

Pré-couples de réduction

Aluminium one stage gearboxes

Un produit compact et modulaire
A modular and compact product

Bride modulaire

Flange

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

Couvercle d'inspection amovible

Removable inspection cover

Allows periodic inspection of gearing during routine maintenance

Patte amovible

Feet

Removable feet.

Carcasse aluminium

Alloy housing

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

Engrenage en acier trempé et rectifiés

Gears

Hardened and ground gears.

Arbre de sortie avec roulement

Output shaft

With well proportioned bearings

Pour combinaison avec réducteurs roue et vis

Ideal for use as first step with wormgearboxes.

Carcasse aluminium en une seule pièce légère et robuste

Single-piece aluminum alloy housing

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

Lubrification à vie avec huile synthétique -15° à +130°

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



World wide sales network.

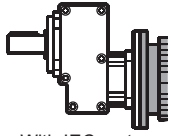
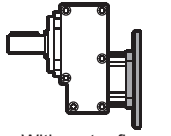
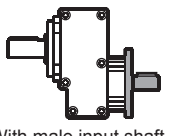
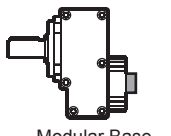
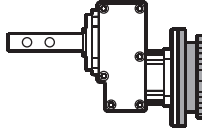
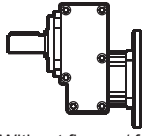
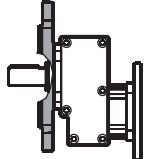
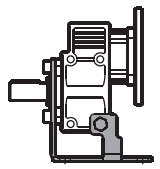




Types / Tipi
Tipen / Types
Tipos

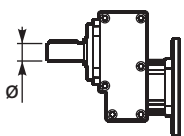
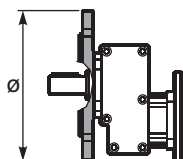
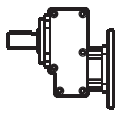
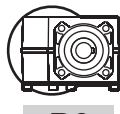
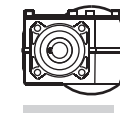
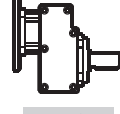
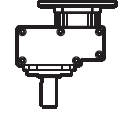
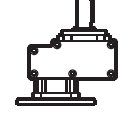


On page / A pagina / Auf Seite / À la page / En la página			
4-5	4-7	4-9	4-11
211A 20Nm	311A 30Nm	411A 38Nm	511A 110Nm

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
Aluminum one step gear Riduttori in alluminio a uno stadio  With IEC motor M  With motor flange P  With male input shaft R  Modular Base B Special output shaft Albero uscita speciale  Only on request for Q.ty A richiesta per quantità	1 Stages Riduzioni Stufen Trains Etapas 211A 311A 411A 511A	 Without flange / feet -N  Output flange mounted -F  Mounted feet H1	See technical data table Vedi tabella dati tecnici. Technisches Datenblatt beachten Voir Tableau données techniques Ver tabla datos técnicos



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 morsettiera Klemmkastenlage Position boîte à bornes Posición caja de bornes
S	2	-C	B3	ST	
 → STANDARD 211A S → Ø14 311A S → Ø14 C ⇒ Ø19 E ⇒ Ø24 411A S ⇒ Ø14 C → Ø19 E ⇒ Ø24 511A C ⇒ Ø19 E ⇒ Ø24 G → Ø28	 N Senza flangia Without flange 211A I ⇒ Ø105 Flangia integrata Integrated flange 311A 1 ⇒ Ø120 2 ⇒ Ø140 3 → Ø160 4 ⇒ Ø200 411A 1 ⇒ Ø120 2 ⇒ Ø140 3 ⇒ Ø160 4 → Ø200 511A 1 ⇒ Ø120 2 ⇒ Ø140 3 ⇒ Ø160 4 ⇒ Ø200 5 → Ø250	Flange Flangia  B5 -A=56 (Ø120) -B=63 (Ø140) -C=71 (Ø160) -D=80 (Ø200) -E=90 (Ø200) -F=100+112 (Ø250) -G=132 (Ø300) B14 -O=56 (Ø80) -P=63 (Ø90) -Q=71 (Ø105) -R=80 (Ø120) -T=90 (Ø140) -U=100+112 (Ø160) -V=132 (Ø200)	Type R Tipo R  211A 311A -1 ⇒ Ø14 411A -2 ⇒ Ø19 511A -3 ⇒ Ø24 Without flange Senza flangia  211A 311A -Z ⇒ Ø9 (56B5) -0 ⇒ Ø11 (63B5) -1 ⇒ Ø14 (71B5) 411A -1 ⇒ Ø14 (71B5) -2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5) 511A -2 ⇒ Ø19 (80B5) -3 ⇒ Ø24 (90B5) -4 ⇒ Ø28 (100B5)	 B3 STANDARD  B6  B7  B8  V5  V6	ST standard bore foro standard With Type M specify terminal box position Con tipo M specificare posizione morsettiera  A  B STANDARD  C  D

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 / rotation

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

Linear movement / traslazione / linearbewegung / translation / translacion

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

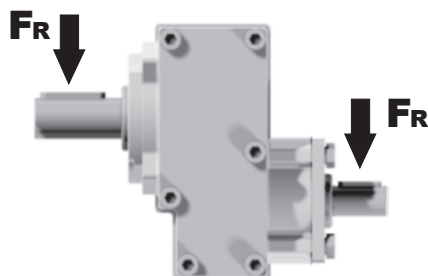
TORQUE / COPPIA / DREHMOMENT / COUPLE / PAR

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

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

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 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

B Output speed
Velocità in uscita
Abtriebsdrehzahl
Vitesse de sortie
Velocidad de salida

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

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

Flange code
Codice flangia
Flanschtype
Code bride
Código bridas

Input speed
Velocità in entrata
Eintriebsdrehzahl
Vitesse en entrée
Velocidad de entrada

Gear size
Grandezza riduttore
Getriebegröße
Taille réducteur
Tamaño reductor

Motor power
Potenza motore
Motorleistung
Puissance moteur
Potencia motor

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	
892	1.57	0.37	3.9	3.3	1.24	13			C	C		2844
493	2.84	0.37	7.0	3.3	1.21	23			C	C		1954
426	3.29	0.37	8.1	3.2	1.18	26			C	C		1756
362	3.87	0.37	9.6	2.9	1.08	28			C	C		1558
										standard ø14		01
												02
												03
												04

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

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 Bridas 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

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	Ratio code
							-B	-C	-O	-P	-Q		
							63	71	56	63	71		
682	2.05	0.37	5	2.0	0.73	10			C	C		1939	01
595	2.35	0.37	6	2.1	0.76	12			C	C		1740	02
500	2.80	0.37	7	2.0	0.75	14			C	C		1542	03
414	3.38	0.37	8	2.0	0.75	17			C	C		1344	04
298	4.70	0.37	12	1.7	0.64	20			C	C		1047	05
225	6.22	0.37	15	1.5	0.55	23			C	C		956	06
169	8.29	0.37	20	1.0	0.36	20			C	C		758	07
142	9.83	0.25	16	1.0	0.24	16			C	C		659	08

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

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

4

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

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

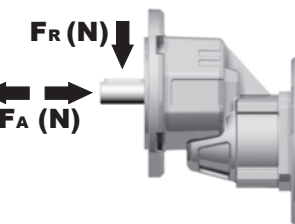
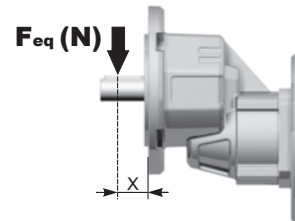
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

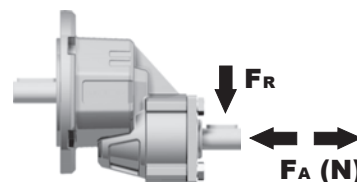
$$F_{eq} = F_R \cdot \frac{34.5}{X+19.5}$$



n ₂	FA	FR
700	101	504
600	120	600
400	138	696
300	151	756
200	175	876
140	192	960

Input shaft

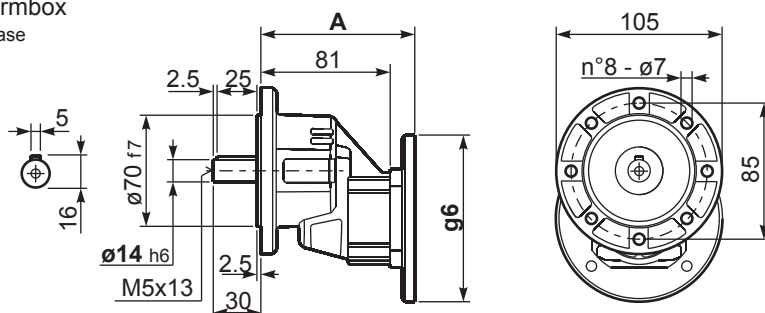
albero in entrata



n ₁	FA	FR
1400	168	840
900	192	960

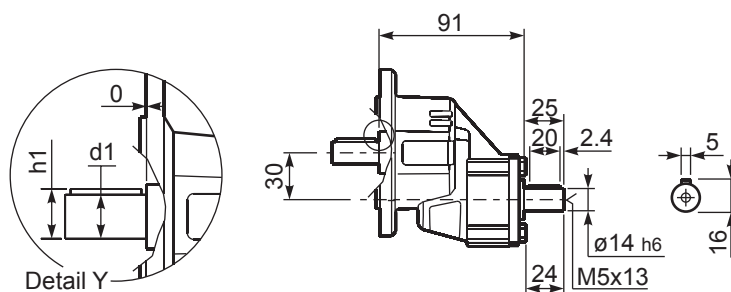
***Strong axial loads in the DX direction are not allowed.**
Non sono consentiti forti carichi assiali con direzione DX

tab. 2

P211A-F... Basic wormbox
Riduttore baseGearbox
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	Ø 14x30	5	16	M5x13



QUICK SELECTION / Selezione veloce

input speed (n_1) = 1400 min⁻¹

Output Speed n ₂ [min ⁻¹]	Ratio i	Motor power P _{1M} [kW]	Output torque M _{2M} [Nm]	Service factor f.s.	Nominal power P _{1R} [kW]	Nominal torque M _{2R} [Nm]	Available B5 motor flanges		Available B14 motor flanges				Output Shaft 	 Ratios code
							-B	-C	-O	-P	-Q			
							63	71	56	63	71			
891	1.57	0.37	4	3.3	1.2	13			C	C		2844	standard ø14 On request ø19 ø24	01
493	2.84	0.37	7	3.3	1.2	23			C	C		1954		02
425	3.29	0.37	8	3.2	1.2	26			C	C		1756		03
362	3.87	0.37	10	2.9	1.1	28			C	C		1558		04
303	4.62	0.37	11	2.6	0.97	30			C	C		1360		05
222	6.30	0.37	16	2.2	0.83	35			C	C		1063		06
170	8.22	0.37	20	1.9	0.69	38			C	C		974		07
129	10.86	0.37	27	1.0	0.39	28			C	C		776		08

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

Motor Flanges Available
Flange Motore Disponibili

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.

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Vedi tab.1 per oli e quantità consigliati.
In tab.2 sono presenti i carichi radiali e assiali applicabili al riduttore.

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In Tabelle 1 ist die Schmiermenge und das empfohlene Schmiermittel angegeben.
In Tabelle 2 sind die zulässigen Radial - und Axialbelastungen des Getriebes aufgeführt.

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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

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

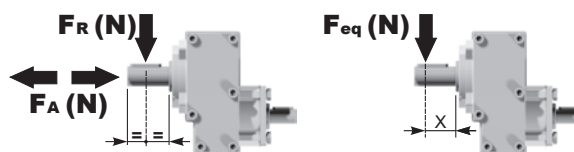
tab. 1

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

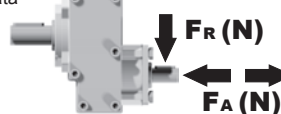
$$F_{eq} = F_R \cdot \frac{38.5}{X+18.5}$$



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

Input shaft

Albero in entrata

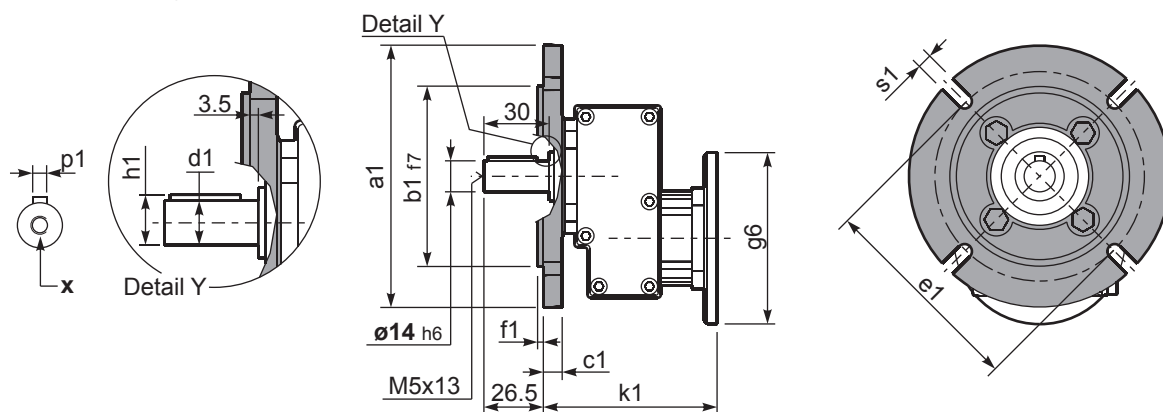


n_1	FA	FR
1400	180	860
900	200	980

tab. 2

P311-F... Output flange
flange di uscita

Gearbox
weight
peso riduttore **2.50 kg**



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

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

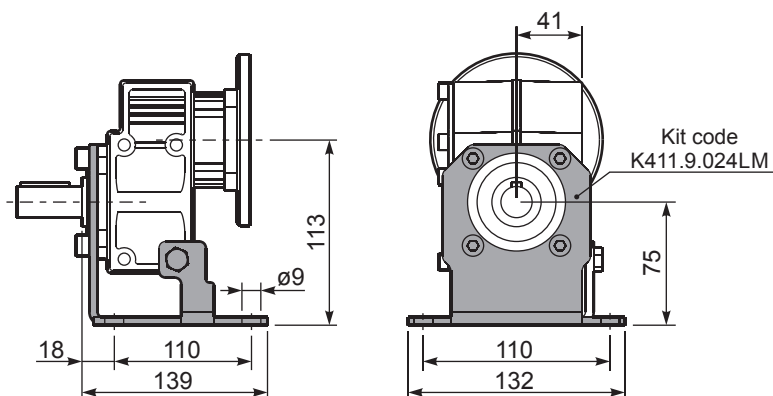
Available output flanges / flange di uscita

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

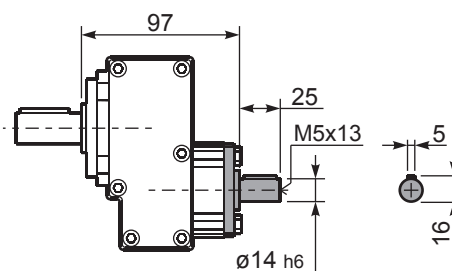
*Holes position
posizione fori



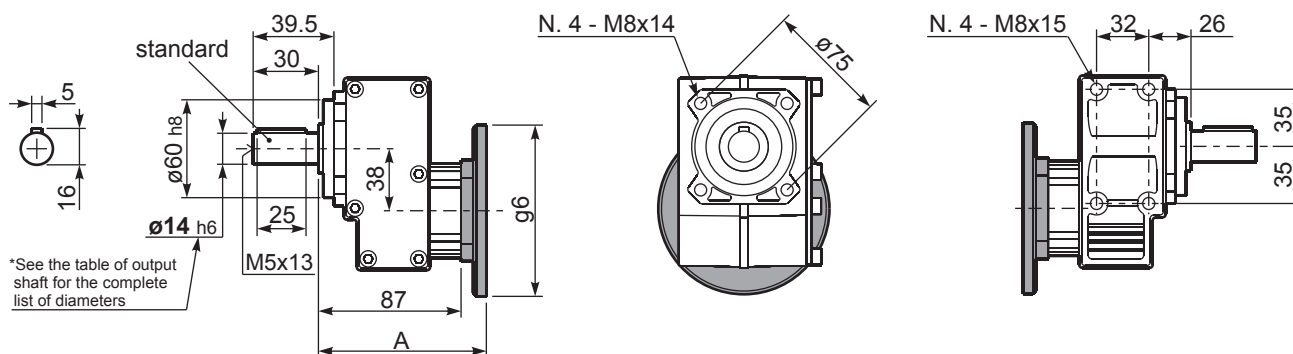
P311-H1... With feet
Con piedini



R311-N... Input Shaft
Albero in entrata



P311-N... Basic gearbox
Riduttore base



B14 Motor Flanges	A	g6	k1	kit code
56 B14	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 	Output Shaft 	Ratios code 
							-B	-C	-D	-E	-Q	-R	-T			
891	1.57	1.5	16	1.3	1.9	20	B				C	C		2844	standard ø19	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	On request ø14 ø24	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

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tab. 1

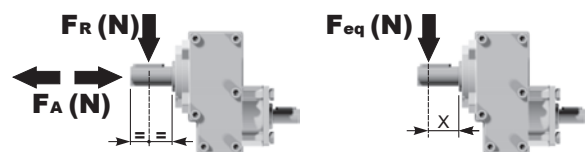
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita

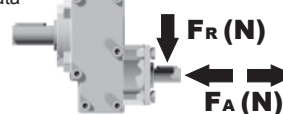
$$F_{eq} = F_R \cdot \frac{40}{X+20}$$



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

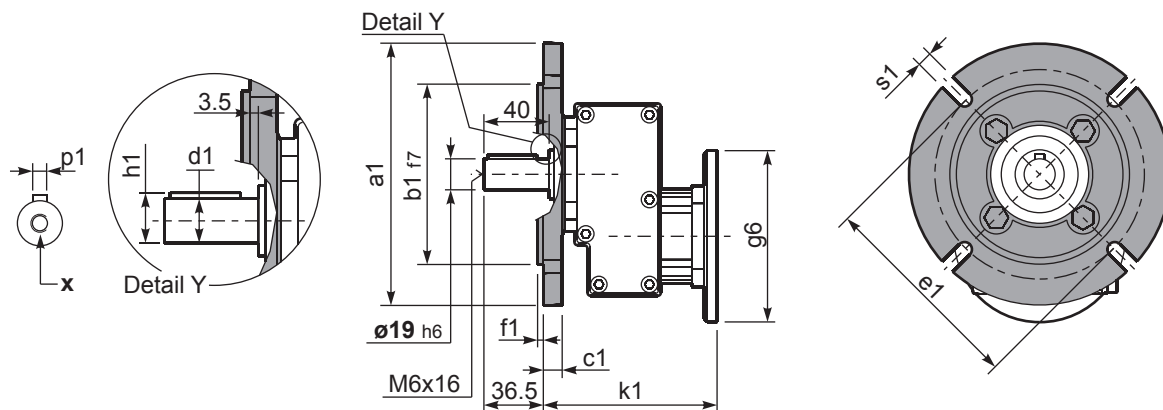
Input shaft

Albero in entrata



n_1	FA	FR
1400	240	1200
900	280	1400

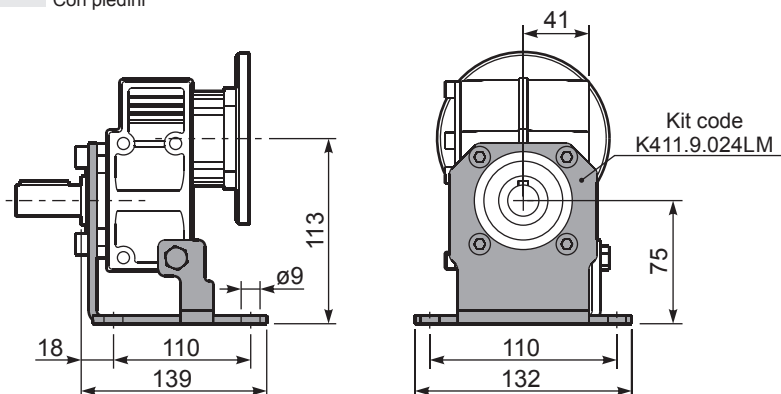
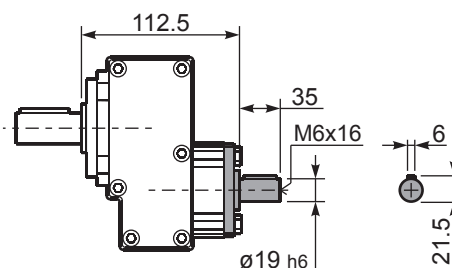
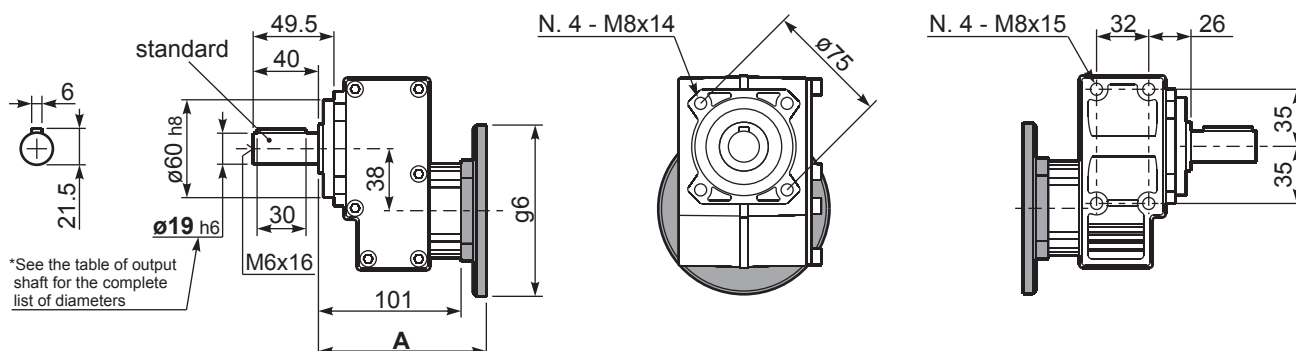
tab. 2

P411-F... Output flange
flange di uscitaGearbox
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	5	16	M5x13
	Ø 24x40	8	27	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	
							-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 On request ø24	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		05	
184	7.63	2.2	111	1.0	2.2	110	B									861		06	
133	10.50	1.1	77	1.0	1.1	80	B									663		07	

The dynamic efficiency is 0.98 for all ratios

Motor Flanges Available
Flange Motore Disponibili

B) Supplied with Reduction Bushing
Fornito con Bussola di Riduzione

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

C) Motor Flange Holes Position
Posizione Fori Flangia Motore

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

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.

SHELL Omala S4 WE 320

ENI Telium VSF 320

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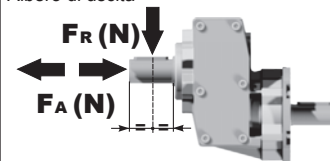
Per maggiori dettagli su lubrificazione e tappi olio vedi il nostro sito web

tab. 1

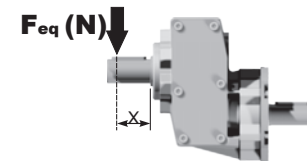
RADIAL AND AXIAL LOADS

Output shaft

Albero di uscita



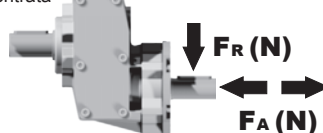
$$F_{eq} = F_R \cdot \frac{47.5}{X+22.5}$$



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

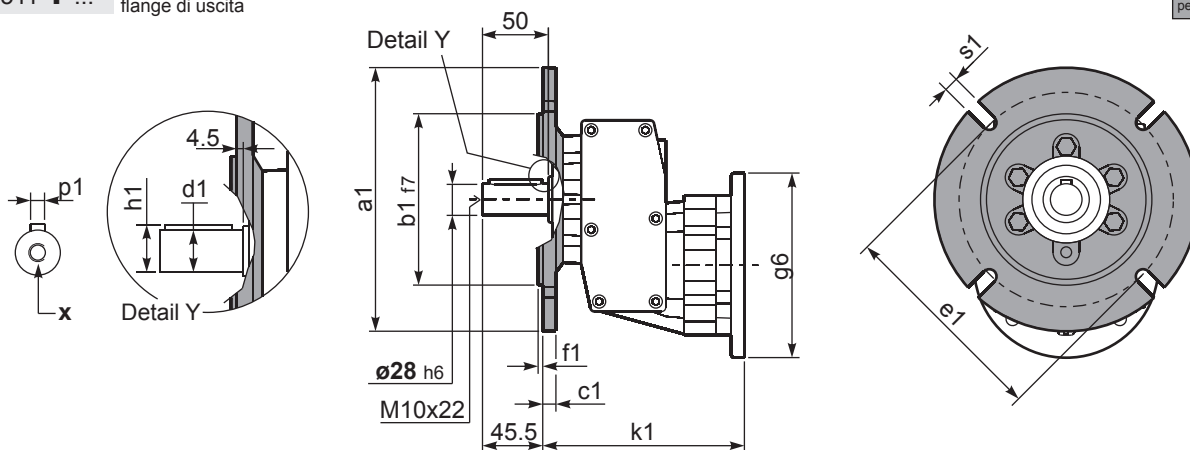
Input shaft

Albero in entrata



n_1	FA	FR
1400	400	2000
900	440	2200

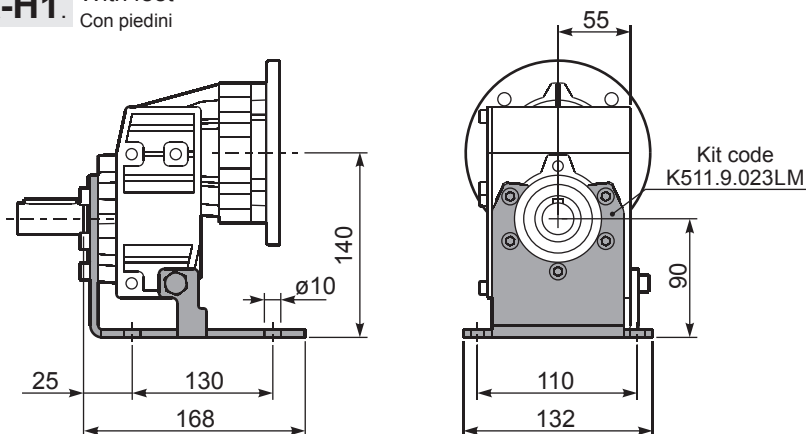
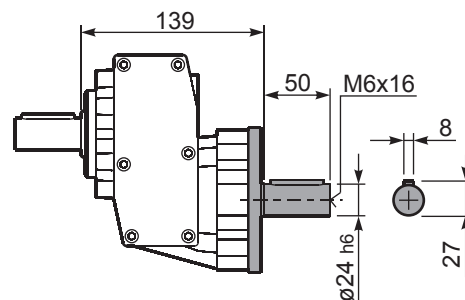
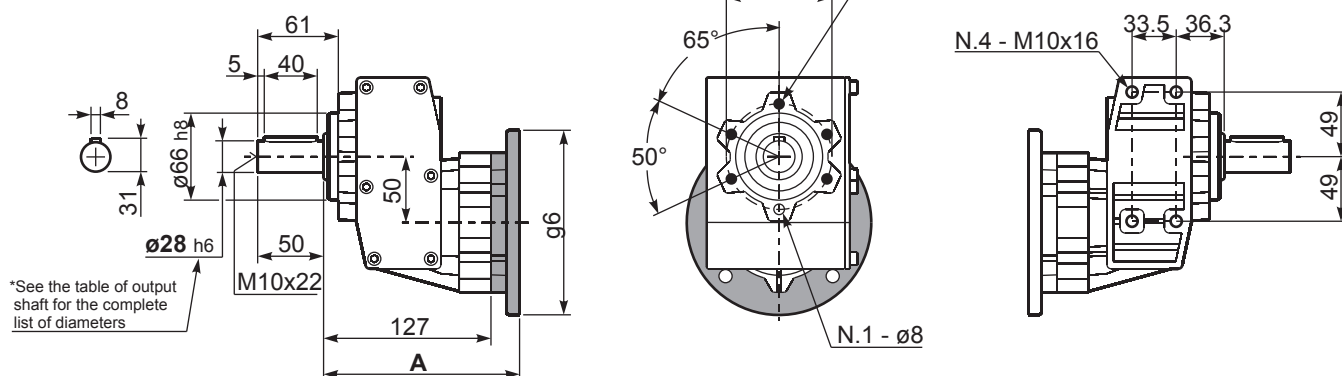
tab. 2

P511-F... Output flanges
flange di uscitaGearbox
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

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	177.5	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	177.5	200	179	KC51.4.041