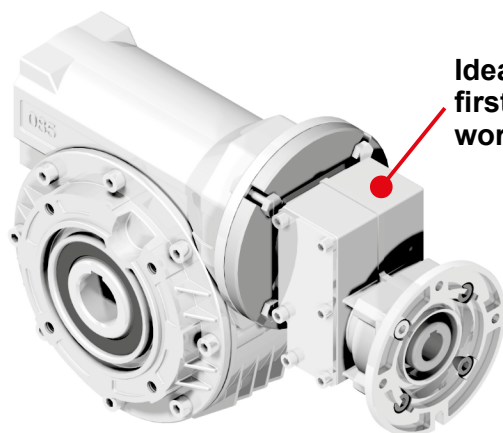
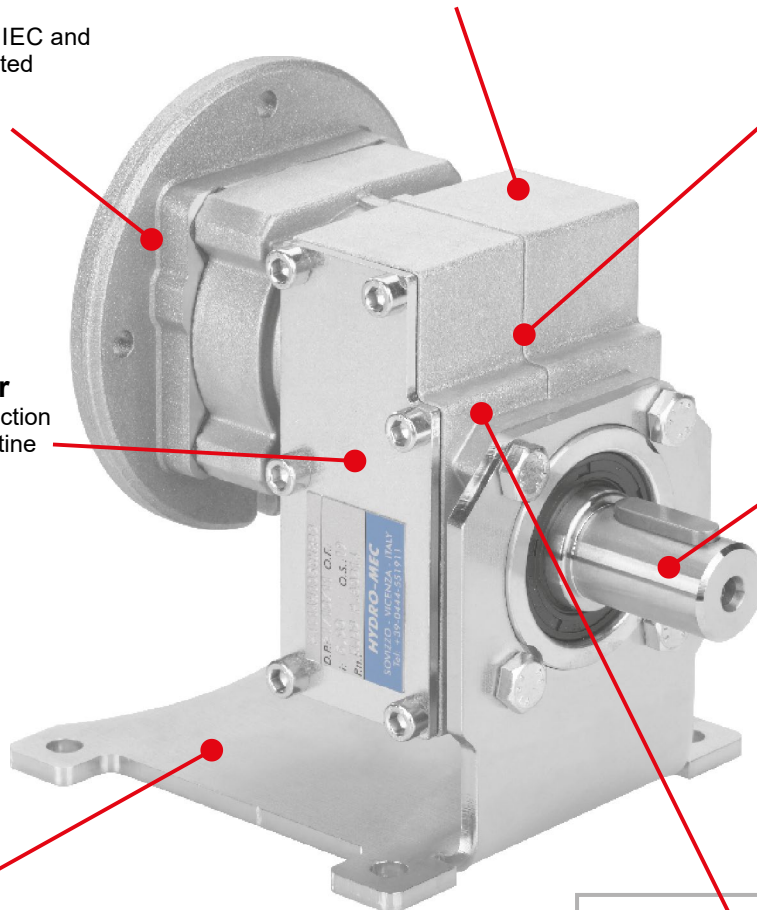
Combines light weight with high tensile strength. Precision machined for alignment of bearings and gearing

Ideal for use as first step with wormgearboxes.

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

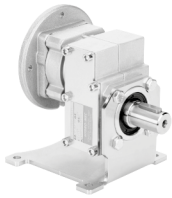


World wide sales network.



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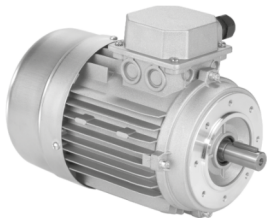
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Types / Tipi
Tipen / Types
Tipos →

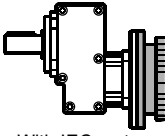
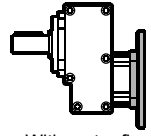
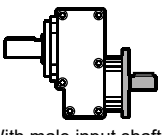
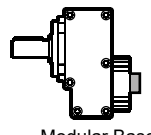
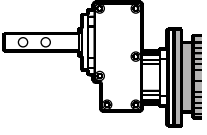
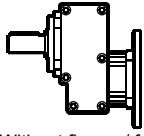
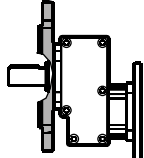
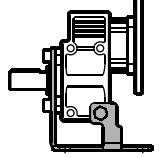
4-5	4-7	4-9	4-11
211A 20Nm	311A 30Nm	411A 38Nm	511A 110Nm

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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

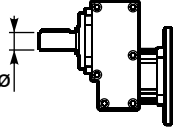
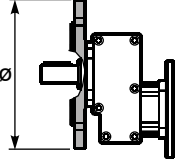



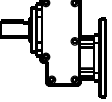
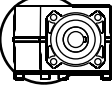
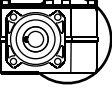
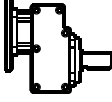
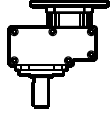
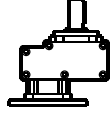
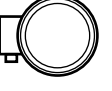



Type - Tipo - Typ Type - Tipo	Size - Grandezza - Grösse Taille - Tamaño	Mounting - Montaggio Montage - Fixation Tipo de montaje	Ratio - Rapporto Untersetzung Reduction Relación
P	311A	-F	2.84
<p>Aluminum one step gear Riduttori in alluminio a uno stadio</p> <div style="display: flex; justify-content: 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> <div style="border: 1px solid black; padding: 10px; margin-top: 20px; text-align: center;"> <p>Special output shaft Albero uscita speciale</p>  <p>Only on request for Q.ty A richiesta per quantità</p> </div>	<p>1 Stages Riduzioni Stufen Trains Etapas</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px; text-align: center;"> <p>211A 311A 411A 511A</p> </div>	<div style="text-align: center; margin-top: 20px;">  Without flange / feet -N </div> <div style="text-align: center; margin-top: 20px;">  Output flange mounted -F </div> <div style="text-align: center; margin-top: 20px;">  Mounted feet H1 </div>	<p>See technical data table</p> <p>Vedi tabelle dati tecnici.</p> <p>Technisches Datenblatt beachten</p> <p>Voir Tableau données techniques</p> <p>Ver tabla datos técnicos</p>

4



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

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 Motor Grösse Grandeur moteur - Tamaño motor	Mounting position Posizione montaggio Einbaulage Position de montage Position de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsetteria Klemmkastenlage Position boîte à bornes Posición caja de bornes
<p align="center">S</p>  <p>→ STANDARD</p> <p>211A</p> <p>S → ∅14</p> <p>311A</p> <p>S → ∅14</p> <p>C ⇒ ∅19</p> <p>E ⇒ ∅24</p> <p>411A</p> <p>S ⇒ ∅14</p> <p>C → ∅19</p> <p>E ⇒ ∅24</p> <p>511A</p> <p>C ⇒ ∅19</p> <p>E ⇒ ∅24</p> <p>G → ∅28</p>	<p align="center">2</p>  <p>N Senza flangia Without flange</p> <p>211A</p> <p>I ⇒ ∅105 Flangia integrata Integrated flange</p> <p>311A</p> <p>1 ⇒ ∅120</p> <p>2 ⇒ ∅140</p> <p>3 → ∅160</p> <p>4 ⇒ ∅200</p> <p>411A</p> <p>1 ⇒ ∅120</p> <p>2 ⇒ ∅140</p> <p>3 ⇒ ∅160</p> <p>4 → ∅200</p> <p>511A</p> <p>1 ⇒ ∅120</p> <p>2 ⇒ ∅140</p> <p>3 ⇒ ∅160</p> <p>4 ⇒ ∅200</p> <p>5 → ∅250</p>	<p align="center">-C</p> <p>Flange Flangia</p>  <p>B5</p> <p>-A=56 (∅120)</p> <p>-B=63 (∅140)</p> <p>-C=71 (∅160)</p> <p>-D=80 (∅200)</p> <p>-E=90 (∅200)</p> <p>-F=100+112 (∅250)</p> <p>-G=132 (∅300)</p> <p>B14</p> <p>-O=56 (∅80)</p> <p>-P=63 (∅90)</p> <p>-Q=71 (∅105)</p> <p>-R=80 (∅120)</p> <p>-T=90 (∅140)</p> <p>-U=100+112 (∅160)</p> <p>-V=132 (∅200)</p> <p>Type R Tipo R</p>  <p>211A 311A</p> <p>-1 ⇒ ∅14</p> <p>411A</p> <p>-2 ⇒ ∅19</p> <p>511A</p> <p>-3 ⇒ ∅24</p> <p>Without flange Senza flangia</p>  <p>211A 311A</p> <p>-Z ⇒ ∅9 (56B5)</p> <p>-0 ⇒ ∅11 (63B5)</p> <p>-1 ⇒ ∅14 (71B5)</p> <p>411A</p> <p>-1 ⇒ ∅14 (71B5)</p> <p>-2 ⇒ ∅19 (80B5)</p> <p>-3 ⇒ ∅24 (90B5)</p> <p>511A</p> <p>-2 ⇒ ∅19 (80B5)</p> <p>-3 ⇒ ∅24 (90B5)</p> <p>-4 ⇒ ∅28 (100B5)</p>	<p align="center">B3</p>  <p>B3</p> <p>STANDARD</p>  <p>B6</p>  <p>B7</p>  <p>B8</p>  <p>V5</p>  <p>V6</p>	<p align="center">-</p> <p>Nothing indication: standard bore</p> <p>Nessuna indicazione: foro standard</p>	<p>With Type M specify terminal box position Con tipo M specificare posizione morsetteria</p>  <p>A</p>  <p>B</p> <p>STANDARD</p>  <p>C</p>  <p>D</p>

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

Lifting / sollevamento / hubantriebe / levage / elevación

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

Rotation / rotazione / drehung / rotation / rotação

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

Linear movement / traslazione / linearbewegung / translation / translación

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

4

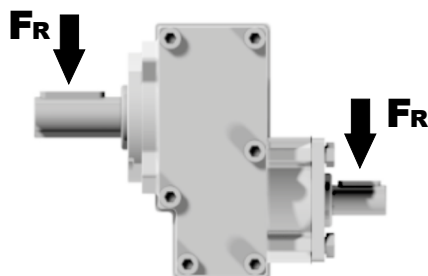
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

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

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

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

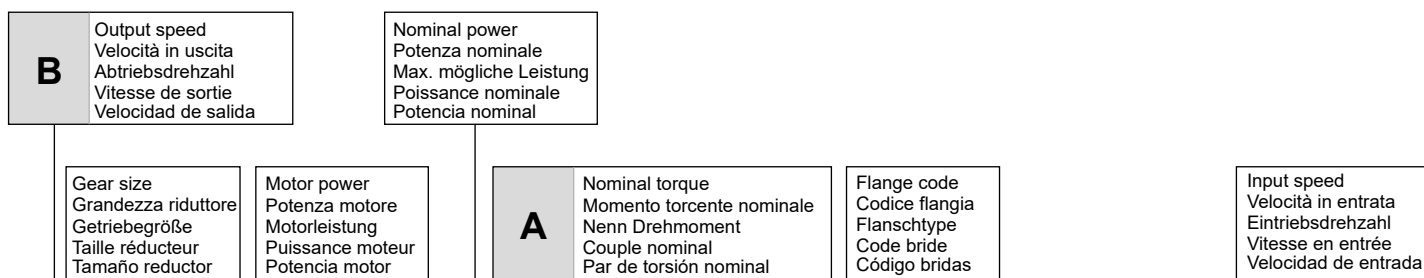
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée 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



	$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$	$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / 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 sprockets / 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 (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	
							-B	-C	-O	-P	-Q	Output shaft diam.	Ratios code
892	1.57	0.37	3.9	3.3	1.24	13	63	71	C	C		2844	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



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

D	Motor flange available Flange disponibili Erhältliche Motorflansche Brides disponibles Bridas disponibles	
B)	Mounting with reduction ring Montaggio con boccia 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/-sockel Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor	
B)	Available without reduction bushes Disponibile anche senza boccia Auch ohne Reduzierbüchse verfügbar Disponible aussi sans douille de réduction Disponible también sin casquillo	

A	Select required torque (according to service factor)	Seleziona la coppia desiderata (comprensiva del fattore di servizio)	Max. Drehmoment in Bezug zum Betriebsfaktor	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 (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 Ø	Ratios code
							-B	-C	-O	-P	-Q		
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

A 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.

SHELL Omala S4 WE 320

ENI Telium VSF 320

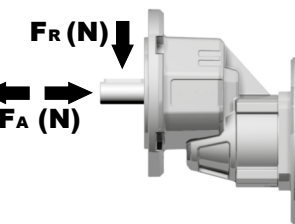
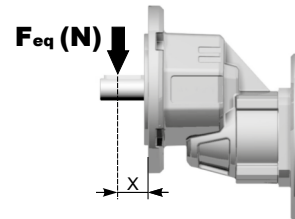
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

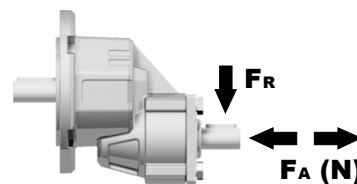
$$F_{eq} = F_R \cdot \frac{34.5}{X+19.5}$$



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



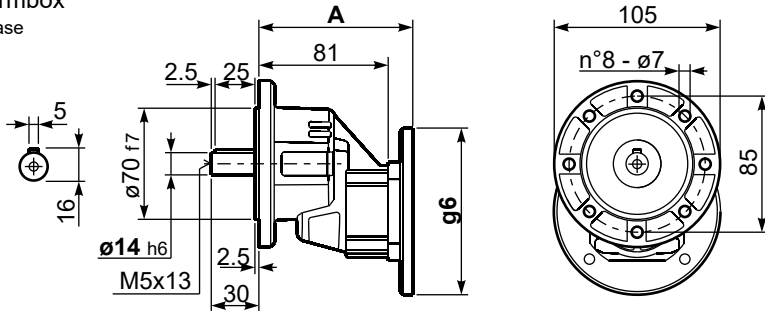
n ₁	FA	FR
1400	168	840
900	192	960

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

tab. 2

P211A-F... Basic wormbox
Riduttore base

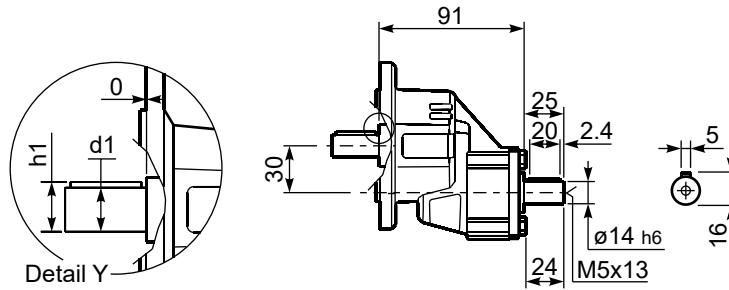
Gearbox weight
peso riduttore **1.40 kg**



B5 Motor Flanges	A	g6	kit code
63 B5	99.5	138	K050.4.041
71 B5	97	160	K050.4.042

B14 Motor Flanges	A	g6	kit code
56 B14	97	80	KC40.4.049
63 B14	99.5	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	$\phi 14 \times 30$	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	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		On request	05
222	6.30	0.37	16	2.2	0.83	35			C	C		1063		ø19	06
170	8.22	0.37	20	1.9	0.69	38			C	C		974		ø24	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

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

4

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.

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.

LUBRICATION 311A Oil Quantity 0.10 Lt.

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

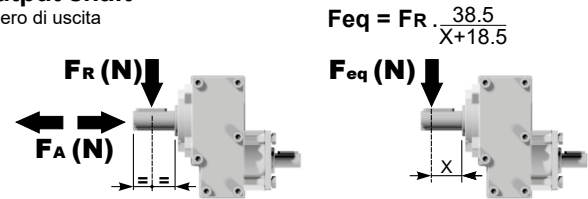
tab. 1

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

RADIAL AND AXIAL LOADS

Output shaft

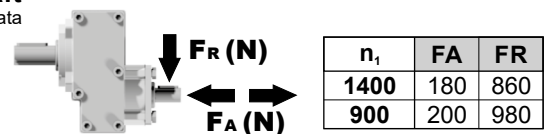
Albero di uscita



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

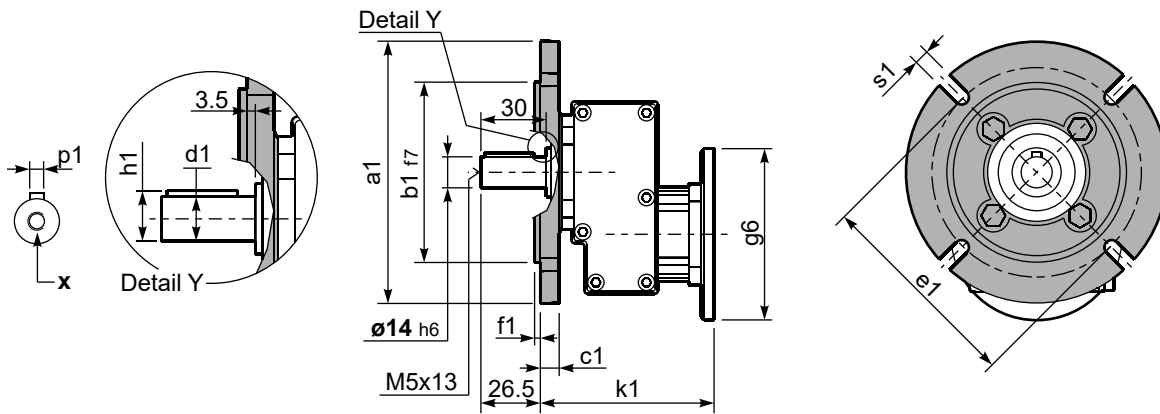
Albero in entrata



tab. 2

P311-F... Output flange
flange di uscita

Gearbox weight
peso riduttore **2.50 kg**



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

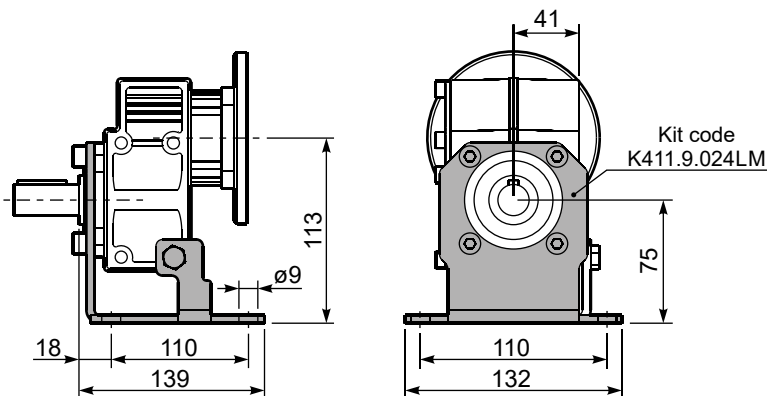
	Shaft - d1	p1	h1	x
Standard	∅ 14x30	5	16	M5x13
On request A richiesta	∅ 19x40 ∅ 24x40	6 8	21.5 27	M6x16 M6x16

Available output flanges / flange di uscita

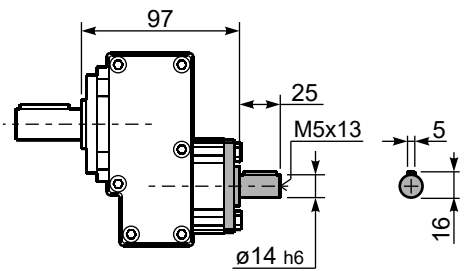
a1 ∅	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

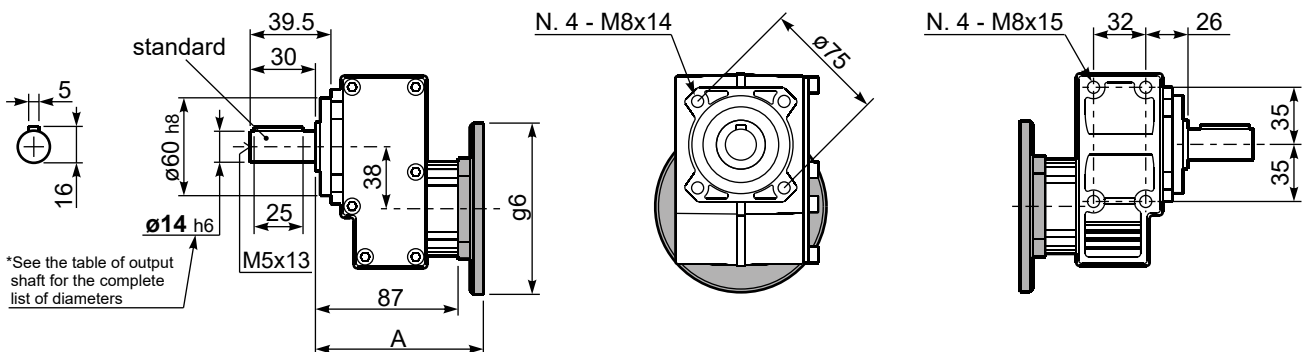
P311-H1... With feet
Con piedini



R311-N... Input Shaft
Albero in entrata



P311-N... Basic gearbox
Riduttore base



B14 Motor Flanges	A	g6	k1	kit code
56 B14	103	80	106.5	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	105.5	138	109	K050.4.041
71 B5	103	160	106.5	K050.4.042



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges				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

4

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.

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.

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.

LUBRICATION 411A Oil Quantity 0.10 Lt.

SHELL Omala S4 WE 320

ENI Telium VSF 320

For all details on lubrication and plugs check our website

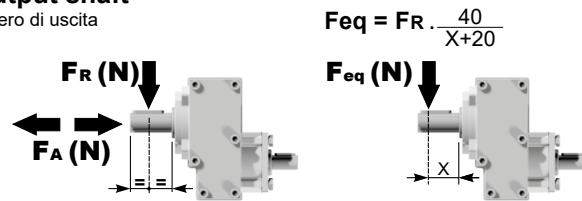
tab. 1

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

RADIAL AND AXIAL LOADS

Output shaft

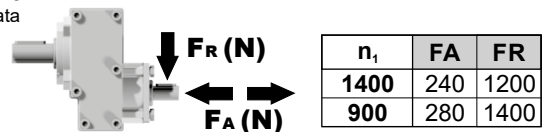
Albero di uscita



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

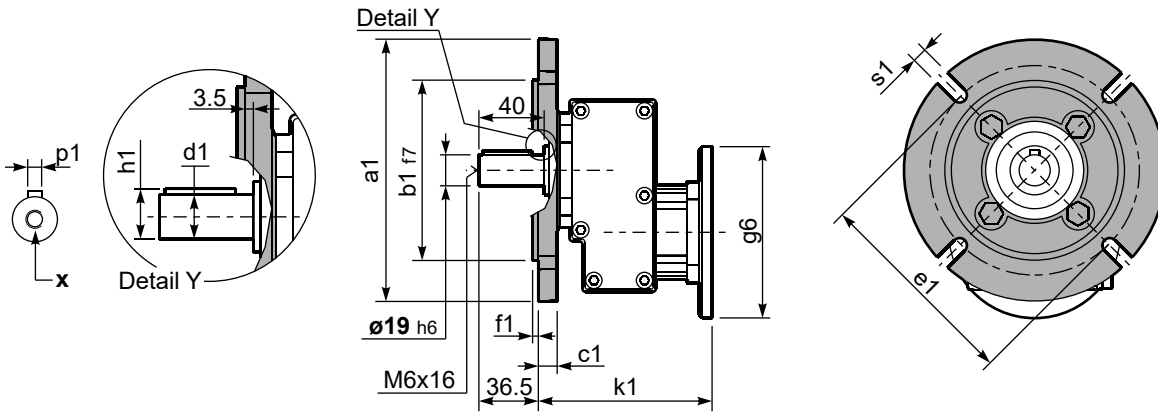
Albero in entrata



tab. 2

P411-F... Output flange
flange di uscita

Gearbox weight
peso riduttore **3.20 kg**



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

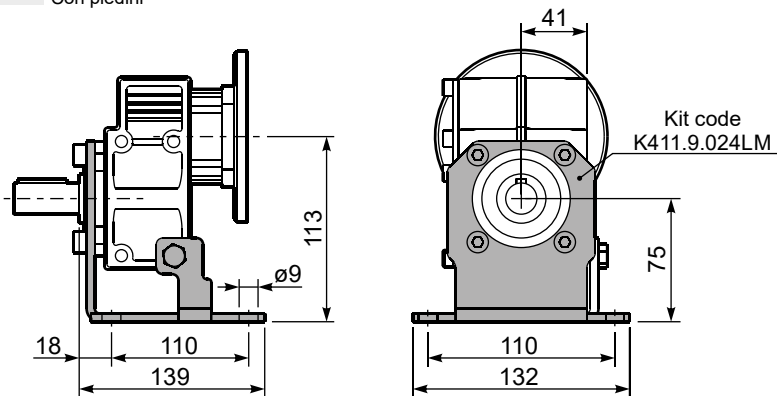
	Shaft - d1	p1	h1	x
Standard	ø 19x40	6	21.5	M6x16
On request A richiesta	ø 14x30 ø 24x40	5 8	16 27	M5x13 M6x16

Available output flanges / flange di uscita

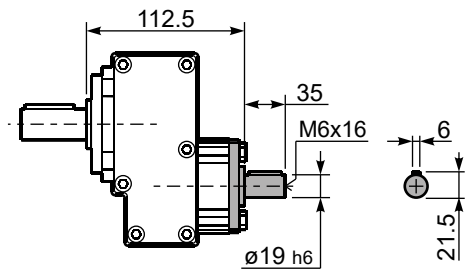
a1 ø	b1	c1	e1	f1	s1	kit code
120	80	11.5	100	3	9*	KC30.9.010
140	95	11.5	115	3	9	KC30.9.011
160	110	11.5	130	3.5	9	KC30.9.012
200	130	11.5	165	3.5	11	KC30.9.013

*Holes position
posizione fori

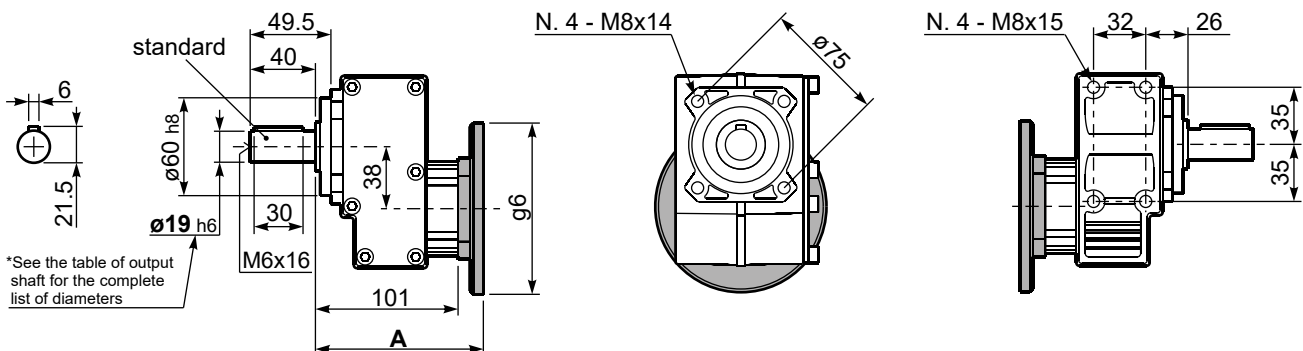
P411-H1... With feet
Con piedini



R411-N... Input Shaft
Albero in entrata



P411-N... Basic gearbox
Riduttore base



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

B14 Motor Flanges	A	g6	k1	kit code
71 B14	119.5	105	123	K063.4.047
80 B14	121.5	120	125	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		ø24	06
133	10.50	1.1	77	1.0	1.1	80	B										663			07

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

A Motor Flanges Available
Flange Motore Disponibili

B Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C Motor Flange Holes Position
Posizione Fori Flangia Motore

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

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

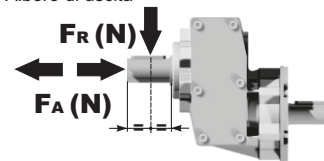
tab. 1

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

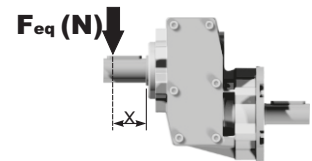
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



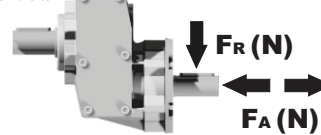
$$F_{eq} = FR \cdot \frac{47.5}{X+22.5}$$



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

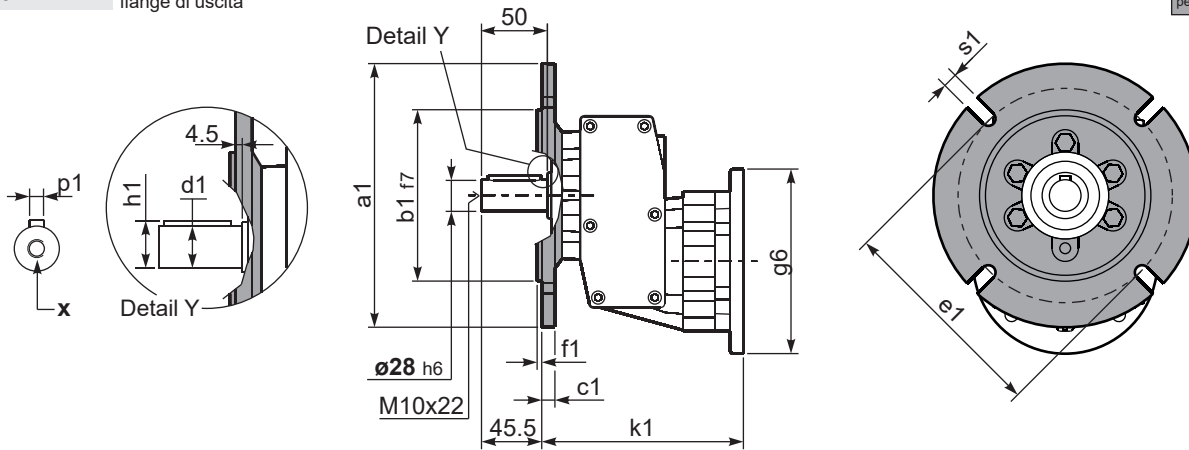


n_1	FA	FR
1400	400	2000
900	440	2200

tab. 2

P511-F... Output flanges
flange di uscita

Gearbox weight
peso riduttore **5.00 kg**



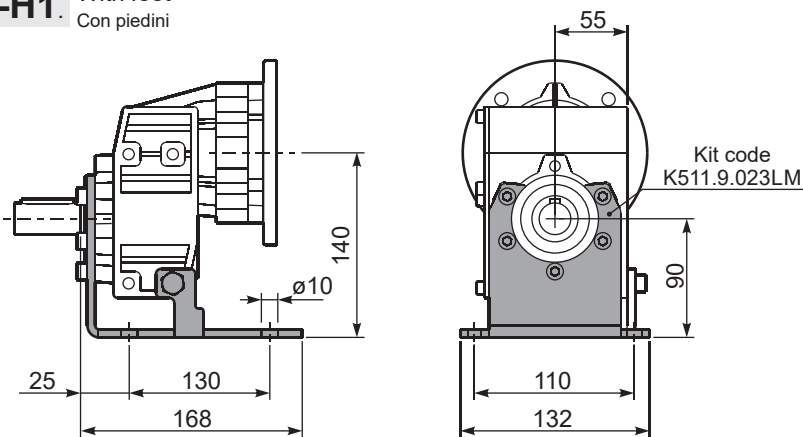
***Available output shaft / Albero di uscita**

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

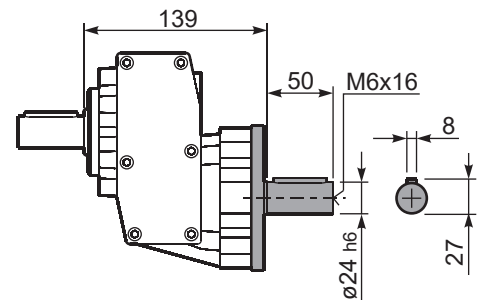
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	7	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3.5	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

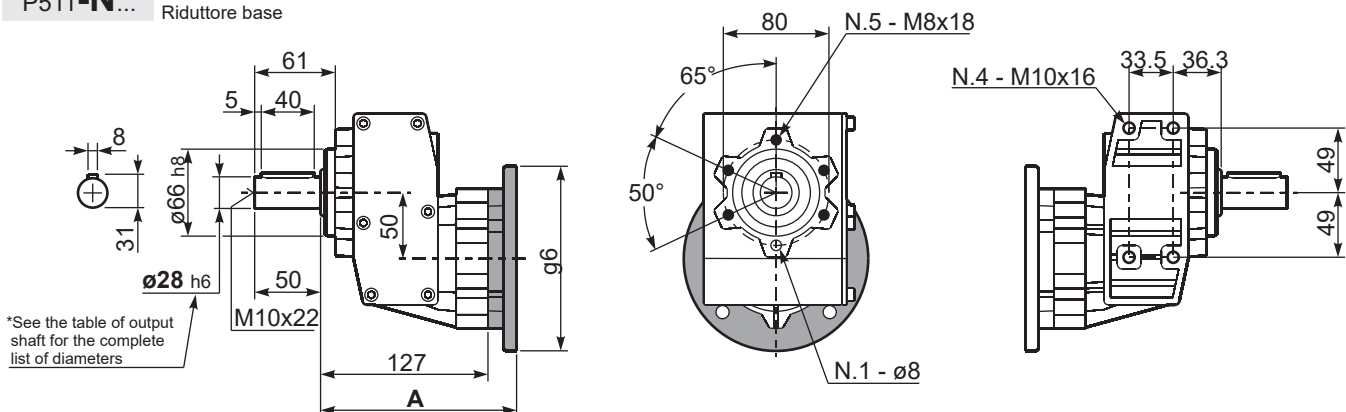
P511A-H1. With feet
Con piedini



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	145.5	160	150	K023.4.041
80/90 B5	147.5	200	152	K023.4.042
100/112 B5	156.5	250	161	K023.4.043
132 B5	174.5	300	179	KC51.4.043

B14 Motor Flanges	A	g6	k1	kit code
80 B14	147.5	120	152	K085.4.046
90 B14	147.5	140	152	K085.4.045
100/112 B14	156.5	160	161	K085.4.047
132 B14	174.5	200	179	KC51.4.041

Aluminum in line gearboxes

A modular and compact product

Alloy housing

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

Flange

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

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Oil seals

Two oil seals on request

Output shaft

With well proportioned bearings

Gears

Hardened and ground gears.

Feet

Removable feet. With patented locking system.

Foot prints

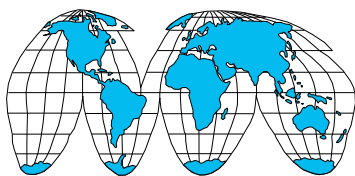
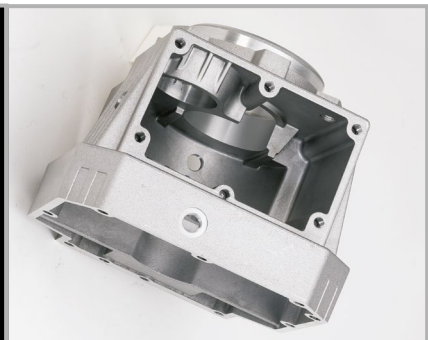
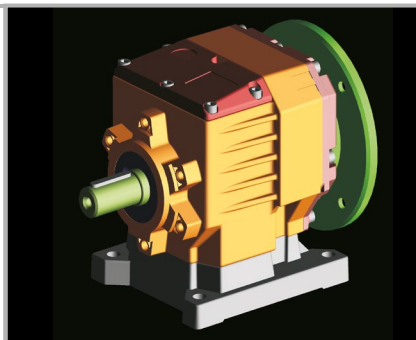
Compatible to the main standard of the market.

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

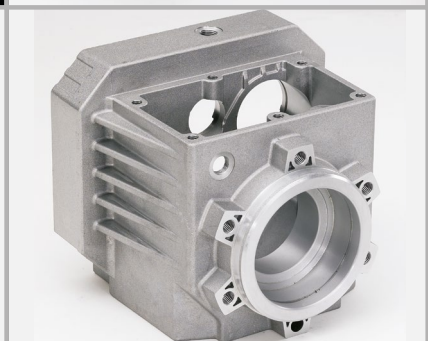
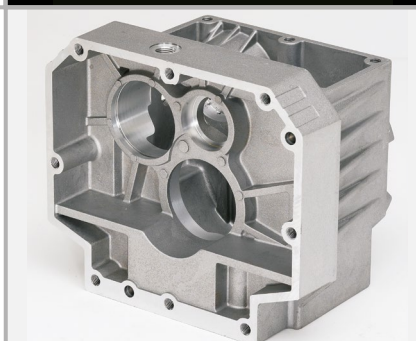


Single-piece aluminum alloy housing

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

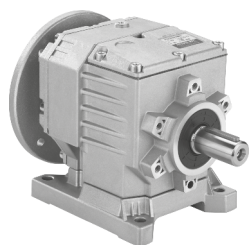


World wide sales network.



Specific type datasheet on page...

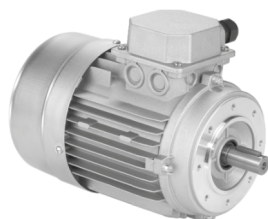
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Types / Tipi
Tipen / Types
Tipos

5-5	5-7	5-9	5-11	5-13	5-15	5-17	5-19	5-21
202A 70Nm	302A 120Nm	412A 175Nm	413A 175Nm	452A 300Nm	512A 360Nm	513A 360Nm	612A 530Nm	613A 530Nm

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 - Tamaño

Mounting - Montaggio
Montage - Fixation
Tipo de montaje

Ratio - Rapporto
Untersetzung - Reduction
Relación

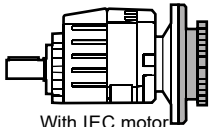
P

412A

-F

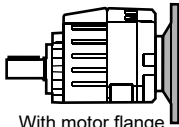
7.33

Aluminum coaxial gear boxes
Riduttori coassiali in alluminio



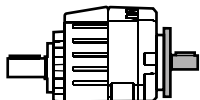
With IEC motor

M



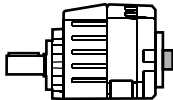
With motor flange

P



With male input shaft

R



Modular base

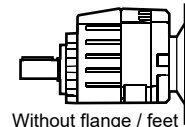
B

2 Stages
Riduzioni
Stufen
Trains
Etapas

3 Stages
Riduzioni
Stufen
Trains
Etapas

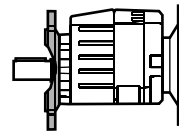
202A
302A
412A
452A
512A
612A

413A
513A
613A



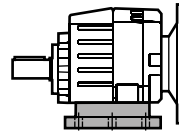
Without flange / feet

-N



Output flange mounted

-F



Mounted feet

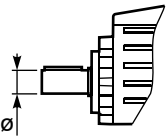
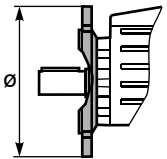



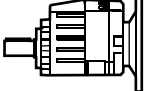
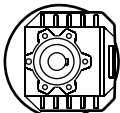
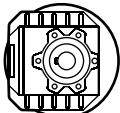
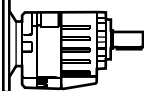
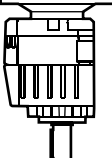

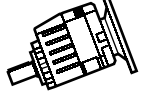
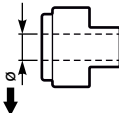
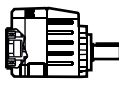




B..

Feet / piedini		G	H	R	L	L1	S
Feet Code	Market reference						
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



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.

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	Mounting position Posizione montaggio Einbaulage Position de montage Position de montage	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettiere Klemmkastenlage Position boîte à bornes Posición caja de bornes
<p>V</p>  <p>→ STANDARD</p> <p>202A</p> <p>S ⇒ Ø14 B → Ø16 D ⇒ Ø20 V ⇒ Ø25</p> <p>302A</p> <p>S ⇒ Ø14 B ⇒ Ø16 C ⇒ Ø19 D → Ø20 E ⇒ Ø24 V ⇒ Ø25</p> <p>412A 413A</p> <p>B ⇒ Ø16 C ⇒ Ø19 D ⇒ Ø20 E ⇒ Ø24 V → Ø25</p> <p>452A 512A 513A</p> <p>E ⇒ Ø24 V ⇒ Ø25 G ⇒ Ø28 H → Ø30 I ⇒ Ø35</p> <p>612A 613A</p> <p>G ⇒ Ø28 H ⇒ Ø30 I → Ø35 L ⇒ Ø38 M ⇒ Ø40</p>	<p>2</p>  <p>N Senza flangia Without flange</p> <p>202A 302A</p> <p>1 ⇒ Ø120 2 → Ø140 3 ⇒ Ø160 4 ⇒ Ø200</p> <p>412A 413A</p> <p>1 ⇒ Ø120 2 → Ø140 3 ⇒ Ø160 4 ⇒ Ø200 5 ⇒ Ø250</p> <p>452A 512A 513A</p> <p>3 ⇒ Ø160 4 → Ø200 5 ⇒ Ø250</p> <p>612A 613A</p> <p>3 ⇒ Ø160 4 ⇒ Ø200 5 → Ø250</p>	<p>-C</p> <p>Flange Flangia</p>  <p>B5</p> <p>-A=56 (Ø120) -B=63 (Ø140) -C=71 (Ø160) -D=80 (Ø200) -E=90 (Ø200) -F=100+112 (Ø250) -G=132 (Ø300)</p> <p>B14</p> <p>-O=56 (Ø80) -P=63 (Ø90) -Q=71 (Ø105) -R=80 (Ø120) -T=90 (Ø140) -U=100+112 (Ø160) -V=132 (Ø200)</p> <p>Type R Tipo R</p>  <p>202A 413A</p> <p>-1 ⇒ Ø14 302A 412A 513A 613A</p> <p>-2 ⇒ Ø19 452A 512A 612A</p> <p>-3 ⇒ Ø24</p> <p>Without flange Senza flangia</p>  <p>-M ⇒ With coupling</p> <p>202A 413A</p> <p>-Z ⇒ Ø9 (56B5) -0 ⇒ Ø11 (63B5) -1 ⇒ Ø14 (71B5)</p> <p>302A 412A 513A 613A</p> <p>-1 ⇒ Ø14 (71B5) -2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5)</p> <p>452A 512A 612A</p> <p>-2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5) -4 ⇒ Ø28 (100B5)</p>	<p>B3</p>  <p>B3 STANDARD</p>  <p>B6</p>  <p>B7</p>  <p>B8</p>  <p>V5</p>  <p>V6</p>  <p>V8</p>	<p>-</p> <p>Nothing indication: standard bore</p> <p>Nessuna indicazione: foro standard</p> <p>COUPLING</p>  <p>A = 9mm B = 11mm C = 14mm D = 19mm E = 24mm F = 28mm</p> <p>0</p> <p>Ready for input coupling Predisposto per giunto</p> 	<p>With Type M specify terminal box position Con tipo M specificare posizione morsettiere</p>  <p>A</p>  <p>B STANDARD</p>  <p>C</p>  <p>D</p>

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

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

5

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

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

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

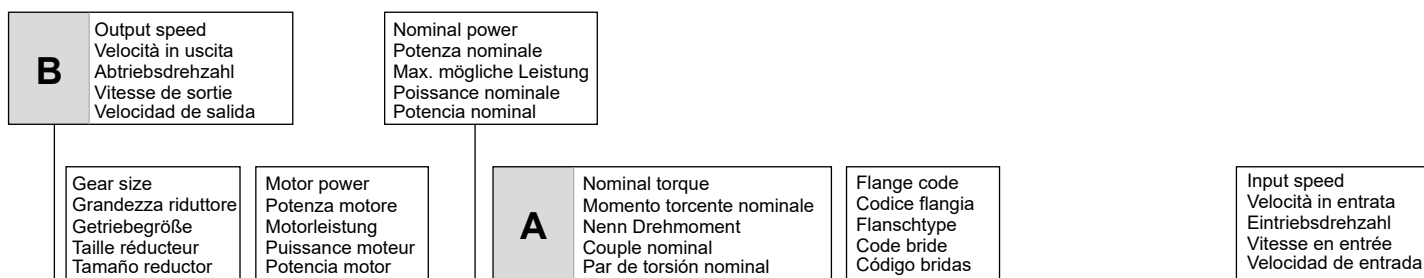
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée 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



	$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$	$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / 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



412A

**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		
							-B	-C	-D	-E	-Q	-R	-T	-U			Ratio code
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 boccia 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/-sockel Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor	
B)	Available without reduction bushes Disponibile anche senza boccia 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 	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**	23	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**	36	1.7	0.93	60			C	C		1915		07
123	11.42	0.55**	41	1.5	0.80	60			C	C		1715	standard	08
107	13.03	0.55**	47	1.3	0.70	60			C	C		1912	ø16	09
93	15.10	0.37	37	1.6	0.61	60			C	C		1712	ø14	10
86	16.20	0.37	39	1.5	0.57	60			C	C		1910	ø20	11
75	18.78	0.37	45	1.3	0.49	60			C	C		1710	ø25	12
66	21.15	0.37	51	1.2	0.43	60			C	C		1312	On request	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	77	0.9	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

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.

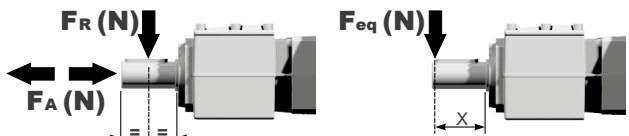
SHELL Omala S4 WE 320 **AGIP** Telium VSF 320

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

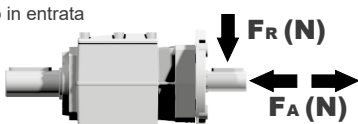
Output shaft
Albero di uscita

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



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

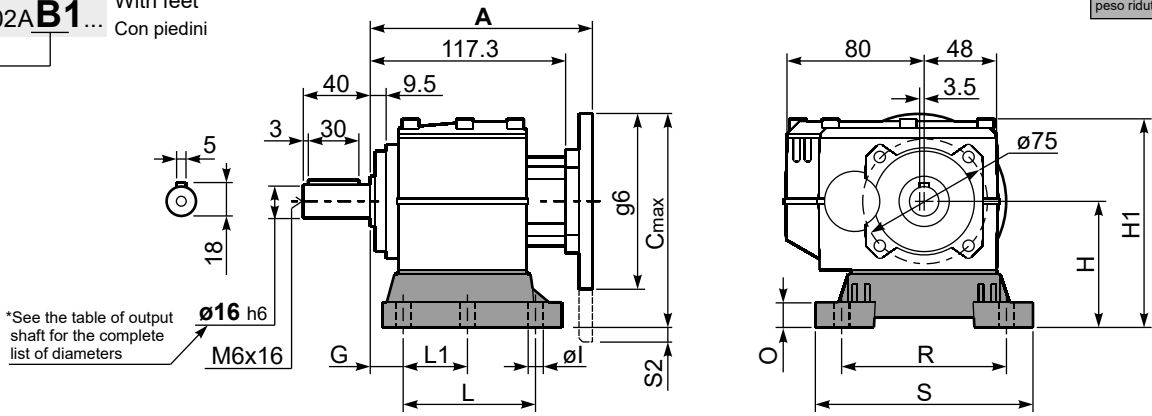


n ₁	FA	FR
1400	140	700
900	160	800
500	190	950

tab. 2

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

P202A-B1... With feet
 Con piedini



*See the table of output shaft for the complete list of diameters
 $\phi 16$ h6
 M6x16

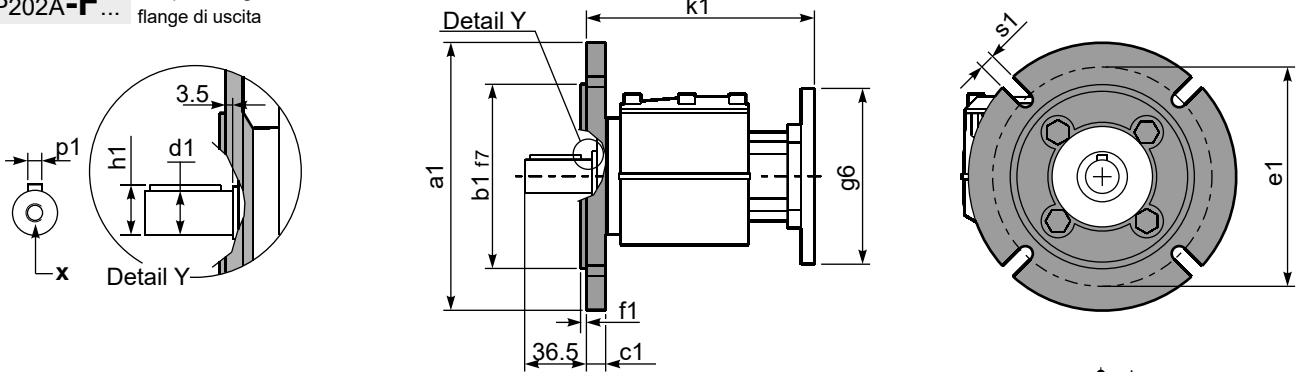
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	$\phi 1$	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	133	15	9	-	-	KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	-	-	KC30.9.023LM
S1	17-32	18	75	110	110	50	130	123	15	9	-	63B5	KC30.9.024

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 / Albero di uscita

	Shaft - d1	p1	h1	x
Standard	$\phi 16 \times 40$	5	18	M6x16
On request A richiesta	$\phi 14 \times 30$	5	16	M6x16
	$\phi 20 \times 40$	6	22.5	M8x19
	$\phi 25 \times 50$	8	28	M8x19

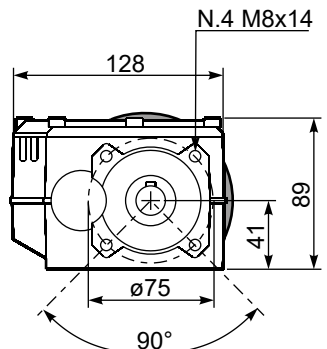
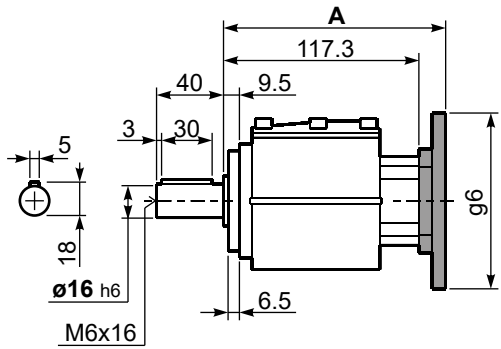
Available output flanges / flange di uscita

a1 ϕ	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

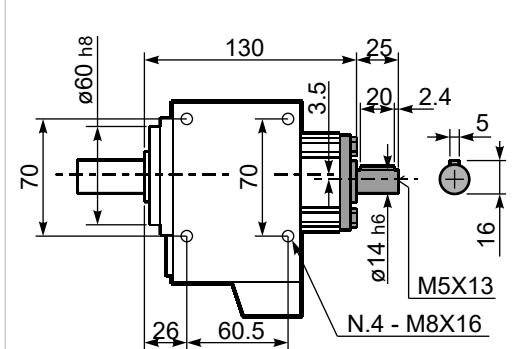
* Holes position
 Posizione fori

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	135.8	170	140	139.3	K050.4.041
71 B5	133.3	180	160	136.8	K050.4.042

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
56 B14	133.3	139	80	136.8	KC40.4.049
63 B14	135.8	146	90	139.3	K050.4.047
71 B14	133.3	152.5	105	136.8	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 	Output Shaft 	Ratios code
							-B	-C	-D	-E	-Q	-R	-T			
							63	71*	80*	90*	71	80	90			
407	3.44	1.5	34	1.0	1.6	35	B				C	C		2821	standard ø20	01
327	4.28	1.5	42	1.0	1.4	40	B				C	C		2818		02
257	5.45	1.5	53	1.0	1.5	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		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	93	1.2	1.3	114	B				C	C		1912		09
93	15.10	1.1	108	1.1	1.2	114	B				C	C		1712		10
86	16.20	0.75	80	1.3	1.0	107	B				C	C		1910	11	
75	18.78	0.75	92	1.2	0.87	107	B				C	C		1710	12	
66	21.15	0.75	104	1.1	0.82	114	B				C	C		1312	13	
64	21.84	0.75	107	1.1	0.83	119	B				C	C		1015	On request	
53	26.31	0.55	95	1.1	0.62	107	B				C	C		1310	15	
48.5	28.88	0.55	105	1.1	0.60	114	B				C	C		1012	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	113	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

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.

SHELL Omala S4 WE 320 **AGIP** Telium VSF 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

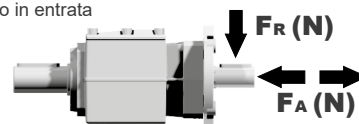
$$F_{eq} = FR \cdot \frac{35.7}{X+20.7}$$



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

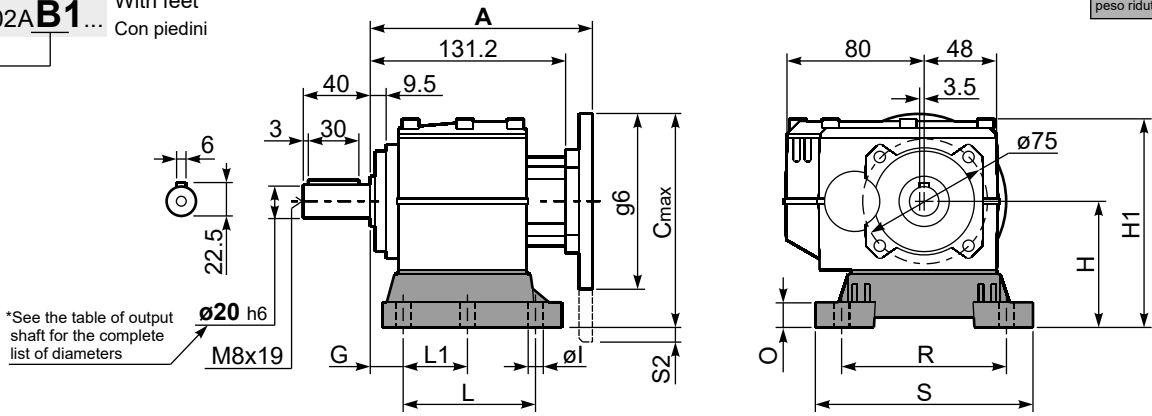


n ₁	FA	FR
1400	226	1130
900	264	1320
500	322	1610

tab. 2

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

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



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

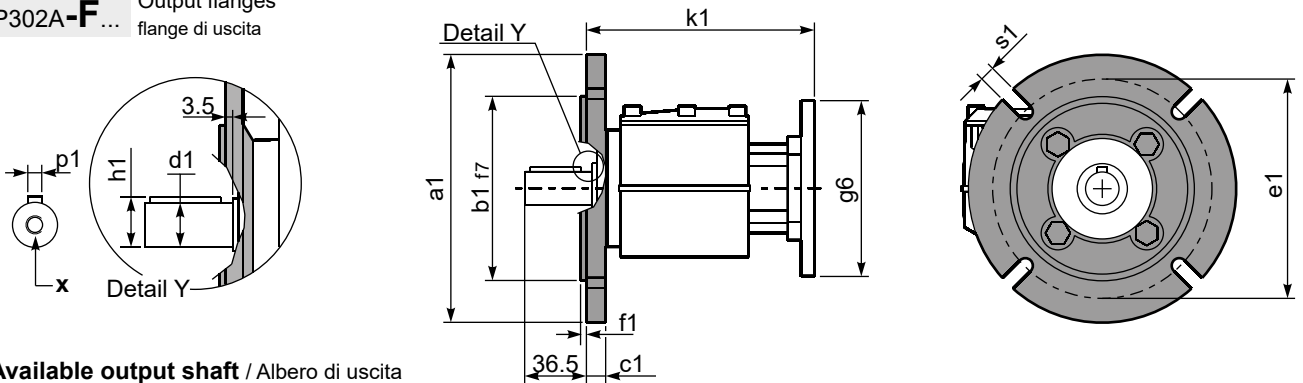
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	1	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	133	15	9	15 80/90B5	-	KC30.9.022
B2	212/3	18	100	130	107.5	60	155	145	5	11	3.5 80/90B5	-	KC30.9.023LM
S1	17-32	18	75	110	110	50	130	123	15	9	5 71B5	71B5	KC30.9.024

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	20x40	6	22.5	M8x19
On request A richiesta	14x30	5	16	M6x16
	16x40	5	18	M6x16
	19x40	6	21.5	M6x16
	24x50	8	27	M8x19
	25x50	8	28	M8x19

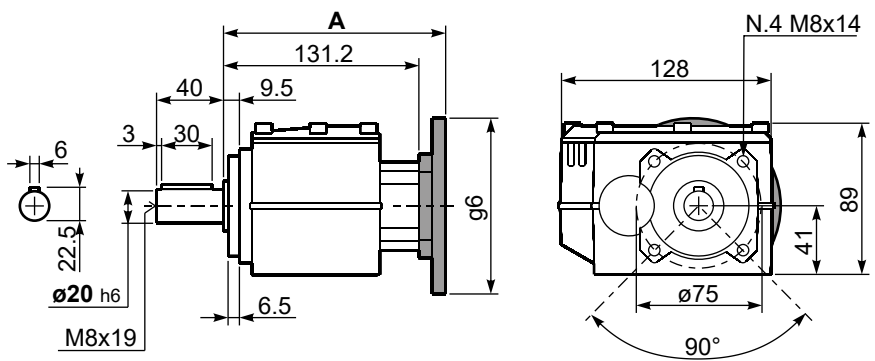
Available output flanges / flange di uscita

a1 1	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

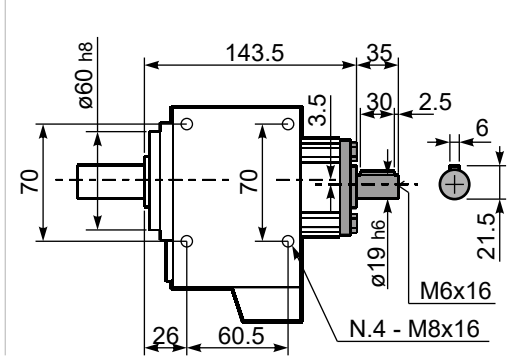
* Holes position
 Posizione fori

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	149.7	180	160	153.2	K063.4.042
80/90 B5	151.7	200	200	155.2	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	151.7	160	120	155.2	K063.4.046
90 B14	151.7	170	140	155.2	K063.4.041



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 Ø	Ratios code
							-B	-C	-D	-E	-F	-Q	-R	-T	-U		
							63	71	80*	90*	100*	71	80	90	100		
398	3.52	3	68	1.2	3.5	80	B					C	C			2821	01
321	4.37	3	84	1.1	3.1	90	B					C	C			2818	02
252	5.56	3	107	0.9	2.7	100	B					C	C			2813	03
220	6.36	2.2	90	1.2	2.5	105	B					C	C			1921	04
191	7.33	2.2	104	1.2	2.5	120	B					C	C			2812	05
177	7.89	2.2	112	1.2	2.5	130	B					C	C			1918	06
139	10.06	2.2	143	1.2	2.5	165	B					C	C			1913	08
120	11.66	2.2	166	1.0	2.2	165	B					C	C			1713	09
106	13.26	1.5	130	1.3	1.9	165	B					C	C			1912	10
102	13.68	1.5	134	1.2	1.8	165	B					C	C			1513	25
91	15.37	1.5	151	1.1	1.6	165	B					C	C			1712	11
86	16.33	1.5	160	1.0	1.5	165	B					C	C			1313	26
78	18.04	1.5	177	0.9	1.4	165	B					C	C			1512	23
65	21.54	1.1	154	1.1	1.2	165	B					C	C			1312	14
63	22.29	1.1	160	1.0	1.1	165	B					C	C			1013	15
53	26.31	0.75	129	1.2	0.90	155	B					C	C			1310	16
47.6	29.40	0.75	144	1.1	0.86	165	B					C	C			1012	17
39	35.91	0.55	130	1.2	0.66	155	B					C	C			1010	18
36.5	38.37	0.55	139	1.2	0.66	165	B					C	C			912	19
29.9	46.87	0.55	170	0.9	0.51	155	B					C	C			910	20
27.6	50.67	0.37	123	1.1	0.41	137	B					C	C			712	21
22.6	61.89	0.37	150	1.0	0.38	155	B					C	C			710	22

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 **412A** 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 **412A** 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 **412A** 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 **412A** 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 **412A** 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	V8
0.25 LT	0.35 LT	0.40 LT	0.45 LT	0.40 LT	0.50 LT	Ask	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320			

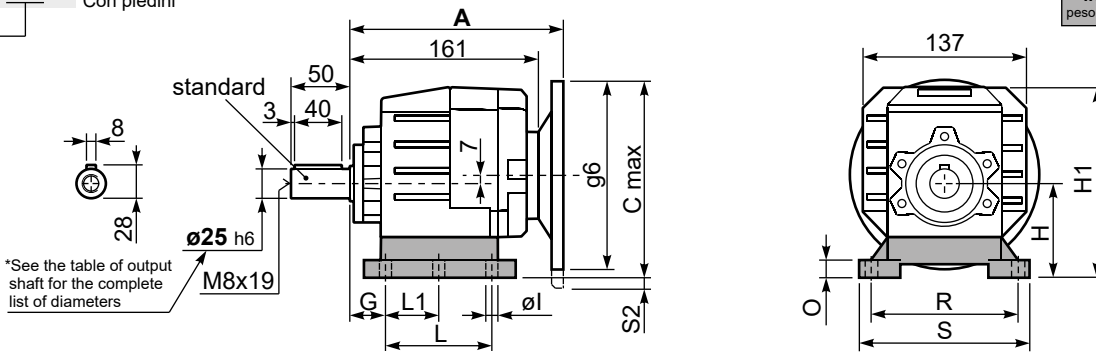
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{46}{X+21}$					
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								
n ₁	FA	FR						
1400	240	1200						
900	280	1400						
500	340	1700						

tab. 2

P412A **B1** ... With feet
Con piedini

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



Feet / piedini

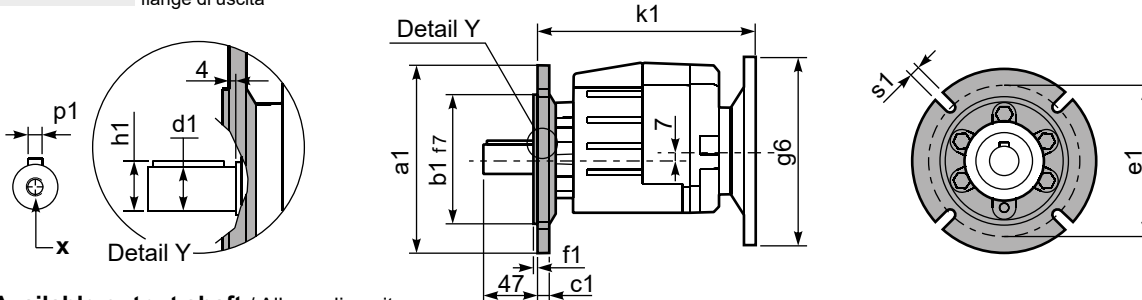
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167.5	15	-	8/33 80/90B5 100/112B5	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182.5	17	11	18 100/112B5	-	KC40.9.025
S1	17	18	75	110	90±110	50	145	155.5	15	9	18/43 80/90B5 100/112B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172.5	20	9	3/28 80/90B5 100/112B5	-	KC40.9.024
H2	022-223	25	100	110	115	-	145	182.5	20	9	18 100/112B5	-	KC40.9.026
M1	42/3	25	80	110±120	85	-	145	162.5	15	9	13/38 80/90B5 100/112B5	-	KC40.9.023

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

P412A **F** ... Output flanges
flange di uscita



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

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

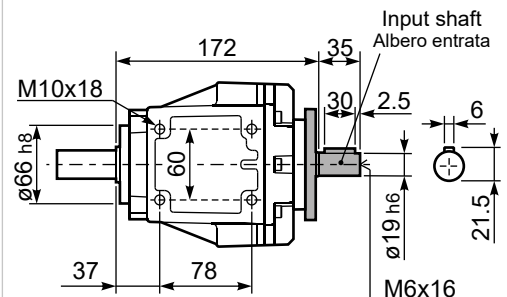
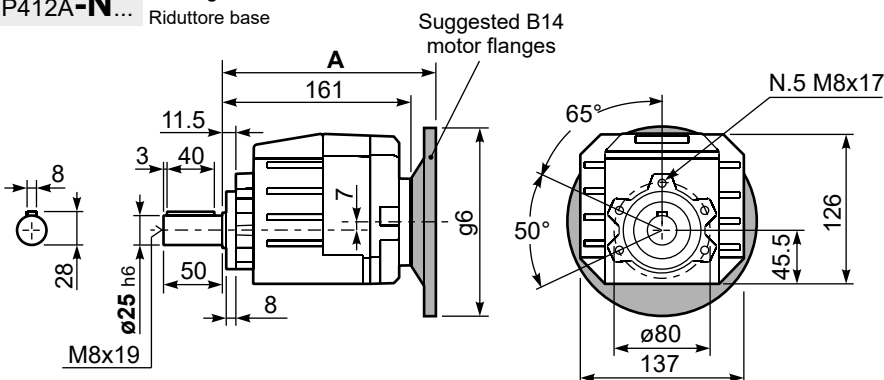
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	7	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3.5	9	KC40.9.012
200	130	10	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

P412A **N** ... Basic gearbox
Riduttore base

R412A **N** ... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	181.5	177	140	185.5	K063.4.041
71 B5	179.5	187	160	183.5	K063.4.042
80/90 B5	181.5	207	200	185.5	K063.4.043
100/112 B5	196.5	232	250	200.5	KC40.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	179.5	159.5	105	183.5	K063.4.047
80 B14	181.5	167	120	185.5	K063.4.046
90 B14	181.5	177	140	185.5	K063.4.041
100/112 B14	196.5	187	160	200.5	KC40.4.041



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges			Output Shaft \varnothing	Ratios code
							-B	-C	-O	-P	-Q		
							63	71	56	63	71		
36.5	38.40	0.37	91	1.8	0.67	165			C	C		171713	02
32.0	43.69	0.37	104	1.6	0.59	165			C	C		191712	03
27.6	50.64	0.37	120	1.4	0.51	165			C	C		171712	04
26.2	53.36	0.37	127	1.3	0.47	160			C	C		191710	05
22.9	61.21	0.37	145	1.2	0.43	170			C	C		191312	06
22.6	61.85	0.37	147	1.1	0.40	160			C	C		171710	07
19.7	70.95	0.37	168	1.0	0.37	170			C	C		131712	08
19.1	73.43	0.37	174	1.0	0.37	175			C	C		101713	09
18.7	74.77	0.37	177	0.9	0.33	160			C	C		191310	10
16.2	86.66	0.25	139	1.2	0.29	160			C	C		131710	11
14.5	96.85	0.25	155	1.1	0.27	170			C	C		101712	12
13.6	102.89	0.25	165	1.1	0.27	175			C	C		101313	13
11.1	126.40	0.18	155	1.1	0.21	170			C	C		91712	17
10.3	135.69	0.18	166	1.0	0.20	170			C	C		101312	15
8.4	165.74	0.12	131	1.2	0.15	160			C	C		101310	16
7.9	177.09	0.12	140	1.2	0.15	170			C	C		91312	18
6.5	216.31	0.09	136	1.2	0.12	160			C	C		91310	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

EN Unit **413A** 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 **413A** 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 **413A** 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 **413A** 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 **413A** 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	
SHELL Omala S4 WE 320				ENI Telium VSF 320			

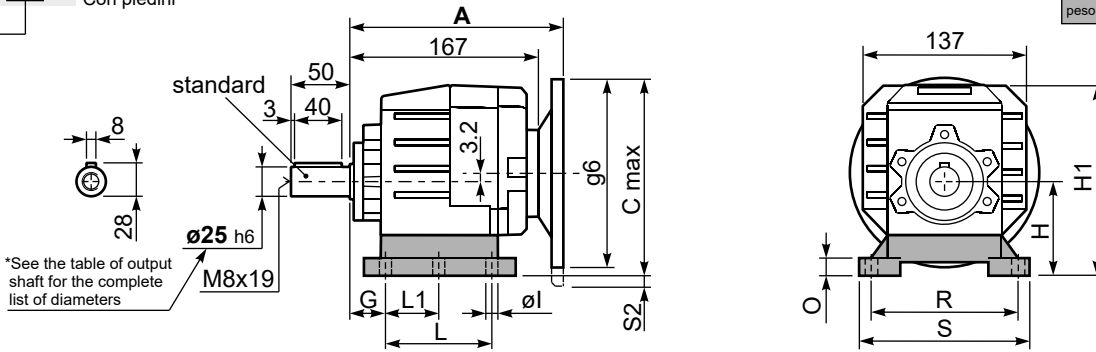
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS									
Output shaft Albero di uscita					$F_{eq} = F_R \cdot \frac{46}{X+21}$				
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR	
300	310	1550	140	406	2030	70	540	2700	
250	330	1650	120	448	2240	40	600	3000	
200	360	1800	85	480	2400	15	600	3000	
Input shaft Albero in entrata									
n_1	FA	FR							
1400	140	700							
900	160	800							
500	190	950							

tab. 2

P413A **B1** ... With feet
Con piedini

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



Feet / piedini

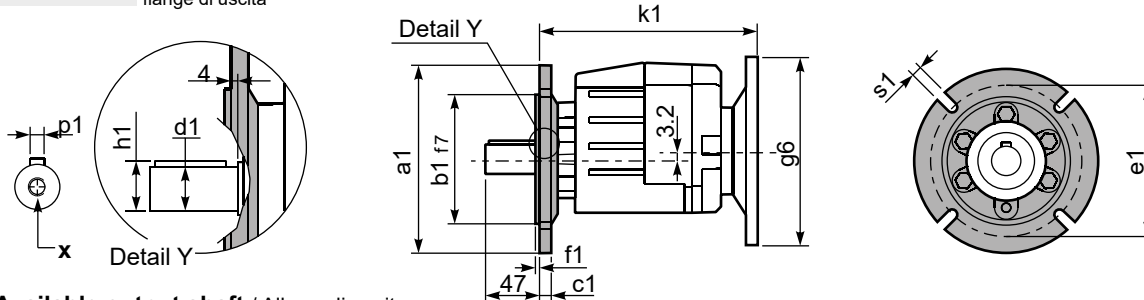
Feet Code	Market reference	G	H	R	L	L1	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B1	112	18	85	110	87	50	130	167.5	15	-	-	-	KC35.9.021
B2	212/3	18	100	130	107.5	60	155	182.5	17	11	-	-	KC40.9.025
S1	17	18	75	110	90±110	50	145	155.5	15	9	2 80/90B5	-	KC40.9.022
S2	27	25	90	110	130	-	145	172.5	20	9	-	-	KC40.9.024
H2	022-223	25	100	110	115	-	145	182.5	20	9	-	-	KC40.9.026
M1	42/3	25	80	110±120	85	-	145	162.5	15	9	-	-	KC40.9.023

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

P413A **-F** ... Output flanges
flange di uscita



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

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

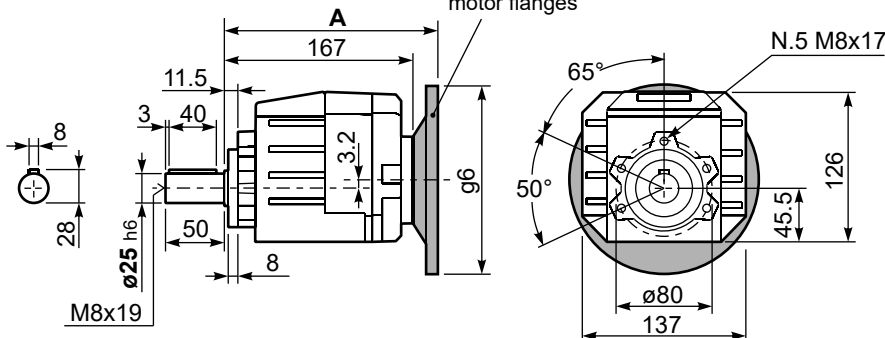
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
120	80	10	100	3	7	KC40.9.010
140	95	10	115	3	9	KC40.9.011
160	110	10	130	3.5	9	KC40.9.012
200	130	10	165	3.5	11	KC40.9.013
250	180	11.5	215	3.5	14	KC40.9.014

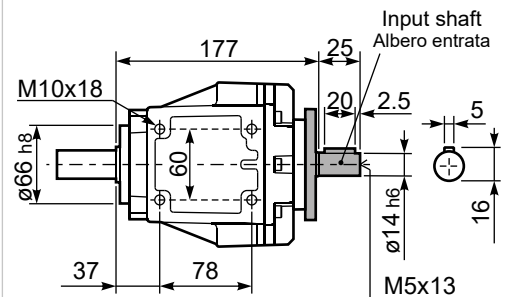
With flange and feet only on request. Ask for compatibility

P413A **-N** ... Basic gearbox
Riduttore base

Suggested B14 motor flanges



R413A **-N** ... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	185.5	173.2	140	189.5	K050.4.041
71 B5	183	183.2	160	187	K050.4.042

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
56 B14	183	143.2	80	187	KC40.4.049
63 B14	185.5	148.2	90	189.5	K050.4.047
71 B14	183	155.7	105	187	K050.4.045



QUICK SELECTION / Selez one 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	93	1.6	6.3	150	B								3018	01	
331	4.23	4	108	1.6	6.1	170	B								3016	02	
279	5.01	4	129	1.6	6.1	200	B								3014	03	
231	6.07	4	156	1.6	6.3	250	B								3012	04	
206	6.81	4	175	1.6	6.2	277	B								2018	05	
176	7.96	4	204	1.5	5.8	300	B								2016	06	
148	9.45	4	242	1.3	4.9	304	B								2014	07	
122	11.43	4	293	1.0	4.0	300	B								2012	08	
99	14.21	3	274	1.0	2.8	265	B								2010	09	
84	16.62	3	321	0.9	2.8	304	B								1314	10	
70	20.10	2.2	286	1.0	2.3	300	B								1312	11	
56	24.98	1.85	302	0.9	1.6	265	B								1310	12	
47.6	29.41	1.5	288	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	290	1.0	1.1	290	B								614	15	
31.7	44.23	1.1	316	0.8	0.92	265	B								810	16	
28.6	49.00	0.75	240	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 utilizza re 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 Riduiz one

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

C) Motor Flange Holes Position
Posiz one Fori Flangia Motore

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

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 n_2 lässigen 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 posiz one specificare in fase d'ordine o aggiungere olio					
B3	B6	B7	B8	V5	V6	V8
0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	0.31 LT	Ask
SHELL Omala S4 WE 320			AGIP Telium VSF 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

$F_{eq} = FR \cdot \frac{51}{X+21}$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	415	2070	140	540	2700	70	700	3510
250	430	2160	120	560	2790	40	810	4050
200	470	2340	85	630	3150	15	900	4500

Input shaft / Albero in entrata

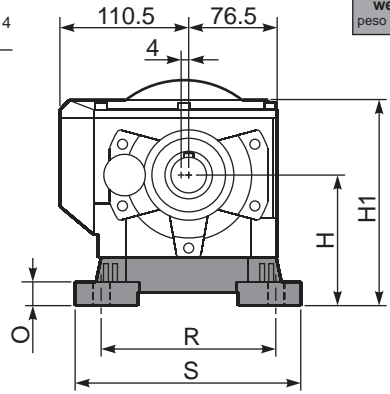
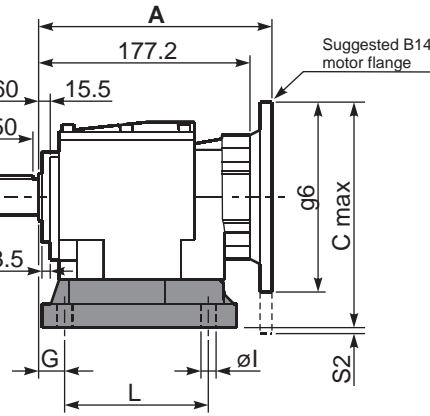
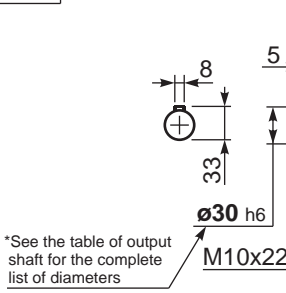
n_1	FA	FR
1400	400	2000
900	440	2200
500	440	2200

tab. 2

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	173	20	11	15 100/112B5 40 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	193	18	14	20 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	178	24	13.5	-	80/90B5	KC50.9.022
H3	023-233	30	130	135	135	185	193	25	14	20 132B5	-	KC50.9.025
M2	52/3	30	110	135-150	100	190	173	18	11	15 100/112B5 40 132B5	-	KC50.9.023

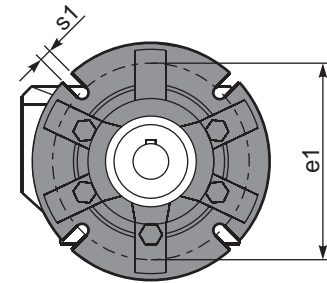
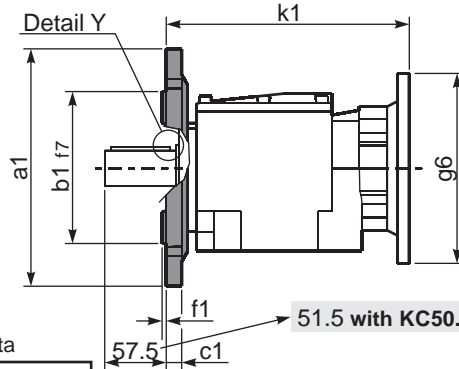
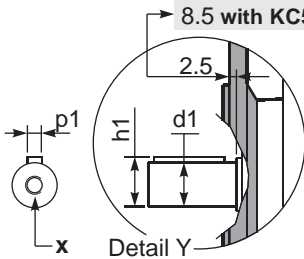
Other feet are available, see our web site
Sono disponibili altri piedini, consulta il nostro sito web

A see on page bottom

Most popular types
Tipi più diffusi

P452A-F...

Output flanges
flange di uscita



*Available output shaft / Albero di uscita

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

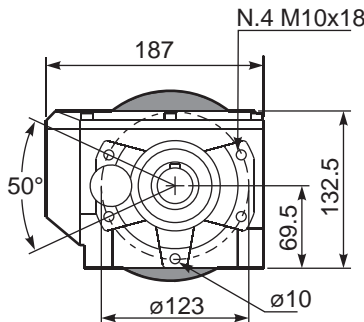
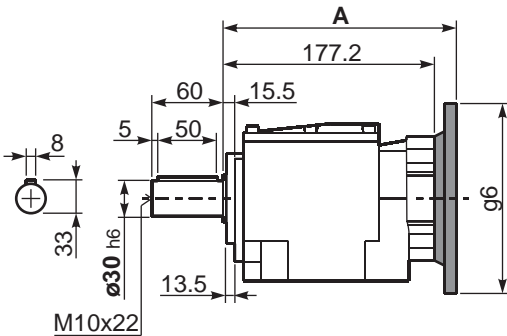
Available output flanges / flange di uscita

a1	ø	b1	c1	e1	f1	s1	kit code
160		110	14	130	3.5	11	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

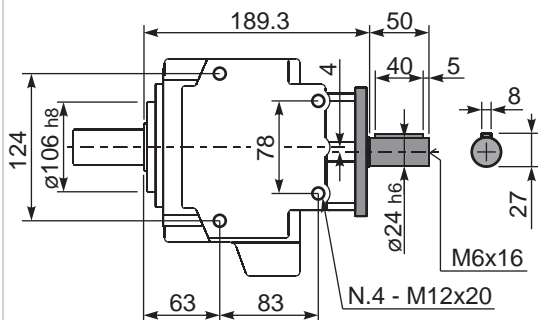
P452A-N...

Basic gearbox
Riduttore base

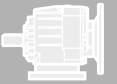


R452A-N...

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	K023.4.041	204.2	80 B14	197.7	202	120	200.2	K085.4.046	206.2
80/90 B5	197.7	242	200	200.2	K023.4.042	206.2	90 B14	197.7	212	140	200.2	K085.4.045	206.2
100/112 B5	206.7	267	250	209.2	K023.4.043	215.2	100/112 B14	206.7	222	160	209.2	K085.4.047	215.2
132 B5	224.7	292	300	227.2	KC51.4.043	233.2	132 B14	224.7	242	200	227.2	KC51.4.041	233.2



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	
							-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	127	1.2	6.6	155	B										3018	01
331	4.23	5.5	148	1.2	6.5	180	B										3016	02
279	5.01	5.5	176	1.2	6.4	210	B										3014	03
231	6.07	5.5	213	1.2	6.4	255	B										3012	04
206	6.81	5.5	239	1.3	6.7	300	B										2018	05
176	7.96	5.5	279	1.2	6.4	335	B										2016	07
148	9.45	5.5	331	1.1	5.8	360	B										2014	08
122	11.43	4	293	1.1	4.4	330	B										2012	09
100	14.00	3	270	1.3	3.9	360	B										1316	21
84	16.62	3	321	1.1	3.3	360	B										1314	11
70	20.10	2.2	286	1.2	2.5	330	B										1312	12
57	24.61	2.2	350	0.9	2.0	330	B										1112	20
47.6	29.41	1.5	288	1.2	1.9	360	B										814	14
39.3	35.58	1.5	349	0.9	1.4	330	B										812	15
34.6	40.50	1.1	290	1.1	1.2	320	B										614	16
31.7	44.23	1.1	316	0.8	0.88	255	B										810	17
28.6	49.00	1.1	351	0.9	1.0	330	B										612	18
23.0	60.90	0.75	299	0.8	0.64	255	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 **512A** 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 **512A** 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 **512A** 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 **512A** 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 **512A** 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					
0.70 LT	0.80 LT	1.15 LT	1.20 LT	1.15 LT	1.25 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 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

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

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

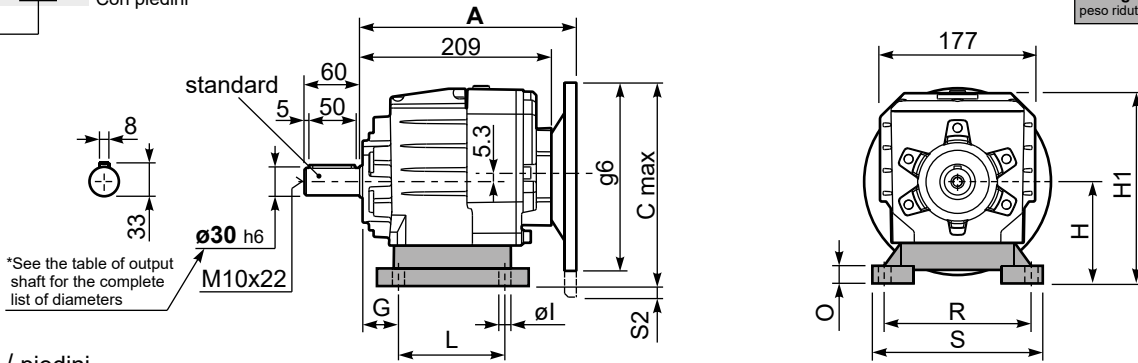
Input shaft
Albero in entrata

n ₁	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P512A **B1** ... With feet
Con piedini

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



Feet / piedini

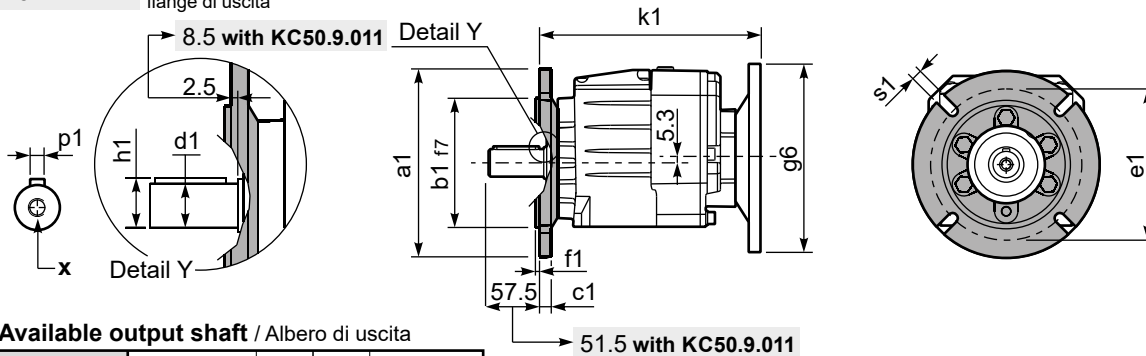
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211	20	11	10 100/112B5 35 132B5	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231	18	14	15 132B5	-	KC60.9.024
S4	47-57	30	115	135	165	170	216	25	14	5 100/112B5 30 132B5	-	KC50.9.022
H3	023-233	30	130	135	135	185	231	25	14	15 132B5	-	KC50.9.025
M2	52/3	30	110	135-150	100	190	211	18	11	10 100/112B5 35 132B5	-	KC50.9.023

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

P512A-**F** ... Output flanges
flange di uscita



*Available output shaft / Alberi di uscita

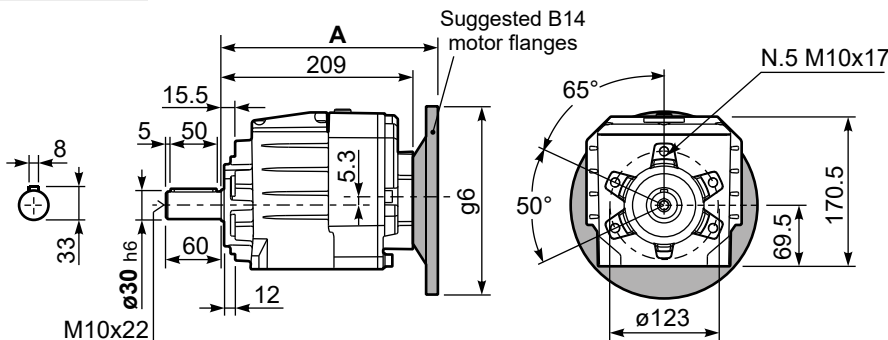
	Shaft - d1	p1	h1	x
Standard	ø 30x60	8	33	M10x22
On request A richiesta	ø 24x50	8	27	M8x19
	ø 25x50	8	28	M8x19
	ø 28x60	8	31	M8x19
	ø 35x60	10	38	M10x22

Available output flanges / flange di uscita

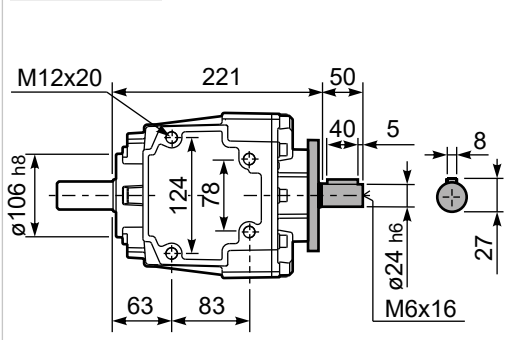
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	11	KC50.9.011
200	130	13	165	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request.
Ask for compatibility

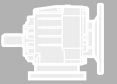
P512A-**N** ... Basic gearbox
Riduttore base



R512A-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	227.5	215.3	160	230	K023.4.041	236	80 B14	229.5	195.3	120	232	K085.4.046	238
80/90 B5	229.5	235.3	200	232	K023.4.042	238	90 B14	229.5	205.3	140	232	K085.4.045	238
100/112 B5	238.5	260.3	250	241	K023.4.043	247	100/112 B14	238.5	215.3	160	241	K085.4.047	247
132 B5	259.5	285.3	300	259	KC51.4.043	265	132 B14	259.5	235.3	200	259	KC51.4.041	265



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	0.9	1.4	360	B				C	C		191316	01
29.6	47.22	1.1	331	1.1	1.2	360	B				C	C		191314	02
25.6	54.73	1.1	384	0.9	1.0	360	B				C	C		171314	03
21.1	66.22	0.75	318	1.0	0.78	330	B				C	C		171312	04
18.3	76.69	0.75	369	1.0	0.73	360	B				C	C		131314	05
16.7	83.59	0.55	297	1.2	0.67	360	B				C	C		190814	06
15.1	92.78	0.55	329	1.0	0.55	330	B				C	C		131312	07
13.4	104.68	0.55	371	1.0	0.54	360	B				C	C		101314	08
11.9	117.22	0.37	278	1.2	0.44	330	B				C	C		170812	09
11.1	126.65	0.37	300	1.1	0.41	330	B				C	C		101312	10
10.2	136.62	0.37	324	1.1	0.41	360	B				C	C		91314	11
8.5	165.29	0.25	264	1.2	0.31	330	B				C	C		91312	12
7.8	180.40	0.25	289	1.2	0.31	360	B				C	C		71314	13
6.4	218.26	0.25	349	0.9	0.24	330	B				C	C		71312	14
5.8	241.82	0.25	387	0.9	0.23	360	B				C	C		90814	15
4.8	292.57	0.18	358	0.9	0.18	330	B				C	C		90812	16
4.4	319.32	0.18	391	0.9	0.18	360	B				C	C		70814	17
3.6	386.33	0.12	305	1.1	0.13	330	B				C	C		70812	18
2.9	480.16	0.12	380	0.7	0.08	255	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

EN Unit **513A** 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 **513A** 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 **513A** 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 **513A** 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 **513A** 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						
1.00 LT	0.90 LT	1.25 LT	1.15 LT	1.45 LT	1.40 LT	1.40 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320			

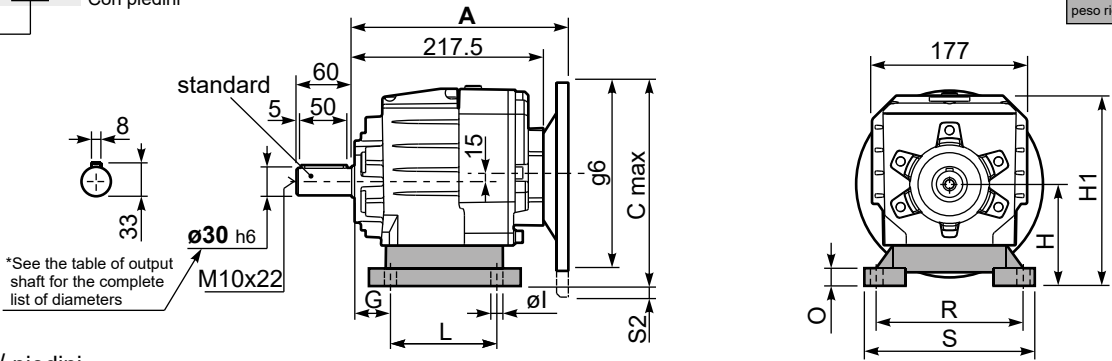
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS											
Output shaft Albero di uscita					$F_{eq} = F_R \cdot \frac{54}{X+24}$						
n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	460	2300	140	600	3000	70	780	3900			
250	480	2400	120	620	3100	40	900	4500			
200	520	2600	85	700	3500	15	1000	5000			
Input shaft Albero di entrata											
n ₁	FA	FR									
1400	400	2000									
900	440	2200									
500	440	2200									

tab. 2

P513A-B1... With feet
Con piedini

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



Feet / piedini

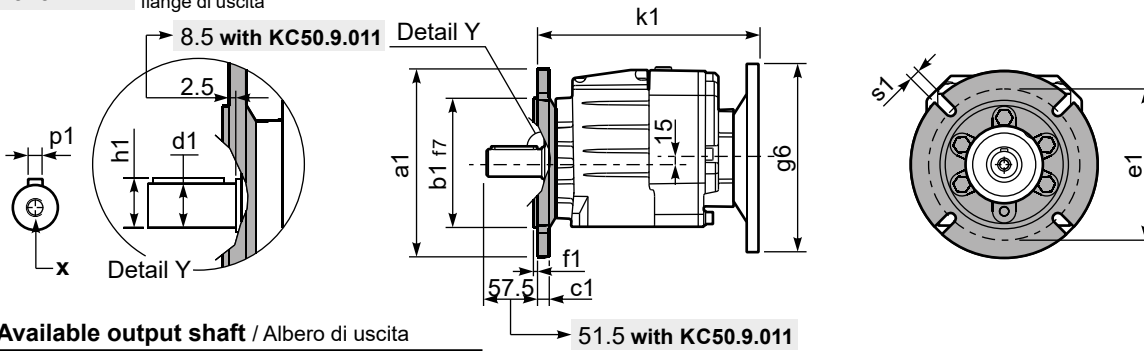
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B3	312/3	18	110	160	130	190	211	20	11	-	-	KC50.9.024
B4	30/35	20	130	180	149.5	216	231	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	216	25	14	-	-	KC50.9.022
H3	023-233	30	130	135	135	185	231	25	14	-	-	KC50.9.025
M2	52/3	30	110	135-150	100	190	211	18	11	-	-	KC50.9.023

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

P513A-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

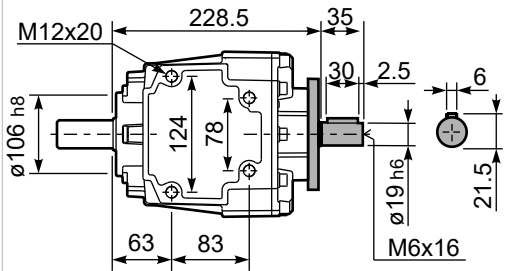
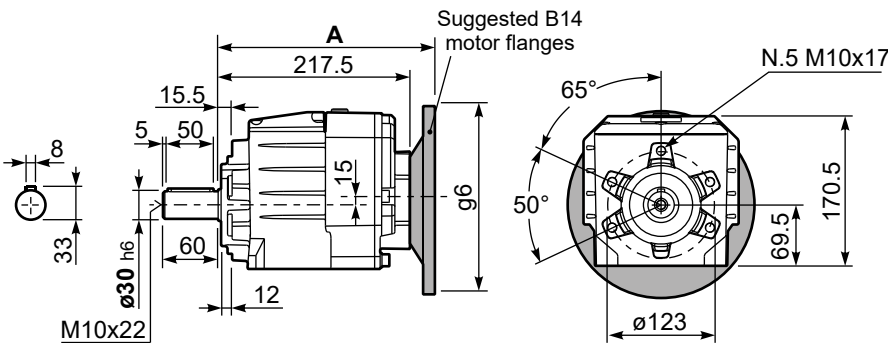
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	11	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

P513A-N... Basic gearbox
Riduttore base

R513A-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
63 B5	238	215	140	240.5	K063.4.041	246.5
71 B5	236	225	160	238.5	K063.4.042	244.5
80/90 B5	238	245	200	240.5	K063.4.043	246.5

B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
71 B14	236	197.5	105	238.5	K063.4.047	244.5
80 B14	238	205	120	240.5	K063.4.046	246.5
90 B14	238	215	140	240.5	K063.4.041	246.5



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	8.0	190	B										3018		01
331	4.23	7.5	200	1.1	8.3	230	B										3016		02
279	5.01	7.5	238	1.1	7.9	260	B										3014		03
231	6.07	7.5	288	1.1	7.8	310	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		07
148	9.45	5.5	331	1.2	6.6	410	B										2014	standard	08
122	11.43	5.5	401	1.1	5.7	425	B										2012	ø35	09
100	14.00	4	359	1.2	4.7	435	B										1316		10
84	16.62	4	426	1.2	4.7	515	B										1314	ø28	11
70	20.10	4	515	1.0	4.0	530	B										1312	ø30	12
57	24.61	3	475	1.1	3.3	530	B										1112	ø38	20
47.6	29.41	2.2	418	1.1	2.3	450	B										814	ø40	14
39.3	35.58	2.2	506	1.0	2.3	530	B										812	On request	15
34.6	40.50	1.1	290	1.1	1.2	320	B										614		16
31.7	44.23	1.5	433	0.9	1.4	410	B										810		17
28.6	49.00	1.1	351	1.1	1.2	400	B										612		18
23.0	60.90	1.1	436	0.9	1.0	410	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

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 **612A** 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 **612A** 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 **612A** 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 **612A** 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 **612A** 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					
0.80 LT	1.00 LT	1.20 LT	1.20 LT	1.30 LT	1.35 LT	Ask
SHELL Omala S4 WE 320			ENI Telium VSF 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

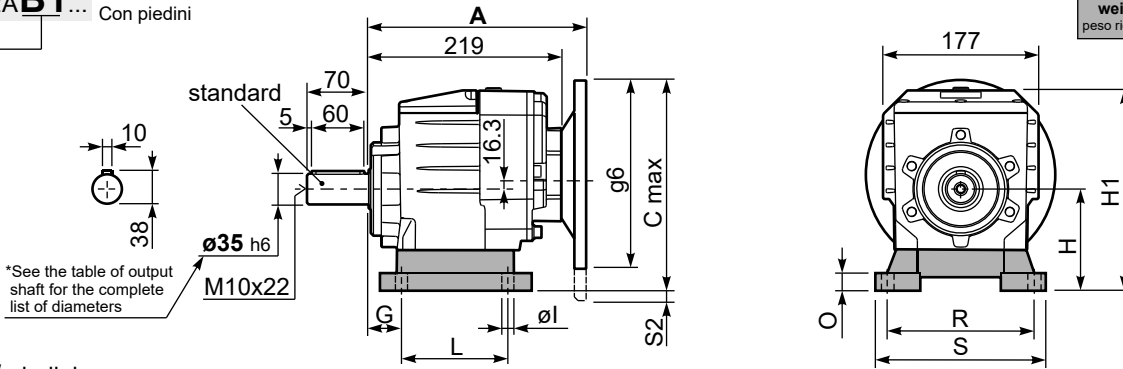
Input shaft
Albero in entrata

n ₁	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P612A **B1** ... With feet
Con piedini

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



Feet / piedini

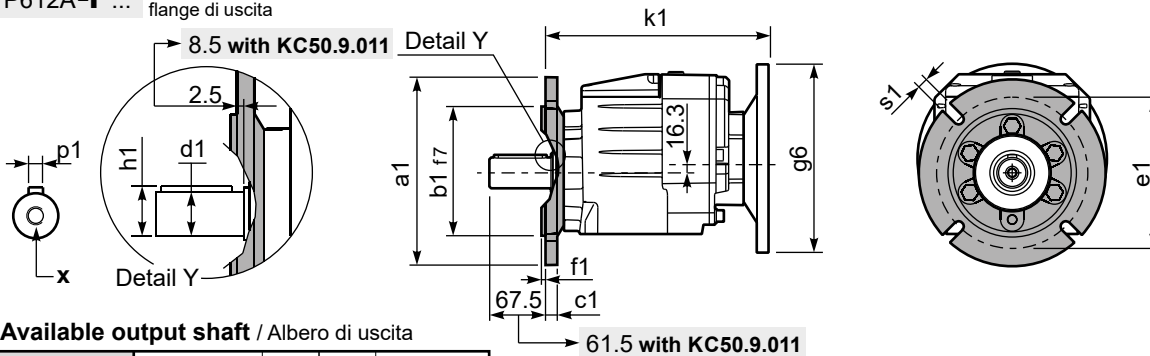
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	242	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	227	25	14	13 132B5	-	KC50.9.022
M3	62/3	35	120	170-185	110	230	232	20	14	8 132B5	-	KC60.9.023
S7	77	35	140	170	205	204	252	8	14	-	-	KC60.9.029LM
H4	024-243	35	155	170	150	225	267	30	14	-	-	KC60.9.025

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

P612A-**F** ... Output flanges
flange di uscita



*Available output shaft / Alberi di uscita

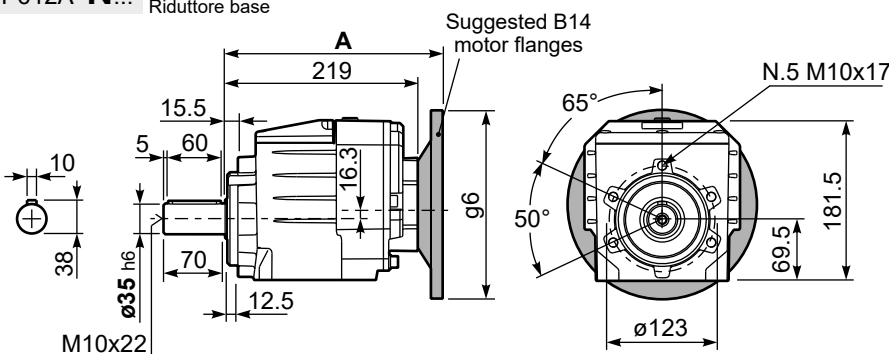
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 28x60	8	31	M8x20
	ø 30x60	8	33	M10x22
	ø 38x70	10	41	M10x25
	ø 40x80	12	43	M12x28

Available output flanges / flange di uscita

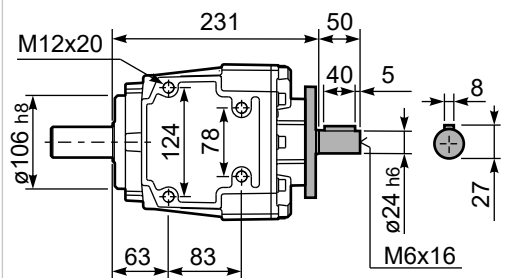
a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	11	KC50.9.011
200	130	13	164	3.5	11	KC50.9.012
250	180	15.5	215	4	14	KC50.9.013

With flange and feet only on request.
Ask for compatibility

P612A-**N** ... Basic gearbox
Riduttore base



R612A-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	237.5	251.3	160	240	K023.4.041	246	80 B14	239.5	231.3	120	242	K085.4.046	248
80/90 B5	239.5	271.3	200	242	K023.4.042	248	90 B14	239.5	241.3	140	242	K085.4.045	248
100/112 B5	248.5	296.3	250	251	K023.4.043	257	100/112 B14	248.5	251.3	160	251	K085.4.047	257
132 B5	269.5	321.3	300	269	KC51.4.043	275	132 B14	269.5	271.3	200	269	KC51.4.041	275



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		
							63	71	80	90	71	80	90		
35.2	39.79	1.5	382	1.1	1.7	434	B				C	C		191316	05
29.6	47.22	1.5	453	1.1	1.7	515	B				C	C		191314	06
25.6	54.73	1.5	525	1.0	1.5	515	B				C	C		171314	07
24.5	57.13	1.5	548	1.0	1.4	530	B				C	C		191312	08
21.1	66.22	1.1	464	1.1	1.2	530	B				C	C		171312	09
19.7	71.01	1.1	498	0.9	0.96	435	B				C	C		191310	10
18.3	76.69	1.1	538	1.0	1.0	515	B				C	C		131314	11
17.0	82.30	0.75	396	1.1	0.82	435	B				C	C		171310	12
16.7	83.59	0.75	402	1.1	0.82	440	B				C	C		190814	13
15.1	92.78	0.75	446	1.2	0.89	530	B				C	C		131312	14
13.4	104.68	0.75	503	1.0	0.77	515	B				C	C		101314	15
11.9	117.22	0.75	564	0.9	0.71	530	B				C	C		170812	16
11.1	126.65	0.55	449	1.2	0.65	530	B				C	C		101312	17
10.3	135.74	0.55	482	0.9	0.51	440	B				C	C		130814	18
9.6	145.68	0.37	346	1.3	0.47	435	B				C	C		170810	19
8.9	157.40	0.37	373	1.2	0.43	435	B				C	C		101310	20
8.5	165.29	0.37	392	1.3	0.50	525	B				C	C		91312	21
7.6	185.29	0.37	439	1.0	0.37	440	B				C	C		100814	22
6.8	205.43	0.37	487	0.9	0.33	435	B				C	C		91310	23
6.2	224.18	0.37	532	1.0	0.37	530	B				C	C		100812	24
5.8	241.82	0.25	387	1.1	0.28	440	B				C	C		90814	25
5.0	278.62	0.25	446	1.0	0.24	435	B				C	C		100810	26
4.8	292.57	0.25	468	1.1	0.28	530	B				C	C		90812	27
3.9	363.63	0.18	445	1.0	0.19	435	B				C	C		90810	28

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

A 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 **613A** 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 **613A** 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 **613A** 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 **613A** 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 **613A** 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					
1.05 LT	1.10 LT	1.25 LT	1.25 LT	1.35 LT	1.50 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

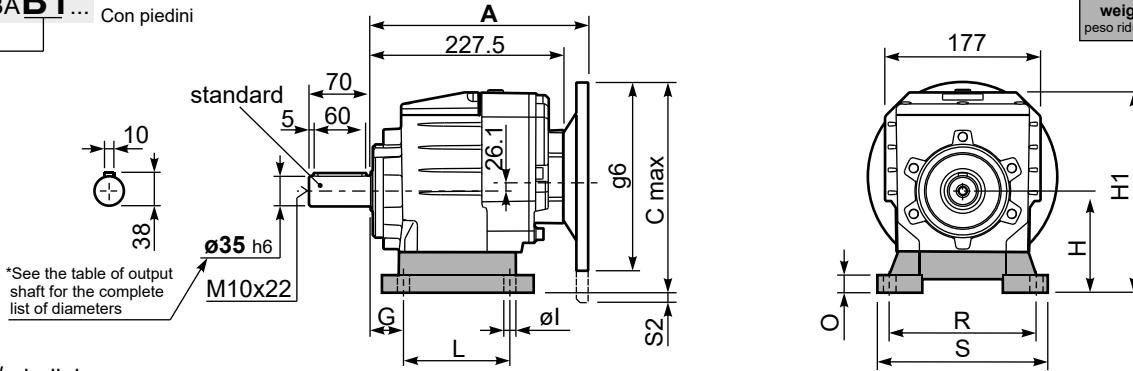
For all details on lubrication and plugs check our website **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

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

P613A **B1** ... With feet
Con piedini

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



Feet / piedini

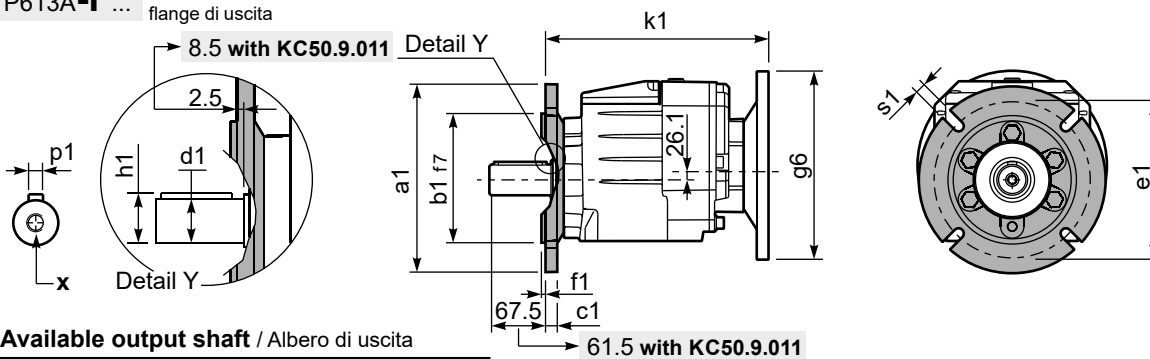
Feet Code	Market reference	G	H	R	L	S	H1	O	øl	S2 only with motor flange	B5 max. Flange	kit code
B4	412/3	20	130	180	149.5	216	242	18	14	-	-	KC60.9.024
S4	47-57	30	115	135	165	170	227	25	14	13 132B5	-	KC50.9.022
M3	62/3	35	120	170-185	110	230	232	20	14	8 132B5	-	KC60.9.023
S7	77	35	140	170	205	204	252	8	14	-	-	KC60.9.029LM
H4	024-243	35	155	170	150	225	267	30	14	-	-	KC60.9.025

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

P613A-**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

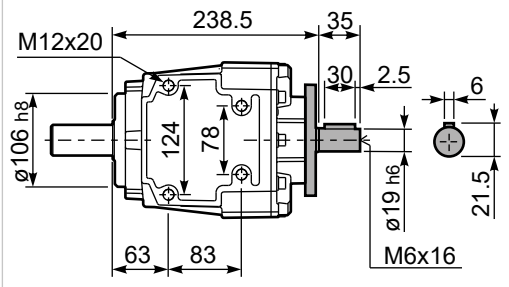
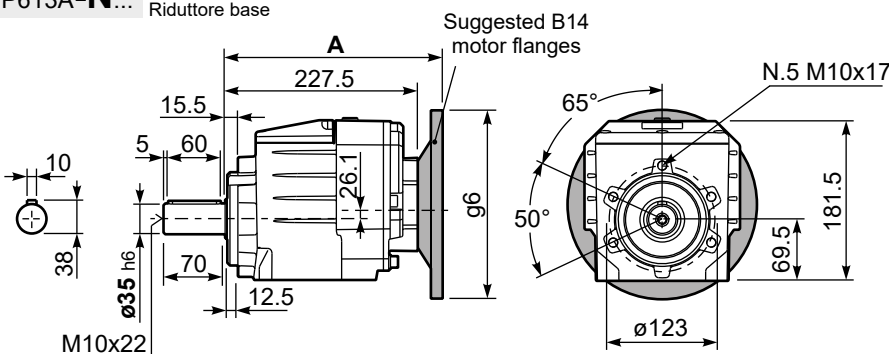
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
160	110	14	130	3.5	11	KC50.9.011
200	130	13	164	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

P613A-**N** ... Basic gearbox
Riduttore base

R613A-N ... Input Shaft
Albero in entrata

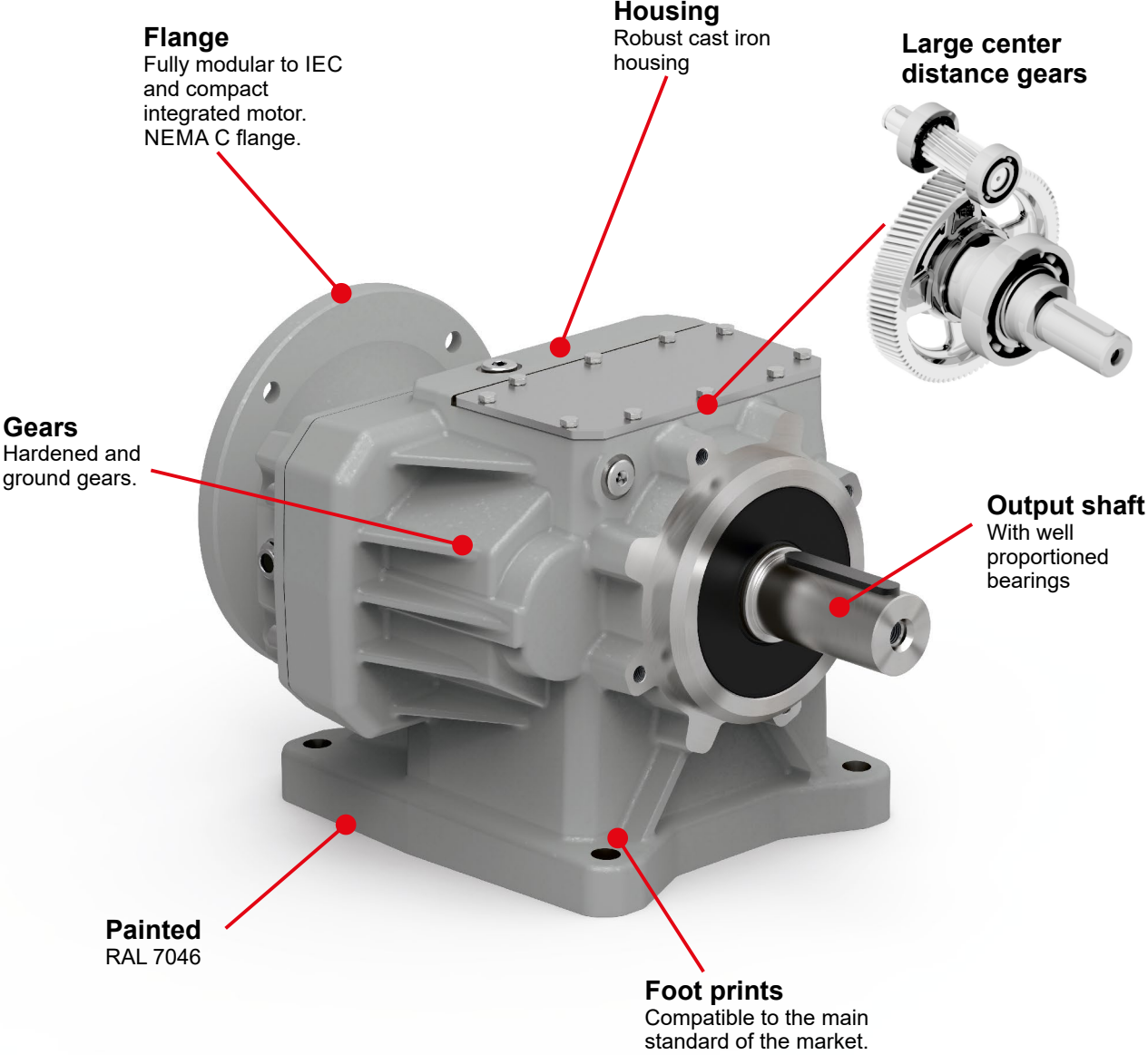


B5 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
63 B5	248	251.1	140	250.5	K063.4.041	256.5
71 B5	246	261.1	160	248.5	K063.4.042	254.5
80/90 B5	248	281.1	200	250.5	K063.4.043	256.5

B14 Motor Flanges	A	C _{max}	g6	k1	kit code	k1 with KC50.9.011
71 B14	246	233.6	105	248.5	K063.4.047	254.5
80 B14	248	241.1	120	250.5	K063.4.046	256.5
90 B14	248	251.1	140	250.5	K063.4.041	256.5

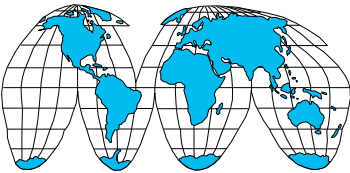
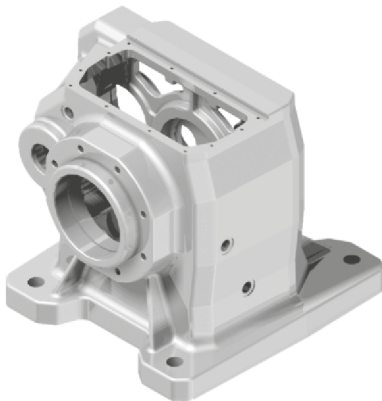
Cast iron in line gearboxes

A modular and compact product



Single-piece Cast Iron housing

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

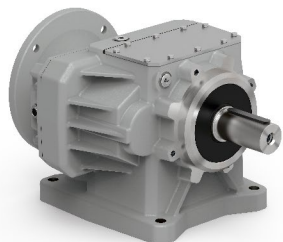


World wide sales network.

Specific type datasheet on page...

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

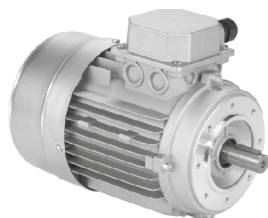
2 and 3 Stages



Types / Tipi
Tipen / Types
Tipos

6-5	6-7	6-9	6-11	6-13	6-15	6-17	6-19	6-21	6-23
712C 675Nm	713C 675Nm	812C 900Nm	813C 900Nm	862C 1600Nm	863C 1800Nm	1002 2900Nm	1003 3000Nm	1102 4500Nm	1103 4600Nm

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 - Tamaño

Mounting - Montaggio
Montage - Fixation
Tipo de montaje

Ratio - Rapporto
Untersetzung
Reduction
Relación

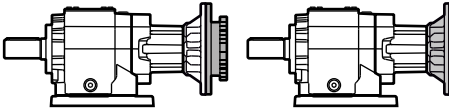
P

712C

-F

6.57

Cast iron coaxial gear boxes
Riduttori coassiali in Ghisa

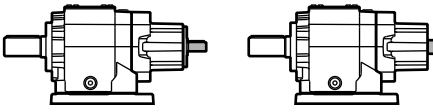


With IEC motor

M

With motor flange

P



With male input shaft

R

Modular base

B

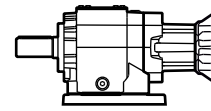
Not available for:
862C, 1002, 1102,
1003, 1103.

2 Stages
Riduzioni
Stufen
Trains
Etapas

712C
812C
862C
1002
1102

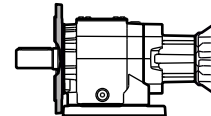
3 Stages
Riduzioni
Stufen
Trains
Etapas

713C
813C
863C
1003
1103



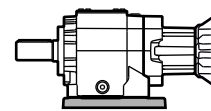
Without flange / feet

-N



Output flange mounted

-F



Mounted feet

B..

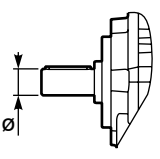
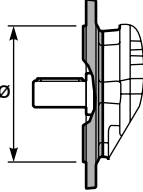



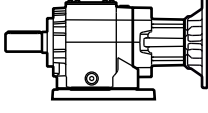
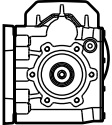
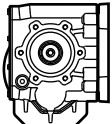
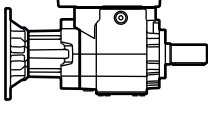
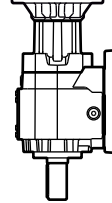
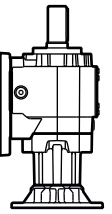
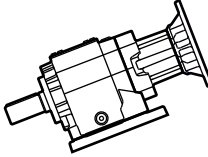
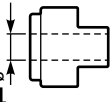
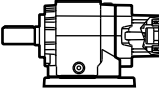




Feet / piedini

Feet Code	Market reference	G	H	R	L
B1	112	18	85	110	
B2	212/3	18	100	130	
S4	17	18	75	110	
S2	27	25	90		
M1	42/3	25	80		
L4	04	13	80		
L5	05	16	100		

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



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.

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	Mounting position Posizione montaggio Einbaulage Position de montage Position de montaje	Input bore Foro entrata Eingangshohlwelle Trou d'entree Eje hueco de entrada	Terminal box position Posizione morsettieria Klemmkastenlage Position boîte à bornes Posición caja de bornes																																																																
<p style="text-align: center;">I</p>  <p>→ STANDARD</p> <table border="1" data-bbox="95 660 263 1243"> <tr><td>712C 713C</td></tr> <tr><td>I → ø35</td></tr> <tr><td>L → ø38</td></tr> <tr><td>812C 813C</td></tr> <tr><td>M → ø40</td></tr> <tr><td>N → ø45</td></tr> <tr><td>862C 863C</td></tr> <tr><td>P → ø50</td></tr> <tr><td>J → ø60</td></tr> <tr><td>1002 1003</td></tr> <tr><td>J → ø60</td></tr> <tr><td>1102 1103</td></tr> <tr><td>A → ø70</td></tr> </table>	712C 713C	I → ø35	L → ø38	812C 813C	M → ø40	N → ø45	862C 863C	P → ø50	J → ø60	1002 1003	J → ø60	1102 1103	A → ø70	<p style="text-align: center;">4</p>  <p>→ STANDARD</p> <p>N Senza flangia Without flange</p> <table border="1" data-bbox="311 660 470 1265"> <tr><td>712C 713C</td></tr> <tr><td>4 → ø200</td></tr> <tr><td>5 → ø250</td></tr> <tr><td>812C 813C</td></tr> <tr><td>5 → ø250</td></tr> <tr><td>6 → ø300</td></tr> <tr><td>7 → ø350</td></tr> <tr><td>1002 1003</td></tr> <tr><td>6 → ø300</td></tr> <tr><td>7 → ø350</td></tr> <tr><td>8 → ø450</td></tr> <tr><td>1102 1103</td></tr> <tr><td>7 → ø350</td></tr> <tr><td>8 → ø450</td></tr> </table>	712C 713C	4 → ø200	5 → ø250	812C 813C	5 → ø250	6 → ø300	7 → ø350	1002 1003	6 → ø300	7 → ø350	8 → ø450	1102 1103	7 → ø350	8 → ø450	<p style="text-align: center;">-F</p> <p>Flange Flangia</p>  <table border="1" data-bbox="518 459 678 1635"> <tr><td>B5</td></tr> <tr><td>-A=56 (ø120)</td></tr> <tr><td>-B=63 (ø140)</td></tr> <tr><td>-C=71 (ø160)</td></tr> <tr><td>-D=80 (ø200)</td></tr> <tr><td>-E=90 (ø200)</td></tr> <tr><td>-F=100+112 (ø250)</td></tr> <tr><td>-G=132 (ø300)</td></tr> <tr><td>-H=160 (ø350)</td></tr> <tr><td>-I=180 (ø350)</td></tr> <tr><td>-L=200 (ø400)</td></tr> <tr><td>CA=225 (ø450)</td></tr> <tr><td>B14</td></tr> <tr><td>-O=56 (ø80)</td></tr> <tr><td>-P=63 (ø90)</td></tr> <tr><td>-Q=71 (ø105)</td></tr> <tr><td>-R=80 (ø120)</td></tr> <tr><td>-T=90 (ø140)</td></tr> <tr><td>-U=100+112 (ø160)</td></tr> <tr><td>-V=132 (ø200)</td></tr> </table> <p>Type R Tipo R</p>  <table border="1" data-bbox="726 459 901 784"> <tr><td>713C 813C</td></tr> <tr><td>-2 → ø19</td></tr> <tr><td>712C 812C 863C</td></tr> <tr><td>-3 → ø24</td></tr> <tr><td>862C 1003 1103</td></tr> <tr><td>-4 → ø28</td></tr> <tr><td>1002 1102</td></tr> <tr><td>-6 → ø42</td></tr> </table> <p>Without flange Senza flangia</p>  <table border="1" data-bbox="726 940 901 1377"> <tr><td>-M → With coupling</td></tr> <tr><td>713C 813C</td></tr> <tr><td>-1 → ø14 (71B5)</td></tr> <tr><td>-2 → ø19 (80B5)</td></tr> <tr><td>-3 → ø24 (90B5)</td></tr> <tr><td>712C 812C 863C</td></tr> <tr><td>-2 → ø19 (80B5)</td></tr> <tr><td>-3 → ø24 (90B5)</td></tr> <tr><td>-4 → ø28 (100B5)</td></tr> </table>	B5	-A =56 (ø120)	-B =63 (ø140)	-C =71 (ø160)	-D =80 (ø200)	-E =90 (ø200)	-F =100+112 (ø250)	-G =132 (ø300)	-H =160 (ø350)	-I =180 (ø350)	-L =200 (ø400)	CA =225 (ø450)	B14	-O =56 (ø80)	-P =63 (ø90)	-Q =71 (ø105)	-R =80 (ø120)	-T =90 (ø140)	-U =100+112 (ø160)	-V =132 (ø200)	713C 813C	-2 → ø19	712C 812C 863C	-3 → ø24	862C 1003 1103	-4 → ø28	1002 1102	-6 → ø42	-M → With coupling	713C 813C	-1 → ø14 (71B5)	-2 → ø19 (80B5)	-3 → ø24 (90B5)	712C 812C 863C	-2 → ø19 (80B5)	-3 → ø24 (90B5)	-4 → ø28 (100B5)	<p style="text-align: center;">B3</p>  <p>B3 STANDARD</p>  <p>B6</p>  <p>B7</p>  <p>B8</p>  <p>V5</p>  <p>V6</p>  <p>V8</p>	<p style="text-align: center;">-</p> <p>Nothing indication: standard bore</p> <p>Nessuna indicazione: foro standard</p> <p>COUPLING</p>  <p>A = 9mm B = 11mm C = 14mm D = 19mm E = 24mm F = 28mm</p> <p style="text-align: center;">0</p> <p>Ready for input coupling Predisposto per giunto</p> 	<p>With Type M specify terminal box position Con tipo M specificare posizione morsettieria</p>  <p>A</p>  <p>B STANDARD</p>  <p>C</p>  <p>D</p>
712C 713C																																																																					
I → ø35																																																																					
L → ø38																																																																					
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-T =90 (ø140)																																																																					
-U =100+112 (ø160)																																																																					
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-2 → ø19 (80B5)																																																																					
-3 → ø24 (90B5)																																																																					
-4 → ø28 (100B5)																																																																					

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

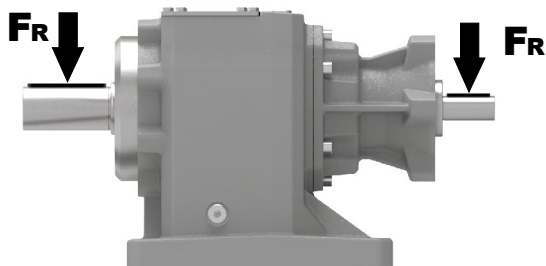
Lifting / sollevamento / hubantriebe / levage / elevación	$P [KW] = \frac{M [Kg] \cdot g [9.81] \cdot v [m / s]}{1000}$
Rotation / rotazione / drehung / rotation / rotacion	$P [KW] = \frac{M [Nm] \cdot n [rpm]}{9550}$
Linear movement / traslazione / linearbewegung / translation / translacion	$P [KW]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

TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

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

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

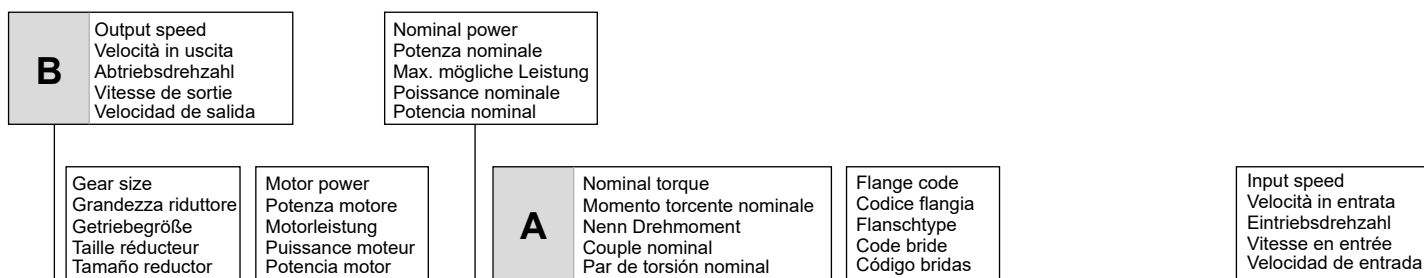
- Radial load generated by external transmissions keyed onto input and/or output shafts.
- Forza radiale generata da organi di trasmissione calettati sugli alberi di ingresso e/o uscita.
- Belastungen der Antriebs- bzw. Abtriebswellen durch von aussen eingebrachte Radiallasten.
- Charge radiale générée 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



	$F_R [N] = \frac{M [Nm] \cdot 2000}{d [mm]} \cdot f_k$	$F_R [N] = \frac{M [lb in] \cdot 8.9}{d [in]} \cdot f_k$
M	Momento torcente / Output torque / Abtriebsdrehmoment / 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



712C

**Coaxial - Gear
675Nm**

Rating - Cast Iron COAXIAL GEARBOXES



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges				Available B14 motor flanges				Output Shaft 	Notes Note Anmerkungen Note Notas		
							-D	-E	-F	-G	-R	-T	-U	-V				
364.3	3.84	9	227	1.5	13.91	350	80	90	100	112	132	80	90	100	112	132	3317	01
257.5	5.44	9	321	1.1	10.11	360											3313	02
233.3	6.00	9	354	1.1	9.67	380											3312	03
187.5	7.47	9	440	1.0	8.59	420											3310	04
165.1	8.48	9	500	1.0	8.64	480											2513	05

C Ratio
Rapporto
Untersetzung
Rapport de réduction
Relación

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

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

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

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 boccia 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/-sockel Position trous bride/barrette à bornes moteur Posición agujeros brida / base motor	
B)	Available without reduction bushes Disponibile anche senza boccia 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 / Selez one v loce

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
							-D	-E	-F	-G	-R	-T	-U	-V		
							80	90	100 112	132	80	90	100 112	132		
364.3	3.84	9	227	1.5	13.91	350								3317	standard ø35	01
257.5	5.44	9	321	1.1	10.11	360								3313		02
233.3	6.00	9	354	1.1	9.67	380								3312		03
187.5	7.47	9	440	1.0	8.59	420								3310		04
165.1	8.48	9	500	1.0	8.64	480								2513		05
149.6	9.36	7.5	444	1.1	8.16	500								2512		06
120.2	11.65	7.5	553	1.1	8.00	610								2510		07
97.3	14.39	5.5	504	1.2	6.69	630								1713		08
88.1	15.88	5.5	557	1.2	6.35	660								1712		09
70.8	19.76	5.5	693	1.0	5.22	675								1710		On request
63.4	22.08	4	566	1.2	4.67	675								1213		11
57.4	24.38	4	625	1.1	4.23	675								1212		12
46.2	30.33	3	586	1.2	3.40	675								1210		13
41.2	34.00	3	656	1.0	3.03	675								912		14
36.1	38.81	2.2	552	1.2	2.66	675								812		15
33.1	42.31	2.2	601	1.1	2.44	675								910		16
29.0	48.30	2.2	687	1.0	2.13	675								810		17

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

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduiz one

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

C) Motor Flange Holes Position
Posiz one Fori Flangia Motore

EN Unit **712C** 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 **712C** v ene fornito completo di olio sintetico per la lubrificaz one permanente e non necessita di alcuna manutenz one. Vedi tab.1 per oli e quantit à consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

D Das Getriebe **712C** ist mit synthetischem Öl gefüllt und ist lebensdauer geschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die v l ässigen Radial - und Axialbelastungen des Getriebes aufgeföhrt.

F Le réducteur **712C** 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 **712C** se suministra, lubricado de por v da 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.

B3	B6	B7	B8	V5	V6	V8
1.50 LT	2.30 LT	1.90 LT	1.70 LT	2.60 LT	2.00 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website [tab. 1](#)
Per maggiori dettagli su lubrificaz one e tappi olio v di il nostro sito web

RADIAL AND AXIAL LOADS

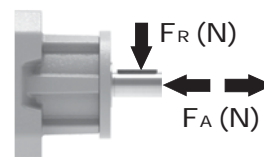
Output shaft
Albero di uscita

$$F_{eq} = F_R \cdot \frac{78}{X+38}$$



n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	680	3400	140	960	4800	70	1300	6500
250	760	3800	120	1040	5200	40	1460	7300
200	900	4500	85	1120	5600	15	1800	9000

Input shaft
Albero in entrata

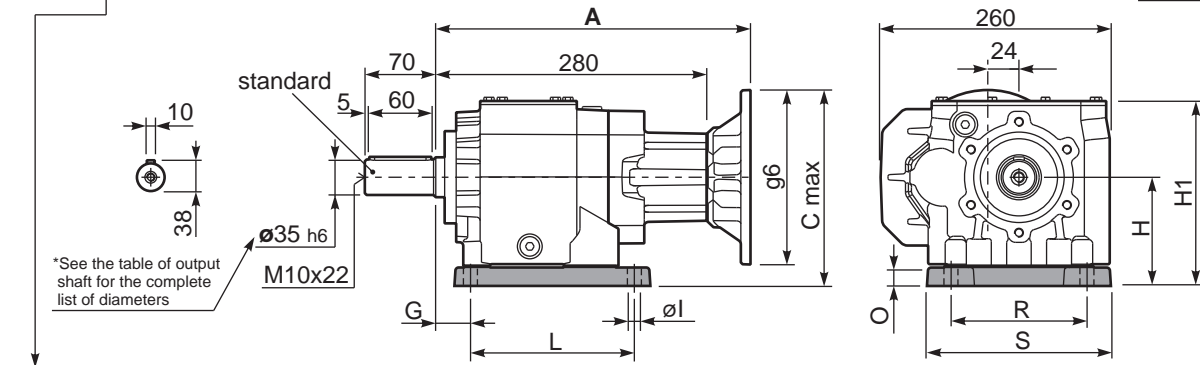


n_1	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P712C**S6**... With feet
Con piedini

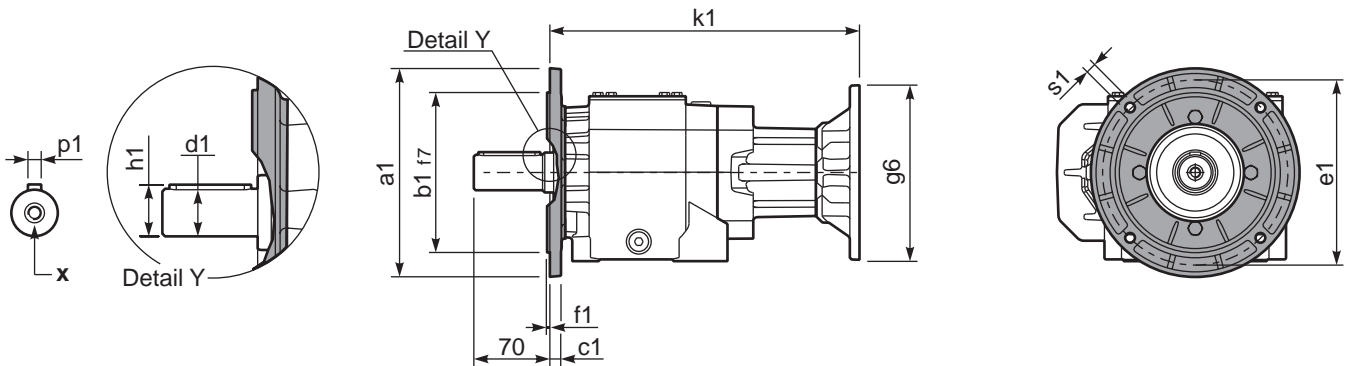
Gearbox weight **33.3 kg**
peso riduttore With feet **35.0 kg**



Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	øl	B5 max. Flange	kit code
B4	412/3	19.5	130	180	149.5	220	220	25	14	-	KC71.9.022
S6	67	30	130	150	195	210	220	25	14	-	KC71.9.024

P712C-**F**... Output flanges
flange di uscita



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

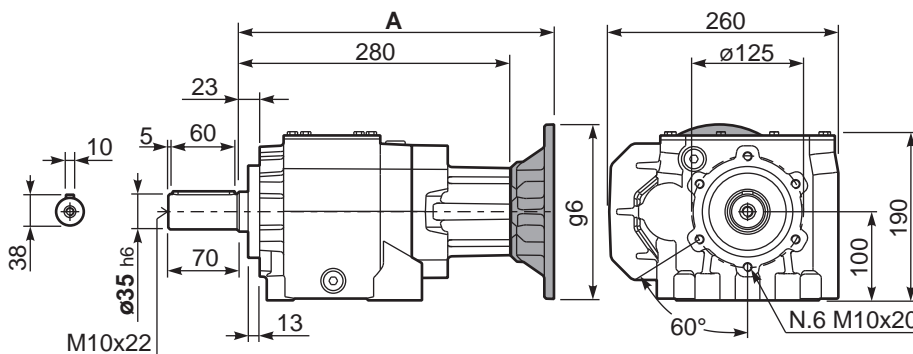
	Shaft - d1	p1	h1	x
Standard	ø 35x70	10	38	M10x22
On request A richiesta	ø 38x70	10	41	M10x25

Available output flanges / flange di uscita

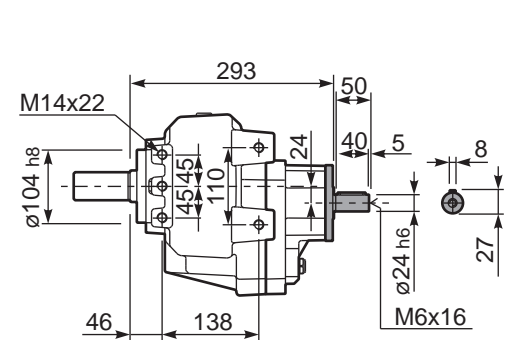
a1 ø	b1	c1	e1	f1	s1	kit code
200	130	11	165	3.5	11	KC71.9.012
250	180	13	215	4	14	KC81.9.013
-	-	-	-	-	-	-

With flange and feet only on request. Ask for compatibility

P712C-**N**... Basic gearbox
Riduttore base



R712C-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
80/90 B5	300.5	230	200	300.5	K023.4.042
100/112 B5	309.5	255	250	309.5	K023.4.043
132 B5	331	280	300	331	KC51.4.043C

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
80 B14	300.5	190	120	300.5	K085.4.046
90 B14	300.5	200	140	300.5	K085.4.045
100/112 B14	309.5	210	160	309.5	K085.4.047
132 B14	331	230	200	331	KC51.4.041C



QUICK SELECTION / Selez one v loce

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 Ø	Ratios code
							-B	-C	-D	-E	-Q	-R	-T		
							63	71	80	90	71	80	90		
22.3	62.76	1.5	603	1.1	1.68	675	B				C	C		191213	01
20.2	69.28	1.5	665	1.0	1.52	675	B				C	C		191212	02
19.2	72.75	1.5	698	1.0	1.45	675	B				C	C		171213	03
17.4	80.29	1.5	771	0.9	1.31	675	B				C	C		171212	04
16.4	85.39	1.1	599	1.1	1.23	675	B				C	C		151213	05
14.9	94.25	1.1	661	1.0	1.12	675	B				C	C		151212	06
13.7	101.92	1.1	715	0.9	1.03	675	B				C	C		131213	07
12.4	112.50	0.75	541	1.2	0.94	675	B				C	C		131212	08
11.9	117.29	0.75	564	1.2	0.90	675	B				C	C		151210	09
10.1	139.13	0.75	669	1.0	0.76	675	B				C	C		101213	10
9.1	153.56	0.75	739	0.9	0.69	675	B				C	C		101212	11
7.7	181.57	0.55	644	1.0	0.58	675	B				C	C		91213	12
7.0	200.42	0.55	711	0.9	0.53	675	B				C	C		91212	13
5.6	249.41	0.37	592	1.1	0.42	675	B				C	C		91210	14
4.3	329.33	0.37	781	0.9	0.32	675	B				C	C		71210	15

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

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

EN Unit **713C** 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 **713C** v ene fornito completo di olio sintetico per la lubrificaz one permanente e non necessita di alcuna manutenz one. Vedi tab.1 per oli e quantit à consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

D Das Getriebe **713C** ist mit synthetischem Öl gefüllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die v lässigen Radial- und Axialbelastungen des Getriebes aufgeföhrt.

F Le réducteur **713C** est fourni complet aec de l'huile synthétique pour la lubrification permanente et ne nécessite aucun entretien. Voir tableau 1 concernant les huiles et les quantit és conseillées. Les charges radiales et axiales applicables au réducteur sont précisées dans le tableau 2.

E El reductor tamaño **713C** se suministra, lubricado de por v da 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.

B3	B6	B7	B8	V5	V6	V8
1.60 LT	2.20 LT	1.80 LT	1.70 LT	2.80 LT	1.90 LT	Ask
SHELL Omala S4 WE 320			ENI Telium VSF 320			

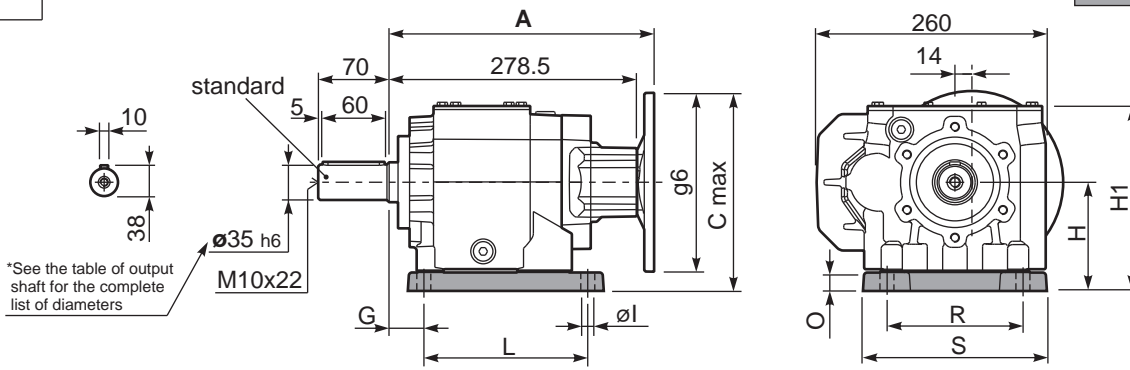
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificaz one e tappi olio v di il nostro sito web **tab. 1**

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{78}{X+38}$					
n₂	FA	FR	n₂	FA	FR	n₂	FA	FR
300	680	3400	140	960	4800	70	1300	6500
250	760	3800	120	1040	5200	40	1460	7300
200	900	4500	85	1120	5600	15	1800	9000
Input shaft Albero in entrata								
n₁	FA	FR						
1400	400	2000						
900	440	2200						
500	440	2200						

tab. 2

P713C**S6**... With feet
Con piedini

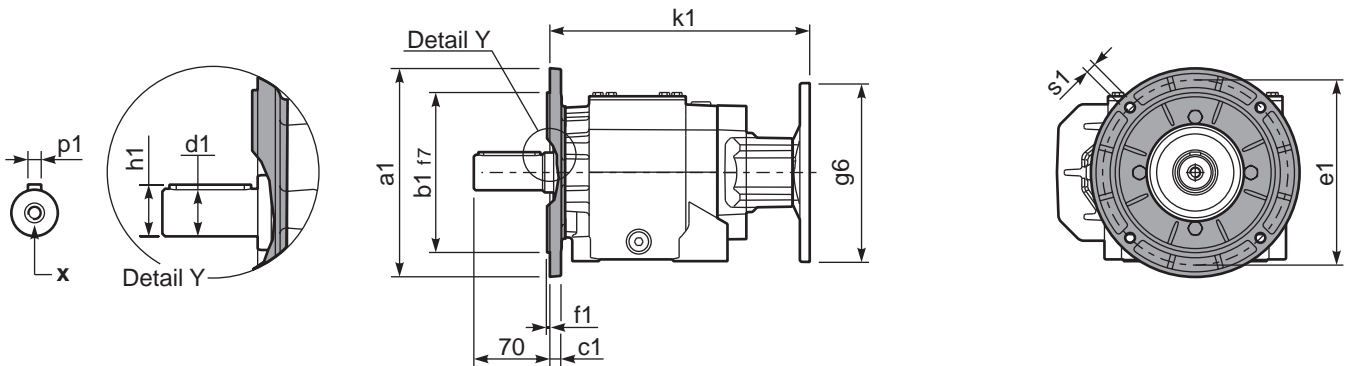
Gearbox weight **34.5 kg**
peso riduttore With feet **36.2 kg**



Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	øl	B5 max. Flange	kit code
B4	412/3	19.5	130	180	149.5	220	220	25	14	-	KC71.9.022
S6	67	30	130	150	195	210	220	25	14	-	KC71.9.024

P713C-**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 38x70	10	41	M10x25

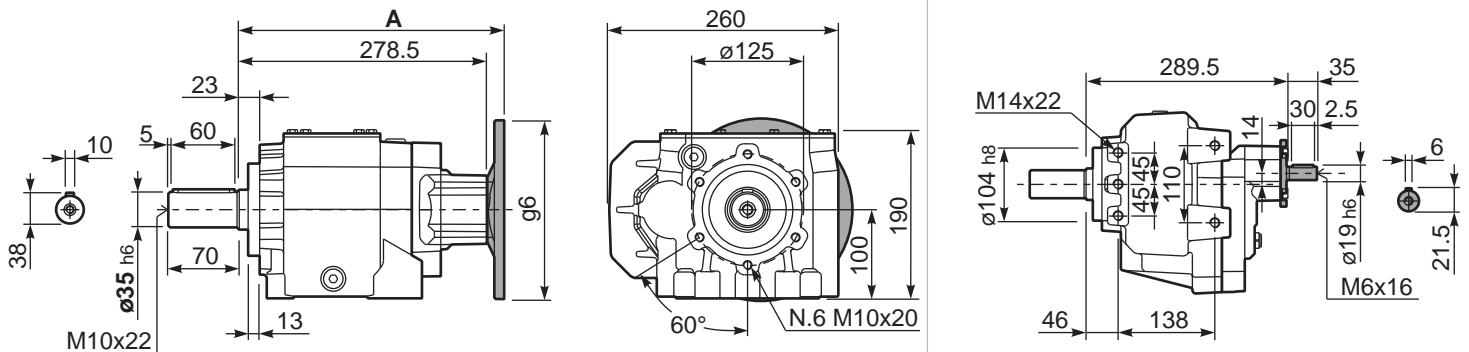
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
200	130	11	165	3.5	11	KC71.9.012
250	180	13	215	4	14	KC81.9.013
-	-	-	-	-	-	-

With flange and feet only on request. Ask for compatibility

P713C-**N**... Basic gearbox
Riduttore base

R713C-**N**... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	299	200	140	299	K063.4.041
71 B5	297	210	160	297	K063.4.042
80/90 B5	299	230	200	299	K063.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	297	182.5	105	297	K063.4.047
80 B14	299	190	120	299	K063.4.046
90 B14	299	200	140	299	K063.4.041



QUICK SELECTION / Selez one v loce

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 \varnothing	Ratios code
							-D	-E	-F	-G	-R	-T	-U	-V		
							80	90	100 112	132	80	90	100 112	132		
364.3	3.84	9	227	2.2	19.47	490								3317	01	
257.5	5.44	9	321	1.6	14.61	520								3313	02	
233.3	6.00	9	354	1.6	14.00	550								3312	03	
187.5	7.47	9	440	1.4	12.27	600								3310	04	
165.1	8.48	9	500	1.3	11.43	635								2513	05	
149.6	9.36	9	552	1.2	10.44	640								2512	06	
120.2	11.65	9	687	1.0	8.65	660								2510	07	
97.3	14.39	7.5	683	1.1	7.64	720								1713	08	
88.1	15.88	7.5	754	1.0	7.21	750								1712	09	
70.8	19.76	7.5	938	0.9	6.34	820								1710	10	
63.4	22.08	5.5	774	1.1	5.98	865								1213	11	
57.4	24.38	5.5	854	1.0	5.42	865								1212	12	
46.2	30.33	4	778	1.1	4.35	865								1210	13	
41.2	34.00	4	872	1.0	3.88	865								912	14	
36.1	38.81	3	749	1.1	3.33	846								812	15	
33.1	42.31	3	817	1.1	3.12	865								910	16	
29.0	48.30	3	932	0.9	2.73	865								810	17	

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

A) Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduiz one

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

C) Motor Flange Holes Position
Posiz one Fori Flangia Motore

EN Unit **812C** 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 **812C** v ene fornito completo di olio sintetico per la lubrificaz one permanente e non necessita di alcuna manutenz one. Vedi tab.1 per oli e quantit consigliati. In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

D Das Getriebe **812C** ist mit synthetischem l gefllt und ist lebensdauergeschmiert. In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben. In Tabelle 2 sind die v lssigen Radial - und Axialbelastungen des Getriebes aufgefhrt.

F Le rducteur **812C** est fourni complet avec de l'huile synthtique pour la lubrification permanente et ne ncessite aucun entretien. Voir tableau 1 concernant les huiles et les quantits conseilles. Les charges radiales et axiales applicables au rducteur sont prcises dans le tableau 2.

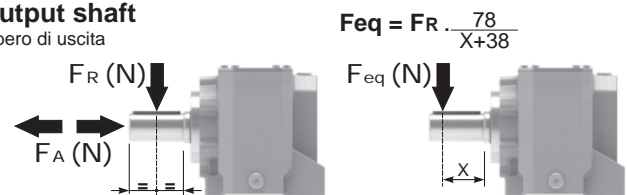
E El reductor tamao **812C** se suministra, lubricado de por v da con aceite sinttico y no requieren mantenimiento alguna. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
1.50 LT	2.30 LT	1.90 LT	1.70 LT	2.60 LT	2.00 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 320		

For all details on lubrication and plugs check our website [tab. 1](#)
Per maggiori dettagli su lubrificaz one e tappi olio v di il nostro sito web

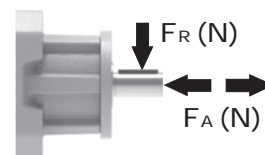
RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita



n ₂	FA	FR	n ₂	FA	FR	n ₂	FA	FR
300	1300	6500	140	1780	8900	70	2200	11000
250	1420	7100	120	1900	9500	40	2360	11800
200	1600	8000	85	2040	10200	15	2400	12000

Input shaft
Albero in entrata

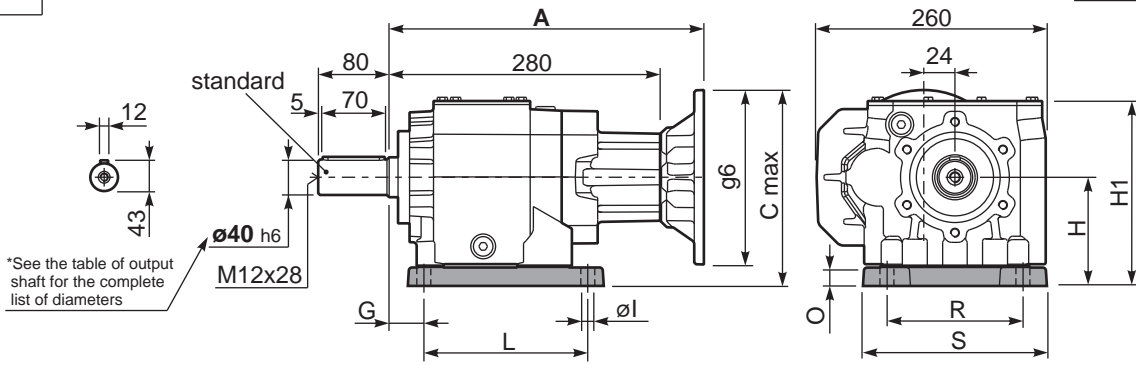


n ₁	FA	FR
1400	450	2250
900	500	2500
500	600	3000

tab. 2

P812C**S7**... With feet
Con piedini

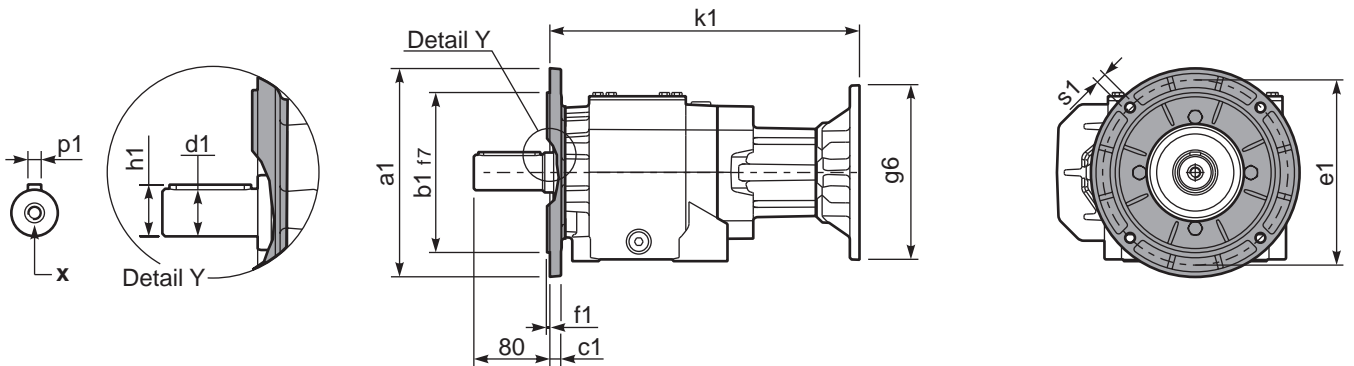
Gearbox weight **33.7 kg**
peso riduttore With flange
With feet **39.2 kg**



Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	øI	B5 max. Flange	kit code
B5	512/3	25	155	225	156	270	245.5	30	18	-	KC81.9.022
S7	77	35	140	170	205	230	230.5	30	17.5	-	KC81.9.024

P812C-**F**... Output flanges
flange di uscita



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

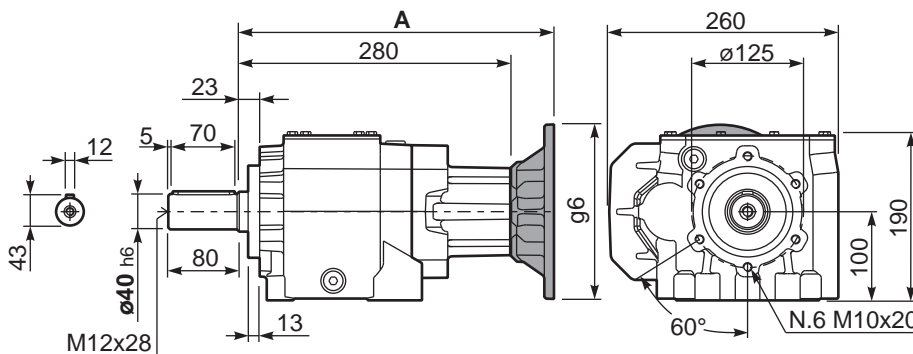
	Shaft - d1	p1	h1	x
Standard	ø 40x80	12	43	M12x28
On request A richiesta	ø 45x90	14	48.5	M14x34

Available output flanges / flange di uscita

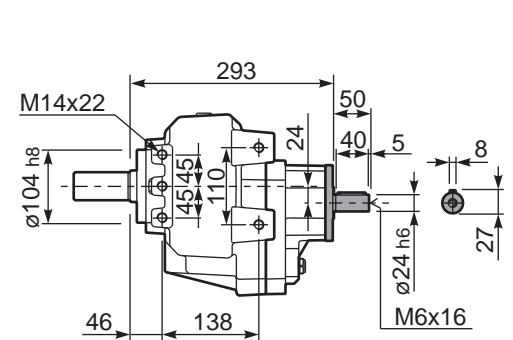
a1 ø	b1	c1	e1	f1	s1	kit code
250	180	13	215	4	14	KC81.9.013
300	230	16	265	4	14	KC81.9.014
-	-	-	-	-	-	-

With flange and feet only on request. Ask for compatibility

P812C-**N**... Basic gearbox
Riduttore base



R812C-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
80/90 B5	300.5	255	200	300.5	K023.4.042
100/112 B5	309.5	280	250	309.5	K023.4.043
132 B5	331	305	300	331	KC51.4.043C

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
80 B14	300.5	215	120	300.5	K085.4.046
90 B14	300.5	225	140	300.5	K085.4.045
100/112 B14	309.5	235	160	309.5	K085.4.047
132 B14	331	255	200	331	KC51.4.041C



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 \varnothing	Ratios code
							-B	-C	-D	-E	-F	-Q	-R	-T	-U		
							63	71	80	90	100	112	71	80	90		
22.3	62.76	2.2	874	1.0	2.15	865	B					C	C			191213	01
20.2	69.28	2.2	965	0.9	1.95	865	B					C	C			191212	02
19.2	72.75	1.5	698	1.2	1.85	865	B					C	C			171213	03
17.4	80.29	1.5	771	1.1	1.68	865	B					C	C			171212	04
16.4	85.39	1.5	820	1.1	1.58	865	B					C	C			151213	05
14.9	94.25	1.5	905	1.0	1.43	865	B					C	C			151212	06
13.7	101.92	1.1	715	1.2	1.32	865	B					C	C			131213	07
12.4	112.50	1.1	789	1.1	1.20	865	B					C	C			131212	08
11.9	117.29	1.1	822	1.1	1.15	865	B					C	C			151210	09
10.1	139.13	1.1	976	0.9	0.97	865	B					C	C			101213	10
9.1	153.56	0.75	739	1.2	0.88	865	B					C	C			101212	11
7.7	181.57	0.75	873	1.0	0.74	865	B					C	C			91213	12
7.0	200.42	0.55	711	1.2	0.67	865	B					C	C			91212	13
5.6	249.41	0.55	885	1.0	0.54	865	B					C	C			91210	14
4.3	329.33	0.37	781	1.1	0.41	865	B					C	C			71210	15

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

EN Unit **813C** 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 **813C** 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 **813C** 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 **813C** 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 **813C** 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.

B3	B6	B7	B8	V5	V6	V8
1.60 LT	2.20 LT	1.80 LT	1.70 LT	2.80 LT	1.90 LT	Ask
SHELL Omala S4 WE 320				ENI Telium VSF 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

$F_{eq} = FR \cdot \frac{78}{X+38}$

F_R (N)
 F_A (N)

F_{eq} (N)

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	1300	6500	140	1780	8900	70	2200	11000
250	1420	7100	120	1900	9500	40	2360	11800
200	1600	8000	85	2040	10200	15	2400	12000

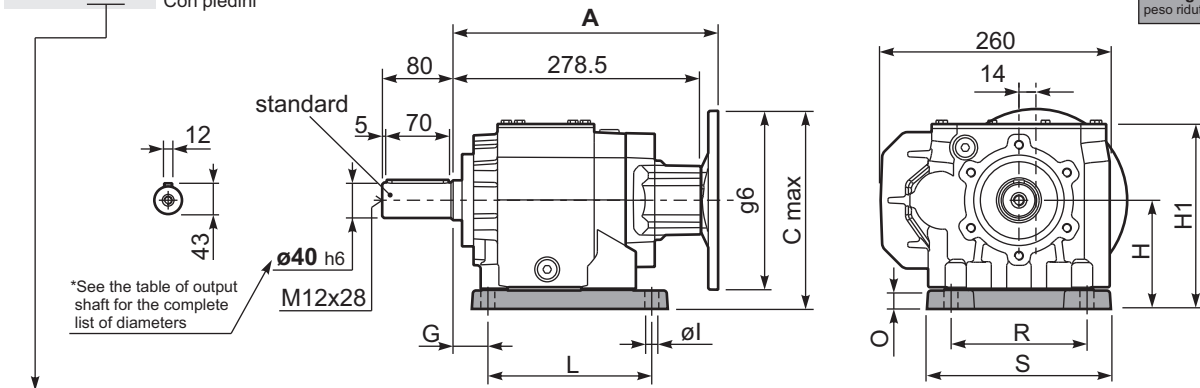
Input shaft
Albero in entrata

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

tab. 2

P813C-S7... With feet
Con piedini

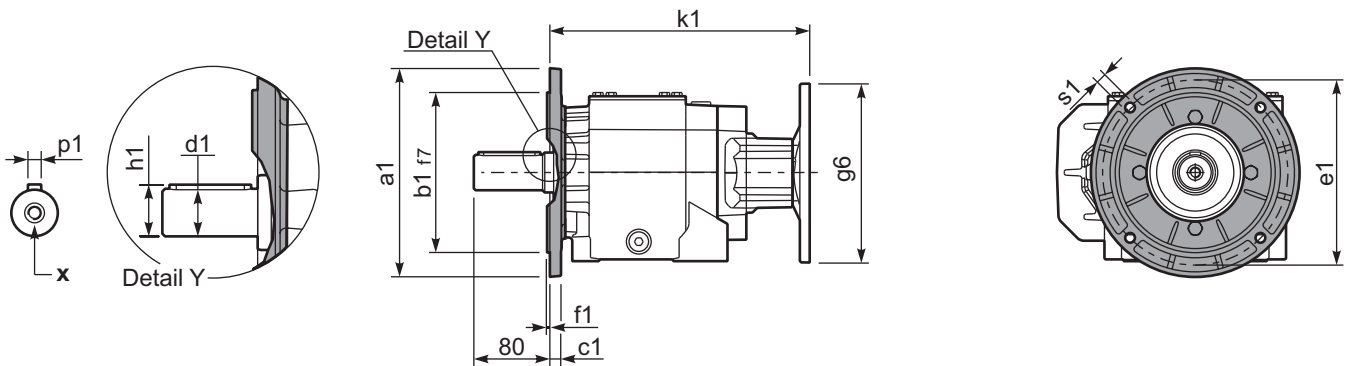
Gearbox weight With flange **34.8 kg**
peso riduttore With feet **40.3 kg**



Feet / piedini

Feet Code	Market reference	G	H	R	L	S	H1	O	øl	B5 max. Flange	kit code
B5	512/3	25	155	225	156	270	245.5	30	18	-	KC81.9.022
S7	77	35	140	170	205	230	230.5	30	17.5	-	KC81.9.024

P813C-F... Output flanges
flange di uscita



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

	Shaft - d1	p1	h1	x
Standard	ø 40x80	12	43	M12x28
On request A richiesta	ø 45x90	14	48.5	M14x34

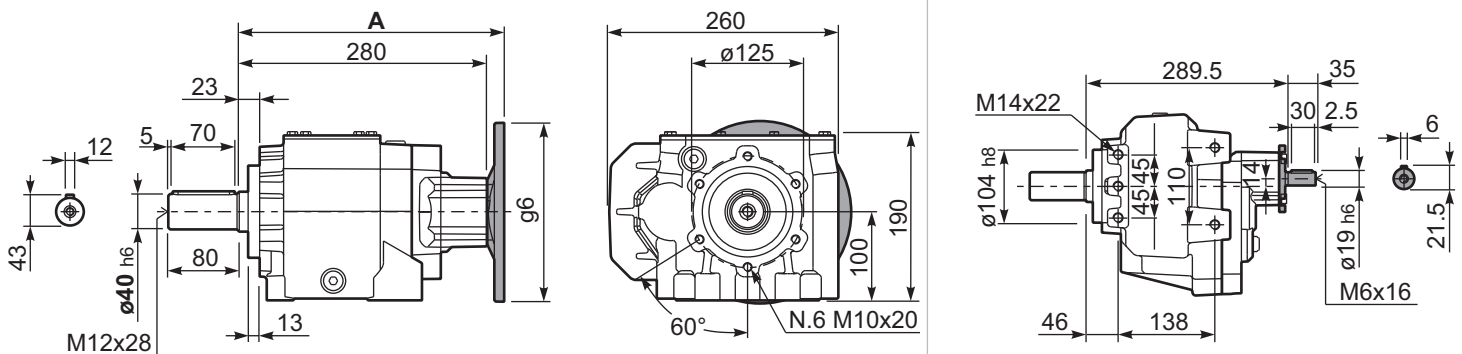
Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
250	180	13	215	4	14	KC81.9.013
300	230	16	265	4	14	KC81.9.014
-	-	-	-	-	-	-

With flange and feet only on request. Ask for compatibility

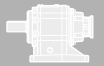
P813C-N... Basic gearbox
Riduttore base

R813C-N... Input Shaft
Albero in entrata



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
63 B5	299	225	140	299	K063.4.041
71 B5	297	235	160	297	K063.4.042
80/90 B5	299	255	200	299	K063.4.043
100/112 B5	314	280	250	314	KC40.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B14	297	207.5	105	297	K063.4.047
80 B14	299	215	120	299	K063.4.046
90 B14	299	225	140	299	K063.4.041
100/112 B14	314	235	160	314	KC40.4.041



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges				B14 motor flanges		Output Shaft 	Ratios code
							-F	-G	-H	-I	-U	-V		
							100 112	132	160	180	100 112	132		
317	4.42	22	611	1.1	24.2	700						3015	01	
264	5.30	22	733	1.0	20.2	700						3013	02	
219	6.38	18.5	742	1.1	19.1	800						3011	03	
168	8.33	15	784	1.0	14.7	800						2015	04	
140	9.99	15	940	1.0	13.8	900						2013	05	
124	11.26	15	1060	1.0	14.9	1100						1615	06	
116	12.03	15	1132	1.1	15.2	1200						2011	07	
104	13.50	15	1271	1.1	15.8	1400						1613	08	
96	14.65	15	1378	1.1	15.6	1500						1315	09	
86	16.26	15	1531	1.0	14.1	1500						1611	10	
80	17.56	11	1214	1.2	13.0	1500						1313	11	
65	21.50	11	1486	1.1	11.4	1600						1113	12	
54	25.88	9	1526	1.0	9.4	1600						1111	13	
45.0	31.09	7.5	1475	1.0	7.2	1460						813	14	
37.4	37.43	5.5	1312	1.2	6.5	1600						811	15	

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

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit **862C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
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 tipo **862C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße **862C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.
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 de type **862C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.
Voir tableau 1 concernant les huiles et les quantités conseillées.
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

E El reductor tamaño **862C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
3.10 LT	4.50 LT	2.50 LT	3.10 LT	4.90 LT	4.20 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

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

$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	1800	9000	140	2400	12000	70	3000	15000
250	2000	10000	120	2600	13000	40	3200	16000
200	2200	11000	85	2800	14000	15	4000	20000

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

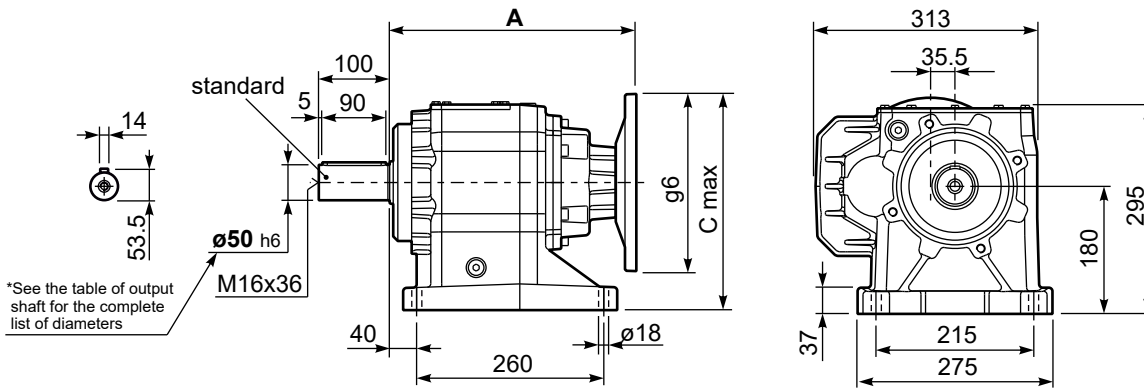
Input shaft
Albero in entrata

n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

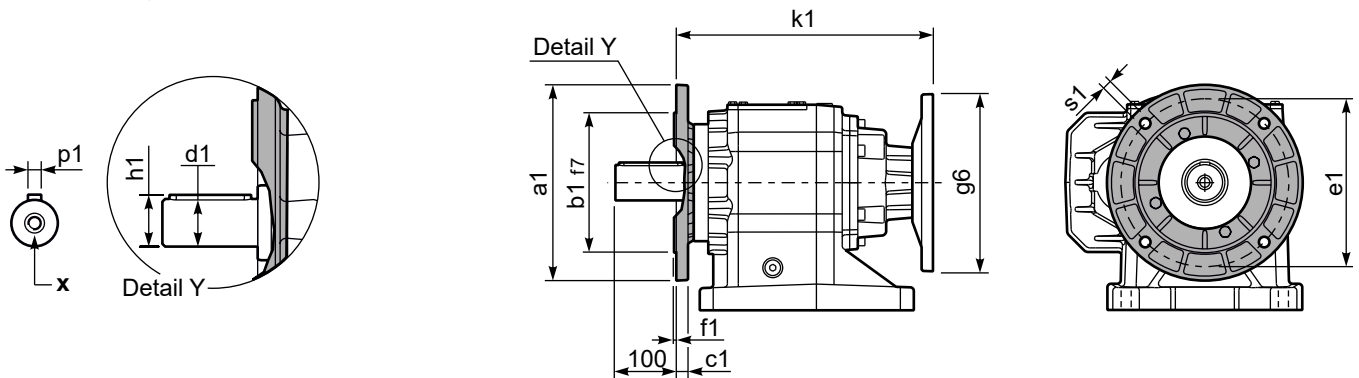
tab. 2

P862C**S8**... With foot
Con piedino

Gearbox weight With flange **84.0 kg**
peso riduttore With feet **74.5 kg**



P862C-**F**... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

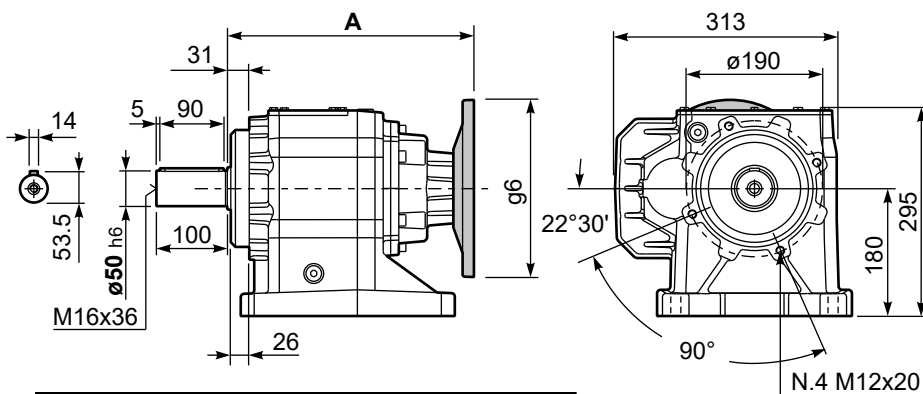
	Shaft - d1	p1	h1	x
Standard	∅ 50x100	14	53.5	M16x36
On request A richiesta	∅ 60x120	18	64	M20x42
	-	-	-	-

Available output flanges / flange di uscita

a1 ∅	b1	c1	e1	f1	s1	kit code
300	230	21	265	4	14	KC90.9.014
350	250	21	300	5	18	KC90.9.015
-	-	-	-	-	-	-

All flanges are compatible with the foot

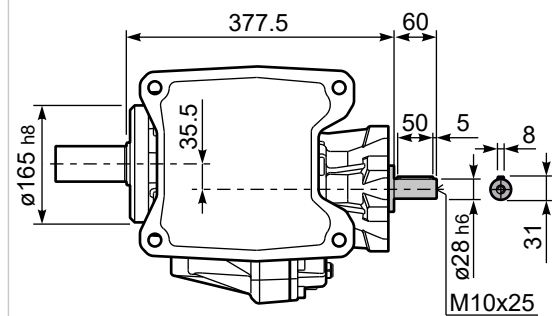
P862C**S8**... Basic gearbox
Riduttore base

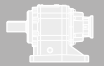


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
100/112 B5	348.5	305	250	348.5	K023.4.043
132 B5	370	330	300	370	KC51.4.043C
160/180 B5	402	355	350	402	KC86.4.0.43

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
100/112 B14	348.5	260	160	348.5	K085.4.047
132 B14	370	280	200	370	KC51.4.041C
-	-	-	-	-	-

R862C**S8**... Input Shaft
Albero in entrata





QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor $f.s.$	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges					Available B14 motor flanges				Output Shaft \varnothing	Ratios code 	
							-C	-D	-E	-F	-G	-R	-T	-U	-V			
							71	80	90	100 112	132	80	90	100 112	132			
32.5	43.03	5.5	1478	1.1	5.8	1600	B									201313	standard $\varnothing 50$ $\varnothing 60$ On request	01
28.9	48.52	5.5	1667	0.9	5.0	1550	B									161315		02
27.0	51.81	4	1302	1.2	4.8	1600	B									201311		03
24.1	58.17	4	1462	1.1	4.3	1600	B									161313		04
22.2	63.09	4	1585	1.0	3.8	1550	B									131315		05
20.0	70.05	4	1760	1.0	4.0	1800	B									161311		06
18.5	75.65	4	1901	0.9	3.7	1800	B									131313		07
15.4	91.09	3	1723	1.0	3.1	1800	B									131311		08
12.6	111.50	2.2	1553	1.2	2.5	1800	B									111311		09
10.5	133.91	2.2	1865	1.0	2.1	1800	B									81313		10
8.7	161.24	1.5	1548	1.2	1.7	1800	B									81311		11
7.6	184.40	1.1	1293	1.1	1.2	1450	B									61313		12
6.3	222.04	1.1	1557	1.1	1.2	1750	B									61311		13

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

EN Unit **863C** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
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 tipo **863C** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße **863C** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.
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 de type **863C** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.
Voir tableau 1 concernant les huiles et les quantités conseillées.
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

E El reductor tamaño **863C** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
3.10 LT	4.60 LT	2.60 LT	3.10 LT	5.60 LT	4.30 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

For all details on lubrication and plugs check our website [www.863c.com](#) **tab. 1**
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft
Albero di uscita

$F_{eq} = F_R \cdot \frac{88.5}{X+38.5}$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	1800	9000	140	2400	12000	70	3000	15000
250	2000	10000	120	2600	13000	40	3200	16000
200	2200	11000	85	2800	14000	15	4000	20000

On request reinforced bearings to increase loads.
A richiesta cuscinetti rinforzati per aumentare i carichi.

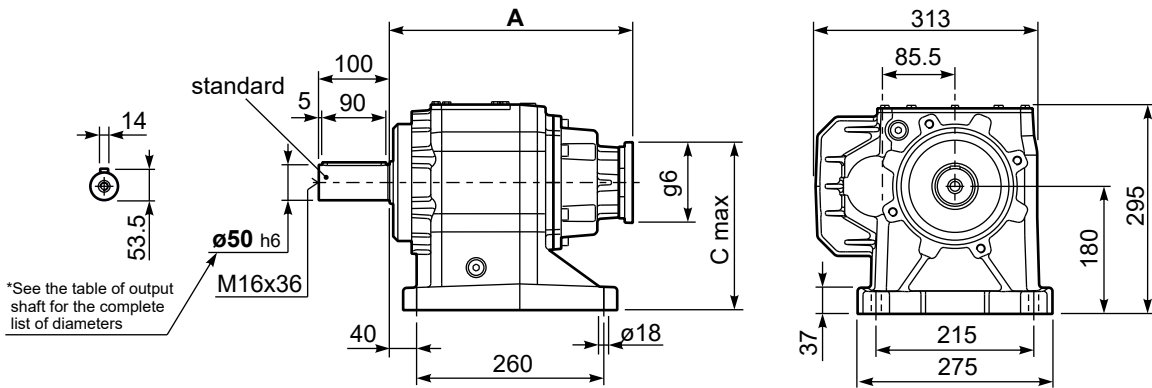
Input shaft
Albero in entrata

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

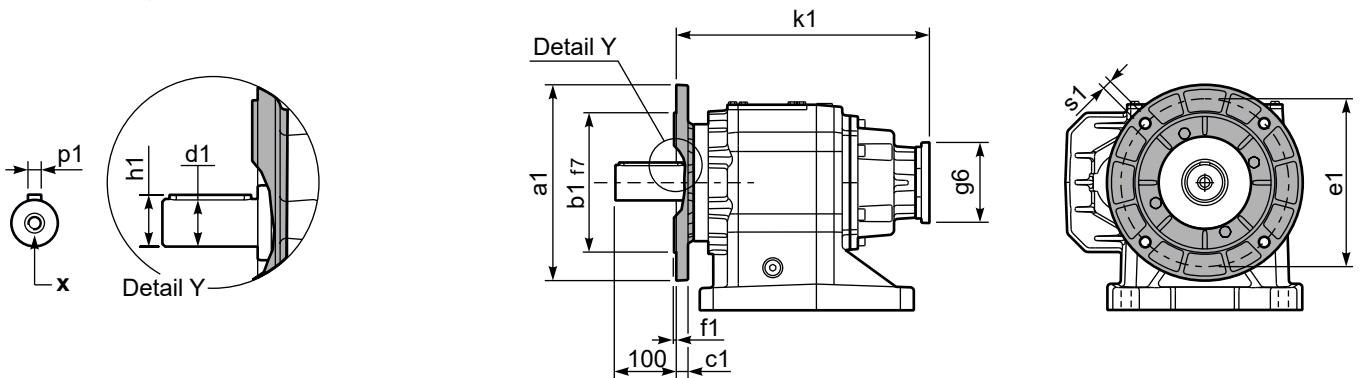
tab. 2

P863C**S8**... With foot
Con piedino

Gearbox weight With flange **78.5 kg**
peso riduttore With feet **69.0 kg**



P863C-**F**... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

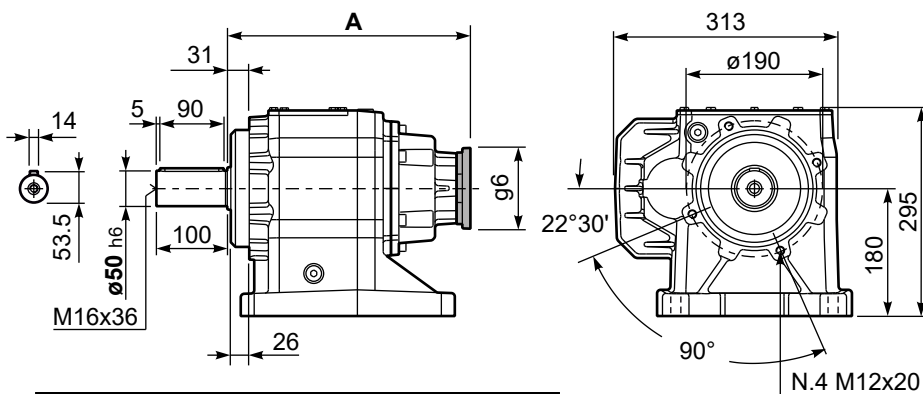
	Shaft - d1	p1	h1	x
Standard	∅ 50x100	14	53.5	M16x36
On request A richiesta	∅ 60x120	18	64	M20x42

Available output flanges / flange di uscita

a1 ∅	b1	c1	e1	f1	s1	kit code
300	230	21	265	4	14	KC90.9.014
350	250	21	300	5	18	KC90.9.015
-	-	-	-	-	-	-

All flanges are compatible with the foot

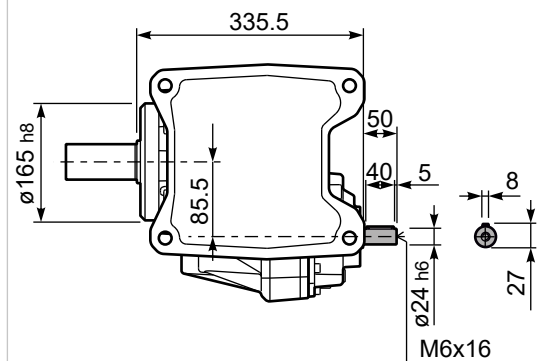
P863C**S8**... Basic gearbox
Riduttore base

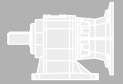


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
71 B5	342	260	160	344	K023.4.041
80/90 B5	344	280	200	344	K023.4.042
100/112 B5	353	305	250	353	K023.4.043
132 B5	374	330	300	374	KC51.4.043

B14 Motor Flanges	A	C _{max}	g6	k1	kit code
80 B14	344	240	120	344	K085.4.046
90 B14	344	250	140	344	K085.4.045
100/112 B14	353	260	160	353	K085.4.047
132 B14	374	280	200	374	KC51.4.041

R863C**S8**... Input Shaft
Albero in entrata





QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor $f.s.$	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges				B14 motor flanges				Output Shaft 	Ratios code
							-G	-H	-I	-L	-	-	-	-		
							132	160	180	200	-	-	-	-		
294	4.75	30	895	1.8	53.0	1650								3914	01	
269	5.21	30	980	1.8	51.3	1750								3913	02	
220	6.36	30	1197	1.6	45.6	1900								3911	03	
188	7.45	30	1401	1.5	43.1	2100								3014	04	
172	8.15	30	1535	1.4	39.3	2100								3013	05	
141	9.96	30	1874	1.2	33.7	2200								3011	06	
120	11.69	30	2200	1.0	30.1	2300								2214	07	
109	12.80	30	2409	1.0	27.4	2300								2213	08	
90	15.63	22	2161	1.1	23.5	2400								2211	09	
79	17.65	22	2441	1.1	22.5	2600								1614	10	
72	19.33	22	2673	1.1	22.9	2900								1613	11	
67	20.77	22	2872	1.0	21.3	2900								1414	12	
62	22.75	18.5	2643	1.1	19.5	2900								1413	13	
59	23.60	18.5	2743	1.1	18.8	2900								1611	14	
50	27.78	15	2615	1.1	15.9	2900								1411	15	
45.5	30.76	15	2896	1.0	14.4	2900								1014	16	
41.6	33.69	11	2330	1.2	13.1	2900								1013	17	
34.0	41.15	11	2845	1.0	10.8	2900								1011	18	

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

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

EN Unit 1002 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug. 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 tipo 1002 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso. Tab.1 per oli e quantità consigliati. Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße 1002 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen. 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 de type 1002 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé. Voir tableau 1 concernant les huiles et les quantités conseillées. Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur.

E El reductor tamaño 1002 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
4.50 LT	8.00 LT	5.50 LT	6.00 LT	10.00 LT	7.50 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

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

$F_{eq} = F_R \cdot \frac{117}{X+57}$

Input shaft
Albero in entrata

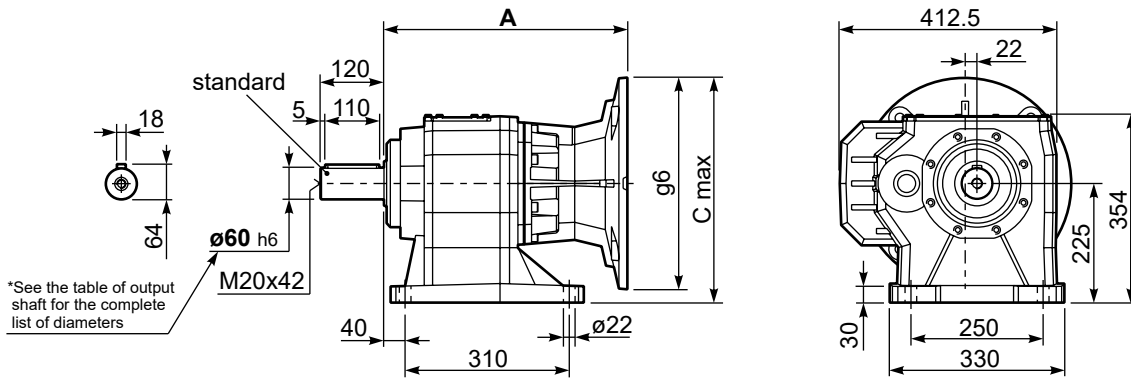
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	2300	11500	140	2980	14900	70	3660	18300
250	2480	12400	120	3180	15900	40	4220	21100
200	2680	13400	85	3440	17200	15	4820	24100

n_1	FA	FR
1400	1120	5600
900	1220	6100
500	1300	6500

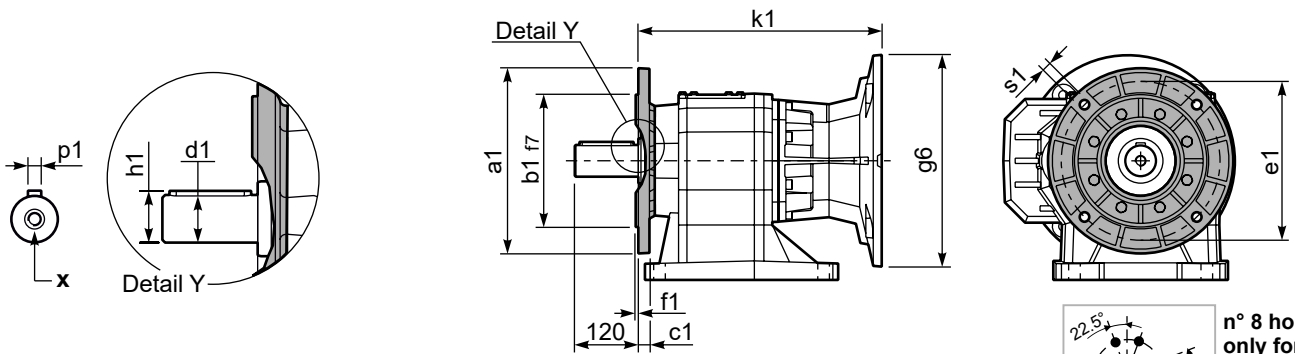
tab. 2

P1002**S9**... With foot
Con piedino

Gearbox weight 120.0 kg
peso riduttore



P1002-**F**... Output flanges
flange di uscita



n° 8 holes
only for
Kit KC909016
Solo per il
kit KC909016

*Available output shaft / Albero di uscita

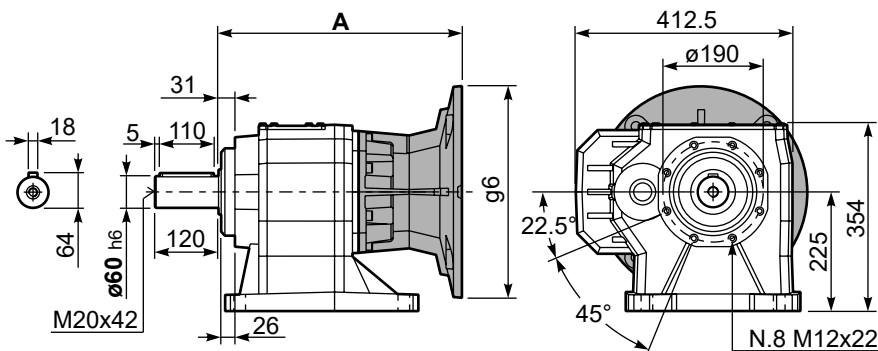
	Shaft - d1	p1	h1	x
Standard	ø 60x120	18	64	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
300	230	21	265	4	14	KC90.9.014
350	250	21	300	5	18	KC90.9.015
450	350	22	400	5	18	KC90.9.016

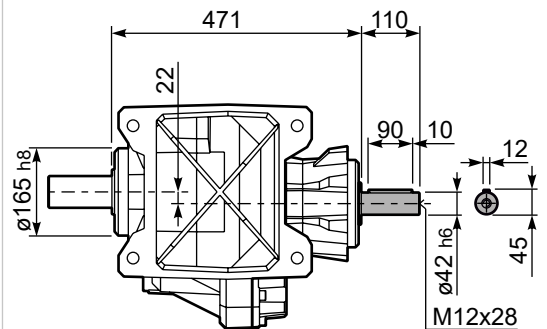
All flanges are compatible with the foot

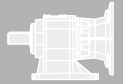
P1002**S9**... Basic gearbox
Riduttore base



B5 Motor Flanges	A	C _{max}	g6	k1	kit code
132 B5	435	375	300	435	KC110.9.052
160 B5	460	400	350	460	KC110.9.053
180 B5	460	400	350	460	KC110.9.053_B
200 B5	460	425	400	460	KC110.9.054

R1002**S9**... Input Shaft
Albero in entrata





QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges			B14 motor flanges		Output Shaft standard ø60	Ratios code
							-F	-G	-H	-U	-V		
							100 112	132	160	100 112	132		
38.8	36.11	11	2447	1.2	12.5	2900					301411	01	
27.5	50.89	9	2941	1.0	9.2	3000					201414	02	
25.1	55.73	7.5	2591	1.2	8.4	3000					201413	03	
20.3	68.80	7.5	3199	0.9	6.8	3000					161414	04	
18.6	75.35	5.5	2589	1.2	6.2	3000					161413	05	
15.6	89.47	5.5	3074	1.0	5.2	3000					131414	06	
15.2	92.02	5.5	3161	0.9	5.1	3000					161411	07	
14.3	97.99	4	2462	1.2	4.8	3000					131413	08	
12.8	109.52	4	2752	1.1	4.3	3000					111414	09	
11.7	119.94	4	3014	1.0	3.9	3000					111413	10	
9.6	146.47	3	2771	1.1	3.2	3000					111411	11	
8.8	158.37	3	2996	1.0	3.0	3000					81414	12	
8.1	173.45	2.2	2416	1.2	2.7	3000					81413	13	
6.6	211.82	2.2	2951	1.0	2.2	3000					81411	14	

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

EN Unit **1003** is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
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 tipo **1003** è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße **1003** wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.
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 de type **1003** est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.
Voir tableau 1 concernant les huiles et les quantités conseillées.
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

E El reductor tamaño **1003** se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético.
Ver tabla 1, para cantidades y aceites recomendados.
En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
5.00 LT	9.00 LT	6.50 LT	6.50 LT	11.00 LT	9.00 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

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

$F_{eq} = F_R \cdot \frac{117}{X+57}$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	2300	11500	140	2980	14900	70	3660	18300
250	2480	12400	120	3180	15900	40	4220	21100
200	2680	13400	85	3440	17200	15	4820	24100

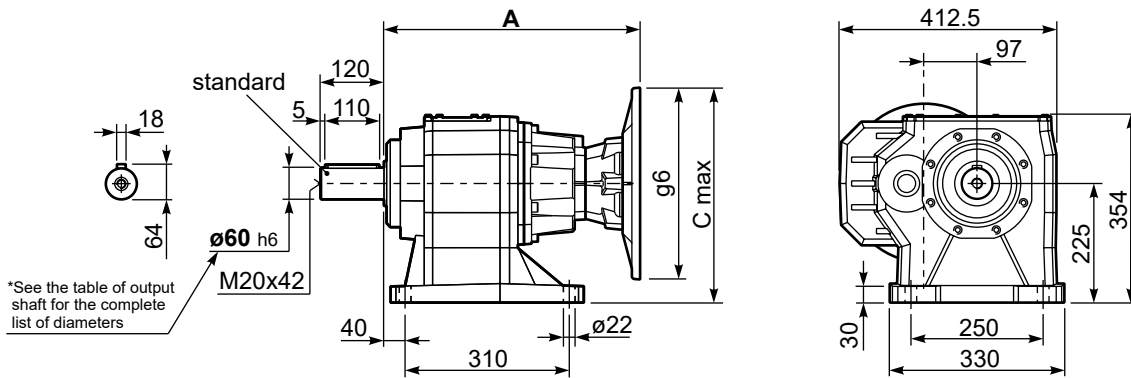
Input shaft
Albero in entrata

n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

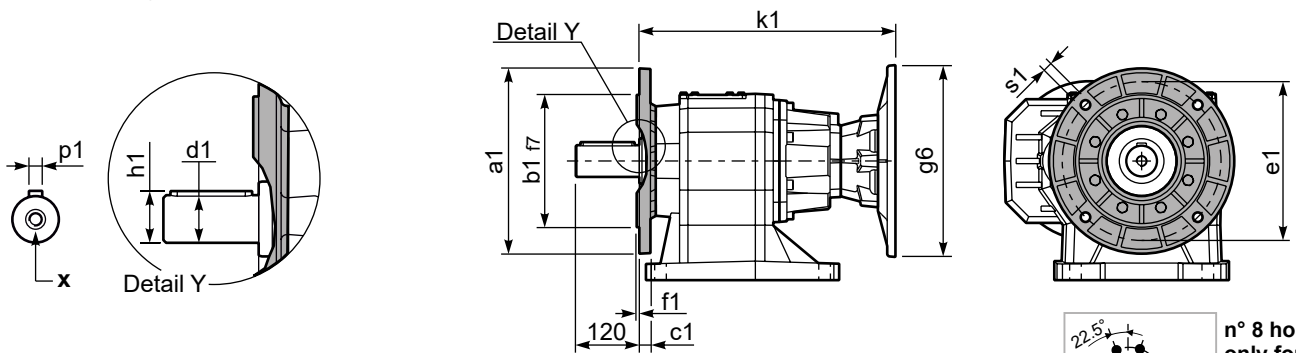
tab. 2

P1003**S9**... With foot
Con piedino

Gearbox weight **116 kg**
peso riduttore



P1003-**F**... Output flanges
flange di uscita



n° 8 holes
only for
Kit KC909016
Solo per il
kit KC909016

*Available output shaft / Albero di uscita

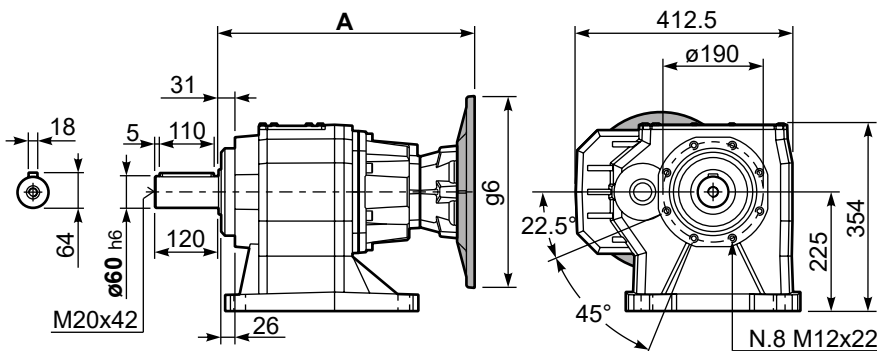
	Shaft - d1	p1	h1	x
Standard	ø 60x120	18	64	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

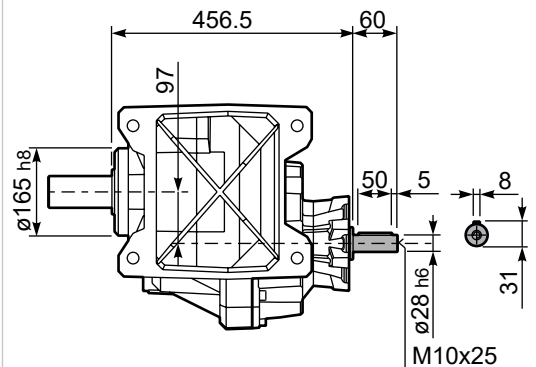
a1 ø	b1	c1	e1	f1	s1	kit code
300	230	21	265	4	14	KC90.9.014
350	250	21	300	5	18	KC90.9.015
450	350	22	400	5	18	KC90.9.016

All flanges are compatible with the foot

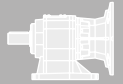
P1003**S9**... Basic gearbox
Riduttore base



R1003**S9**... Input Shaft
Albero in entrata



Motor Flanges	A	C _{max}	g6	k1	kit code
100/112 B5	427.5	350	250	427.5	K023.4.043
132 B5	448.5	375	300	449	KC51.4.043C
160 B5	481	400	350	481	KC86.4.043
100/112B14	427.5	305	160	427.5	K085.4.047
132B14	448.5	325	200	449	KC51.4.041C



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor $f.s.$	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	B5 motor flanges					B14 motor flanges			Output Shaft 	Ratios code
							-G	-H	-I	-L	CA	-	-	-		
							132	160	180	200	225	-	-	-		
294	4.75	45	1333	2.0	86.7	2700								3914		01
269	5.21	45	1460	1.9	82.1	2800								3913		02
220	6.36	45	1783	1.7	72.0	3000								3911		03
188	7.45	45	2088	1.6	67.7	3300								3014		04
172	8.15	45	2287	1.5	63.7	3400								3013		05
141	9.96	45	2792	1.3	55.2	3600								3011		06
120	11.69	45	3277	1.2	49.7	3800								2214		07
109	12.80	45	3589	1.1	47.7	4000								2213		08
90	15.63	45	4383	1.0	42.0	4300								2211	standard	09
79	17.65	37	4068	1.1	38.9	4500								1614	ø70	10
72	19.33	37	4455	1.0	35.6	4500								1613		11
67	20.77	30	3910	1.2	33.1	4500								1414		12
62	22.75	30	4282	1.1	30.2	4500								1413		13
59	23.60	30	4443	1.0	29.1	4500								1611		14
50	27.78	22	3842	1.2	24.7	4500								1411		15
45.5	30.76	22	4255	1.1	22.3	4500								1014		16
41.6	33.69	22	4660	1.0	20.4	4500								1013		17
34.0	41.15	18.5	4781	0.9	16.7	4500								1011		18

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

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

EN Unit 1102 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
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 tipo 1102 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße 1102 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.
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 de type 1102 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.
Voir tableau 1 concernant les huiles et les quantités conseillées.
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

E El reductor tamaño 1102 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
6.50 LT	12.50 LT	7.50 LT	8.50 LT	14.50 LT	11.50 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

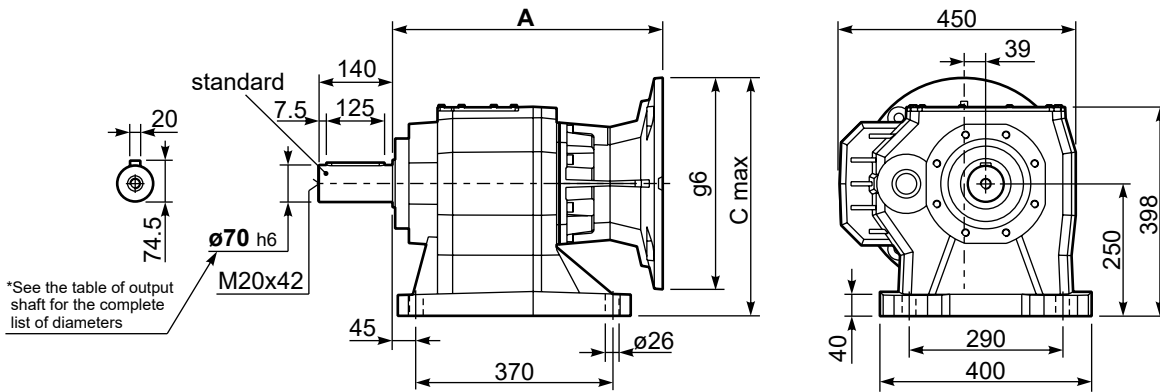
For all details on lubrication and plugs check our website
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web **tab. 1**

RADIAL AND AXIAL LOADS								
Output shaft Albero di uscita			$F_{eq} = F_R \cdot \frac{138}{X+68}$					
n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	2600	13000	140	3300	16500	70	4300	21500
250	2700	13500	120	3500	17500	40	5000	25000
200	3000	15000	85	3900	19500	15	5900	29500
Input shaft Albero in entrata								
n_1	FA	FR						
1400	1120	5600						
900	1220	6100						
500	1300	6500						

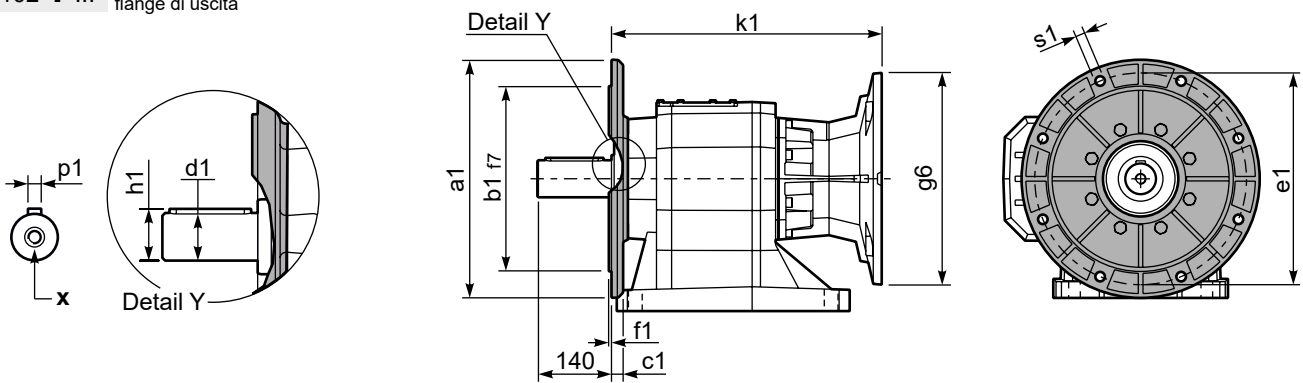
tab. 2

P1102**S0**... With foot
Con piedino

Gearbox weight
peso riduttore **165 kg**



P1102-**F**... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

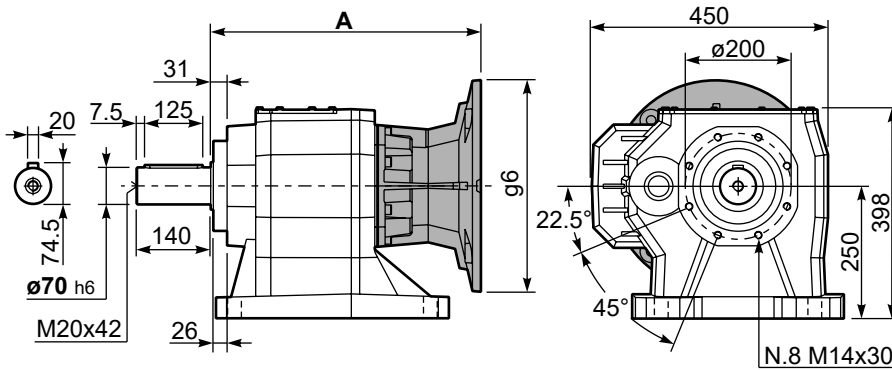
	Shaft - d1	p1	h1	x
Standard	ø 70x140	20	74.5	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

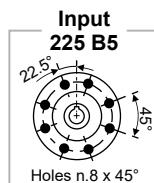
a1 ø	b1	c1	e1	f1	s1	kit code
350	250	21	300	5	18	KC110.9.015
450	350	22	400	5	18	KC110.9.016
-	-	-	-	-	-	-

All flanges are compatible with the foot

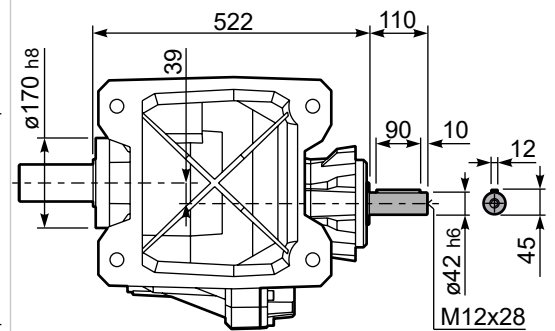
P1102**S0**... Basic gearbox
Riduttore base

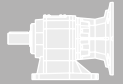


B5 Motor Flanges	A	C _{max}	g6	k1	kit code
132 B5	485.5	400	300	485.5	KC110.9.052
160 B5	510.5	425	350	510.5	KC110.9.053
180 B5	510.5	425	350	510.5	KC110.9.053 B
200 B5	510.5	450	400	510.5	KC110.9.054
225 B5	537.5	475	450	537.5	KC110.9.055



R1102**S0**... Input Shaft
Albero in entrata





QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n_2 [min ⁻¹]	Ratio i	Motor power P_{1M} [kW]	Output torque M_{2M} [Nm]	Service factor f.s.	Nominal power P_{1R} [kW]	Nominal torque M_{2R} [Nm]	Available B5 motor flanges				B14 motor flanges		Output Shaft standard ø70	Ratios code
							-F	-G	-H	-I	-U	-V		
							100 112	132	160	180	100 112	132		
38.8	36.11	18.5	4113	1.1	19.4	4500						301411	01	
27.5	50.89	15	4694	1.0	14.1	4600						201414	02	
25.1	55.73	11	3777	1.2	12.9	4600						201413	03	
20.3	68.80	11	4662	1.0	10.4	4600						161414	04	
18.6	75.35	9	4354	1.1	9.5	4600						161413	05	
15.6	89.47	7.5	4160	1.1	8.0	4600						131414	06	
15.2	92.02	7.5	4278	1.1	7.6	4500						161411	07	
14.3	97.99	7.5	4556	1.0	7.3	4600						131413	08	
12.8	109.52	5.5	3762	1.2	6.6	4600						111414	09	
11.7	119.94	5.5	4120	1.1	6.0	4600						111413	10	
9.6	146.47	4	3681	1.2	4.8	4500						111411	11	
8.8	158.37	4	3980	1.2	4.5	4600						81414	12	
8.1	173.45	4	4359	1.1	4.1	4600						81413	13	
6.6	211.82	3	4007	1.1	3.3	4500						81411	14	

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

EN Unit 1103 is supplied without lubricant and equipped with a breather, level and drain plugs. User can add mineral oil keeping existing plugs. Should the user wish to fill it with synthetic oil, it is recommended to replace the existing plugs with a closed plug.
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 tipo 1103 è fornito privo di lubrificazione con tappi di sfiato, livello e scarico olio. L'utente può immettere olio minerale mantenendo i tappi esistenti. Se immetterà olio sintetico, dovrà sostituire i tappi esistenti con altri tipo chiuso.
Tab.1 per oli e quantità consigliati.
Tab.2 carichi radiali e assiali applicabili al riduttore.

D Das Getriebe der Baugröße 1103 wird ohne Schmiermittel geliefert. Es ist jedoch mit Einfüllschraube, Überdruckventil und Ablassschraube ausgerüstet. Das benötigte mineralische Öl kann über die Einfüllschraube eingefüllt werden. Sollte synthetisches Öl bevorzugt werden, so ist sind das eingebaute Überdruckventil durch eine geschlossenen Schraube zu ersetzen.
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 de type 1103 est fourni sans lubrification et avec un bouchon de remplissage, de niveau et d'évacuation de l'huile. L'utilisateur peut y verser de l'huile minérale en conservant les bouchons existants. S'il y versera de l'huile synthétique, il devra substituer les bouchons existants avec d'autres bouchons de type fermé.
Voir tableau 1 concernant les huiles et les quantités conseillées.
Voir tableau 2 concernant les charges radiales et axiales applicables au réducteur

E El reductor tamaño 1103 se suministra sin lubricante, provisto de tapones de respiración, nivel y descarga de aceite. El usuario puede utilizar aceite mineral, manteniendo los tapones existentes. Si prefiere utilizar aceite sintético deberá sustituir los tapones existentes por tapones ciegos. La prerreducción se suministra con tapones ciegos, lubricado de por vida con aceite sintético. Ver tabla 1, para cantidades y aceites recomendados. En la tabla 2, se encuentran las cargas radiales y axiales admitidas por el reductor.

B3	B6	B7	B8	V5	V6	V8
7.00 LT	13.00 LT	8.00 LT	9.00 LT	16.00 LT	13.50 LT	Ask
SHELL Omala S2 GX 460				ENI Blasias 460		

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

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

$F_{eq} = F_R \cdot \frac{138}{X+68}$

Req
 $F_{eq} (N)$

n_2	FA	FR	n_2	FA	FR	n_2	FA	FR
300	2600	13000	140	3300	16500	70	4300	21500
250	2700	13500	120	3500	17500	40	5000	25000
200	3000	15000	85	3900	19500	15	5900	29500

Input shaft
Albero in entrata

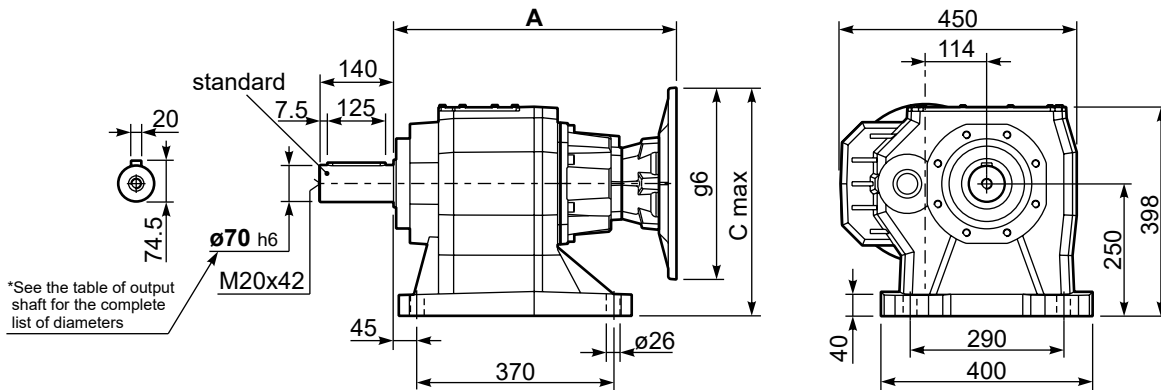
$F_R (N)$
 $F_A (N)$

n_1	FA	FR
1400	700	3500
900	840	4200
500	900	4500

tab. 2

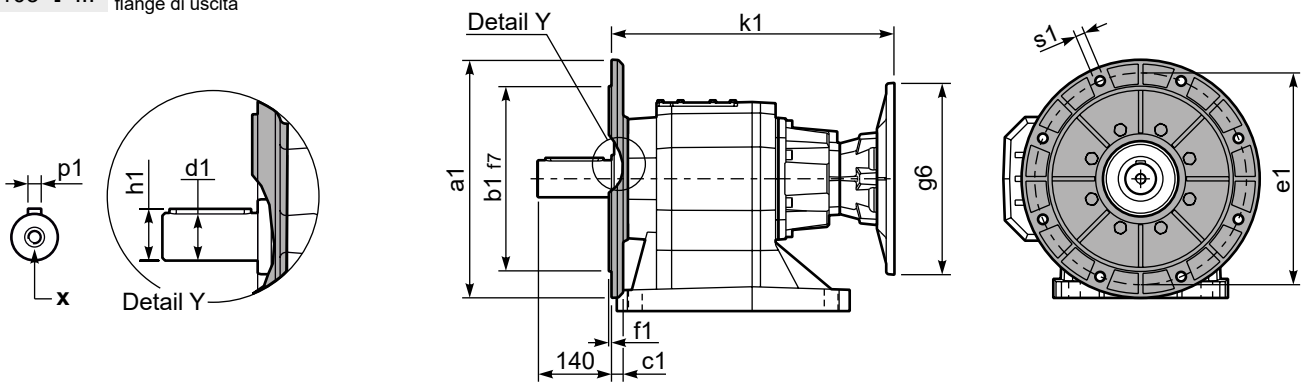
P1103**S0**... With foot
Con piedino

Gearbox weight **156 kg**
peso riduttore



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

P1103-**F**... Output flanges
flange di uscita



*Available output shaft / Albero di uscita

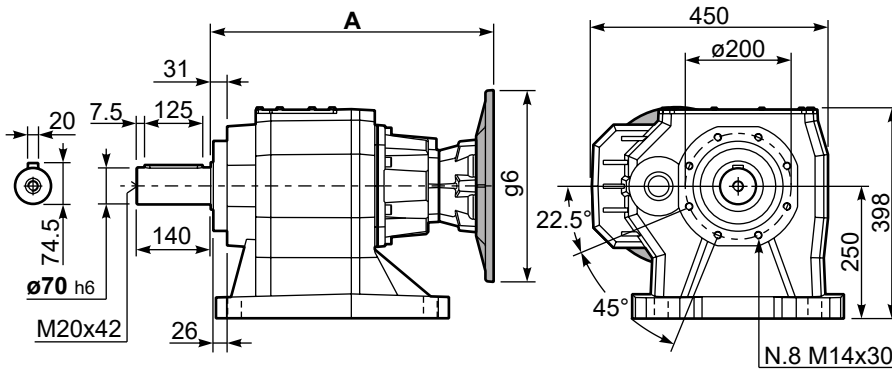
	Shaft - d1	p1	h1	x
Standard	ø 70x140	20	74.5	M20x42
On request A richiesta	-	-	-	-

Available output flanges / flange di uscita

a1 ø	b1	c1	e1	f1	s1	kit code
350	250	21	300	5	18	KC110.9.015
450	350	22	400	5	18	KC110.9.016
-	-	-	-	-	-	-

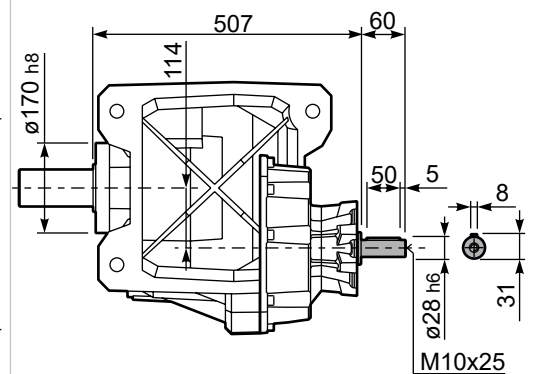
All flanges are compatible with the foot

P1103**S0**... Basic gearbox
Riduttore base

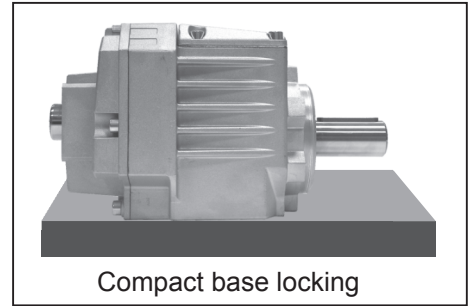
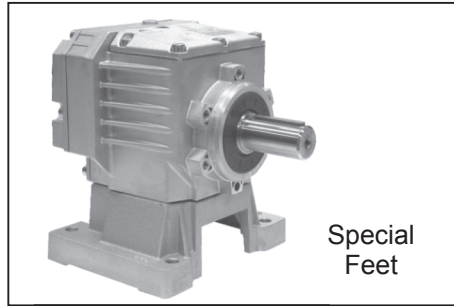
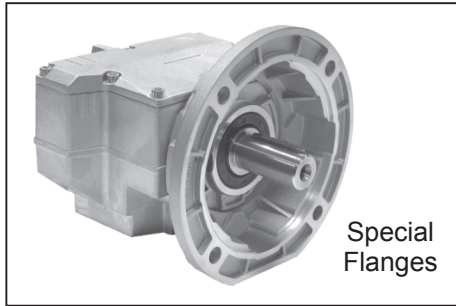
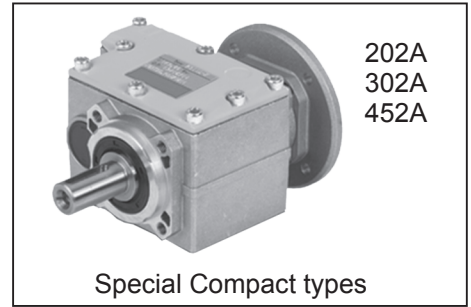
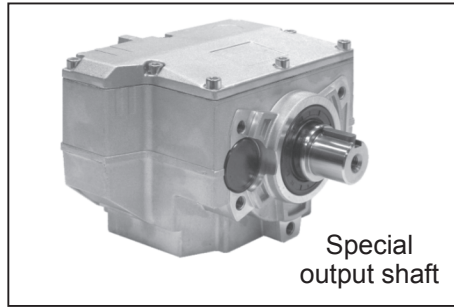
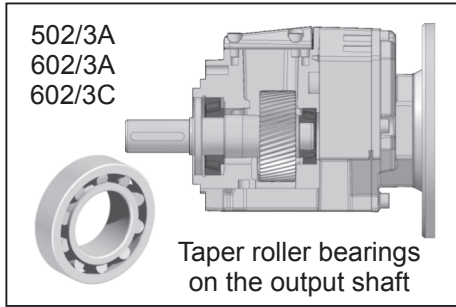


Motor Flanges	A	C _{max}	g6	k1	kit code
100/112 B5	478	375	250	478	K023.4.043
132 B5	499.5	400	300	499.5	KC51.4.043C
160-180 B5	531.5	425	350	531.5	KC864.043
100/112B14	478	330	160	478	K085.4.047
132B14	499.5	350	200	499.5	KC51.4.041C

R1103**S0**... Input Shaft
Albero in entrata



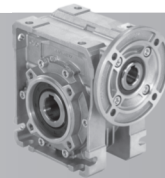
New options available



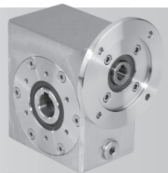
Others HYDRO-MEC products



Worm gearboxes
Rid. a vite senza fine



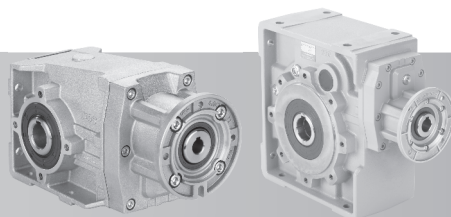
Square worm gearboxes
Rid. a vite senza fine quadro



Stainless steel worm gearboxes
Rid. a vite senza fine Inox



Stainless steel one step gearbox
Riduttore uno stadio Inox

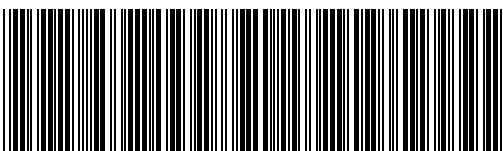


Helical bevel gearboxes
Rid. a coppia conica

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* CT - RCM - WO - HM0 1 7

