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Introduzione  
Introduction





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## Generalità

Per avere una migliore comprensione degli argomenti e dei dati esposti in questo catalogo proponiamo la simbologia utilizzata corredandola delle informazioni di base per giungere ad una corretta selezione dei motoriduttori e variatori.

*Information in this manual is provided with symbols in order to understand the subject matter and data. These symbols are intended to aid the user in selecting the right gearmotors and variators.*

## General information

### Velocità entrata

$n_1$  [min<sup>-1</sup>]

### Input speed

Rappresenta la velocità riferita al tipo di motorizzazione prescelta ed è applicata in entrata al riduttore.

*This is the input speed at the gearbox related to the type of drive unit selected.*

Per selezioni a velocità diverse da quelle riportate consultare il ns. Servizio Tecnico.

*When different speeds are required, contact our Technical Service.*

### Rapporto di riduzione

$i$

### Gear ratio

È una grandezza adimensionale ed è in funzione del numero dei denti degli ingranaggi interni al riduttore.

*This value is strictly related to the size and number of teeth gears inside the gearbox.*

Nei riduttori a vite senza fine si ottiene dividendo il numero di denti della corona per il numero dei filetti (Z) della vite senza fine.

*This value is obtained in wormgearboxes by dividing the number of wheel teeth by the number of starts (Z) of the worm.*

Dai dati di catalogo si può ottenere con la relazione:

*From the data given in the catalogue, the value can be calculated using the following formula:*

$$i = \frac{n_1}{n_2}$$

### Velocità in uscita

$n_2$  [min<sup>-1</sup>]

### Output speed

È la velocità risultante sull' asse di uscita del riduttore e viene ricavata dalla relazione precedente:

*This is the gearbox output speed calculated using the formula given above:*

$$n_2 = \frac{n_1}{i}$$

### Coppia richiesta

$Mr_2$  [Nm]

### Requested torque

È la coppia richiesta dall'applicazione ed è indispensabile per la selezione di una motorizzazione.

*This is the torque needed for the application and must be known when selecting a drive system. It can either be provided by the user or calculated according to the application data (if provided).*

Essa può essere comunicata dall'utente oppure calcolata in base ai dati di applicazione (se forniti).

### Coppia nominale

**Mn<sub>2</sub>** [Nm]

### Nominal torque

Rappresenta la coppia in uscita trasmissibile dal riduttore in base alla velocità in entrata  $n_1$  e al rapporto di riduzione  $i$ . Essa è calcolata in base ad un servizio con carico continuo uniforme corrispondente ad un fattore di servizio uguale a 1. Questo valore non è riportato nel presente catalogo ma può essere ricavato approssimativamente con la seguente relazione fra  $M_2$  (coppia trasmessa) e  $sf$  (fattore di servizio):

*This is the output torque that can be transmitted by the gearbox according to input speed  $n_1$  and gear ratio  $i$ . It is calculated based on service with a continuous steady load corresponding to a service factor equal to 1. This value is not given in the catalogue but can be calculated approximately with the following formula between  $M_2$  (output torque) and  $sf$  (service factor):*

$$Mn_2 = M_2 \cdot sf$$

### Coppia trasmessa

**M<sub>2</sub>** [Nm]

### Output torque

È la coppia trasmessa in uscita al riduttore. Dipende dalla potenza  $P_1$  del motore installato, dal numero di giri in uscita  $n_2$  e dal rendimento dinamico  $Rd$  e può essere calcolata con la relazione:

*This is the gearbox's output torque. It is strictly related to power  $P_1$  of the motor installed, output rpm  $n_2$  and dynamic efficiency  $Rd$ . It can be calculated with the following formula:*

$$M_2 = \frac{9550 \cdot P_1 \cdot Rd}{n_2}$$

oppure:  
or:

$$M_2 = \frac{9550 \cdot P_2}{n_2}$$

dove:  
where:

$$P_2 = P_1 \cdot Rd$$

### Rendimento del riduttore a vite senza fine

**Rd; Rs**

### Worm gearbox efficiency

I calcoli delle prestazioni sono stati effettuati in base al rendimento dinamico  $Rd$  dei riduttori (valore ottimale che si raggiunge nel funzionamento a regime dopo rodaggio).

*Efficiency is calculated based on dynamic efficiency  $Rd$  of the gearboxes (optimal value reached when running at normal speed after the break in period).*

Nei riduttori combinati, il rendimento complessivo è dato dal prodotto dei rendimenti dei due riduttori, considerando però che nel secondo riduttore il rendimento dovrà essere valutato in base alla ridotta velocità in entrata ottenuta dividendo  $n_1$  per il rapporto  $i$  del primo riduttore.

*In combination gearboxes, overall efficiency is obtained from the combined efficiency of the two gearboxes. However, keep in mind that efficiency of the second gearbox should be determined according to the reduced input speed obtained by dividing  $n_1$  by ratio  $i$  of the first gearbox.*

È opportuno considerare che nei riduttori a vite senza fine si ha anche un valore di rendimento statico  $Rs$ , presente in fase di avviamento, che declassa sensibilmente la coppia risultante per cui influenza in modo determinante la scelta di motorizzazioni destinate ad applicazioni intermittenti (es. sollevamenti).

*It is important to remember that wormgearboxes also have static efficiency value  $Rs$  present at start-up. This value notably reduces the resulting torque. As a result, it must be taken into consideration when selecting drive systems for intermittent operations (e.g. lifting) as it is a determinant factor.*

Il valore dei rendimenti dinamico e statico dei riduttori a vite senza fine sono riportati nella tabella a pag. N4.

*Dynamic and static efficiency of wormgearboxes are given in the table on page N4.*

Nei riduttori ad ingranaggi CMG e CMB il rendimento medio è del 94%.

*On helical gearboxes CMG and CMB the average efficiency is 94%.*

Nei motovariatori il rendimento assume un valore di 0.85 alla velocità massima e decresce fino a 0.7 alla velocità minima.

*Efficiency is 0.85 at the highest speed decreasing to 0.7 at the lowest speed in motovariators.*

## Reversibilità e irreversibilità

## Reversibility and irreversibility

La diretta conseguenza del rendimento (statico e dinamico) è la reversibilità del riduttore a vite senza fine che consiste nella possibilità di fare ruotare l'albero entrata tramite l'applicazione di una torsione più o meno accentuata sull'albero uscita.

L'impossibilità o la difficoltà ad effettuare l'azione sopra descritta, determina il grado di reversibilità (o irreversibilità) di un riduttore.

Questa caratteristica, molto significativa nei riduttori a vite senza fine, è influenzata da molteplici fattori quali angolo d'elica (quindi rapporto di trasmissione), lubrificazione, temperatura, finitura superficiale della vite senza fine, presenza di vibrazioni, ecc.

In applicazioni dove sono presenti delle traslazioni è necessario garantire una elevata reversibilità onde evitare che le inerzie delle masse in movimento possano determinare punte di carico inammissibili sugli organi di trasmissione.

In applicazioni dove è richiesto un non ritorno del carico (es. sollevamenti o nastri trasportatori inclinati) in assenza di un freno motore è necessario scegliere un riduttore caratterizzato da un elevato grado di irreversibilità.

**Desideriamo comunque evidenziare che la garanzia assoluta di non ritorno è data esclusivamente dall'installazione di un motore autofrenante o di un altro dispositivo frenante esterno.**

La tabella sottostante riporta a titolo puramente indicativo i vari gradi di reversibilità/irreversibilità nei riduttori a vite senza fine in funzione del rendimento dinamico Rd e statico Rs.

*Reversibility of the wormgearbox is the direct consequence of efficiency (static and dynamic). This determines whether or not the input shaft can be rotated by applying a certain torque on the output shaft.*

*Whether or not this can be done and how difficult it actually is to do determine the degree of reversibility (or irreversibility) of a gearbox.*

*This feature, quite significant in wormgearboxes, is affected by numerous factors including the helix angle (therefore drive ratio), lubrication, temperature, surface finish of the worm, vibrations, etc...*

*In applications that include translations, high reversibility must be guaranteed to prevent inertia of the moving parts from creating unacceptable load peaks on the drive parts.*

*In applications that require non-return of the load (e.g. lifting or inclined conveyor belts) a gearbox with high irreversibility must be chosen when a motor-brake unit is not present.*

**However, we would like to point out that non-return can be totally assured only by installing a self-braking motor or other external braking device.**

*The table below is provided for reference purposes only. It contains the various degrees of reversibility/irreversibility of wormgearboxes in relation to dynamic Rd and static Rs efficiency.*

Rd	Reversibilità e irreversibilità dinamica	Dynamic reversibility and irreversibility
> 0.6	Reversibilità dinamica	Dynamic reversibility
0.5 - 0.6	Reversibilità dinamica incerta	Uncertain dynamic reversibility
0.4 - 0.5	Buona irreversibilità dinamica	Good dynamic irreversibility
<0.4	Irreversibilità dinamica	Dynamic irreversibility
Rs	Reversibilità e irreversibilità statica	Static reversibility and irreversibility
> 0.55	Reversibilità statica	Static reversibility
0.5 - 0.55	Reversibilità statica incerta	Uncertain static reversibility
<0.5	Irreversibilità statica	Static irreversibility

## Potenza in entrata

$P_1$  [kW]

## Input power

È la potenza motore applicata in entrata al riduttore e riferita alla velocità  $n_1$ .

Può essere calcolata come segue:

*This is the power applied by the motor at the gearbox input in reference to speed  $n_1$ .*

*It can be calculated with the following formula:*

$$P_1 = \frac{M_2 \cdot n_2}{9550 \cdot Rd}$$

**Fattore di servizio**

**sf**

**Service factor**

È una grandezza adimensionale che indica il sovradimensionamento da applicare ad una determinata motorizzazione per garantire la resistenza agli urti e la durata richiesta.

Le tabelle di catalogo offrono una vasta scelta di motorizzazioni con fattori di servizio differenziati che possono soddisfare la maggior parte delle applicazioni più o meno gravose.

Per una corretta interpretazione dei valori del fattore di servizio sf riportati a fianco di ogni selezione proposta, riportiamo nelle tabelle seguenti i valori indicativi attribuiti alle classi di carico A, B, C e alla durata di funzionamento giornaliero h/d e al numero di avviamenti/ora.

Definendo la classe di carico a cui riferire l'applicazione, si ricercherà nella tabella il corrispondente valore di sf da utilizzare nella scelta della motorizzazione più idonea.

*This value indicates how a certain drive system is to be over-sized in order to assure the requested service and stand up to shocks.*

*The tables given in the catalogue offer a wide range of drive systems with different service factors able to satisfy most types of applications. To correctly understand service factor values sf given for each item, approximate values for load classes A, B and C along with the number of hours of daily operation h/d and number of start-ups/hours need to be known.*

*Once the load class required for the application has been determined, locate corresponding value sf to be used when selecting the most suitable drive system.*

<b>A - Uniforme</b>	$fa \leq 0.3$
<b>B - Medio</b>	$fa \leq 3$
<b>C - Forte</b>	$fa \leq 10$

<b>A - Uniform</b>	$fa \leq 0.3$
<b>B - Moderate shocks</b>	$fa \leq 3$
<b>C - Heavy shocks</b>	$fa \leq 10$

$fa = \frac{Je}{Jm}$

- Je (kgm<sup>2</sup>) momento d'inerzia esterno ridotto all'albero motore.
- Jm (kgm<sup>2</sup>) momento d'inerzia motore.

Se  $fa > 10$  interpellare il ns. Servizio Tecnico.

$fa = \frac{Je}{Jm}$

- Je (kgm<sup>2</sup>) moment of reduced external inertia at the drive-shaft.
- Jm (kgm<sup>2</sup>) moment of inertia of motor.

If  $fa > 10$  call our Technical Service.

**A** Classe di carico / Load class  
**Carico uniforme / Uniform load**

		sf								
		n. avviamenti/ora / n. start-up/hour								
h/d		2	4	8	16	32	63	125	250	500
4		0.8	0.8	0.9	0.9	1.0	1.1	1.1	1.2	1.2
8		1.0	1.0	1.1	1.1	1.3	1.3	1.3	1.3	1.3
16		1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
24		1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8

**B** Classe di carico / Load class  
**Carico con urti moderati / Moderate shock load**

		sf								
		n. avviamenti/ora / n. start-up/hour								
h/d		2	4	8	16	32	63	125	250	500
4		1.0	1.0	1.0	1.0	1.3	1.3	1.3	1.3	1.3
8		1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
16		1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8
24		1.8	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2

**C** Classe di carico / Load class  
**Carico con urti forti / Heavy shock load**

		sf								
		n. avviamenti/ora / n. start-up/hour								
h/d		2	4	8	16	32	63	125	250	500
4		1.3	1.3	1.3	1.3	1.5	1.5	1.5	1.5	1.5
8		1.5	1.5	1.5	1.5	1.8	1.8	1.8	1.8	1.8
16		1.8	1.8	1.8	1.8	2.2	2.2	2.2	2.2	2.2
24		2.2	2.2	2.2	2.2	2.5	2.5	2.5	2.5	2.5

Esempio applicazione:

Nastro trasportatore attribuibile alla classe di carico B (**carico con urti moderati**) e previsto per una durata di funzionamento giornaliero (h/d) di **16** ore e con **8** avviamenti/ora. Dalla tabella rileviamo **sf = 1.5**

Application example:

Conveyor belt assigned to load class B (**moderate shock load**), to be run **16** hours a day (h/d) with **8** start-ups/hour. The following value is obtained from the table **sf = 1.5**

## Carico radiale

**R; R<sub>2</sub> [N]**

## Radial load

L'applicazione sull'albero in uscita del riduttore di pignoni, pulegge, ecc. determina delle forze radiali che debbono necessariamente essere considerate per evitare sollecitazioni eccessive con il rischio di danneggiamenti del riduttore stesso.

Il calcolo del carico radiale esterno R agente sull'albero del riduttore può essere determinato come segue:

*Pinions, pulleys, etc applied on the output shaft of the gearboxes create radial forces that must be taken into consideration to avoid excessive stress risking damage to the gearbox itself.*

*External radial load R that acts on the gearbox shaft can be calculated as follows:*

$$R = \frac{2000 \cdot M_2 \cdot kr}{d} \leq R_2$$

dove:

**d [mm]** diametro primitivo del pignone o della puleggia

**kr** coefficiente riferito al tipo di trasmissione:

**kr = 1.4** ruota per catena

**kr = 1.1** ingranaggio

**kr = 1.5 - 2.5** puleggia per cinghia a V

where:

**d [mm]** diameter of the pinion or pulley

**kr** coefficient in relation to type of transmission:

**kr = 1.4** sprocket wheel

**kr = 1.1** gear

**kr = 1.5 - 2.5** pulley for V belts

È opportuno evidenziare che i valori di R<sub>2</sub> sono riferiti a carichi agenti sulla mezzeria dell'albero lento (considerando l'albero sporgente) per cui il confronto dovrà essere effettuato nelle medesime condizioni.

*Keep in mind that values R<sub>2</sub> refer to loads that act on the center-line of the output shaft (considering the shaft protrudes). As a result, the value should be compared under the same conditions.*

## Carico assiale

**A; A<sub>2</sub> [N]**

## Axial load

A volte, unitamente al carico radiale, può essere presente anche una forza A che agisce assialmente sull'albero uscita; in questo caso considerare che il carico assiale ammissibile A<sub>2</sub> sull'albero è da considerare:

*At times, along with the radial load, force A may be present that acts axially on the output shaft. In this case, keep in mind allowable axial load A<sub>2</sub> that can be applied on the shaft is:*

$$A_2 = R_2 \cdot 0.2$$

Nel caso in cui il valore del carico assiale A agente sull'albero risultasse superiore ad A<sub>2</sub> contattate il ns. Servizio Tecnico.

*If axial load A that acts on the shaft is greater than A<sub>2</sub>, contact the Technical Service.*

## Scelta dei motoriduttori

## Selecting the gearmotors

Per la scelta di un motoriduttore è necessario seguire la seguente procedura.

*To select the required gearmotor perform the procedure below:*

1. Per l'applicazione desiderata ricavare il fattore di servizio sf dalle tabelle a pag. A5 in base alla classe di carico, alle ore di funzionamento giornaliere e al numero di avviamenti orari.

*1. Determine the service factor sf for the desired application by referring to the charts given on page A5. This is to be done by considering the class of load, the operational hours/day and the number of start-ups/ hour.*

2. Se si conosce la potenza motore P<sub>1</sub> [kW] richiesta, passare al punto 3); se è nota la coppia in uscita M<sub>2</sub> richiesta è necessario calcolare la potenza motore P<sub>1</sub> con la formula:

*2. If the required motor power output P<sub>1</sub> [kW] is known, go to item 3); if the required output torque M<sub>2</sub> is known, determine motor output P<sub>1</sub> by using the following formula:*

$$P_1 = \frac{M_2 \cdot n_2}{9550 \cdot Rd}$$

dove Rd è il rendimento dinamico e n<sub>2</sub> il numero di giri richiesti in uscita al motoriduttore.


*where Rd stands for the dynamic efficiency and n<sub>2</sub> indicates the required output rpm of the gearmotor.*



3. Nelle tabelle dei dati tecnici ricercare la motorizzazione in cui sia  $P_1$  maggiore o uguale a  $P$  e con riferimento ad una velocità  $n_2/n_{2max}$  prossima a quella desiderata, scegliere la motorizzazione in cui il fattore di servizio  $sf$  indicato risulti uguale o superiore a quello ricavato al punto 1).

3. Use the specification chart to search for the power unit where  $P_1$  is greater than or equal to  $P$  with a speed  $n_2/n_{2max}$  that approximates the desired one. Choose a power unit where the indicated service factor  $sf$  is equal to or greater than that calculated at point 1).

### ECM

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>140</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	2.0	5.0	5	<b>ECM100/026</b>	120/240/24E
	<b>400</b>	2.9	3.8	7.5		
	<b>300</b>	3.8	2.9	10		
	<b>200</b>	5.5	2.0	15		
	<b>150</b>	7.1	1.5	20		
	<b>100</b>	10	1.2	30		
	<b>75</b>	12	0.9	40		
	<b>60</b>	14	0.7	50		
	<b>50</b>	13	0.7	60		

Esempio / Example:

#### Applicazione / Application:


Carrello automatico / Automatic carriage

$P_1$  : 140 W  
sf : 1.5  
 $n_2$  : 150 min<sup>-1</sup>

Motorizzazione scelta / Power unit selected:

**ECM100/026, i = 20,  $P_1$  = 140 W, sf = 1.5**

### ECMP

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>250</b>						
(3000 min <sup>-1</sup> )	<b>50</b>	35	2.3	60	<b>ECMP180/063/050</b>	120/240/24E
	<b>40</b>	42	1.8	75		
	<b>33</b>	48	2.1	90		
	<b>25</b>	58	1.5	120		
	<b>20</b>	69	1.2	150		
	<b>17</b>	77	1.0	180		
	<b>13</b>	90	0.8	240		

Esempio / Example:

#### Applicazione / Application:

Carrello automatico / Automatic carriage

$M_2$  : 58 Nm  
sf : 1.5  
 $n_2$  : 25 min<sup>-1</sup>

Motorizzazione scelta / Power unit selected:

**ECMP180/063/050, i = 120,  $P_1$  = 250 W, sf = 1.5**

## Giunto elastico

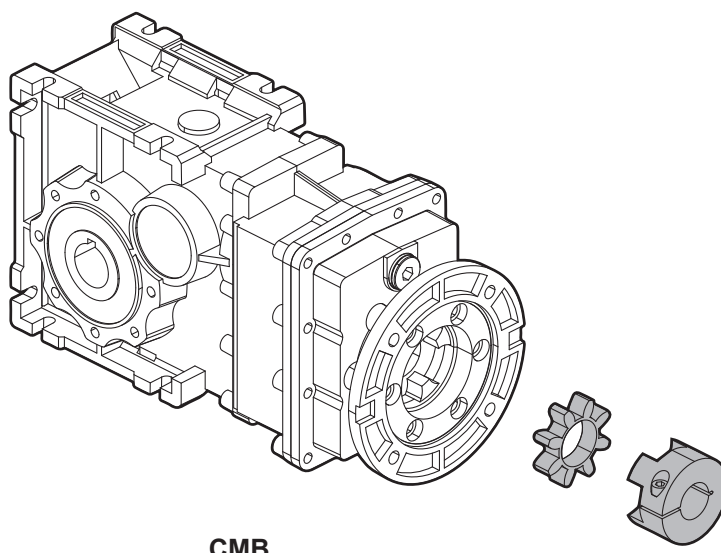
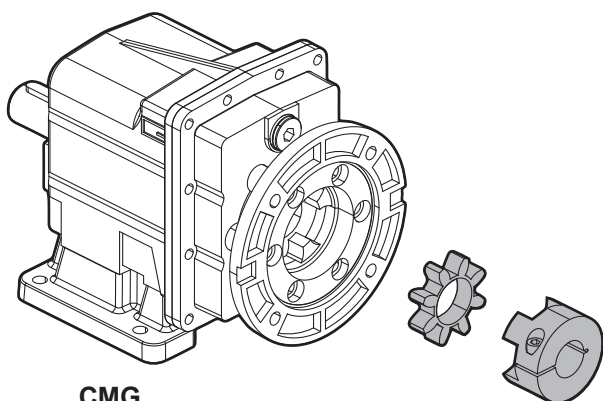
L'accoppiamento al motore tramite giunto elastico a morsetto ha i seguenti vantaggi:

- Maggiore rigidità torsionale;
- Smorzamento delle vibrazioni;
- Smorzamento dei picchi d'inerzia del motore;
- Eliminazione dell'ossidazione tra l'albero motore ed il manicotto per tribocorrosione;
- Temperatura di funzionamento inferiore;
- Facilità di smontaggio del motore anche dopo lunghi periodi di utilizzo;
- Evita il danneggiamento della linguetta del motore per servizio altamente intermittente.

## Flexible coupling

Motor connection by clamp flexible coupling allows the following benefits:

- Increasing torsional rigidity;
- Reducing vibrations;
- Cushioning motor start up jerks;
- Eliminates fretting corrosion phenomenon between motor sleeve and electric motor shaft;
- Lowering operating temperature;
- Easy disassembly of the motor after long periods of use;
- Avoid the damage of the key of the motor for highly intermittent duty



## Installazione e verifiche

## Installation and inspection

In fase di installazione del motoriduttore è opportuno verificare che:

- i dati riportati in targhetta corrispondano al prodotto che è stato ordinato;
- le superfici di accoppiamento e gli alberi siano accuratamente puliti e privi di ammaccature;
- le superfici su cui verrà installato il riduttore siano perfettamente piane e sufficientemente rigide;
- l'albero macchina e quello del riduttore siano correttamente allineati;
- siano stati installati sistemi di limitazione della coppia se si prevedono urti o blocchi della macchina durante il funzionamento;
- siano state predisposte le necessarie protezioni antinfortunistiche agli organi rotanti;
- siano state create delle opportune coperture a protezione dagli agenti atmosferici se l'installazione è effettuata all'aperto ed è soggetta alle intemperie;
- l'ambiente di lavoro non sia corrosivo (a meno che tale specifica non sia stata dichiarata in fase di ordine al fine di predisporre il riduttore per questo utilizzo);
- gli eventuali pignoni o pulegge montati sull'albero uscita o entrata del riduttore, siano calettati correttamente in modo tale da non generare carichi radiali e/o assiali superiori a quelli ammissibili;
- su tutti gli accoppiamenti sia stato applicato un adeguato protettivo antiossidante per prevenire eventuali ossidazioni da contatto;
- tutte le viti di fissaggio siano state serrate correttamente.

*While installing the gearmotor always make sure that:*

- *the specifications stamped on the rating plate match those indicated for the unit actually ordered;*
- *the mating surfaces and the shafts are thoroughly clean and free of dents;*
- *the surfaces where the gearbox are to be mounted on are flat and strong enough;*
- *the machine drive shaft and the gearbox shaft are perfectly aligned;*
- *the required torque limiters have been installed if the machine is likely to produce shocks or blockages during operation;*
- *the rotary parts have been provided with the required safety guards;*
- *adequate weatherproof covering has been provided if the machine is to be installed outdoor;*
- *the working environment is not exposed to corrosive agents (unless this has been indicated while placing the order so that the gearbox assembly can be adequately set up);*
- *the pinions or pulleys on the gearbox input/output shafts are properly fitted in order not to produce radial and/or axial loads that exceed the maximum allowable limits;*
- *all the couplings have been treated with adequate rust preventative in order to avoid oxidation provoked by contact;*
- *all the mounting screws have been securely tightened.*

## Applicazioni critiche

## Critical applications

In tutti questi casi consultare il Servizio Tecnico

- utilizzo come organo di sollevamento;
- utilizzo in posizioni non previste a catalogo;
- utilizzo in ambiente con pressione diversa da quella atmosferica;
- utilizzo in ambiente con temperature  $<0^{\circ}\text{C}$  o  $>+40^{\circ}\text{C}$
- utilizzo in ambienti esterni
- servizio continuo o altamente intermittente per motoriduttori in corrente continua o brushless
- utilizzo in applicazioni con forti inerzia

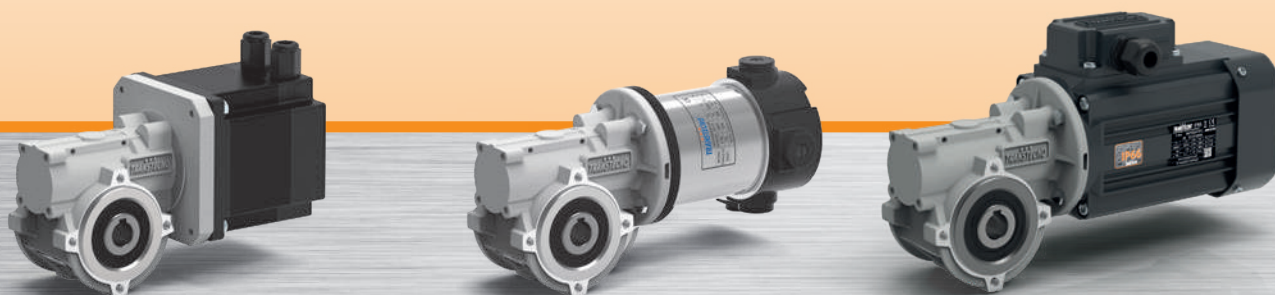
*In these cases please contact the Technical Service*

- *used as a hoist;*
- *used in mounting positions not shown in the catalogue;*
- *used in environment pressure other than atmospheric pressure;*
- *used in places with temperature  $<0^{\circ}\text{C}$  or  $>+40^{\circ}\text{C}$*
- *when used outdoors*
- *continuous or highly intermittent duty for DC or brushless gearmotors*
- *used in applications with high inertia*

**MINI**  **TECNO**™  
**small** but strong

**CL**

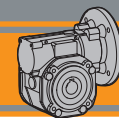
Motoriduttori a vite senza fine  
Wormgearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



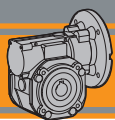




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Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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# CL

## Motoriduttori a vite senza fine Wormgearmotors



### Caratteristiche tecniche

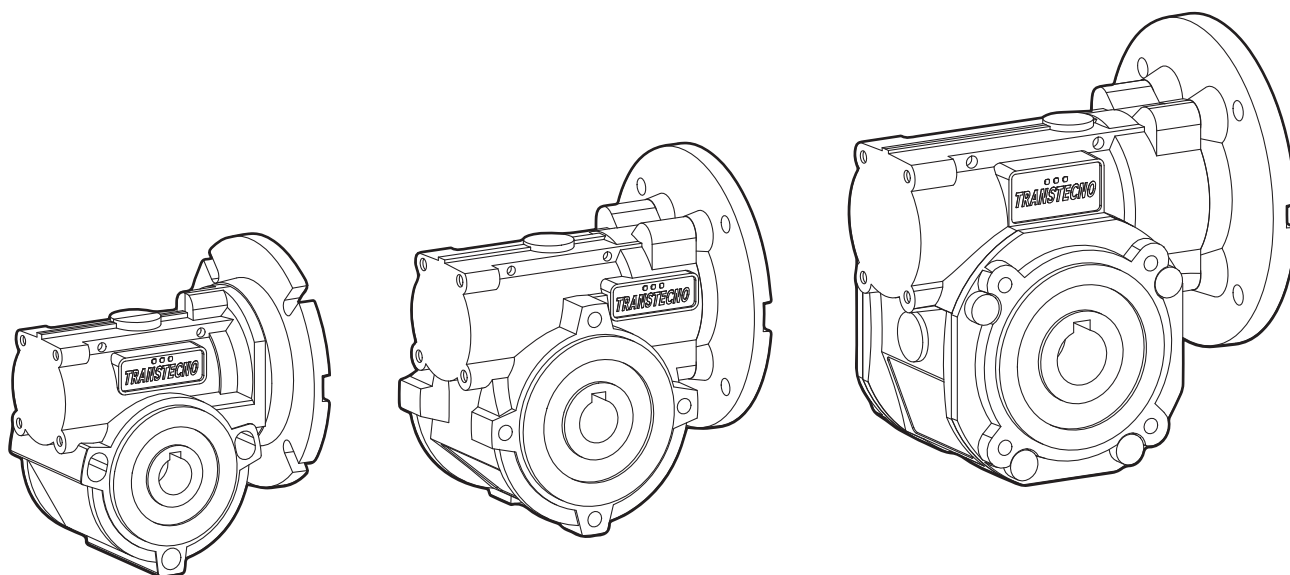
### Technical features

L'elevata modularità contraddistingue i motoriduttori a vite senza fine della serie CL: i diversi kit entrata ed uscita li rendono estremamente versatili.

The high degree of modularity is a design feature of CL wormgearmotors range thanks to a wide selection of input and output kits. Main features of CL range are:

Le caratteristiche principali della serie CL sono:

- Carcassa in alluminio
- Lubrificazione permanente con olio sintetico
- Die-cast aluminium housing
- Permanent synthetic oil long life lubrication

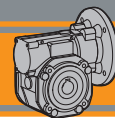


### Designazione

### Classification

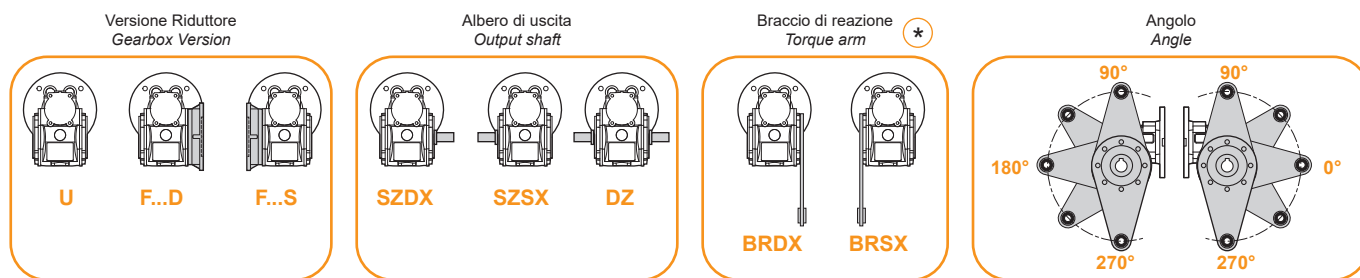
## RIDOTTORI A VITE SENZA FINE / WORMGEARBOXES

RIDOTTORE / GEARBOX									
CL	030	U	10	63	B14	SZDX	BRSX	90	VS
Tipo Type	Grandezza Size	Versione riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Opzioni Options
<b>CL</b> 	<b>026 (D11)</b> <b>026</b> <b>026 (D14)</b> <b>030</b> <b>040</b>	<b>U</b> <b>F...</b>	Vedere tabella See tables	<b>56..</b> — <b>71..</b>	<b>B5</b> <b>B14</b>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b> 	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>VS</b>
<b>CLIS</b> 									



## Designazione

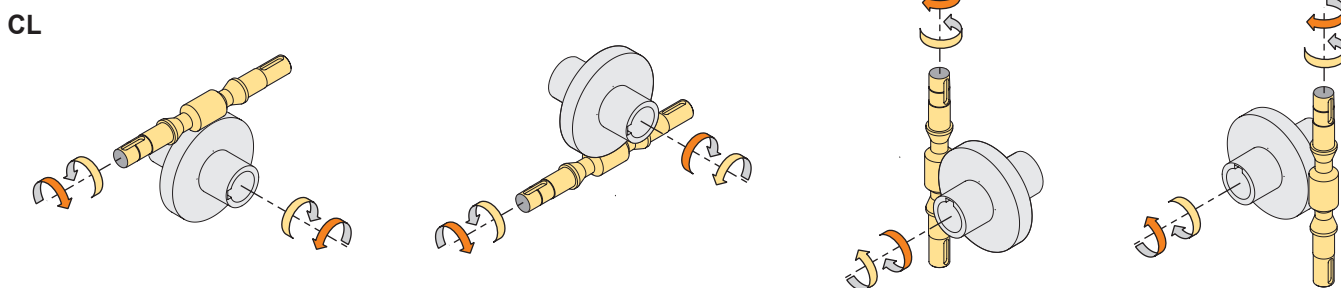
## Classification



\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.

## Sensi di rotazione

## Direction of rotation



## Simbologia

## Symbols

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$sf$	Fattore di servizio / <i>Service factor</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	$Rd$	% Rendimento dinamico / <i>Dynamic efficiency</i>
$i$		Rapporto di riduzione / <i>Ratio</i>	$Rs$	% Rendimento statico / <i>Static efficiency</i>
$P_1$	[kW]	Potenza in entrata / <i>Nominal input power</i>	$R_2$	[N] Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$	[Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>	$A_2$	[N] Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>	$Z$	Numero di principi della vite / <i>Worm starts</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>	$\beta$	Angolo d'elica / <i>Helix angle</i>

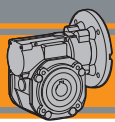
## Lubrificazione

## Lubrication

Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

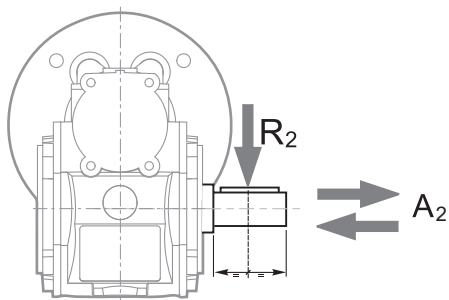
*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*





Carichi radiali

Radial loads

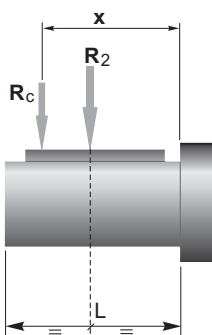


$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]		
	CL026	CL030	CL040
187	400	674	1264
140	490	743	1392
93	580	851	1596
70	610	936	1754
56	610	1008	1890
47	610	1069	2004
35	610	1179	2210
28	610	1270	2381
23	610	1356	2542
18	610	1471	2759
14	610	1600	3000

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:



$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valori riportati nella tabella  
a, b = values given in the table

	CL		
	026	030	040
a	56	65	84
b	43	50	64
R <sub>2MAX</sub>	610	1600	3000

Dati di dentatura

Toothing data

	Dati della coppia vite-corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CL026	Z	6	4	3	2	2		1	1	1	1		
	β	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CL030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CL040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'

Rendimento

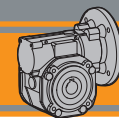
Efficiency

	n <sub>1</sub> [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CL026	2800	Rd	89	87	85	83	80		73	68	64	60		
	1400		87	84	83	78	74		66	61	57	53		
	900		84	83	80	75	71		61	57	52	48		
CL030	2800	Rs	72	71	68	61	56	46	41	36	34			
	1400		89	88	86	84	81	78	74	70	65	62	57	52
	900		86	85	84	79	75	72	67	62	58	55	48	43
CL040	2800	Rs	84	83	81	75	71	68	62	58	53	49	43	39
	1400		72	67	63	55	50	43	39	35	31	27	23	21
	900		90	89	87	84	83	80	77	73	69	66	60	56
CL040	2800	Rd	88	86	84	81	78	74	70	65	60	58	52	46
	1400		86	84	82	77	74	70	66	60	57	53	46	41
	900		74	71	67	60	55	51	45	40	36	32	28	24



Rendimento teorico del riduttore dopo il rodaggio  
Theoretical efficiency of the gearbox after the first running period






## Dati tecnici

$n_1$  1400 min<sup>-1</sup>

## Technical data


	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
-----------------------------------------------------------------------------------	-------------------------------	----------------	----------------	-----

### CLIS026

280	13	0.44	5
187	14	0.33	7.5
140	14	0.25	10
93	14	0.18	15
70	14	0.14	20
47	15	0.11	30
35	14	0.08	40
28	13	0.07	50
23	12	0.06	60

### CLIS030

280	18	0.61	5
187	20	0.46	7.5
140	21	0.37	10
93	21	0.26	15
70	19	0.19	20
56	20	0.16	25
47	22	0.16	30
35	20	0.12	40
28	19	0.10	50
23	17	0.08	60
18	15	0.06	80
14	14	0.05	100

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
-----------------------------------------------------------------------------------	-------------------------------	----------------	----------------	-----

### CLIS040

280	41	1.37	5
187	44	1.00	7.5
140	45	0.79	10
93	45	0.54	15
70	40	0.38	20
56	38	0.30	25
47	48	0.34	30
35	42	0.24	40
28	39	0.19	50
23	36	0.15	60
18	33	0.12	80
14	31	0.10	100

Nota:

$Pn_1$  è la potenza meccanica.

La potenza applicabile è ridotta del fattore termico.

Per maggiori dettagli consultare il nostro Servizio Tecnico.

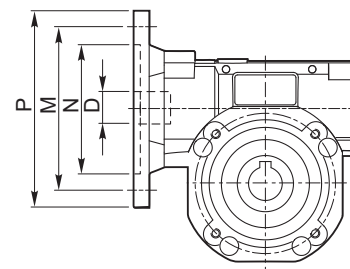
Note:

$Pn_1$  is an input mechanical power which must be reduced by the heating factor in order to get the relevant one. For more details please contact our Technical Service.

## Motori applicabili

## IEC Motor adapters

	IEC	N	M	P	D	$i$																	
						5	7.5	10	15	20	25	30	40	50	60	80	100						
CL026	56B14	50	65	80	9																		
CL030	63B5	95	115	140	11																		
	63B14	60	75	90	9	B	B	B	B	B	B	B	B	B									
CL040	71B5	110	130	160	14																		
	63B5	95	115	140	11	B	B	B	B	B	B	B	B										
	63B14	60	75	90	9	BS	BS	BS	BS	BS	BS	BS	BS	BS	B	B	B	B					
56B5	80	100	120	9																			
56B14	50	65	80	9																			



N.B.

Le aree evidenziate in grigio indicano l'applicabilità della corrispondente grandezza motore.

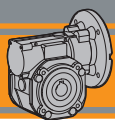
N.B. Grey areas indicate motor inputs available on each size of unit.

**B/BS = Boccola di riduzione in acciaio**

**B/BS = Metal shaft sleeve**

Nota: flange Nema disponibili a richiesta

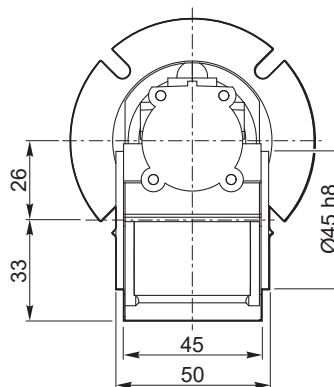
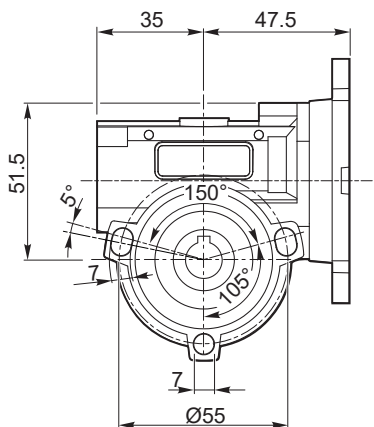
Note: Nema flange available on demand



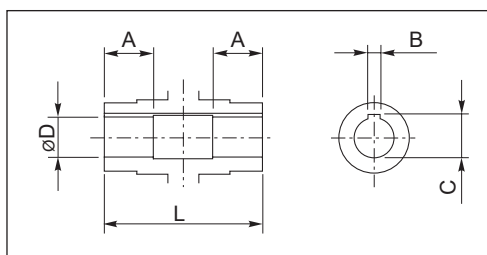
### Dimensioni

### Dimensions

#### CL 026 U



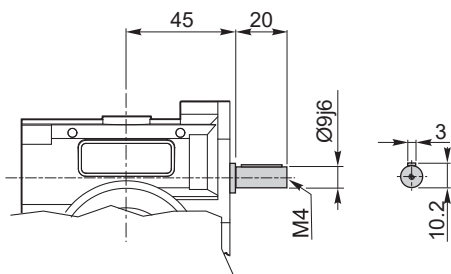
**Kg**  
0.7



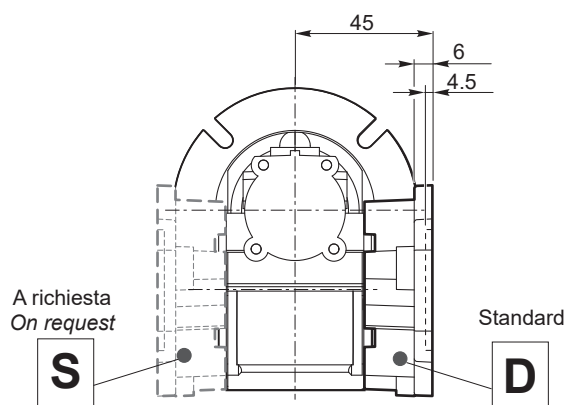
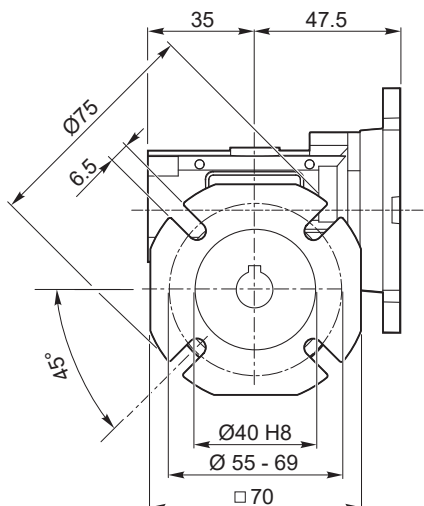
Albero lento cavo / Hollow output shaft

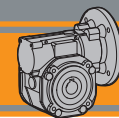
Grandezza Size	Ø D H8	L	A	B	C
CL 026 (D11)	11	50	15	4	12.8
CL 026	12	50	15	4	13.8
CL 026 (D14)	14	50	15	5	16.2

#### CLIS 026 ..



#### CL 026 F

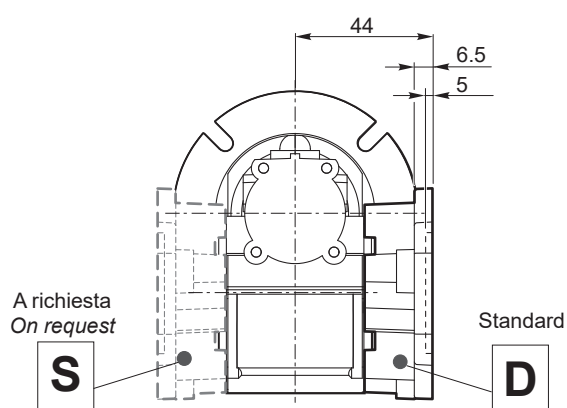
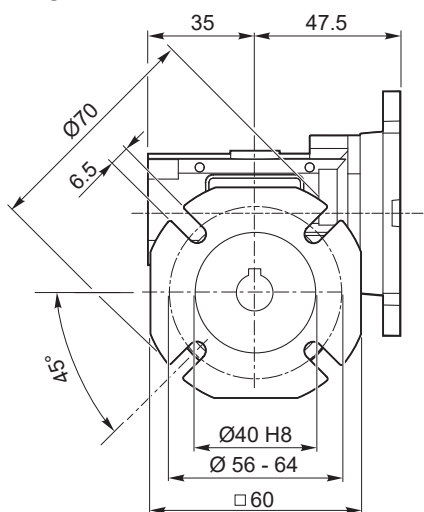




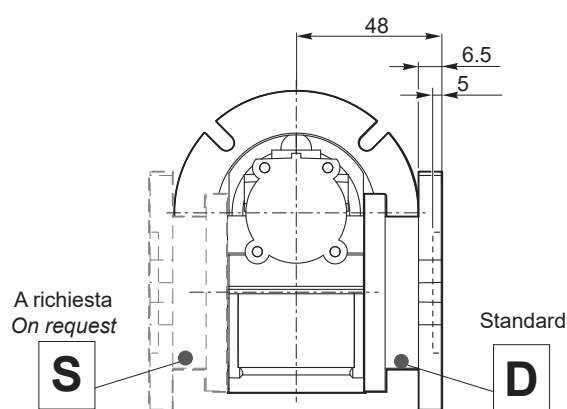
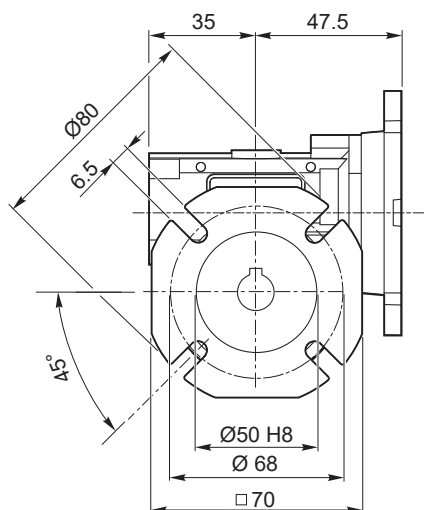
**Dimensioni**

**Dimensions**

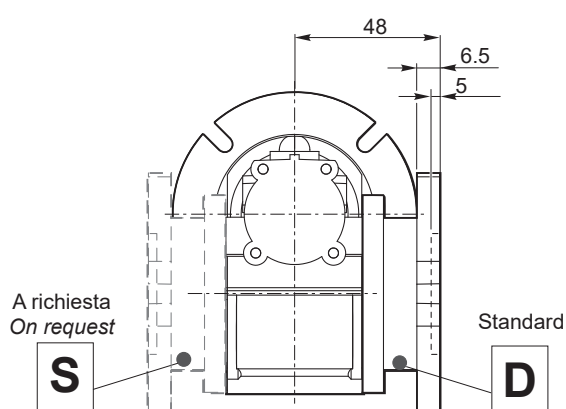
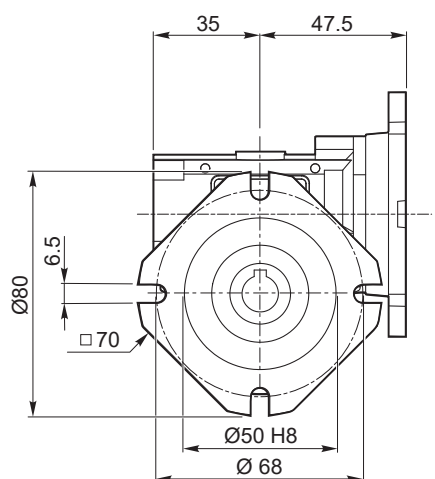
**CL 026 F28**

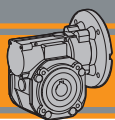


**CL 026 F30**



**CL 026 F30C**

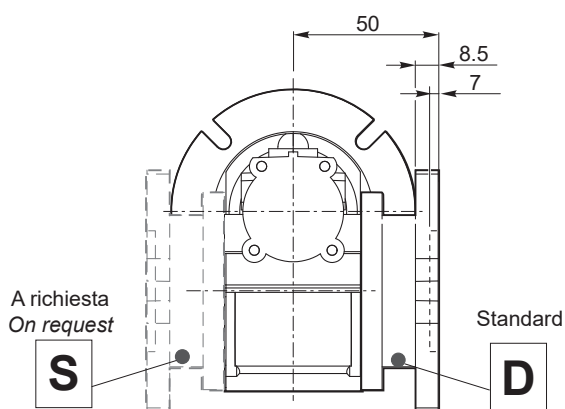
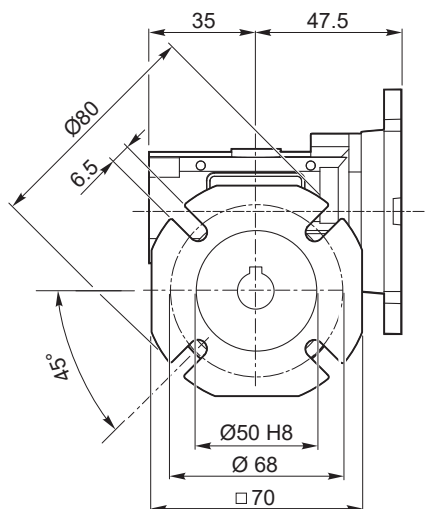




### Dimensioni

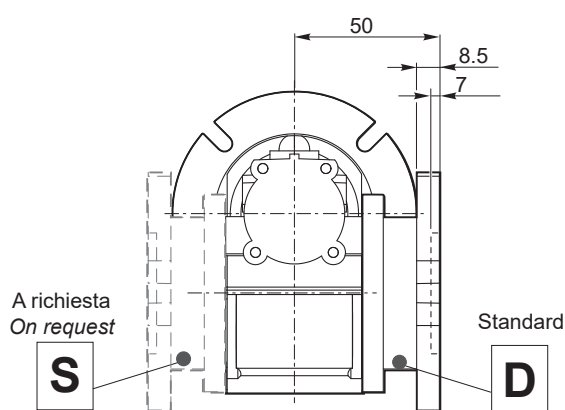
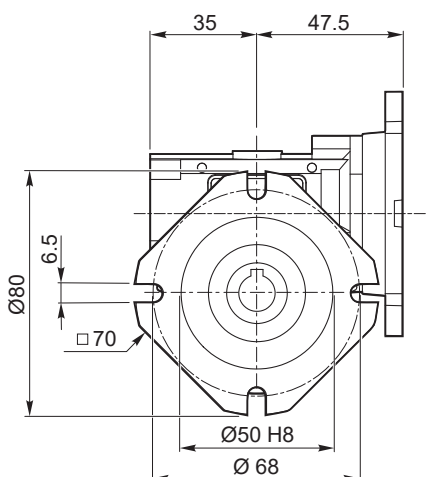
### Dimensions

#### CL 026 F30S



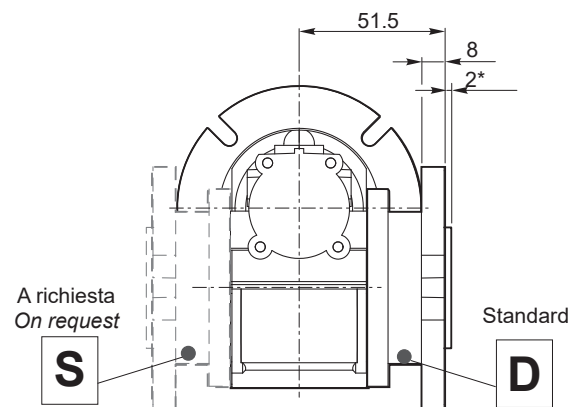
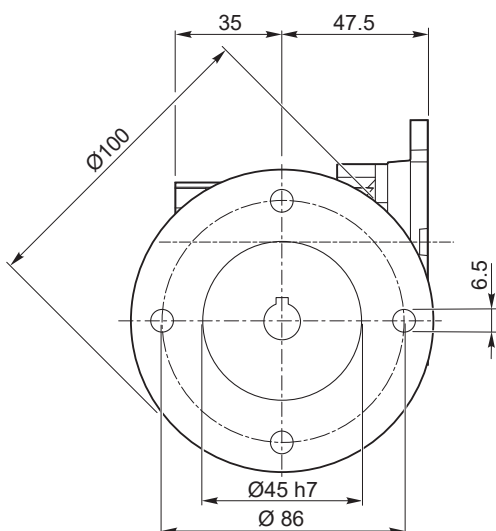
**Nota:** Esecuzione con flangia uscita F30 e spessore 2mm  
**Note:** Made with flange F30 and spacer with 2mm thickness

#### CL 026 F30SC

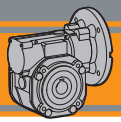


**Nota:** Esecuzione con flangia uscita F30C e spessore 2mm  
**Note:** MAde with flange F30C and spacer with 2mm thickness

#### CL 026 F100



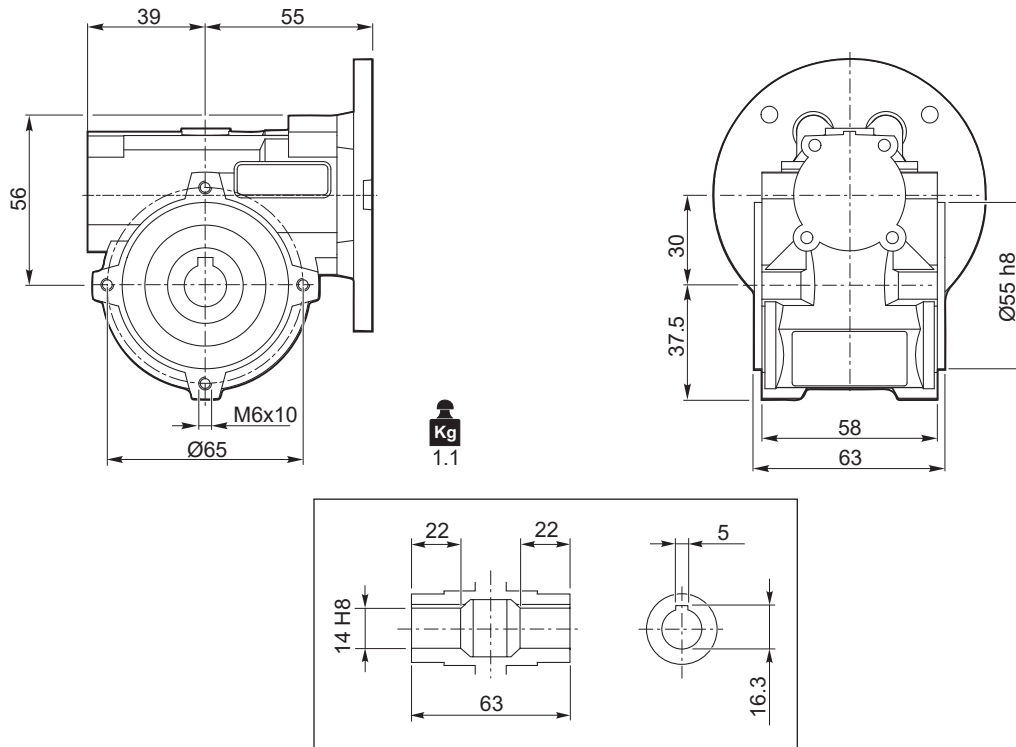
(\*): Centraggio maschio  
 (\*): Male centering diameter



**Dimensioni**

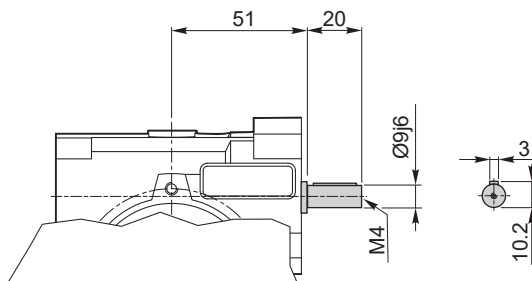
**Dimensions**

**CL 030 U**

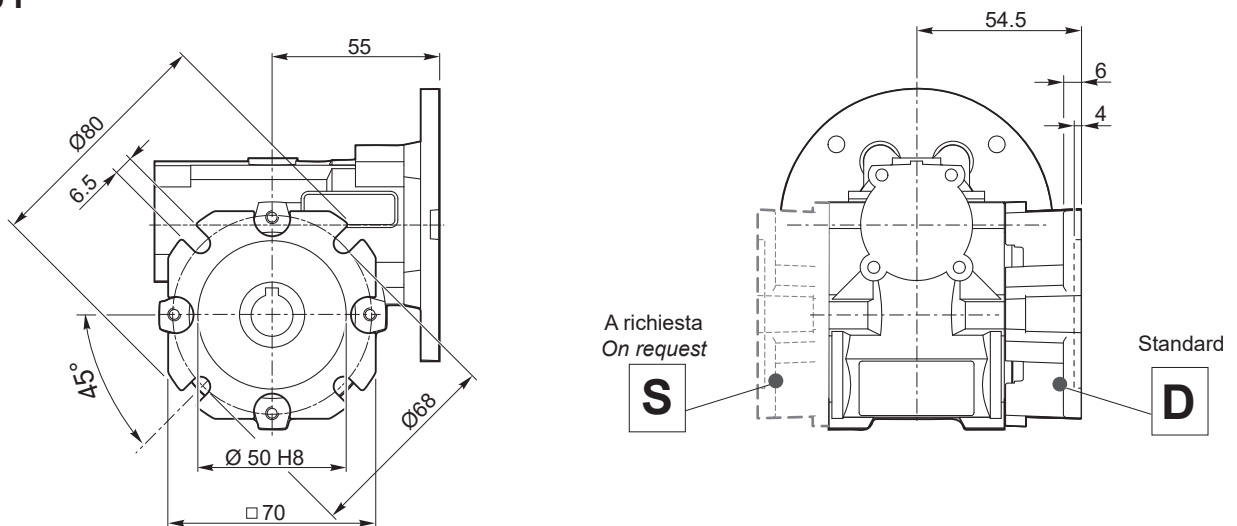


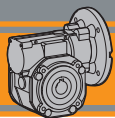
Albero lento cavo / Hollow output shaft

**CLIS 030 ..**



**CL 030 F**





# CL

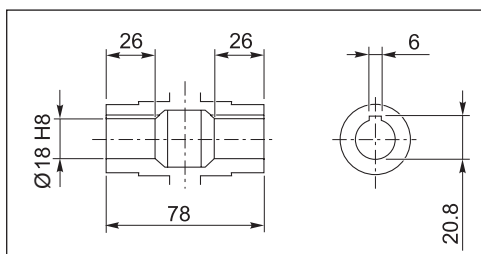
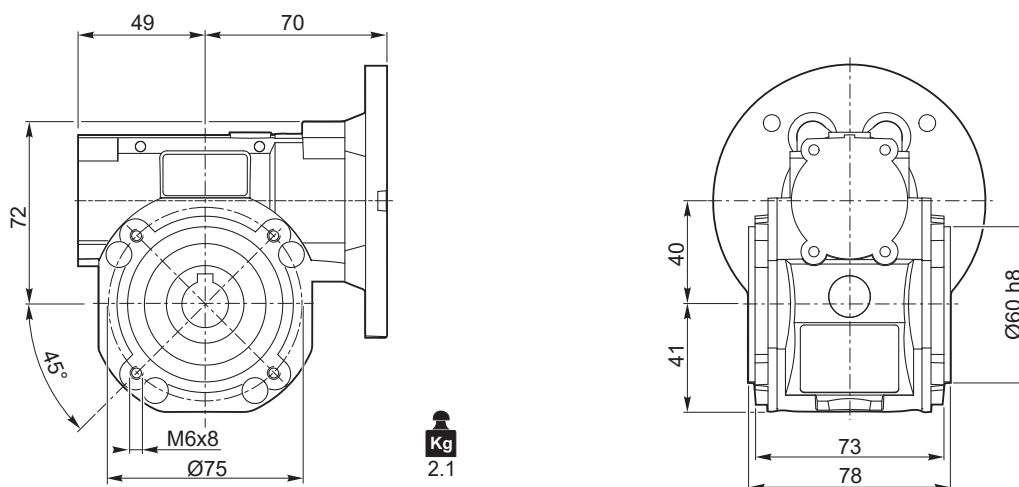
## Motoriduttori a vite senza fine Wormgearmotors

# MINI TECNO

Dimensioni

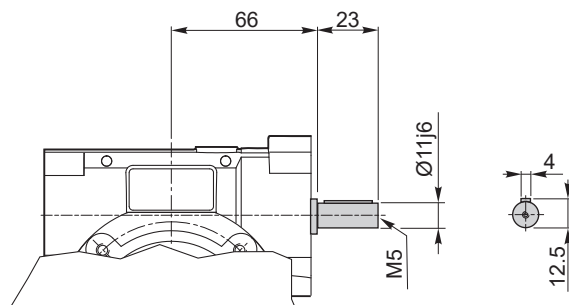
Dimensions

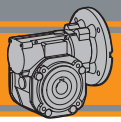
### CL 040 U



Albero lento cavo / Hollow output shaft

### CLIS 040 ..

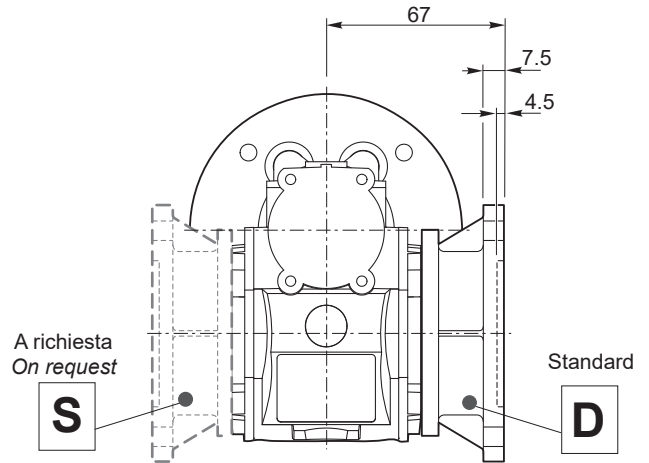
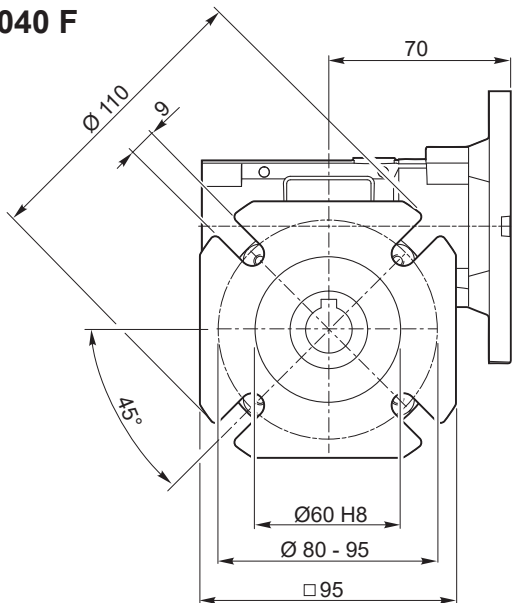




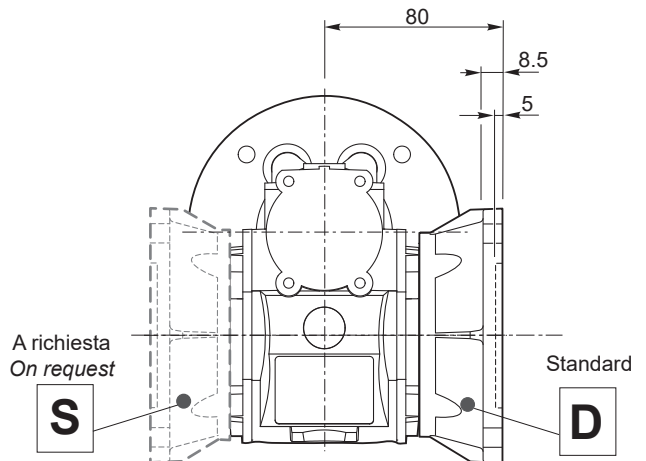
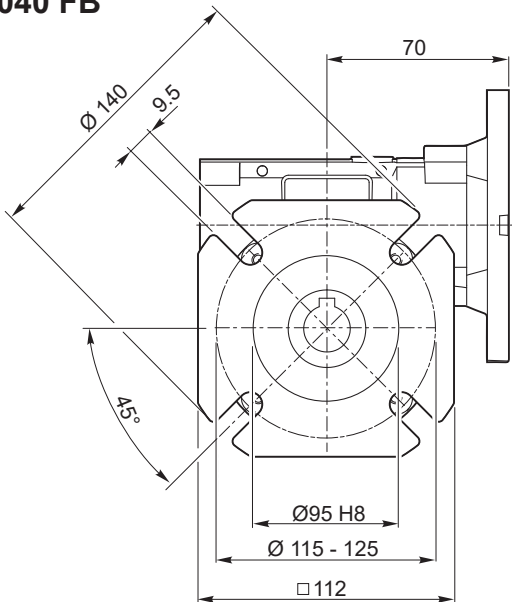
**Dimensioni**

**Dimensions**

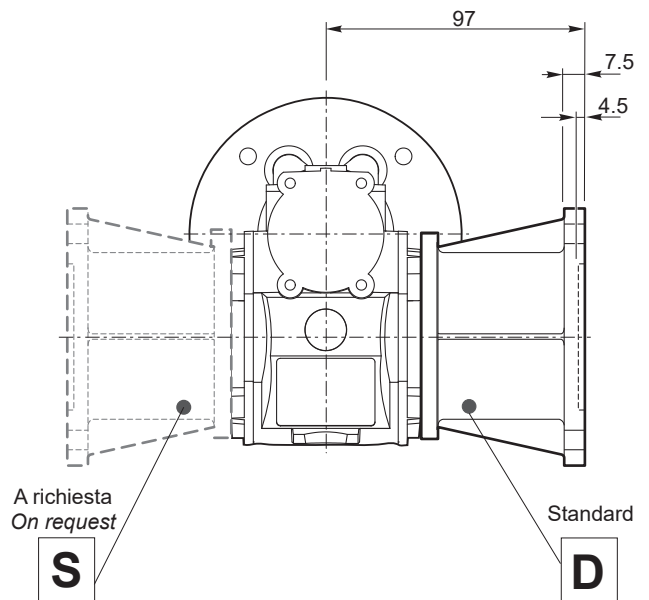
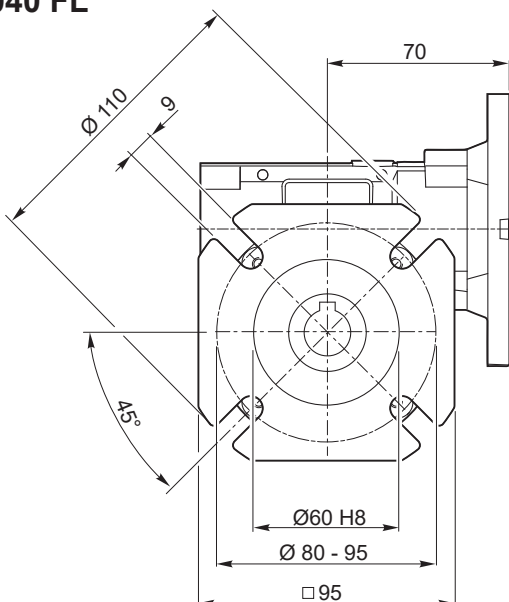
**CL 040 F**

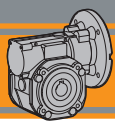


**CL 040 FB**



**CL 040 FL**





CL

Motoriduttori a vite senza fine  
Wormgearmotors

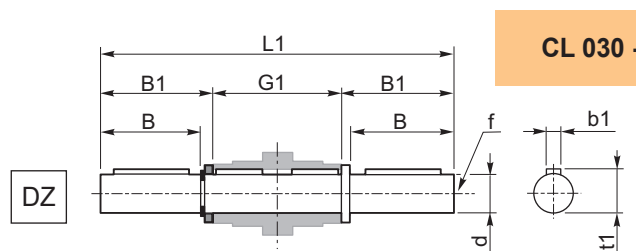
MINI TECNO

Accessori

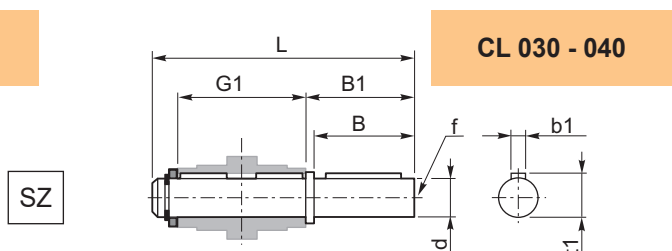
Accessories

Albero lento semplice e doppio

Single and double output shaft

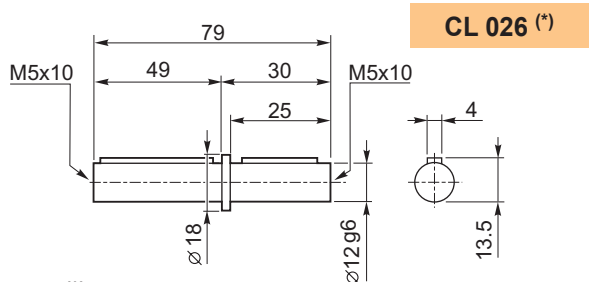


CL 030 - 040



CL 030 - 040

CL	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
030	14	30	32.5	63	102	128	M6	5	16
040	18	40	43	78	128	164	M6	6	20.5



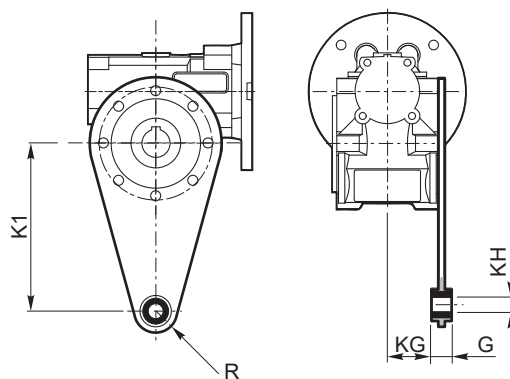
CL 026 (\*)

(\*)  
Nota: disponibile solo per cavo uscita Ø12  
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

CL	K1	G	KG	KH	R
030	85	14	23	8	15
040	100	14	31	10	18



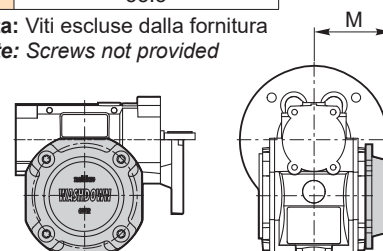
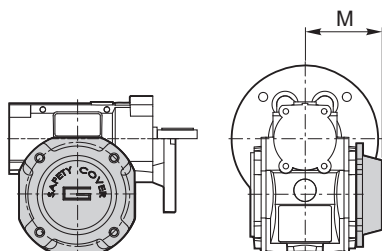
SC - Safety Cover

WD - Kit washdown cover

CL	M
030	47
040	54.5

CL	M
026 *	37.5
030	48
040	55.5

(\*) Nota: Viti escluse dalla fornitura  
(\*) Note: Screws not provided

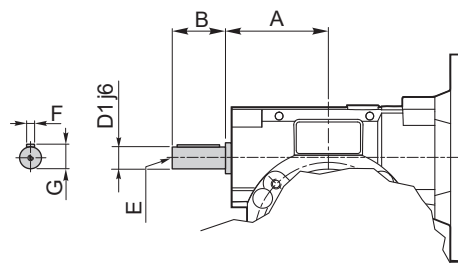


Opzioni

Options

VS - Vite sporgente / Extended input shaft

CL	A	B	D <sub>1</sub> <sub>j6</sub>	E	F	G
030	45	20	9	M4	3	10.2
040	53	23	11	M5	4	12.5



Costruito su richiesta  
Built on request



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Motoriduttori CA  
AC gearmotors

















AC



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**TRANSTECNO**®





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	<b>A-C</b> Motori elettrici CA servoventilati SM..SV	AC Electric Motors with forced-ventilation SM..SV	A-A1
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 	<b>A-L</b> Motoriduttori CA epicicloidali P	AC Planetary garmotors P	A-G1
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**SM**



AC

**Motori elettrici asincroni CA**  
**AC asynchronous electric motors**

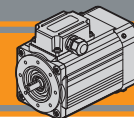


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**TRANSTECNO**®









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Designazione	<i>Classification</i>	<b>AA2</b>
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Connessioni e collegamenti	<i>Connection diagram</i>	<b>AA11</b>
Targhetta	<i>Nameplate</i>	<b>AA16</b>

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**Caratteristiche tecniche**

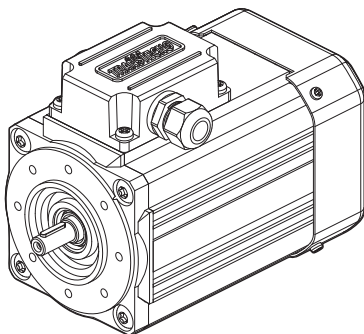
**Technical characteristics**

I motori delle serie SMT ed SMM hanno le seguenti caratteristiche principali:

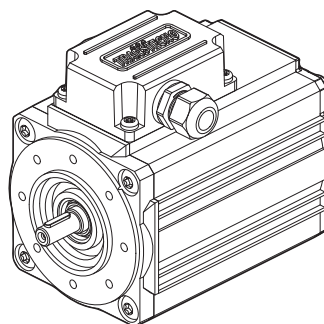
SMT and SMM motor range has the following main features:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa estrusa in alluminio anodizzato nero
- Motore elettrico AC con grado di protezione IP66 eccetto il condensatore.
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: -20°C / + 40°C
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie 56, 63 e 71.
- SMT56, SMT63 e SMT71 adatti al funzionamento con alimentazione da inverter.
- Cava esagonale su albero motore lato NDE.
- Condensatore di marcia sempre cablato ad esclusione della taglia SMM50.
- La tolleranza di tensione è ±10% per tutti i motori ad esclusione della taglia 50 (±5%).
- Disponibili nelle versioni autofrenante, servoventilata e con certificazione UL.

- Compact design
- AC single phase and three phase motors available
- Black anodized extruded aluminium housing
- AC electric motor in IP66 protection Standard, except capacitor
- Low noise and vibrations
- Class F insulation Standard
- Motor flange IEC B14
- Ambient temperature: -20°C / +40°C
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56, 63 and 71.
- SMT56, SMT63 and SMT71 are suitable for inverter duty.
- Motor shaft hexagon socket on the NDE side.
- Running capacitor always connected, except for SMM50.
- The voltage tolerance is ±10% for all motors, except for size 50 (±5%).
- Brake motors, forced ventilation motors and UL compliance versions available.



**SM .. TEFC**



**SM .. TENV**

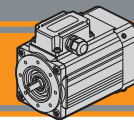




**Designazione**

**Classification**

MOTORE TRIFASE / THREE PHASE MOTOR									
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options
SMT 	Vedi tabelle See tables	1-2-3-4-5	4	0.04 kW ... 0.75 kW	B14	230-400 V  460V	50Hz  60Hz	TEFC  TENV	BR →  SV →  UL-CSA →





MOTORE MONOFASE / SINGLE PHASE MOTOR									
SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	-
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options
<b>SMM</b>	Vedi tabelle See tables	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.55 kW</b>	<b>B14</b>	<b>230V</b>  115V (UL-CSA)	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>	<b>UL-CSA</b> → <b>AD1</b>
 									

**Simbologia e formule**
**Symbols and formulas**

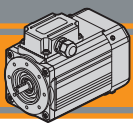
$P_n$	[kW]	Potenza nominale	<i>Rated power</i>
$I_n$	[A]	Corrente nominale (a 400V)	<i>Rated current (at 400V)</i>
$M_n$	[Nm]	Coppia nominale	<i>Rated torque</i>
$n_n$	[rpm]	Velocità nominale	<i>Rated speed</i>
$M_s / M_n$		Rapporto coppia spunto / coppia nominale	<i>Ratio start torque / rated torque</i>
$M_k / M_n$		Rapporto coppia massima / coppia nominale	<i>Ratio max torque / rated torque</i>
$I_s / I_n$		Rapporto corrente di spunto / corrente nominale	<i>Ratio start current / rated current</i>
$\cos\varphi$		Fattore di potenza al carico nominale	<i>Power factor at rated torque load</i>
$\eta$		Rendimento al carico nominale	<i>Efficiency at rated torque load</i>
Potenza Power	[HP]	Potenza [kW] x 1.341	<i>Power [kW] x 1.341</i>
Potenza resa $P_n$ $P_n$ output power	[kW]	Potenza assorbita x $\eta$	<i>Absorbed power x <math>\eta</math></i>
Pot. assorbita Absorbed power	[kW]	$\frac{V \times I \times \cos\varphi}{1000}$ (monofase)	$\frac{V \times I \times \cos\varphi}{1000}$ (singlephase)
		$\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (trifase)	$\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (threephase)
$I_n$ (230 V)		$I_n$ (400 V) x $\sqrt{3}$	$I_n$ (400 V) x $\sqrt{3}$

**Dati tecnici**
**Technical data**
**SMT Motori trifase / SMT Three phase motors**
**(230-400 V / 50 Hz) poli / poles 4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	$I_n$ (400V) [A]	$\eta$ %	$\cos\varphi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	PTO [°C]	Servizio Duty TEFC	Servizio Duty TENV
5014	0.04	0.30	1290	0.25	34.0	0.68	1.65	1.75	1.70	-	S1	S3 30%
5024	0.06	0.44	1300	0.35	35.7	0.69	1.55	1.80	1.60			
5034	0.09	0.65	1315	0.54	38.0	0.64	1.80	2.00	1.85		S3 75%	
5044	0.12	0.87	1315	0.64	43.0	0.63	1.80	2.00	1.80			
5624	0.09	0.64	1345	0.45	46.5	0.62	2.50	2.40	2.70	PTO 150°	S1	S3 50%
5634	0.12	0.89	1300	0.45	52.0	0.74	1.90	2.40	1.90			
5644	0.18	1.26	1360	0.69	59.0	0.65	2.50	3.00	2.60			
5654	0.25	1.80	1330	0.93	59.0	0.66	2.50	2.80	2.60			
6324	0.18	1.26	1360	0.69	57.0	0.66	2.50	2.90	2.50			
6334	0.25	1.74	1375	0.94	62.0	0.64	2.80	3.00	2.80			
6344	0.37	2.60	1360	1.24	65.3	0.66	2.70	3.00	2.70			
7124	0.37	2.52	1400	1.10	67.9	0.72	2.75	4.20	2.75			
7134	0.55	3.76	1395	1.55	70.2	0.73	2.90	4.40	2.90			
7144	0.75	5.09	1405	2.00	74.0	0.73	2.90	5.00	2.90			

**SMM Motori monofase / SMM Single phase motors**
**(230 V / 50 Hz) poli / poles 4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	$I_n$ (230V) [A]	$\eta$ %	$\cos\varphi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	Cond/cap [μF]	PTO [°C]	Servizio Duty TEFC	Servizio Duty TENV
5014	0.04	0.27	1390	0.60	33.4	0.88	0.74	1.60	1.55	8.0	-	S1	S3 30%
5024	0.06	0.42	1380	0.89	34.3	0.85	0.76	1.70	1.50	12.0			
5034	0.09	0.63	1375	1.10	40.0	0.89	0.80	1.70	1.45	16.0			
5624	0.09	0.63	1370	0.82	48.6	0.98	0.72	1.70	1.45	6.3	PTO 150°	S1	S3 50%
5634	0.12	0.83	1380	1.06	50.3	0.98	0.75	2.10	1.65	9.0			
5644	0.18	1.25	1375	1.50	53.8	0.97	0.70	2.20	1.58	12.5			
6324	0.18	1.33	1290	1.50	54.5	0.97	1.00	1.80	1.45	12.0			
6334	0.25	1.85	1290	1.95	56.8	0.98	0.93	1.90	1.50	16.0			
7124	0.37	2.72	1300	2.78	58.6	0.99	0.77	2.00	1.35	20.0			
7134	0.55	3.95	1330	3.54	68.9	0.98	0.66	2.40	1.40	25.0			

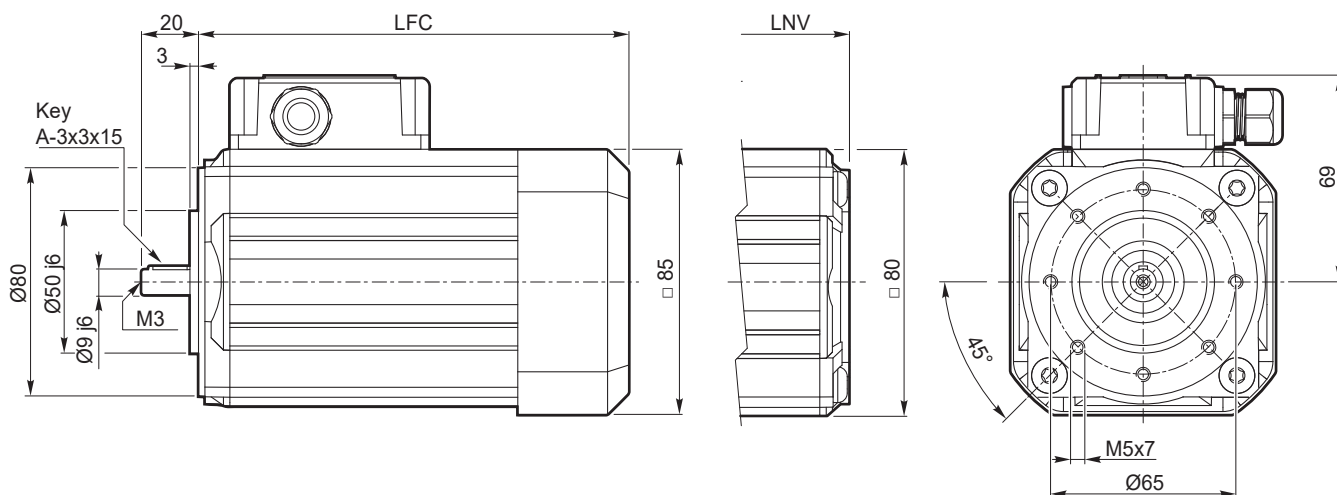


Dimensioni motori trifase

Three phase motors dimensions

3~

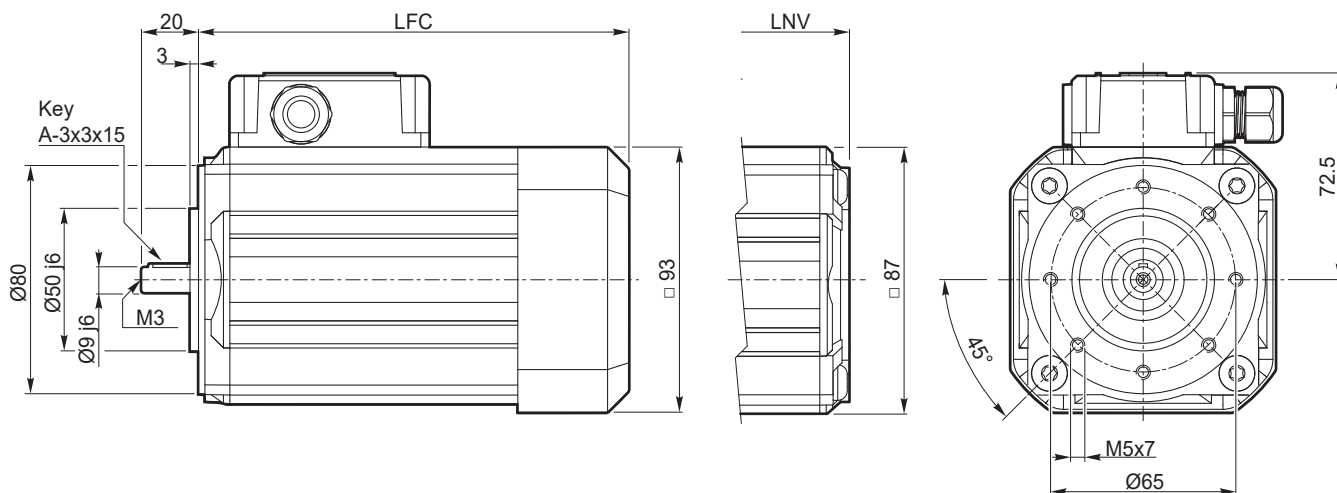
**SMT50.. - B14 - TEFC / TENV**



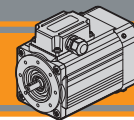
SMT	... TEFC		... TENV	
	LFC	kg	LNV	kg
5014	135.5	2.3	108.5	2.2
5024	150.5	2.7	123.5	2.6
5034	175.5	3.5	148.5	3.4
5044	200.5	4.2	173.5	4.1

3~

**SMT56.. - B14 - TEFC / TENV**



SMT	... TEFC		... TENV	
	LFC	kg	LNV	kg
5624	141	2.9	117	2.8
5634	151	3.2	127	3.1
5644	186	4.4	162	4.3
5654	206	5.1	182	5.0

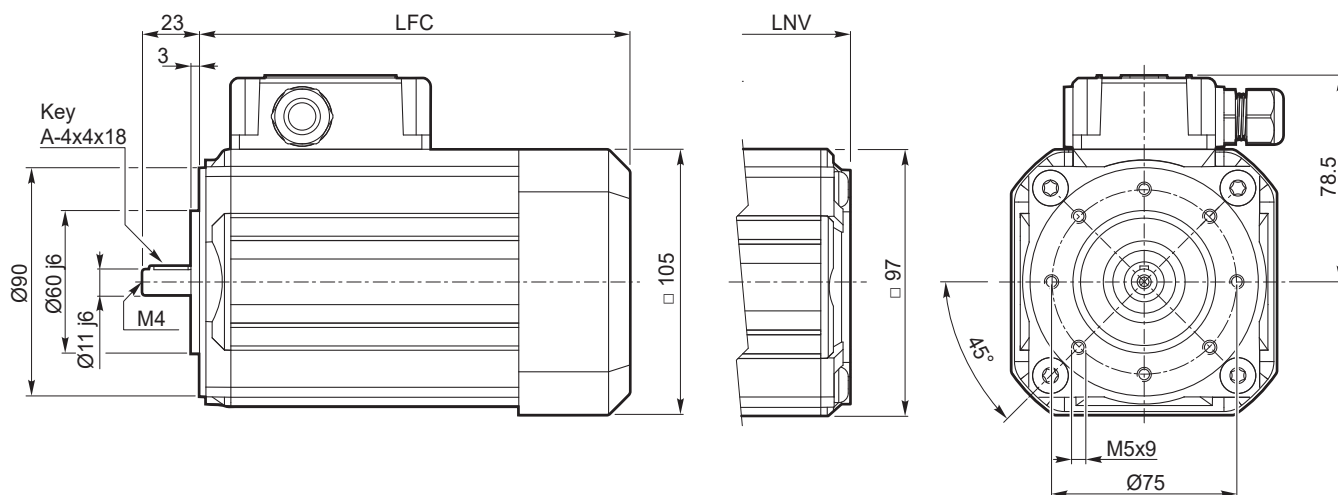


Dimensioni motori trifase

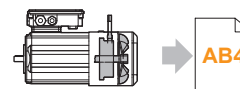
Three phase motors dimensions

3 ~

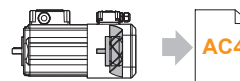
SMT63.. - B14 - TEFC / TENV



SMT	... TEFC		... TENV	
	LFC	kg	LNV	kg
6324	165.5	4.3	138.5	4.2
6334	180.5	5.0	153.5	4.9
6344	205.5	6.2	178.5	6.1



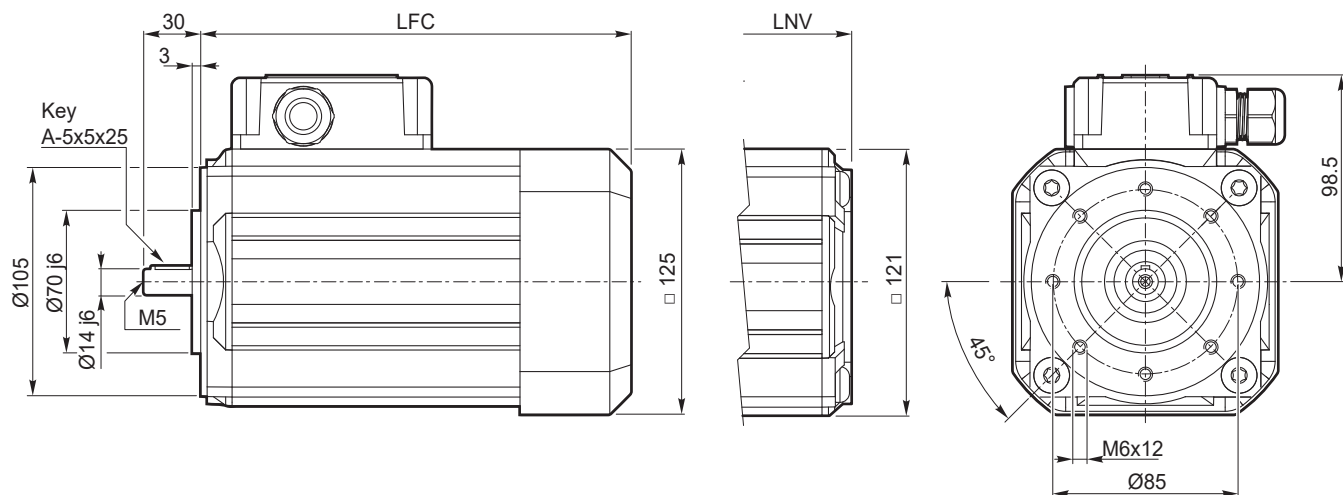
SM..BR..  
Motori autofrenanti  
Brake motors



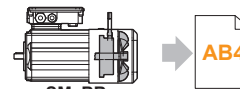
SM..V..  
Motori servoventilati  
Motors with forced-ventilation

3 ~

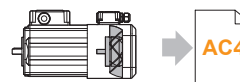
SMT71.. - B14 - TEFC / TENV



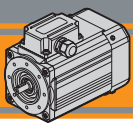
SMT	... TEFC		... TENV	
	LFC	kg	LNV	kg
7124	174	6.6	145.5	6.4
7134	189	7.7	160.5	7.5
7144	214	9.4	185.5	9.2



SM..BR..  
Motori autofrenanti  
Brake motors



SM..V..  
Motori servoventilati  
Motors with forced-ventilation

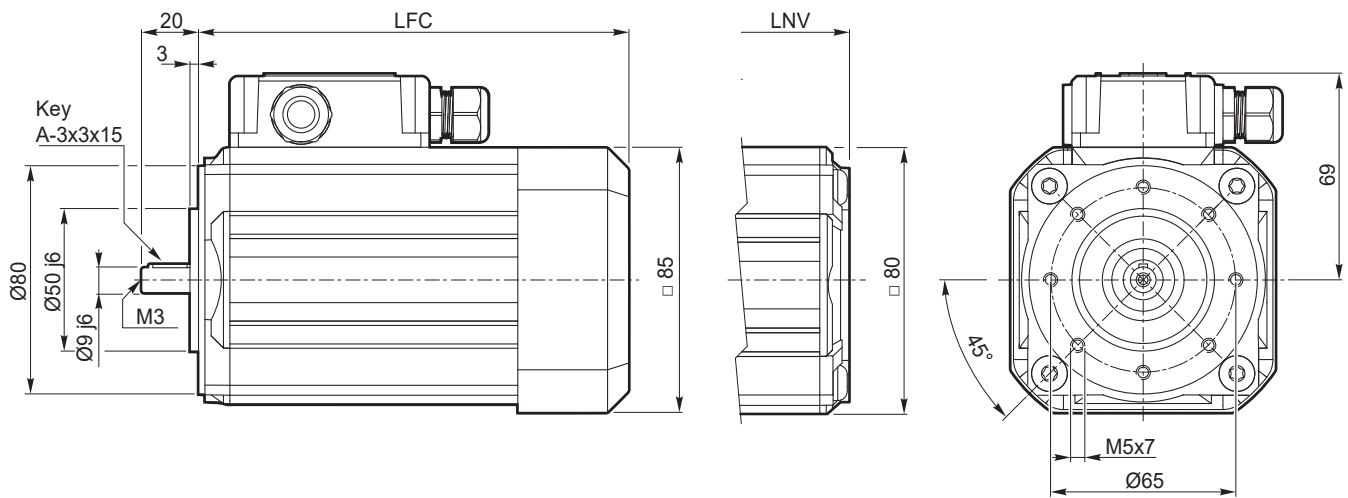


Dimensioni motori monofase

Single phase motors dimensions

1~

**SMM50.. - B14 - TEFC / TENV**



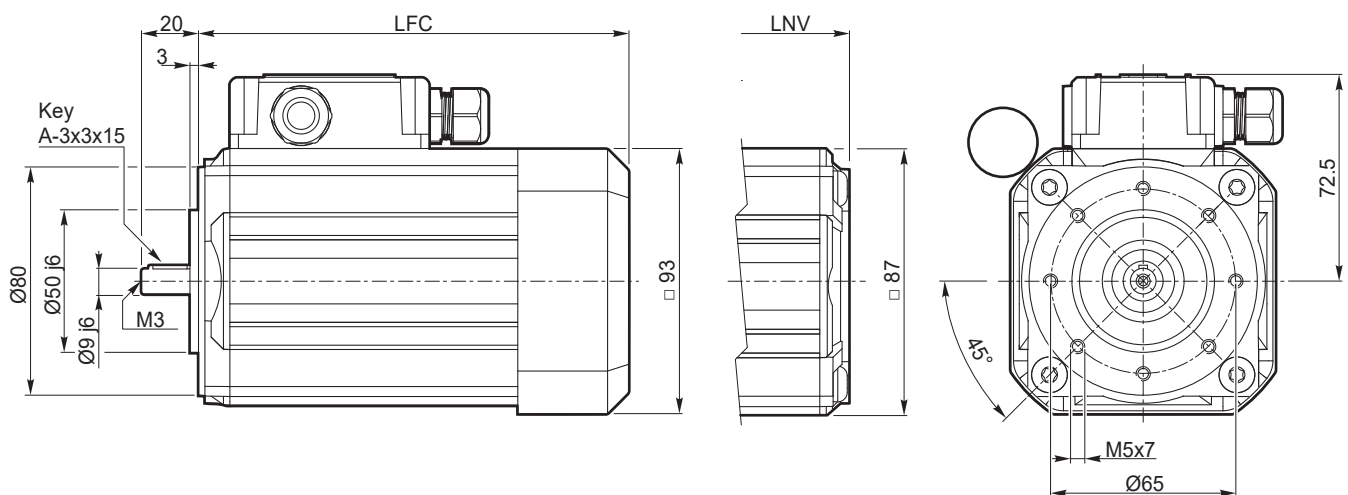
SMM	... TEFC		... TENV	
	LFC	kg	LNV	kg
5014	150.5	2.7	123.5	2.6
5024	175.5	3.5	148.5	3.4
5034	200.5	4.2	173.5	4.1

**Nota:**  
il condensatore sarà fornito a corredo

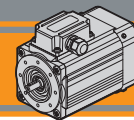
**Note:**  
the capacitor will be supplied separately

1~

**SMM56.. - B14 - TEFC / TENV**



SMM	... TEFC		... TENV	
	LFC	kg	LNV	kg
5624	151	3.3	127	3.2
5634	171	3.9	147	3.8
5644	206	5.0	182	4.9

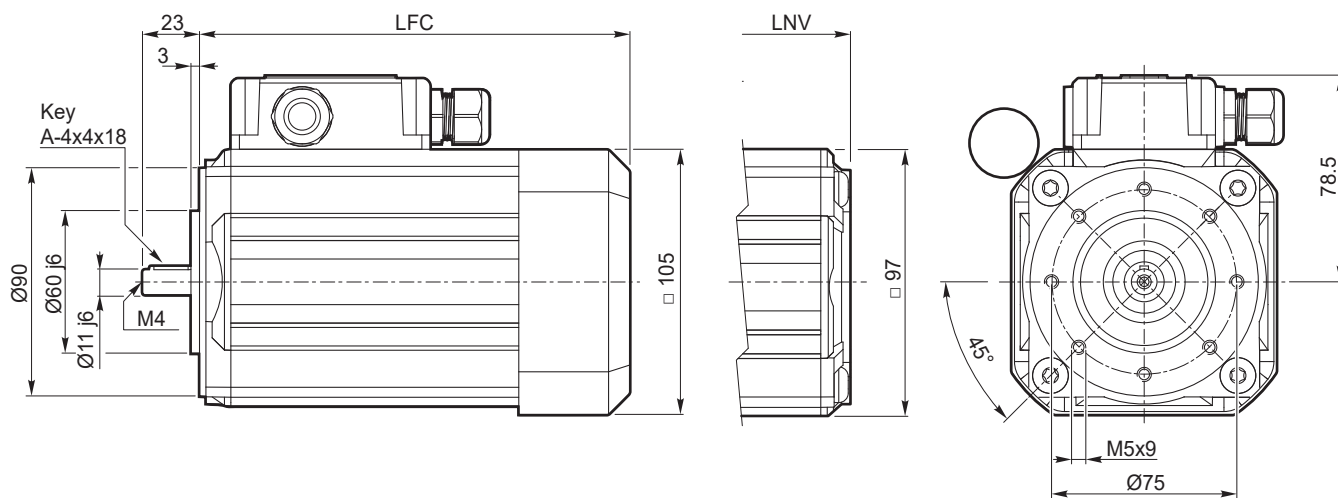


Dimensioni motori monofase

Single phase motors dimensions

1 ~

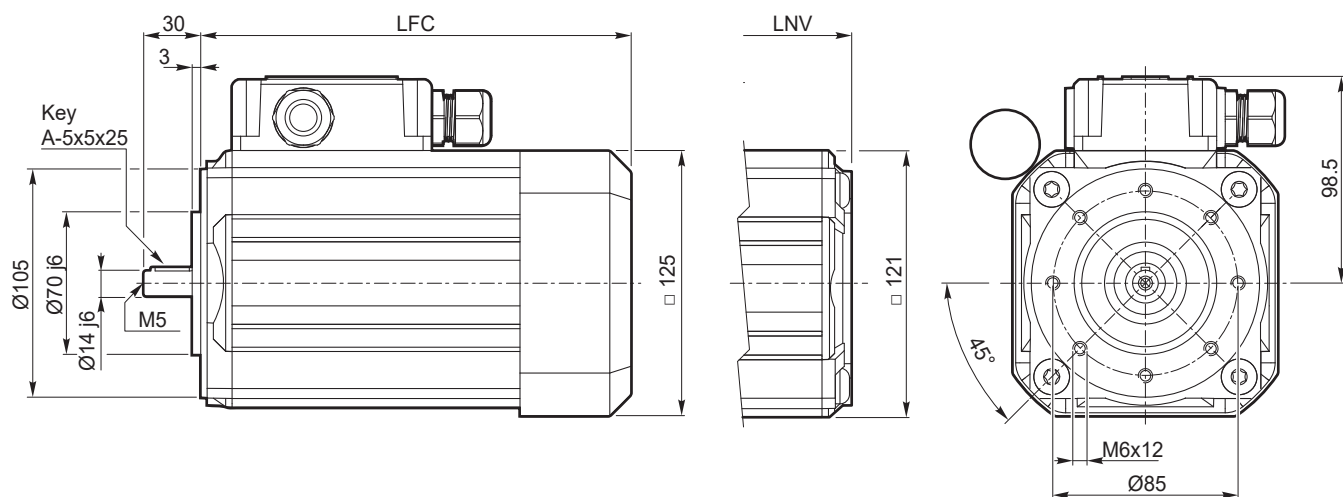
**SMM63.. - B14 - TEFC / TENV**



SMM	... TEFC		... TENV	
	LFC	kg	LNV	kg
6324	180.5	5.1	153.5	5.0
6334	205.5	6.2	178.5	6.1

1 ~

**SMM71.. - B14 - TEFC / TENV**

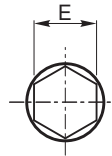
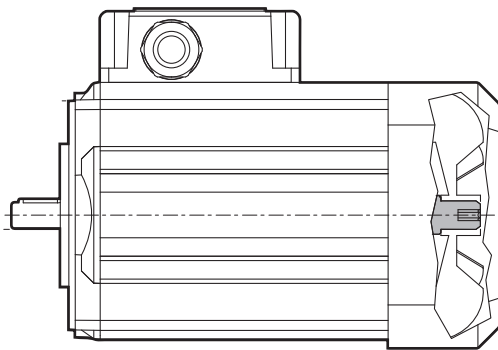


SMM	... TEFC		... TENV	
	LFC	kg	LNV	kg
7124	189	7.3	160.5	7.1
7134	214	9.2	185.5	9.0



**Cava esagonale**

**Hexagonal socket**



Esagono / Hexagon

SM..	E
50	
56	4
63	
71	6

**Nota:**

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

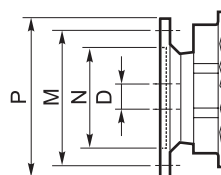
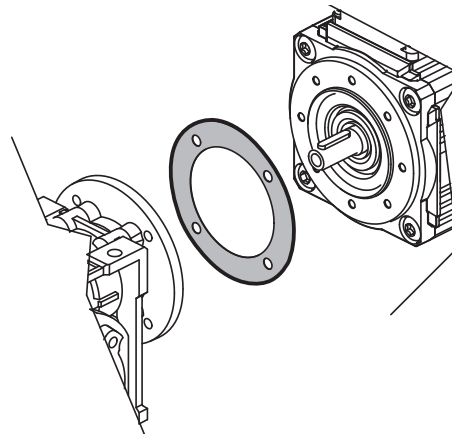
**Note:**

*An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.*

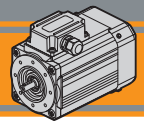
*The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.*

**Opzione guarnizione CA**

**Rubber gasket option**



Dimensioni IEC / IEC Dimensions			
	56 B14	63 B14	71 B14
<b>N</b>	50	60	70
<b>M</b>	65	75	85
<b>P</b>	80	90	105
<b>D</b>	9	11	14


**Grado di protezione IP**
**IP protection rating**

Indica il grado di isolamento meccanico del corpo motore.















1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

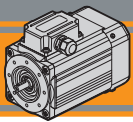
The 1<sup>st</sup> figure indicates the level of protection against the intrusion of solid matter.

The 2<sup>nd</sup> figure indicates to which degree the motor is waterproof.

IP		Definizione / Description	IP		Definizione / Description
0		Non protetto / No protection	0		Non protetto / No protection
1		Protetto da corpi solidi superiori a Ø 50 mm. Protected against solid matter (over Ø 50 mm).	1		Protetto contro la caduta verticale di gocce d'acqua. Protected against drops of water falling vertically.
2		Protetto da corpi solidi superiori a Ø 12 mm. Protected against solid matter (over Ø 12 mm).	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. Protected against drops of water falling up to 15°.
3		Protetto da corpi solidi superiori a Ø 2.5 mm. Protected against solid matter (over Ø 2.5 mm).	3		Protetto contro la pioggia. Rain proof.
4		Protetto da corpi solidi superiori a Ø 1 mm. Protected against solid matter (over Ø 1 mm).	4		Protetto contro gli spruzzi. Splash proof.
5		Protetto contro la polvere. Dust protected.	5		Protetto contro getti d'acqua. Water jet proof.
6		Totalmente protetto contro la polvere. Fully dust tight.	6		Protetto dalle ondate. Waveproof.
7		N.A.	7		Protetto contro immersione. Immersion up to 1 metre.
8		N.A.	8		Protetto contro immersione/sommersione prolungata. Immersion beyond 1 metre.

**AC**
**Normative di riferimento**
**Reference Standards**

	Europe EN	World IEC	Italy CEI
<b>Requisiti generali per macchine elettriche</b> <i>General requirements electrical machines</i>	EN 60034-1:2010	IEC 60034-1:2010	CEI EN 60034-1:2010
<b>Classificazione del grado di protezione</b> <i>Classification degree of protection provided by enclosures</i>	EN 60034-5:2001	IEC 60034-5:2001	CEI EN 60034-5:2001
<b>Sistema di raffreddamento</b> <i>Cooling system</i>	EN 60034-6:1993	IEC 60034-6:1993	CEI EN 60034-6:1993
<b>Modalità di montaggio</b> <i>Mounting arrangements</i>	EN 60034-7:1993	IEC 60034-7:1993	CEI EN 60034-7:1993



**Tipi di servizi IEC**

**IEC duty cycles**

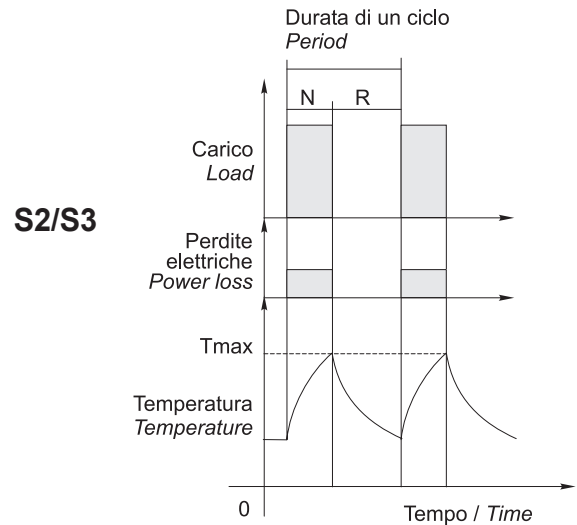
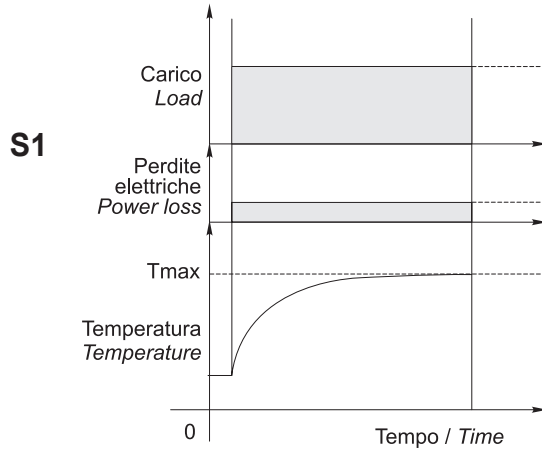
Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

Most common duty cycles diagram

N = funzionamento / run  
R = riposo / rest



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

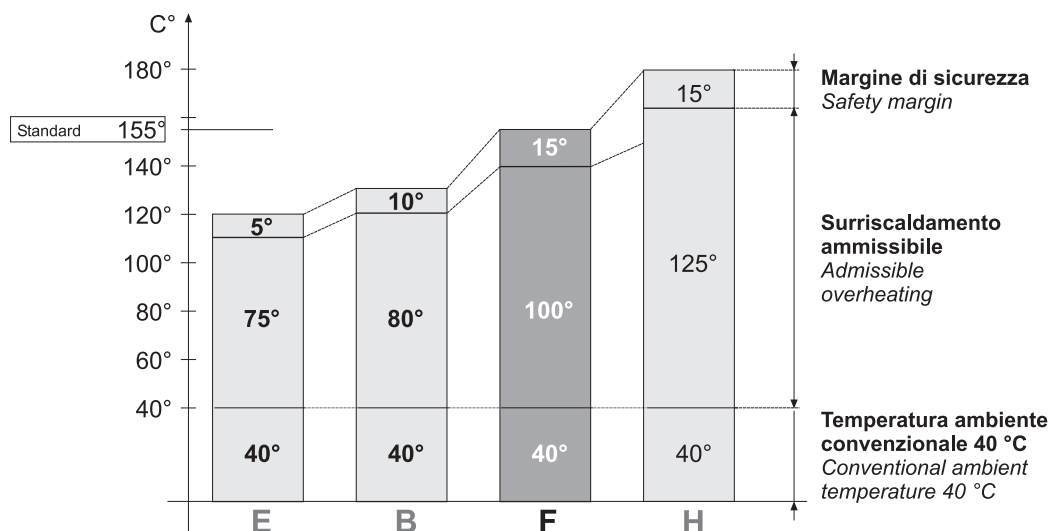
**Classe di isolamento termico**

**Insulation class**

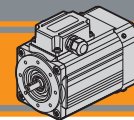
La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti). Isolamento termico classe F.

Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings). Thermal insulation class F.

Classe Class	Massima temperatura interna Max. windings temp.
E	120°C
B	130°C
F	155°C
H	180°C








**Serie SM - Funzionamento a 60 Hz**

**Series SM - 60 Hz line power supply**

Velocità, coppia e potenza nominale nel funzionamento a 60 Hz varieranno come da tabella:

Speed, torque and rated power in 60 Hz operation is shown in the following table:

	50 Hz	60 Hz
<b>400 V</b>	Vedi dati tecnici / see technical data 	Velocità / speed ≈ + 20% Coppia / torque ≈ -20% Potenza / power ≈ invariata / the same
<b>480 V</b>	Non permesso / not allowed	Velocità / speed ≈ + 20% Coppia / torque ≈ invariata / the same Potenza / power ≈ + 20%

**Tabella pressacavi**

**Table of cable glands data**

**Serie SMT / SMT Series**

**Serie SMM / SMM Series**

TAGLIA SIZE	Pressacavo Cable gland
50 / 56 / 63	M16x1.5
71	M20x1.5

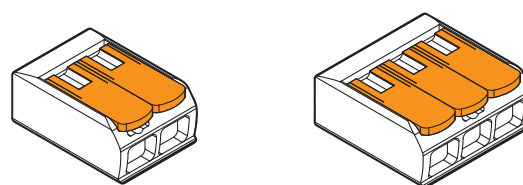
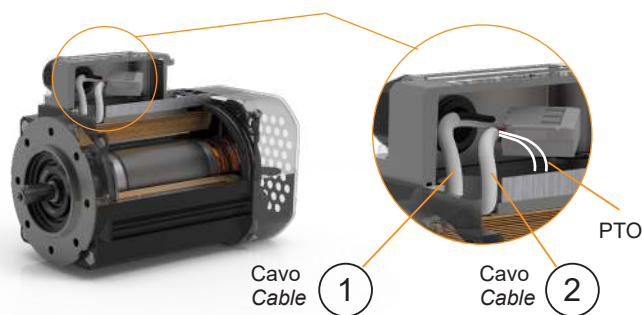
TAGLIA SIZE	Pressacavo Cable gland
50 / 56 / 63	n°2 - M16x1.5
71	M20x1.5 + M16x1.5

**Connessioni e collegamenti**

**Connection diagram**

**Riferimenti**

**References**



Morsetto di collegamento a leva a 2 e 3 poli  
Splicing connector with lever 2 - and 3 - pin.

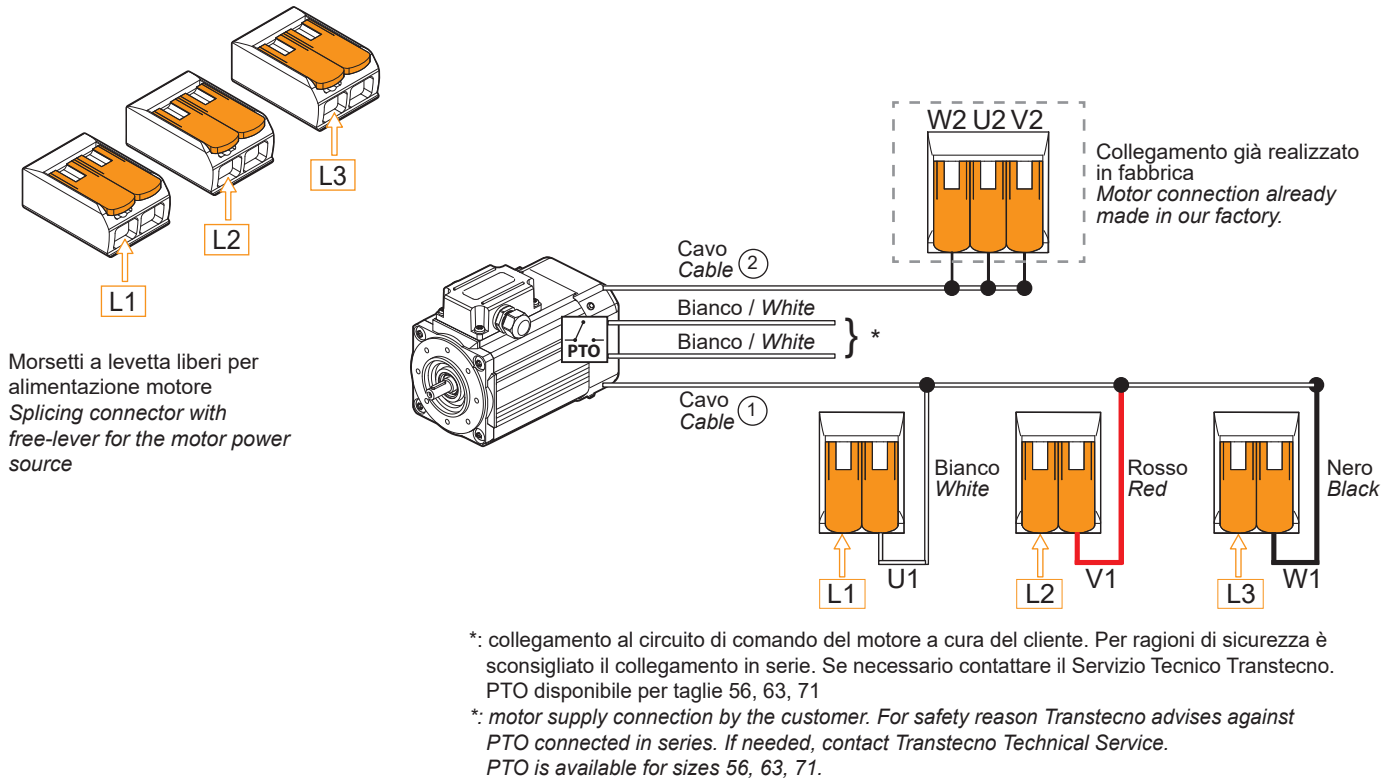


**Connessioni e collegamenti**

**Connection diagram**

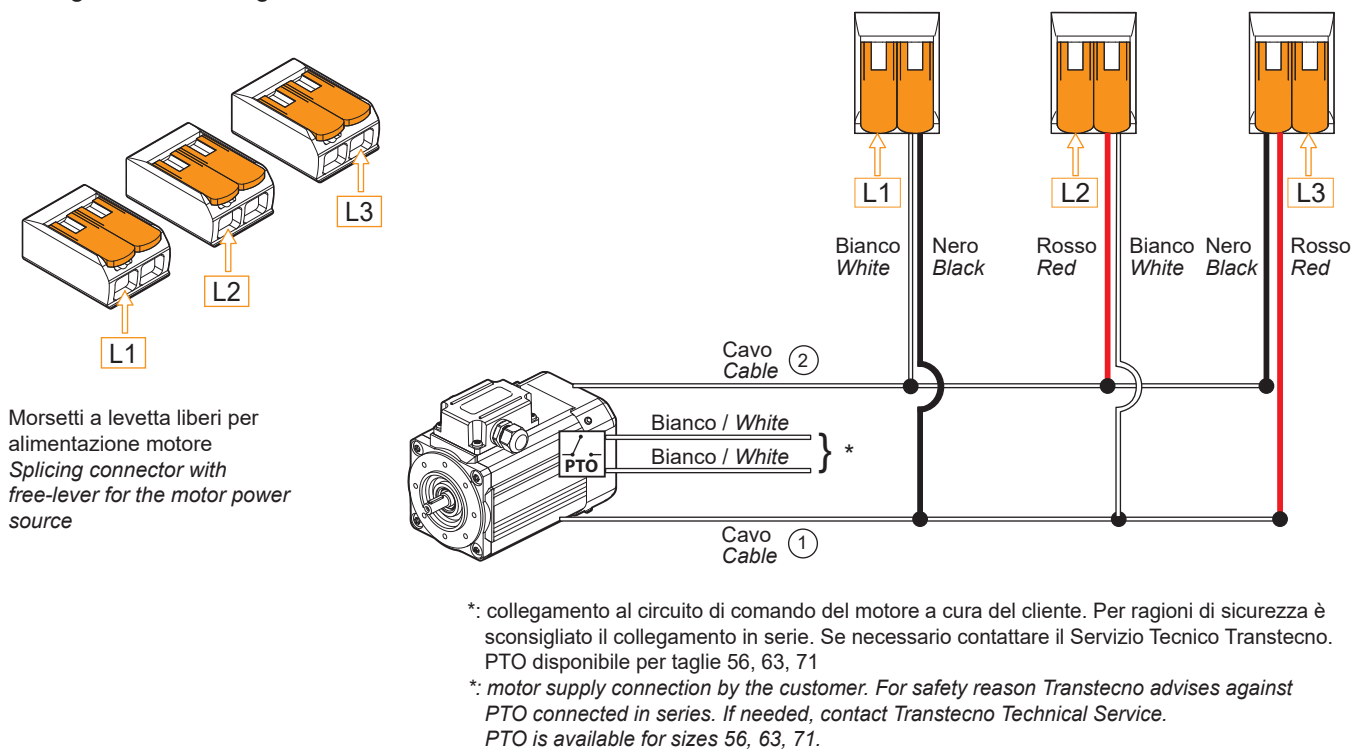
**400/460 V - Trifase / Three phase**

**Collegamento a stella / Star connection**



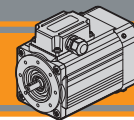
**230 V - Trifase / Three phase**

**Collegamento a triangolo / Delta connection**



I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

*The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.*

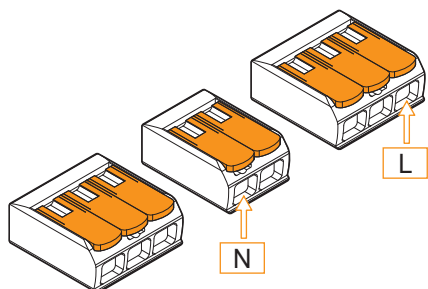


Connessioni e collegamenti

Connection diagram

**230 V - Monofase / Single phase**

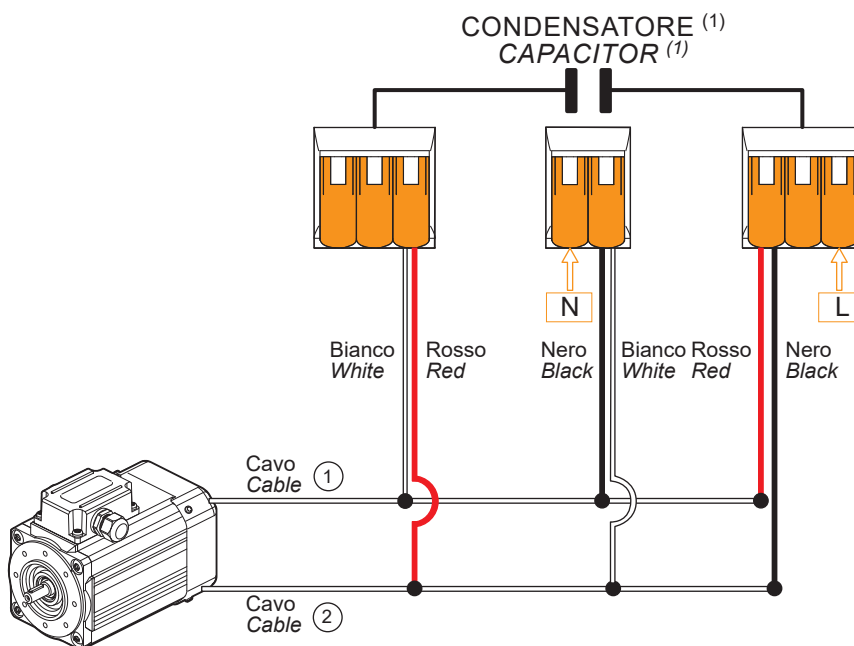
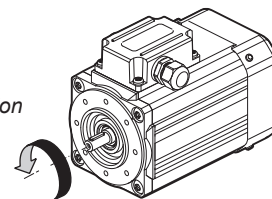
Monofase SMM 50... / Single phase SMM 50...



Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source

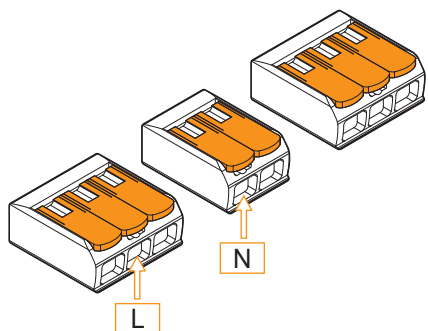
(1): il condensatore sarà fornito a corredo.  
(1): the capacitor will be supplied separately.

Senso di rotazione antiorario  
Counter-clockwise direction of rotation



**230 V - Monofase / Single phase**

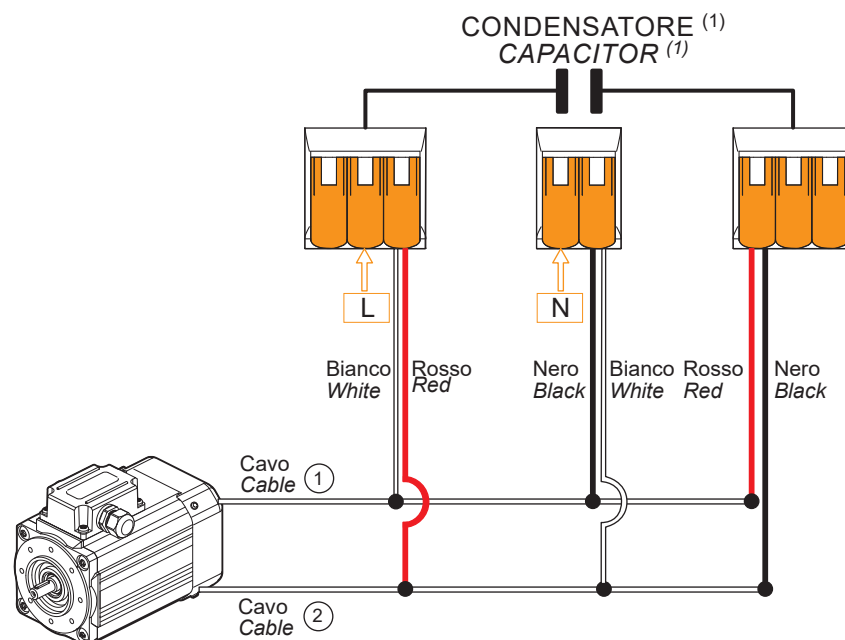
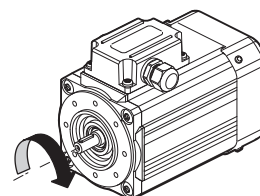
Monofase SMM 50... / Single phase SMM 50...



Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source

(1): il condensatore sarà fornito a corredo.  
(1): the capacitor will be supplied separately.

Senso di rotazione orario  
Clockwise direction of rotation



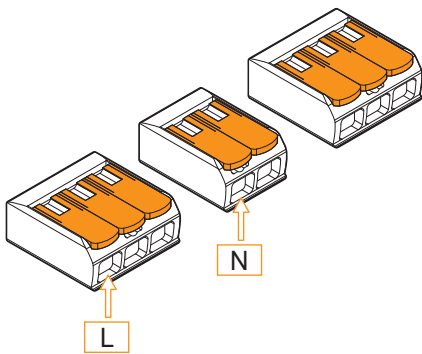


**Connessioni e collegamenti**

**Connection diagram**

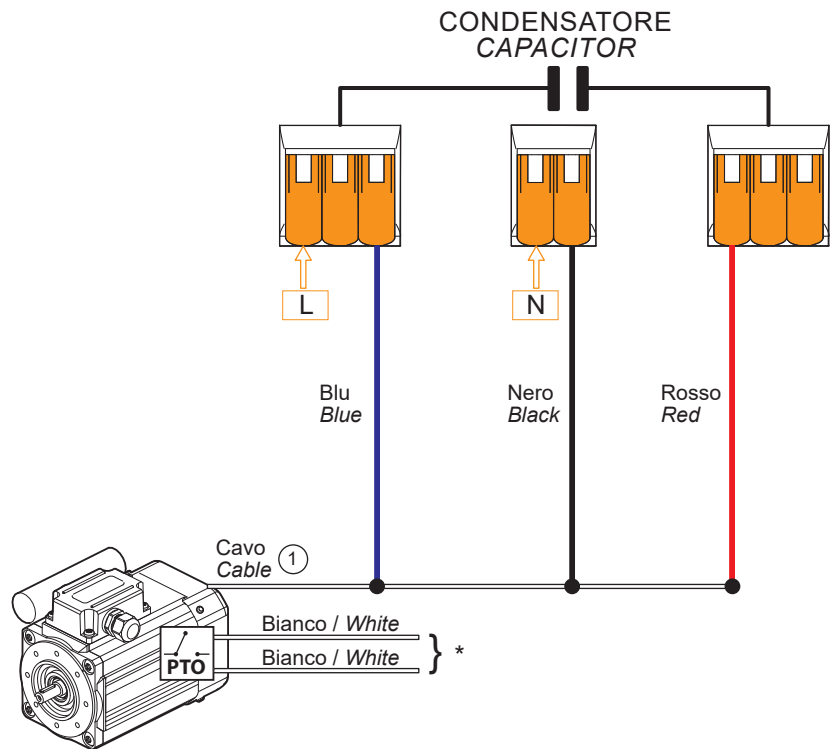
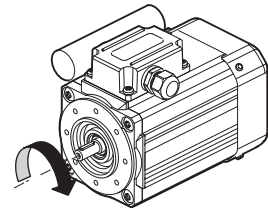
**230 V - Monofase / Single phase**

Monofase da SMM 56... a SMM 71... / Single phase from SMM 56... to SMM 71...



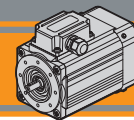
Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source

Senso di rotazione orario  
Clockwise direction of rotation



\*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71

\*: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.

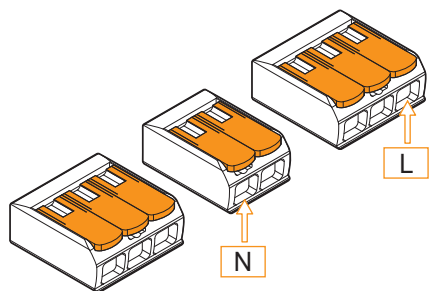


Connessioni e collegamenti

Connection diagram

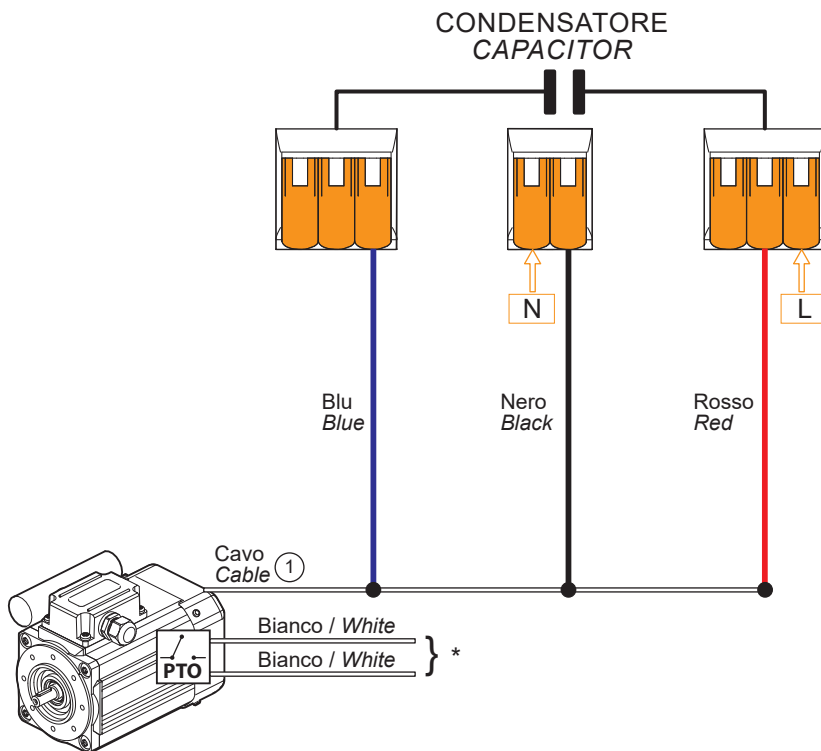
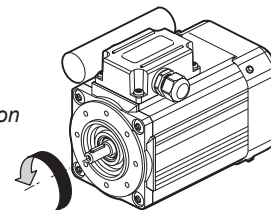
**230 V - Monofase / Single phase**

Monofase da SMM 56... a SMM 71... / Single phase from SMM 56... to SMM 71...



Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source

Senso di rotazione antiorario  
Counter-clockwise direction of rotation



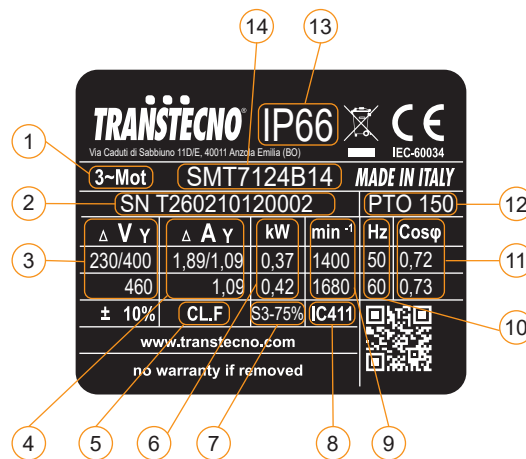
\*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71

\*: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71.



Targhetta

Nameplate



Pos.	Descrizione	Description
1	Tipo di alimentazione	Power supply
2	Numero di serie	Serial number
3	Tensione di alimentazione	Supply voltage
4	Corrente nominale	Rated current
5	Classe di isolamento	Insulation class
6	Potenza nominale	Rated power
7	Servizio	Duty
8	Ventilazione	Fan cooling
9	Velocità nominale	Rated speed
10	Frequenza nominale	Rated frequency
11	Fattore di potenza	Power factor
12	Protezione termica PTO 150°C	PTO 150°C Thermal protection
13	Grado di protezione IP	IP protection rating
14	Tipo motore	Motor type



**MINI**  **TECNO**™  
**small** but strong

**SM..BR**



**Motori elettrici CA autofrenanti**  
**AC electric motors with brake**



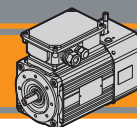
**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



AC





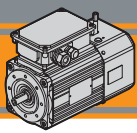


BRAKE

<b>Indice</b>	<b>Index</b>	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	<b>AB2</b>
Designazione	<i>Classification</i>	<b>AB2</b>
Simbologia e formule	<i>Symbols and formulas</i>	<b>AB3</b>
Dati tecnici	<i>Technical data</i>	<b>AB3</b>
Dimensioni motori trifase	<i>Three phase motors dimensions</i>	<b>AB4</b>
Cava esagonale	<i>Hexagonal socket</i>	<b>AB5</b>
Opzione guarnizione CA	<i>Rubber gasket option</i>	<b>AB5</b>
Gradi di protezione IP	<i>IP protection rating</i>	<b>AB6</b>
Tipo di servizio IEC	<i>IEC duty cycles</i>	<b>AB7</b>
Classe di isolamento termico	<i>Insulation class</i>	<b>AB7</b>
Tabella pressacavi	<i>Table of cable glands data</i>	<b>AB7</b>
Connessioni e collegamenti	<i>Connection diagram</i>	<b>AB8</b>
Targhetta	<i>Nameplate</i>	<b>AB9</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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**Caratteristiche tecniche**

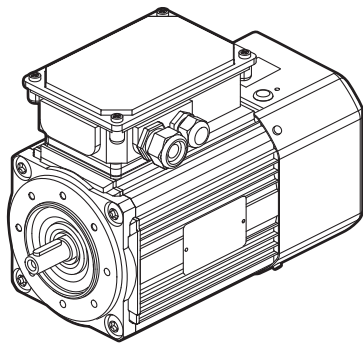
**Technical characteristics**

I motori autofrenanti delle serie SMT..BR hanno le seguenti caratteristiche principali:

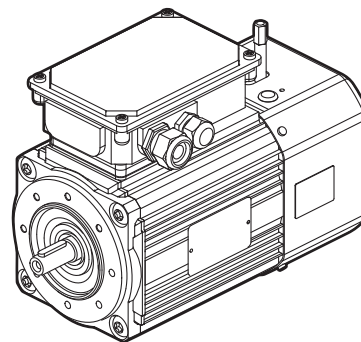
*SMT..BR braked motor range has the following main features:*

- Costruzione compatta
- Motorizzazioni in corrente alternata trifase
- Carcasa estrusa in alluminio anodizzato nero
- Motore elettrico AC con grado di protezione IP66 (freno IP66 e IP65)
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: 0°C / + 40°C (Per utilizzo a temperature diverse contattare il ns. servizio tecnico)
- Disponibili nella versione ventilata TEFC (servizio S1)
- Protezioni termiche PTO 150°C
- Adatti al funzionamento con alimentazione da inverter (Richiedere opzione freno con alimentazione separata)
- Cava esagonale su albero motore lato NDE.
- La tolleranza di tensione è ±10% per tutti i motori
- Il freno è a corrente continua

- *Compact design*
- *AC three phase motors available*
- *Black anodized extruded aluminium housing*
- *AC electric motor in IP66 protection Standard (IP66 and IP65 brake)*
- *Low noise and vibrations*
- *Class F insulation Standard*
- *Motor flange IEC B14*
- *Ambient temperature: 0°C / +40°C (For different temperatures contact Transtecno Technical Dept)*
- *Fan cooled TEFC (duty S1) available*
- *PTO 150°C thermal protection*
- *Suitable for running with frequency converter (Request brake option with separate power supply)*
- *Motor shaft hexagon socket on the NDE side*
- *The voltage tolerance is ±10% for all motors*
- *The brake is DC*



**SMT..TEFC BR**



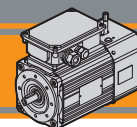
**SMT..TEFC BRL**



**Designazione**

**Classification**

MOTORE TRIFASE AUTOFRENANTE / THREE PHASE BRAKED MOTOR									
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Freno - Leva di sblocco Brake - Hand-release lever
<b>SMT</b>	Vedi tabelle See tables	<b>1-2-3-4-5</b>	<b>4</b>	<b>0.18 kW</b> ... <b>0.55 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b> a richiesta on request	<b>50Hz</b>  <b>60Hz</b>	<b>TEFC</b>	<b>BR</b>  <b>BRL</b>



**Simbologia e formule**

**Symbols and formulas**

$P_n$	[kW]	Potenza nominale	Rated power
$I_n$	[A]	Corrente nominale (a 400V)	Rated current (at 400V)
$M_n$	[Nm]	Coppia nominale	Rated torque
$n_n$	[rpm]	Velocità nominale	Rated speed
$M_s / M_n$		Rapporto coppia spunto / coppia nominale	Ratio start torque / rated torque
$M_k / M_n$		Rapporto coppia massima / coppia nominale	Ratio max torque / rated torque
$M_b$	[Nm]	Coppia frenante	Braking torque
$I_s / I_n$		Rapporto corrente di spunto / corrente nominale	Ratio start current / rated current
$\cos\phi$		Fattore di potenza al carico nominale	Power factor at rated torque load
$\eta$		Rendimento al carico nominale	Efficiency at rated torque load
Potenza Power	[HP]	Potenza [kW] x 1.341	Power [kW] x 1.341
Potenza resa $P_n$ $P_n$ output power	[kW]	Potenza assorbita x $\eta$	Absorbed power x $\eta$
Pot. assorbita Absorbed power	[kW]	$\frac{\sqrt{x} \cdot I \cdot \cos\phi}{1000}$ (monofase)	$\frac{\sqrt{x} \cdot I \cdot \cos\phi}{1000}$ (singlephase)
		$\frac{\sqrt{x} \cdot I \cdot \sqrt{3} \cdot \cos\phi}{1000}$ (trifase)	$\frac{\sqrt{x} \cdot I \cdot \sqrt{3} \cdot \cos\phi}{1000}$ (threephase)
$I_n$ (230 V)		$I_n$ (400 V) x $\sqrt{3}$	$I_n$ (400 V) x $\sqrt{3}$

**Dati tecnici**

**Technical data**

**SMT..BR Motori trifase autofrenanti / SMT..BR Three phase motors with brake (230-400 V / 50 Hz) poli / poles 4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	$I_n$ (400V) [A]	$\eta$ %	$\cos\phi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	PTO [°C]	Servizio Duty TEFC	IP Motore Motor	$M_b$ [Nm]	IP Freno Brake
SMT6324B14BR(L)	0.18	1.26	1360	0.69	57.0	0.66	2.50	2.90	2.50	PTO 150°	S3 75%	66	4	66
SMT6334B14BR(L)	0.25	1.74	1375	0.94	62.0	0.64	2.80	3.00	2.80				4	66
SMT7124B14BR(L)	0.37	2.52	1400	1.10	67.9	0.72	2.75	4.20	2.75				7,5	65
SMT7134B14BR(L)	0.55	3.76	1395	1.55	70.2	0.73	2.90	4.40	2.90				7,5	65

I freni adottati sono freni elettromagnetici ad azione negativa: l'azione frenante viene quindi esercitata in assenza di alimentazione.

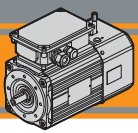
Il freno è a corrente continua e, in configurazione standard, viene alimentato direttamente da una fase del motore, passando attraverso un raddrizzatore alloggiato all'interno della morsetteria. Per le applicazioni in cui si rende necessario, come ad esempio l'azionamento tramite inverter, è possibile richiedere l'alimentazione del freno separata 230Vac ±10% 50Hz. Sono disponibili anche le versioni 400Vac ±10% 50Hz o 24Vdc.

La leva di sblocco è una opzione che va specificata in fase di ordine.

The brakes adopted are negative action electromagnetic brakes: the braking action is performed in the absence of power.

The brake is DC and, in standard configuration, is powered directly by a phase of the motor, passing through a rectifier housed inside the terminal block. For the applications in which it is required, like the ones with motor driven by inverter, it is possible to request 230Vac ± 10% 50Hz separate brake power supply. 400Vac ± 10% 50Hz or 24Vdc power supply are available on request.

The release lever is an option that must be requested when ordering.

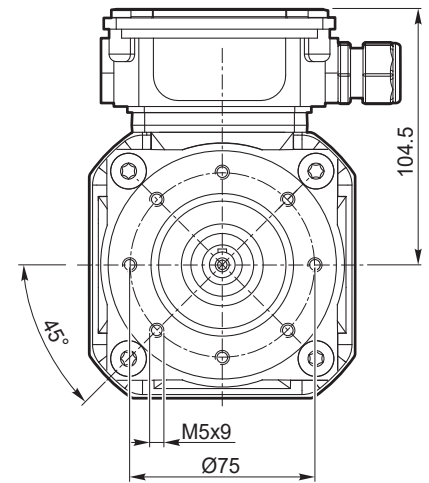
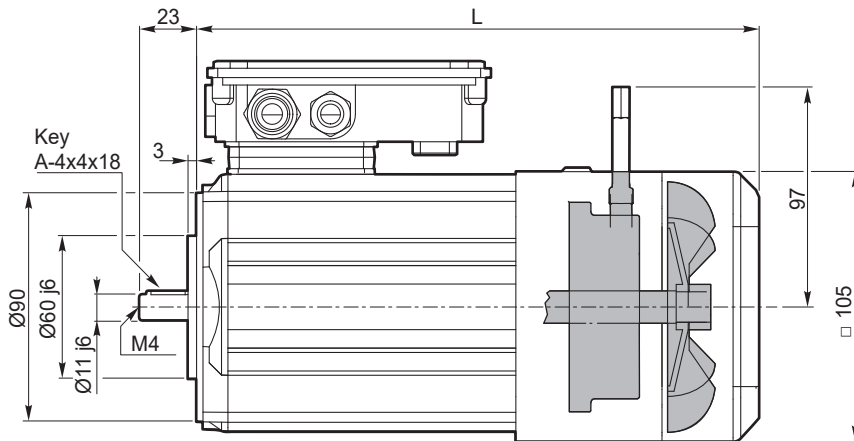


Dimensioni motori trifase

Three phase motors dimensions

3~

**SMT63.. - B14 - TEFC - BR (L)**



**Nota:**

La leva di sblocco è una opzione che va specificata in fase di ordine.

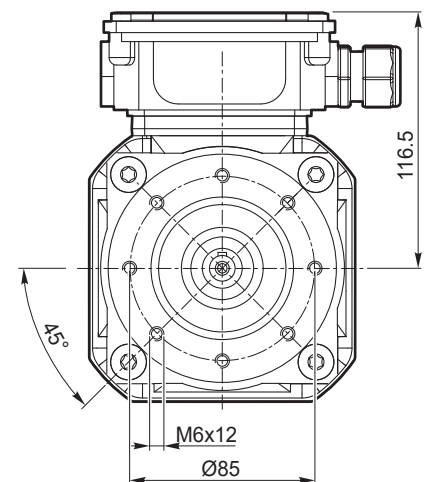
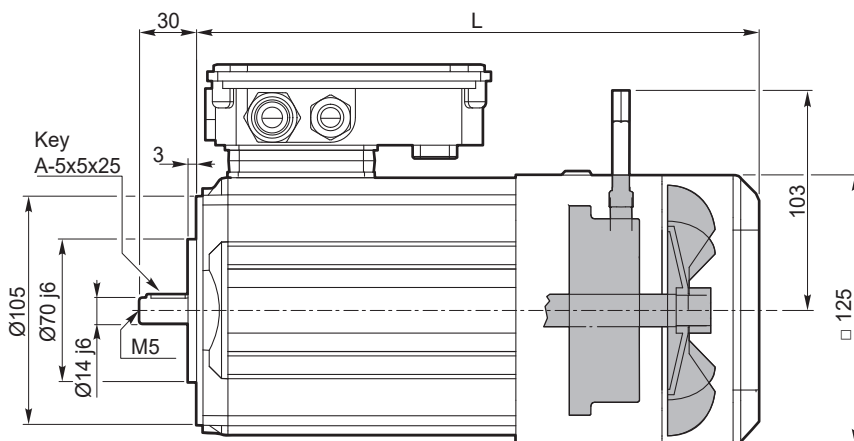
**Note:**

The release lever is an option that must be requested when ordering.

SMT..BR	... TEFC	
	L	Kg
6324	211	5.8
6334	226	6.5

3~

**SMT71.. - B14 - TEFC - BR (L)**



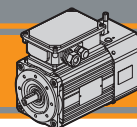
**Nota:**

La leva di sblocco è una opzione che va specificata in fase di ordine.

**Note:**

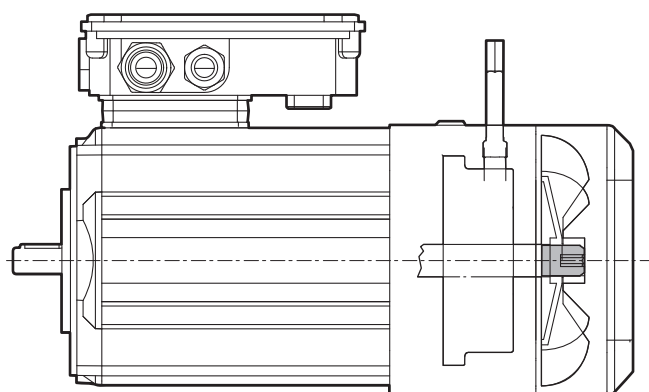
The release lever is an option that must be requested when ordering.

SMT..BR	... TEFC	
	L	Kg
7124	221	7.8
7134	236	8.9



**Cava esagonale**

**Hexagonal socket**



Esagono / Hexagon

SM..	E
63	4
71	6

**Nota:**

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omnipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

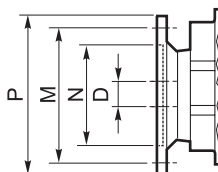
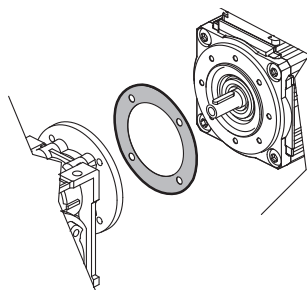
**Note:**

An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.

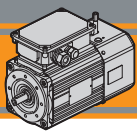
The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.

**Opzione guarnizione CA**

**Rubber gasket option**



Dimensioni IEC / IEC Dimensions		
	63 B14	71 B14
N	60	70
M	75	85
P	90	105
D	11	14



**Grado di protezione IP**

**IP protection rating**

Indica il grado di isolamento meccanico del corpo motore.















1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

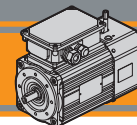
2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

The 1<sup>st</sup> figure indicates the level of protection against the intrusion of solid matter.

The 2<sup>nd</sup> figure indicates to which degree the motor is waterproof.

IP		Definizione / Description	IP		Definizione / Description
0		Non protetto / No protection	0		Non protetto / No protection
1		Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matter (over Ø 50 mm).</i>	1		Protetto contro la caduta verticale di gocce d'acqua. <i>Protected against drops of water falling vertically.</i>
2		Protetto da corpi solidi superiori a Ø 12 mm. <i>Protected against solid matter (over Ø 12 mm).</i>	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. <i>Protected against drops of water falling up to 15°.</i>
3		Protetto da corpi solidi superiori a Ø 2.5 mm. <i>Protected against solid matter (over Ø 2.5 mm).</i>	3		Protetto contro la pioggia. <i>Rain proof.</i>
4		Protetto da corpi solidi superiori a Ø1 mm. <i>Protected against solid matter (over Ø1 mm).</i>	4		Protetto contro gli spruzzi. <i>Splash proof.</i>
5		Protetto contro la polvere. <i>Dust protected.</i>	5		Protetto contro getti d'acqua. <i>Water jet proof.</i>
6		Totalmente protetto contro la polvere. <i>Fully dust tight.</i>	6		Protetto dalle ondate. <i>Waveproof.</i>
7	N.A.	N.A.	7		Protetto contro immersione. <i>Immersion up to 1 metre.</i>
8	N.A.	N.A.	8		Protetto contro immersione/sommersione prolungata. <i>Immersion beyond 1 metre.</i>



**Tipi di servizi IEC**

**IEC duty cycles**

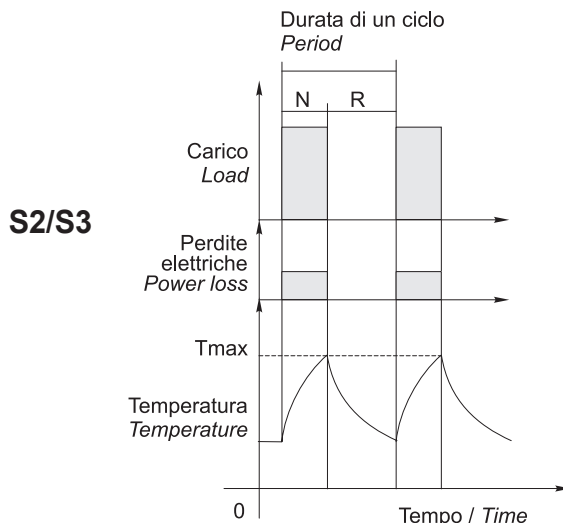
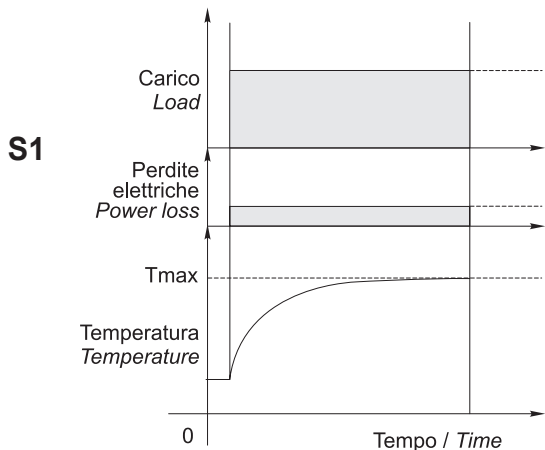
Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

Most common duty cycles diagram

N = funzionamento / run  
R = riposo / rest



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

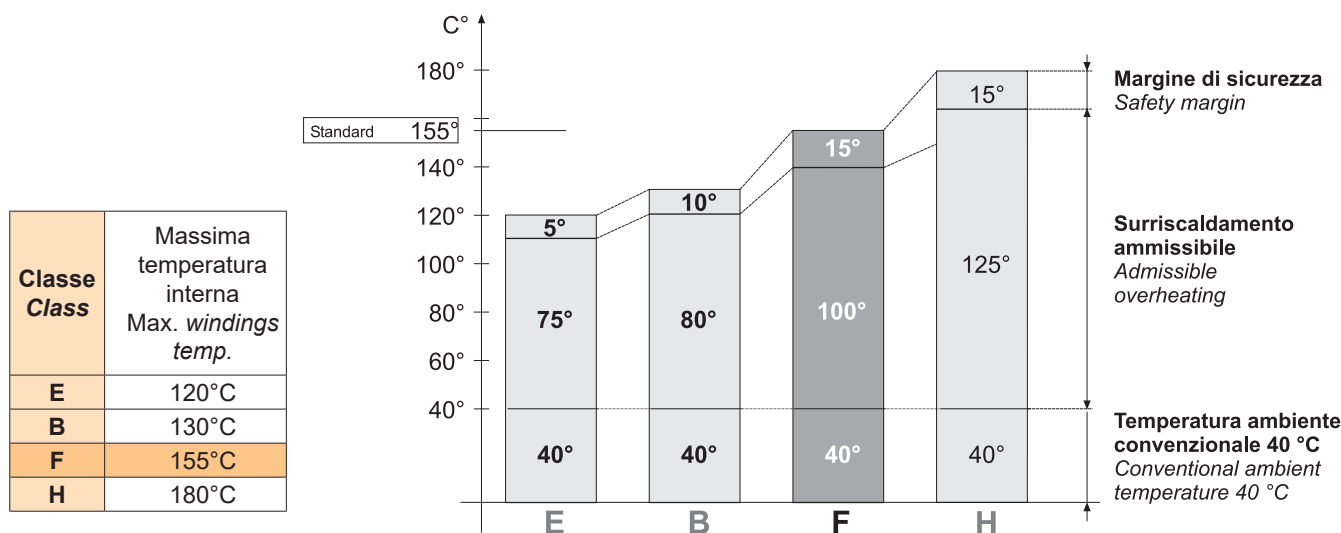
NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

**Classe di isolamento termico**

**Insulation class**

La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti). Isolamento termico classe F.

Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings). Thermal insulation class F.

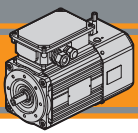


**Tabella pressacavi**

**Table of cable glands data**

Serie SM..BR / SM..BR Series

TAGLIA SIZE	Pressacavo Cable gland
63 / 71	1x M20x1.5

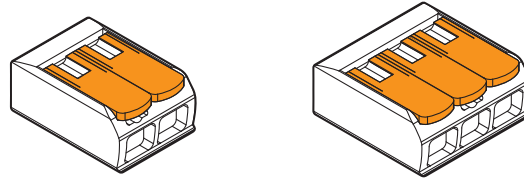


**Connessioni e collegamenti**

**Connection diagram**

**Riferimenti**

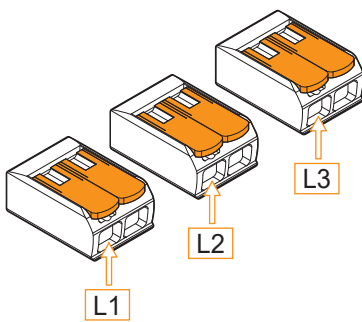
**References**



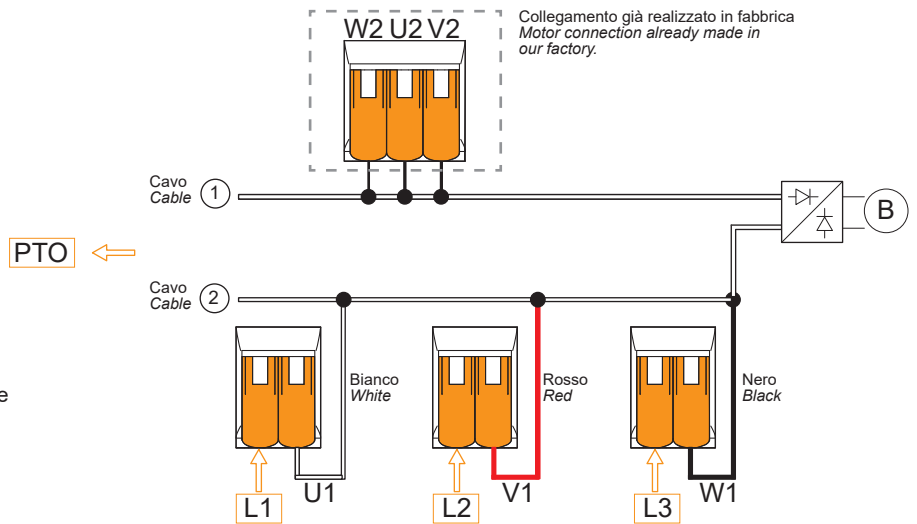
Morsetto di collegamento a leva a 2 e 3 poli  
Splicing connector with lever 2 - and 3 - pin.

**400/460 V - Trifase / three phase**

**Collegamento a stella / Star connection**

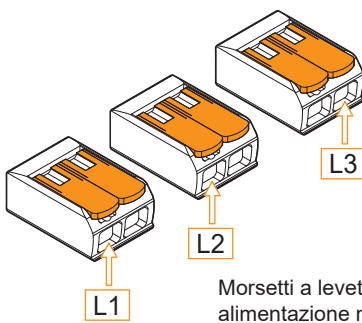


Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source

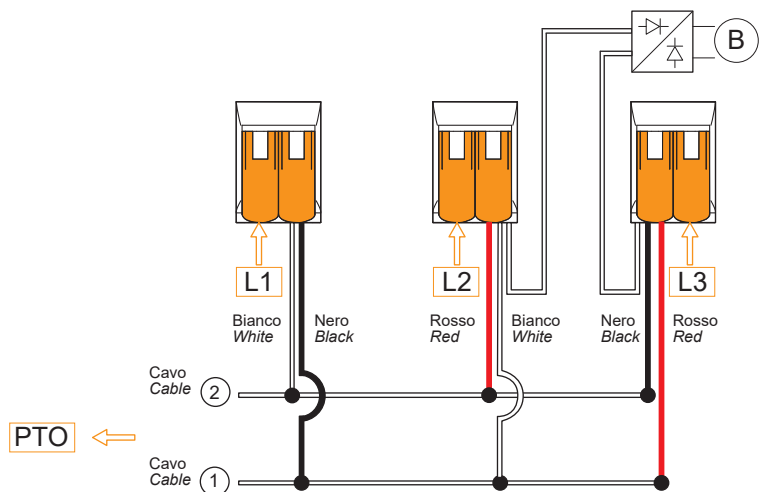


**230 V - Trifase / three phase**

**Collegamento a triangolo / Delta connection**



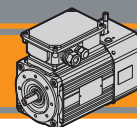
Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source



I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

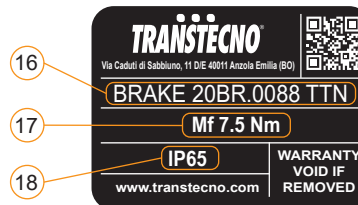
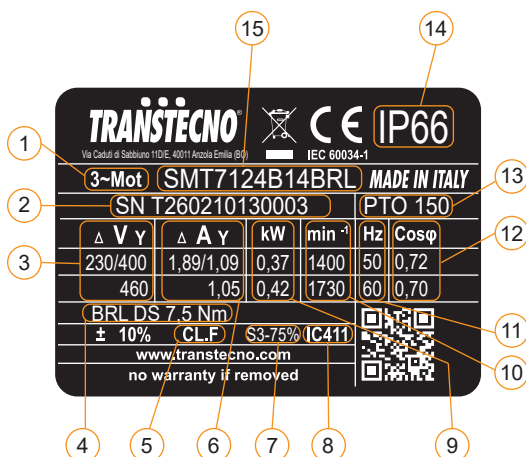
The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.



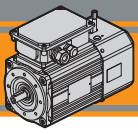


Targhetta

Nameplate



Pos.	Descrizione	Description
1	Tipo di alimentazione	Power supply
2	Numero di serie	Serial number
3	Tensione di alimentazione	Supply voltage
4	Tipo freno	Brake type
5	Classe di isolamento	Insulation class
6	Corrente nominale	Rated current
7	Servizio	Duty
8	Ventilazione	Fan cooling
9	Potenza nominale	Rated power
10	Velocità nominale	Rated speed
11	Frequenza nominale	Rated frequency
12	Fattore di potenza	Power factor
13	Protezione termica PTO 150°C	PTO 150°C Thermal protection
14	Grado di protezione IP motore	Motor IP protection rating
15	Tipo motore	Motor type
16	Codice freno	Brake code
17	Coppia frenante	Braking torque
18	Grado di protezione IP freno	Brake IP protection rating



# Note / Notes

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**MINI**  **TECNO**™  
**small** but strong

**SM..SV**



AC

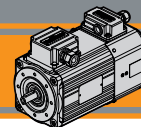
Motori elettrici CA servoventilati  
AC electric motors with forced-ventilation



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



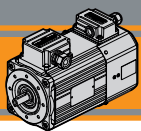




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Designazione	<i>Classification</i>	<b>AC2</b>
Simbologia e formule	<i>Symbols and formulas</i>	<b>AC3</b>
Dati tecnici	<i>Technical data</i>	<b>AC3</b>
Dimensioni motori trifase	<i>Three phase motors dimensions</i>	<b>AC4</b>
Opzione guarnizione CA	<i>Rubber gasket option</i>	<b>AC5</b>
Gradi di protezione IP	<i>IP protection rating</i>	<b>AC5</b>
Tipo di servizio IEC	<i>IEC duty cycles</i>	<b>AC6</b>
Classe di isolamento termico	<i>Insulation class</i>	<b>AC6</b>
Serie SM - Funzionamento a 60 Hz	<i>Series SM - 60 Hz line power supply</i>	<b>AC7</b>
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Connessioni e collegamenti - Motore	<i>Connection diagram - Motor</i>	<b>AC7</b>
Connessioni e collegamenti - Servoventola	<i>Connection diagram - Servo fan</i>	<b>AC9</b>
Targhetta	<i>Nameplate</i>	<b>AC10</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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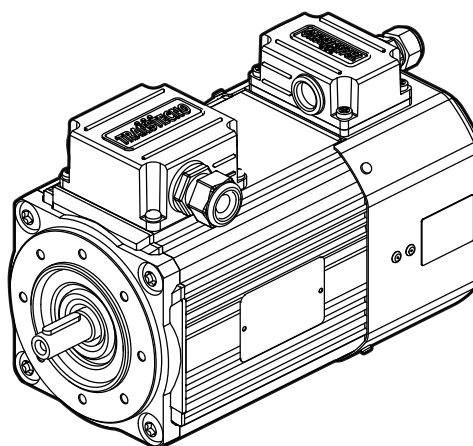
**Caratteristiche tecniche**

**Technical characteristics**

I motori delle serie SMT..SV hanno le seguenti caratteristiche principali:

SMT..SV motor range has the following main features:



- Costruzione compatta
  - Motorizzazioni in corrente alternata trifase
  - Carcasa estrusa in alluminio anodizzato nero
  - Motore elettrico AC con grado di protezione IP 66 (solo motore - servoventola con grado di protezione IP44)
  - Rumorosità e vibrazioni contenute
  - Isolamento termico di classe F
  - Flangia motore IEC B14
  - Temperatura ambiente: 0°C / + 40°C (Per utilizzo a temperature diverse contattare il ns. servizio tecnico)
  - Protezioni termiche PTO 150°C
  - Adatti al funzionamento con alimentazione da inverter
  - La tolleranza di tensione è ±10% per tutti i motori
- Compact design
  - AC three phase motors available
  - Black anodized extruded aluminium housing
  - AC Electric motors with IP66 Protection standard (only motor - Servo fan with IP44 protection Standard)
  - Low noise and vibrations
  - Class F insulation Standard
  - Motor flange IEC B14
  - Ambient temperature: 0°C / +40°C (For different temperatures contact Transtecno Technical Dept)
  - PTO 150°C thermal protection
  - Suitable for running with frequency converter
  - The voltage tolerance is ±10% for all motors

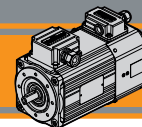


**SMT..SV**

**Designazione**

**Classification**

MOTORE TRIFASE SERVOVENTILATO / THREE PHASE MOTOR WITH FORCED-VENTIATION								
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	SV
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling
SMT	Vedi tabelle See tables	1-2-3-4-5	4	0.18 kW ... 0.75 kW	B14	230-400 V  460V a richiesta on request	50Hz  60Hz	SV
								
								



**Simbologia e formule**

**Symbols and formulas**

$P_n$	[kW]	Potenza nominale	Rated power
$I_n$	[A]	Corrente nominale (a 400V)	Rated current (at 400V)
$M_n$	[Nm]	Coppia nominale	Rated torque
$n_n$	[rpm]	Velocità nominale	Rated speed
$M_s / M_n$		Rapporto coppia spunto / coppia nominale	Ratio start torque / rated torque
$M_k / M_n$		Rapporto coppia massima / coppia nominale	Ratio max torque / rated torque
$I_s / I_n$		Rapporto corrente di spunto / corrente nominale	Ratio start current / rated current
$\cos\phi$		Fattore di potenza al carico nominale	Power factor at rated torque load
$\eta$		Rendimento al carico nominale	Efficiency at rated torque load
$P_{sf}$	[W]	Potenza assorbita servoventola	Electric fan power
Potenza Power	[HP]	Potenza [kW] x 1.341	Power [kW] x 1.341
Potenza resa $P_n$ $P_n$ output power	[kW]	Potenza assorbita x $\eta$	Absorbed power x $\eta$
Pot. assorbita Absorbed power	[kW]	$\frac{\sqrt{x} \cdot I \cdot \cos\phi}{1000}$ (monofase)	$\frac{\sqrt{x} \cdot I \cdot \cos\phi}{1000}$ (singlephase)
		$\frac{\sqrt{x} \cdot I \cdot \sqrt{3} \cdot \cos\phi}{1000}$ (trifase)	$\frac{\sqrt{x} \cdot I \cdot \sqrt{3} \cdot \cos\phi}{1000}$ (threephase)
$I_n$ (230 V)		$I_n$ (400 V) x $\sqrt{3}$	$I_n$ (400 V) x $\sqrt{3}$

**Dati tecnici**

**Technical data**

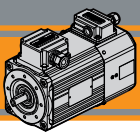
**SMT..SV Motori trifase servoventilati / SMT..SV Three phase motors with forced-ventilation** (230-400 V / 50 Hz) poli / poles **4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	$I_n$ (400V) [A]	$\eta$ %	$\cos\phi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	PTO [°C]	Servizio Duty SV	IP Motore Motor	IP Servoventola Foced vent.	$P_{sf}$ [W]
SMT6324B14.SV	0.18	1.26	1360	0.69	57.0	0.66	2.50	2.90	2.50	PTO 150°	S3 75%	66	44	11-9
SMT6334B14.SV	0.25	1.74	1375	0.94	62.0	0.64	2.80	3.00	2.80				44	11-9
SMT6344B14.SV	0.37	2.60	1360	1.24	65.3	0.66	2.70	3.00	2.70				44	11-9
SMT7124B14.SV	0.37	2.52	1400	1.10	67.9	0.72	2.75	4.20	2.75				44	14-16
SMT7134B14.SV	0.55	3.76	1395	1.55	70.2	0.73	2.90	4.40	2.90				44	14-16
SMT7144B14.SV	0.75	5.09	1405	2.00	74.0	0.73	2.90	5.00	2.90				44	14-16

Alimentazione della servoventola: 200-240 Vac / 50-60 Hz

Forced ventilation supply voltage: 200-240 Vac / 50-60 Hz



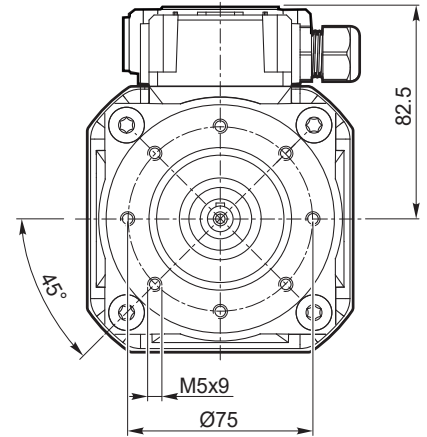
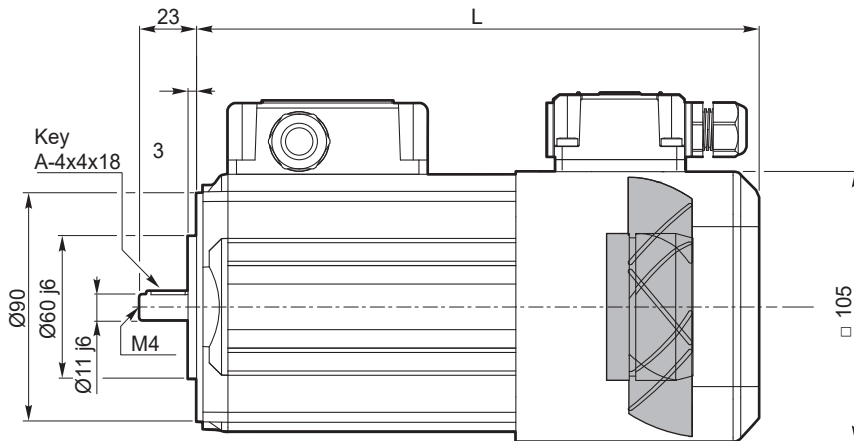


Dimensioni motori trifase

Three phase motors dimensions

3 ~

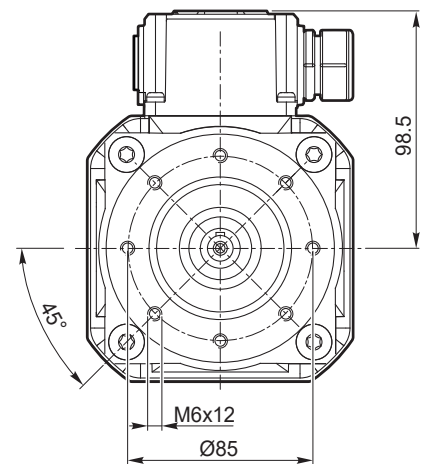
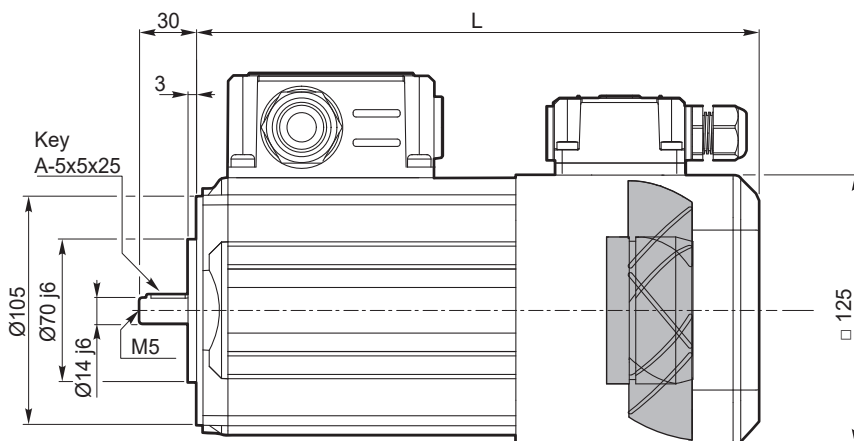
**SMT63.. - B14 - SV**



SMT	... SV	
	L	Kg
6324	210	5.0
6334	225	5.7
6344	250	6.8

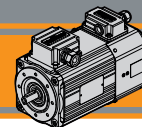
3 ~

**SMT71.. - B14 - SV**



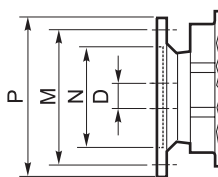
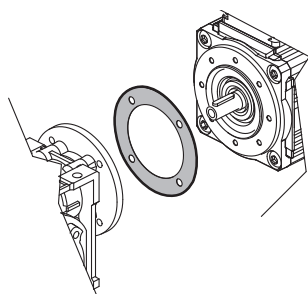
SMT	... SV	
	L	Kg
7124	219	7.5
7134	234	8.5
7144	259	10.2





Opzione guarnizione CA

Rubber gasket option



Dimensioni IEC / IEC Dimensions		
	63 B14	71 B14
N	60	70
M	75	85
P	90	105
D	11	14

Grado di protezione IP

IP protection rating

Indica il grado di isolamento meccanico del corpo motore.

IP protection rating indicates the degree of mechanical insulation of the motor casing.

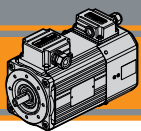
1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

The 1<sup>st</sup> figure indicates the level of protection against the intrusion of solid matter.

2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

The 2<sup>nd</sup> figure indicates to which degree the motor is waterproof.

IP		Definizione / Description	IP		Definizione / Description
0		Non protetto / No protection	0		Non protetto / No protection
1		Protetto da corpi solidi superiori a Ø 50 mm. Protected against solid matter (over Ø 50 mm).	1		Protetto contro la caduta verticale di gocce d'acqua. Protected against drops of water falling vertically.
2		Protetto da corpi solidi superiori a Ø 12 mm. Protected against solid matter (over Ø 12 mm).	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. Protected against drops of water falling up to 15°.
3		Protetto da corpi solidi superiori a Ø 2.5 mm. Protected against solid matter (over Ø 2.5 mm).	3		Protetto contro la pioggia. Rain proof.
4		Protetto da corpi solidi superiori a Ø 1 mm. Protected against solid matter (over Ø 1 mm).	4		Protetto contro gli spruzzi. Splash proof.
5		Protetto contro la polvere. Dust protected.	5		Protetto contro getti d'acqua. Water jet proof.
6		Totalmente protetto contro la polvere. Fully dust tight.	6		Protetto dalle ondate. Waveproof.
7		N.A.	7		Protetto contro immersione. Immersion up to 1 metre.
8		N.A.	8		Protetto contro immersione/sommersione prolungata. Immersion beyond 1 metre.



**Tipi di servizi IEC**

**IEC duty cycles**

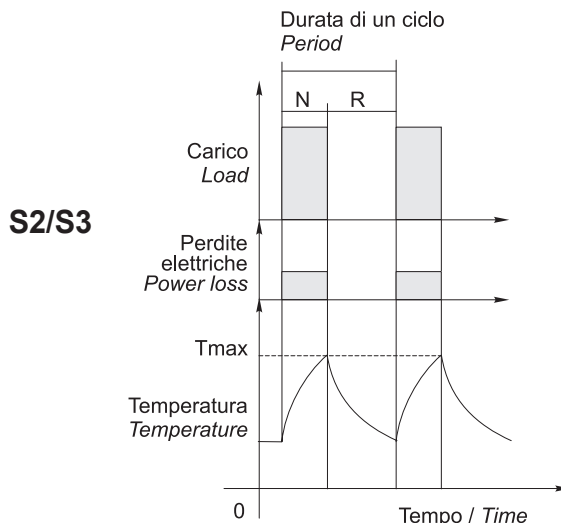
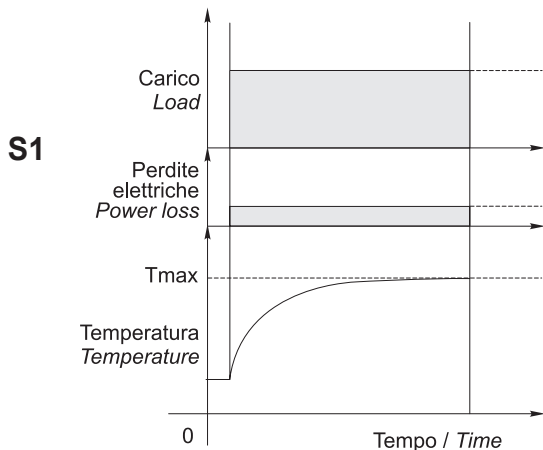
Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

Most common duty cycles diagram

N = funzionamento / run  
R = riposo / rest



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

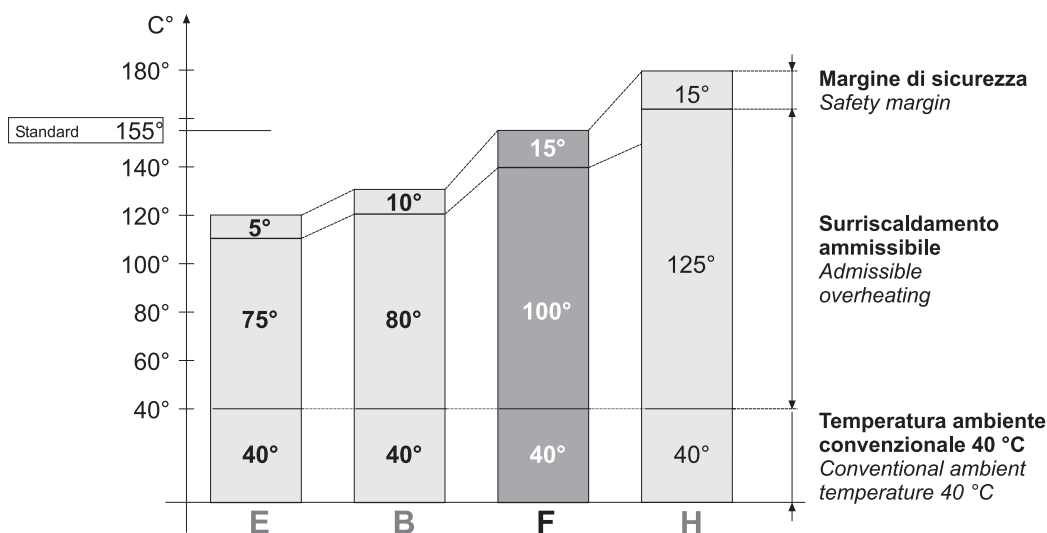
**Classe di isolamento termico**

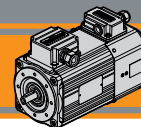
**Insulation class**

La classe termica indica il grado di resistenza alla temperatura interna, nel punto più caldo (avvolgimenti). Isolamento termico classe F.

Thermal insulation class indicates the level of thermal protection measured at the hottest point inside the motor (windings). Thermal insulation class F.

Classe Class	Massima temperatura interna Max. windings temp.
E	120°C
B	130°C
F	155°C
H	180°C






**Serie SM - Funzionamento a 60 Hz**

**Series SM - 60 Hz line power supply**

Velocità, coppia e potenza nominale nel funzionamento a 60 Hz varieranno come da tabella:

Speed, torque and rated power in 60 Hz operation is shown in the following table:

	50 Hz	60 Hz
<b>400 V</b>	Vedi dati tecnici / see technical data 	Velocità / speed ≈ + 20% Coppia / torque ≈ -20% Potenza / power ≈ invariata / the same
<b>480 V</b>	Non permesso / not allowed	Velocità / speed ≈ + 20% Coppia / torque ≈ invariata / the same Potenza / power ≈ + 20%

AC

**Tabella pressacavi**

**Table of cable glands data**

**Serie SM..BR / SM..BR Series**

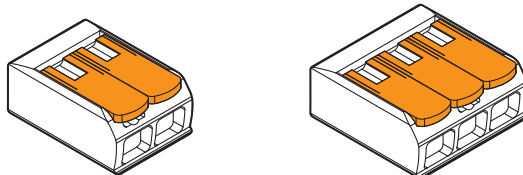
TAGLIA SIZE	Pressacavo Cable gland
63 / 71	1x M20x1.5

**Connessioni e collegamenti - Motore**

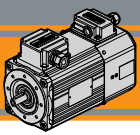
**Connection diagram - Motor**

Riferimenti

References



Morsetto di collegamento a leva a 2 e 3 poli  
Splicing connector with lever 2 - and 3 - pin.

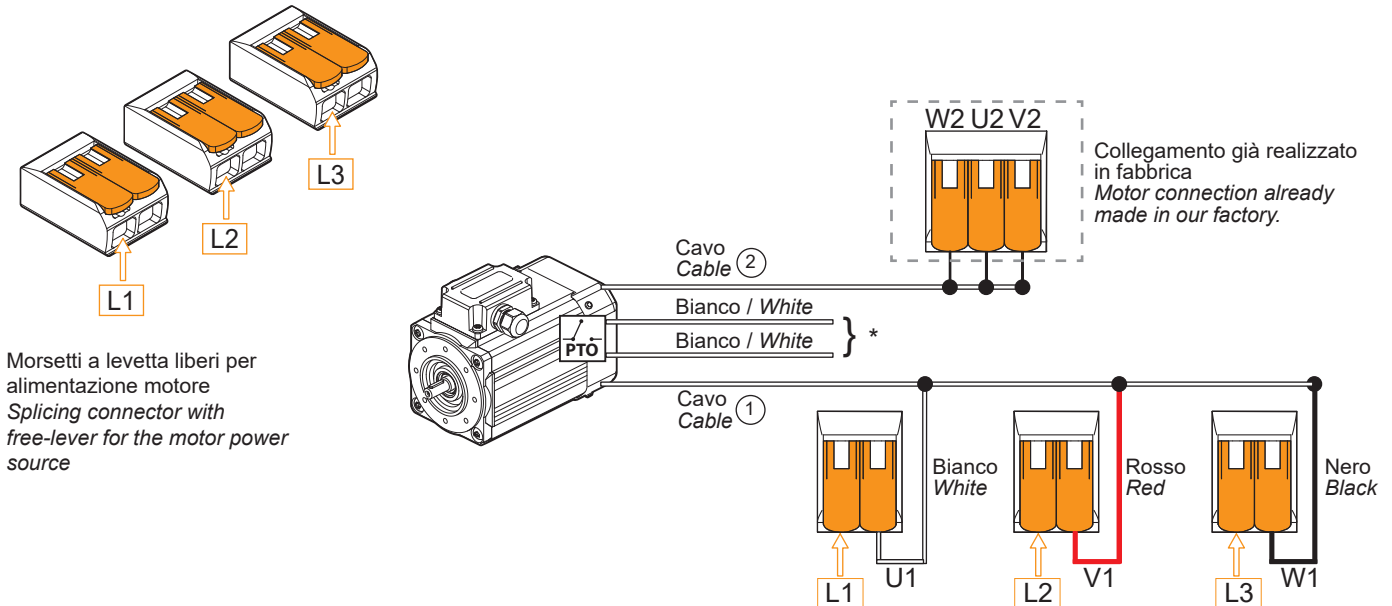


**Connessioni e collegamenti - Motore**

**Connection diagram - Motor**

**400/460 V - Trifase / three phase**

**Collegamento a stella / Star connection**

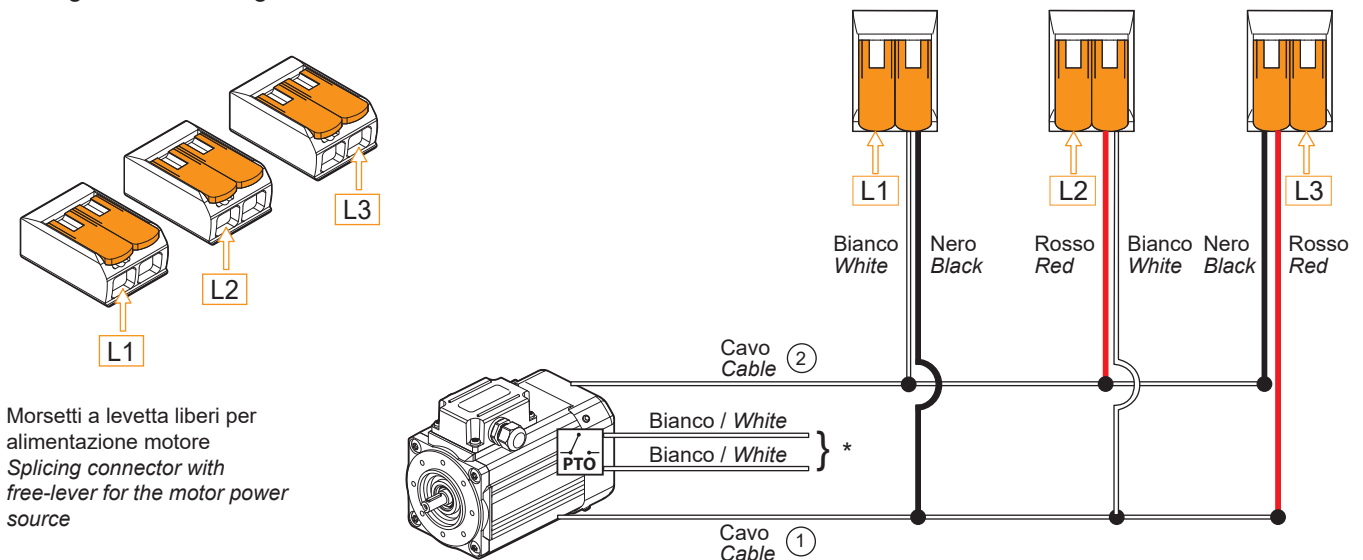


\*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71, 80, 90.

\*: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71, 80, 90.

**230 V - Trifase / three phase**

**Collegamento a triangolo / Delta connection**

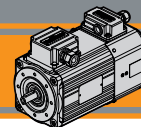


\*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno. PTO disponibile per taglie 56, 63, 71, 80, 90.

\*: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service. PTO is available for sizes 56, 63, 71, 80, 90.

I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Se necessario contattare il Servizio Tecnico Transtecno.

*The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.*

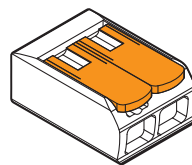
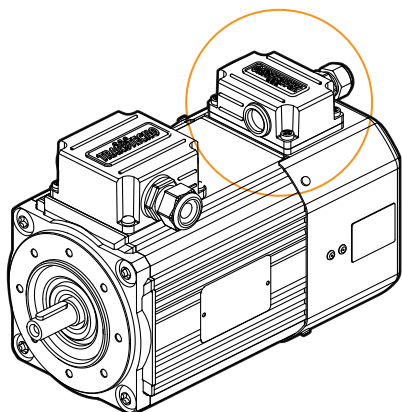


**Connessioni e collegamenti - Servoventola**

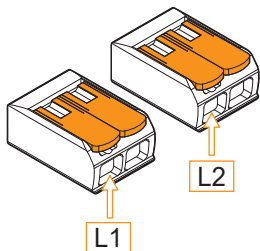
**Connection diagram - Servo fan**

Riferimenti

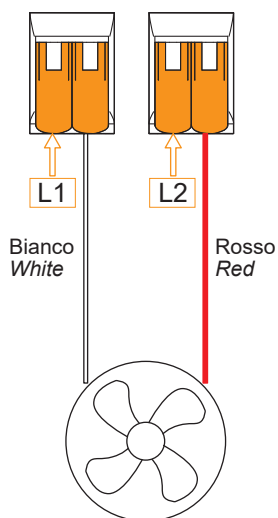
References

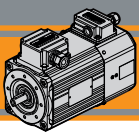


Morsetto di collegamento a leva a 2 poli  
Splicing connector with lever 2 pin.



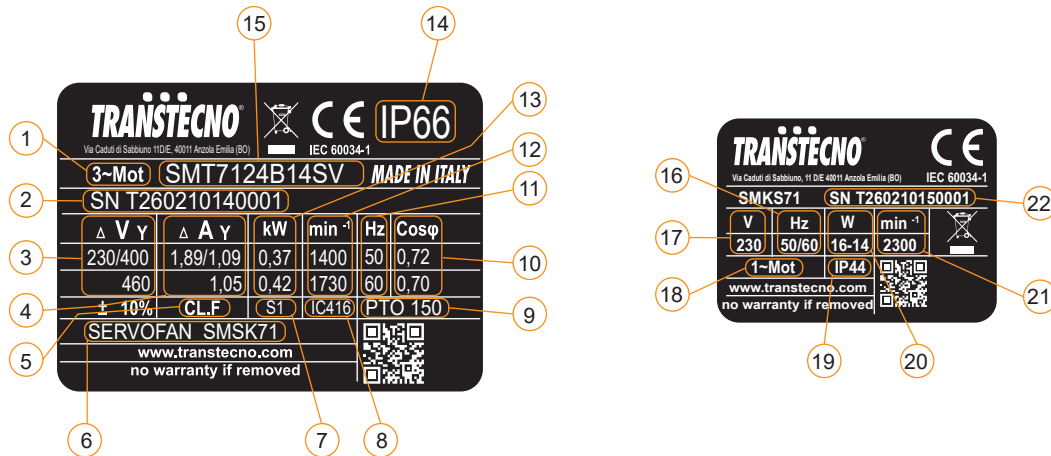
Morsetti a levetta liberi per alimentazione servoventola  
Splicing connector with free-lever for the electric fan





**Targhetta**

**Nameplate**



Pos.	Descrizione	Description
1	Tipo di alimentazione	Power supply
2	Numero di serie	Serial number
3	Tensione di alimentazione	Supply voltage
4	Corrente nominale	Rated current
5	Classe di isolamento	Insulation class
6	Tipo servoventola	Servo fan type
7	Servizio	Duty
8	Ventilazione	Fan cooling
9	Protezione termica PTO 150°C	PTO 150°C Thermal protection
10	Fattore di potenza	Power factor
11	Frequenza nominale	Rated frequency
12	Velocità nominale	Rated speed
13	Potenza nominale	Rated power
14	Grado di protezione IP motore	Motor IP protection rating
15	Tipo motore	Motor type
16	Frequenza kit servoventola	Servo fan kit frequency
17	Tensione kit servoventola	Servo fan kit voltage
18	Tipo di alimentazione kit servoventola	Servo fan kit power supply
19	Grado di protezione kit servoventola	Servo fan kit IP protection rating
20	Potenza kit servoventola	Servo fan kit power
21	Velocità kit servoventola	Servo fan kit speed
22	Numero di serie kit servoventola	Servo fan kit serial number



**MINI**  **TECNO**™  
**small** but strong

**SM..UL/CSA**



Motori elettrici asincroni CA  
AC asynchronous electric motors

**C**  **US**  
File E511911



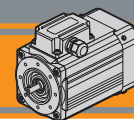
**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



AC



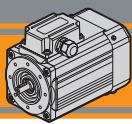




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Designazione	<i>Classification</i>	<b>AD2</b>
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Dimensioni motori monofase	<i>Single phase motors dimensions</i>	<b>AD7</b>
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Gradi di protezione IP	<i>IP protection rating</i>	<b>AD9</b>
Tipo di servizio IEC	<i>IEC duty cycles</i>	<b>AD10</b>
Tabella pressacavi	<i>Table of cable glands data</i>	<b>AD10</b>
Connessioni e collegamenti	<i>Connection diagram</i>	<b>AD11</b>
Targhetta	<i>Nameplate</i>	<b>AD13</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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**Caratteristiche tecniche**

**Technical characteristics**

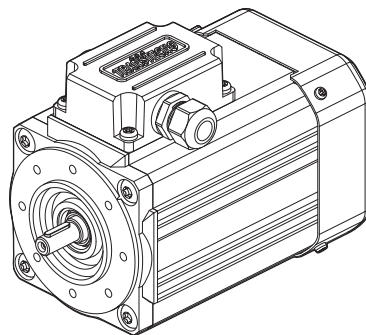
I motori certificati UL/CSA delle serie SMT ed SMM hanno le seguenti caratteristiche principali:

SMT and SMM motor range with UL/CSA Certification has the following main features:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa estrusa in alluminio anodizzato nero
- Motore elettrico AC con grado di protezione IP66 (escluso condensatore)
- Rumorosità e vibrazioni contenute
- Isolamento termico di classe F
- Flangia motore IEC B14
- Temperatura ambiente: -20°C/+40°C
- Disponibili nella versione ventilata TEFC (servizio S1).
- Protezione termica PTO 150°C
- Motori trifase SMT dotati di separatori di fase
- Cava esagonale su albero motore lato NDE
- Condensatore di marcia per motori monofase SMM
- La tolleranza di tensione è ±10%
- Standard applicati:  
UL1004-1: Rotating Electrical Machines General Requirements  
CSA:100-14: Motors and Generators

- Compact design
- AC single phase and three phase motors available
- Black anodized extruded aluminium housing
- AC electric motor in IP66 protection Standard (except capacitor)
- Low noise and vibrations
- Class F insulation Standard
- Motor flange IEC B14
- Ambient temperature: -20°C / +40°C
- Fan cooled TEFC (duty S1)
- PTO 150°C thermal protection
- Three phase motors SMT equipped with phase separators.
- Motor shaft hexagon socket on the NDE side.
- Running capacitor for single phase motors SMM.
- Voltage tolerance ±10%
- Standards applied:  
UL1004-1: Rotating Electrical Machines General Requirements  
CSA:100-14: Motors and Generators

**SM .. TEFC**





**UL** US  
File E511911

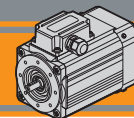


**Designazione**

**Classification**

MOTORE TRIFASE / THREE PHASE MOTOR									
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	UL-CSA
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Versione UL UL Version
<b>SMT</b>  <b>3 ~</b>	Vedi tabelle See tables	<b>2 - 3</b>	<b>4</b>	<b>0.09 kW</b> ... <b>0.66 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b>	<b>50Hz</b>  <b>60Hz</b>	<b>TEFC</b>	<b>UL-CSA</b>

MOTORE MONOFASE / SINGLE PHASE MOTOR									
SMM	63	2	4	0.18 kW	B14	115 V	60 Hz	TEFC	UL-CSA
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Versione UL UL Version
<b>SMM</b>  <b>1 ~</b>	Vedi tabelle See tables	<b>2 - 3</b>	<b>4</b>	<b>0.09 kW</b> ... <b>0.37 kW</b>	<b>B14</b>	<b>115V</b>	<b>60Hz</b>	<b>TEFC</b>	<b>UL-CSA</b>


**Simbologia e formule**
**Symbols and formulas**

$P_n$	[kW]	Potenza nominale	Rated power
$I_n$	[A]	Corrente nominale	Rated current
$M_n$	[Nm]	Coppia nominale	Rated torque
$n_n$	[rpm]	Velocità nominale	Rated speed
$M_s / M_n$		Rapporto coppia spunto / coppia nominale	Ratio start torque / rated torque
$M_k / M_n$		Rapporto coppia massima / coppia nominale	Ratio max torque / rated torque
$I_s / I_n$		Rapporto corrente di spunto / corrente nominale	Ratio start current / rated current
$\cos\varphi$		Fattore di potenza al carico nominale	Power factor at rated torque load
$\eta$		Rendimento al carico nominale	Efficiency at rated torque load
$f$	[Hz]	Frequenza	Frequency
$V$	[V]	Tensione	Voltage
Potenza Power	[HP]	Potenza [kW] x 1.341	Power [kW] x 1.341
Potenza resa $P_n$ $P_n$ output power	[kW]	Potenza assorbita x $\eta$	Absorbed power x $\eta$
Pot. assorbita Absorbed power	[kW]	$\frac{V \times I \times \cos\varphi}{1000}$ (monofase)	$\frac{V \times I \times \cos\varphi}{1000}$ (singlephase)
		$\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (trifase)	$\frac{V \times I \times \sqrt{3} \times \cos\varphi}{1000}$ (threephase)
$I_n$ (230 V)		$I_n$ (400 V) x $\sqrt{3}$	$I_n$ (400 V) x $\sqrt{3}$

**Dati tecnici**
**Technical data**
**SMT Motori trifase / SMT Three phase motors**

 (230-400 V / 50 Hz) poli / poles **4**

 (460 V / 60 Hz) poli / poles **4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	V - f [V - Hz]	$I_n$ (400-460 V) [A]	$\eta$ %	$\cos\varphi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	PTO [°C]	Servizio Duty TEFC
5624	0.09	0.63	1365	400 - 50	0.45	47.3	0.61	2.50	2.40	2.70	PTO 150°	S1
	0.11		1660	460 - 60		50.3		2.60	2.60			
5634	0.12	0.88	1300	400 - 50	0.45	52.0	0.74	1.90	2.40	1.90		
	0.14	0.83	1600	460 - 60	0.42	59.0	0.71	2.10	2.70	2.10		
6324	0.18	1.26	1360	400 - 50	0.69	57.0	0.66	2.50	2.90	2.50		
	0.22	1.27	1650	460 - 60		59.7	0.67		3.00			
6334	0.25	1.74	1375	400 - 50	0.94	62.0	0.64	2.80	3.00	2.80		
	0.28	1.59	1690	460 - 60		61.3	0.61	3.00	3.20	3.00		
7124	0.37	2.52	1400	400 - 50	1.09	68.0	0.72	2.75	4.20	2.75		
	0.42	2.35	1700	460 - 60		68.1	0.71	2.90	4.50	2.90		
7134	0.55	3.76	1395	400 - 50	1.55	70.2	0.73	2.90	4.40	2.90		
	0.66	3.71	1700	460 - 60		73.2			4.80	2.80		

**SMM Motori monofase / SMM Single phase motors**

 (115 V / 60 Hz) poli / poles **4**

TAGLIA SIZE	$P_n$ [kW]	$M_n$ [Nm]	$n_n$ [min <sup>-1</sup> ]	V - f [V - Hz]	$I_n$ (115V) [A]	$\eta$ %	$\cos\varphi$	$M_s/M_n$	$I_s/I_n$	$M_k/M_n$	Cond/cap [μF]	PTO [°C]	Servizio Duty TEFC
5624	0.09	0.52	1665	115 - 60	1.60	50.0	0.98	0.64	1.95	1.51	20	PTO 150°	S1
6324	0.18	1.09	1570	115 - 60	2.70	58.5	0.99	1.0	2.1	1.50	40		
7124	0.37	2.18	1620	115 - 60	4.70	69.8	0.98	0.64	2.3	1.33	60		

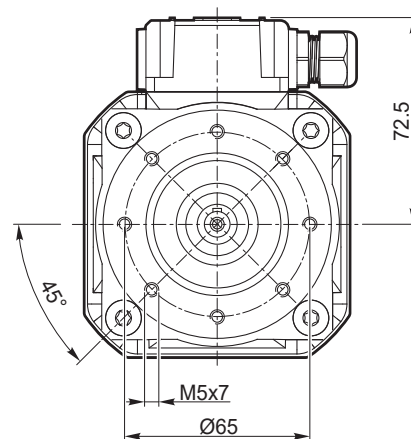
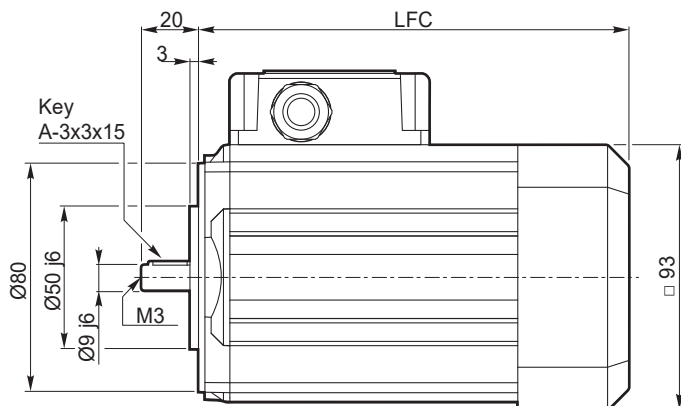


Dimensioni motori trifase

Three phase motors dimensions

3~

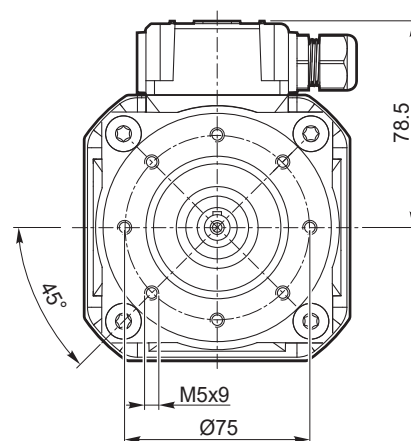
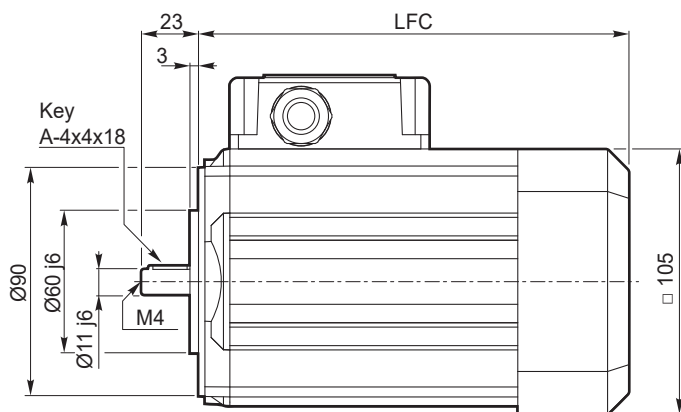
**SMT56.. - B14 - TEFC**



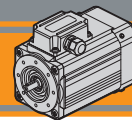
SMT	... TEFC	
	LFC	Kg
5624	186	3.1
5634	186	3.5

3~

**SMT63.. - B14 - TEFC**



SMT	... TEFC	
	LFC	Kg
6324	205.5	4.7
6334	205.5	5.4

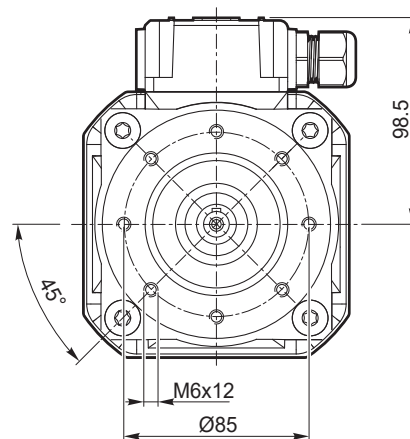
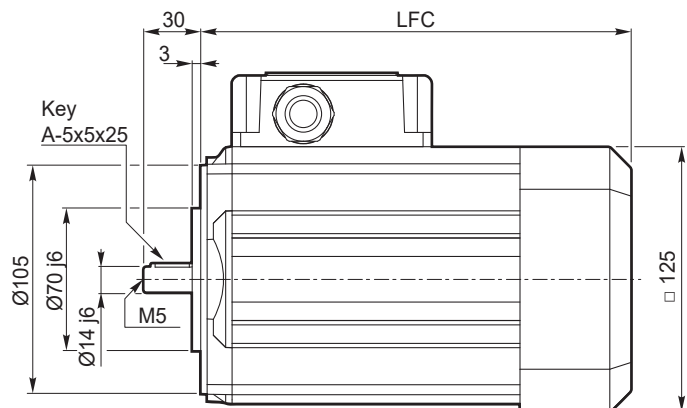



Dimensioni motori trifase

Three phase motors dimensions

3 ~

SMT71.. - B14 - TEFC



SMT	... TEFC	
	LFC	 Kg
7124	214	7.0
7134	214	8.2

AC

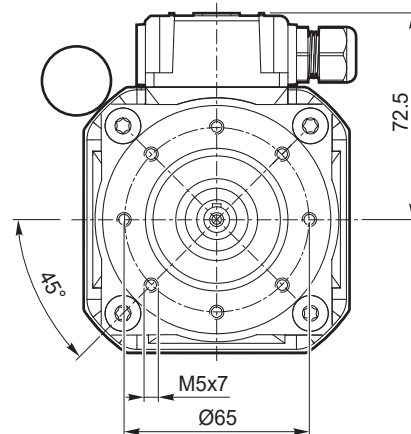
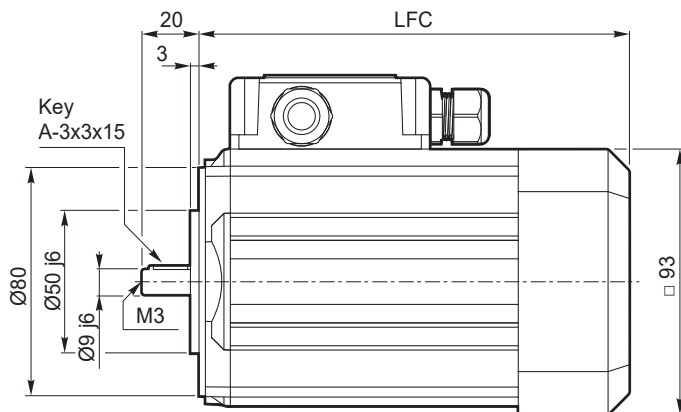


Dimensioni motori monofase

Single phase motors dimensions

1 ~

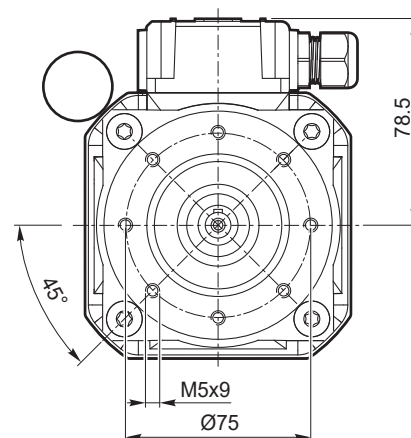
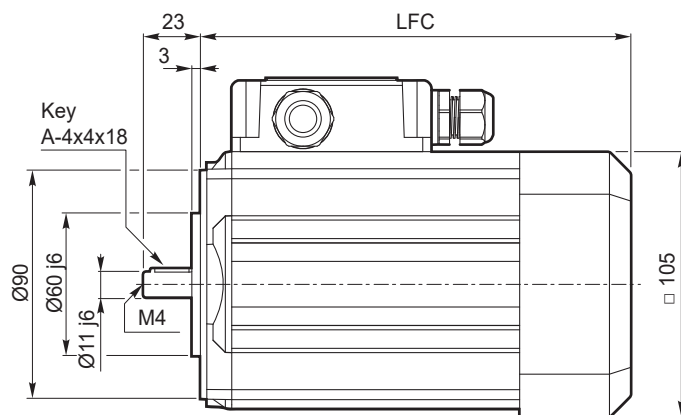
**SMM56.. - B14 - TEFC**



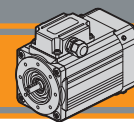
SMM	... TEFC	
	LFC	Kg
5624	186	3.6

1 ~

**SMM63.. - B14 - TEFC**



SMM	... TEFC	
	LFC	Kg
6324	205.5	5.5

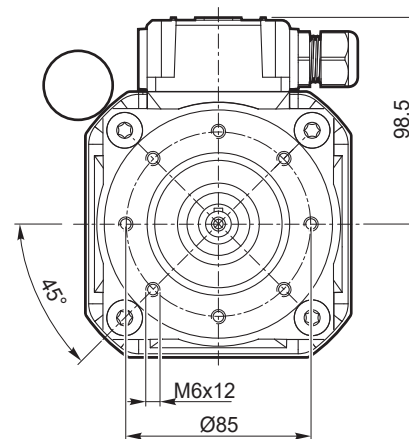
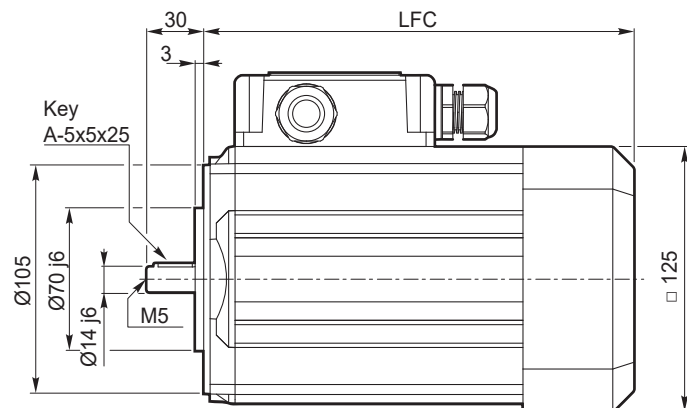


Dimensioni motori monofase

Single phase motors dimensions

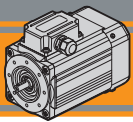
1 ~

**SMM71.. - B14 - TEFC**



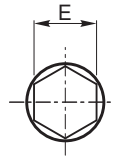
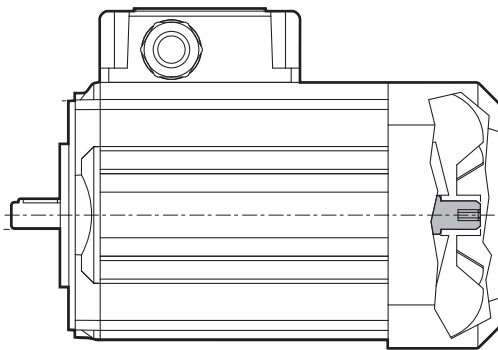
SMM	... TEFC	
	LFC	kg
7124	214	8.0

AC



**Cava esagonale**

**Hexagonal socket**



**Esagono / Hexagon**

SM..	E
56	4
63	4
71	6

**Nota:**

Installare a monte dell'alimentazione un dispositivo che assicuri la disconnessione della rete omipolare, durante le operazioni di rotazione manuale è obbligatorio l'utilizzo di tale sezionatore.

Il quadro elettrico del motore deve essere lucchettabile al fine di evitare il riarmo non previsto alla rete elettrica.

E' severamente vietata la messa in servizio del motore elettrico senza copriventola opportunamente montata.

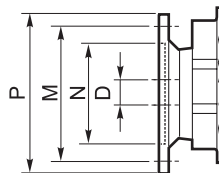
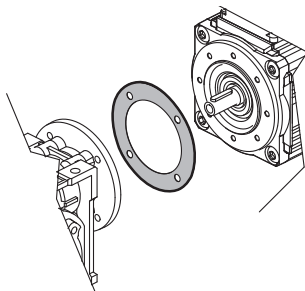
**Note:**

*An omnipolar cut-off device must be fitted upstream of the power supply; the use of this device is mandatory during manual rotation operations.*

*The switchgear for the motor must be padlockable in order to prevent the power supply from being accidentally reset. It is strictly prohibited to put the electric motor into service if the fan cover is not fitted.*

**Opzione guarnizione CA**

**Rubber gasket option**



**Dimensioni IEC / IEC Dimensions**

	56 B14	63 B14	71 B14
<b>N</b>	50	60	70
<b>M</b>	65	75	85
<b>P</b>	80	90	105
<b>D</b>	9	11	14

**Versioni opzionali**

**Optional versions**

Versioni opzionali con freno ed encoder disponibili a richiesta su alcuni modelli. Su richiesta sono disponibili grandezze motore superiori a quelle indicate a catalogo.

Si prega di contattare il nostro Servizio Tecnico.

*Optional versions with brake and encoder are available on request on some models. Motor sizes bigger than those indicated in the catalogue are available on request.*

*Please contact our Technical Service.*

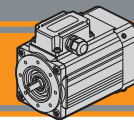
**Certificazione UL / CSA**

**UL / CSA certificate**

I motori SM certificati UL/CSA sono marcati secondo la Norma UL 1004-1, Rotating Electrical Machines General Requirements e CSA 100-14, Motors and Generators.

*SM motors Certified UL/CSA are marked for approval by UL 1004-1, Rotating Electrical Machines General Requirements and CSA 100-14, Motors and Generators.*




**Grado di protezione IP**

Indica il grado di isolamento meccanico del corpo motore.

 1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

 2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

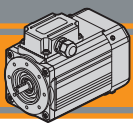
**IP protection rating**

IP protection rating indicates the degree of mechanical insulation of the motor casing.

 The 1<sup>st</sup> figure indicates the level of protection against the intrusion of solid matter.

 The 2<sup>nd</sup> figure indicates to which degree the motor is waterproof.

IP		Definizione / Description	IP		Definizione / Description
0		Non protetto / No protection	0		Non protetto / No protection
1		Protetto da corpi solidi superiori a Ø 50 mm. Protected against solid matter (over Ø 50 mm).	1		Protetto contro la caduta verticale di gocce d'acqua. Protected against drops of water falling vertically.
2		Protetto da corpi solidi superiori a Ø 12 mm. Protected against solid matter (over Ø 12 mm).	2		Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15°. Protected against drops of water falling up to 15°.
3		Protetto da corpi solidi superiori a Ø 2.5 mm. Protected against solid matter (over Ø 2.5 mm).	3		Protetto contro la pioggia. Rain proof.
4		Protetto da corpi solidi superiori a Ø 1 mm. Protected against solid matter (over Ø 1 mm).	4		Protetto contro gli spruzzi. Splash proof.
5		Protetto contro la polvere. Dust protected.	5		Protetto contro getti d'acqua. Water jet proof.
6		Totalmente protetto contro la polvere. Fully dust tight.	6		Protetto dalle ondate. Waveproof.
7		N.A.	7		Protetto contro immersione. Immersion up to 1 metre.
8		N.A.	8		Protetto contro immersione/sommersione prolungata. Immersion beyond 1 metre.



**Tipi di servizi IEC**

**IEC duty cycles**

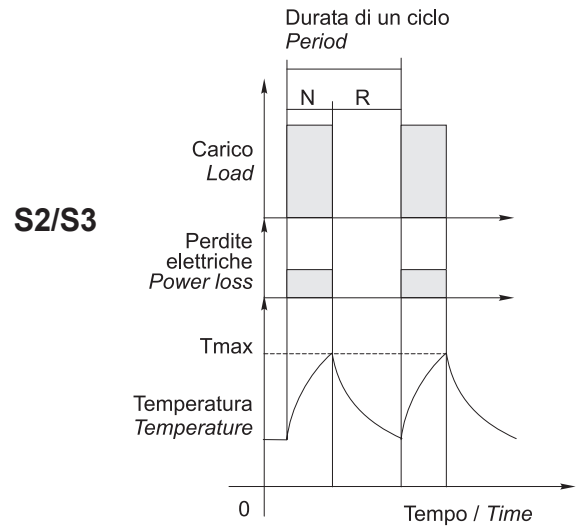
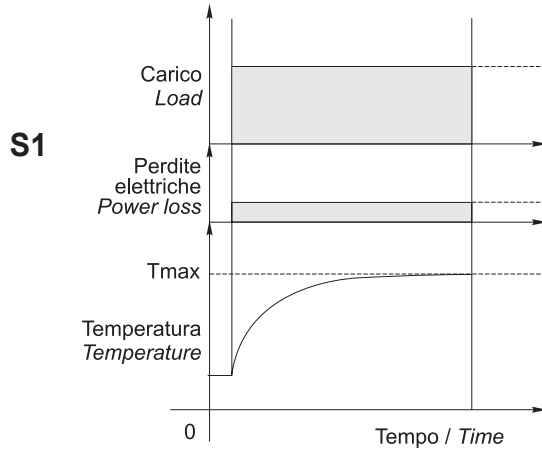
Il servizio di un motore indica il tipo di utilizzo e la gravosità del ciclo di lavoro.

The duty cycle of a motor indicates its use and running cycle.

Grafico servizi più comuni

Most common duty cycles diagram

N = funzionamento / run  
R = riposo / rest



NOTA: Lo stesso motore può essere usato per cicli e servizi diversi, con l'unica limitazione che la temperatura interna non superi mai la Tmax stabilita dalla classe di isolamento termico del motore.

NOTE: The same motor can run under all duty services, limitation is due to internal temperature that must not override Tmax stated by motor thermal class.

**Tabella pressacavi**

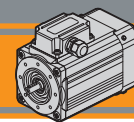
**Table of cable glands data**

**Serie SMT / SMT Series**

TAGLIA SIZE	Pressacavo Cable gland
56 / 63	M16x1.5
71	M20x1.5

**Serie SMM / SMM Series**

TAGLIA SIZE	Pressacavo Cable gland
56 / 63	2 x M16x1.5
71	1x M20x1.5 + 1 x M16x1.5

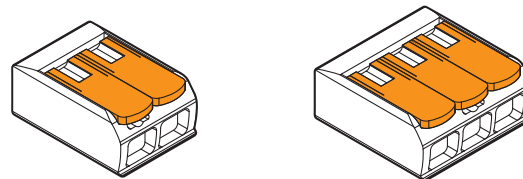
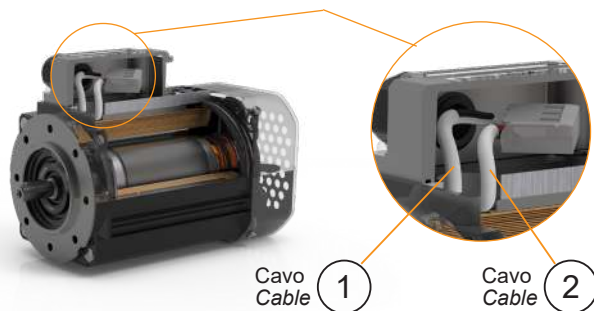


Connessioni e collegamenti

Connection diagram

Riferimenti

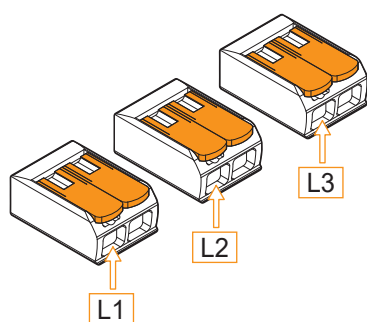
References



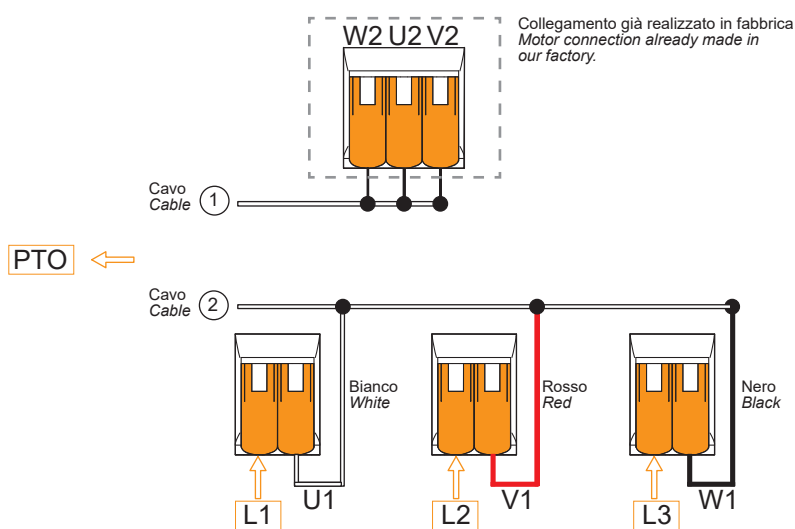
Morsetto di collegamento a leva a 2 e 3 poli  
Splicing connector with lever 2 - and 3 - pin.

400/460 V - Trifase / three phase

Collegamento a stella / Star connection

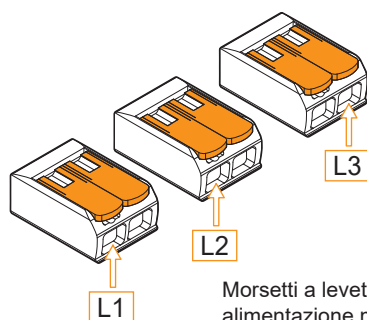


Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source



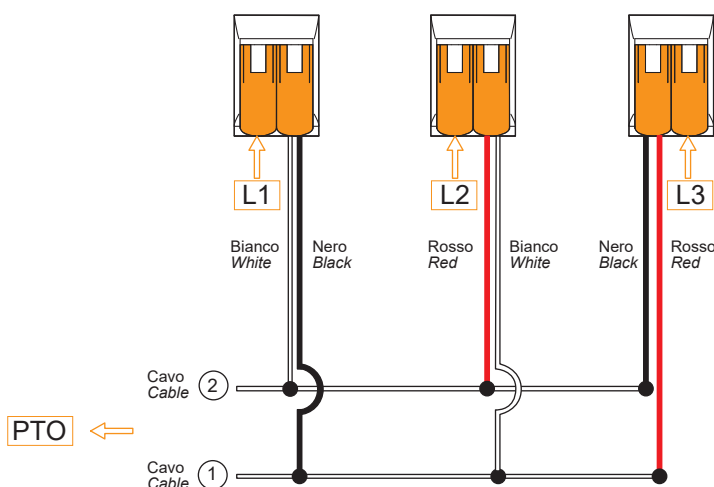
230 V - Trifase / three phase

Collegamento a triangolo / Delta connection



Morsetti a levetta liberi per alimentazione motore

Splicing connector with free-lever for the motor power source



I motori della serie SM sono forniti in collegamento a stella, lo schema di collegamento a triangolo sopra riportato fornisce una chiara indicazione delle modifiche che il cliente può apportare in autonomia. Senecessario contattare il Serziao Tecnico Transtecno.

The SM series is supplied in star connection, the delta connection diagram shown above provides a clear indication of the modification that the customer can make independently. If needed, contact Transtecno Technical Service.

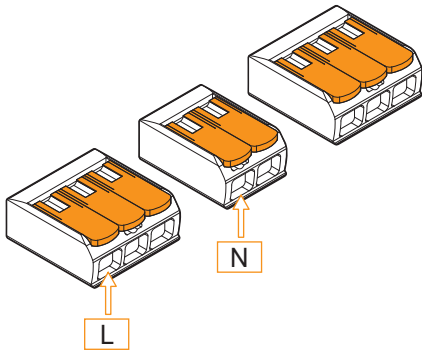


**Connessioni e collegamenti**

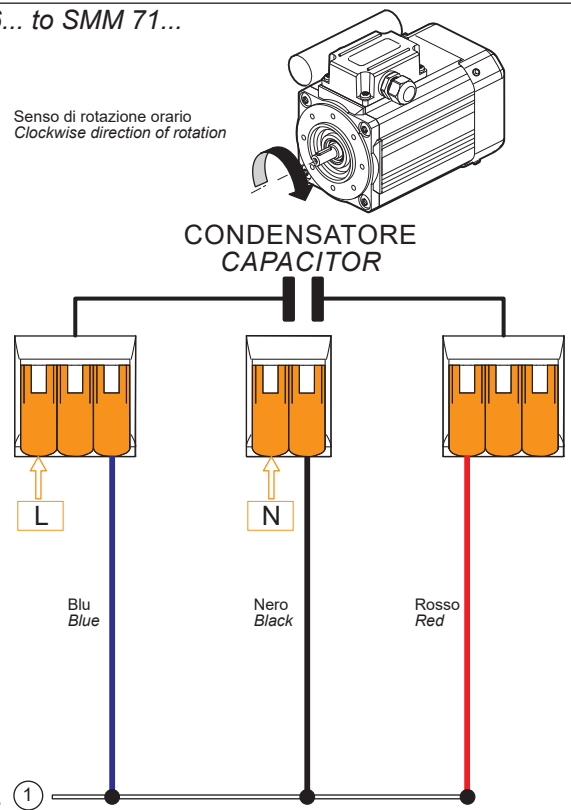
**Connection diagram**

**115 V - Monofase / single phase**

Monofase da SMM 56... a SMM 71... / Single phase from SMM 56... to SMM 71...

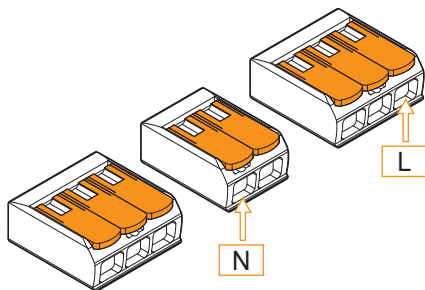


Morsetti a levetta liberi per alimentazione motore  
Splicing connector with free-lever for the motor power source



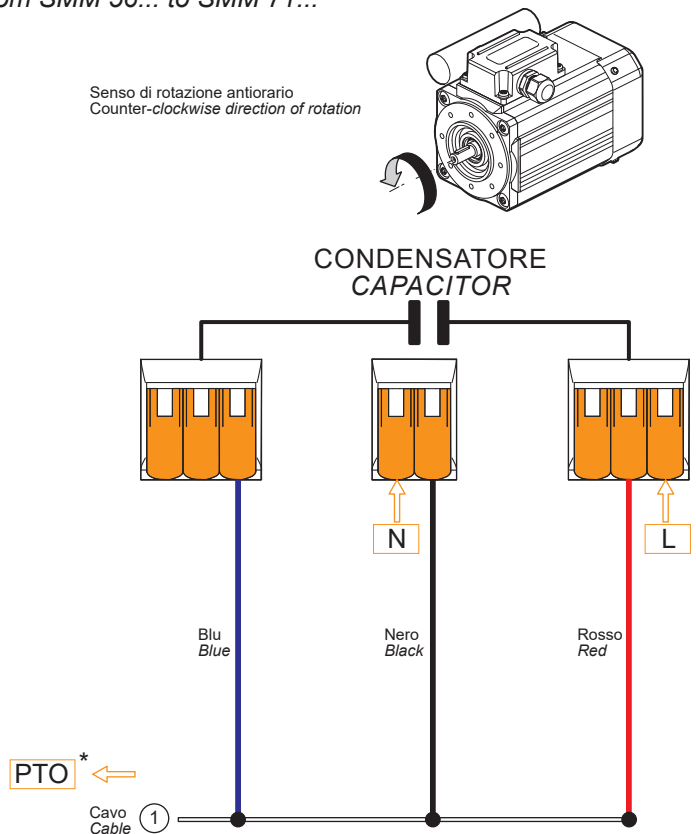
**115 V - Monofase / single phase**

Monofase da SMM 56... a SMM 71... / Single phase from SMM 56... to SMM 71...



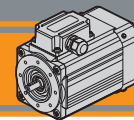
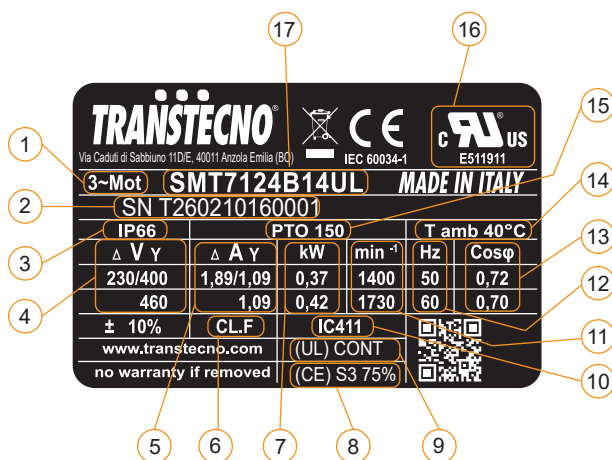
Morsetti a levetta liberi per alimentazione motore

Splicing connector with free-lever for the motor power source



\*: collegamento al circuito di comando del motore a cura del cliente. Per ragioni di sicurezza è sconsigliato il collegamento in serie. Se necessario contattare il Servizio Tecnico Transtecno.

\*: motor supply connection by the customer. For safety reason Transtecno advises against PTO connected in series. If needed, contact Transtecno Technical Service.


**Targhetta**
**Nameplate**


Pos.	Descrizione	Description
1	Tipo di alimentazione	Power supply
2	Numero di serie	Serial number
3	Grado di protezione IP motore	Motor IP protection rating
4	Tensione di alimentazione	Supply voltage
5	Corrente nominale	Rated current
6	Classe di isolamento	Insulation class
7	Potenza nominale	Rated power
8	Servizio per certificazione CE	CE compliance duty
9	Servizio per certificazione UL/CSA	UL/CSA compliance duty
10	Ventilazione	Fan cooling
11	Velocità nominale	Rated speed
12	Frequenza nominale	Rated frequency
13	Fattore di potenza	Power factor
14	Temperatura ambiente massima	Max allowed ambient temperature
15	Protezione termica PTO 150°C	PTO 150°C Thermal protection
16	Certificazione UL/CSA	UL/CSA compliance
17	Tipo di motore	Motor type



**MINI**  **TECNO**™  
**small** but strong

**CMG**

AC

## Motoriduttori CA ad ingranaggi cilindrici AC Helical in-line gearmotors

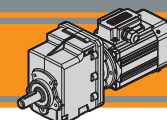


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®





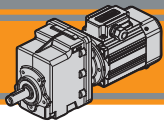




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Designazione	<i>Classification</i>	<b>AE2</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>AE3</b>
Lubrificazione	<i>Lubrication</i>	<b>AE3</b>
Simbologia	<i>Symbols</i>	<b>AE3</b>
Carichi radiali	<i>Radial loads</i>	<b>AE3</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>AE4</b>
Dati tecnici	<i>Technical data</i>	<b>AE4</b>
Dimensioni	<i>Dimensions</i>	<b>AE6</b>

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**Caratteristiche tecniche**

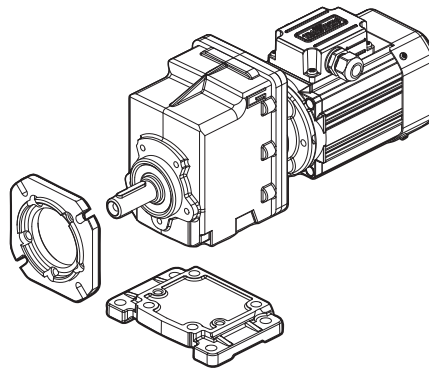
**Technical features**

Le caratteristiche principali dei motoriduttori CMG sono:

CMG gearmotor range has the following main features:

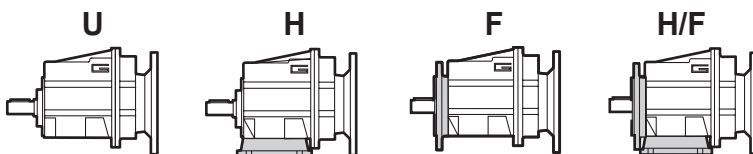
- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Carcasse dei riduttori in pressofusione di alluminio
- Motore elettrico AC con grado di protezione IP66
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56, 63 e 71.
- SMT56, SMT63 e SMT71 adatti al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servoventilata e con certificazione UL.
- Disponibili con giunto elastico in entrata

- Compact design
- AC single phase and three phase motors available
- Motor extruded aluminum housing black anodized
- Gearbox die-cast aluminum housing
- AC electric motor in IP66 protection Standard
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56, 63 and 71.
- SMT56, SMT63 and SMT71 are suitable for inverter duty
- Brake motors, forced ventilation motors and UL compliance versions available.
- Available with input flexible couplin



**Designazione**

**Classification**

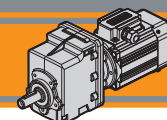


RIDUTTORE / GEARBOX

CMG	00	2	H60	10.16	D20	63	B14	FX
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero uscita Output shaft	IEC 	Forma costruttiva Version	Giunto elastico Flexible coupling
<b>CMG</b>	<b>00</b>	<b>2</b> <b>3</b>	<b>U...</b> <b>H...</b> <b>F...</b> <b>H.../F...</b>	vedi tabelle see tables	vedi tabelle see tables	<b>56..</b> <b>63..</b> <b>71..</b>	<b>B14</b>	<b>FX</b> 

MOTORE TRIFASE / THREE PHASE MOTOR

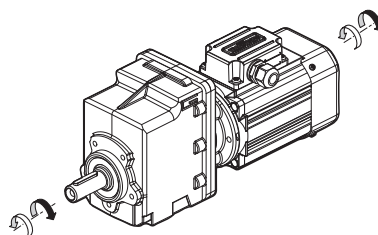
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsetti Terminal box pos.
<b>SMT</b> 	Vedere tab. See tab.	<b>1-2-3-4-5</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.75 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b>	<b>50Hz</b>  <b>60Hz</b>	<b>TEFC</b>  <b>TENV</b>		<b>T1 (Std)</b> 



MOTORE MONOFASE / SINGLE PHASE MOTOR										
SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	UL-CSA	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
<b>SMM</b>	Vedere tab. See tab.	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.55 kW</b>	<b>B14</b>	<b>230V</b>	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>	<b>AD1</b>	T1 (Std) T4 T2 T3

**Sensi di rotazione**

**Direction of rotation**



**Lubrificazione**

**Lubrication**

Tutti i riduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

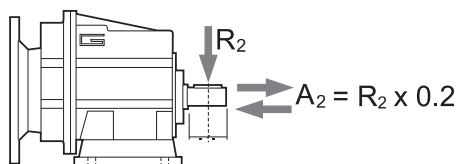
**Simbologia**

**Symbols**

- $n_1$  [min<sup>-1</sup>] Velocità in ingresso / Input speed
- $n_2$  [min<sup>-1</sup>] Velocità in uscita / Output speed
- $i$  Rapporto di riduzione / Ratio
- $P_1$  [kW] Potenza in entrata / Input power
- $M_2$  [Nm] Coppia nominale in uscita in funzione di  $P_1$  / Output torque referred to  $P_1$
- $sf$  Fattore di servizio / Service factor
- $R_2$  [N] Carico radiale ammissibile in uscita / Permitted output radial load
- $A_2$  [N] Carico assiale ammissibile in uscita / Permitted output axial load

**Carichi radiali**

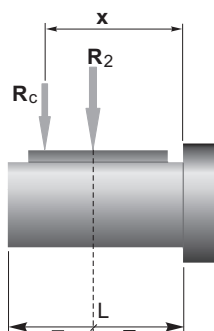
**Radial loads**



	CMG 002												
$n_2$ [min <sup>-1</sup> ]	700	600	500	400	250	180	150	120	100	80	60	40	10
$R_2$ [N]	416	437	465	501	586	653	748	806	958	1032	1136	1300	1300

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

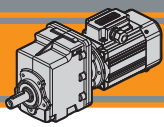
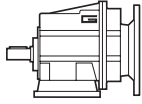
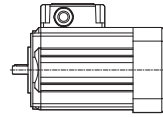


	CMG 002
<b>a</b>	73
<b>b</b>	53
<b>R<sub>2MAX</sub></b>	1300

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$a, b =$  valori riportati nella tabella  
 $a, b =$  values given in the table

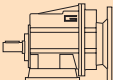
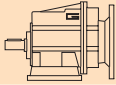




$$R \leq R_c$$

**CMG****Motoriduttori CA ad ingranaggi cilindrici**  
AC Helical in-line gearmotors**MINI**  
TECNO**Motori applicabili****IEC Motor adapters**

		SMT				SMM			
		5014	5624	6324	7124	5014	5624	6324	7124
		5024	5634	6334	7134	5024	5634	6334	7134
		5034	5644	6344	7144	5034	5644	6344	7144
		5044	5654						
<b>CMG</b>	<b>002</b>	5.03 - 55.10							

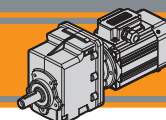
5.03 - 55.10 Rapporti di riduzione i / Ratio i

**Dati tecnici****Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.04</b>						<b>0.09</b>					
SMT5014	<b>279</b>	1	30.4	5.03	<b>CMG002</b>	SMT5034	<b>279</b>	3	13.5	5.03	<b>CMG002</b>
SMM5014	<b>230</b>	2	25.0	6.10		SMM5034	<b>230</b>	4	11.1	6.10	
(1400 min <sup>-1</sup> )	<b>187</b>	2	20.4	7.49		SMT5624	<b>187</b>	4	9.1	7.49	
	<b>156</b>	2	21.2	8.99		SMM5624	<b>156</b>	5	9.4	8.99	
	<b>138</b>	3	18.8	10.16		(1400 min <sup>-1</sup> )	<b>138</b>	6	8.3	10.16	
	<b>116</b>	3	15.8	12.07			<b>116</b>	7	7.0	12.07	
	<b>105</b>	4	20.0	13.40			<b>105</b>	8	8.9	13.40	
	<b>92</b>	4	17.7	15.14			<b>92</b>	9	7.8	15.14	
	<b>77</b>	5	14.7	18.17			<b>77</b>	11	6.5	18.17	
	<b>65</b>	6	12.4	21.58			<b>65</b>	13	5.5	21.58	
	<b>60</b>	6	11.4	23.51			<b>60</b>	14	5.1	23.51	
	<b>56</b>	7	10.6	25.10			<b>56</b>	15	4.7	25.10	
	<b>52</b>	7	9.9	27.08			<b>52</b>	16	4.4	27.08	
	<b>43</b>	9	8.2	32.49			<b>43</b>	19	3.7	32.49	
	<b>33</b>	11	6.4	42.04		<b>33</b>	25	2.8	42.04		
	<b>31</b>	12	6.0	44.89		<b>31</b>	26	2.6	44.89		
	<b>29</b>	13	5.5	48.86		<b>29</b>	29	2.4	48.86		
	<b>25</b>	14	4.8	55.10		<b>25</b>	32	2.2	55.10		
<b>0.06</b>						<b>0.12</b>					
SMT5024	<b>279</b>	2	20.3	5.03	<b>CMG002</b>	SMT5044	<b>279</b>	4	10.1	5.03	<b>CMG002</b>
SMM5024	<b>230</b>	2	16.7	6.10		SMT5634	<b>230</b>	5	8.3	6.10	
(1400 min <sup>-1</sup> )	<b>187</b>	3	13.6	7.49		SMM5634	<b>187</b>	6	6.8	7.49	
	<b>156</b>	4	14.2	8.99		(1400 min <sup>-1</sup> )	<b>156</b>	7	7.1	8.99	
	<b>138</b>	4	12.5	10.16			<b>138</b>	8	6.3	10.16	
	<b>116</b>	5	10.5	12.07			<b>116</b>	9	5.3	12.07	
	<b>105</b>	5	13.3	13.40			<b>105</b>	11	6.7	13.40	
	<b>92</b>	6	11.8	15.14			<b>92</b>	12	5.9	15.14	
	<b>77</b>	7	9.8	18.17			<b>77</b>	14	4.9	18.17	
	<b>65</b>	8	8.3	21.58			<b>65</b>	17	4.1	21.58	
	<b>60</b>	9	7.6	23.51			<b>60</b>	18	3.8	23.51	
	<b>56</b>	10	7.1	25.10			<b>56</b>	20	3.5	25.10	
	<b>52</b>	11	6.6	27.08			<b>52</b>	21	3.3	27.08	
	<b>43</b>	13	5.5	32.49			<b>43</b>	26	2.7	32.49	
	<b>33</b>	17	4.2	42.04		<b>33</b>	33	2.1	42.04		
	<b>31</b>	18	4.0	44.89		<b>31</b>	35	2.0	44.89		
	<b>29</b>	19	3.6	48.86		<b>29</b>	38	1.8	48.86		
	<b>25</b>	22	3.2	55.10		<b>25</b>	43	1.6	55.10		



Motori Motors	SMT		SMM	
		5014 5024 5034 5044	5624 5634	5014 5024 5034
<b>IEC</b>	<b>56 B14</b>		<b>56 B14</b>	



Dati tecnici

Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
------------------------	----------------------------------------	------------------------	----	---	--

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
------------------------	----------------------------------------	------------------------	----	---	--

**0.18**

SMT5644	<b>279</b>	6	6.8	5.03	<b>CMG002</b>
SMM5644	<b>230</b>	7	5.6	6.10	
SMT6324	<b>187</b>	9	4.5	7.49	
SMM6324	<b>156</b>	11	4.7	8.99	
(1400 min <sup>-1</sup> )	<b>138</b>	12	4.2	10.16	
	<b>116</b>	14	3.5	12.07	
	<b>105</b>	16	4.4	13.40	
	<b>92</b>	18	3.9	15.14	
	<b>77</b>	21	3.3	18.17	
	<b>65</b>	25	2.8	21.58	
	<b>60</b>	28	2.5	23.51	
	<b>56</b>	30	2.4	25.10	
	<b>52</b>	32	2.2	27.08	
	<b>43</b>	38	1.8	32.49	
	<b>33</b>	50	1.4	42.04	
	<b>31</b>	53	1.3	44.89	
	<b>29</b>	58	1.2	48.86	
	<b>25</b>	65	1.1	55.10	

**0.37**

SMT6344	<b>279</b>	12	3.3	5.03	<b>CMG002</b>
SMT7124	<b>230</b>	15	2.7	6.10	
SMM7124	<b>187</b>	18	2.2	7.49	
(1400 min <sup>-1</sup> )	<b>156</b>	22	2.3	8.99	
	<b>138</b>	25	2.0	10.16	
	<b>116</b>	29	1.7	12.07	
	<b>105</b>	32	2.2	13.40	
	<b>92</b>	37	1.9	15.14	
	<b>77</b>	44	1.6	18.17	
	<b>65</b>	52	1.3	21.58	
	<b>60</b>	57	1.2	23.51	
	<b>56</b>	61	1.2	25.10	
	<b>52</b>	66	1.1	27.08	
	<b>43</b>	79	0.9	32.49	

**0.25**

SMT5654	<b>279</b>	8	4.9	5.03	<b>CMG002</b>
SMT6334	<b>230</b>	10	4.0	6.10	
SMM6334	<b>187</b>	12	3.3	7.49	
(1400 min <sup>-1</sup> )	<b>156</b>	15	3.4	8.99	
	<b>138</b>	17	3.0	10.16	
	<b>116</b>	20	2.5	12.07	
	<b>105</b>	22	3.2	13.40	
	<b>92</b>	25	2.8	15.14	
	<b>77</b>	30	2.4	18.17	
	<b>65</b>	35	2.0	21.58	
	<b>60</b>	38	1.8	23.51	
	<b>56</b>	41	1.7	25.10	
	<b>52</b>	44	1.6	27.08	
	<b>43</b>	53	1.3	32.49	
	<b>33</b>	69	1.0	42.04	
	<b>31</b>	73	1.0	44.89	
	<b>29</b>	80	0.9	48.86	
	<b>25</b>	90	0.8	55.10	

**0.55**

SMT7134	<b>279</b>	18	2.2	5.03	<b>CMG002</b>
SMM7134	<b>230</b>	22	1.8	6.10	
(1400 min <sup>-1</sup> )	<b>187</b>	27	1.5	7.49	
	<b>156</b>	32	1.5	8.99	
	<b>138</b>	37	1.4	10.16	
	<b>116</b>	43	1.2	12.07	
	<b>105</b>	48	1.5	13.40	
	<b>92</b>	55	1.3	15.14	
	<b>77</b>	65	1.1	18.17	
	<b>65</b>	78	0.9	21.58	

**0.75**

SMT7144	<b>279</b>	25	1.6	5.03	<b>CMG002</b>
(1400 min <sup>-1</sup> )	<b>230</b>	30	1.3	6.10	
	<b>187</b>	37	1.1	7.49	
	<b>156</b>	44	1.1	8.99	
	<b>138</b>	50	1.0	10.16	
	<b>116</b>	59	0.8	12.07	
	<b>105</b>	66	1.1	13.40	
	<b>92</b>	74	0.9	15.14	

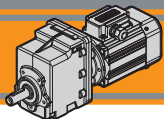


Motori Motors	SMT			SMM		
		5644 5654	6324 6334 6344	7124 7134 7144	5644	6324 6334
<b>IEC</b>	<b>56 B14</b>	<b>63 B14</b>	<b>71 B14</b>	<b>56 B14</b>	<b>63 B14</b>	<b>71 B14</b>

Dati tecnici elettrici

Electrical technical data



**CMG**

Motoriduttori CA ad ingranaggi cilindrici  
AC Helical in-line gearmotors

**MINI**  
TECNO

Dimensioni

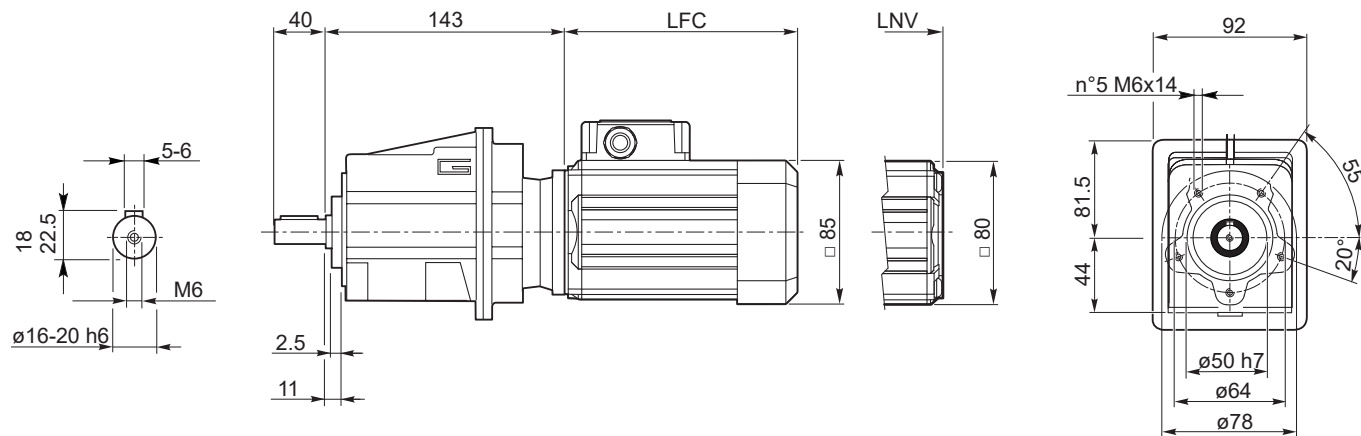
Dimensions

**CMG 002 U****CMG 002 U**

SMT50...TEFC  
SMM50... TEFC

SMT50...TENV  
SMM50... TENV

S3 servizio 30%  
duty



SMT	LFC	LNV	Kg	
5014	135.5	108.5	5.2	
5024	150.5	123.5	5.6	
5034	175.5	148.5	6.4	
5044	200.5	173.5	7.1	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	5.6	
5024	175.5	148.5	6.4	
5034	200.5	173.5	7.1	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CMG...H → AE8

CMG...F → AE8

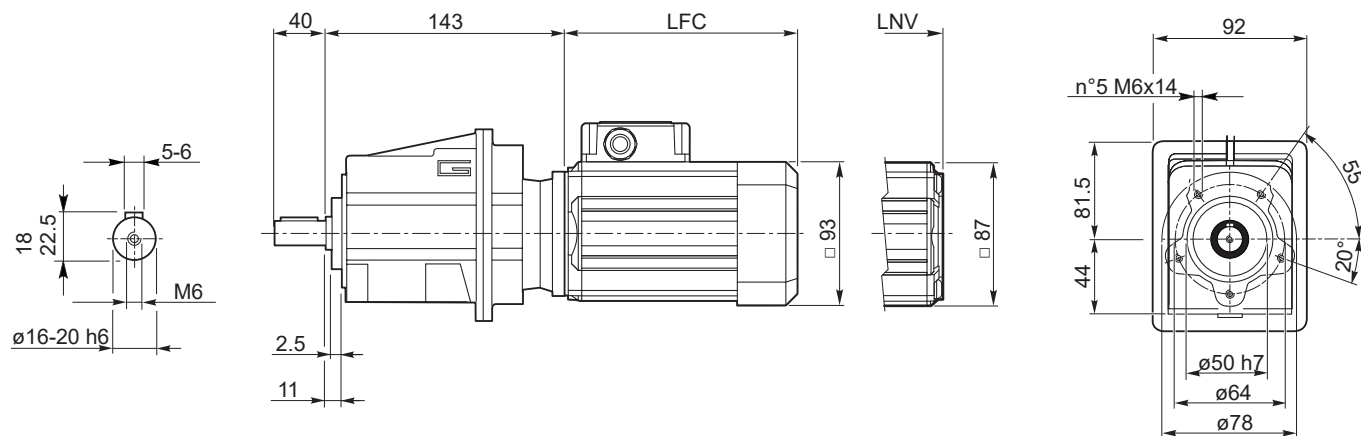
CMG...H/F → AE9

**CMG 002 U**

SMT56...TEFC  
SMM56... TEFC

SMT56...TENV  
SMM56... TENV

S3 servizio 30%  
duty



SMT	LFC	LNV	Kg	
5624	141	117	5.7	
5634	151	127	6.1	
5644	186	162	7.3	
5654	206	182	8	

SMM	LFC	LNV	Kg	
5624	151	127	6	
5634	171	147	6.6	
5644	206	182	7.9	

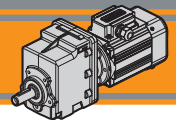
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CMG...H → AE8

CMG...F → AE8

CMG...H/F → AE9

SMT  
SMM  
OPTIONS → AB1  
AC1  
AD1



Dimensioni

Dimensions

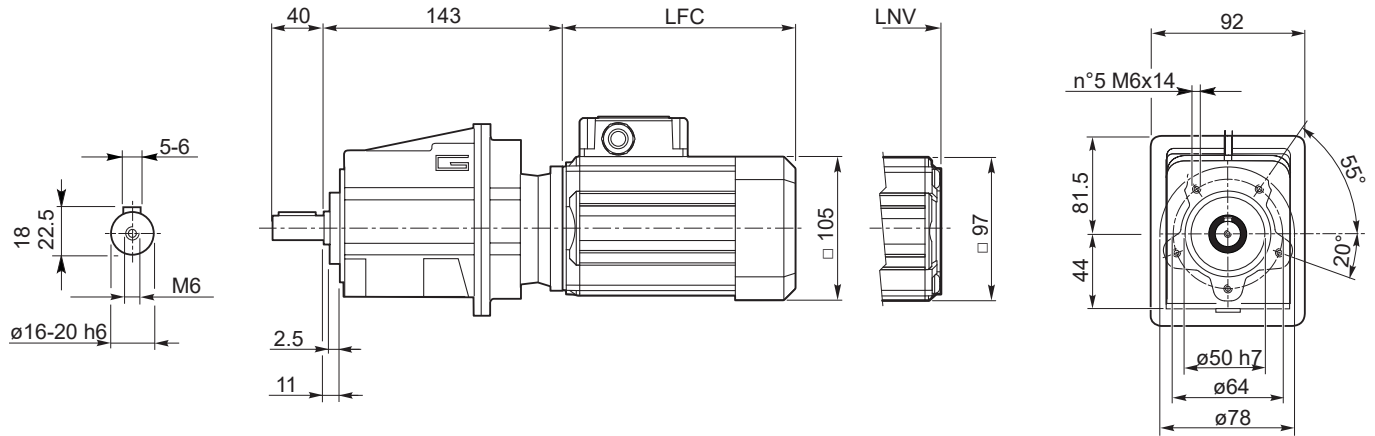
CMG 002 U

CMG 002 U

SMT63...TEFC  
SMM63... TEFC

SMT63...TENV  
SMM63... TENV

S3 servizio duty 30%



SMT	LFC	LNV	Kg	
6324	165.5	138.5	7.2	
6334	180.5	153.5	7.9	
6344	205.5	178.5	9.1	

SMM	LFC	LNV	Kg	
6324	180.5	153.5	8	
6334	205.5	178.5	9.2	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

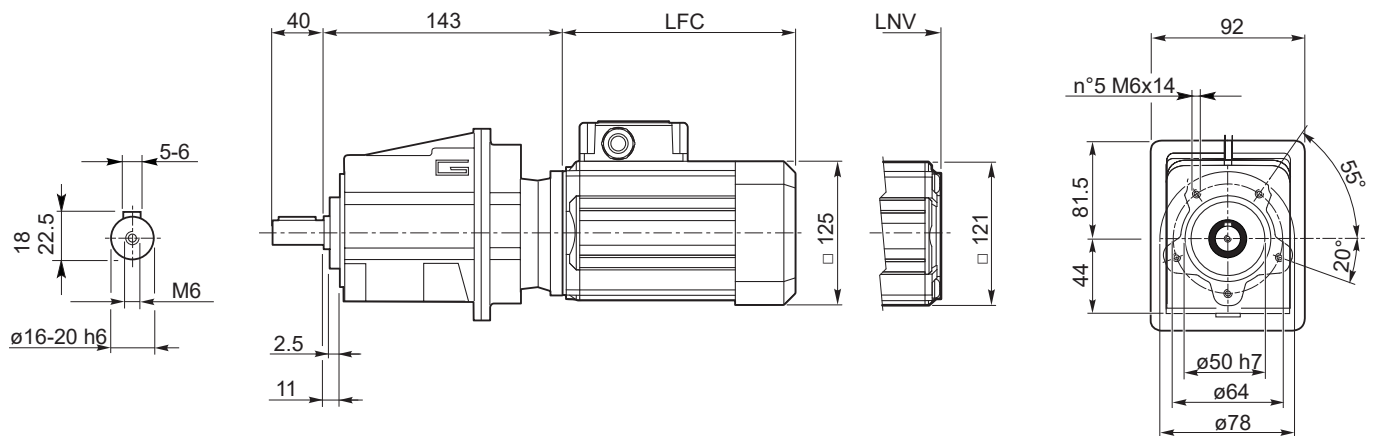
- CMG...H → AE8
- CMG...F → AE8
- CMG...H/F → AE9
- AB1 AC1 AD1

CMG 002 U

SMT71...TEFC  
SMM71... TEFC

SMT71...TENV  
SMM71... TENV

S3 servizio duty 30%

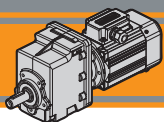


SMT	LFC	LNV	Kg	
7124	174	174	9.4	
7134	189	189	10.5	
7144	214	214	12.2	

SMM	LFC	LNV	Kg	
7124	189	160.5	10.1	
7134	214	185.5	12.1	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

- CMG...H → AE8
- CMG...F → AE8
- CMG...H/F → AE9
- AB1 AC1 AD1



**CMG**

Motoriduttori CA ad ingranaggi cilindrici  
AC Helical in-line gearmotors

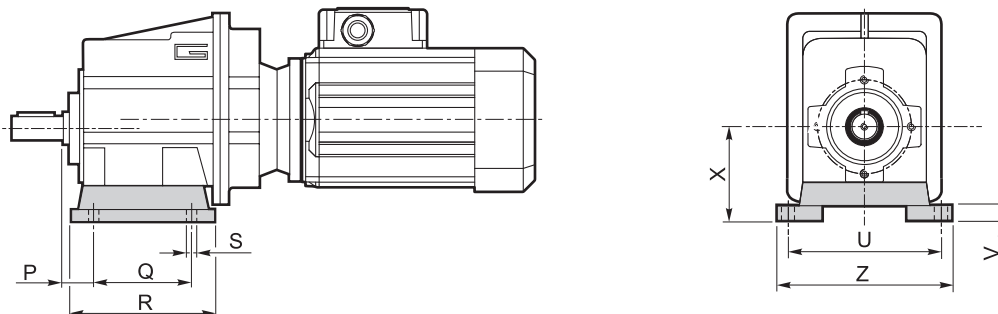
**MINI**  
TECNO

Dimensioni

Dimensions

**CMG..H**

**CMG002 H..**

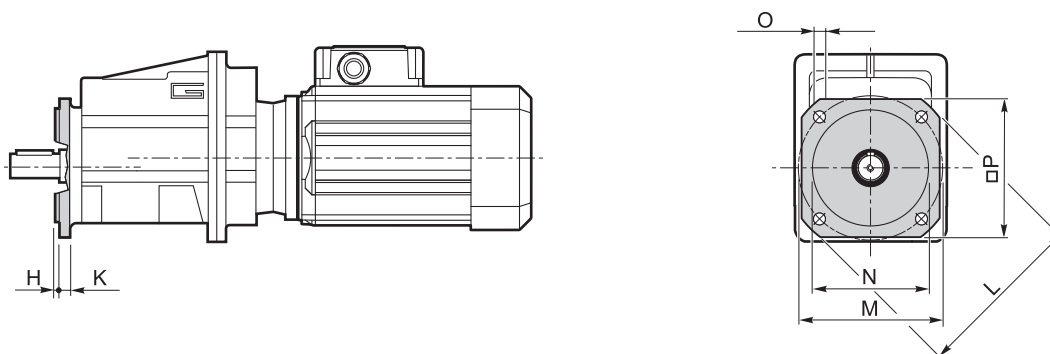


Versione H / H Version										
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot	
									Tipo / Type	Peso / Weight [kg]
002	18	60	80	9	100	10	60	120	H60	0.2
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4

Preferenziale / Preferred

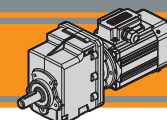
**CMG..F**

**CMG002 F..**



Versione F / F Version										
CMG	H	K	L	M	N f7	O	P	Flangia / Flange		
								Tipo / Type	Peso / Weight [kg]	
002	3.5	7	105	85	70	6.5	90	F105	0.1	
	3.5	8	120	100	80	7	100	F120	0.2	
	3.5	8	140	115	95	9	115	F140	0.2	



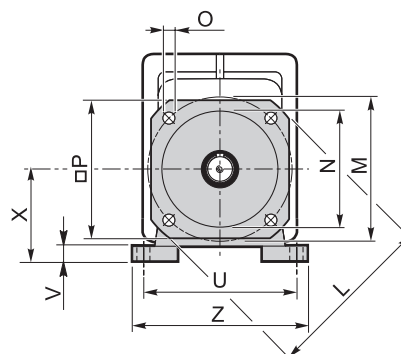
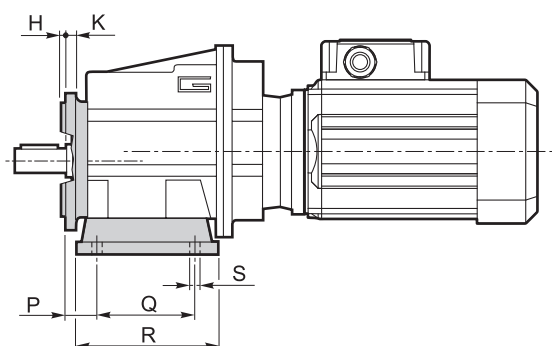


Dimensioni

Dimensions

CMG..H../F..

CMG002 H../F..



Versione H / H Version										Combinazioni possibili H/F Possible combinations H/F							
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot		F105	F120	F140	F160	F200	F250	F300
									Tipo / Type	Peso / Weight [kg]							
002	18	60	80	9	100	10	60	120	H60	0.2	•	•	•				
	18	80	104	9	110 - 120	10	75	145	H75	0.3	•	•	•				
	18	50 - 87	110	9	110	10	85	135	H85	0.4	•	•	•				

Preferenziale / Preferred

• Combinazioni possibili H/F / Possible combinations H/F

Versione F / F Version									
CMG	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	Peso / Weight [kg]
002	3.5	7	105	85	70	6.5	90	F105	0.1
	3.5	8	120	100	80	7	100	F120	0.2
	3.5	8	140	115	95	9	115	F140	0.2

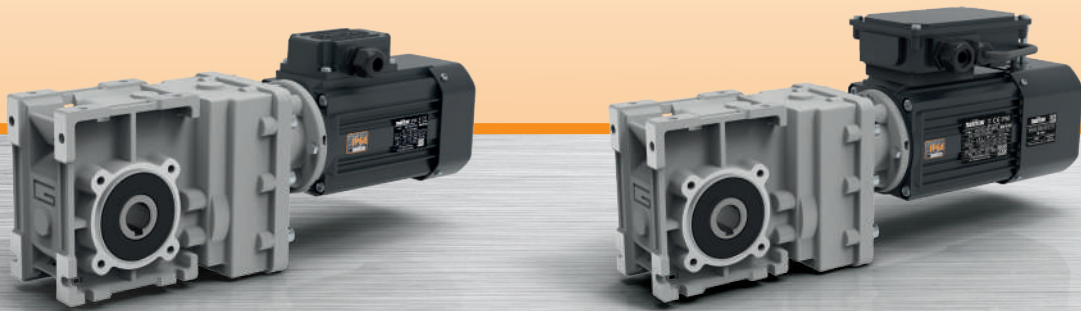


**MINI**  **TECNO**™  
**small** but strong

**CMB**

AC

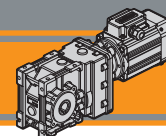
Motoriduttori CA ad assi ortogonali  
AC Helical bevel gearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



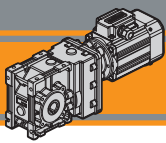




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Designazione	<i>Classification</i>	<b>AC2</b>
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**CMB**

Motoriduttori CA ad assi ortogonali  
AC Helical bevel gearmotors



**Caratteristiche tecniche**

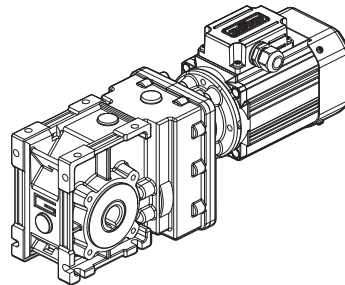
**Technical features**

Le caratteristiche principali dei motoriduttori CMB sono:

CMB gearmotor range has the following main features:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Carcasse dei riduttori in pressofusione di alluminio
- Motore elettrico AC con grado di protezione IP66
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56, 63 e 71.
- SMT56, SMT63 e SMT71 adatti al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servoventilata e con certificazione UL.
- Disponibili con giunto elastico in entrata

- Compact design
- AC single phase and three phase motors available
- Motor extruded aluminum housing black anodized
- Gearbox die-cast aluminum housing
- AC electric motor in IP66 protection Standard
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56, 63 and 71.
- SMT56, SMT63 and SMT71 are suitable for inverter duty
- Brake motors, forced ventilation motors and UL compliance versions available.
- Available with input flexible couplin



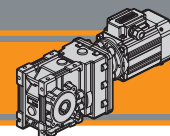
**Designazione**

**Classification**

RIDUTTORE / GEARBOX											
CMB	40 2		U	9.81	D20	63	B14	SZDX	BR SX	90	FX
Tipo Type	Grandezza Size	Stadi Stages	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	IEC	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Giunto elastico Flexible coupling
	40	2	U FD FS FBD FBS FLD FLS	vedi tabelle see tables	vedi tabelle see tables	 56.. 63.. 71..	B14	SZDX SZSX DZ	BRDX BR SX *	0° 90° 180° 270°	FX  17
Versione Riduttore Gearbox Version			Albero di uscita Output shaft			Braccio di reazione Torque arm *		Angolo Angle			
 U    FD    FS FLD    FBD    FBS			 SZDX    SZSX    DZ			 BRDX    BR SX		 90°    90° 180°    270°    0°    270°			

\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.

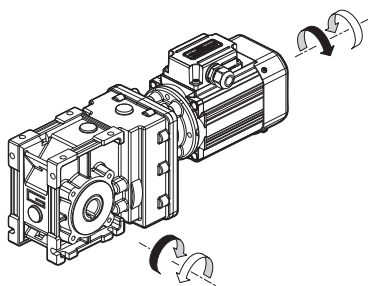
MOTORE TRIFASE / THREE PHASE MOTOR										
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
SMT 	Vedere tab. See tab.	1-2-3-4-5	4	0.04 kW ... 0.75 kW	B14	230-400 V  460V	50Hz  60Hz	TEFC  TENV	 AB1 AC1 AD1	T1 (Std)  T4    T2 T3



MOTORE MONOFASE / SINGLE PHASE MOTOR										
SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	UL-CSA	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsetteria Terminal box pos.
<b>SMM</b>	Vedere tab. See tab.	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.55 kW</b>	<b>B14</b>	<b>230V</b>	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>	 <b>AD1</b>	 T1 (Std) T4 T2 T3

**Sensi di rotazione**

**Direction of rotation**



**Simbologia**

**Symbols**

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	sf	Fattore di servizio / <i>Service factor</i>
i	Rapporto di riduzione / <i>Ratio</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_1$ [kW]	Potenza in entrata / <i>Input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>

**Lubrificazione**

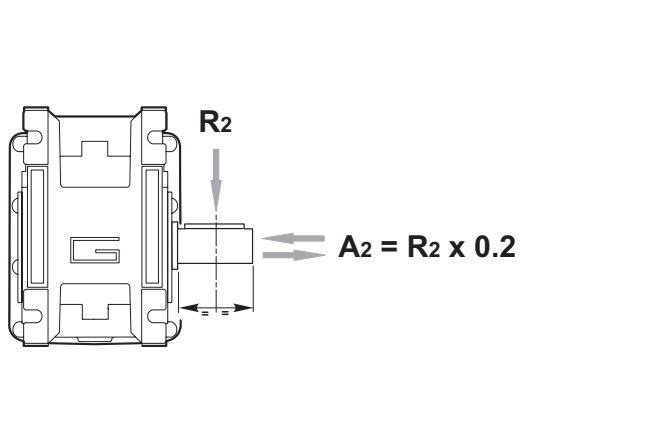
**Lubrication**

Tutti i riduttori nelle taglie 402 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use sizes 402 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*

**Carichi radiali**

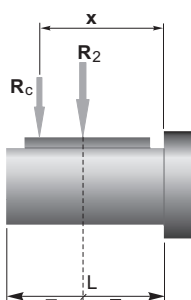
**Radial loads**



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]
	<b>CMB 402</b>
400	905
300	996
200	1141
170	1204
140	1414
100	1582
90	1638
60	2047
40	2524
30	2778
20	3180
15	3500
10	3500

Quando il carico radiale risultante non è applicato sulla mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*

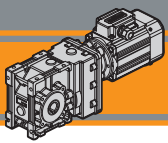


	<b>CMB 402</b>
a	86
b	66
$R_{2MAX}$	3500

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

*a, b = valori riportati nella tabella  
a, b = values given in the table*



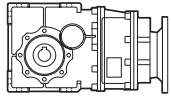
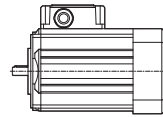
**CMB**

Motoriduttori CA ad assi ortogonali  
AC Helical bevel gearmotors



Motori applicabili

Motor adapters



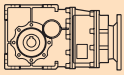
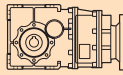
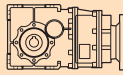




		SMT				SMM			
		5014 5024 5034 5044	5624 5634 5644 5654	6324 6334 6344	7124 7134 7144	5014 5024 5034	5624 5634 5644	6324 6334	7124 7134
<b>CMB</b>	<b>402</b>	6.18 - 72.50							

6.18 - 72.50

Rapporti di riduzione i  
Ratio i

Dati tecnici

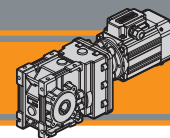
Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.04</b>						<b>0.06</b>					
SMT5014	<b>227</b>	2	25.3	6.18	<b>CMB402</b>	SMT5024	<b>42</b>	13	5.0	33.57	
SMM5014	<b>187</b>	2	20.8	7.49		SMM5024	<b>39</b>	14	4.7	35.63	
(1400 min <sup>-1</sup> )	<b>152</b>	2	16.9	9.20		(1400 min <sup>-1</sup> )	<b>33</b>	16	4.0	42.75	
	<b>118</b>	3	14.8	11.83			<b>25</b>	21	3.1	55.31	
	<b>112</b>	3	14.1	12.48			<b>24</b>	23	2.9	59.06	
	<b>94</b>	4	11.8	14.83			<b>22</b>	25	2.6	64.29	
	<b>79</b>	5	10.0	17.63			<b>19</b>	28	2.3	72.50	
	<b>75</b>	5	11.5	18.60							
	<b>63</b>	6	9.6	22.33							
	<b>59</b>	6	9.0	23.91							
	<b>48</b>	7	8.8	28.89							
	<b>45</b>	8	8.2	30.84							
	<b>42</b>	9	7.5	33.57							
	<b>39</b>	9	7.1	35.63							
	<b>33</b>	11	5.9	42.75							
	<b>25</b>	14	4.6	55.31							
	<b>24</b>	15	4.3	59.06							
	<b>22</b>	16	3.9	64.29							
	<b>19</b>	19	3.5	72.50							
<b>0.06</b>						<b>0.09</b>					
SMT5024	<b>227</b>	2	16.8	6.18	<b>CMB402</b>	SMT5034	<b>227</b>	4	11.2	6.18	<b>CMB402</b>
SMM5024	<b>187</b>	3	13.9	7.49		SMM5034	<b>187</b>	4	9.3	7.49	
(1400 min <sup>-1</sup> )	<b>152</b>	4	11.3	9.20		(1400 min <sup>-1</sup> )	<b>152</b>	5	7.5	9.20	
	<b>118</b>	5	9.9	11.83			<b>118</b>	7	6.6	11.83	
	<b>112</b>	5	9.4	12.48			<b>112</b>	7	6.2	12.48	
	<b>94</b>	6	7.9	14.83			<b>94</b>	9	5.3	14.83	
	<b>79</b>	7	6.6	17.63			<b>79</b>	10	4.4	17.63	
	<b>75</b>	7	7.7	18.60			<b>75</b>	11	5.1	18.60	
	<b>63</b>	9	6.4	22.33			<b>63</b>	13	4.3	22.33	
	<b>59</b>	9	6.0	23.91			<b>59</b>	14	4.0	23.91	
	<b>48</b>	11	5.8	28.89			<b>48</b>	17	3.9	28.89	
	<b>45</b>	12	5.5	30.84			<b>45</b>	18	3.7	30.84	
							<b>42</b>	19	3.4	33.57	
							<b>39</b>	21	3.2	35.63	
							<b>33</b>	25	2.6	42.75	
							<b>25</b>	32	2.0	55.31	
						<b>24</b>	34	1.9	59.06		
						<b>22</b>	37	1.8	64.29		
						<b>19</b>	42	1.6	72.50		



Motori Motors	SMT		SMM	
		5014 5024 5034	5624	5014 5024 5034
<b>IEC</b>	<b>56 B14</b>		<b>56 B14</b>	





Dati tecnici

Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.12</b>					
SMT5044	<b>227</b>	5	8.4	6.18	<b>CMB402</b>
SMT5634	<b>187</b>	6	6.9	7.49	
SMM5634	<b>152</b>	7	5.6	9.20	
(1400 min <sup>-1</sup> )	<b>118</b>	9	4.9	11.83	
	<b>112</b>	10	4.7	12.48	
	<b>94</b>	11	3.9	14.83	
	<b>79</b>	14	3.3	17.63	
	<b>75</b>	14	3.8	18.60	
	<b>63</b>	17	3.2	22.33	
	<b>59</b>	18	3.0	23.91	
	<b>48</b>	22	2.9	28.89	
	<b>45</b>	24	2.7	30.84	
	<b>42</b>	26	2.5	33.57	
	<b>39</b>	27	2.4	35.63	
	<b>33</b>	33	2.0	42.75	
	<b>25</b>	43	1.5	55.31	
	<b>24</b>	45	1.4	59.06	
	<b>22</b>	49	1.3	64.29	
	<b>19</b>	56	1.2	72.50	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.18</b>					
SMT5644	<b>227</b>	7	5.6	6.18	<b>CMB402</b>
SMM5644	<b>187</b>	9	4.6	7.49	
SMT6324	<b>152</b>	11	3.8	9.20	
SMM6324	<b>118</b>	14	3.3	11.83	
(1400 min <sup>-1</sup> )	<b>112</b>	14	3.1	12.48	
	<b>94</b>	17	2.6	14.83	
	<b>79</b>	20	2.2	17.63	
	<b>75</b>	21	2.6	18.60	
	<b>63</b>	26	2.1	22.33	
	<b>59</b>	28	2.0	23.91	
	<b>48</b>	33	1.9	28.89	
	<b>45</b>	36	1.8	30.84	
	<b>42</b>	39	1.7	33.57	
	<b>39</b>	41	1.6	35.63	
	<b>33</b>	49	1.3	42.75	
	<b>25</b>	64	1.0	55.31	
	<b>24</b>	68	0.95	59.06	
	<b>22</b>	74	0.88	64.29	
	<b>19</b>	84	0.8	72.50	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>					
SMT5654	<b>227</b>	10	4.0	6.18	<b>CMB402</b>
SMT6334	<b>187</b>	12	3.3	7.49	
SMM6334	<b>152</b>	15	2.7	9.20	
(1400 min <sup>-1</sup> )	<b>118</b>	19	2.4	11.83	
	<b>112</b>	20	2.2	12.48	
	<b>94</b>	24	1.9	14.83	
	<b>79</b>	28	1.6	17.63	
	<b>75</b>	30	1.8	18.60	
	<b>63</b>	36	1.5	22.33	
	<b>59</b>	38	1.4	23.91	
	<b>48</b>	46	1.4	28.89	
	<b>45</b>	49	1.3	30.84	
	<b>42</b>	54	1.2	33.57	
	<b>39</b>	57	1.1	35.63	
	<b>33</b>	69	0.9	42.75	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.37</b>					
SMT6344	<b>227</b>	15	2.7	6.18	<b>CMB402</b>
SMT7124	<b>187</b>	18	2.3	7.49	
SMM7124	<b>152</b>	22	1.8	9.20	
(1400 min <sup>-1</sup> )	<b>118</b>	28	1.6	11.83	
	<b>112</b>	30	1.5	12.48	
	<b>94</b>	35	1.3	14.83	
	<b>79</b>	42	1.1	17.63	
	<b>75</b>	44	1.2	18.60	
	<b>63</b>	53	1.0	22.33	
	<b>59</b>	57	1.0	23.91	
	<b>48</b>	69	0.9	28.89	
	<b>45</b>	73	0.9	30.84	
	<b>42</b>	80	0.8	33.57	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.55</b>					
SMT7134	<b>227</b>	22	1.8	6.18	<b>CMB402</b>
SMM7134	<b>187</b>	26	1.5	7.49	
(1400 min <sup>-1</sup> )	<b>152</b>	32	1.2	9.20	
	<b>118</b>	42	1.1	11.83	
	<b>112</b>	44	1.0	12.48	
	<b>94</b>	52	0.9	14.83	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.75</b>					
SMT7144	<b>227</b>	30	1.3	6.18	<b>CMB402</b>
(1400 min <sup>-1</sup> )	<b>187</b>	36	1.1	7.49	
	<b>152</b>	44	0.9	9.20	

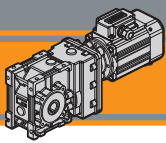


Motori Motors	SMT				SMM		
	5044	5634 5644 5654	6324 6334 6344	7124 7134 7144	5644	6324 6334	7124 7134
IEC	56 B14		63 B14	71 B14	56 B14	63 B14	71 B14

Dati tecnici elettrici

Electrical technical data

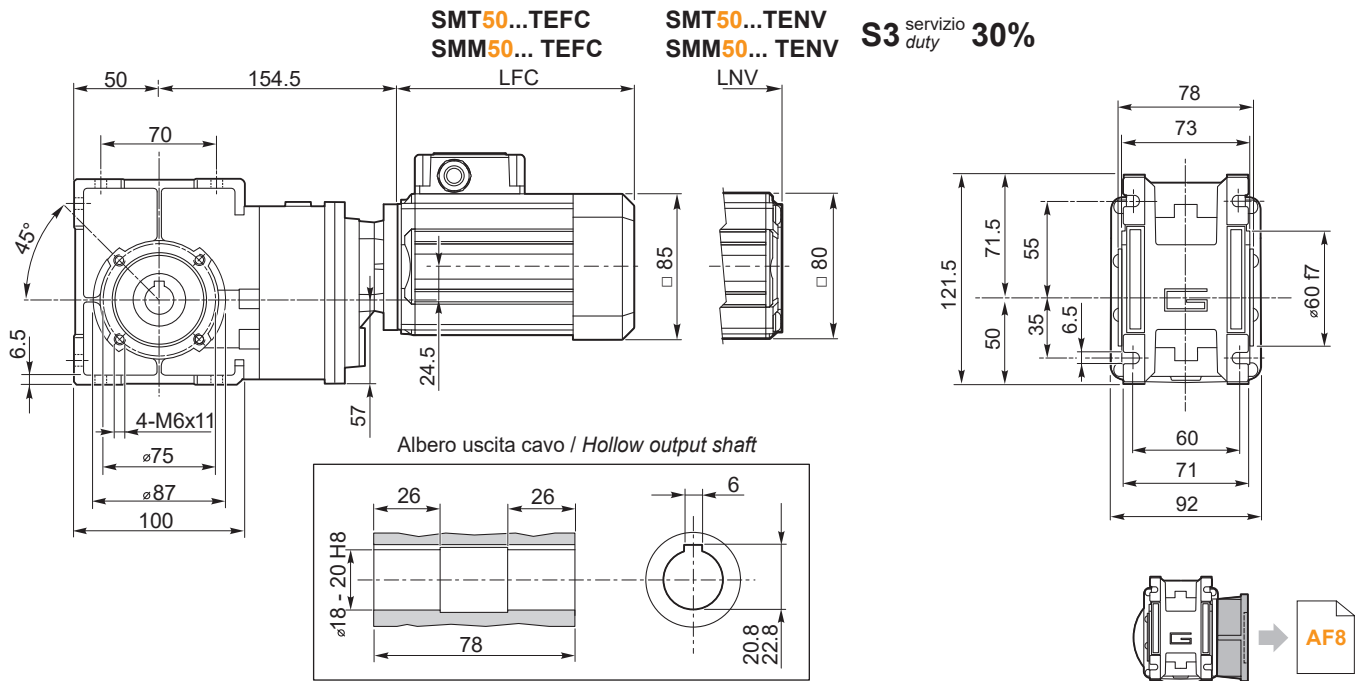




**Dimensioni**

**Dimensions**

**CMB 402 U**



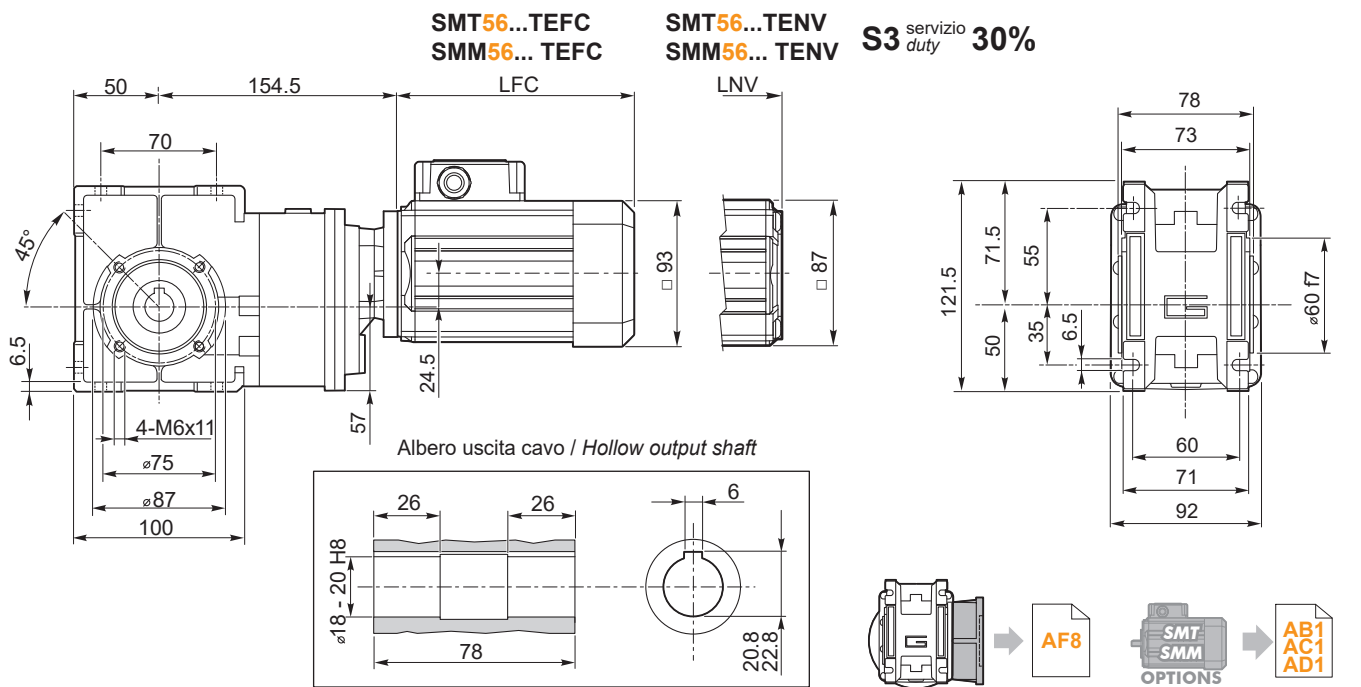
SMT	LFC	LNV	Kg	
5014	135.5	108.5	5.7	
5024	150.5	123.5	6.1	
5034	175.5	148.5	6.9	
5044	200.5	173.5	7.6	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	6.1	
5024	175.5	148.5	6.9	
5034	200.5	173.5	7.6	

**Nota:**  
il condensatore sarà fornito a corredo

**Note:**  
the capacitor will be supplied separately

**CMB 402 U**

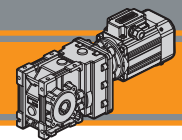


SMT	LFC	LNV	Kg	
5624	141	117	6.2	
5634	151	127	6.6	
5644	186	162	7.8	
5654	206	182	8.5	

SMM	LFC	LNV	Kg	
5624	151	127	6.5	
5634	171	147	7.1	
5644	206	182	8.4	

**Nota:**  
il condensatore sarà fornito a corredo

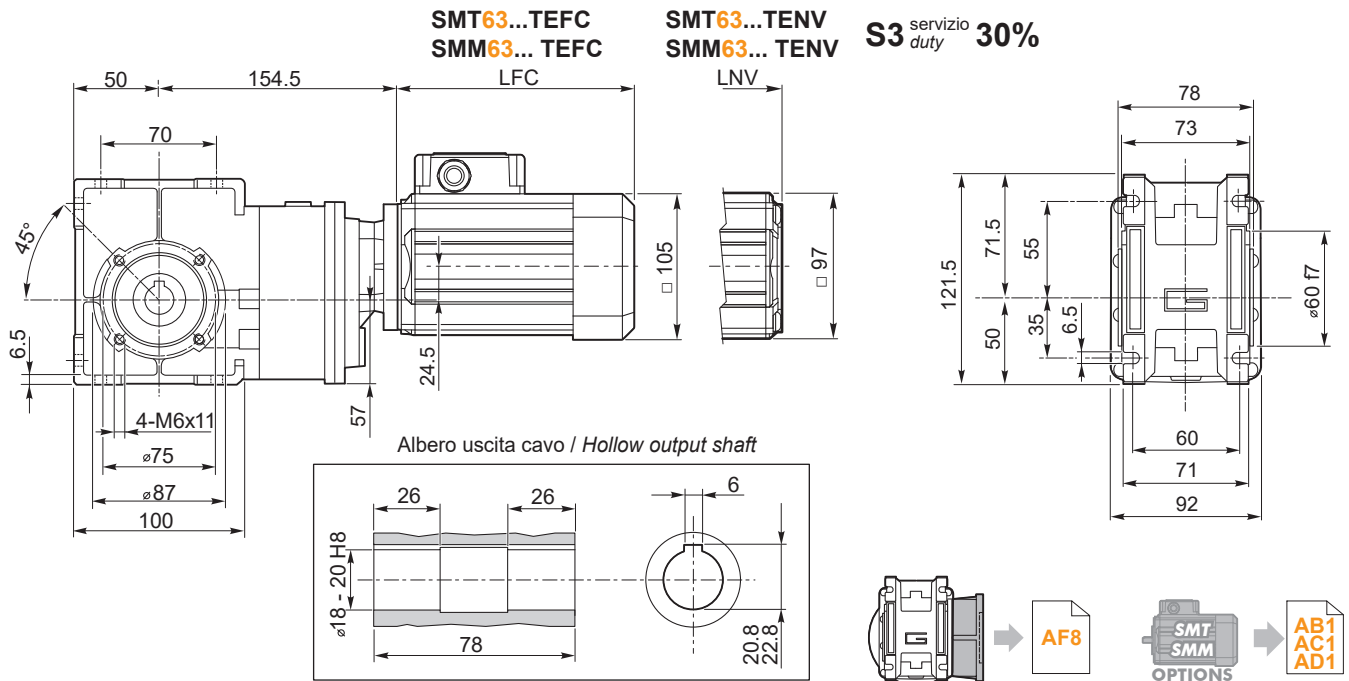
**Note:**  
the capacitor will be supplied separately



Dimensioni

Dimensions

CMB 402 U



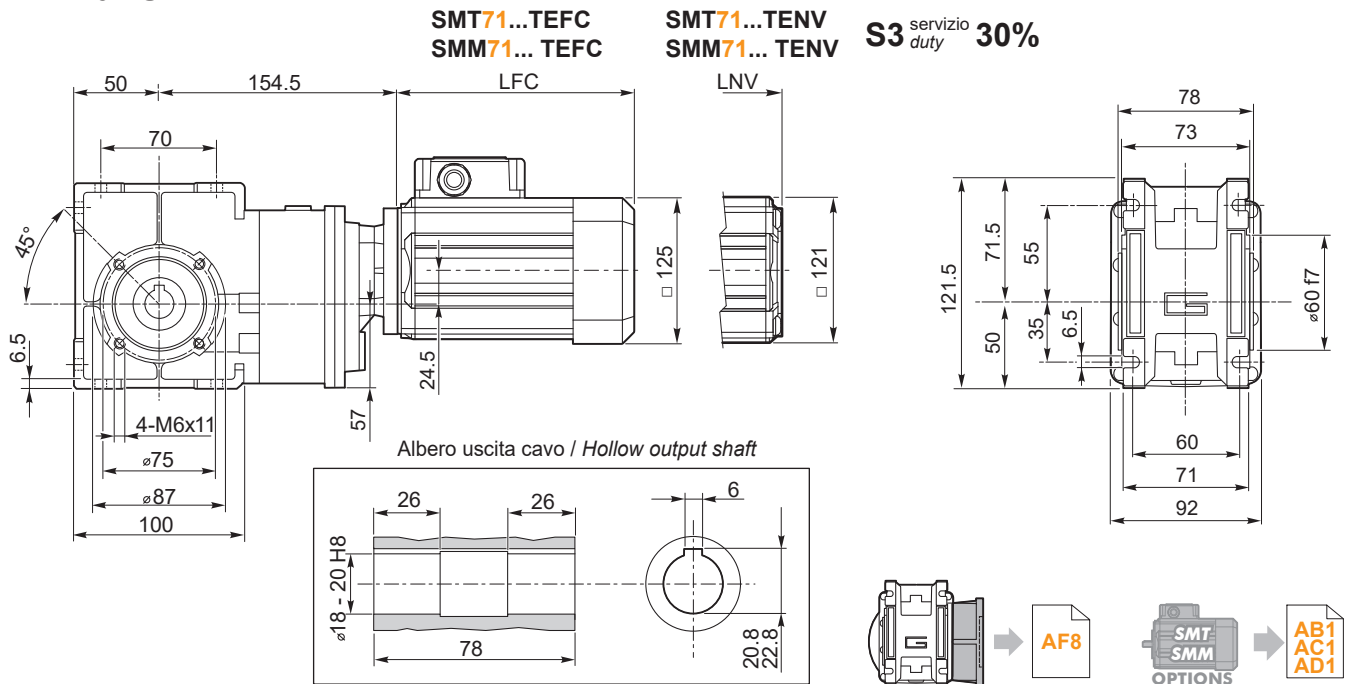
SMT	LFC	LNV	Kg	
6324	165.5	138.5	7.7	
6334	180.5	153.5	8.4	
6344	205.5	178.5	9.6	

SMM	LFC	LNV	Kg	
6324	180.5	153.5	8.5	
6334	205.5	178.5	9.7	

**Nota:**  
il condensatore sarà fornito a corredo

**Note:**  
the capacitor will be supplied separately

CMB 402 U

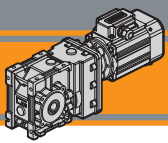


SMT	LFC	LNV	Kg	
7124	174	145.5	9.9	
7134	189	160.5	11	
7144	214	185.5	12.7	

SMM	LFC	LNV	Kg	
7124	189	160.5	10.6	
7134	214	185.5	12.6	

**Nota:**  
il condensatore sarà fornito a corredo

**Note:**  
the capacitor will be supplied separately

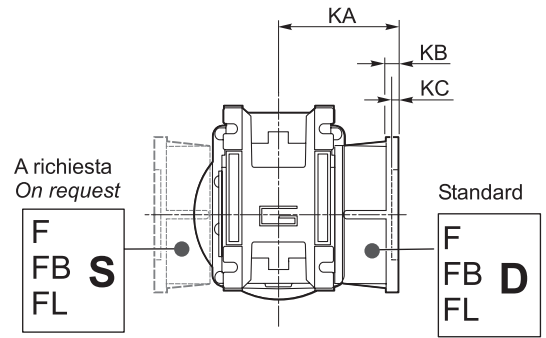
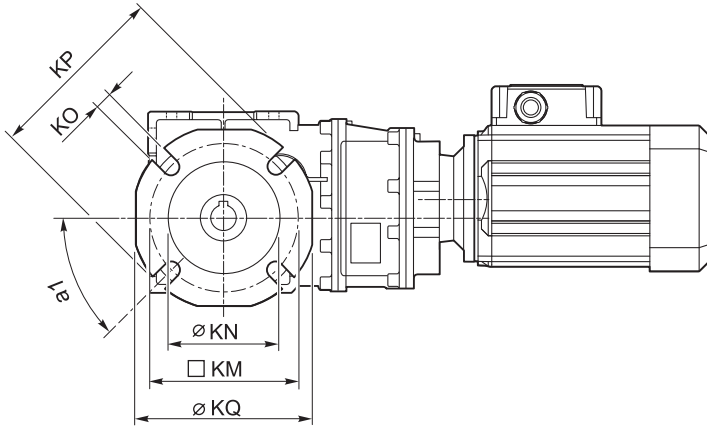


**CMB**

Motoriduttori CA ad assi ortogonali  
AC Helical bevel gearmotors

**MINI** TECNO

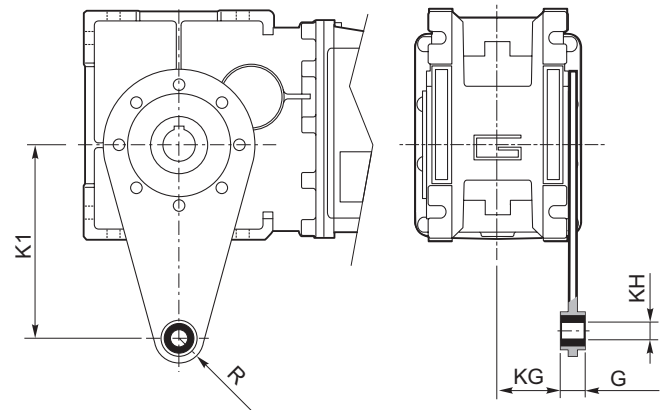
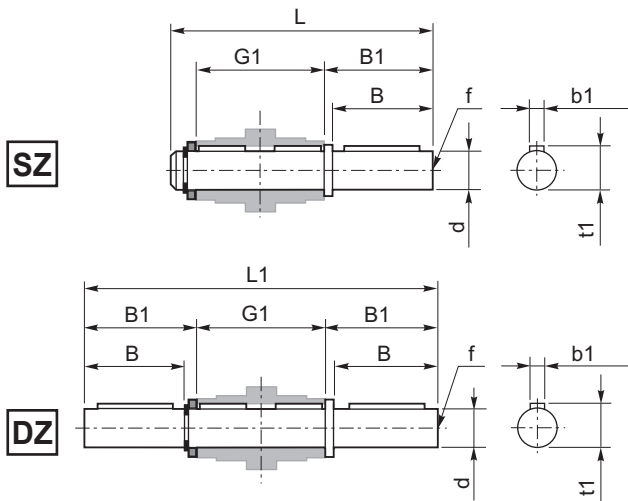
**CMB402/ F...** Flange uscita / Output flanges



CMB	Flange uscita / Output flanges																										
	F					FL					FB																
	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ
<b>402</b>	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112

**Accessori**

**Accessories**



Albero lento / Output shaft

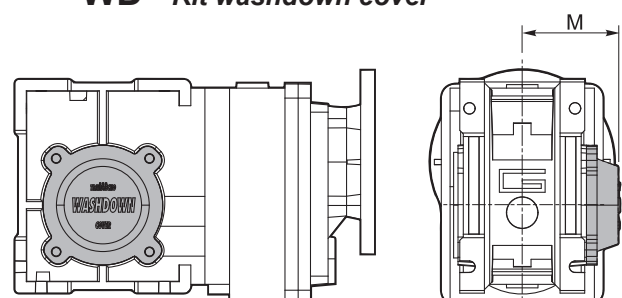
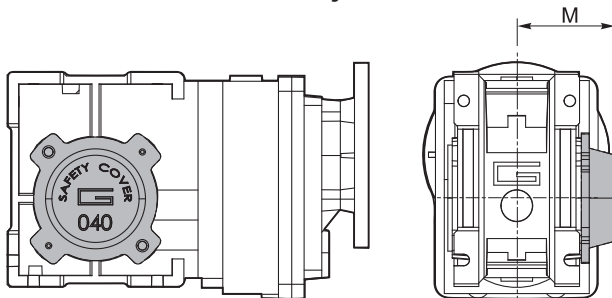
Braccio di reazione / Torque arm

CMB	d h7	B	B1	G1	L	L1	f	b1	t1
<b>402</b>	18	40	43	78	128	164	M6	6	20.5

CMB	K1	G	KG	KH	R
<b>402</b>	100	14	31	10	18

**SC - Safety cover**

**WD - Kit washdown cover**



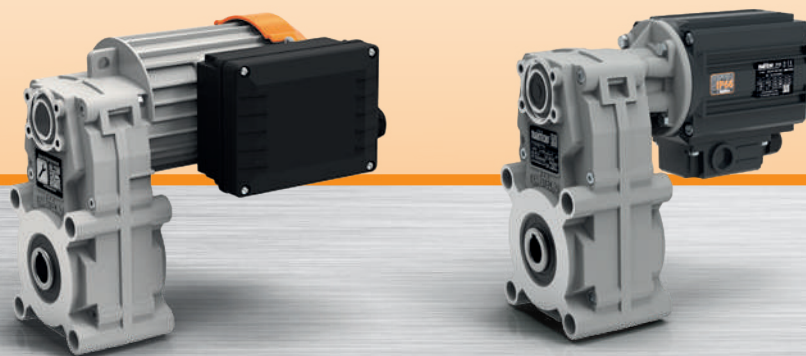
CMB	M
<b>402</b>	54.5

CMB	M
<b>402</b>	55.5

**MINI**  **TECNO**™  
**small** but strong

# KFT105 - FT

Motoriduttori CA pendolari  
AC Helical parallel gearmotors

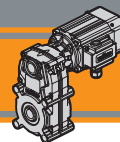


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



AC

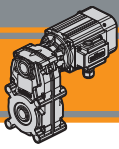




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Designazione	<i>Classification</i>	<b>AG2</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>AG3</b>
Simbologia	<i>Symbols</i>	<b>AG3</b>
Lubrificazione	<i>Lubrication</i>	<b>AG3</b>
Carichi radiali	<i>Radial loads</i>	<b>AG4</b>
Motori applicabili	<i>Motor adapters</i>	<b>AG4</b>
Dati tecnici	<i>Technical data</i>	<b>AG5</b>
Dati tecnici elettrici	<i>Electrical technical data</i>	<b>AG7</b>
Normative di riferimento	<i>Reference standards</i>	<b>AG7</b>
Dimensioni	<i>Dimensions</i>	<b>AG8</b>

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**KFT105  
FT**

**Motoriduttori CA pendolari  
AC Helical parallel gearmotors**



**Caratteristiche tecniche**

**Technical features**

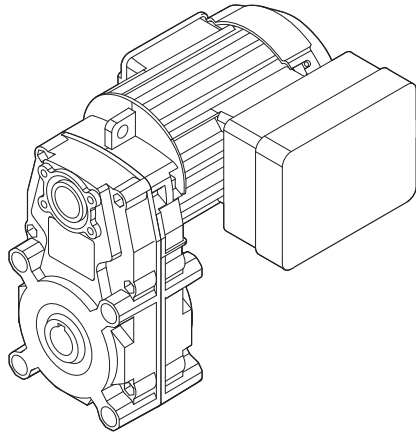
Le caratteristiche principali dei motoriduttori KFT e FT sono:

*KFT and FT gearmotor range has the following main features:*

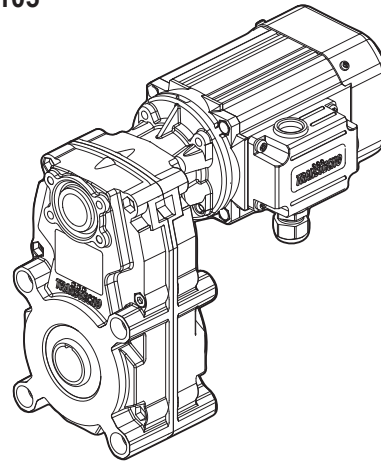
- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore SMT e SMM estrusa in alluminio anodizzato nero
- Carcasse dei riduttori in pressofusione di alluminio
- Motore elettrico SMT e SMM con grado di protezione IP66
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per la taglia motore 56.
- SMT56 adatto al funzionamento con alimentazione da inverter
- SMT e SMM Disponibili nelle versioni autofrenante, servoven-tilata e con certificazione UL.
- Versione KFT105 con motore monofase integrato

- *Compact design*
- *AC single phase and three phase motors available*
- *SMT and SMM motors extruded aluminum housing black ano-dized*
- *Gearbox die-cast aluminum housing*
- *SMT and SMM electric motors in IP66 protection Standard*
- *Permanent synthetic oil long-life lubrication*
- *Ground-hardened helical gears*
- *Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available*
- *PTO 150°C thermal protection for motor size 56.*
- *SMT56 is suitable for inverter duty*
- *Brake motors, forced ventilation motors and UL compliance versions available for SMT and SMM motors.*
- *KFT105 version with integrated single motor phase*

**KFT105**



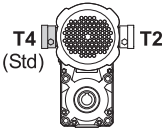
**FT105**



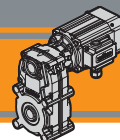
**Designazione**

**Classification**

RIDUTTORE / GEARBOX				
<b>KFT</b>	<b>105/3</b>	<b>U</b>	<b>88.87</b>	<b>O20</b>
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft
<b>KFT</b> 	<b>105/3</b> <b>105/4</b>	<b>U...</b> <b>F...</b>	vedi tabelle see tables	vedi tabelle see tables

MOTORE / MOTOR						
<b>40W</b>	<b>4p</b>	<b>3ph</b>	<b>230/400V</b>	<b>50Hz</b>	<b>T1</b>	<b>TEFC</b>
Potenza Power	Poli Poles	Fasi Phases	Tensione Voltage	Frequenza Frequency	Pos. morsetti- Terminal box pos.	Ventilazione Fan cooling
vedi tabelle see tables	<b>4p</b>	<b>1ph</b> <b>3ph</b>	<b>230V</b> ... <b>230/400V</b> ...	<b>50Hz</b> <b>60Hz</b>		<b>TEFC</b> <b>TENV</b>

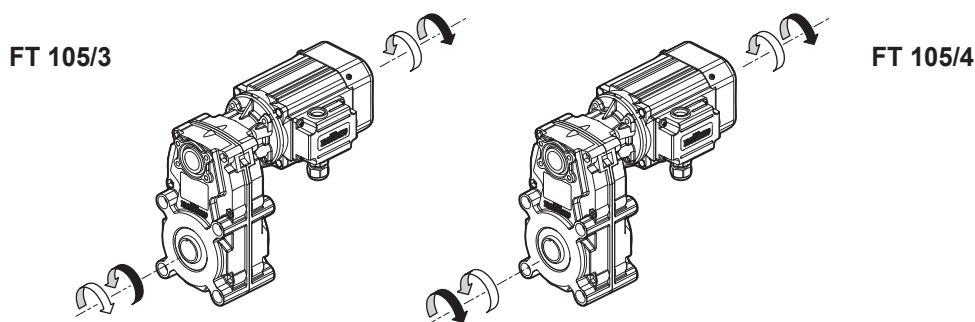



**Designazione**
**Classification**

RIDUTTORE / GEARBOX						
<b>FT</b>	<b>105/3</b>	<b>U</b>	<b>77.07</b>	<b>O20</b>	<b>56</b>	<b>B14</b>
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	IEC 	Forma costruttiva Version
<b>FT</b> 	<b>105/3</b> <b>105/4</b>	<b>U...</b>	vedi tabelle see tables	vedi tabelle see tables	<b>56</b>	<b>B14</b>

MOTORE TRIFASE / THREE PHASE MOTOR										
<b>SMT</b>	<b>56</b>	<b>4</b>	<b>4</b>	<b>0.18 kW</b>	<b>B14</b>	<b>230-400 V</b>	<b>50 Hz</b>	<b>TEFC</b>	<b>BR</b>	<b>T1</b>
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
<b>SMT</b> 	Vedere tab. See tab.	<b>1-2-3-4-5</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.25 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b>	<b>50Hz</b>  <b>60Hz</b>	<b>TEFC</b>  <b>TENV</b>	 <b>AB1</b> <b>AC1</b> <b>AD1</b>	<b>T1 (Std)</b>  <b>T4</b> <b>T2</b> <b>T3</b>

MOTORE MONOFASE / SINGLE PHASE MOTOR										
<b>SMM</b>	<b>56</b>	<b>4</b>	<b>4</b>	<b>0.18 kW</b>	<b>B14</b>	<b>230 V</b>	<b>50 Hz</b>	<b>TEFC</b>	<b>UL-CSA</b>	<b>T1</b>
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
<b>SMM</b> 	Vedere tab. See tab.	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.18 kW</b>	<b>B14</b>	<b>230V</b>	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>	 <b>AD1</b>	<b>T1 (Std)</b>  <b>T4</b> <b>T2</b> <b>T3</b>

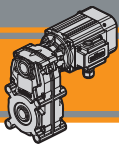
**Sensi di rotazione**
**Direction of rotation**

**Simbologia**
**Symbols**

$n_1$	[ $\text{min}^{-1}$ ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[ $\text{min}^{-1}$ ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

**Lubrificazione**
**Lubrication**

Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*



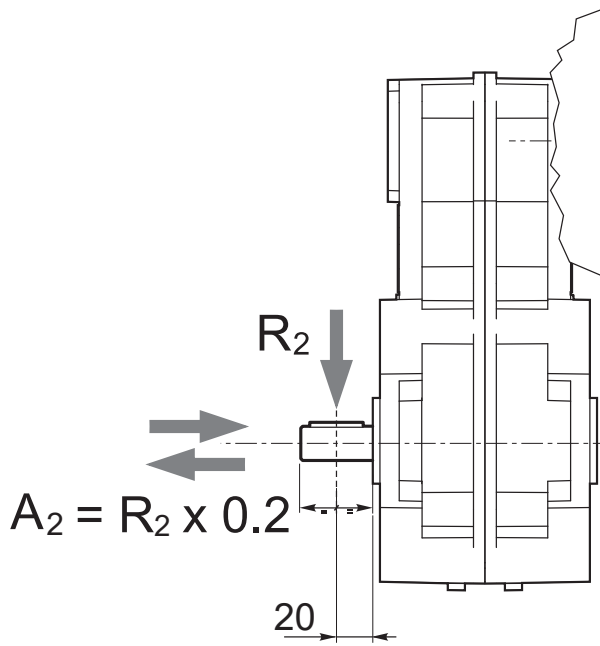
**KFT105  
FT**

**Motoriduttori CA pendolari  
AC Helical parallel gearmotors**



**Carichi radiali**

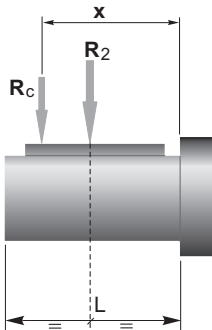
**Radial loads**



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]
	KFT105 FT105
70	1500
40	1700
30	1850
20	2000
10	2000
5	2000

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:



	KFT105 FT105
a	82
b	62
$R_{2MAX}$	2000

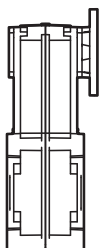
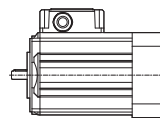
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

a, b = valori riportati nella tabella  
a, b = values given in the table

$$R \leq R_c$$

**Motori applicabili**

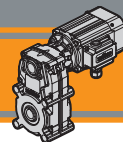
**IEC Motor adapters**



		SMT		SMM	
		5014	5624	5014	5624
		5024	5634	5024	5634
		5034	5644	5034	5644
		5044	5654		
<b>FT</b>	<b>105/3</b>	20.57 - 315.05			
<b>FT</b>	<b>105/4</b>	368.19 - 929.4			

20.57 - 929.4

Rapporti di riduzione i  
Ratio i



### Dati tecnici

### Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	M <sub>n</sub> [Nm]	i	
------------------------	----------------------------------------	------------------------	----	------------------------	---	--

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	M <sub>n</sub> [Nm]	i	
------------------------	----------------------------------------	------------------------	----	------------------------	---	--

#### 0.025

68	3	12.1	40	20.57	KFT105/3
42	5	9.4	50	33.32	
32	7	9.1	65	44.36	
26	9	7.4	65	54.87	
19	12	5.6	65	71.84	
18	12	5.3	65	77.07	
16	14	4.6	65	88.87	
11	20	3.2	65	124.81	
7.7	29	2.2	65	181.35	
6.2	36	1.8	65	224.32	
4.4	51	1.3	65	315.05	
3.8	58	1.1	65	368.19	KFT105/4
2.6	84	0.8	65	534.98	
2.1	104	0.6	65	661.76	
1.5	120	0.5	65	929.40	

#### 0.09

68	12	3.4	40	20.57	KFT105/3
42	19	2.6	50	33.32	
32	26	2.5	65	44.36	
26	32	2.1	65	54.87	
19	41	1.6	65	71.84	
18	44	1.5	65	77.07	
16	51	1.3	65	88.87	
11	72	0.9	65	124.81	
7.7	105	0.6	65	181.35	
6.2	110	0.6	65	224.32	

#### 0.04

68	5	7.6	40	20.57	KFT105/3
42	9	5.9	50	33.32	
32	11	5.7	65	44.36	
26	14	4.6	65	54.87	
19	18	3.5	65	71.84	
18	20	3.3	65	77.07	
16	23	2.9	65	88.87	
11	32	2.0	65	124.81	
7.7	47	1.4	65	181.35	
6.2	58	1.1	65	224.32	
4.4	81	0.8	65	315.05	
3.8	92	0.7	65	368.19	KFT105/4
2.6	120	0.5	65	534.98	
2.1	120	0.5	65	661.76	

#### 0.12

68	16	2.5	40	20.57	KFT105/3
42	26	2.0	50	33.32	
32	34	1.9	65	44.36	
26	42	1.5	65	54.87	
19	55	1.2	65	71.84	
18	59	1.1	65	77.07	
16	68	1.0	65	88.87	
11	96	0.7	65	124.81	
7.7	110	0.6	65	181.35	

#### 0.06

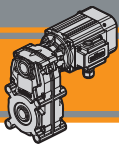
68	8	5.1	40	20.57	KFT105/3
42	13	3.9	50	33.32	
32	17	3.8	65	44.36	
26	21	3.1	65	54.87	
19	28	2.4	65	71.84	
18	30	2.2	65	77.07	
16	34	1.9	65	88.87	
11	48	1.4	65	124.81	
7.7	70	0.9	65	181.35	
6.2	86	0.8	65	224.32	
4.4	110	0.6	65	315.05	
3.8	120	0.5	65	368.19	KFT105/4

N.B.

Verificare sempre che la coppia M<sub>2</sub> utilizzata non ecceda il valore indicato nelle caselle in grigio

N.B.

Please check that the output torque M<sub>2</sub> does not exceed the value in the grey areas

**FT****Motoriduttori CA pendolari**  
**AC Helical parallel gearmotors****Dati tecnici****Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.04</b>					
SMT5014	<b>68</b>	5	7.6	20.57	<b>FT105/3</b>
SMM5014	<b>42</b>	9	5.9	33.32	
(1400 min <sup>-1</sup> )	<b>32</b>	11	5.7	44.36	
	<b>26</b>	14	4.6	54.87	
	<b>19</b>	18	3.5	71.84	
	<b>18</b>	20	3.3	77.07	
	<b>16</b>	23	2.9	88.87	
	<b>11</b>	32	2.0	124.81	
	<b>7.7</b>	47	1.4	181.35	
	<b>6.2</b>	58	1.1	224.32	
	<b>4.4</b>	81	0.8	315.05	
	<b>3.8</b>	92	0.7	368.19	<b>FT105/4</b>
	<b>2.6</b>	120	0.5	534.98	
	<b>2.1</b>	120	0.5	661.76	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.12</b>					
SMT5044	<b>68</b>	16	2.5	20.57	<b>FT105/3</b>
SMT5634	<b>42</b>	26	2.0	33.32	
SMM5624	<b>32</b>	34	1.9	44.36	
(1400 min <sup>-1</sup> )	<b>26</b>	42	1.5	54.87	
	<b>19</b>	55	1.2	71.84	
	<b>18</b>	59	1.1	77.07	
	<b>16</b>	68	1.0	88.87	
	<b>11</b>	96	0.7	124.81	
	<b>7.7</b>	110	0.6	181.35	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.06</b>					
SMT5024	<b>68</b>	8	5.1	20.57	<b>FT105/3</b>
SMM5024	<b>42</b>	13	3.9	33.32	
(1400 min <sup>-1</sup> )	<b>32</b>	17	3.8	44.36	
	<b>26</b>	21	3.1	54.87	
	<b>19</b>	28	2.4	71.84	
	<b>18</b>	30	2.2	77.07	
	<b>16</b>	34	1.9	88.87	
	<b>11</b>	48	1.4	124.81	
	<b>7.7</b>	70	0.9	181.35	
	<b>6.2</b>	86	0.8	224.32	
	<b>4.4</b>	92	0.7	315.05	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.18</b>					
SMT5644	<b>68</b>	24	1.7	20.57	<b>FT105/3</b>
SMM5644	<b>42</b>	38	1.3	33.32	
(1400 min <sup>-1</sup> )	<b>32</b>	51	1.3	44.36	
	<b>26</b>	63	1.0	54.87	
	<b>19</b>	83	0.8	71.84	
	<b>18</b>	89	0.7	77.07	
	<b>16</b>	92	0.7	88.87	
	<b>11</b>	110	0.6	124.81	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>					
SMT5654	<b>68</b>	33	1.2	20.57	<b>FT105/3</b>
(1400 min <sup>-1</sup> )	<b>42</b>	53	0.9	33.32	
	<b>32</b>	71	0.9	44.36	

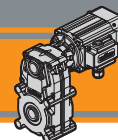
P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.09</b>					
SMT5034	<b>68</b>	12	3.4	20.57	<b>FT105/3</b>
SMM5034	<b>42</b>	19	2.6	33.32	
SMT5624	<b>32</b>	26	2.5	44.36	
SMM5624	<b>26</b>	32	2.1	54.87	
(1400 min <sup>-1</sup> )	<b>19</b>	41	1.6	71.84	
	<b>18</b>	44	1.5	77.07	
	<b>16</b>	51	1.3	88.87	
	<b>11</b>	72	0.9	124.81	
	<b>7.7</b>	105	0.6	181.35	
	<b>6.2</b>	110	0.6	224.32	

N.B.  
Verificare sempre che la coppia M<sub>2</sub> utilizzata non ecceda il valore indicato nelle caselle in grigio  
N.B.  
*Please check that the output torque M<sub>2</sub> does not exceed the value in the grey areas*



Motori Motors	SMT		SMM	
		5014 5024 5034 5044	5624 5634 5644 5654	5014 5024 5034
IEC	56 B14		56 B14	

**Dati tecnici elettrici****Electrical technical data**


**Dati tecnici elettrici - KFT 105**
**KFT 105 - Electrical technical data**

1 Ph	P <sub>n</sub> [W]	V [V]	F [Hz]	I <sub>n</sub> [A]	I <sub>s</sub> [A]	cosØ	C [µF]	TEFC Servizio Duty	TENV Servizio Duty
	25	230	50	0.42	0.84	0.87	6.0	S1 100%	S3 30%
	40			0.47	0.86	0.91	6.3		
	60			0.74	1.50	0.82	8.0		
	90			0.82	1.60	0.93	12.5		
	120			1.38	3.10	0.81	14.0		

3 Ph	P <sub>n</sub> [W]	V [V]	F [Hz]	I <sub>n</sub> [A]	I <sub>s</sub> [A]	cosØ	TEFC Servizio Duty	TENV Servizio Duty
	25	230	50	0.41	0.97	0.54	S1 100%	S3 30%
		400						
	40	230	50	0.43	0.97	0.62		
		400						
	60	230	50	0.72	1.80	0.48		
		400						
	90	230	50	0.74	1.80	0.60		
		400						
	120	230	50	1.34	3.70	0.50		
		400						

**Nota:**

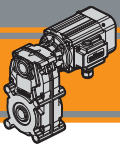
Classe di rendimento Standard IE1

**Note:**

Standard efficiency IE1

**Normative di riferimento**
**Reference standards**

	Europe EN	World IEC	Italy CEI
<b>Requisiti generali per macchine elettriche</b> <i>General requirements electrical machines</i>	EN 60034-1:2010	IEC 60034-1:2010	CEI EN 60034-1:2010
<b>Classificazione del grado di protezione</b> <i>Classification degree of protection provided by enclosures</i>	EN 60034-5:2001	IEC 60034-5:2001	CEI EN 60034-5:2001
<b>Sistema di raffreddamento</b> <i>Cooling system</i>	EN 60034-6:1993	IEC 60034-6:1993	CEI EN 60034-6:1993
<b>Modalità di montaggio</b> <i>Mounting arrangements</i>	EN 60034-7:1993	IEC 60034-7:1993	CEI EN 60034-7:1993



### Dimensioni

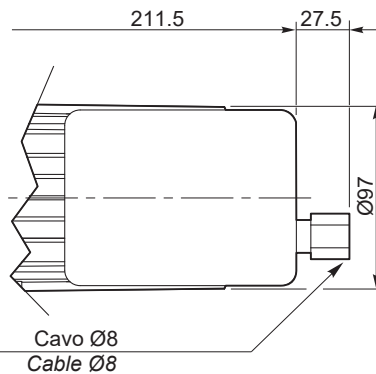
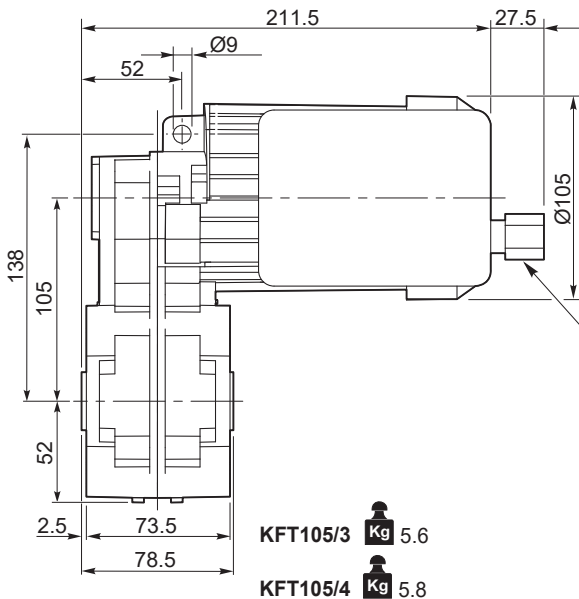
### Dimensions

## KFT 105... 25W - 40W - 60W - 90W

### KFT 105...1 Ph...TEFC

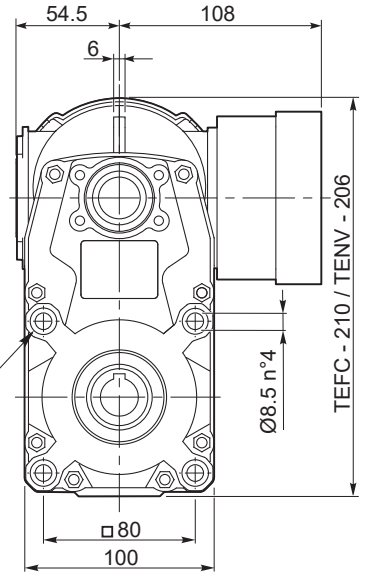
### KFT 105...1 Ph...TENV

S3 servizio duty 30%



Lamature Ø14  
Prof. 10 mm n°4  
Spot-facing Ø14  
Deep 10 mm n°4

KFT105/3 **Kg** 5.5  
KFT105/4 **Kg** 5.7

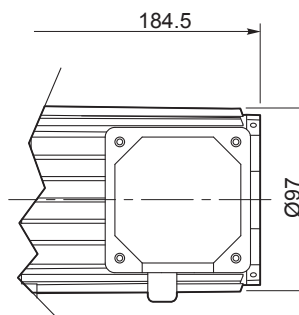
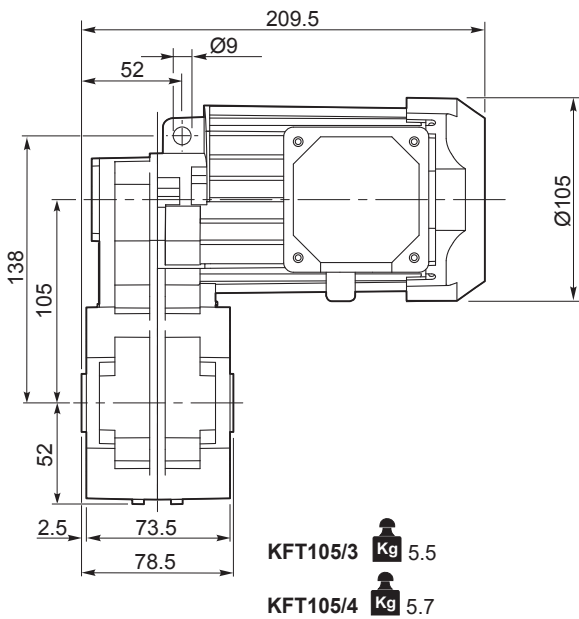


NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

### KFT 105...3 Ph... TEFC

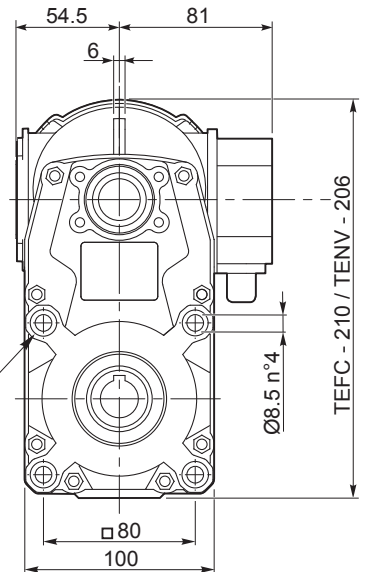
### KFT 105...3 Ph... TENV

S3 servizio duty 30%



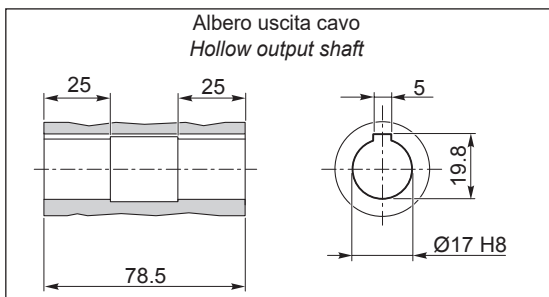
Lamature Ø14  
Prof. 10 mm n°4  
Spot-facing Ø14  
Deep 10 mm n°4

KFT105/3 **Kg** 5.4  
KFT105/4 **Kg** 5.6

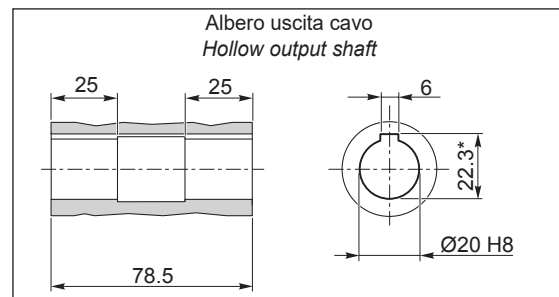


NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

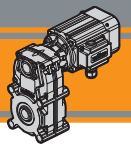
### O17



### O20



\*Sede linguetta ribassata / Special Keyway



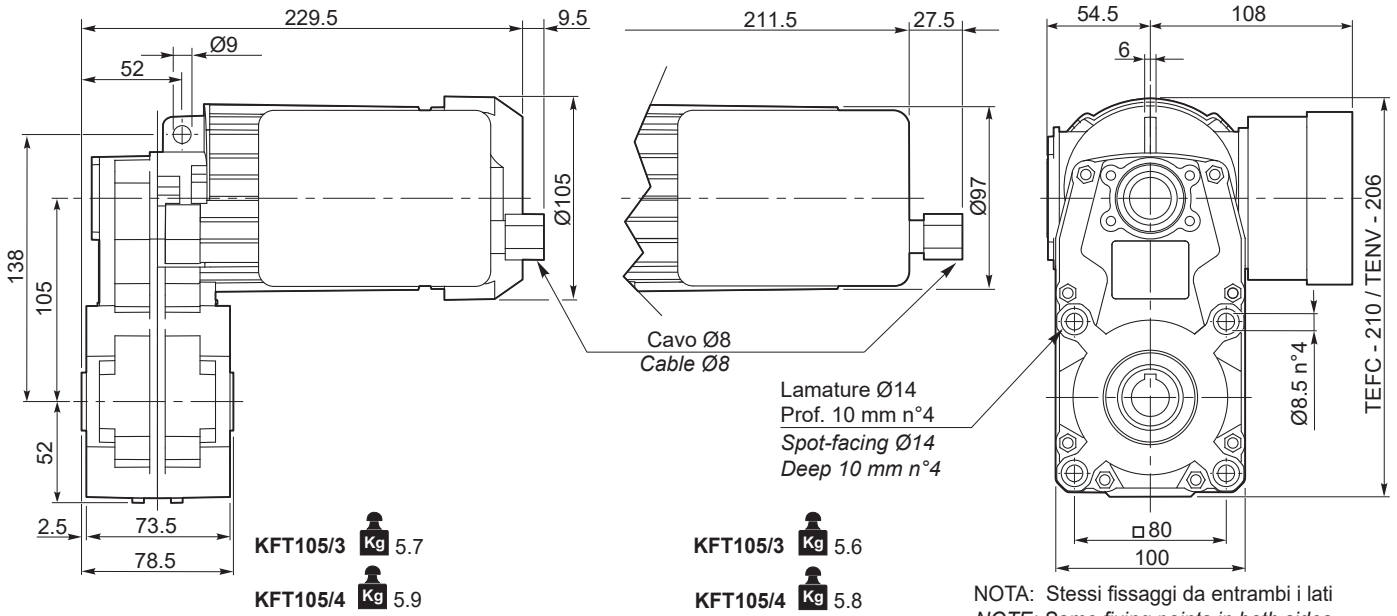
Dimensioni

Dimensions

**KFT 105... 120W**

**KFT 105...1 Ph... TEFC**

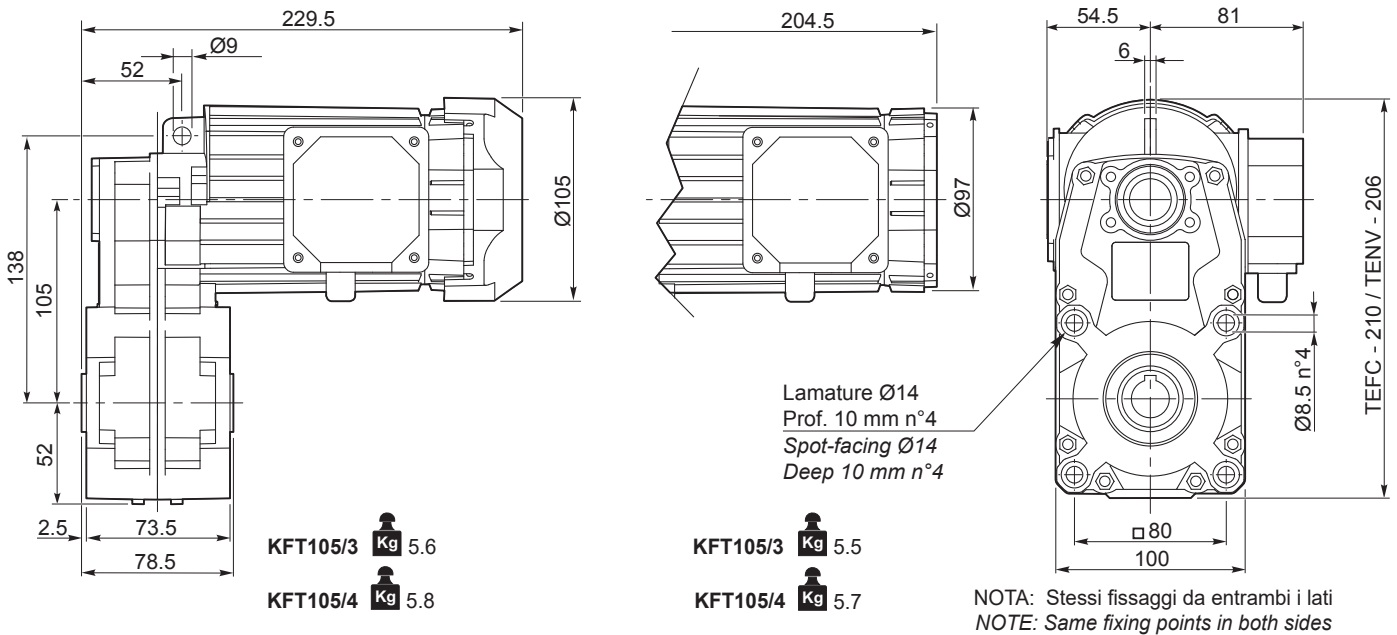
**KFT 105...1 Ph...TENV S3 <sup>servizio</sup> <sub>duty</sub> 30%**



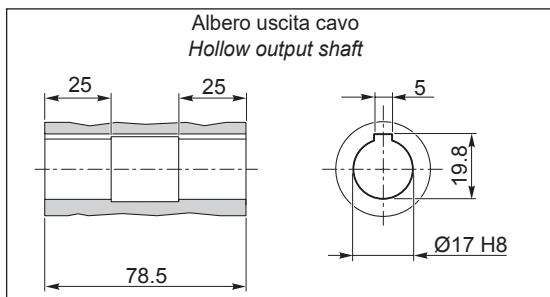
AC

**KFT 105...3 Ph... TEFC**

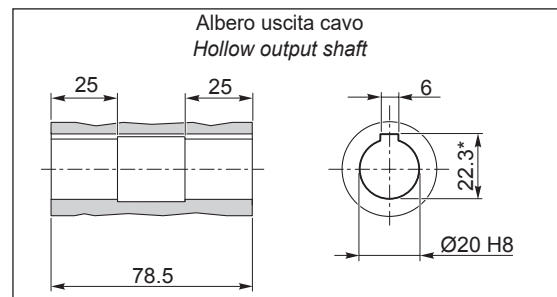
**KFT 105...3 Ph... TENV S3 <sup>servizio</sup> <sub>duty</sub> 30%**



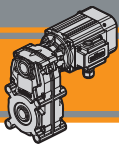
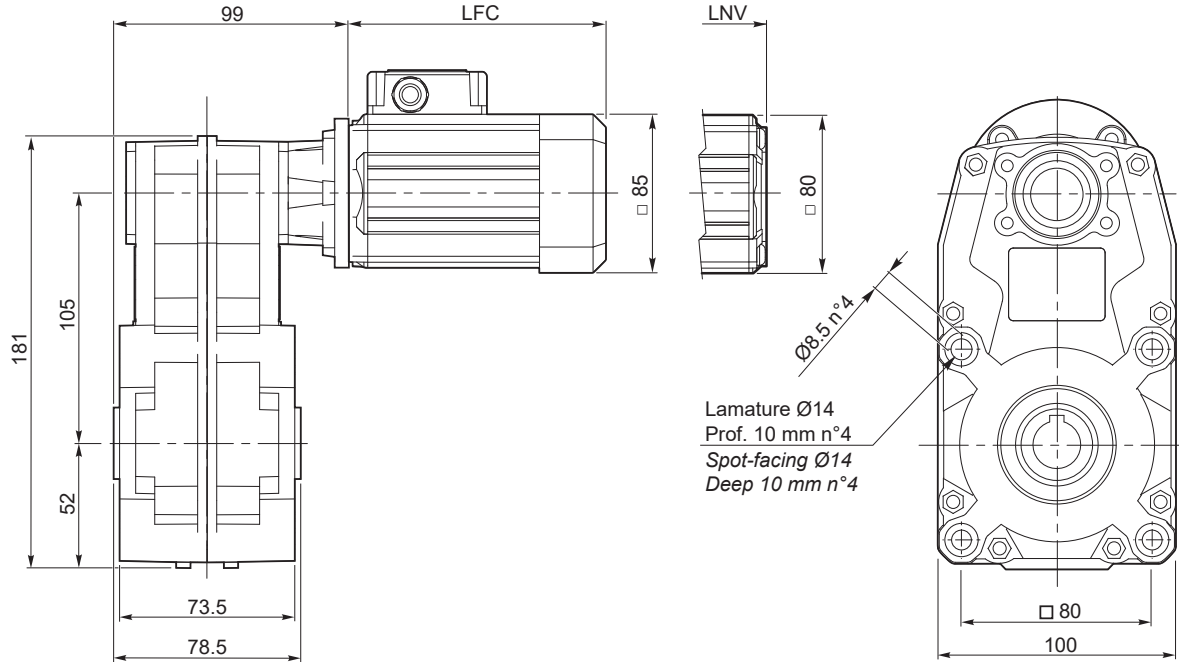
**O17**



**O20**



\*Sede linguetta ribassata/ Special Keyway

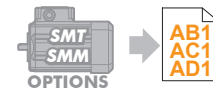
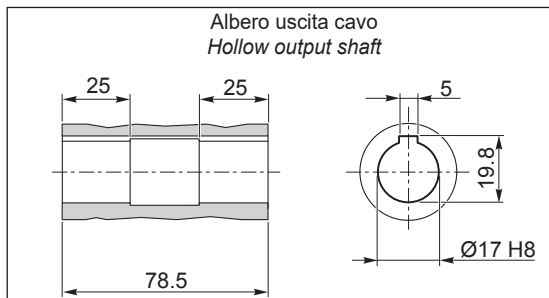
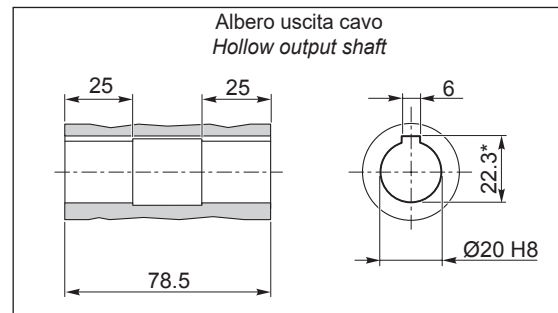
**FT****Motoriduttori CA pendolari  
AC Helical parallel gearmotors****MINI  
TECNO****Dimensioni****Dimensions****FT105 U****FT 105...U****SMT50...TEFC  
SMM50... TEFC****SMT50...TENV  
SMM50... TENV****S3 servizio 30%**  
*duty*

NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

SMT	LFC	LNV	Kg	
5014	135.5	108.5	6.5	
5024	150.5	123.5	6.9	
5034	175.5	148.5	7.7	
5044	200.5	173.5	8.4	

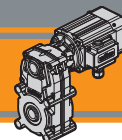
SMM	LFC	LNV	Kg	
5014	150.5	123.5	6.9	
5024	175.5	148.5	7.7	
5034	200.5	173.5	8.4	

**Nota:**  
il condensatore sarà fornito a corredo  
**Note:**  
the capacitor will be supplied separately

**O17****O20**

\*: Sede linguetta ribassata / Special keyway



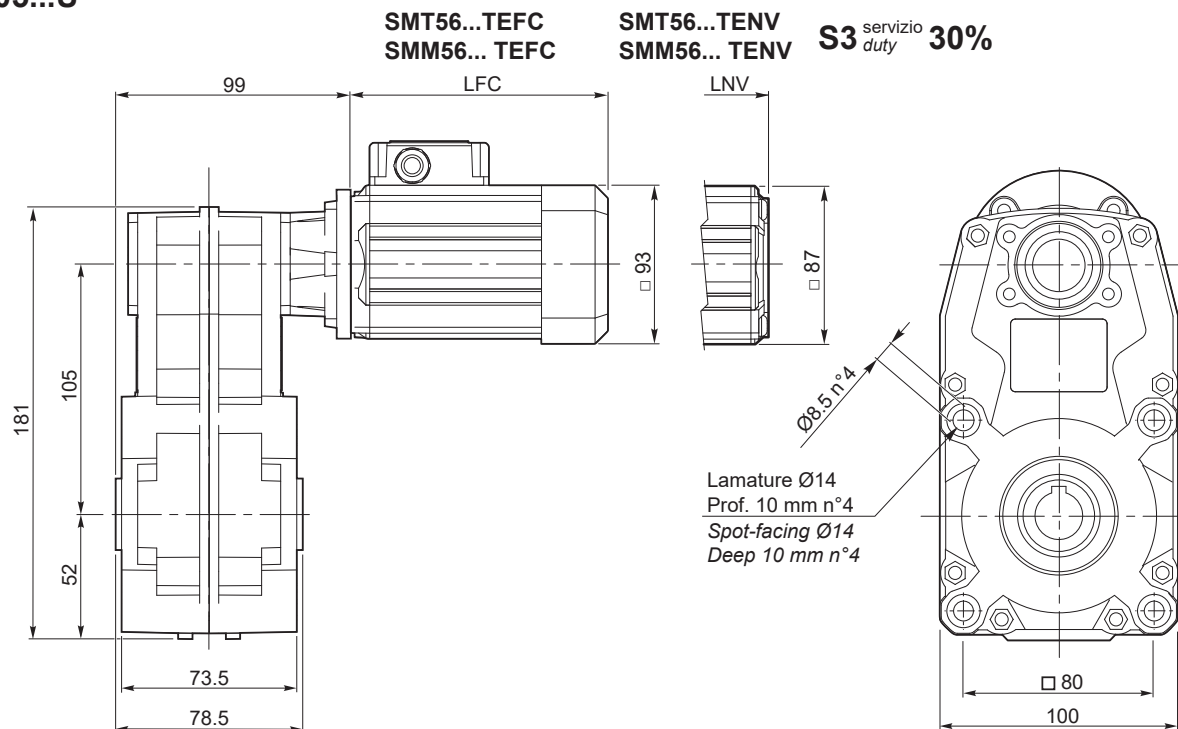


Dimensioni

Dimensions

FT105 U

FT 105...U



NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

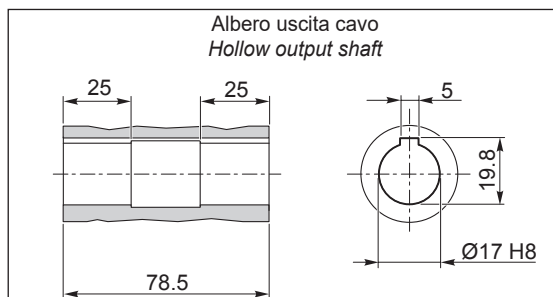
SMT	LFC	LNV	Kg	
5624	141	117	7	
5634	151	127	7.4	
5644	186	162	8.6	
5654	206	182	9.3	

SMM	LFC	LNV	Kg	
5624	151	127	7.3	
5634	171	147	7.9	
5644	206	182	9.2	

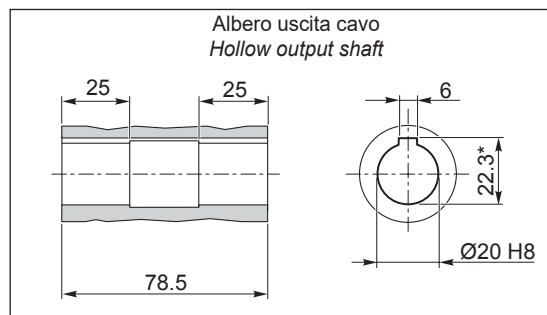
**Nota:**  
il condensatore sarà fornito a corredo  
**Note:**  
the capacitor will be supplied separately



O17



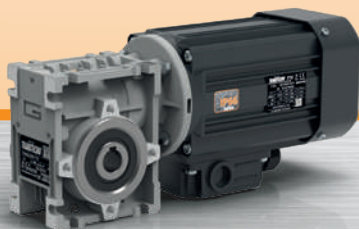
O20



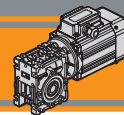
\*: Sede linguetta ribassata / Special keyway



## Motoriduttori CA a vite senza fine AC Wormgearmotors



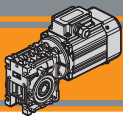




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Rendimento	<i>Efficiency</i>	<b>AH6</b>
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CM  
CMP

## Caratteristiche tecniche

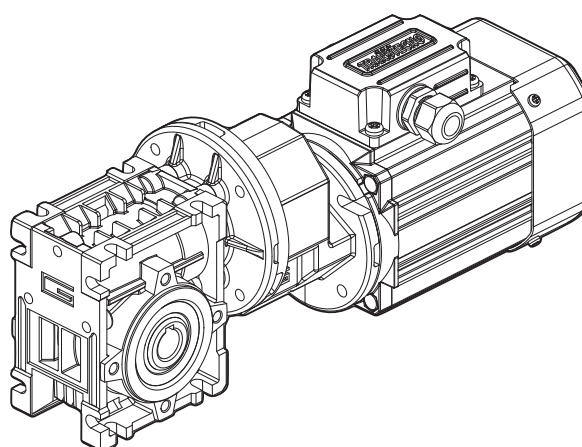
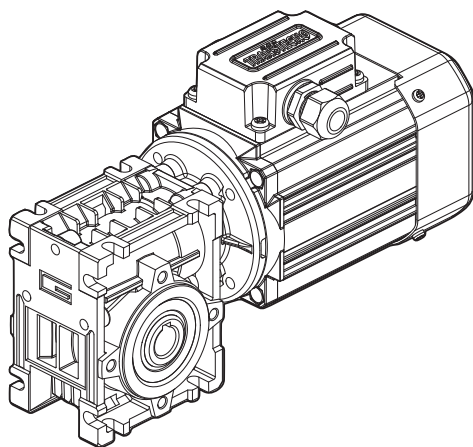
## Technical features

Le caratteristiche principali dei motoriduttori CM e CMP sono:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Carcasse dei riduttori in pressofusione di alluminio
- Motore elettrico AC con grado di protezione IP66
- Lubrificazione permanente con olio sintetico
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56, 63 e 71.
- SMT56, SMT63 e SMT71 adatti al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servovenilata e con certificazione UL.

CM and CMP gearmotors range has the following main features:

- Compact design
- AC single phase and three phase motors available
- Motor extruded aluminum housing black anodized
- Gearbox die-cast aluminum housing
- AC electric motor in IP66 protection Standard
- Permanent synthetic oil long-life lubrication
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56, 63 and 71.
- SMT56, SMT63 and SMT71 are suitable for inverter duty
- Brake motors, forced ventilation motors and UL compliance versions available.



## Designazione

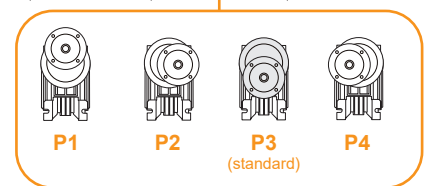
## Classification

### RIDUTTORI A VITE SENZA FINE / WORMGEARBOXES

RIDUTTORE / GEARBOX									
CM	040	U	10	63	B14	SZDX	BRSX	90	VS
Tipo Type	Grandezza Size	Versione riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Opzioni Options
	026 026 (D11) 026 (D14) 030 040	U F...	Vedere tabella See tables	56.. 63.. 71..	B14	SZDX SZSX DZ	BRDX BRSX 	0° 90° 180° 270°	VS

### RIDUTTORI A VITE SENZA FINE CON PRECOPPIA / PRE-STAGE WORMGEARBOXES

RIDUTTORE / GEARBOX										
CMP	063/040	U	90	63	B14	SZDX	BRSX	90	P4	VS
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio precoppia Pre stage mounting position	Opzioni Options
	056/030 056/040 063/040	U F...	Vedere tabella See tables	56.. 63..	B5 B14	SZDX SZSX DZ	BRDX BRSX 	0° 90° 180° 270°	P1 P2 P3 (standard) P4	VS

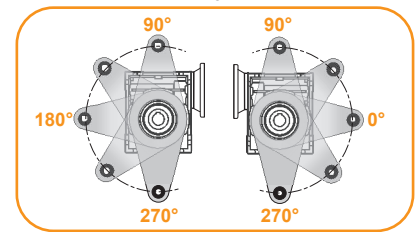
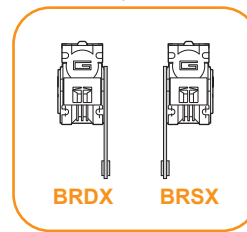
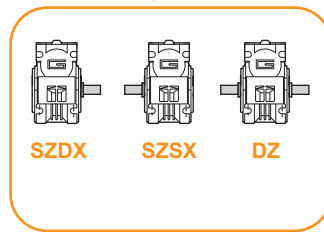
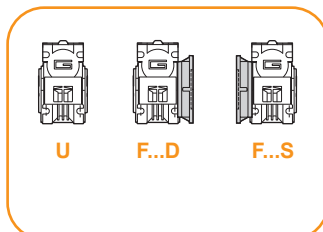


Versione Riduttore  
Gearbox Version

Albero di uscita  
Output shaft

Braccio di reazione  
Torque arm

Angolo  
Angle



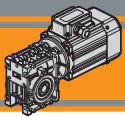
**NOTA:** il braccio di reazione viene fornito smontato.  
**NOTE:** the torque arm will be supplied not assembled.

### MOTORE TRIFASE / THREE PHASE MOTOR

SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
	Vedere tab. See tab.	1-2-3-4-5	4	0.04 kW ... 0.75 kW	B14	230-400 V 460V	50Hz 60Hz	TEFC TENV	 AB1 AC1 AD1	T1 (Std)  T4 T2 T3

### MOTORE MONOFASE / SINGLE PHASE MOTOR

SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	UL-CSA	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
	Vedere tab. See tab.	1-2-3-4	4	0.04 kW ... 0.55 kW	B14	230V	50Hz	TEFC TENV	 AD1	T1 (Std)  T4 T2 T3

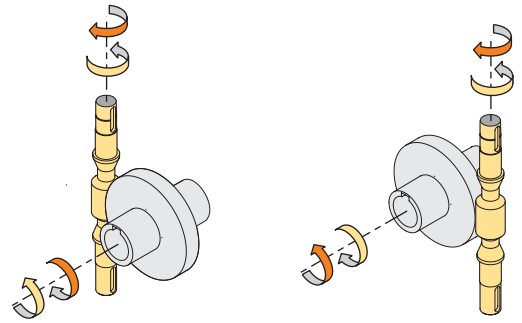
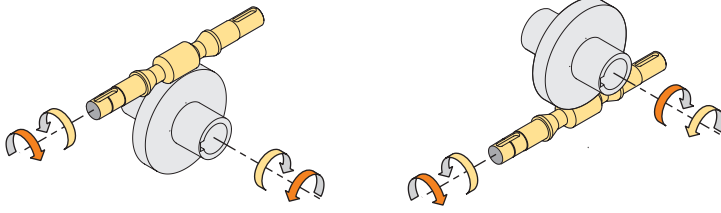


CM  
CMP

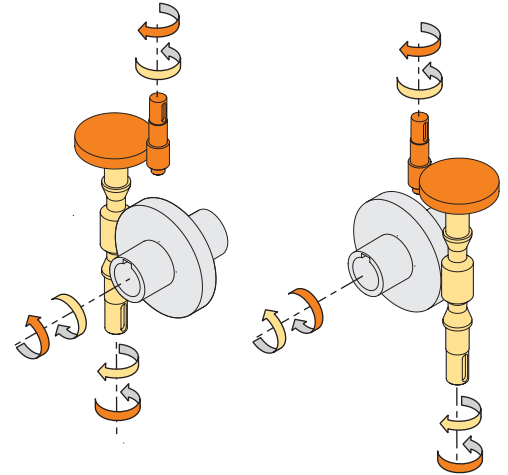
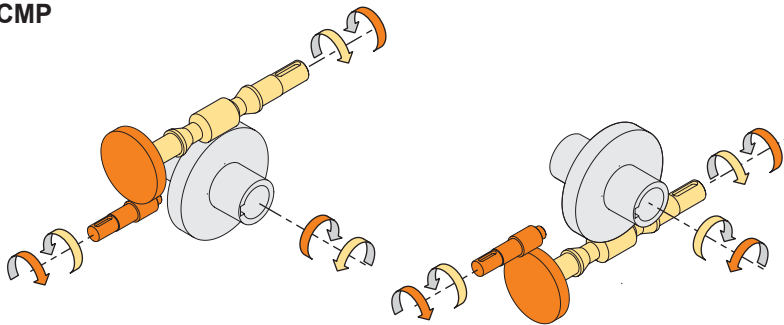
Sensi di rotazione

Direction of rotation

CM



CMP



Simbologia

Symbols

$n_1$	[ $\text{min}^{-1}$ ]	Velocità in ingresso / <i>Input speed</i>	$R_d$	%	Rendimento dinamico / <i>Dynamic efficiency</i>
$n_2$	[ $\text{min}^{-1}$ ]	Velocità in uscita / <i>Output speed</i>	$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$i$		Rapporto di riduzione / <i>Ratio</i>	$R_s$	%	Rendimento statico / <i>Static efficiency</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>	$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$	[Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>	$Z$		Numero di principi della vite / <i>Worm starts</i>
$sf$		Fattore di servizio / <i>Service factor</i>	$\beta$		Angolo d'elica / <i>Helix angle</i>

Lubrificazione

Lubrication

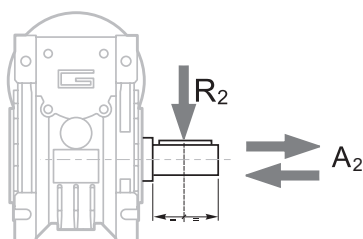
I riduttori a vite senza fine della serie CM sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

*Permanent synthetic oil long-life lubrication allow to use CM wormgearbox range in all mounting position.*



Carichi radiali

Radial loads

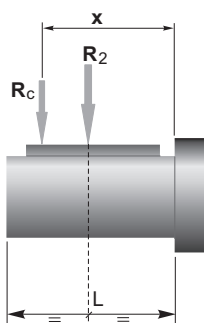


$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]		
	CM026	CM030	CM040
187	400	674	1264
140	490	743	1392
93	580	851	1596
70	610	936	1754
56	610	1008	1890
47	610	1069	2004
35	610	1179	2210
28	610	1270	2381
23	610	1356	2542
18	610	1471	2759
14	610	1600	3000
		CMP... /030	CMP... /040

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:



$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

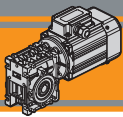
a, b = valori riportati nella tabella  
a, b = values given in the table

	CM	CM / CMP	
	026	030	040
a	56	65	84
b	43	50	64
R <sub>2MAX</sub>	610	1600	3000

Dati di dentatura

Toothing data

	Dati della coppia vite- corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	β	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'



CM  
CMP

Motoriduttori CA a vite senza fine  
AC Wormgearmotors



Rendimento

Efficiency

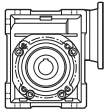
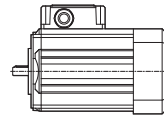
	$n_1$ [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	89	87	85	83	80		73	68	64	60		
	1400		87	84	83	78	74		66	61	57	53		
	900		84	83	80	75	71		61	57	52	48		
		Rs	72	71	68	61	56		46	41	36	34		
CM030	2800	Rd	89	88	86	84	81	78	74	70	65	62	57	52
	1400		86	85	84	79	75	72	67	62	58	55	48	43
	900		84	83	81	75	71	68	62	58	53	49	43	39
		Rs	72	67	63	55	50	43	39	35	31	27	23	21
CM040	2800	Rd	90	89	87	84	83	80	77	73	69	66	60	56
	1400		88	86	84	81	78	74	70	65	60	58	52	46
	900		86	84	82	77	74	70	66	60	57	53	46	41
		Rs	74	71	67	60	55	51	45	40	36	32	28	24



Rendimento teorico del riduttore dopo il rodaggio  
Theoretical efficiency of the gearbox after the first running period

Motori applicabili

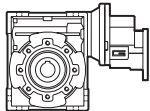
Motor adapters



		SMT				SMM			
		5014 5024 5034 5044	5624 5634 5644 5654	6324 6334 6344	7124 7134 7144	5014 5024 5034	5624 5634 5644	6324 6334	7124 7134
CM	026	5 - 60				5 - 60			
	030	5 - 100		5-50		5 - 100		5-50	
	040	5 - 100			5-30	5 - 100			5-30

5 - 100

Rapporti di riduzione i  
Ratio i



		SMT			SMM			
		5014 5024 5034 5044	5624 5634 5644 5654	6324 6334 6344	5014 5024 5034	5624 5634 5644	6324 6334	
CMP	056/030	60 - 150				60 - 150		
	056/040	60 - 300				60 - 300		
	063/040			60 - 120			60 - 120	

60 - 300

Rapporti di riduzione i  
Ratio i

## Dati tecnici

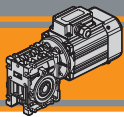
## Technical data









$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.04</b>							<b>0.06</b>						
SMT5014	<b>280</b>	1.2	11.0	5	<b>CM026</b>		SMT5024	<b>280</b>	1.8	10.2	5	<b>CM030</b>	
SMM5014	<b>187</b>	1.7	8.1	7.5	<b>CM026</b>		SMM5024	<b>187</b>	2.6	7.7	7.5	<b>CM030</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	2.3	6.2	10	<b>CM026</b>		(1400 min <sup>-1</sup> )	<b>140</b>	3.4	6.1	10	<b>CM030</b>	
	<b>93</b>	3.2	4.4	15	<b>CM026</b>			<b>93</b>	4.9	4.3	15	<b>CM030</b>	
	<b>70</b>	4.0	3.5	20	<b>CM026</b>			<b>70</b>	6.1	3.1	20	<b>CM030</b>	
	<b>47</b>	5.4	2.8	30	<b>CM026</b>			<b>56</b>	7.4	2.7	25	<b>CM030</b>	
	<b>35</b>	6.7	2.1	40	<b>CM026</b>			<b>47</b>	8.2	2.7	30	<b>CM030</b>	
	<b>28</b>	7.8	1.7	50	<b>CM026</b>			<b>35</b>	10	2.0	40	<b>CM030</b>	
	<b>23</b>	8.7	1.4	60	<b>CM026</b>			<b>28</b>	12	1.6	50	<b>CM030</b>	
								<b>23</b>	14	1.3	60	<b>CM030</b>	
	<b>280</b>	1.2	15.3	5	<b>CM030</b>			<b>23</b>	16	1.6	60		<b>CMP056/030</b>
	<b>187</b>	1.7	11.5	7.5	<b>CM030</b>			<b>19</b>	19	1.4	75		<b>CMP056/030</b>
	<b>140</b>	2.3	9.2	10	<b>CM030</b>			<b>18</b>	16	1.0	80	<b>CM030</b>	
	<b>93</b>	3.2	6.5	15	<b>CM030</b>			<b>16</b>	21	1.6	90		<b>CMP056/030</b>
	<b>70</b>	4.1	4.6	20	<b>CM030</b>			<b>14</b>	18	0.8	100	<b>CM030</b>	
	<b>56</b>	4.9	4.1	25	<b>CM030</b>			<b>12</b>	25	1.1	120		<b>CMP056/030</b>
	<b>47</b>	5.5	4.0	30	<b>CM030</b>			<b>9</b>	29	0.9	150		<b>CMP056/030</b>
	<b>35</b>	6.8	3.0	40	<b>CM030</b>								
	<b>28</b>	7.9	2.4	50	<b>CM030</b>			<b>35</b>	11	3.9	40	<b>CM040</b>	
	<b>23</b>	9.0	1.9	60	<b>CM030</b>			<b>28</b>	12	3.2	50	<b>CM040</b>	
	<b>23</b>	11	2.4	60		<b>CMP056/030</b>		<b>23</b>	14	2.5	60	<b>CM040</b>	
	<b>19</b>	12	2.1	75		<b>CMP056/030</b>		<b>23</b>	17	3.4	60		<b>CMP056/040</b>
	<b>18</b>	10	1.4	80	<b>CM030</b>			<b>19</b>	20	2.6	75		<b>CMP056/040</b>
	<b>16</b>	14	2.3	90		<b>CMP056/030</b>		<b>18</b>	17	1.9	80	<b>CM040</b>	
	<b>14</b>	12	1.2	100	<b>CM030</b>			<b>16</b>	23	3.1	90		<b>CMP056/040</b>
	<b>12</b>	17	1.7	120		<b>CMP056/030</b>		<b>14</b>	19	1.6	100	<b>CM040</b>	
	<b>9</b>	20	1.4	150		<b>CMP056/030</b>		<b>12</b>	28	2.2	120		<b>CMP056/040</b>
								<b>9</b>	32	1.8	150		<b>CMP056/040</b>
	<b>23</b>	9.5	3.8	60	<b>CM040</b>			<b>8</b>	35	1.5	180		<b>CMP056/040</b>
	<b>23</b>	11	5.2	60		<b>CMP056/040</b>		<b>6</b>	41	1.1	240		<b>CMP056/040</b>
	<b>19</b>	13	3.9	75		<b>CMP056/040</b>		<b>5</b>	46	0.9	300		<b>CMP056/040</b>
	<b>18</b>	11	2.9	80	<b>CM040</b>								
	<b>16</b>	15	4.7	90		<b>CMP056/040</b>							
	<b>14</b>	13	2.5	100	<b>CM040</b>								
	<b>12</b>	19	3.3	120		<b>CMP056/040</b>							
	<b>9</b>	21	2.7	150		<b>CMP056/040</b>							
	<b>8</b>	24	2.3	180		<b>CMP056/040</b>							
	<b>6</b>	28	1.7	240		<b>CMP056/040</b>							
	<b>5</b>	30	1.4	300		<b>CMP056/040</b>							
<b>0.06</b>							<b>0.09</b>						
SMT5024	<b>280</b>	1.8	7.3	5	<b>CM026</b>		SMT5034	<b>280</b>	2.7	4.9	5	<b>CM026</b>	
SMM5024	<b>187</b>	2.6	5.4	7.5	<b>CM026</b>		SMM5034	<b>187</b>	3.9	3.6	7.5	<b>CM026</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	3.4	4.1	10	<b>CM026</b>		SMT5624	<b>140</b>	5.1	2.7	10	<b>CM026</b>	
	<b>93</b>	4.8	2.9	15	<b>CM026</b>		SMM5624	<b>93</b>	7.2	1.9	15	<b>CM026</b>	
	<b>70</b>	6.1	2.3	20	<b>CM026</b>		(1400 min <sup>-1</sup> )	<b>70</b>	9.1	1.5	20	<b>CM026</b>	
	<b>47</b>	8.1	1.9	30	<b>CM026</b>			<b>47</b>	12	1.2	30	<b>CM026</b>	
	<b>35</b>	10	1.4	40	<b>CM026</b>			<b>35</b>	15	0.9	40	<b>CM026</b>	
	<b>28</b>	12	1.1	50	<b>CM026</b>			<b>28</b>	17	0.7	50	<b>CM026</b>	
	<b>23</b>	13	0.9	60	<b>CM026</b>								

AC



Motori Motors	SMT		SMM	
	5014 5024 5034	5624	5014 5024 5034	5624
IEC	56 B14		56 B14	

**CM  
CMP****Motoriduttori CA a vite senza fine  
AC Wormgearmotors****Dati tecnici****Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i			$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.09</b>							<b>0.12</b>						
SMT5034	<b>280</b>	2.6	6.8	5	<b>CM030</b>		SMT5044	<b>93</b>	10	4.5	15	<b>CM040</b>	
SMM5034	<b>187</b>	3.9	5.1	7.5	<b>CM030</b>		SMT5634	<b>70</b>	13	3.1	20	<b>CM040</b>	
SMT5624	<b>140</b>	5.2	4.1	10	<b>CM030</b>		SMM5634	<b>56</b>	15	2.5	25	<b>CM040</b>	
SMM5624	<b>93</b>	7.3	2.9	15	<b>CM030</b>		(1400 min <sup>-1</sup> )	<b>47</b>	17	2.8	30	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>70</b>	9.2	2.1	20	<b>CM030</b>			<b>35</b>	21	2.0	40	<b>CM040</b>	
	<b>56</b>	11	1.8	25	<b>CM030</b>		<b>28</b>	25	1.6	50	<b>CM040</b>		
	<b>47</b>	12	1.8	30	<b>CM030</b>		<b>23</b>	28	1.3	60	<b>CM040</b>		
	<b>35</b>	15	1.3	40	<b>CM030</b>		<b>23</b>	34	1.7	60	<b>CM040</b>		
	<b>28</b>	18	1.1	50	<b>CM030</b>		<b>19</b>	40	1.3	75	<b>CM040</b>	<b>CMP056/040</b>	
	<b>23</b>	20	0.8	60	<b>CM030</b>		<b>18</b>	34	1.0	80	<b>CM040</b>	<b>CMP056/040</b>	
	<b>23</b>	24	1.1	60		<b>CMP056/030</b>	<b>16</b>	45	1.6	90		<b>CMP056/040</b>	
	<b>19</b>	29	0.9	75		<b>CMP056/030</b>	<b>14</b>	38	0.8	100	<b>CM040</b>		
	<b>16</b>	32	1.0	90		<b>CMP056/030</b>	<b>12</b>	56	1.1	120		<b>CMP056/040</b>	
							<b>9</b>	64	1.0	150		<b>CMP056/040</b>	
	<b>70</b>	10	4.2	20	<b>CM040</b>		<b>0.18</b>						
	<b>56</b>	11	3.3	25	<b>CM040</b>		SMT5644	<b>280</b>	5.3	2.4	5	<b>CM026</b>	
	<b>47</b>	13	3.7	30	<b>CM040</b>		SMM5644	<b>187</b>	7.7	1.8	7.5	<b>CM026</b>	
	<b>35</b>	16	2.6	40	<b>CM040</b>		(1400 min <sup>-1</sup> )	<b>140</b>	10	1.4	10	<b>CM026</b>	
	<b>28</b>	18	2.1	50	<b>CM040</b>			<b>93</b>	14	1.0	15	<b>CM026</b>	
	<b>23</b>	21	1.7	60	<b>CM040</b>		<b>70</b>	18	0.8	20	<b>CM026</b>		
	<b>23</b>	25	2.3	60		<b>CMP056/040</b>							
	<b>19</b>	30	1.7	75		<b>CMP056/040</b>	<b>280</b>	5.3	3.4	5	<b>CM030</b>		
	<b>18</b>	26	1.3	80	<b>CM040</b>		<b>187</b>	7.8	2.6	7.5	<b>CM030</b>		
	<b>16</b>	34	2.1	90		<b>CMP056/040</b>	<b>140</b>	10	2.0	10	<b>CM030</b>		
	<b>14</b>	28	1.1	100	<b>CM040</b>		<b>93</b>	15	1.4	15	<b>CM030</b>		
	<b>12</b>	42	1.5	120		<b>CMP056/040</b>	<b>70</b>	18	1.0	20	<b>CM030</b>		
	<b>9</b>	48	1.2	150		<b>CMP056/040</b>	<b>56</b>	22	0.9	25	<b>CM030</b>		
	<b>8</b>	53	1.0	180		<b>CMP056/040</b>	<b>47</b>	25	0.9	30	<b>CM030</b>		
<b>0.12</b>													
SMT5044	<b>280</b>	3.6	3.7	5	<b>CM026</b>		<b>280</b>	5.4	7.6	5	<b>CM040</b>		
SMT5634	<b>187</b>	5.2	2.7	7.5	<b>CM026</b>		<b>187</b>	7.9	5.6	7.5	<b>CM040</b>		
SMM5634	<b>140</b>	6.8	2.1	10	<b>CM026</b>		<b>140</b>	10	4.4	10	<b>CM040</b>		
(1400 min <sup>-1</sup> )	<b>93</b>	10	1.5	15	<b>CM026</b>		<b>93</b>	15	3.0	15	<b>CM040</b>		
	<b>70</b>	12	1.2	20	<b>CM026</b>		<b>70</b>	19	2.1	20	<b>CM040</b>		
	<b>47</b>	16	0.9	30	<b>CM026</b>		<b>56</b>	23	1.7	25	<b>CM040</b>		
	<b>35</b>	20	0.7	40	<b>CM026</b>		<b>47</b>	26	1.9	30	<b>CM040</b>		
	<b>280</b>	3.5	5.1	5	<b>CM030</b>		<b>35</b>	32	1.3	40	<b>CM040</b>		
	<b>187</b>	5.2	3.8	7.5	<b>CM030</b>		<b>28</b>	37	1.1	50	<b>CM040</b>		
	<b>140</b>	6.9	3.1	10	<b>CM030</b>		<b>23</b>	43	0.8	60	<b>CM040</b>		
	<b>93</b>	10	2.2	15	<b>CM030</b>		<b>23</b>	51	1.1	60		<b>CMP056/040</b>	
	<b>70</b>	12	1.5	20	<b>CM030</b>		<b>19</b>	60	0.9	75		<b>CMP056/040</b>	
	<b>56</b>	15	1.4	25	<b>CM030</b>		<b>18</b>	68	1.0	90		<b>CMP056/040</b>	
	<b>47</b>	16	1.3	30	<b>CM030</b>								
	<b>35</b>	20	1.0	40	<b>CM030</b>		<b>280</b>	5.3	3.4	5	<b>CM030</b>		
	<b>28</b>	24	0.8	50	<b>CM030</b>		<b>187</b>	7.8	2.6	7.5	<b>CM030</b>		
	<b>23</b>	32	0.8	60		<b>CMP056/030</b>	<b>140</b>	10	2.0	10	<b>CM030</b>		
							<b>93</b>	15	1.4	15	<b>CM030</b>		
							<b>70</b>	18	1.0	20	<b>CM030</b>		
							<b>56</b>	22	0.9	25	<b>CM030</b>		
							<b>47</b>	25	0.9	30	<b>CM030</b>		



Motori Motors	SMT		SMM	
	5034 5044	5624 5634 5644	5034	5624 5634 5644
IEC	56 B14		56 B14	

## Dati tecnici

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.18</b>						
SMT6324	<b>280</b>	5.4	7.6	5	<b>CM040</b>	CMP063/040 CMP063/040 CMP063/040
SMM6324	<b>187</b>	7.9	5.6	7.5	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	10	4.4	10	<b>CM040</b>	
	<b>93</b>	15	3.0	15	<b>CM040</b>	
	<b>70</b>	19	2.1	20	<b>CM040</b>	
	<b>56</b>	23	1.7	25	<b>CM040</b>	
	<b>47</b>	26	1.9	30	<b>CM040</b>	
	<b>35</b>	32	1.3	40	<b>CM040</b>	
	<b>28</b>	37	1.1	50	<b>CM040</b>	
	<b>23</b>	43	0.8	60	<b>CM040</b>	
	<b>23</b>	51	1.1	60		
	<b>19</b>	60	0.9	75		
	<b>18</b>	68	1.0	90		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.25</b>						
SMT6334	<b>280</b>	7.5	5.5	5	<b>CM040</b>	CMP063/040
SMM6334	<b>187</b>	11	4.0	7.5	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	14	3.1	10	<b>CM040</b>	
	<b>93</b>	21	2.2	15	<b>CM040</b>	
	<b>70</b>	27	1.5	20	<b>CM040</b>	
	<b>56</b>	32	1.2	25	<b>CM040</b>	
	<b>47</b>	36	1.3	30	<b>CM040</b>	
	<b>35</b>	44	0.9	40	<b>CM040</b>	
	<b>28</b>	51	0.8	50	<b>CM040</b>	
	<b>23</b>	70	0.8	60		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.25</b>						
SMT5654	<b>280</b>	7	1.8	5	<b>CM026</b>	CMP056/040
(1400 min <sup>-1</sup> )	<b>187</b>	11	1.3	8	<b>CM026</b>	
	<b>140</b>	14	1.0	10	<b>CM026</b>	
	<b>280</b>	7.3	2.5	5	<b>CM030</b>	
	<b>187</b>	11	1.8	7.5	<b>CM030</b>	
	<b>140</b>	14	1.5	10	<b>CM030</b>	
	<b>93</b>	20	1.0	15	<b>CM030</b>	
	<b>70</b>	26	0.7	20	<b>CM030</b>	
	<b>280</b>	7.5	5.5	5	<b>CM040</b>	
	<b>187</b>	11	4.0	7.5	<b>CM040</b>	
	<b>140</b>	14	3.1	10	<b>CM040</b>	
	<b>93</b>	21	2.2	15	<b>CM040</b>	
	<b>70</b>	27	1.5	20	<b>CM040</b>	
	<b>56</b>	32	1.2	25	<b>CM040</b>	
	<b>47</b>	36	1.3	30	<b>CM040</b>	
	<b>35</b>	44	0.9	40	<b>CM040</b>	
	<b>28</b>	51	0.8	50	<b>CM040</b>	
	<b>23</b>	70	0.8	60		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.37</b>						
SMT6344	<b>280</b>	11	1.7	5	<b>CM030</b>	
(1400 min <sup>-1</sup> )	<b>187</b>	16	1.2	7.5	<b>CM030</b>	
	<b>140</b>	21	1.0	10	<b>CM030</b>	
	<b>93</b>	30	0.7	15	<b>CM030</b>	
	<b>280</b>	11	3.7	5	<b>CM040</b>	
	<b>187</b>	16	2.7	7.5	<b>CM040</b>	
	<b>140</b>	21	2.1	10	<b>CM040</b>	
	<b>93</b>	31	1.5	15	<b>CM040</b>	
	<b>70</b>	39	1.0	20	<b>CM040</b>	
	<b>56</b>	47	0.8	25	<b>CM040</b>	
	<b>47</b>	53	0.9	30	<b>CM040</b>	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.25</b>						
SMT6334	<b>280</b>	7.3	2.5	5	<b>CM030</b>	
SMM6334	<b>187</b>	11	1.8	7.5	<b>CM030</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	14	1.5	10	<b>CM030</b>	
	<b>93</b>	20	1.0	15	<b>CM030</b>	
	<b>70</b>	26	0.7	20	<b>CM030</b>	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.37</b>						
SMT7124	<b>280</b>	11	3.7	5	<b>CM040</b>	
SMM7124	<b>187</b>	16	2.7	7.5	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	21	2.1	10	<b>CM040</b>	
	<b>93</b>	31	1.5	15	<b>CM040</b>	
	<b>70</b>	39	1.0	20	<b>CM040</b>	
	<b>56</b>	47	0.8	25	<b>CM040</b>	
	<b>47</b>	53	0.9	30	<b>CM040</b>	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.55</b>						
SMT7134	<b>280</b>	17	2.5	5	<b>CM040</b>	
SMM7134	<b>187</b>	24	1.8	7.5	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>140</b>	32	1.4	10	<b>CM040</b>	
	<b>93</b>	46	1.0	15	<b>CM040</b>	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.75</b>						
SMT7144	<b>280</b>	23	1.8	5	<b>CM040</b>	
(1400 min <sup>-1</sup> )	<b>187</b>	33	1.3	7.5	<b>CM040</b>	
	<b>140</b>	43	1.0	10	<b>CM040</b>	

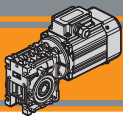


Motori Motors	SMT			SMM	
	5654	6324 6334 6344	7124 7134 7144	6324 6334	7124 7134
<b>IEC</b>	56 B14	63 B14	71 B14	63 B14	71 B14

## Dati tecnici elettrici

## Electrical technical data





CM  
CMP

Dimensioni

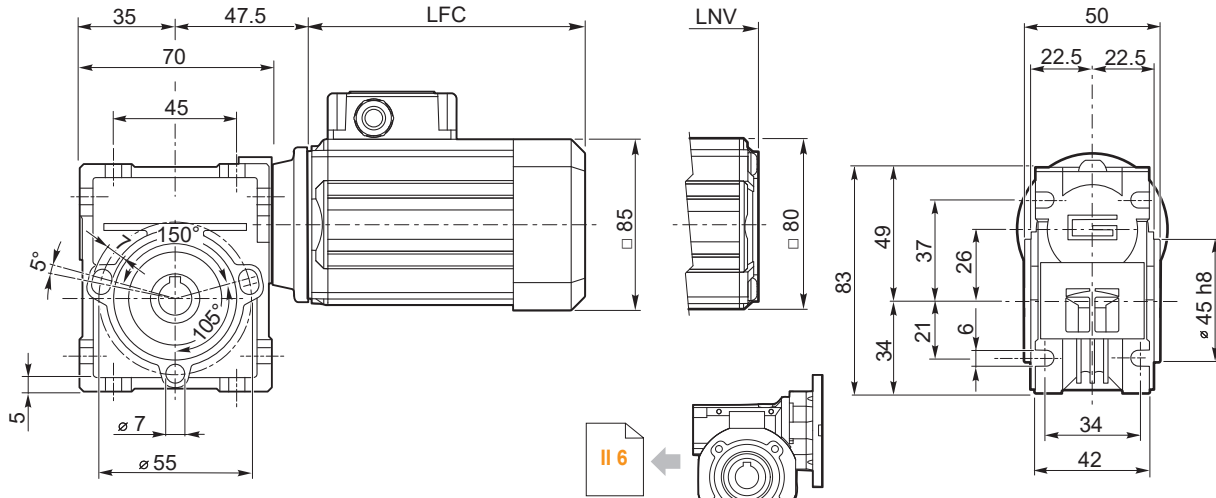
Dimensions

CM 026 .. U

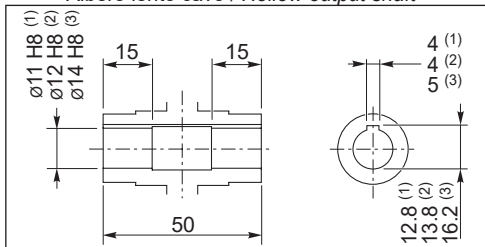
SMT50...TEFC  
SMM50... TEFC

SMT50...TENV  
SMM50... TENV

S3 servizio 30%  
duty



Albero lento cavo / Hollow output shaft



- (1): CM 120/026 (D11)
- (2): CM 120/026
- (3): CM 120/026 (D14)

SMT	LFC	LNV	Kg	
5014	135.5	108.5	3.1	
5024	150.5	123.5	3.5	
5034	175.5	148.5	4.3	
5044	200.5	173.5	5	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	3.5	
5024	175.5	148.5	4.3	
5034	200.5	173.5	5	

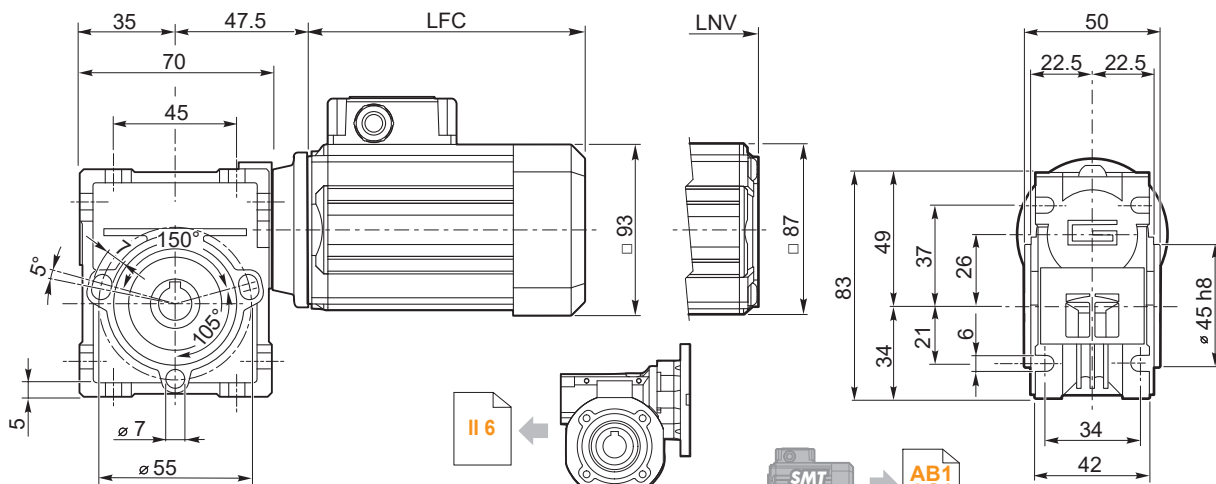
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CM 026 .. U

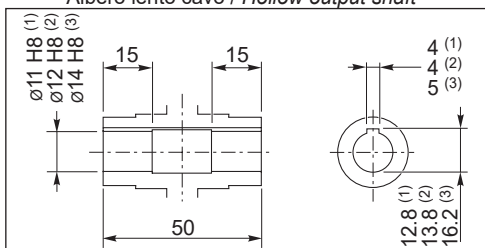
SMT56...TEFC  
SMM56... TEFC

SMT56...TENV  
SMM56... TENV

S3 servizio 30%  
duty



Albero lento cavo / Hollow output shaft

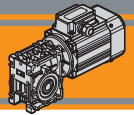


- (1): CM 120/026 (D11)
- (2): CM 120/026
- (3): CM 120/026 (D14)

SMT	LFC	LNV	Kg	
5624	141	117	3.6	
5634	151	127	4	
5644	186	162	5.2	
5654	206	182	5.9	

SMM	LFC	LNV	Kg	
5624	151	127	3.9	
5634	171	147	4.5	
5644	206	182	5.8	

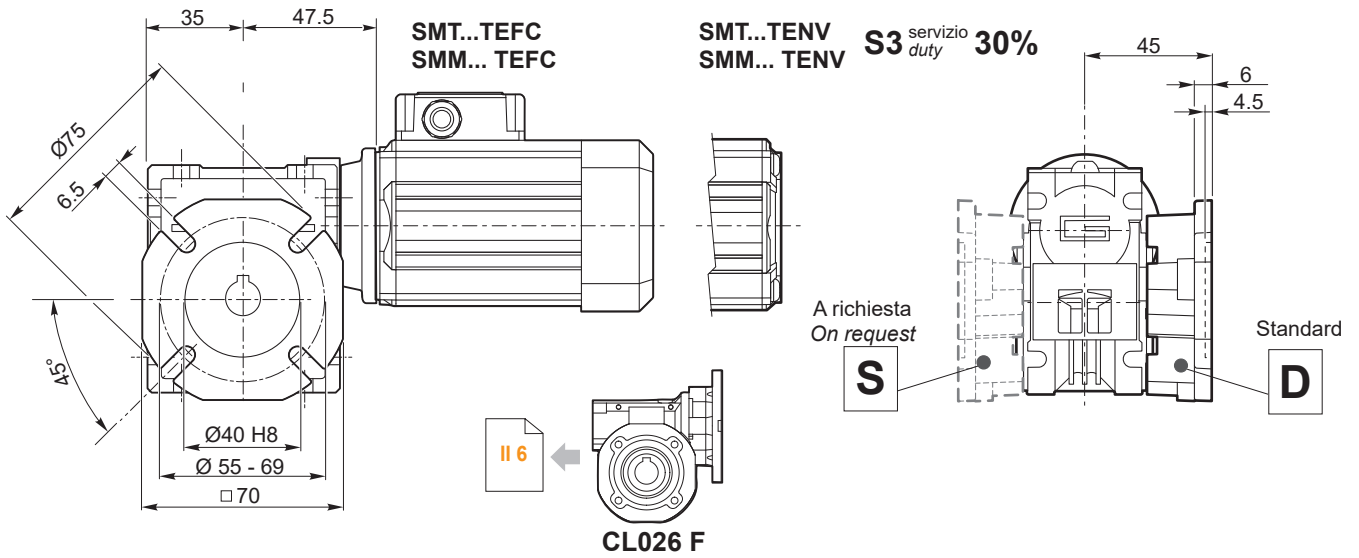
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately



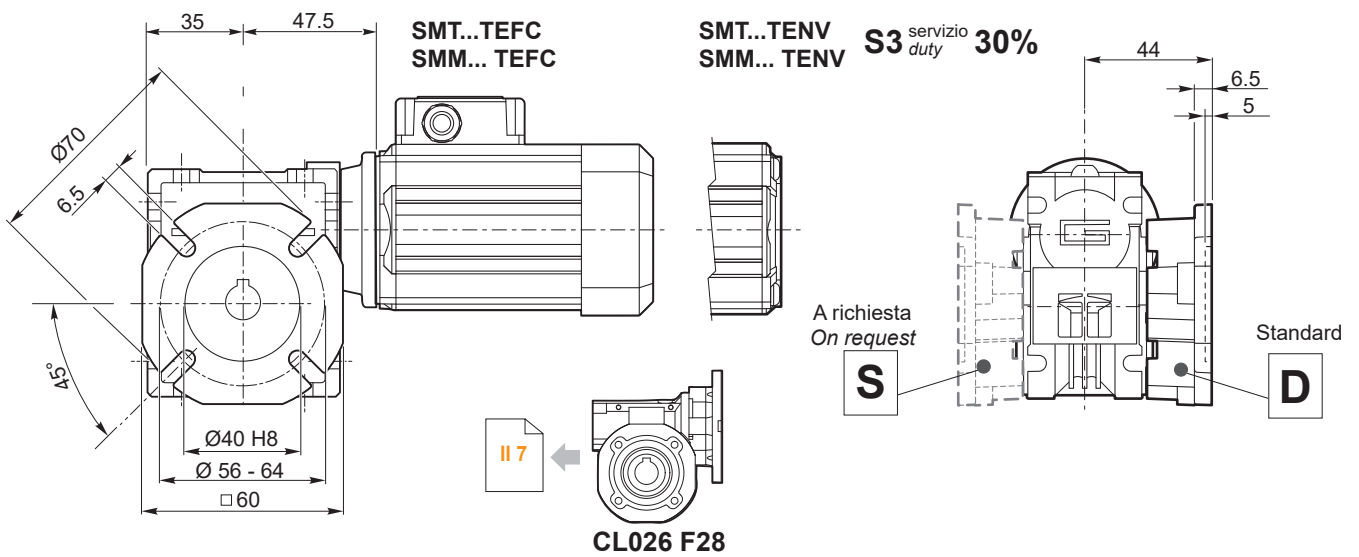
Dimensioni

Dimensions

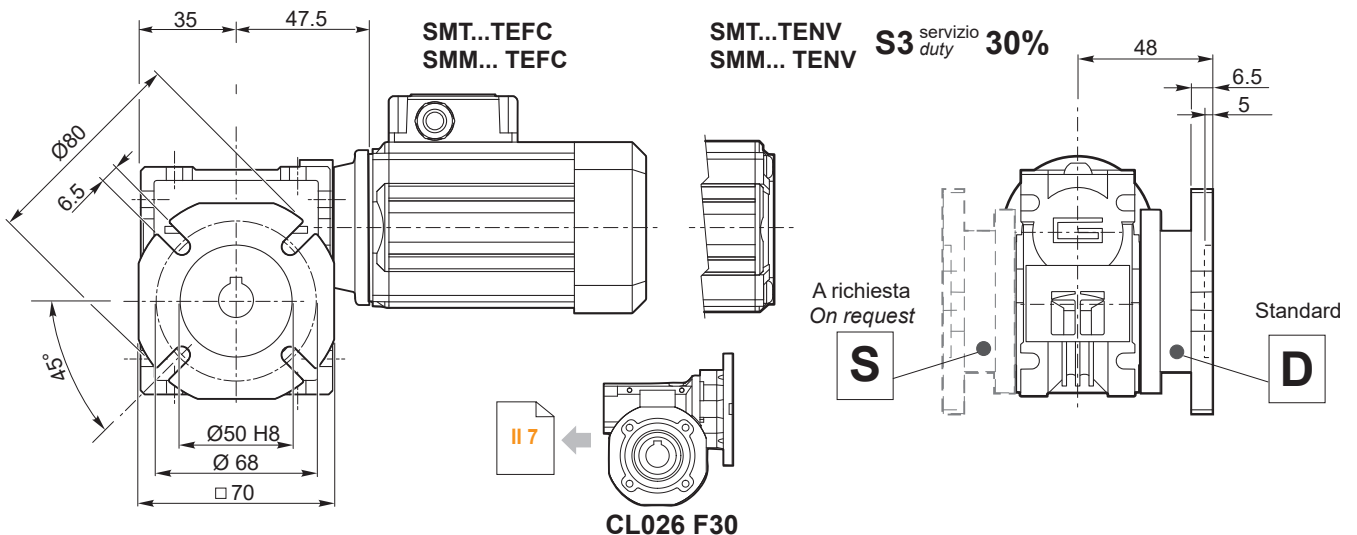
CM 026 .. F



CM 026 .. F28

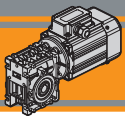


CM 026 .. F30



AC





CM  
CMP

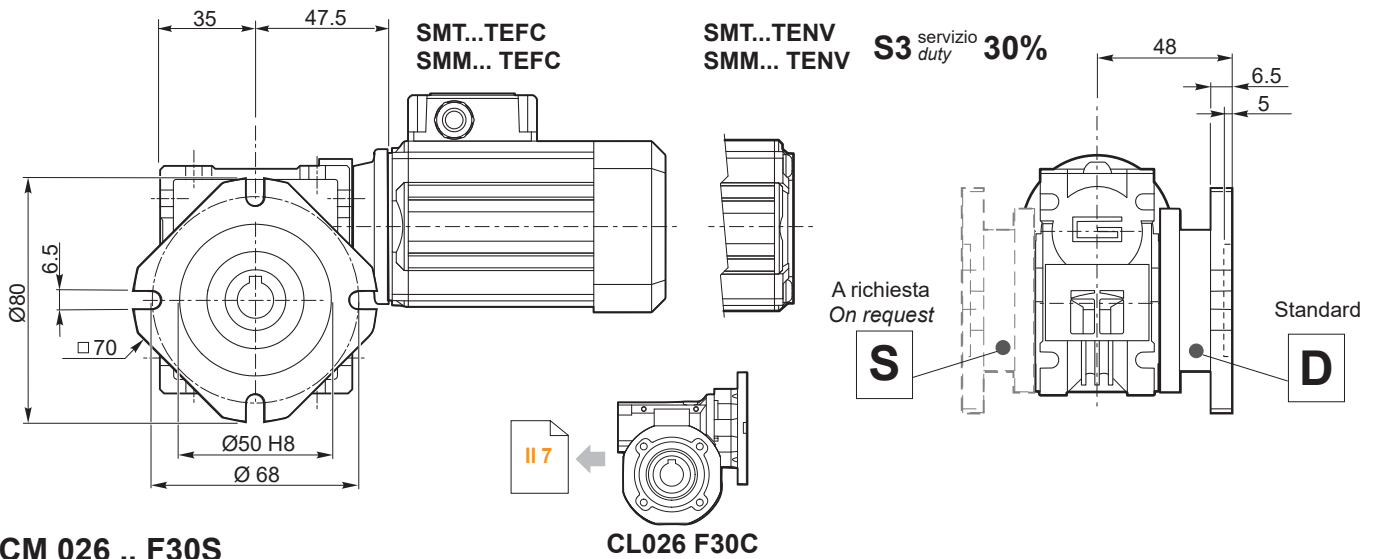
Motoriduttori CA a vite senza fine  
AC Wormgearmotors

MINI  
TECNO

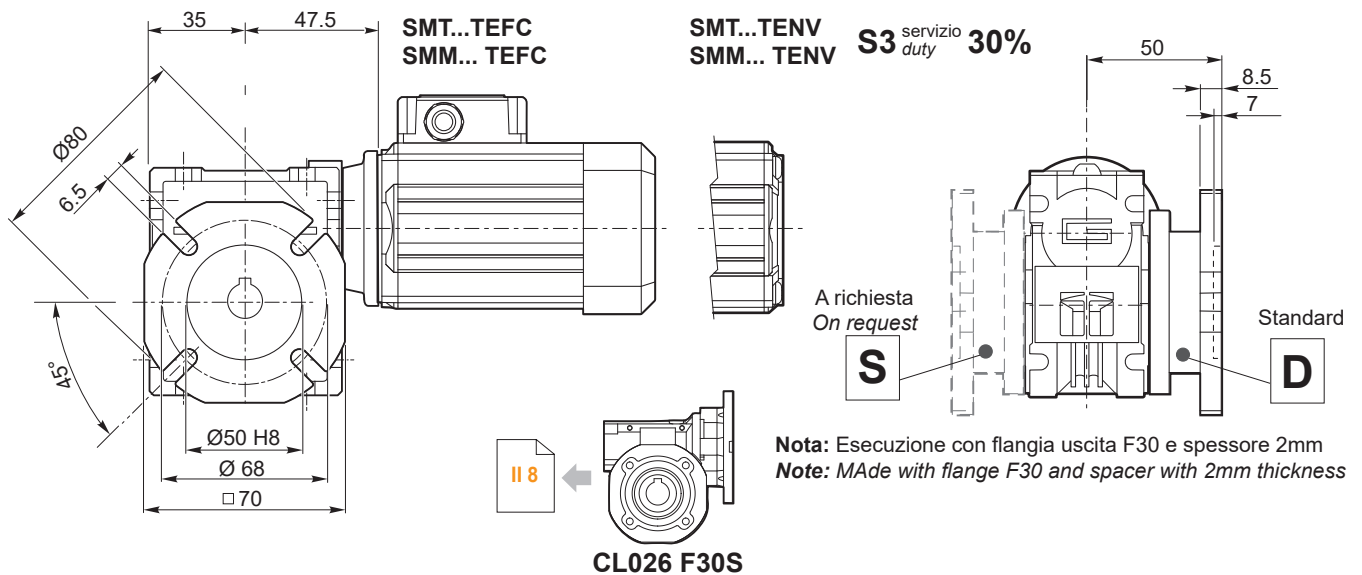
Dimensioni

Dimensions

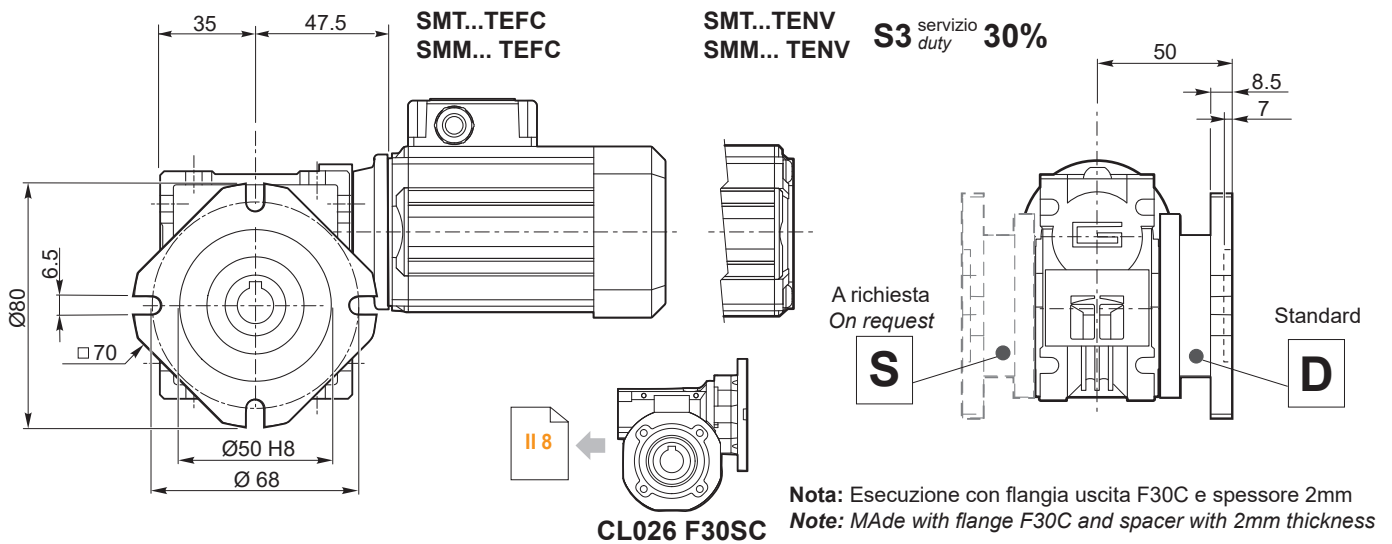
### CM 026 .. F30C



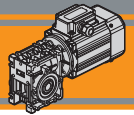
### CM 026 .. F30S



### CM 026 .. F30SC



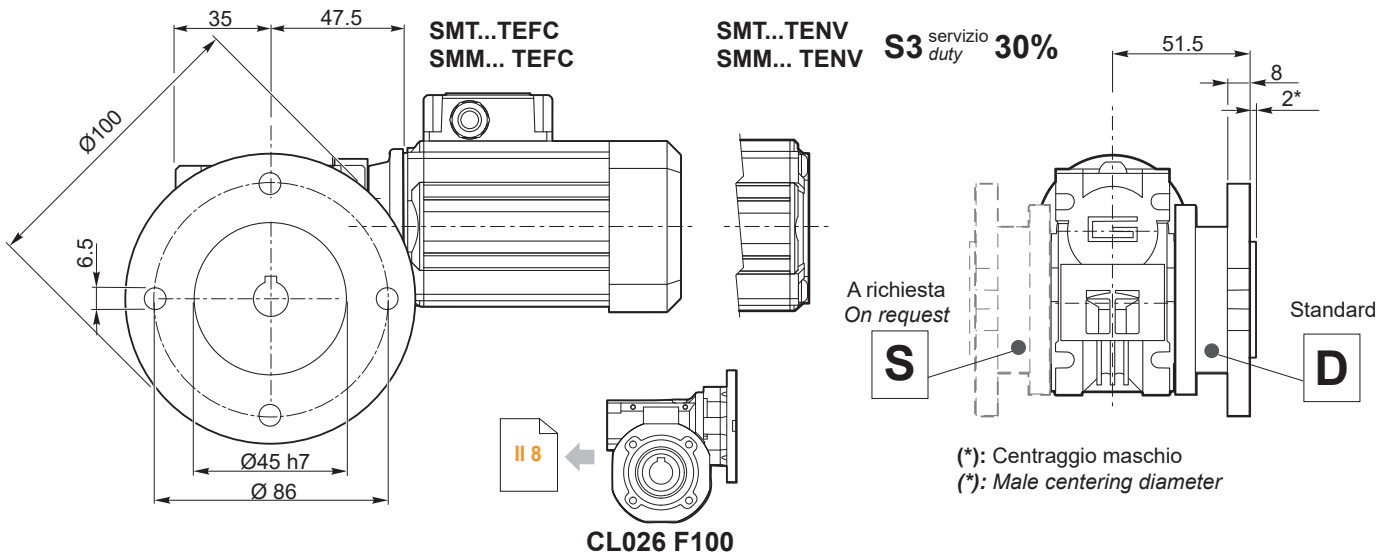




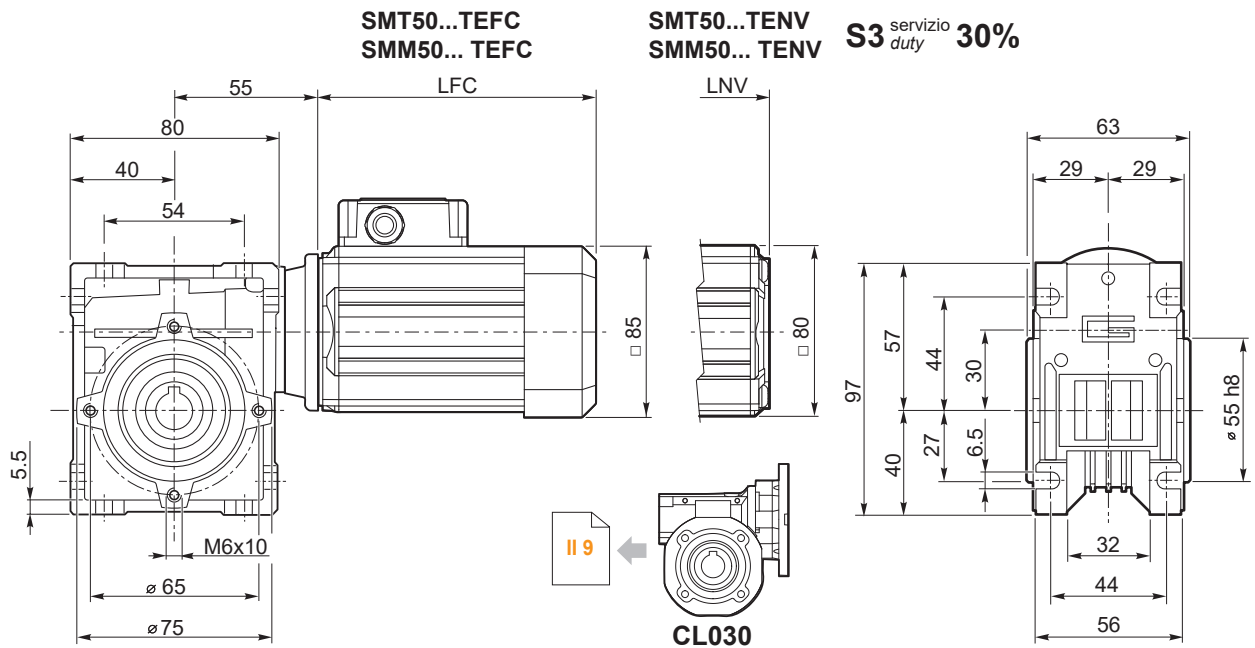
Dimensioni

Dimensions

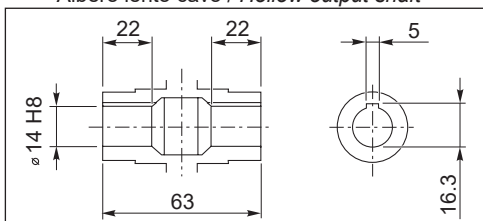
CM 026 .. F100



CM 030 ...U



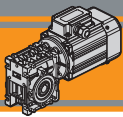
Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
5014	135.5	108.5	3.5	
5024	150.5	123.5	3.9	
5034	175.5	148.5	4.7	
5044	200.5	173.5	5.4	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	3.9	
5024	175.5	148.5	4.7	
5034	200.5	173.5	5.4	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately



CM  
CMP

Motoriduttori CA a vite senza fine  
AC Wormgearmotors



Dimensioni

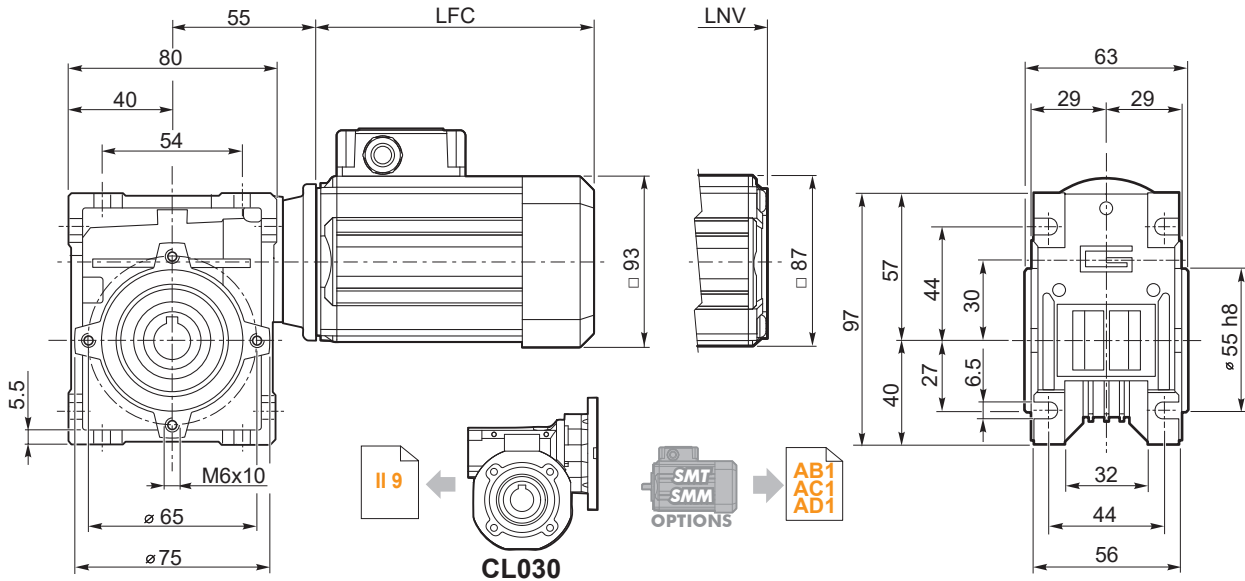
Dimensions

CM 030 ...U

SMT56...TEFC  
SMM56... TEFC

SMT56...TENV  
SMM56... TENV

S3 servizio 30%  
duty



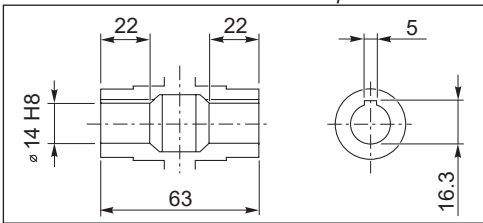
II 9

SMT  
SMM  
OPTIONS

AB1  
AC1  
AD1

CL030

Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
5624	141	117	4	
5634	151	127	4.4	
5644	186	162	5.6	
5654	206	182	6.3	

SMM	LFC	LNV	Kg	
5624	151	127	4.3	
5634	171	147	4.9	
5644	206	182	6.2	

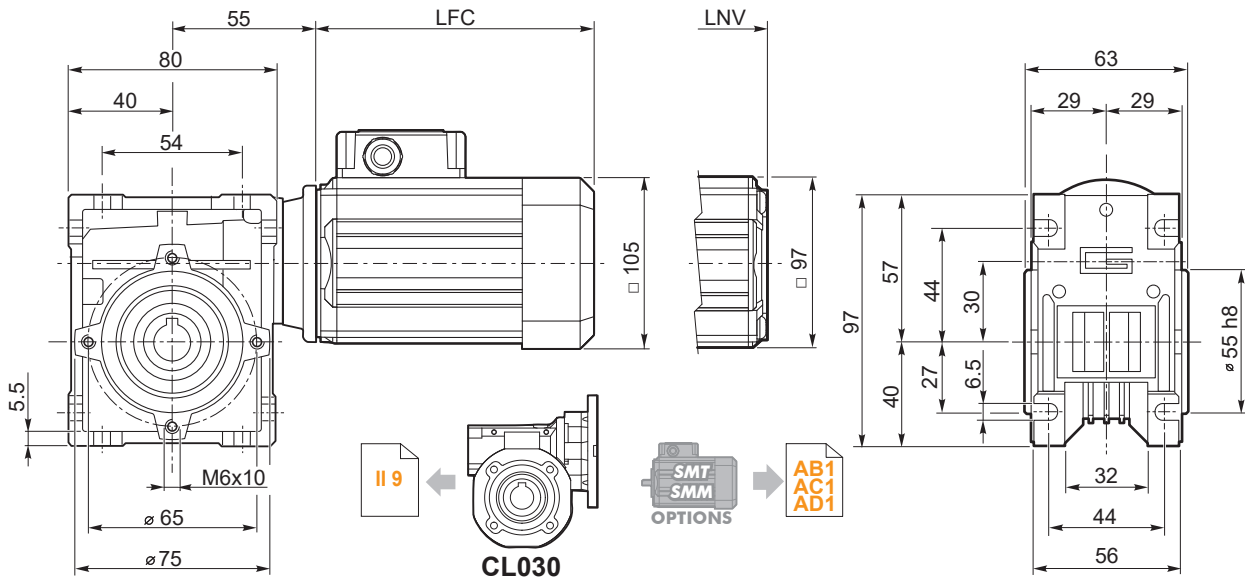
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CM 030 ...U

SMT63...TEFC  
SMM63... TEFC

SMT63...TENV  
SMM63... TENV

S3 servizio 30%  
duty



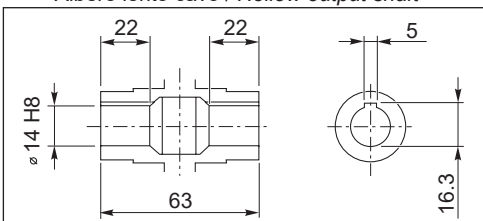
II 9

SMT  
SMM  
OPTIONS

AB1  
AC1  
AD1

CL030

Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
6324	165.5	138.5	5.5	
6334	180.5	153.5	6.2	
6344	205.5	178.5	7.4	

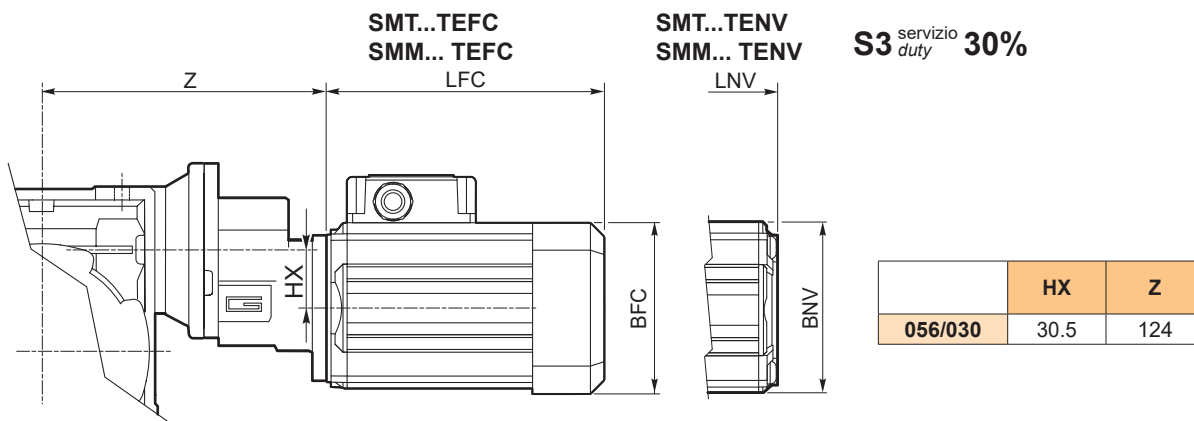
SMM	LFC	LNV	Kg	
6324	180.5	153.5	6.3	
6334	205.5	178.5	7.5	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

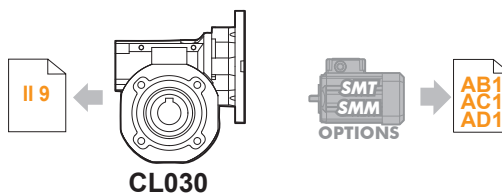
Dimensioni

Dimensions

CMP 056/030 ...U



S3 servizio 30%  
duty



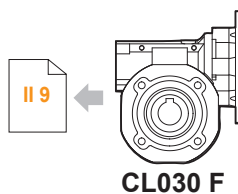
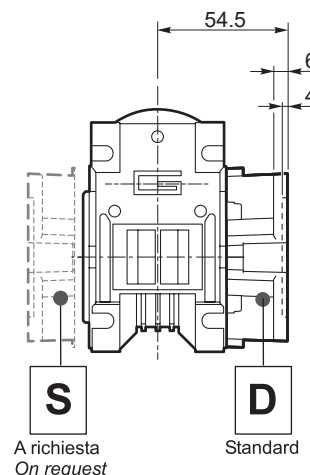
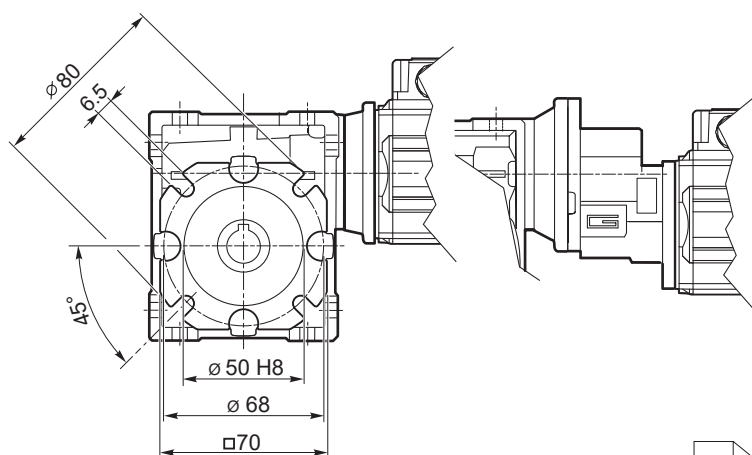
SMT	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	135.5	108.5
5024			150.5	123.5
5034			175.5	148.5
5044			200.5	173.5
5624	□ 93	□ 87	141	117
5634			151	127
5644			186	162
5654			206	182

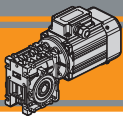
SMM	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	150.5	123.5
5024			175.5	148.5
5034			200.5	173.5
5624			□ 93	□ 87
5634	186	162		
5644	206	182		

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CM 030 ... - F

CMP 056/030 ... - F





CM  
CMP

Motoriduttori CA a vite senza fine  
AC Wormgearmotors



Dimensioni

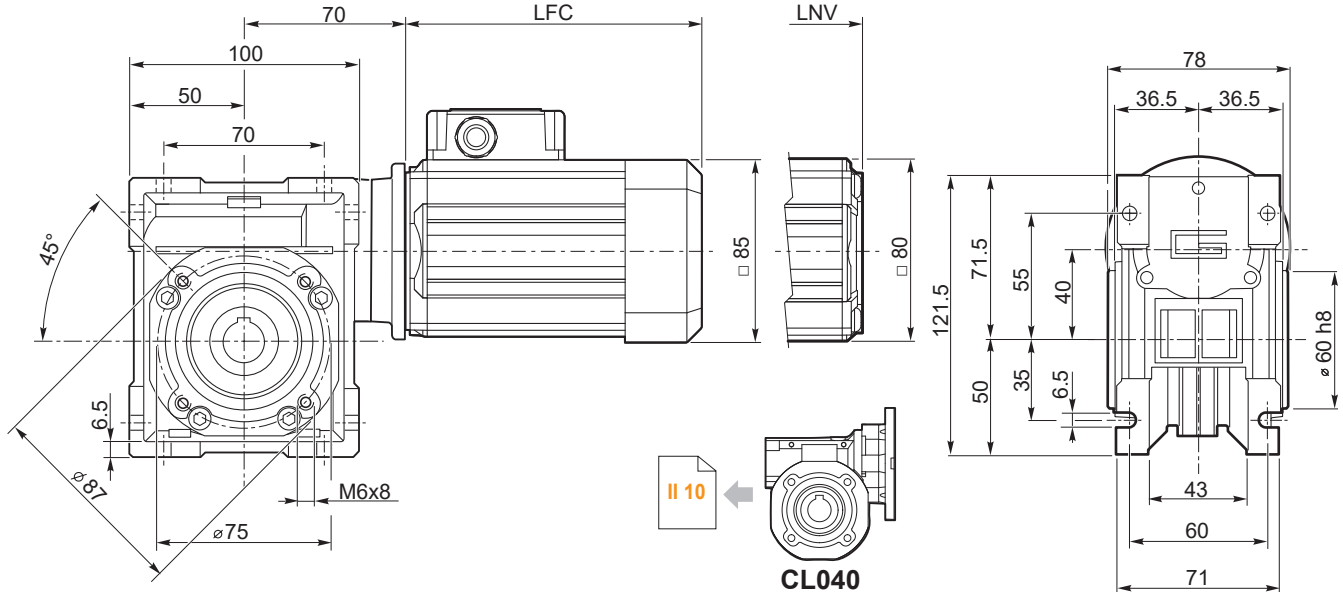
Dimensions

CM 040 ...U

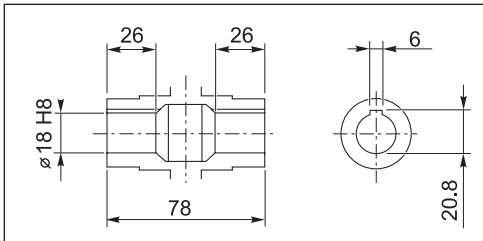
SMT50...TEFC  
SMM50... TEFC

SMT50...TENV  
SMM50... TENV

S3 servizio 30%  
duty



Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
5014	135.5	108.5	4.6	
5024	150.5	123.5	5	
5034	175.5	148.5	5.8	
5044	200.5	173.5	6.5	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	5	
5024	175.5	148.5	5.8	
5034	200.5	173.5	6.5	

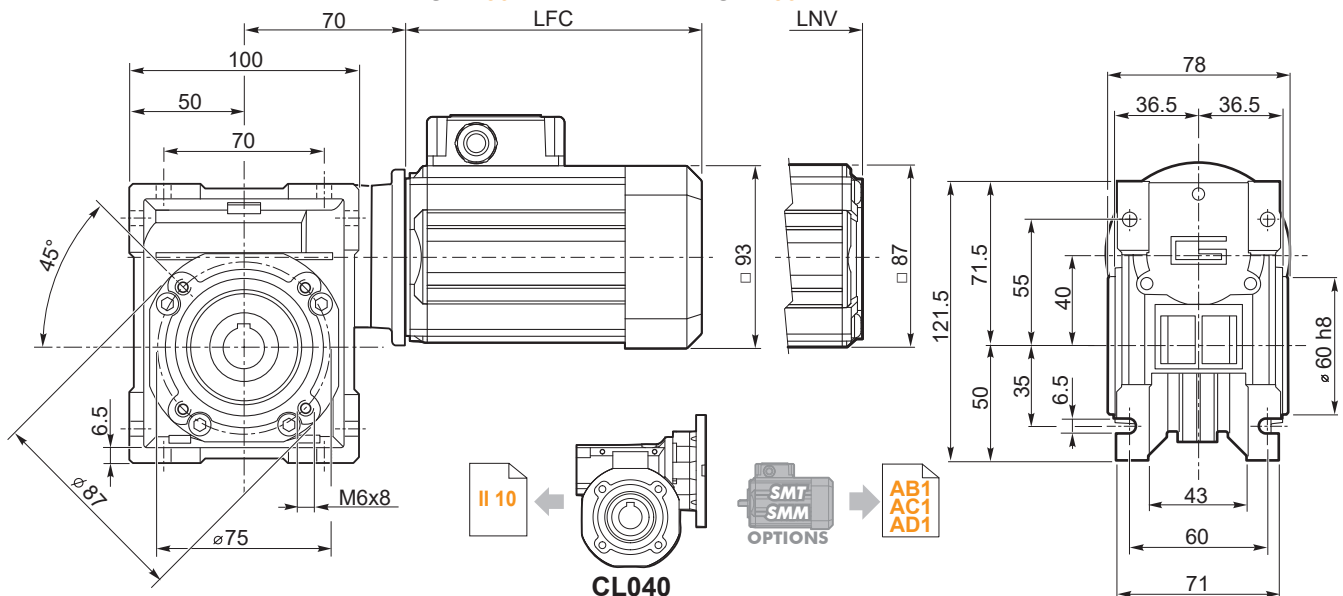
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CM 040 ...U

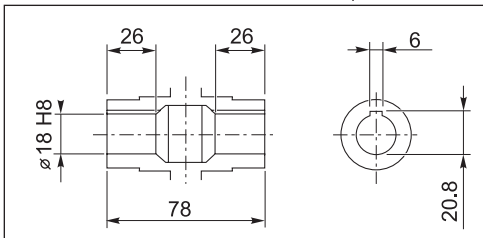
SMT56...TEFC  
SMM56... TEFC

SMT56...TENV  
SMM56... TENV

S3 servizio 30%  
duty



Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
5624	141	117	5.1	
5634	151	127	5.5	
5644	186	162	6.7	
5654	206	182	7.4	

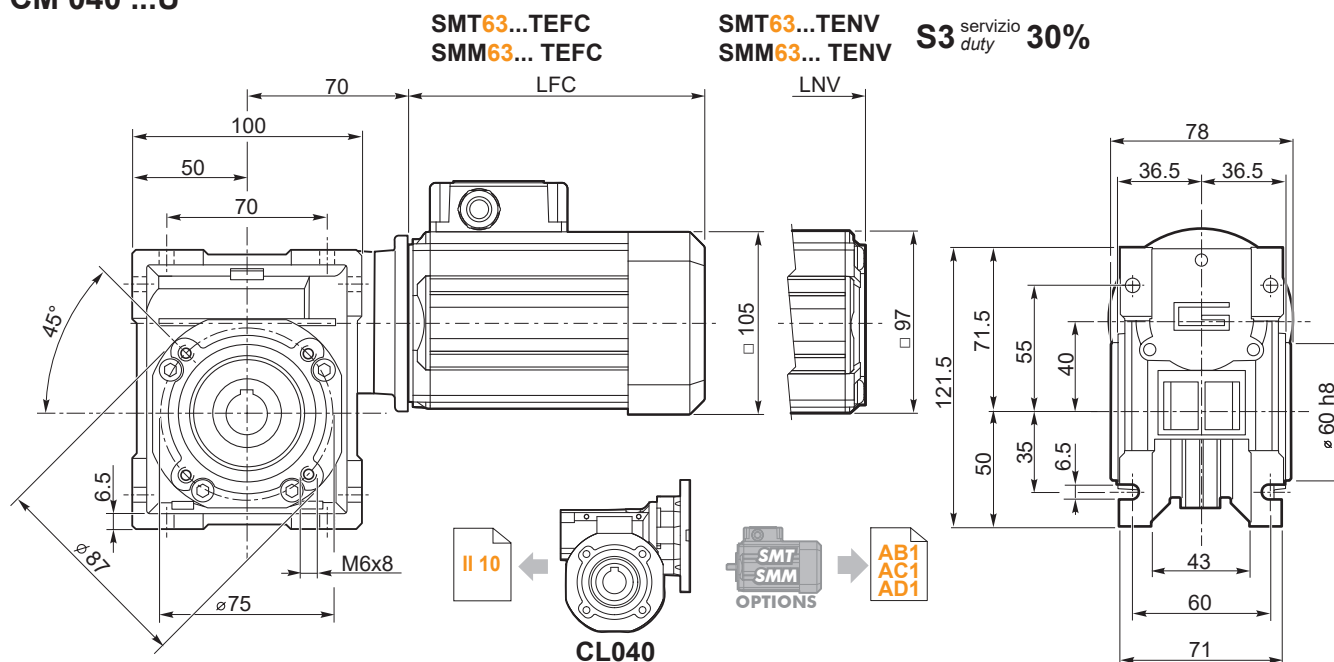
SMM	LFC	LNV	Kg	
5624	151	127	5.4	
5634	171	147	6	
5644	206	182	7.3	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

Dimensioni

Dimensions

CM 040 ...U

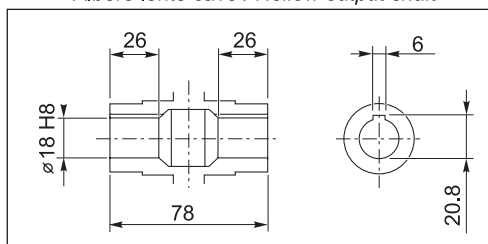


SMT63...TEFC  
SMM63... TEFC

SMT63...TENV  
SMM63... TENV

S3 servizio 30%  
duty

Albero lento cavo / Hollow output shaft

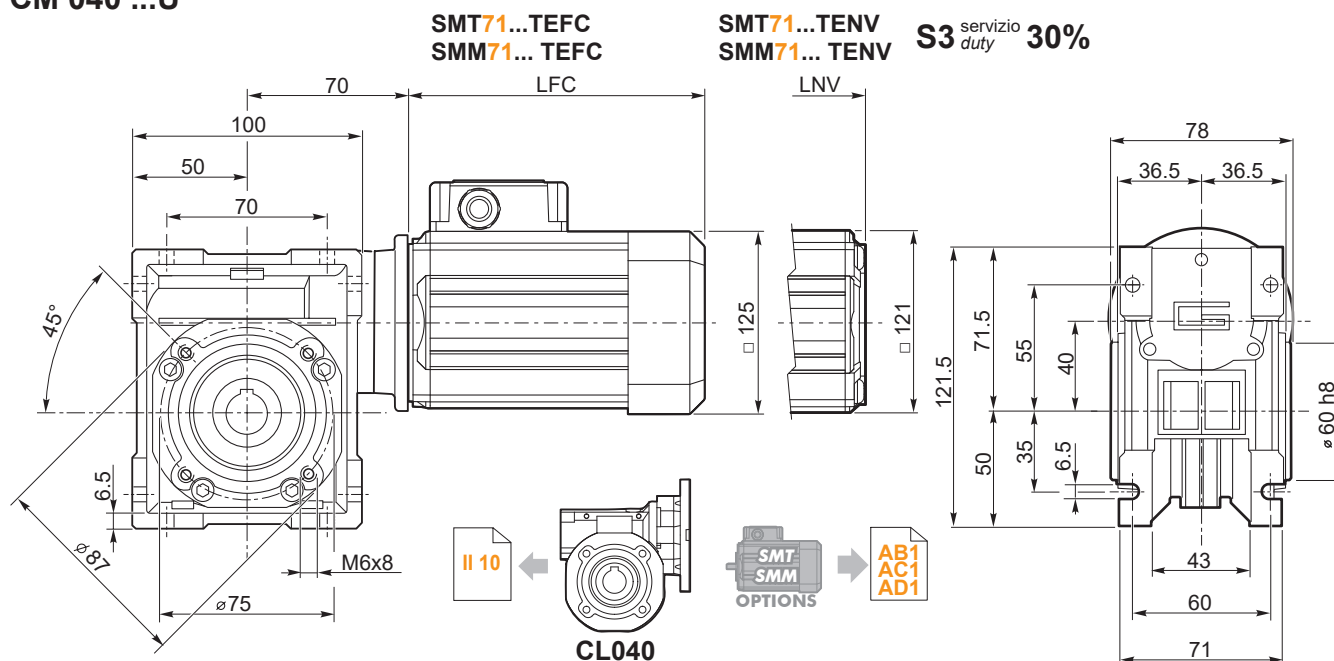


SMT	LFC	LNV	Kg	
6324	165.5	138.5	6.6	
6334	180.5	153.5	7.3	
6344	205.5	178.5	8.5	

SMM	LFC	LNV	Kg	
6324	180.5	153.5	7.4	
6334	205.5	178.5	8.6	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

CM 040 ...U

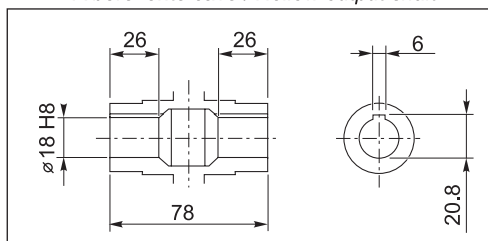


SMT71...TEFC  
SMM71... TEFC

SMT71...TENV  
SMM71... TENV

S3 servizio 30%  
duty

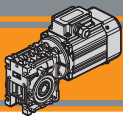
Albero lento cavo / Hollow output shaft



SMT	LFC	LNV	Kg	
7124	174	145.5	8.8	
7134	189	160.5	9.9	
7144	214	185.5	11.6	

SMM	LFC	LNV	Kg	
7124	189	160.5	9.5	
7134	214	185.5	11.5	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately



CM  
CMP

Dimensioni

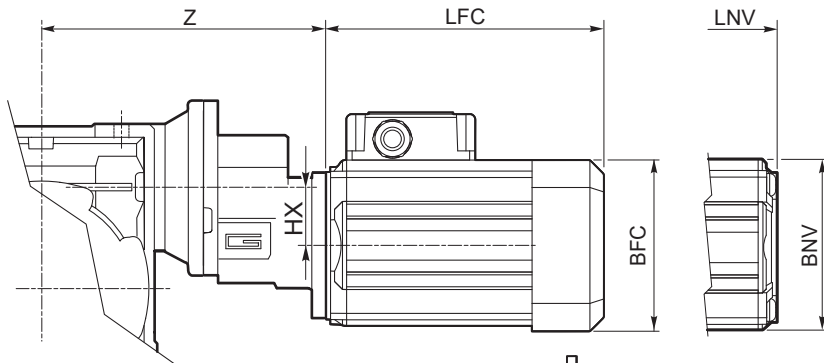
Dimensions

CMP .../040 ...U

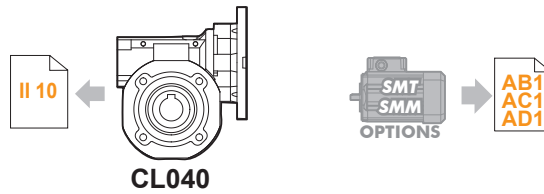
SMT...TEFC  
SMM... TEFC

SMT...TENV  
SMM... TENV

S3 servizio duty 30%



	HX	Z
056/040	30.5	139
063/040	30.5	142



CL040

SMT	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	135.5	108.5
5024			150.5	123.5
5034			175.5	148.5
5044			200.5	173.5
5624	□ 93	□ 87	141	117
5634			151	127
5644			186	162
5654			206	182
6324	□ 105	□ 97	165.5	138.5
6334			180.5	153.5
6344			205.5	178.5

SMM	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	150.5	123.5
5024			175.5	148.5
5034			200.5	173.5
5624			□ 93	□ 87
5634	186	162		
5644	206	182		
6324	□ 105	□ 97	180.5	153.5
6334			205.5	178.5

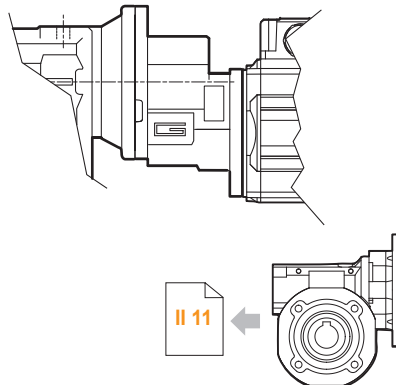
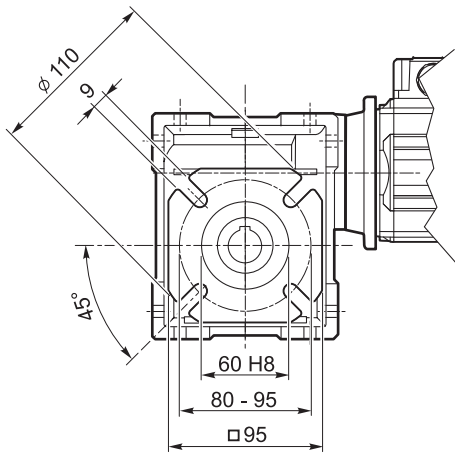
Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

Dimensioni

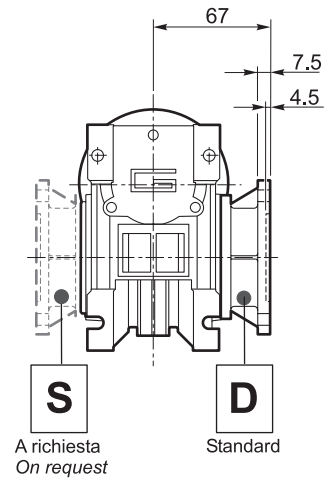
Dimensions

CM 040 ... - F

CMP .../040 ... - F

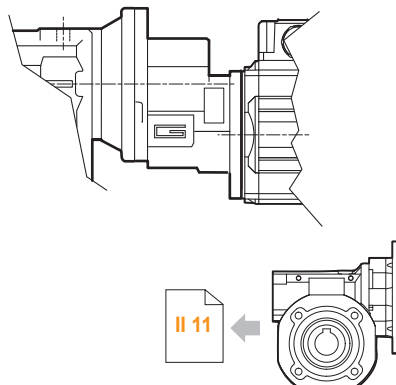
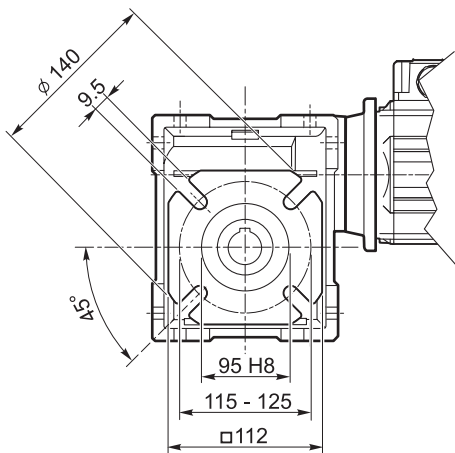


CL040 F

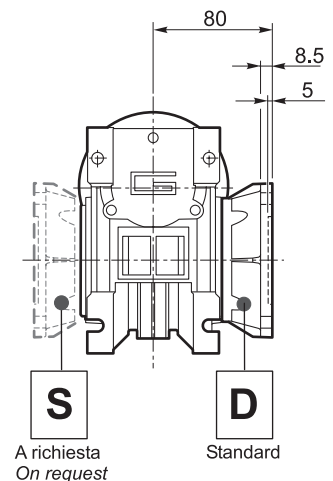


CM 040 ... - FB

CMP .../040 ... - FB

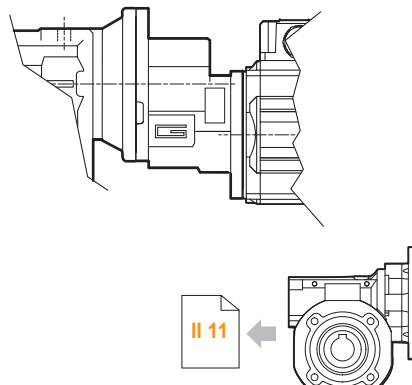
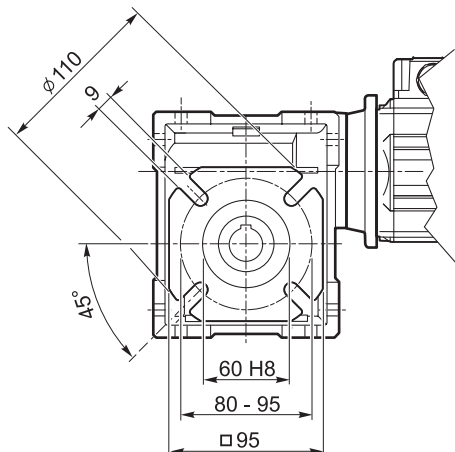


CL040 FB

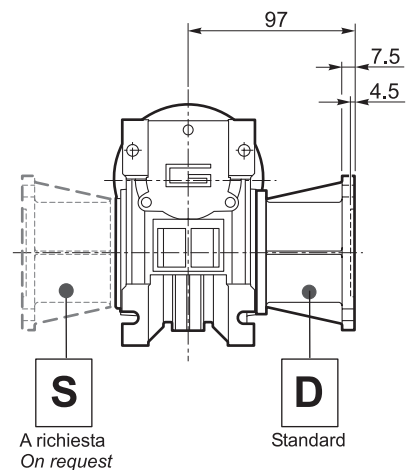


CM 040 ... - FL

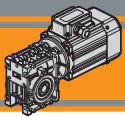
CMP .../040 ... - FL



CL040 FL



AC

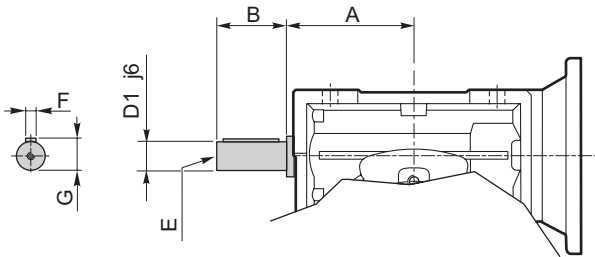


**CM  
CMP**

Opzioni

Options

**VS - Vite sporgente / Extended input shaft**



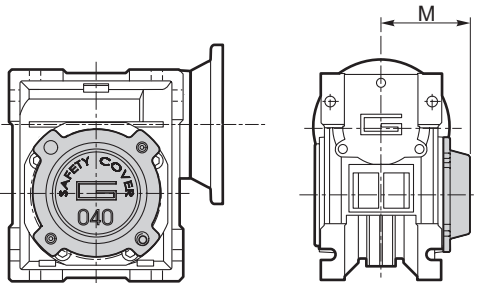
CM	CMP	A	B	D <sub>1</sub> j6	E	F	G
030	056/030	45	20	9	M4	3	10.2
040	056/040 063/040	53	23	11	M5	4	12.5

Costruito su richiesta  
Built on request

Accessori

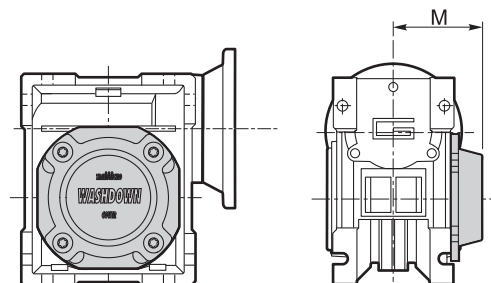
Accessories

**SC - Safety cover**



CM	CMP	M
030	056/030	47
040	056/040 063/040	54.5

**WD - Kit washdown cover**



CM	CMP	M
030	056/030	48
040	056/040 063/040	55.5

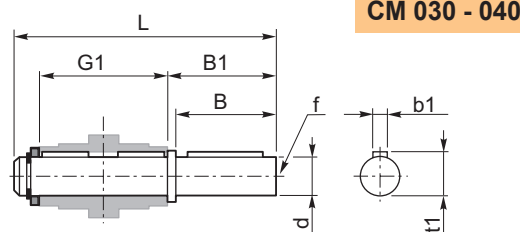
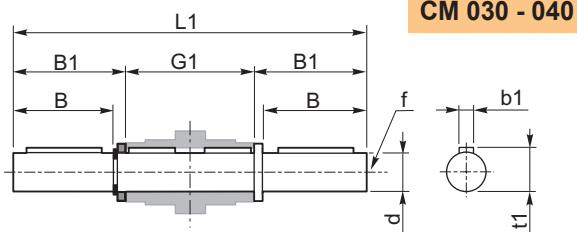


Accessori

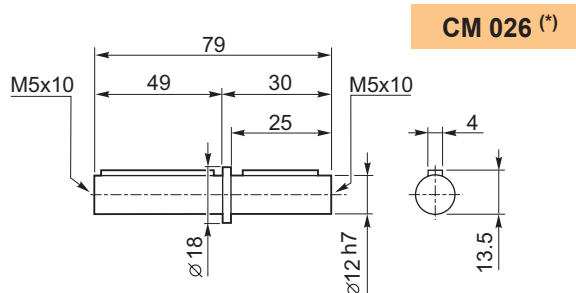
Accessories

Albero lento

Output shaft



CM	CMP	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
030	056/030	14	30	32.5	63	102	128	M6	5	16
040	056/040 063/040	18	40	43	78	128	164	M6	6	20.5



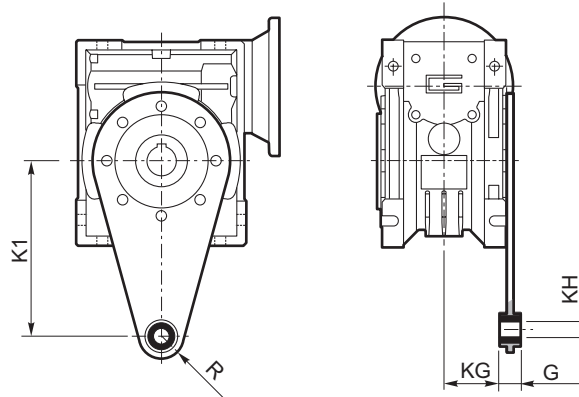
(\*)  
Nota: disponibile solo per cavo uscita Ø12  
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

CM	CMP	K1	G	KG	KH	R
030	056/030	85	14	23	8	15
040	056/040 063/040	100	14	31	10	18

DZ





**MINI**  **TECNO**™  
**small** but strong

**CMM**

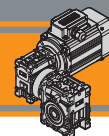
Motoriduttori CA combinati a vite senza fine  
AC Double reduction wormgearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



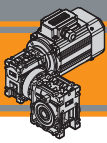




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Designazione	<i>Classification</i>	<b>A13</b>
Simbologia	<i>Symbols</i>	<b>A14</b>
Esecuzioni di montaggio	<i>Mounting executions</i>	<b>A14</b>
Combinazioni rapporti	<i>Combination ratio</i>	<b>A14</b>
Lubrificazione	<i>Lubrication</i>	<b>A14</b>
Dati tecnici	<i>Technical data</i>	<b>A15</b>
Motori applicabili	<i>Motor adapters</i>	<b>A17</b>
Dimensioni	<i>Dimensions</i>	<b>A18</b>
Opzioni	<i>Options</i>	<b>AI12</b>
Accessori	<i>Accessories</i>	<b>AI12</b>

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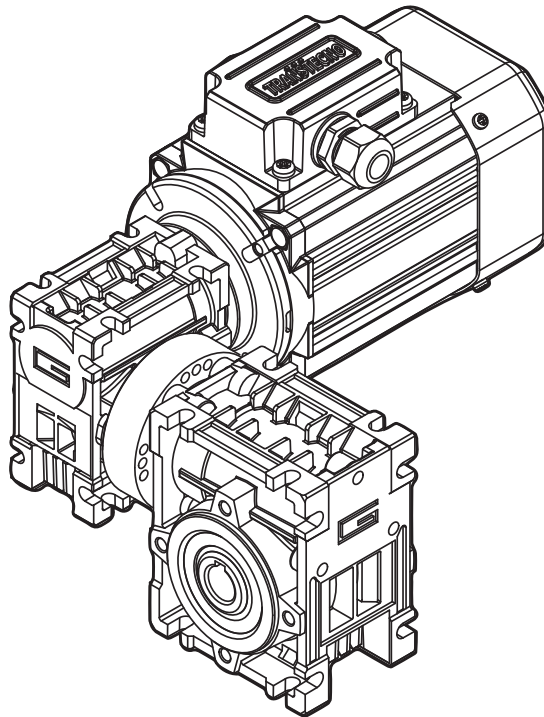
**Caratteristiche tecniche****Technical features**

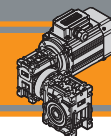
Le caratteristiche principali dei motoriduttori CMM sono:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Carcasse dei riduttori in pressofusione di alluminio
- Motore elettrico AC con grado di protezione IP66
- Lubrificazione permanente con olio sintetico
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56 e 63.
- SMT56 e SMT63 adatti al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servovenilata e con certificazione UL.

*CMM gearmotors range has the following main features:*

- *Compact design*
- *AC single phase and three phase motors available*
- *Motor extruded aluminum housing black anodized*
- *Gearbox die-cast aluminum housing*
- *AC electric motor in IP66 protection Standard*
- *Permanent synthetic oil long-life lubrication*
- *Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available*
- *PTO 150°C thermal protection for motor sizes 56 and 63.*
- *SMT56 and SMT63 are suitable for inverter duty*
- *Brake motors, forced ventilation motors and UL compliance versions available.*





Designazione

Classification

RIDUTTORE / GEARBOX										
CMM	030/040	FD	150	63	B5	SZDX	BRSX	90	US1	VS
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	IEC 	Forma costruttiva Version	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Esecuzione di montaggio Mounting execution	Opzioni Options
	026/026 026/026 (D11) 026/026 (D14) 026/030 026/040  030/040	U F...	vedi tabelle see tables	56.. 63..	B5 B14	SZDX SZSX DZ	BRDX BRSX  *	0° 90° 180° 270°	UB1 UB2 US1 US2 UV1 UV2 UC1 UC2	VS1 VS2

NOTA: il braccio di reazione viene fornito smontato.

\* NOTE: the torque arm will be supplied not assembled.

Versione Riduttore  
Gearbox Version

U F...D F...S

Albero di uscita  
Output shaft

SZDX SZSX DZ

Braccio di reazione  
Torque arm \*

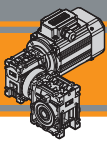
BRDX BRSX

Angolo  
Angle

90° 90°  
180° 0°  
270° 270°

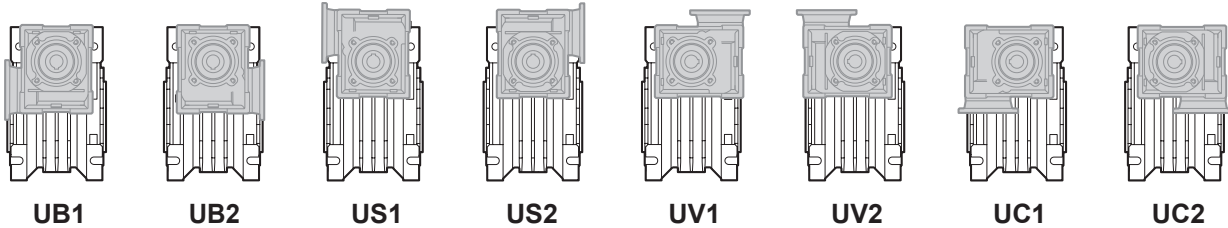
MOTORE TRIFASE / THREE PHASE MOTOR										
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsetteria Terminal box pos.
	Vedere tab. See tab.	1-2-3-4	4	0.04 kW ... 0.25 kW	B14	230-400 V  460V	50Hz  60Hz	TEFC  TENV		T1 (Std)  T4 T2 T3

MOTORE MONOFASE / SINGLE PHASE MOTOR										
SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	UL-CSA	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsetteria Terminal box pos.
	Vedere tab. See tab.	1-2-3-4	4	0.04 kW ... 0.25 kW	B14	230V	50Hz	TEFC  TENV		T1 (Std)  T4 T2 T3

**Simbologia****Symbols**

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>

$M_2$	[Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

**Esecuzioni di montaggio****Mounting executions****Combinazioni rapporti****Combination ratio**

CMM 026/026 - CMM 026/030 - CMM 026/040												
$i (i_1 \times i_2)$												
	150	225	300	450	600	900	1200	1500	1800	2400	3000	3600
$i_1$	10	15	10	15	20	30	40	50	60	60	60	60
$i_2$	15	15	30	30	30	30	30	30	30	40	50	60

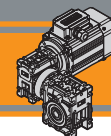
CMM 030/040														
$i (i_1 \times i_2)$														
	150	200	250	300	400	500	600	750	900	1200	1500	1800	2400	3000
$i_1$	10	10	10	10	10	10	20	25	30	40	50	60	60	60
$i_2$	15	20	25	30	40	50	30	30	30	30	30	30	40	50

**Lubrificazione****Lubrication**

Tutti i motoriduttori nelle taglie 26, 30, 40 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors size 26, 30, 40 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*





Dati tecnici

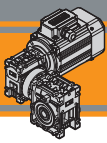
Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.04</b>						<b>0.06</b>					
SMT5014	9.3	23	1.1	150		SMT5024	9.3	33	0.8	150	
SMM5014	6.2	32	0.8	225		SMM5024	6.2	33	0.8	225	
(1400 min <sup>-1</sup> )	4.7	34	0.8	300		9.3	34	1.1	150		
	3.1	34	0.8	450		6.2	48	0.8	225		
	2.3	34	0.8	600		4.7	50	0.8	300		
	1.6	34	0.8	900		9.3	35	2.5	150		
	1.2	34	0.8	1200		6.2	50	1.8	225		
	0.9	34	0.8	1500		4.7	58	1.5	300		
	0.8	34	0.8	1800		3.1	82	1.1	450		
	0.6	28	0.8	2400		2.3	104	0.9	600		
	0.5	25	0.8	3000		1.6	113	0.8	900		
	0.4	23	0.8	3600		9.3	36	2.4	150		
	9.3	23	1.7	150	7.0	46	1.6	200			
	6.2	32	1.2	225	5.6	55	1.2	250			
	4.7	37	1.1	300	4.7	59	1.5	300			
	3.1	50	0.8	450	3.5	72	1.0	400			
	2.3	50	0.8	600	2.8	81	0.8	500			
	1.6	50	0.8	900	2.3	105	0.9	600			
	1.2	50	0.8	1200	1.9	113	0.8	750			
	0.9	50	0.8	1500	1.6	113	0.8	900			
	0.8	50	0.8	1800							
	0.6	43	0.8	2400							
	0.5	38	0.8	3000							
	0.4	34	0.8	3600							
	9.3	23	3.7	150							
	6.2	33	2.6	225							
	4.7	39	2.3	300							
	3.1	55	1.6	450							
	2.3	69	1.3	600							
	1.6	92	1.0	900							
	1.2	113	0.8	1200							
	0.9	113	0.8	1500							
	0.8	113	0.8	1800							
	0.6	93	0.8	2400							
	0.5	85	0.8	3000							
	0.4	78	0.8	3600							
	9.3	24	3.7	150							
	7.0	31	2.4	200							
	5.6	37	1.8	250							
	4.7	39	2.3	300							
	3.5	48	1.6	400							
	2.8	54	1.3	500							
	2.3	70	1.3	600							
	1.9	84	1.1	750							
	1.6	94	1.0	900							
	1.2	113	0.8	1200							
	0.9	113	0.8	1500							
	0.8	113	0.8	1800							
	0.6	93	0.8	2400							
	0.5	85	0.8	3000							

**Nota:** Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio  
**Note:** Please check that the output torque M2 does not exceed the value into the grey areas


Motori Motors	SMT		SMM	
		5014 5024 5034	5624	5014 5024 5034
IEC	56 B14		56 B14	







**Dati tecnici**

**Technical data**


P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
------------------------	----------------------------------------	------------------------	----	---	-----------------------------------------------------------------------------------

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
------------------------	----------------------------------------	------------------------	----	---	-------------------------------------------------------------------------------------

**0.12**

SMT5044	<b>9.3</b>	70	1.2	150	<b>CMM</b> <b>026/040</b>
SMT5634	<b>6.2</b>	99	0.9	225	
SMM5634 (1400 min <sup>-1</sup> )	<b>4.7</b>	113	0.8	300	
	<b>9.3</b>	71	1.2	150	<b>CMM</b> <b>030/040</b>
	<b>7.0</b>	92	0.8	200	
	<b>5.6</b>	84	0.8	250	
	<b>4.7</b>	113	0.8	300	

**0.18**


SMT6324	<b>9.3</b>	107	0.8	150	<b>CMM</b> <b>030/040</b>
SMM6324 (1400 min <sup>-1</sup> )	<b>7.0</b>	93	0.8	225	
					

**0.25**

SMT5654	<b>9.3</b>	109	0.8	150	<b>CMM</b> <b>030/040</b>
SMT6334					
SMM6334 (1400 min <sup>-1</sup> )					



**0.18**

SMT5644	<b>9.3</b>	105	0.8	150	<b>CMM</b> <b>026/040</b>
SMM5644 (1400 min <sup>-1</sup> )	<b>6.2</b>	109	0.8	225	
	<b>9.3</b>	107	0.8	150	<b>CMM</b> <b>030/040</b>
	<b>7.0</b>	93	0.8	200	

**Nota:** Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

**Note:** Please check that the output torque M2 does not exceed the value into the grey areas

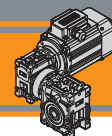


Motori Motors	SMT			SMM	
	5044	5644 5654	6324 6334	5634 5644	6324 6334
<b>IEC</b>	56 B14		63 B14	56 B14	63 B14

**Dati tecnici elettrici**

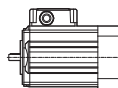
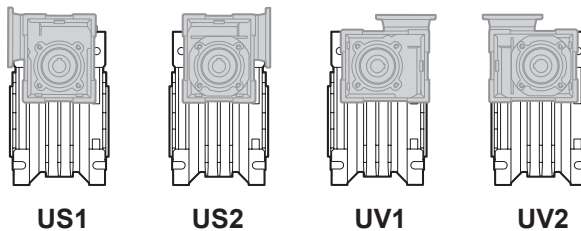
**Electrical technical data**





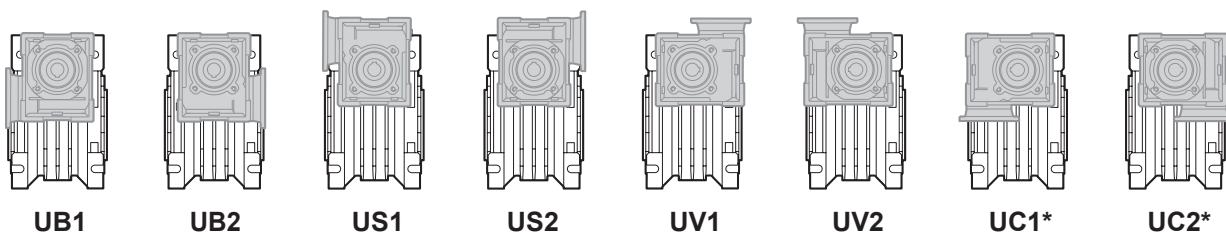
Motori applicabili

Motor adapters

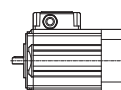


		<b>SMT</b>		<b>SMM</b>	
		5014	5624	5014	5624
		5024	5634	5024	5634
		5034	5644	5034	5644
		5044	5654		
<b>CM</b>	<b>026/026</b>	150 - 3600		150 - 3600	

150 - 3600 Rapporti di riduzione i / Ratio i

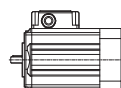
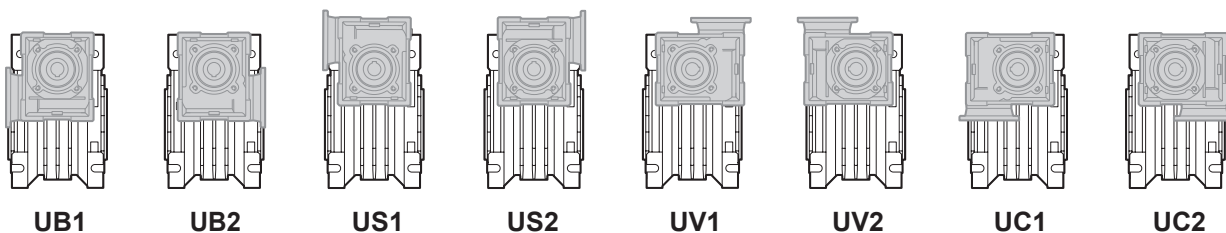


\*: Solo / only SMT 50 - SMM50



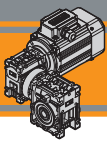
		<b>SMT</b>		<b>SMM</b>	
		5014	5624	5014	5624
		5024	5634	5024	5634
		5034	5644	5034	5644
		5044	5654		
<b>CM</b>	<b>026/030</b> <b>026/040</b>	150 - 3600		150 - 3600	

150 - 3600 Rapporti di riduzione i / Ratio i



		<b>SMT</b>			<b>SMM</b>		
		5014	5624	6324	5014	5624	6314
		5024	5634	6334	5024	5634	6324
		5034	5644	6344	5034	5644	6334
		5044	5654				
<b>CM</b>	<b>030/040</b>	75 - 3600		75-1500	75 - 3600		75-1500

75 - 3600 Rapporti di riduzione i / Ratio i



**CMM**

Motoriduttori CA combinati a vite senza fine  
AC Double reduction wormgearmotors



**Dimensioni**

**Dimensions**

CMM..U - CMM..F...																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>h8</sub>	N1	N2
026/026 (D11)			11														
026/026	45	70	12	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21

CMM..U - CMM..F...														
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg
026/026 (D11)												4	12.8	
026/026	6	—	37	49	49	5	15	21	76	7	—	4	13.8	1.6
026/026 (D14)												5	16.2	
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	2.4
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	3.5

	CMM..F						CMM..F28						CMM..F30						CMM..F30S <sup>(1)</sup>														
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026 (D11)	45°	45	6	4.5	55-69	40	6.5 (n.4)	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
026																																	
026 (D14)																																	

(1): F30S eseguita con F30 e distanziale di spessore 2 mm / F30S made with F30 and spacer with 2mm thickness

	CMM..F30C						CMM..F30SC <sup>(2)</sup>						CMM..F100												
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC*	KM	KN <sub>H7</sub>	KO	KP	KQ
026 (D11)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2*	86	45	6.5	100	-
026																									
026 (D14)																									

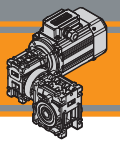
(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / F30SC made with F30C and spacer with 2mm thickness

	CMM..F						CMM..FB						CMM..FL												
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70								—								
026/040	45°	67	7.5	4.5	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95

SMT	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	135.5	108.5
5024			150.5	123.5
5034			175.5	148.5
5044			200.5	173.5
5624	□ 93	□ 87	141	117
5634			151	127
5644			186	162
5654			206	182

SMM	BFC	BNV	LFC	LNV
5014	□ 85	□ 80	150.5	123.5
5024			175.5	148.5
5034			200.5	173.5
5624			151	127
5634	□ 93	□ 87	186	162
5644			206	182

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately



Dimensioni

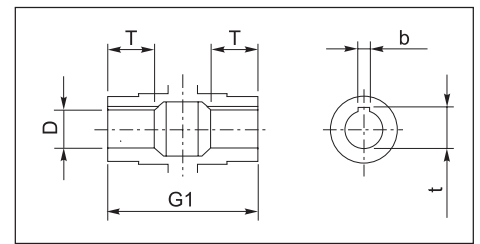
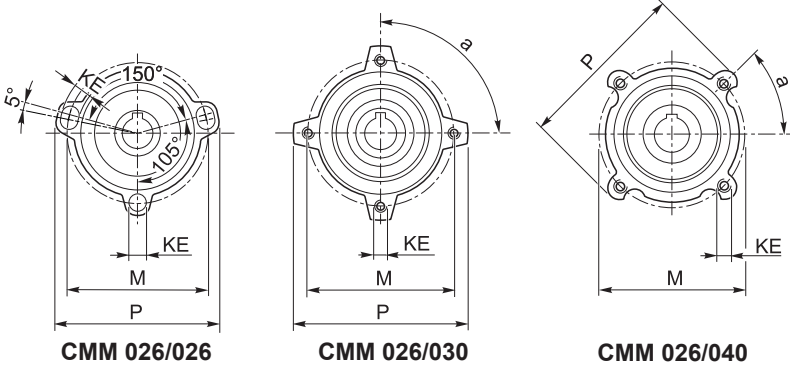
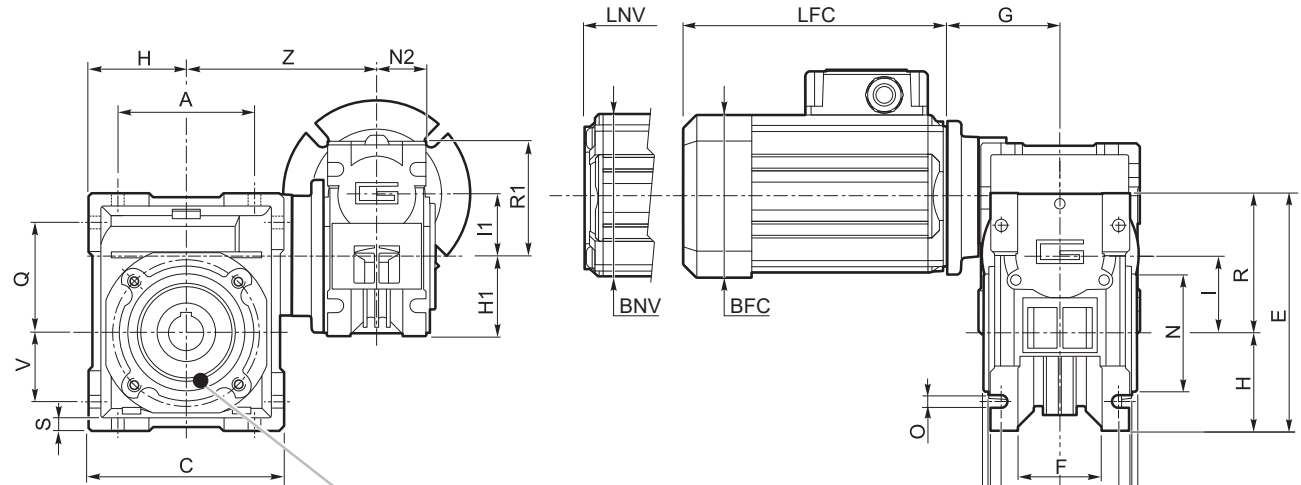
Dimensions

CMM 026/... U

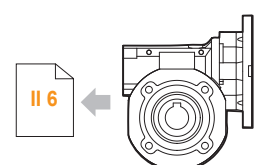
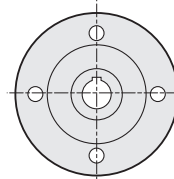
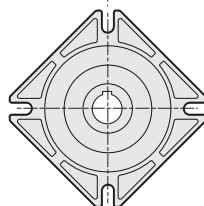
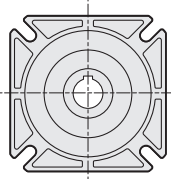
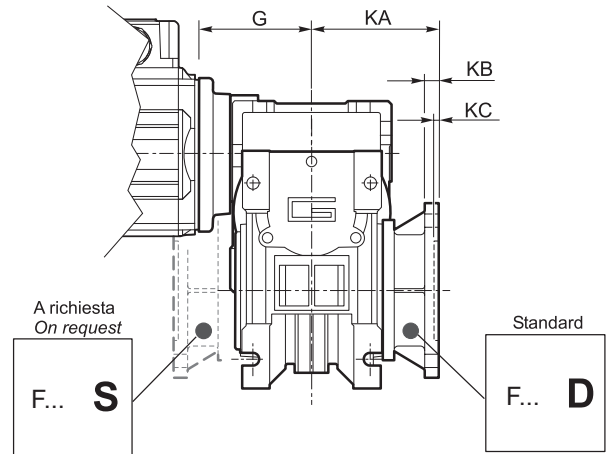
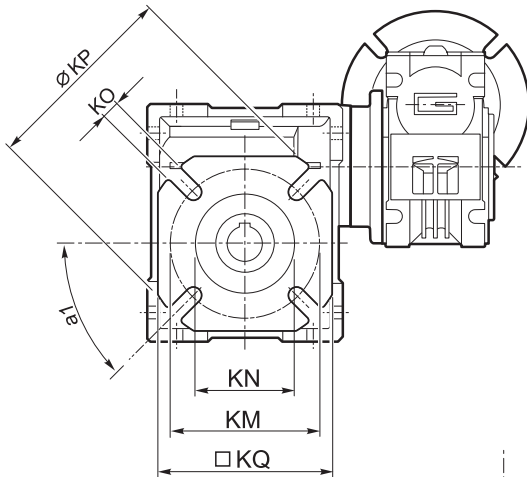
S3 <sup>servizio</sup> <sub>duty</sub> 30%

SMT...TENV  
SMM... TENV

SMT...TEFC  
SMM... TEFC



Albero lento cavo / Hollow output shaft



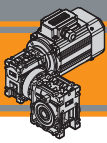
CMM026/026.. F  
CMM026/026.. F28  
CMM026/026.. F30  
CMM026/026.. F30S  
CMM026/030.. F..  
CMM026/040.. F..

CMM026/026.. F30C  
CMM026/026.. F30SC

CMM026/026.. F100

CL026  
CL030  
CL040





**Dimensioni**

**Dimensions**

CMM.. - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

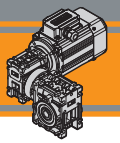
CMM.. - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8 (21.8)	3.9	

	CMM..F								CMM..FB								CMM..FL								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
030/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95

SMT	BFC	BNV	LFC	LVN
5014	□ 85	□ 80	135.5	108.5
5024			150.5	123.5
5034			175.5	148.5
5044			200.5	173.5
5624	□ 93	□ 87	141	117
5634			151	127
5644			186	162
5654			206	182
6324	□ 105	□ 97	165.5	138.5
6334			180.5	153.5
6344			205.5	178.5

SMM	BFC	BNV	LFC	LVN
5014	□ 85	□ 80	150.5	123.5
5024			175.5	148.5
5034			200.5	173.5
5624	□ 93	□ 87	151	127
5634			186	162
5644			206	182
6324	□ 105	□ 97	180.5	153.5
6334			205.5	178.5

**Nota:** il condensatore sarà fornito a corredo  
**Note:** the capacitor will be supplied separately



Dimensioni

Dimensions

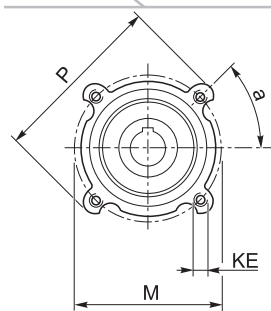
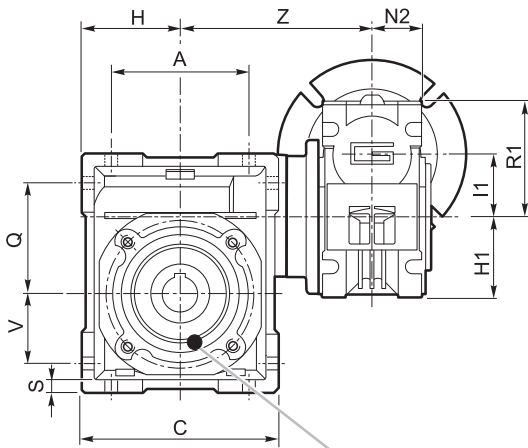
CMM 030/040 U

S3 servizio duty

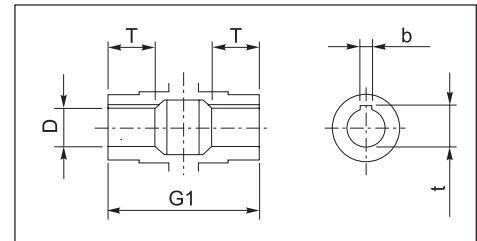
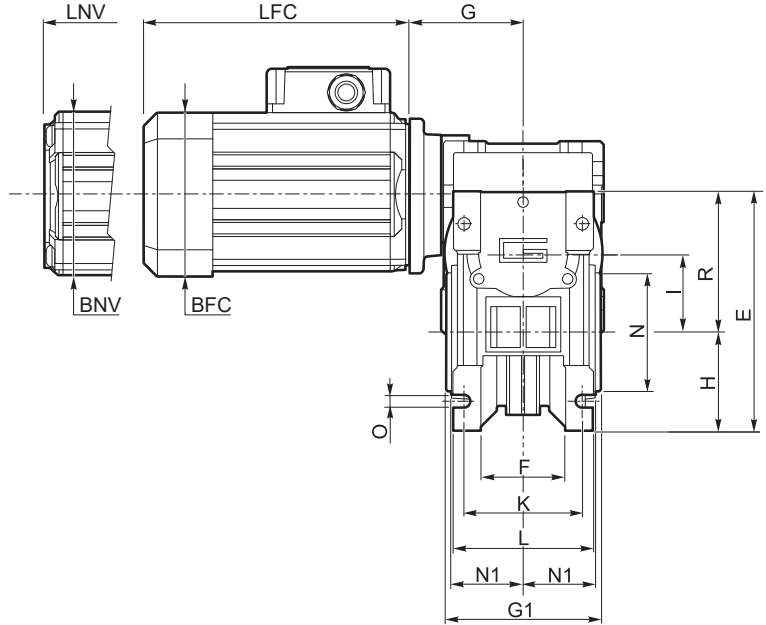
30%

SMT...TENV  
SMM... TENV

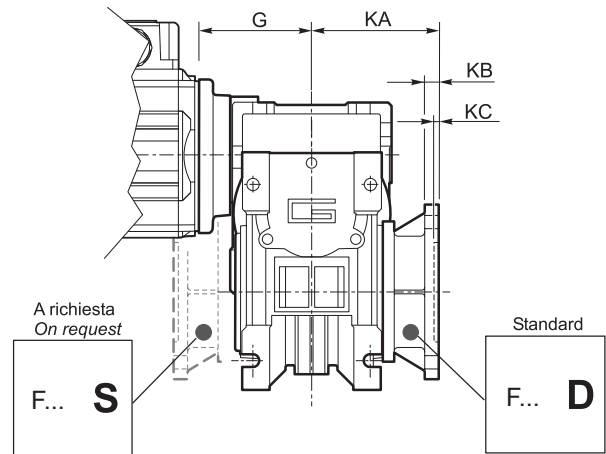
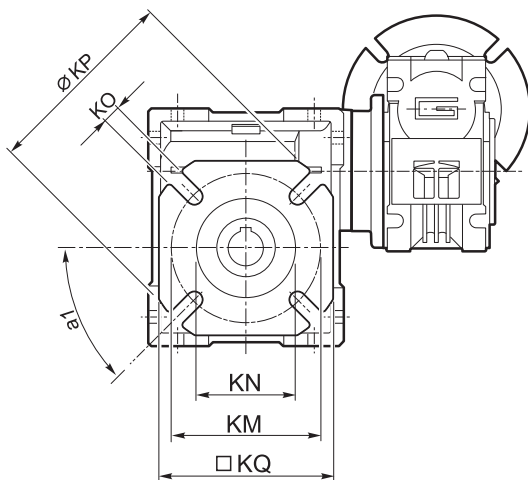
SMT...TEFC  
SMM... TEFC



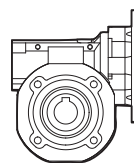
CMM 030/040



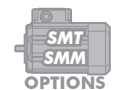
Albero lento cavo / Hollow output shaft



II 9  
II 10

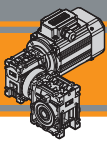


CL030  
CL040



AB1  
AC1  
AD1

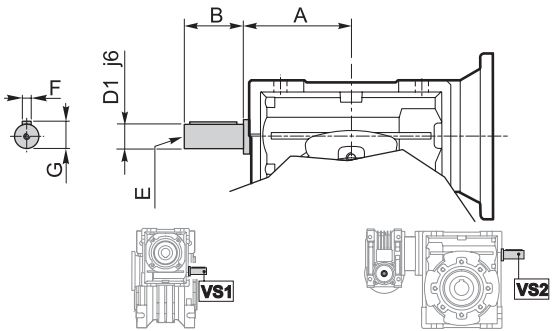
AC



Opzioni

Options

**VS1 - VS2 - Vite sporgente / Extended input shaft**



CMM	VS1						VS2					
	A	B	D <sub>1</sub> j6	E	F	G	A	B	D <sub>1</sub> j6	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5

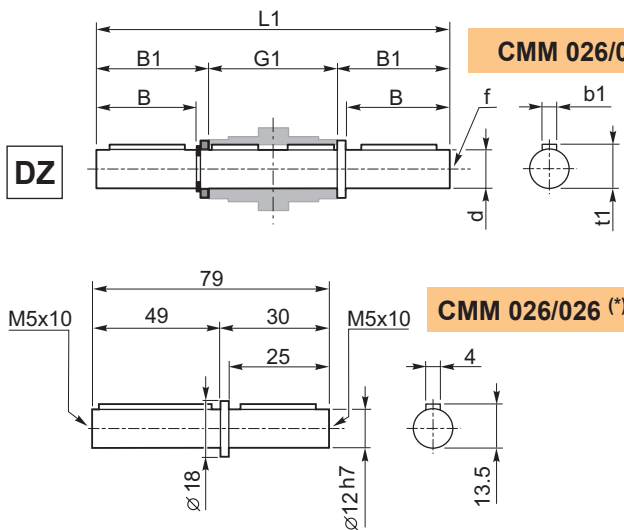
Costruito su richiesta  
Built on request

Accessori

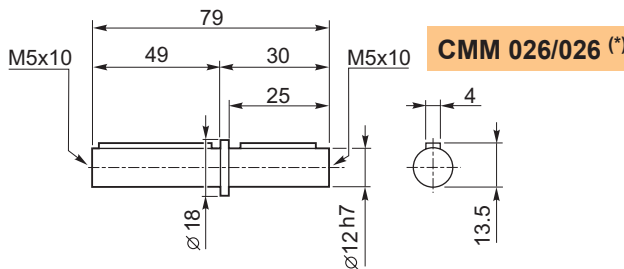
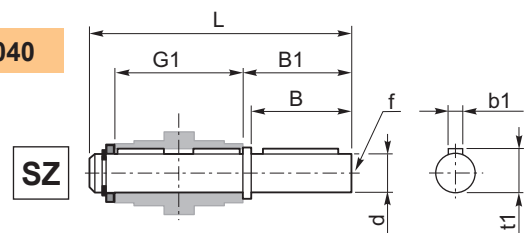
Accessories

**Albero lento semplice e doppio**

**Single and double output shaft**



CMM 026/030 - CMM 030/040



CMM 026/026 (\*)

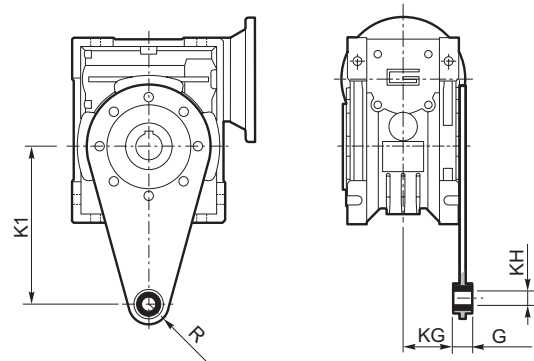
CMM	d h7	B	B1	G1	L	L1	f	b1	t1
026/030	14	30	32.5	63	102	128	M6	5	16
026/040 030/040	18	40	43	78	128	164	M6	6	20.5

(\*)  
Nota: disponibile solo per cavo uscita Ø12  
Note: available for output hollow shaft Ø12 only

**Braccio di reazione**

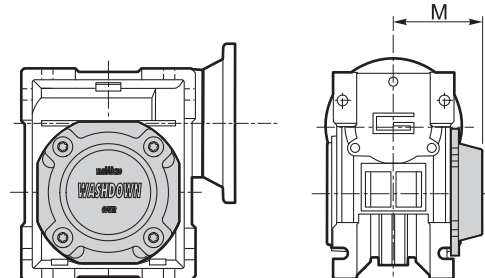
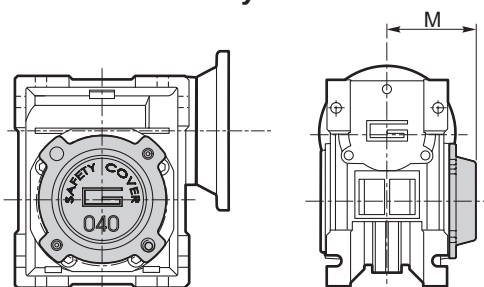
**Torque arm**

CMM	K1	G	KG	KH	R
026/030	85	14	23	8	15
026/040 030/040	100	14	31	10	18



**SC - Safety cover**

**WD - Kit washdown cover**



M	CM	
	30	40
M	47	54.5

M	CM	
	30	40
M	48	55.5



**MINI**  **TECNO**™  
**small** but strong

**PM**

**AC**

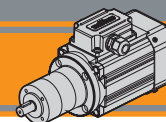
**Motoriduttori CA epicicloidali**  
**AC Planetary gearmotors**



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



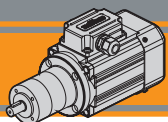




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Designazione	<i>Classification</i>	<b>AL2</b>
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Rapporti	<i>Ratios</i>	<b>AL3</b>
Dati tecnici	<i>Technical data</i>	<b>AL4</b>
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Dimensioni	<i>Dimensions</i>	<b>AL8</b>

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**PM**

**Motoriduttori CA epicicloidali**  
**AC planetary gearmotors**

**MINI**  
**TECNO**

**Caratteristiche tecniche**

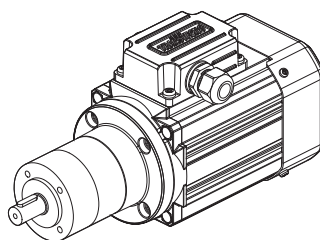
**Technical features**

Le caratteristiche principali dei motoriduttori PM sono:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Motore elettrico AC con grado di protezione IP66
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56 e 63.
- SMT56 e SMT63 adatti al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servoventilata e con certificazione UL.

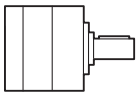
PM gearmotors gearmotors have the following main features:



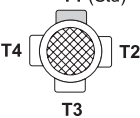
- Compact design
- AC single phase and three phase motors available
- Motor extruded aluminum housing black anodized
- AC electric motor in IP66 protection Standard
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56 and 63.
- SMT56 and SMT63 are suitable for inverter duty
- Brake motors, forced ventilation motors and UL compliance versions available.



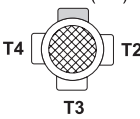


**Designazione**

**Classification**

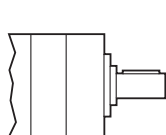
RIDUTTORE / GEARMOTOR				
PM	52	2	C80	34.97
Tipo Type	Grandezza Size	Stadi riduttore Gearbox stages	Versione riduttore Gearbox Version	Rapporto Ratio
<b>PM</b> 	<b>52</b> <b>62</b>	<b>1</b> <b>2</b> <b>3</b>	<b>U</b> <b>C80</b> <b>C90</b> <b>C105</b> <b>C120</b>	Vedere tabella See tables

MOTORE TRIFASE / THREE PHASE MOTOR										
SMT	63	2	4	0.18 kW	B14	230-400 V	50 Hz	TEFC	BR	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
<b>SMT</b> 	Vedere tab. See tab.	<b>1-2-3-4-5</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.37 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b>	<b>50Hz</b>  <b>60Hz</b>	<b>TEFC</b>  <b>TENV</b>		<b>T1 (Std)</b> 

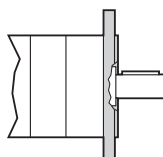
MOTORE MONOFASE / SINGLE PHASE MOTOR										
SMM	63	2	4	0.18 kW	B14	230 V	50 Hz	TEFC	UL-CSA	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Opzioni Options	Pos. Morsettiera Terminal box pos.
<b>SMM</b> 	Vedere tab. See tab.	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.25 kW</b>	<b>B14</b>	<b>230V</b>	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>		<b>T1 (Std)</b> 

**Versioni**

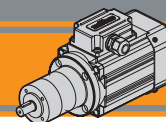
**Versions**



**U**



**C**



## Simbologia

## Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$sf$	Fattore di servizio / <i>Service factor</i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	Rd %	Rendimento dinamico / <i>Dynamic efficiency</i>
$i$	Rapporto di riduzione / <i>Ratio</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_1$ [kW]	Potenza in entrata / <i>Input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>		

## Lubrificazione

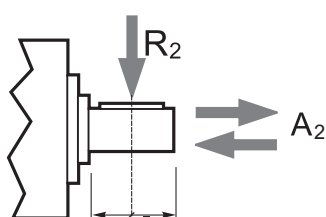
## Lubrication

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione. Questo gli consente di essere installati praticamente ovunque.

*Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free. They can be installed in any location.*

## Carichi radiali

## Radial loads



Numero di stadi Stages number	Carichi Radiali $R_2$ [N] / <i>Radial Load <math>R_2</math> [N]</i>	
	PM52	PM62
1	200	240
2	320	360
3	450	520

Numero di stadi Stages number	Carichi Assiali $A_2$ [N] / <i>Axial Load <math>A_2</math> [N]</i>	
	PM52	PM62
1	60	70
2	100	100
3	150	150

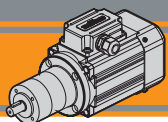
## Rapporti

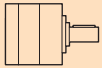
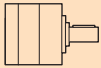


## Ratios

Numero di stadi Stages number	Per tutte le grandezze di riduttori della serie PM <i>For all gearbox sizes of PM range</i>	
	Rapporti / <i>Ratios</i>	
1	3.70	
	4.28	
	5.18	
	6.75	
2	13.73	
	15.88	
	18.36	
	19.20	
	22.20	
	25.01	
	26.85	
	28.93	
	34.97	
	45.56	
3	50.89	
	58.85	
	68.06	
	71.16	
	78.71	
	92.70	
	95.17	
	99.50	
	107.20	
	115.07	
	123.97	
	129.62	
	139.13	
	149.90	
	168.84	
181.24		
195.26		
236.09		
307.54		

**Rapporti preferenziali per le taglie PM52, PM62.**  
*Preferred ratios for PM52, PM62.*

Disponibile a 4 stadi con rapporti fino a 2076  
*Available 4 stages with ratio up to 2076*

**PM****Motoriduttori CA epicicloidali  
AC planetary gearmotors****MINI  
TECNO****Dati tecnici****Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.04</b>						<b>0.04</b>						
SMT5014	<b>378</b>	0.8	6.3	3.7	<b>PM521</b>	SMT5014	<b>28</b>	10	6.5	50.89	<b>PM623</b>	
SMM5014	<b>327</b>	0.9	5.4	4.28		SMM5014	<b>24</b>	11	5.6	58.85		
(1400 min <sup>-1</sup> )	<b>270</b>	1.1	4.5	5.18		(1400 min <sup>-1</sup> )	<b>21</b>	13	4.9	68.06		
	<b>207</b>	1.5	3.4	6.75			<b>20</b>	14	4.7	71.16		
	<b>102</b>	3	5.4	13.73	<b>PM522</b>		<b>18</b>	15	4.2	78.71		
	<b>88</b>	3	4.7	15.88			<b>15</b>	18	3.6	92.7		
	<b>76</b>	4	4.0	18.36			<b>15</b>	18	3.5	95.17		
	<b>73</b>	4	3.9	19.2			<b>14</b>	19	3.3	99.5		
	<b>63</b>	5	3.3	22.2			<b>13</b>	20	3.1	107.2		
	<b>56</b>	5	3.0	25.01			<b>12</b>	22	2.9	115.07		
	<b>52</b>	5	2.8	26.85			<b>11</b>	24	2.7	123.97		
	<b>48</b>	6	2.6	28.93			<b>11</b>	25	2.6	129.62		
	<b>40</b>	7	2.1	34.97			<b>10</b>	27	2.4	139.13		
	<b>31</b>	9	1.6	45.56			<b>9.3</b>	29	2.2	149.9		
						<b>PM523</b>		<b>8.3</b>	32	2.0	168.84	
	<b>28</b>	10	3.3	50.89				<b>7.7</b>	35	1.8	181.24	
	<b>24</b>	11	2.8	58.85			<b>7.2</b>	37	1.7	195.26		
	<b>21</b>	13	2.4	68.06			<b>5.9</b>	45	1.4	236.09		
	<b>20</b>	14	2.3	71.16			<b>4.6</b>	59	1.1	307.54		
	<b>18</b>	15	2.1	78.71								
	<b>15</b>	18	1.8	92.7								
	<b>15</b>	18	1.7	95.17								
	<b>14</b>	19	1.7	99.5								
	<b>13</b>	20	1.5	107.2								
	<b>12</b>	22	1.4	115.07								
	<b>11</b>	24	1.3	123.97								
	<b>11</b>	25	1.3	129.62								
	<b>10</b>	27	1.2	139.13								
	<b>9.3</b>	29	1.1	149.9								
	<b>8.3</b>	32	1.0	168.84								
	<b>7.7</b>	35	0.9	181.24								
	<b>7.2</b>	37	0.8	195.26								
	<b>5.9</b>	45	0.7	236.09								
	<b>4.6</b>	45	0.7	307.54								
					<b>PM622</b>							
	<b>56</b>	5	6.2	25.01								
	<b>52</b>	5	5.8	26.85								
	<b>48</b>	6	5.3	28.93								
	<b>40</b>	7	4.4	34.97								
	<b>31</b>	9	3.4	45.56								
						<b>PM522</b>						
	<b>102</b>	4	3.6	13.73								
	<b>88</b>	5	3.1	15.88								
	<b>76</b>	6	2.7	18.36								
	<b>73</b>	6	2.6	19.2								
	<b>63</b>	7	2.2	22.2								
	<b>56</b>	8	2.0	25.01								
	<b>52</b>	8	1.8	26.85								
	<b>48</b>	9	1.7	28.93								
	<b>40</b>	11	1.4	34.97								
	<b>31</b>	14	1.1	45.56								
					<b>PM523</b>							
	<b>28</b>	15	2.2	50.89								
	<b>24</b>	17	1.9	58.85								
	<b>21</b>	19	1.6	68.06								
	<b>20</b>	20	1.6	71.16								
	<b>18</b>	23	1.4	78.71								
	<b>15</b>	27	1.2	92.7								
	<b>15</b>	27	1.2	95.17								
	<b>14</b>	29	1.1	99.5								
	<b>13</b>	31	1.0	107.2								
	<b>12</b>	33	1.0	115.07								
	<b>11</b>	36	0.9	123.97								
	<b>11</b>	37	0.9	129.62								
	<b>10</b>	40	0.8	139.13								
	<b>9.3</b>	45	0.7	149.9								
	<b>8.3</b>	45	0.7	168.84								
	<b>7.7</b>	45	0.7	181.24								
	<b>7.2</b>	45	0.7	195.26								

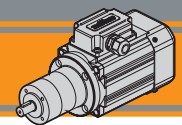
**Motoriduttori preferenziali / Preferred gearmotors**

NOTA  
Per sf=0.7 verificare che la coppia utilizzata non  
ecceda il valore M2 indicato.

NOTE  
For sf=0.7 check that the duty torque does not  
exceed the value M2



Motori Motors	SMT	SMM
	5014 5024	5014 5024
IEC	56 B14	56 B14



## Dati tecnici

## Technical data

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i	
<b>0.06</b>						<b>0.09</b>					
SMT5024	<b>56</b>	8	4.1	25.01	<b>PM622</b>	SMT5034	<b>56</b>	12	2.7	25.01	<b>PM622</b>
SMM5024	<b>52</b>	8	3.8	26.85		SMM5034	<b>52</b>	12	2.6	26.85	
(1400 min <sup>-1</sup> )	<b>48</b>	9	3.6	28.93		SMT5624	<b>48</b>	13	2.4	28.93	
	<b>40</b>	11	2.9	34.97		SMM5624	<b>40</b>	16	2.0	34.97	
	<b>31</b>	14	2.3	45.56		(1400 min <sup>-1</sup> )	<b>31</b>	21	1.5	45.56	
	<b>28</b>	15	4.3	50.89	<b>PM623</b>		<b>28</b>	22	2.9	50.89	<b>PM623</b>
	<b>24</b>	17	3.8	58.85			<b>24</b>	25	2.5	58.85	
	<b>21</b>	19	3.2	68.06			<b>21</b>	29	2.2	68.06	
	<b>20</b>	20	3.1	71.16			<b>20</b>	31	2.1	71.16	
	<b>18</b>	23	2.8	78.71			<b>18</b>	34	1.9	78.71	
	<b>15</b>	27	2.4	92.7			<b>15</b>	40	1.6	92.7	
	<b>15</b>	27	2.3	95.17			<b>15</b>	41	1.5	95.17	
	<b>14</b>	29	2.2	99.5			<b>14</b>	43	1.5	99.5	
	<b>13</b>	31	2.1	107.2			<b>13</b>	46	1.4	107.2	
	<b>12</b>	33	1.9	115.07			<b>12</b>	49	1.3	115.07	
	<b>11</b>	36	1.8	123.97			<b>11</b>	53	1.2	123.97	
	<b>11</b>	37	1.7	129.62			<b>11</b>	56	1.1	129.62	
	<b>10</b>	40	1.6	139.13			<b>10</b>	60	1.1	139.13	
	<b>9.3</b>	43	1.5	149.9			<b>9.3</b>	64	1.0	149.9	
	<b>8.3</b>	48	1.3	168.84			<b>8.3</b>	73	0.9	168.84	
	<b>7.7</b>	52	1.2	181.24		<b>7.7</b>	78	0.8	181.24		
	<b>7.2</b>	56	1.1	195.26		<b>7.2</b>	84	0.8	195.26		
	<b>5.9</b>	68	0.9	236.09		<b>5.9</b>	90	0.7	236.09		
	<b>4.6</b>	88	0.7	307.54		<b>4.6</b>	90	0.7	307.54		

<b>0.09</b>						<b>0.12</b>								
SMT5034	<b>378</b>	2	2.8	3.7	<b>PM521</b>	SMT5044	<b>378</b>	2	2.1	3.7	<b>PM521</b>			
SMM5034	<b>327</b>	2	2.4	4.28		SMT5634	<b>327</b>	3	1.8	4.28				
SMT5624	<b>270</b>	3	2.0	5.18		SMM5634	<b>270</b>	3	1.5	5.18				
SMM5624	<b>207</b>	3	1.5	6.75		(1400 min <sup>-1</sup> )	<b>207</b>	4	1.1	6.75				
(1400 min <sup>-1</sup> )	<b>102</b>	6	2.4	13.73	<b>PM522</b>		<b>102</b>	8	1.8	13.73	<b>PM522</b>			
	<b>88</b>	7	2.1	15.88			<b>88</b>	10	1.6	15.88				
	<b>76</b>	8	1.8	18.36			<b>76</b>	11	1.3	18.36				
	<b>73</b>	9	1.7	19.2			<b>73</b>	12	1.3	19.2				
	<b>63</b>	10	1.5	22.2			<b>63</b>	14	1.1	22.2				
	<b>56</b>	12	1.3	25.01			<b>56</b>	15	1.0	25.01				
	<b>52</b>	12	1.2	26.85			<b>52</b>	16	0.9	26.85				
	<b>48</b>	13	1.1	28.93			<b>48</b>	18	0.9	28.93				
	<b>40</b>	16	0.9	34.97			<b>40</b>	22	0.7	34.97				
	<b>31</b>	21	0.7	45.56			<b>31</b>	22	0.7	45.56				
	<b>28</b>	22	1.4	50.89		<b>PM523</b>								
	<b>24</b>	25	1.3	58.85										
	<b>21</b>	29	1.1	68.06										
	<b>20</b>	31	1.0	71.16										
	<b>18</b>	34	0.9	78.71										
	<b>15</b>	40	0.8	92.7										
	<b>15</b>	41	0.8	95.17										
	<b>14</b>	45	0.7	99.5										
	<b>13</b>	45	0.7	107.2										
	<b>12</b>	45	0.7	115.07										
	<b>11</b>	45	0.7	123.97										
	<b>11</b>	45	0.7	129.62										
	<b>10</b>	45	0.7	139.13										

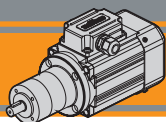
NOTA  
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

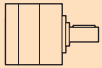
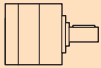



NOTE  
For sf=0.7 check that the duty torque does not exceed the value M2

Motoriduttori preferenziali / Preferred gearmotors



Motori Motors	SMT		SMM	
		5014 5024 5034 5044	5624 5634	5024 5034
IEC	56 B14		56 B14	

**PM****Motoriduttori CA epicicloidali  
AC planetary gearmotors****MINI  
TECNO****Dati tecnici****Technical data**

$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		$P_1$ [kW]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		
<b>0.12</b>						<b>0.18</b>						
SMT5044	<b>28</b>	29	1.1	50.89	<b>PM523</b>	SMT5644	<b>378</b>	4	1.4	3.7	<b>PM521</b>	
SMT5634	<b>24</b>	34	0.9	58.85		SMM5644	<b>327</b>	4	1.2	4.28		
SMM5634	<b>21</b>	39	0.8	68.06		(1400 min <sup>-1</sup> )	<b>270</b>	5	1.0	5.18		
(1400 min <sup>-1</sup> )	<b>20</b>	41	0.8	71.16			<b>207</b>	7	0.8	6.75		
	<b>18</b>	45	0.7	78.71		<b>102</b>	13	1.2	13.73	<b>PM522</b>		
<b>15</b>	45	0.7	92.7	<b>88</b>		15	1.0	15.88				
<b>15</b>	45	0.7	95.17	<b>76</b>		17	0.9	18.36				
<b>14</b>	45	0.7	99.5	<b>73</b>		18	0.9	19.2				
<b>13</b>	45	0.7	107.2	<b>63</b>		22	0.7	22.2				
<b>12</b>	45	0.7	115.07	<b>56</b>		22	0.7	25.01				
<b>11</b>	45	0.7	123.97	<b>52</b>	22	0.7	26.85					
<b>11</b>	45	0.7	129.62	<b>48</b>	22	0.7	28.93					
<b>10</b>	45	0.7	139.13									
	<b>378</b>	2	4.2	3.7	<b>PM621</b>	<b>28</b>	45	0.7	50.89	<b>PM523</b>		
	<b>327</b>	3	3.6	4.28		<b>24</b>	45	0.7	58.85			
	<b>270</b>	3	3.0	5.18		<b>21</b>	45	0.7	68.06			
	<b>207</b>	4	2.3	6.75		<b>20</b>	45	0.7	71.16			
	<b>102</b>	8	3.8	13.73	<b>PM622</b>	<b>0.18</b>						
	<b>88</b>	10	3.2	15.88		SMT5644	<b>378</b>	4	2.8	3.7	<b>PM621</b>	
	<b>76</b>	11	2.8	18.36		SMM5644	<b>327</b>	4	2.4	4.28		
	<b>73</b>	12	2.7	19.2		SMT6324	<b>270</b>	5	2.0	5.18		
	<b>63</b>	14	2.3	22.2		SMM6324	<b>207</b>	7	1.5	6.75		
	<b>56</b>	15	2.1	25.01		(1400 min <sup>-1</sup> )	<b>102</b>	13	2.5	13.73		<b>PM622</b>
	<b>52</b>	16	1.9	26.85			<b>88</b>	15	2.2	15.88		
	<b>48</b>	18	1.8	28.93		<b>76</b>	17	1.9	18.36			
	<b>40</b>	21	1.5	34.97		<b>73</b>	18	1.8	19.2			
	<b>31</b>	28	1.1	45.56		<b>63</b>	20	1.5	22.2			
					<b>56</b>	23	1.4	25.01				
	<b>28</b>	29	2.2	50.89	<b>52</b>	25	1.3	26.85	<b>PM623</b>			
	<b>24</b>	34	1.9	58.85	<b>48</b>	27	1.2	28.93				
	<b>21</b>	39	1.6	68.06	<b>40</b>	32	1.0	34.97				
	<b>20</b>	41	1.6	71.16	<b>31</b>	42	0.8	45.56				
	<b>18</b>	45	1.4	78.71								
	<b>15</b>	53	1.2	92.7	<b>28</b>	44	1.4	50.89				
	<b>15</b>	55	1.2	95.17	<b>24</b>	51	1.3	58.85				
	<b>14</b>	57	1.1	99.5	<b>21</b>	58	1.1	68.06				
	<b>13</b>	61	1.0	107.2	<b>20</b>	61	1.0	71.16				
	<b>12</b>	66	1.0	115.07	<b>18</b>	68	0.9	78.71				
	<b>11</b>	71	0.9	123.97	<b>15</b>	80	0.8	92.7				
	<b>11</b>	74	0.9	129.62	<b>15</b>	82	0.8	95.17				
	<b>10</b>	80	0.8	139.13	<b>14</b>	86	0.7	99.5				
	<b>9.3</b>	90	0.7	149.9	<b>13</b>	90	0.7	107.2				
	<b>8.3</b>	90	0.7	168.84	<b>12</b>	90	0.7	115.07				
	<b>7.7</b>	90	0.7	181.24	<b>11</b>	90	0.7	123.97				
	<b>7.2</b>	90	0.7	195.26	<b>11</b>	90	0.7	129.62				
					<b>10</b>	90	0.7	139.13				

NOTA  
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

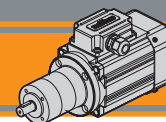
NOTE  
For sf=0.7 check that the duty torque does not exceed the value M2

 Motoriduttori preferenziali / Preferred gearmotors



Motori Motors	SMT			SMM	
	5044	5634 5644	6324	5634 5644	6324
IEC	56 B14			63 B14	





## Dati tecnici

## Technical data

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.25</b>						<b>0.37</b>					
SMT5654 (1400 min <sup>-1</sup> )	<b>378</b>	4	1.4	<b>3.7</b>	<b>PM521</b>	SMT6344 (1400 min <sup>-1</sup> )	<b>378</b>	7	1.4	<b>3.7</b>	<b>PM621</b>
	<b>327</b>	4	1.2	4.28		<b>327</b>	9	1.2	4.28		
	<b>270</b>	5	1.0	5.18		<b>270</b>	10	1.0	5.18		
	<b>207</b>	7	0.8	<b>6.75</b>		<b>207</b>	14	0.7	<b>6.75</b>		
	<b>102</b>	18	0.9	<b>13.73</b>	<b>PM522</b>	<b>102</b>	26	1.2	<b>13.73</b>	<b>PM622</b>	
	<b>88</b>	20	0.7	15.88		<b>88</b>	30	1.1	15.88		
	<b>76</b>	22	0.7	18.36		<b>76</b>	35	0.9	18.36		
	<b>73</b>	22	0.7	19.2		<b>73</b>	36	0.9	19.2		
						<b>63</b>	42	0.8	22.2		
					<b>56</b>	45	0.7	<b>25.01</b>	<b>PM623</b>		
					<b>52</b>	45	0.7	26.85			
					<b>48</b>	45	0.7	28.93			
<b>0.25</b>						<b>28</b>	90	0.7	50.89	<b>PM623</b>	
SMT5654	<b>378</b>	5	2.0	<b>3.7</b>	<b>PM621</b>	<b>24</b>	90	0.7	58.85		
SMT6334	<b>327</b>	6	1.7	4.28		<b>21</b>	90	0.7	<b>68.06</b>		
SMM6334	<b>270</b>	7	1.4	5.18		<b>20</b>	90	0.7	71.16		
(1400 min <sup>-1</sup> )	<b>207</b>	9	1.1	<b>6.75</b>							
	<b>102</b>	18	1.8	<b>13.73</b>	<b>PM622</b>						
	<b>88</b>	20	1.6	15.88							
	<b>76</b>	23	1.3	18.36							
	<b>73</b>	25	1.3	19.2							
	<b>63</b>	28	1.1	22.2							
	<b>56</b>	32	1.0	<b>25.01</b>							
	<b>52</b>	34	0.9	26.85							
	<b>48</b>	37	0.9	28.93							
	<b>40</b>	45	0.7	34.97							
	<b>31</b>	45	0.7	<b>45.56</b>							
	<b>28</b>	61	1.0	50.89	<b>PM623</b>						
	<b>24</b>	70	0.9	58.85							
	<b>21</b>	81	0.8	<b>68.06</b>							
	<b>20</b>	85	0.7	71.16							
	<b>18</b>	90	0.7	78.71							
	<b>15</b>	90	0.7	<b>92.7</b>							
	<b>15</b>	90	0.7	95.17							
	<b>14</b>	90	0.7	99.5							

## NOTA

Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.



Motoriduttori preferenziali / Preferred gearmotors

## NOTE

For sf=0.7 check that the duty torque does not exceed the value M2

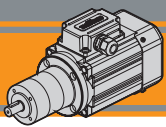


Motori Motors	SMT		SMM
		5654	6334 6344
<b>IEC</b>	<b>56 B14</b>	<b>63 B14</b>	<b>63 B14</b>

## Dati tecnici elettrici

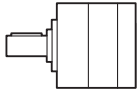
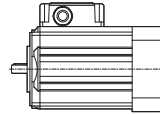
## Electrical technical data





**Motori applicabili**

**IEC Motor adapters**



		<b>SMT</b>		<b>SMM</b>		<b>SMT</b>		<b>SMM</b>	
		5014	5624	5014	5624	6324		6324	
		5024	5634	5024	5634	6334		6334	
		5034	5644	5034	5644	6344			
		5044	5654						
<b>PM</b>	52...								
	62...								



Flangia di combainazione  
Combination flange

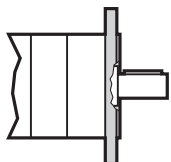
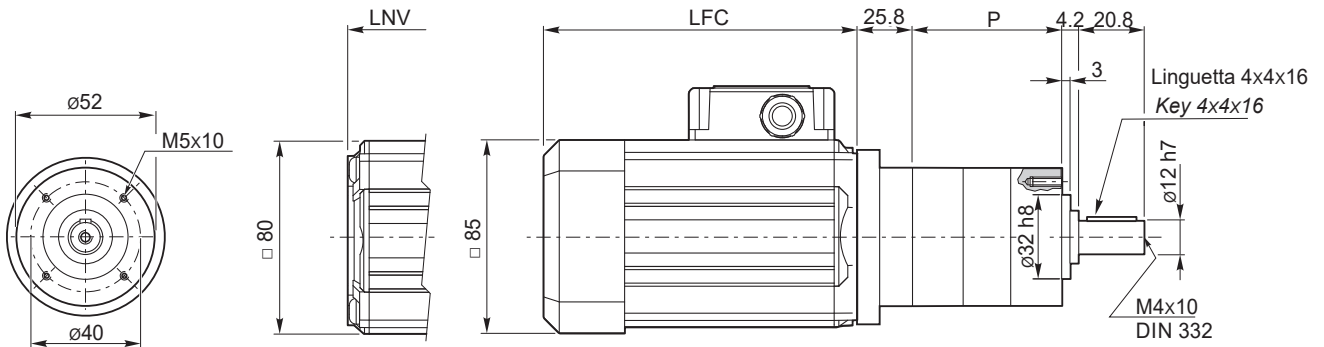
**Dimensioni**

**Dimensions**

**PM52 ... U**

**S3** servizio duty **30%** **SMT50...TENV**  
**SMM50... TENV**

**SMT50...TEFC**  
**SMM50... TEFC**



**PM52...C**



Tipo Type	Numero di stadi Stages number	P
PM52...	1	47.2
	2	61.3
	3	75.6

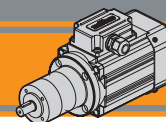
SMT	LFC	LNV	Kg	
5014	135.5	108.5	3.4	
5024	150.5	123.5	3.8	
5034	175.5	148.5	4.6	
5044	200.5	173.5	5.3	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	3.8	
5024	175.5	148.5	4.6	
5034	200.5	173.5	5.3	

**Nota:** il condensatore sarà fornito a corredo  
**Note:** the capacitor will be supplied separately



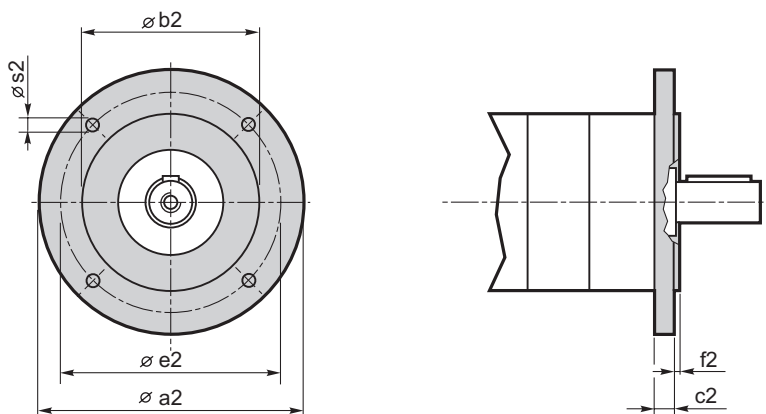




Dimensioni

Dimensions

PM.../... C... Flange uscita / Output flanges



Dimensioni / Dimensions							
PM	a2	b2	c2	e2	f2	s2	Flangia uscita Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120



**MINI**  **TECNO**™  
**small** but strong

**WMP**

Motoriduttori CA combinati  
AC Double reduction gearmotors



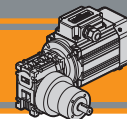
**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



AC



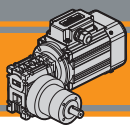




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## Caratteristiche tecniche

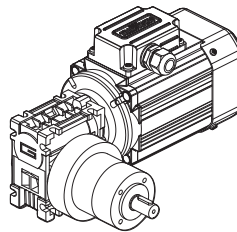
## Technical features

Le caratteristiche principali dei motoriduttori WMP sono:

- Costruzione compatta
- Motorizzazioni in corrente alternata monofase e trifase
- Carcassa motore estrusa in alluminio anodizzato nero
- Motore elettrico AC con grado di protezione IP66
- Disponibili sia nella versione ventilata TEFC (servizio S1) che non ventilata TENV (servizio S3)
- Protezione termica PTO 150°C per le taglie motore 56.
- SMT56 adatto al funzionamento con alimentazione da inverter
- Disponibili nelle versioni autofrenante, servovenilata e con certificazione UL.

WMP gearmotors gearmotors have the following main features:

- Compact design
- AC single phase and three phase motors available
- Motor extruded aluminum housing black anodized
- AC electric motor in IP66 protection Standard
- Fan cooled TEFC (duty S1) and not ventilated TENV (duty S3) versions available
- PTO 150°C thermal protection for motor sizes 56.
- SMT56 is suitable for inverter duty
- Brake motors, forced ventilation motors and UL compliance versions available.



## Designazione

## Classification

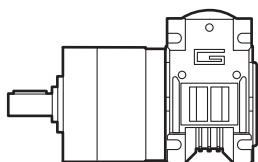
RIDUTTORE / GEARMOTOR					
WMP	026/52	2	C	202.5	56 B14
Tipo Type	Grandezza Size	Numero stadi epicicloidale Planetary stages number	Versione riduttore Gearbox Version	Rapporto Ratio	IEC  56 B14
<b>WMP</b> 	<b>026/52</b> <b>026/62</b>	<b>1</b> <b>2</b> <b>3</b>	<b>US</b> <b>UD</b> <b>CS80...120</b> <b>CD80...120</b>	Vedere tabella See tables	

MOTORE TRIFASE / THREE PHASE MOTOR									
SMT	56	3	4	0.12 kW	B14	230-400 V	50 Hz	TEFC	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Pos. Morsettiera Terminal box pos.
<b>SMT</b> 	Vedere tab. See tab.	<b>1-2-3-4</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.18 kW</b>	<b>B14</b>	<b>230-400 V</b>  <b>460V</b>	<b>50Hz</b>  <b>60Hz</b>	 <b>TEFC</b> <b>TENV</b>	 T1 (Std) T4 T2 T3

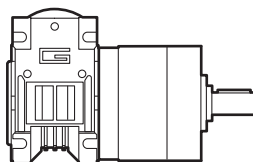
MOTORE MONOFASE / SINGLE PHASE MOTOR									
SMM	56	3	4	0.12 kW	B14	230 V	50 Hz	TEFC	T1
Tipo Type	Grandezza Size	Indicativo potenza Power coefficient	Poli Poles	Potenza Power	Forma costruttiva Version	Tensione Voltage	Frequenza Frequency	Ventilazione Fan cooling	Pos. Morsettiera Terminal box pos.
<b>SMM</b> 	Vedere tab. See tab.	<b>1-2-3</b>	<b>4</b>	<b>0.04 kW</b> ... <b>0.18 kW</b>	<b>B14</b>	<b>230V</b>	<b>50Hz</b>	<b>TEFC</b>  <b>TENV</b>	 T1 (Std) T4 T2 T3

## Versioni

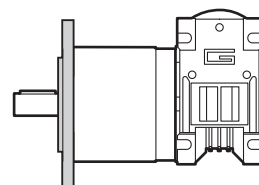
## Versions



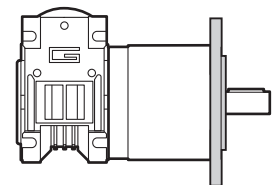
US



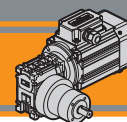
UD



CS



CD

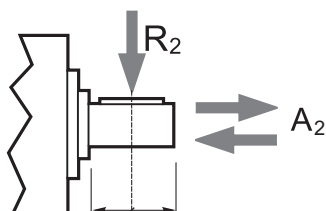

**Simbologia**
**Symbols**

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$sf$	Fattore di servizio / <i>Service factor</i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	Rd %	Rendimento dinamico / <i>Dynamic efficiency</i>
$i$	Rapporto di riduzione / <i>Ratio</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_1$ [kW]	Potenza in entrata / <i>Input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>		

**Lubrificazione**
**Lubrication**

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione.  
Questo gli consente di essere installati praticamente ovunque.

*Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free.  
They can be installed in any location.*

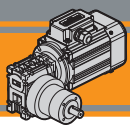
**Carichi radiali**
**Radial loads**


Numero di stadi <i>Stages number</i>	Carichi Radiali $R_2$ [N] / <i>Radial Load <math>R_2</math> [N]</i>	
	PM52	PM62
1	200	240
2	320	360
3	450	520

Numero di stadi <i>Stages number</i>	Carichi Assiali $A_2$ [N] / <i>Axial Load <math>A_2</math> [N]</i>	
	PM52	PM62
1	60	70
2	100	100
3	150	150

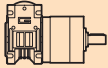

**Rapporti**
**Ratios**

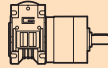

Motoriduttore <i>Gearmotor</i>	Numero stadi epicicloidale <i>Planetary stages number</i>	Rapporto epicicloidale <i>Planetary ratio</i>	Rapporto vite senza fine <i>Wormgearbox ratio</i>	Rapporto finale <i>Total ratio</i>
WMP 026/052 WMP 026/062	1	6.75	10	67.5
			15	101.3
			20	135
			30	202.5
			40	270
			50	337.5
	2	25.01	60	405
			10	250.1
			15	375.15
			20	500.2
			30	750.3
			40	1000.4
			50	1250.5
60	1500.6			
	45.56	60	2734	

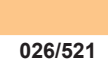





**Dati tecnici**

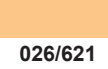

**Technical data**

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		
<b>0.04</b>						
SMT5014	20.7	12.2	2.0	67.5	<b>026/521</b>	
SMM5014	13.8	17.2	1.4	101.3		
(1400 min <sup>-1</sup> )	10.4	21.8	1.1	135		
	6.9	25.0	1.0	202.5		
	5.2	25.0	1.0	270		
	4.1	25.0	1.0	337.5		
	3.5	25.0	1.0	405		
	5.6	25.0	1.0	250.1		<b>026/522</b>
	3.7	25.0	1.0	375.15		
	2.8	25.0	1.0	500.2		
	1.9	25.0	1.0	750.3		
	1.4	25.0	1.0	1000.4		
	1.1	25.0	1.0	1250.5		
	0.9	25.0	1.0	1500.6		
	0.5	25.0	1.0	2734		
	20.7	12.2	3.3	67.5	<b>026/621</b>	
	13.8	17.2	2.3	101.3		
	10.4	21.8	1.8	135		
	6.9	29.2	1.4	202.5		
	5.2	36.0	1.1	270		
	4.1	40.0	1.0	337.5		
	3.5	40.0	1.0	405		
	5.6	42.5	1.2	250.1		<b>026/622</b>
	3.7	50.0	1.0	375.15		
	2.8	50.0	1.0	500.2		
	1.9	50.0	1.0	750.3		
	1.4	50.0	1.0	1000.4		
	1.1	50.0	1.0	1250.5		
	0.9	50.0	1.0	1500.6		
	0.5	50.0	1.0	2734		

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.06</b>					
SMT5024	20.7	18.3	1.4	67.5	<b>026/521</b>
SMM5024	13.8	25.0	1.0	101.3	
(1400 min <sup>-1</sup> )	10.4	25.0	1.0	135	
	20.7	18.3	2.2	67.5	<b>026/621</b>
	13.8	25.9	1.5	101.3	
	10.4	32.7	1.2	135	
	6.9	40.0	1.0	202.5	
	5.2	40.0	1.0	270	
	5.6	50.0	1.0	250.1	

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.09</b>					
SMT5034	20.7	25.0	1.0	67.5	<b>026/521</b>
SMM5034	13.8	27.5	1.5	67.5	
SMT5624	20.7	38.8	1.0	101.3	<b>026/621</b>
SMM5624	13.8	40.0	1.0	135	
(1400 min <sup>-1</sup> )	10.4	40.0	1.0	135	
					

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.12</b>					
SMT5044	20.7	36.7	1.1	67.5	<b>026/621</b>
SMT5634	13.8	40.0	1.0	101.3	
SMM5634	13.8	40.0	1.0	101.3	<b>026/622</b>
(1400 min <sup>-1</sup> )					
					

P <sub>1</sub> [kW]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i	
<b>0.18</b>					
SMT5644	20.7	40.0	1.0	67.5	<b>026/621</b>
SMM5644	13.8	40.0	1.0	101.3	
(1400 min <sup>-1</sup> )					
					

N.B.  
Verificare sempre che la coppia M<sub>2</sub> utilizzata non ecceda il valore indicato nelle caselle in grigio.

N.B.  
Please check that the output torque M<sub>2</sub> does not exceed the value in the grey areas.

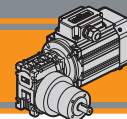


Motori Motors	SMT			SMM		
	5014 5024 5034 5044	5624 5634	6324	5024 5034	5624 5634	6324
IEC	56 B14			56 B14		

**Dati tecnici elettrici**

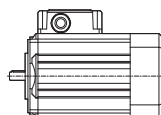
**Electrical technical data**





Motori applicabili

IEC Motor adapters



		SMT		SMM	
		5014	5624	5014	5624
		5024	5634	5024	5634
		5034	5644	5034	5644
		5044	5654		
WMP	026/52	67.5 - 2734		67.5 - 2734	
	026/62	67.5 - 2734		67.5 - 2734	

67.5 - 2734

Rapporti di riduzione i  
Ratio i

Dimensioni

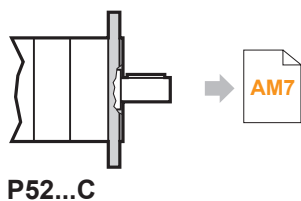
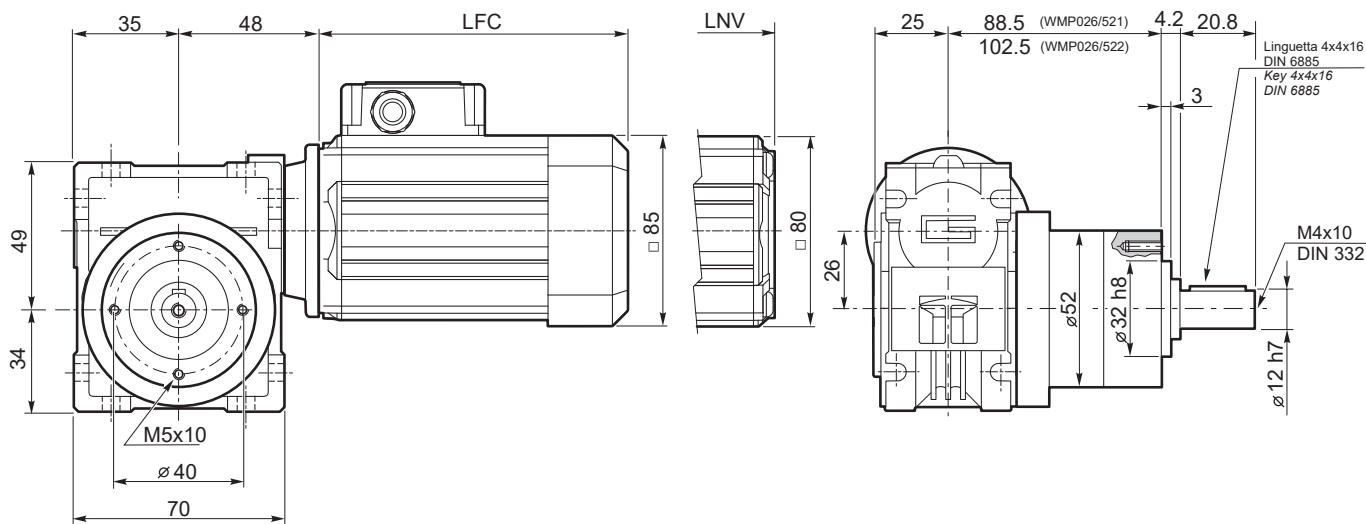
Dimensions

WMP 026/521  
WMP 026/522

SMT50...TEFC  
SMM50... TEFC

SMT50...TENV  
SMM50... TENV

S3 servizio 30%  
duty

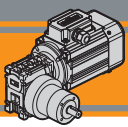


P52...C

SMT	LFC	LNV	Kg	
5014	135.5	108.5	4.1	
5024	150.5	123.5	4.5	
5034	175.5	148.5	5.3	
5044	200.5	173.5	6	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	4.5	
5024	175.5	148.5	5.3	
5034	200.5	173.5	6	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately



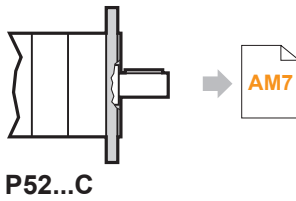
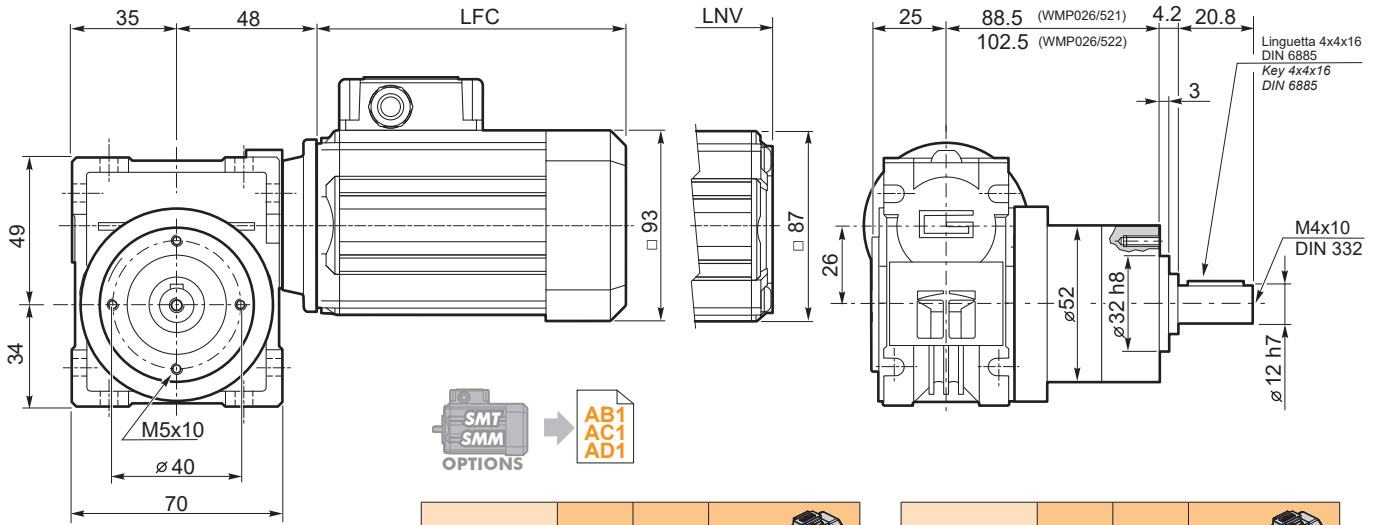
**Dimensioni**

**Dimensions**

**WMP 026/521**  
**WMP 026/522**

**SMT56...TEFC**  
**SMM56... TEFC**

**SMT56...TENV**  
**SMM56... TENV** S3 servizio duty 30%



**P52...C**

SMT	LFC	LNV	Kg	
5624	141	117	4.6	
5634	151	127	5	
5644	186	162	6.2	
5654	206	182	6.9	

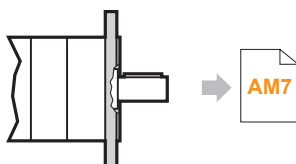
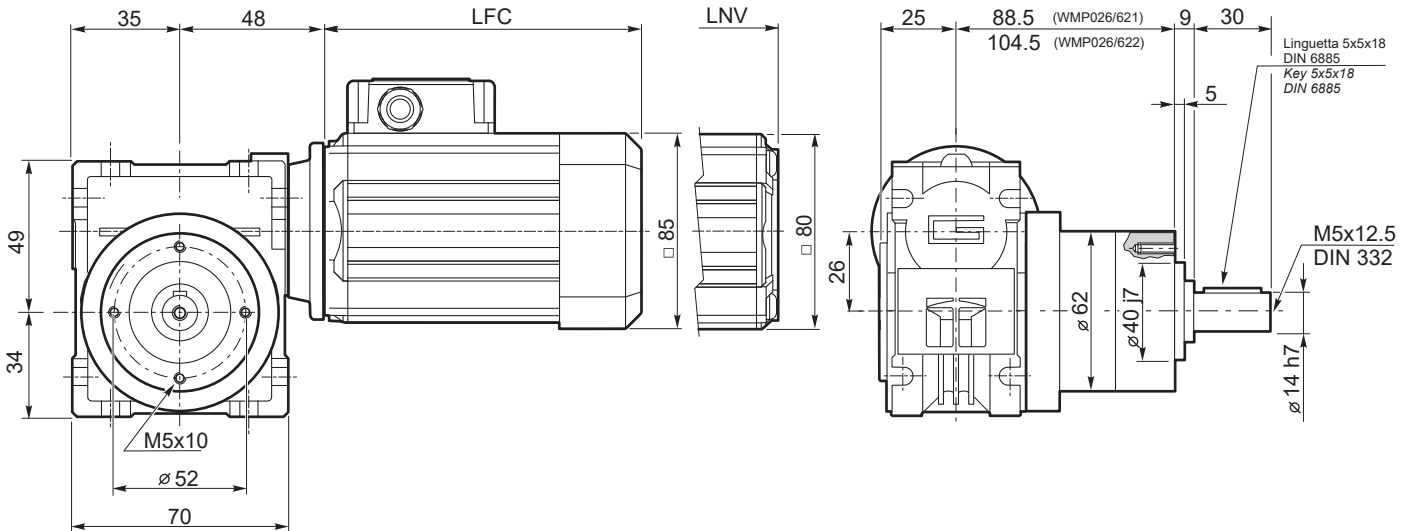
SMM	LFC	LNV	Kg	
5624	151	127	4.9	
5634	171	147	5.5	
5644	206	182	6.8	

**Nota:** il condensatore sarà fornito a corredo  
**Note:** the capacitor will be supplied separately

**WMP 026/621**  
**WMP 026/622**

**SMT50...TEFC**  
**SMM50... TEFC**

**SMT50...TENV**  
**SMM50... TENV** S3 servizio duty 30%

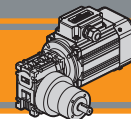


**P62...C**

SMT	LFC	LNV	Kg	
5014	135.5	108.5	4.4	
5024	150.5	123.5	4.8	
5034	175.5	148.5	5.6	
5044	200.5	173.5	6.3	

SMM	LFC	LNV	Kg	
5014	150.5	123.5	4.8	
5024	175.5	148.5	5.6	
5034	200.5	173.5	6.3	

**Nota:** il condensatore sarà fornito a corredo  
**Note:** the capacitor will be supplied separately



Dimensioni

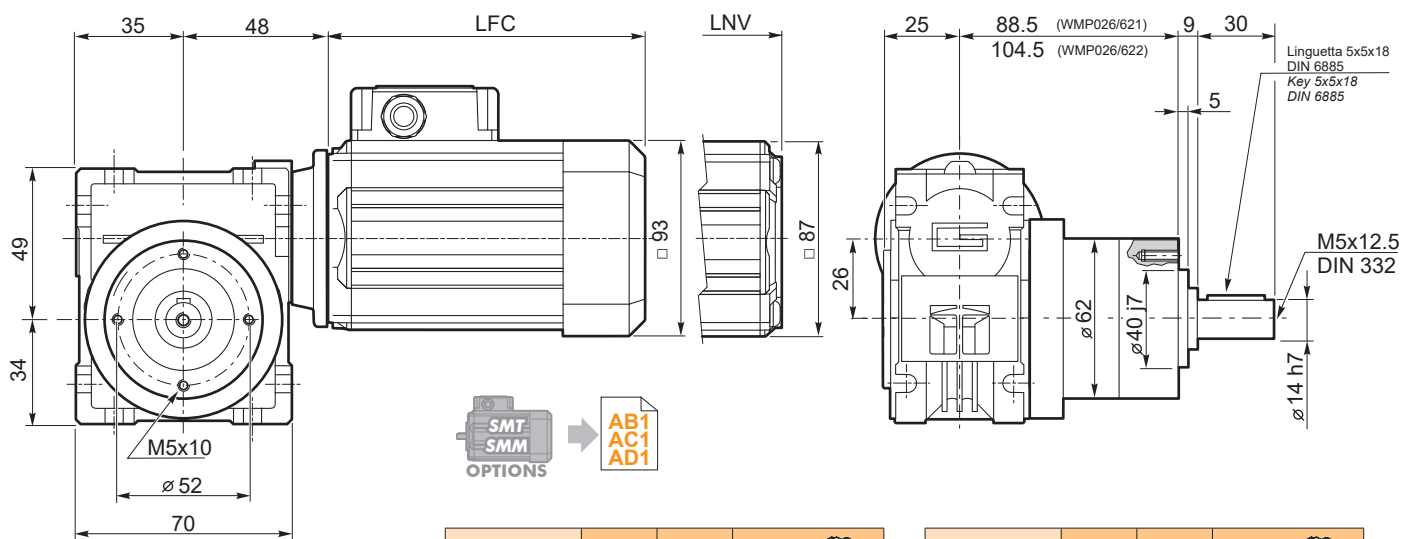
Dimensions

WMP 026/621  
WMP 026/622

SMT56...TEFC  
SMM56... TEFC

SMT56...TENV  
SMM56... TENV

S3 servizio 30%  
duty

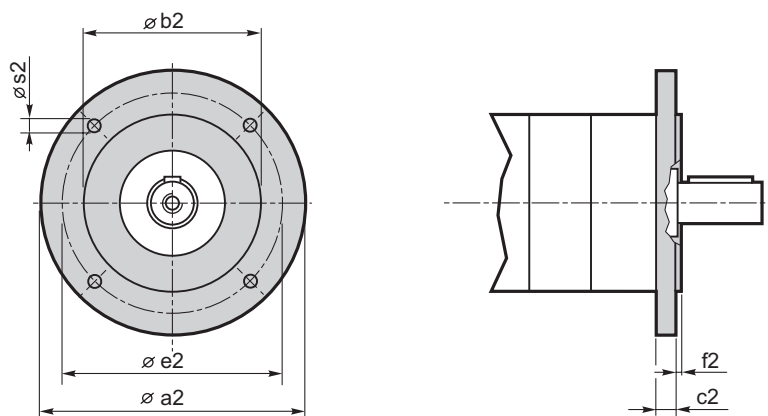


SMT	LFC	LNV	Kg	
5624	141	117	4.9	
5634	151	127	5.3	
5644	186	162	6.5	
5654	206	182	7.2	

SMM	LFC	LNV	Kg	
5624	151	127	5.2	
5634	171	147	5.8	
5644	206	182	7.1	

Nota: il condensatore sarà fornito a corredo  
Note: the capacitor will be supplied separately

P.../... C... Flange uscita / Output flanges



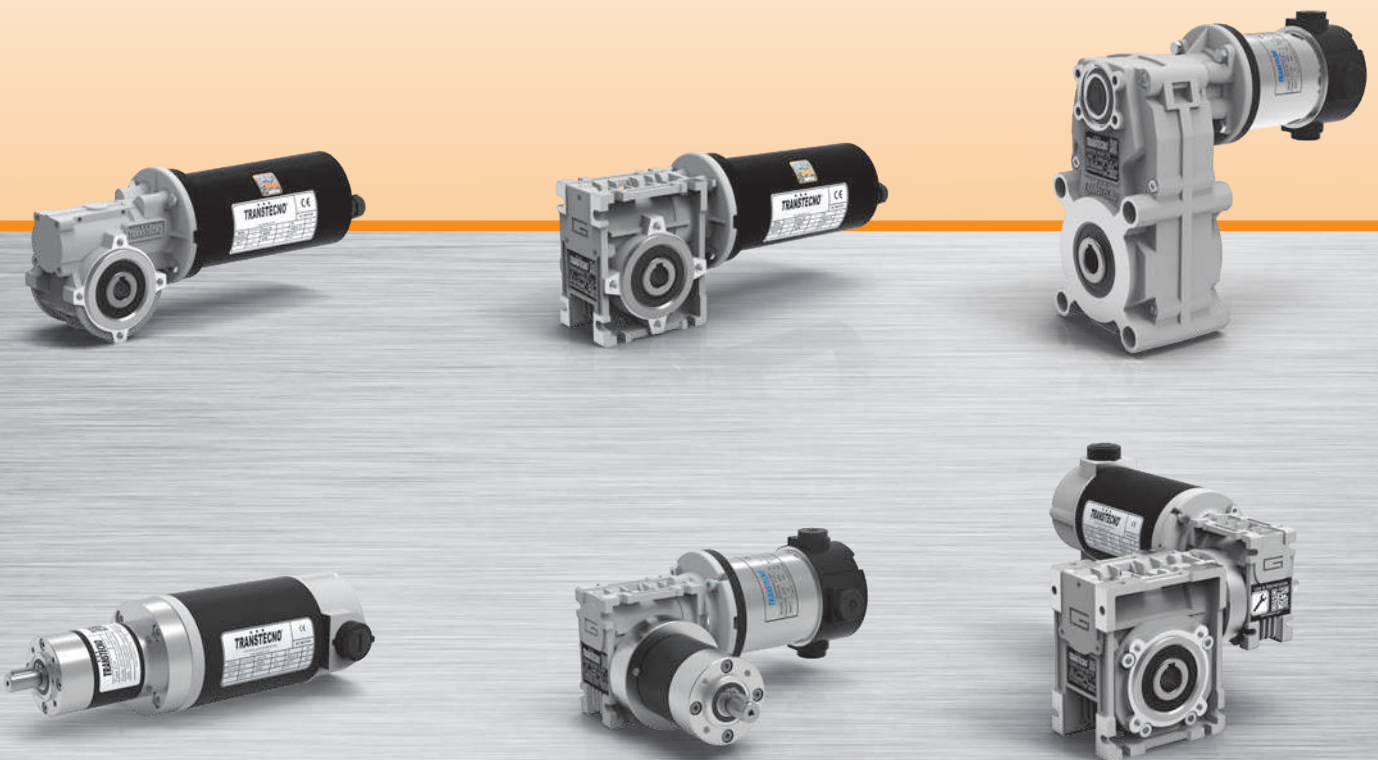
Dimensioni / Dimensions							
P	a2	b2	c2	e2	f2	s2	Flangia uscita Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120





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**small** but strong

Motoriduttori CC  
DC gearmotors




















DC

**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®





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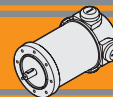
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Motori elettrici CC - Neodimio  
DC electric motors - Neodymium



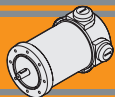




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	Classe di isolamento termico	<i>Insulation class</i>	<b>BA3</b>
	Tipi di servizio IEC	<i>IEC duty cycle ratings</i>	<b>BA3</b>
<b>ND120.120</b>	Caratteristiche	<i>Features</i>	<b>BA4</b>
<b>ND120.240</b>	Dimensioni	<i>Dimensions</i>	<b>BA4</b>
	Prestazioni	<i>Performances</i>	<b>BA5</b>
<b>ND180.120</b>	Caratteristiche	<i>Features</i>	<b>BA6</b>
<b>ND180.240</b>	Dimensioni	<i>Dimensions</i>	<b>BA6</b>
	Prestazioni	<i>Performances</i>	<b>BA7</b>
	Legenda / Glossario dei grafici	<i>Key / Diagram Glossary</i>	<b>BA8</b>
	Formule utili	<i>Useful formulas</i>	<b>BA8</b>
	Freni	<i>Brakes</i>	<b>BA9</b>
	Encoder	<i>Encoder</i>	<b>BA9</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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## Caratteristiche tecniche

I magneti in Neodimio (NdFeB) fanno parte dei magneti a terre rare e sono attualmente i magneti più potenti in produzione. Dotati di alta forza coercitiva (resistenza alla smagnetizzazione) ed alto valore di saturazione magnetica, sono in grado di immagazzinare moltissima energia magnetica. Pertanto, i motori CC dotati di magneti in Neodimio forniscono alti valori di coppia pur in dimensioni ridotte, grazie all'alta densità di flusso del campo magnetico.

Le caratteristiche principali dei motori elettrici CC a magneti permanenti in neodimio ND sono:

- Campo magnetico generato da magneti permanenti in Neodimio ( NdFeB )
- Costruzione tubolare senza ventilazione
- Disponibili in una grandezza diametro 65
- Alimentazione a bassa tensione 12 o 24 Vcc
- Potenza 160W e 250W S2
- Elevata coppia di spunto
- Maggiori coppie e potenze rispetto ai corrispettivi motori a magneti permanenti standard (a parità di dimensioni)
- Predisposizione encoder / freno

## Classe di isolamento termico

Gli avvolgimenti del rotore sono soggetti a surriscaldamento, come pure altre parti del motore. Il grado di isolamento indica la massima temperatura ammissibile oltre la quale l'isolante della matassa e l'isolante di tutte le parti soggette ad elevato riscaldamento perde le caratteristiche di buon isolante, con pericolo di danneggiamento del motore.

## Servizio

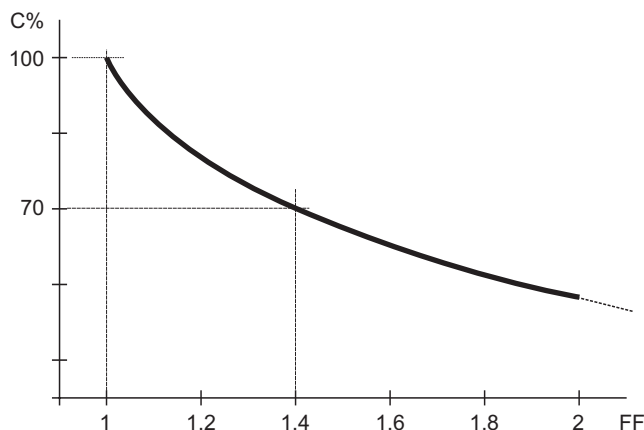
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

Servizio intermittente (S2, S3, etc...) = periodi alternati di lavoro e di riposo tali da raffreddare il motore. Dato un motore, la potenza espressa per servizio continuo è inferiore a quella per servizio intermittente.

## Fattore di forma

Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1 Alimentazione da transistori (modulazione PWM) = FF 1.05.

Qualitativamente l'andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:



## Technical features

*Neodymium magnet (NdFeB) is a type of rare-earth magnet and is currently the strongest type of permanent magnets. Due to high coercivity resistance to being demagnetized and high saturation magnetization, they have potential for storing large amounts of magnetic energy. Therefore permanent Neodymium magnets DC motors can provide high torque in compact size due to the high density flux of magnet field.*

*The main features of ND neodymium permanent magnets DC electric motors range are:*

- *Magnetic field generated by Neodymium ( NdFeB ) permanent magnets*
- *Tubular construction without fan*
- *Available in one size diameter 65*
- *Low voltage power supply 12 or 24 Vdc*
- *Power ratings available 160W and 250W S2*
- *High starting torque*
- *Higher torque and higher power than standard permanent magnet D.C. motors.*
- *Suitable for encoder / brake assembly*

## Thermal insulation class

*The windings of the rotor can overheat just like other parts of the motor too. The degree of insulation indicates the maximum allowable temperature above which the insulation of the windings, as well as that of all the parts which heat up to a high temperature, loses its insulating properties and the motor therefore risks being damaged.*

## Duty cycle

*This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.*

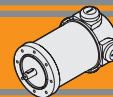
*Intermittent operation (S2, S3, etc.) = alternating periods of work and rest so that the motor can cool down. The output power for continuous operation is lower than that for intermittent operation.*

## Form factor

*It indicates how much spurious alternating current is present in the D.C. motor power supply. The higher the factor, the lower the motor's efficiency. SCR power supplies = F.F 1.40. Battery supply = FF 1 Transistor supply (PWM modulation) = FF 1.05.*

*The graph below indicates the torque trend (percentage) in relation to the form factor:*




**Grado di protezione IP**
**IP enclosures protection indexes**

Indica il grado di isolamento meccanico del corpo motore.

Indicates the degree of mechanical insulation of the motor body.

1<sup>a</sup> cifra: protezione alla penetrazione di corpi solidi.

1<sup>st</sup> figure: indicating level of protection against the penetration of solid bodies.

2<sup>a</sup> cifra: protezione contro la penetrazione d'acqua.

2<sup>nd</sup> figure: indicating degree to which the motor is waterproof.

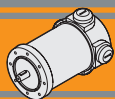
<b>0</b>	Non protetto / No protection	<b>0</b>	Non protetto / No protection
<b>1</b>	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (over Ø 50 mm)</i>	<b>1</b>	Protetto contro la caduta verticale di gocce d'acqua. <i>Protected against drops of water falling vertically</i>
<b>2</b>	Protetto da corpi solidi superiori a Ø 12 mm. <i>Protected against solid matters (over Ø 12 mm)</i>	<b>2</b>	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° <i>Protected against drops of water falling up to 15°</i>
<b>3</b>	Protetto da corpi solidi superiori a Ø 2.5 mm. <i>Protected against solid matters (over Ø 2.5 mm)</i>	<b>3</b>	Protetto contro la pioggia. <i>Rain proof fixture</i>
<b>4</b>	Protetto da corpi solidi superiori a Ø 1 mm. <i>Protected against solid matters (over Ø 1 mm)</i>	<b>4</b>	Protetto contro gli spruzzi. <i>Splash proof fixture</i>
<b>5</b>	Protetto contro la polvere <i>Dust proof</i>	<b>5</b>	Protetto contro getti d'acqua <i>Water jet proof</i>
<b>6</b>	Totalmente protetto contro la polvere <i>Fully dust proof</i>	<b>6</b>	Protetto dalle ondate <i>Wave proof</i>
<b>7</b>	N.A.	<b>7</b>	Protetto contro immersione <i>Watertight immersion fixture.</i>
<b>8</b>	N.A.	<b>8</b>	Protetto contro immersione/sommersione prolungata <i>Watertight immersion fixture for a long time.</i>

**Classe di isolamento termico**
**Insulation class**

Classe / Class	$\Delta t$ °C Temp. ambiente: 40°C Ambient temperature: 40°C
<b>A</b>	65°C
<b>B</b>	90°C
<b>F</b>	115°C
<b>H</b>	140°C

**Tipi di servizio IEC**
**IEC duty cycle ratings**

<b>S1</b>	<b>Servizio continuo.</b> Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	<b>Continuous duty.</b> The motor works at a constant load for enough time to reach temperature equilibrium
<b>S2</b>	<b>Servizio di durata limitata.</b> Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell'equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	<b>Short time duty.</b> The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
<b>S3</b>	<b>Servizio periodico intermittente.</b> Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	<b>Intermittent periodic duty.</b> Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
<b>S4</b>	<b>Servizio periodico intermittente con avviamento.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	<b>Intermittent periodic duty with starting.</b> Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
<b>S5</b>	<b>Servizio periodico intermittente con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	<b>Intermittent periodic duty with electric braking.</b> Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
<b>S6</b>	<b>Servizio periodico ininterrotto con carico intermittente.</b> Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	<b>Continuous operation with intermittent load.</b> Sequential, identical cycles of running with constant load and running with no load. No rest periods.
<b>S7</b>	<b>Servizio periodico ininterrotto con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	<b>Continuous operation with electric braking.</b> Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
<b>S8</b>	<b>Servizio periodico ininterrotto con variazioni di carico e di velocità.</b> Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	<b>Continuous operation with periodic changes in load and speed.</b> Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.



**ND120.120 - ND120.240**

**Caratteristiche**

**Features**

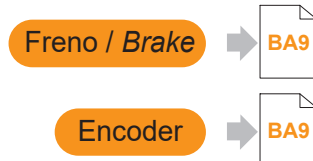
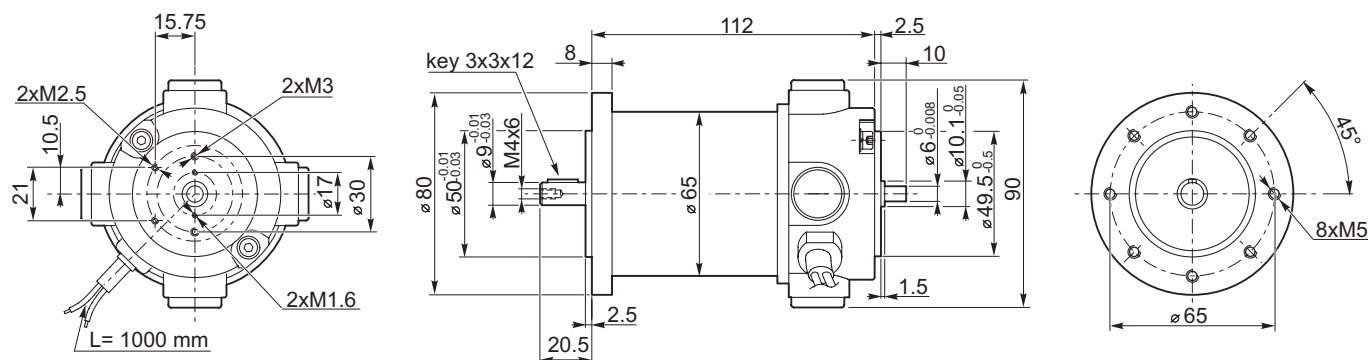
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	160 W S2 (120 W S1)
Magneti	4 magneti in terre rare
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard

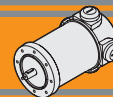
Construction	Tubular, without fan
Size	Ø 65 mm
Power	160 W S2 (120 W S1)
Magnets	4 rare earth magnets
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Electric cable	Length: 1000 mm
Rear Shaft	Standard

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
ND120.120	S1	120	12	13.9	F	1	0.38	3000	20	1.6
	S2 20'	160		19			0.51			
ND120.240	S1	120	24	6.9						
	S2 20'	160		9.0			0.38			
							0.51			

**Dimensioni**

**Dimensions**



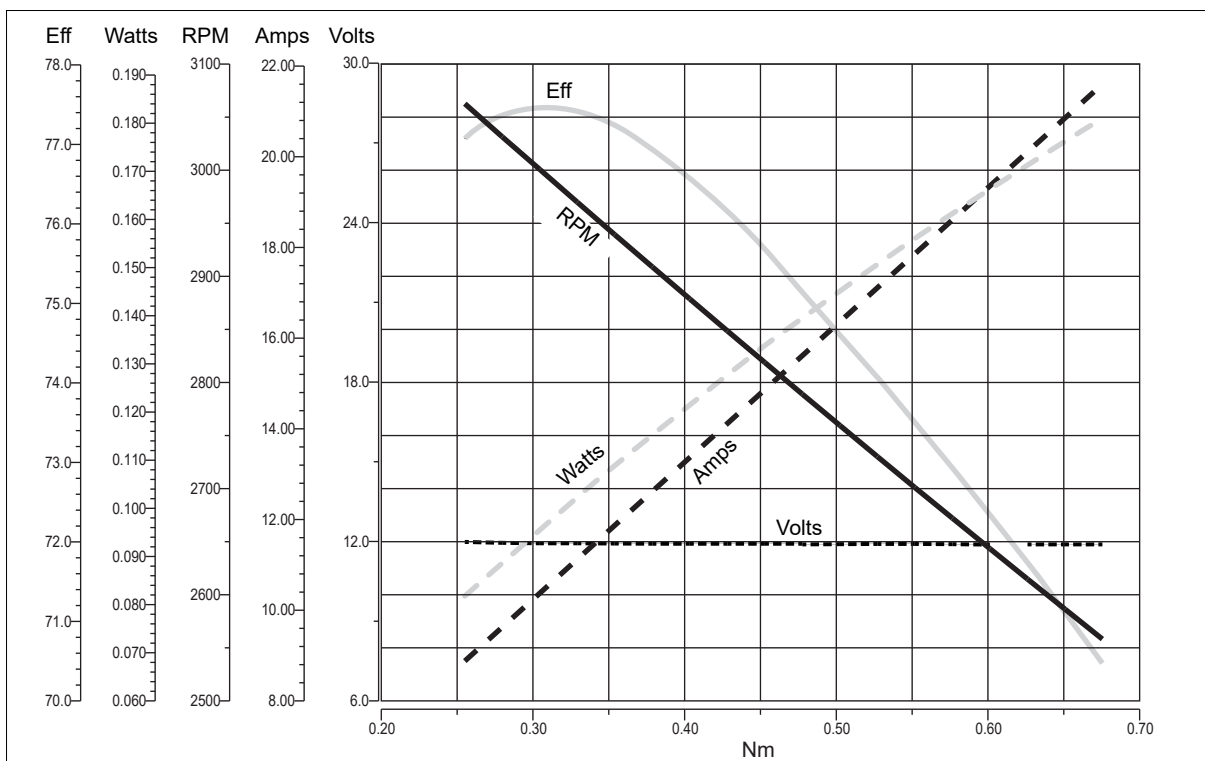


**ND120.120 - ND120.240**

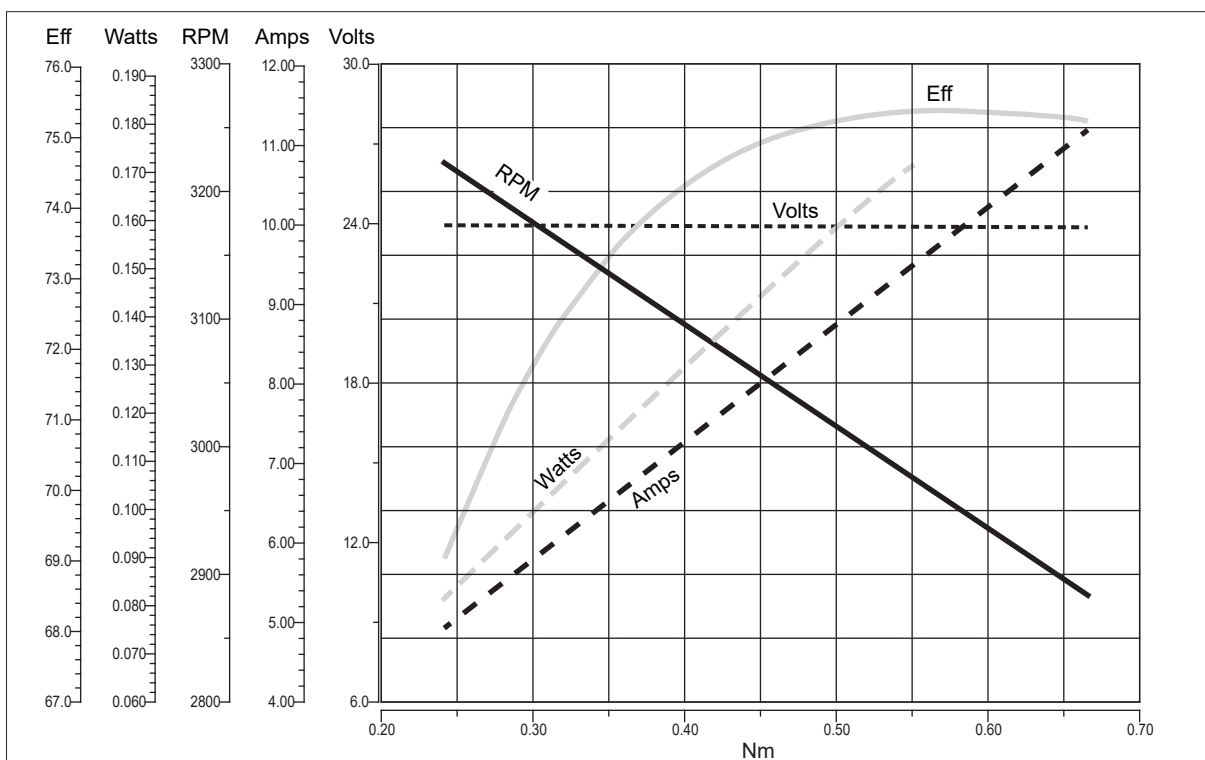
Prestazioni

Performances

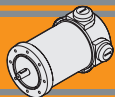
**ND120.120**



**ND120.240**



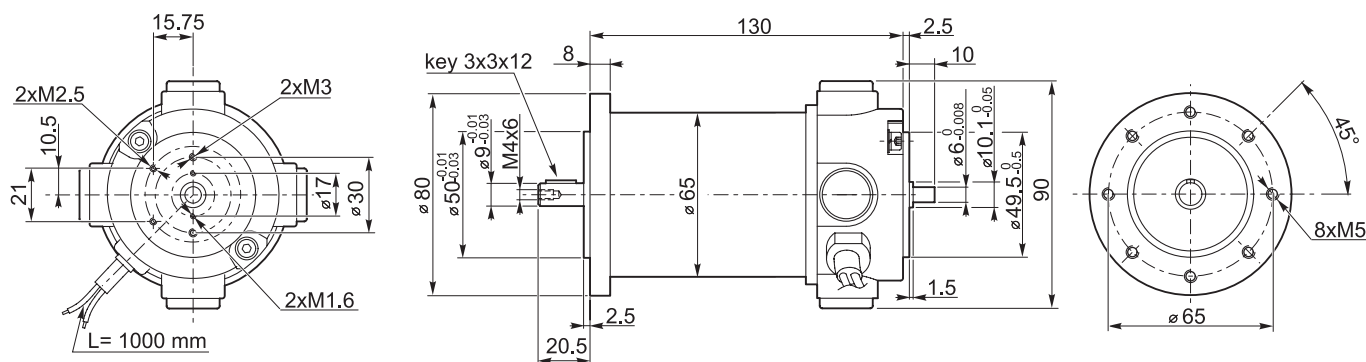
DC

**ND****Motori elettrici CC - Neodimio**  
DC Electric motors - Neodymium**MINI**  
TECNO**ND180.120 - ND180.240****Caratteristiche****Features**

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	250 W S2 (180 W S1)
Magneti	4 magneti in terre rare
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard

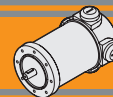
Construction	Tubular, without fan
Size	Ø 65 mm
Power	250 W S2 (180 W S1)
Magnets	4 rare earth magnets
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Electric cable	Length: 1000 mm
Rear Shaft	Standard

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
ND180.120	S1	180	12	20	F	1	0.57	3000	20	1.95
	S2 20'	250		30			0.80			
ND180.240	S1	180	24	10						
	S2 20'	250		14			0.57			
							0.80			

**Dimensioni****Dimensions**

Freno / Brake → BA9

Encoder → BA9

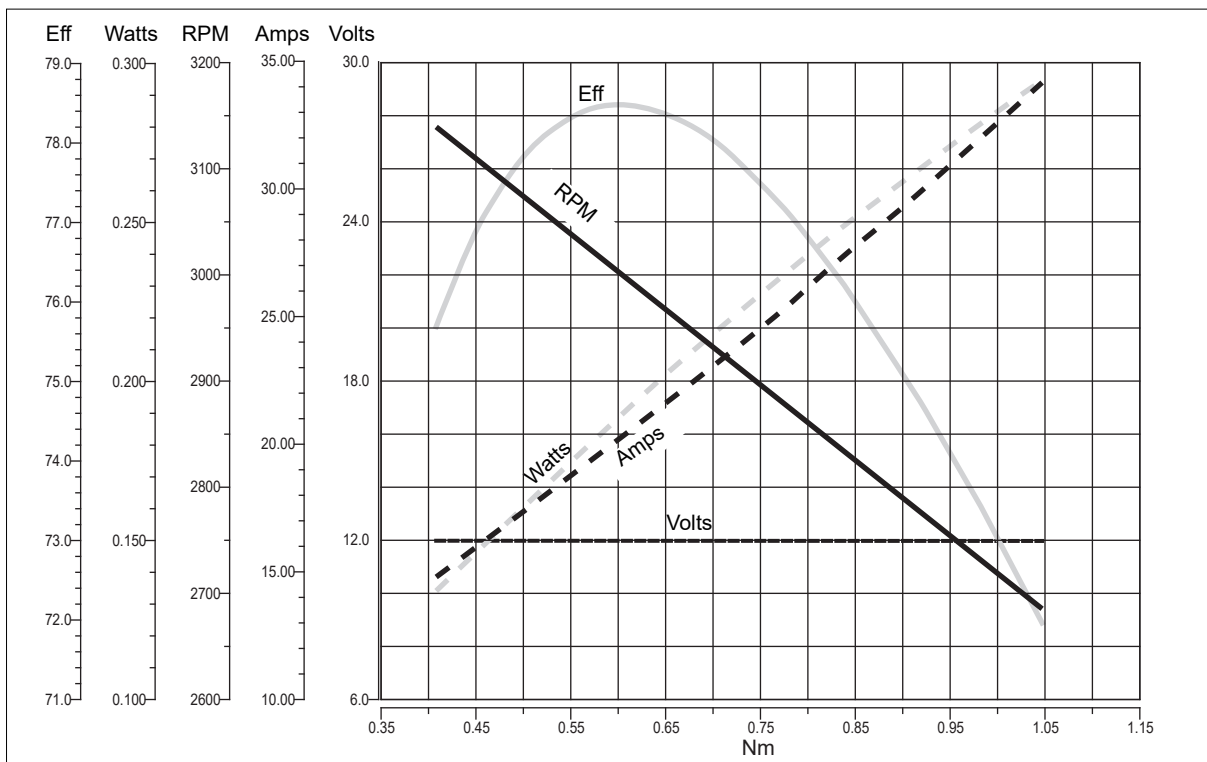


**ND180.120 - ND180.240**

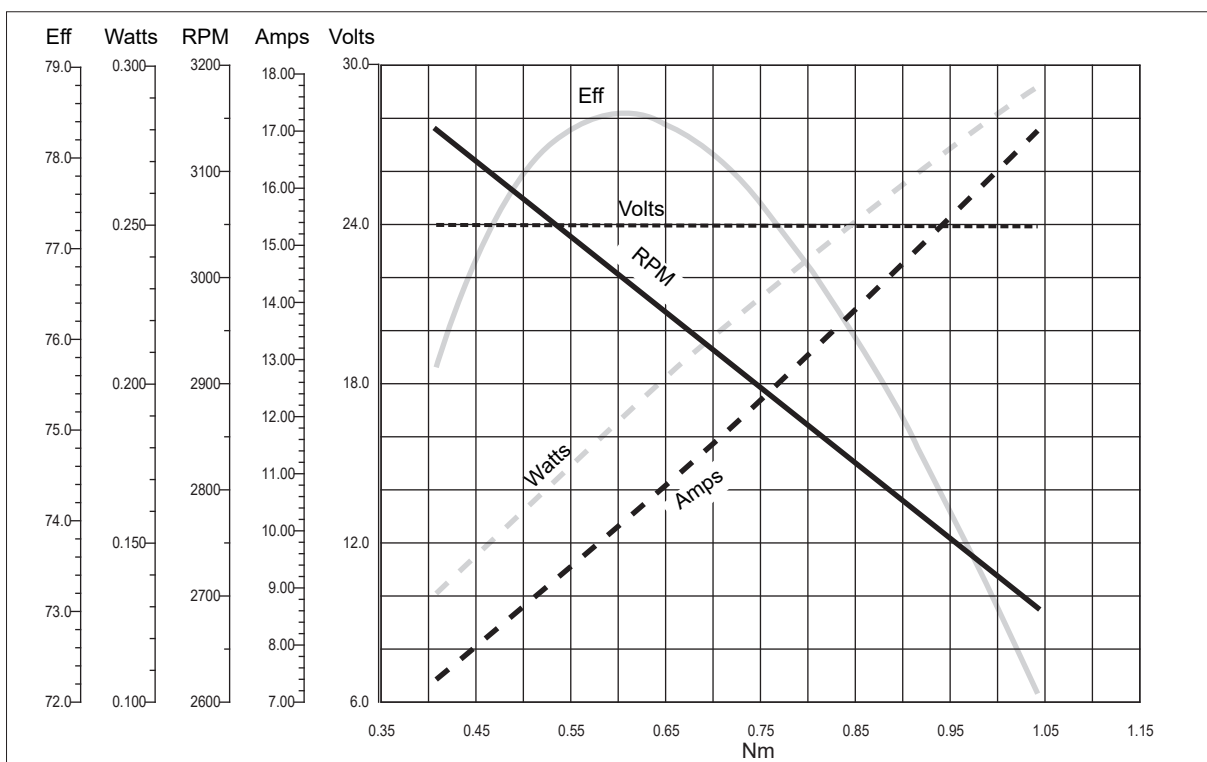
Prestazioni

Performances

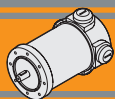
**ND180.120**



**ND180.240**



DC

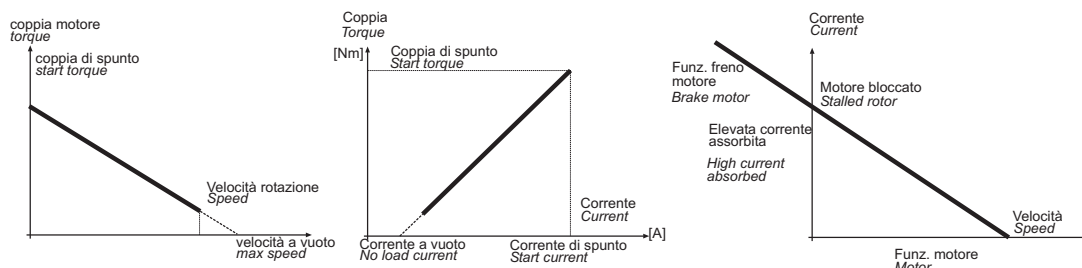


**Legenda / Glossario dei grafici**

**Key / Diagram Glossary**

Dato un motore in CC, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

With a DC motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

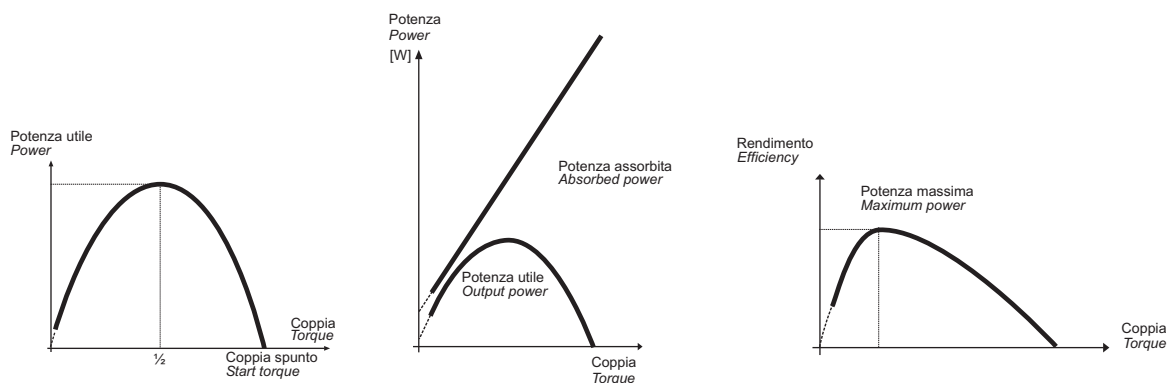


La potenza utile (potenza all'albero) si ricava dalla formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$

The output power is calculated using the formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è una retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

**Formule utili**

**Useful formulas**

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

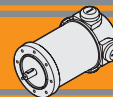
$$[HP] \cdot 746 = [W]$$

Esempio 2 HP = circa 1500 W.

$$[HP] \cdot 746 = [W]$$

Example 2 HP = approx. 1500 W.

<b>S</b>	—	Servizio	Duty
<b>P<sub>n</sub></b>	[W]	Potenza in uscita	Rated power
<b>P<sub>a</sub></b>	[W]	Potenza assorbita	Absorbed power
<b>M<sub>n</sub></b>	[Nm]	Coppia nominale	Rated torque
<b>V</b>	[V]	Tensione	Voltage
<b>I</b>	[A]	Corrente assorbita	Absorbed current
<b>n<sub>1</sub></b>	[min <sup>-1</sup> ]	Numero giri motore	Motor speed
<b>S<sub>v</sub></b>	[rad/s]	Velocità angolare	Angular speed
<b>IC</b>	—	Classe d'isolamento termico	Thermal insulation class
<b>FF</b>	—	Fattore di forma	Form factor
<b>IP</b>	—	Classe di protezione	Protection class
<b>η</b>	—	Rendimento	Efficiency
<b>Kg</b>	—	Peso	Weight

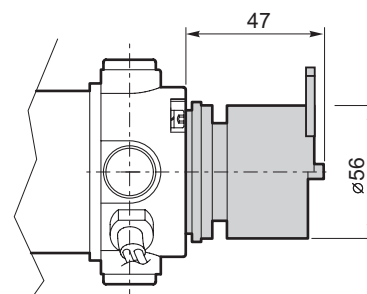
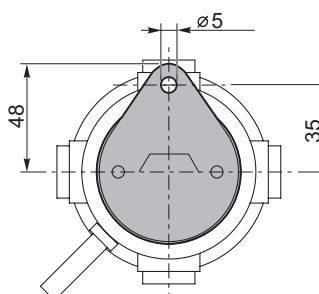
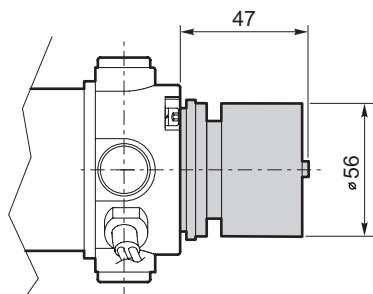


Freno

Brake

ND...BR Freno / Brake

ND...BRL Freno con leva di sblocco/ Brake with hand release

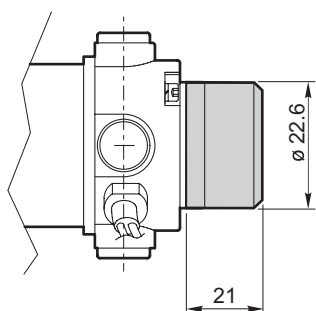


	Pn [W]	V [V]	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]
Caratteristiche del freno / Break features	14	12	2	3000
		24		

Encoder

Encoder

ND...ME22



Nota: Fornito con cavo lungo 300 mm

Note: Supplie with cavle 300 mm long

Risoluzione Encoder (CPR) / Encoder Resolution (CPR)	Numero di canali / Number of channels	Tensione d'alimentazione / Power supply
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.

For non-standard encoder resolution, please contact our Technical Department.





**MINI**  **TECNO**™  
**small** but strong

**EC**

**Motori elettrici CC - Ferrite**  
**DC electric motors - Ferrite**

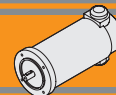


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



**DC**

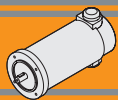




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	Simbologia	<i>Symbols</i>	<b>BB2</b>
	Grado di protezione IP	<i>IP enclosures protection indexes</i>	<b>BB3</b>
	Classe di isolamento termico	<i>Insulation class</i>	<b>BB3</b>
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<b>EC070.24E</b>	Dimensioni	<i>Dimensions</i>	<b>BB10</b>
	Prestazioni	<i>Performances</i>	<b>BB11</b>
<b>EC100.120</b>	Caratteristiche	<i>Features</i>	<b>BB12</b>
<b>EC100.240</b>	Dimensioni	<i>Dimensions</i>	<b>BB12</b>
<b>EC100.24E</b>	Prestazioni	<i>Performances</i>	<b>BB13</b>
<b>EC180.120</b>	Caratteristiche	<i>Features</i>	<b>BB14</b>
<b>EC180.240</b>	Dimensioni	<i>Dimensions</i>	<b>BB14</b>
<b>EC180.24E</b>	Prestazioni	<i>Performances</i>	<b>BB15</b>
<b>EC250.120</b>	Caratteristiche	<i>Features</i>	<b>BB16</b>
<b>EC250.240</b>	Dimensioni	<i>Dimensions</i>	<b>BB16</b>
	Prestazioni	<i>Performances</i>	<b>BB17</b>
<b>EC350.120</b>	Caratteristiche	<i>Features</i>	<b>BB18</b>
<b>EC350.240</b>	Dimensioni	<i>Dimensions</i>	<b>BB18</b>
	Prestazioni	<i>Performances</i>	<b>BB19</b>
<b>EC600.120</b>	Caratteristiche	<i>Features</i>	<b>BB20</b>
<b>EC600.240</b>	Dimensioni	<i>Dimensions</i>	<b>BB20</b>
	Prestazioni	<i>Performances</i>	<b>BB21</b>
	Legenda / Glossario dei grafici	<i>Key / Diagram Glossary</i>	<b>BB22</b>
	Formule utili	<i>Useful formulas</i>	<b>BB22</b>
	Freni	<i>Brakes</i>	<b>BB23</b>
	Encoder	<i>Encoder</i>	<b>BB24</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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## Caratteristiche tecniche

## Technical features

Le caratteristiche principali dei motori elettrici CC a magneti permanenti in ferrite EC sono:

- Campo magnetico generato da magneti permanenti in ferrite
- Costruzione tubolare, senza ventilazione
- Disponibili in 6 grandezze: diametro 42, 52, 65, 81, 104, 110 mm
- Alimentazione a bassa tensione, 12 o 24 Vcc
- Potenze disponibili da 30 a 800 W S2
- Elevate coppie di spunto
- Elevate coppie e potenze in dimensioni compatte

The main features of EC ferrite permanent magnets DC electric motors range are:

- Magnetic field generated by permanent ferrite magnets
- Tubular construction, without fan
- Available in 6 sizes: diameter 42, 52, 65, 81, 104, 110 mm
- Low voltage power supply, 12 or 24 Vdc
- Power ratings available from 30 to 800 W S2
- High starting torque
- High torque and output power with compact package

### Classe di isolamento termico

Gli avvolgimenti del rotore sono soggetti a surriscaldamento, come pure altre parti del motore. Il grado di isolamento indica la massima temperatura ammissibile oltre la quale l'isolante della matassa e l'isolante di tutte le parti soggette ad elevato riscaldamento perde le caratteristiche di buon isolante, con pericolo di danneggiamento del motore.

### Thermal insulation class

The windings of the rotor can overheat just like other parts of the motor too. The degree of insulation indicates the maximum allowable temperature above which the insulation of the windings, as well as that of all the parts which heat up to a high temperature, loses its insulating properties and the motor therefore risks being damaged.

### Servizio

Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

Servizio intermittente (S2, S3, etc...) = periodi alternati di lavoro e di riposo tali da raffreddare il motore. Dato un motore, la potenza espressa per servizio continuo è inferiore a quella per servizio intermittente.

### Duty cycle

This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

Intermittent operation (S2, S3, etc...) = alternating periods of work and rest so that the motor can cool down. The output power for continuous operation is lower than that for intermittent operation.

### Fattore di forma

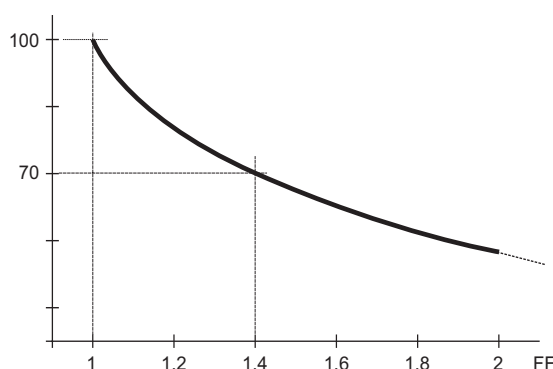
Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1. Alimentazione da transistori (modulazione PWM) = FF 1.05.

Qualitativamente l'andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:

### Form factor

It indicates how much spurious alternating current is present in the D.C. motor power supply. The higher the factor, the lower the motor's efficiency. SCR power supplies = F.F 1.40. Battery supply = FF 1 Transistor supply (PWM modulation) = FF 1.05.

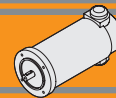
The graph below indicates the torque trend (percentage) in relation to the form factor.



## Simbologia

## Symbols

<b>S</b>	—	Servizio / Duty	<b>M<sub>Br</sub></b>	[Nm]	Coppia nominale del freno / Brake motor torque
<b>P<sub>n</sub></b>	[W]	Potenza in uscita / Rated power	<b>n<sub>1 max</sub></b>	[min <sup>-1</sup> ]	Velocità massima / Max speed
<b>P<sub>a</sub></b>	[W]	Potenza assorbita / Absorbed power	<b>T<sub>r</sub></b>	[ms]	Tempo di inserzione / Engaging time
<b>M<sub>n</sub></b>	[Nm]	Coppia nominale / Rated torque	<b>T<sub>f</sub></b>	[ms]	Tempo di disimpegno / Disengaging time
<b>V</b>	[V]	Tensione / Voltage	<b>IC</b>	—	Classe d'isolamento termico / Thermal insulation class
<b>I</b>	[A]	Corrente assorbita / Absorbed current	<b>FF</b>	—	Fattore di forma / Form factor
<b>n<sub>1</sub></b>	[min <sup>-1</sup> ]	Numero giri motore / Motor speed	<b>IP</b>	—	Classe di protezione / Protection class
<b>S<sub>v</sub></b>	[rad/s]	Velocità angolare / Angular speed	<b>η</b>	—	Rendimento / Efficiency
<b>P<sub>e</sub></b>	[W]	Potenza elettrica del freno / Brake electric power	<b>K<sub>g</sub></b>	—	Peso / Weight


**Grado di protezione IP**
**IP enclosures protection indexes**

Indica il grado di isolamento meccanico del corpo motore.

Indicates the degree of mechanical insulation of the motor body.  
1<sup>st</sup> figure indicating level of protection against the penetration of solid bodies.

1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

2<sup>nd</sup> figure: indicating degree to which the motor is waterproof.

2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

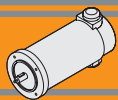
<b>0</b>	Non protetto / No protection	<b>0</b>	Non protetto / No protection
<b>1</b>	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (over Ø 50 mm)</i>	<b>1</b>	Protetto contro la caduta verticale di gocce d'acqua. <i>Protected against drops of water falling vertically</i>
<b>2</b>	Protetto da corpi solidi superiori a Ø 12 mm. <i>Protected against solid matters (over Ø 12 mm)</i>	<b>2</b>	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° <i>Protected against drops of water falling up to 15°</i>
<b>3</b>	Protetto da corpi solidi superiori a Ø 2,5 mm. <i>Protected against solid matters (over Ø 2,5 mm)</i>	<b>3</b>	Protetto contro la pioggia. <i>Rain proof fixture</i>
<b>4</b>	Protetto da corpi solidi superiori a Ø1 mm. <i>Protected against solid matters (over Ø1 mm)</i>	<b>4</b>	Protetto contro gli spruzzi. <i>Splash proof fixture</i>
<b>5</b>	Protetto contro la polvere <i>Dust proof</i>	<b>5</b>	Protetto contro getti d'acqua <i>Water jet proof</i>
<b>6</b>	Totalmente protetto contro la polvere <i>Fully dust proof</i>	<b>6</b>	Protetto dalle ondate <i>Wave proof</i>
<b>7</b>	N.A.	<b>7</b>	Protetto contro immersione <i>Watertight immersion fixture.</i>
<b>8</b>	N.A.	<b>8</b>	Protetto contro immersione/sommersione prolungata <i>Watertight immersion fixture for a long time.</i>

**Classe di isolamento termico**
**Insulation class**

Classe / Class	Δ t °C Temp. ambiente: 40°C <i>Ambient temperature: 40°C</i>
<b>A</b>	65°C
<b>B</b>	90°C
<b>F</b>	115°C
<b>H</b>	140°C

**Tipi di servizio IEC**
**IEC duty cycle ratings**

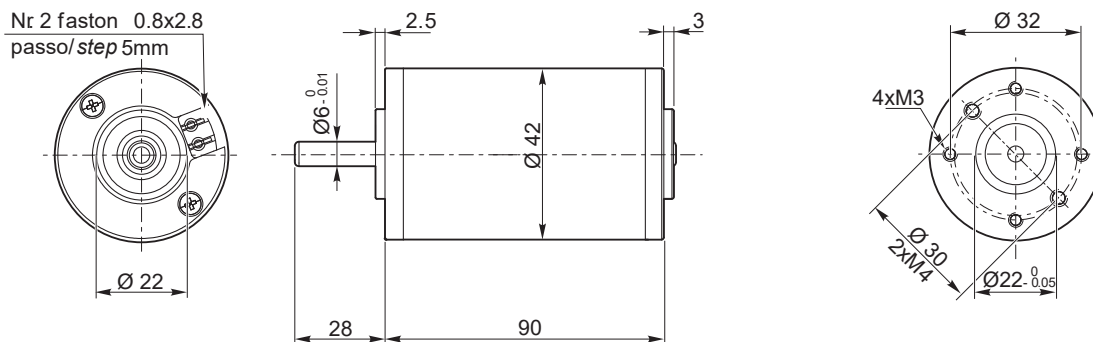
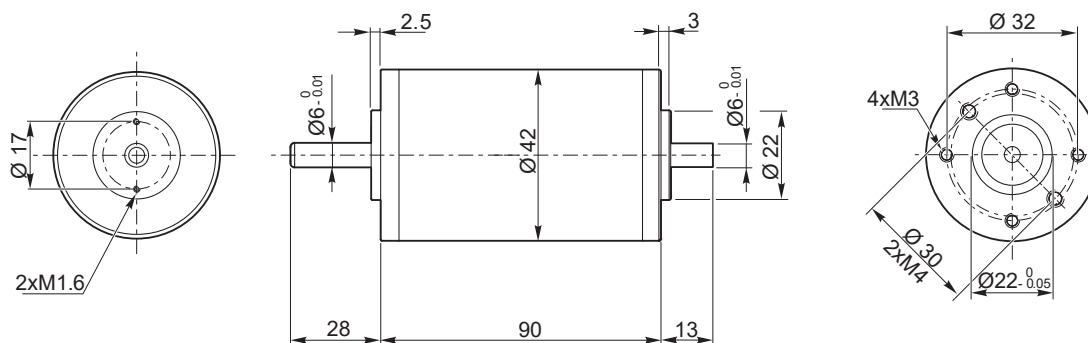
<b>S1</b>	<b>Servizio continuo.</b> Funzionamento a carico costante per una durata sufficiente al raggiungimento dell' equilibrio termico.	<b>Continuous duty.</b> The motor works at a constant load for enough time to reach temperature equilibrium
<b>S2</b>	<b>Servizio di durata limitata.</b> Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell' equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	<b>Short time duty.</b> The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
<b>S3</b>	<b>Servizio periodico intermittente.</b> Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell' equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	<b>Intermittent periodic duty.</b> Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
<b>S4</b>	<b>Servizio periodico intermittente con avviamento.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	<b>Intermittent periodic duty with starting.</b> Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
<b>S5</b>	<b>Servizio periodico intermittente con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	<b>Intermittent periodic duty with electric braking.</b> Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
<b>S6</b>	<b>Servizio periodico ininterrotto con carico intermittente.</b> Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	<b>Continuous operation with intermittent load.</b> Sequential, identical cycles of running with constant load and running with no load. No rest periods.
<b>S7</b>	<b>Servizio periodico ininterrotto con frenatura elettrica.</b> Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	<b>Continuous operation with electric braking.</b> Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
<b>S8</b>	<b>Servizio periodico ininterrotto con variazioni di carico e di velocità.</b> Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	<b>Continuous operation with periodic changes in load and speed.</b> Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.

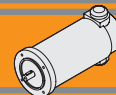
**EC****Motori elettrici CC - Ferrite**  
**DC Electric motors - Ferrite****MINI**  
**TECNO****EC020.120 - EC020.24E****Caratteristiche****Features**

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 42 mm
Potenza	30 W S2 (20 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Cavo di alimentazione	Connettori faston (0.8 x 2.8 mm)

Construction	Tubular, without fan
Size	Ø 42 mm
Power	30 W S2 (20 W S1)
Magnets	2
Bearings	Ball bearing
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 brushes made of graphite/copper composite
Electric cable	Faston terminals (0.8 x 2.8 mm)

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC020.120	S1	20	12	2.6	B	1	0.06	2850	20	0.4
	S2 6'	30		3.5			0.08			
EC020.24E	S1	20	24	1.4			0.06			
	S2 6'	30		1.9			0.08			

**Dimensioni****Dimensions****EC020.120****EC020.24E**Encoder **BB24**

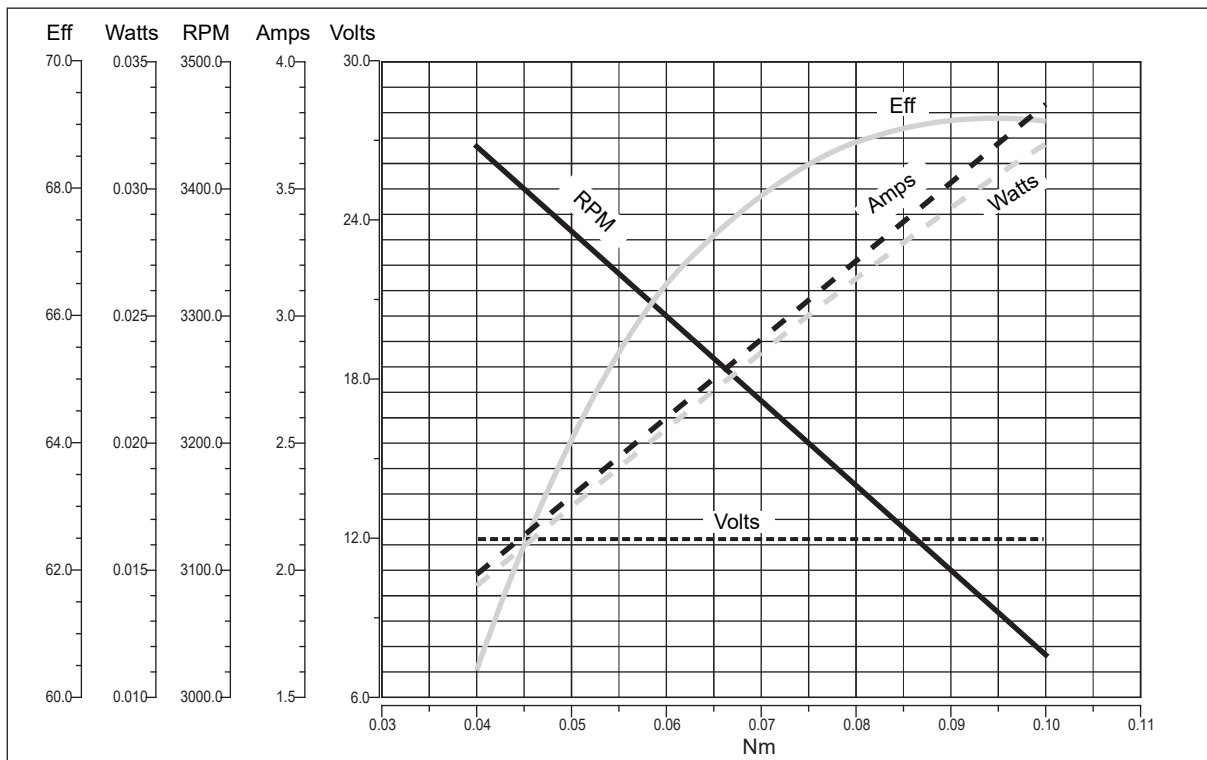


**EC020.120 - EC020.24E**

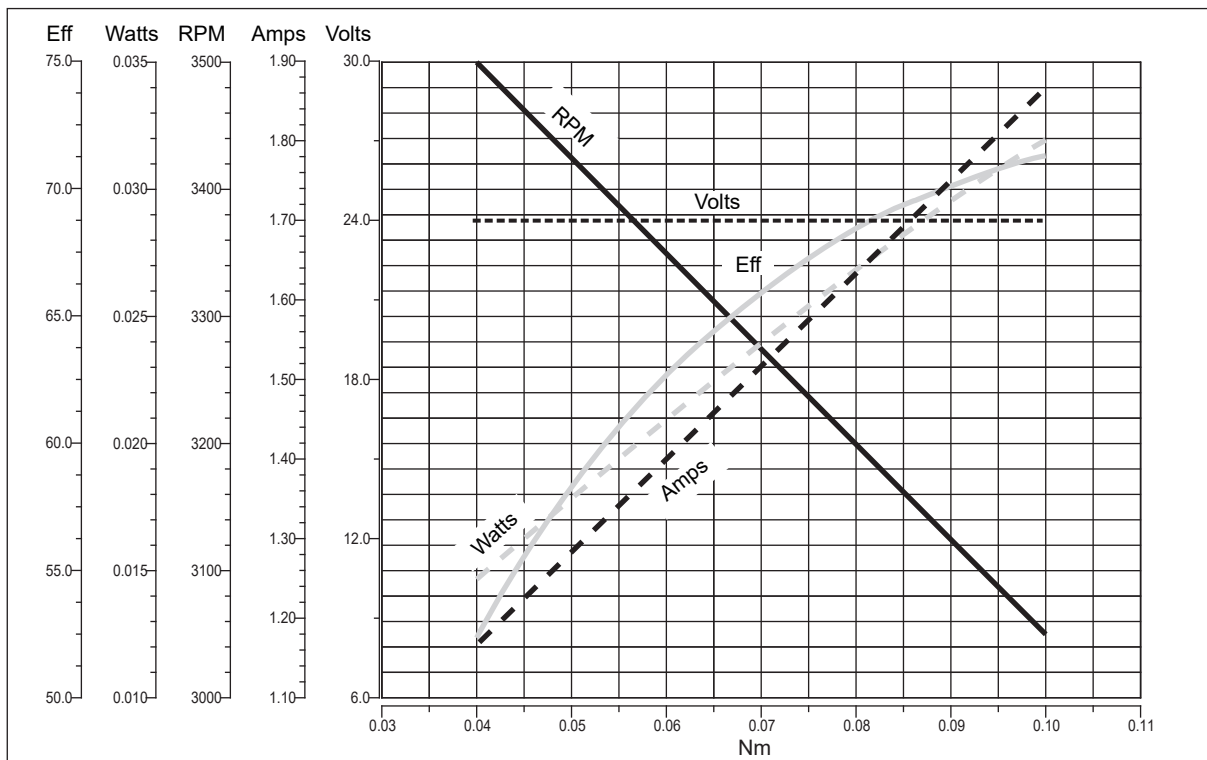
Prestazioni

Performances

**EC020.120**

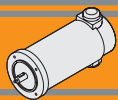


**EC020.24E**



DC





**EC035.120 - EC035.240**

**Caratteristiche**

**Features**

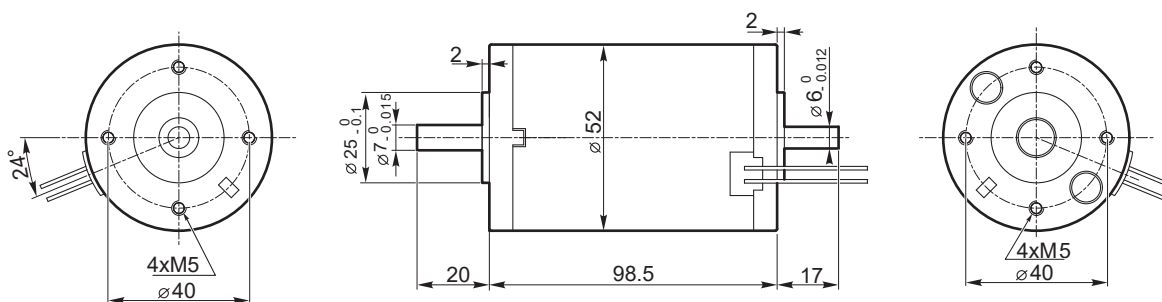
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 52 mm
Potenza	55 W S2 (35 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm

Construction	Tubular, without fan
Size	Ø 52 mm
Power	55 W S2 (35 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 200 mm

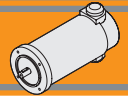
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC035.120	S1	35	12	5.2	F	1	0.11	3000	20	0.8
	S2 9'	55		8.0			0.18			
EC035.240	S1	35	24	2.6	F	1	0.11		20	0.8
	S2 9'	55		4.0			0.18			

**Dimensioni**

**Dimensions**





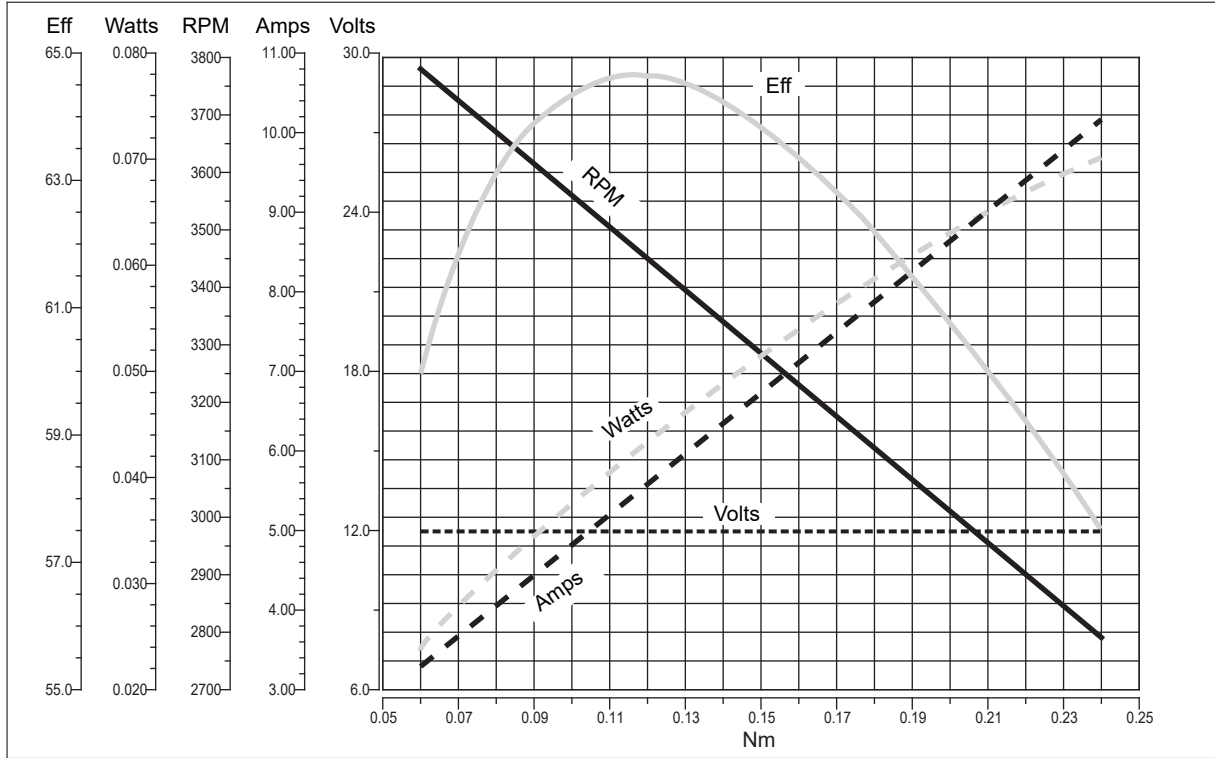


**EC035.120 - EC035.240**

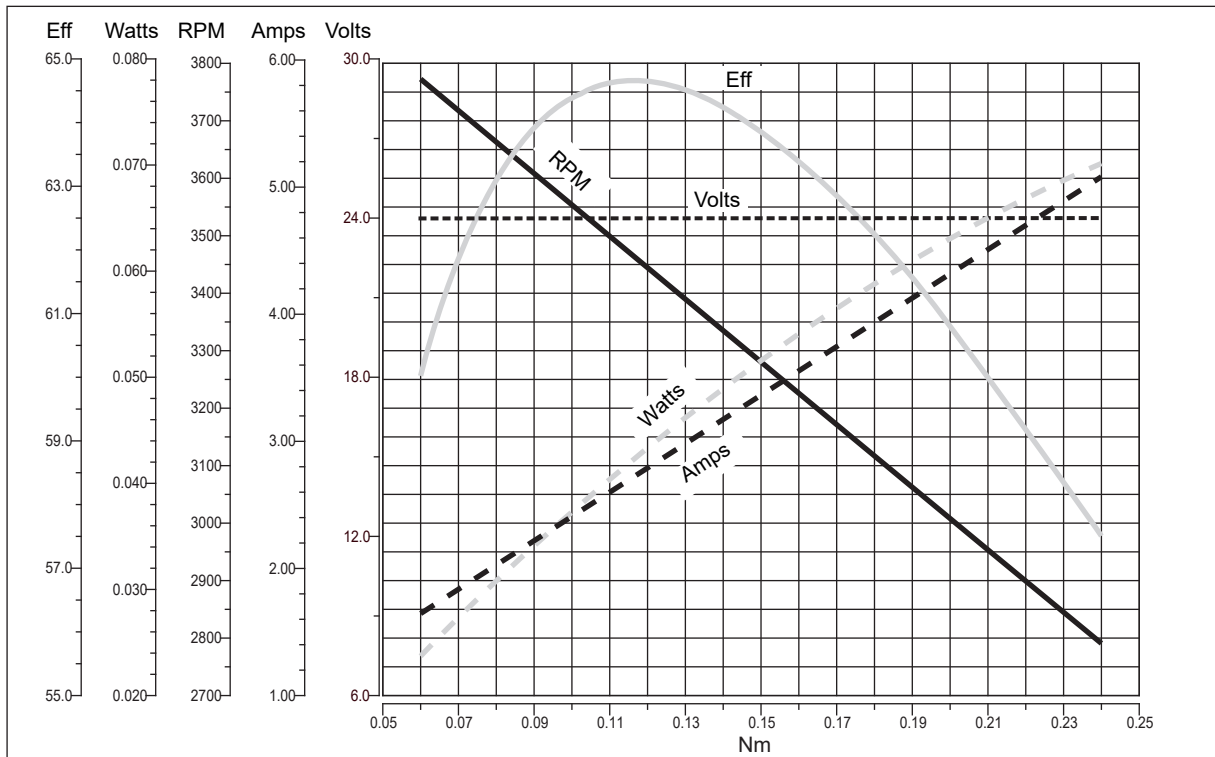
Prestazioni

Performances

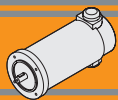
**EC035.120**



**EC035.240**



DC



**EC050.12E - EC050.24E**

**Caratteristiche**

**Features**

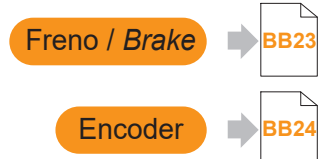
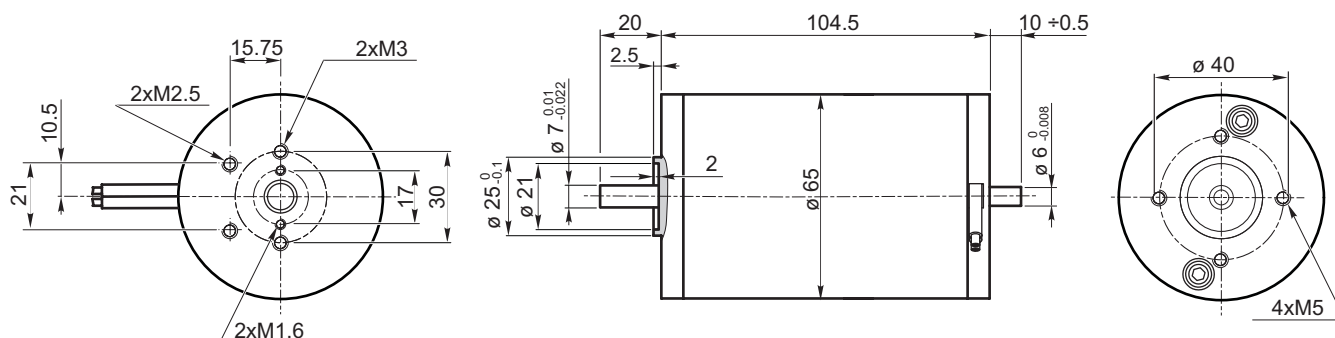
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	70 W S2 (50 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm
Bisporgenza	Standard

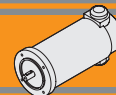
Construction	Tubular, without fan
Size	Ø 65 mm
Power	70 W S2 (50 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 200 mm
Rear Shaft	Standard

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC050.12E	S1	50	12	6.5	F	1	0.16	3000	20	1.2
	S2 30'	70		9.0			0.22			
EC050.24E	S1	50	24	3.2			0.16			
	S2 30'	70		4.5			0.22			

**Dimensioni**

**Dimensions**



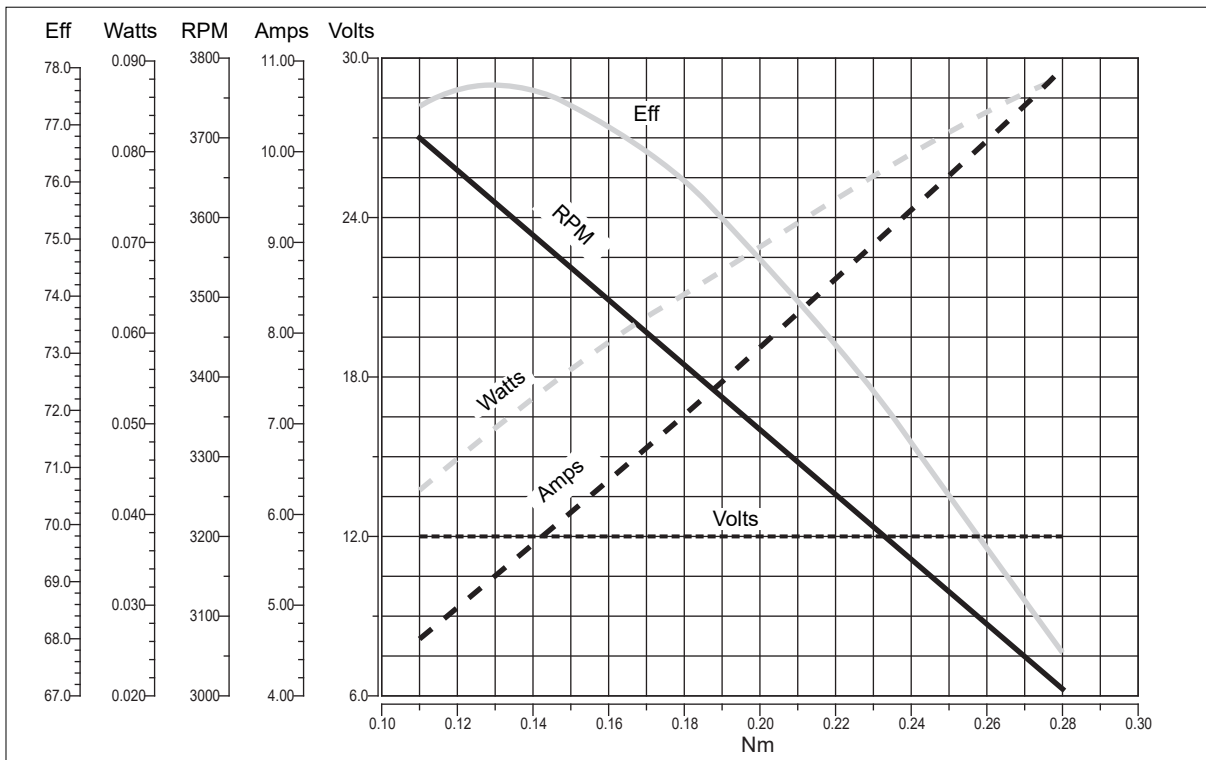


**EC050.12E - EC050.24E**

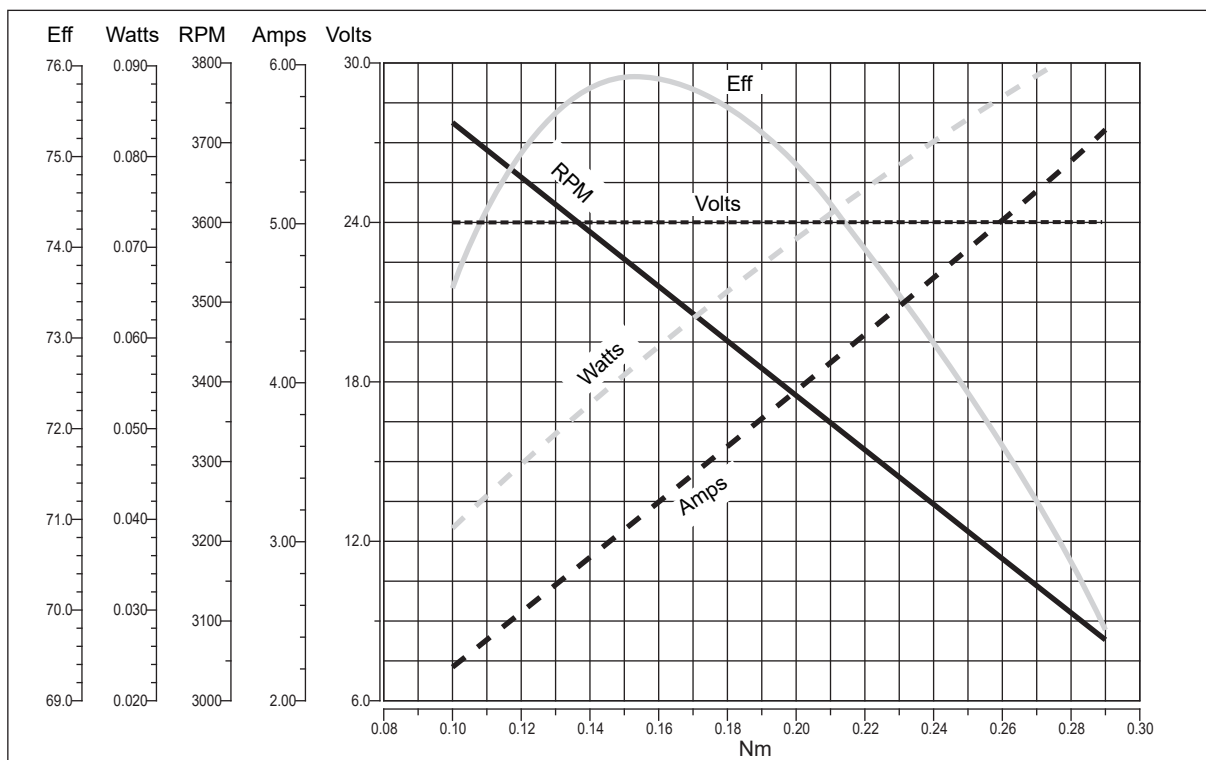
Prestazioni

Performances

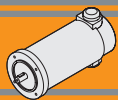
**EC050.12E**



**EC050.24E**



DC



## EC070.12E - EC070.24E

## Caratteristiche

## Features

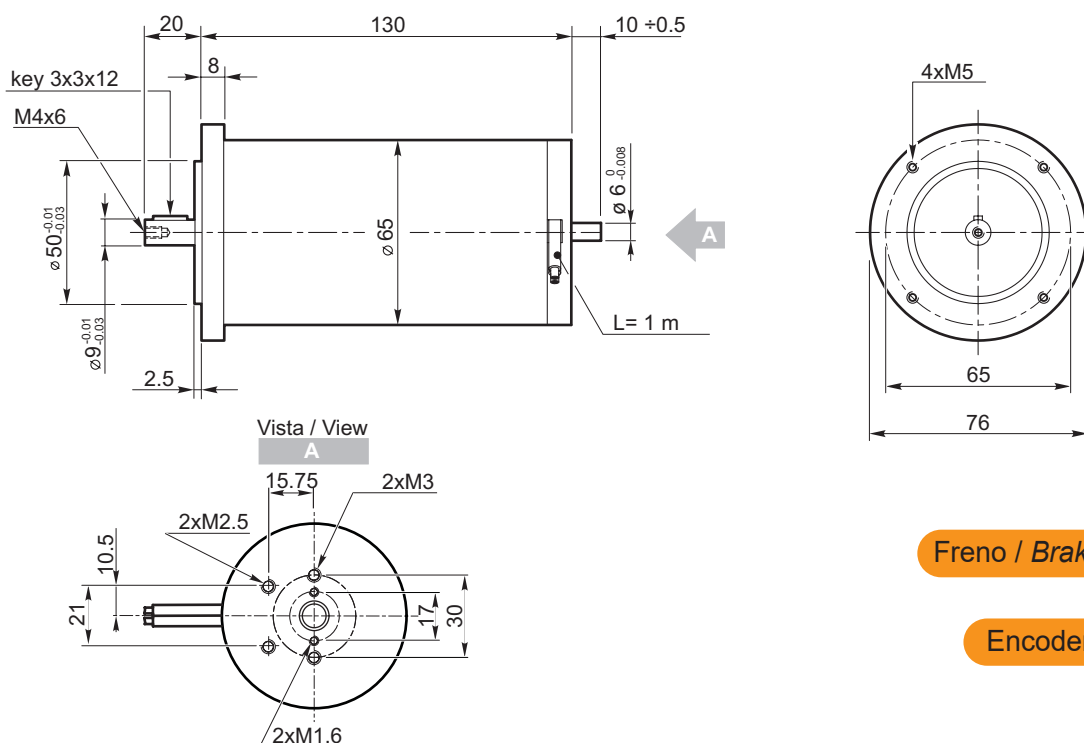
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

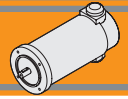
Construction	Tubular, without fan
Size	Ø 65 mm
Power	100 W S2
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 1000 mm

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC070.12E	S1	70	12	8.4	F	1	0.22	3000	20	1.7
	S2 30'	100		11.8			0.31			
EC070.24E	S1	70	24	4.2						
	S2 30'	100		5.9			0.31			

## Dimensioni

## Dimensions



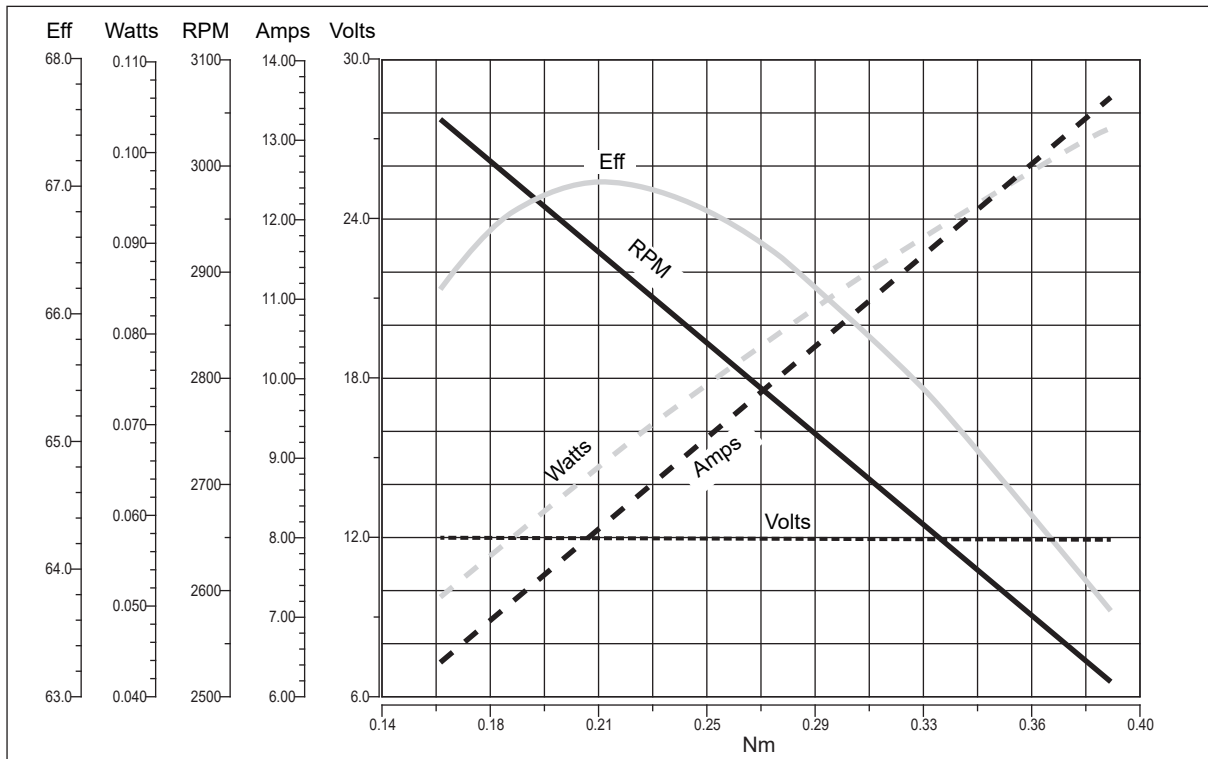


**EC070.12E - EC070.24E**

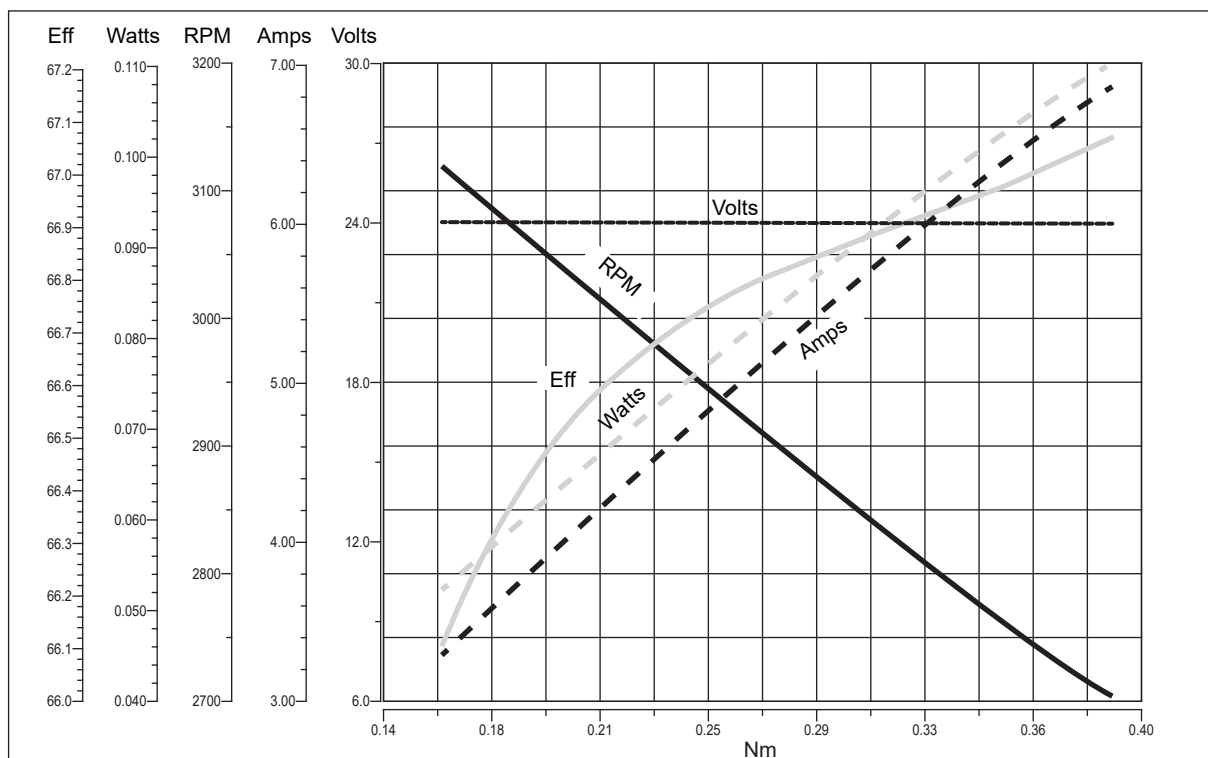
Prestazioni

Performances

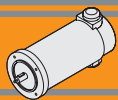
**EC070.12E**



**EC070.24E**



DC



**EC100.120 - EC100.240 - EC100.24E**

**Caratteristiche**

**Features**

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard solo EC100.24E

Construction	Tubular, without fan
Size	Ø 80 mm
Power	140 W S2 (100 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Brushes size	LxWxH = 17.1 x 6.5 x 16.7 mm
Electric cable	Length: 1000 mm
Rear shaft	Standard only EC100.24E

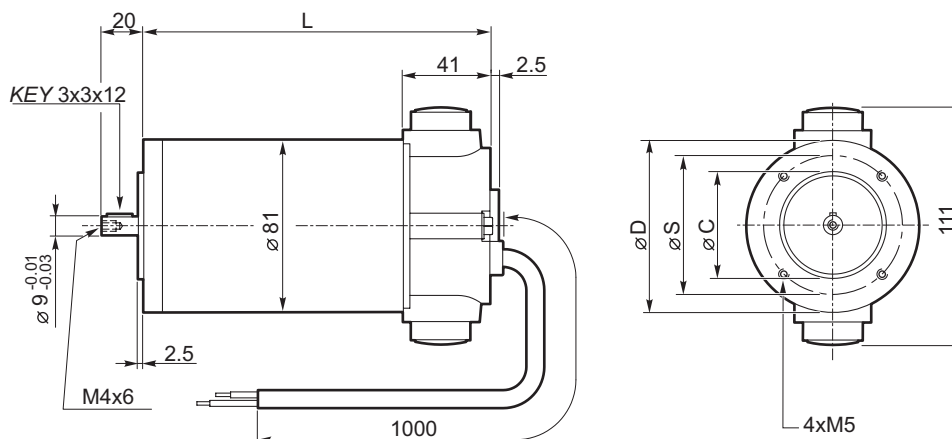
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	S1	100	24	6			0.31			
	S2 25'	140		8.4			0.43			
EC100.24E	S1	100	24	6			0.31		20	
	S2 25'	140		8.4			0.43			

**Dimensioni**

**Dimensions**

**EC100.120  
EC100.240**

56 B14	
L	153
D	80
S	65
C (-0.03 / -0.01)	50
63B14*	
L	155
D	90
S	75
C (-0.03 / -0.01)	60

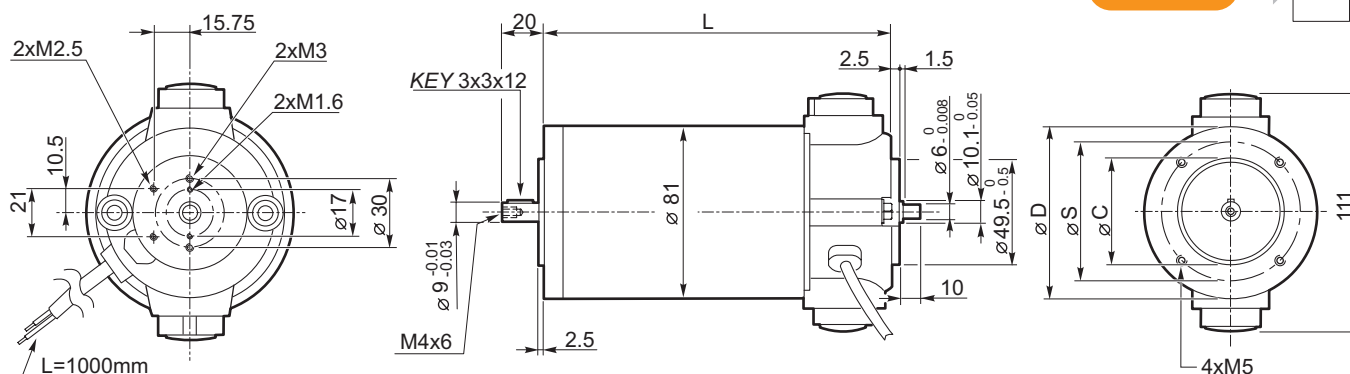


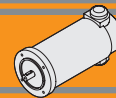
\* Usare boccola 9/11  
\* Use sleeve 9/11

Freno / Brake → BB23

Encoder → BB24

**EC100.24E**



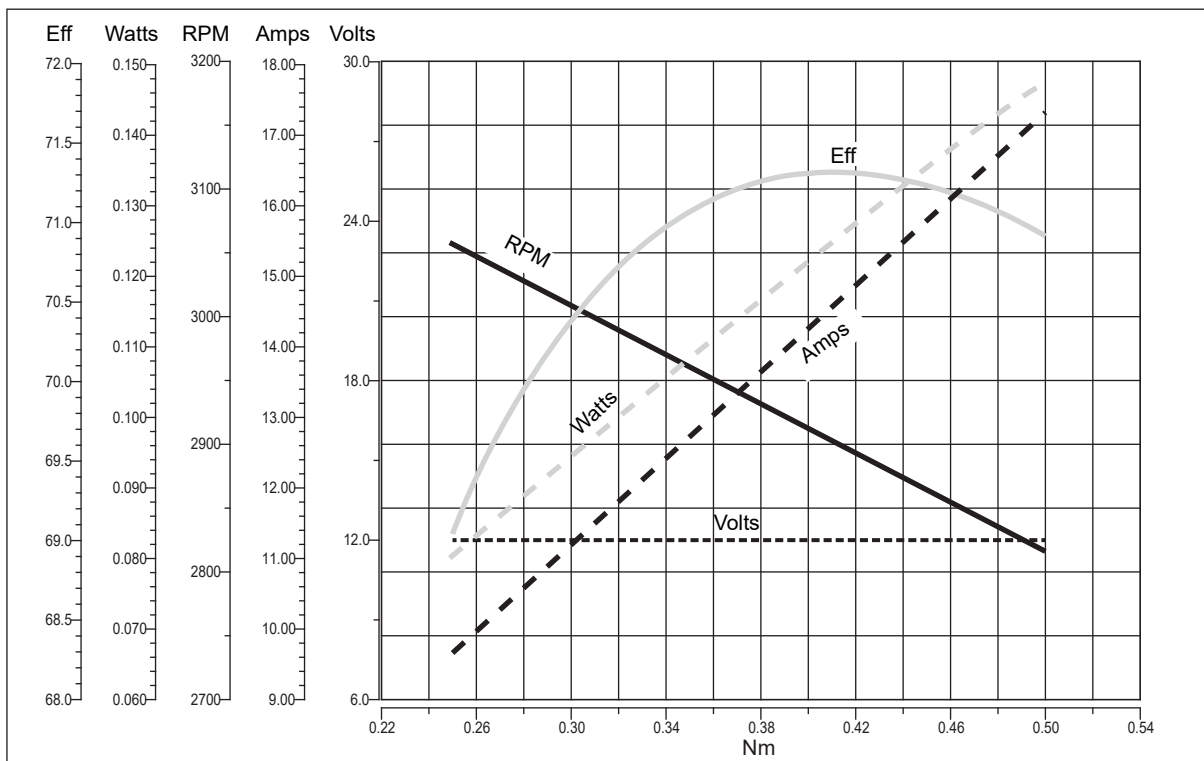


**EC100.120 - EC100.240 - EC100.24E**

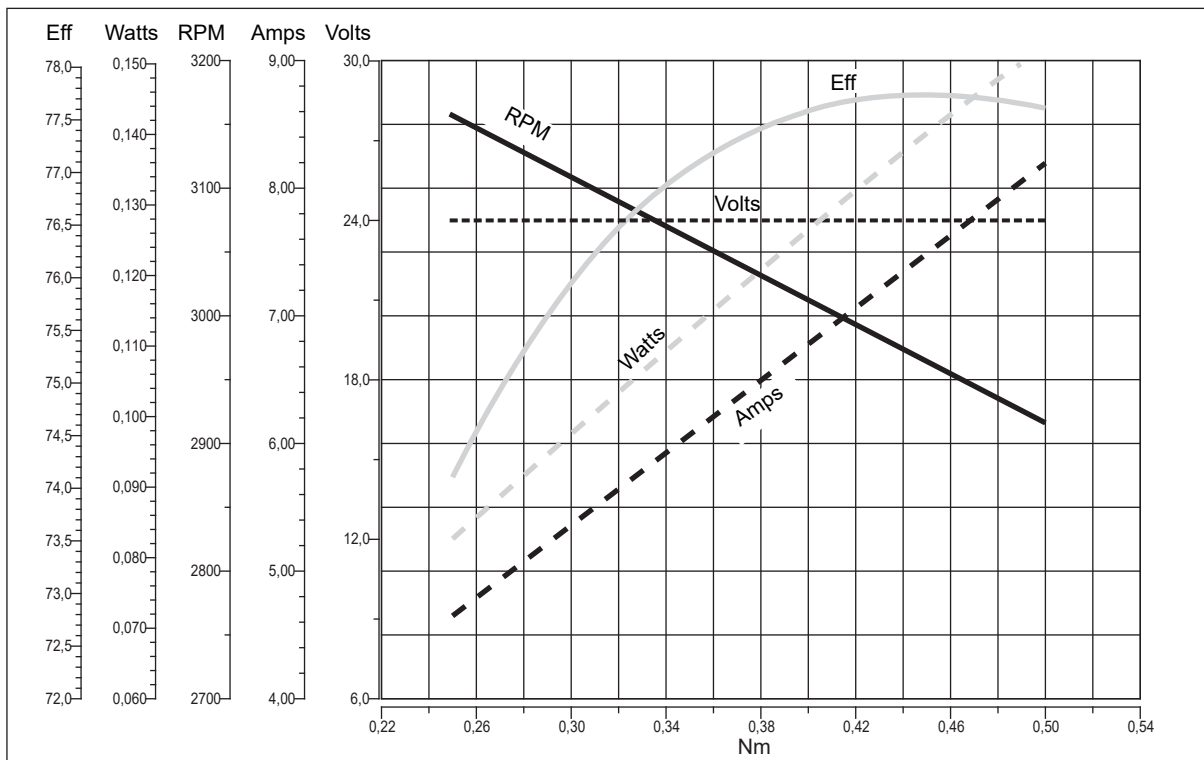
Prestazioni

Performances

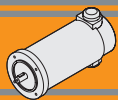
**EC100.120**



**EC100.240 - EC100.24E**



DC

**EC**
**Motori elettrici CC - Ferrite**  
**DC Electric motors - Ferrite**


## EC180.120 - EC180.240 - EC180.24E

### Caratteristiche

### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard solo EC180.24E

Construction	Tubular, without fan
Size	Ø 80 mm
Power	250 W S2 (180 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Brushes size	LxPxH = 17.1 x 6.5 x 16.7 mm
Electric cable	Length: 1000 mm
Rear shaft	Standard only EC180.24E

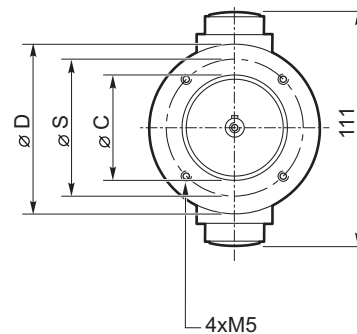
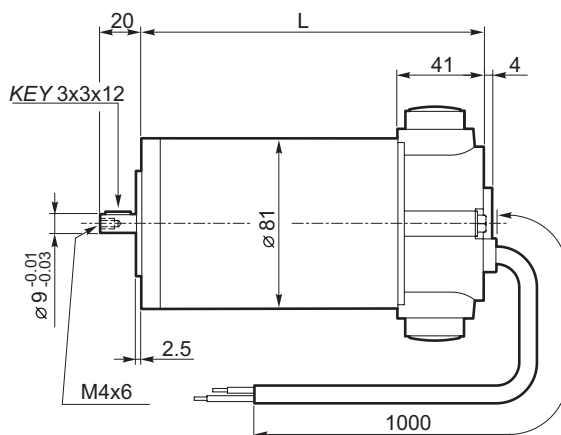
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC180.120	S1	180	12	21.5	F	1	0.57	3000	40	3.4
	S2 25'	250		30			0.8			
EC180.240	S1	180	24	10.8			0.57			
	S2 25'	250		15			0.8			
EC180.24E	S1	180		10.8			0.57		20	
	S2 25'	250		15			0.8			

### Dimensioni

### Dimensions

#### EC180.120 EC180.240

56 B14	
L	185
D	80
S	65
C (-0.03 / -0.01)	50
63B14*	
L	187
D	90
S	75
C (-0.03 / -0.01)	60



\* Usare boccola 9/11  
\* Use sleeve 9/11

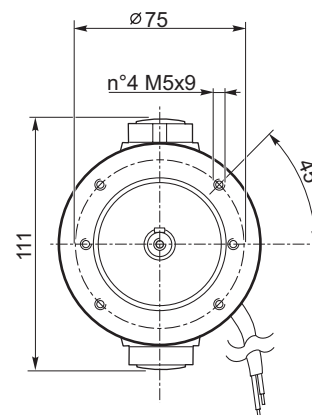
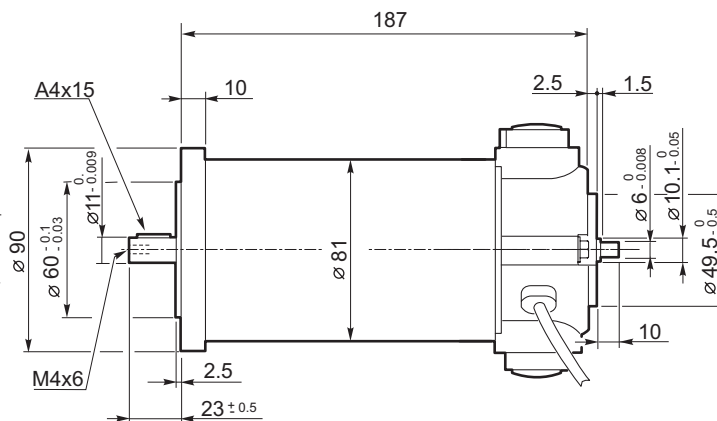
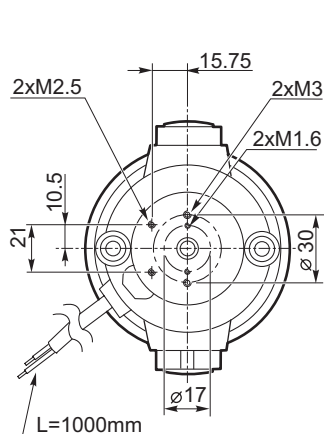
Freno / Brake



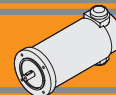
Encoder



#### EC180.24E





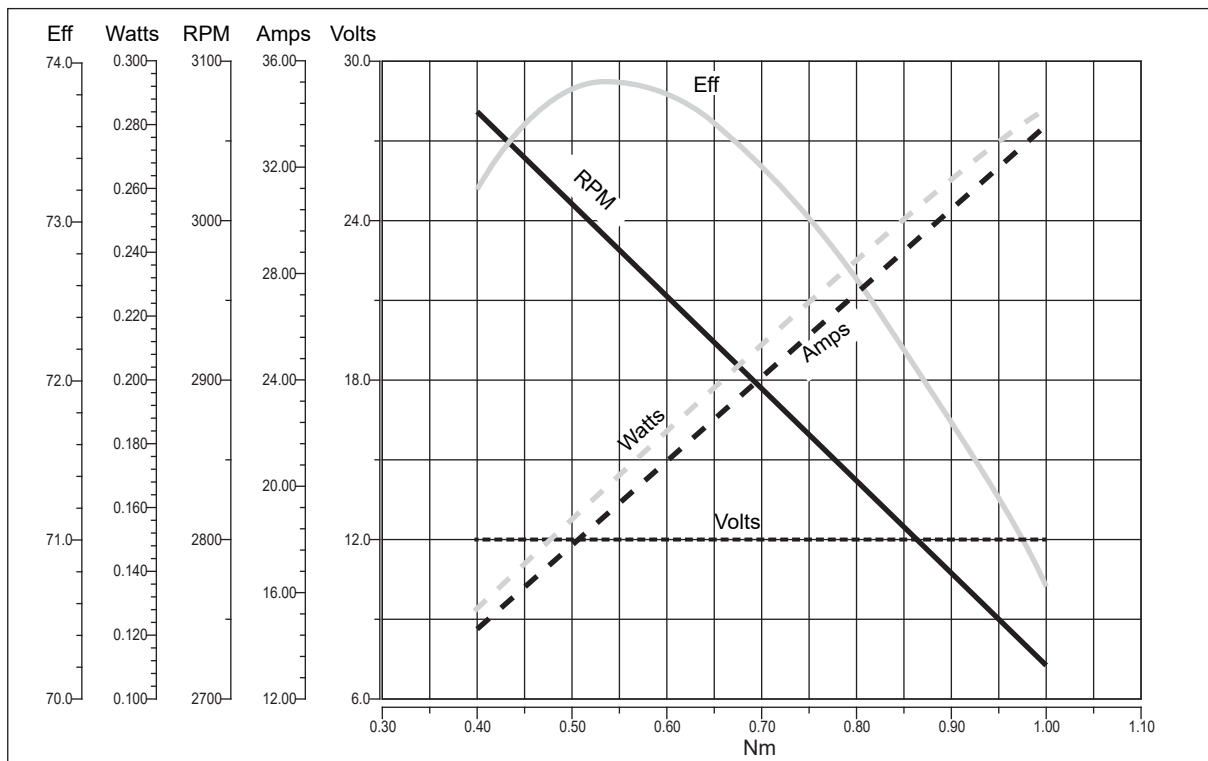


**EC180.120 - EC180.240 - EC180.24E**

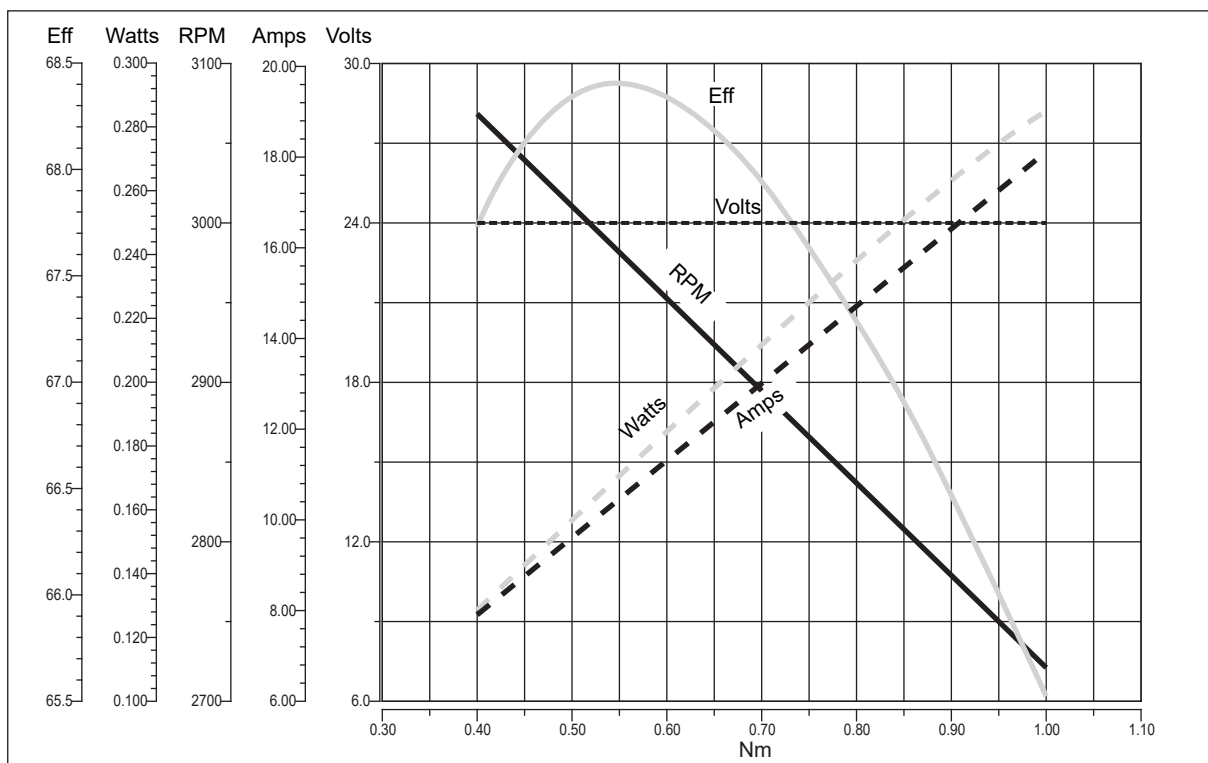
Prestazioni

Performances

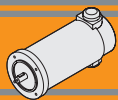
**EC180.120**



**EC180.240 - EC180.24E**



DC



**EC250.120 - EC250.240**

**Caratteristiche**

**Features**

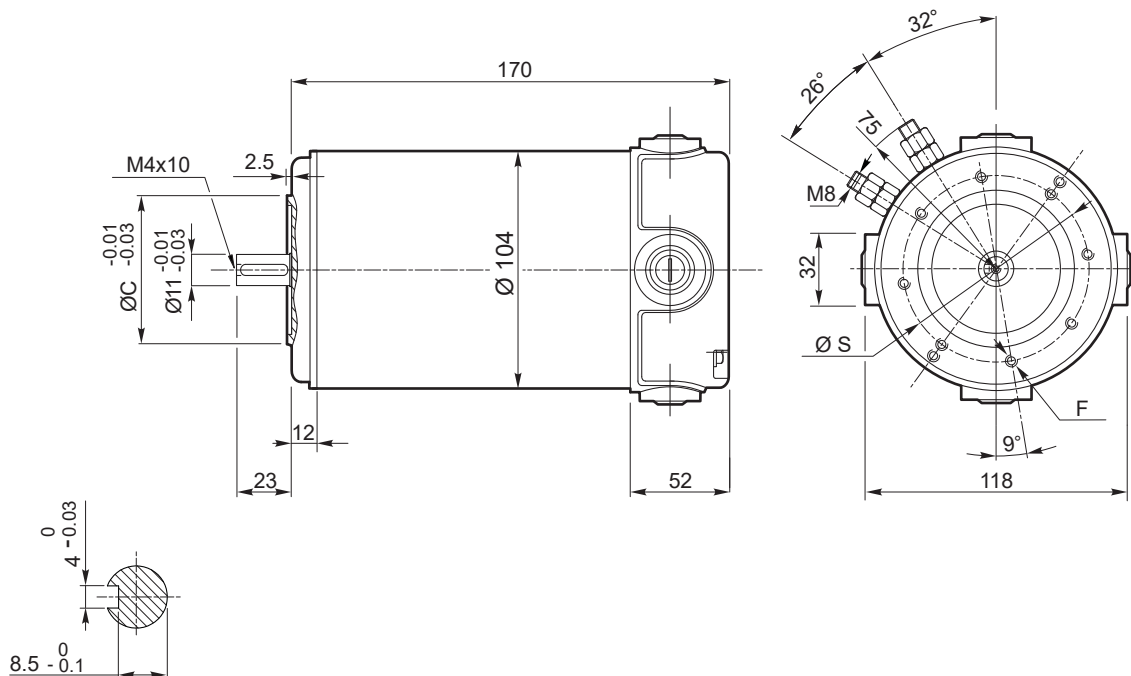
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado di fissaggio

Construction	Tubular, without fan
Size	Ø 104 mm
Power	350 W S2 (250 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 inside brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC250.120	S1	250	12	30	F	1	0.8	3000	40	4.15
	S2 25'	350		38.5			1.12			
EC250.240	S1	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

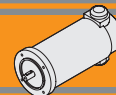
**Dimensioni**

**Dimensions**



	63 B14	71 B14*
S	75	85
C (-0.03 / -0.01)	60	70
F	8 - M5	8 - M6

\* Usare boccola 11/14  
\* Use sleeve 11/14

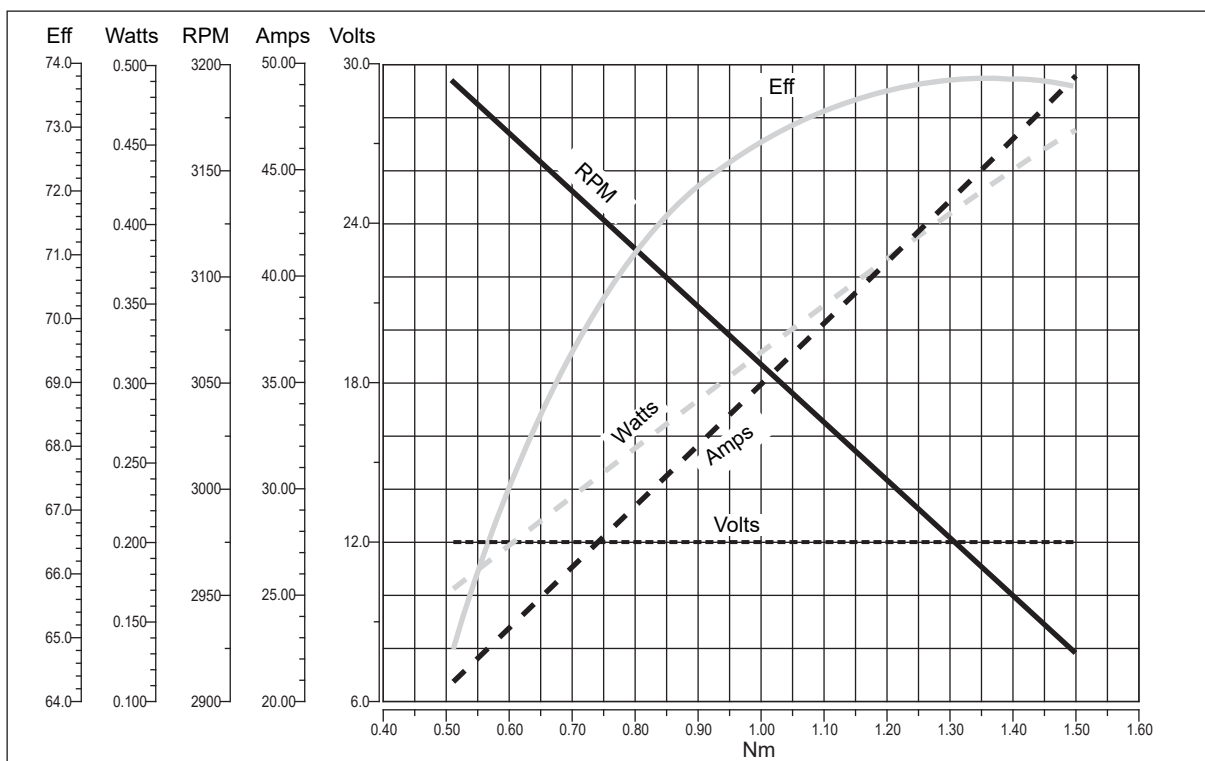


**EC250.120 - EC250.240**

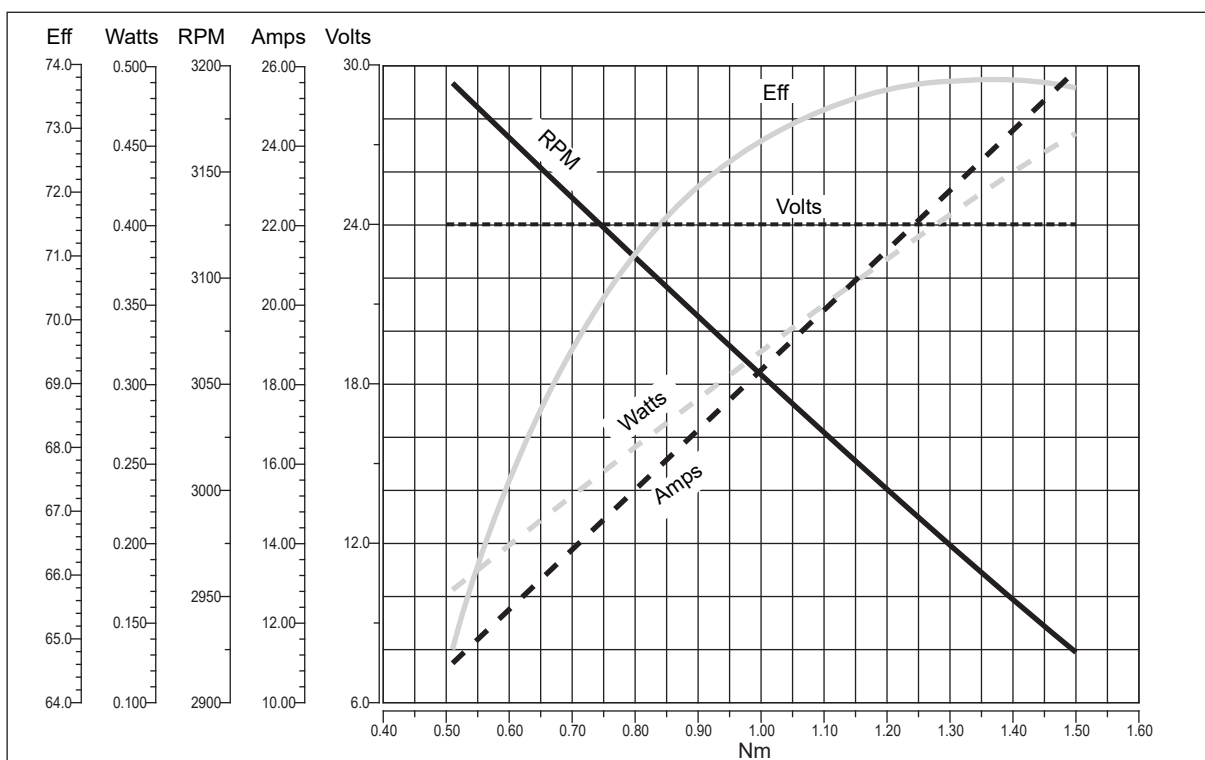
Prestazioni

Performances

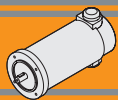
**EC250.120**



**EC250.240**



DC



**EC350.120 - EC350.240**

**Caratteristiche**

**Features**

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con dadi di fissaggio

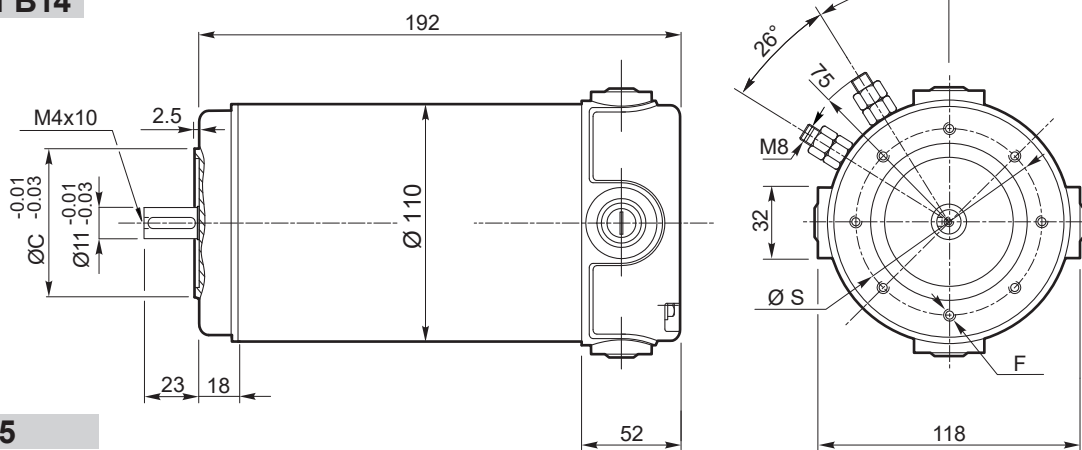
Construction	Tubular, without fan
Size	Ø 110 mm
Power	500 W S2 (350 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC350.120	S1	350	12	42	F	1	1.12	3000	40	5.1
	S2 30'	500		58.8			1.57			
EC350.240	S1	350	24	21			1.12		40	5.3
	S2 30'	500		29.4			1.57			

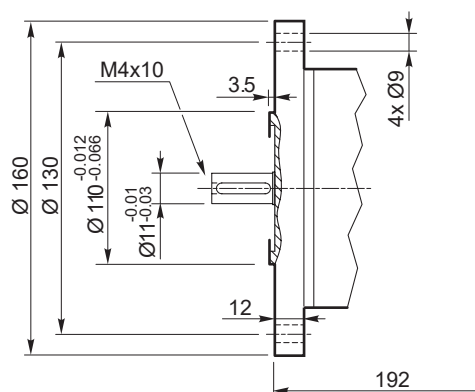
**Dimensioni**

**Dimensions**

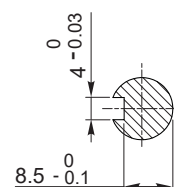
**63 B14 - 71 B14**



**71 B5**

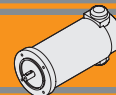


Freno / Brake



	63 B14	71 B14*
S	75	85
C (-0.03 / -0.01)	60	70
F	8 - M5	8 - M6

\* Usare boccola 11/14  
\* Use sleeve 11/14

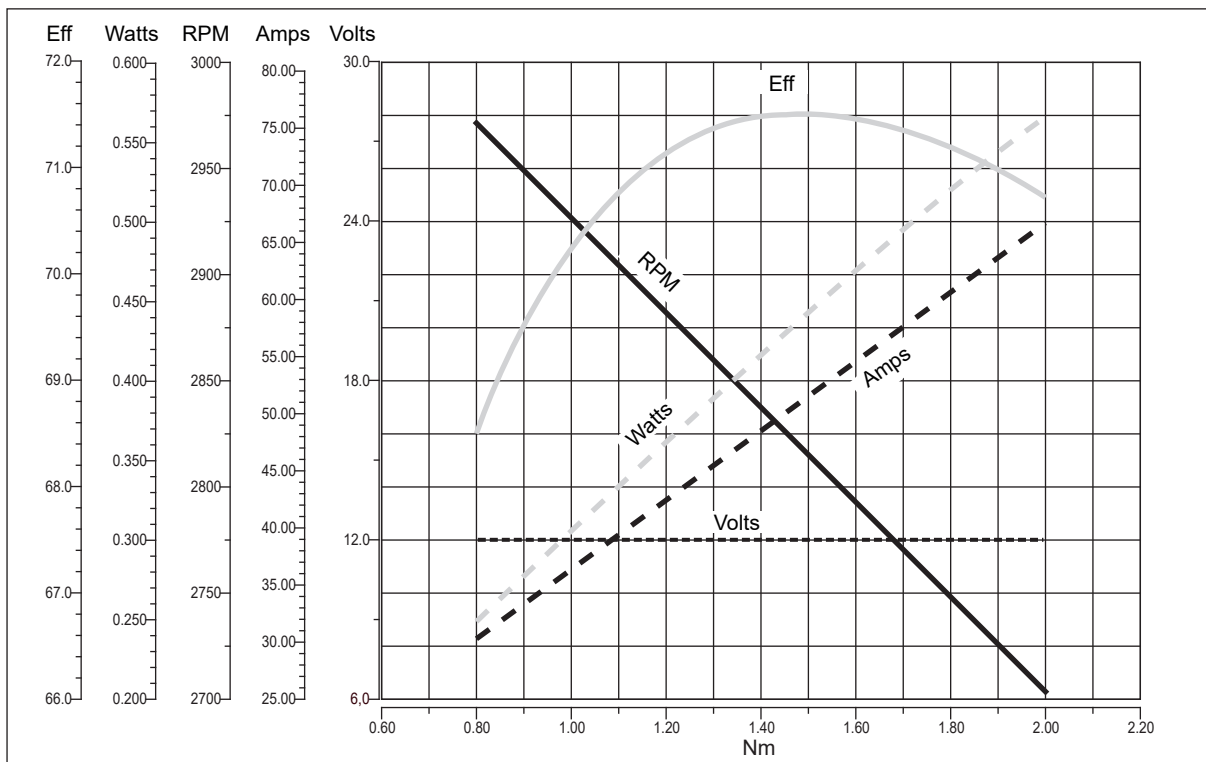


**EC350.120 - EC350.240**

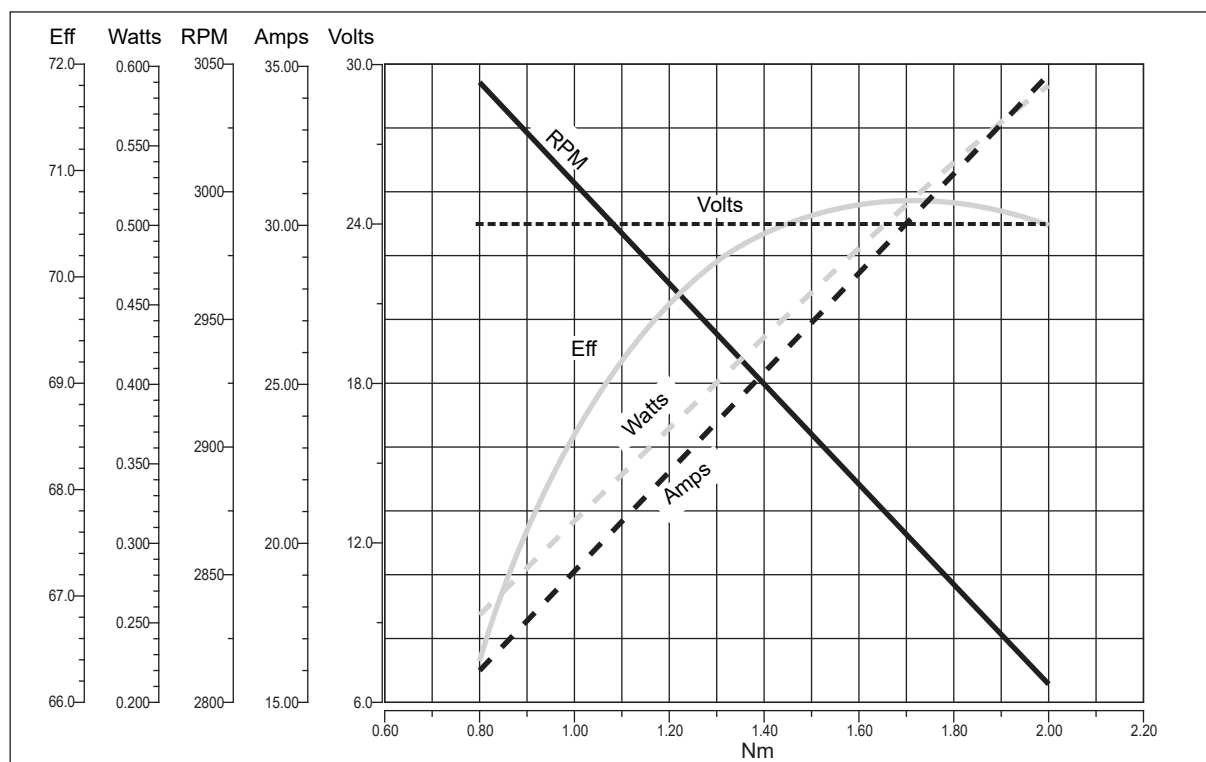
Prestazioni

Performances

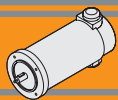
**EC350.120**



**EC350.240**



DC



**EC600.120 - EC600.240**

**Caratteristiche**

**Features**

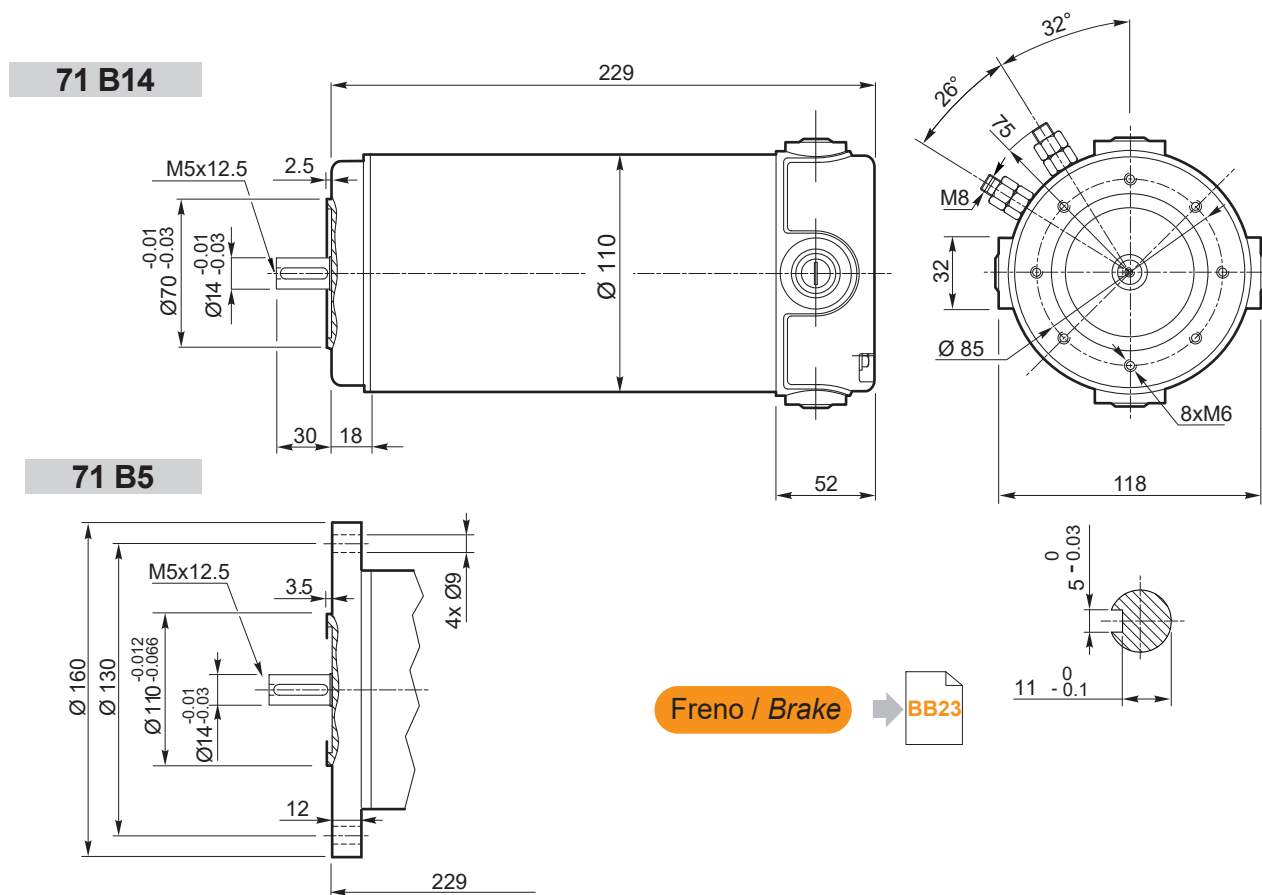
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	800 W S2 (600 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado di fissaggio

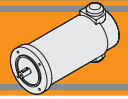
Construction	Tubular, without fan
Size	Ø 110 mm
Power	800 W S2 (600 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg	
EC600.120	S1	600	12	71	F	1	1.91	3000	40	6.6	
	S2 30'	800		94.4			2.54				
EC600.240	S1	600	24	35.5			1.91		40		7.1
	S2 30'	800		47.2			2.54				

**Dimensioni**

**Dimensions**



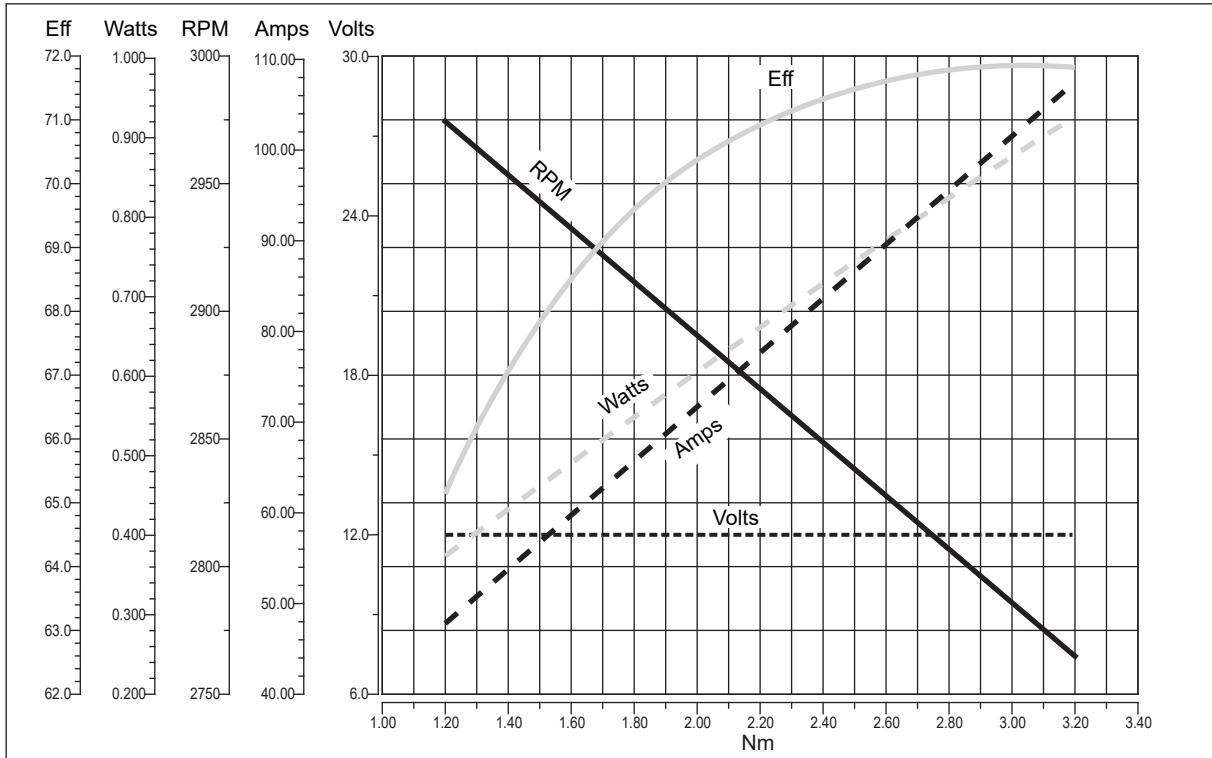


**EC600.120 - EC600.240**

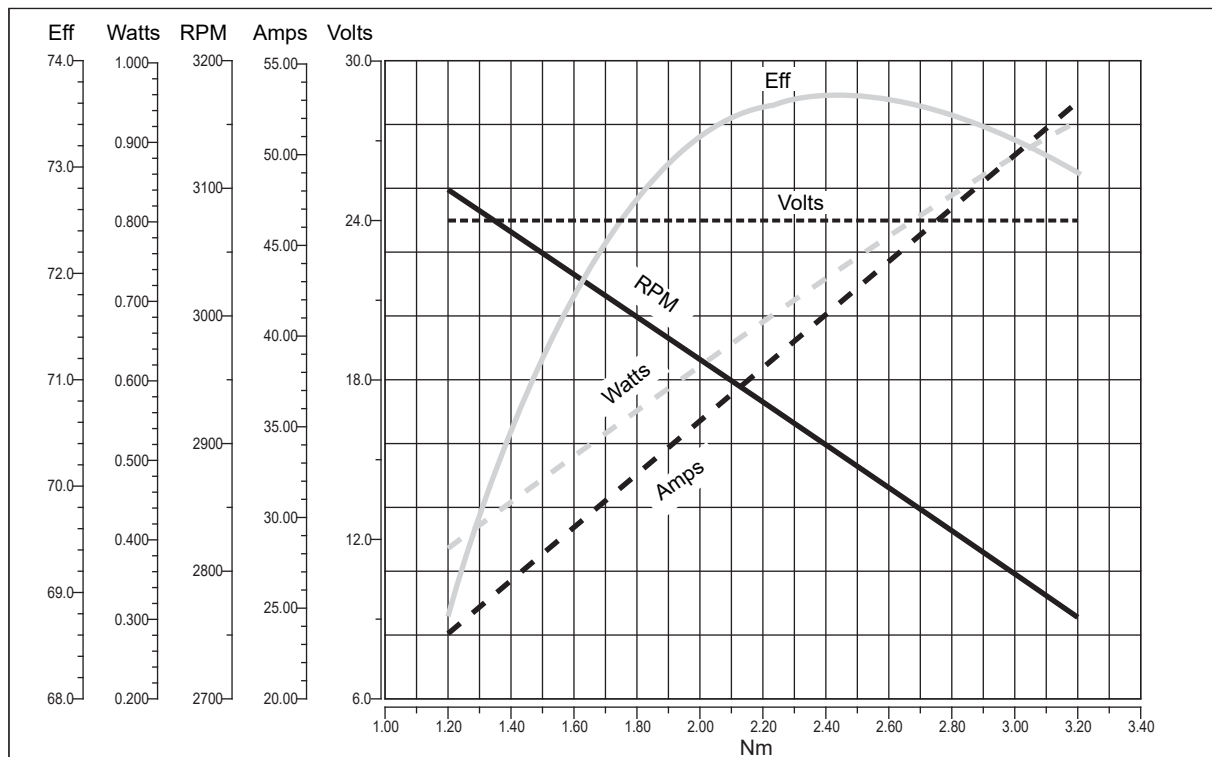
Prestazioni

Performances

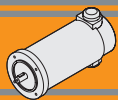
**EC600.120**



**EC600.240**



DC

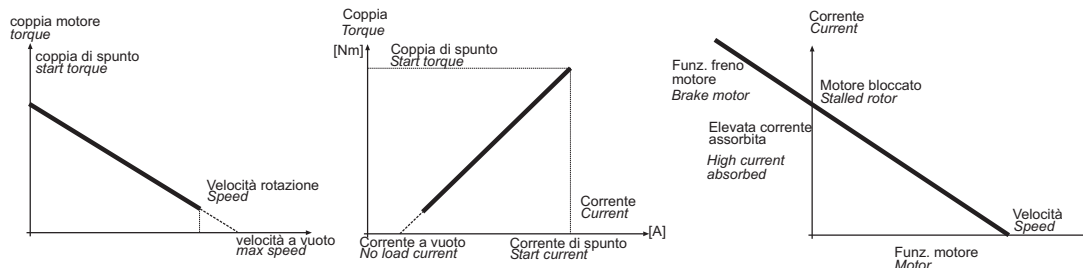


**Legenda / Glossario dei grafici**

**Key / Diagram Glossary**

Dato un motore in C.C, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

With a D.C. motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

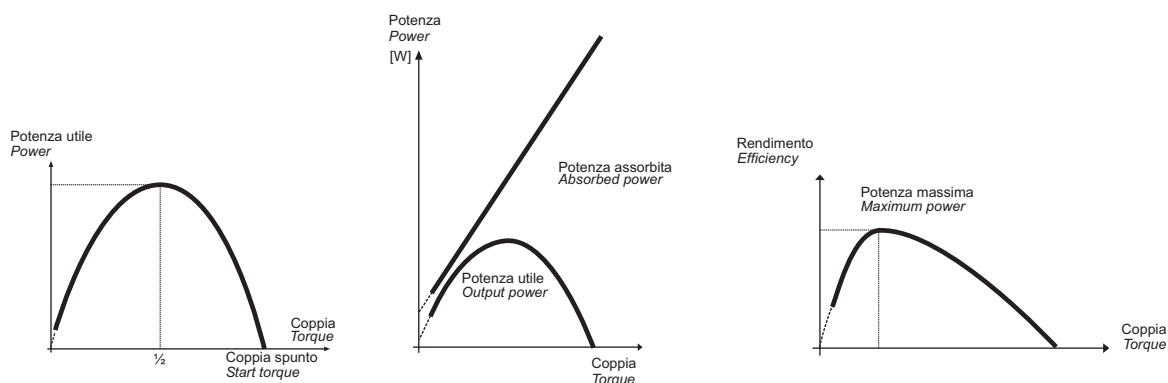


La potenza utile (potenza all' albero) si ricava dalla formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$

The output power is calculated using the formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è un retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

**Formule utili**

**Useful formulas**

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

$$[HP] \cdot 746 = [W].$$

Esempio 2 HP = circa 1500 W.

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

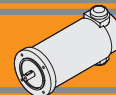
$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

$$[HP] \cdot 746 = [W].$$

Example 2 HP = approx. 1500 W.



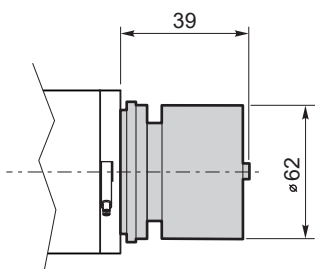


Freno

Brake

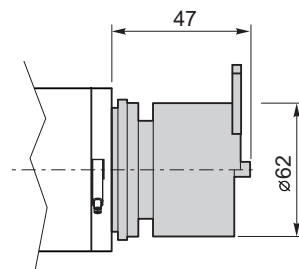
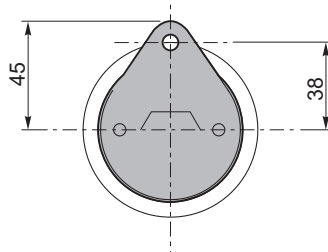
Freno / Brake

EC050...BR  
EC070...BR



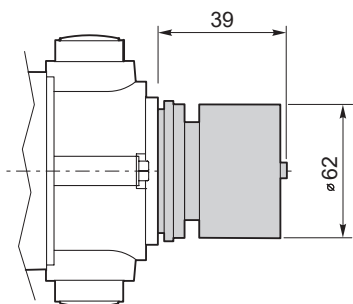
Freno con leva di sblocco/ Brake with hand release

EC050...BRL  
EC070...BRL

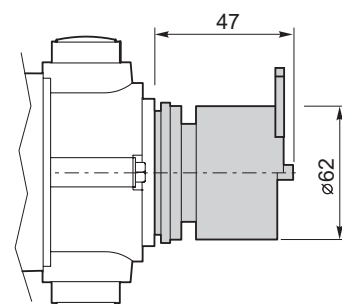
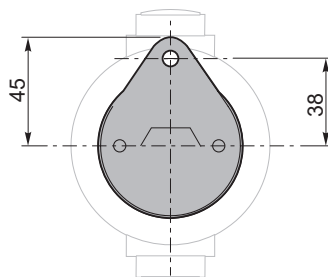


	Pn [W]	V [V]	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]
Caratteristiche del freno / Break features	14	12 24	1.8	3000

EC100.24E BR  
EC180.24E BR

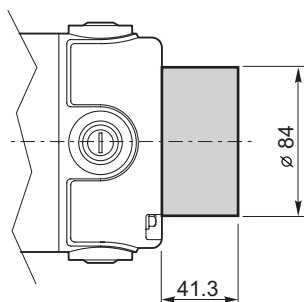


EC100.24E BRL  
EC180.24E BRL

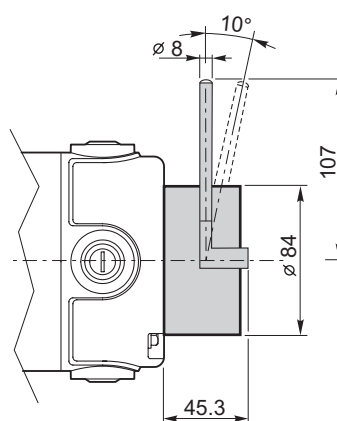


	Pn [W]	V [V]	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]
Caratteristiche del freno / Break features	14	12 24	1.8	3000

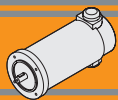
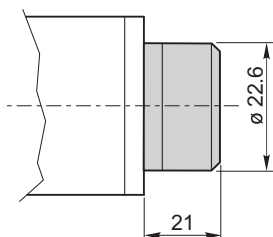
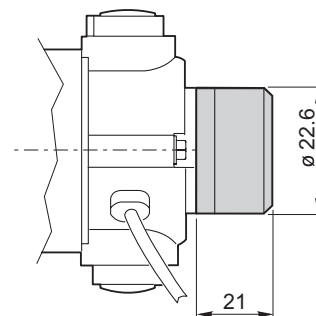
EC350...BR  
EC600...BR



EC350...BRL  
EC600...BRL



	Pn [W]	V [V]	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]
Caratteristiche del freno / Break features	25	12 24	5	3000

**Encoder****Encoder****EC020.24E ME22****EC050.12E ME22****EC050.24E ME22****EC070.12E ME22****EC070.24E ME22****EC100.24E ME22****EC180.24E ME22**

Risoluzione Encoder (CPR) / Encoder Resolution (CPR)	Numero di canali / Number of channels	Tensione d'alimentazione / Power supply
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.

*For non-standard encoder resolution, please contact our Technical Department.*

Nota: Fornito con cavo lungo 300 mm

*Note: Supplie with cavle 300 mm long*

**MINI**  **TECNO**™  
**small** but strong

**EC IP66**



Motori elettrici CC IP66 - Ferrite  
IP66 DC electric motors - Ferrite



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC





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<b>EC100.120.66</b> <b>EC100.240.66</b>	Caratteristiche	<i>Features</i>	<b>BC4</b>
	Dimensioni	<i>Dimensions</i>	<b>BC4</b>
	Prestazioni	<i>Performances</i>	<b>BC4</b>
<b>EC180.120.66</b> <b>EC180.240.66</b>	Caratteristiche	<i>Features</i>	<b>BC6</b>
	Dimensioni	<i>Dimensions</i>	<b>BC6</b>
	Prestazioni	<i>Performances</i>	<b>BC6</b>
<b>EC250.120.66</b> <b>EC250.240.66</b>	Caratteristiche	<i>Features</i>	<b>BC8</b>
	Dimensioni	<i>Dimensions</i>	<b>BC8</b>
	Prestazioni	<i>Performances</i>	<b>BC9</b>
<b>EC350.120.66</b> <b>EC350.240.66</b>	Caratteristiche	<i>Features</i>	<b>BC10</b>
	Dimensioni	<i>Dimensions</i>	<b>BC10</b>
	Prestazioni	<i>Performances</i>	<b>BC11</b>
<b>EC600.120.66</b> <b>EC600.240.66</b>	Caratteristiche	<i>Features</i>	<b>BC12</b>
	Dimensioni	<i>Dimensions</i>	<b>BC12</b>
	Prestazioni	<i>Performances</i>	<b>BC13</b>

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### EC070.120.66 - EC070.240.66

#### Caratteristiche

#### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2 (70 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

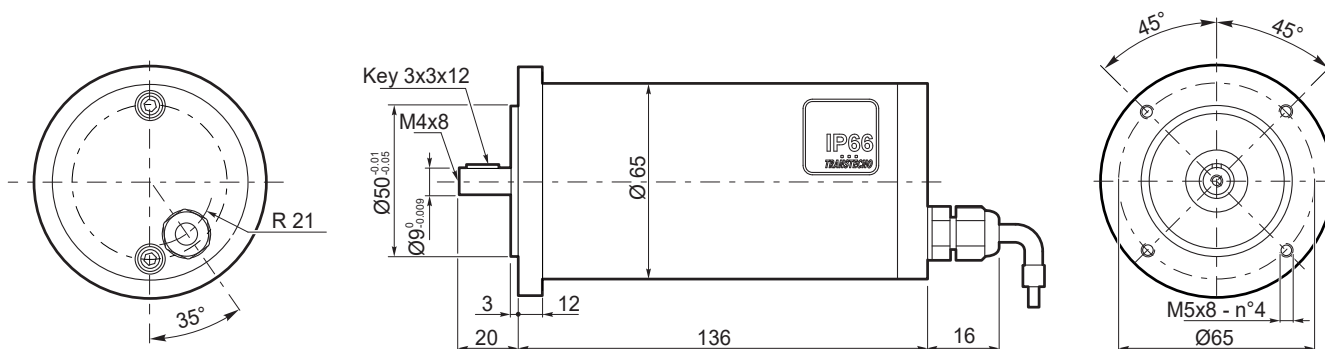
Construction	Tubular, without fan
Size	Ø 65 mm
Power	100 W S2 (70 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 1000 mm

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC070.120.66	S1	70	12	8.4	F	1	0.22	3000	66	1.7
	S2 30'	100		11.8			0.31			
EC070.240.66	S1	70	24	4.2						
	S2 30'	100		5.9			0.31			

#### Dimensioni

#### Dimensions

EC070.120.66  
EC070.240.66



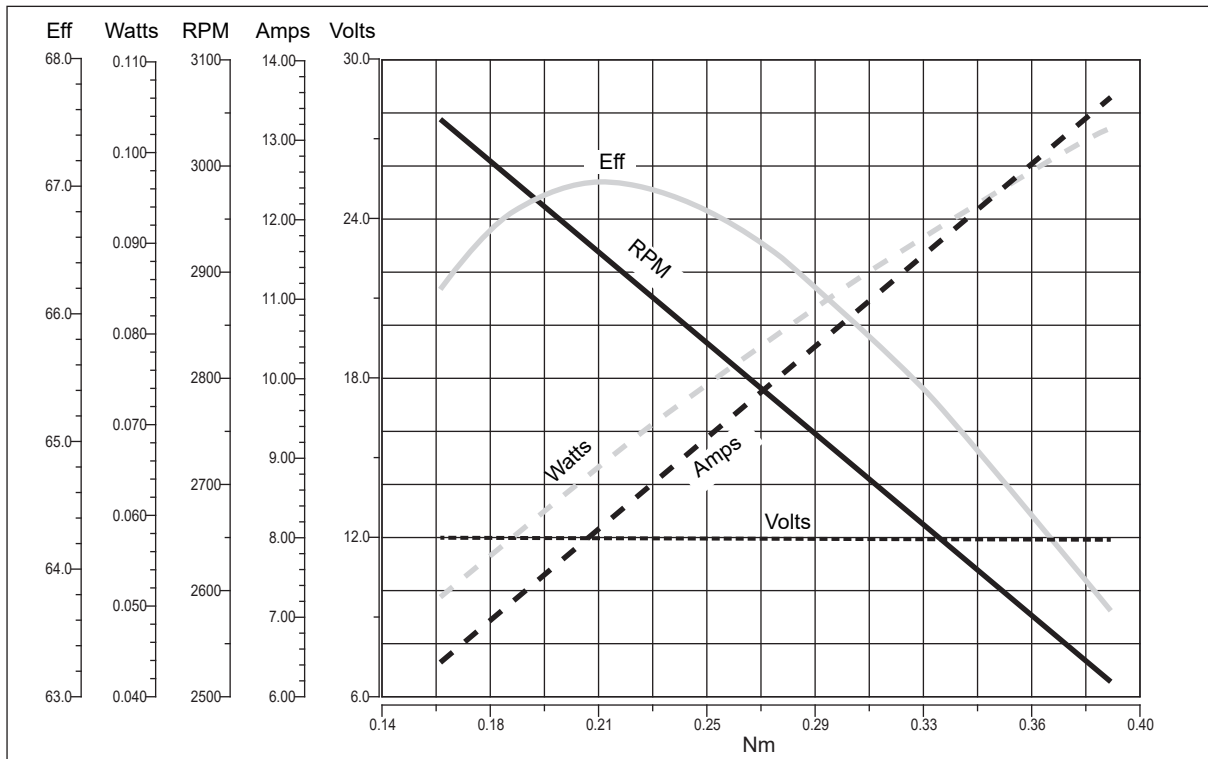


**EC070.120.66 - EC070.240.66**

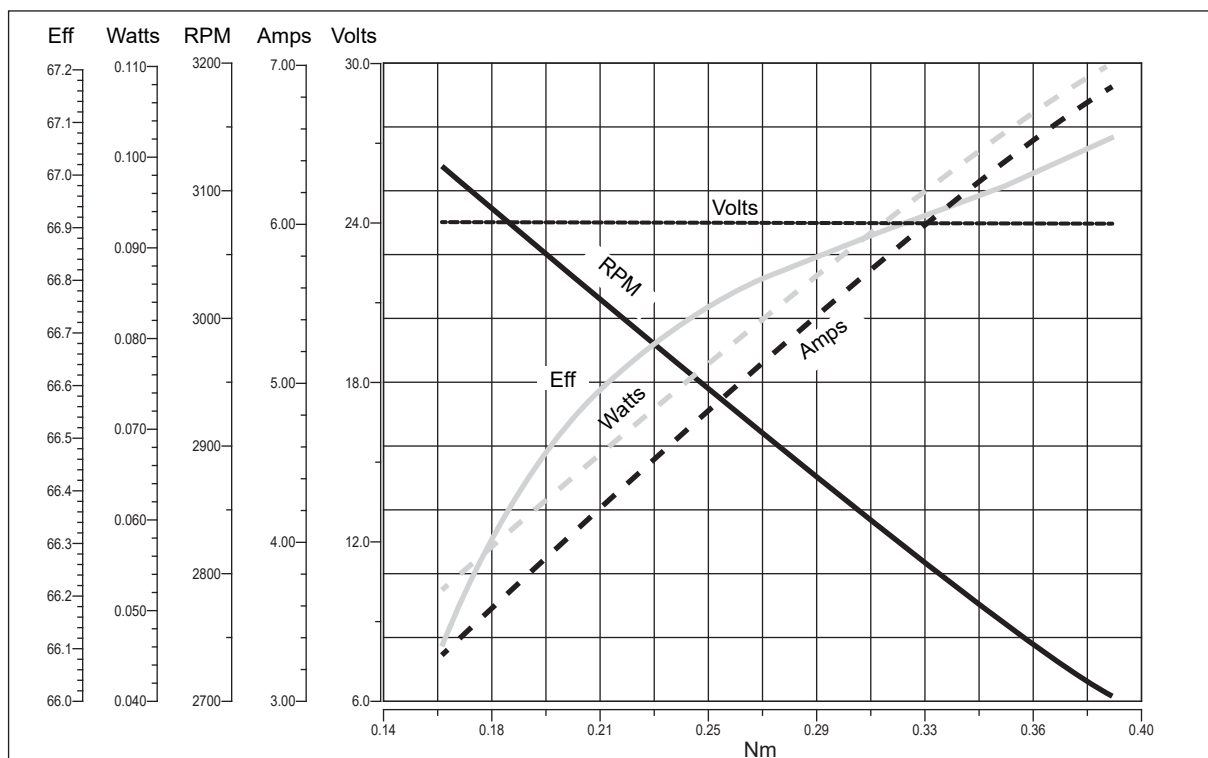
Prestazioni

Performances

**EC070.120.66**



**EC070.240.66**



DC



## EC100.120.66 - EC100.240.66

### Caratteristiche

### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

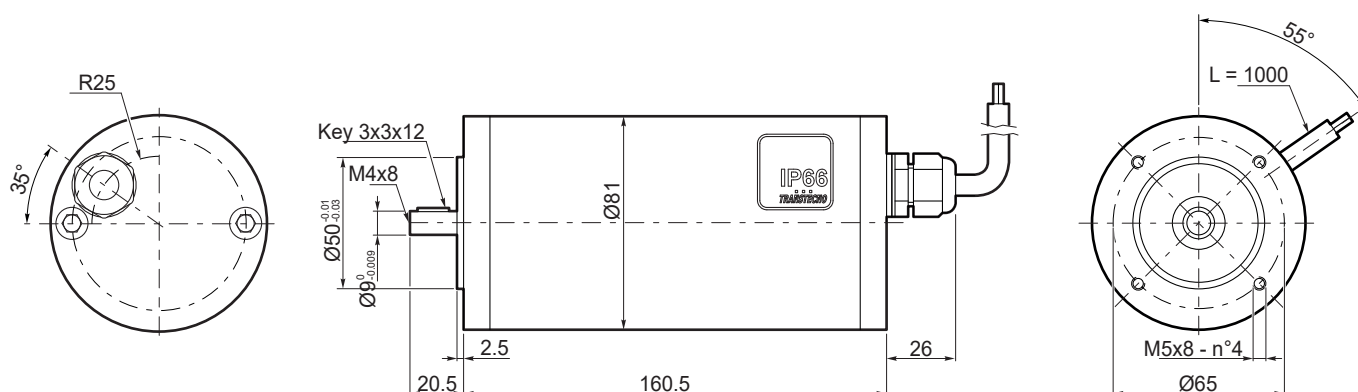
Construction	Tubular, without fan
Size	Ø 80 mm
Power	140 W S2 (100 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Electric cable	Length: 1000 mm

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC100.120.66	S1	100	12	12	F	1	0.31	3000	66	2.7
	S2 25'	140		16.8			0.43			
EC100.240.66	S1	100	24	6			0.31			
	S2 25'	140		8.4			0.43			

### Dimensioni

### Dimensions

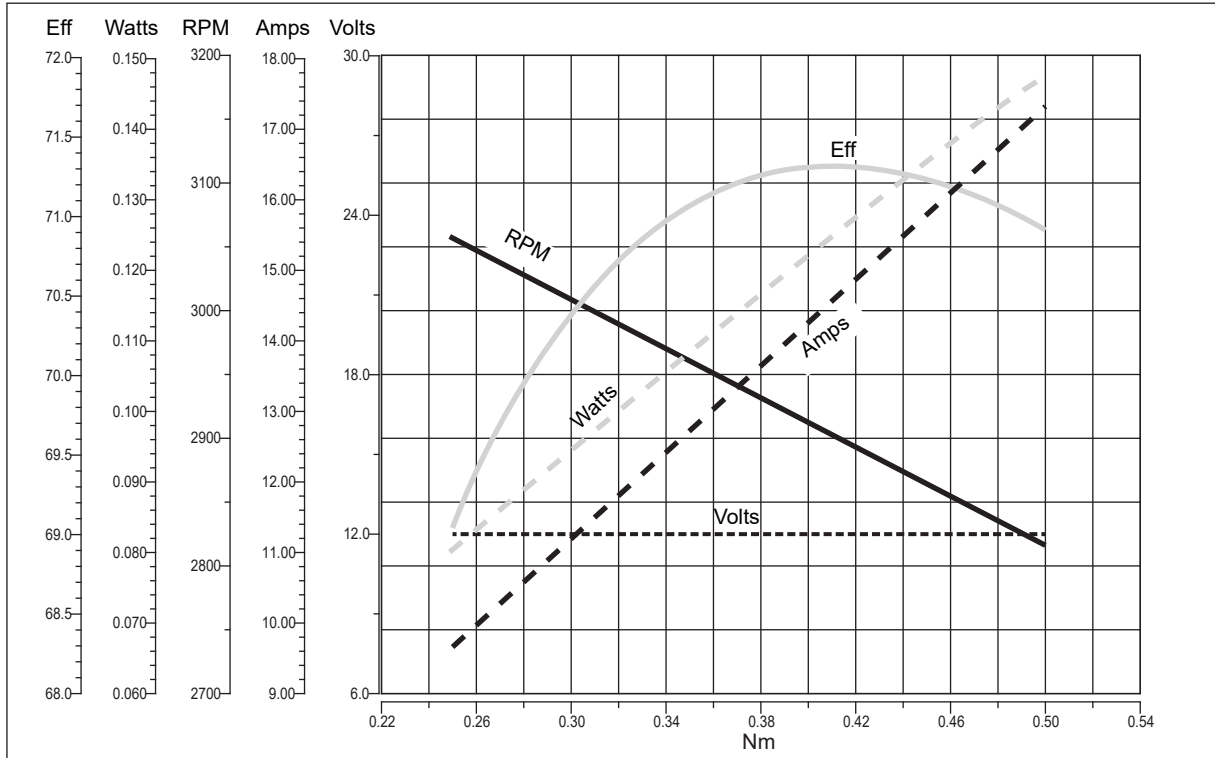
EC100.120.66  
EC100.240.66



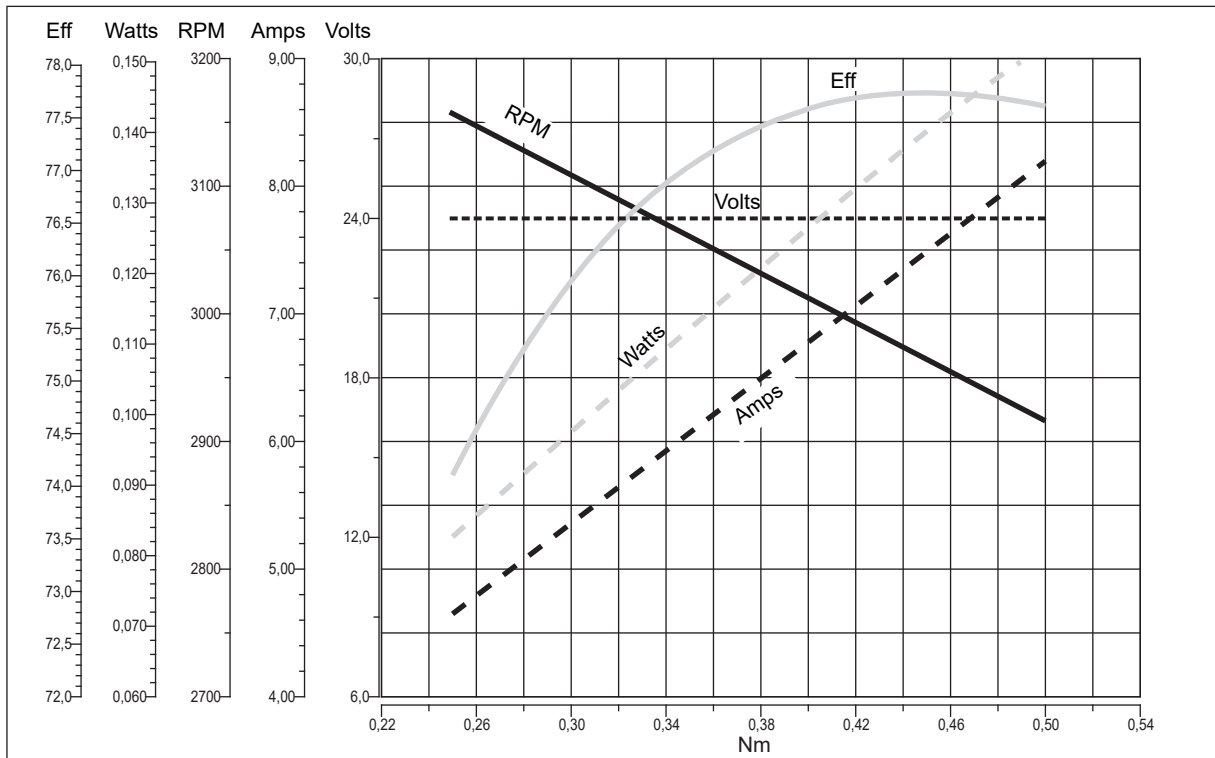




**EC100.120.66**



**EC100.240.66**



DC



## EC180.120.66 - EC180.240.66

### Caratteristiche

### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

Construction	Tubular, without fan
Size	Ø 80 mm
Power	250 W S2 (180 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Electric cable	Length: 1000 mm

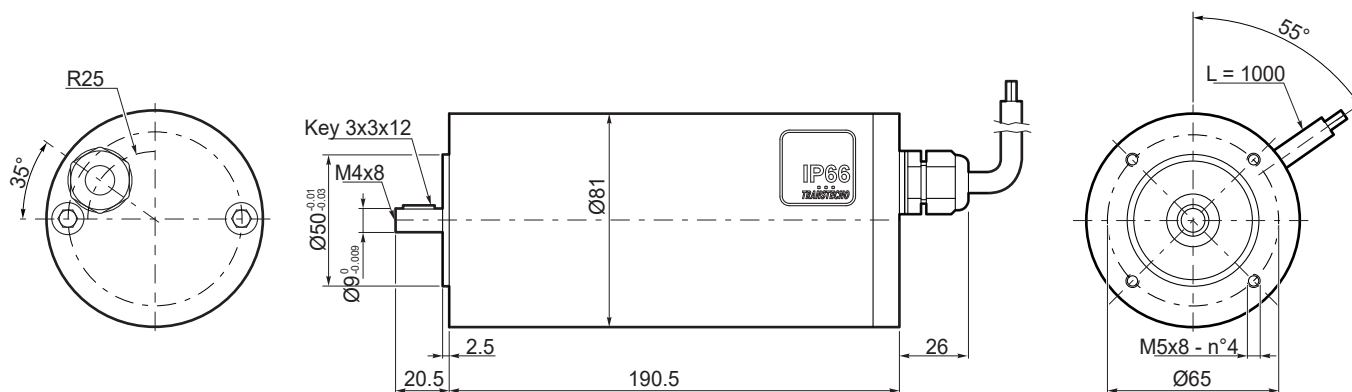
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC180.120.66	S1	180	12	21.5	F	1	0.57	3000	66	3.4
	S2 25'	250		30			0.8			
EC180.240.66	S1	180	24	10.8						
	S2 25'	250		15			0.8			

### Dimensioni

### Dimensions

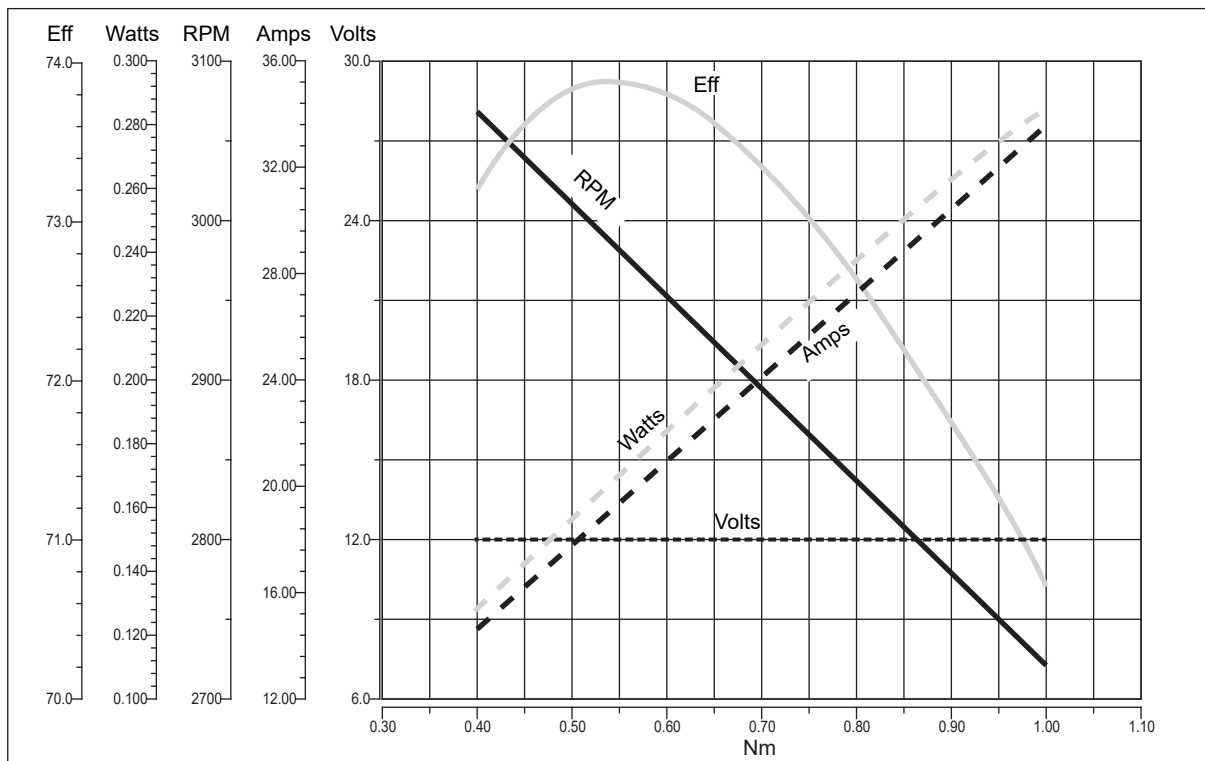
#### EC180.120.66

#### EC180.240.66

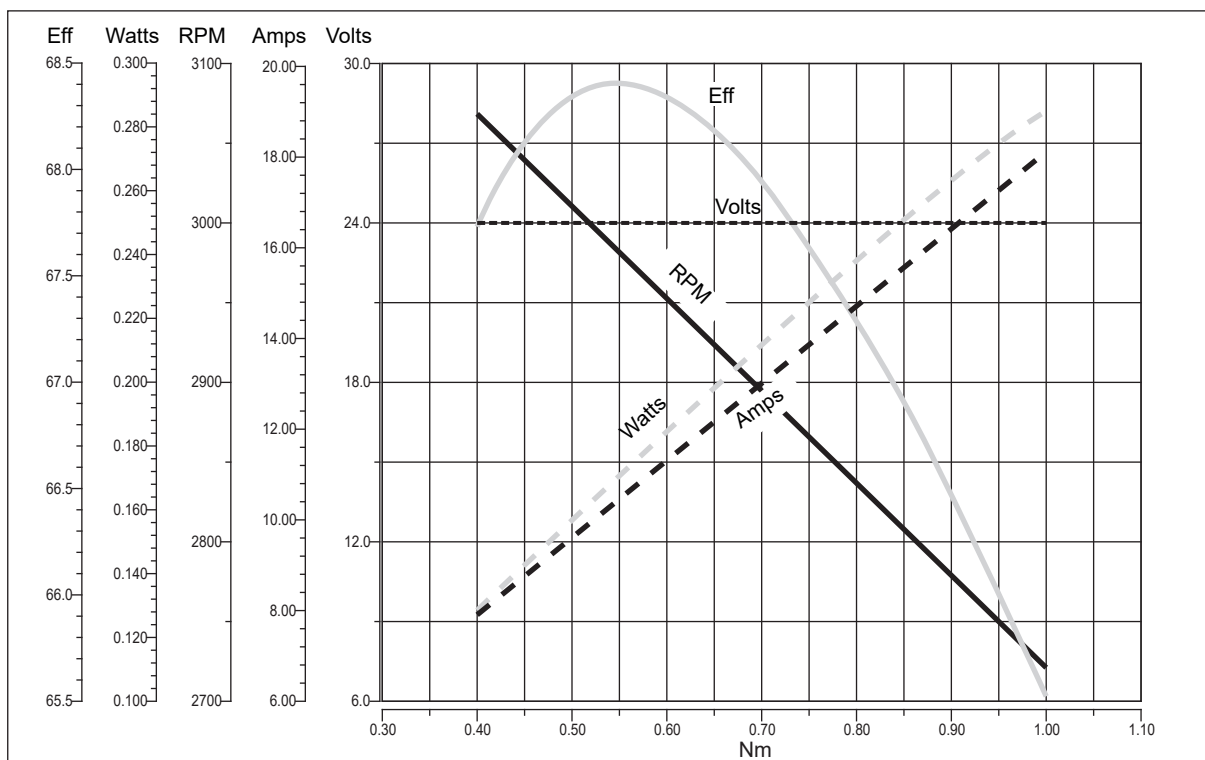




**EC180.120.66**



**EC180.240.66**



DC



## EC250.120.66 - EC250.240.66

### Caratteristiche

### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con doppio dado di fissaggio

Construction	Tubular, without fan
Size	Ø 104 mm
Power	350 W S2 (250 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Leads terminals	2, with double nut

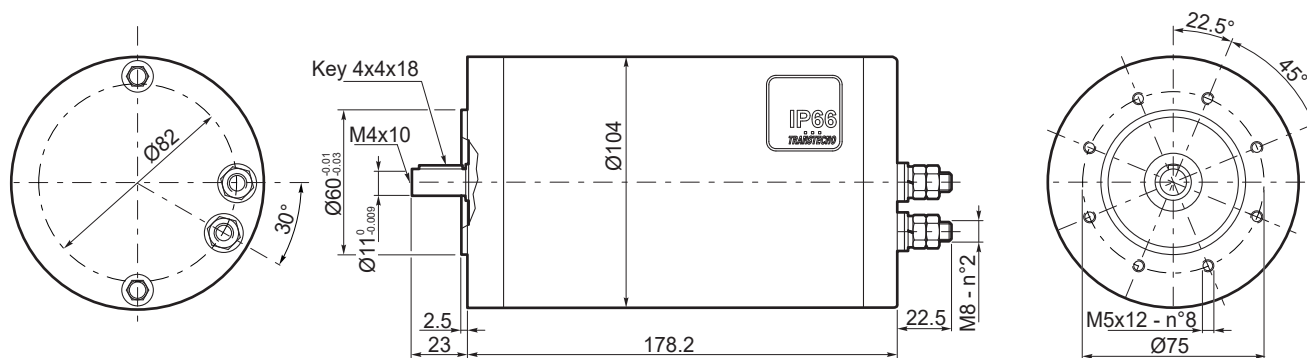
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC250.120.66	S1	250	12	30	F	1	0.8	3000	66	4.15
	S2 25'	350		38.5			1.12			
EC250.240.66	S1	250	24	15						
	S2 25'	350		20.5			1.12			

### Dimensioni

### Dimensions

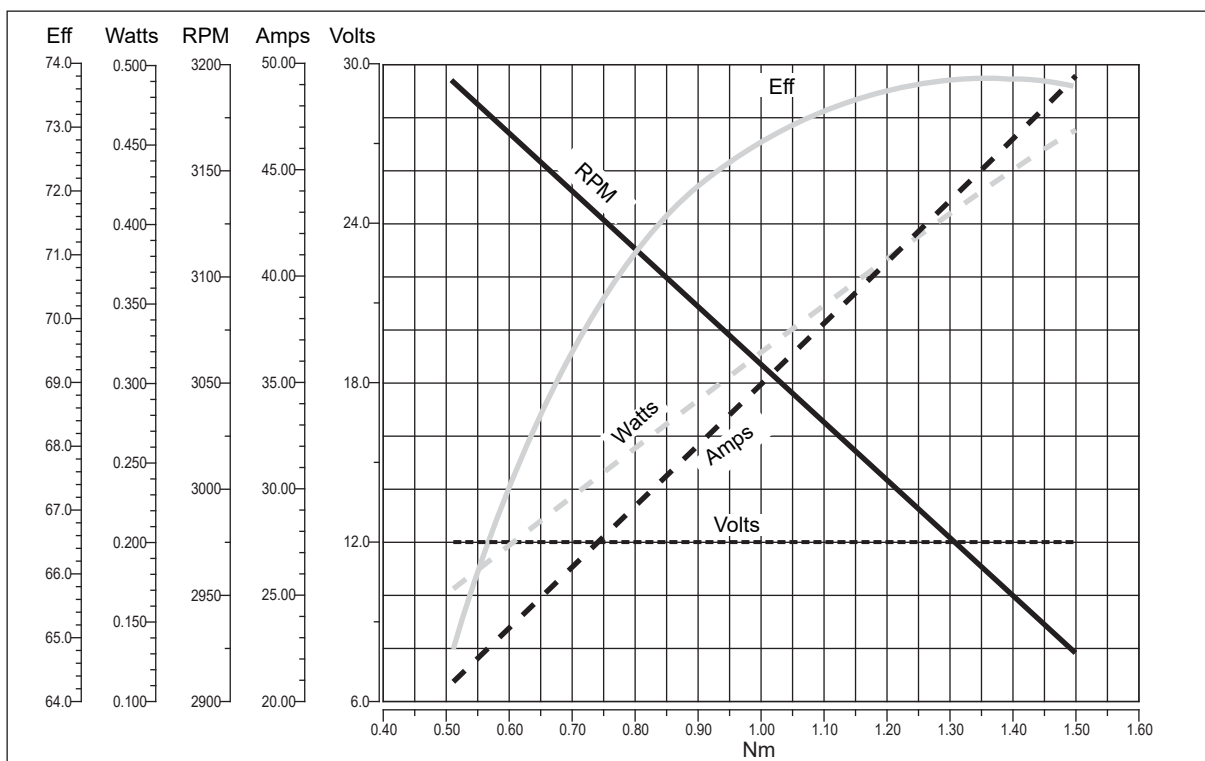
EC250.120.66

EC250.240.66

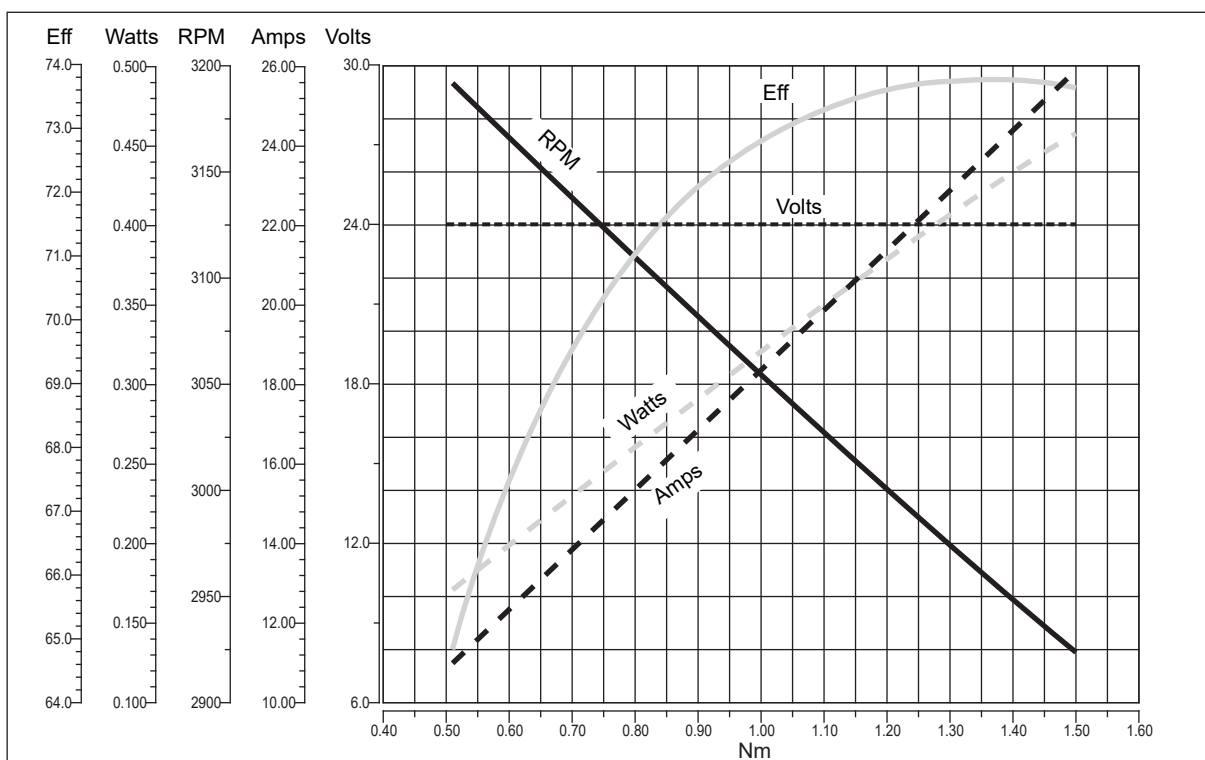




**EC250.120.66**



**EC250.240.66**



DC



## EC350.120.66 - EC350.240.66

### Caratteristiche

### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con dadi di fissaggio

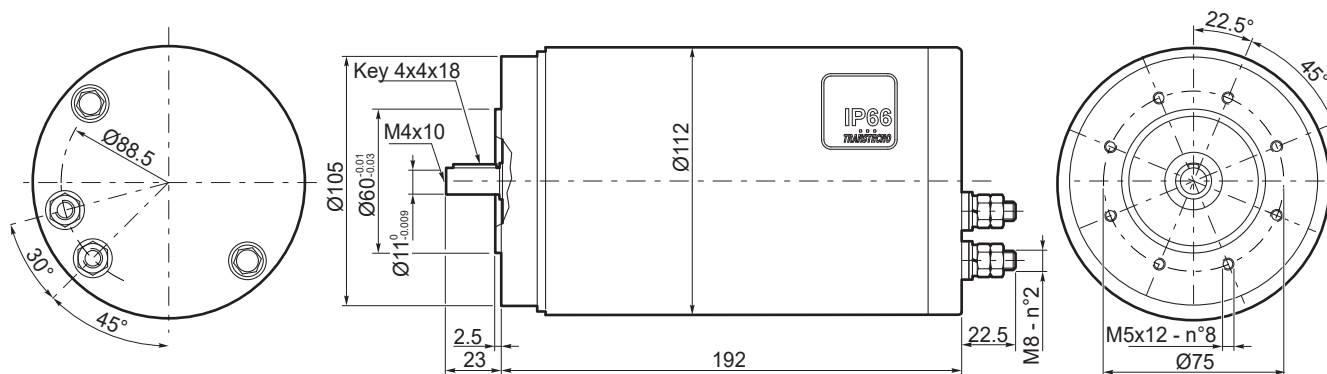
Construction	Tubular, without fan
Size	Ø 110 mm
Power	500 W S2 (350 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Leads terminals	2, with double nut

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC350.120.66	S1	350	12	42	F	1	1.12	3000	66	5.1
	S2 30'	500		58.8			1.57			
EC350.240.66	S1	350	24	21			1.12			5.3
	S2 30'	500		29.4			1.57			

### Dimensioni

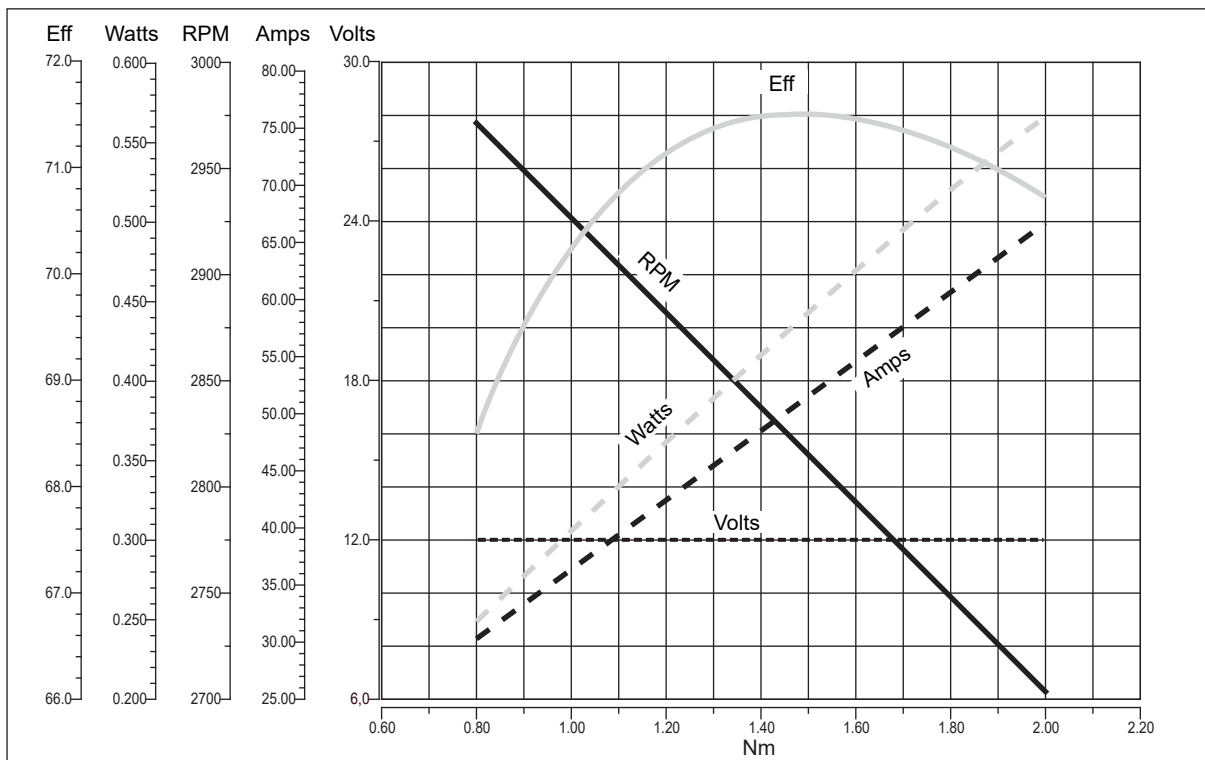
### Dimensions

EC350.120.66  
EC350.240.66

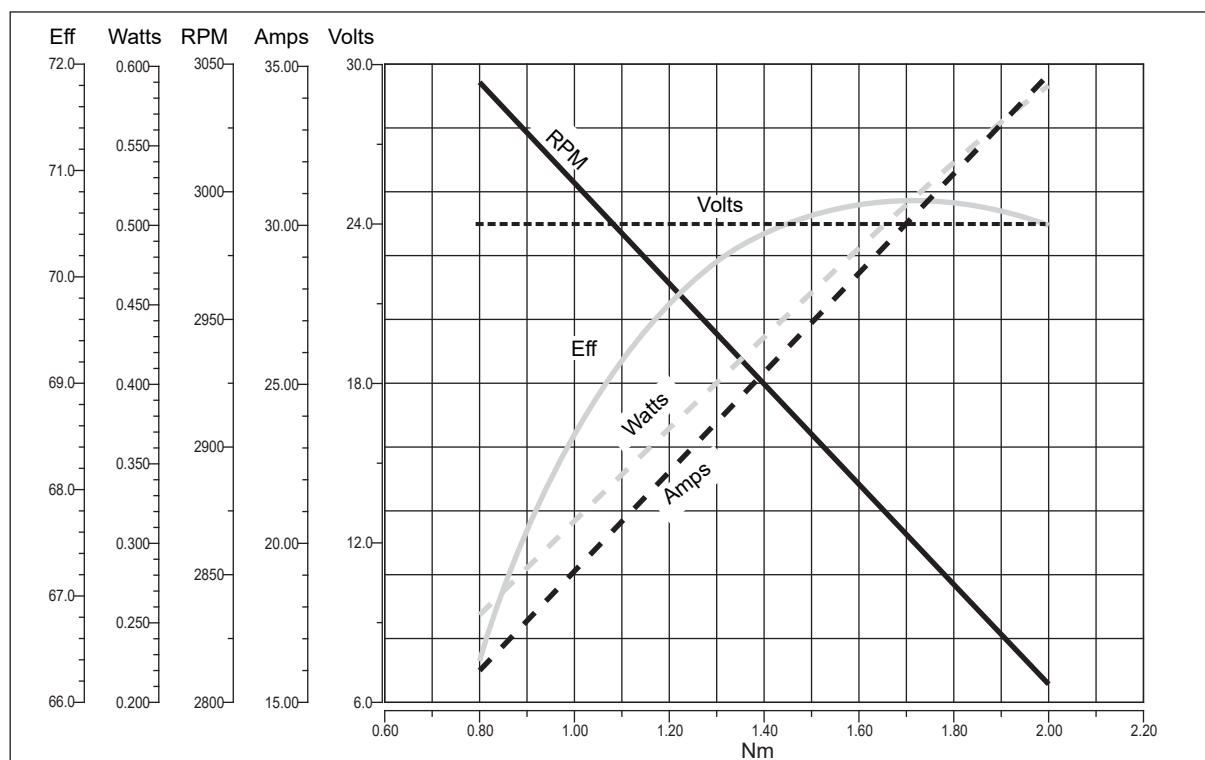




**EC350.120.66**



**EC350.240.66**



DC



### EC600.120.66 - EC600.240.66

#### Caratteristiche

#### Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	800 W S2 (600 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con doppio dado di fissaggio

Construction	Tubular, without fan
Size	Ø 110 mm
Power	800 W S2 (600 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Leads terminals	2, with double nut

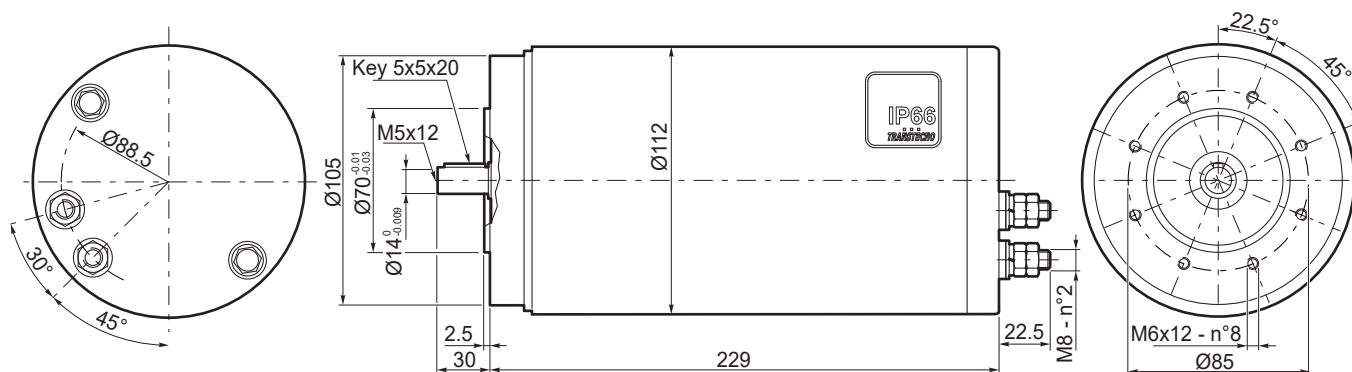
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n <sub>1</sub> [min <sup>-1</sup> ]	IP	Kg
EC600.120.66	S1	600	12	71	F	1	1.91	3000	66	6.6
	S2 30'	800		94.4			2.54			
EC600.240.66	S1	600	24	35.5			1.91			
	S2 30'	800		47.2			2.54			

#### Dimensioni

#### Dimensions

#### EC600.120.66

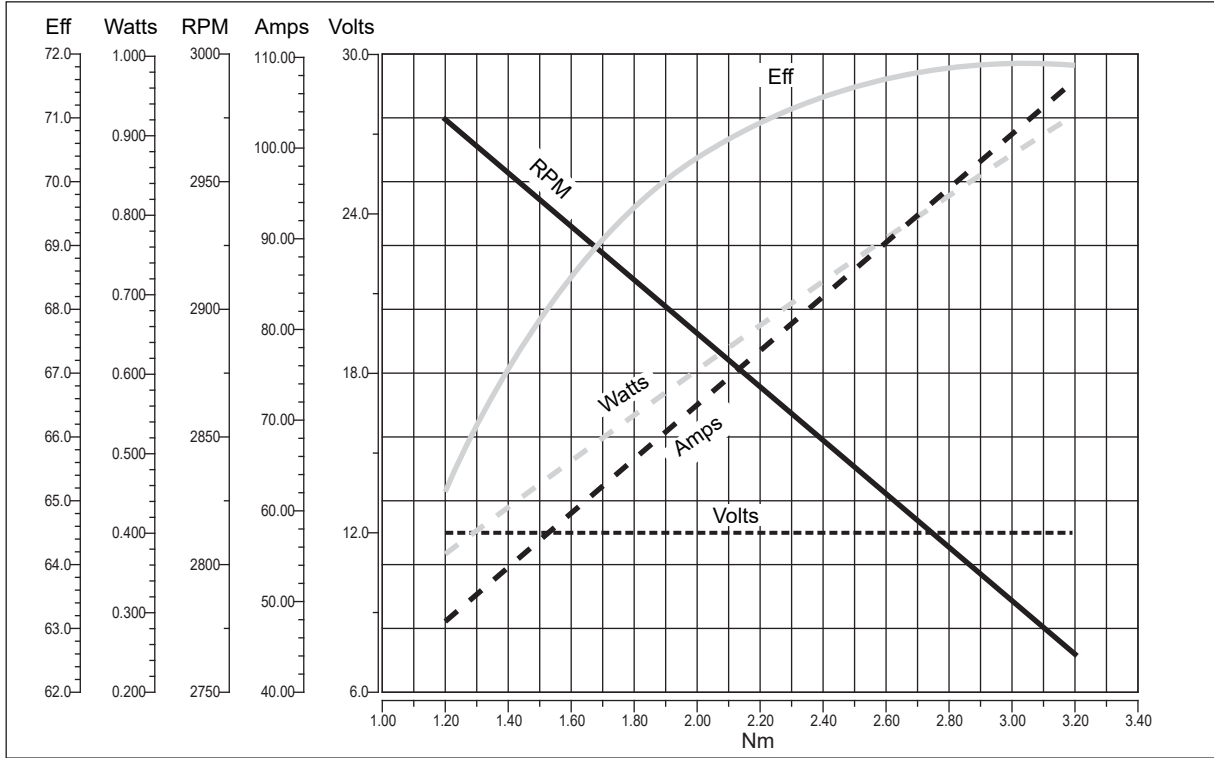
#### EC600.240.66



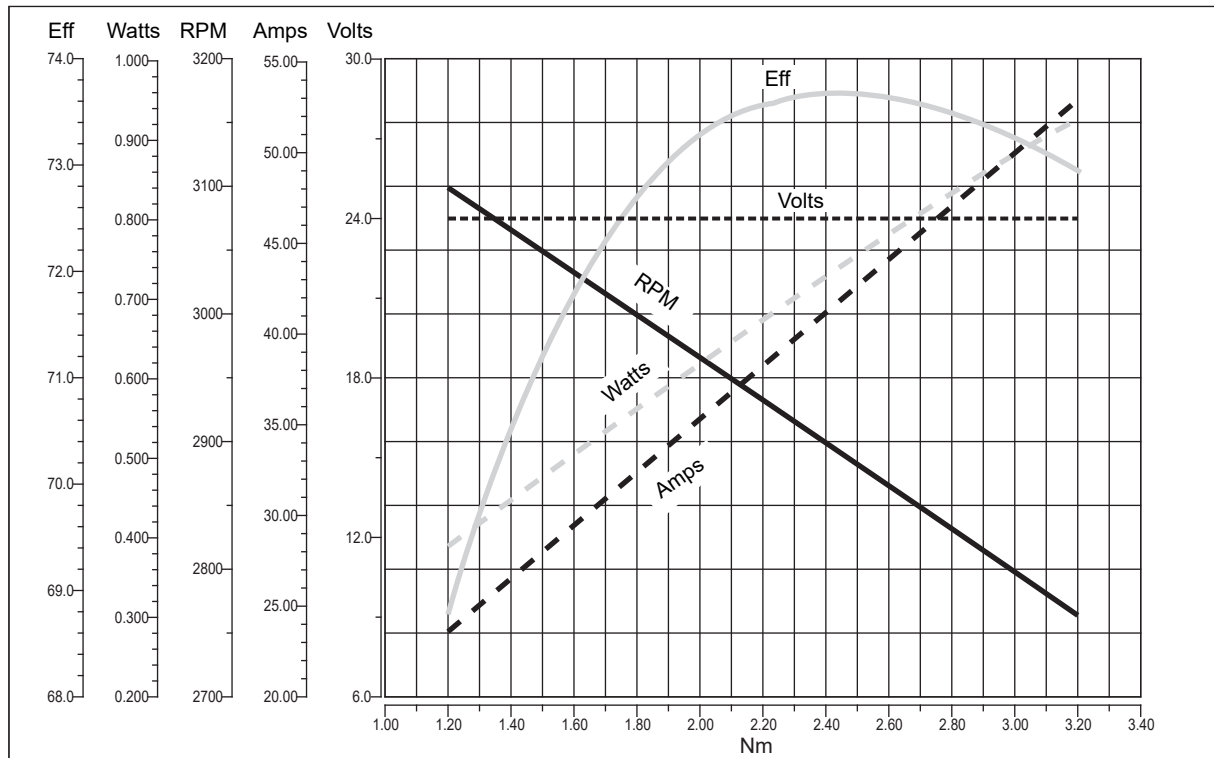




**EC600.120.66**



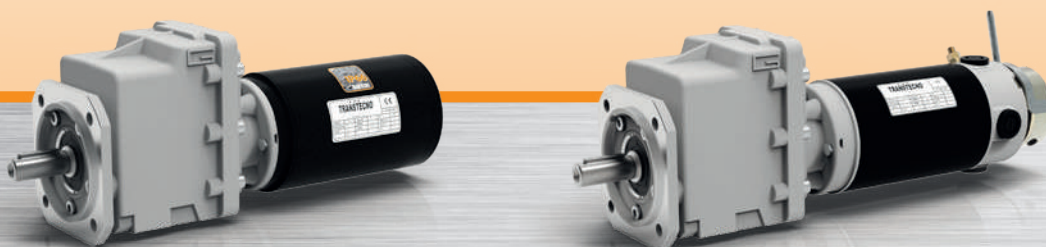
**EC600.240.66**



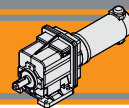
DC



Motoriduttori CC ad ingranaggi cilindrici  
DC helical in-line gearmotors



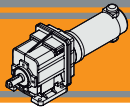




<b>Indice</b>	<b>Index</b>	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	<b>BD2</b>
Designazione	<i>Classification</i>	<b>BD3</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>BD3</b>
Lubrificazione	<i>Lubrication</i>	<b>BD3</b>
Simbologia	<i>Symbols</i>	<b>BD3</b>
Carichi radiali	<i>Radial loads</i>	<b>BD4</b>
Motori applicabili	<i>IEC Motor adapters</i>	<b>BD4</b>
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	<b>BD5</b>
Dimensioni	<i>Dimensions</i>	<b>BD7</b>

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### Caratteristiche tecniche

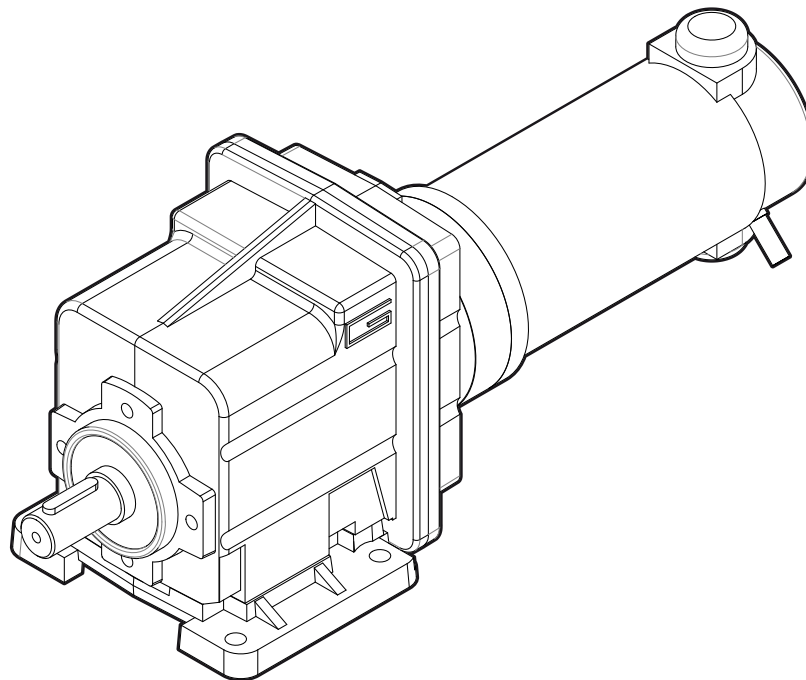
I motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio **NDCMG** e in ferrite **ECMG** hanno le seguenti caratteristiche principali:

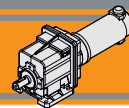
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili con giunto elastico in entrata

### Technical features

**NDCMG** neodymium permanent magnets and **ECMG** ferrite permanent magnets DC helical in-line gearmotors range has the following main features:

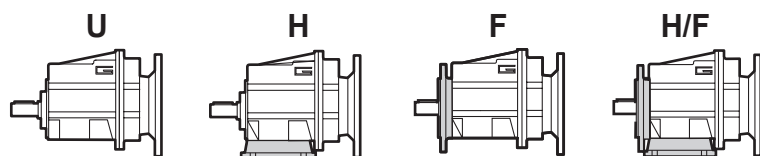
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Available with input flexible couplin

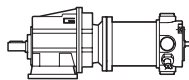


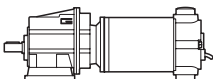



Designazione

Classification

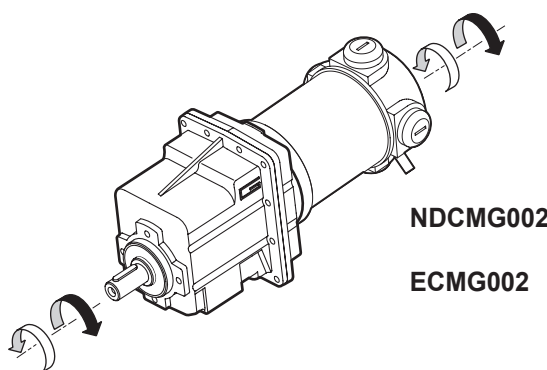


MOTORIDUTTORE / GEARMOTOR						
NDCMG	120/002	U	8.99	D20	240	
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Versione motore Motor version	
NDCMG 	120/002 180/002	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	120 240	

MOTORIDUTTORE / GEARMOTOR						
ECMG	100/002	U	8.99	D20	240	FX
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Versione motore Motor version	Giunto elastico Flexible coupling
ECMG 	070/002 100/002 180/002 250/002 350/002 600/002	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	120 240 24E	FX 

Sensi di rotazione

Direction of rotation



Lubrificazione

Lubrication

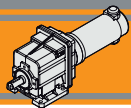
Tutti i riduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*

Simbologia

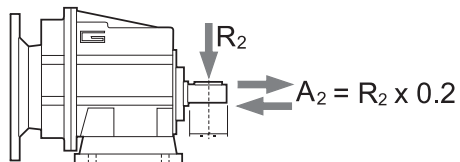
Symbols

$n_1$	[min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>



Carichi radiali

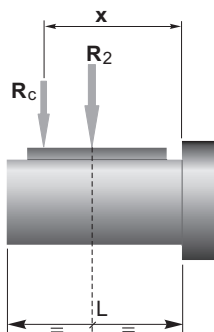
Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]
	CMG 002
700	416
600	437
500	465
400	501
250	586
180	653
150	748
120	806
100	958
80	1032
60	1136
40	1300
10	1300

Quando il carico radiale risultante non è applicato sulla mezza-  
ria dell'albero occorre calcolare quello effettivo con la seguente  
formula:

When the resulting radial load is not applied on the centre line  
of the shaft it is necessary to calculate the effective load with the  
following formula:



	CMG 002
a	73
b	53
R <sub>2MAX</sub>	1300

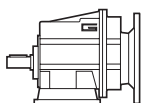
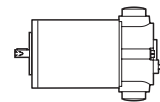
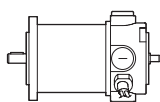
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

a, b = valori riportati nella tabella  
a, b = values given in the table

$$R \leq R_c$$

Motori applicabili

IEC Motor adapters

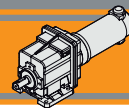


CMG	002	ND		EC						
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
		5.03 - 55.10								

5.03 - 55.10

Rapporti di riduzione i  
Ratio i

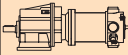
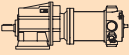




**Dati tecnici per servizio S2**

**NDCMG**

**Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>160</b>							<b>250</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	2.5	12.6	5.03	<b>120/002</b>	120/240	(3000 min <sup>-1</sup> )	<b>596</b>	3.8	8.1	5.03	<b>180/002</b>	120/240
	<b>492</b>	3.0	10.4	6.10				<b>492</b>	4.7	6.7	6.10		
	<b>401</b>	3.7	8.5	7.49				<b>401</b>	5.7	5.4	7.49		
	<b>334</b>	4.4	8.9	8.99				<b>334</b>	6.9	5.7	8.99		
	<b>295</b>	5.0	7.9	10.16				<b>295</b>	7.8	5.0	10.16		
	<b>249</b>	5.9	6.6	12.07				<b>249</b>	9.2	4.2	12.07		
	<b>224</b>	6.6	8.4	13.40				<b>224</b>	10	5.4	13.40		
	<b>198</b>	7.4	7.4	15.14				<b>198</b>	12	4.8	15.14		
	<b>165</b>	8.9	6.2	18.17				<b>165</b>	14	4.0	18.17		
	<b>139</b>	11	5.2	21.58				<b>139</b>	17	3.3	21.58		
	<b>128</b>	12	4.8	23.51				<b>128</b>	18	3.1	23.51		
	<b>120</b>	12	4.5	25.10				<b>120</b>	19	2.9	25.10		
	<b>111</b>	13	4.2	27.08				<b>111</b>	21	2.7	27.08		
	<b>92</b>	16	3.5	32.49				<b>92</b>	25	2.2	32.49		
	<b>71</b>	21	2.7	42.04				<b>71</b>	32	1.7	42.04		
	<b>67</b>	22	2.5	44.89				<b>67</b>	34	1.6	44.89		
	<b>61</b>	24	2.3	48.86				<b>61</b>	37	1.5	48.86		
	<b>54</b>	27	2.0	55.10				<b>54</b>	42	1.3	55.10		

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

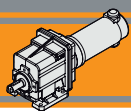
**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Dati tecnici elettrici**

**Electrical technical data**

ND 120 → 

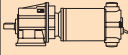
ND 180 → 

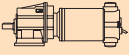


### Dati tecnici per servizio S2

### ECMG

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>100</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	1.5	20.2	5.03	<b>070/002</b>	12E/24E
	<b>492</b>	1.9	16.6	6.10		
	<b>401</b>	2.3	13.5	7.49		
	<b>334</b>	2.7	14.2	8.99		
	<b>295</b>	3.1	12.6	10.16		
	<b>249</b>	3.7	10.6	12.07		
	<b>224</b>	4.1	13.4	13.40		
	<b>198</b>	4.6	11.9	15.14		
	<b>165</b>	5.5	9.9	18.17		
	<b>139</b>	6.6	8.3	21.58		
	<b>128</b>	7.2	7.7	23.51		
	<b>120</b>	7.7	7.2	25.10		
	<b>111</b>	8.3	6.6	27.08		
	<b>92</b>	9.9	5.5	32.49		
	<b>71</b>	13	4.3	42.04		
	<b>67</b>	14	4.0	44.89		
	<b>61</b>	15	3.7	48.86		
	<b>54</b>	17	3.3	55.10		

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>350</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	5.4	5.8	5.03	<b>250/002</b>	120/240
	<b>492</b>	6.5	4.8	6.10		
	<b>401</b>	8.0	3.9	7.49		
	<b>334</b>	10	4.1	8.99		
	<b>295</b>	11	3.6	10.16		
	<b>249</b>	13	3.0	12.07		
	<b>224</b>	14	3.8	13.40		
	<b>198</b>	16	3.4	15.14		
	<b>165</b>	19	2.8	18.17		
	<b>139</b>	23	2.4	21.58		
	<b>128</b>	25	2.2	23.51		
	<b>120</b>	27	2.0	25.10		
	<b>111</b>	29	1.9	27.08		
	<b>92</b>	35	1.6	32.49		
	<b>71</b>	45	1.2	42.04		
	<b>67</b>	48	1.1	44.89		
	<b>61</b>	52	1.1	48.86		
	<b>54</b>	59	0.9	55.10		

<b>140</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	2.2	14.4	5.03	<b>100/002</b>	120/240/24E
	<b>492</b>	2.6	11.9	6.10		
	<b>401</b>	3.2	9.7	7.49		
	<b>334</b>	3.8	10.1	8.99		
	<b>295</b>	4.3	9.0	10.16		
	<b>249</b>	5.2	7.6	12.07		
	<b>224</b>	5.7	9.6	13.40		
	<b>198</b>	6.5	8.5	15.14		
	<b>165</b>	7.8	7.1	18.17		
	<b>139</b>	9.2	6.0	21.58		
	<b>128</b>	10	5.5	23.51		
	<b>120</b>	11	5.1	25.10		
	<b>111</b>	12	4.7	27.08		
	<b>92</b>	14	4.0	32.49		
	<b>71</b>	18	3.1	42.04		
	<b>67</b>	19	2.9	44.89		
	<b>61</b>	21	2.6	48.86		
	<b>54</b>	24	2.3	55.10		

<b>500</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	7.7	4.0	5.03	<b>350/002</b>	120/240
	<b>492</b>	9.3	3.3	6.10		
	<b>401</b>	11	2.7	7.49		
	<b>334</b>	14	2.8	8.99		
	<b>295</b>	16	2.5	10.16		
	<b>249</b>	18	2.1	12.07		
	<b>224</b>	20	2.7	13.40		
	<b>198</b>	23	2.4	15.14		
	<b>165</b>	28	2.0	18.17		
	<b>139</b>	33	1.7	21.58		
	<b>128</b>	36	1.5	23.51		
	<b>120</b>	38	1.4	25.1		
	<b>111</b>	41	1.3	27.08		
	<b>92</b>	50	1.1	32.49		
	<b>71</b>	64	0.9	42.04		
	<b>67</b>	69	0.8	44.89		
	<b>61</b>	75	0.7	48.86		

<b>250</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	3.8	8.1	5.03	<b>180/002</b>	120/240/24E
	<b>492</b>	4.7	6.7	6.10		
	<b>401</b>	5.7	5.4	7.49		
	<b>334</b>	6.9	5.7	8.99		
	<b>295</b>	7.8	5.0	10.16		
	<b>249</b>	9.2	4.2	12.07		
	<b>224</b>	10	5.4	13.40		
	<b>198</b>	12	4.8	15.14		
	<b>165</b>	14	4.0	18.17		
	<b>139</b>	17	3.3	21.58		
	<b>128</b>	18	3.1	23.51		
	<b>120</b>	19	2.9	25.10		
	<b>111</b>	21	2.7	27.08		
	<b>92</b>	25	2.2	32.49		
	<b>71</b>	32	1.7	42.04		
	<b>67</b>	34	1.6	44.89		
	<b>61</b>	37	1.5	48.86		
	<b>54</b>	42	1.3	55.10		

<b>800</b>						
(3000 min <sup>-1</sup> )	<b>596</b>	12	2.5	5.03	<b>600/002</b>	120/240
	<b>492</b>	15	2.1	6.10		
	<b>401</b>	18	1.7	7.49		
	<b>334</b>	22	1.8	8.99		
	<b>295</b>	25	1.6	10.16		
	<b>249</b>	30	1.3	12.07		
	<b>224</b>	33	1.7	13.40		
	<b>198</b>	37	1.5	15.14		
	<b>165</b>	44	1.2	18.17		
	<b>139</b>	53	1.0	21.58		
	<b>128</b>	57	1.0	23.51		
	<b>120</b>	61	0.9	25.10		
	<b>111</b>	66	0.8	27.08		
	<b>92</b>	79	0.7	32.49		
	<b>71</b>	79	0.7	42.04		
	<b>67</b>	79	0.7	44.89		

NOTA:  
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE:  
Please check that the output torque M2 does not exceed the value in the grey areas

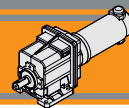
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

### Dati tecnici elettrici

### Electrical technical data

EC070 → 	EC100 → 	EC180 → 	EC250 → 	EC350 → 	EC600 → 
---------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------

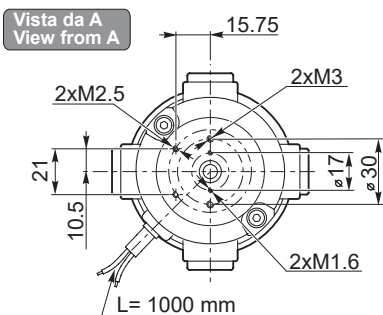
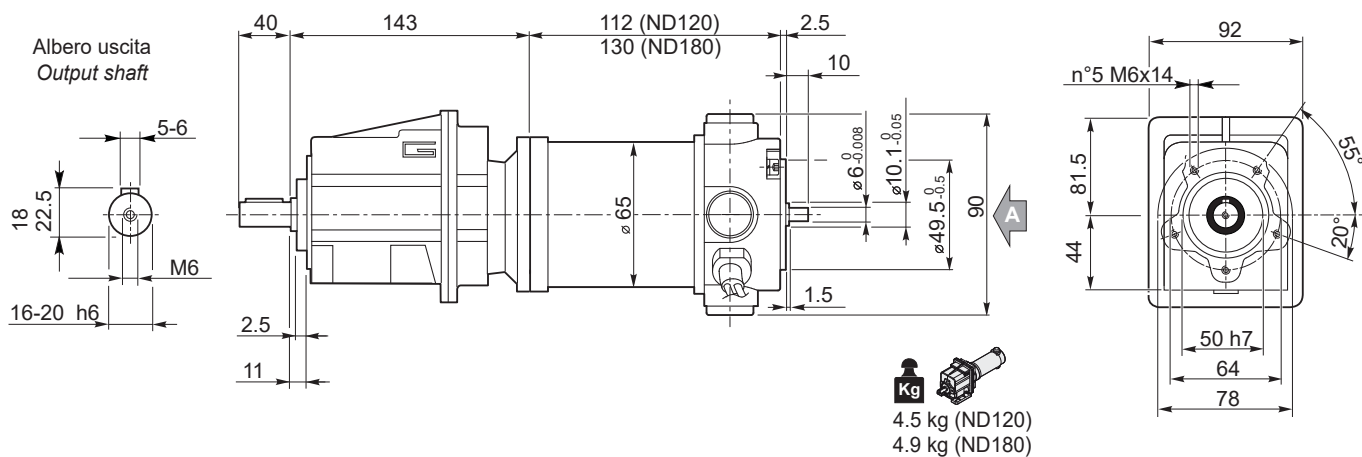


Dimensioni

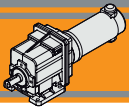
Dimensions

## NDCMG..U

NDCMG120/002 U  
NDCMG180/002 U



- NDCMG...H → [BD12](#)
- Freno / Brake → [BA9](#)
- NDCMG...F → [BD12](#)
- Encoder → [BA9](#)
- NDCMG...H/F → [BD13](#)

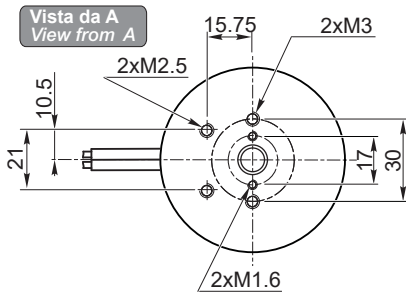
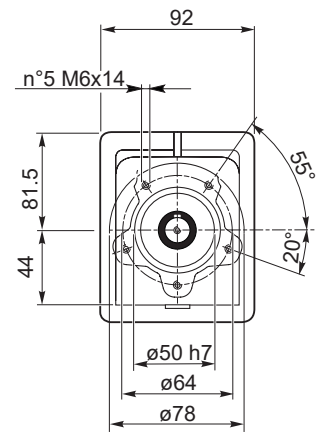
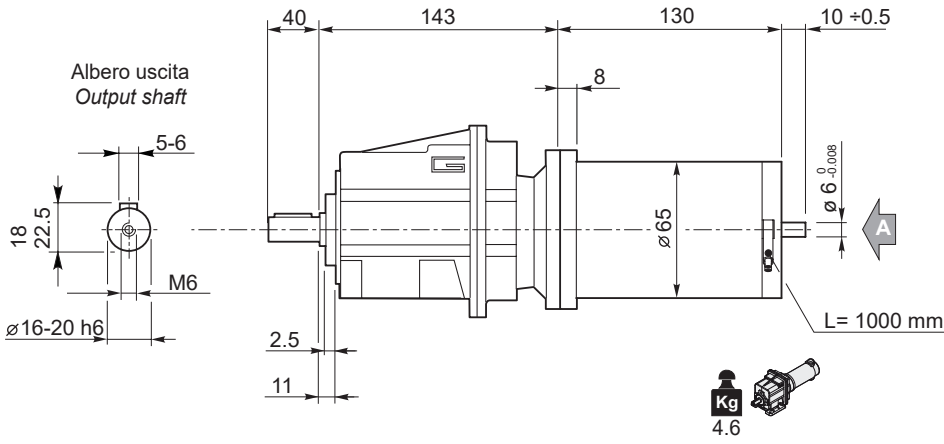


### Dimensioni

### Dimensions

## ECMG..U

### ECMG070/002 U



Freno / Brake → [BB23](#)

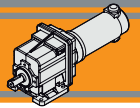
Encoder → [BB24](#)

Motori / Motors IP66 → [BC2](#)

ECMG...H → [BD12](#)

ECMG...F → [BD12](#)

ECMG...H/F → [BD13](#)

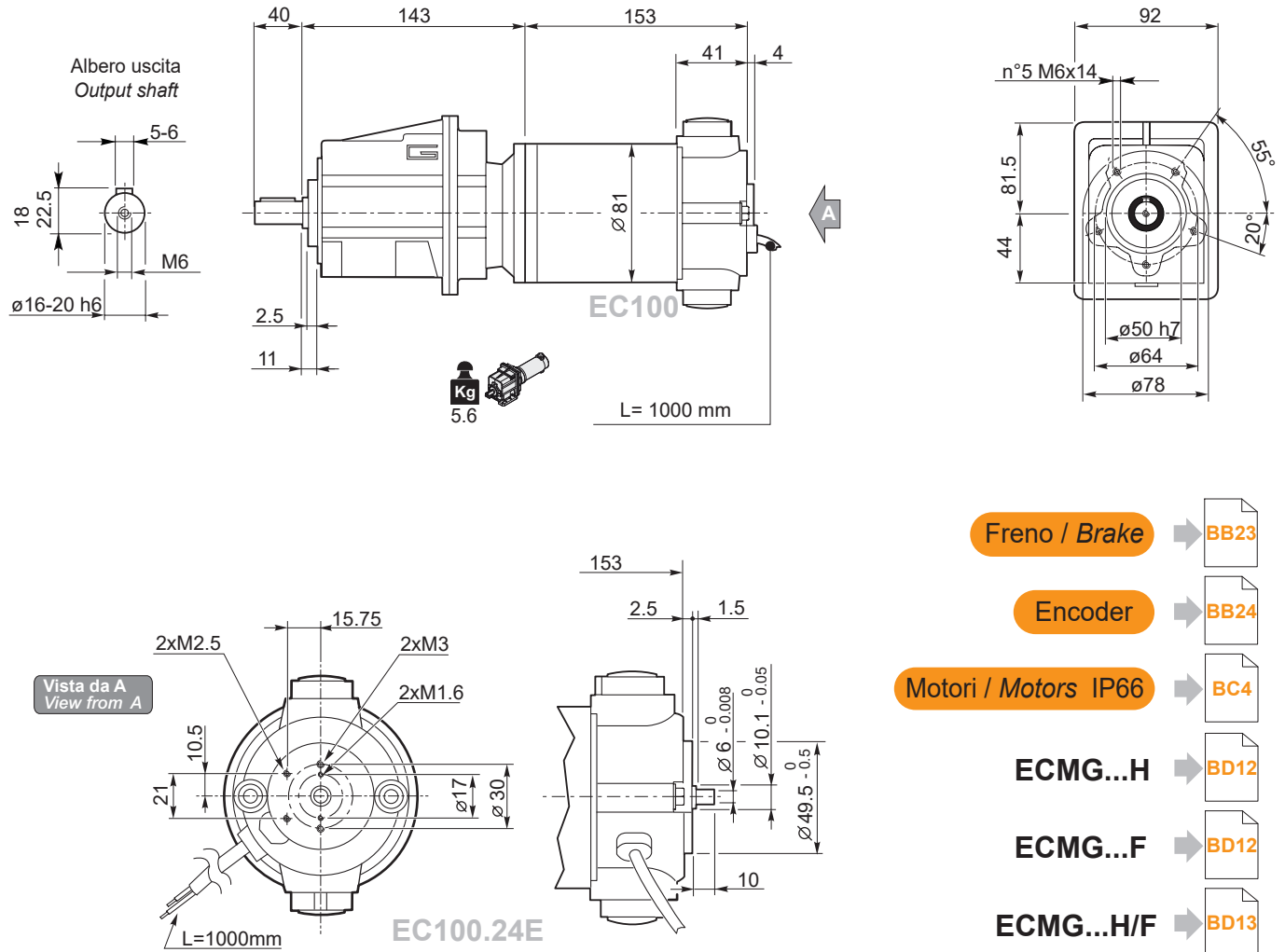


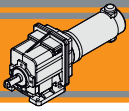
Dimensioni

Dimensions

ECMG..U

ECMG100/002 U



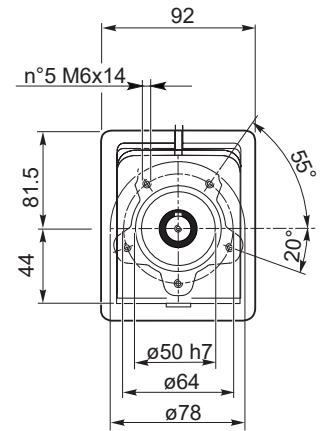
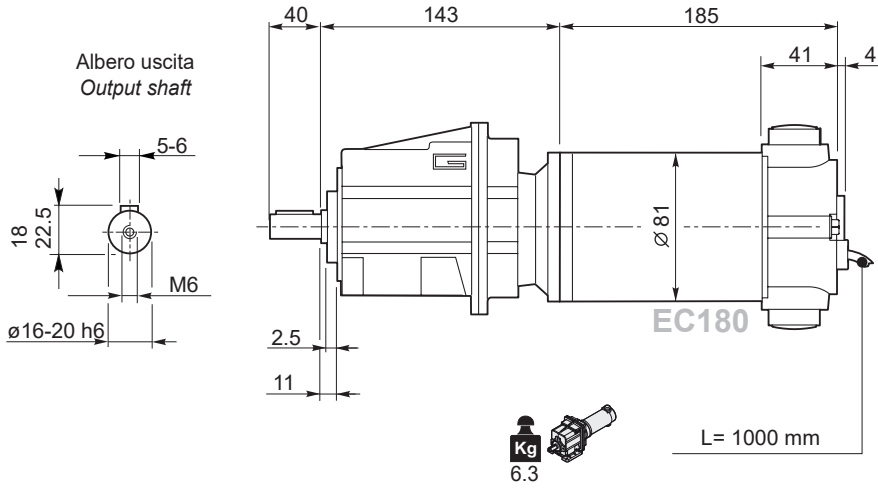


### Dimensioni

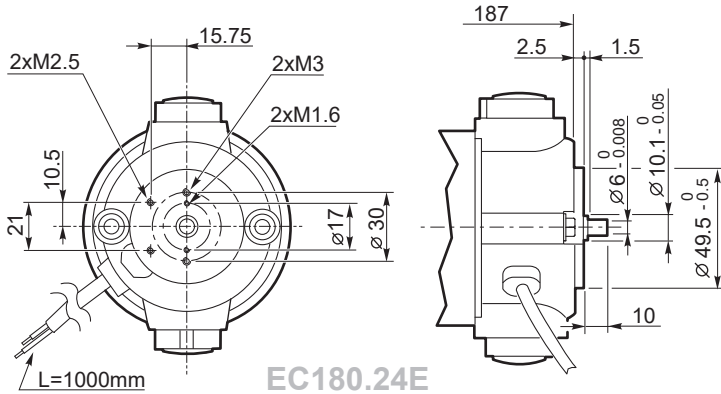
### Dimensions

## ECMG..U

### ECMG180/002 U



Vista da A  
View from A



Freno / Brake → [BB23](#)

Encoder → [BB24](#)

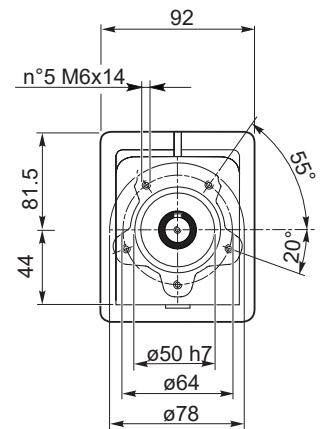
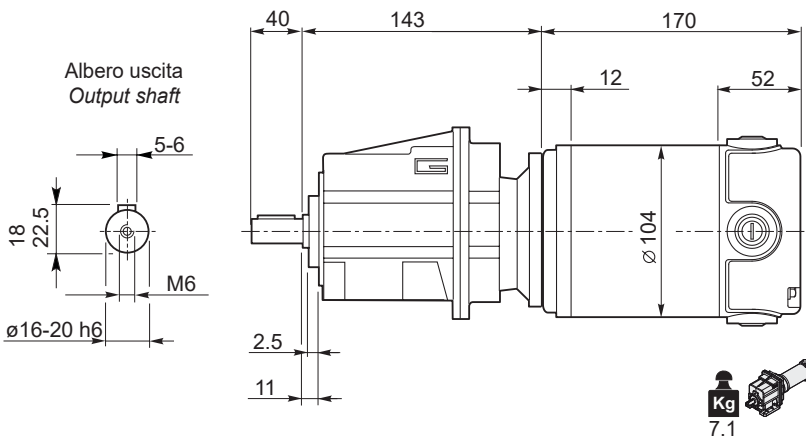
Motori / Motors IP66 → [BC6](#)

ECMG...H → [BD12](#)

ECMG...F → [BD12](#)

ECMG...H/F → [BD13](#)

### ECMG250/002 U

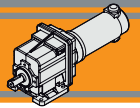


Motori / Motors IP66 → [BC8](#)

ECMG...H → [BD12](#)

ECMG...F → [BD12](#)

ECMG...H/F → [BD13](#)

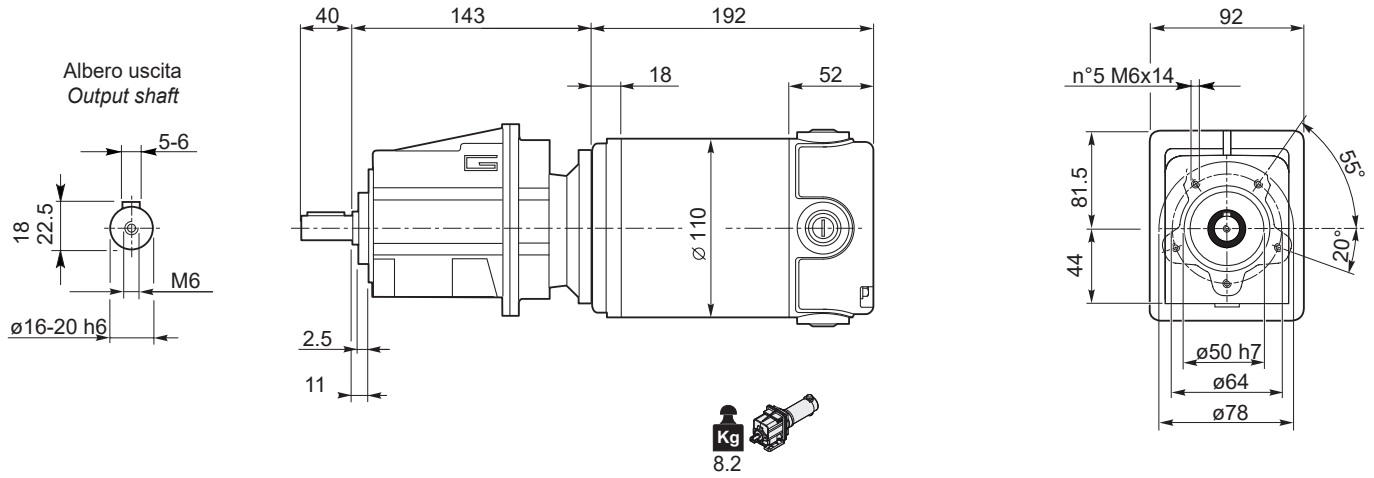


Dimensioni

Dimensions

**ECMG..U**

**ECMG350/002 U**



Freno / Brake



Motori / Motors IP66



ECMG...H



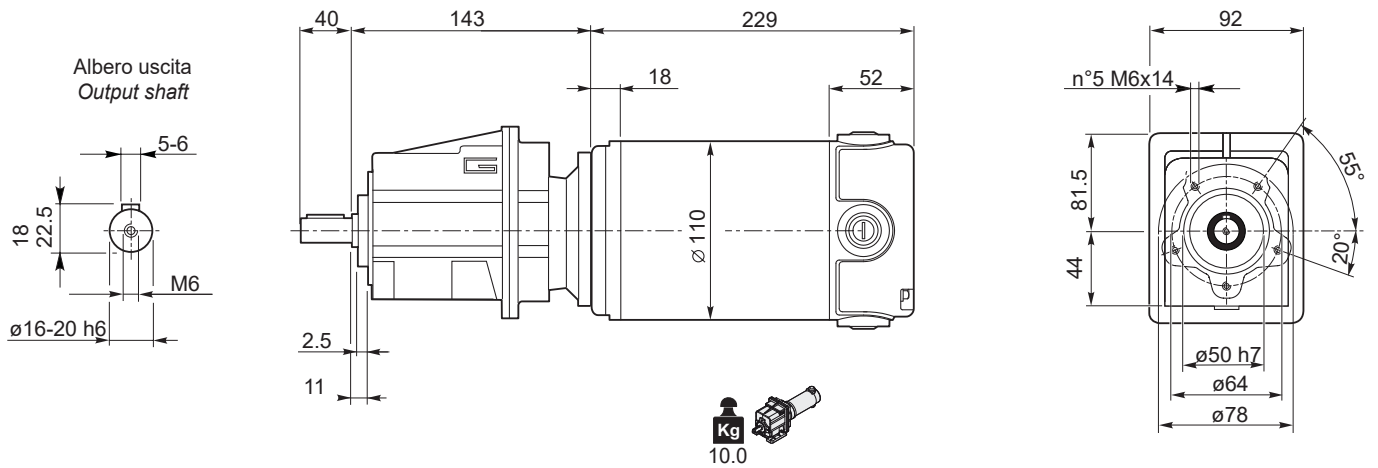
ECMG...F



ECMG...H/F



**ECMG600/002 U**



Freno / Brake



Motori / Motors IP66



ECMG...H



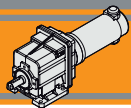
ECMG...F



ECMG...H/F



DC

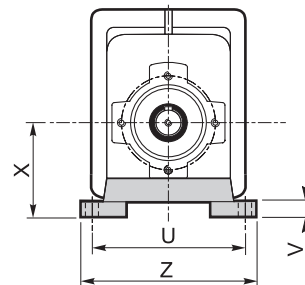
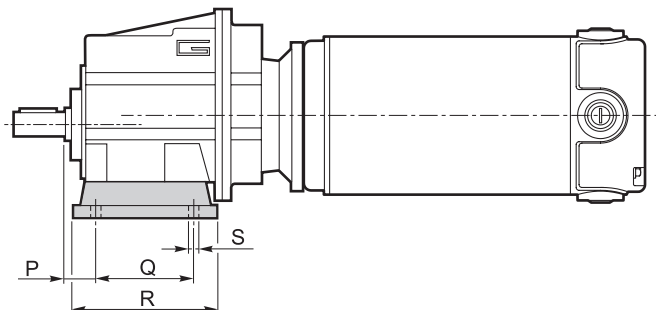


**Dimensioni**

**Dimensions**

**NDCMG..H - ECMG..H**

**NDCMG..2 H..  
ECMG..2 H..**

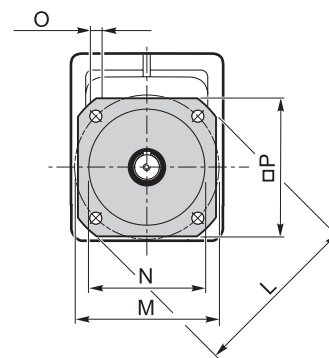
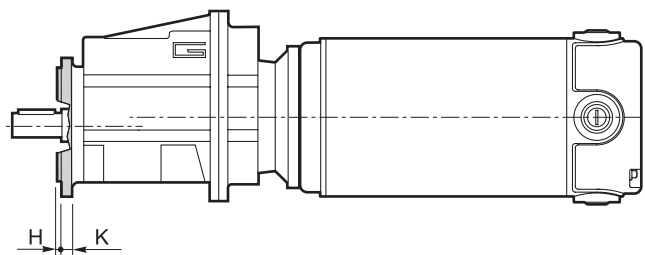


Versione H / H Version										
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot	
									Tipo / Type	Kg
002	18	60	80	9	100	10	60	120	H60	0.2
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4

■ Preferenziale / Preferred

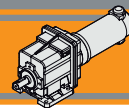
**NDCMG..F - ECMG..F**

**NDCMG..2 F..  
ECMG..2 F..**



Versione F / F Version										
CMG	H	K	L	M	N f7	O	P	Flangia / Flange		
								Tipo / Type	Kg	
002	3.5	7	105	85	70	6.5	90	F105	0.1	
	3.5	8	120	100	80	7	100	F120	0.2	
	3.5	8	140	115	95	9	115	F140	0.2	



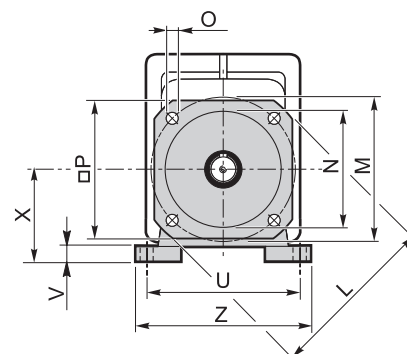
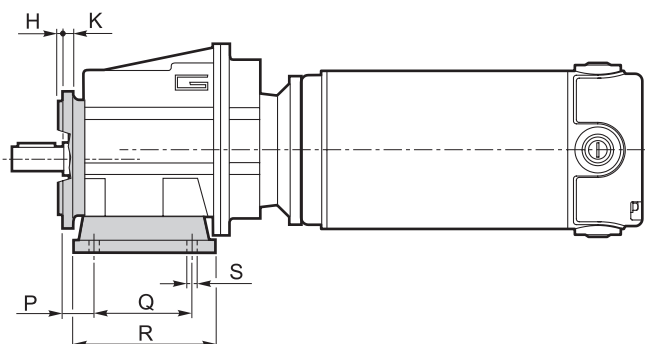


Dimensioni

Dimensions

NDCMG..H../F.. - ECMG..H../F..

NDCMG..2 H../F..  
ECMG..2 H../F..



Versione H / H Version									Combinazioni possibili H/F Possible combinations H/F				
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot		F105	F120	F140
									Tipo / Type	Peso / Weight [kg]			
002	18	60	80	9	100	10	60	120	H60	0.2	•	•	•
	18	80	104	9	110 - 120	10	75	145	H75	0.3	•	•	•
	18	50 - 87	110	9	110	10	85	135	H85	0.4	•	•	•

Preferenziale / Preferred

• Combinazioni possibili H/F / Possible combinations H/F

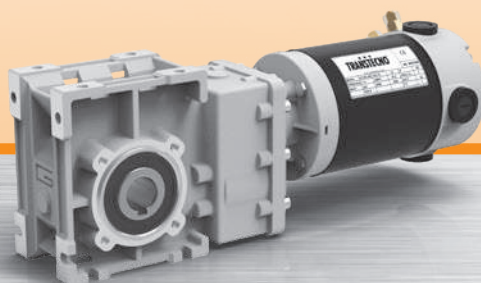
Versione F / F Version									
CMG	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	kg
002	3.5	7	105	85	70	6.5	90	F105	0.1
	3.5	8	120	100	80	7	100	F120	0.2
	3.5	8	140	115	95	9	115	F140	0.2



**MINI**  **TECNO**™  
**small** but strong

**NDCMB**  
**ECMB**

Motoriduttori CC ad assi ortogonali  
DC helical bevel gearmotors

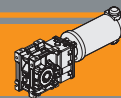


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC

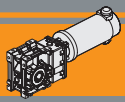




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Dimensioni	<i>Dimensions</i>	<b>BE6</b>
Accessori	<i>Accessories</i>	<b>BE12</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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**Caratteristiche tecniche**

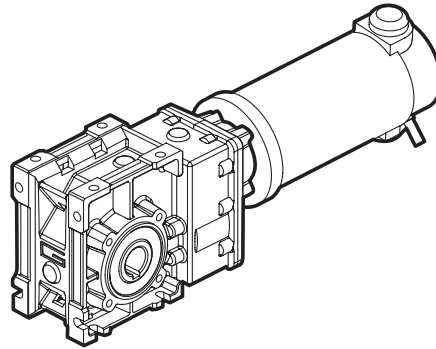
**Technical features**

I motoriduttori CC ortogonali a magneti permanenti in neodimio **NDCMB** e in ferrite **ECMB** hanno le seguenti caratteristiche principali:

**NDCMB** neodymium permanent magnets and **ECMB** ferrite permanent magnets DC helical bevel gearmotors range has the following main features:

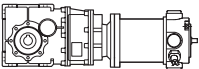
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili con giunto elastico in entrata

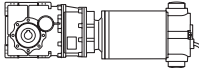

- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Available with input flexible couplin

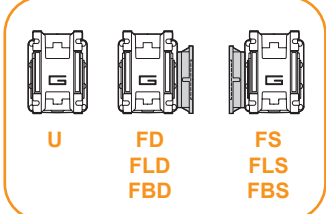
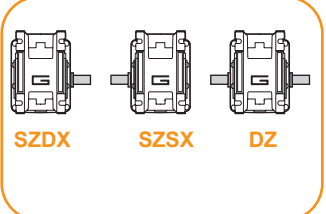
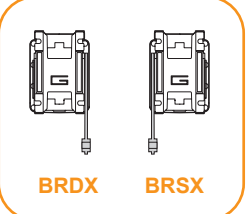
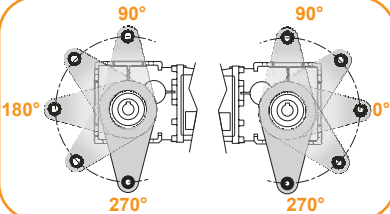


**Designazione**

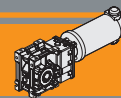
**Classification**

MOTORIDUTTORE / GEARMOTOR								
<b>NDCMB</b>	<b>120/402</b>	<b>U</b>	<b>9.2</b>	<b>D20</b>	<b>SZDX</b>	<b>BRSX</b>	<b>90</b>	<b>240</b>
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version
<b>NDCMB</b> 	<b>120/402</b> <b>180/402</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FLD</b> <b>FLS</b> <b>FBD</b> <b>FBS</b>	Vedere tabella <i>See tables</i>	Vedere tabella <i>See tables</i>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b> *	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>120</b> <b>240</b>

MOTORIDUTTORE / GEARMOTOR									
<b>ECMB</b>	<b>100/402</b>	<b>U</b>	<b>9.2</b>	<b>D20</b>	<b>SZDX</b>	<b>BRSX</b>	<b>90</b>	<b>240</b>	<b>FX</b>
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Giunto elastico Flexible coupling
<b>ECMB</b> 	<b>070/402</b> <b>100/402</b> <b>180/402</b> <b>250/402</b> <b>350/402</b> <b>600/402</b>	<b>U</b> <b>FD</b> <b>FS</b> <b>FLD</b> <b>FLS</b> <b>FBD</b> <b>FBS</b>	Vedere tabella <i>See tables</i>	Vedere tabella <i>See tables</i>	<b>SZDX</b> <b>SZSX</b> <b>DZ</b>	<b>BRDX</b> <b>BRSX</b> *	<b>0°</b> <b>90°</b> <b>180°</b> <b>270°</b>	<b>120</b> <b>240</b> <b>24E</b>	<b>FX</b> 

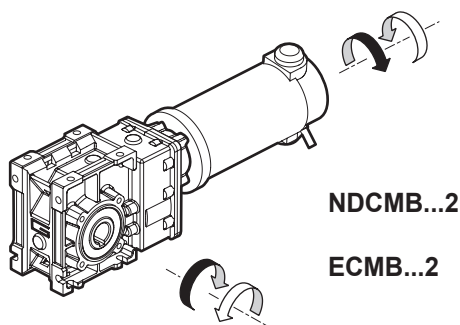
<p>Versione Riduttore Gearbox Version</p> 	<p>Albero di uscita Output shaft</p> 	<p>Braccio di reazione Torque arm *</p> 	<p>Angolo Angle</p> 
-----------------------------------------------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------------------------

\* **NOTA:** il braccio di reazione viene fornito smontato.  
**NOTE:** the torque arm will be supplied not assembled.



Sensi di rotazione

Direction of rotation



Simbologia

Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	sf	Fattore di servizio / <i>Service factor</i>
i	Rapporto di riduzione / <i>Ratio</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$P_1$ [kW]	Potenza in entrata / <i>Input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>

Lubrificazione

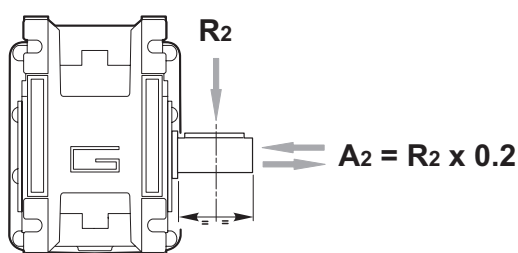
Lubrication

Tutti i riduttori nelle taglie 402 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use sizes 402 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*

Carichi radiali

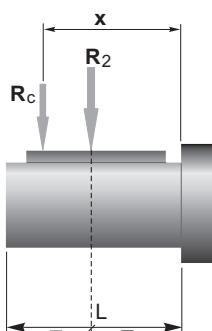
Radial loads



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]
	CMB 402
400	905
300	996
200	1141
170	1204
140	1414
100	1582
90	1638
60	2047
40	2524
30	2778
20	3180
15	3500
10	3500

Quando il carico radiale risultante non è applicato sulla mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*

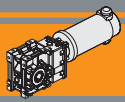


	CMB 402
a	86
b	66
$R_{2MAX}$	3500

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

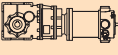
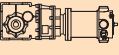
*a, b = valori riportati nella tabella  
a, b = values given in the table*



### Dati tecnici per servizio S2

### NDCMB

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version	P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>160</b>							<b>250</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	3.0	10.5	6.18	<b>120/402</b>	120/240	(3000 min <sup>-1</sup> )	<b>485</b>	4.6	6.7	6.18	<b>180/402</b>	120/240
	<b>401</b>	3.6	8.6	7.49									
	<b>326</b>	4.4	7.0	9.20									
	<b>254</b>	5.7	6.2	11.83									
	<b>240</b>	6.0	5.9	12.48									
	<b>202</b>	7.1	4.9	14.83									
	<b>170</b>	8.4	4.1	17.63									
	<b>161</b>	8.9	4.8	18.60									
	<b>134</b>	10	4.0	22.33									
	<b>125</b>	11	3.8	23.91									
	<b>104</b>	14	3.7	28.89									
	<b>97</b>	15	3.5	30.84									
	<b>89</b>	16	3.2	33.57									
	<b>84</b>	17	3.0	35.63									
	<b>70</b>	21	2.5	42.75									
	<b>54</b>	27	1.9	55.31									
	<b>51</b>	29	1.8	59.06									
	<b>47</b>	31	1.7	64.29									
	<b>41</b>	35	1.5	72.50									

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

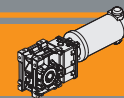
### Dati tecnici elettrici

### Electrical technical data

ND 120 → 

ND 180 → 





### Dati tecnici per servizio S2

### ECMB

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>100</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	1.8	16.8	6.18		12E/24E
	<b>401</b>	2.2	13.8	7.49		
	<b>326</b>	2.8	11.3	9.20		
	<b>254</b>	3.5	9.9	11.83		
	<b>240</b>	3.7	9.4	12.48		
	<b>202</b>	4.4	7.9	14.83		
	<b>170</b>	5.3	6.6	17.63		
	<b>161</b>	5.6	7.7	18.60		
	<b>134</b>	6.7	6.4	22.33		
	<b>125</b>	7.2	6.0	23.91		
	<b>104</b>	8.6	5.9	28.89		
	<b>97</b>	9.2	5.5	30.84		
	<b>89</b>	10	5.1	33.57		
	<b>84</b>	11	4.8	35.63		
	<b>70</b>	13	4.0	42.75		
	<b>54</b>	17	3.1	55.31		
	<b>51</b>	18	2.9	59.06		
	<b>47</b>	19	2.7	64.29		
	<b>41</b>	22	2.4	72.50		

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>350</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	6.5	4.8	6.18		250/402
	<b>401</b>	7.8	4	7.49		
	<b>326</b>	9.6	3.2	9.20		
	<b>254</b>	12	2.8	11.83		
	<b>240</b>	13	2.7	12.48		
	<b>202</b>	16	2.3	14.83		
	<b>170</b>	19	1.9	17.63		
	<b>161</b>	20	2.2	18.60		
	<b>134</b>	23	1.8	22.33		
	<b>125</b>	25	1.7	23.91		
	<b>104</b>	30	1.7	28.89		
	<b>97</b>	32	1.6	30.84		
	<b>89</b>	35	1.5	33.57		
	<b>84</b>	37	1.4	35.63		
	<b>70</b>	45	1.1	42.75		
	<b>54</b>	58	0.9	55.31		
	<b>51</b>	62	0.8	59.06		
	<b>47</b>	67	0.8	64.29		
	<b>41</b>	72	0.7	72.50		

<b>140</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	2.6	12.0	6.18		100/402
	<b>401</b>	3.1	9.9	7.49		
	<b>326</b>	3.9	8.0	9.20		
	<b>254</b>	5.0	7.1	11.83		
	<b>240</b>	5.2	6.7	12.48		
	<b>202</b>	6.2	5.6	14.83		
	<b>170</b>	7.4	4.7	17.63		
	<b>161</b>	7.8	5.5	18.60		
	<b>134</b>	9.4	4.6	22.33		
	<b>125</b>	10	4.3	23.91		
	<b>104</b>	12	4.2	28.89		
	<b>97</b>	13	3.9	30.84		
	<b>89</b>	14	3.6	33.57		
	<b>84</b>	15	3.4	35.63		
	<b>70</b>	18	2.8	42.75		
	<b>54</b>	23	2.2	55.31		
	<b>51</b>	25	2.1	59.06		
	<b>47</b>	27	1.9	64.29		
	<b>41</b>	30	1.7	72.50		

<b>500</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	9	3.4	6.18		350/402
	<b>401</b>	11	2.8	7.49		
	<b>326</b>	14	2.3	9.2		
	<b>254</b>	18	2.0	11.83		
	<b>240</b>	19	1.9	12.48		
	<b>202</b>	22	1.6	14.83		
	<b>170</b>	26	1.3	17.63		
	<b>161</b>	28	1.5	18.6		
	<b>134</b>	33	1.3	22.33		
	<b>125</b>	36	1.2	23.91		
	<b>104</b>	43	1.2	28.89		
	<b>97</b>	46	1.1	30.84		
	<b>89</b>	50	1.0	33.57		
	<b>84</b>	53	1.0	35.63		
	<b>70</b>	64	0.8	42.75		
	<b>54</b>	73	0.7	55.31		
	<b>51</b>	73	0.7	59.06		
	<b>47</b>	73	0.7	64.29		

<b>250</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	4.6	6.7	6.18		180/402
	<b>401</b>	5.6	5.5	7.49		
	<b>326</b>	6.9	4.5	9.20		
	<b>254</b>	8.8	4.0	11.83		
	<b>240</b>	9.3	3.7	12.48		
	<b>202</b>	11	3.2	14.83		
	<b>170</b>	13	2.7	17.63		
	<b>161</b>	14	3.1	18.60		
	<b>134</b>	17	2.6	22.33		
	<b>125</b>	18	2.4	23.91		
	<b>104</b>	22	2.4	28.89		
	<b>97</b>	23	2.2	30.84		
	<b>89</b>	25	2.0	33.57		
	<b>84</b>	27	1.9	35.63		
	<b>70</b>	32	1.6	42.75		
	<b>54</b>	41	1.2	55.31		
	<b>51</b>	44	1.2	59.06		
	<b>47</b>	48	1.1	64.29		
	<b>41</b>	54	0.9	72.50		

<b>800</b>						
(3000 min <sup>-1</sup> )	<b>485</b>	15	2.1	6.18		600/402
	<b>401</b>	18	1.7	7.49		
	<b>326</b>	22	1.4	9.20		
	<b>254</b>	28	1.2	11.83		
	<b>240</b>	30	1.2	12.48		
	<b>202</b>	36	1.0	14.83		
	<b>170</b>	42	0.8	17.63		
	<b>161</b>	45	1.0	18.60		
	<b>134</b>	53	0.8	22.33		
	<b>125</b>	57	0.8	23.91		
	<b>104</b>	69	0.7	28.89		
	<b>97</b>	73	0.7	30.84		
	<b>89</b>	73	0.7	33.57		
	<b>84</b>	73	0.7	35.63		
	<b>70</b>	73	0.7	42.75		

NOTA  
Verificare sempre che la coppia M<sub>2</sub> utilizzata non ecceda il valore indicato nelle caselle in grigio  
NOTE  
Please check that the output torque M<sub>2</sub> does not exceed the value in the grey areas

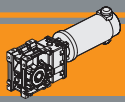
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

### Dati tecnici elettrici

### Electrical technical data

EC070 →	EC100 →	EC180 →	EC250 →	EC350 →	EC600 →
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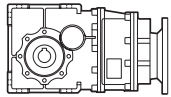
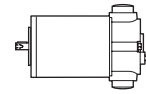
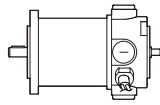
**NDCMB  
ECMB**

**Motoriduttori CC ad assi ortogonali  
DC Helical bevel gearmotors**



**Motori applicabili**

**Motor adapters**



		ND		EC						
		120.120	180.120	070.12E	100.120	180.120	250.120	350.120	600.120	
		120.240	180.240	070.24E	100.240	180.240	250.240	350.240	600.240	
<b>CMB</b>	<b>402</b>	6.18 - 72.50								

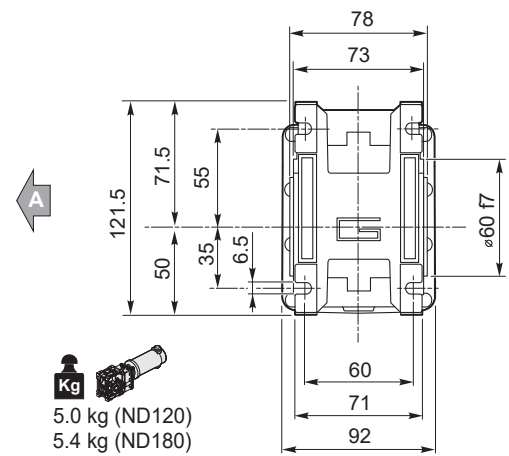
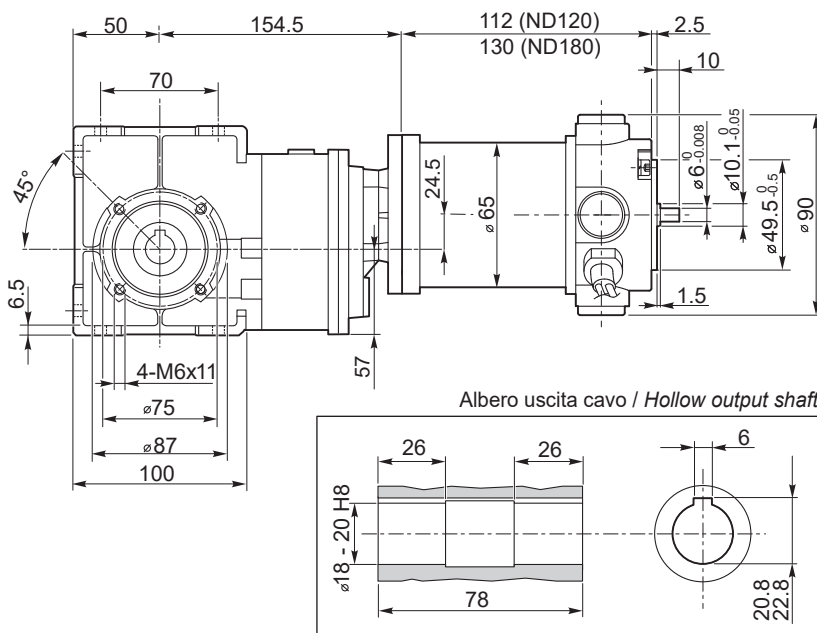
6.18 - 72.50

Rapporti di riduzione *i*  
Ratio *i*

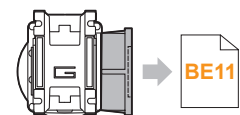
**Dimensioni**

**Dimensions**

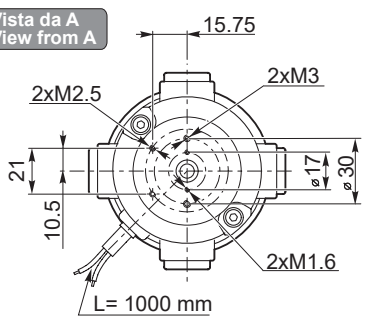
**NDCMB120/402 U  
NDCMB180/402 U**



**Kg**  
5.0 kg (ND120)  
5.4 kg (ND180)



Vista da A  
View from A



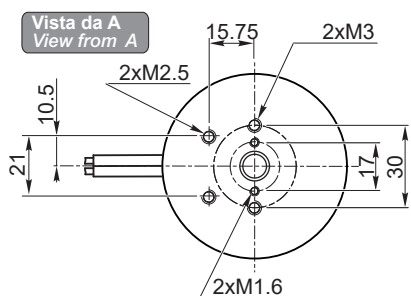
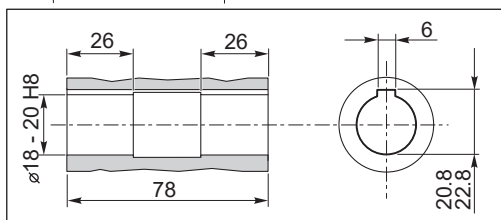
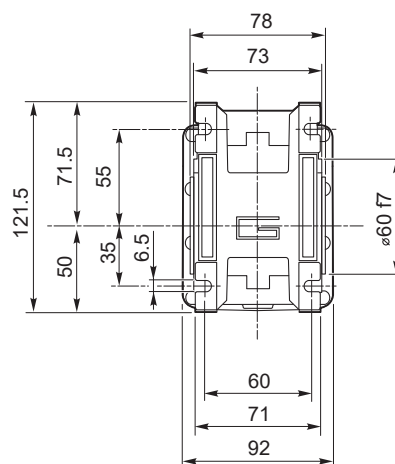
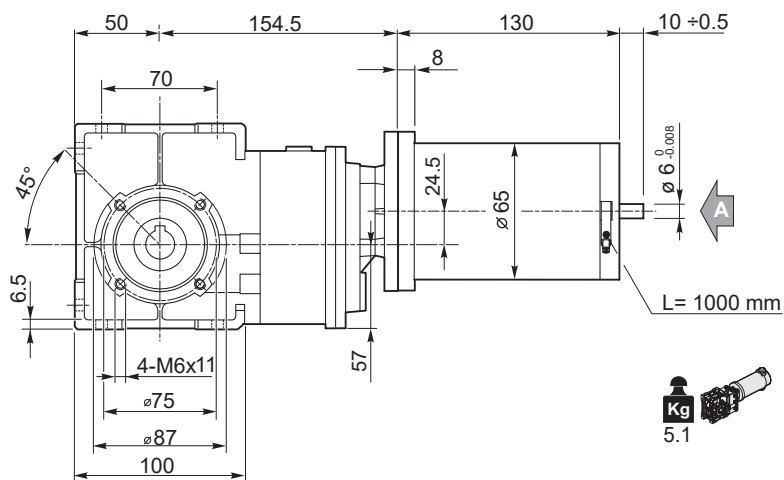
**Freno / Brake** → BA9

**Encoder** → BA9

**Dimensioni**

**Dimensions**

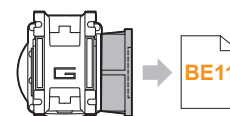
**ECMB070/402 U**

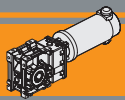


Freno / Brake → **BB23**

Encoder → **BB24**

Motori / Motors IP66 → **BC2**

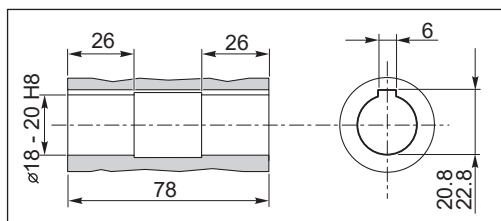
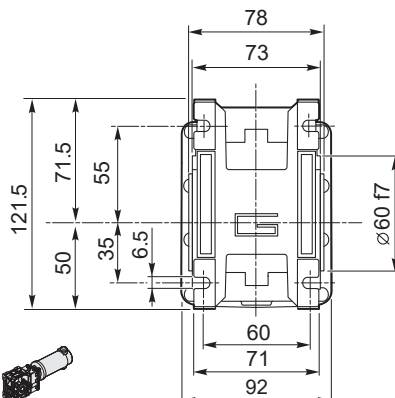
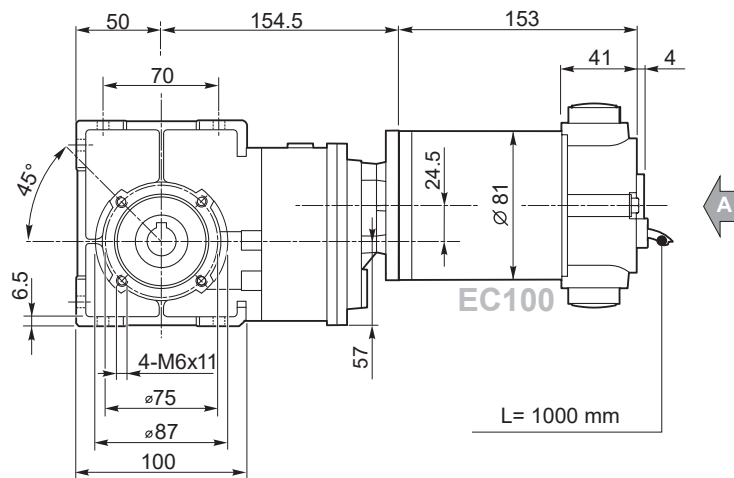




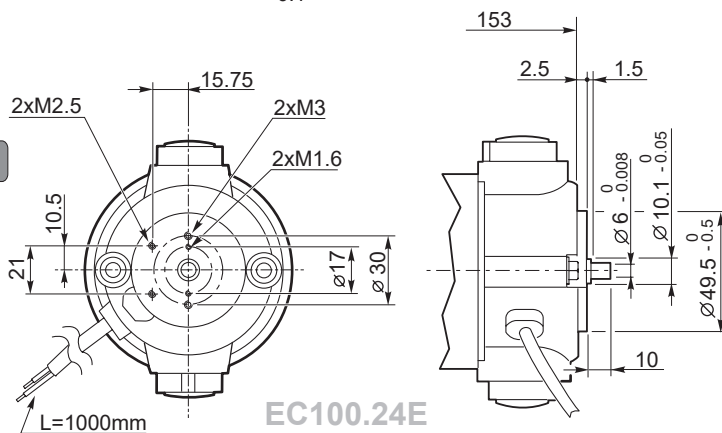
### Dimensioni

### Dimensions

## ECMB100/402 U



Vista da A  
View from A



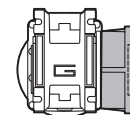
Motori / Motors IP66



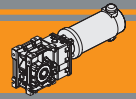
Encoder



Freno / Brake



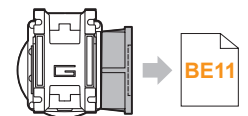
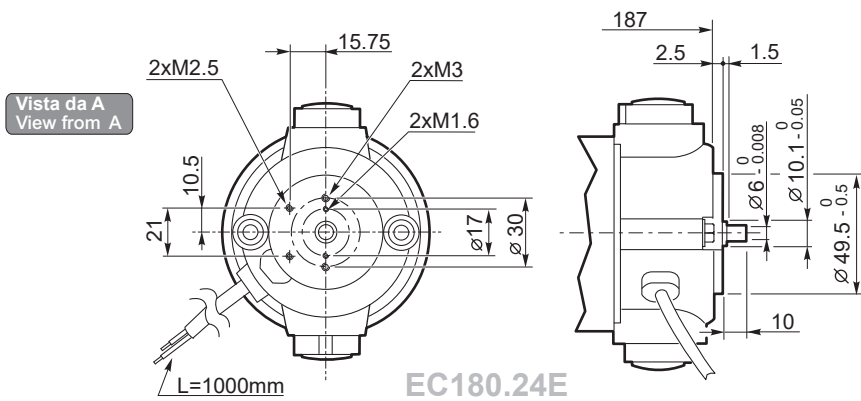
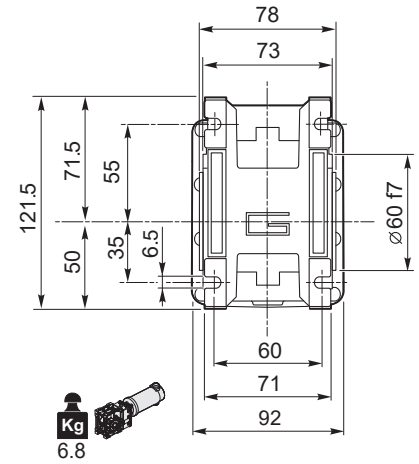
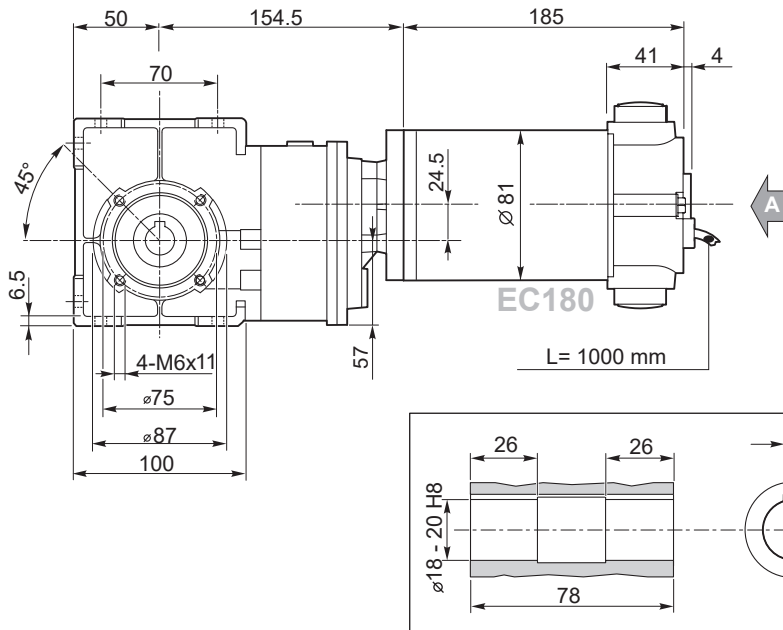
BE11

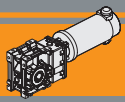


**Dimensioni**

**Dimensions**

**ECMB180/402 U**

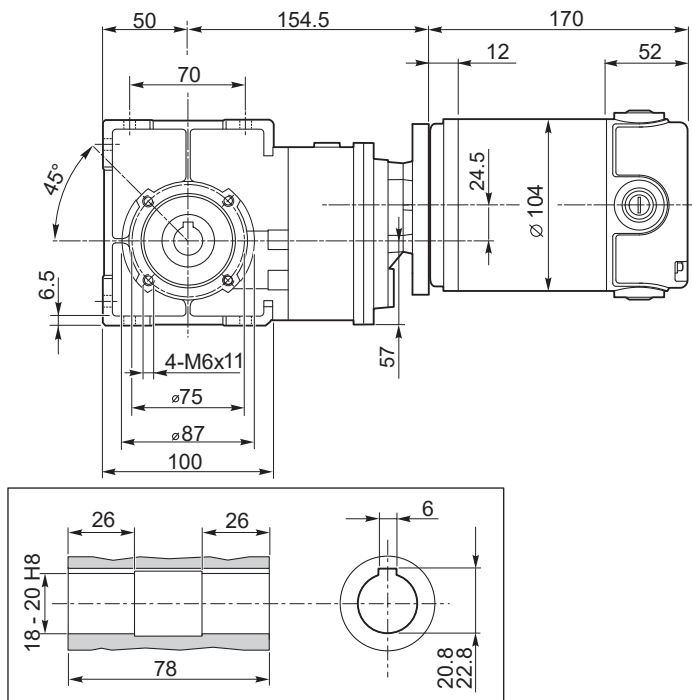




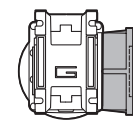
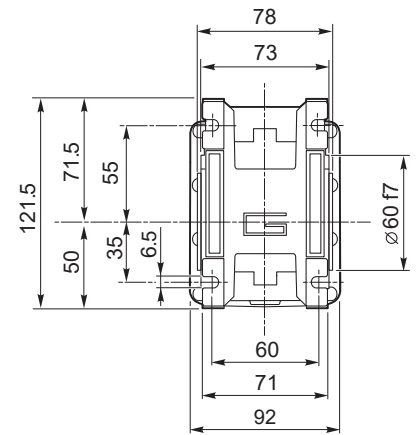
### Dimensioni

### Dimensions

#### ECMB250/402 U



Kg  
7.6

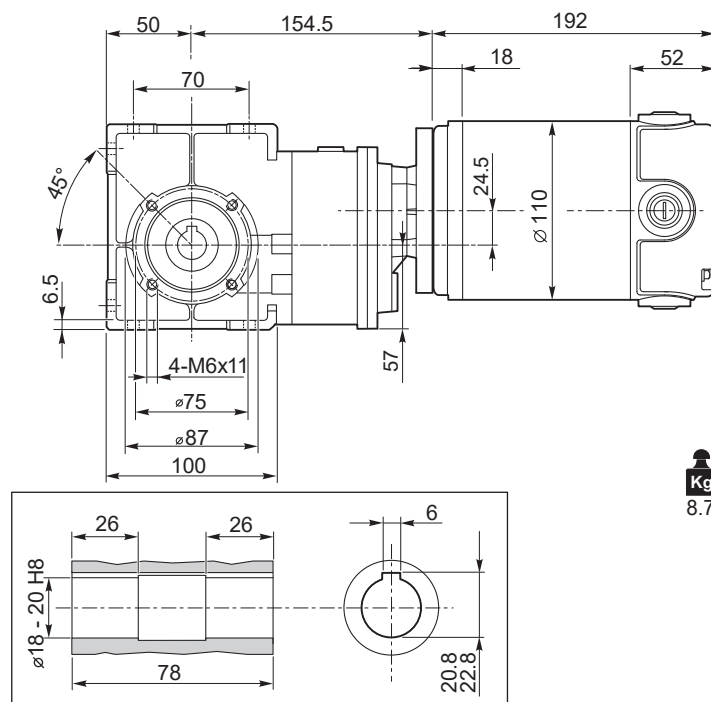


BE11

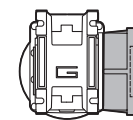
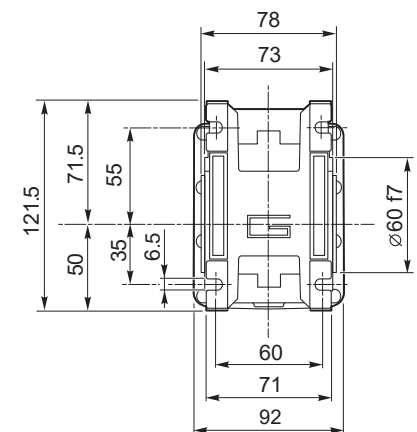
Motori / Motors IP66

BC8

#### ECMB350/402 U



Kg  
8.7



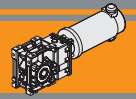
BE11

Freno / Brake

BB24

Motori / Motors IP66

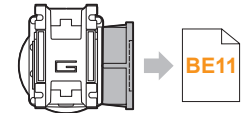
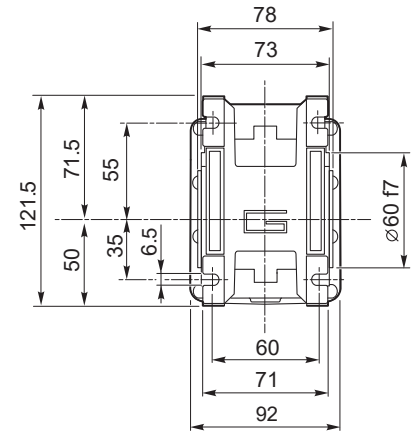
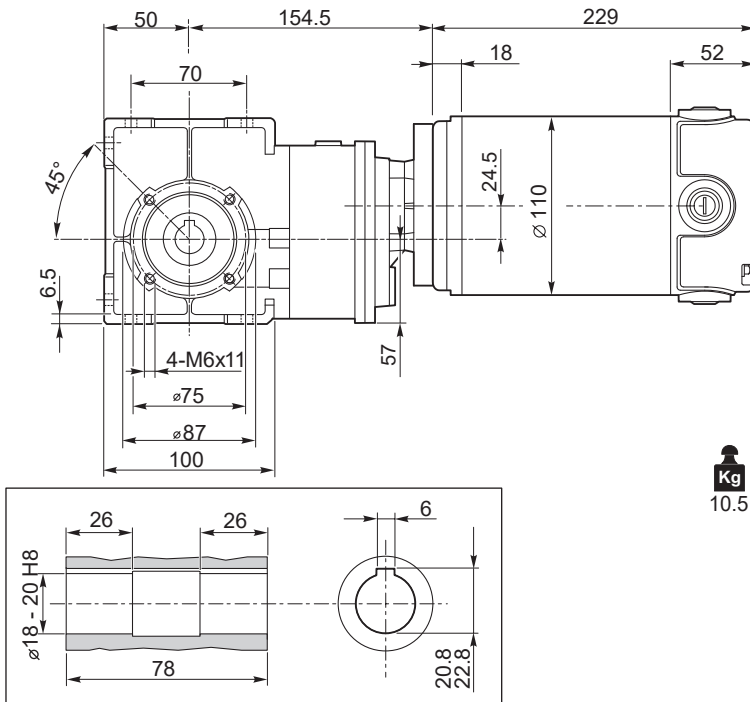
BC10



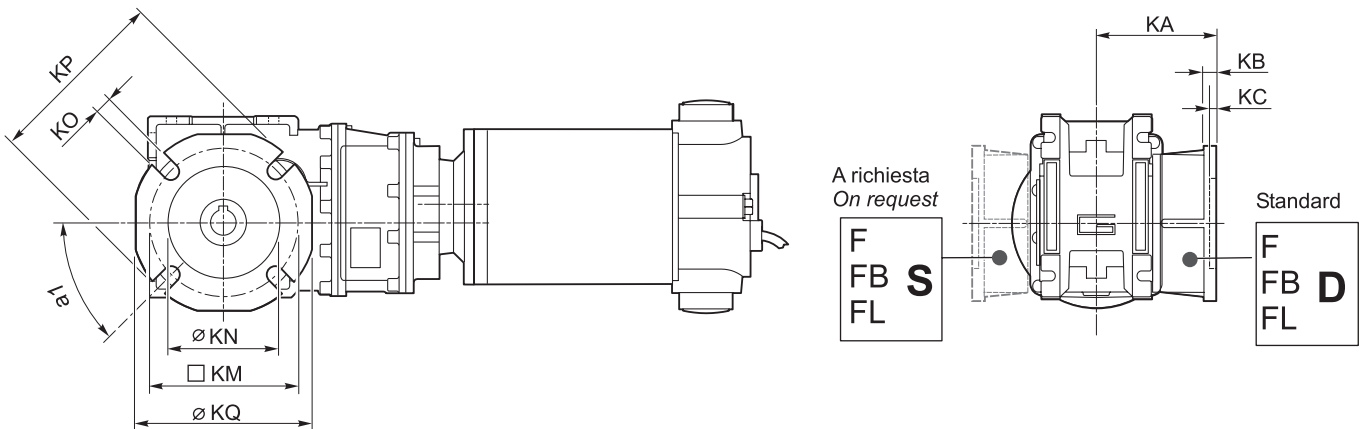
Dimensioni

Dimensions

ECMB600/402 U

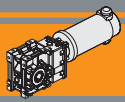


NDCMB.../ F... - ECMB.../... F... Flange uscita / Output flanges



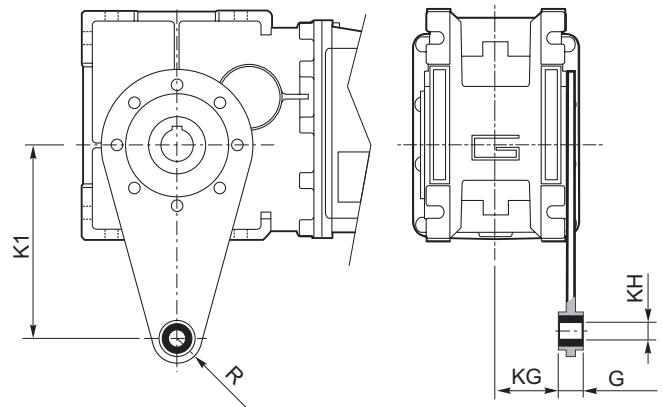
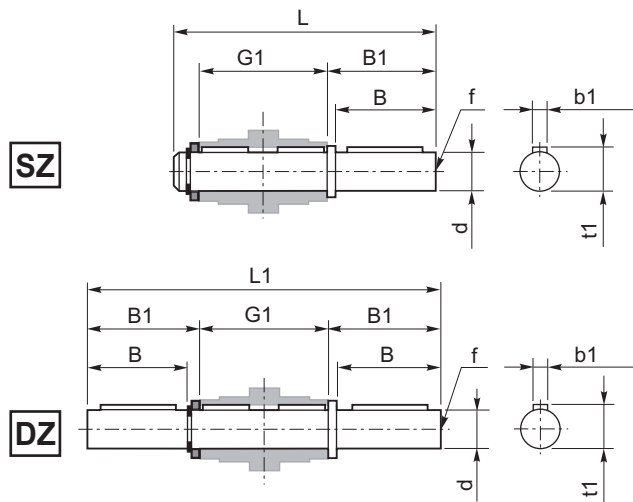
CMB	Flange uscita / Output flanges																										
	F					FL					FB																
	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112

DC



**Accessori**

**Accessories**



Albero lento / Output shaft

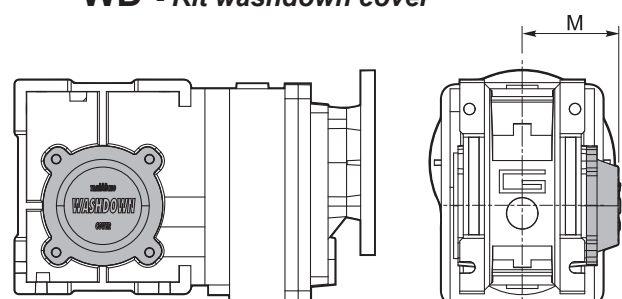
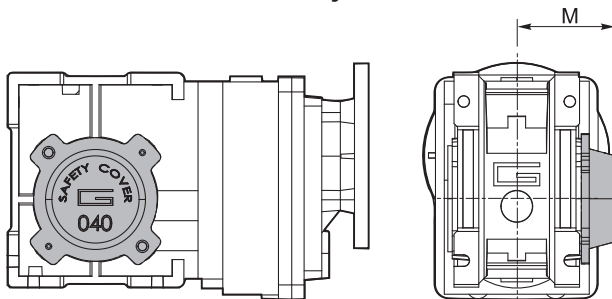
Braccio di reazione / Torque arm

CMB	d h7	B	B1	G1	L	L1	f	b1	t1
<b>402</b>	18	40	43	78	128	164	M6	6	20.5

CMB	K1	G	KG	KH	R
<b>402</b>	100	14	31	10	18

**SC - Safety cover**

**WD - Kit washdown cover**



CMB	M
<b>402</b>	54.5

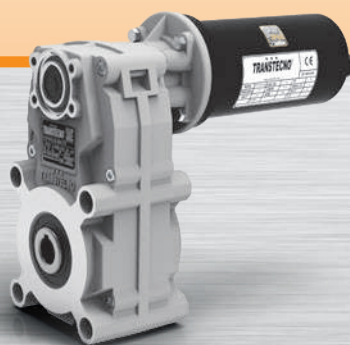
CMB	M
<b>402</b>	55.5



**MINI**  **TECNO**™  
**small** but strong

**NDFT**  
**ECFT**

Motoriduttori CC pendolari  
DC Helical parallel gearmotors

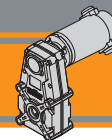


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC

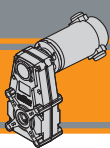




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Designazione	<i>Classification</i>	<b>BF2</b>
Sensi di rotazione	<i>Direction of rotation</i>	<b>BF3</b>
Simbologia	<i>Symbols</i>	<b>BF3</b>
Lubrificazione	<i>Lubrication</i>	<b>BF3</b>
Carichi radiali	<i>Radial loads</i>	<b>BF4</b>
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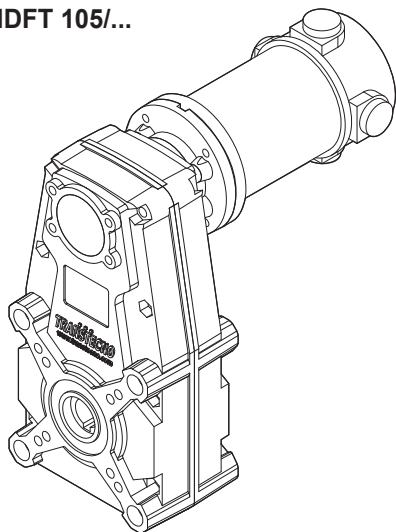
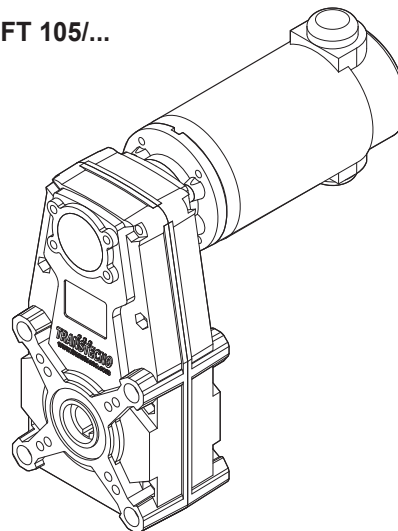
**NDFT  
ECFT****Motoriduttori CC pendolari  
DC Helical parallel gearmotors****Caratteristiche tecniche****Technical features**

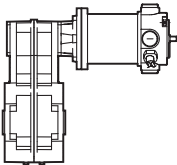
I motoriduttori CC pendolari a magneti permanenti in neodimio **NDFT** e in ferrite **ECFT** hanno le seguenti caratteristiche principali:

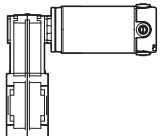
**NDFT** neodymium permanent magnets and **ECFT** ferrite permanent magnets DC helical parallel gearmotors range has the following main features:

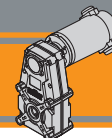
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali.

- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250W S2
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- helical gears.

**NDFT 105/...****ECFT 105/...****Designazione****Classification**

MOTORIDUTTORE / GEARMOTOR					
<b>NDFT</b>	<b>120/105</b>	<b>U</b>	<b>60.63</b>	<b>O20</b>	<b>240</b>
Tipo Type	Grandezza Size	Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Versione Motore Motor Version
<b>NDFT</b> 	<b>120/105...</b> <b>180/105...</b>	<b>U...</b>	Vedere tabella See tables	Vedere tabella See tables	<b>120</b> <b>240</b>

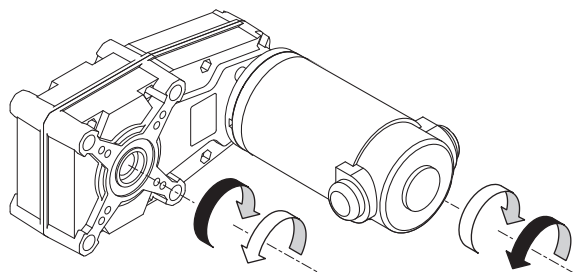
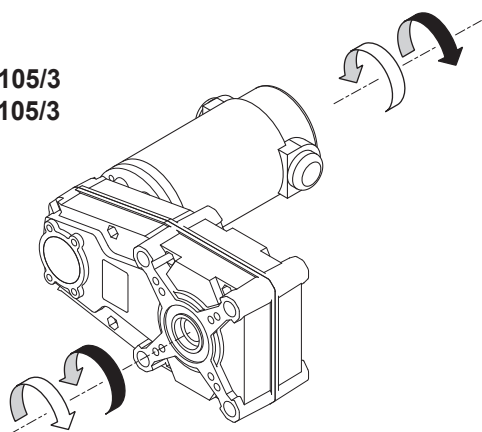
MOTORIDUTTORE / GEARMOTORS					
<b>ECFT</b>	<b>180/105</b>	<b>U</b>	<b>60.63</b>	<b>O20</b>	<b>240</b>
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	Versione motore Motor version
<b>ECFT</b> 	<b>070/105...</b> <b>100/105...</b> <b>180/105...</b>	<b>U...</b>	vedi tabelle see tables	vedi tabelle see tables	<b>120</b> <b>240</b> <b>12E</b> <b>24E</b>



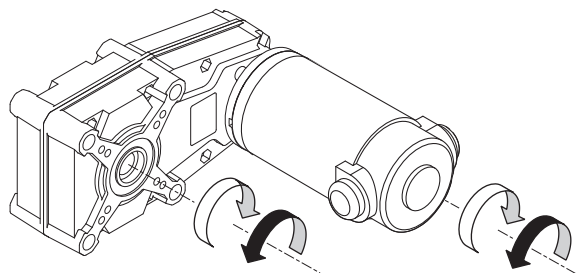
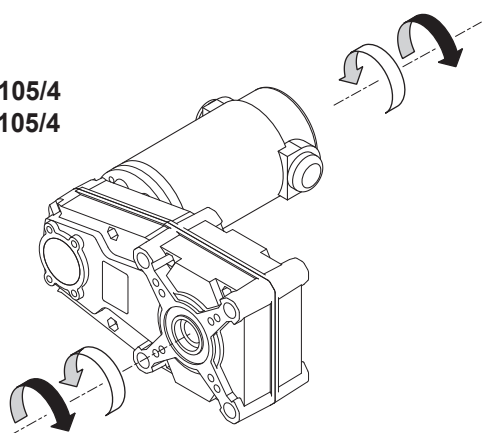
Sensi di rotazione

Direction of rotation

NDFT 105/3  
ECFT 105/3



NDFT 105/4  
ECFT 105/4



Simbologia

Symbols

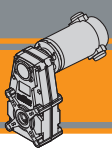
$n_1$	[ $\text{min}^{-1}$ ]	Velocità in ingresso / <i>Input speed</i>
$n_2$	[ $\text{min}^{-1}$ ]	Velocità in uscita / <i>Output speed</i>
$i$		Rapporto di riduzione / <i>Ratio</i>
$P_1$	[kW]	Potenza in entrata / <i>Input power</i>
$M_2$	[Nm]	Coppia nominale in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>
$P_{n1}$	[kW]	Potenza nominale in entrata / <i>Nominal input power</i>
$M_{n2}$	[Nm]	Coppia nominale in uscita in funzione di $P_{n1}$ / <i>Nominal output torque referred to <math>P_{n1}</math></i>
$sf$		Fattore di servizio / <i>Service factor</i>
$R_2$	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$A_2$	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>

Lubrificazione

Lubrication

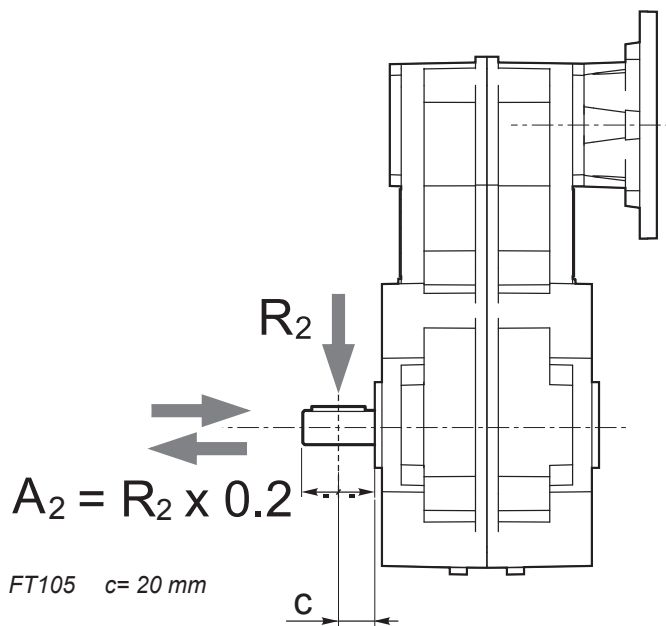
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication ( viscosity grade 320) makes it possible to use the gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*



Carichi radiali

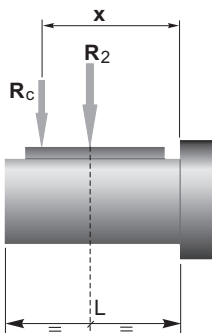
Radial loads



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]
	FT105
70	1500
40	1700
30	1850
20	2000
10	2000
5	2000

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

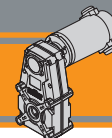




	FT105
a	82
b	62
$R_{2MAX}$	2000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valori riportati nella tabella  
a, b = values given in the table


**Dati tecnici**
**NDFT**
**Technical data**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>160</b>							<b>250</b>						
(3000 min <sup>-1</sup> )	<b>146</b>	10	3.2	20.57	<b>120/105/3</b>	120/240	(3000 min <sup>-1</sup> )	<b>146</b>	15	2.0	20.57	<b>180/105/3</b>	120/240
	<b>90</b>	16	2.4	33.32									
	<b>68</b>	21	2.4	44.36									
	<b>55</b>	26	1.9	54.87									
	<b>42</b>	34	1.5	71.84									
	<b>39</b>	37	1.4	77.07									
	<b>34</b>	43	1.2	88.87									
	<b>24</b>	60	0.8	124.81									
	<b>17</b>	86	0.6	181.35									
	<b>13</b>	86	0.6	224.32									
	<b>9.5</b>	86	0.6	315.05									
	<b>8.1</b>	86	0.6	368.19	<b>120/105/4</b>	120/240							
	<b>5.6</b>	86	0.6	534.98									
	<b>4.5</b>	86	0.6	661.76									
	<b>3.2</b>	86	0.6	929.40									

**NOTA**

Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

**NOTE**

Please check that the output torque M2 does not exceed the value in the grey areas

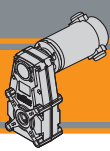
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Dati tecnici elettrici**
**Electrical technical data**

ND 120 → 




ND 180 → 






**Dati tecnici**

**ECFT**

**Technical data**

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>100</b>						
(3000 min <sup>-1</sup> )	<b>146</b>	6	5.1	20.57		070/105/3 <b>12E/24E</b>
	<b>90</b>	10	3.9	33.32		
	<b>68</b>	13	3.8	44.36		
	<b>55</b>	16	3.1	54.87		
	<b>42</b>	21	2.4	71.84		
	<b>39</b>	23	2.2	77.07		
	<b>34</b>	27	1.9	88.87		
	<b>24</b>	37	1.4	124.81		
	<b>17</b>	54	0.9	181.35		
	<b>13</b>	67	0.8	224.32		
	<b>9.5</b>	86	0.6	315.05		
	<b>8.1</b>	86	0.6	368.19		070/105/4 <b>12E/24E</b>
	<b>5.6</b>	86	0.6	534.98		
	<b>4.5</b>	86	0.6	661.76		
	<b>3.2</b>	86	0.6	929.40		

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>250</b>						
(3000 min <sup>-1</sup> )	<b>146</b>	15	2.0	20.57		180/105/3 <b>120/240</b>
	<b>90</b>	25	1.6	33.32		
	<b>68</b>	33	1.5	44.36		
	<b>55</b>	41	1.2	54.87		
	<b>42</b>	54	0.9	71.84		
	<b>39</b>	58	0.9	77.07		
	<b>34</b>	66	0.8	88.87		

<b>140</b>						
(3000 min <sup>-1</sup> )	<b>146</b>	9	3.6	20.57		100/105/3 <b>120/240/24E</b>
	<b>90</b>	14	2.8	33.32		
	<b>68</b>	19	2.7	44.36		
	<b>55</b>	23	2.2	54.87		
	<b>42</b>	30	1.7	71.84		
	<b>39</b>	32	1.6	77.07		
	<b>34</b>	37	1.4	88.87		
	<b>24</b>	52	1.0	124.81		
	<b>16.5</b>	76	0.7	181.35		

NOTA  
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE  
Please check that the output torque M2 does not exceed the value in the grey areas

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

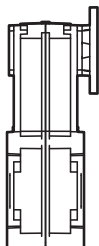
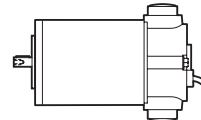
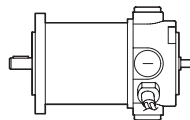
**Dati tecnici elettrici**

**Electrical technical data**



**Motori applicabili**

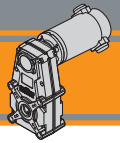
**Motor adapters**



		ND		EC		
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240
FT	105/3	20.57 - 315.05				
	105/4	368.19 - 929.4				

20.57 - 315.05 Rapporti di riduzione i  
Ratio i



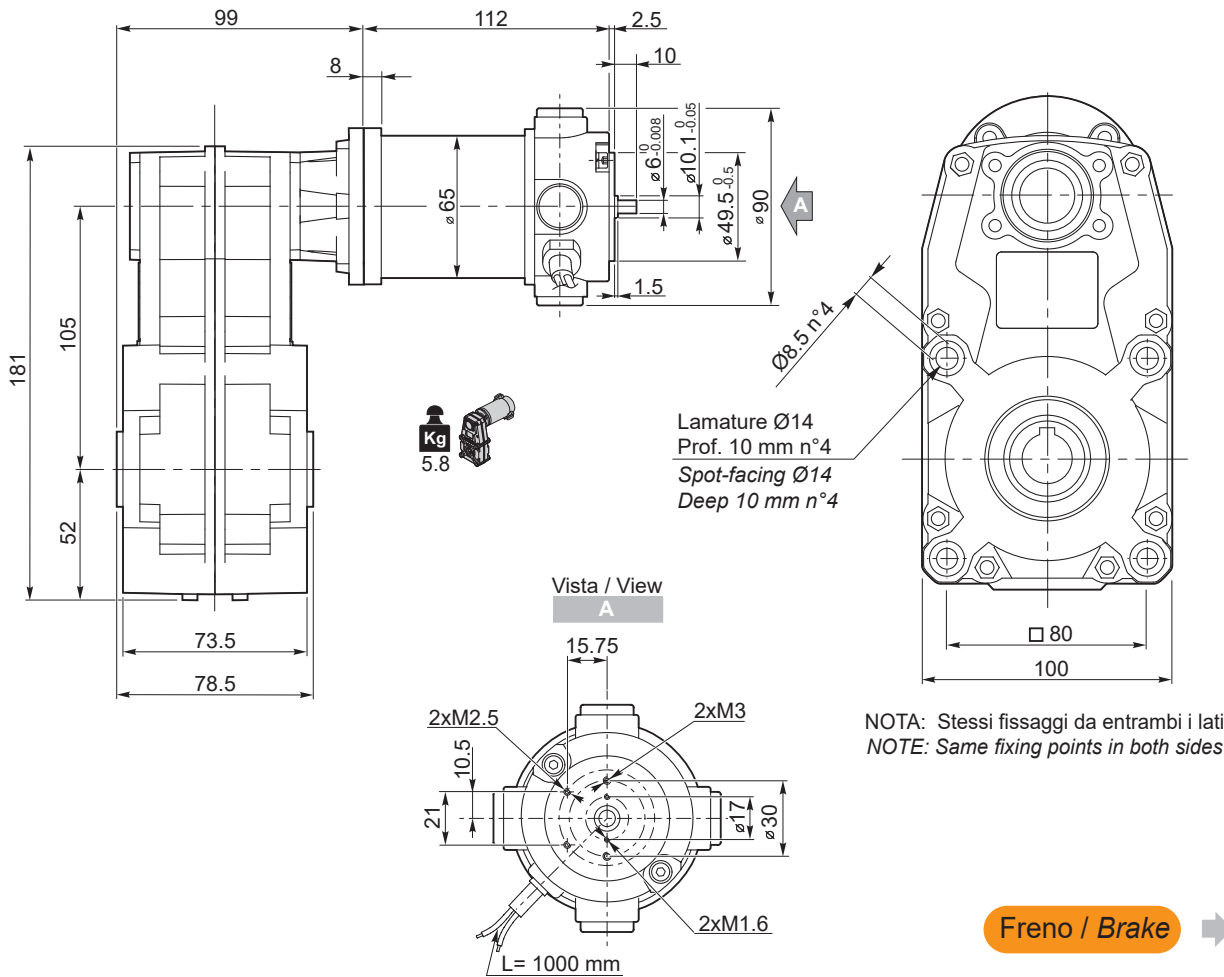


Dimensioni

Dimensions

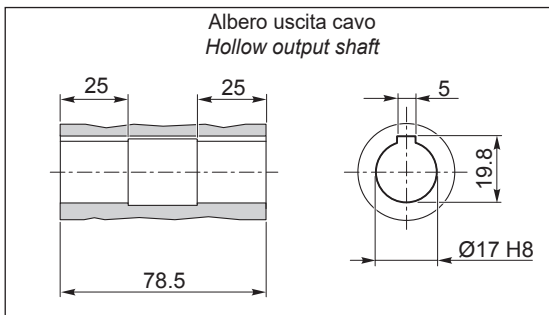
**NDFT 120/105**

**NDFT 120/105...U**

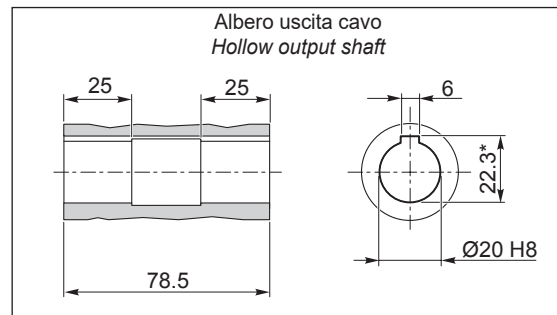


- Freno / Brake → BA9
- Encoder → BA9

**O17**

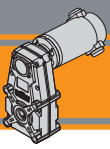


**O20**



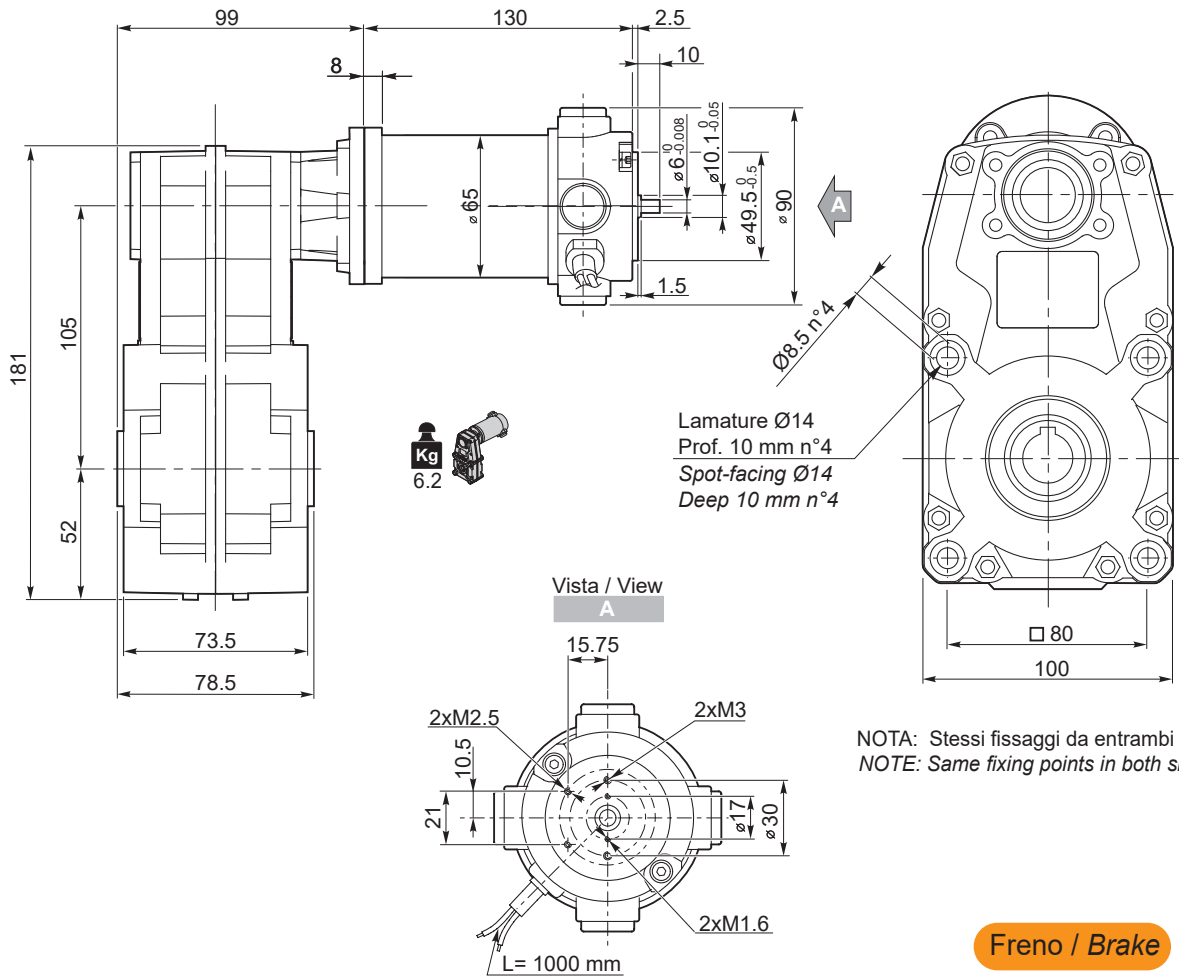
\*: Sede linguetta ribassata / Special keyway

**DC**



### NDFT 180/105

#### NDFT 180/105...U

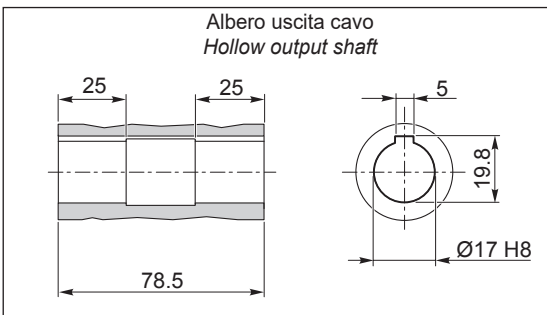


NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

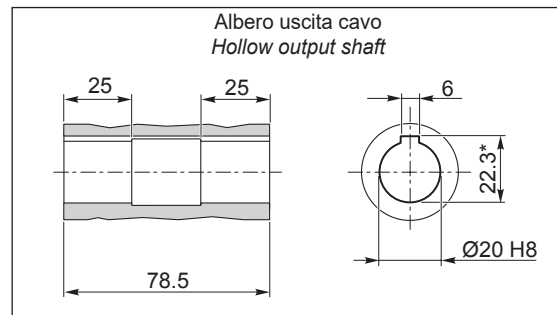
**Freno / Brake** ➔ BA9

**Encoder** ➔ BA9

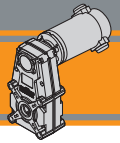
#### O17



#### O20



\*: Sede linguetta ribassata / Special keyway

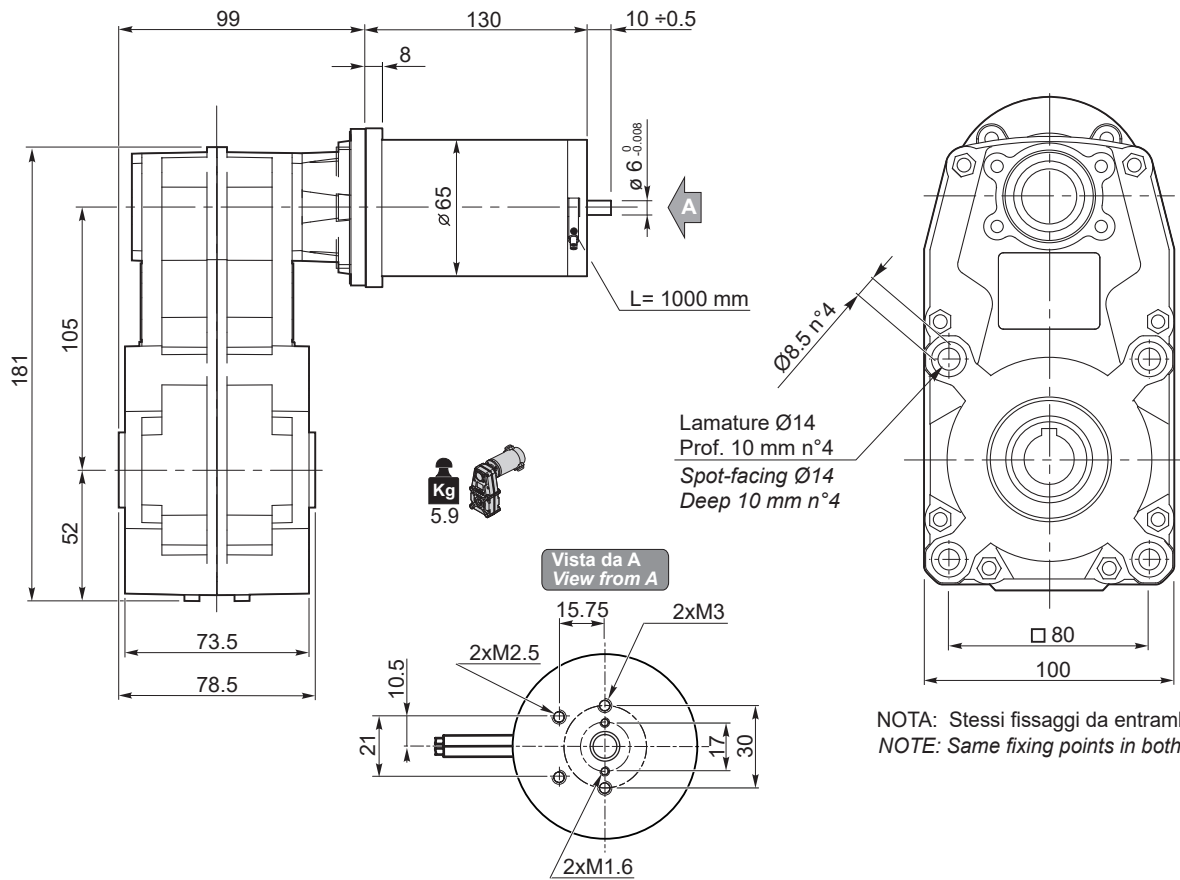


Dimensioni

Dimensions

ECFT 070/105

ECFT 070/105...U



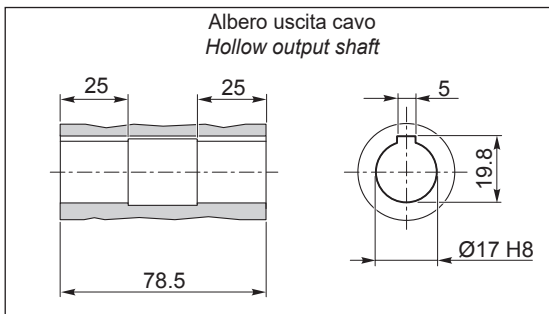
NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

Freno / Brake → BB23

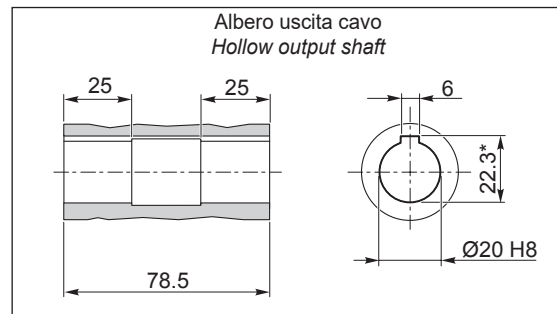
Encoder → BB24

Motori / Motors IP66 → BC2

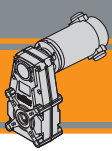
O17



O20

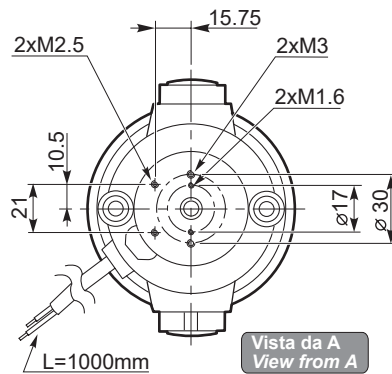
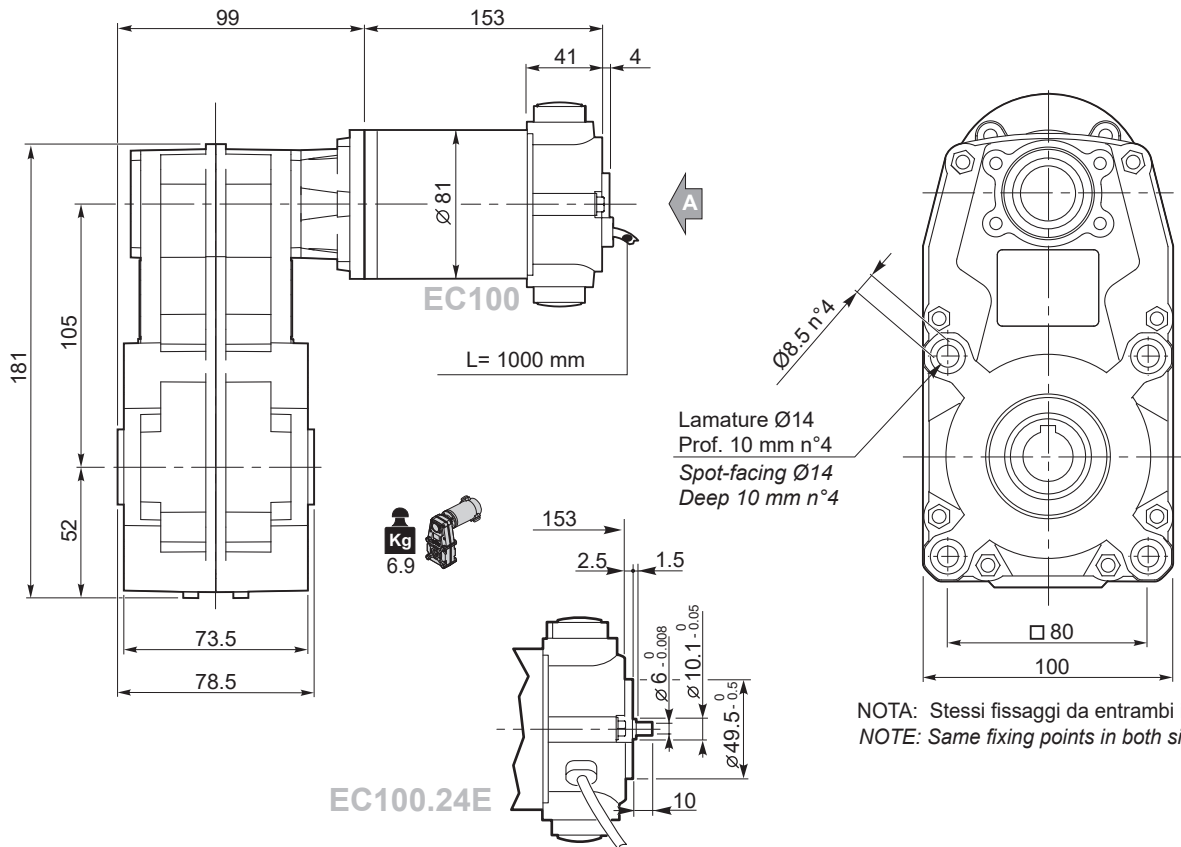


\*: Sede linguetta ribassata / Special keyway



## ECFT 100/105

### ECFT 100/105...U

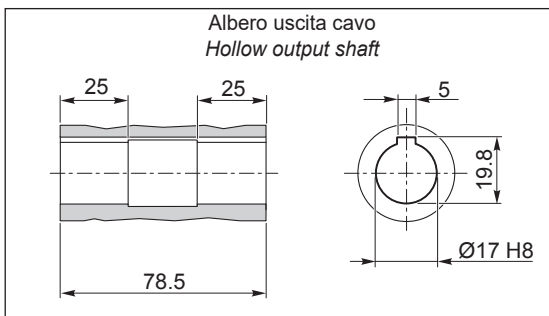


Freno / Brake → **BB23**

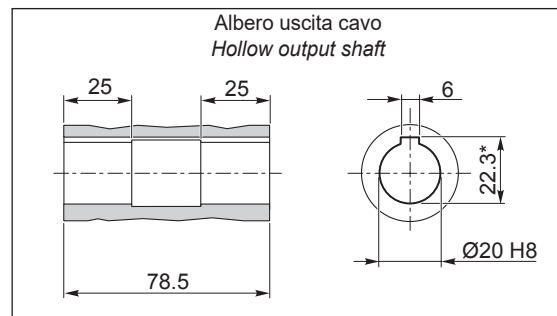
Encoder → **BB24**

Motori / Motors IP66 → **BC4**

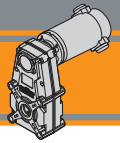
### O17



### O20



\*: Sede linguetta ribassata / Special keyway

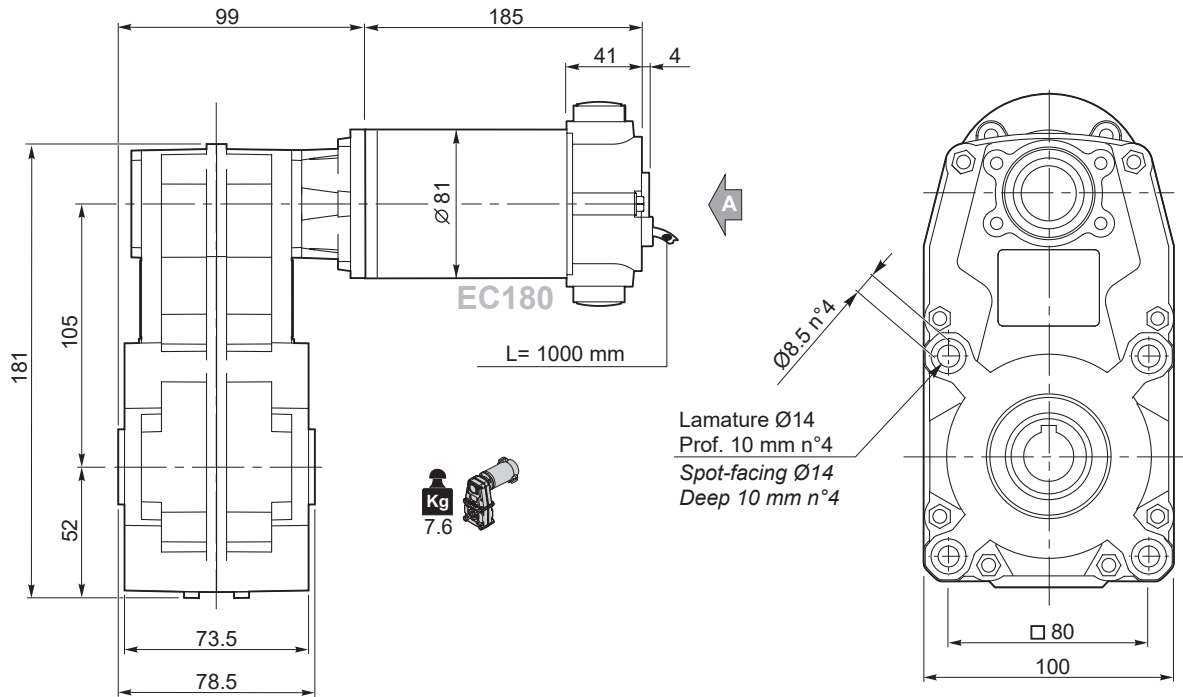


**Dimensioni**

**Dimensions**

**ECFT 180/105**

**ECFT 180/105...U**

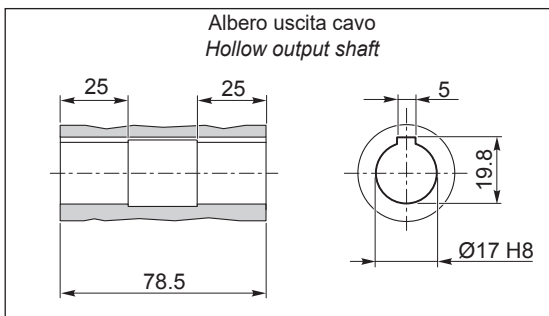


Lamature  $\varnothing 14$   
Prof. 10 mm n°4  
Spot-facing  $\varnothing 14$   
Deep 10 mm n°4

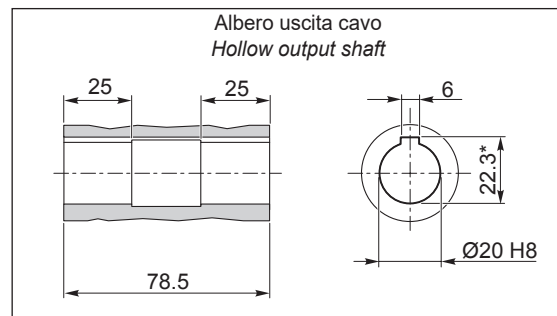
NOTA: Stessi fissaggi da entrambi i lati  
NOTE: Same fixing points in both sides

- Freno / Brake → **BB23**
- Encoder → **BB24**
- Motori / Motors IP66 → **BC6**

**O17**

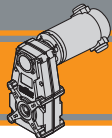


**O20**



\*: Sede linguetta ribassata / Special keyway

**DC**



# Note/Notes

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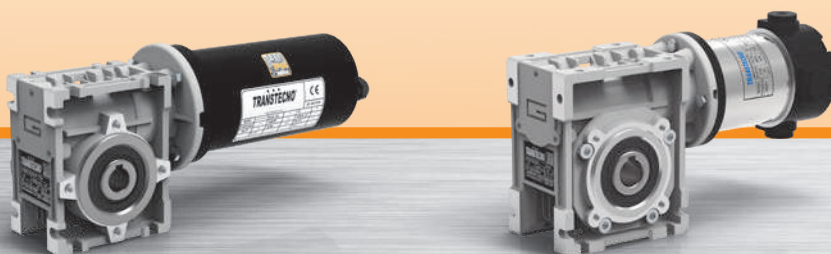
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**MINI**  **TECNO**™  
**small** but strong

**NDCM**  
**ECM**

Motoriduttori CC a vite senza fine  
DC wormgearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC



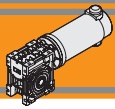




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Designazione	<i>Classification</i>	<b>BG2</b>
Simbologia	<i>Symbols</i>	<b>BG3</b>
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Dati di dentatura	<i>Toothing data</i>	<b>BG4</b>
Rendimento	<i>Efficiency</i>	<b>BG4</b>
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	<b>BG5</b>
Motori applicabili	<i>Motor adapters</i>	<b>BG8</b>
Dimensioni	<i>Dimensions</i>	<b>BG8</b>
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Accessori	<i>Accessories</i>	<b>BG23</b>

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**Caratteristiche tecniche**

**Technical features**

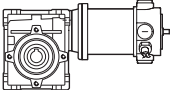
I motoriduttori CC a vite senza fine a magneti permanenti in neodimio **NDCM** e in ferrite **ECM** hanno le seguenti caratteristiche principali:

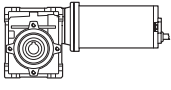
**NDCM** neodymium permanent magnets and **ECM** ferrite permanent magnets DC wormgearmotors range has the following main features:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800 W S2
- Carcasce dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800 W S2
- Die-cast aluminum housing
- Permanent synthetic oil long life lubrication

**Designazione**

**Classification**

MOTORIDUTTORE / GEARMOTOR									
NDCM	120/030		U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
 <p><b>NDCM</b></p>	120/026	180/026	U F...	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	120 — 240	VS
	120/026 (D11)	180/026 (D11)							
	120/026 (D14)	180/026 (D14)							
	120/030	180/030							
	120/040	180/040							

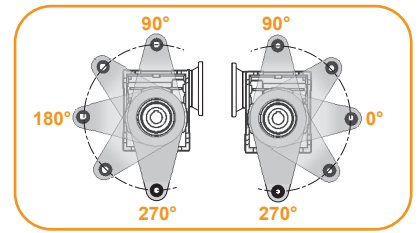
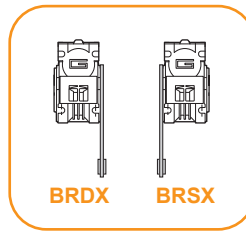
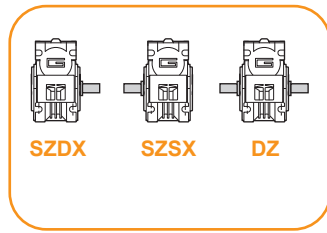
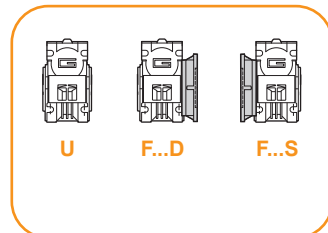
MOTORIDUTTORE / GEARMOTOR											
ECM	070/026				U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size				Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
 <p><b>ECM</b></p>	035/026	070/026	100/026	180/026	250/030	U F...	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	120 240 24E
	035/026 (D11)	070/026 (D11)	100/026 (D11)	180/026 (D11)	250/040						
	035/026 (D14)	070/026 (D14)	100/026 (D14)	180/026 (D14)	350/030						
	035/030	070/030	100/030	180/030	350/040						
	050/026		100/040	180/040	600/040						
	050/026 (D11)										
050/026 (D14)											
050/030											

Versione Riduttore  
Gearbox Version

Albero di uscita  
Output shaft

Braccio di reazione  
Torque arm

Angolo  
Angle



\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.



### Simbologia

### Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / <i>Input speed</i>	$R_d$ %	Rendimento dinamico / <i>Dynamic efficiency</i>
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / <i>Output speed</i>	$A_2$ [N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
$i$	Rapporto di riduzione / <i>Ratio</i>	$R_s$ %	Rendimento statico / <i>Static efficiency</i>
$P_1$ [kW]	Potenza in entrata / <i>Input power</i>	$R_2$ [N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>
$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / <i>Output torque referred to <math>P_1</math></i>	$Z$	Numero di principi della vite / <i>Worm starts</i>
$sf$	Fattore di servizio / <i>Service factor</i>	$\beta$	Angolo d'elica / <i>Helix angle</i>

### Lubrificazione

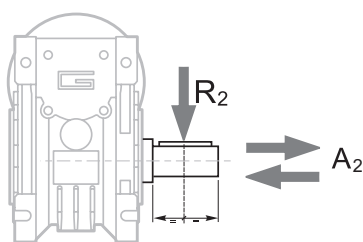
### Lubrication

I riduttori a vite senza fine della serie CM sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

*Permanent synthetic oil long-life lubrication allow to use CM wormgearbox range in all mounting position.*

### Carichi radiali

### Radial loads

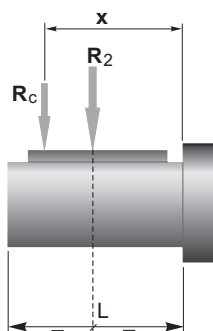


$$A_2 = R_2 \times 0.2$$

$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]		
	CM026	CM030	CM040
187	400	674	1264
140	490	743	1392
93	580	851	1596
70	610	936	1754
56	610	1008	1890
47	610	1069	2004
35	610	1179	2210
28	610	1270	2381
23	610	1356	2542
18	610	1471	2759
14	610	1600	3000

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*

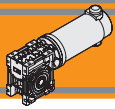


$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

*a, b = valori riportati nella tabella*  
*a, b = values given in the table*

	CM		
	026	030	040
<b>a</b>	56	65	84
<b>b</b>	43	50	64
<b><math>R_{2MAX}</math></b>	610	1600	3000



**Dati di dentatura**

**Toothing data**

	Dati della coppia vite-corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	$\beta$	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	$\beta$	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	$\beta$	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'

**Rendimento**

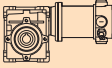
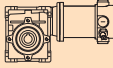
**Efficiency**

	$n_1$ [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio												
			5	7.5	10	15	20	25	30	40	50	60	80	100	
CM026	2800	Rd	89	87	85	83	80		73	68	64	60			
			1400	87	84	83	78	74		66	61	57	53		
			900	84	83	80	75	71		61	57	52	48		
			Rs	72	71	68	61	56		46	41	36	34		
CM030	2800	Rd	89	88	86	84	81	78	74	70	65	62	57	52	
			1400	86	85	84	79	75	72	67	62	58	55	48	43
			900	84	83	81	75	71	68	62	58	53	49	43	39
			Rs	72	67	63	55	50	43	39	35	31	27	23	21
CM040	2800	Rd	90	89	87	84	83	80	77	73	69	66	60	56	
			1400	88	86	84	81	78	74	70	65	60	58	52	46
			900	86	84	82	77	74	70	66	60	57	53	46	41
			Rs	74	71	67	60	55	51	45	40	36	32	28	24



**Rendimento teorico del riduttore dopo il rodaggio**  
*Theoretical efficiency of the gearbox after the first running period*


**Dati tecnici per servizio S2**
**NDCM**
**Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>160</b>							<b>250</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	2	4.4	5	<b>120/026</b>	<b>120/240</b>	(3000 min <sup>-1</sup> )	<b>600</b>	4	2.8	5	<b>180/026</b>	<b>120/240</b>
	<b>400</b>	3	3.3	7.5	<b>120/026</b>			<b>400</b>	5	2.1	7.5	<b>180/026</b>	
	<b>300</b>	4	2.5	10	<b>120/026</b>			<b>300</b>	7	1.6	10	<b>180/026</b>	
	<b>200</b>	6	1.7	15	<b>120/026</b>			<b>200</b>	10	1.1	15	<b>180/026</b>	
	<b>150</b>	8	1.3	20	<b>120/026</b>			<b>150</b>	13	0.9	20	<b>180/026</b>	
	<b>100</b>	11	1.1	30	<b>120/026</b>			<b>100</b>	17	0.7	30	<b>180/026</b>	
	<b>75</b>	14	0.8	40	<b>120/026</b>			<b>75</b>	16	0.7	40	<b>180/026</b>	
	<b>60</b>	14	0.7	50	<b>120/026</b>			<b>60</b>	14	0.7	50	<b>180/026</b>	
	<b>50</b>	13	0.7	60	<b>120/026</b>			<b>50</b>	13	0.7	60	<b>180/026</b>	
	<b>600</b>	2	5.7	5	<b>120/030</b>	<b>120/240</b>		<b>600</b>	4	3.7	5	<b>180/030</b>	<b>120/240</b>
	<b>400</b>	3	4.5	7.5	<b>120/030</b>			<b>400</b>	5	2.9	7.5	<b>180/030</b>	
	<b>300</b>	4	3.7	10	<b>120/030</b>			<b>300</b>	7	2.3	10	<b>180/030</b>	
	<b>200</b>	6	2.5	15	<b>120/030</b>			<b>200</b>	10	1.6	15	<b>180/030</b>	
	<b>150</b>	8	1.7	20	<b>120/030</b>			<b>150</b>	13	1.1	20	<b>180/030</b>	
	<b>120</b>	10	1.5	25	<b>120/030</b>			<b>120</b>	16	1.0	25	<b>180/030</b>	
	<b>100</b>	11	1.6	30	<b>120/030</b>			<b>100</b>	18	1.0	30	<b>180/030</b>	
	<b>75</b>	14	1.1	40	<b>120/030</b>			<b>75</b>	22	0.7	40	<b>180/030</b>	
	<b>60</b>	17	0.9	50	<b>120/030</b>			<b>60</b>	21	0.7	50	<b>180/030</b>	
	<b>50</b>	20	0.7	60	<b>120/030</b>			<b>50</b>	20	0.7	60	<b>180/030</b>	
	<b>38</b>	17	0.7	80	<b>120/030</b>			<b>38</b>	17	0.7	80	<b>180/030</b>	
	<b>30</b>	16	0.7	100	<b>120/030</b>			<b>30</b>	16	0.7	100	<b>180/030</b>	
	<b>150</b>	8	3.7	20	<b>120/040</b>	<b>120/240</b>		<b>600</b>	4	8.1	5	<b>180/040</b>	<b>120/240</b>
	<b>120</b>	10	2.7	25	<b>120/040</b>			<b>400</b>	5	5.8	7.5	<b>180/040</b>	
	<b>100</b>	12	3.2	30	<b>120/040</b>			<b>300</b>	7	4.8	10	<b>180/040</b>	
	<b>75</b>	15	2.3	40	<b>120/040</b>			<b>200</b>	10	3.5	15	<b>180/040</b>	
	<b>60</b>	18	1.8	50	<b>120/040</b>			<b>150</b>	13	2.3	20	<b>180/040</b>	
	<b>50</b>	20	1.4	60	<b>120/040</b>			<b>120</b>	16	1.8	25	<b>180/040</b>	
	<b>38</b>	24	1.1	80	<b>120/040</b>			<b>100</b>	18	2.1	30	<b>180/040</b>	
	<b>30</b>	29	0.8	100	<b>120/040</b>			<b>75</b>	23	1.5	40	<b>180/040</b>	
								<b>60</b>	27	1.2	50	<b>180/040</b>	
								<b>50</b>	32	0.9	60	<b>180/040</b>	
								<b>38</b>	38	0.7	80	<b>180/040</b>	
								<b>30</b>	34	0.7	100	<b>180/040</b>	

N.B.

 Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio

N.B.

 Please check that the output torque  $M_2$  does not exceed the value in the grey areas

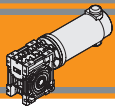
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Dati tecnici elettrici**
**Electrical technical data**

 ND 120 → 




 ND 180 → 








### Dati tecnici per servizio S2




### ECM

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>55</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	0.8	12.8	5		ECM035/026 120/240
	<b>400</b>	1.1	9.6	7.5		
	<b>300</b>	1.5	7.4	10		
	<b>200</b>	2.2	5.0	15		
	<b>150</b>	2.8	3.9	20		
	<b>100</b>	3.8	3.1	30		
	<b>75</b>	4.8	2.3	40		
	<b>60</b>	5.6	1.8	50		
	<b>50</b>	6.3	1.4	60		
	<b>600</b>	0.8	16.7	5		
	<b>400</b>	1.2	13.0	7.5		ECM035/030 120/240
	<b>300</b>	1.5	10.6	10		
	<b>200</b>	2.2	7.3	15		
	<b>150</b>	2.8	4.9	20		
	<b>120</b>	3.4	4.4	25		
	<b>100</b>	3.9	4.6	30		
	<b>75</b>	4.9	3.3	40		
	<b>60</b>	5.7	2.6	50		
	<b>50</b>	6.5	2.1	60		
	<b>38</b>	8.0	1.5	80		
	<b>30</b>	9.1	1.2	100		

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>100</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	1.4	7.1	5		ECM070/026 12E/24E
	<b>400</b>	2.1	5.3	7.5		
	<b>300</b>	2.7	4.1	10		
	<b>200</b>	4.0	2.8	15		
	<b>150</b>	5.1	2.2	20		
	<b>100</b>	7.0	1.7	30		
	<b>75</b>	8.7	1.3	40		
	<b>60</b>	10	1.0	50		
	<b>50</b>	11	0.8	60		
	<b>600</b>	1.4	9.2	5		
	<b>400</b>	2.1	7.1	7.5		ECM070/030 12E/24E
	<b>300</b>	2.7	5.8	10		
	<b>200</b>	4.0	4.0	15		
	<b>150</b>	5.2	2.7	20		
	<b>120</b>	6.2	2.4	25		
	<b>100</b>	7.1	2.5	30		
	<b>75</b>	8.9	1.8	40		
	<b>60</b>	10	1.4	50		
	<b>50</b>	12	1.2	60		
	<b>38</b>	15	0.8	80		
	<b>30</b>	17	0.7	100		

<b>70</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	1.0	10.1	5		ECM050/026 120/240
	<b>400</b>	1.5	7.6	7.5		
	<b>300</b>	1.9	5.8	10		
	<b>200</b>	2.8	4.0	15		
	<b>150</b>	3.6	3.1	20		
	<b>100</b>	4.9	2.5	30		
	<b>75</b>	6.1	1.8	40		
	<b>60</b>	7.1	1.4	50		
	<b>50</b>	8.0	1.1	60		
	<b>600</b>	1.0	13.1	5		
	<b>400</b>	1.5	10.2	7.5		ECM050/030 120/240
	<b>300</b>	1.9	8.3	10		
	<b>200</b>	2.8	5.7	15		
	<b>150</b>	3.6	3.9	20		
	<b>120</b>	4.3	3.5	25		
	<b>100</b>	4.9	3.6	30		
	<b>75</b>	6.2	2.6	40		
	<b>60</b>	7.2	2.1	50		
	<b>50</b>	8.3	1.7	60		
	<b>38</b>	10.2	1.2	80		
	<b>30</b>	11.6	0.9	100		

<b>140</b>						
(3000 min <sup>-1</sup> )	<b>600</b>	2.0	5.0	5		ECM100/026 120/240/24E
	<b>400</b>	2.9	3.8	7.5		
	<b>300</b>	3.8	2.9	10		
	<b>200</b>	5.5	2.0	15		
	<b>150</b>	7.1	1.5	20		
	<b>100</b>	10	1.2	30		
	<b>75</b>	12	0.9	40		
	<b>60</b>	14	0.7	50		
	<b>50</b>	13	0.7	60		
	<b>200</b>	5.6	2.8	15		
	<b>150</b>	7.2	1.9	20		ECM100/030 120/240/24E
	<b>120</b>	8.7	1.7	25		
	<b>100</b>	10	1.8	30		
	<b>75</b>	12	1.3	40		
	<b>60</b>	14	1.0	50		
	<b>50</b>	17	0.8	60		
	<b>38</b>	17	0.7	80		
	<b>30</b>	16	0.7	100		
	<b>100</b>	10	3.7	30		
	<b>75</b>	13	2.6	40		
	<b>60</b>	15	2.1	50		
	<b>50</b>	18	1.6	60		
	<b>38</b>	21	1.3	80		
	<b>30</b>	25	1.0	100		
	<b>100</b>	10	3.7	30		ECM100/040 120/240/24E
	<b>75</b>	13	2.6	40		
	<b>60</b>	15	2.1	50		
	<b>50</b>	18	1.6	60		

NOTA  
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE  
Please check that the output torque M2 does not exceed the value in the grey areas

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

### Dati tecnici elettrici

### Electrical technical data





### Dati tecnici per servizio S2

### ECM

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
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P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
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#### 250

(3000 min <sup>-1</sup> )	<b>600</b>	3.5	2.8	5	<b>ECM180/026</b>	120/240		
	<b>400</b>	5.2	2.1	7.5				
	<b>300</b>	6.8	1.6	10				
	<b>200</b>	10	1.1	15				
	<b>150</b>	13	0.9	20				
	<b>100</b>	17	0.7	30				
	<b>75</b>	16	0.7	40				
	<b>60</b>	14	0.7	50				
	<b>50</b>	13	0.7	60				
	<b>600</b>	3.5	3.7	5			<b>ECM180/030</b>	120/240/24E
	<b>400</b>	5.3	2.9	7.5				
	<b>300</b>	6.8	2.3	10				
	<b>200</b>	10	1.6	15				
	<b>150</b>	13	1.1	20				
	<b>120</b>	16	1.0	25				
	<b>100</b>	18	1.0	30				
	<b>75</b>	22	0.7	40				
	<b>60</b>	21	0.7	50				
	<b>50</b>	20	0.7	60				
	<b>38</b>	17	0.7	80				
	<b>30</b>	16	0.7	100				
	<b>200</b>	10	3.5	15	<b>ECM180/040</b>	120/240/24E		
	<b>150</b>	13	2.3	20				
	<b>120</b>	16	1.8	25				
	<b>100</b>	18	2.1	30				
	<b>75</b>	23	1.5	40				
	<b>60</b>	27	1.2	50				
	<b>50</b>	32	0.9	60				
	<b>38</b>	38	0.7	80				
	<b>30</b>	34	0.7	100				

#### 500

(3000 min <sup>-1</sup> )	<b>600</b>	7.1	1.8	5	<b>ECM350/030</b>	120/240		
	<b>400</b>	11	1.4	7.5				
	<b>300</b>	14	1.2	10				
	<b>200</b>	20	0.8	15				
	<b>150</b>	20	0.7	20				
	<b>120</b>	21	0.7	25				
	<b>100</b>	26	0.7	30				
	<b>75</b>	23	0.7	40				
	<b>60</b>	21	0.7	50				
	<b>600</b>	7.2	4.0	5			<b>ECM350/040</b>	120/240
	<b>400</b>	11	2.9	7.5				
	<b>300</b>	14	2.4	10				
	<b>200</b>	20	1.7	15				
	<b>150</b>	26	1.2	20				
	<b>120</b>	32	0.9	25				
	<b>100</b>	37	1.0	30				
	<b>75</b>	46	0.7	40				
	<b>60</b>	46	0.7	50				
	<b>50</b>	41	0.7	60				
	<b>38</b>	39	0.7	80				
	<b>30</b>	34	0.7	100				

#### 800

(3000 min <sup>-1</sup> )	<b>600</b>	11	2.5	5	<b>ECM600/040</b>	120/240
	<b>400</b>	17	1.8	7.5		
	<b>300</b>	22	1.5	10		
	<b>200</b>	32	1.1	15		
	<b>150</b>	42	0.7	20		
	<b>120</b>	40	0.7	25		
	<b>100</b>	54	0.7	30		
	<b>75</b>	49	0.7	40		

#### 350

(3000 min <sup>-1</sup> )	<b>600</b>	5.0	2.6	5	<b>ECM250/030</b>	120/240		
	<b>400</b>	7.4	2.0	7.5				
	<b>300</b>	10	1.7	10				
	<b>200</b>	14	1.1	15				
	<b>150</b>	18	0.8	20				
	<b>120</b>	22	0.7	25				
	<b>100</b>	25	0.7	30				
	<b>75</b>	22	0.7	40				
	<b>60</b>	21	0.7	50				
	<b>200</b>	14	2.5	15			<b>ECM250/040</b>	120/240
	<b>150</b>	18	1.7	20				
	<b>120</b>	22	1.3	25				
	<b>100</b>	26	1.5	30				
	<b>75</b>	33	1.0	40				
	<b>60</b>	38	0.8	50				
	<b>50</b>	44	0.7	60				
	<b>38</b>	38	0.7	80				
	<b>30</b>	35	0.7	100				

N.B.  
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio  
N.B.  
Please check that the output torque M2 does not exceed the value in the grey areas

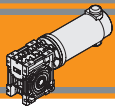
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

### Dati tecnici elettrici

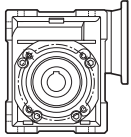
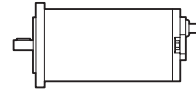
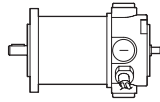
### Electrical technical data





**Motori applicabili**

**Motor adapters**



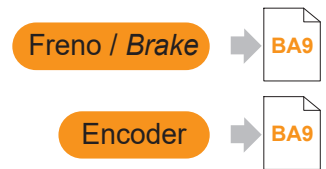
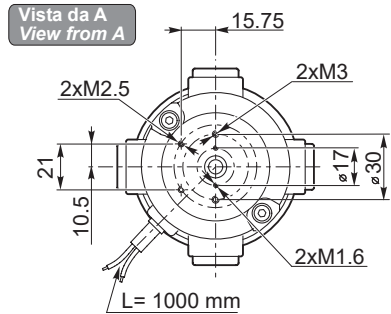
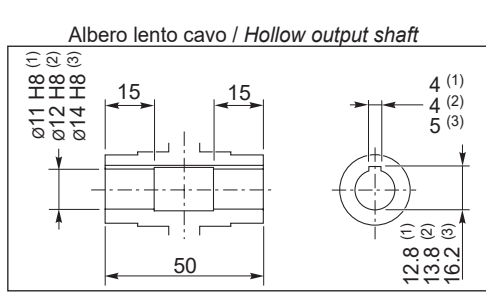
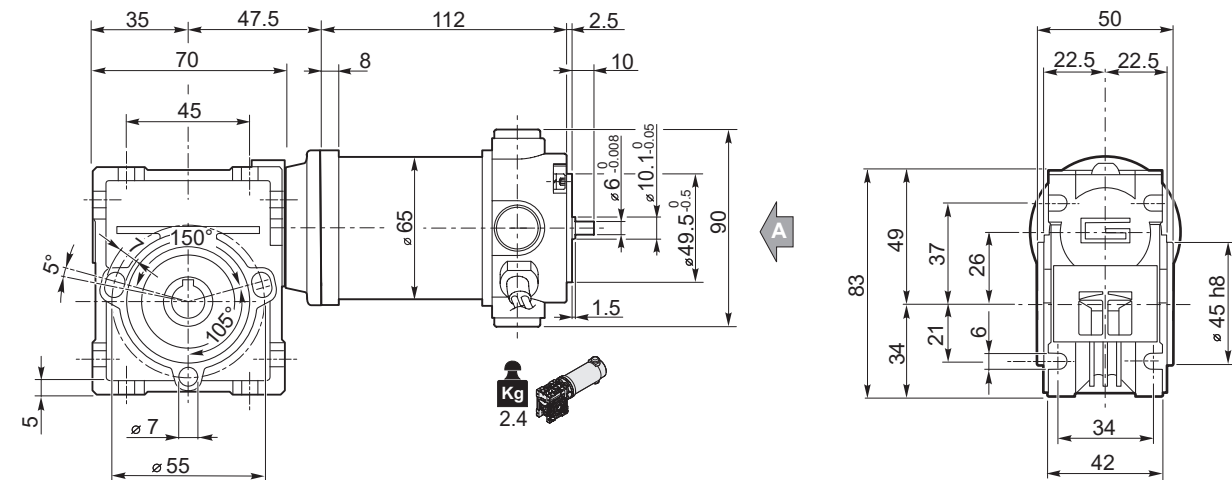
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		120.120 120.240	180.120 180.240	035.12E 035.24E	050.12E 050.24E	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CM	026	5-60	5-60	5-60	5-60	5-60	5-60	5-60				
	030	5-100	5-100	5-100	5-100	5-100	5-100	5-100	5-50	5-50	5-50	
	040	5-100	5-100			5-100	5-100	5-100	5-100	5-100	5-100	5-40

5-100      Rapporti di riduzione i  
Ratio i

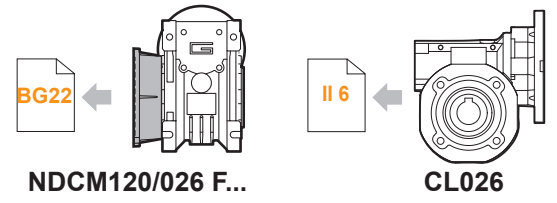
**Dimensioni**

**Dimensions**

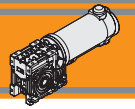
**NDCM120/026 U**



- (1): NDCM 120/026 (D11)
- (2): NDCM 120/026
- (3): NDCM 120/026 (D14)



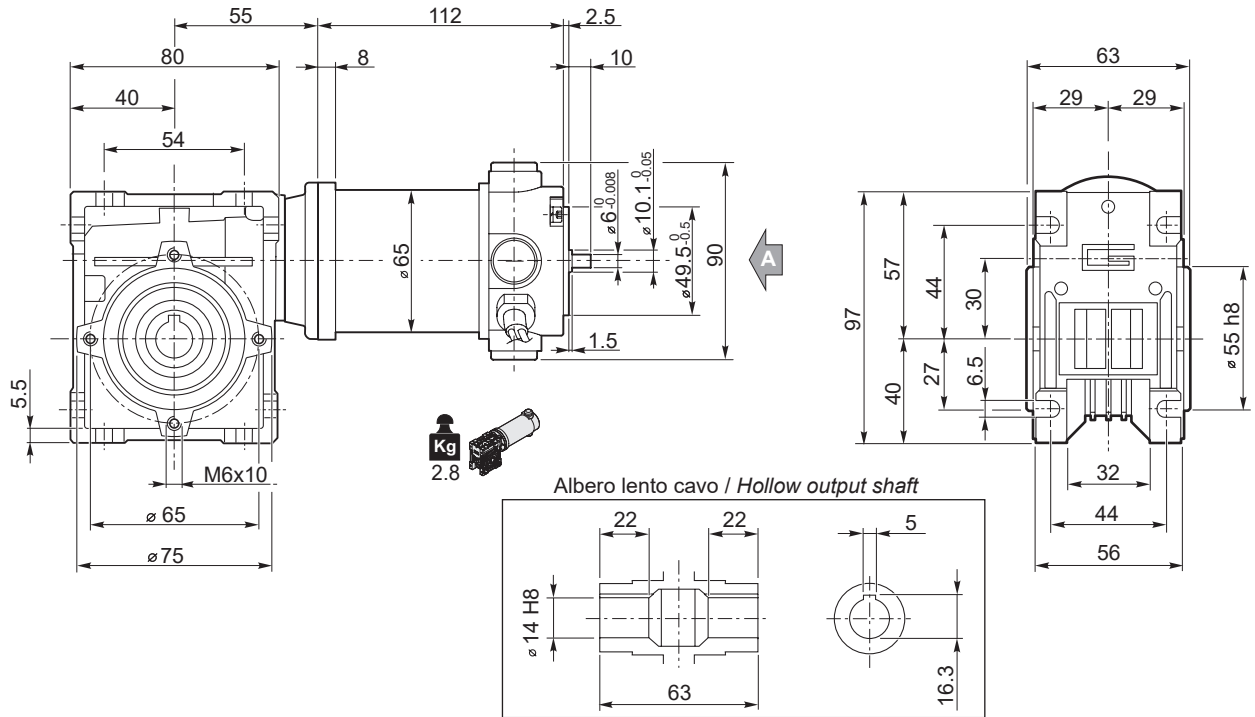




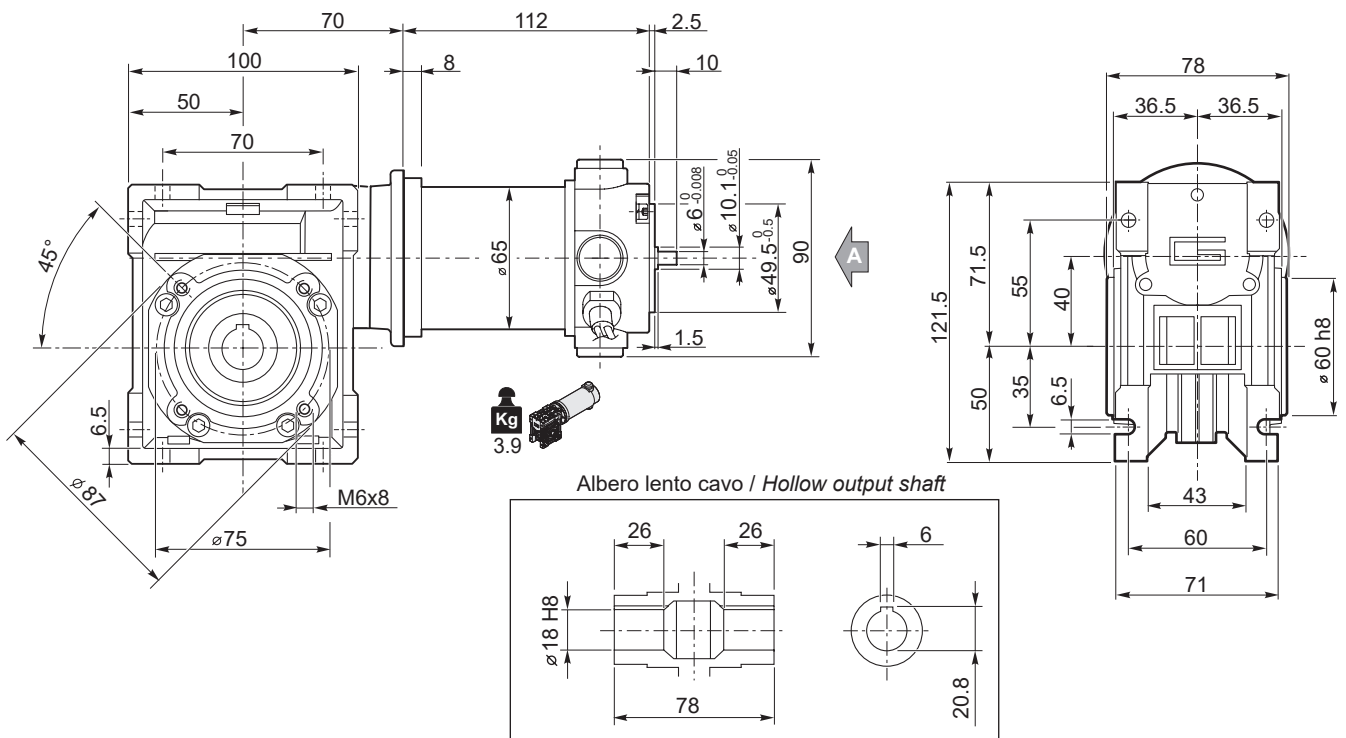
Dimensioni

Dimensions

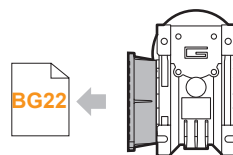
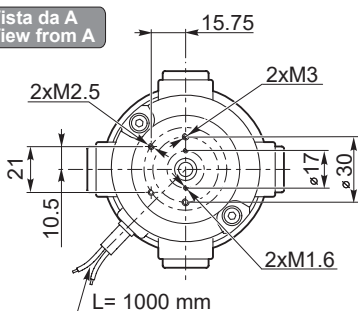
**NDCM120/030 U**



**NDCM120/040 U**

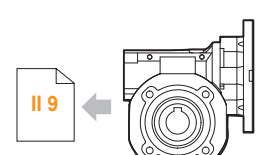


Vista da A  
View from A



**NDCM120/030 F**  
**NDCM120/040 F...**

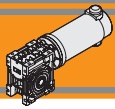
Freno / Brake



**CL030**  
**CL040**

Encoder

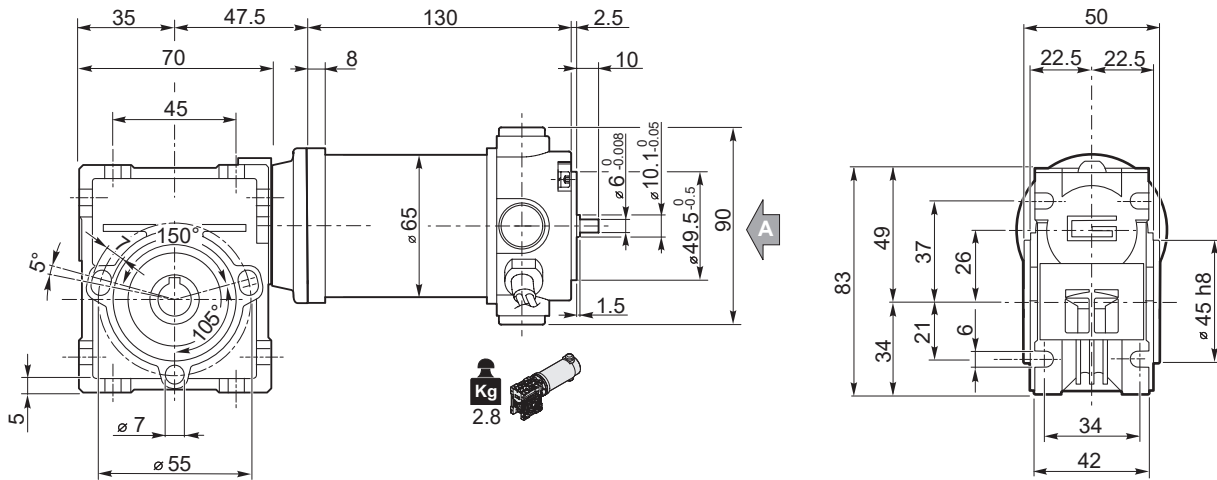




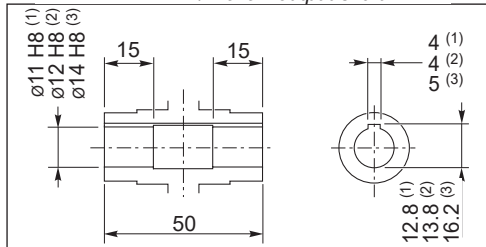
### Dimensioni

### Dimensions

#### NDCM180/026 U

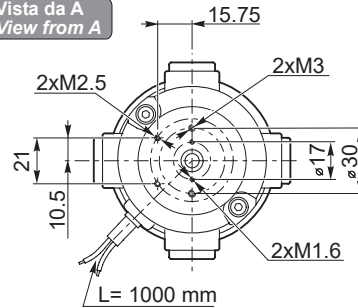


Albero lento cavo / Hollow output shaft



- (1): NDCM 180/026 (D11)
- (2): NDCM 180/026
- (3): NDCM 180/026 (D14)

Vista da A  
View from A

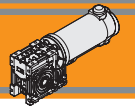


Freno / Brake → BA9

Encoder → BA9

BG22 → NDCM180/026 F...

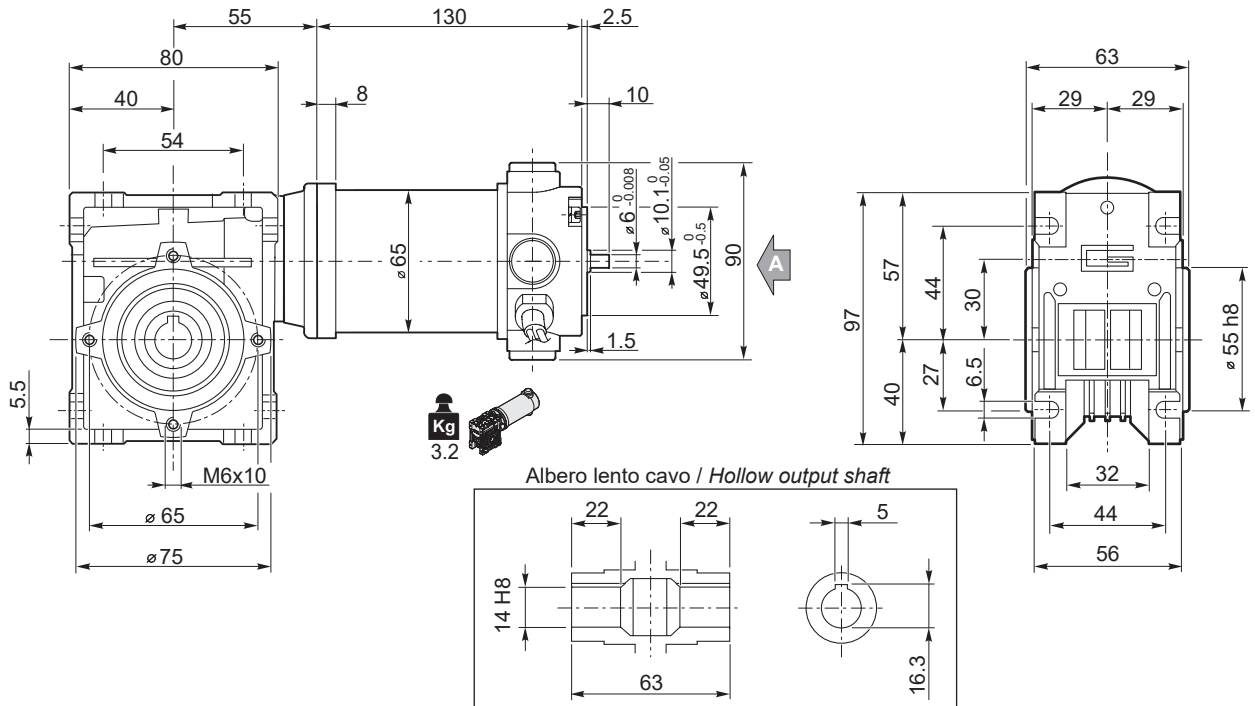
II 6 → CL026



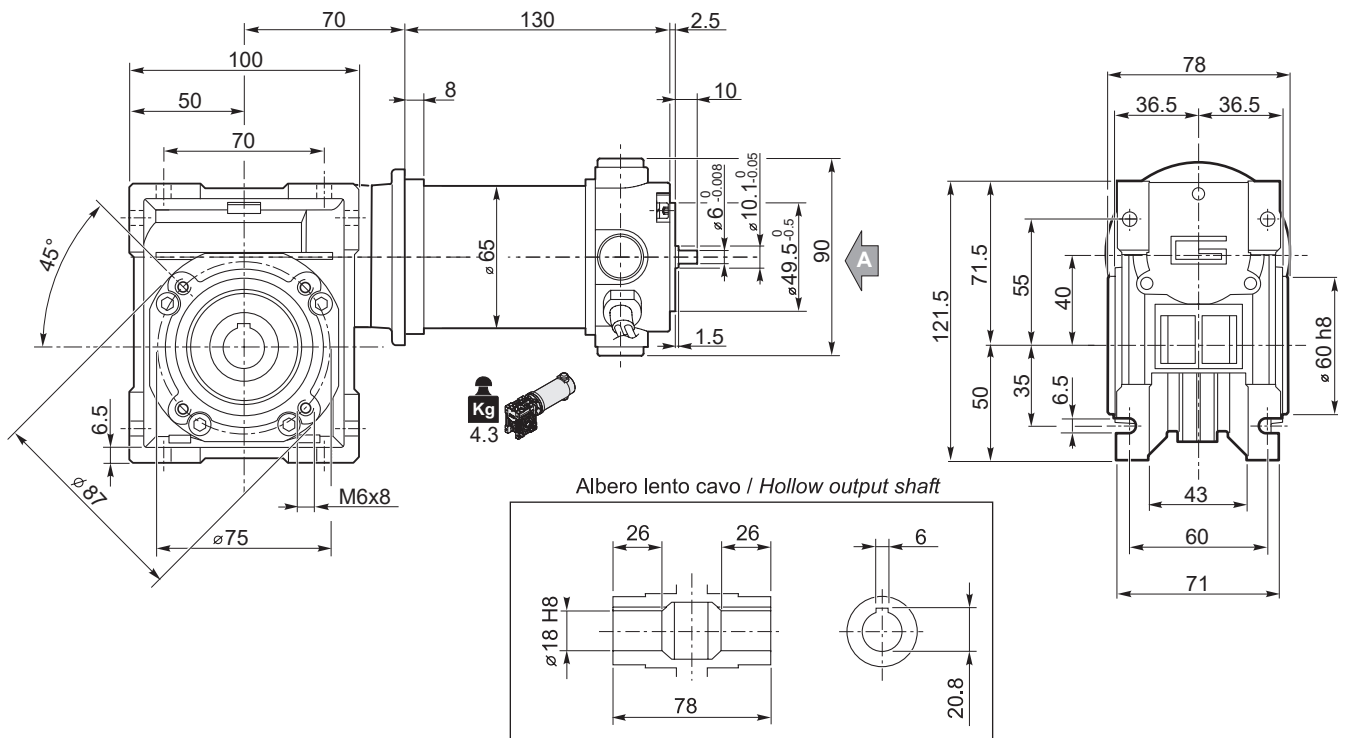
Dimensioni

Dimensions

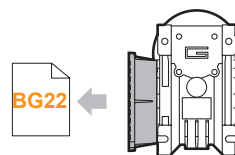
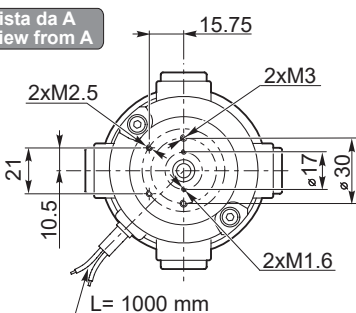
**NDCM180/030 U**



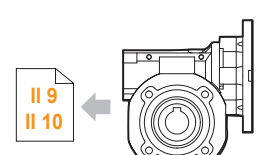
**NDCM180/040 U**



Vista da A  
View from A



**NDCM180/030 F**  
**NDCM180/040 F...**



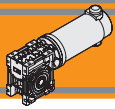
**CL030**  
**CL040**

Freno / Brake



Encoder

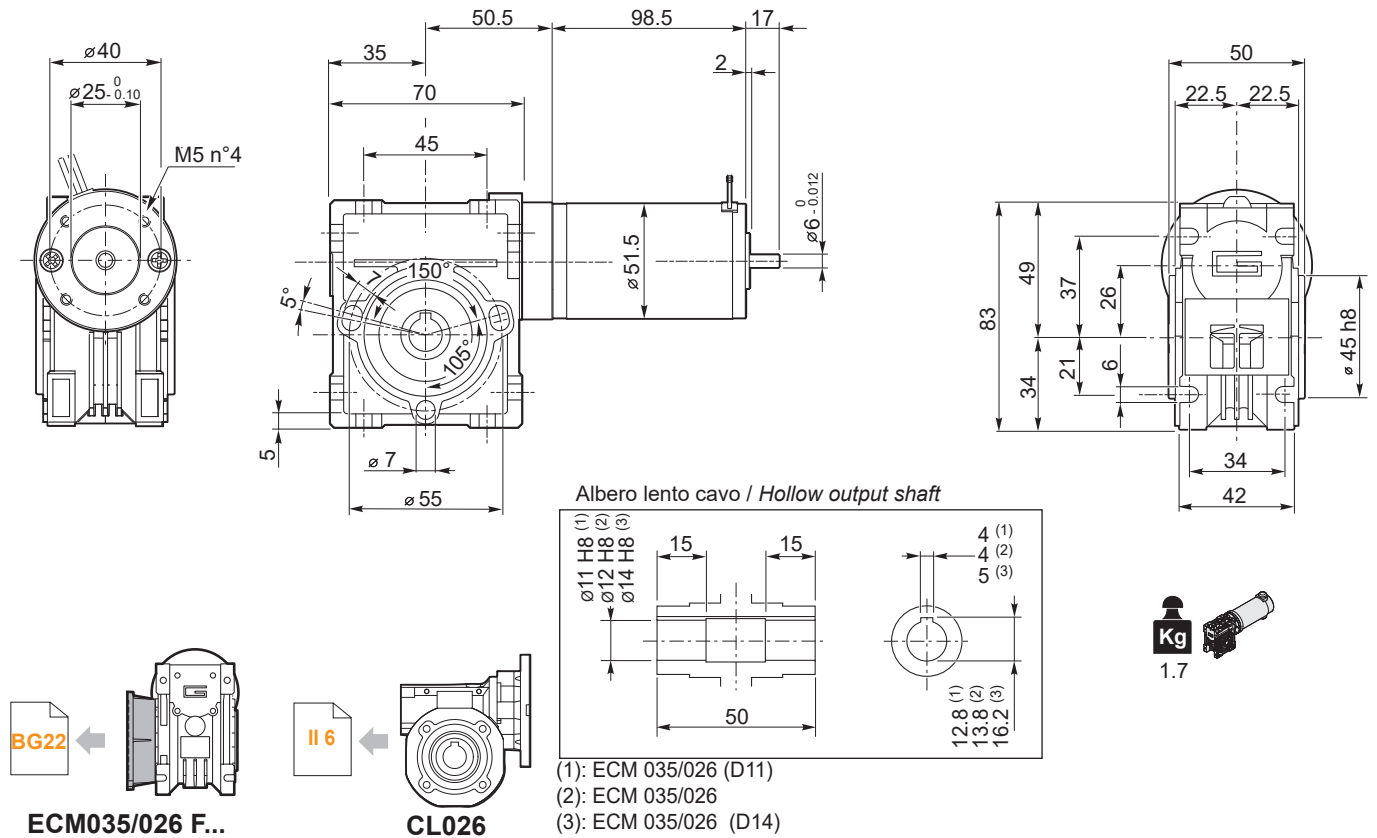




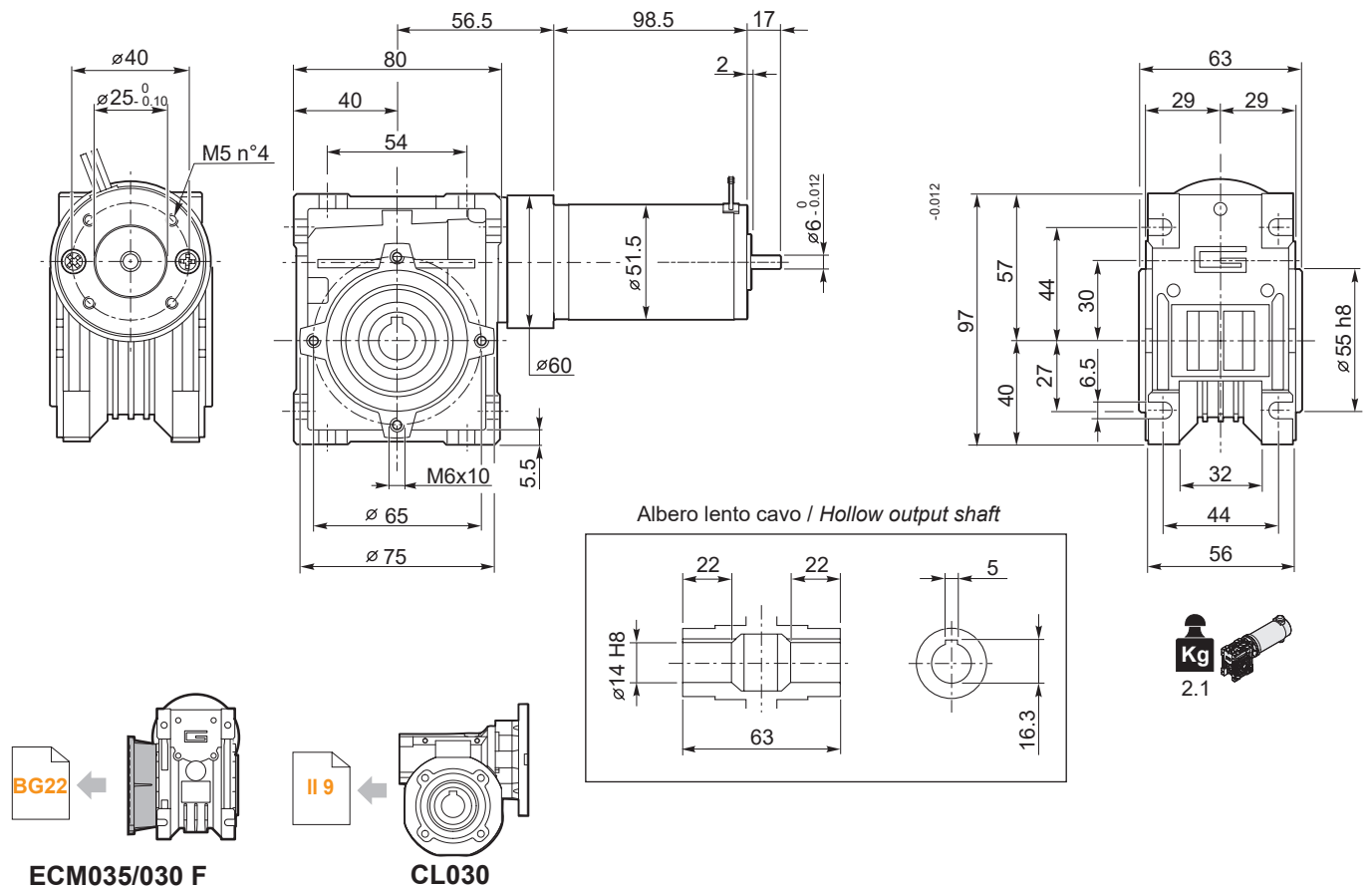
### Dimensioni

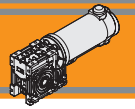
### Dimensions

#### ECM035/026 U



#### ECM035/030 U

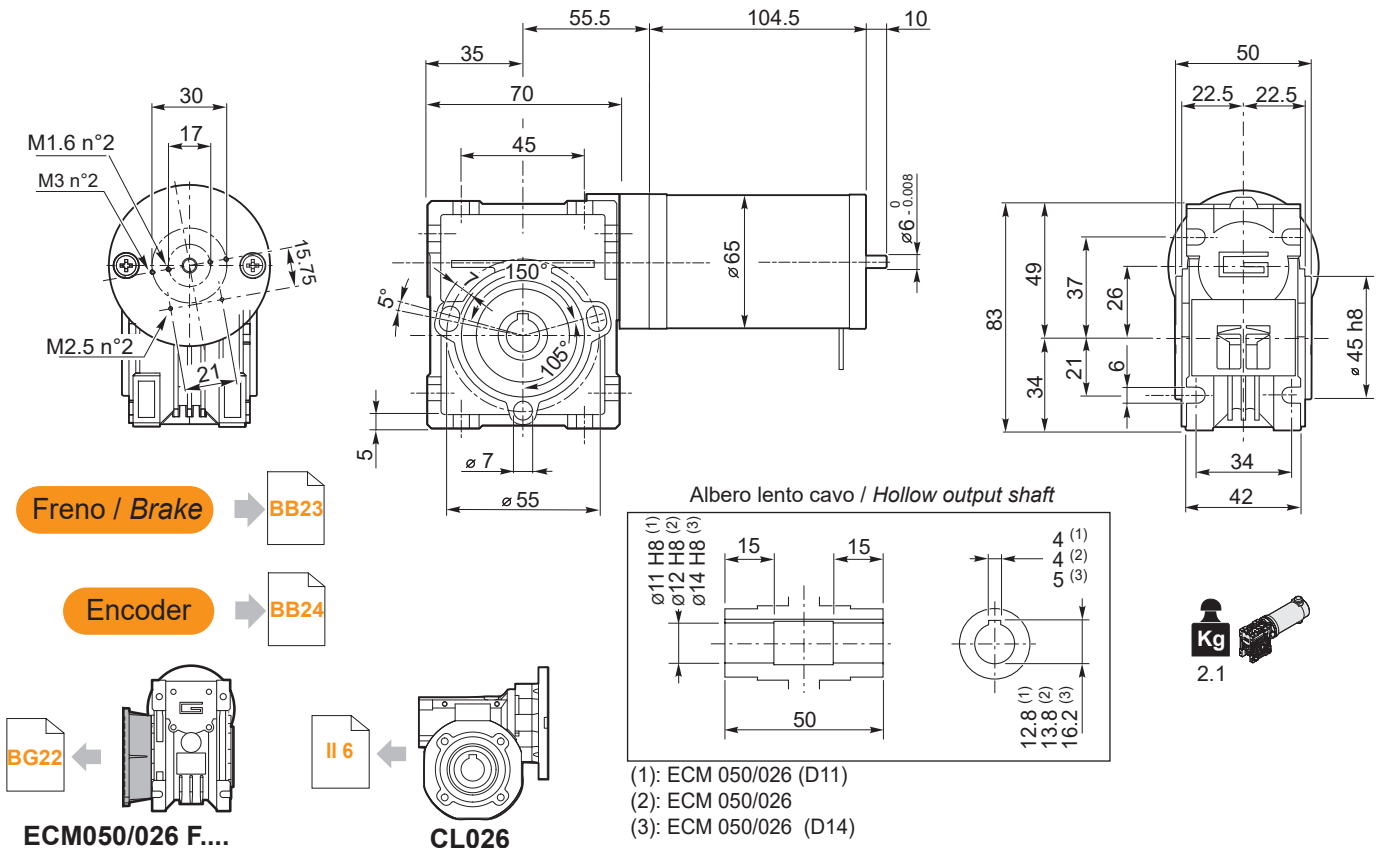




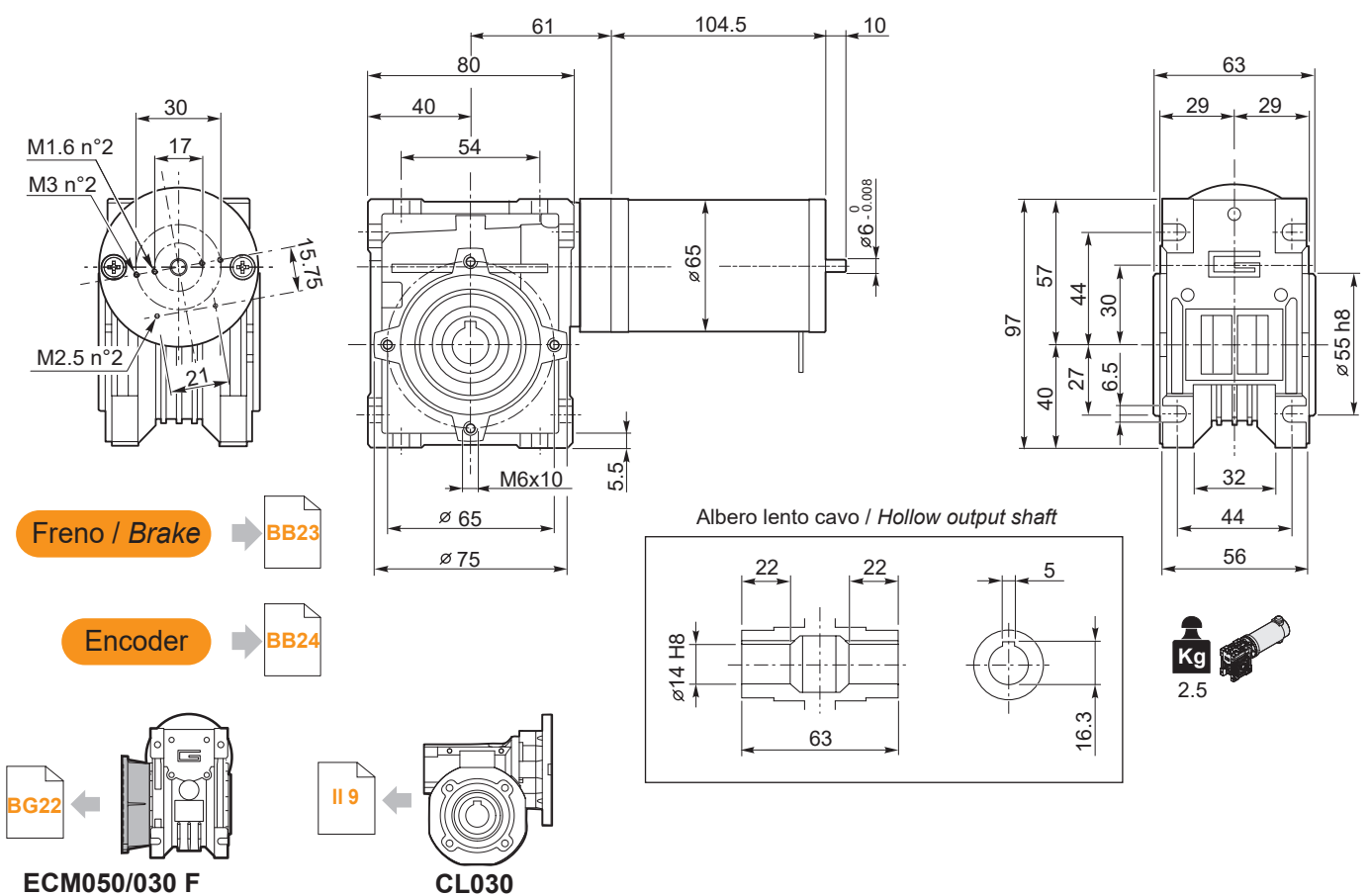
Dimensioni

Dimensions

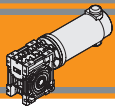
ECM050/026 U



ECM050/030 U



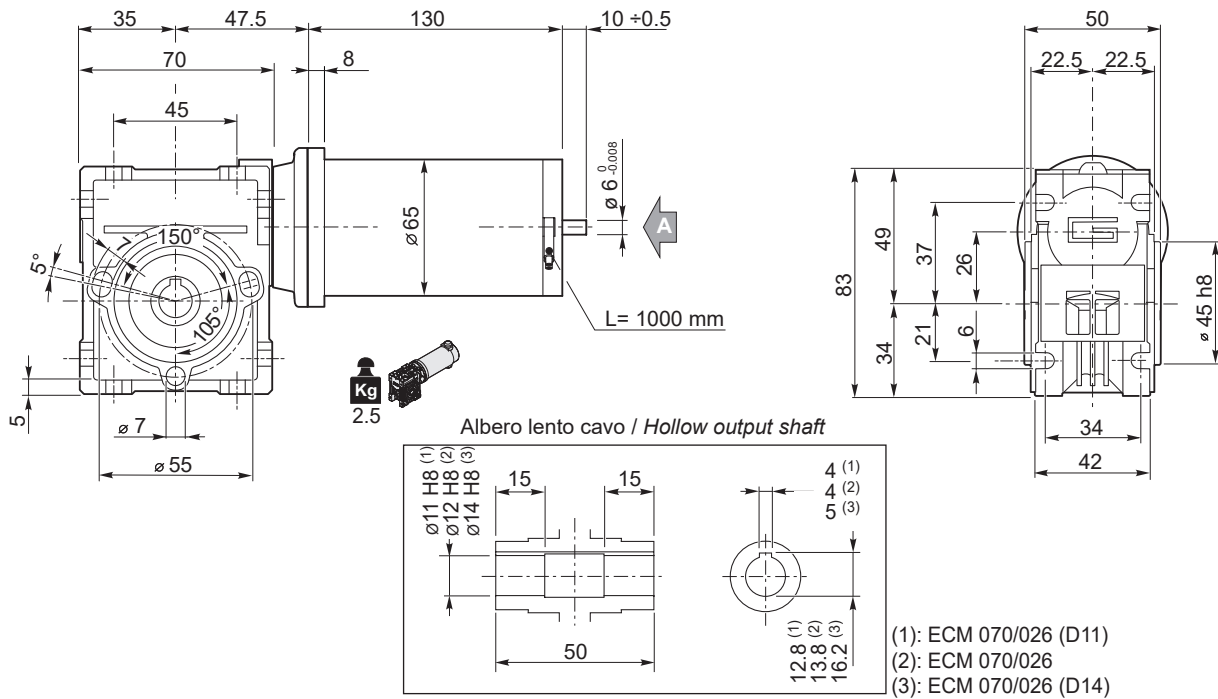
DC



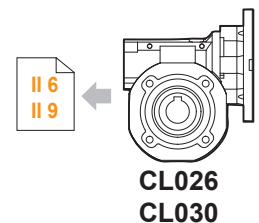
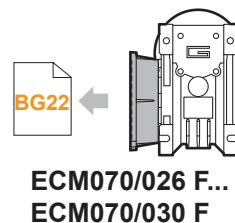
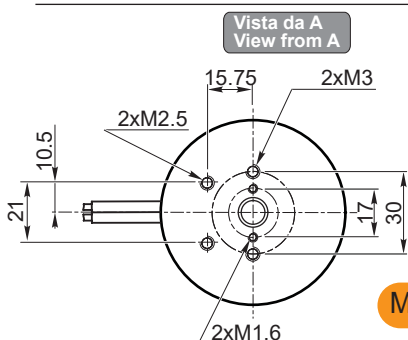
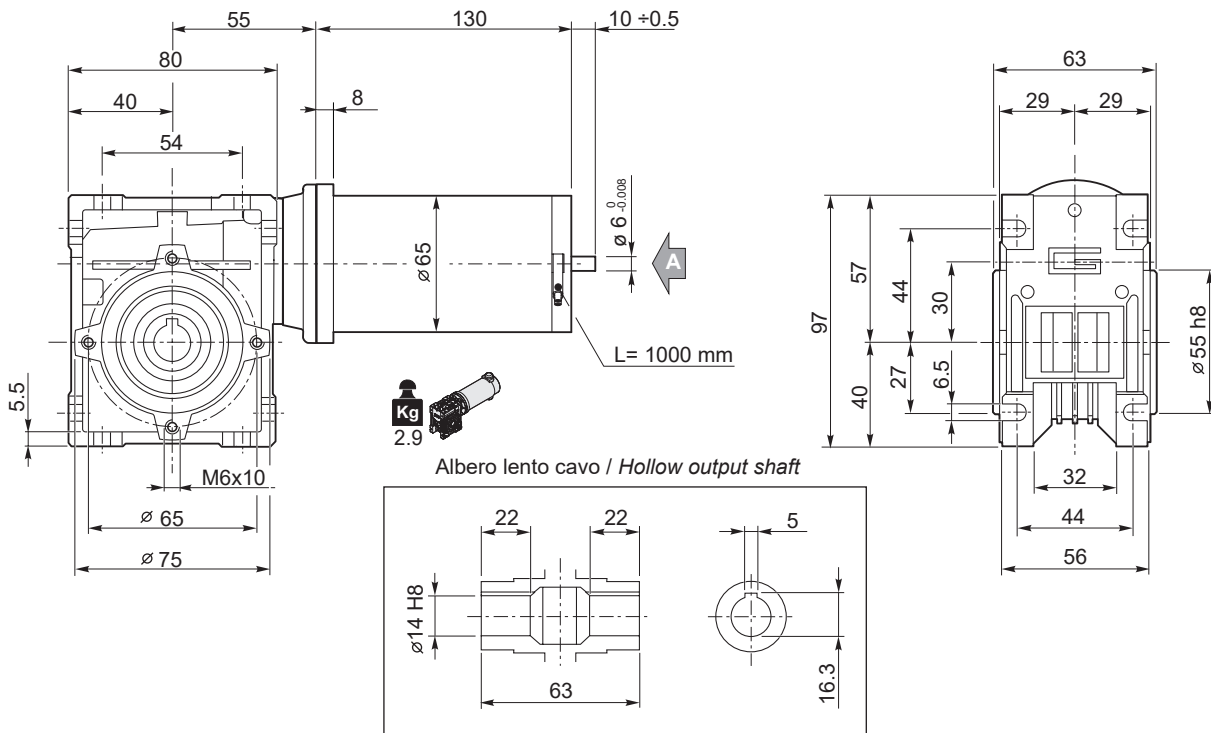
### Dimensioni

### Dimensions

#### ECM070/026 U



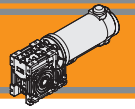
#### ECM070/030 U



Motori / Motors IP66 → BC2

Freno / Brake → BB23

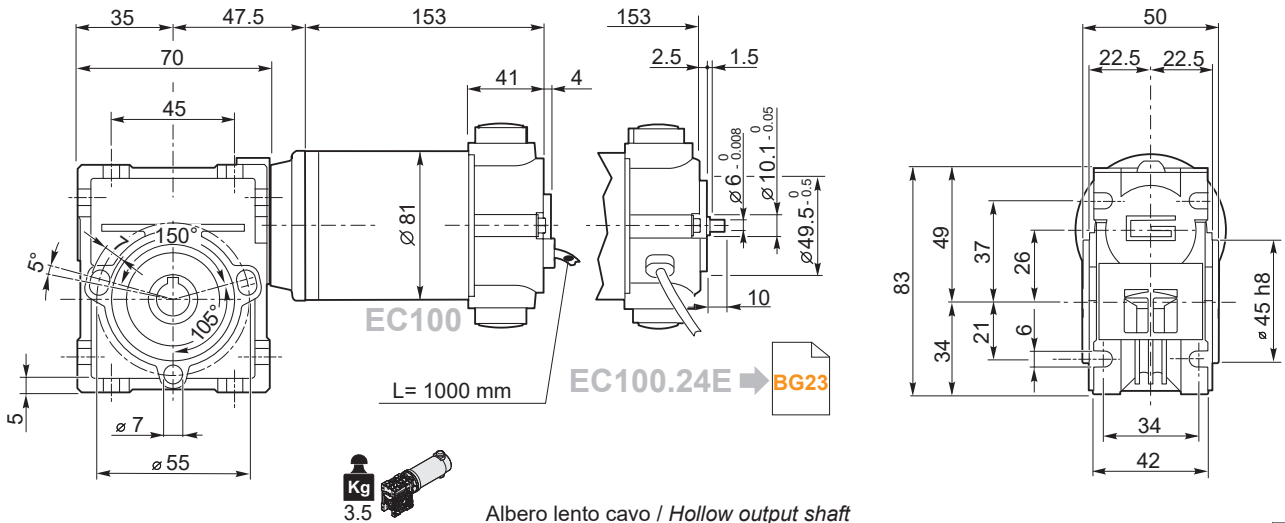
Encoder → BB24



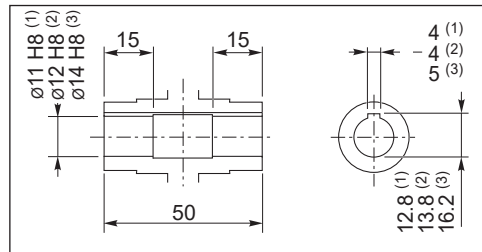
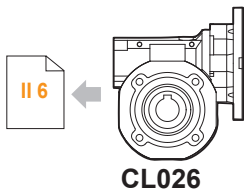
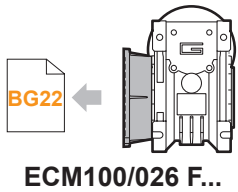
**Dimensioni**

**Dimensions**

**ECM100/026 U**

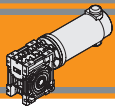


Albero lento cavo / Hollow output shaft



- (1): ECM 100/026 (D11)
- (2): ECM 100/026
- (3): ECM 100/026 (D14)

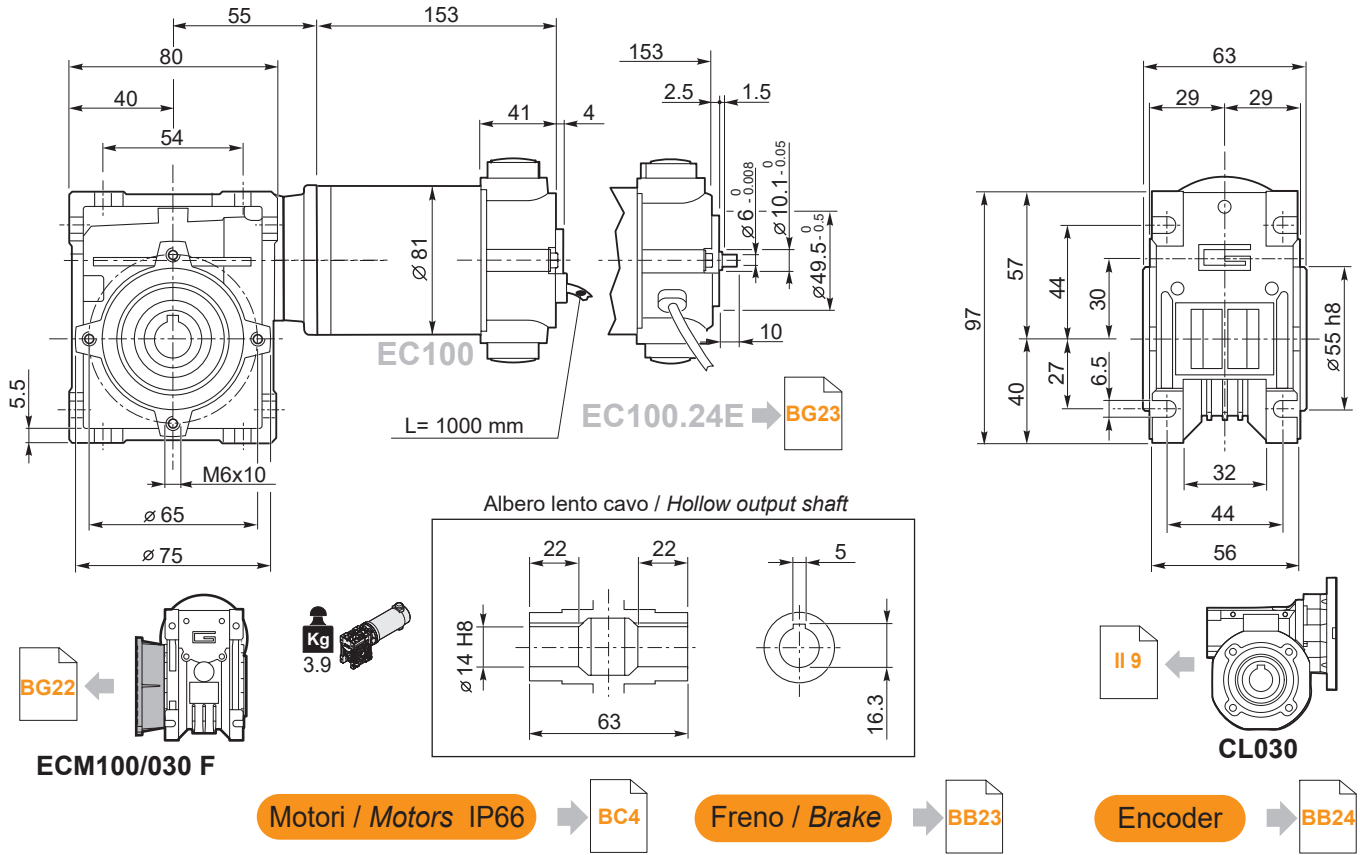
- Motori / Motors IP66** → **BC4**
- Freno / Brake** → **BB23**
- Encoder** → **BB24**



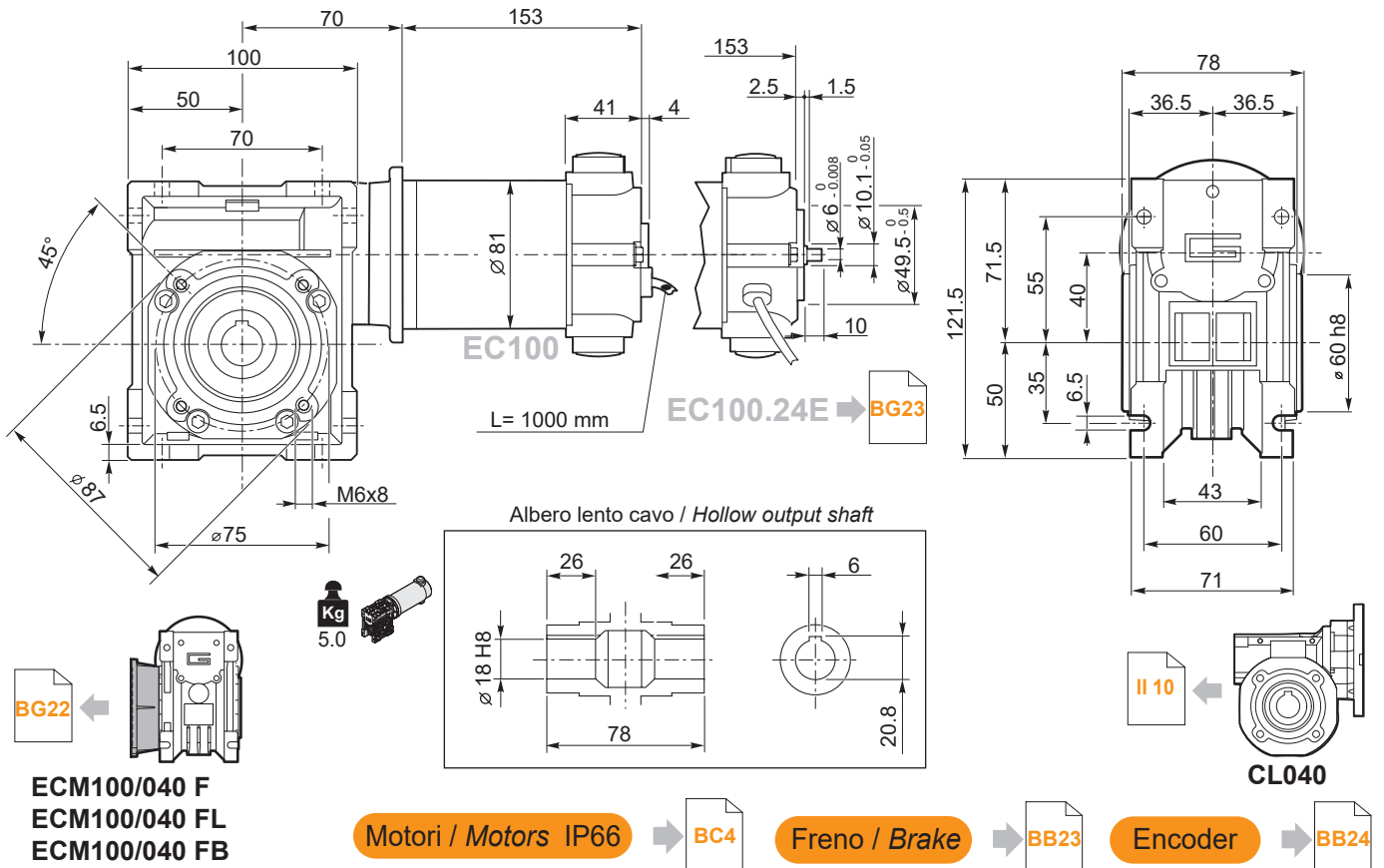
### Dimensioni

### Dimensions

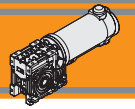
#### ECM100/030 U



#### ECM100/040 U



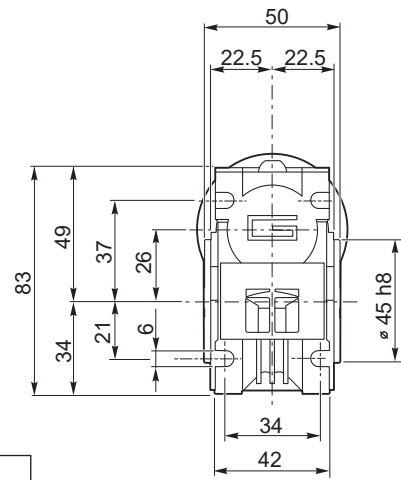
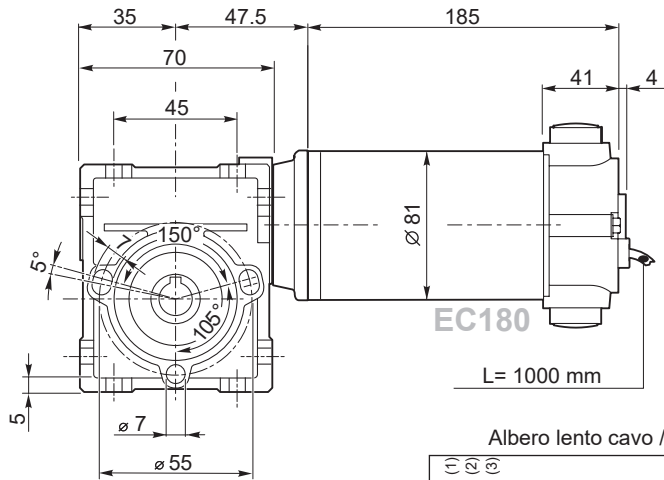




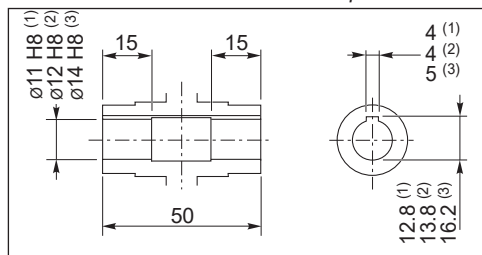
Dimensioni

Dimensions

ECM180/026 U



Albero lento cavo / Hollow output shaft



- (1): ECM 180/026 (D11)
- (2): ECM 180/026
- (3): ECM 180/026 (D14)



ECM180/026 F...

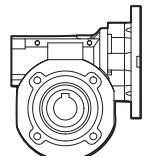
Motori / Motors IP66



Freno / Brake

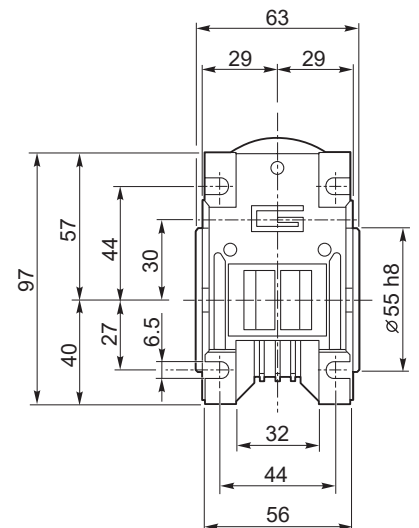
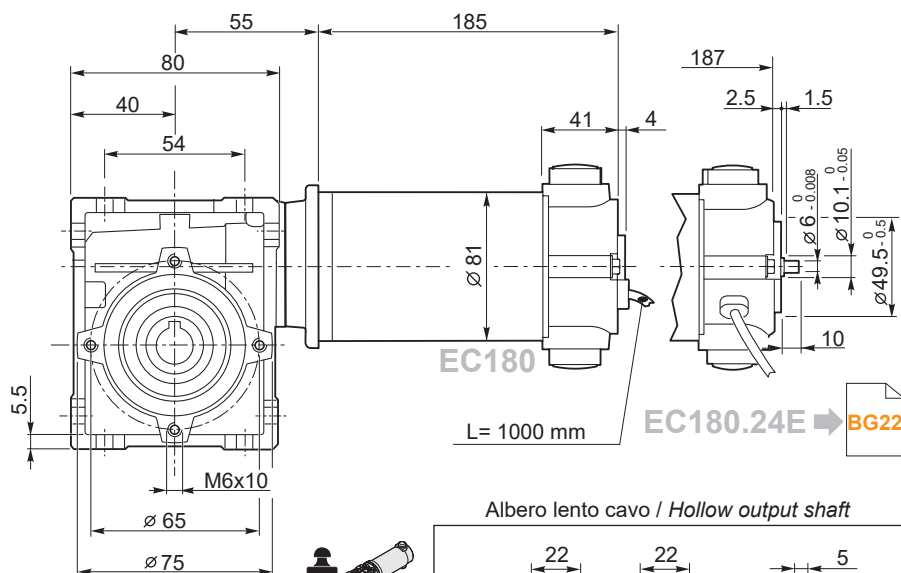


Encoder

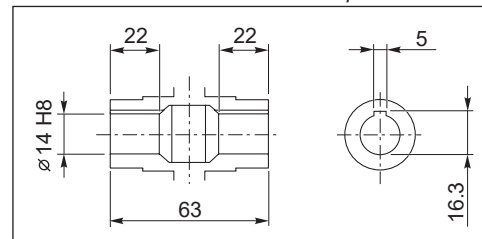


CL026

ECM180/030 U



Albero lento cavo / Hollow output shaft



ECM180/030 F

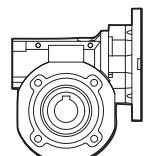
Motori / Motors IP66



Freno / Brake

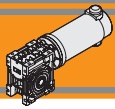


Encoder



CL030

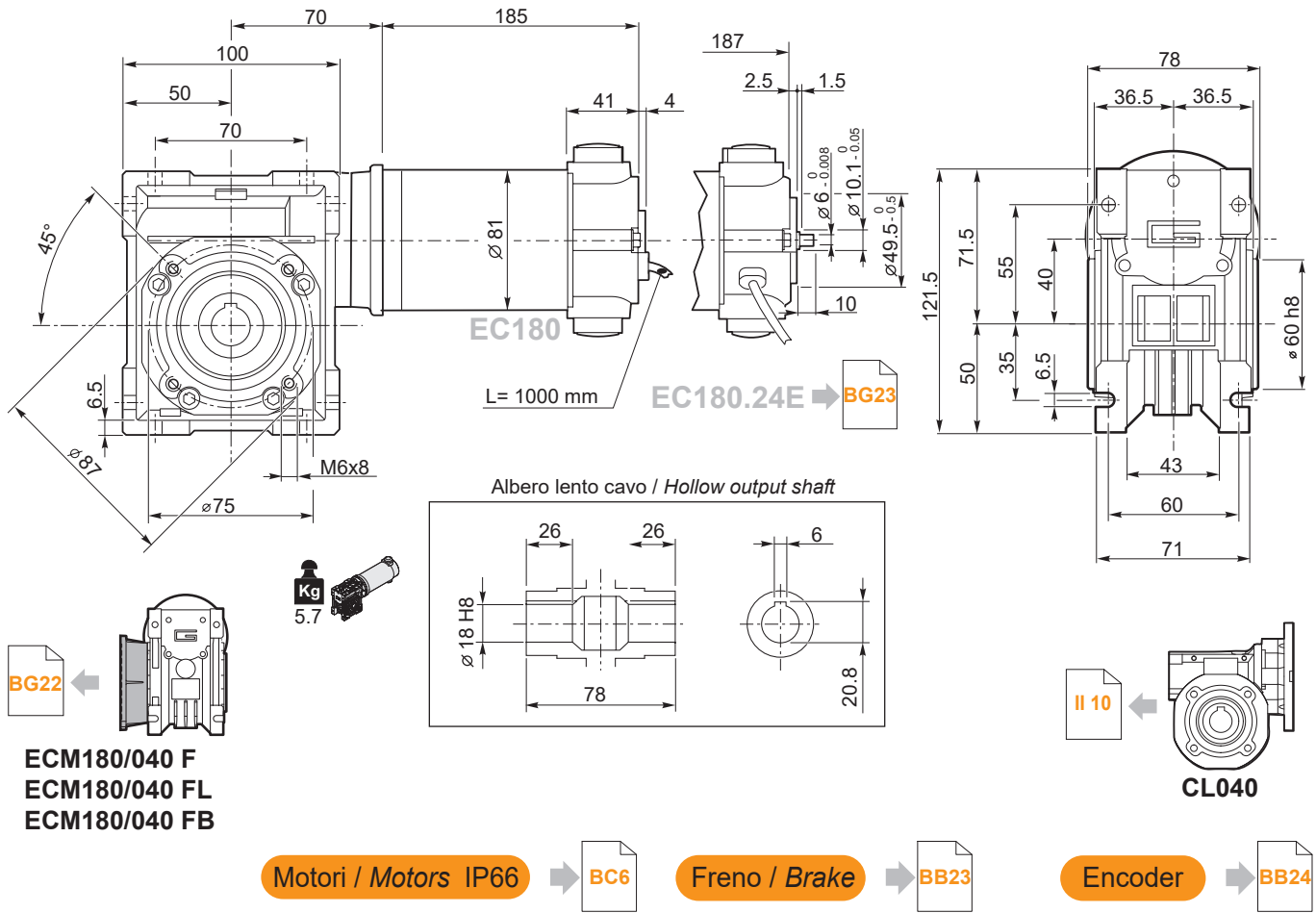
DC

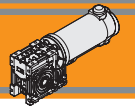


### Dimensioni

### Dimensions

#### ECM180/040 U

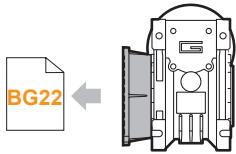
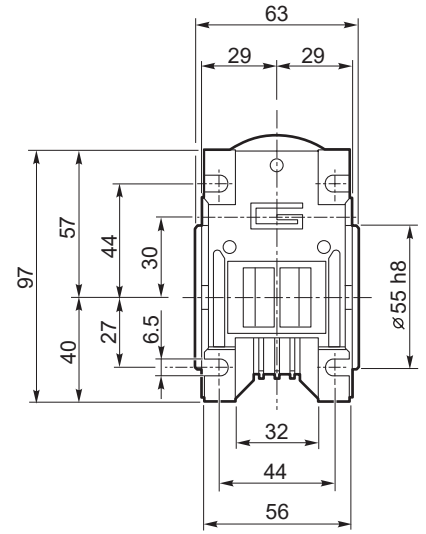
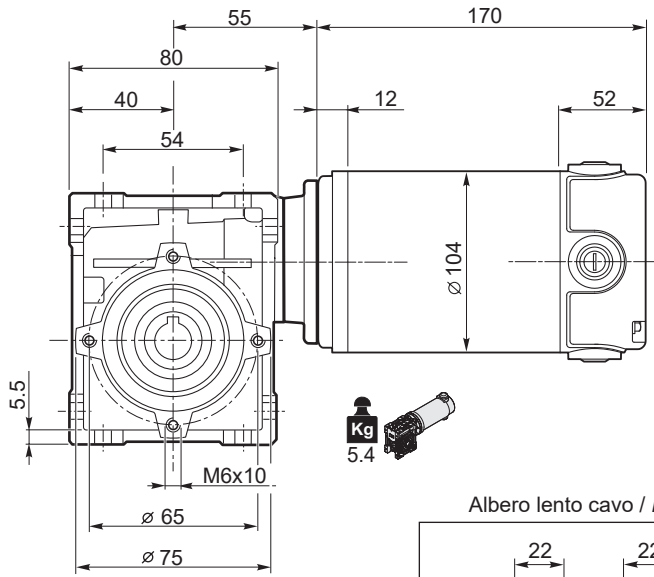




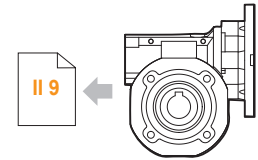
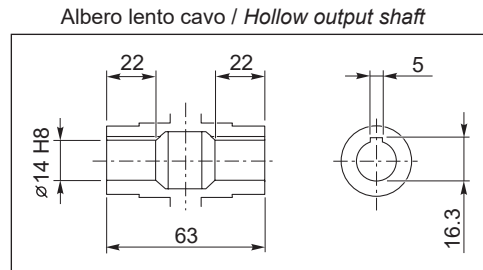
Dimensioni

Dimensions

ECM250/030 U



ECM250/030 F

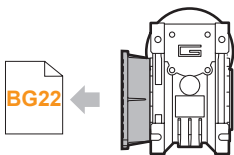
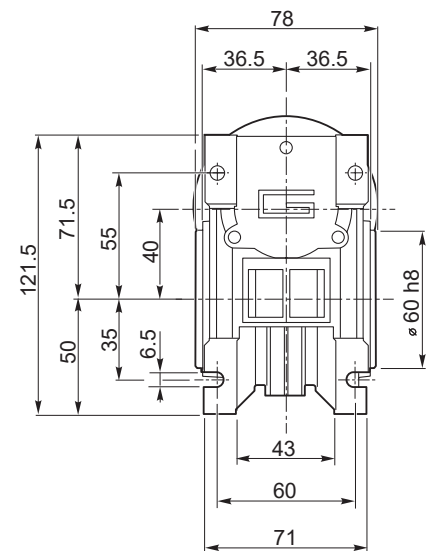
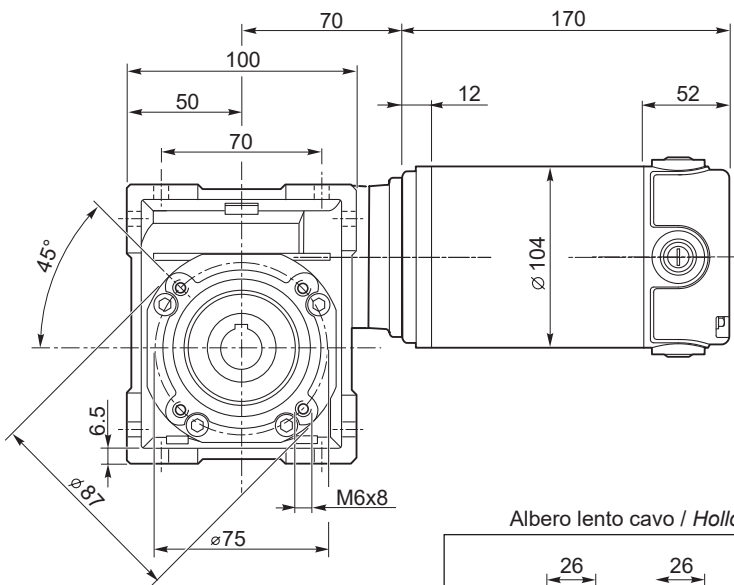


CL030

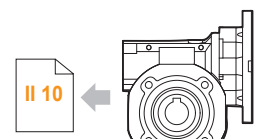
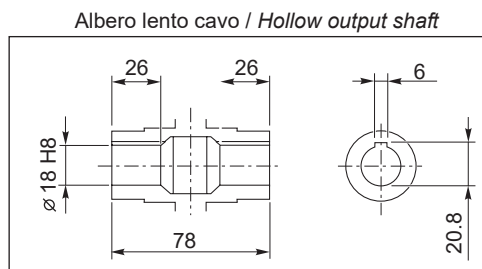
Motori / Motors IP66

BC8

ECM250/040 U



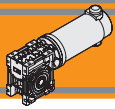
ECM250/040 F  
ECM250/040 FL  
ECM250/040 FB



CL040

Motori / Motors IP66

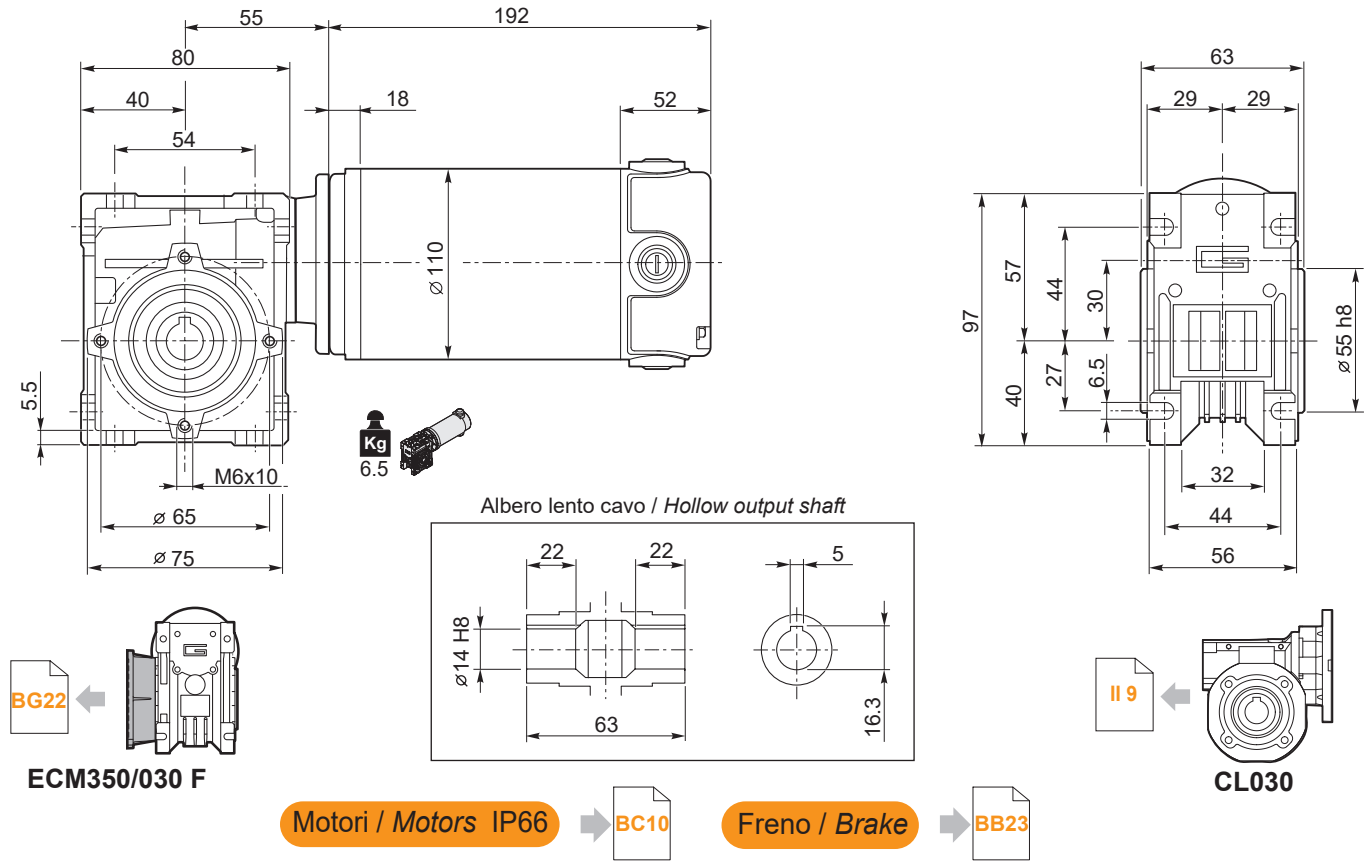
BC8



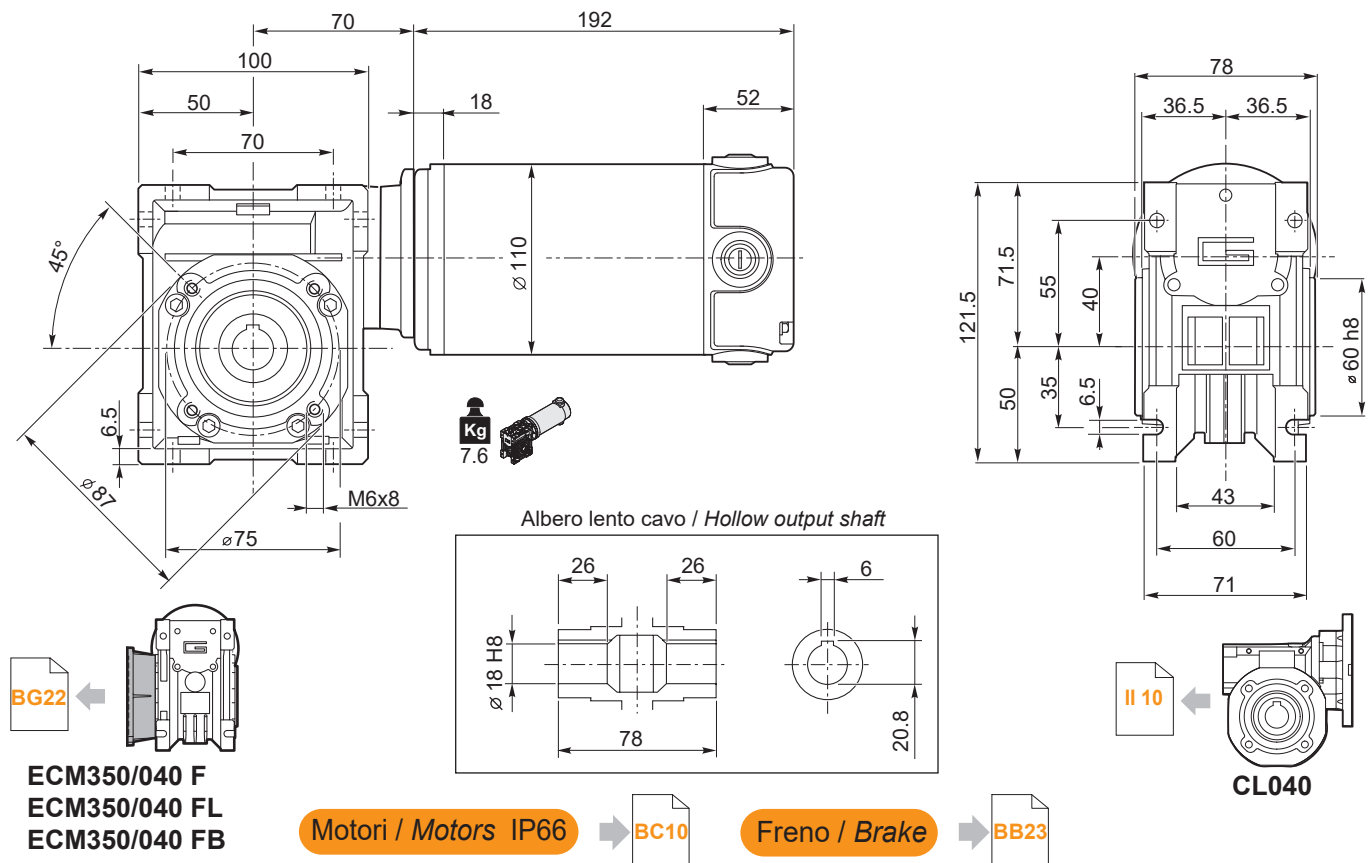
### Dimensioni

### Dimensions

#### ECM350/030 U



#### ECM350/040 U

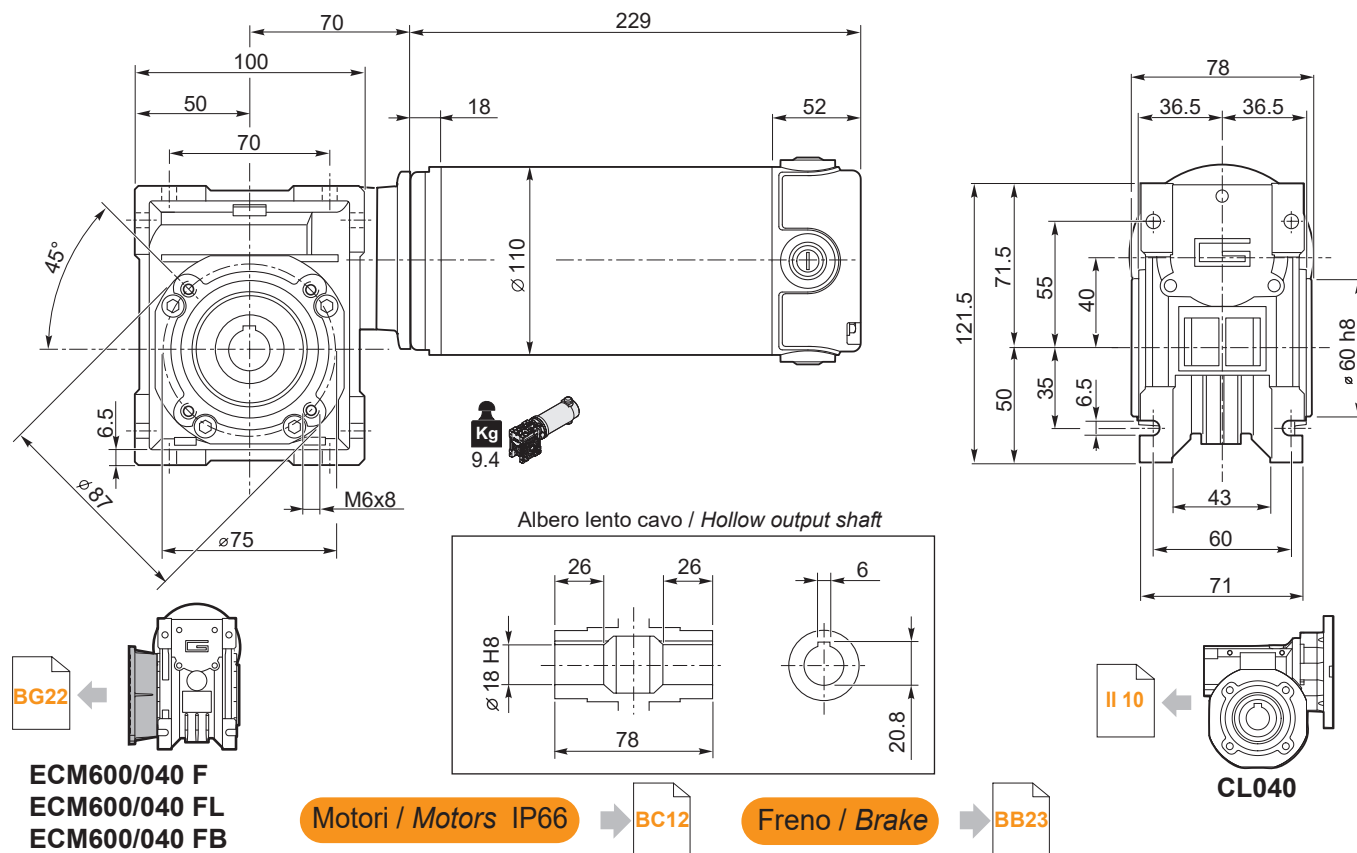


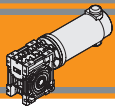


**Dimensioni**

**Dimensions**

**ECM600/040 U**

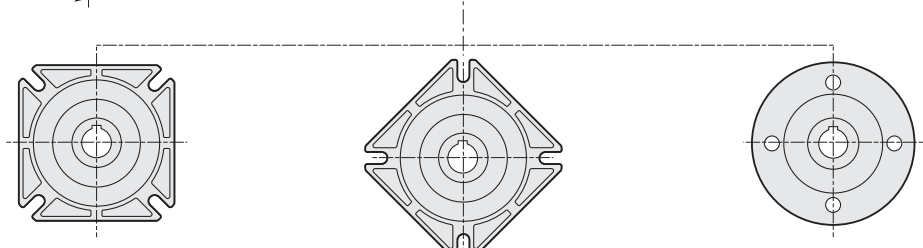
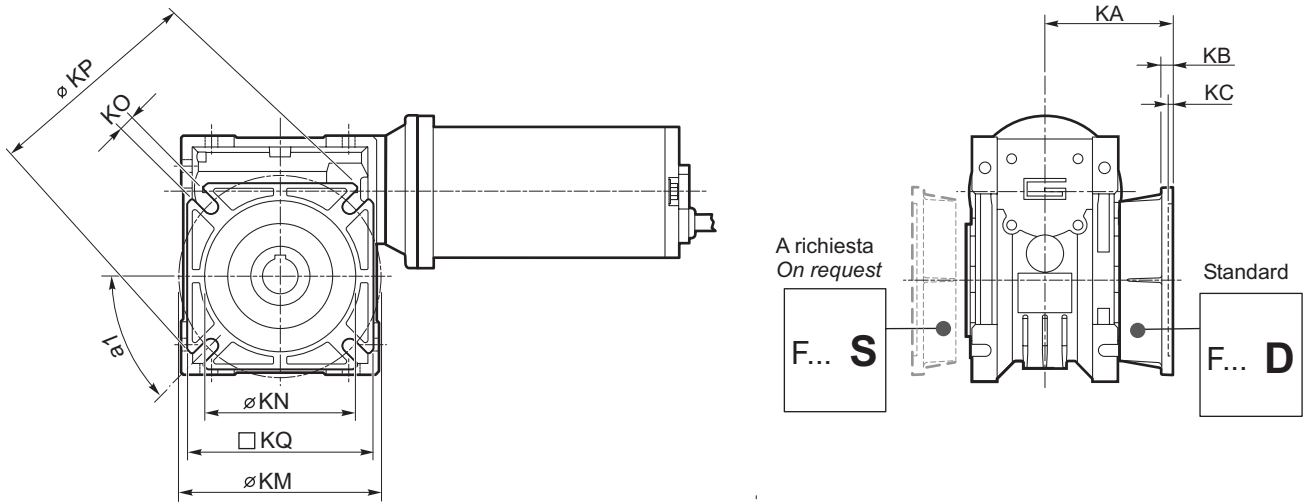




**Dimensioni**

**Dimensions**

**NDCM.../.... F... - ECM.../... F... Flange uscita / Output flanges**



- ..CM026 ../. F**  
**..CM026 ../. F28**  
**..CM026 ../. F30**  
**..CM026 ../. F30S**  
**..CM030 ../. F..**  
**..CM040 ../. F..**
- ..CM026 ../. F30C**  
**..CM026 ../. F30SC**
- ..CM026 ../. F100**

	CM..F						CM..F28						CM..F30						CM..F30S <sup>(1)</sup>														
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
<b>026 (D11)</b>	45°	45	6	4.5	55-69	40	6.5	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
<b>026 (D14)</b>							(n.4)																										

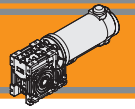
(1): F30S eseguita con F30 e distanziale di spessore 2 mm / F30S made with F30 and spacer with 2mm thickness

	CM..F30C						CM..F30SC <sup>(2)</sup>						CM..F100												
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC *	KM	KN <sub>h7</sub>	KO	KP	KQ
<b>026 (D11)</b>	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-
<b>026 (D14)</b>																									

(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / F30SC made with F30C and spacer with 2mm thickness

\*: Centraggio maschio / Male centering diameter

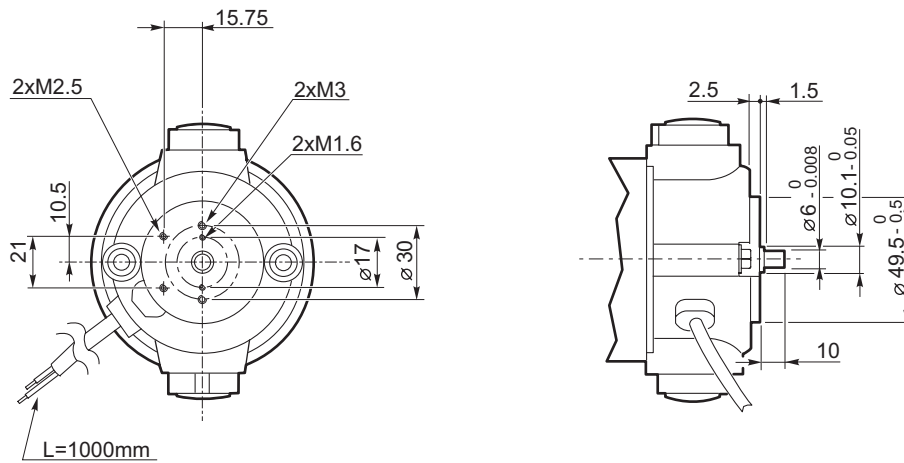
CM	CM..F						CM..FB						CM..FL												
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
<b>030</b>	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>040</b>	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9 (n.4)	110	95



Dimensioni

Dimensions

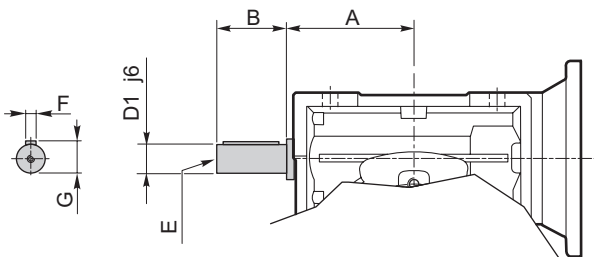
EC100.24E  
EC180.24E



Opzioni

Options

**VS** - Vite sporgente / Extended input shaft



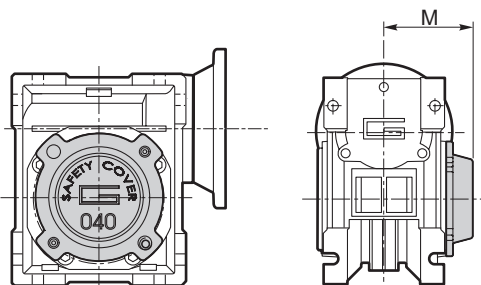
	A	B	D <sub>1</sub> j6	E	F	G
CM 030	45	20	9	M4	3	10.2
CM 040	53	23	11	M5	4	12.5

Costruito su richiesta  
Built on request

Accessori

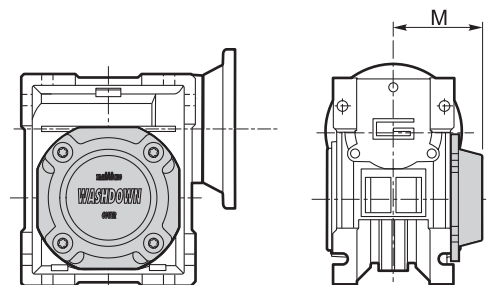
Accessories

**SC** - Safety cover

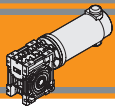


	M
CM 030	47
CM 040	54.5

**WD** - Kit washdown cover



	M
CM 030	48
CM 040	55.5

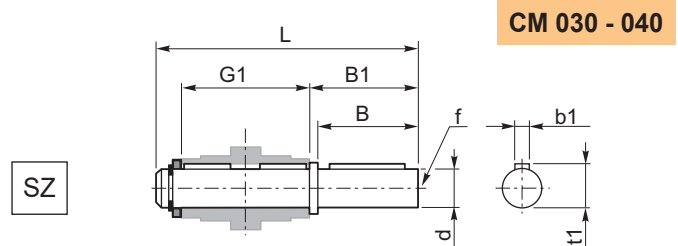
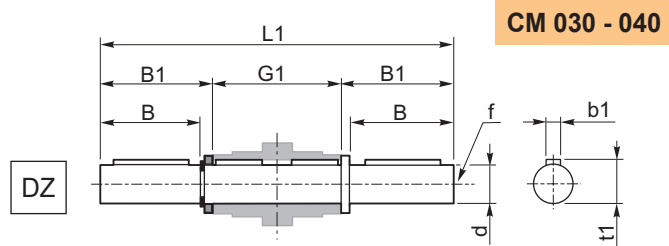


**Accessori**

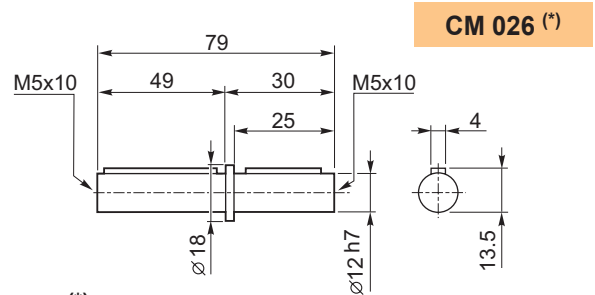
**Accessories**

**Albero lento**

**Output shaft**



	d h7	B	B1	G1	L	L1	f	b1	t1
<b>CM 030</b>	14	30	32.5	63	102	128	M6	5	16
<b>CM 040</b>	18	40	43	78	128	164	M6	6	20.5

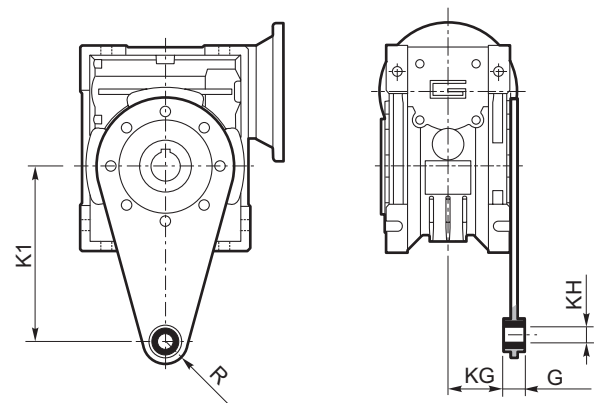


(\*)  
**Nota:** disponibile solo per cavo uscita Ø12  
**Note:** available for output hollow shaft Ø12 only

**Braccio di reazione**

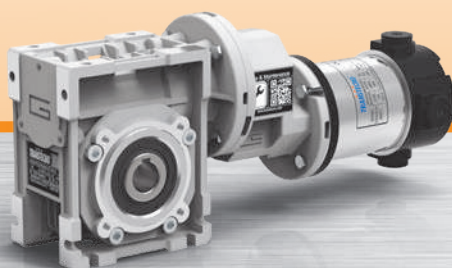
**Torque arm**

	K1	G	KG	KH	R
<b>CM 030</b>	85	14	23	8	15
<b>CM 040</b>	100	14	31	10	18

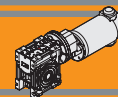




Motoriduttori CC a vite senza fine con precoppia  
DC pre stage wormgearmotors



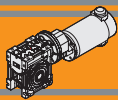




<b>Indice</b>	<b>Index</b>	Pag. Page
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Designazione	<i>Classification</i>	<b>BH2</b>
Simbologia	<i>Symbols</i>	<b>BH3</b>
Lubrificazione	<i>Lubrication</i>	<b>BH3</b>
Carichi radiali	<i>Radial loads</i>	<b>BH3</b>
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	<b>BH4</b>
Motori applicabili	<i>Motor adapters</i>	<b>BH5</b>
Dimensioni	<i>Dimensions</i>	<b>BH6</b>
Opzioni	<i>Options</i>	<b>BH13</b>
Accessori	<i>Accessories</i>	<b>BH13</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

*This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)*

**NDCMP  
ECMP****Motoriduttori CC a vite senza fine con precoppia  
DC Pre stage wormgearmotors****Caratteristiche tecniche****Technical features**

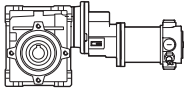
I motoriduttori CC a vite senza fine con precoppia a magneti permanenti in neodimio **NDCMP** e in ferrite **ECMP** hanno le seguenti caratteristiche principali:

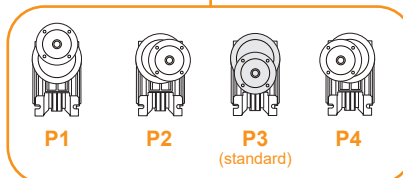
**NDCMP** neodymium permanent magnets and **ECMP** ferrite permanent magnets DC pre stage wormgearmotors range has the following main features:

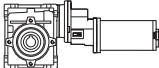
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 350W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

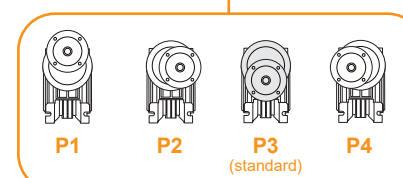
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 350W S2
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.

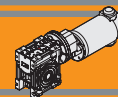
**Designazione****Classification**

MOTORIDUTTORE / GEARMOTOR										
NDCMP	120/056/030		U	90	SZDX	BRSX	90	P4	240	VS
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio precoppia Pre stage mounting position	Versione Motore Motor Version	Opzioni Options
	120/056/030	180/056/030	U FD FS FLD FLS FBD FBS	Vedere tabella  See tables	SZDX SZSX DZ	BRDX BRSX  *	0° 90° 180° 270°	P1 P2 P3 (standard) P4	120 — 240	VS
	120/056/040	180/056/040								



MOTORIDUTTORE / GEARMOTOR										
ECMP	070/056/030		U	90	SZDX	BRSX	90	P4	240	VS
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio precoppia Pre stage mounting position	Versione Motore Motor Version	Opzioni Options
	070/056/030	180/056/030	U FD FS FLD FLS FBD FBS	Vedere tabella  See tables	SZDX SZSX DZ	BRDX BRSX  *	0° 90° 180° 270°	P1 P2 P3 (standard) P4	120	VS
	070/056/040	180/056/040							240	
	100/056/030	250/063/040							24E	
	100/056/040									





### Designazione

### Classification

<p>Versione Riduttore Gearbox Version</p> <p><b>U</b>      <b>FD</b>      <b>FS</b> <b>FLD</b>      <b>FLS</b> <b>FBD</b>      <b>FBS</b></p>	<p>Albero di uscita Output shaft</p> <p><b>SZDX</b>      <b>SZSX</b>      <b>DZ</b></p>	<p>Braccio di reazione Torque arm *</p> <p><b>BRDX</b>      <b>BRSX</b></p>	<p>Angolo Angle</p>
-----------------------------------------------------------------------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------------------	---------------------------------------------------------------------------------	-------------------------

\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.

### Simbologia

### Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / Input speed	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / Output torque referred to $P_1$
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / Output speed	sf	Fattore di servizio / Service factor
i	Rapporto di riduzione / Ratio	$R_2$ [N]	Carico radiale ammissibile in uscita / Permitted output radial load
$P_1$ [kW]	Potenza in entrata / Input power	$A_2$ [N]	Carico assiale ammissibile in uscita / Permitted output axial load

### Lubrificazione

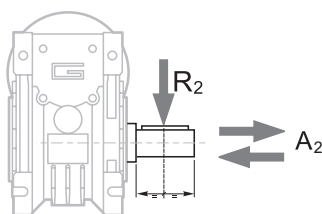
### Lubrication

I riduttori a vite senza fine con precoppia della serie CMP sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

Permanent synthetic oil long - life lubrication allow to use CMP range in all mounting positions.

### Carichi radiali

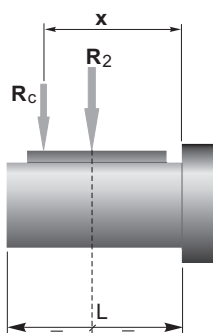
### Radial loads



$n_2$ [min <sup>-1</sup> ]	$R_2$ [N]	
	CM030	CM040
35	1179	2210
28	1270	2381
23	1356	2542
18	1471	2759
14	1600	3000

Quando il carico radiale risultante non è applicato sulla mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:

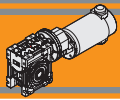


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

$a, b =$  valori riportati nella tabella  
 $a, b =$  values given in the table




	CM	
	030	040
$a$	65	84
$b$	50	64
$R_{2MAX}$	1600	3000






**Dati tecnici per servizio S2**

**NDCMP**

**Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>160</b>						
(3000 min <sup>-1</sup> )	<b>50</b>	21	1.0	60		<b>120/056/030</b>
	<b>40</b>	25	0.9	75		
	<b>33</b>	28	1.0	90		
	<b>25</b>	35	0.7	120		
	<b>20</b>	31	0.7	150		
	<b>50</b>	22	2.0	60		<b>120/056/040</b>
	<b>40</b>	26	1.7	75		
	<b>33</b>	30	1.9	90		
	<b>25</b>	36	1.3	120		
	<b>20</b>	43	1.1	150		
	<b>17</b>	48	0.9	180		
	<b>13</b>	55	0.7	240		
	<b>10</b>	51	0.7	300		

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
<b>250</b>						
(3000 min <sup>-1</sup> )	50	31	0.7	60		<b>180/056/030</b>
	40	31	0.7	75		
	33	39	0.7	90		
	25	33	0.7	120		
	20	31	0.7	150		
	50	35	1.3	60		<b>180/056/040</b>
	40	41	1.1	75		
	33	46	1.2	90		
	25	56	0.9	120		
	20	66	0.7	150		
	17	61	0.7	180		
	13	57	0.7	240		
	10	51	0.7	300		

**NOTA**  
Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio

**NOTE**  
Please check that the output torque  $M_2$  does not exceed the value in the grey areas

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

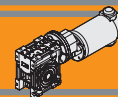
**NOTE:** for continuous or highly intermittent duty, please contact our technical service

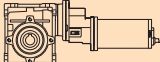
**Dati tecnici elettrici**

**Electrical technical data**

**ND 120** → 

**ND 180** → 


**Dati tecnici per servizio S2**
**ECMP**
**Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
--------------	-------------------------------	---------------	----	---	-----------------------------------------------------------------------------------	----------------------------------

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version
--------------	-------------------------------	---------------	----	---	-------------------------------------------------------------------------------------	----------------------------------

**100**

(3000 min <sup>-1</sup> )	50	13	1.7	60	<b>ECMP070/056/030</b>	12E/24E		
	40	16	1.4	75				
	33	17	1.6	90				
	25	22	1.1	120				
	20	25	0.9	150				
	50	14	3.2	60			<b>ECMP070/056/040</b>	12E/24E
	40	16	2.7	75				
	33	19	3.0	90				
	25	22	2.1	120				
	20	27	1.7	150				
17	30	1.4	180					
13	34	1.2	240					
10	38	0.9	300					

**250**

(3000 min <sup>-1</sup> )	50	33	0.7	60	<b>ECMP180/056/030</b>	120/240		
	40	31	0.7	75				
	33	39	0.7	90				
	25	33	0.7	120				
	20	31	0.7	150				
	50	35	1.3	60			<b>ECMP180/056/040</b>	120/240
	40	41	1.1	75				
	33	46	1.2	90				
	25	56	0.9	120				
	20	67	0.7	150				
17	61	0.7	180					
13	57	0.7	240					
10	51	0.7	300					
50	35	1.3	60	<b>ECMP180/063/040</b>	24E			
40	41	1.1	75					
33	46	1.2	90					
25	56	0.9	120					

**140**

(3000 min <sup>-1</sup> )	50	19	1.2	60	<b>ECMP100/056/030</b>	120/240/24E		
	40	22	1.0	75				
	33	24	1.1	90				
	25	30	0.8	120				
	20	31	0.7	150				
	50	19	2.3	60			<b>ECMP100/056/040</b>	120/240/24E
	40	23	1.9	75				
	33	26	2.2	90				
	25	31	1.5	120				
	20	37	1.2	150				
17	42	1.0	180					
13	48	0.8	240					
10	54	0.7	300					

**350**

(3000 min <sup>-1</sup> )	50	48	0.9	60	<b>ECMP250/063/040</b>	120/240
	40	57	0.8	75		
	33	65	0.9	90		
	25	69	0.7	120		

**NOTA**

Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio

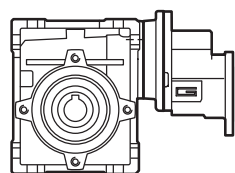
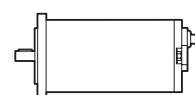
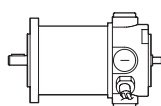
**NOTE**

Please check that the output torque  $M_2$  does not exceed the value in the grey areas

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

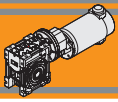
**Dati tecnici elettrici**
**Electrical technical data**

**Motori applicabili**
**Motor adapters**


		ND		EC					
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
<b>CMP</b>	056/030	150	150	150	150	150			
	056/040	300	300	300	300	300			
	063/040						120	120	120

150

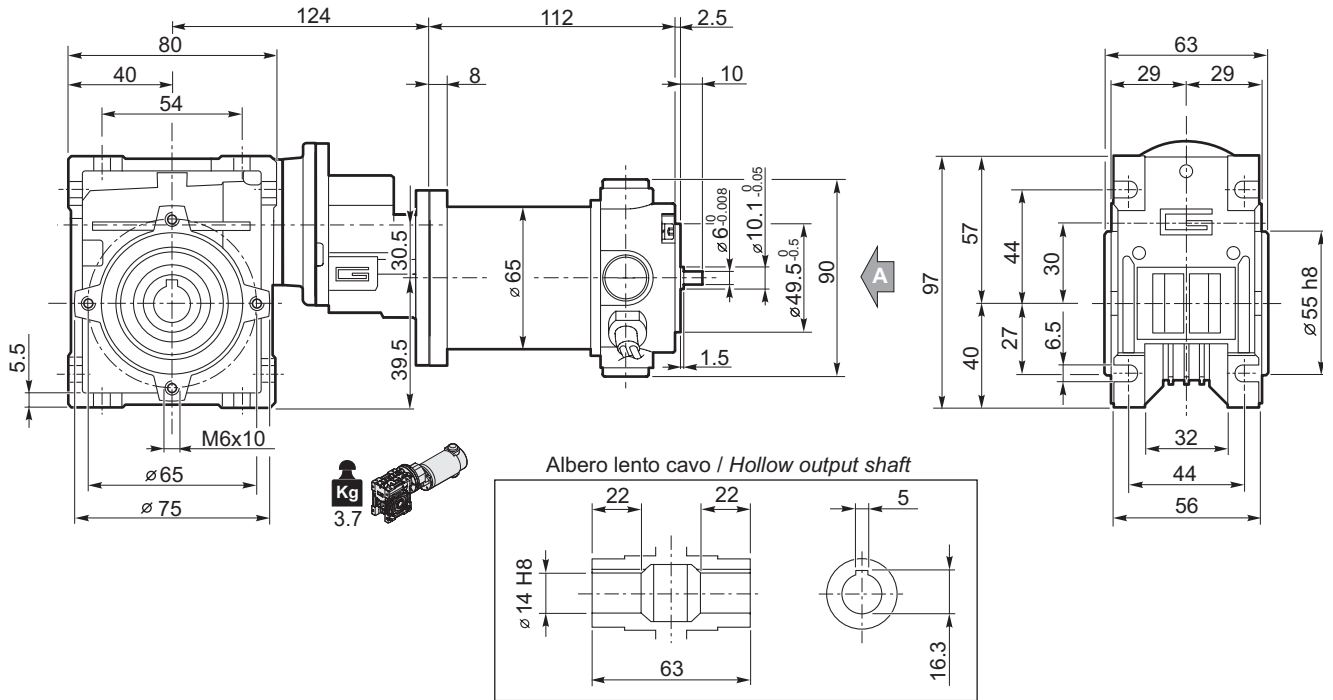
Rapporto di riduzione massimo  $i_{max}$   
Maximum ratio  $i_{max}$



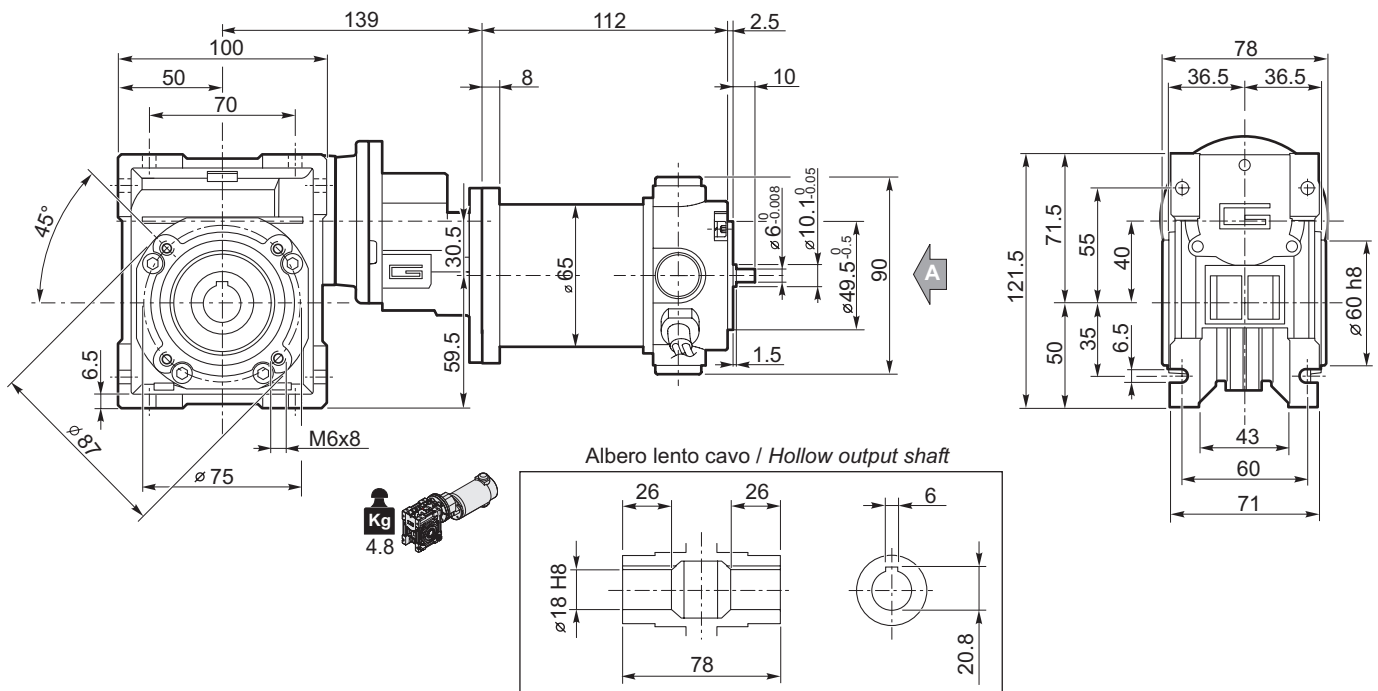
**Dimensioni**

**Dimensions**

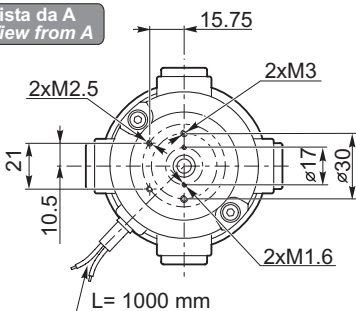
**NDCMP120/056/030 U**



**NDCMP120/056/040 U**



Vista da A  
View from A

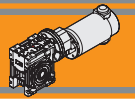


**NDCMP120/056/030 F**  
**NDCMP120/056/040 F...**

**CL030**  
**CL040**

**Freno / Brake** → BA9    **Encoder** → BA9

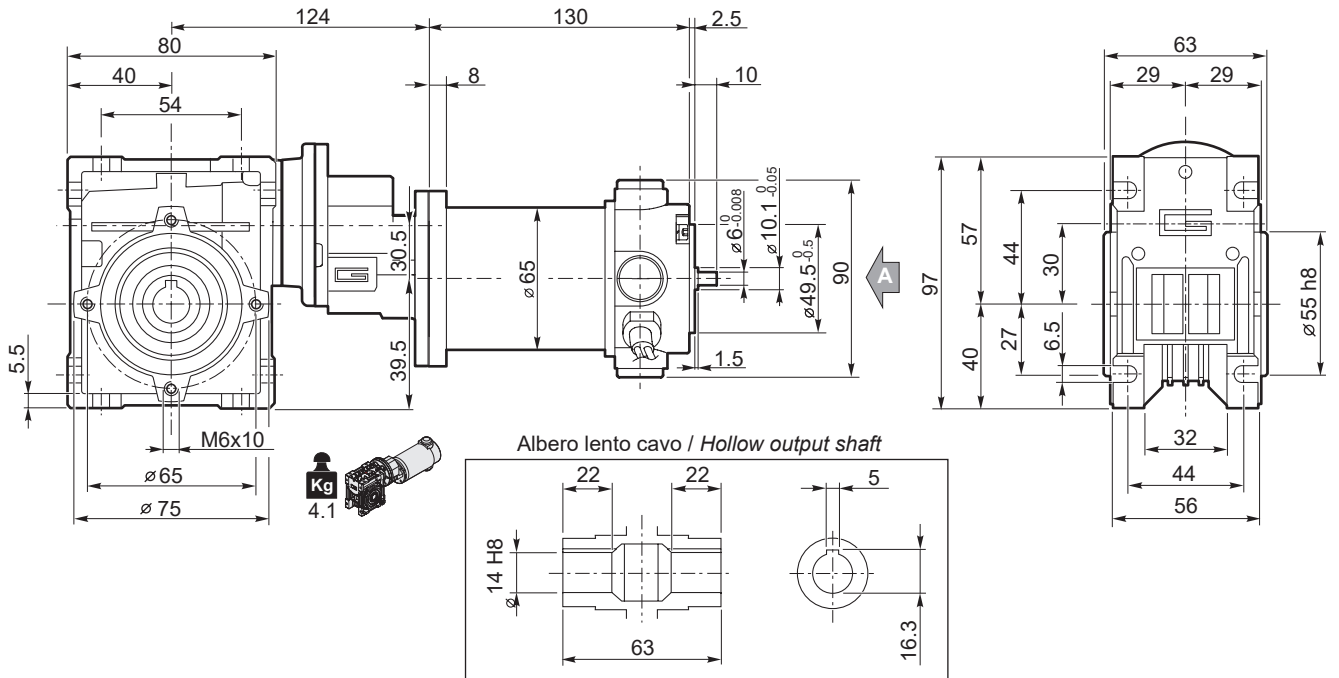




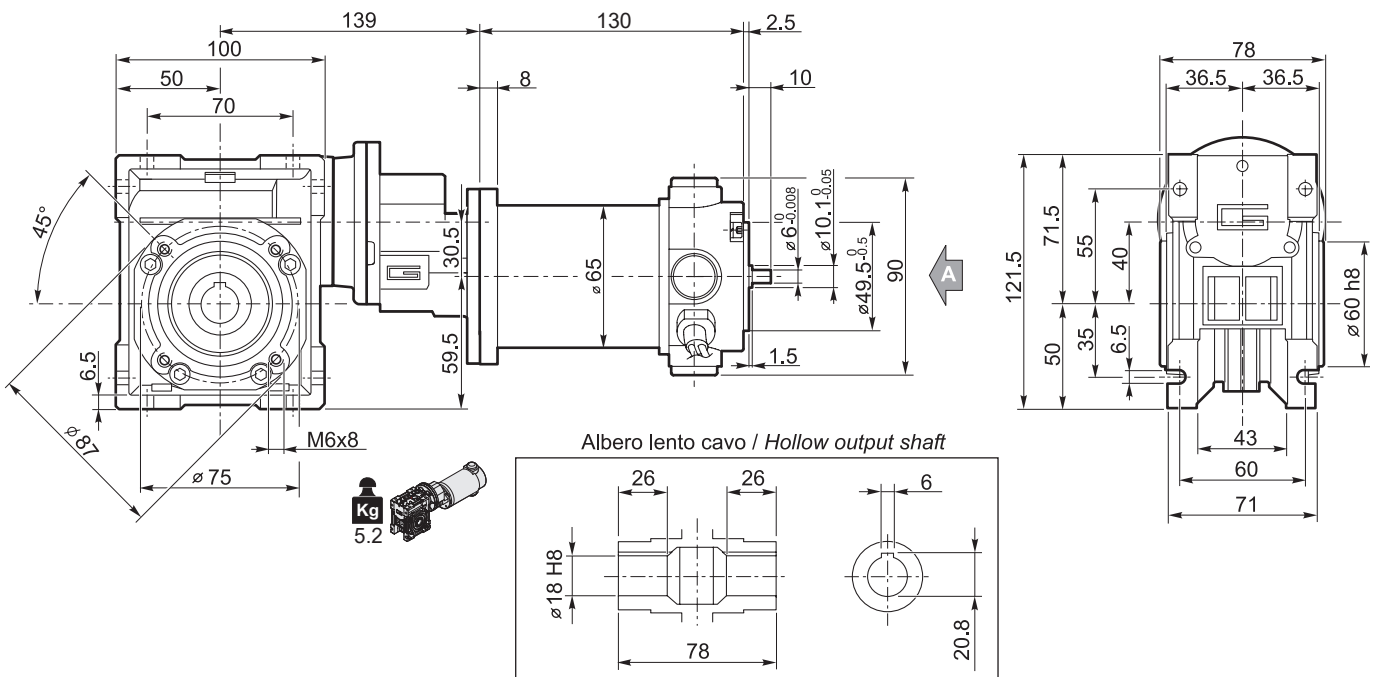
Dimensioni

Dimensions

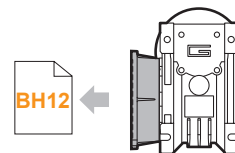
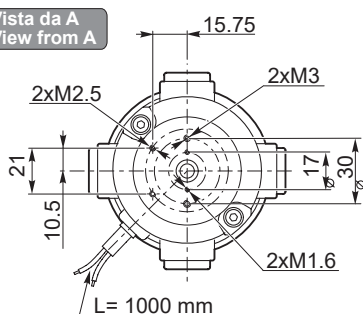
**NDCMP180/056/030 U**



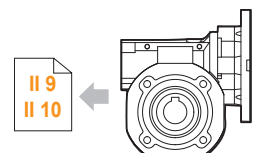
**NDCMP180/056/040 U**



Vista da A  
View from A



NDCMP180/056/030 F  
NDCMP180/056/040 F..



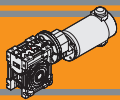
CL030  
CL040

Freno / Brake



Encoder

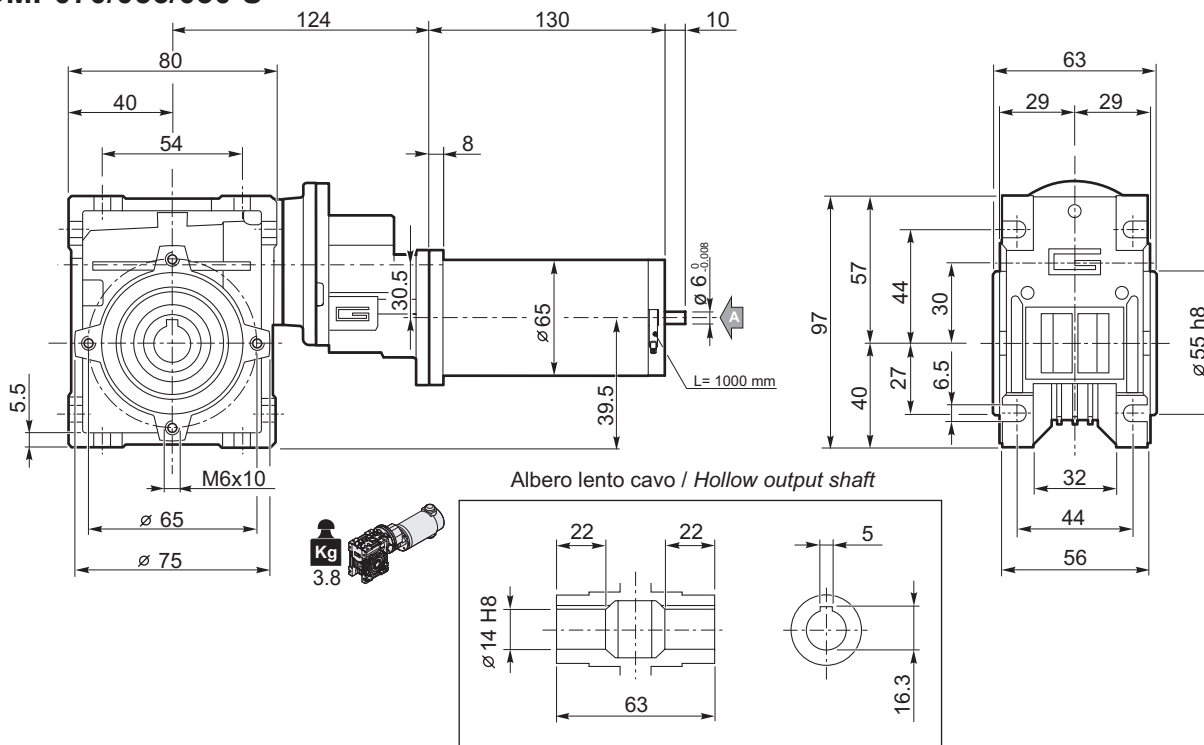




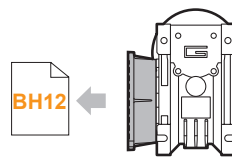
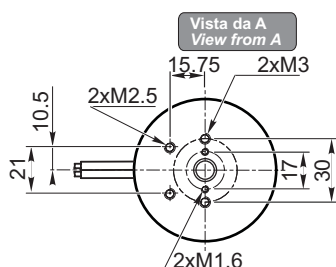
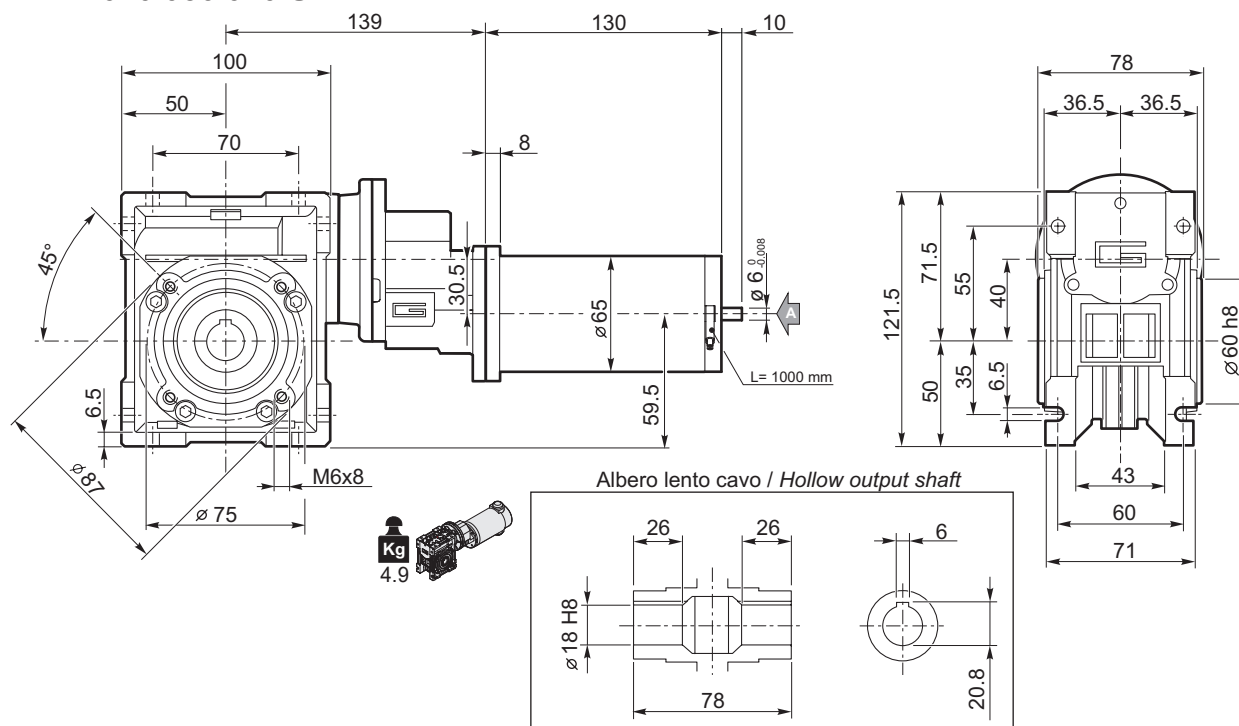
### Dimensioni

### Dimensions

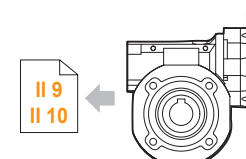
#### ECMP070/056/030 U



#### ECMP070/056/040 U



BH12  
ECMP070/056/030 F  
ECMP070/056/040 F..

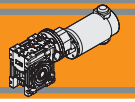


CL030  
CL040

Motori / Motors IP66 → BC2

Freno / Brake → BB23

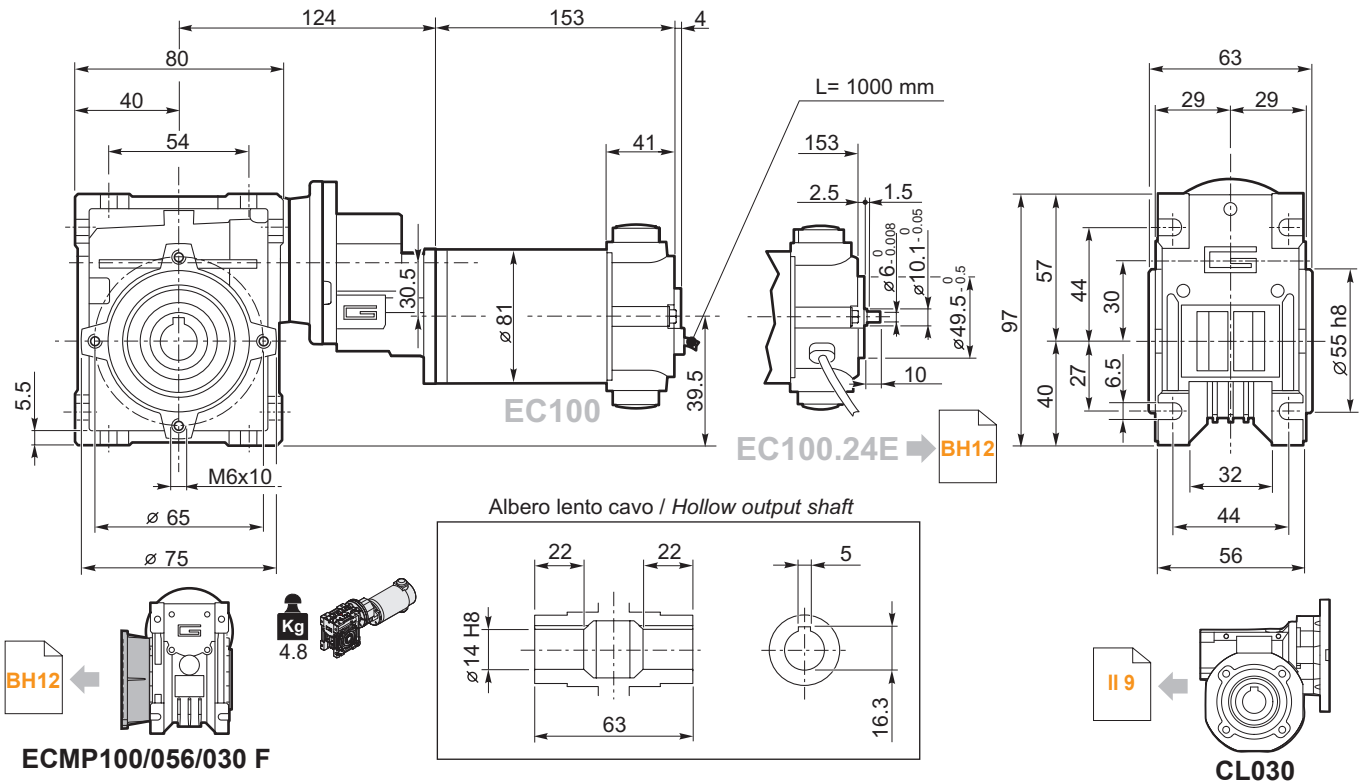
Encoder → BB24



Dimensioni

Dimensions

ECMP100/056/030 U

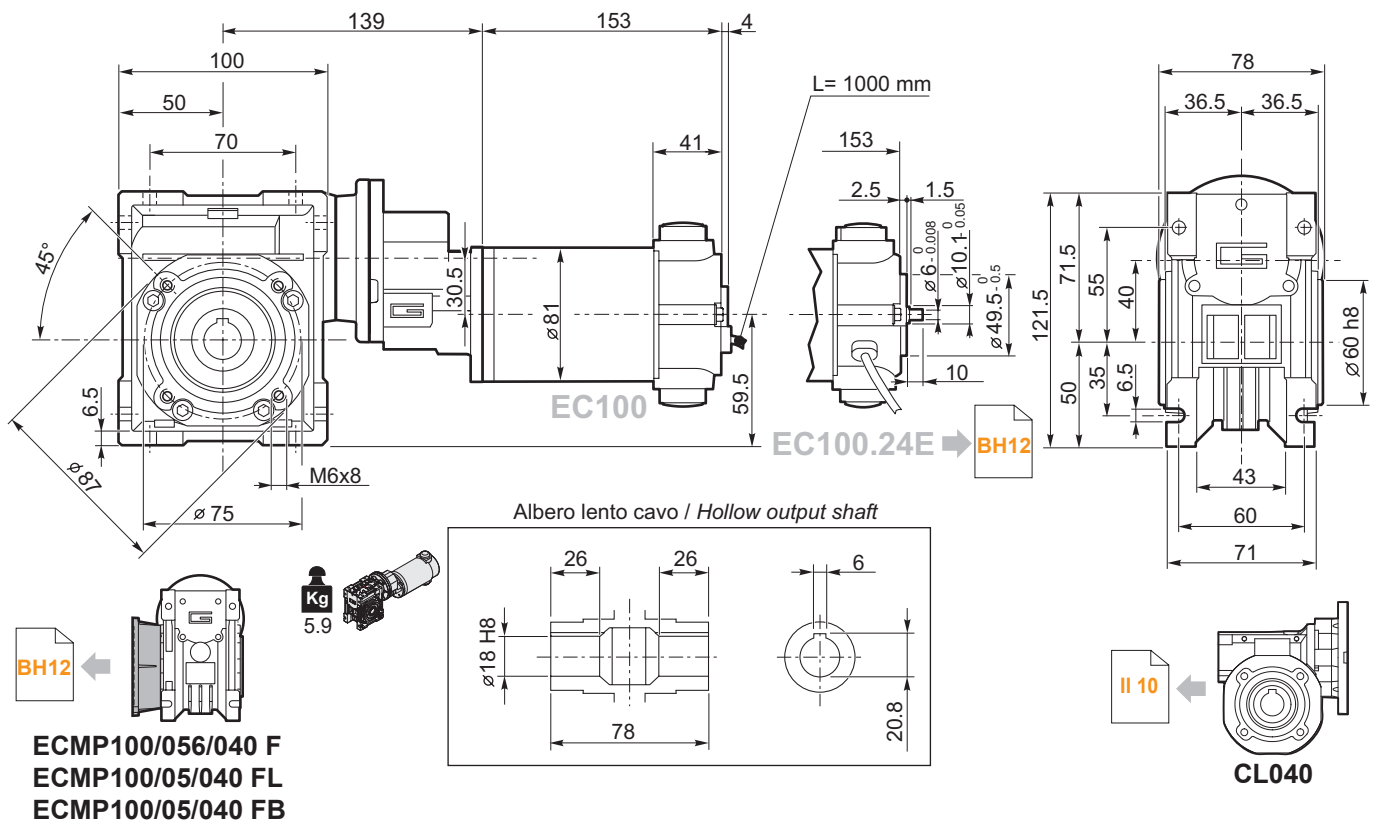


Motori / Motors IP66 → BC4

Freno / Brake → BB23

Encoder → BB24

ECMP100/056/040 U

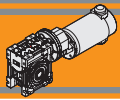


Motori / Motors IP66 → BC4

Freno / Brake → BB23

Encoder → BB24

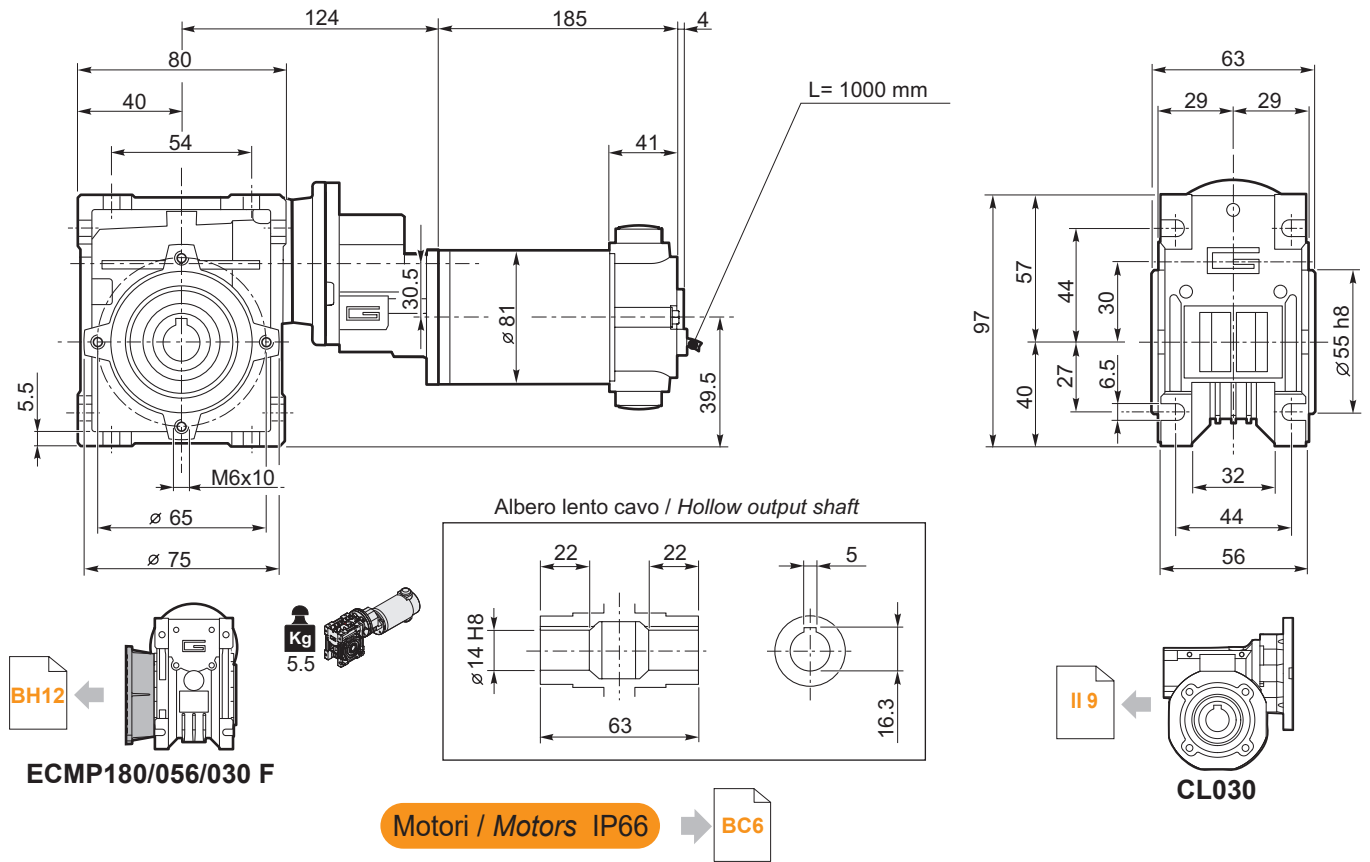
DC



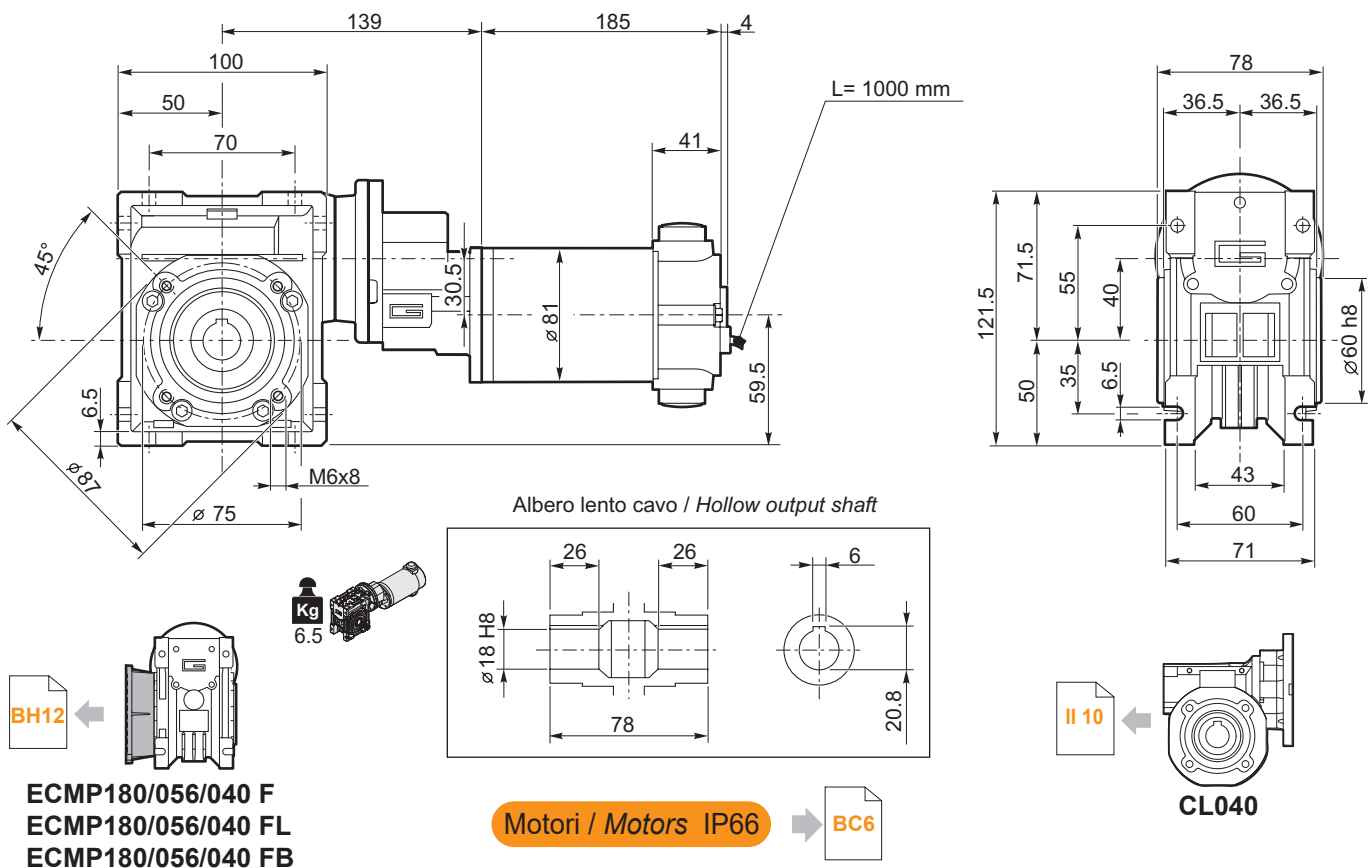
### Dimensioni

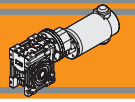
### Dimensions

#### ECMP180/056/030 U



#### ECMP180/056/040 U

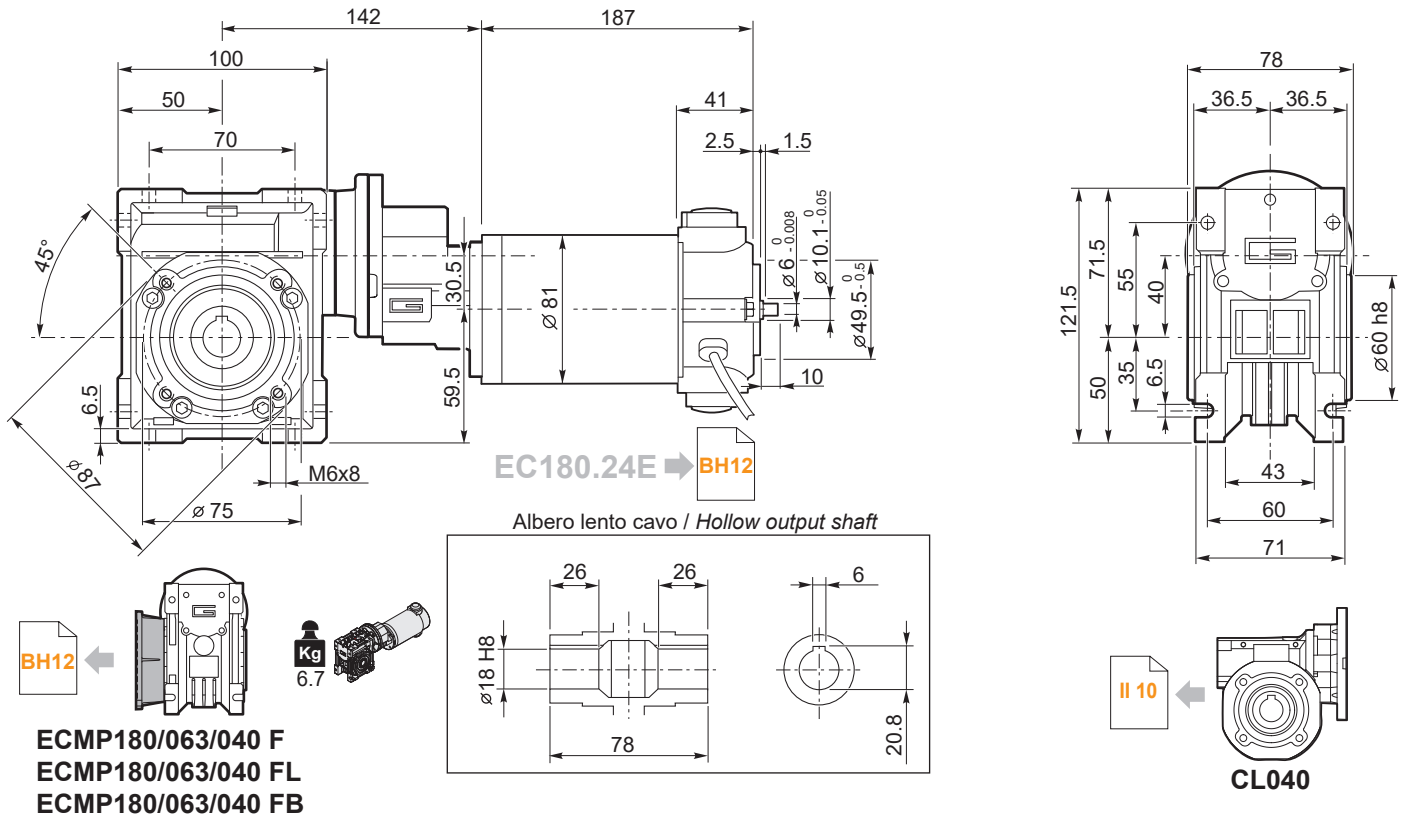




Dimensioni

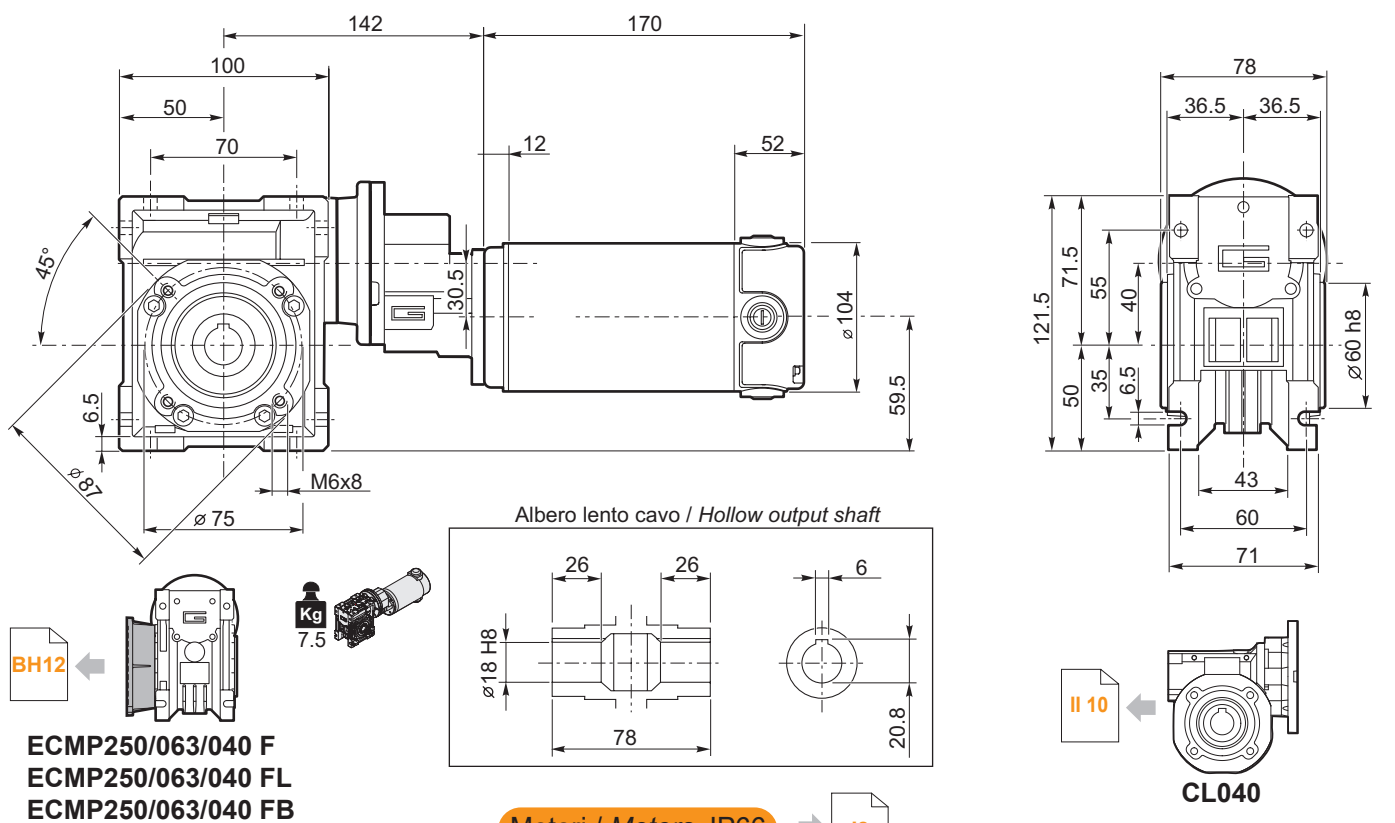
Dimensions

ECMP180/063/040 U



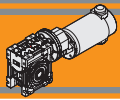
Motori / Motors IP66 → BC6    Freno / Brake → BB23    Encoder → BB24

ECMP250/063/040 U



Motori / Motors IP66 → I8

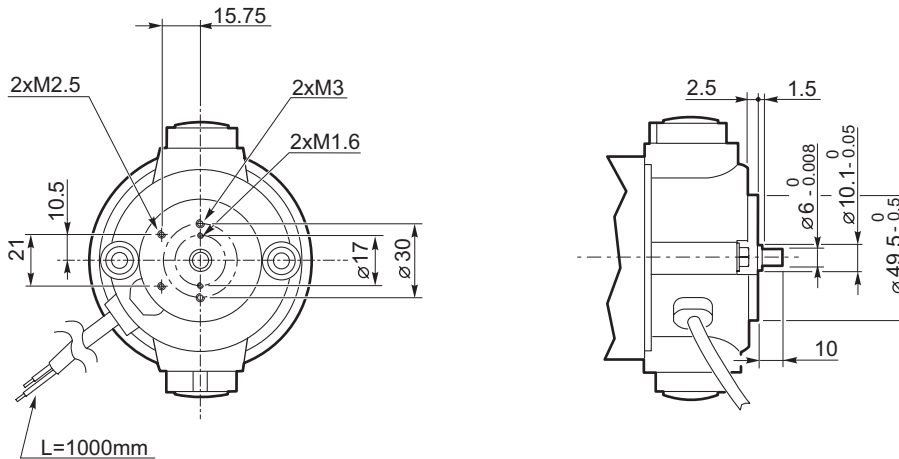
DC



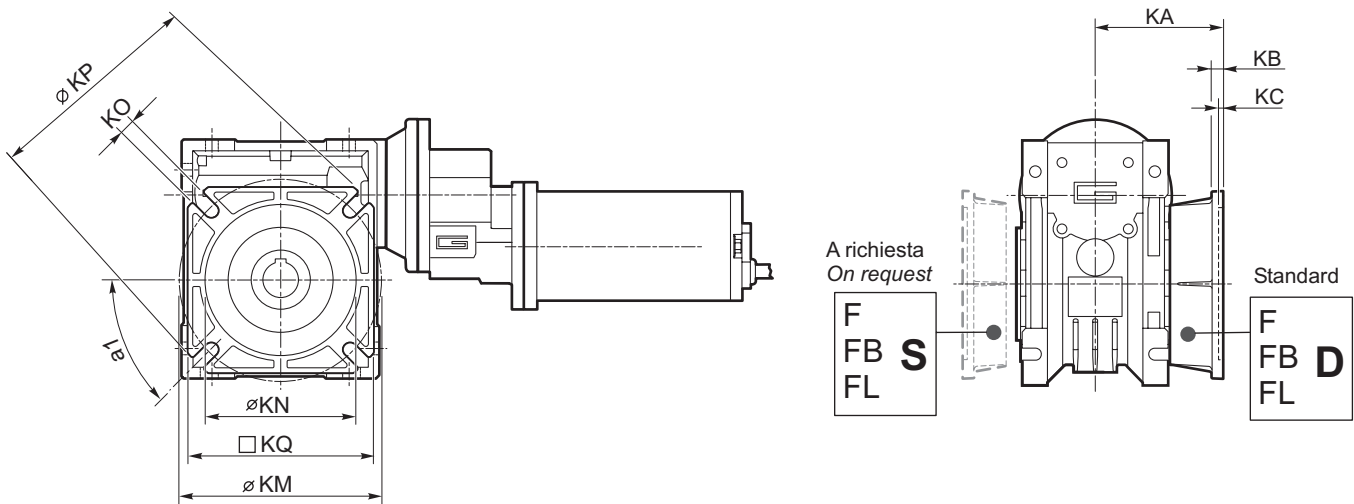
**Dimensioni**

**Dimensions**

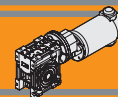
**EC100.24E  
EC180.24E**



**ECMP.../... F... Flange uscita / Output flanges**



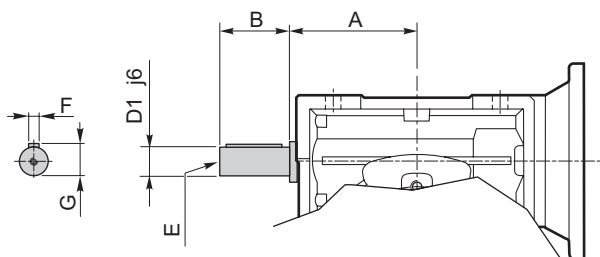
CMP	CMP..F								CMP..FB							CMP..FL									
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
056/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
056/040 063/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95



Opzioni

Options

**VS - Vite sporgente / Extended input shaft**



CMP	A	B	D <sub>1</sub> j <sub>6</sub>	E	F	G
056/030	45	20	9	M4	3	10.2
056/040 063/040	53	23	11	M5	4	12.5

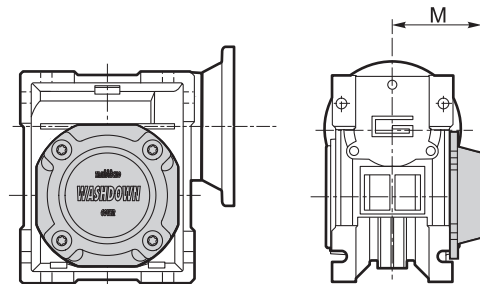
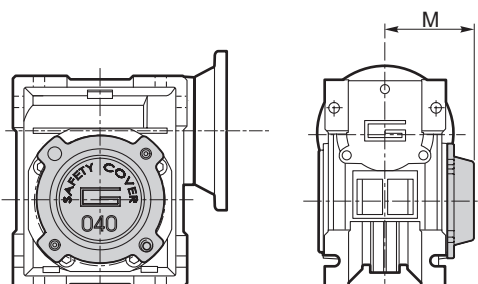
Costruito su richiesta  
Built on request

Accessori

Accessories

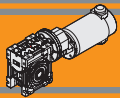
**SC - Safety cover**

**WD - Kit washdown cover**



	M
CM 030	47
CM 040	54.5

	M
CM 030	48
CM 040	55.5



**Accessori**

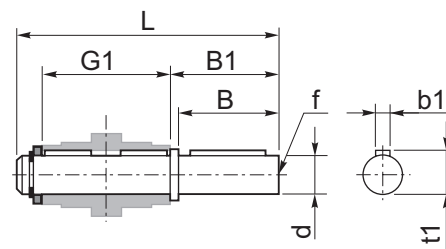
**Accessories**

**Albero lento semplice e doppio**

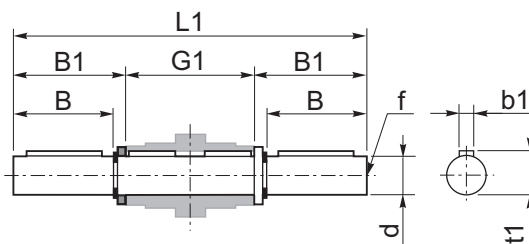
**Single and double output shaft**

CMP	d <sub>h7</sub>	B	B1	G1	L	L1	f	b1	t1
056/030	14	30	32.5	63	102	128	M6	5	16
056/040 063/040	18	40	43	78	128	164	M6	6	20.5

SZ



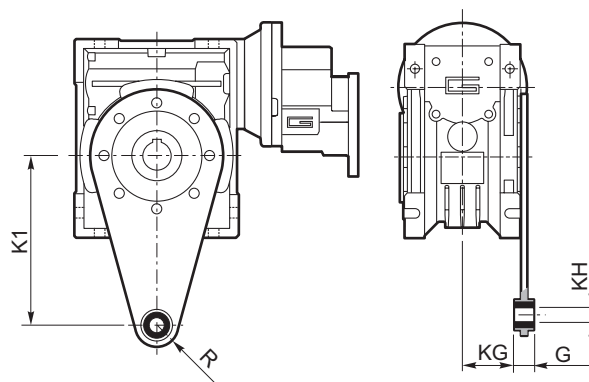
DZ



**Braccio di reazione**

**Torque arm**

CMP	K1	G	KG	KH	R
056/030	85	14	23	8	15
056/040 063/040	100	14	31	10	18





**MINI**  **TECNO**™  
**small** but strong

**ECMM**

Motoriduttori CC a vite senza fine combinati  
DC double reduction wormgearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC

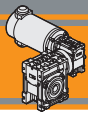




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Designazione	<i>Classification</i>	<b>B12</b>
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Esecuzioni di montaggio	<i>Mounting executions</i>	<b>B12</b>
Combinazioni rapporti	<i>Combination ratio</i>	<b>B13</b>
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Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	<b>B14</b>
Motori applicabili	<i>Motor adapters</i>	<b>B15</b>
Dimensioni	<i>Dimensions</i>	<b>B16</b>
Opzioni	<i>Options</i>	<b>BI15</b>
Accessori	<i>Accessories</i>	<b>BI15</b>

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## Caratteristiche tecniche

## Technical features

I motoriduttori CC a vite senza fine combinati a magneti permanenti in ferrite ECMM hanno le seguenti caratteristiche principali:

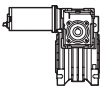
- Alimentazione in bassa tensione 12/24Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 500W S2
- Carcassa dei riduttori in pressofusione di alluminio.
- Lubrificazione permanente con olio sintetico

**ECMM ferrite permanent magnets DC double reduction wormgearmotors range has the following main features:**

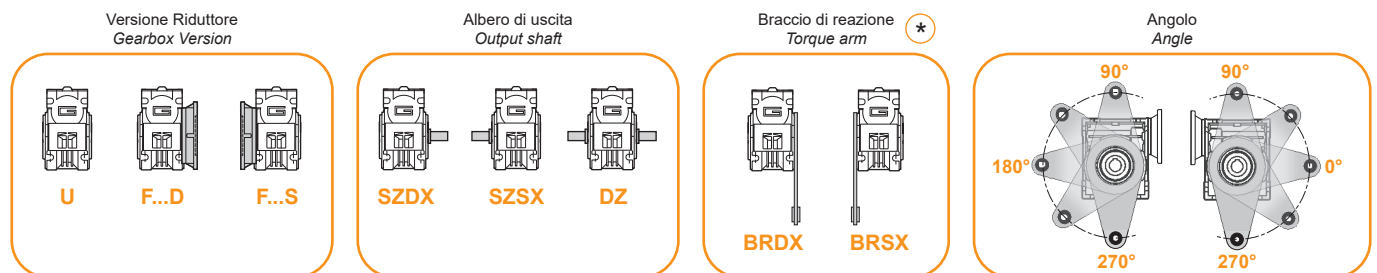
- Low voltage power supply 12/24Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 800W S2
- Die cast aluminium housing
- Permanent synthetic oil long life lubrication

## Designazione

## Classification

MOTORIDUTTORE / GEARMOTOR													
ECMM	100/026/026				U	150	SZDX	BRSX	90	B3	UB1	120	VS1
Tipo Type	Grandezza Size				Versione Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Pos. di montaggio Mounting position	Esecuzione di montaggio Mounting execution	Versione motore Motor version	Opzioni Options
	070/026/026	100/026/026	180/026/040	250/030/040	U F...	vedi tabelle  see tables	SZDX SZSX DZ	BRDX BRSX  *	0° 90° 180° 270°	B3 B8 B6 B7 V5 V6	UB1 UB2 US1 US2 UV1 UV2 UC1 UC2	120 240 24E	VS1 VS2
	070/026/026 (D11)	100/026/026 (D11)	180/030/040	350/030/040									
	070/026/026 (D14)	100/026/026 (D14)											
	070/026/030	100/026/030											
	070/026/040	100/026/040											

\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.



## Simbologia

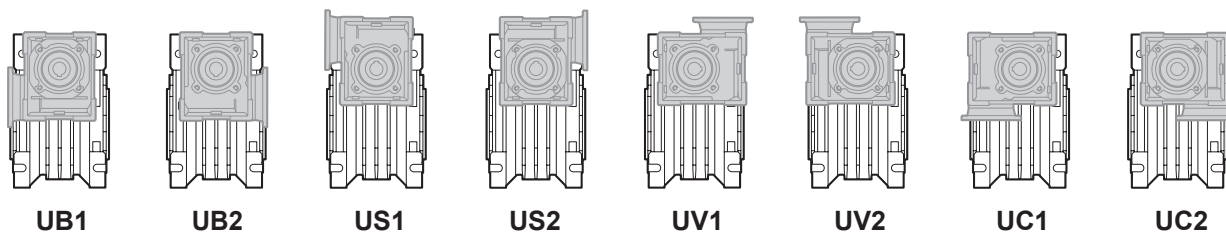
## Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / Input speed	$M_2$ [Nm]	Coppia in uscita in funzione di $P_1$ / Output torque referred to $P_1$
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / Output speed	sf	Fattore di servizio / Service factor
i	Rapporto di riduzione / Ratio	$R_2$ [N]	Carico radiale ammissibile in uscita / Permitted output radial load
$P_1$ [kW]	Potenza in entrata / Input power	$A_2$ [N]	Carico assiale ammissibile in uscita / Permitted output axial load



Esecuzioni di montaggio

Mounting executions



Combinazioni rapporti

Combination ratio

CMM 026/026 - CMM 026/030 - CMM 026/040												
i (i <sub>1</sub> x i <sub>2</sub> )												
	150	225	300	450	600	900	1200	1500	1800	2400	3000	3600
i <sub>1</sub>	10	15	10	15	20	30	40	50	60	60	60	60
i <sub>2</sub>	15	15	30	30	30	30	30	30	30	40	50	60

CMM 030/040																
i (i <sub>1</sub> x i <sub>2</sub> )																
	75	100	150	200	250	300	400	500	600	750	900	1200	1500	1800	2400	3000
i <sub>1</sub>	7.5	10	10	10	10	10	10	10	20	25	30	40	50	60	60	60
i <sub>2</sub>	10	10	15	20	25	30	40	50	30	30	30	30	30	30	40	50



Lubrificazione

Lubrication

Tutti i motoriduttori nelle taglie 26, 30, 40 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

*Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors size 26, 30, 40 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.*

**Dati tecnici per servizio S2****Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version			
<b>100</b>							<b>140</b>									
(3000 min <sup>-1</sup> )	<b>20.0</b>	26	1.0	150	<b>ECMM 070/026/026</b>	<b>12E/24E</b>	(3000 min <sup>-1</sup> )	<b>20.0</b>	26	1.0	150	<b>ECMM 100/026/026</b>	<b>120/240/24E</b>			
	<b>13.3</b>	26	1.0	225					<b>13.3</b>	26	1.0			225		
	<b>10.0</b>	27	1.0	300					<b>10.0</b>	27	1.0			300		
	<b>6.7</b>	27	1.0	450					<b>6.7</b>	27	1.0			450		
	<b>5.0</b>	27	1.0	600					<b>5.0</b>	27	1.0			600		
	<b>3.3</b>	27	1.0	900					<b>3.3</b>	27	1.0			900		
	<b>2.5</b>	27	1.0	1200					<b>2.5</b>	27	1.0			1200		
	<b>2.0</b>	27	1.0	1500					<b>2.0</b>	27	1.0			1500		
	<b>1.7</b>	27	1.0	1800					<b>1.7</b>	27	1.0			1800		
	<b>1.3</b>	22	1.0	2400					<b>1.3</b>	22	1.0			2400		
	<b>1.0</b>	20	1.0	3000					<b>1.0</b>	20	1.0			3000		
	<b>0.8</b>	18	1.0	3600					<b>0.8</b>	18	1.0			3600		
	<b>20.0</b>	26	1.5	150			<b>ECMM 070/026/030</b>	<b>12E/24E</b>		<b>20.0</b>	37			1.1	150	<b>ECMM 100/026/030</b>
	<b>13.3</b>	39	1.0	225					<b>13.3</b>	39	1.0	225				
	<b>10.0</b>	40	1.0	300					<b>10.0</b>	40	1.0	300				
	<b>6.7</b>	40	1.0	450					<b>6.7</b>	40	1.0	450				
	<b>5.0</b>	40	1.0	600					<b>5.0</b>	40	1.0	600				
	<b>3.3</b>	40	1.0	900					<b>3.3</b>	40	1.0	900				
	<b>2.5</b>	40	1.0	1200					<b>2.5</b>	40	1.0	1200				
	<b>2.0</b>	40	1.0	1500					<b>2.0</b>	40	1.0	1500				
	<b>1.7</b>	40	1.0	1800					<b>1.7</b>	40	1.0	1800				
	<b>1.3</b>	34	1.0	2400					<b>1.3</b>	34	1.0	2400				
	<b>1.0</b>	30	1.0	3000					<b>1.0</b>	30	1.0	3000				
	<b>0.8</b>	27	1.0	3600					<b>0.8</b>	27	1.0	3600				
	<b>20.0</b>	27	3.2	150	<b>ECMM 070/026/040</b>	<b>12E/24E</b>				<b>20.0</b>	38	2.3	150	<b>ECMM 100/026/040</b>	<b>120/240/24E</b>	
	<b>13.3</b>	40	2.2	225					<b>13.3</b>	55	1.6	225				
	<b>10.0</b>	45	2.0	300					<b>10.0</b>	63	1.4	300				
	<b>6.7</b>	66	1.4	450					<b>6.7</b>	92	1.0	450				
	<b>5.0</b>	85	1.1	600					<b>5.0</b>	90	1.0	600				
	<b>3.3</b>	90	1.0	900					<b>3.3</b>	90	1.0	900				
	<b>2.5</b>	90	1.0	1200					<b>2.5</b>	90	1.0	1200				
	<b>2.0</b>	90	1.0	1500					<b>2.0</b>	90	1.0	1500				
	<b>1.7</b>	90	1.0	1800					<b>1.7</b>	90	1.0	1800				
	<b>1.3</b>	74	1.0	2400					<b>1.3</b>	74	1.0	2400				
	<b>1.0</b>	68	1.0	3000					<b>1.0</b>	68	1.0	3000				
	<b>0.8</b>	62	1.0	3600					<b>0.8</b>	62	1.0	3600				
	<b>40.0</b>	15	5.5	75			<b>ECMM 070/030/040</b>	<b>12E/24E</b>		<b>40.0</b>	21	3.9	75			<b>ECMM 100/030/040</b>
	<b>30.0</b>	20	4.2	100					<b>30.0</b>	28	3.0	100				
	<b>20.0</b>	28	3.2	150					<b>20.0</b>	38	2.3	150				
	<b>15.0</b>	36	2.1	200					<b>15.0</b>	50	1.5	200				
	<b>12.0</b>	43	1.6	250					<b>12.0</b>	59	1.1	250				
	<b>10.0</b>	46	2.0	300					<b>10.0</b>	63	1.4	300				
	<b>7.5</b>	55	1.3	400					<b>7.5</b>	77	1.0	400				
	<b>6.0</b>	63	1.1	500					<b>6.0</b>	87	0.8	500				
	<b>5.0</b>	86	1.0	600					<b>5.0</b>	119	0.8	600				
	<b>4.0</b>	103	0.9	750					<b>4.0</b>	90	1.0	750				
	<b>3.3</b>	118	0.8	900					<b>3.3</b>	90	1.0	900				
	<b>2.5</b>	74	1.0	1200					<b>2.5</b>	74	1.0	1200				
	<b>2.0</b>	90	1.0	1500					<b>2.0</b>	90	1.0	1500				
	<b>1.7</b>	90	1.0	1800			<b>1.7</b>	90	1.0	1800						
	<b>1.3</b>	74	1.0	2400			<b>1.3</b>	74	1.0	2400						
	<b>1.0</b>	68	1.0	3000			<b>1.0</b>	68	1.0	3000						

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**NOTA:**

Verificare sempre che la coppia  $M_2$  utilizzata non ecceda il valore indicato nelle caselle in grigio




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


Please check that the output torque  $M_2$  does not exceed the value in the grey areas



Dati tecnici per servizio S2

Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>250</b>						
(3000 min <sup>-1</sup> )	<b>20.0</b>	70	1.2	150		ECMM 180/026/040 120/240
	<b>13.3</b>	103	0.8	225		
	<b>10.0</b>	116	0.8	300		
	<b>40.0</b>	40	2.1	75		ECMM 180/030/040 120/240/24E
	<b>30.0</b>	52	1.6	100		
	<b>20.0</b>	71	1.2	150		
	<b>15.0</b>	92	0.8	200		
	<b>12.0</b>	67	1.0	250		
	<b>10.0</b>	90	1.0	300		
	<b>7.5</b>	74	1.0	400		
	<b>6.0</b>	68	1.0	500		
	<b>5.0</b>	90	1.0	600		
	<b>4.0</b>	90	1.0	750		
	<b>3.3</b>	90	1.0	900		

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>350</b>						
(3000 min <sup>-1</sup> )	<b>40.0</b>	55	1.5	75		ECMM 250/030/040 120/240
	<b>30.0</b>	72	1.2	100		
	<b>20.0</b>	100	0.9	150		
	<b>15.0</b>	74	1.0	200		
	<b>500</b>					
(3000 min <sup>-1</sup> )	<b>40.0</b>	78	1.1	75		ECMM 350/030/040 120/240
	<b>30.0</b>	101	0.8	100		
	<b>20.0</b>	87	1.0	150		

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

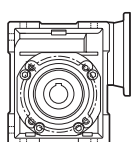
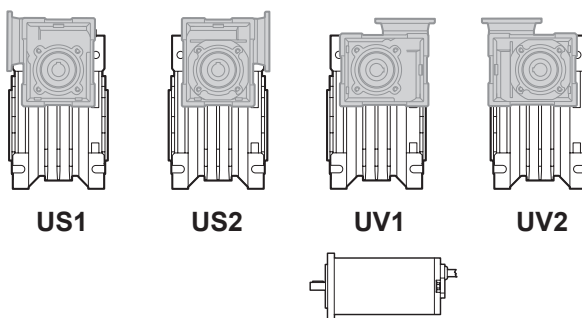
Dati tecnici elettrici

Electrical technical data



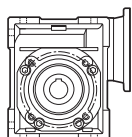
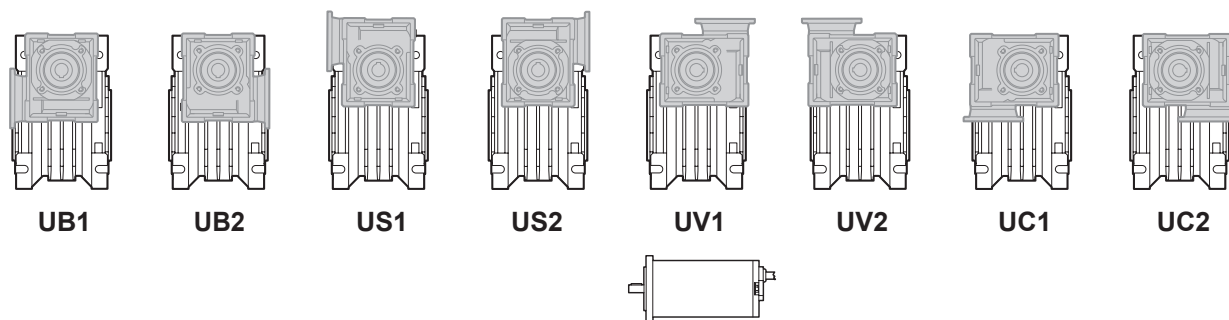
Motori applicabili

Motor adapters



		EC			
		070.12E 070.24E	100.120 100.240	100.24E	180.120 180.240
<b>CMM</b>	<b>026/026</b>	150 - 3600	150 - 3600	150 - 3600	150 - 3600

150 - 3600 Rapporti di riduzione i / Ratio i




		EC						
		070.12E 070.24E	100.120 100.240	100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
<b>CMM</b>	<b>026/030</b>	150 - 3600	150 - 3600	150 - 3600	150 - 3600			
	<b>026/040</b>	150 - 3600	150 - 3600	150 - 3600	150 - 3600			
	<b>030/040</b>	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1500	75 - 1500	75 - 1500

75 - 1500 Rapporti di riduzione i / Ratio i

**Dimensioni****Dimensions**

CMM..U - CMM..F..																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>h8</sub>	N1	N2
026/026 (D11)	45	70	11	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026			12														
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

CMM..U - CMM..F..															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	 (*)	
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3	
026/026												4	13.8		
026/026 (D14)												5	16.2		
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	4.1	
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	5.2	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	5.6	

(\*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 070 /...

**Note:** The weight in kg is referred to the gearmotor ECMM 070 /...

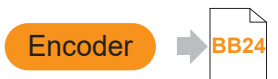
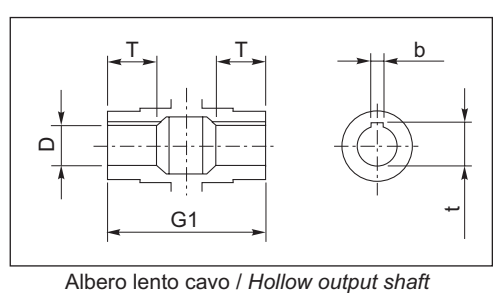
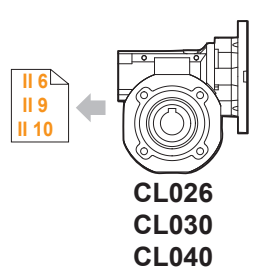
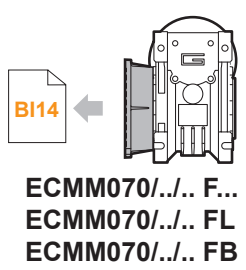
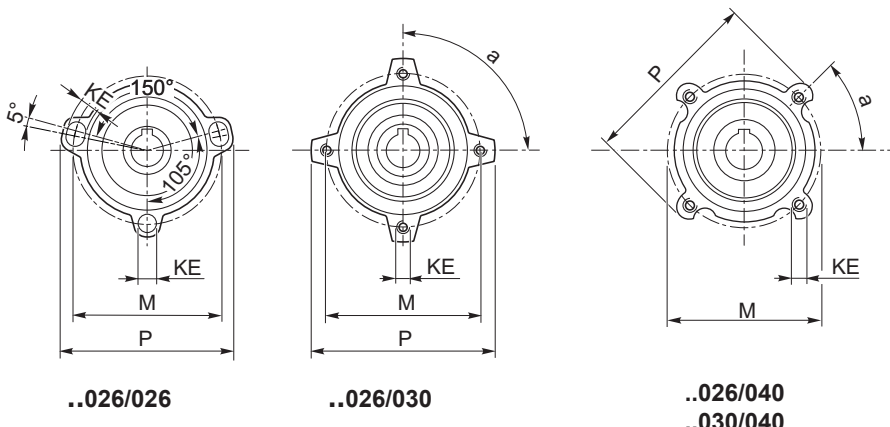
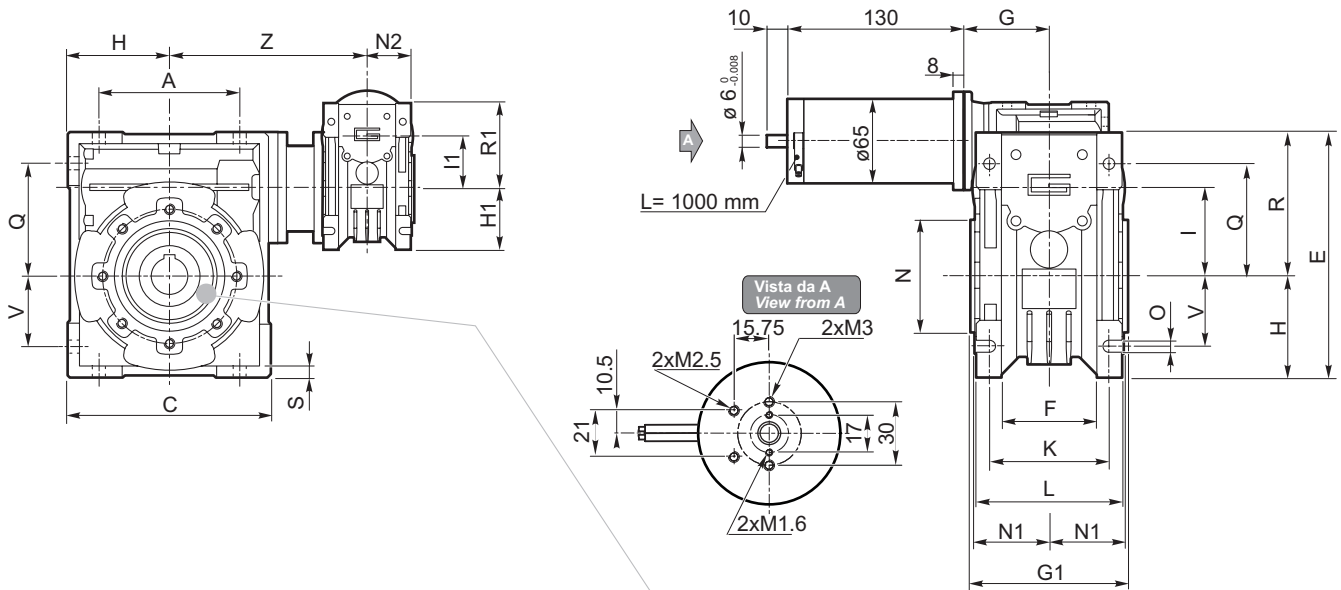




**Dimensioni**

**Dimensions**

**ECMM070/...U**



DC

**Dimensioni****Dimensions**

CMM..U - CMM..F...																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
026/026 (D11)	45	70	11	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026			12														
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

CMM..U - CMM..F...															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)	
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3	
026/026												4	13.8		
026/026 (D14)												5	16.2		
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	5.1	
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	6.2	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	6.6	

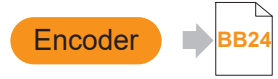
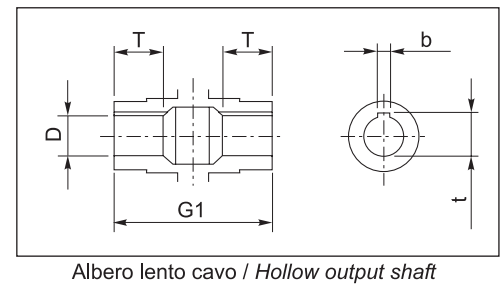
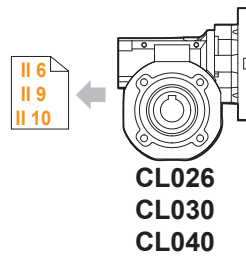
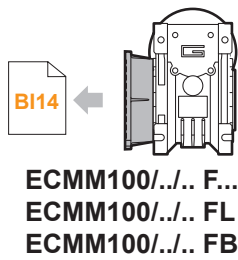
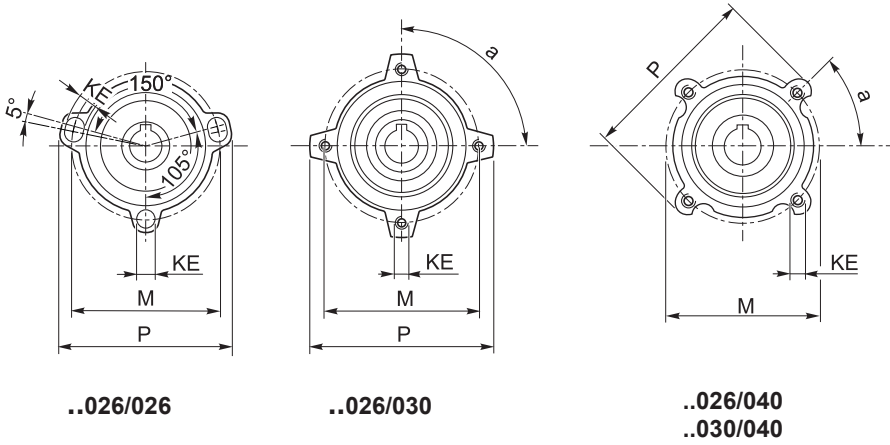
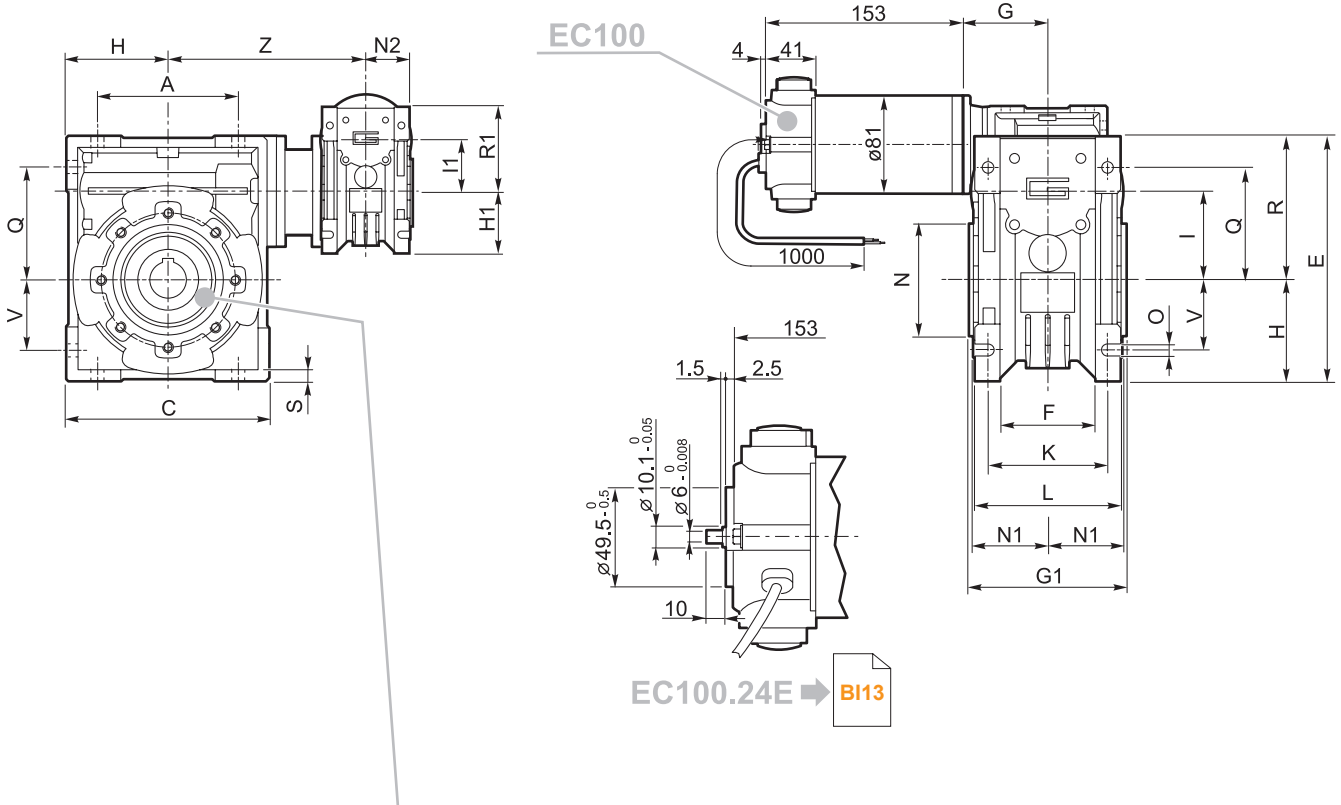
(\*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 100 /...**Note:** The weight in kg is referred to the gearmotor ECMM 100 /...



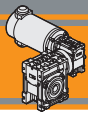
**Dimensioni**

**Dimensions**

**ECMM100/...U**



**DC**



**Dimensioni**

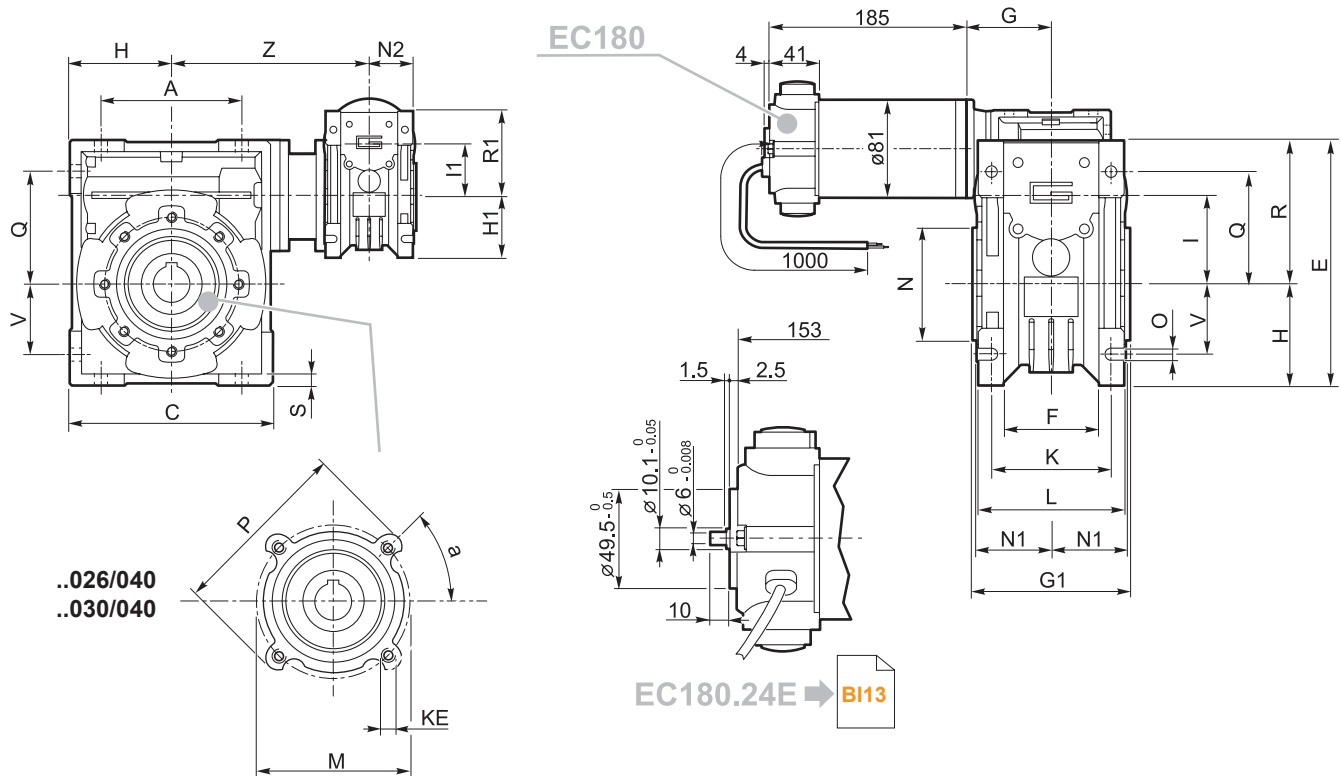
**Dimensions**

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

CMM..U - CMM..F - CMM..FB - CMM..FL														
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	6.9
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	7.3

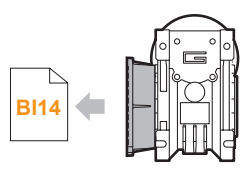
(\*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 180 /...  
**Note:** The weight in kg is referred to the gearmotor ECMM 180 /...

**ECMM180/...U**

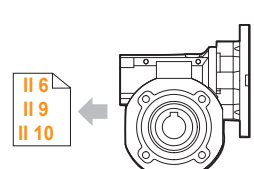


..026/040  
..030/040

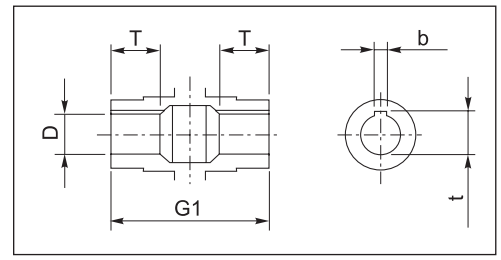
EC180.24E → BI13



ECMM180/... F  
ECMM180/... FL  
ECMM180/... FB



CL026  
CL030  
CL040

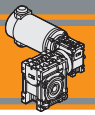


Albero lento cavo / Hollow output shaft

Motori / Motors IP66 → BC6

Freno / Brake → BB23

Encoder → BB24



Dimensioni

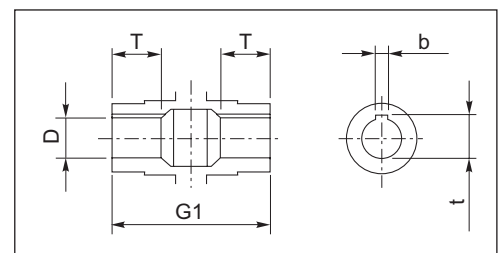
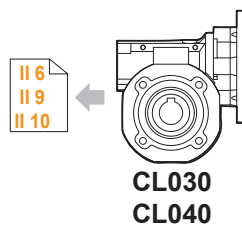
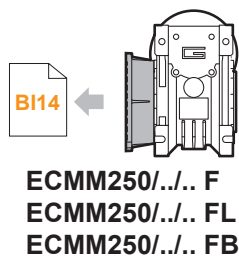
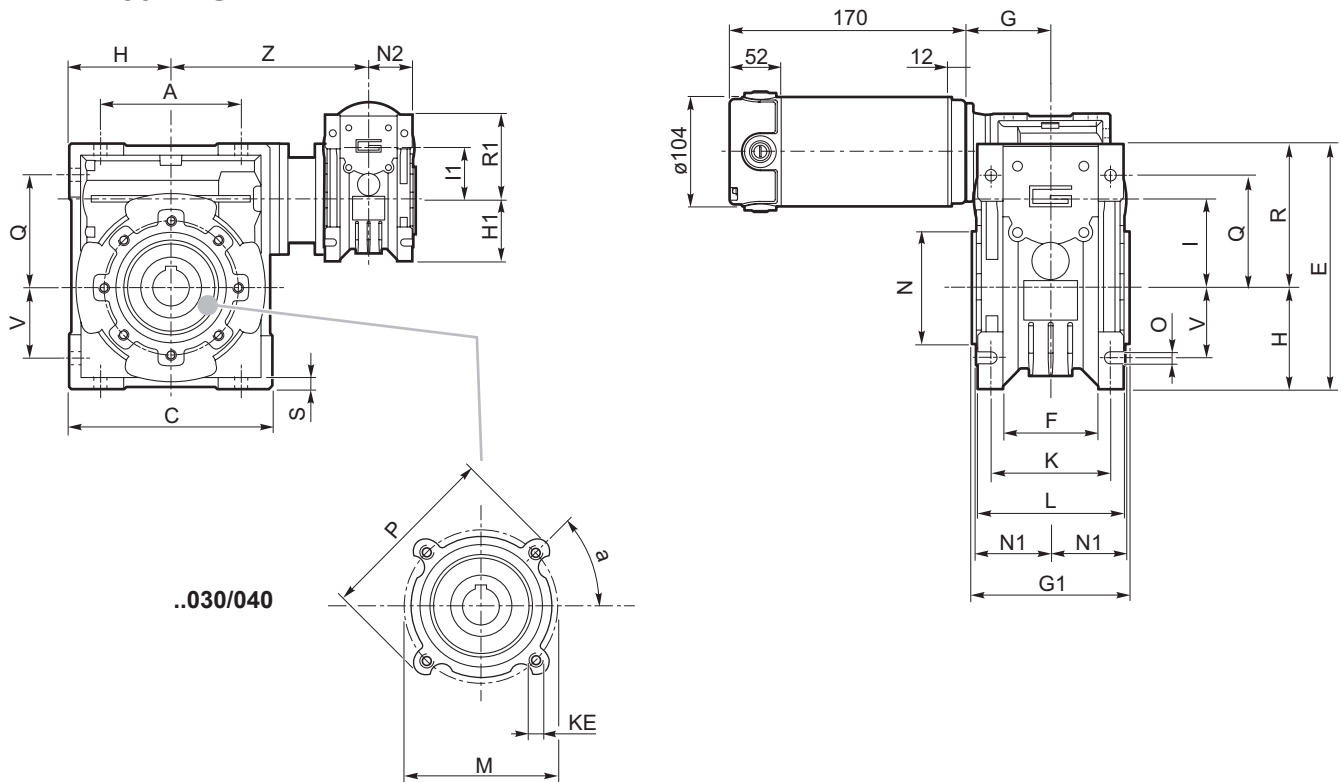
Dimensions

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>H8</sub>	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

CMM..U - CMM..F - CMM..FB - CMM..FL														
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	8.2

(\*) Nota: Il peso in kg si riferisce al motoriduttore ECMM 250 /...  
Note: The weight in kg is referred to the gearmotor ECMM 250 /...

ECMM250/.../..U



Albero lento cavo / Hollow output shaft





**Dimensioni**

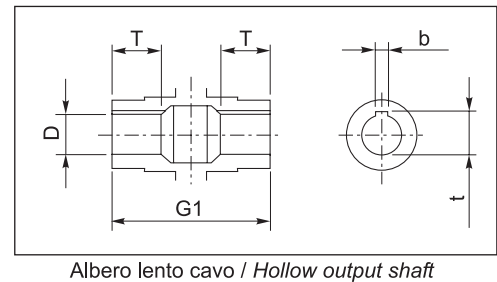
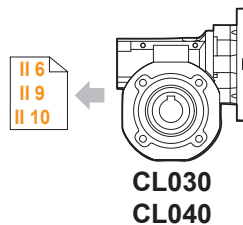
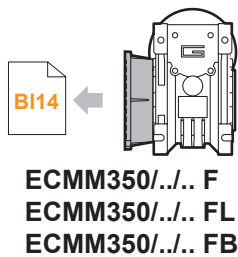
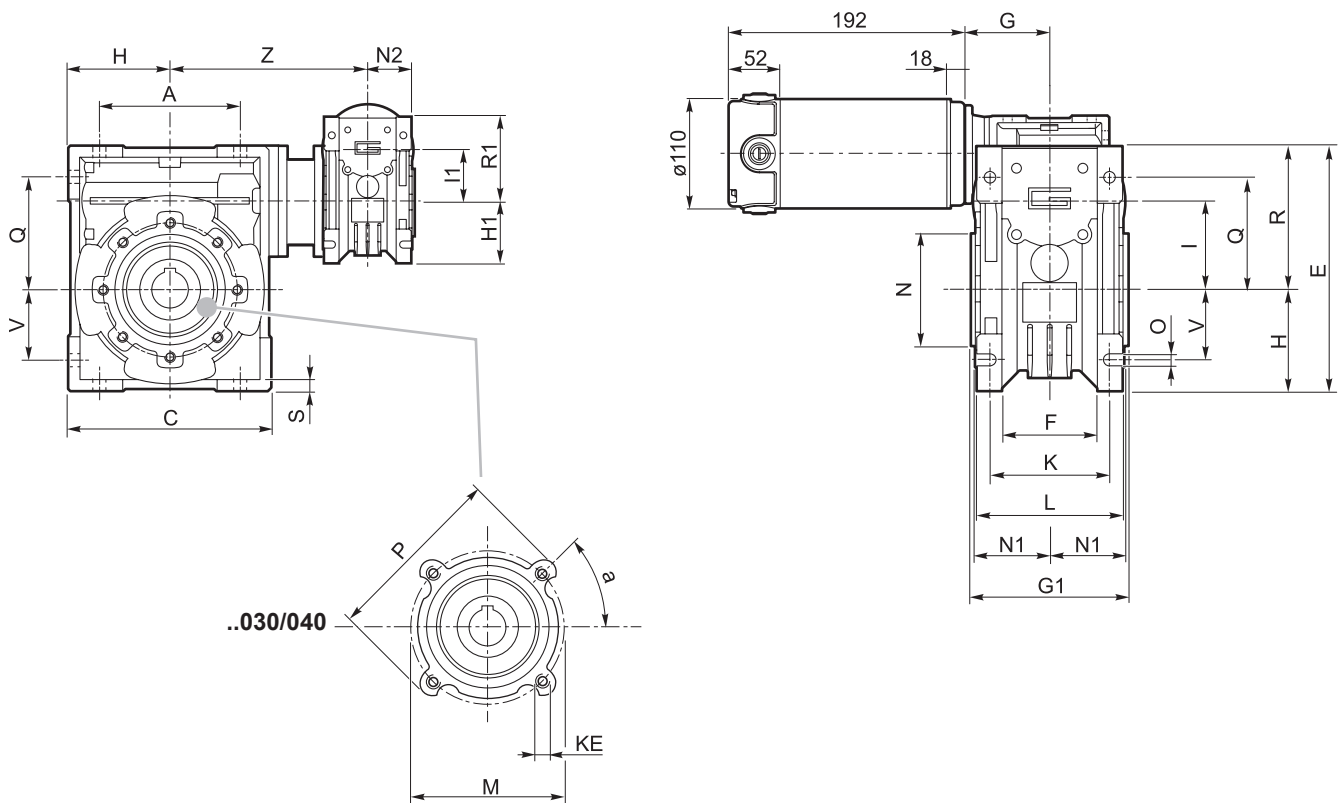
**Dimensions**

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D <sub>H8</sub>	E	F	G	G1	H	H1	I	I1	K	L	M	N <sub>h8</sub>	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

CMM..U - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	(*)	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	9.2	

(\*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 350 /...  
**Note:** The weight in kg is referred to the gearmotor ECMM 350 /...

**ECMM350/...U**

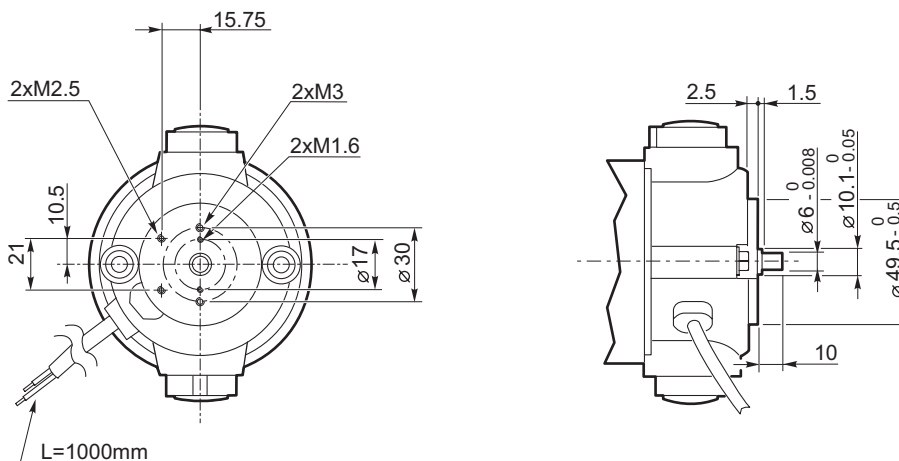




**Dimensioni**

**Dimensions**

**EC100.24E**  
**EC180.24E**

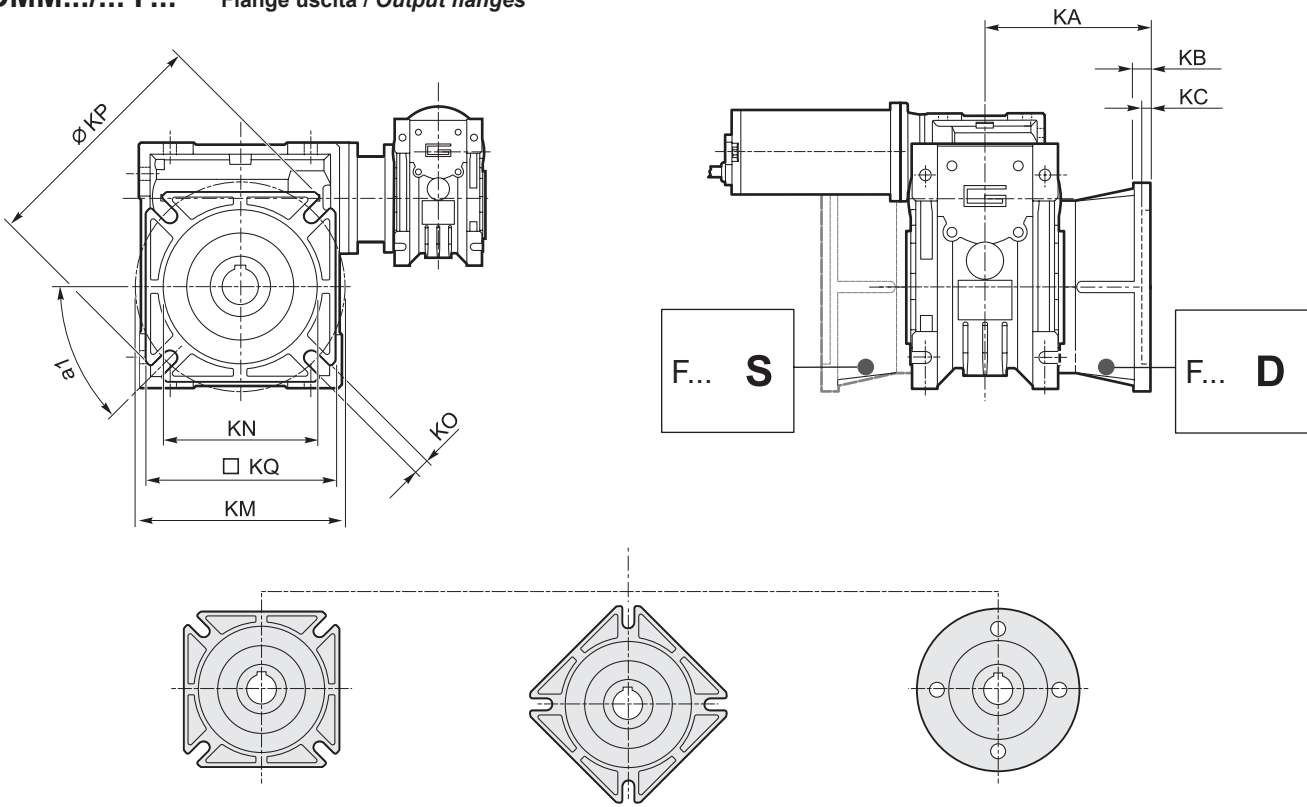




**Dimensioni**

**Dimensions**

**ECMM.../... F... Flange uscita / Output flanges**



- ..ECMM.../.../026.. F  
..ECMM.../.../026.. F28  
..ECMM.../.../026.. F30  
..ECMM.../.../026.. F30S  
...ECMM.../.../030.. F..  
..ECMM.../.../040.. F..
- ..ECMM.../.../026.. F30C  
..ECMM.../.../026.. F30SC
- ..ECMM.../.../026.. F100

	CM..F								CM..F28								CM..F30								CM..F30S <sup>(1)</sup>								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
<b>026 (D11)</b>	45°	45	6	4.5	55-69	40	6.5	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
<b>026 (D14)</b>							(n.4)																										

(1): F30S eseguita con F30 e distanziale di spessore 2 mm / F30S made with F30 and spacer with 2mm thickness

	CM..F30C								CM..F30SC <sup>(2)</sup>								CM..F100								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC *	KM	KN <sub>H7</sub>	KO	KP	KQ
<b>026 (D11)</b>	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-
<b>026 (D14)</b>																									

(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / F30SC made with F30C and spacer with 2mm thickness

\*: Centraggio maschio / Male centering diameter

CM	CM..F								CM..FB								CM..FL								
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
<b>030</b>	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
<b>040</b>	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9 (n.4)	110	95

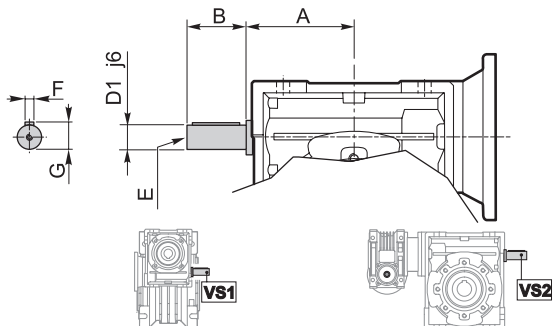




Opzioni

Options

VS1 - VS2 - Vite sporgente / Extended input shaft



CMM	VS1						VS2					
	A	B	D <sub>1</sub> j6	E	F	G	A	B	D <sub>1</sub> j6	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5

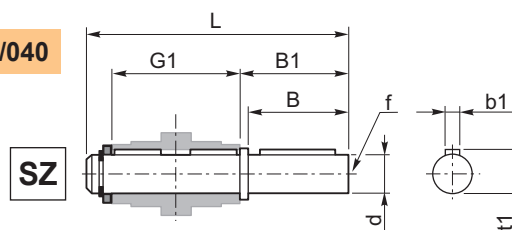
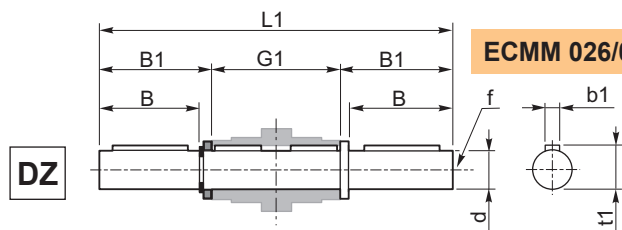
Costruito su richiesta  
Built on request

Accessori

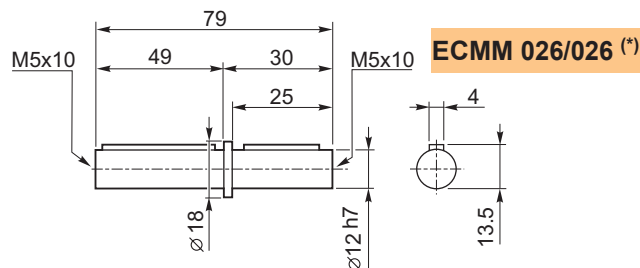
Accessories

Albero lento semplice e doppio

Single and double output shaft



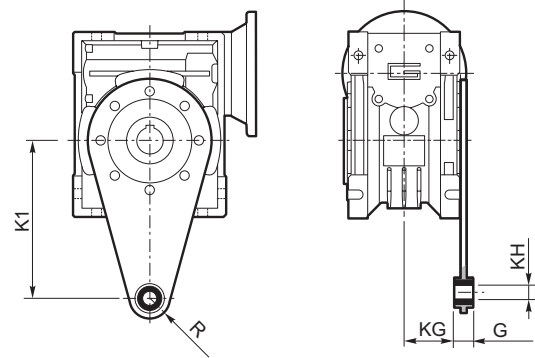
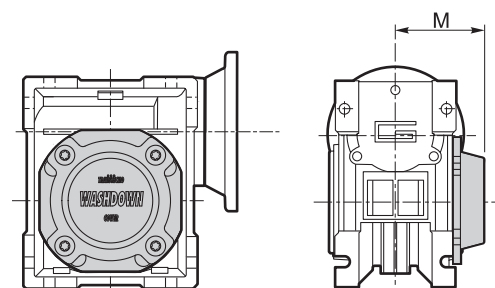
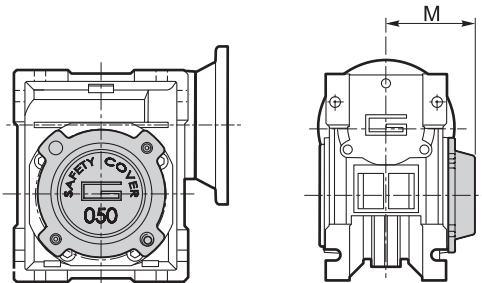
ECMM	d h7	B	B1	G1	L	L1	f	b1	t1
026/030	14	30	32.5	63	102	128	M6	5	16
026/040 030/040	18	40	43	78	128	164	M6	6	20.5



(\*)  
**Nota:** disponibile solo per cavo uscita Ø12  
**Note:** available for output hollow shaft Ø12 only

**Braccio di reazione****Torque arm**

ECMM	K1	G	KG	KH	R
026/030	85	14	23	8	15
026/040 030/040	100	14	31	10	18

**SC - Safety cover****WD - Kit washdown cover**

	M
CM 030	47
CM 040	54.5

	M
CM 030	48
CM 040	55.5

**MINI**  **TECNO**™  
**small** but strong

**NDP**  
**ECP**

Motoriduttori CC epicicloidali  
DC planetary gearmotors

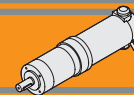


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC





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## Caratteristiche tecniche

## Technical features

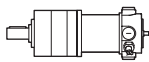
I motoriduttori CC epicicloidali a magneti permanenti in neodimio **NDP** e in ferrite **ECP** hanno le seguenti caratteristiche principali:


**NDP** neodymium permanent magnets and **ECP** ferrite permanent magnets DC planetary gearmotors range has the following main features:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 500W S2
- Entrata ed uscita coassiali
- Design compatto
- Lubrificazione permanente a grasso
- Possono essere installati in qualunque posizione di montaggio.
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 500W S2
- In-line input and output
- Compact design
- Permanent grease oil long-life lubrication
- Can be intalled in all mounting position.

## Designazione

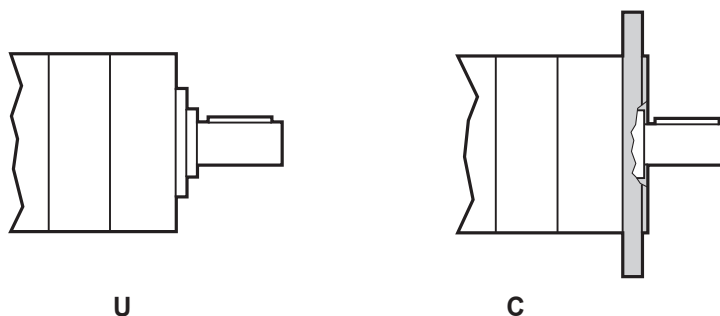
## Classification

MOTORIDUTTORE / GEARMOTOR								
NDP	120/62		2	C	90	34.97	120	BR
Tipo Type	Grandezza Size		Stadi riduttore Gearbox stages	Versione riduttore Gearbox Version	Flangia uscita Output flange	Rapporto Ratio	Versione Motore Motor Version	Opzioni Options
NDP 	120/52 120/62	180/52 180/62	1 2 3	U C	80 90 105 120	Vedere tabella See tables	120 240	BR BRL

MOTORIDUTTORE / GEARMOTOR														
ECP	070/62							2	C	90	34.97	120	BR	
Tipo Type	Grandezza Size							Stadi riduttore Gearbox stages	Versione riduttore Gearbox Version	Flangia Uscita Output flange	Rapporto Ratio	Versione Motore Motor Version	Opzioni Options	
ECP 	020/42	035/42 035/52	050/42 050/52	070/52 070/62	100/52 100/62	180/52 180/62	250/62	350/62	1 2 3	U C	80 90 105 120	Vedere tabella See tables	120 240 24E	BR BRL

## Versioni

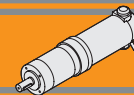
## Versions



## Simbologia

## Symbols

$n_1$ [min <sup>-1</sup> ]	Velocità in ingresso / Input speed	sf	Fattore di servizio / Service factor
$n_2$ [min <sup>-1</sup> ]	Velocità in uscita / Output speed	Rd %	Rendimento dinamico / Dynamic efficiency
i	Rapporto di riduzione / Ratio	A <sub>2</sub> [N]	Carico assiale ammissibile in uscita / Permitted output axial load
P <sub>1</sub> [kW]	Potenza in entrata / Input power	R <sub>2</sub> [N]	Carico radiale ammissibile in uscita / Permitted output radial load
M <sub>2</sub> [Nm]	Coppia in uscita in funzione di P <sub>1</sub> / Output torque referred to P <sub>1</sub>		



**Lubrificazione**

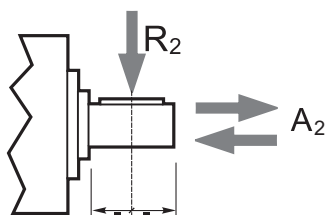
**Lubrication**

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione. Questo gli consente di essere installati praticamente ovunque.

Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free. They can be installed in any location.

**Carichi radiali**

**Radial loads**



Numero di stadi Stages number	Carichi Radiali $R_2$ [N] / Radial Load $R_2$ [N]		
	PM42	PM52	PM62
1	160	200	240
2	230	320	360
3	300	450	520

Numero di stadi Stages number	Carichi Assiali $A_2$ [N] / Axial Load $A_2$ [N]		
	PM42	PM52	PM62
1	50	60	70
2	80	100	100
3	110	150	150

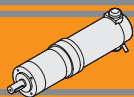
**Rapporti**

**Ratios**

Numero di stadi Stages number	Per tutte le grandezze di riduttori della serie P For all gearbox sizes of P range
	Rapporti / Ratios
1	3.70
	4.28
	5.18
2	6.75
	13.73
	15.88
	18.36
	19.20
	22.20
	25.01
	26.85
	28.93
34.97	
3	45.56
	50.89
	58.85
	68.06
	71.16
	78.71
	92.70
	95.17
	99.50
	107.20
	115.07
	123.97
	129.62
	139.13
	149.90
168.84	
181.24	
195.26	
236.09	
307.54	

**Rapporti preferenziali per le taglie PM42, PM52, PM62.**  
Preferred ratios for PM42, PM52, PM62.

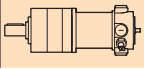
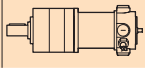
Disponibile a 4 stadi con rapporti fino a 2076  
Available 4 stages with ratio up to 2076



### Dati tecnici per servizio S2

### NDP

### Technical data for S2 duty

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	
<b>160</b>							<b>160</b>							
(3000 min <sup>-1</sup> )	<b>811</b>	2	2.6	3.70	<b>NDP120/521</b>	<b>120/240</b>	(3000 min <sup>-1</sup> )	<b>59</b>	18	2.8	50.89	<b>NDP120/623</b>	<b>120/240</b>	
	<b>701</b>	2	2.3	4.28			<b>51</b>	21	2.4	58.85				
	<b>579</b>	2	1.9	5.18			<b>44</b>	24	2.1	68.06				
	<b>444</b>	3	1.5	6.75			<b>42</b>	25	2.0	71.16				
	<b>218</b>	5	2.3	13.73			<b>NDP120/522</b>	<b>120/240</b>	<b>38</b>	28	1.8			78.71
	<b>189</b>	6	2.0	15.88					<b>32</b>	33	1.5			92.70
	<b>163</b>	7	1.7	18.36					<b>32</b>	34	1.5			95.17
	<b>156</b>	7	1.6	19.20					<b>30</b>	36	1.4			99.50
	<b>135</b>	8	1.4	22.20					<b>28</b>	38	1.3			107.20
	<b>120</b>	10	1.3	25.01					<b>26</b>	41	1.2			115.07
	<b>112</b>	10	1.2	26.85	<b>24</b>	44			1.1	123.97				
	<b>104</b>	11	1.1	28.93	<b>23</b>	46			1.1	129.62				
	<b>86</b>	13	0.9	34.97	<b>22</b>	50			1.0	139.13				
	<b>66</b>	17	0.7	45.56	<b>20</b>	54			0.9	149.90				
	<b>59</b>	18	1.4	50.89	<b>NDP120/523</b>	<b>120/240</b>	<b>18</b>	60	0.8	168.84				
	<b>51</b>	21	1.2	58.85			<b>17</b>	65	0.8	181.24				
	<b>44</b>	24	1.0	68.06			<b>15</b>	70	0.7	195.26				
	<b>42</b>	25	1.0	71.16			<b>13</b>	71	0.7	236.09				
	<b>38</b>	28	0.9	78.71			<b>9.8</b>	71	0.7	307.54				
	<b>32</b>	33	0.8	92.70										
	<b>32</b>	34	0.7	95.17										
	<b>30</b>	36	0.7	99.50										
	<b>28</b>	36	0.7	107.20										
	<b>26</b>	36	0.7	115.07										
	<b>24</b>	36	0.7	123.97										
	<b>23</b>	36	0.7	129.62										
	<b>22</b>	36	0.7	139.13										
	<b>20</b>	36	0.7	149.90										
	<b>18</b>	36	0.7	168.84										
	<b>17</b>	36	0.7	181.24										
	<b>15</b>	36	0.7	195.26										
	<b>13</b>	36	0.7	236.09										
	<b>9.8</b>	36	0.7	307.54										
	<b>579</b>	2	3.8	5.18	<b>NDP120/621</b>	<b>120/240</b>								
	<b>444</b>	3	2.9	6.75										
	<b>218</b>	5	4.8	13.73	<b>NDP120/622</b>	<b>120/240</b>								
	<b>189</b>	6	4.1	15.88										
	<b>163</b>	7	3.6	18.36										
	<b>156</b>	7	3.4	19.20										
	<b>135</b>	8	2.9	22.20										
	<b>120</b>	10	2.6	25.01										
	<b>112</b>	10	2.4	26.85										
	<b>104</b>	11	2.3	28.93										
	<b>86</b>	13	1.9	34.97										
	<b>66</b>	17	1.4	45.56										

<b>250</b>													
(3000 min <sup>-1</sup> )	<b>811</b>	2	1.7	3.70	<b>NDP180/521</b>	<b>120/240</b>	(3000 min <sup>-1</sup> )	<b>811</b>	2	1.7	3.70	<b>NDP180/521</b>	<b>120/240</b>
	<b>701</b>	3	1.5	4.28			<b>701</b>	3	1.5	4.28			
	<b>579</b>	3	1.2	5.18			<b>579</b>	3	1.2	5.18			
	<b>444</b>	4	0.9	6.75			<b>444</b>	4	0.9	6.75			
	<b>218</b>	8	1.5	13.73	<b>NDP180/522</b>	<b>120/240</b>	<b>218</b>	8	1.5	13.73	<b>NDP180/522</b>	<b>120/240</b>	
	<b>189</b>	10	1.3	15.88			<b>189</b>	10	1.3	15.88			
	<b>163</b>	11	1.1	18.36			<b>163</b>	11	1.1	18.36			
	<b>156</b>	12	1.0	19.20			<b>156</b>	12	1.0	19.20			
	<b>135</b>	13	0.9	22.20			<b>135</b>	13	0.9	22.20			
	<b>120</b>	15	0.8	25.01			<b>120</b>	15	0.8	25.01			
	<b>112</b>	16	0.7	26.85			<b>112</b>	16	0.7	26.85			
	<b>104</b>	17	0.7	28.93			<b>104</b>	17	0.7	28.93			
	<b>86</b>	17	0.7	34.97			<b>86</b>	17	0.7	34.97			
	<b>66</b>	17	0.7	45.56			<b>66</b>	17	0.7	45.56			

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

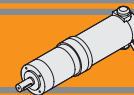
**NOTE:** for continuous or highly intermittent duty, please contact our technical service

NOTA  
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

NOTE  
For sf=0.7 check that the duty torque does not exceed the value M2

Motoriduttori preferenziali / Preferred gearmotors

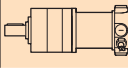
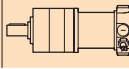




## Dati tecnici per servizio S2

## NDP

## Technical data for S2 duty

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	
<b>250</b>							<b>250</b>							
(3000 min <sup>-1</sup> )	<b>59</b>	28	0.9	50.89	<b>NDP180/523</b>	<b>120/240</b>	(3000 min <sup>-1</sup> )	<b>59</b>	28	1.8	50.89	<b>NDP180/623</b>	<b>120/240</b>	
	<b>51</b>	33	0.8	58.85				<b>51</b>	33	1.5	58.85			
	<b>44</b>	36	0.7	68.06				<b>44</b>	38	1.3	68.06			
	<b>42</b>	36	0.7	71.16				<b>42</b>	40	1.3	71.16			
	<b>38</b>	36	0.7	78.71				<b>38</b>	44	1.1	78.71			
	<b>32</b>	36	0.7	92.70				<b>32</b>	52	1.0	92.70			
	<b>32</b>	36	0.7	95.17				<b>32</b>	53	0.9	95.17			
	<b>30</b>	36	0.7	99.50				<b>30</b>	56	0.9	99.50			
	<b>28</b>	36	0.7	107.20				<b>28</b>	60	0.8	107.20			
	<b>26</b>	36	0.7	115.07				<b>26</b>	64	0.8	115.07			
	<b>24</b>	36	0.7	123.97				<b>24</b>	69	0.7	123.97			
	<b>23</b>	36	0.7	129.62				<b>23</b>	71	0.7	129.62			
	<b>22</b>	36	0.7	139.13				<b>22</b>	71	0.7	139.13			
	<b>20</b>	36	0.7	149.90				<b>20</b>	71	0.7	149.90			
	<b>18</b>	36	0.7	168.84				<b>18</b>	71	0.7	168.84			
	<b>17</b>	36	0.7	181.24				<b>17</b>	71	0.7	181.24			
	<b>15</b>	36	0.7	195.26				<b>15</b>	71	0.7	195.26			
	<b>13</b>	36	0.7	236.09				<b>13</b>	71	0.7	236.09			
	<b>9.8</b>	36	0.7	307.54				<b>9.8</b>	71	0.7	307.54			
	<b>811</b>	2	3.4	3.70			<b>NDP180/621</b>	<b>120/240</b>						
	<b>701</b>	3	2.9	4.28										
	<b>579</b>	3	2.4	5.18										
	<b>444</b>	4	1.9	6.75										
	<b>218</b>	8	3.0	13.73	<b>NDP180/622</b>	<b>120/240</b>								
	<b>189</b>	10	2.6	15.88										
	<b>163</b>	11	2.3	18.36										
	<b>156</b>	12	2.2	19.20										
	<b>135</b>	13	1.9	22.20										
	<b>120</b>	15	1.7	25.01										
	<b>112</b>	16	1.6	26.85										
	<b>104</b>	17	1.4	28.93										
	<b>86</b>	21	1.2	34.97										
	<b>66</b>	27	0.9	45.56										

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

## NOTA

Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

## NOTE

For sf=0.7 check that the duty torque does not exceed the value M2

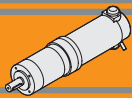
 Motoriduttori preferenziali / Preferred gearmotors

## Dati tecnici elettrici

## Electrical technical data

ND 120 → 

ND 180 → 



**ECP**

**Motoriduttori CC epicicloidali  
DC planetary gearmotors**



**Dati tecnici per servizio S2**

**ECP**

**Technical data for S2 duty**

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version		
<b>30</b>								
(2850 min <sup>-1</sup> )	<b>770</b>	0.24	12.7	<b>3.70</b>		<b>ECP020/421</b>		
	<b>666</b>	0.27	11.0	4.28				
	<b>550</b>	0.33	9.0	5.18				
	<b>422</b>	0.43	6.9	<b>6.75</b>				
	<b>208</b>	0.82	9.1	<b>13.73</b>		<b>ECP020/422</b>		
	<b>179</b>	0.95	7.9	15.88				
	<b>155</b>	1.1	6.8	18.36				
	<b>148</b>	1.2	6.5	19.20				
	<b>128</b>	1.3	5.6	22.20				
	<b>114</b>	1.5	5.0	25.01				
	<b>106</b>	1.6	4.7	26.85				
	<b>99</b>	1.7	4.3	28.93				
	<b>81</b>	2.1	3.6	34.97				
	<b>63</b>	2.7	2.7	<b>45.56</b>				
	<b>56</b>	2.8	5.3	50.89				<b>ECP020/423</b>
	<b>48</b>	3.3	4.6	58.85				
	<b>42</b>	3.8	3.9	<b>68.06</b>				
	<b>40</b>	4.0	3.8	71.16				
	<b>36</b>	4.4	3.4	78.71				
	<b>31</b>	5.2	2.9	<b>92.70</b>				
	<b>30</b>	5.3	2.8	95.17				
	<b>29</b>	5.6	2.7	99.50				
	<b>27</b>	6.0	2.5	107.20				
	<b>25</b>	6.4	2.3	115.07				
	<b>23</b>	6.9	2.2	123.97				
	<b>22</b>	7.3	2.1	129.62				
	<b>20</b>	7.8	1.9	139.13				
	<b>19</b>	8.4	1.8	149.90				
	<b>17</b>	9.5	1.6	<b>168.84</b>				
	<b>16</b>	10	1.5	181.24				
	<b>15</b>	11	1.4	195.26				
	<b>12</b>	13	1.1	236.09				
	<b>9.3</b>	17	0.9	<b>307.54</b>				

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version		
<b>55</b>								
(3000 min <sup>-1</sup> )	<b>811</b>	0.53	5.6	<b>3.70</b>		<b>ECP035/421</b>		
	<b>701</b>	0.62	4.9	4.28				
	<b>579</b>	0.75	4.0	5.18				
	<b>444</b>	0.97	3.1	<b>6.75</b>				
	<b>218</b>	1.9	4.0	<b>13.73</b>		<b>ECP035/422</b>		
	<b>189</b>	2.1	3.5	15.88				
	<b>163</b>	2.5	3.0	18.36				
	<b>156</b>	2.6	2.9	19.20				
	<b>135</b>	3.0	2.5	22.20				
	<b>120</b>	3.4	2.2	<b>25.01</b>				
	<b>112</b>	3.6	2.1	26.85				
	<b>104</b>	3.9	1.9	28.93				
	<b>86</b>	4.7	1.6	34.97				
	<b>65.8</b>	6.2	1.2	<b>45.56</b>				
	<b>59</b>	6.4	2.3	50.89				<b>ECP035/423</b>
	<b>51</b>	7.4	2.0	58.85				
	<b>44</b>	8.6	1.7	<b>68.06</b>				
	<b>42</b>	9.0	1.7	71.16				
	<b>38</b>	9.9	1.5	78.71				
	<b>32</b>	12	1.3	<b>92.70</b>				

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version		
<b>55</b>								
(2850 min <sup>-1</sup> )	<b>31</b>	12	1.3	95.17		<b>ECP035/423</b>		
	<b>30</b>	13	1.2	99.50				
	<b>28</b>	14	1.1	107.20				
	<b>26</b>	14	1.0	115.07				
	<b>24</b>	16	1.0	123.97				
	<b>23</b>	16	0.9	129.62				
	<b>22</b>	18	0.9	139.13				
	<b>20</b>	19	0.8	149.90				
	<b>18</b>	21	0.7	<b>168.84</b>				
	<b>17</b>	21	0.7	181.24				
	<b>15</b>	21	0.7	195.26				
	<b>13</b>	21	0.7	236.09				
	<b>10</b>	21	0.7	<b>307.54</b>				
	<b>811</b>	0.53	7.5	<b>3.70</b>		<b>ECP035/521</b>		
	<b>701</b>	0.62	6.5	4.28				
	<b>579</b>	0.75	5.4	5.18				
	<b>444</b>	0.97	4.1	<b>6.75</b>				
	<b>218</b>	1.9	6.5	<b>13.73</b>		<b>ECP035/522</b>		
	<b>189</b>	2.1	5.6	15.88				
	<b>163</b>	2.5	4.8	18.36				
	<b>156</b>	2.6	4.6	19.20				
	<b>135</b>	3.0	4.0	22.20				
	<b>120</b>	3.4	3.6	<b>25.01</b>				
	<b>112</b>	3.6	3.3	26.85				
	<b>104</b>	3.9	3.1	28.93				
	<b>86</b>	4.7	2.5	34.97				
	<b>66</b>	6.2	2.0	<b>45.56</b>				
	<b>59</b>	6.4	3.9	50.89				<b>ECP035/523</b>
	<b>51</b>	7.4	3.4	58.85				
	<b>44</b>	8.6	2.9	<b>68.06</b>				
	<b>42</b>	9.0	2.8	71.16				
	<b>38</b>	9.9	2.5	78.71				
	<b>32</b>	11.7	2.1	<b>92.70</b>				
	<b>31</b>	12.0	2.1	95.17				
	<b>30</b>	12.5	2.0	99.50				
	<b>28</b>	13.5	1.9	107.20				
	<b>26</b>	14.5	1.7	115.07				
	<b>24</b>	15.6	1.6	123.97				
	<b>23</b>	16.3	1.5	129.62				
	<b>22</b>	17.5	1.4	139.13				
	<b>20</b>	18.9	1.3	149.90				
	<b>18</b>	21.3	1.2	<b>168.84</b>				
	<b>17</b>	22.8	1.1	181.24				
	<b>15</b>	24.6	1.0	195.26				
	<b>13</b>	29.7	0.8	236.09				
	<b>10</b>	35.7	0.7	<b>307.54</b>				

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version
<b>70</b>						
(3000 min <sup>-1</sup> )	<b>811</b>	0.65	4.6	<b>3.70</b>		<b>ECP050/421</b>
	<b>701</b>	0.75	4.0	4.28		
	<b>579</b>	0.91	3.3	5.18		
	<b>444</b>	1.2	2.5	<b>6.75</b>		
	<b>218</b>	2.3	3.3	<b>13.73</b>		<b>ECP050/422</b>
	<b>189</b>	2.6	2.9	15.88		
	<b>163</b>	3.0	2.5	18.36		
	<b>156</b>	3.2	2.4	19.20		
	<b>135</b>	3.7	2.0	22.20		
	<b>120</b>	4.1	1.8	<b>25.01</b>		
	<b>112</b>	4.4	1.7	26.85		
	<b>104</b>	4.8	1.6	28.93		
	<b>86</b>	5.8	1.3	34.97		
	<b>66</b>	7.5	1.0	<b>45.56</b>		

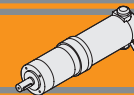
NOTA  
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M<sub>2</sub> indicato.

NOTE  
For sf=0.7 check that the duty torque does not exceed the value M<sub>2</sub>

**Motoriduttori preferenziali / Preferred gearmotors**

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

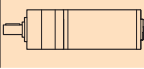
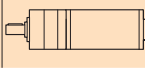
**NOTE:** for continuous or highly intermittent duty, please contact our technical service



## Dati tecnici per servizio S2

## ECP

## Technical data for S2 duty

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version					
<b>70</b>							<b>100</b>											
(2850 min <sup>-1</sup> )	<b>59</b>	7.8	1.9	50.89	<b>ECP050/423</b>	<b>12E/24E</b>	(3000 min <sup>-1</sup> )	<b>811</b>	0.92	4.4	<b>3.70</b>	<b>ECP070/521</b>	<b>120/240</b>					
	<b>51</b>	9.1	1.7	58.85					<b>701</b>	1.1	3.8			4.28				
	<b>44</b>	10	1.4	68.06					<b>579</b>	1.3	3.1			5.18				
	<b>42</b>	11	1.4	71.16					<b>444</b>	1.7	2.4			6.75				
	<b>38</b>	12	1.2	78.71														
	<b>32</b>	14	1.1	92.70					<b>218</b>	3.2	3.8			13.73	<b>ECP070/522</b>	<b>120/240</b>		
	<b>31</b>	15	1.0	95.17					<b>189</b>	3.7	3.3			15.88				
	<b>30</b>	15	1.0	99.50					<b>163</b>	4.3	2.8			18.36				
	<b>28</b>	17	0.9	107.20					<b>156</b>	4.5	2.7			19.20				
	<b>26</b>	18	0.8	115.07					<b>135</b>	5.2	2.3			22.20				
	<b>24</b>	19	0.8	123.97					<b>120</b>	5.8	2.1			25.01				
	<b>23</b>	20	0.8	129.62					<b>112</b>	6.2	1.9			26.85				
	<b>22</b>	21	0.7	139.13					<b>104</b>	6.7	1.8			28.93				
	<b>20</b>	21	0.7	149.90					<b>86</b>	8.1	1.5			34.97				
	<b>18</b>	21	0.7	168.84					<b>66</b>	11	1.1			45.56				
	<b>17</b>	21	0.7	181.24														
	<b>15</b>	21	0.7	195.26					<b>59</b>	11	2.3			50.89	<b>ECP070/523</b>	<b>120/240</b>		
	<b>13</b>	21	0.7	236.09					<b>51</b>	13	2.0			58.85				
	<b>9.8</b>	21	0.7	307.54			<b>44</b>	15	1.7	68.06								
							<b>42</b>	15	1.6	71.16								
	<b>163</b>	3.0	4.0	18.36	<b>ECP050/522</b>	<b>12E/24E</b>	<b>38</b>	17	1.5	78.71								
	<b>156</b>	3.2	3.8	19.20					<b>32</b>	20	1.2	92.70						
	<b>135</b>	3.7	3.3	22.20					<b>31</b>	21	1.2	95.17						
	<b>120</b>	4.1	2.9	25.01					<b>30</b>	22	1.2	99.50						
	<b>112</b>	4.4	2.7	26.85					<b>28</b>	23	1.1	107.20						
	<b>104</b>	4.8	2.5	28.93					<b>26</b>	25	1.0	115.07						
	<b>86</b>	5.8	2.1	34.97					<b>24</b>	27	0.9	123.97						
	<b>66</b>	7.5	1.6	45.56					<b>23</b>	28	0.9	129.62						
									<b>22</b>	30	0.8	139.13						
	<b>59</b>	7.8	3.2	50.89			<b>ECP050/523</b>	<b>12E/24E</b>	<b>20</b>	33	0.8	149.90						
	<b>51</b>	9.1	2.8	58.85					<b>18</b>	36	0.7	168.84						
	<b>44</b>	10	2.4	68.06					<b>17</b>	36	0.7	181.24						
	<b>42</b>	11	2.3	71.16					<b>15</b>	36	0.7	195.26						
	<b>38</b>	12	2.1	78.71					<b>13</b>	36	0.7	236.09						
	<b>32</b>	14	1.8	92.70					<b>9.8</b>	36	0.7	307.54						
	<b>31</b>	15	1.7	95.17														
	<b>30</b>	15	1.6	99.50					<b>120.0</b>	5.8	4.3	25.01	<b>ECP070/622</b>	<b>120/240</b>				
	<b>28</b>	17	1.5	107.20					<b>112</b>	6.2	4.0	26.85						
	<b>26</b>	18	1.4	115.07					<b>104</b>	6.7	3.7	28.93						
	<b>24</b>	19	1.3	123.97					<b>86</b>	8.1	3.1	34.97						
	<b>23</b>	20	1.3	129.62					<b>66</b>	11	2.4	45.56						
	<b>22</b>	21	1.2	139.13														
	<b>20</b>	23	1.1	149.90					<b>59</b>	11	4.5	50.89			<b>ECP070/623</b>	<b>120/240</b>		
	<b>18</b>	26	1.0	168.84					<b>51</b>	13	3.9	58.85						
	<b>17</b>	28	0.9	181.24					<b>44</b>	15	3.4	68.06						
	<b>15</b>	30	0.8	195.26					<b>42</b>	15	3.2	71.16						
	<b>13</b>	36	0.7	236.09					<b>38</b>	17	2.9	78.71						
	<b>9.8</b>	36	0.7	307.54			<b>32</b>	20	2.5	92.70								
							<b>31</b>	21	2.4	95.17								
							<b>30</b>	22	2.3	99.50								
							<b>28</b>	23	2.1	107.20								
							<b>26</b>	25	2.0	115.07								
							<b>24</b>	27	1.9	123.97								
							<b>23</b>	28	1.8	129.62								
							<b>22</b>	30	1.7	139.13								
							<b>20</b>	33	1.5	149.90								
							<b>18</b>	37	1.4	168.84								
							<b>17</b>	39	1.3	181.24								
							<b>15</b>	42	1.2	195.26								
							<b>13</b>	51	1.0	236.09								
							<b>9.8</b>	67	0.7	307.54								

## NOTA

Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

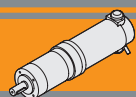
## NOTE



For sf=0.7 check that the duty torque does not exceed the value M2

 Motoriduttori preferenziali / Preferred gearmotors

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**ECP**Motoriduttori CC epicicloidali  
DC planetary gearmotors**Dati tecnici per servizio S2****ECP****Technical data for S2 duty**

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	
<b>140</b>							<b>140</b>							
(3000 min <sup>-1</sup> )	<b>811</b>	1.3	3.1	<b>3.70</b>	<b>ECP100/521</b>	<b>120/240/24E</b>	(3000 min <sup>-1</sup> )	<b>59</b>	15	3.3	50.89	<b>ECP100/623</b>	<b>120/240/24E</b>	
	<b>701</b>	1.5	2.7	4.28			<b>51</b>	18	2.8	58.85				
	<b>579</b>	1.8	2.2	5.18			<b>44</b>	20	2.4	68.06				
	<b>444</b>	2.3	1.7	6.75			<b>42</b>	21	2.3	71.16				
	<b>218</b>	4.4	2.7	13.73			<b>ECP100/522</b>	<b>120/240/24E</b>	<b>38</b>	24	2.1			78.71
	<b>189</b>	5.1	2.3	15.88					<b>32</b>	28	1.8			92.70
	<b>163</b>	5.9	2.0	18.36					<b>31</b>	29	1.7			95.17
	<b>156</b>	6.2	1.9	19.20					<b>30</b>	30	1.7			99.50
	<b>135</b>	7.2	1.7	22.20					<b>28</b>	32	1.5			107.20
	<b>120</b>	8.1	1.5	25.01					<b>26</b>	35	1.4			115.07
	<b>112</b>	8.7	1.4	26.85					<b>24</b>	37	1.3			123.97
	<b>104</b>	9.3	1.3	28.93					<b>23</b>	39	1.3			129.62
	<b>86</b>	11	1.1	34.97					<b>22</b>	42	1.2			139.13
	<b>66</b>	15	0.8	45.56	<b>20</b>	45			1.1	149.90				
	<b>59</b>	15	1.6	50.89	<b>ECP100/523</b>	<b>120/240/24E</b>			<b>18</b>	51	1.0	168.84		
	<b>51</b>	18	1.4	58.85					<b>17</b>	55	0.9	181.24		
	<b>44</b>	20	1.2	68.06					<b>15</b>	59	0.9	195.26		
	<b>42</b>	21	1.2	71.16			<b>13</b>	71	0.7	236.09				
	<b>38</b>	24	1.1	78.71			<b>9.8</b>	71	0.7	307.54				
	<b>32</b>	28	0.9	92.70			<b>250</b>							
	<b>31</b>	29	0.9	95.17			(3000 min <sup>-1</sup> )	<b>811</b>	2.4	1.7	<b>3.70</b>	<b>ECP180/521</b>	<b>120/240</b>	
	<b>30</b>	30	0.8	99.50			<b>701</b>	2.7	1.5	4.28				
	<b>28</b>	32	0.8	107.20			<b>579</b>	3.3	1.2	5.18				
	<b>26</b>	35	0.7	115.07			<b>444</b>	4.3	0.9	6.75				
	<b>24</b>	36	0.7	123.97			<b>218</b>	8.2	1.5	13.73	<b>ECP180/522</b>			<b>120/240</b>
	<b>23</b>	36	0.7	129.62			<b>189</b>	9.5	1.3	15.88				
	<b>22</b>	36	0.7	139.13			<b>163</b>	11	1.1	18.36				
	<b>20</b>	36	0.7	149.90	<b>156</b>	12	1.0	19.20						
	<b>18</b>	36	0.7	168.84	<b>135</b>	13	0.9	22.20						
	<b>17</b>	36	0.7	181.24	<b>120</b>	15	0.8	25.01						
	<b>15</b>	36	0.7	195.26	<b>112</b>	16	0.7	26.85						
	<b>13</b>	36	0.7	236.09	<b>104</b>	17	0.7	28.93						
	<b>9.8</b>	36	0.7	307.54	<b>86</b>	17	0.7	34.97						
	<b>444</b>	2.3	3.4	6.75	<b>ECP100/621</b>	<b>120/240/24E</b>	<b>66</b>	17	0.7	45.56				
	<b>156</b>	6.2	4.0	19.20			<b>ECP180/523</b>	<b>120/240</b>	<b>59</b>	28		0.9	50.89	
	<b>135</b>	7.2	3.5	22.20					<b>51</b>	33		0.8	58.85	
	<b>120</b>	8.1	3.1	25.01					<b>44</b>	36		0.7	68.06	
	<b>112</b>	8.7	2.9	26.85					<b>42</b>	36	0.7	71.16		
	<b>104</b>	9.3	2.7	28.93					<b>38</b>	36	0.7	78.71		
	<b>86</b>	11	2.2	34.97					<b>32</b>	36	0.7	92.70		
	<b>66</b>	15	1.7	45.56					<b>31</b>	36	0.7	95.17		
									<b>30</b>	36	0.7	99.50		
									<b>28</b>	36	0.7	107.20		
									<b>26</b>	36	0.7	115.07		
									<b>24</b>	36	0.7	123.97		
									<b>23</b>	36	0.7	129.62		
					<b>22</b>	36			0.7	139.13				
					<b>20</b>	36	0.7	149.90						
					<b>18</b>	36	0.7	168.84						
					<b>17</b>	36	0.7	181.24						
					<b>15</b>	36	0.7	195.26						
					<b>13</b>	36	0.7	236.09						
					<b>9.8</b>	36	0.7	307.54						

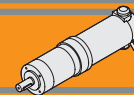
**NOTA**

Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

**NOTE**

For sf=0.7 check that the duty torque does not exceed the value M2

**Motoriduttori preferenziali / Preferred gearmotors****NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico**NOTE:** for continuous or highly intermittent duty, please contact our technical service



## Dati tecnici per servizio S2

## ECP

## Technical data for S2 duty

$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version	$P_1$ [W]	$n_2$ [min <sup>-1</sup> ]	$M_2$ [Nm]	sf	i		Versione motore Motor version		
<b>250</b>							<b>350</b>								
(3000 min <sup>-1</sup> )	<b>811</b>	2.4	3.4	<b>3.70</b>		<b>ECP180/621</b>	<b>120/240/24E</b>	(3000 min <sup>-1</sup> )	<b>59</b>	39.9	1.3	50.89		<b>ECP250/623</b>	<b>120/240</b>
	<b>701</b>	2.7	2.9	4.28					<b>51</b>	46.1	1.1	58.85			
	<b>579</b>	3.3	2.4	5.18					<b>44</b>	53.4	0.9	68.06			
	<b>444</b>	4.3	1.9	6.75					<b>42</b>	55.8	0.9	71.16			
	<b>218</b>	8.2	3.0	<b>13.73</b>		<b>ECP180/622</b>	<b>120/240/24E</b>		<b>38</b>	61.7	0.8	78.71		<b>ECP180/623</b>	<b>120/240/24E</b>
	<b>189</b>	9.5	2.6	15.88					<b>32</b>	72.7	0.7	92.70			
	<b>163</b>	11	2.3	18.36					<b>32</b>	74.6	0.7	95.17			
	<b>156</b>	12	2.2	19.20					<b>30</b>	71.0	0.7	99.50			
	<b>135</b>	13	1.9	22.20					<b>28</b>	71.0	0.7	107.20			
	<b>120</b>	15	1.7	25.01					<b>26</b>	71.0	0.7	115.07			
	<b>112</b>	16	1.6	26.85					<b>24</b>	71.0	0.7	123.97			
	<b>104</b>	17	1.4	28.93					<b>23</b>	71.0	0.7	129.62			
	<b>86</b>	21	1.2	34.97					<b>22</b>	71.0	0.7	139.13			
	<b>66</b>	27	0.9	45.56					<b>20</b>	71.0	0.7	149.90			
	<b>59</b>	28	1.8	50.89					<b>18</b>	71.0	0.7	168.84			
	<b>51</b>	33	1.5	58.85		<b>17</b>	71.0	0.7	181.24						
	<b>44</b>	38	1.3	68.06		<b>15</b>	71.0	0.7	195.26						
	<b>42</b>	40	1.3	71.16		<b>13</b>	71.0	0.7	236.09						
	<b>38</b>	44	1.1	78.71		<b>9.8</b>	71.0	0.7	307.54						
	<b>32</b>	52	1.0	92.70											
	<b>31</b>	53	0.9	95.17											
	<b>30</b>	56	0.9	99.50											
	<b>28</b>	60	0.8	107.20											
	<b>26</b>	64	0.8	115.07											
	<b>24</b>	69	0.7	123.97											
	<b>23</b>	71	0.7	129.62											
	<b>22</b>	71	0.7	139.13											
	<b>20</b>	71	0.7	149.90											
	<b>18</b>	71	0.7	168.84											
	<b>17</b>	71	0.7	181.24											
	<b>15</b>	71	0.7	195.26											
	<b>13</b>	71	0.7	236.09											
	<b>9.8</b>	71	0.7	307.54											
<b>350</b>							<b>500</b>								
(3000 min <sup>-1</sup> )	<b>811</b>	3.3	2.4	<b>3.70</b>		<b>ECP250/621</b>	<b>120/240</b>	(3000 min <sup>-1</sup> )	<b>811</b>	4.6	1.7	<b>3.70</b>		<b>ECP350/621</b>	<b>120/240</b>
	<b>701</b>	3.8	2.1	4.28					<b>701</b>	5.4	1.5	4.28			
	<b>579</b>	4.6	1.7	5.18					<b>579</b>	6.5	1.2	5.18			
	<b>444</b>	6.0	1.3	6.75					<b>444</b>	8.5	0.9	6.75			
	<b>218</b>	11.5	2.2	<b>13.73</b>		<b>ECP250/622</b>	<b>120/240</b>		<b>218</b>	16	1.5	<b>13.73</b>		<b>ECP350/622</b>	<b>120/240</b>
	<b>189</b>	13.3	1.9	15.88					<b>189</b>	19	1.3	15.88			
	<b>163</b>	15.4	1.6	18.36					<b>163</b>	22	1.2	18.36			
	<b>156</b>	16.1	1.6	19.20					<b>156</b>	23	1.1	19.20			
	<b>135</b>	18.6	1.3	22.20					<b>135</b>	26	1.0	22.20			
	<b>120</b>	21.0	1.2	25.01					<b>120</b>	29	0.8	25.01			
	<b>112</b>	22.6	1.1	26.85					<b>112</b>	32	0.8	26.85			
	<b>104</b>	24.3	1.0	28.93					<b>104</b>	34	0.7	28.93			
	<b>86</b>	29.4	0.9	34.97					<b>86</b>	36	0.7	34.97			
	<b>66</b>	38.3	0.7	45.56					<b>66</b>	36	0.7	45.56			
	<b>59</b>	56	0.9	50.89					<b>59</b>	56	0.9	50.89			
	<b>51</b>	65	0.8	58.85		<b>51</b>	65	0.8	58.85						
	<b>44</b>	71	0.7	68.06		<b>44</b>	71	0.7	68.06						
	<b>42</b>	71	0.7	71.16		<b>42</b>	71	0.7	71.16						
	<b>38</b>	71	0.7	78.71		<b>38</b>	71	0.7	78.71						
	<b>32</b>	71	0.7	92.70		<b>32</b>	71	0.7	92.70						
	<b>31</b>	71	0.7	95.17		<b>31</b>	71	0.7	95.17						
	<b>30</b>	71	0.7	99.50		<b>30</b>	71	0.7	99.50						
	<b>28</b>	71	0.7	107.20		<b>28</b>	71	0.7	107.20						
	<b>26</b>	71	0.7	115.07		<b>26</b>	71	0.7	115.07						
	<b>24</b>	71	0.7	123.97		<b>24</b>	71	0.7	123.97						
	<b>23</b>	71	0.7	129.62		<b>23</b>	71	0.7	129.62						
	<b>22</b>	71	0.7	139.13		<b>22</b>	71	0.7	139.13						
	<b>20</b>	71	0.7	149.90		<b>20</b>	71	0.7	149.90						
	<b>18</b>	71	0.7	168.84		<b>18</b>	71	0.7	168.84						
	<b>17</b>	71	0.7	181.24		<b>17</b>	71	0.7	181.24						
	<b>15</b>	71	0.7	195.26		<b>15</b>	71	0.7	195.26						
	<b>13</b>	71	0.7	236.09		<b>13</b>	71	0.7	236.09						
	<b>9.8</b>	71	0.7	307.54		<b>9.8</b>	71	0.7	307.54						

NOTA  
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

NOTE  
For sf=0.7 check that the duty torque does not exceed the value M2

Motoriduttori preferenziali / Preferred gearmotors

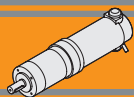
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

## Dati tecnici elettrici

## Electrical technical data

<b>EC020</b> →	<b>EC035</b> →	<b>EC050</b> →	<b>EC070</b> →
<b>EC100</b> →	<b>EC180</b> →	<b>EC250</b> →	<b>EC350</b> →



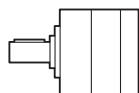
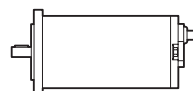
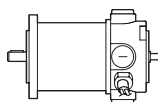
NDP  
ECP

# Motoriduttori CC epicicloidali DC planetary gearmotors



Motori applicabili

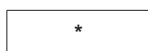
Motor adapters



		ND		EC								
		120.120 120.240	180.120 180.240	020.120 020.24E	035.120 035.240	050.12E 050.24E	070.120 070.240	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
PM	42						*	*	*			
	52											
	62											



Combinazioni preferenziali / Preferred combinations

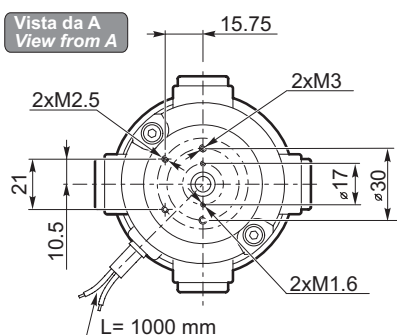
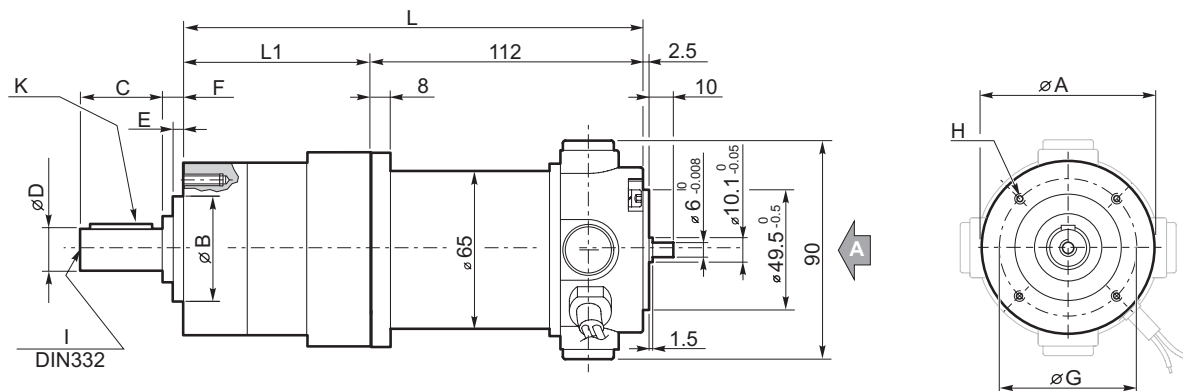


\* Contattare il nostro servizio tecnico / Please contact our technical department

Dimensioni

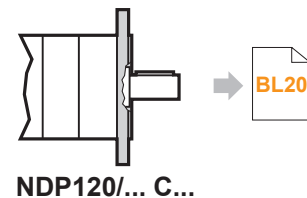
Dimensions

NDP120/... U

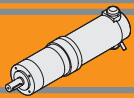


Freno / Brake → BA9

Encoder → BA9



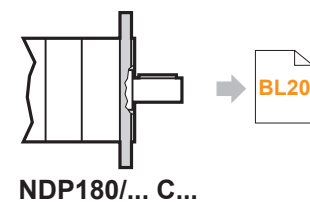
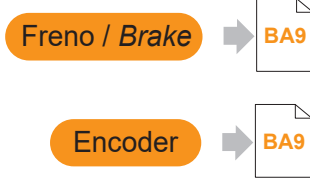
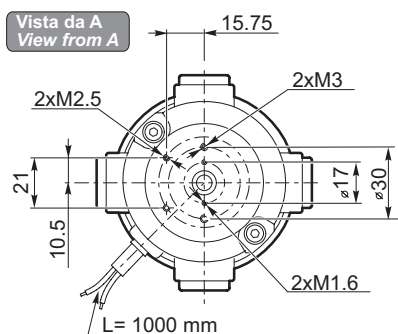
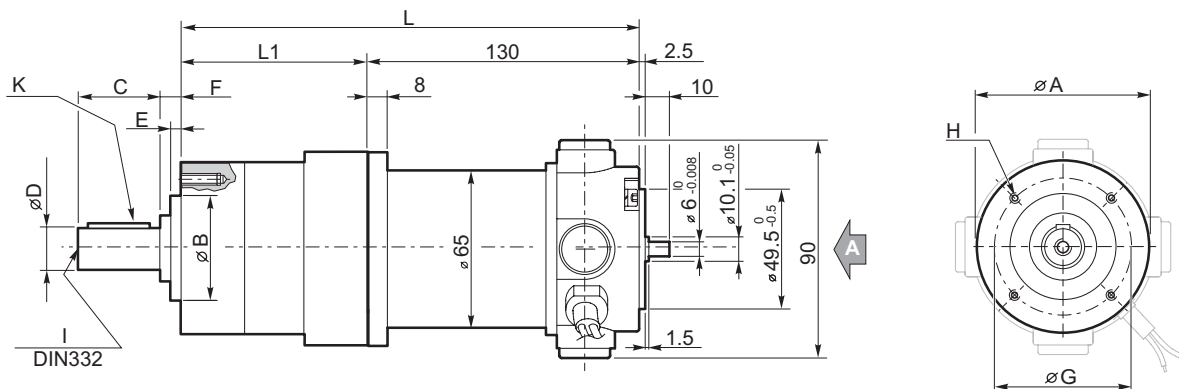
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
NDP120/52...	1	73	185	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	199.1										
	3	101.4	213.4										
NDP120/62...	1	72.8	184.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	201.7										
	3	106.7	218.7										



**Dimensioni**

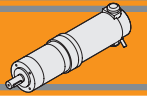
**Dimensions**

**NDP180/... U**



Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
NDP180/52	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
NDP180/62	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7										
	3	106.7	236.7										

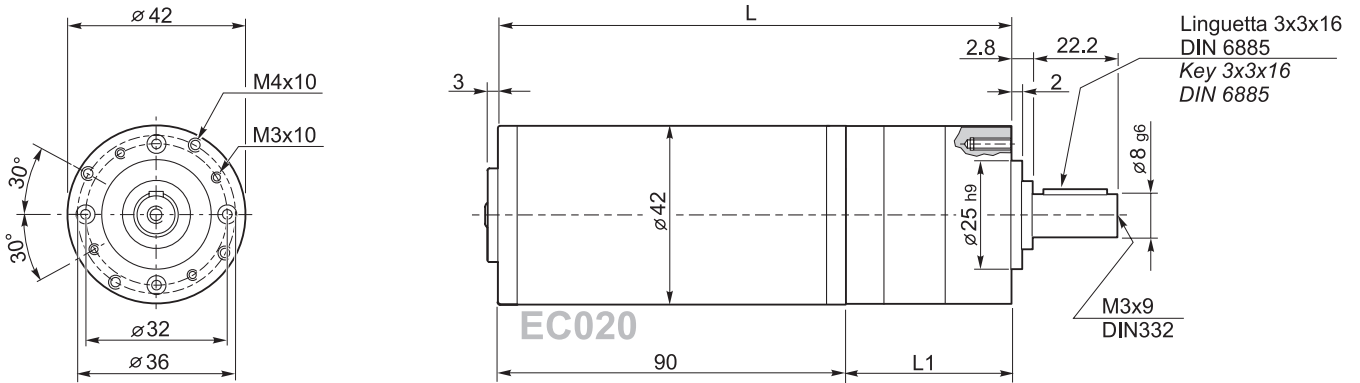




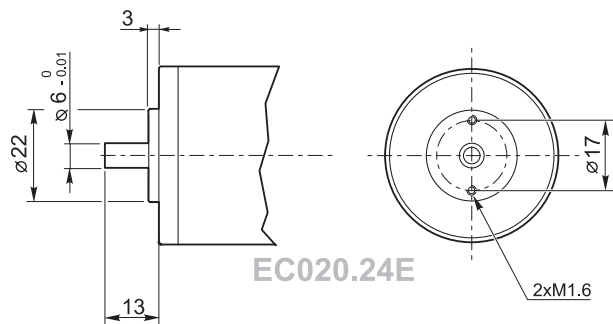
Dimensioni

Dimensions

ECP020/42... U

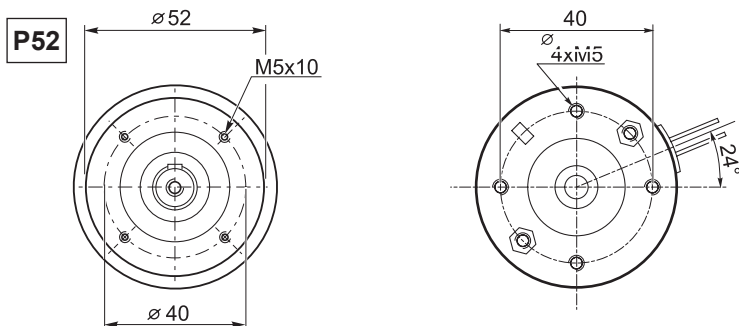
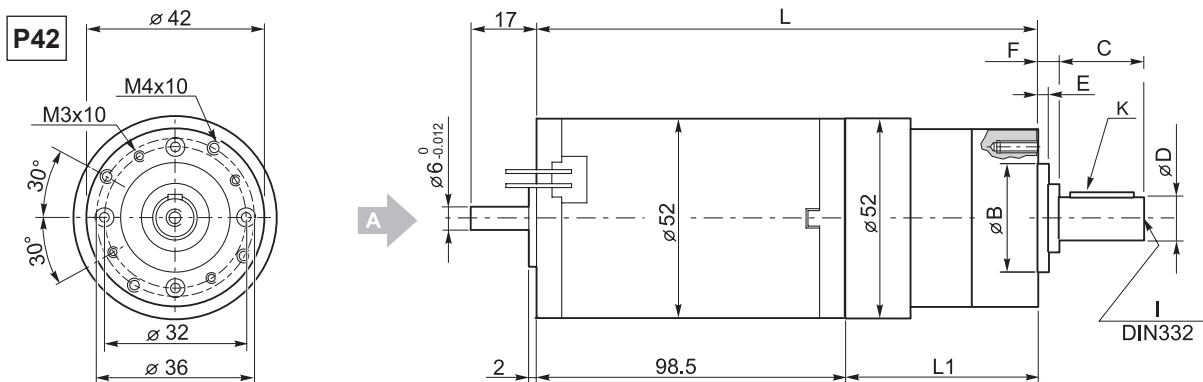


Encoder BB24



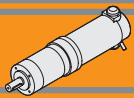
	Numero di stadi / Stages number		
ECP020/42...	1	2	3
L1	60.5	73.6	86.6
L	150.5	163.6	176.6

ECP035/... U



Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions								
		L1	L	B	C	D	E	F	I	K
ECP035/42...	1	60.5	159	25 h9	22.2	8 g6	2	2.8	M3x9	3x3x16
	2	73.6	172.1							
	3	86.6	185.1							
ECP035/52...	1	73.1	171.6	32 h8	20.8	12 h7	3	4.2	M4x10	4x4x16
	2	87.2	185.7							
	3	101.5	200							

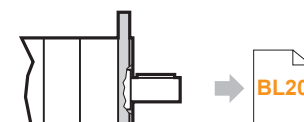
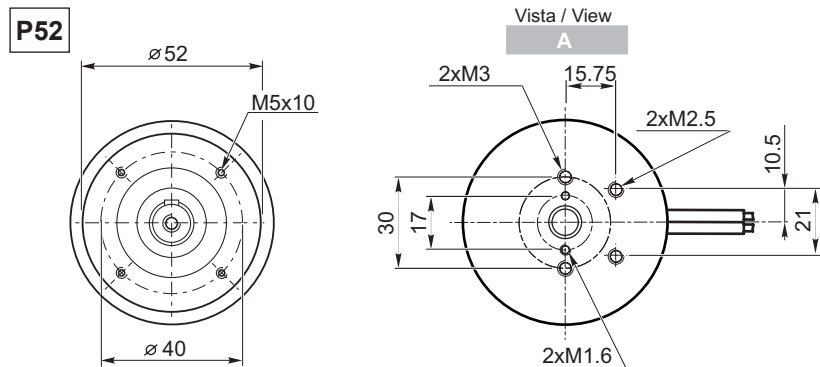
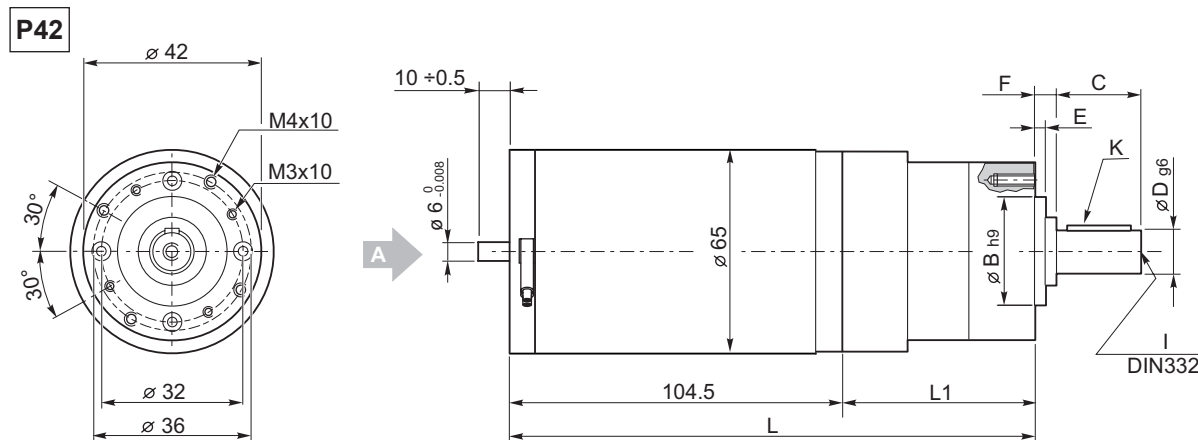
DC



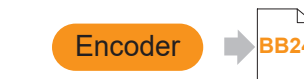
Dimensioni

Dimensions

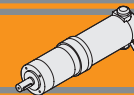
**ECP050/... U**



ECP050/... C...



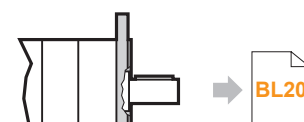
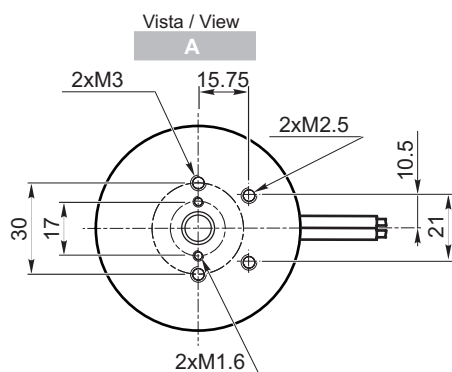
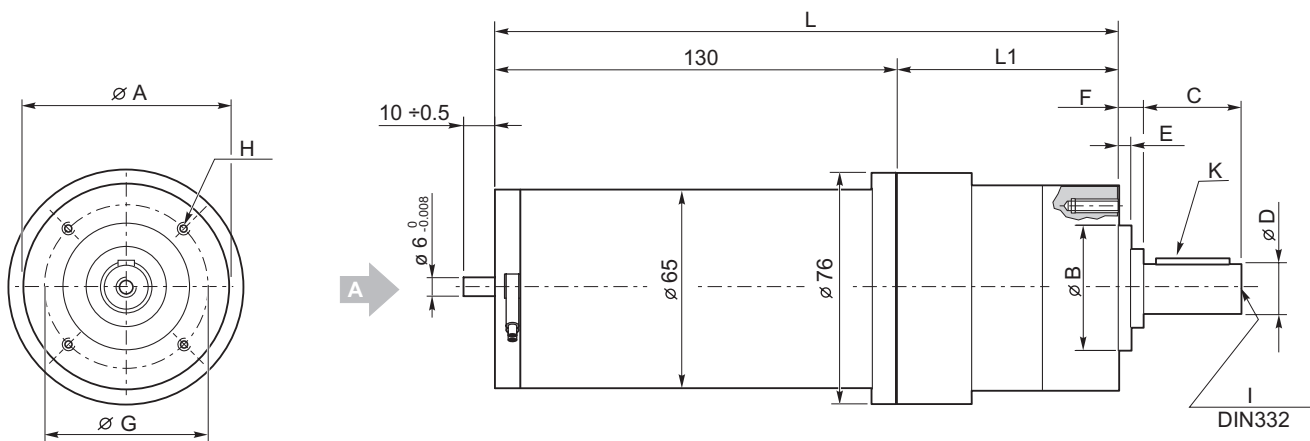
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions								
		L1	L	B	C	D	E	F	I	K
ECP050/42...	1	60.5	165	25 h9	22.2	8 g6	2	2.8	M3x9	3x3x16
	2	73.6	178.1							
	3	86.6	191.1							
ECP050/52...	1	73.1	177.6	32 h8	20.8	12 h7	3	4.2	M4x10	4x4x16
	2	87.2	191.7							
	3	101.5	206							



Dimensioni

Dimensions

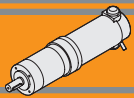
ECP070/... U



ECP070/... C...

- Motori / Motors IP66 → [BC2](#)
- Freno / Brake → [BB23](#)
- Encoder → [BB24](#)

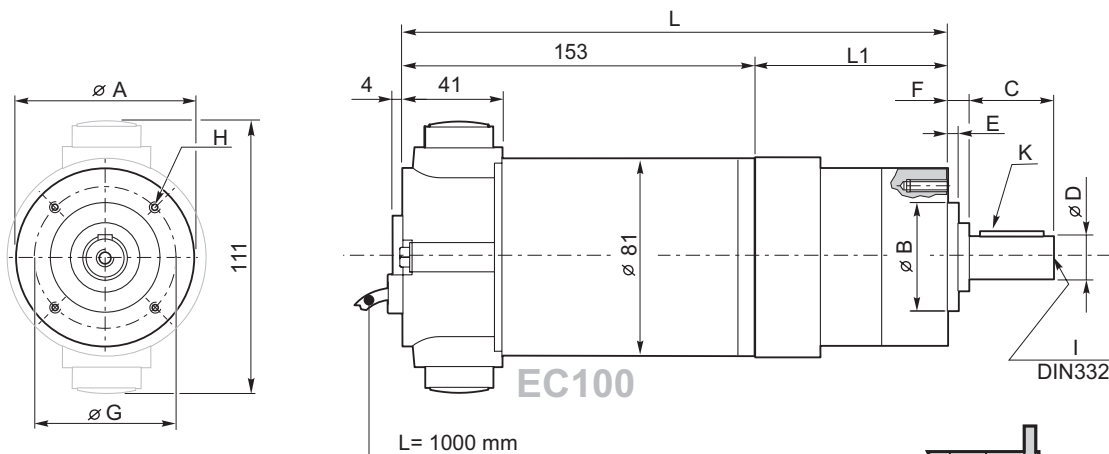
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP070/52...	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
ECP070/62...	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7										
	3	106.7	236.7										



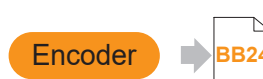
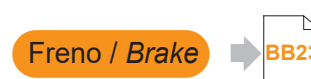
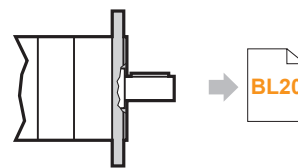
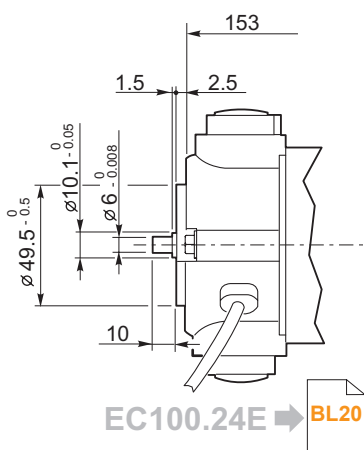
**Dimensioni**

**Dimensions**

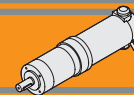
**ECP100/... U... 120/140**



**ECP100/... U... 24E**



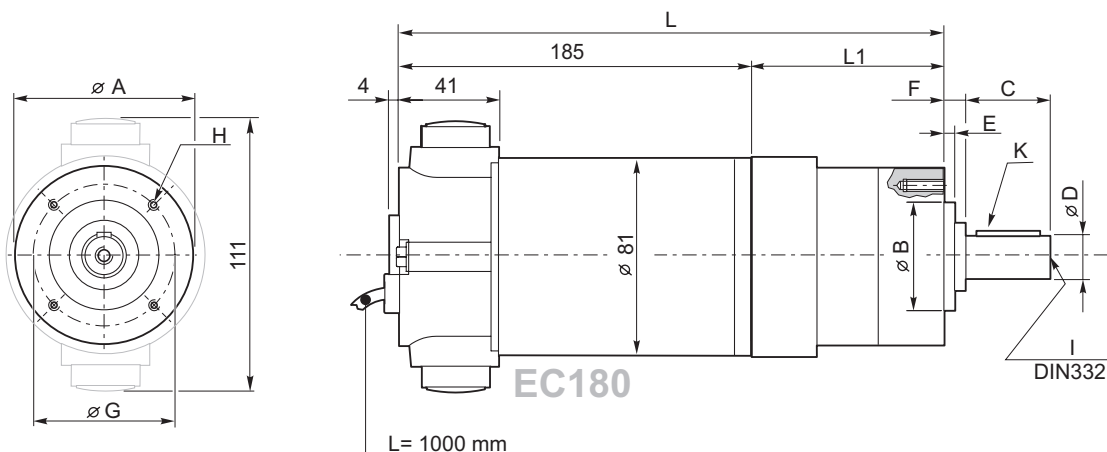
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP100/52...	1	73	226	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	240.1										
	3	101.4	254.4										
ECP100/62...	1	72.8	225.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	242.7										
	3	106.7	259.7										



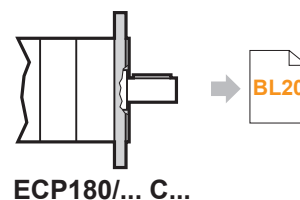
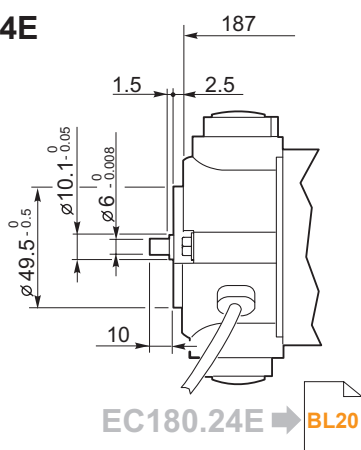
Dimensioni

Dimensions

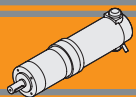
ECP180/... U... 120/240



ECP180/62.. U... 24E

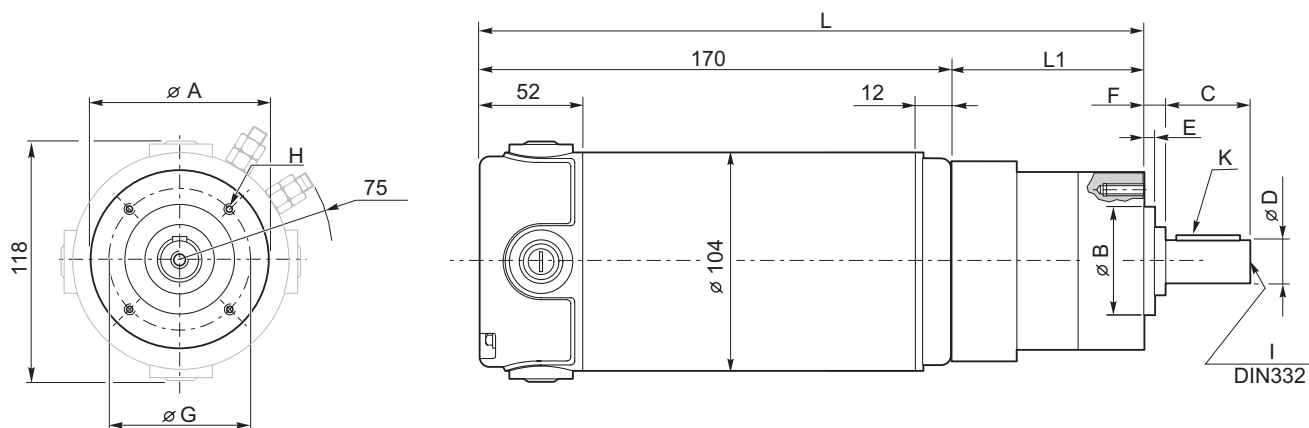


Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions													
		EC180		EC180.24E		EC180 - EC180.24E									
		L1	L	L1	L	A	B	C	D	E	F	G	H	I	K
ECP180/52...	1	73	258			52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	272.1												
	3	101.4	286.4												
ECP180/62...	1	72.8	257.8	76	263	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	274.7	92	279										
	3	106.7	291.7	108	295										

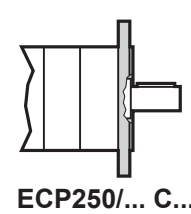
**ECP**

Motoriduttori CC epicicloidali  
DC planetary gearmotors

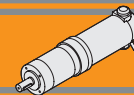
**MINI**  
TECNO

**Dimensioni****Dimensions****ECP250/... U**

Motori / Motors IP66



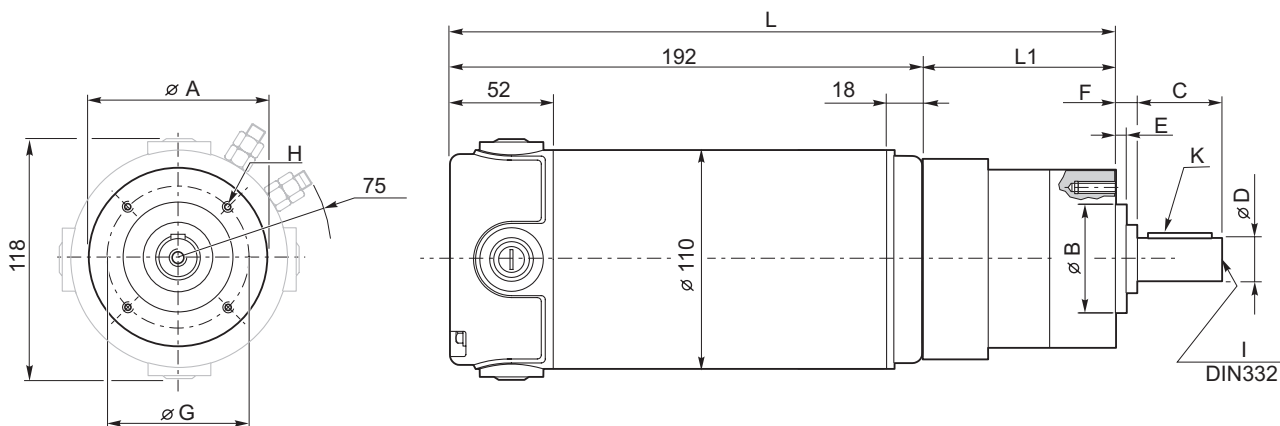
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP250/62...	1	74.5	244.5	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	91.5	261.5										
	3	108.5	278.5										



Dimensioni

Dimensions

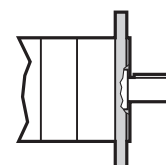
ECP350/... U



Motori / Motors IP66

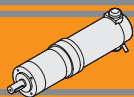


Freno / Brake



ECP350/... C...

Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP350/62...	1	74.5	266.5	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	91.5	283.5										
	3	108.5	300.5										



**NDP  
ECP**

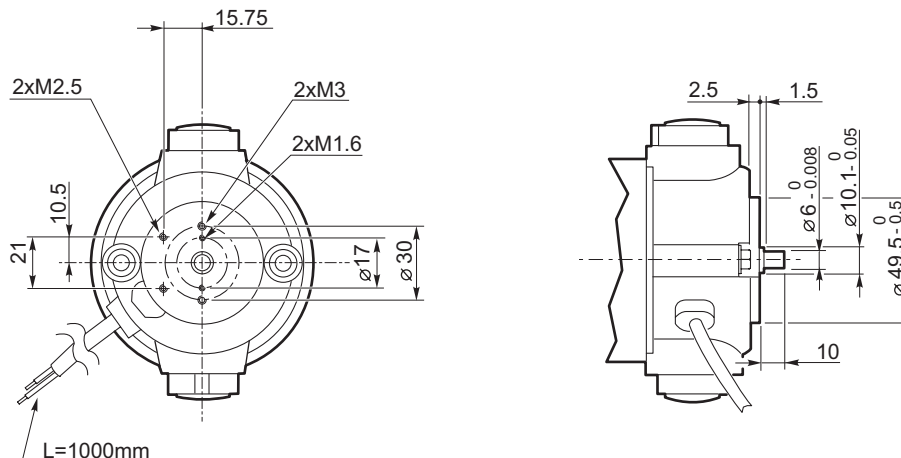
**Motoriduttori CC epicicloidali  
DC planetary gearmotors**

**MINI  
TECNO**

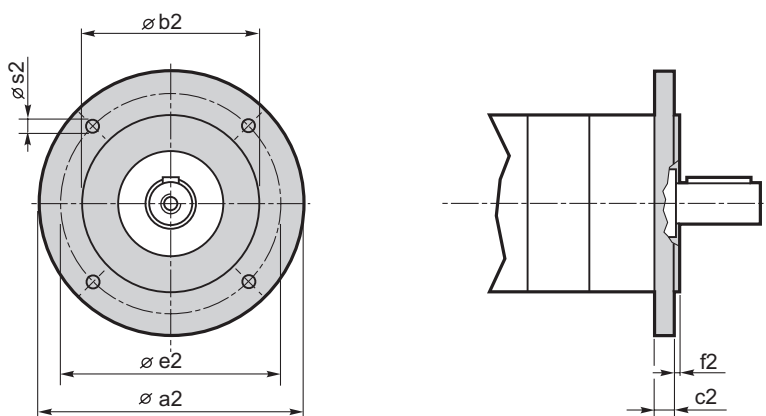
**Dimensioni**

**Dimensions**

**ECP100.24E  
ECP180.24E**



**NDP.../... C... - ECP.../... C... Flange uscita / Output flanges**



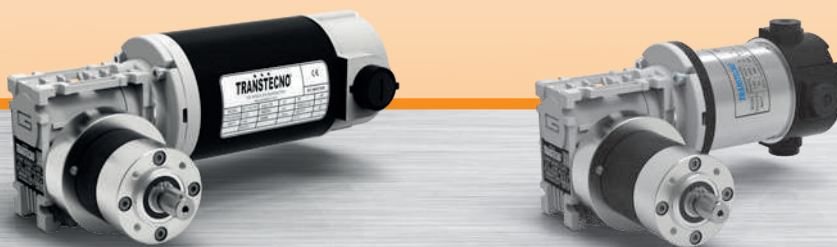
Dimensioni / Dimensions							
PM	a2	b2	c2	e2	f2	s2	Flangia uscita Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120



**MINI**  **TECNO**™  
**small** but strong

**NDWMP**  
**ECWMP**

Motoriduttori CC combinati  
DC double reduction gearmotors

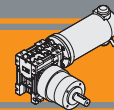


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC

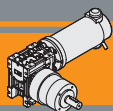




<b>Indice</b>	<b>Index</b>	Pag. Page
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Designazione	<i>Classification</i>	<b>BM2</b>
Versioni	<i>Versions</i>	<b>BM2</b>
Simbologia	<i>Symbols</i>	<b>BM2</b>
Lubrificazione	<i>Lubrication</i>	<b>BM3</b>
Carichi radiali	<i>Radial loads</i>	<b>BM3</b>
Rapporti	<i>Ratios</i>	<b>BM3</b>
Dati tecnici	<i>Technical data</i>	<b>BM4</b>
Dimensioni	<i>Dimensions</i>	<b>BM6</b>

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**Caratteristiche tecniche**

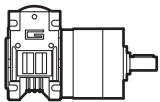
**Technical features**

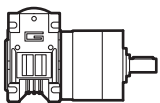
L'accoppiamento di un riduttore a vite senza fine con un riduttore epicicloidale consente di ottenere elevati rapporti di riduzione ( $i_{max} = 1/18452$ ) e di disporre di un gruppo autolubrificato compatto, silenzioso e con un'elevata affidabilità.

The coupling of a wormgearbox to a planetary gearbox allows to obtain high reduction ratios ( $i_{max} = 1/18452$ ) and to get a compact, silent, self lubricated with high reliability group.

**Designazione**

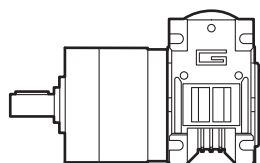
**Classification**

MOTORIDUTTORE / GEARMOTOR								
NDWMP	120/026/52		2	CD	90	405	240	BR
Tipo Type	Grandezza Size		Numero stadi epicicloidale Planetary stages number	Versione Riduttore Gearbox Version	Flangia Uscita Output flange	Rapporto Ratio	Versione Motore Motor Version	Opzioni Options
	<b>120/026/52</b>  <b>120/026/62</b>	<b>180/026/62</b>	<b>1</b>	<b>US</b>	<b>80</b>	Vedere tabella See tables	<b>120</b> <b>240</b>	<b>BR</b> <b>BRL</b>
			<b>2</b>	<b>UD</b>	<b>90</b>			
			<b>3</b>	<b>CS</b>	<b>105</b>			
				<b>CD</b>	<b>120</b>			

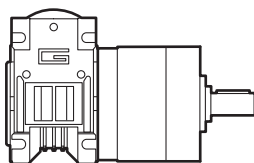
MOTORIDUTTORE / GEARMOTOR									
ECWMP	070/026/52			2	CD	90	405	240	BR
Tipo Type	Grandezza Size			Numero stadi epicicloidale Planetary stages number	Versione Riduttore Gearbox Version	Flangia Uscita Output flange	Rapporto Ratio	Versione Motore Motor Version	Opzioni Options
	<b>070/026/52</b> <b>070/026/62</b>	<b>100/026/52</b> <b>100/026/62</b>	<b>180/026/62</b>	<b>1</b>	<b>US</b>	<b>80</b>	Vedere tabella See tables	<b>120</b> <b>240</b> <b>24E</b>	<b>BR</b> <b>BRL</b>
				<b>2</b>	<b>UD</b>	<b>90</b>			
				<b>3</b>	<b>CS</b>	<b>105</b>			
					<b>CD</b>	<b>120</b>			

**Versioni**

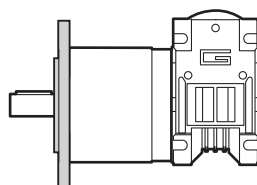
**Versions**



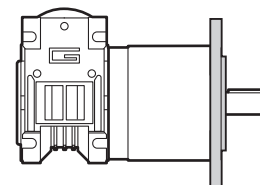
**US**



**UD**



**CS**

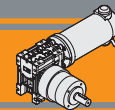


**CD**

**Simbologia**

**Symbols**

- $n_1$  [ $\text{min}^{-1}$ ] Velocità in ingresso / *Input speed*
- $n_2$  [ $\text{min}^{-1}$ ] Velocità in uscita / *Output speed*
- $i$  Rapporto di riduzione / *Ratio*
- $P_1$  [kW] Potenza in entrata / *Input power*
- $M_n$  [Nm] Coppia nominale in uscita del riduttore / *Maximum output torque of the gearbox*
- $M_2$  [Nm] Coppia in uscita in funzione di  $P_1$  / *Output torque referred to  $P_1$*
- $sf$  Fattore di servizio / *Service factor*
- Rd % Rendimento dinamico / *Dynamic efficiency*
- $A_2$  [N] Carico assiale ammissibile in uscita / *Permitted output axial load*
- $R_2$  [N] Carico radiale ammissibile in uscita / *Permitted output radial load*



## Lubrificazione

## Lubrication

I riduttori a vite senza fine della serie CM sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

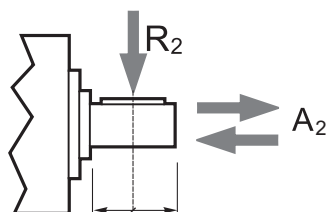
*Permanent synthetic oil long-life lubrication allow to use CM wormgearbox range in all mounting position.*

I riduttori epicicloidali sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione. Questo gli consente di essere installati praticamente ovunque.

*Planetary gearboxes are life-time lubricated with grease, therefore they are maintenance free. They can be installed in any location.*

## Carichi radiali

## Radial loads



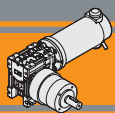
Numero di stadi Stages number	Carichi Radiali $R_2$ [N] Radial Load $R_2$ [N]		
	P52	P62	P81
1	200	240	400
2	320	360	600
3	450	520	1000

Numero di stadi Stages number	Carichi Assiali $A_2$ [N] Axial Load $A_2$ [N]		
	P52	P62	P81
1	60	70	80
2	100	100	120
3	150	150	200

## Rapporti

## Ratios

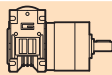
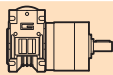
Motoriduttore Gearmotor	Numero stadi epicicloidale Planetary stages number	Rapporto epicicloidale Planetary ratio	Rapporto vite senza fine Wormgearbox ratio	Rapporto finale Total ratio
.../026/052 .../026/062	1	6.75	10	67.5
			15	101.3
			20	135
			30	202.5
			40	270
			50	337.5
	2	25.01	10	250.1
			15	375.15
			20	500.2
			30	750.3
			40	1000.4
			50	1250.5
			60	1500.6
	45.56	60	2734	



### Dati tecnici per servizio S2

### NDWMP

### Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version	P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version					
<b>160</b>							<b>250</b>											
(3000 min <sup>-1</sup> )	<b>44.4</b>	22.8	1.1	67.5	<b>120/026/521</b>	120/240	(3000 min <sup>-1</sup> )	<b>44.4</b>	25.0	1.0	67.5	<b>180/026/521</b>	120/240					
	<b>29.6</b>	25.0	1.0	101.3														
	<b>22.2</b>	25.0	1.0	135														
	<b>14.8</b>	25.0	1.0	202.5														
	<b>11.1</b>	25.0	1.0	270														
	<b>8.9</b>	25.0	1.0	337.5														
	<b>7.4</b>	25.0	1.0	405														
	<b>12.0</b>	25.0	1.0	250.1			<b>120/026/522</b>	120/240										
	<b>8.0</b>	25.0	1.0	375.15														
	<b>6.0</b>	25.0	1.0	500.2														
	<b>4.0</b>	25.0	1.0	750.3														
	<b>3.0</b>	25.0	1.0	1000.4														
	<b>2.4</b>	25.0	1.0	1250.5														
	<b>2.0</b>	25.0	1.0	1500.6														
	<b>1.1</b>	25.0	1.0	2734														
	<b>44.4</b>	23	1.7	67.5	<b>120/026/621</b>	120/240												
	<b>29.6</b>	34	1.2	101.3														
	<b>22.2</b>	40	1.0	135.0														
	<b>14.8</b>	40	1.0	202.5														
	<b>11.1</b>	40	1.0	270.0														
	<b>8.9</b>	40	1.0	337.5														
	<b>7.4</b>	40	1.0	405.0														
	<b>12.0</b>	50.0	1.0	250.1			<b>120/026/622</b>	120/240										
	<b>8.0</b>	50.0	1.0	375.15														
	<b>6.0</b>	50.0	1.0	500.2														
	<b>4.0</b>	50.0	1.0	750.3														
	<b>3.0</b>	50.0	1.0	1000.4														
	<b>2.4</b>	50.0	1.0	1250.5														
	<b>2.0</b>	50.0	1.0	1500.6														
	<b>1.1</b>	50.0	1.0	2734														

NOTA:  
Verificare sempre che la coppia M<sub>2</sub> utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE:  
Please check that the output torque M<sub>2</sub> does not exceed the value in the grey areas

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

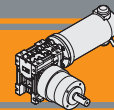
NOTE: for continuous or highly intermittent duty, please contact our technical service

### Dati tecnici elettrici

### Electrical technical data

ND 120 → 

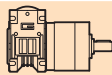
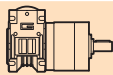
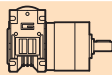
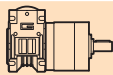
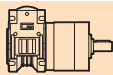
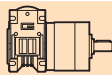
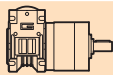
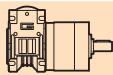
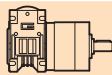
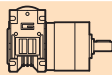
ND 180 → 



Dati tecnici per servizio S2

**ECWMP**

Technical data for S2 duty

P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version	P <sub>1</sub> [W]	n <sub>2</sub> [min <sup>-1</sup> ]	M <sub>2</sub> [Nm]	sf	i		Versione motore Motor version		
<b>100</b>							<b>140</b>								
(3000 min <sup>-1</sup> )	44.4	14	1.8	67.5		070/026/521	120/240	(3000 min <sup>-1</sup> )	44.4	20	1.3	67.5		100/026/521	120/240/24E
	29.6	21	1.2	101.3				29.6	25	1.0	101.3				
	22.2	25	1.0	135.0				44.4	20	2.0	67.5		100/026/621	120/240/24E	
	14.8	25	1.0	202.5				29.6	29	1.4	101.3				
	11.1	25	1.0	270.0				22.2	37	1.1	135.0				
	8.9	25	1.0	337.5				14.8	40	1.0	202.5				
	7.4	25	1.0	405											
	12.0	25.0	1.0	250.1				070/026/522	120/240	<b>250</b>					
	8.0	25.0	1.0	375.15	(3000 min <sup>-1</sup> )	44.4			25.0	1.0	67.5		180/026/521	120/240	
	6.0	25.0	1.0	500.2		44.4			37	1.1	67.5				
	4.0	25.0	1.0	750.3		29.6			40	1.0	101.3				
	3.0	25.0	1.0	1000.4		22.2			40	1.0	135.0				
	2.4	25.0	1.0	1250.5											
	2.0	25.0	1.0	1500.6											
	1.1	25.0	1.0	2734											
	44.4	14.3	2.8	67.5		070/026/621	120/240	<b>NOTA:</b> Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio							
	29.6	20.1	2.0	101.3			<b>NOTE:</b> Please check that the output torque M2 does not exceed the value in the grey areas								
	22.2	25.4	1.6	135											
	14.8	34.0	1.2	202.5											
	11.1	40.0	1.0	270											
	8.9	40.0	1.0	337.5											
	7.4	40.0	1.0	405											
	12.0	50.0	1.0	250.1				070/026/622	120/240						
	8.0	50.0	1.0	375.15											
	6.0	50.0	1.0	500.2											
	4.0	50.0	1.0	750.3											
	3.0	50.0	1.0	1000.4											
	2.4	50.0	1.0	1250.5											
	2.0	50.0	1.0	1500.6											
	1.1	50.0	1.0	2734											

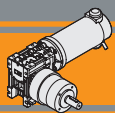
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Dati tecnici elettrici

Electrical technical data

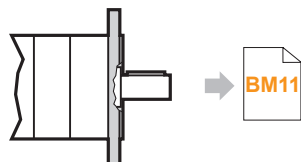
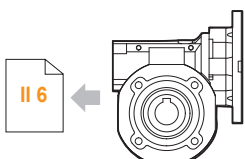
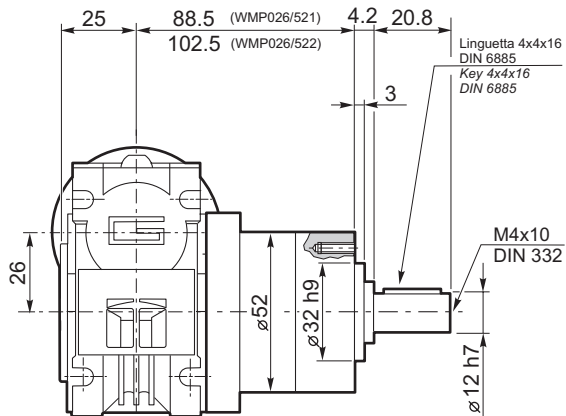
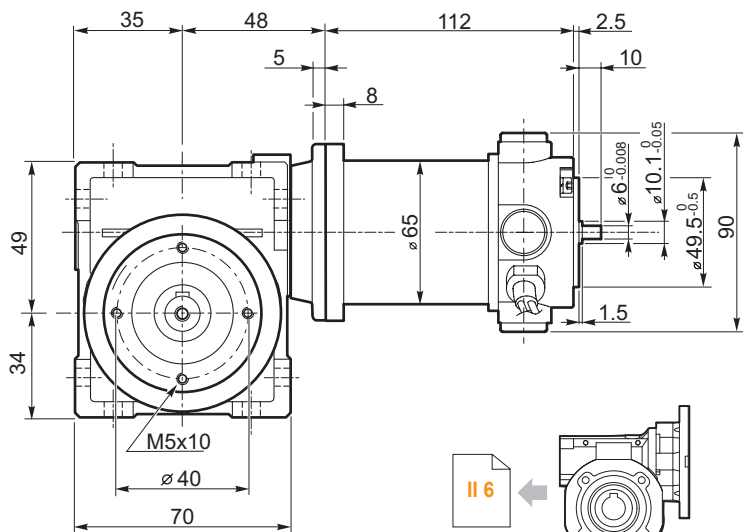




Dimensioni

Dimensions

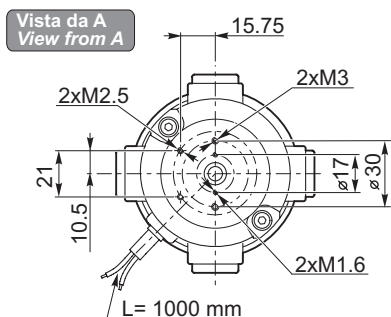
NDWMP120/026/52...U



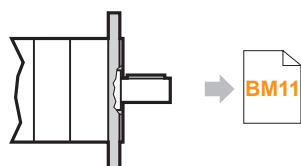
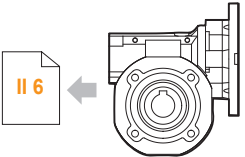
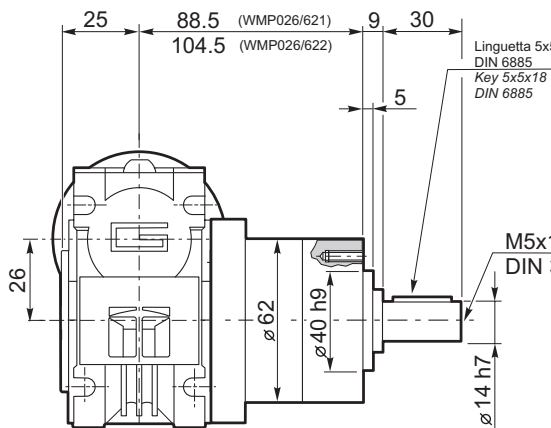
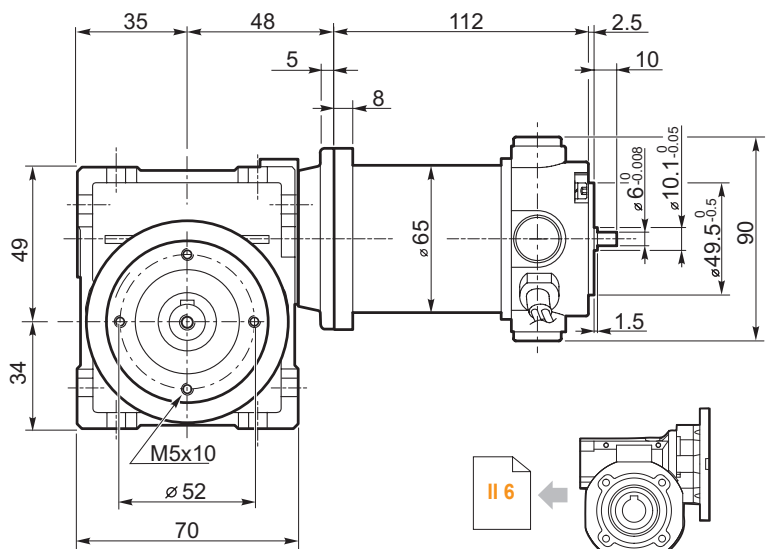
NDWMP120/026/52...C

Freno / Brake → BA9

Encoder → BA9



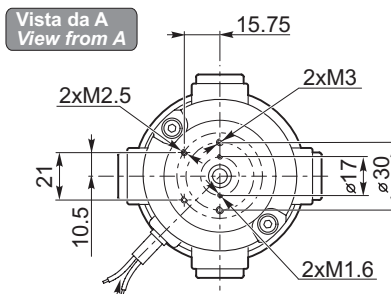
NDWMP120/026/62...U



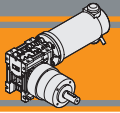
NDWMP120/026/62...C

Freno / Brake → BA9

Encoder → BA9



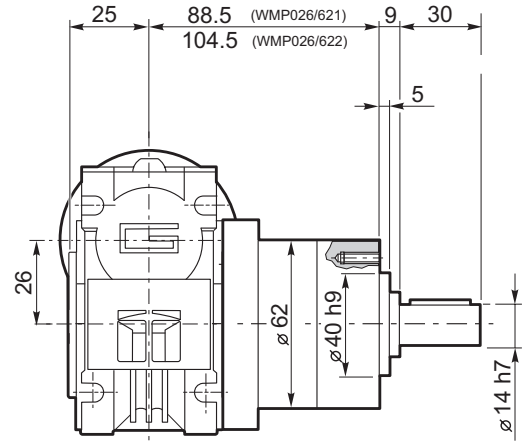
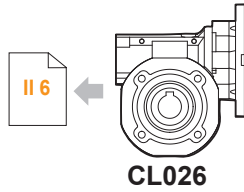
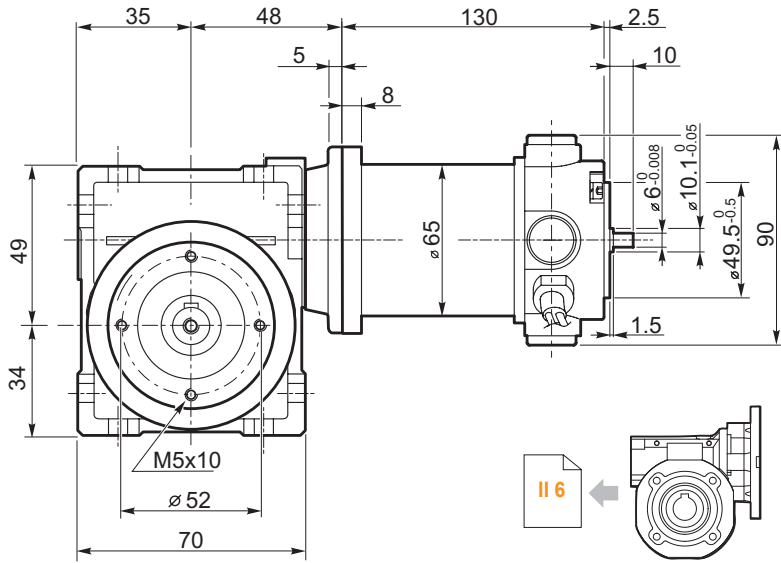




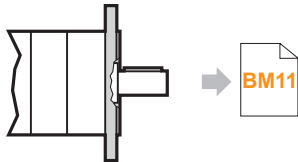
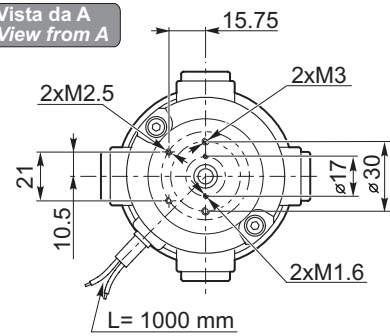
**Dimensioni**

**Dimensions**

**NDWMP180/026/62...U**



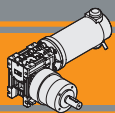
Vista da A  
View from A



**NDWMP180/026/62...C**

Freno / Brake → **BA9**

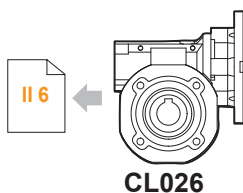
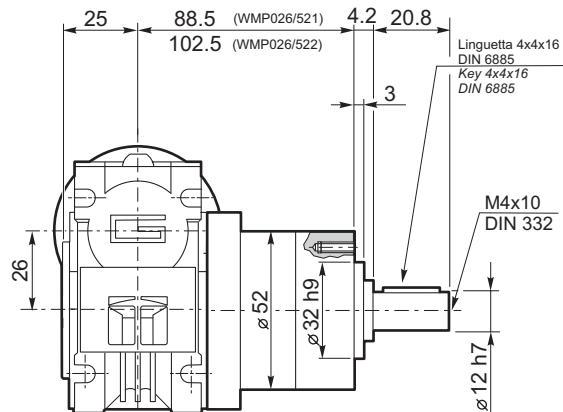
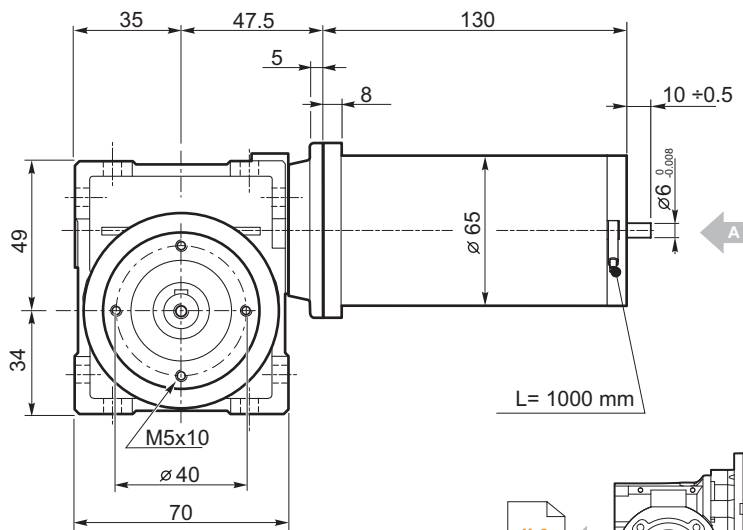
Encoder → **BA9**



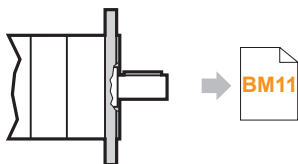
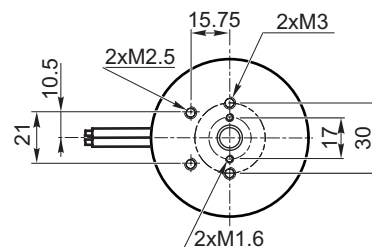
### Dimensioni

### Dimensions

#### ECWMP070/026/52...U



Vista / View  
A



ECWMP070/026/52...C

Motore / Motor IP66



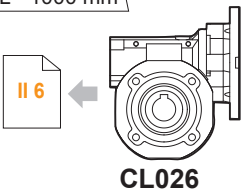
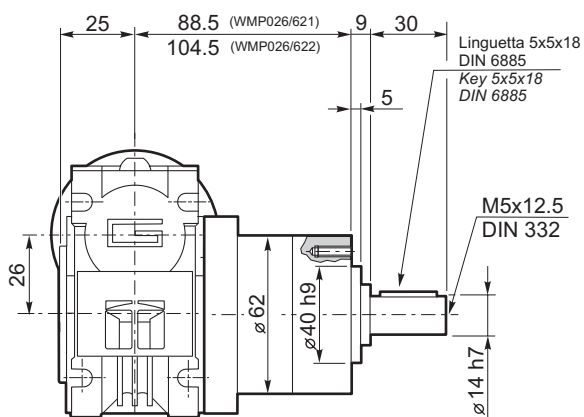
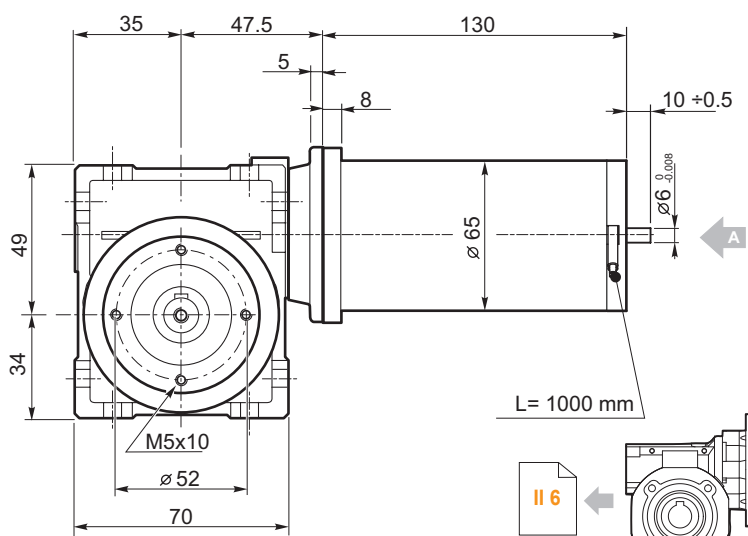
Freno / Brake



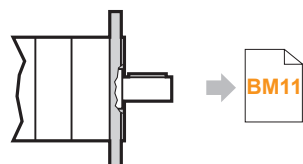
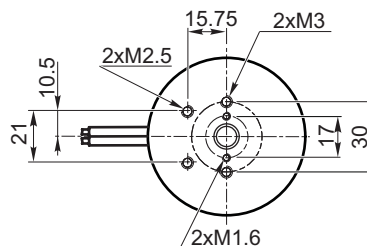
Encoder



#### ECWMP070/026/62...U



Vista / View  
A



ECWMP070/026/62...C

Motore / Motor IP66

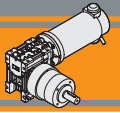


Freno / Brake



Encoder

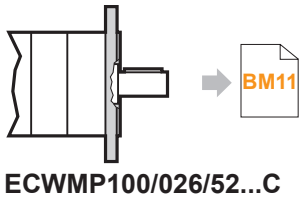
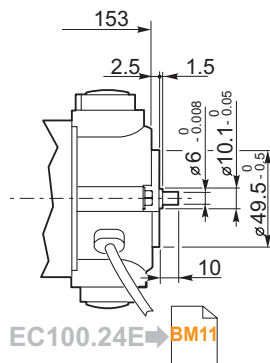
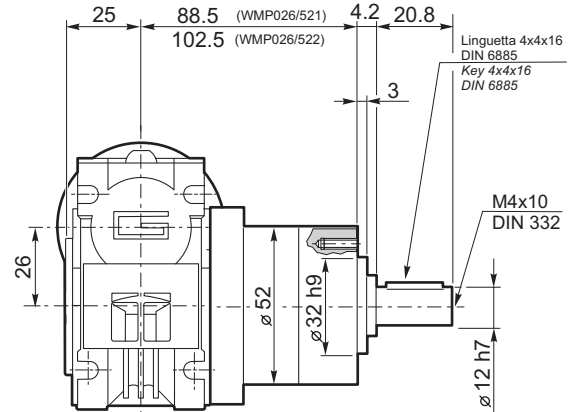
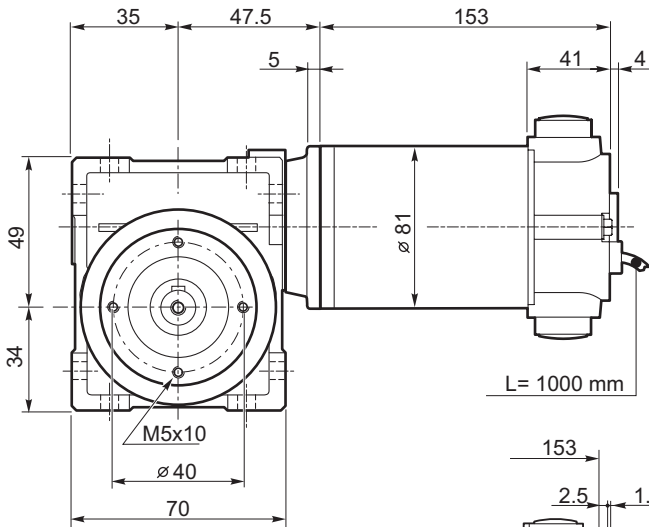




Dimensioni

Dimensions

**ECWMP100/026/52...U**



Motori / Motors IP66 →

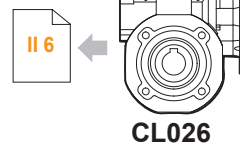
BC4

Freno / Brake →

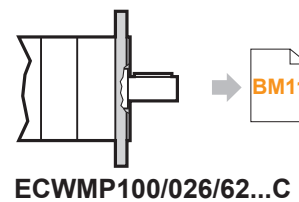
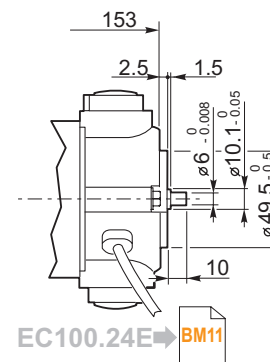
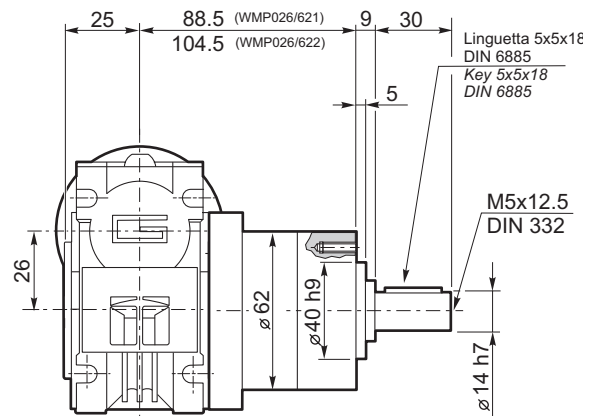
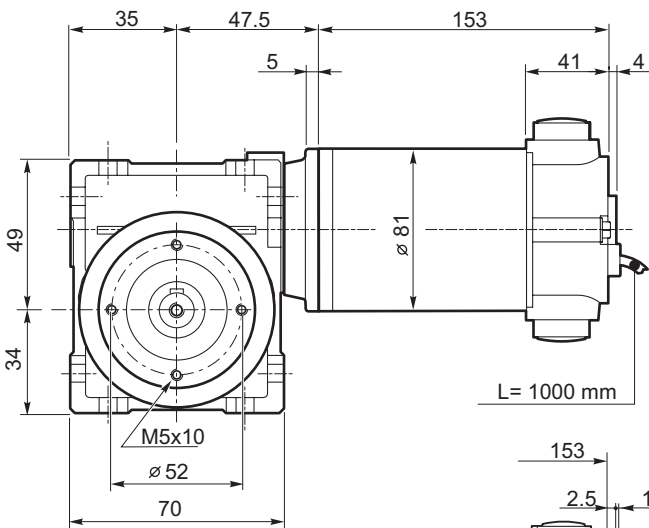
BB23

Encoder →

BB24



**ECWMP100/026/62...U**



Motori / Motors IP66 →

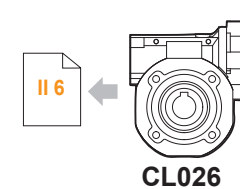
BC4

Freno / Brake →

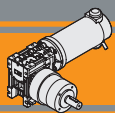
BB23

Encoder →

BB24



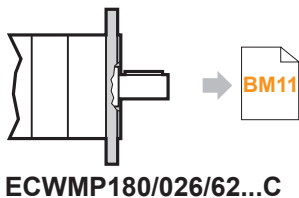
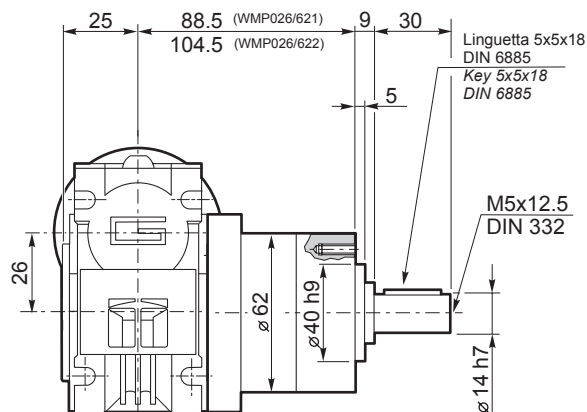
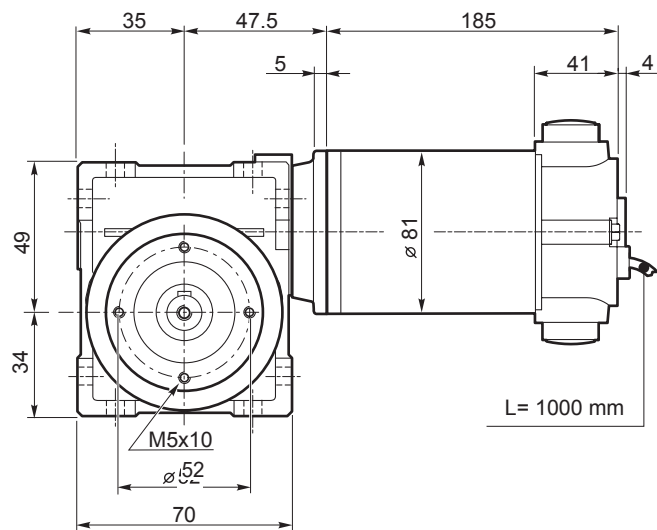
DC



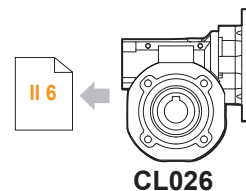
### Dimensioni

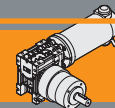
### Dimensions

#### ECWMP180/026/62...U



- Motori / Motors IP66 → BC6
- Freno / Brake → BB23
- Encoder → BB24

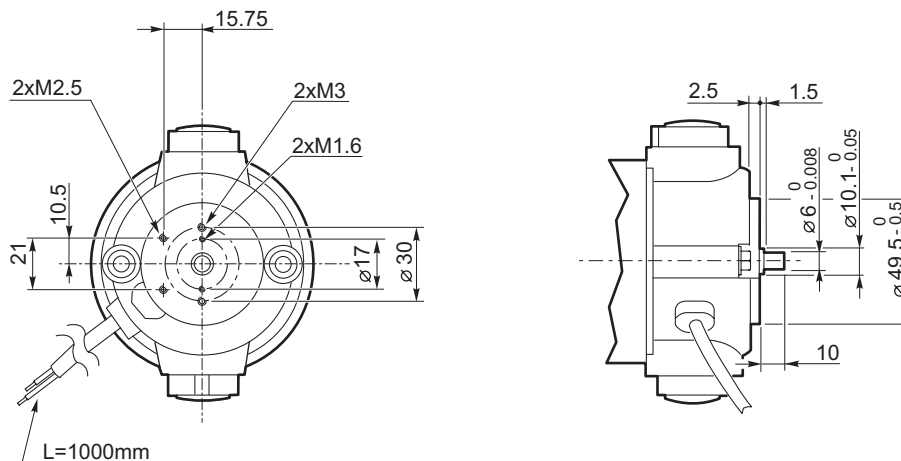




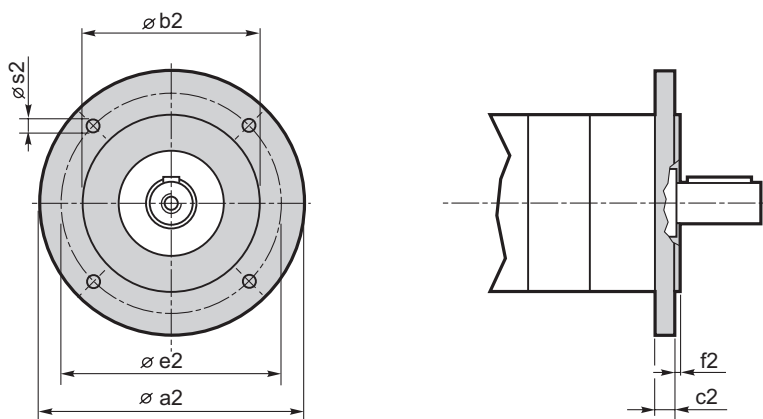
Dimensioni

Dimensions

ECWMP100.24E  
ECWMP180.24E



NDWMP.../.../... C... - ECWMP.../.../... C... Flange uscita / Output flanges



Dimensioni / Dimensions							
P	a2	b2	c2	e2	f2	s2	Flangia uscita Output flange
52	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120
62	80	50 j7	9	65	2.5	M5	C80
	90	60 j7	9	75	2.5	5.5	C90
	105	70 j7	9	85	2.5	6.5	C105
	120	80 j7	9	100	3.0	6.5	C120



**MINI**  **TECNO**™  
**small** but strong

**PLN**

Azionamenti per motori CC  
DC motor controls



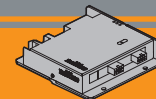
**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



DC



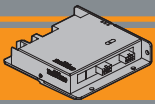




	<b>Indice</b>	<b>Index</b>	Pag. Page
<b>PLN19-8</b>	Schema dei collegamenti	<i>Main connection diagram</i>	<b>BN2</b>
	Caratteristiche tecniche	<i>Technical features</i>	<b>BN2</b>
	Dimensioni	<i>Dimensions</i>	<b>BN3</b>
	Opzioni	<i>Options</i>	<b>BN3</b>
<b>PLN20 PLN40</b>	Schema dei collegamenti	<i>Main connection diagram</i>	<b>BN4</b>
	Caratteristiche tecniche	<i>Technical features</i>	<b>BN5</b>
	Dotazioni	<i>Equipment</i>	<b>BN5</b>
	Manuale	<i>User manual</i>	<b>BN5</b>
	Dimensioni	<i>Dimensions</i>	<b>BN6</b>
	GUIDA alla selezione dell'azionamento	<i>Drive selection GUIDE</i>	<b>BN7</b>
	Note	<i>Note</i>	<b>BN8</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

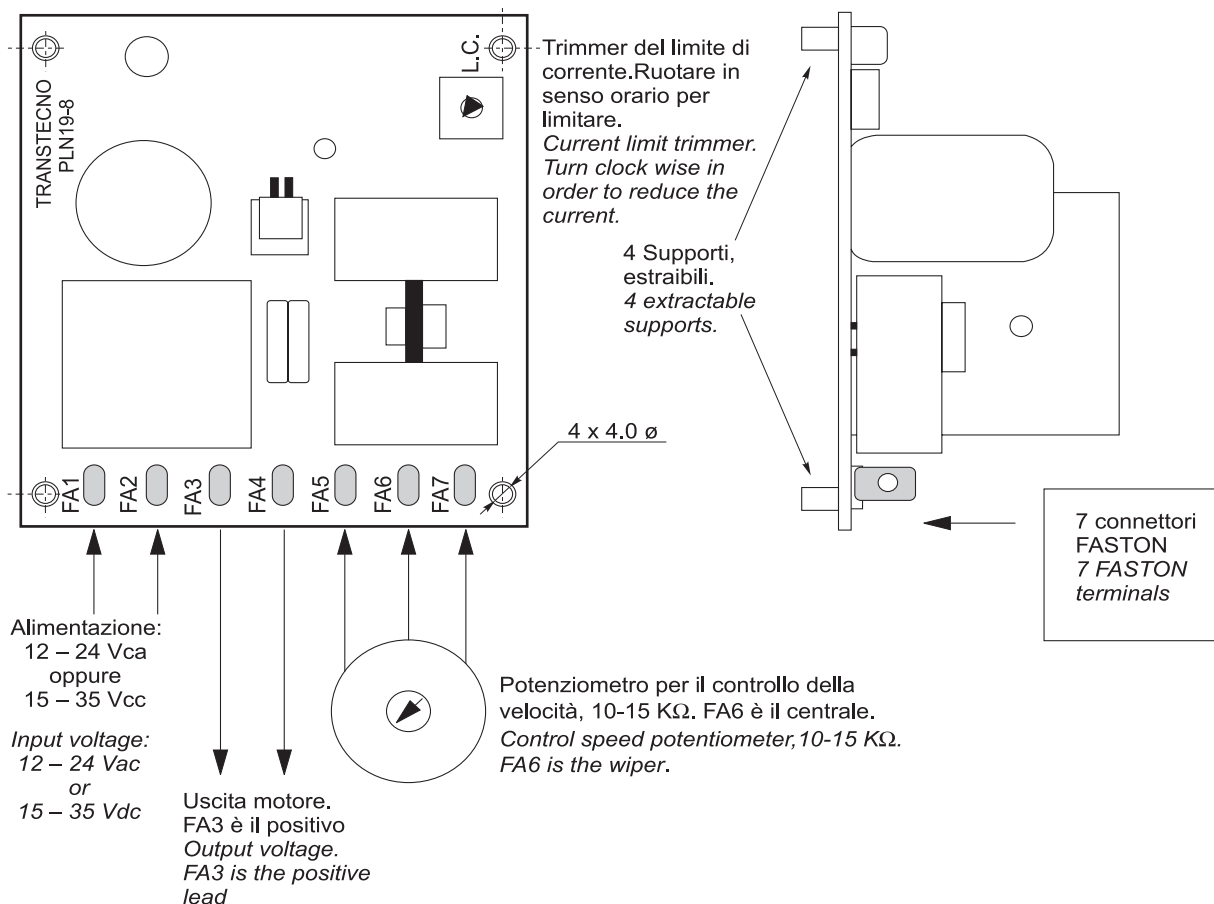
*This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. In this case the latest version is available on our web site [www.transtecno.com](http://www.transtecno.com)*



### AZIONAMENTO UNIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

### LOW VOLTAGE SINGLE DIRECTION PWM DC MOTORS CONTROL

#### SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



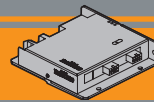
**Attenzione:** se si scollega il potenziometro con la scheda alimentata, il motore ruota alla velocità nominale.

**Warning:** if speed pot is disconnected when the board is powered, the motor runs at its maximum speed.

#### Caratteristiche tecniche

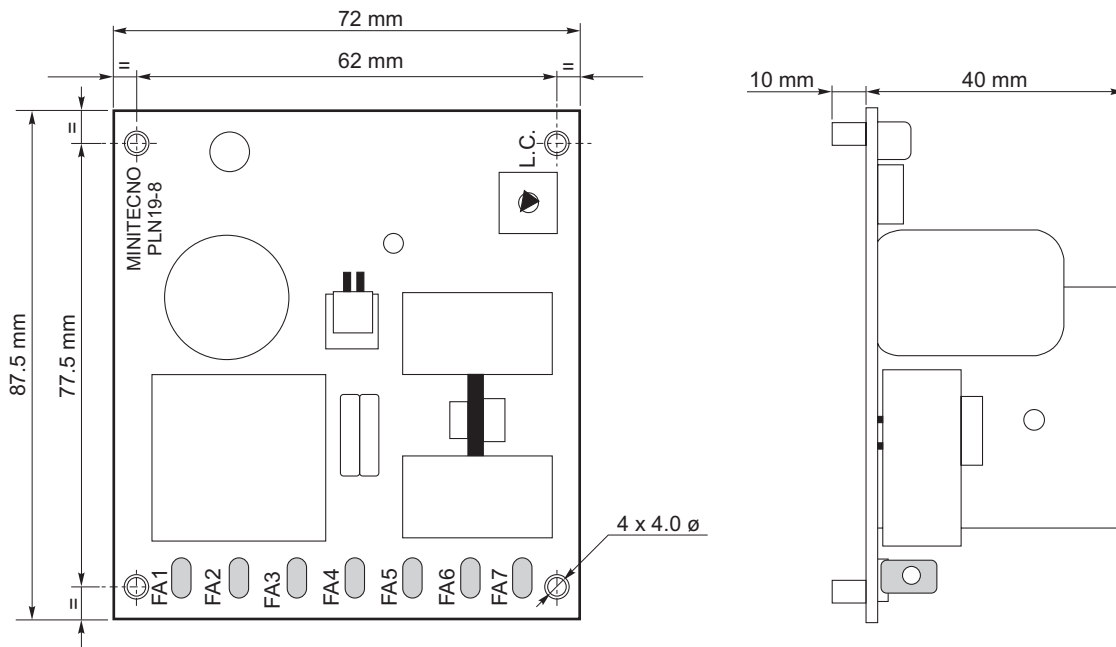
#### Technical features

- Alimentazione ai terminali FA1 e FA2:  
12 - 24 Vca oppure 15 - 35 Vcc.
- Regolazione della velocità mediante potenziometro 10-15 KΩ.
- Trimmer di Limitazione della corrente, per adattare la scheda anche a motori di piccole potenze. Per limitare l'erogazione di corrente, ruotare in senso orario il trimmer.
- Uscita motore ai terminali FA3 e FA4, regolabile da 0 a Vcc MAX che è proporzionale alla tensione di ingresso. Con 35 Vcc di alimentazione, l'uscita MAX è circa 30 Vcc.
- Corrente di uscita (\*): Massima corrente ammessa: 8 A in ambiente ventilato, servizio continuo.
- Peso: 0.120 Kg.
- Line voltage at terminals FA1 and FA2:  
12 - 24 Vac or 15 - 35 Vdc.
- The speed of the drive is to be controlled by potentiometer, 10-15 KΩ.
- Current Limit trimmer, in order to suit the board for small motors. In order to limit the current, turn clock wise the trimmer.
- Output voltage from terminals FA3 and FA4, from 0 up to Vdc MAX which is proportional to the input voltage. With 35 Vdc input voltage, the max output voltage is about 30 Vdc.
- Output current (\*): Maximum output current allowed: 8 A in a ventilated environment, continuous duty.
- Weight: 0.120 Kg.



Dimensioni

Dimensions



Opzioni

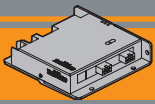
Options

1. Potenzimetro 10 kΩ
2. Supporto per montaggio su guida DIN

1. Speed potentiometer 10 kΩ
2. DIN mounting support

(\*) il valore massimo di corrente motore deve essere utilizzato in **ambiente ventilato**. In ambienti non ventilati e per temperatura ambiente di 45 °C, ridurre la corrente motore massima a 4 A; servizio continuo.

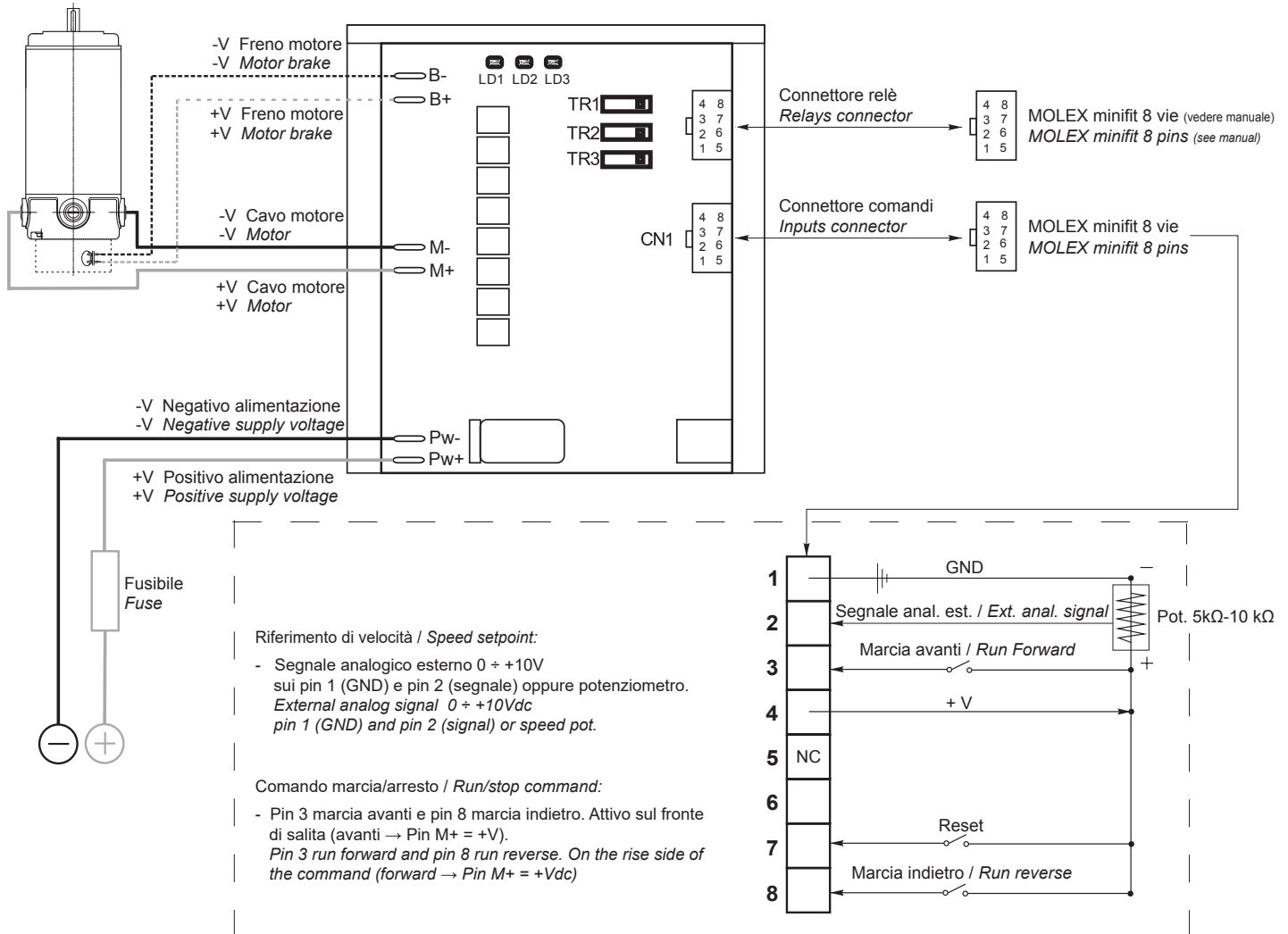
(\*) *the maximum output current value must be used in a ventilated environment. Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.*



**AZIONAMENTO BIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE**

**LOW VOLTAGE BIDIRECTIONAL PWM DC MOTORS CONTROL**

**SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM**



**Fusibile:**

150-200% della corrente motore. Max 3 volte la corrente nominale della scheda, con intervento entro pochi secondi.

**Fuse:**

150-200 % rated motor current. Max 3 times rated current of the drive (trip time in few seconds).

**Trimmer multigiro:**

TR1: Accelerazione: selezione da 0.5 a 10 sec.  
 TR2: Limite di corrente: riduce il limite di corrente nominale da 100% a circa 30% (corrente di picco 3 volte la corrente selezionata).  
 TR3: Decelerazione: selezione da 0.5 a 10 sec.

**Multiturn trimmers:**

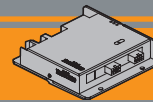
TR1: Acceleration time: from 0.5 to 10 sec.  
 TR2: Current limitation: rated current limited from 100% to about 30% (peak current 3 times the selected limited current).  
 TR3: Deceleration time: from 0.5 to 10 sec.

**LED:**

LD1: Visualizza lo stato di funzionamento con limite di corrente attivo (il motore assorbe più della corrente selezionata e l'azionamento opera in limitazione).  
 LD2: Stato dell'azionamento: lampeggio veloce e continuo = funzionamento normale, lampeggio lento e codificato = presenza di un allarme  
 LD3: Segnalazione presenza alimentazione.

**LED:**

LD1: ON when the drive runs under current limitation (motor requires more than the rated current and drive supplies only limited current).  
 LD2: Status: quick continuous flash = drive ok, slow coded flash = fault).  
 LD3: Power ON



**Caratteristiche tecniche**

**Technical features**

- Scheda bidirezionale a transistor a ricircolo di corrente.
  - Selezionabili i seguenti parametri (mediante trimmer):
    - rampa di accelerazione: 0.5 - 10 sec
    - rampa di decelerazione: 0.5 - 10 sec
    - limite corrente 100%-30% circa
  - Temperatura di lavoro: 0°C / +40°C (allarme sotto zero)
  - Diagnostica tramite LED
  - Frequenza di commutazione: 16kHz
  - Dotata di coperchio
  - Velocità regolabile con potenziometro 5-10 kΩ o con segnale 0-10 Vcc
  - Limitazione della corrente regolabile
  - Sensore termico di protezione
- *Transistor bidirectional drive with regenerative current system.*
  - *Following settings can be adjusted (by built in trimmers):*
    - *acceleration ramp: 0.5 - 10 sec*
    - *deceleration ramp: 0.5 - 10 sec*
    - *current limit 100% - about 30%*
  - *Room temperature: 0°C / +40°C (alarm below zero)*
  - *LED for system diagnosis*
  - *Switching frequency: 16kHz*
  - *Covered*
  - *5-10 kΩ Speed pot. or 0-10 Vdc external signal for speed re-  
gulation*
  - *Variable current limit*
  - *Thermal sensor for protection*

Modello Model number	Tensione di alimentazione DC input voltage [Vdc]	Tensione di uscita Motor voltage [Vdc]*	Corrente di uscita nominale DC load current [A]	Corrente di picco motore Maximum load current [A]**	Campo di alimentazione Power supply range [Vdc]
<b>PLN20</b>	12 ÷ 24	0 ÷ Vin	20	60 (4 sec)	10 ÷ 30
<b>PLN40</b>	12 ÷ 24	0 ÷ Vin	40	120 (1 sec)	10 ÷ 30

\* L'azionamento riduce la tensione nominale di 1-2 Vcc. Il fenomeno è normale e fisiologico. Se serve ottenere 24 ÷ 12 Vcc in uscita sotto ogni condizione di carico, si suggerisce di sovralimentare di un paio di volt.

\*\* Un timer impone il limite con un andamento temporale iperbolico, cioè quanta più corrente eroga e tanto meno è il tempo per il quale ciò è ammesso, prima che appunto la scheda vada in limitazione. Alla corrente di picco (x 3 volte quella nominale) la scheda funziona per pochi secondi.

\* *The drive reduces the rated voltage of 1-2 Vdc. This is normal and physiological. If 24 ÷ 12 VDC output is required under all load conditions, it is advisable to supercharge a couple of volts.*

\*\* *A timer imposes a limit with a temporary hyperbolic performance, which means the more current is requested, the less time is permitted with this current before the drive is limited. When the current reaches its peak (3 times the rated value) the drive will work for a few seconds.*

**Dotazioni**

**Equipment**

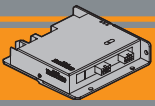
	PLN20 PLN40
Trimmer di selezione ACCEL, DECEL e LIMITE di CORRENTE / <i>Selection Trimmer ACCEL, DECEL, CURRENT LIMIT</i>	■
2 contatti: marcia avanti e marcia indietro / <i>2 contacts : forward and reverse</i>	■
Riferimento di velocità / <i>Speed setpoint reference</i>	■
3 LEDs di segnalazione / <i>3 LEDs signals</i>	■
Segnale di comando di eventuale freno negativo di stazionamento / <i>Command signal for possible negative electromagnetic brake</i>	■
Predisposizione per montaggio a libro e a zoccolo / <i>Arranged for 2 different ways of mounting</i>	■
Memorizzazione e segnalazione degli allarmi / <i>Memory storage and report of alarm</i>	■
2 ingressi digitali ausiliari / <i>2 auxiliary digital inputs</i>	■#
1 relè segnalazione allarmi / <i>Alarm output relays</i>	■

# uno impegnato dal reset / *one comitted by reset*



Per approfondimenti si raccomanda di scaricare il manuale d'uso dal nostro sito [www.transtecno.com](http://www.transtecno.com) alla pagina dei prodotti.

Please, download the user manual for more information from our web site [www.transtecno.com](http://www.transtecno.com) from the product page.



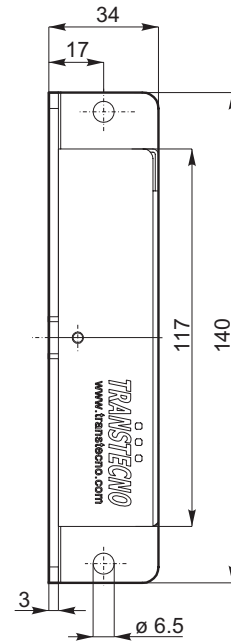
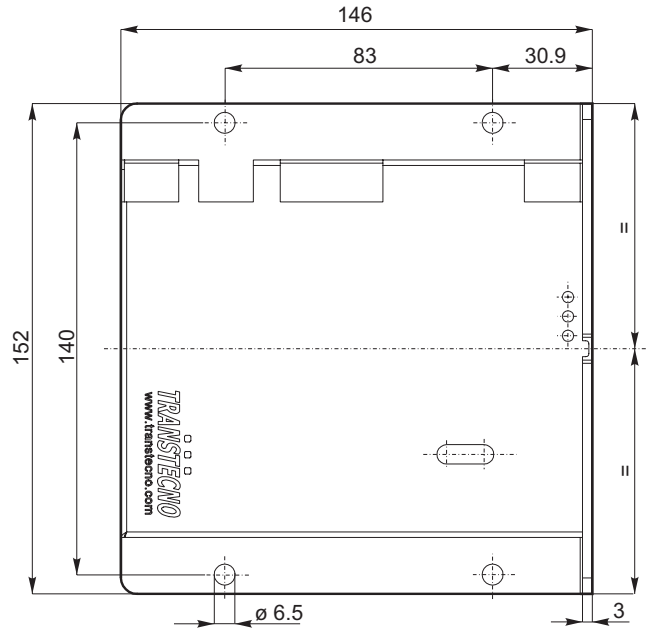
**AZIONAMENTO BIDIREZIONALE PWM PER LA  
REGOLAZIONE DI VELOCITA' DEI MOTORI A  
CORRENTE CONTINUA A BASSA TENSIONE**

**LOW VOLTAGE BIDIRECTIONAL  
PWM DC MOTORS CONTROL**

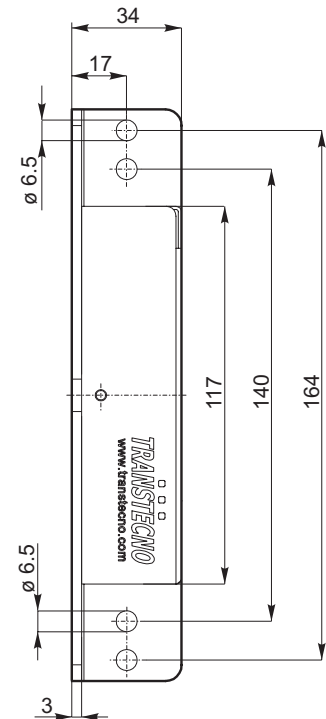
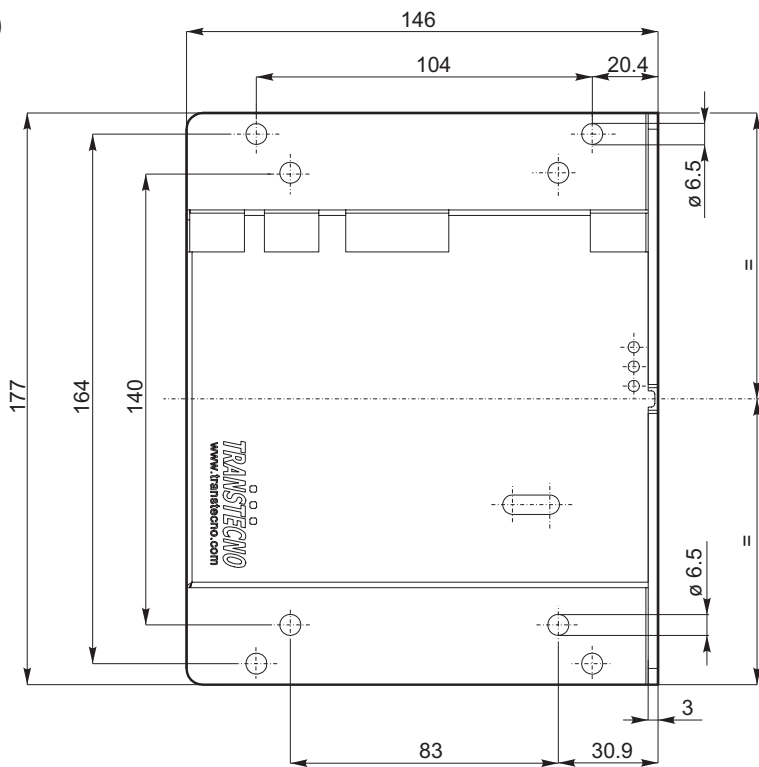
## Dimensioni

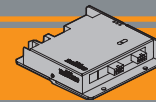
## Dimensions

**PLN20**



**PLN40**





### GUIDA alla selezione dell'azionamento

### Drive selection GUIDE

$$\text{Corrente di uso del motore} \leq \text{Corrente nominale dell'azionamento}$$

$$\text{Real motor current} \leq \text{Rated current of the drive}$$

Attenzione: la reale corrente assorbita dal motore può essere diversa da quella indicata in targhetta.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

Vedere sotto la tabella per esemplificazioni

Warning: the real absorbed current by the motor can be different from the one written on the nameplate.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

See the table below for quick reference

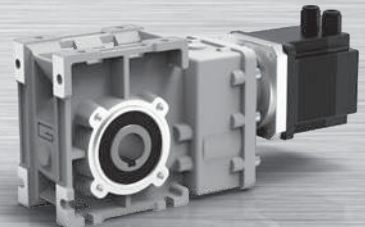
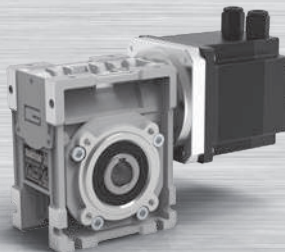
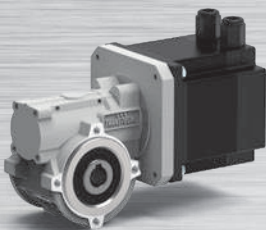
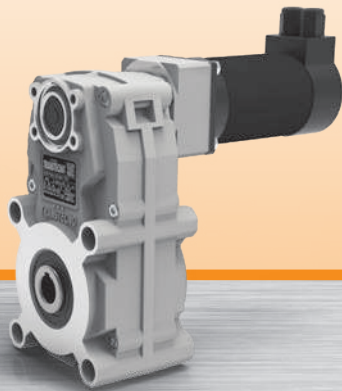
Codice motore <i>Motor code</i>	Corrente motore <i>Motor current</i> <b>S1</b>	Scheda-Drive (servizio motore-motor duty) <b>S1</b>	Corrente motore <i>Motor current</i> <b>S2</b>	Scheda-Drive (servizio motore-motor duty) <b>S2</b>
<b>EC020.120</b>	3.2	PLN19-8 – PLN20	4	PLN19-8 – PLN20
<b>EC020.240</b>	1.5	PLN19-8 – PLN20	2	PLN19-8 - PLN20
<b>EC035.120</b>	5.2	PLN19-8 – PLN20	8	PLN20
<b>EC035.240</b>	2.6	PLN19-8 - PLN20	4	PLN19-8 - PLN20
<b>EC050.120</b>	6.8	PLN20	9.4	PLN20
<b>EC050.240</b>	3.4	PLN19-8 - PLN20	4.7	PLN19-8 - PLN20
<b>EC070.120</b>	8.4	PLN20	11.8	PLN20
<b>EC070.240</b>	4.2	PLN19-8 - PLN20	5.9	PLN19-8 - PLN20
<b>EC100.120</b>	12	PLN20	16.8	PLN20
<b>EC100.240</b>	6	PLN19-8 - PLN20	8.4	PLN20
<b>EC100.24E</b>	6	PLN19-8 - PLN20	8.4	PLN20
<b>ND100.120</b>	13.9	PLN20	19	PLN20
<b>ND100.240</b>	6.9	PLN20	9.0	PLN20
<b>EC180.120</b>	21.5	PLN20	30	PLN40
<b>EC180.240</b>	10.8	PLN20	15	PLN20
<b>EC180.24E</b>	10.8	PLN20	15	PLN20
<b>ND180.120</b>	20	PLN20	30	PLN40
<b>ND180.240</b>	10	PLN20	14	PLN20
<b>EC250.120</b>	30	PLN40	39	PLN40
<b>EC250.240</b>	15	PLN20	19.5	PLN20
<b>EC350.240</b>	21	PLN20	29.4	PLN40
<b>EC350.240BR</b>				
<b>EC600.240</b>	35.5	PLN40	47	PLN40
<b>EC600.240BR</b>				





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Motoriduttori BLDC  
BLDC gearmotors








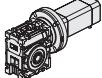

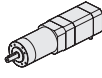




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BLDC



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 	<b>C-B</b> Motoriduttori brushless CC ad assi ortogonali BLCMB	Brushless DC helical bevel gearmotors BLCMB	C-B1
 	<b>C-C</b> Motoriduttori brushless CC pendolari BLFT	Brushless DC helical parallel gearmotors BLFT	C-C1
 	<b>C-D</b> Motoriduttori brushless CC a vite senza fine BLCM	Brushless DC wormgearmotors BLCM	C-D1
 	<b>C-E</b> Motoriduttori brushless CC epicicloidali BLP	Brushless DC planetary gearmotors BLP	C-E1
 	<b>C-F</b> Azionamenti per motori brushless CC BLD	Brushless DC motor controls BLD	C-F1

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 La versione più aggiornata è disponibile sul sito  
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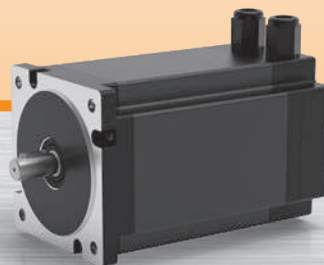
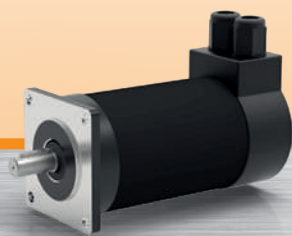


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**BL**



Motori brushless CC  
Brushless DC motors

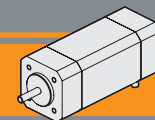


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**BLDC**

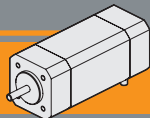




	<b>Indice</b>	<b>Index</b>	Pag. Page
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	Grado di protezione IP	<i>IP enclosures protection indexes</i>	<b>CA2</b>
	Classe di isolamento termico	<i>Insulation class</i>	<b>CA2</b>
	Tipi di servizio IEC	<i>IEC duty cycle ratings</i>	<b>CA2</b>
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	Diagramma dei collegamenti	<i>Connection diagram</i>	<b>CA9</b>
<b>BL070.480</b> <b>BL070.48B</b>	Specifiche costruttive	<i>General features</i>	<b>CA10</b>
	Prestazioni	<i>Performances</i>	<b>CA10</b>
	Dimensioni	<i>Dimensions</i>	<b>CA11</b>
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<b>BL140.480</b>	Specifiche costruttive	<i>General features</i>	<b>CA12</b>
	Prestazioni	<i>Performances</i>	<b>CA12</b>
	Dimensioni	<i>Dimensions</i>	<b>CA13</b>
	Diagramma dei collegamenti	<i>Connection diagram</i>	<b>CA13</b>
<b>BL210.480</b> <b>BL210.48E</b>	Specifiche costruttive	<i>General features</i>	<b>CA14</b>
	Prestazioni	<i>Performances</i>	<b>CA14</b>
	Dimensioni	<i>Dimensions</i>	<b>CA15</b>
	Diagramma dei collegamenti	<i>Connection diagram</i>	<b>CA15</b>
<b>Freno / Brake</b>	Specifiche costruttive	<i>General features</i>	<b>CA16</b>
	Dimensioni	<i>Dimensions</i>	<b>CA16</b>

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## Caratteristiche tecniche

## Technical features

I motori brushless CC della serie BL vengono realizzati in 5 taglie con coppie da 0.22 Nm a 2.1 Nm, e sono forniti con driver esterno.

I vantaggi di utilizzare i motori brushless anziché i tradizionali motori cc a spazzole, sono i seguenti:

- Lunga durata nel tempo
- Elevata efficienza
- Commutazione elettronica e controllo del motore tramite sensori digitali (encoder, resolver ecc..)
- Ampio campo di regolazione della velocità
- Mancanza di manutenzione

I motori della serie BL sono estremamente compatti e grazie al basso momento di inerzia offrono una elevata prestazione dinamica, ed inoltre sono economici in quanto dotati di sensori di Hall (anziché encoder o resolver).

Le 3 fasi dell'avvolgimento del motore sono a bassa tensione 24V / 36V / 48V e quindi offrono maggiori garanzie in termini di sicurezza dell'impianto, soprattutto nelle applicazioni dove l'operatore può essere a contatto con il motore stesso.

Tutti i motori sono realizzati con grado di protezione IP55.

**Brushless DC motors from the BL range** are available in 5 sizes with torque from 0.22 Nm to 2.1 Nm and they are supplied with external driver.

The advantages of using brushless motors instead of traditional DC brushed motors are the following:

- Longer life time
- Higher efficiency
- Electronic commutation and control of the motor via digital sensors (encoder, resolver etc.)
- Wide speed range
- Maintenance free

BL motors have a compact design and thanks to low inertia they have high performances and are a low cost solution already including Hall sensors, as opposed to an encoder or resolver.

The 3 phase windings of the motor have a low voltage of 24/36/48 V and so these motors are safer to use when a machine operator has direct contact with them.

IP55 protection index for all the motors.

## Grado di protezione IP

## IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

1<sup>a</sup> cifra protezione alla penetrazione di corpi solidi.

2<sup>a</sup> cifra protezione contro la penetrazione d'acqua.

Indicates the degree of mechanical insulation of the motor body. 1<sup>st</sup> figure indicating level of protection against the penetration of solid bodies.

2<sup>nd</sup> figure: indicating degree to which the motor is waterproof.

<b>5</b>	Protetto contro la polvere <i>Dust proof</i>	<b>5</b>	Protetto contro i getti d'acqua <i>Water jet proof</i>
----------	-------------------------------------------------	----------	-----------------------------------------------------------

## Classe di isolamento termico

## Insulation class

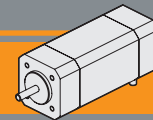
Classe / Class	$\Delta t$ °C Temp. ambiente: 40°C Ambient temperature: 40°C
<b>B</b>	90°C
<b>F</b>	115°C
<b>H</b>	140°C

## Tipi di servizio IEC

## IEC duty cycle ratings

<b>S1</b>	<b>Servizio continuo.</b> Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	<b>Continuous duty.</b> The motor works at a constant load for enough time to reach temperature equilibrium
<b>S2</b>	<b>Servizio di durata limitata.</b> Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell'equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	<b>Short time duty.</b> The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
<b>S3</b>	<b>Servizio periodico intermittente.</b> Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	<b>Intermittent periodic duty.</b> Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.



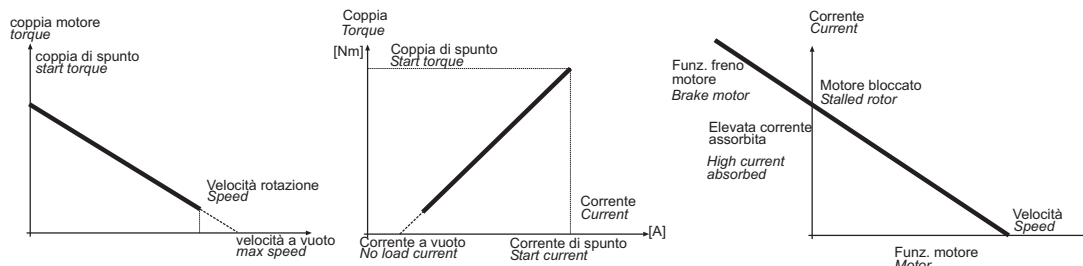


**Legenda / Glossario dei grafici**

**Key / Diagram Glossary**

Dato un motore brushless CC, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

With a brushless DC motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

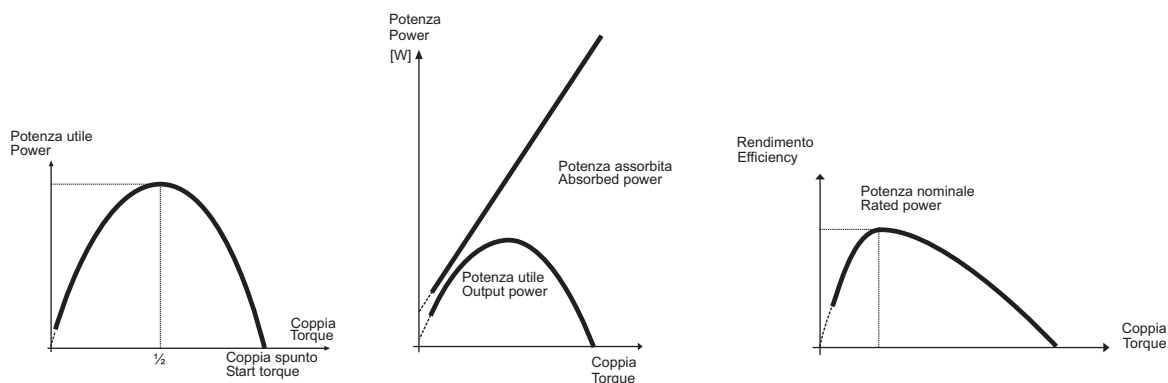


La potenza utile (potenza all' albero) si ricava dalla formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$

The output power is calculated using the formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è una retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

**Formule utili**

**Useful formulas**

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

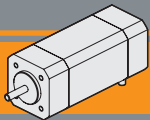
$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

[HP] · 746 = [W].  
Esempio 2 HP = circa 1500 W.

[HP] · 746 = [W].  
Example 2 HP = approx. 1500 W.

<b>S</b>	—	Servizio	<i>Duty</i>
<b>P<sub>n</sub></b>	[W]	Potenza in uscita	<i>Rated power</i>
<b>P<sub>a</sub></b>	[W]	Potenza assorbita	<i>Absorbed power</i>
<b>M<sub>n</sub></b>	[Nm]	Coppia nominale	<i>Rated torque</i>
<b>V</b>	[V]	Tensione	<i>Voltage</i>
<b>I</b>	[A]	Corrente assorbita	<i>Absorbed current</i>
<b>n<sub>1</sub></b>	[min <sup>-1</sup> ]	Numero giri motore	<i>Motor speed</i>
<b>S<sub>v</sub></b>	[rad/s]	Velocità angolare	<i>Angular speed</i>
<b>IC</b>	—	Classe d'isolamento termico	<i>Thermal insulation class</i>
<b>FF</b>	—	Fattore di forma	<i>Form factor</i>
<b>IP</b>	—	Classe di protezione	<i>protection class</i>
<b>η</b>	—	Rendimento	<i>Efficiency</i>
<b>Kg</b>	—	Massa	<i>Mass</i>



**BLS022.240**

**Specifiche costruttive**

**General features**

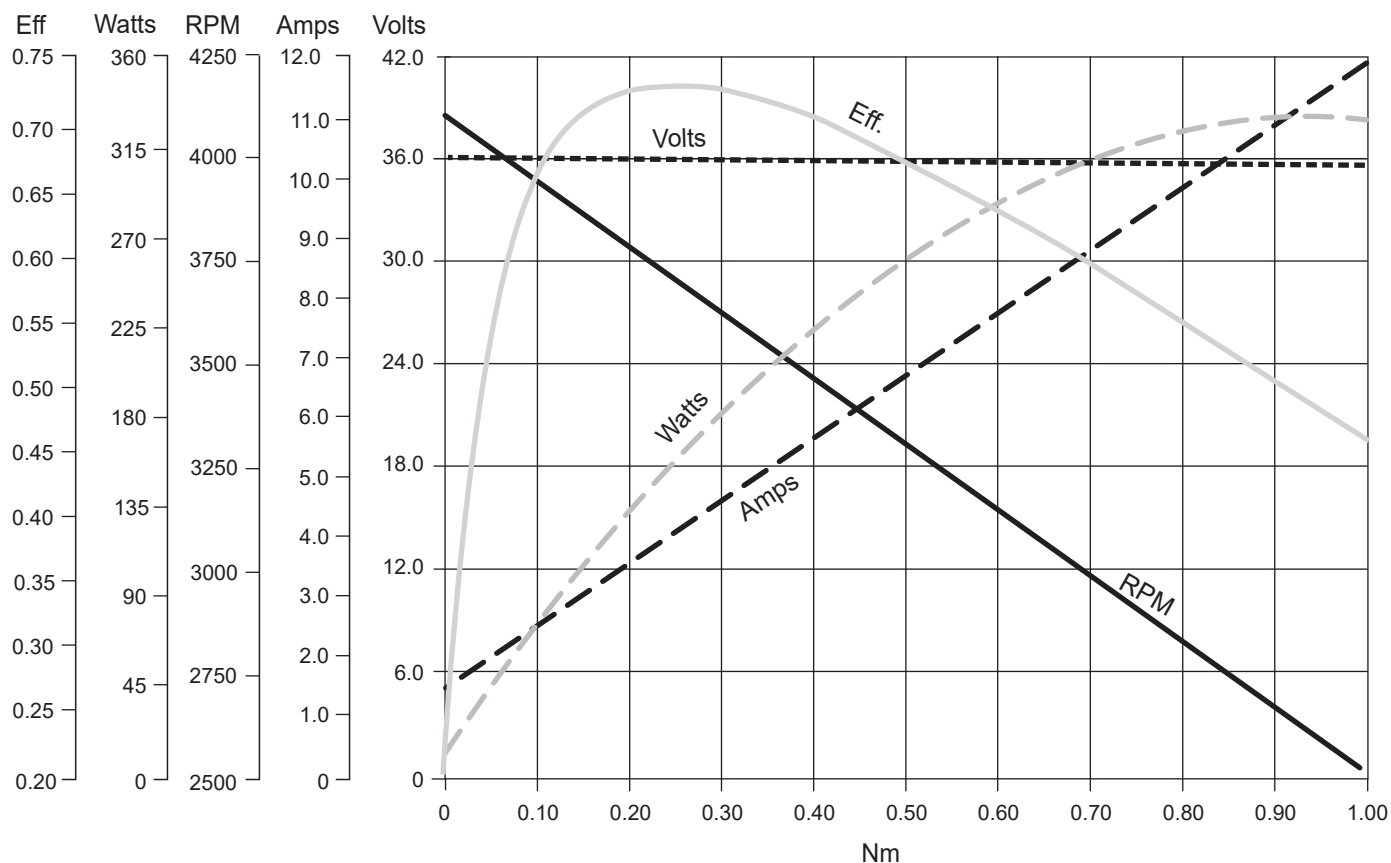
<b>Tipologia di avvolgimento</b> <i>Winding type</i>	delta	<b>Max forza radiale</b> <i>Max radial force</i>	75N @ 20 mm dalla flangia 75N @ 20 mm from flange
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici 120 degree electrical angle	<b>Max forza assiale</b> <i>Max axial force</i>	15N
<b>Gioco radiale</b> <i>Radial play</i>	0.025 mm @ 460 g	<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B Class B
<b>Gioco assiale</b> <i>End play</i>	0.025 mm @ 4000 g	<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto 500 Vdc 1 minute
<b>Scantatura albero</b> <i>Shaft run out</i>	0.025 mm	<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc 100MΩ min, 500 Vdc

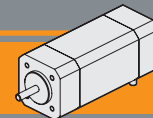
Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BLS022.240	4	3	36	4000	0.22	92	0.66	3.7	11.2	0.64	2.1	0.06	6.28	119	0.72	55
BLS022.240	4	3	24	3000	0.22	70	0.66	3.7	11.2	0.64	3.1	0.06	6.28	119	0.72	55



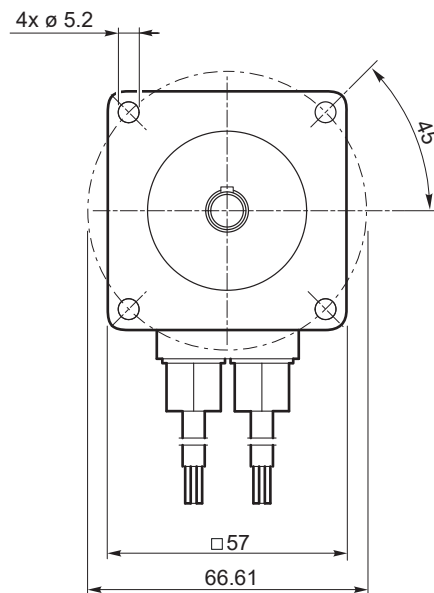
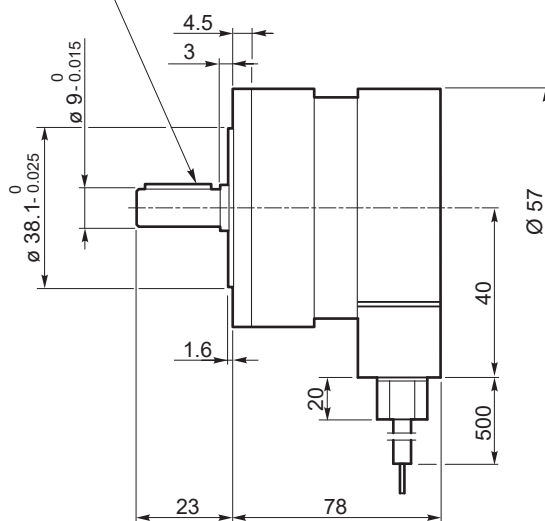
**Prestazioni**

**Performances**




**BLS022.240**
**Dimensioni**
**Dimensions**
**BLS022.240**

Linguetta 3x3x16  
 DIN 6885  
 Key 3x3x16  
 DIN 6885

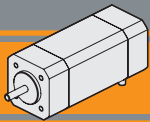

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Giallo / Yellow	Fase U / U motor Phase
Rosso / Red	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors



**BLS043.240**

**Specifiche costruttive**

**General features**

<b>Tipologia di avvolgimento</b> <i>Winding type</i>	delta
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici <i>120 degree electrical angle</i>
<b>Gioco radiale</b> <i>Radial play</i>	0.025 mm @ 460 g
<b>Gioco assiale</b> <i>End play</i>	0.025 mm @ 4000 g
<b>Scantatura albero</b> <i>Shaft run out</i>	0.025 mm

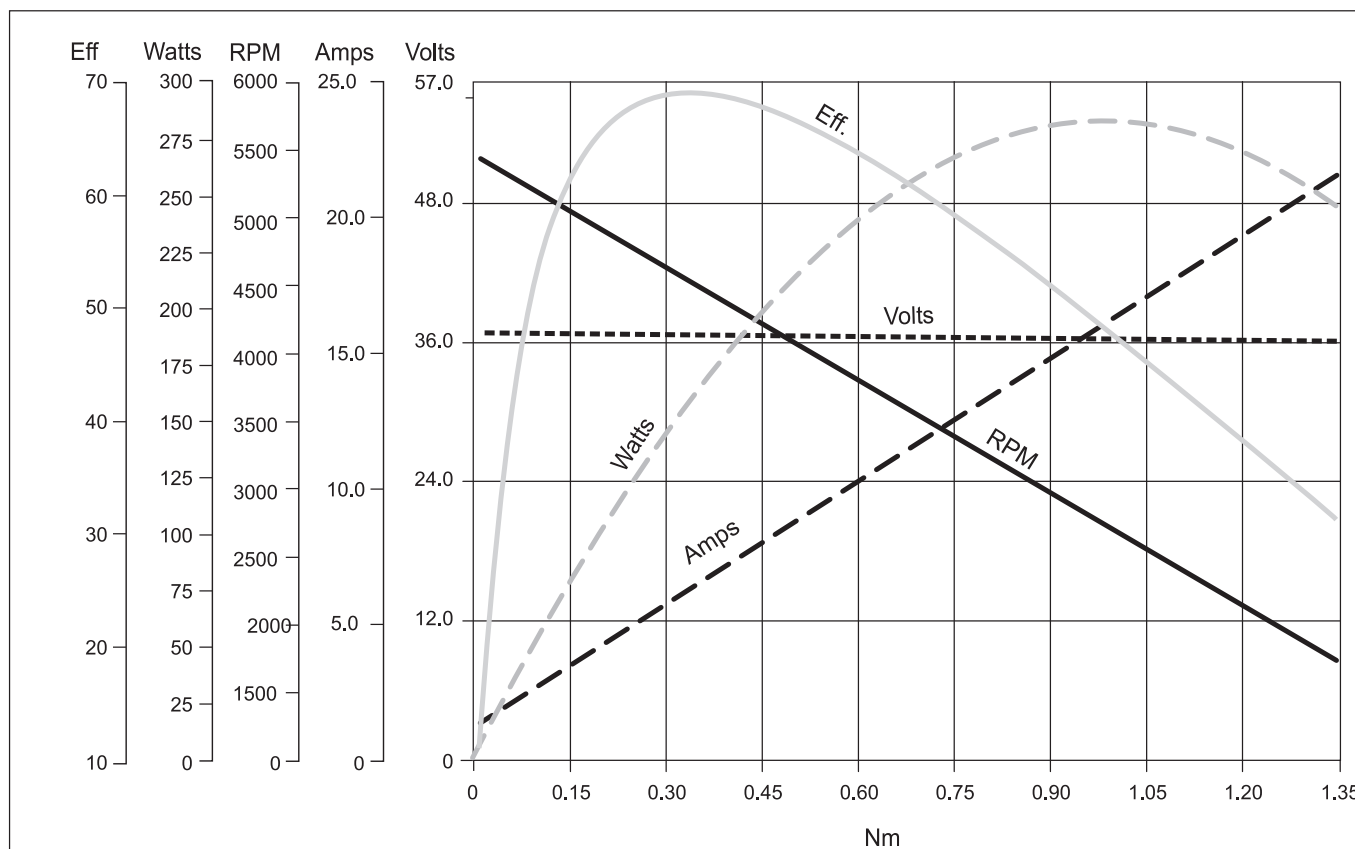
<b>Max forza radiale</b> <i>Max radial force</i>	75N @ 20 mm dalla flangia <i>75N @ 20 mm from flange</i>
<b>Max forza assiale</b> <i>Max axial force</i>	15N
<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B <i>Class B</i>
<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto <i>500 Vdc 1 minute</i>
<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc <i>100MΩ min, 500 Vdc</i>

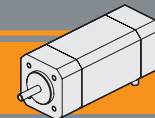
Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BLS043.240	4	3	36	4000	0.43	180	1.27	6.8	20.5	0.35	1.0	0.063	6.6	230	1.25	55
BLS043.240	4	3	24	3000	0.43	130	1.27	6.8	20.5	0.35	1.0	0.063	6.6	230	1.25	55

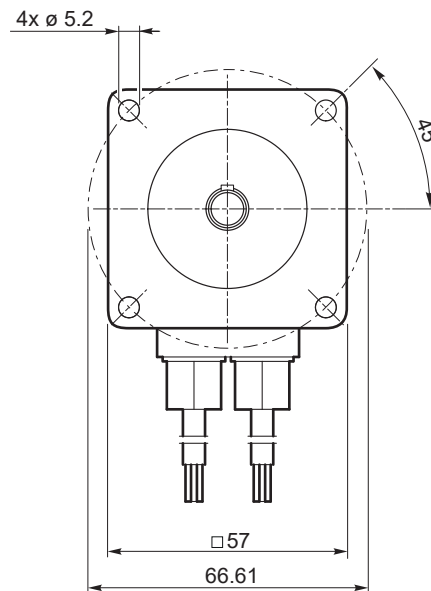
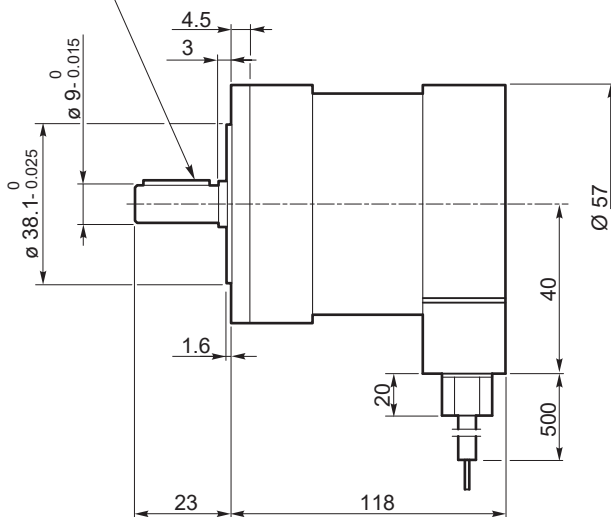


**Prestazioni**

**Performances**




**BLS043.240**
**Dimensioni**
**Dimensions**
**BLS043.240**

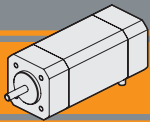
 Linguetta 3x3x16  
 DIN 6885  
 Key 3x3x16  
 DIN 6885

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Giallo / Yellow	Fase U / U motor Phase
Rosso / Red	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors



**BL070.240 / BL070.24B**

**Specifiche costruttive**

**General features**

<b>Tipologia di avvolgimento</b> <i>Winding type</i>	Stella <i>Star</i>
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici <i>120 degree electrical angle</i>
<b>Gioco radiale</b> <i>Radial play</i>	0.02 mm @ 450g
<b>Gioco assiale</b> <i>End play</i>	0.08 mm @ 450g
<b>Scantatura albero</b> <i>Shaft run out</i>	0.05 mm

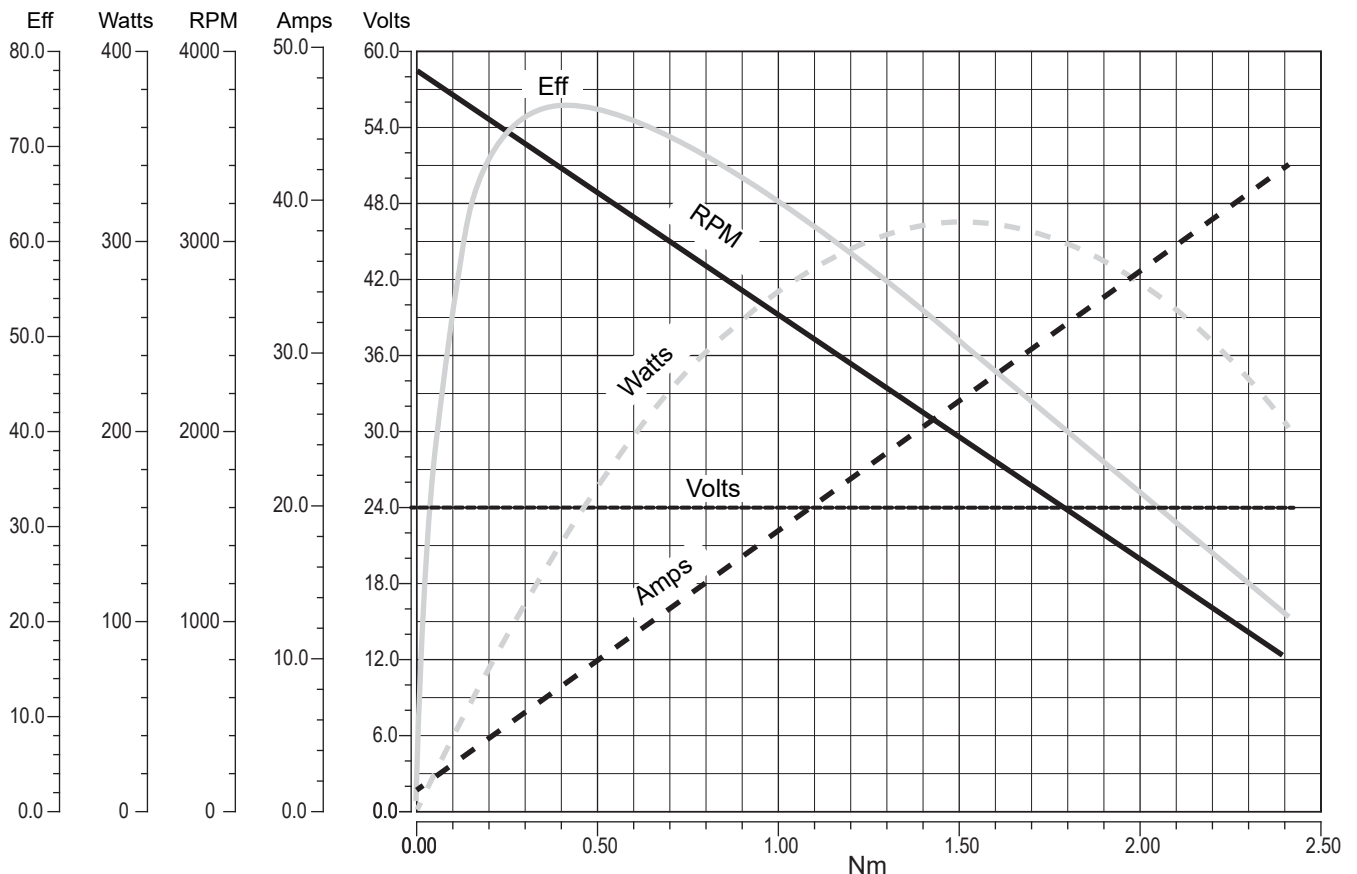
<b>Max forza radiale</b> <i>Max radial force</i>	220N @ 20 mm dalla flangia <i>220N @ 20 mm from flange</i>
<b>Max forza assiale</b> <i>Max axial force</i>	60N
<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B <i>Class B</i>
<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto <i>500 Vdc 1 minute</i>
<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc <i>100MΩ min, 500 Vdc</i>

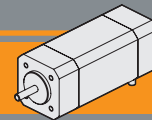
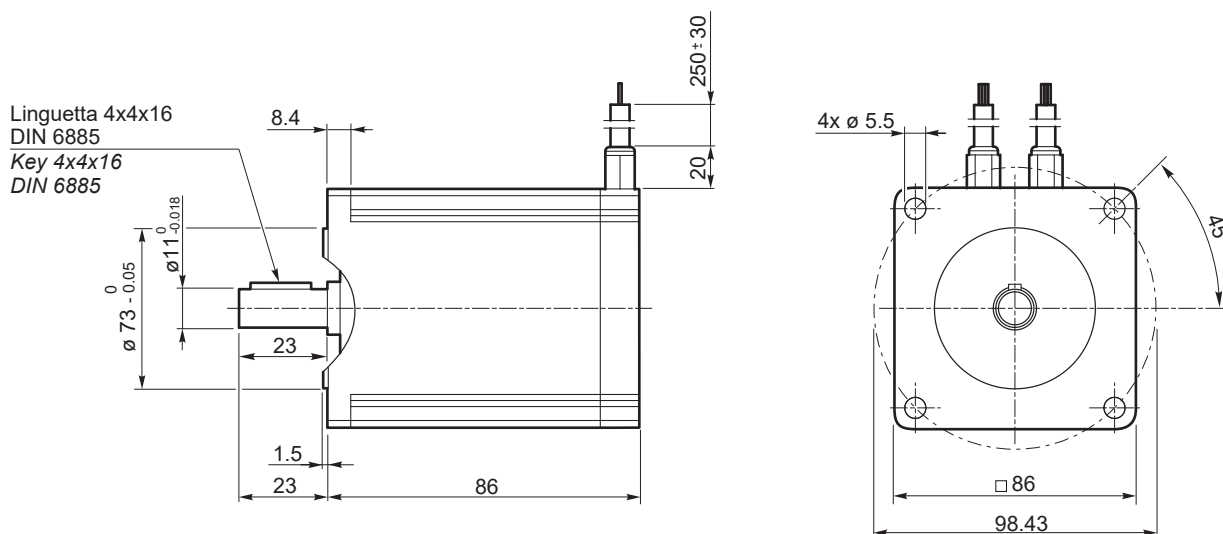
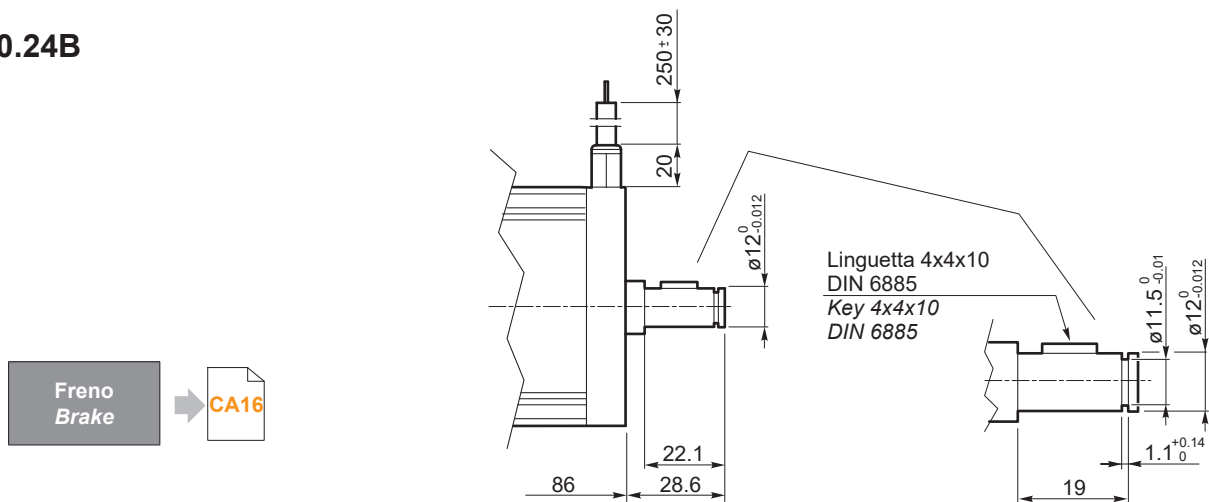
Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BL070.240 BL070.24B	8	3	24	3000	0.7	220	2.1	13	39	0.091	0.23	0.0589	4.24	800	2.1	55



**Prestazioni**

**Performances**



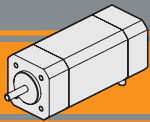

**BL070.240 / BL070.24B**
**Dimensioni**
**Dimensions**
**BL070.240**

**BL070.24B**

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Blu / Blue	Fase U / U motor Phase
Marrone / Brown	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control



**BL070.480 / BL070.48B**

**Specifiche costruttive**

**General features**

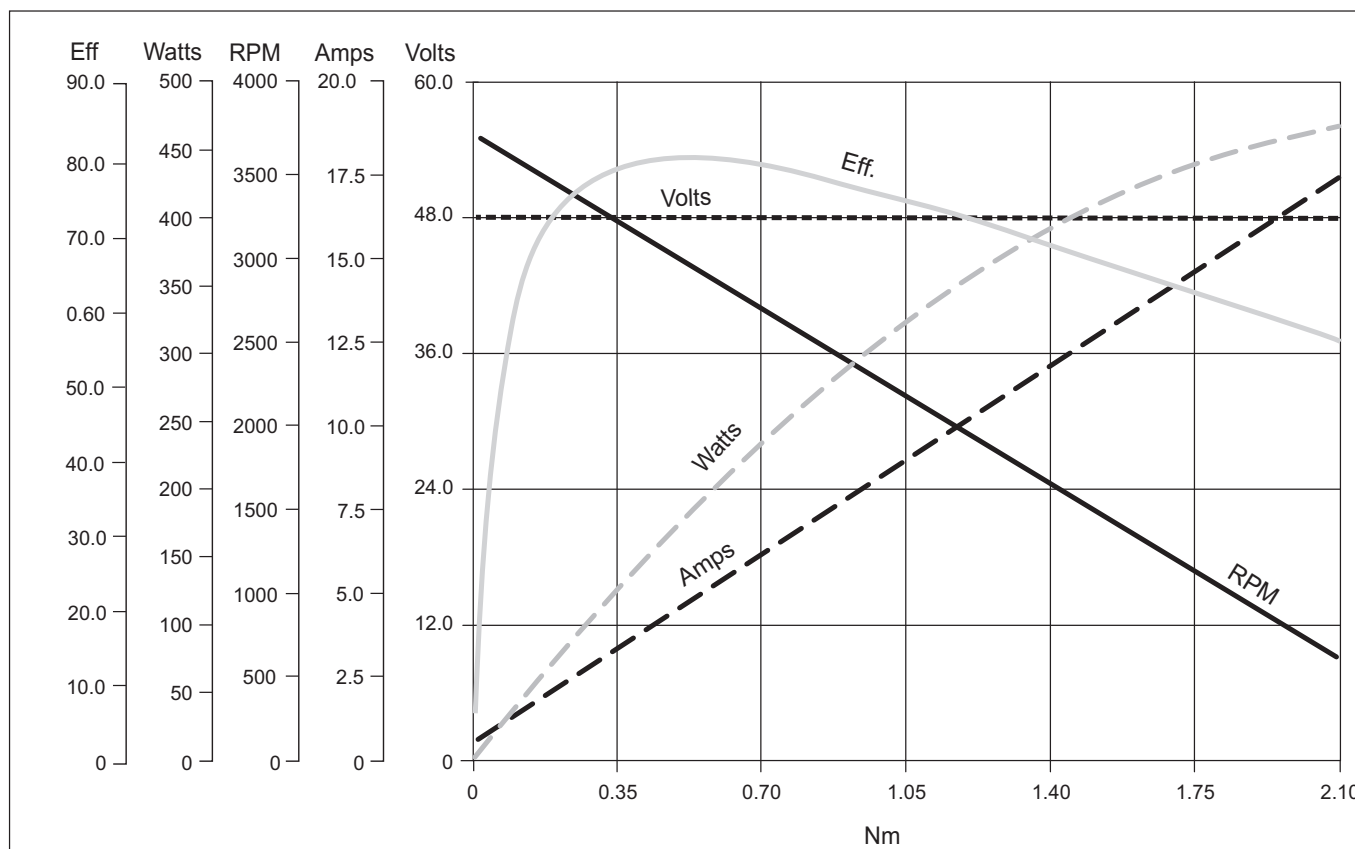
<b>Tipologia di avvolgimento</b> <i>Winding type</i>	Stella <i>Star</i>	<b>Max forza radiale</b> <i>Max radial force</i>	220N @ 20 mm dalla flangia <i>220N @ 20 mm from flange</i>
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici <i>120 degree electrical angle</i>	<b>Max forza assiale</b> <i>Max axial force</i>	60N
<b>Gioco radiale</b> <i>Radial play</i>	0.02 mm @ 450g	<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B <i>Class B</i>
<b>Gioco assiale</b> <i>End play</i>	0.08 mm @ 450g	<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto <i>500 Vdc 1 minute</i>
<b>Scentratura albero</b> <i>Shaft run out</i>	0.05 mm	<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc <i>100MΩ min, 500 Vdc</i>

Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BL070.480 BL070.48B	8	3	48	3000	0.7	220	2.1	6.5	20	0.34	1.0	0.107	9	800	2.1	55

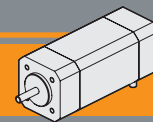
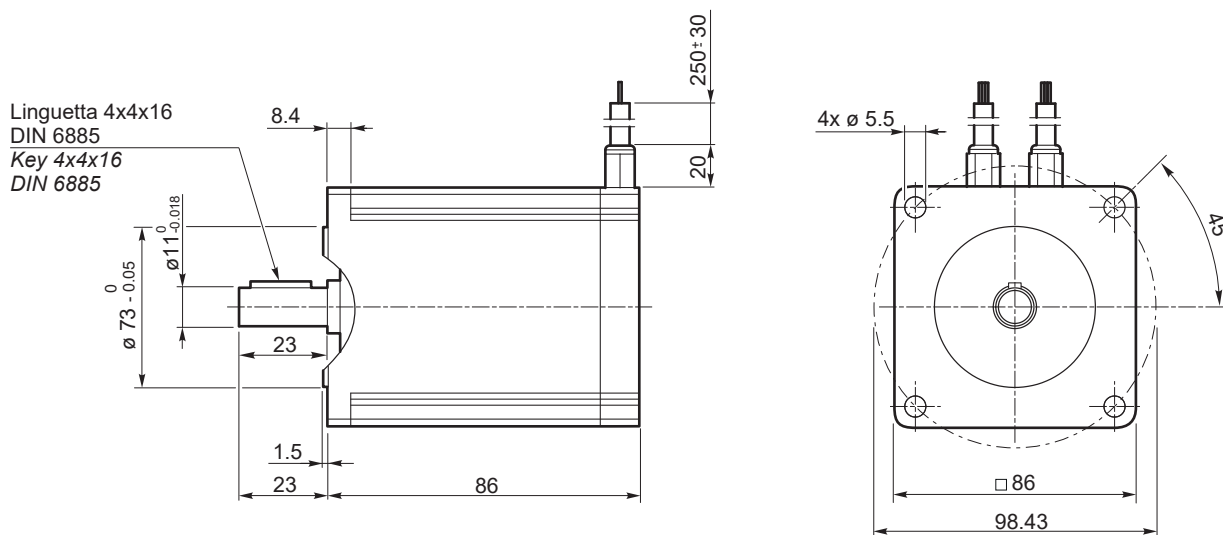
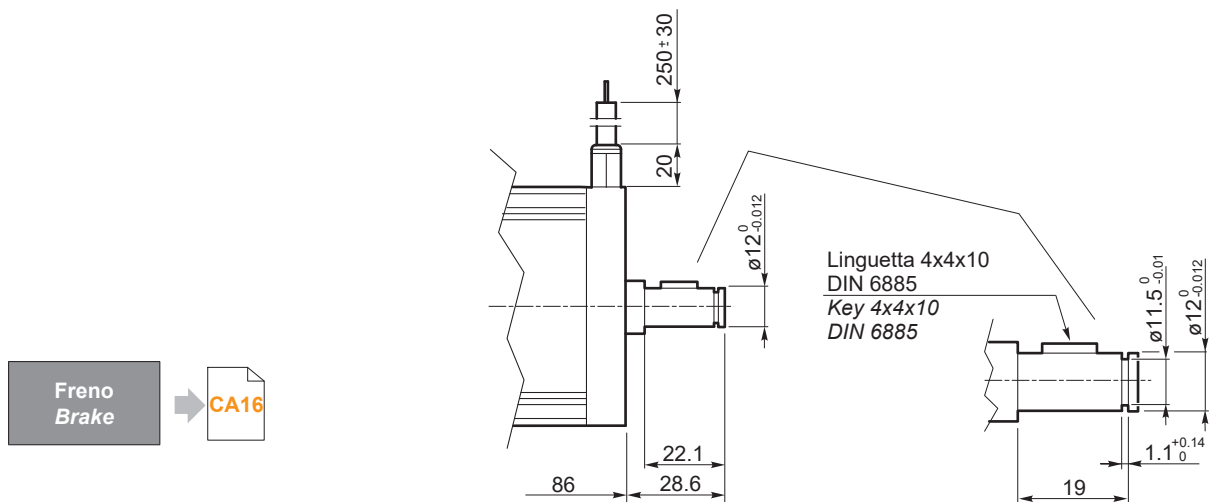


**Prestazioni**

**Performances**





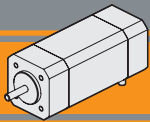

**BL070.480 / BL070.48B**
**Dimensioni**
**Dimensions**
**BL070.480**

**BL070.48B**

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Blu / Blue	Fase U / U motor Phase
Marrone / Brown	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors



**BL140.480**

**Specifiche costruttive**

**General features**

<b>Tipologia di avvolgimento</b> <i>Winding type</i>	Stella <i>Star</i>
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici <i>120 degree electrical angle</i>
<b>Gioco radiale</b> <i>Radial play</i>	0.02 mm @ 450g
<b>Gioco assiale</b> <i>End play</i>	0.08 mm @ 450g
<b>Scenatura albero</b> <i>Shaft run out</i>	0.05 mm

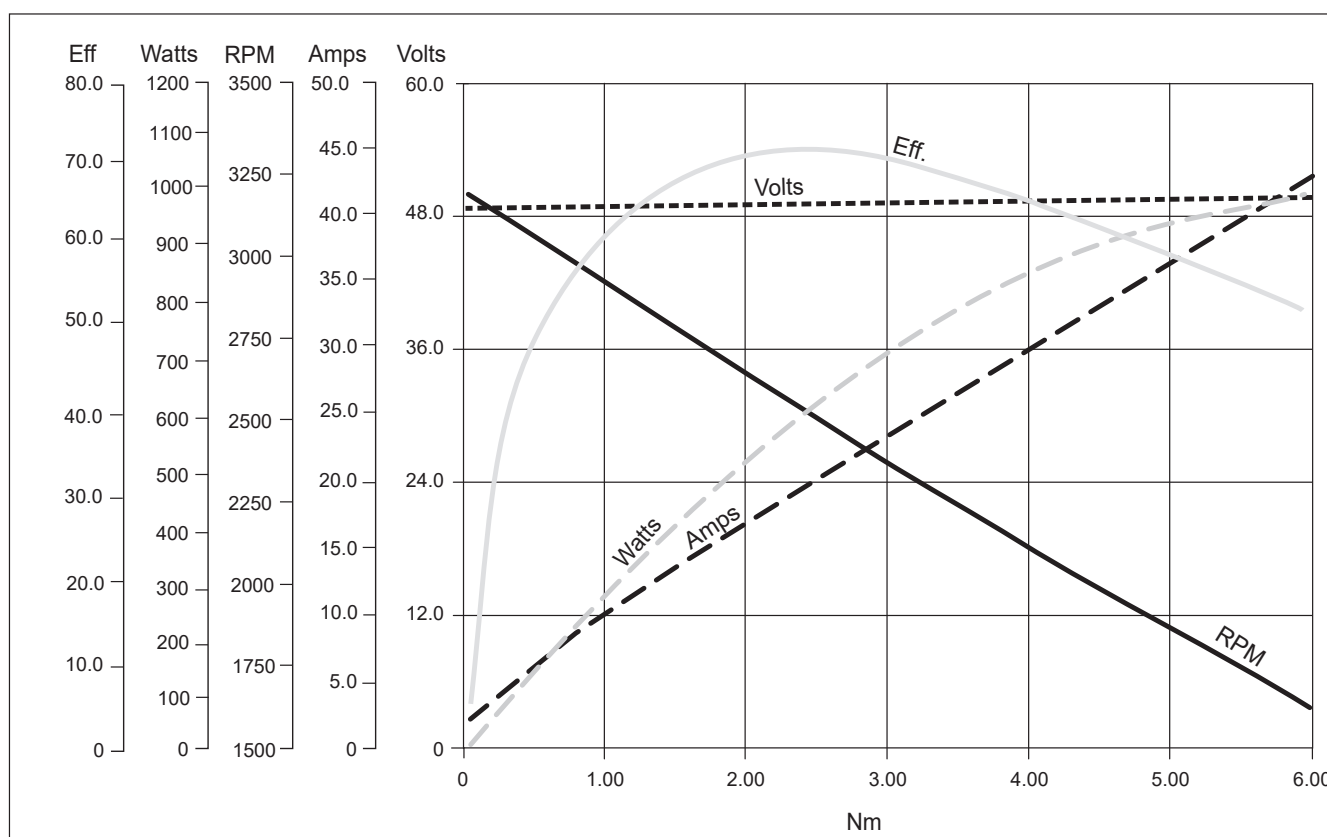
<b>Max forza radiale</b> <i>Max radial force</i>	220N @ 20 mm dalla flangia <i>220N @ 20 mm from flange</i>
<b>Max forza assiale</b> <i>Max axial force</i>	60N
<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B <i>Class B</i>
<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto <i>500 Vdc 1 minute</i>
<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc <i>100MΩ min, 500 Vdc</i>

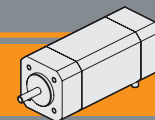
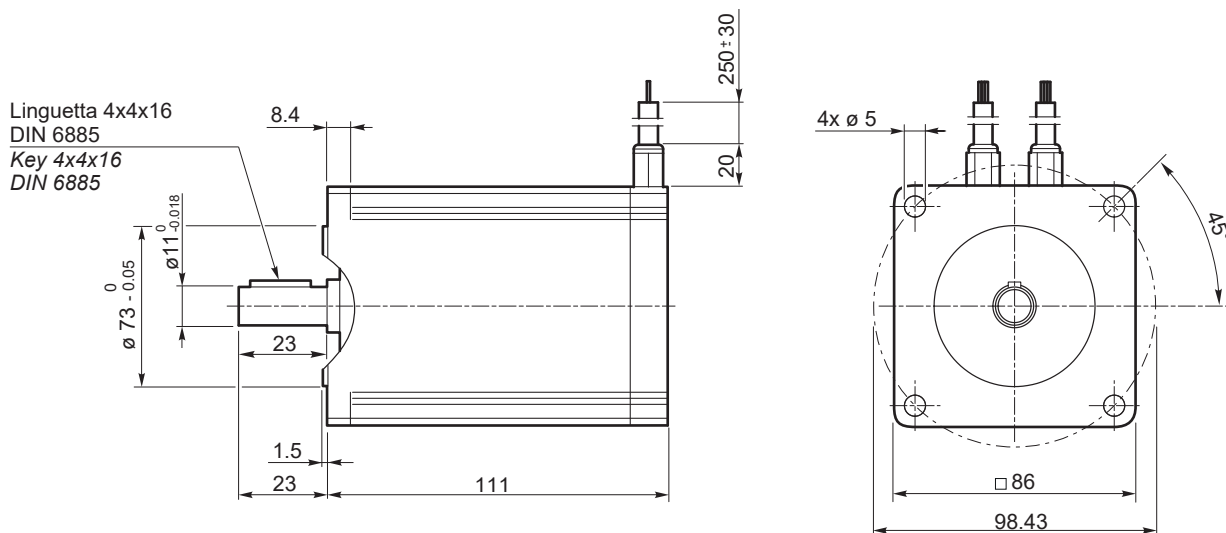
Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BL140.480	8	3	48	3000	1.4	440	4.2	13	39	0.16	0.5	0.113	9.4	1600	3.15	55



**Prestazioni**

**Performances**



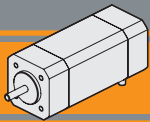

**BL140.480**
**Dimensioni**
**Dimensions**
**BL140.480**

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Blu / Blue	Fase U / U motor Phase
Marrone / Brown	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control



**BL210.480 / BL210.48E**

**Specifiche costruttive**

**General features**

<b>Tipologia di avvolgimento</b> <i>Winding type</i>	Stella <i>Star</i>
<b>Angolo sensori Hall</b> <i>HALL effect angle</i>	120 gradi elettrici <i>120 degree electrical angle</i>
<b>Gioco radiale</b> <i>Radial play</i>	0.02 mm @ 450g
<b>Gioco assiale</b> <i>End play</i>	0.08 mm @ 450g
<b>Scenatura albero</b> <i>Shaft run out</i>	0.05 mm

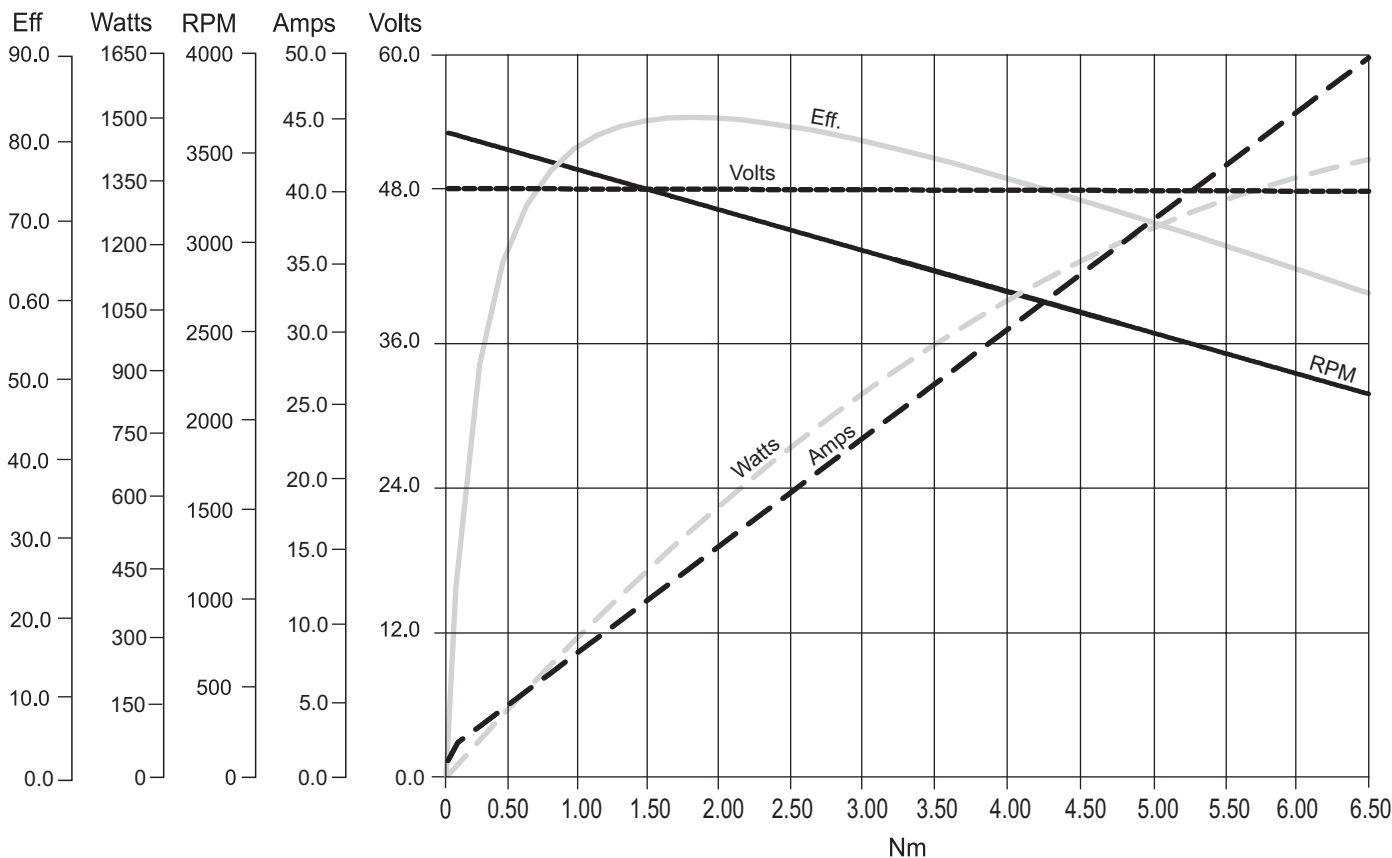
<b>Max forza radiale</b> <i>Max radial force</i>	220N @ 20 mm dalla flangia <i>220N @ 20 mm from flange</i>
<b>Max forza assiale</b> <i>Max axial force</i>	60N
<b>Classe di isolamento termico</b> <i>Insulation class</i>	Classe B <i>Class B</i>
<b>Isolamento dielettrico</b> <i>Dielectric strength</i>	500Vcc x 1 minuto <i>500 Vdc 1 minute</i>
<b>Resistenza isolamento</b> <i>Insulation resistance</i>	100MΩ minimo, 500Vcc <i>100MΩ min, 500 Vdc</i>

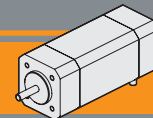
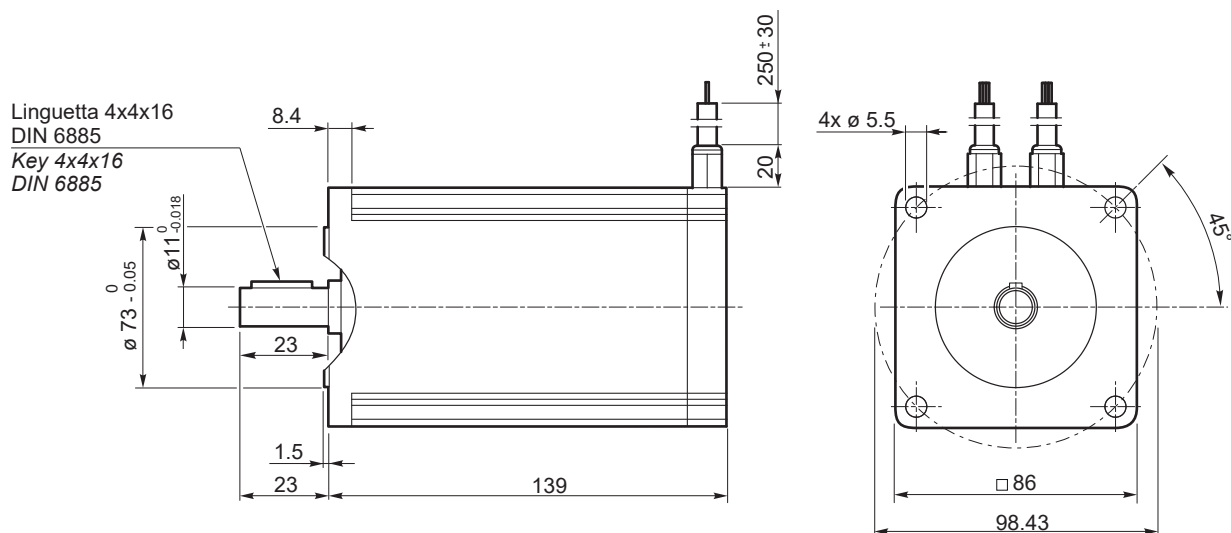
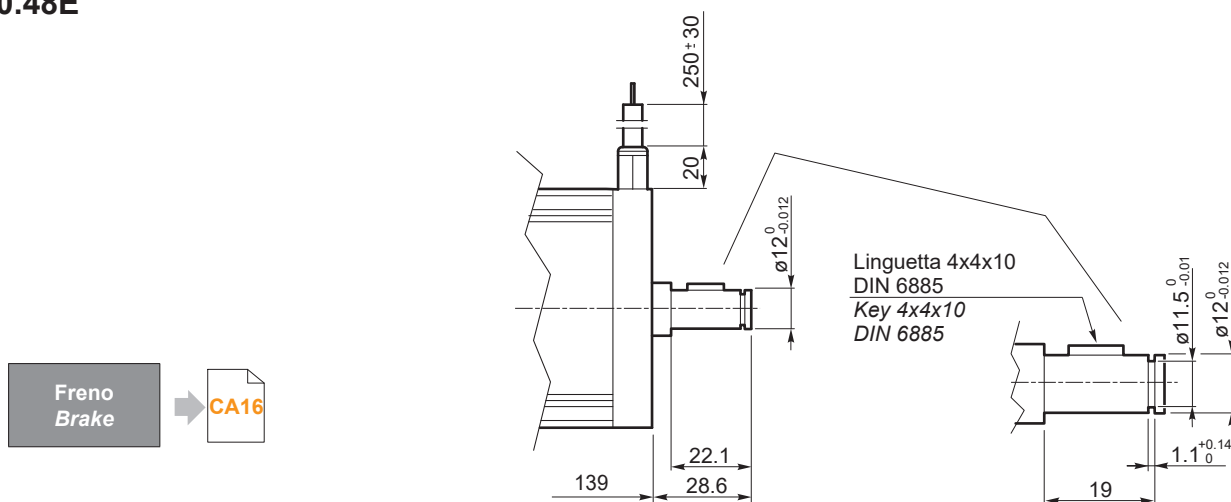
Modello <i>Model</i>	Poli <i>Poles</i>	Fasi <i>Phases</i>	Tensione nominale	Velocità nominale	Coppia nominale	Potenza nominale	Coppia di picco	Corrente nominale	Corrente di picco	Resistenza fase-fase	Induttanza fase-fase	Costante di coppia	Costante FCEM	Inerzia rotore	Peso	IP
			<i>Rated voltage</i>	<i>Rated speed</i>	<i>Rated torque</i>	<i>Rated power</i>	<i>Peak torque</i>	<i>Rated current</i>	<i>Peak current</i>	<i>Line to line resistance</i>	<i>Line to line inductance</i>	<i>Torque constant</i>	<i>Back EMF</i>	<i>Rotor inertia</i>	<i>Weight</i>	
			[V]	[min <sup>-1</sup> ]	[Nm]	[W]	[Nm]	[A]	[A]	[Ω]	[mH]	[Nm/A]	[V/kRPM]	[gcm <sup>2</sup> ]	[kg]	
BL210.480 BL210.48E	8	3	48	3000	2.1	660	6.3	18.7	56	0.115	0.31	0.112	9.5	2400	4.2	55



**Prestazioni**

**Performances**



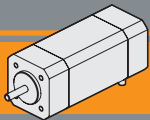

**BL210.480 / BL210.48E**
**Dimensioni**
**Dimensions**
**BL210.480**

**BL210.48E**

**Diagramma dei collegamenti**
**Connection diagram**

Cavi di potenza Power leads	Descrizione Description
Blu / Blue	Fase U / U motor Phase
Marrone / Brown	Fase V / V motor Phase
Nero / Black	Fase W / W motor Phase

Cavi di segnale Signal leads	Descrizione Description
Blue	HALL fase U U phase HALL
Verde Green	HALL fase V V phase HALL
Bianco White	HALL fase W W phase HALL
Rosso (piccolo) Red (small)	Alimentazione HALL + 5Vcc ÷ + 24 Vcc Supply voltage for Hall sensors, + 5 Vdc ÷ + 24 Vdc
Nero (piccolo) Black (small)	Comune per i segnali di HALL Ground for HALL sensors

**Nota:** Si raccomanda di seguire fedelmente gli schemi di collegamento qui riportati, pericolo di danneggiamento del motore o dell'elettronica.

**Note:** Pls, follow strictly the above connection diagrams, danger for the motor and the electric control



Freno

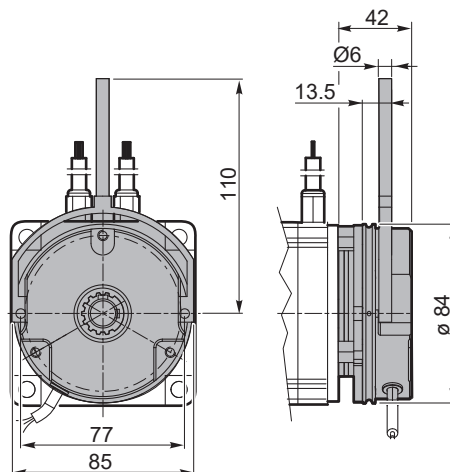
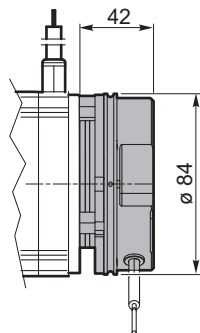
Brake

**Freno / Brake**

**Freno con leva di sblocco/ Brake with hand release**

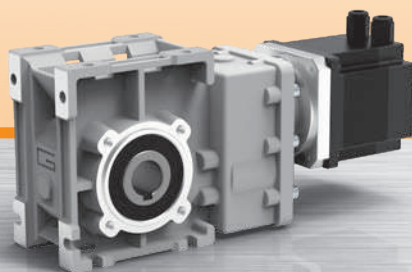
**BL070.24B-BR**  
**BL070.48B-BR**  
**BL210.48E-BR**

**BL070.24B-BRL**  
**BL070.48B-BRL**  
**BL210.48E-BRL**



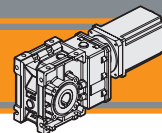
	<b>P<sub>n</sub></b> [W]	<b>V</b> [V]	<b>M<sub>n</sub></b> [Nm]	<b>n<sub>1</sub></b> [min <sup>-1</sup> ]	<b>Kg</b>	<b>IP</b>
<b>Caratteristiche del freno / Break features</b>	23	48	4.5	3000	0.90	20

## Motoriduttori brushless CC ad assi ortogonali Brushless DC helical bevel gearmotors





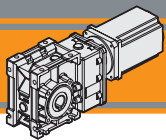




<b>Indice</b>	<b>Index</b>	<b>Pag. Page</b>
Caratteristiche tecniche	<i>Technical features</i>	<b>CB2</b>
Designazione	<i>Classification</i>	<b>CB2</b>
Simbologia	<i>Symbols</i>	<b>CB3</b>
Lubrificazione e temperatura	<i>Lubrication and temperature</i>	<b>CB3</b>
Carichi radiali	<i>Radial loads</i>	<b>CB3</b>
CMB402 con motore brushless BLS043.240	<i>CMB402 with BLS043.240 brushless motor</i>	<b>CB4</b>
CMB402 con motore brushless BL070.240	<i>CMB402 with BL070.240 brushless motor</i>	<b>CB5</b>
CMB402 con motore brushless BL070.24B	<i>CMB402 with BL070.24B brushless motor</i>	<b>CB5</b>
CMB402 con motore brushless BL070.480	<i>CMB402 with BL070.480 brushless motor</i>	<b>CB5</b>
CMB402 con motore brushless BL070.48B	<i>CMB402 with BL070.48B brushless motor</i>	<b>CB5</b>
CMB402 con motore brushless BL140.480	<i>CMB402 with BL140.480 brushless motor</i>	<b>CB6</b>
Dati tecnici	<i>Technical data</i>	<b>CB7</b>
Dimensioni CMB con flange motore AS	<i>CMB dimensions with motor flanges AS</i>	<b>CB8</b>
Flange uscita	<i>Output flange</i>	<b>CB9</b>
Accessori	<i>Accessories</i>	<b>CB10</b>

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### Caratteristiche tecniche

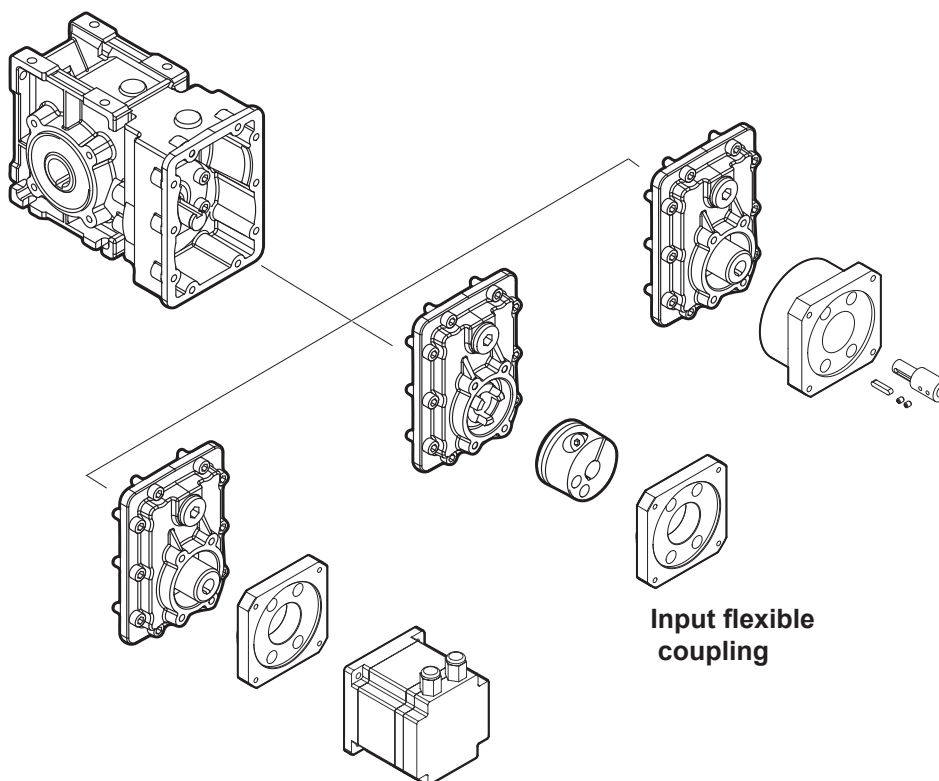
### Technical features

Le caratteristiche principali dei motoriduttori brushless CC ad assi ortogonali della serie BLCMB sono:

The main features of BLCMB brushless DC helical bevel gearmotors range are:

- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore Brushless CC con grado di protezione IP55
- Coppie motori disponibili da 0.43 Nm a 1.4 Nm
- Lubrificazione permanente con olio sintetico
- Carcassa in pressofusione di alluminio
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili anche nella versione con solo riduttore, sia con flangia di entrata standard che con flangia e manicotto dedicati
- Disponibili con giunto elastico in entrata

- Low voltage power supply 24/36/48 Vdc
- Brushless DC motor in IP55 protection Standard
- Motor torque ratings available from 0.43 Nm up to 1.4 Nm
- Permanent synthetic oil long life lubrication
- Die-cast aluminium housing
- Ground-hardened helical gears.
- Gearbox only version also available, with either standard input flange or customized flange and coupling
- Available with input flexible coupling

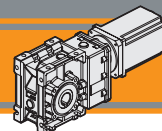


### Designazione

### Classification

RIDUTTORE / GEARBOX						MOTORE / MOTOR		
CMB	402	U	9.2	020	FX	BL070.480	48V	BR
Tipo Type	Grandezza Size	Versione riduttore Gearbox version	Rapporto Ratio	Albero di uscita Output shaft	Giunto elastico Flexible coupling	Tipo Type	Tensione Voltage	Freno Brake
CMB	402	U FD FS FLD FLS FBD FBS	Vedere tabelle See tables		FX 	BLS043.240 BL070.240 BL070.24B BL070.48B BL070.480 BL140.480	24V-36V 24V 24V 48V 48V 48V	24V 48V 
Versione Riduttore Gearbox Version		Albero di uscita Output shaft		Braccio di reazione Torque arm *		Angolo Angle		

\* NOTA: il braccio di reazione viene fornito smontato.  
NOTE: the torque arm will be supplied not assembled.



## Simbologia

## Symbols

Ns	n° stadi / No. stages	Mn <sub>2</sub>	[Nm]	Coppia nominale in uscita in funzione di Pn1 <i>Nominal output torque referred to Pn1</i>
ir	rapporto reale / real ratio	n <sub>1MAX</sub>	[Rpm]	Velocità max entrata / Max input speed
M <sub>2</sub>	[Nm]	V	[V]	Tensione / Voltage
A <sub>2</sub>	[N]	n <sub>2</sub>	[Rpm]	Velocità in uscita / Output Speed
R <sub>2</sub>	[N]	IP		Grado di protezione / Enclosure protection
Pn <sub>1</sub>	[kW]	Kg		Peso / Weight
		sf		Fattore di servizio / Service Factor

## Lubrificazione e temperatura

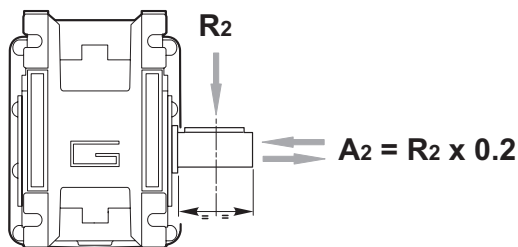
## Lubrication and temperature

I motoriduttori BLCMB sono forniti completi di lubrificante sintetico (viscosità 320) e non necessitano di manutenzione.  
Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).  
Per temperature diverse, contattare nostro UT.

*Permanent synthetic oil long life lubrication (viscosity grade 320) on BLCMB gearmotors.*  
*Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).*  
*For temperature outside this range please contact our technical dept.*

## Carichi radiali

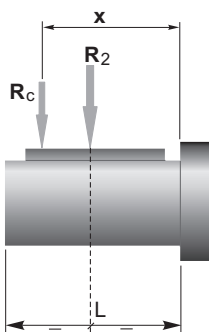
## Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]
	CMB 402
400	905
300	996
200	1141
170	1204
140	1414
100	1582
90	1638
60	2047
40	2524
30	2778
20	3180
15	3500
10	3500

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*

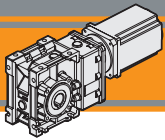


	CMB 402
a	86
b	66
R <sub>2MAX</sub>	3500

$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

*a. b = valori riportati nella tabella*  
*a. b = values given in the table*

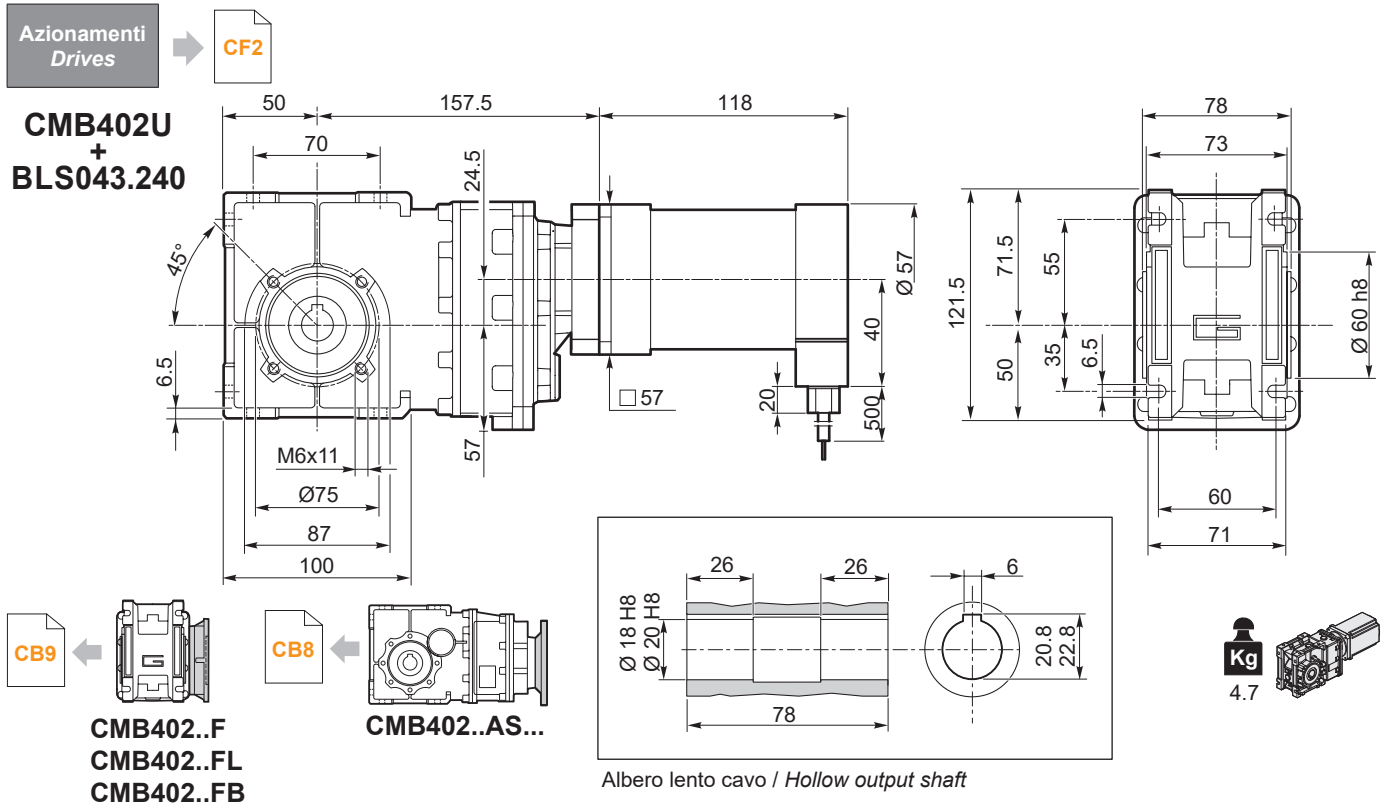


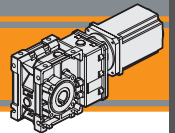
CMB402	BLS043.240													
	24V						36V							
	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]		n <sub>1MAX</sub> [ rpm ]	
M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]		sf		M <sub>2</sub> [Nm]	sf			
6.2	49	2.5	18.4	486	2.5	12.5	3000	65	2.5	18.4	648	2.5	11.1	4000
7.5	40	3.0	15.2	400	3.0	10.3		53	3.0	15.2	534	3.0	9.1	
9.2	33	3.7	12.4	326	3.7	8.4		43	3.7	12.4	435	3.7	7.4	
11.8	25	4.8	10.8	254	4.8	7.3		34	4.8	10.8	338	4.8	6.5	
12.5	24	5.0	10.3	240	5.0	7.0		32	5.0	10.3	320	5.0	6.2	
14.8	20	6.0	8.6	202	6.0	5.9		27	6.0	8.6	270	6.0	5.2	
17.6	17	7.1	7.3	170	7.1	4.9		23	7.1	7.3	227	7.1	4.4	
18.6	16	7.5	8.4	161	7.5	5.7		22	7.5	8.4	215	7.5	5.0	
22.3	13	9.0	7.0	134	9.0	4.8		18	9.0	7.0	179	9.0	4.2	
23.9	13	9.7	6.5	125	9.7	4.4		17	9.7	6.5	167	9.7	3.9	
28.9	10	12	6.4	104	12	4.3		14	12	6.4	138	12	3.8	
30.8	9.7	12	6.0	97	12	4.1		13	12	6.0	130	12	3.6	
33.6	8.9	14	5.5	89	14	3.7		12	14	5.5	119	14	3.3	
35.6	8.4	14	5.2	84	14	3.5		11	14	5.2	112	14	3.1	
42.8	7.0	17	4.3	70	17	2.9		9.4	17	4.3	94	17	2.6	
55.3	5.4	22	3.3	54	22	2.3		7.2	22	3.3	72	22	2.0	
59.1	5.1	24	3.1	51	24	2.1		6.8	24	3.1	68	24	1.9	
64.3	4.7	26	2.9	47	26	2.0		6.2	26	2.9	62	26	1.7	
72.5	4.1	29	2.6	41	29	1.7		5.5	29	2.6	55	29	1.5	

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS043.240	4	3	36	4000	0.43	180
			24	3000		130
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BLS043.240	0.86	6	0.35	1	12.0	1.25




**CMB402 con motore brushless CC**
**CMB402 with brushless DC motor**

CMB402	BL070.240 / BL070.24B / BL070.480 / BL070.48B					
	24V / 48V					
	ir	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]	
M <sub>2</sub> [Nm]		sf	M <sub>2</sub> [Nm]	sf	n <sub>1MAX</sub> [ rpm ]	
6.2	49	4.1	11.3	486	4.1	7.7
7.5	40	4.9	9.3	400	4.9	6.3
9.2	33	6.1	7.6	326	6.1	5.2
11.8	25	7.8	6.6	254	7.8	4.5
12.5	24	8.2	6.3	240	8.2	4.3
14.8	20	9.8	5.3	202	9.8	3.6
17.6	17	12	4.5	170	12	3.0
18.6	16	12	5.2	161	12	3.5
22.3	13	15	4.3	134	15	2.9
23.9	13	16	4.0	125	16	2.7
28.9	10	19	3.9	104	19	2.7
30.8	9.7	20	3.7	97	20	2.5
33.6	8.9	22	3.4	89	22	2.3
35.6	8.4	23	3.2	84	23	2.2
42.8	7.0	28	2.7	70	28	1.8
55.3	5.4	36	2.1	54	36	1.4
59.1	5.1	39	1.9	51	39	1.3
64.3	4.7	42	1.8	47	42	1.2
72.5	4.1	48	1.6	41	48	1.1

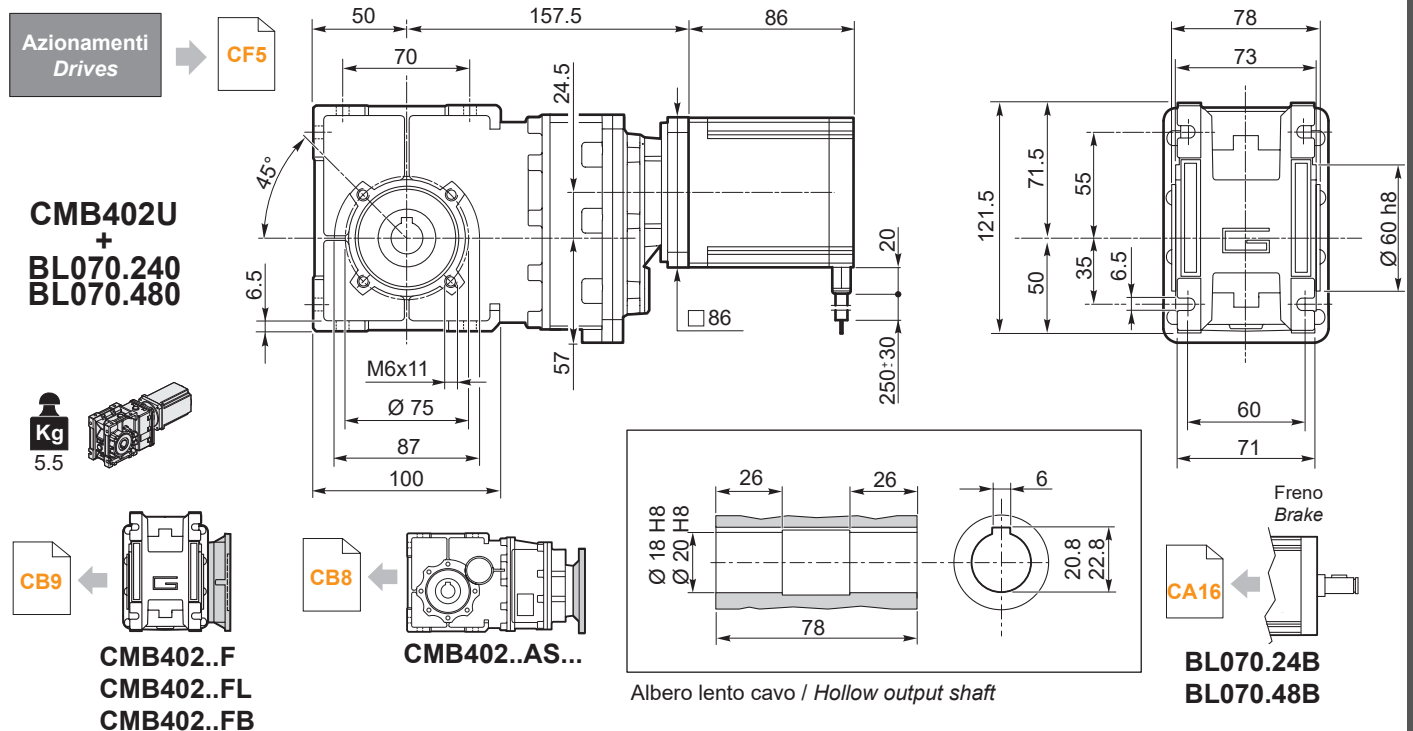
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

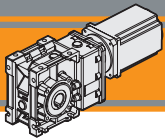
**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BL070.240 BL070.24B	8	3	24	3000	0.7	220
BL070.480 BL070.48B	8	3	48	3000	0.7	220

Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BL070.240 BL070.24B	2.1	13	0.091	0.23	26	2.1
BL070.480 BL070.48B	1.4	6.5	0.34	1.0	13	2.1





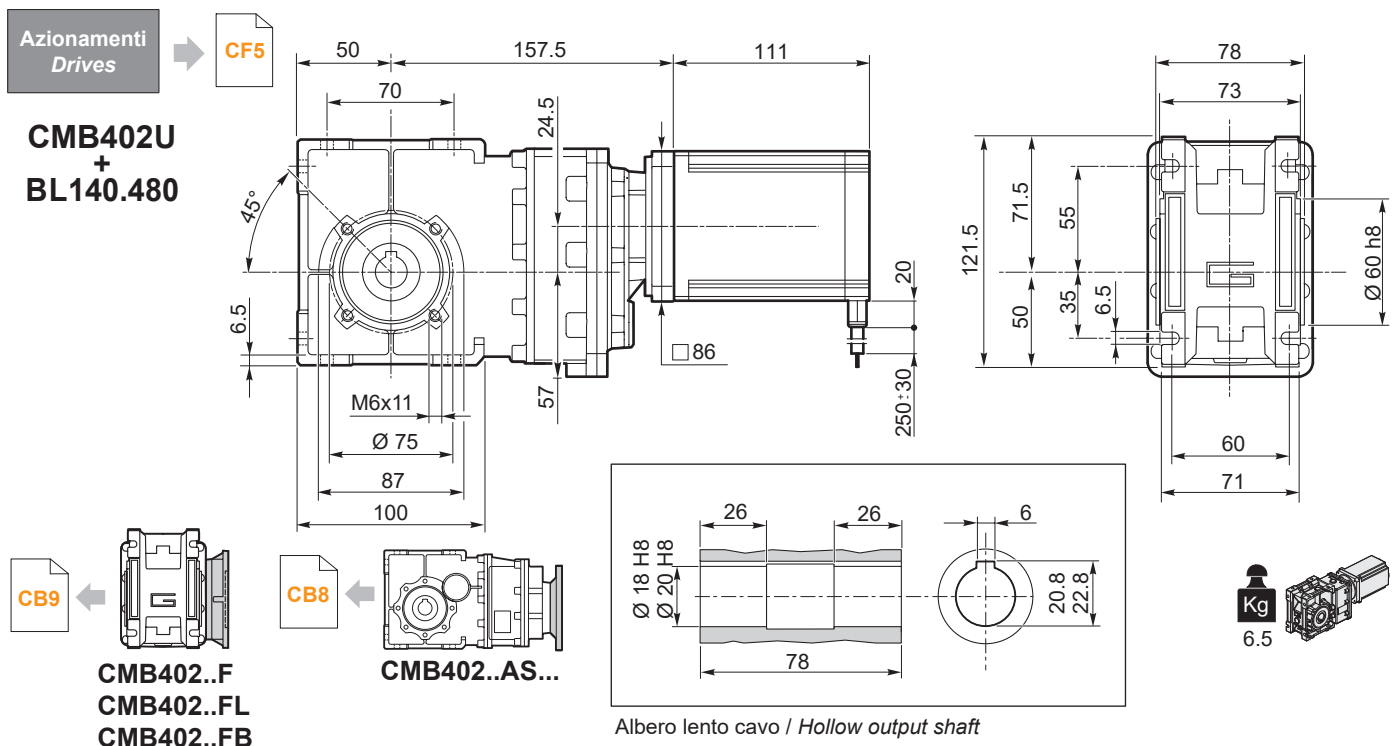
CMB402	BL140.480					
	48V					
	ir	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]	
		M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf
6.2	49	8.1	5.7	486	8.1	3.8
7.5	40	9.9	4.7	400	9.9	3.2
9.2	33	12.1	3.8	326	12.1	2.6
11.8	25	15.6	3.3	254	15.6	2.3
12.5	24	16.4	3.1	240	16.4	2.1
14.8	20	19.5	2.7	202	19.5	1.8
17.6	17	23	2.2	170	23	1.5
18.6	16	24	2.6	161	24	1.8
22.3	13	29	2.2	134	29	1.5
23.9	13	31	2.0	125	31	1.4
28.9	10	38	2.0	104	38	1.3
30.8	9.7	41	1.8	97	41	1.2
33.6	8.9	44	1.7	89	44	1.1
35.6	8.4	47	1.6	84	47	1.1
42.8	7.0	56	1.3	70	56	0.9
55.3	5.4	73	1.0	54	72	0.7
59.1	5.1	78	1.0	51	72	0.7
64.3	4.7	85	0.9	47	72	0.7
72.5	4.1	95	0.8	41	72	0.7

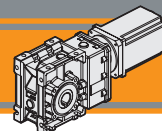
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please. contact our technical office.

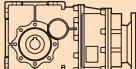
Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BL140.480	8	3	48	3000	1.4	440
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BL140.480	2.8	13.0	0.16	0.5	26	3.15

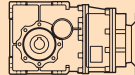




**Dati tecnici**

**Technical data**

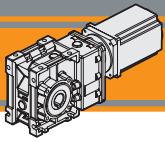
	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMB 402</b>				
$n_1 = 1400$ rpm	<b>227</b>	40	1.0	6.18
	<b>187</b>	40	0.83	7.49
	<b>152</b>	40	0.68	9.2
	<b>118</b>	45	0.59	11.83
	<b>112</b>	45	0.56	12.48
	<b>94.4</b>	45	0.47	14.83
	<b>79.4</b>	45	0.40	17.63
	<b>75.3</b>	55	0.46	18.6
	<b>62.7</b>	55	0.38	22.33
	<b>58.6</b>	55	0.36	23.91
	<b>48.5</b>	65	0.35	28.89
	<b>45.4</b>	65	0.33	30.84
	<b>41.7</b>	65	0.30	33.57
	<b>39.3</b>	65	0.28	35.63
	<b>32.7</b>	65	0.24	42.75
	<b>25.3</b>	65	0.18	55.31
	<b>23.7</b>	65	0.17	59.06
	<b>21.8</b>	65	0.16	64.29
	<b>19.3</b>	65	0.14	72.50

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
<b>CMB 402</b>				
$n_1 = 3000$ rpm	<b>486</b>	31.2	1.65	6.18
	<b>400</b>	31.2	1.36	7.49
	<b>326</b>	31.2	1.11	9.20
	<b>254</b>	35.1	0.97	11.83
	<b>240</b>	35.1	0.92	12.48
	<b>202</b>	35.1	0.77	14.83
	<b>170</b>	35.1	0.65	17.63
	<b>161</b>	42.9	0.75	18.60
	<b>134</b>	42.9	0.63	22.33
	<b>126</b>	42.9	0.59	23.91
	<b>104</b>	50.7	0.57	28.89
	<b>97.3</b>	50.7	0.54	30.84
	<b>89.4</b>	50.7	0.49	33.57
	<b>84.2</b>	50.7	0.47	35.63
	<b>70.2</b>	50.7	0.39	42.75
	<b>54.2</b>	50.7	0.30	55.31
	<b>50.8</b>	50.7	0.28	59.06
	<b>46.7</b>	50.7	0.26	64.29
	<b>41.4</b>	50.7	0.23	72.50

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

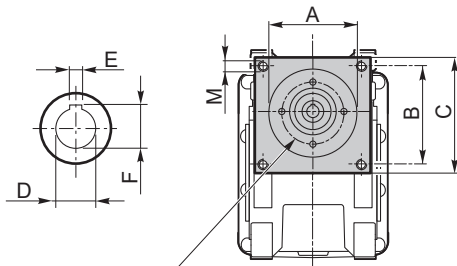




**Dimensioni CMB con flange motore AS**

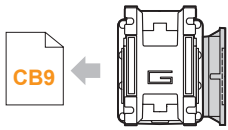
**CMB dimensions with motor flanges AS**

**CMB402 - U - AS...**

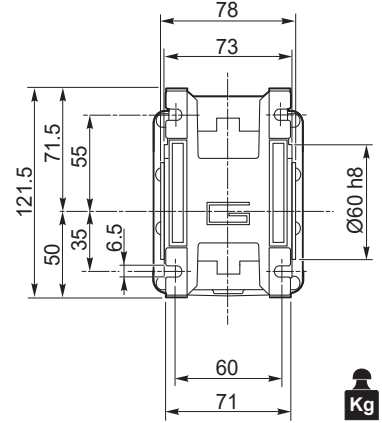
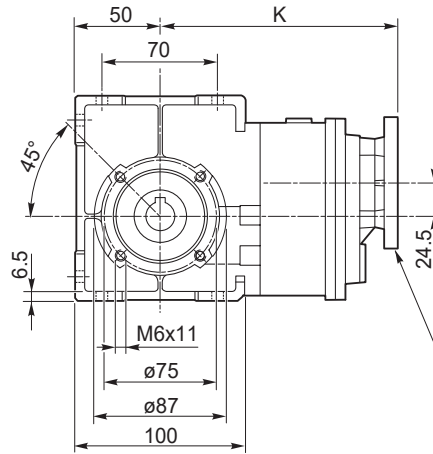


Connessione con boccola o giunto in funzione del diametro dell'albero motore.

Connection with sleeve or coupling depending on motorshaft's diameter.



**CMB402..F**  
**CMB402..FL**  
**CMB402..FB**

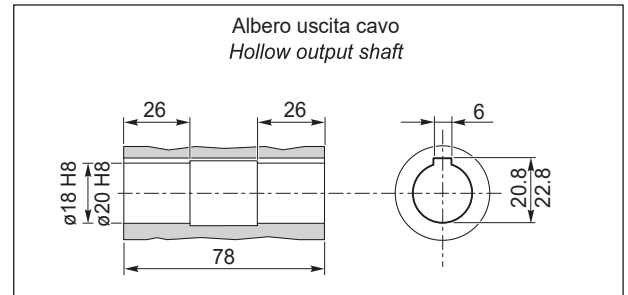


3.4

Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

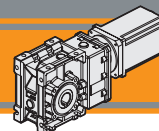
Flange's thickness may vary depending on motorshaft's lenght.

Dimensioni / Dimensions								
AS	A	B	C	M	K	D	E	F
AS392FX	38.1	47.1	64	M5	157.5	9	3	10.5
						11	4	12.8
						14	5	16.3
AS384FX	73	69.6	86	M5	157.5	9	3	10.5
						11	4	12.8
						14	5	16.3
...	...	...	...	...	...	...	...	...



Albero uscita cavo  
Hollow output shaft

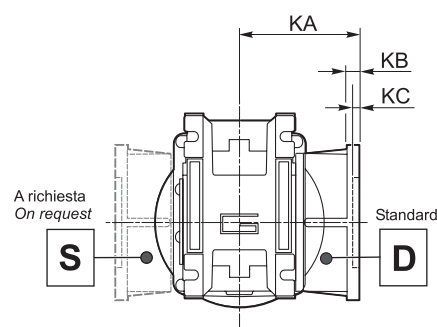
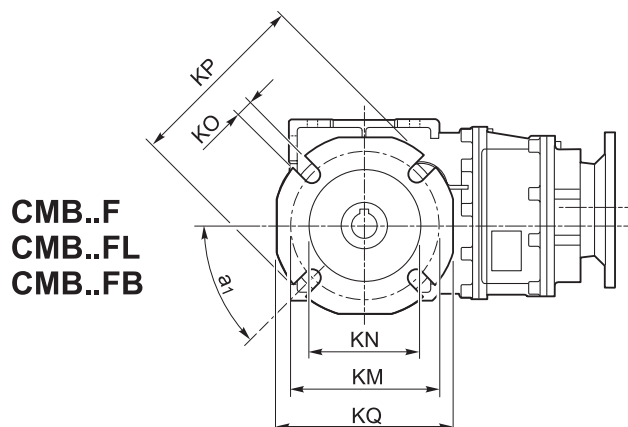


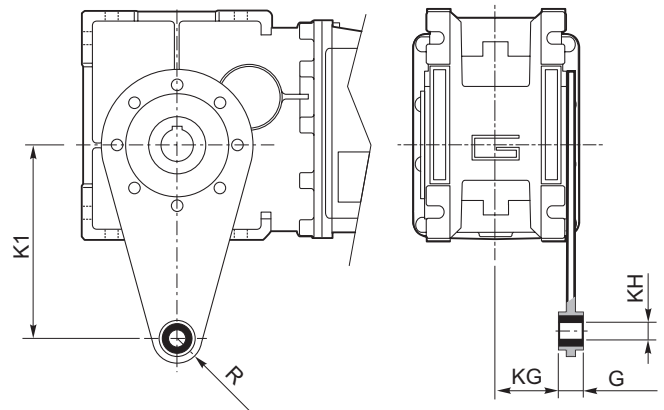
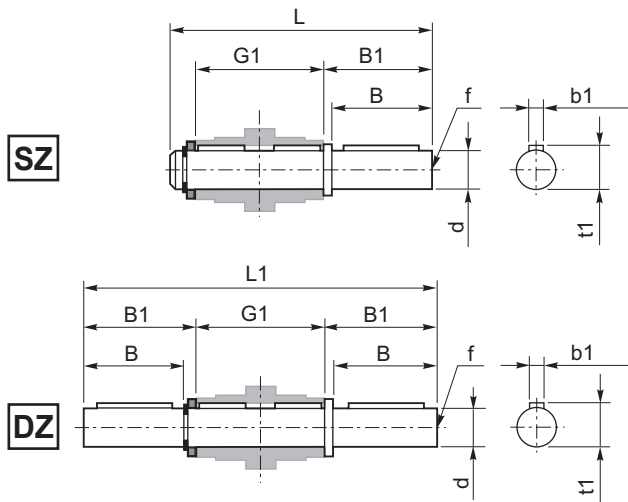
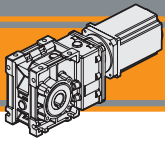


Flange uscita

Output flange

Flange uscita / Output flanges																											
CMB	F										FL										FB						
	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ	a <sub>1</sub>	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112





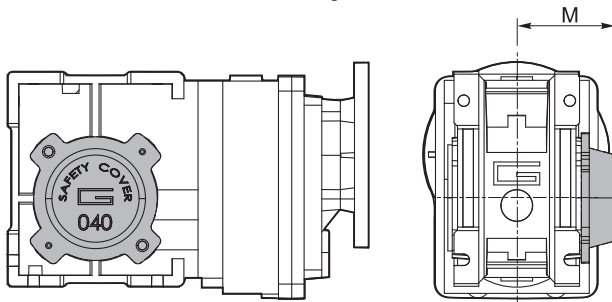
Albero lento / Output shaft

CMB	d h7	B	B1	G1	L	L1	f	b1	t1
402	18	40	43	78	128	164	M6	6	20.5

Braccio di reazione / Torque arm

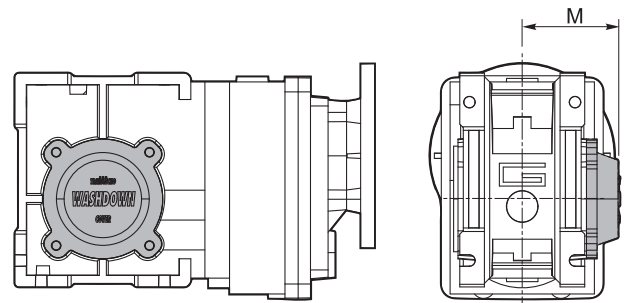
CMB	K1	G	KG	KH	R
402	100	14	31	10	18

SC - Safety cover



CMB	M
402	54.5

WD - Kit washdown cover

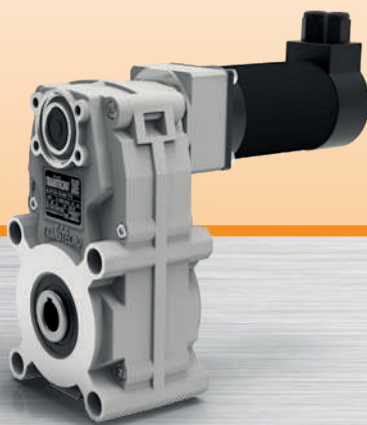


CMB	M
402	55.5

**MINI**  **TECNO**™  
**small** but strong

**BLFT**

Motoriduttori brushless CC pendolari  
Brushless DC helical parallel gearmotors



**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



**BLDC**





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Designazione	<i>Classification</i>	<b>CC2</b>
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Carichi radiali	<i>Radial loads</i>	<b>CC3</b>
FT105 con motore brushless BLS022.240	<i>FT105 with BLS022.240 brushless motor</i>	<b>CC4</b>
FT105 con motore brushless BLS043.240	<i>FT105 with BLS043.240 brushless motor</i>	<b>CC5</b>
Dati tecnici	<i>Technical data</i>	<b>CC6</b>
Dimensioni FT con flange motore AS	<i>FT dimensions with motor flanges AS</i>	<b>CC6</b>

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## Caratteristiche tecniche

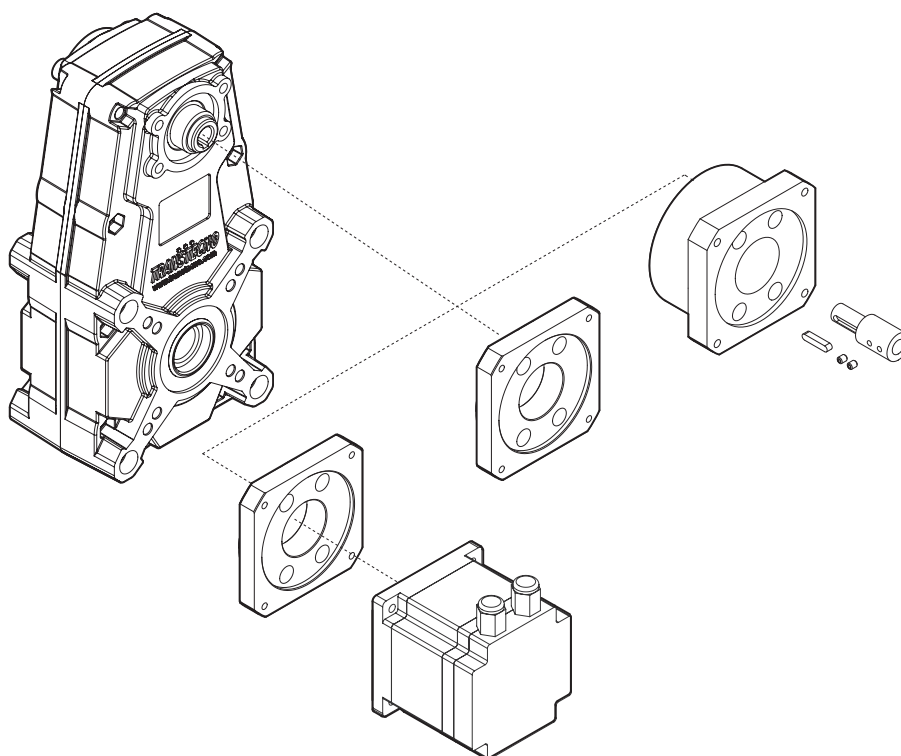
## Technical features

Le caratteristiche principali dei motoriduttori brushless CC pendolari della serie BLFT sono:

The main features of BLFT brushless DC helical parallel gearmotors range are:

- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore Brushless CC con grado di protezione IP55
- Coppie motori disponibili da 0.22 Nm a 0.43 Nm
- Lubrificazione permanente con olio sintetico
- Carcassa in pressofusione di alluminio
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili anche nella versione con solo riduttore, sia con flangia di entrata standard che con flangia e manicotto dedicati

- Low voltage power supply 24/36/48 Vdc
- Brushless DC motor in IP55 protection Standard
- Motor torque ratings available from 0.22 Nm up to 0.43 Nm
- Permanent synthetic oil long life lubrication
- Die-cast aluminium housing
- Ground-hardened helical gears
- Gearbox only version also available, with either standard input flange or customized flange and coupling



## Designazione

## Classification

RIDUTTORE / GEARBOX					MOTORE / MOTOR		
FT	105	U	46	020	BL043.240	24V	BR
Tipo Type	Grandezza Size	Versione riduttore Gearbox version	Rapporto Ratio	Albero di uscita Output shaft	Tipo Type	Tensione Voltage	Freno Brake
FT	105	U	Vedere tabelle See tables	Vedere tabelle See tables	BLS022.240 BLS043.240	24V - 36V 24V - 36V	24V 48V

CA16



### Simbologia

### Symbols

Ns	n° stadi / No. stages	Mn <sub>2</sub>	[Nm]	Coppia nominale in uscita in funzione di Pn1 <i>Nominal output torque referred to Pn1</i>
ir	rapporto reale / real ratio	n <sub>1MAX</sub>	[Rpm]	Velocità max entrata / Max input speed
M <sub>2</sub>	[Nm]	V	[V]	Tensione / Voltage
A <sub>2</sub>	[N]	n <sub>2</sub>	[Rpm]	Velocità in uscita / Output Speed
R <sub>2</sub>	[N]	IP		Grado di protezione / Enclosure protection
Pn <sub>1</sub>	[kW]	Kg		Peso / Weight
		sf		Fattore di servizio / Service Factor

### Lubrificazione e temperatura

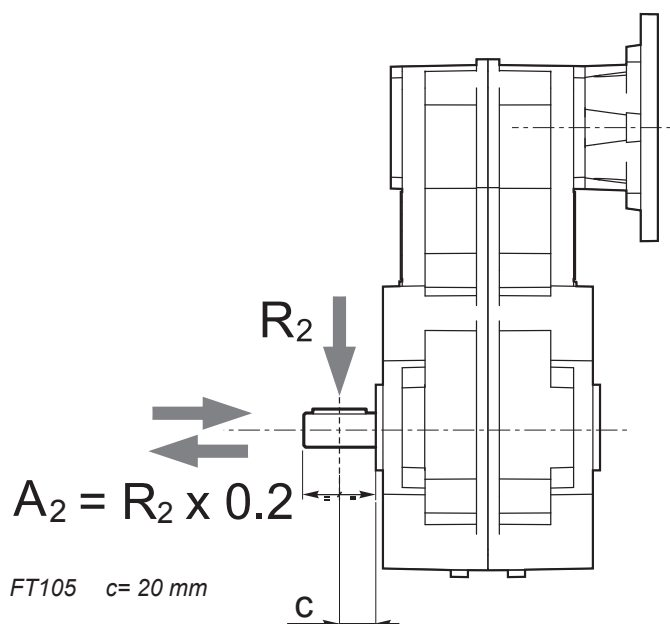
### Lubrication and temperature

I motoriduttori BLFT sono forniti completi di lubrificante sintetico (viscosità 320) e non necessitano di manutenzione.  
Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).  
Per temperature diverse, contattare nostro UT.

*Permanent synthetic oil long life lubrication (viscosity grade 320) on BLFT gearmotors.*  
*Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).*  
*For temperature outside this range please contact our technical dept.*

### Carichi radiali

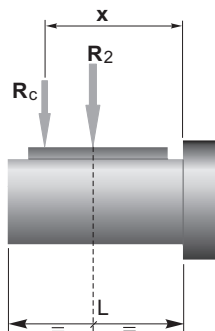
### Radial loads



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]
	FT105
70	1500
40	1700
30	1850
20	2000
10	2000
5	2000

Quando il carico radiale risultante non è applicato sulla mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

*When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:*



	FT105
a	82
b	62
R <sub>2MAX</sub>	2000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a, b = valori riportati nella tabella  
a, b = values given in the table



**FT105 con motore brushless**

**FT105 with brushless motor**

FT105		BLS022.240													
		24V						36V							
		n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]		n <sub>1MAX</sub> [ rpm ]	
M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf					
20.6	3	14.6	4.3	10.8	146	4.3	7.3	3000	19.4	4.3	10.8	194	4.3	6.5	4000
33.3		9.0	6.9	8.3	90	6.9	5.7		12.0	6.9	8.3	120	6.9	5.0	
44.4		6.8	9.2	8.1	68	9.2	5.5		9.0	9.2	8.1	90	9.2	4.9	
54.9		5.5	11	6.6	55	11	4.5		7.3	11	6.6	73	11	4.0	
71.8		4.2	15	5.0	42	15	3.4		5.6	15	5.0	56	15	3.0	
77.1		3.9	16	4.7	39	16	3.2		5.2	16	4.7	52	16	2.8	
88.9		3.4	18	4.1	34	18	2.8		4.5	18	4.1	45	18	2.4	
124.8		2.4	26	2.9	24	26	2.0		3.2	26	2.9	32	26	1.7	
181.4		1.7	38	2.0	17	38	1.4		2.2	38	2.0	22	38	1.2	
224.3		1.3	46	1.6	13	46	1.1		1.8	46	1.6	18	46	1.0	
315.1		1.0	65	1.1	10	65	0.8		1.3	65	1.1	13	64	0.7	
368.2		0.8	75	1.0	8.1	72	0.7		1.1	75	1.0	11	64	0.7	
535.0		0.6	105	0.7	5.6	72	0.7		0.7	105	0.7	7.5	64	0.7	
661.8		0.5	105	0.7	4.5	72	0.7		0.6	105	0.7	6.0	64	0.7	
929.4	0.3	105	0.7	3.2	72	0.7	0.4	105	0.7	4.3	64	0.7			

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS022.240	4	3	36	4000	0.22	92
			24	3000		70
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BLS022.240	0.44	3.7	0.64	3.1	7.4	0.72

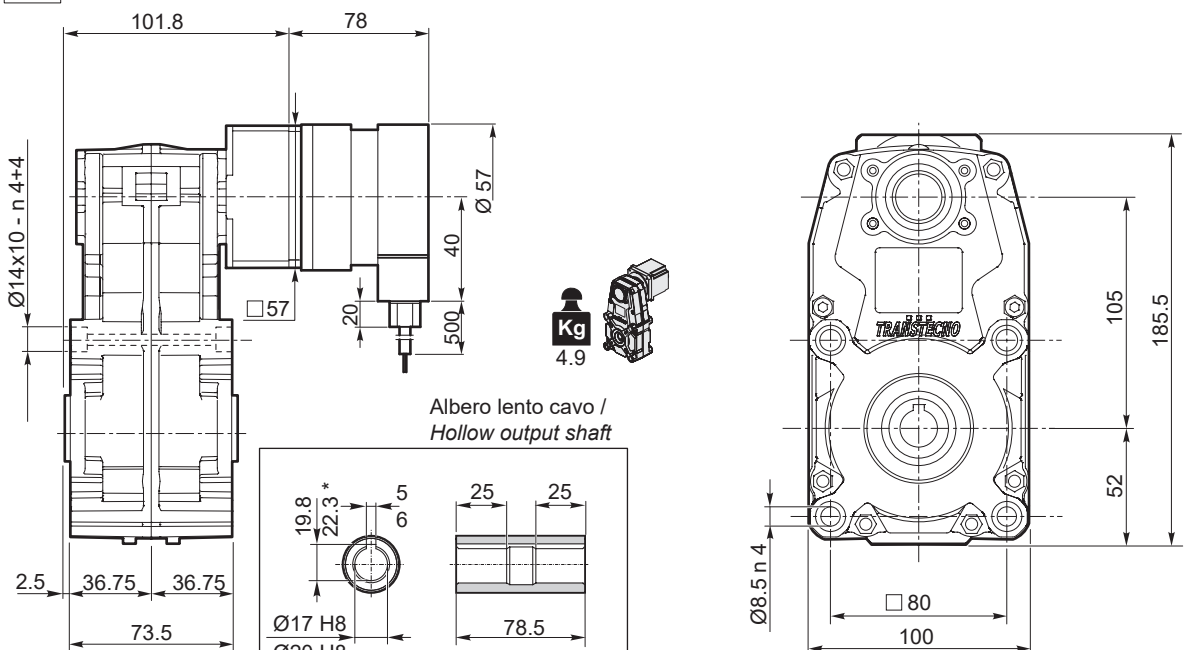
Azionamenti Drives

CF2

FT105U + BLS022.240

CC6

FT105.. AS...



\*Sede linguetta ribassata /  
\*Special keyway





FT105 con motore brushless

FT105 with brushless motor

FT105		BLS043.240													
		24V						36V							
		n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]		n <sub>1MAX</sub> [ rpm ]	
M <sub>2</sub> [Nm]	sf	M <sub>2</sub> [Nm]	sf	M <sub>2</sub> [Nm]	sf	M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf					
20.6	3	14.6	8.3	5.5	146	8.3	3.8	3000	19.4	8.3	5.5	194	8.3	3.3	4000
33.3		9.0	13	4.3	90	13	2.9		12.0	13	4.3	120	13	2.6	
44.4		6.8	18	4.2	68	18	2.8		9.0	18	4.2	90	18	2.5	
54.9		5.5	22	3.4	55	22	2.3		7.3	22	3.4	73	22	2.0	
71.8		4.2	29	2.6	42	29	1.7		5.6	29	2.6	56	29	1.5	
77.1		3.9	31	2.4	39	31	1.6		5.2	31	2.4	52	31	1.4	
88.9		3.4	36	2.1	34	36	1.4		4.5	36	2.1	45	36	1.2	
124.8		2.4	50	1.5	24	50	1.0		3.2	50	1.5	32	50	0.9	
181.4		1.7	73	1.0	17	72	0.7		2.2	73	1.0	22	64	0.7	
224.3		1.3	91	0.8	13	72	0.7		1.8	91	0.8	18	64	0.7	
315.1		1.0	105	0.7	10	72	0.7		1.3	105	0.7	13	64	0.7	
368.2		0.8	105	0.7	8.1	72	0.7		1.1	105	0.7	11	64	0.7	
535.0		0.6	105	0.7	5.6	72	0.7		0.7	105	0.7	7.5	64	0.7	
661.8		0.5	105	0.7	4.5	72	0.7		0.6	105	0.7	6.0	64	0.7	
929.4	0.3	105	0.7	3.2	72	0.7	0.4	105	0.7	4.3	64	0.7			

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS043.240	4	3	36	4000	0.43	180
			24	3000		130
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BLS043.240	0.86	6	0.35	1	12.0	1.25

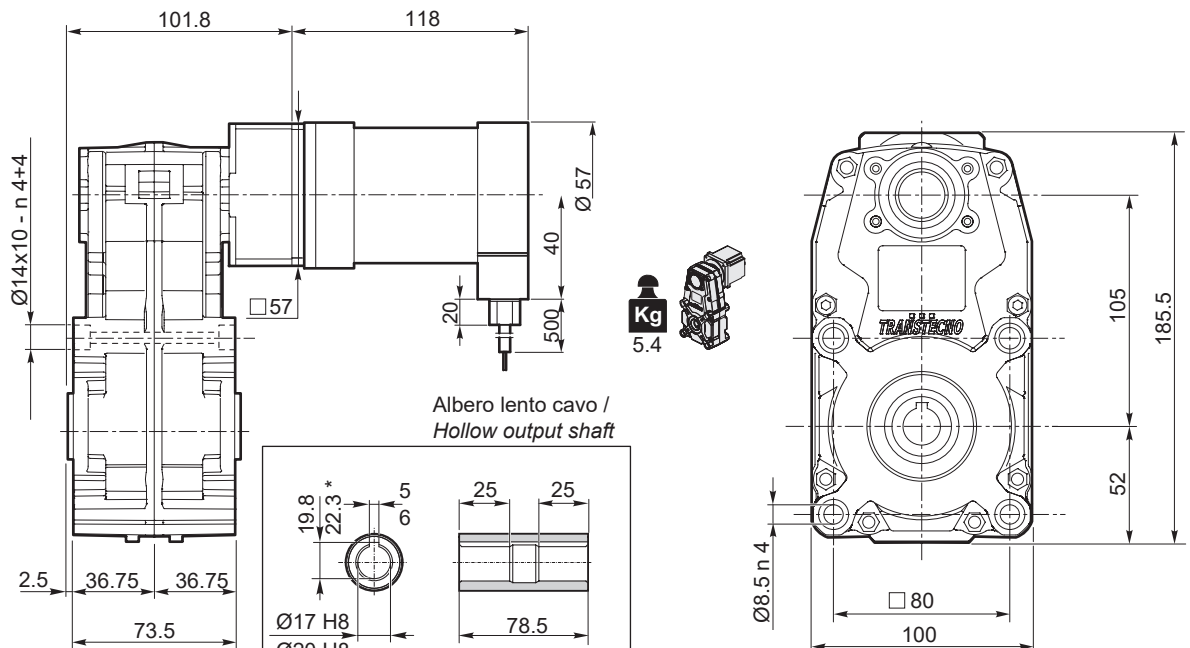
Azionamenti Drives

CF2

FT105U + BLS043.240

CC6

FT105.. AS...




Albero lento cavo / Hollow output shaft


\*Sede linguetta ribassata /  
\*Special keyway



**Dati tecnici**

**Technical data**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	
<b>FT105</b>					
<b>FT105/3</b>	$n_1 = 1400$ rpm	68	40	0.30	20.57
		42	50	0.23	33.32
		32		0.23	44.36
		26		0.18	54.87
		20		0.14	71.84
		18		0.13	77.07
		16	65	0.11	88.87
		11		0.081	124.81
		7.7		0.056	181.35
		6.2		0.045	224.32
	4.4		0.032	315.05	
<b>FT105/4</b>		3.8	65	0.028	368.19
		2.6		0.019	534.98
		2.1		0.015	661.76
		1.5		0.011	929.40

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$	
<b>FT105</b>					
<b>FT105/3</b>	$n_1 = 3000$ rpm	146	31	0.51	20.57
		90	39	0.39	33.32
		68		0.38	44.36
		55		0.31	54.87
		42		0.24	71.84
		39		0.22	77.07
		34	51	0.19	88.87
		24		0.14	124.81
		17		0.09	181.35
		13		0.08	224.32
	10		0.05	315.05	
<b>FT105/4</b>		8.1	51	0.05	368.19
		5.6		0.03	534.98
		4.5		0.03	661.76
		3.2		0.02	929.40

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

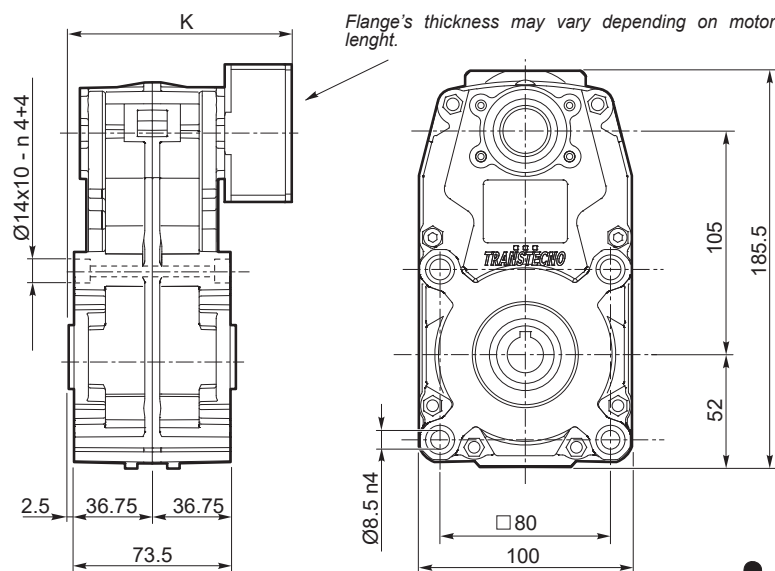
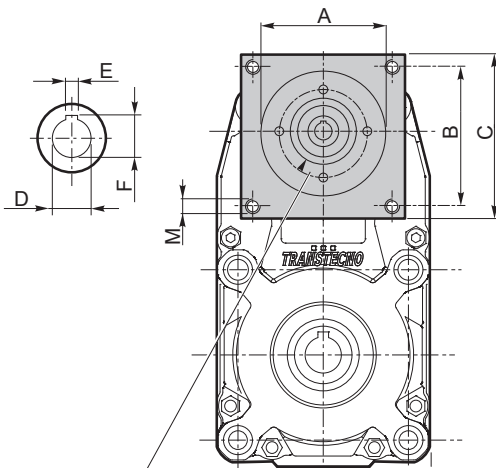
**Dimensioni FT con flange motore AS**

**FT dimensions with motor flanges AS**

**FT105 - U - AS...**

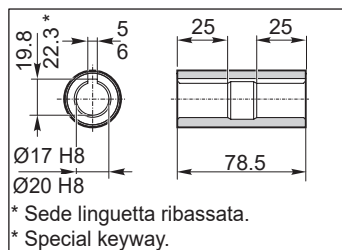
Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

Flange's thickness may vary depending on motor shaft's length.



Connessione con boccola o giunto in funzione del diametro dell'albero motore.

Connection with sleeve or coupling depending on motor shaft's diameter.



Albero lento cavo / Hollow output shaft

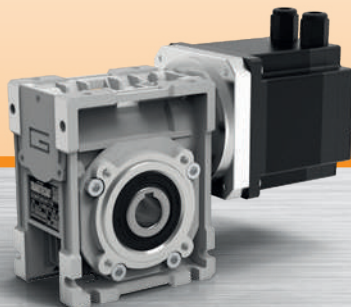
**Kg**  
4.2

Dimensioni / Dimensions								
AS	A	B	C	M	K	D	E	F
AS416	38.1	47.1	56.6	M5	101.8	9	3	10.4
...	...	...	...	...	...	...	...	...

**MINI**  **TECNO**™  
**small** but strong

**BLCM**

Motoriduttori brushless CC a vite senza fine  
Brushless DC wormgearmotors

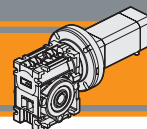


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



**BLDC**

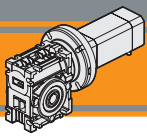




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CM030 con motore brushless BL 070.240	<i>CM030 with brushless motor BL 070.240</i>	<b>CD7</b>
CM030 con motore brushless BL 070.24B	<i>CM030 with brushless motor BL 070.24B</i>	<b>CD7</b>
CM030 con motore brushless BL 070.480	<i>CM030 with brushless motor BL 070.480</i>	<b>CD7</b>
CM030 con motore brushless BL 070.48B	<i>CM030 with brushless motor BL 070.48B</i>	<b>CD7</b>
CM040 con motore brushless BLS 043.240	<i>CM040 with brushless motor BLS 043.240</i>	<b>CD8</b>
CM040 con motore brushless BL 070.240	<i>CM040 with brushless motor BL 070.240</i>	<b>CD9</b>
CM040 con motore brushless BL 070.24B	<i>CM040 with brushless motor BL 070.24B</i>	<b>CD9</b>
CM040 con motore brushless BL 070.480	<i>CM040 with brushless motor BL 070.480</i>	<b>CD9</b>
CM040 con motore brushless BL 070.48B	<i>CM040 with brushless motor BL 070.48B</i>	<b>CD9</b>
CM040 con motore brushless BL 140.480	<i>CM040 with brushless motor BL 140.480</i>	<b>CD9</b>
CM040 con motore brushless BL 210.480	<i>CM040 with brushless motor BL 210.480</i>	<b>CD9</b>
CM040 con motore brushless BL 210.48E	<i>CM040 with brushless motor BL 210.48E</i>	<b>CD9</b>
Dati tecnici	<i>Technical data</i>	<b>CD10</b>
Dimensioni CM con flange motore AS	<i>CM dimensions with motor flanges AS</i>	<b>CD11</b>
Dimensioni flange uscita	<i>Output flange dimensions</i>	<b>CD13</b>
Opzioni	<i>Options</i>	<b>CD14</b>
Accessori	<i>Accessories</i>	<b>CD14</b>

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### Caratteristiche tecniche

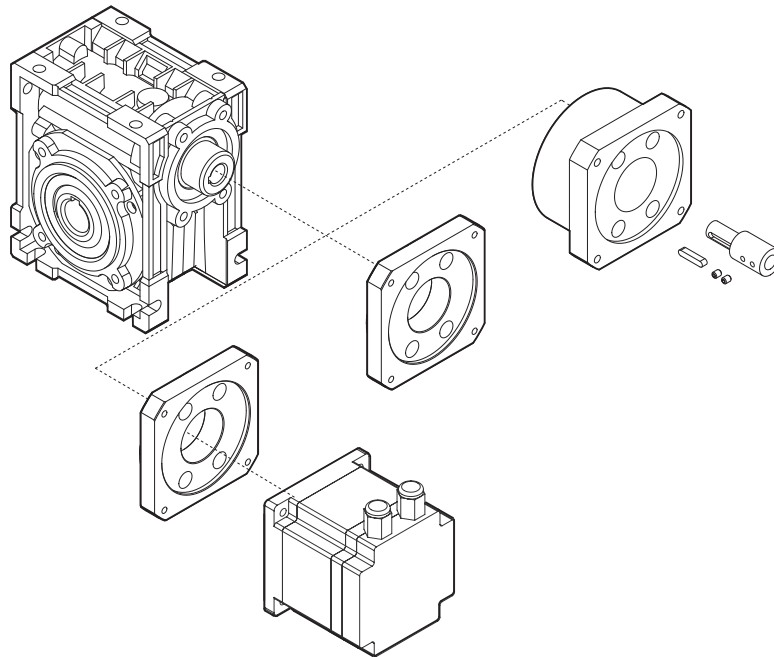
### Technical features

Le caratteristiche principali dei motoriduttori brushless CC a vite senza fine della serie BLCM sono:

The main features of BLCM brushless DC wormgearmotors range are:

- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore Brushless CC con grado di protezione IP55
- Coppie motore disponibili da 0.22 a 2.1 Nm
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Disponibili anche nella versione con solo riduttore, sia con flangia di entrata standard che con flangia e manicotto dedicati

- Low voltage power supply 24/36/48 Vdc
- Brushless DC motor in IP55 protection Standard
- Motor torque ratings available from 0.22 up to 2.1 Nm
- Die-cast aluminium housings
- Permanent synthetic oil long life lubrication
- Gearbox only version also available, with either standard input flange or customized flange and coupling



### Designazione

### Classification

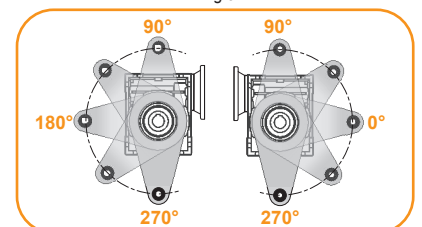
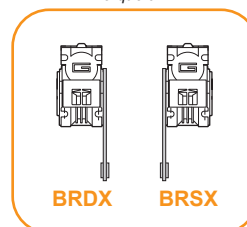
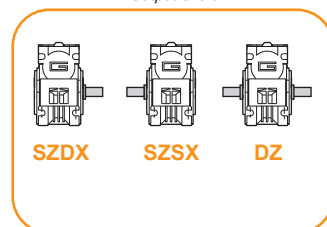
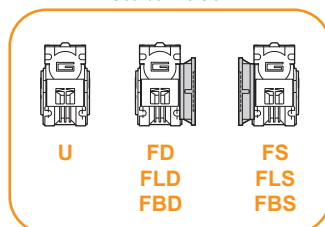
RIDUTTORE / GEARBOX				MOTORE / MOTOR		
CM	030	20	U	BL070.480	48V	BR
Tipo Type	Grandezza Size	Rapporto in Ratio in	Versione Version	Tipo Type	Tensione Voltage	Freno Brake
CM	026 026 (11) 026 (14) 030 040	Vedere tabelle See tables	U F FL FB	BLS022.240 BLS043.240 BL070.240 BL070.24B BL070.48B BL070.480 BL140.480 BL210.480 BL210.48E	24V-36V 24V-36V 24V 24V 48V 48V 48V 48V	24V 48V 

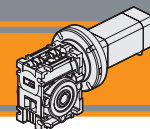
Versione Riduttore  
Gearbox Version

Albero di uscita  
Output shaft

Braccio di reazione  
Torque arm

Angolo  
Angle





**Simbologia**

**Symbols**

Ns	n° stadi / No. stages	n <sub>1MAX</sub>	[Rpm]	Velocità max entrata / Max input speed
ir	rapporto reale / real ratio	V	[V]	Tensione / Voltage
M <sub>2</sub>	[Nm] coppia in uscita / output torque	n <sub>2</sub>	[Rpm]	Velocità in uscita / Output Speed
A <sub>2</sub>	[N] Carico assiale ammissibile in uscita / Permitted output axial load	IP		Grado di protezione / Enclosure protection
R <sub>2</sub>	[N] Carico radiale ammissibile in uscita / Permitted output radial load	Kg		Peso / Weight
Pn <sub>1</sub>	[kW] Potenza nominale in entrata / Nominal input power	sf		Fattore di servizio / Service Factor
Mn <sub>2</sub>	[Nm] Coppia nominale in uscita in funzione di Pn1 / Nominal output torque referred to Pn1	Rd	%	Rendimento dinamico / Dynamic efficiency
		Rs	%	Rendimento statico / Static efficiency
		Z		Numero di principi della vite / Worm starts
		β		Angolo d'elica / Helix angle

**Lubrificazione e temperatura**

**Lubrication and temperature**

Tutti i motoriduttori BLCM sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the BLCM worm gearmotors in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).

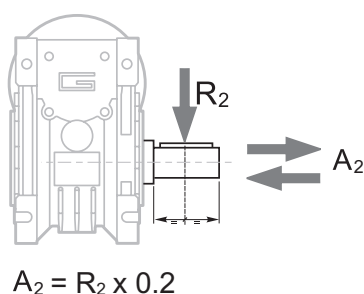
Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).

Per temperature diverse, contattare nostro UT.

For temperature outside this range please contact our technical dept.

**Carichi radiali**

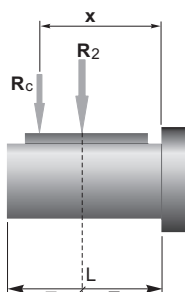
**Radial loads**



n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]		
	CM026	CM030	CM040
187	400	674	1264
140	490	743	1392
93	480	851	1596
70	610	936	1754
56	610	1008	1890
47	610	1069	2004
35	610	1179	2210
28	610	1270	2381
23	610	1356	2542
18	610	1471	2759
14	610	1600	3000

Quando il carico radiale risultante non è applicato sulla mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

When the resulting radial load is not applied on the centre line of the shaft it is necessary to calculate the effective load with the following formula:



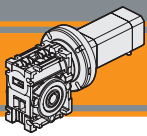
	CM		
	026	030	040
a	56	65	84
b	43	50	64
R <sub>2MAX</sub>	610	1600	3000

$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

a. b = valori riportati nella tabella  
a. b = values given in the table





**Dati di dentatura**

**Toothing data**

	Dati della coppia vite-corona Worm wheel data	Rapporto / Ratio											
		5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	Z	6	4	3	2	2		1	1	1	1		
	$\beta$	34° 35'	24° 41'	19° 1'	12° 57'	10° 30'		6° 33'	5° 17'	4° 26'	3° 49'		
CM030	Z	6	4	3	2	2	2	1	1	1	1	1	1
	$\beta$	27° 4'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'
CM040	Z	6	4	3	2	2	2	1	1	1	1	1	1
	$\beta$	34° 19'	24° 28'	18° 50'	12° 49'	10° 23'	8° 43'	6° 29'	5° 14'	4° 23'	3° 46'	2° 57'	2° 25'

**Rendimento**

**Efficiency**

	$n_1$ [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	89	87	85	83	80		73	68	64	60		
		Rs	72	71	68	61	56	46	41	36	34			
CM030	2800	Rd	89	88	86	84	81	78	74	70	65	62	57	52
		Rs	72	67	63	55	50	43	39	35	31	27	23	21
CM040	2800	Rd	90	89	87	84	83	80	77	73	69	66	60	56
		Rs	74	71	67	60	55	51	45	40	36	32	28	24

**Reversibilità e irreversibilità**

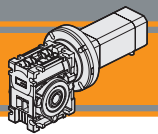
**Reversibility and irreversibility**

La tabella sottostante riporta a titolo puramente indicativo i vari gradi di reversibilità/irreversibilità nei riduttori a vite senza fine in funzione del rendimento dinamico Rd e statico Rs.

The table below is provided for reference purposes only. It contains the various degrees of reversibility/irreversibility of wormgearboxes in relation to dynamic Rd and static Rs efficiency.

Rd	Reversibilità e irreversibilità dinamica	Dynamic reversibility and irreversibility
> 0.60	Reversibilità dinamica	Dynamic reversibility
0.50 - 0.60	Reversibilità dinamica incerta	Uncertain dynamic reversibility
0.40 - 0.50	Buona irreversibilità dinamica	Good dynamic irreversibility
<0.40	Irreversibilità dinamica	Dynamic irreversibility
Rs	Reversibilità e irreversibilità statica	Static reversibility and irreversibility
> 0.55	Reversibilità statica	Static reversibility
0.50 - 0.55	Reversibilità statica incerta	Uncertain static reversibility
<0.50	Irreversibilità statica	Static irreversibility





CM026 con motore brushless

CM026 with brushless motor

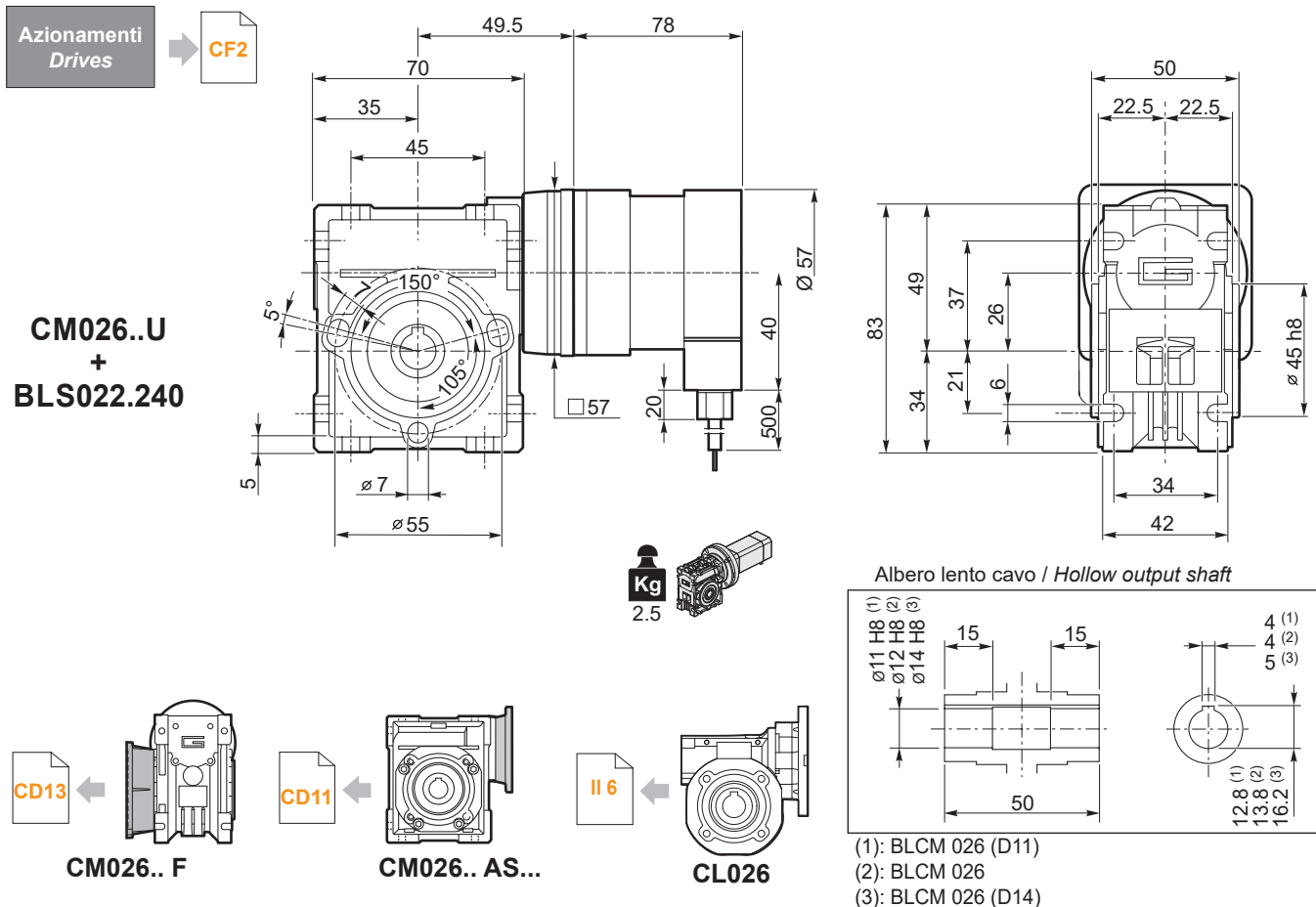
CM026	BLS022.240													
	24V						36V							
	n <sub>2</sub> MIN		n <sub>2</sub> MAX		n <sub>1</sub> MAX [ rpm ]	n <sub>2</sub> MIN		n <sub>2</sub> MAX		n <sub>1</sub> MAX [ rpm ]				
M <sub>2</sub>	sf	M <sub>2</sub>	sf	M <sub>2</sub>		sf	M <sub>2</sub>	sf						
5	60	0.9	27	600	1.0	10	3000	80	0.9	21	800	1.0	8.0	4000
7.5	40	1.3	19	400	1.5	7.9		53	1.3	16	533	1.5	6.0	
10	30	1.7	16	300	1.9	5.8		40	1.7	12	400	1.9	4.7	
15	20	2.2	12	200	2.7	4.1		27	2.3	9.1	267	2.8	3.2	
20	15	2.8	9.3	150	3.5	3.1		20	2.9	6.9	200	3.6	2.5	
30	10	3.6	7.5	100	4.8	2.5		13	3.8	5.8	133	5.0	2.0	
40	7.5	4.4	4.8	75	6.0	1.8		10	4.6	4.1	100	6.2	1.5	
50	6	4.8	4.2	60	7.0	1.4		8.0	5.2	3.5	80	7.3	1.1	
60	5	5.4	3.3	50	7.8	1.1		6.7	5.8	2.9	67	8.2	0.9	

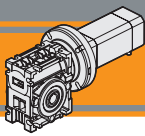
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS022.240	4	3	36	4000	0.22	92
			24	3000		70
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BLS022.240	0.44	3.7	0.64	3.1	7.4	0.72





CM030 con motore brushless

CM030 with brushless motor

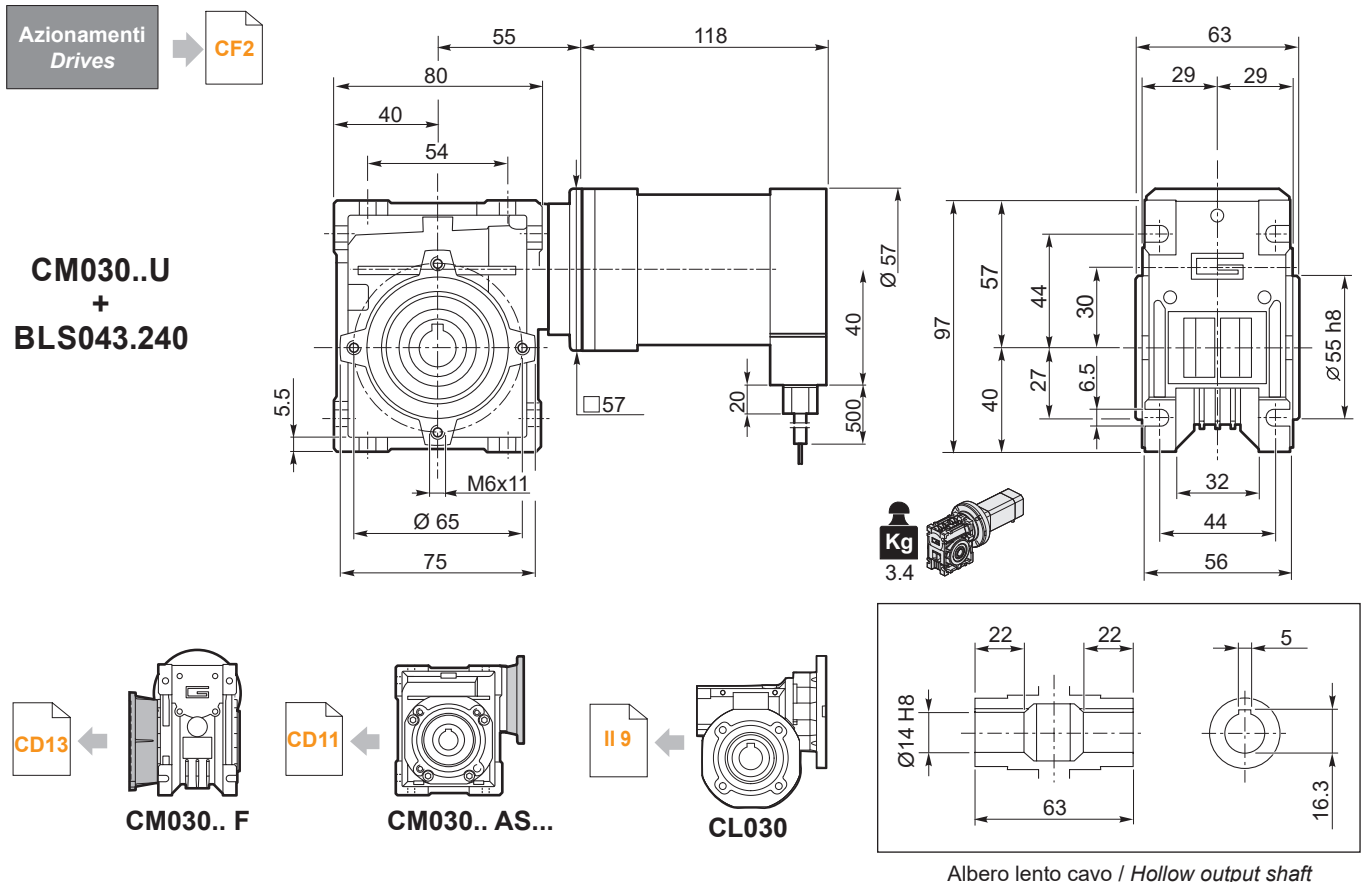
CM030	BLS043.240													
	24V						36V							
	n <sub>2</sub> MIN		sf	n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]	n <sub>2</sub> MIN		sf	n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]		
M <sub>2</sub>		M <sub>2</sub>			M <sub>2</sub>			M <sub>2</sub>						
5	60	1.7	20	600	1.9	6.8	3000	80	1.7	20	800	1.9	6.8	4000
7.5	40	2.5	14	400	2.8	5.3		53	2.5	14	533	2.8	5.3	
10	30	3.2	12	300	3.7	4.3		40	3.2	12	400	3.7	4.3	
15	20	4.4	8.6	200	5.4	3.0		26	4.4	8.6	267	5.4	3.0	
20	15	5.5	5.8	150	7.0	2.0		20	5.5	5.8	200	7.0	2.0	
25	12	6.5	4.8	120	8.4	1.8		16	6.5	4.8	160	8.4	1.8	
30	10	7.1	5.5	100	9.5	1.9		13	7.1	5.5	133	9.5	1.9	
40	7.5	8.4	3.9	75	12	1.3		10	8.4	3.9	100	12	1.3	
50	6.0	9.7	3.0	60	14	1.1		8	9.7	3.0	80	14	1.1	
60	5.0	11	2.5	50	16	0.9		6.6	11	2.5	67	16	0.9	
80	3.7	12	1.8	38	17	0.7	5	12	1.8	50	17	0.7		
100	3.0	14	1.4	30	16	0.7	4	14	1.4	40	16	0.7		

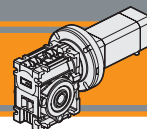
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BLS043.240	4	3	36	4000	0.43	180
	4	3	24	3000	0.43	130
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BLS043.240	0.86	6	0.35	1.0	12.0	1.25





CM030 con motore brushless

CM030 with brushless motor

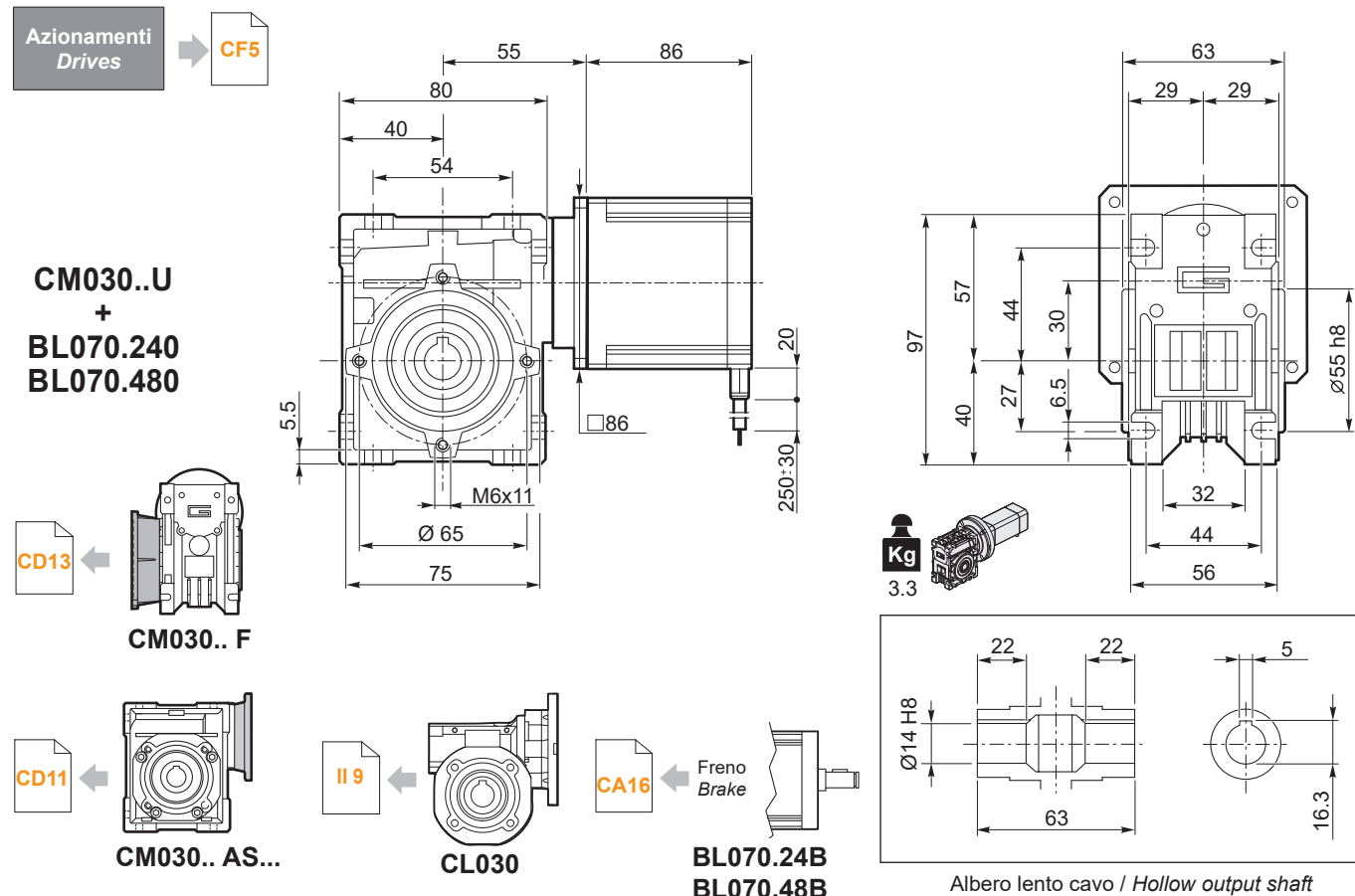
CM030	BL070.240 / BL070.24B / BL070.480 / BL070.48B						
	24V / 48V						
ir	n <sub>2</sub> MIN			n <sub>2</sub> MAX			n <sub>1</sub> MAX [ rpm ]
		M <sub>2</sub>	sf		M <sub>2</sub>	sf	
5	60	2.8	11	600	3.1	4.2	3000
7.5	40	4.1	8.0	400	4.6	3.2	
10	30	5.3	6.4	300	6.0	2.7	
15	20	7.2	4.9	200	8.8	1.8	
20	15	9.1	3.2	150	11	1.2	
25	12	11	2.5	120	14	1.1	
30	10	12	2.9	100	16	1.2	
40	7.5	14	2.1	75	20	0.8	
50	6.0	16	1.6	60	23	0.7	

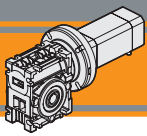
**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

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Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BL070.240 BL070.24B	8	3	24	3000	0.7	220
BL070.480 BL070.48B	8	3	48	3000	0.7	220
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BL070.240 BL070.24B	2.1	13	0.091	0.23	26	2.1
BL070.480 BL070.48B	1.4	6.5	0.34	1.0	13	2.1





CM040 con motore brushless

CM040 with brushless motor

CM040	BLS043.240											
	24V						36V					
	n <sub>2</sub> MIN		sf	n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]	n <sub>2</sub> MIN		sf	n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]
M <sub>2</sub>		M <sub>2</sub>			M <sub>2</sub>			M <sub>2</sub>				
5	60	1.8	35	600	2.0	14	80	1.8	35	800	2.0	14
7.5	40	2.6	26	400	2.9	11	53	2.6	26	533	2.9	11
10	30	3.4	20	300	3.7	8.9	40	3.4	20	400	3.7	8.9
15	20	4.6	15	200	5.4	6.5	26	4.6	15	267	5.4	6.5
20	15	5.8	10	150	7.2	4.3	20	5.8	10	200	7.2	4.3
25	12	6.9	7.8	120	8.6	3.2	16	6.9	7.8	160	8.6	3.2
30	10	7.9	9.4	100	10	3.8	13	7.9	9.4	133	10	3.8
40	7.5	9.6	6.8	75	13	2.6	10	9.6	6.8	100	13	2.6
50	6.0	12	5.5	60	15	2.1	8	12	5.5	80	15	2.1
60	5.0	12	4.7	50	17	1.7	6.6	12	4.7	67	17	1.7
80	3.7	14	3.6	38	21	1.3	5	14	3.6	50	21	1.3
100	3.0	16	2.8	30	24	1.0	4	16	2.8	40	24	1.0

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

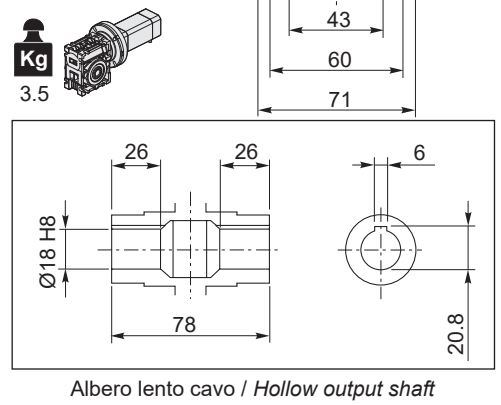
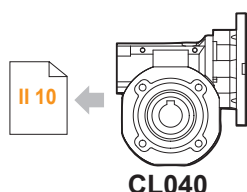
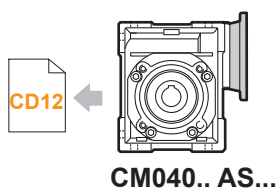
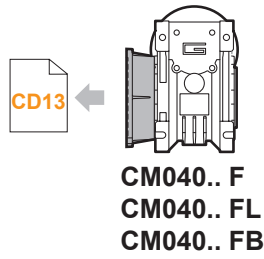
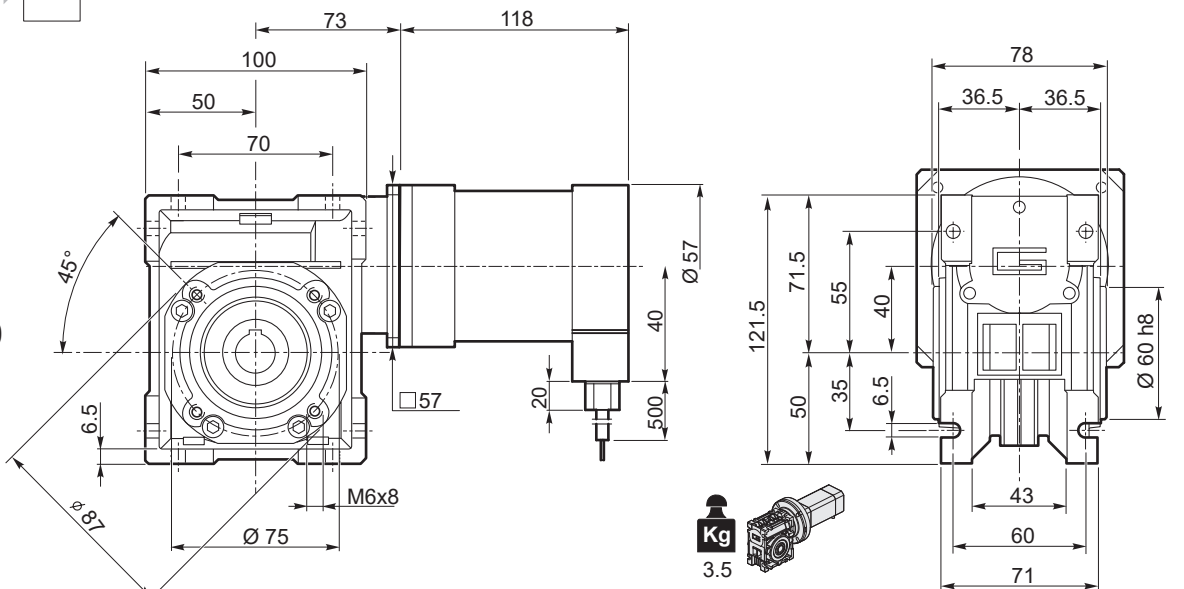
NOTE: for continuous or highly intermittent duty, please contact our technical service

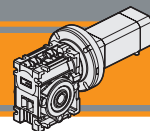
Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BLS043.240	4	3	36	4000	0.43	180
	4	3	24	3000	0.43	130
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BLS043.240	0.86	6	0.35	1.0	12.0	1.25

Azionamenti Drives

CF2

CM040..U + BLS043.240





CM040 con motore brushless

CM040 with brushless motor

CM040	BL070.240 / BL070.24B BL070.480 / BL070.48B						BL140.480						BL210.480 / BL210.48E					
	24V / 48V						48V						48V					
	ir	n <sub>2</sub> MIN		n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]	n <sub>2</sub> MIN		n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]	n <sub>2</sub> MIN		n <sub>2</sub> MAX		n <sub>1</sub> MAX [rpm]		
M <sub>2</sub>		sf	M <sub>2</sub>	sf	M <sub>2</sub>		sf	M <sub>2</sub>	sf	M <sub>2</sub>		sf	M <sub>2</sub>	sf	M <sub>2</sub>		sf	
5	60	2.9	25	600	3.2	9.2	60	5.8	13	600	6.3	4.6	60	8.6	8.5	600	9.4	3.1
7.5	40	4.2	18	400	4.7	6.6	40	8.4	9.0	400	9.3	3.3	40	12	6.1	400	14	2.2
10	30	5.3	14	300	6.1	5.4	30	11	7.1	300	12	2.7	30	16	4.7	300	18	1.8
15	20	7.4	11	200	8.8	3.9	20	15	5.1	200	18	2.0	20	22	3.6	200	27	1.3
20	15	9.5	7.1	150	12	2.6	15	19	3.6	150	23	1.3	15	29	2.3	150	35	0.9
25	12	11	5.4	120	14	2.0	12	22	2.8	120	28	1.0	12	34	1.8	120	42	0.7
30	10	12	6.7	100	16	2.3	10	24	3.4	100	32	1.2	10	37	2.2	100	49	0.8
40	7.5	15	4.5	75	20	1.6	8	29	2.4	75	41	0.8	7.5	45	1.5	75	52	0.7
50	6.0	17	3.7	60	24	1.3	6	33	1.9	60	41	0.7	6.0	50	1.2	60	41	0.7
60	5.0	19	3.0	50	28	1.0	5	37	1.5	50	36	0.7	5.0	57	1.0	50	36	0.7
80	3.7	22	2.2	38	34	0.8	4	43	1.2	38	39	0.7	3.7	66	0.7	38	39	0.7
100	3.0	24	1.8	30	33	0.7	3	47	1.0	30	33	0.7	3.0	63	0.7	30	33	0.7

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

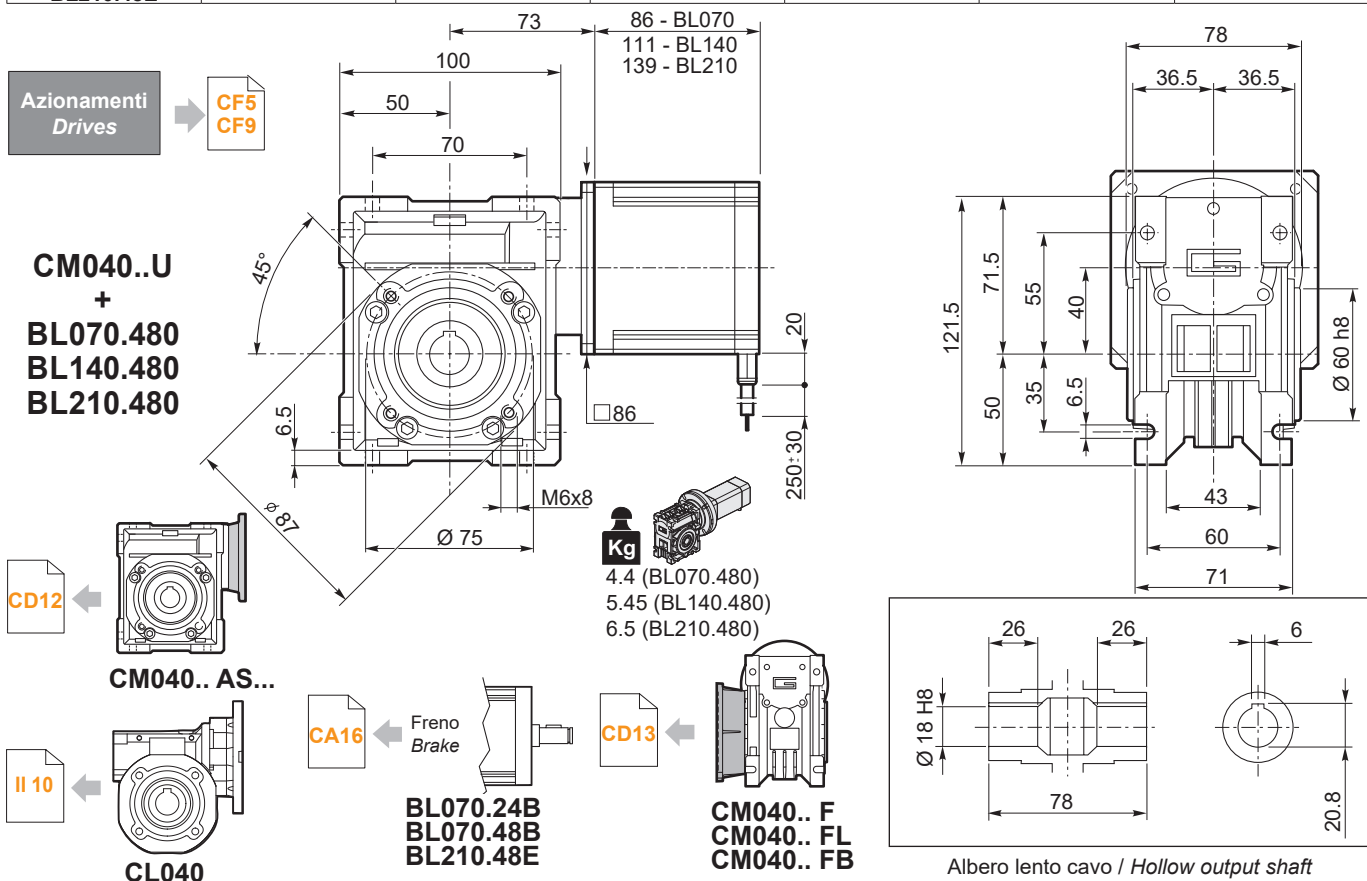
**NOTE:** for continuous or highly intermittent duty, please contact our technical service

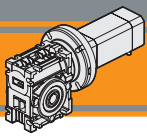
Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico  
Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.


Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL070.240 BL070.24B	8	3	24	3000	0.7	220
BL070.480 BL070.48B	8	3	48	3000	0.7	220
BL140.480	8	3	48	3000	1.4	440
BL210.480 BL210.48E	8	3	48	3000	2.1	660


  

Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL070.240 BL070.24B	2.1	13	0.091	0.23	26	2.1
BL070.480 BL070.48B	1.4	6.5	0.34	1.0	13	2.1
BL140.480	2.8	13	0.16	0.5	26	3.15
BL210.480 BL210.48E	4.2	18.7	0.115	0.31	37	4.2



**Dati tecnici****Technical data**

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
-----------------------------------------------------------------------------------	-------------------------------	----------------	----------------	-----

	$n_2$ [min <sup>-1</sup> ]	$Mn_2$ [Nm]	$Pn_1$ [kW]	$i$
-----------------------------------------------------------------------------------	-------------------------------	----------------	----------------	-----

**CM026**

$n_1 = 1400 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>280</b>	13	0.44	5
	<b>187</b>	14	0.33	7,5
	<b>140</b>	14	0.25	10
	<b>93</b>	14	0.18	15
	<b>70</b>	14	0.14	20
	<b>47</b>	15	0.11	30
	<b>35</b>	14	0.08	40
	<b>28</b>	13	0.07	50
	<b>23</b>	12	0.06	60

**CM026**

$n_1 = 3000 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>600</b>	10	0.71	5
	<b>400</b>	11	0.53	7.5
	<b>300</b>	11	0.41	10
	<b>200</b>	11	0.28	15
	<b>150</b>	11	0.22	20
	<b>100</b>	12	0.17	30
	<b>75</b>	11	0.13	40
	<b>60</b>	10	0.10	50
	<b>50</b>	9	0.08	60

**CM030**

$n_1 = 1400 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>280</b>	18	0.61	5
	<b>187</b>	20	0.46	7.5
	<b>140</b>	21	0.37	10
	<b>93</b>	21	0.26	15
	<b>70</b>	19	0.19	20
	<b>56</b>	20	0.16	25
	<b>47</b>	22	0.16	30
	<b>35</b>	20	0.12	40
	<b>28</b>	19	0.10	50
	<b>23</b>	17	0.08	60
	<b>18</b>	15	0.06	80
	<b>14</b>	14	0.05	100

**CM030**

$n_1 = 3000 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>600</b>	13	0.92	5
	<b>400</b>	15	0.71	7.5
	<b>300</b>	16	0.58	10
	<b>200</b>	16	0.40	15
	<b>150</b>	14	0.27	20
	<b>120</b>	15	0.24	25
	<b>100</b>	18	0.25	30
	<b>75</b>	16	0.18	40
	<b>60</b>	15	0.14	50
	<b>50</b>	14	0.12	60
	<b>37.5</b>	12	0.08	80
	<b>30</b>	11	0.07	100

**CM040**

$n_1 = 1400 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>280</b>	41	1.37	5
	<b>187</b>	44	1.00	7.5
	<b>140</b>	45	0.79	10
	<b>93</b>	45	0.54	15
	<b>70</b>	40	0.38	20
	<b>56</b>	38	0.30	25
	<b>47</b>	48	0.34	30
	<b>35</b>	42	0.24	40
	<b>28</b>	39	0.19	50
	<b>23</b>	36	0.15	60
	<b>18</b>	33	0.12	80
	<b>14</b>	31	0.10	100

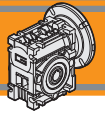
**CM040**

$n_1 = 3000 \text{ rpm}$	$n_2$	$Mn_2$	$Pn_1$	$i$
	<b>600</b>	29	2.02	5
	<b>400</b>	31	1.46	7.5
	<b>300</b>	33	1.19	10
	<b>200</b>	35	0.87	15
	<b>150</b>	31	0.59	20
	<b>120</b>	28	0.44	25
	<b>100</b>	38	0.52	30
	<b>75</b>	34	0.37	40
	<b>60</b>	32	0.29	50
	<b>50</b>	29	0.23	60
	<b>37.5</b>	27	0.18	80
	<b>30</b>	24	0.13	100

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

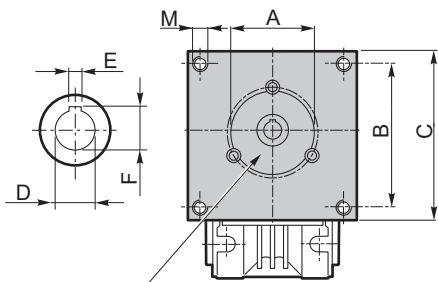




**Dimensioni CM con flange motore AS**

**CM dimensions with motor flanges AS**

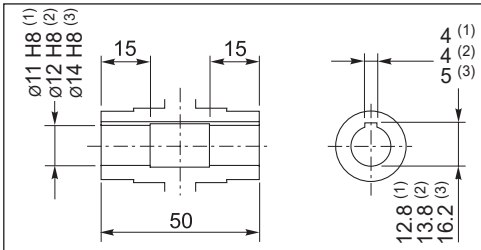
**CM026 - U - AS...**



Connessione con boccola o giunto in funzione del diametro dell'albero motore.

Connection with sleeve or coupling depending on motorshaft's diameter.

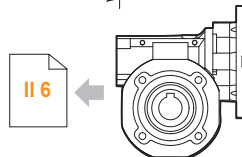
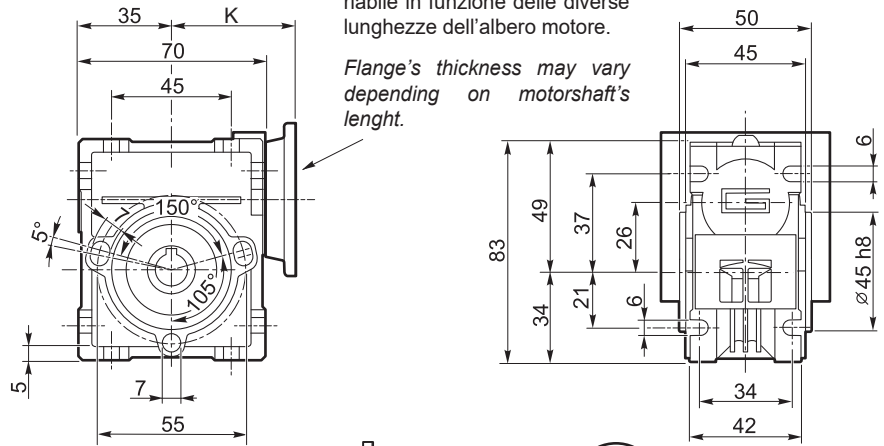
Albero lento cavo / Hollow output shaft



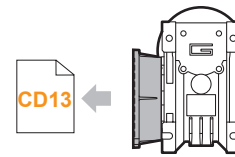
- (1): BLCM 026 (D11)
- (2): BLCM 026
- (3): BLCM 026 (D14)

Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

Flange's thickness may vary depending on motorshaft's lenght.



**CL026**

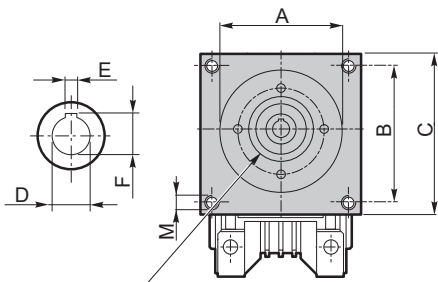


**CM026.. F**

**Kg**  
0.8

Dimensioni / Dimensions						Rapporti / Ratio		
AS	A	B	C	M	K	5...100		
						D	E	F
AS417	38.1	47.1	56	M4	49.5	9	3	10.4
...	...	...	...	...	...	...	...	...

**CM030 - U - AS...**

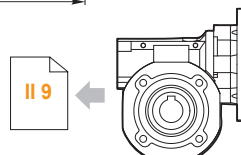
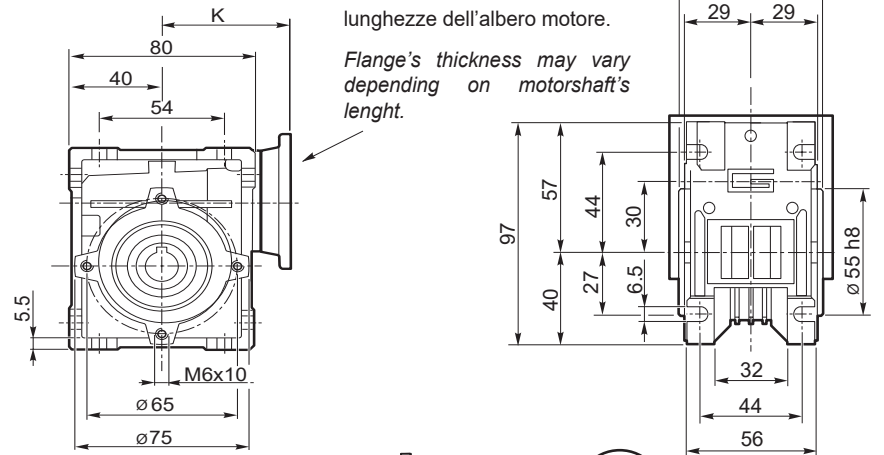


Connessione con boccola o giunto in funzione del diametro dell'albero motore.

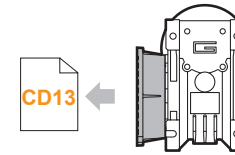
Connection with sleeve or coupling depending on motorshaft's diameter.

Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

Flange's thickness may vary depending on motorshaft's lenght.

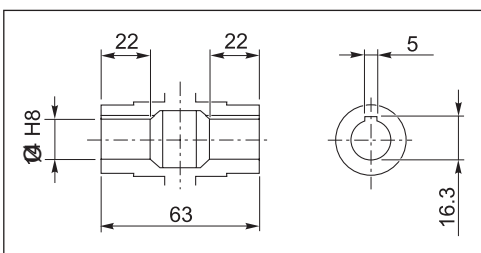


**CL030**



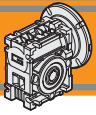
**CM030.. F**

**Kg**  
1.2



Albero lento cavo / Hollow output shaft

Dimensioni / Dimensions						Rapporti / Ratio					
AS	A	B	C	M	K	5...50			60...100		
						D	E	F	D	E	F
AS393	38.1	47.1	57	M5	55	11	4	12.8	9	3	10.4
AS391	73	69.6	86	M5	55	11	4	12.8	9	3	10.4
...	...	...	...	...	...	...	...	...	...	...	...



**CM**

Riduttori a vite senza fine  
Wormgearboxes

**MINI**  
TECNO

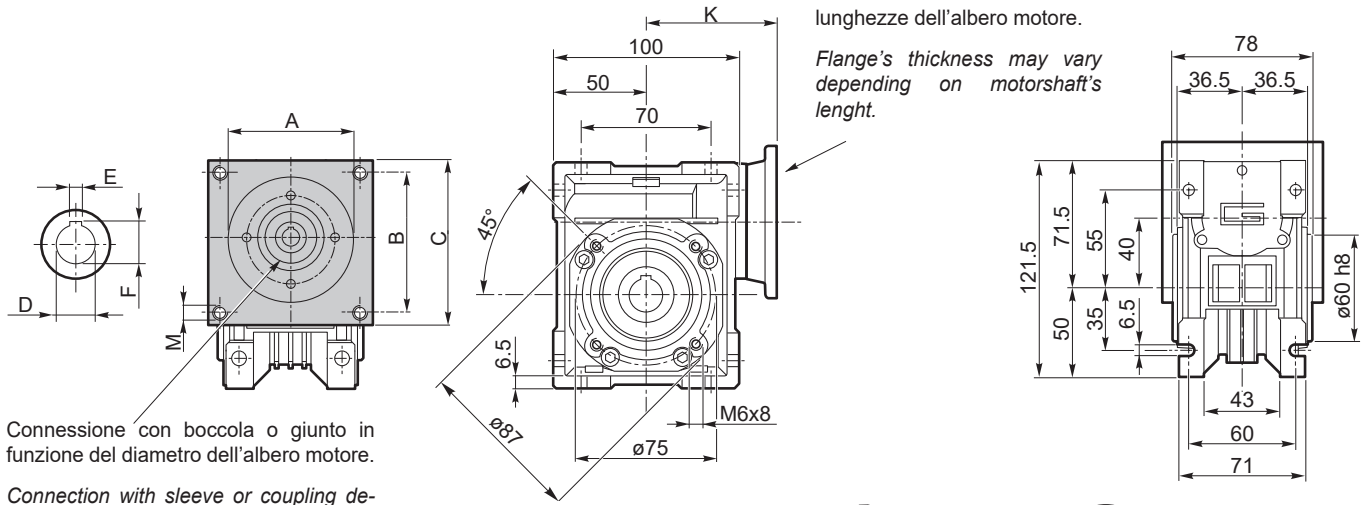
**Dimensioni CM con flange motore AS**

**CM dimensions with motor flanges AS**

**CM040 - U - AS...**

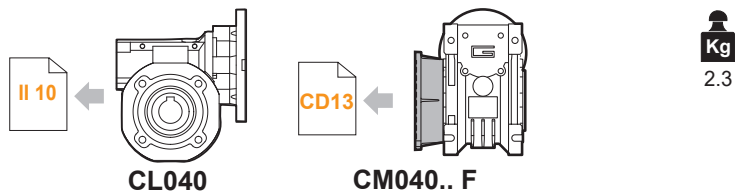
Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.

Flange's thickness may vary depending on motorshaft's length.



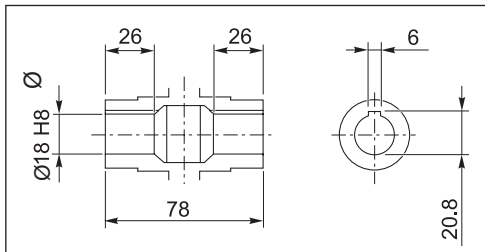
Connessione con boccola o giunto in funzione del diametro dell'albero motore.

Connection with sleeve or coupling depending on motorshaft's diameter.



**CL040**

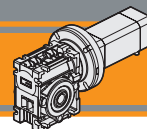
**CM040.. F**



Albero lento cavo / Hollow output shaft

Dimensioni / Dimensions											
AS	A	B	C	M	K	Rapporti / Ratio					
						5...40			50...100		
						D	E	F	D	E	F
<b>AS392FX</b>	38.1	47.1	64	M5	73	14	5	16.3	11	4	12.8
<b>AS384FX</b>	73	69.6	86	M5	73	14	5	16.3	11	4	12.8
...	...	...	...	...	...	...	...	...	...	...	...

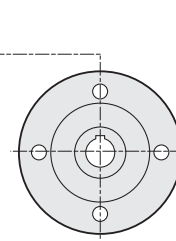
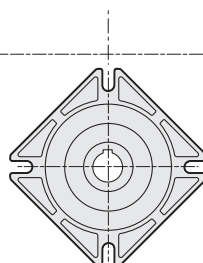
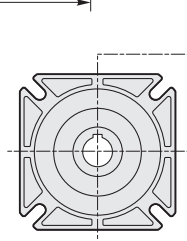
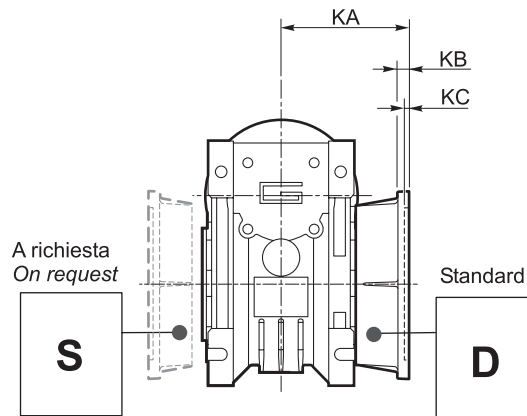
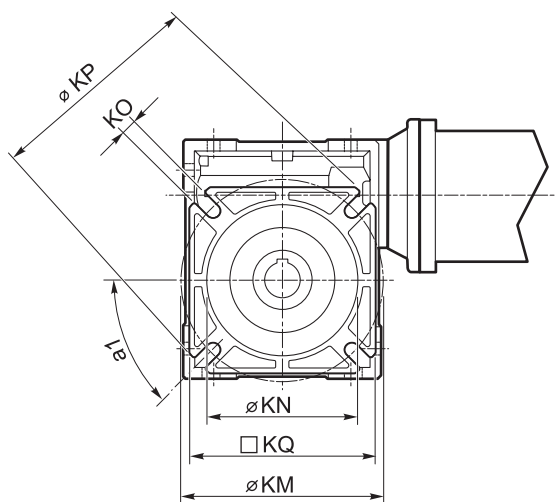




Dimensioni flange uscita

Output flange dimensions

CM.../... F... Flange uscita / Output flanges



..CM026 ../. F  
..CM026 ../. F28  
..CM026 ../. F30  
..CM026 ../. F30S  
..CM030 ../. F.  
..CM040 ../. F.

..CM026 ../. F30C  
..CM026 ../. F30SC

..CM026 ../. F100

	CM..F							CM..F28							CM..F30							CM..F30S <sup>(1)</sup>											
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
026 (D11)	45°	45	6	4.5	55-69	40	6.5	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
026 (D14)							(n.4)																										

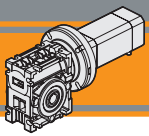
(1): F30S eseguita con F30 e distanziale di spessore 2 mm / F30S made with F30 and spacer with 2mm thickness

	CM..F30C							CM..F30SC <sup>(2)</sup>							CM..F100										
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC *	KM	KN <sub>H7</sub>	KO	KP	KQ
026 (D11)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-
026 (D14)																									

(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / F30SC made with F30C and spacer with 2mm thickness

\*: Centraggio maschio / Male centering diameter

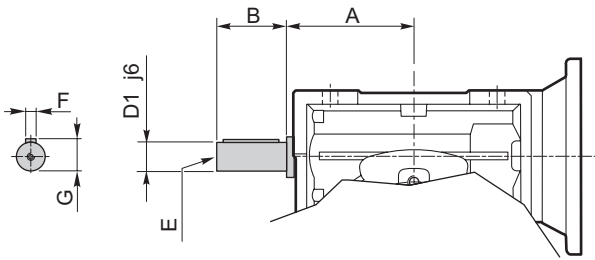
CM	CM..F							CM..FB							CM..FL										
	a1	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ	KA	KB	KC	KM	KN <sub>H8</sub>	KO	KP	KQ
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9 (n.4)	110	95



Opzioni

Options

**VS** - Vite sporgente / Extended input shaft



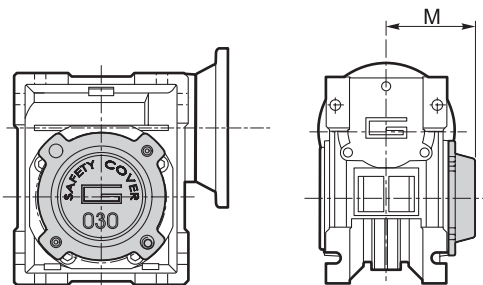
	A	B	D <sub>1</sub> j6	E	F	G
<b>CM 030</b>	45	20	9	M4	3	10.2
<b>CM 040</b>	53	23	11	M5	4	12.5

Costruito su richiesta  
Built on request

Accessori

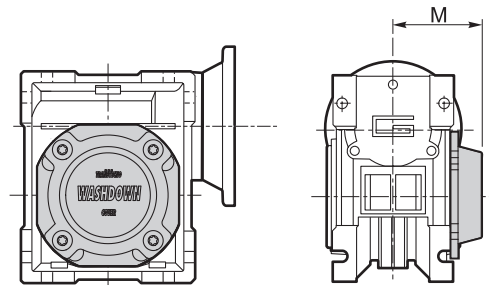
Accessories

**SC** - Safety cover

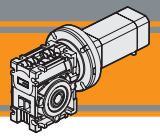


	M
<b>CM 030</b>	47
<b>CM 040</b>	54.5

**WD** - Kit washdown cover



	M
<b>CM 030</b>	48
<b>CM 040</b>	55.5

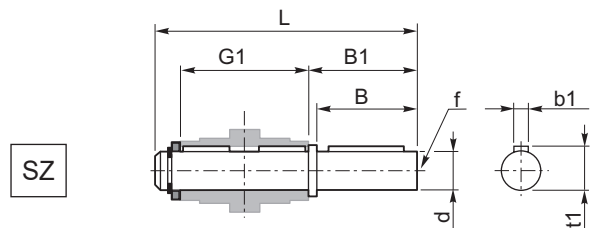
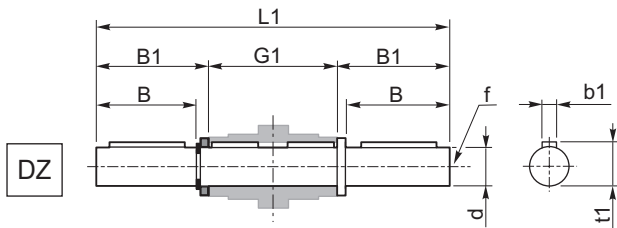


**Accessori**

**Accessories**

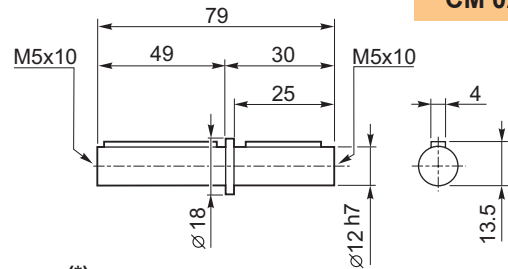
**Albero lento**

**Output shaft**



	d h7	B	B1	G1	L	L1	f	b1	t1
<b>CM 030</b>	14	30	32.5	63	102	128	M6	5	16
<b>CM 040</b>	18	40	43	78	128	164	M6	6	20.5

**CM 026 (\*)**

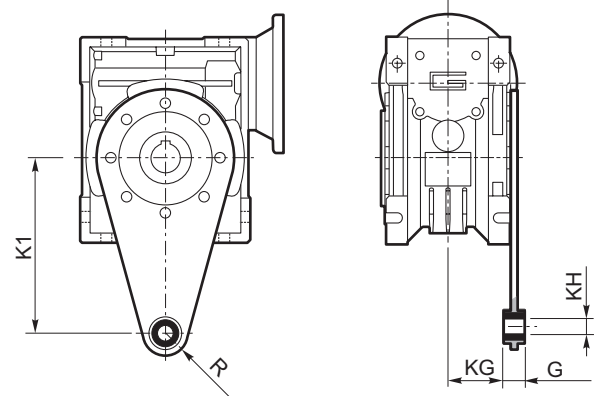


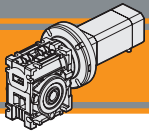
(\*)  
**Nota:** disponibile solo per cavo uscita Ø12  
**Note:** available for output hollow shaft Ø12 only

**Braccio di reazione**

**Torque arm**

	K1	G	KG	KH	R
<b>CM 030</b>	85	14	23	8	15
<b>CM 040</b>	100	14	31	10	18





**BLCM**

Motoriduttori brushless CC a vite senza fine  
Brushless DC Wormgearmotors

**MINI**  
TECNO

# Note/Notes

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**MINI**  **TECNO**™  
**small** but strong

**BLP**

Motoriduttori brushless CC epicicloidali  
Brushless DC planetary gearmotors

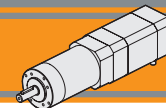


**MINI**  **TECNO**™ brand of  
**TRANSTECNO**®



**BLDC**

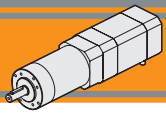




<b>Indice</b>	<b>Index</b>	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	<b>CE2</b>
Designazione	<i>Classification</i>	<b>CE2</b>
Simbologia	<i>Symbols</i>	<b>CE2</b>
Lubrificazione e temperatura	<i>Lubrication and temperature</i>	<b>CE3</b>
Carichi radiali	<i>Radial loads</i>	<b>CE3</b>
Rapporti	<i>Ratios</i>	<b>CE3</b>
PM52 con motore brushless BLS 022.240	<i>PM52 with brushless motor BLS 022.240</i>	<b>CE4</b>
PM52 con motore brushless BLS 043.240	<i>PM52 with brushless motor BLS 043.240</i>	<b>CE6</b>
PM62 con motore brushless BL 070.240	<i>PM62 with brushless motor BL 070.240</i>	<b>CE8</b>
PM62 con motore brushless BL 070.24B	<i>PM62 with brushless motor BL 070.24B</i>	<b>CE8</b>
PM62 con motore brushless BL 070.480	<i>PM62 with brushless motor BL 070.480</i>	<b>CE8</b>
PM62 con motore brushless BL 070.48B	<i>PM62 with brushless motor BL 070.48B</i>	<b>CE8</b>
PM62 con motore brushless BL 140.480	<i>PM62 with brushless motor BL 140.480</i>	<b>CE8</b>
Dati tecnici	<i>Technical data</i>	<b>CE10</b>
Dimensioni PM con flange motore AS	<i>PM dimensions with motor flanges AS</i>	<b>CE11</b>
Flange uscita	<i>Output flange</i>	<b>CE12</b>

Questa sezione annulla e sostituisce ogni precedente edizione o revisione. Qualora questa sezione non Vi sia giunta in distribuzione controllata, l'aggiornamento dei dati ivi contenuto non è assicurato. **In tal caso la versione più aggiornata è disponibile sul nostro sito internet [www.transtecno.com](http://www.transtecno.com)**

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## Caratteristiche tecniche

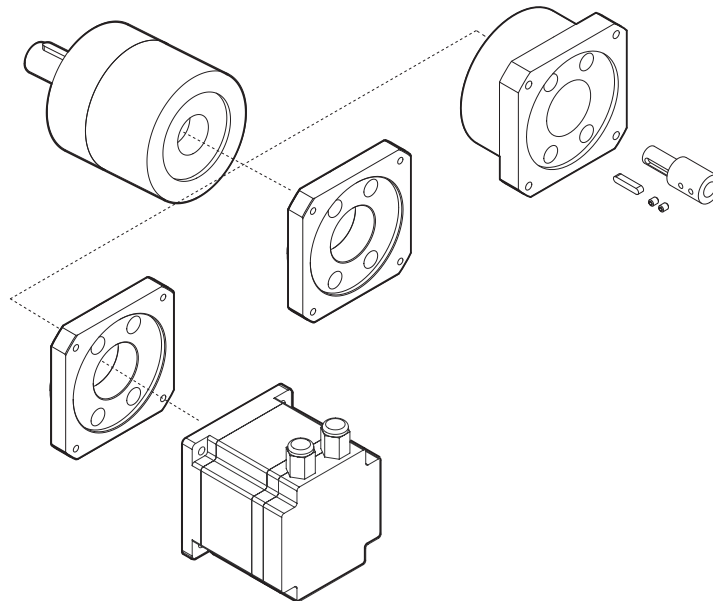
## Technical features

Le caratteristiche principali dei motoriduttori brushless CC epicicloidali della serie BLP sono:

The main features of brushless DC planetary gearmotors BLP range are:

- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore Brushless CC con grado di protezione IP55
- Coppie motori disponibili da 0.22 Nm a 1.4 Nm
- Lubrificazione permanente a grasso
- Completamente in metallo
- Doppio cuscinetto su albero di uscita
- Disponibili anche nella versione con solo riduttore, sia con flangia di entrata standard che con flangia e manicotto dedicati

- Low voltage power supply 24/36/48 Vdc
- Brushless DC motor in IP55 protection Standard
- Motor torque ratings available from 0.22 Nm up to 1.4 Nm
- Permanent grease long life lubrication
- Completely made out of metal
- Double ball bearing on output shaft
- Gearbox only version also available, with either standard input flange or customized flange and coupling



## Designazione

## Classification

RIDUTTORE / GEARBOX			
PM	52	2	46
Tipo Type	Grandezza Size	Stadi riduttore Gearbox stages	Rapporto in Ratio in
PM	52 62	1 2 3	Vedere tabelle See tables

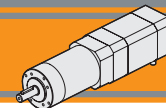
MOTORE / MOTOR		
BL070.480	48V	BR
Tipo Type	Tensione Voltage	Freno Brake
BLS022.240	24V-36V	24V
BLS043.240	24V-36V	48V
BL070.240	24V	
BL070.24B	24V	
BL070.48B	48V	
BL070.480	48V	
BL140.480	48V	

## Simbologia

## Symbols

Ns	n° stadi / No. stages	Mn <sub>2</sub>	[Nm]	Coppia nominale in uscita in funzione di Pn1 Nominal output torque referred to Pn1
ir	rapporto reale / real ratio	V	[V]	Tensione / Voltage
M <sub>2</sub>	[Nm] coppia in uscita output torque	n <sub>1MAX</sub>	[Rpm]	Velocità max entrata / Max input speed
Rd	rendimento dinamico / efficiency	n <sub>2</sub>	[Rpm]	Velocità in uscita / Output Speed
A <sub>2</sub>	[N] Carico assiale ammissibile in uscita Permitted output axial load	IP		Grado di protezione / Enclosure protection
R <sub>2</sub>	[N] Carico radiale ammissibile in uscita Permitted output radial load	Kg		Peso / Weight
Pn <sub>1</sub>	[kW] Potenza nominale in entrata Nominal input power	sf		Fattore di servizio / Service Factor





**Lubrificazione e temperatura**

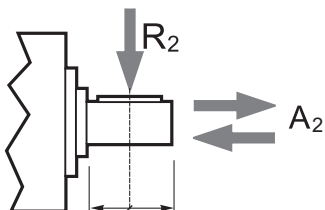
**Lubrication and temperature**

I motoriduttori epicicloidali BLP sono lubrificati in modo permanente, non richiedono quindi ulteriore manutenzione. Questo gli consente di essere installati praticamente ovunque. Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa). Per temperature diverse, contattare nostro UT.

Planetary BLP gearmotors are life-time lubricated with grease, therefore they are maintenance free. They can be installed in any location. Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation). For temperature outside this range please contact our technical dept.

**Carichi radiali**

**Radial loads**



Ns	Carichi Radiali R <sub>2</sub> [N] / Radial Load R <sub>2</sub> [N]	
	PM52	PM62
1	200	240
2	320	360
3	450	520

Ns	Carichi Assiali A <sub>2</sub> [N] / Axial Load A <sub>2</sub> [N]	
	PM52	PM62
1	60	70
2	100	100
3	150	150

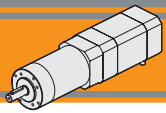
**Rapporti**

**Ratios**

Ns	PM 52 / 62		Rd	PM 52	PM 62
	in	ir		kg	kg
1	<b>4</b>	<b>3.7</b>	0.8	0.7	0.8
	4	4.28			
	5	5.18			
	<b>7</b>	<b>6.75</b>			
2	<b>14</b>	<b>13.73</b>	0.75	0.9	1.2
	16	15.88			
	18	18.36			
	19	19.2			
	22	22.2			
	<b>25</b>	<b>25.01</b>			
	27	26.85			
	29	28.93			
	35	34.97			
	<b>46</b>	<b>45.56</b>			
3	51	50.89	0.7	1.1	1.6
	59	58.85			
	<b>68</b>	<b>68.06</b>			
	71	71.16			
	79	78.71			
	<b>93</b>	<b>92.7</b>			
	95	95.17			
	100	99.5			
	107	107.2			
	115	115.07			
	124	123.97			
	130	129.62			
	139	139.13			
	150	149.9			
	<b>169</b>	<b>168.84</b>			
	181	181.24			
195	195.26				
236	236.09				
<b>308</b>	<b>307.54</b>				
4	a richiesta	on request			

**Rapporti preferenziali**  
Preferred ratios

Disponibile a 4 stadi con rapporti fino a 2076  
Available 4 stages with ratio up to 2076



PM52 con motore brushless

PM52 with brushless motor

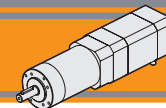
PM52			BLS022.240													
			24V						36V							
Ns	ir	in	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]
			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf		
1	<b>3.7</b>	<b>4</b>	81	0.7	9.0	811	0.7	6.1	3000	108	0.7	9.0	1081	0.7	5.4	4000
	4.28	4	70	0.8	7.8	701	0.8	5.3		93	0.8	7.8	935	0.8	4.7	
	5.18	5	58	0.9	6.4	579	0.9	4.4		77	0.9	6.4	772	0.9	3.9	
	<b>6.75</b>	<b>7</b>	44	1.2	4.9	444	1.2	3.3		59	1.2	4.9	593	1.2	3.0	
<b>13.73</b>	<b>14</b>	22	2.3	7.6	218	2.3	5.2	29		2.3	7.6	291	2.3	4.6		
15.88	16	19	2.6	6.6	189	2.6	4.5	25		2.6	6.6	252	2.6	4.0		
18.36	18	16	3.0	5.7	163	3.0	3.9	22		3.0	5.7	218	3.0	3.4		
19.2	19	16	3.2	5.4	156	3.2	3.7	21		3.2	5.4	208	3.2	3.3		
22.2	22	14	3.7	4.7	135	3.7	3.2	18		3.7	4.7	180	3.7	2.8		
<b>25.01</b>	<b>25</b>	12	4.1	4.2	120	4.1	2.8	16		4.1	4.2	160	4.1	2.5		
26.9	27	11	4.4	3.9	112	4.4	2.6	15		4.4	3.9	149	4.4	2.3		
28.9	29	10	4.8	3.6	104	4.8	2.5	14		4.8	3.6	138	4.8	2.2		
35.0	35	8.6	5.8	3.0	86	5.8	2.0	11		5.8	3.0	114	5.8	1.8		
<b>45.6</b>	<b>46</b>	6.6	7.5	2.3	66	7.5	1.6	8.8		7.5	2.3	88	7.5	1.4		
50.9	51	5.9	8	4.7	59	7.8	3.2	7.9		8	4.7	79	7.8	2.8		
58.9	59	5.1	9	4.1	51	9.1	2.8	6.8		9	4.1	68	9.1	2.4		
<b>68.1</b>	<b>68</b>	4.4	10	3.5	44	10	2.4	5.9	10	3.5	59	10	2.1			
71.2	71	4.2	11	3.4	42	11	2.3	5.6	11	3.4	56	11	2.0			
78.7	79	3.8	12	3.0	38	12	2.1	5.1	12	3.0	51	12	1.8			
<b>92.7</b>	<b>93</b>	3.2	14	2.6	32	14	1.7	4.3	14	2.6	43	14	1.5			
95.2	95	3.2	15	2.5	32	15	1.7	4.2	15	2.5	42	15	1.5			
99.5	100	3.0	15	2.4	30	15	1.6	4.0	15	2.4	40	15	1.4			
107.2	107	2.8	17	2.2	28	17	1.5	3.7	17	2.2	37	17	1.3			
115.07	115	2.6	18	2.1	26	18	1.4	3.5	18	2.1	35	18	1.2			
123.97	124	2.4	19	1.9	24	19	1.3	3.2	19	1.9	32	19	1.2			
129.62	130	2.3	20	1.8	23	20	1.3	3.1	20	1.8	31	20	1.1			
139.13	139	2.2	21	1.7	22	21	1.2	2.9	21	1.7	29	21	1.0			
149.9	150	2.0	23	1.6	20	23	1.1	2.7	23	1.6	27	23	1.0			
<b>168.84</b>	<b>169</b>	1.8	26	1.4	18	26	1.0	2.4	26	1.4	24	26	0.8			
181.24	181	1.7	28	1.3	17	28	0.9	2.2	28	1.3	22	28	0.8			
195.26	195	1.5	30	1.2	15	30	0.8	2.0	30	1.2	20	30	0.7			
236.09	236	1.3	36	1.0	13	36	0.7	1.7	36	1.0	17	31	0.7			
<b>307.54</b>	<b>308</b>	1.0	47	0.8	9.8	36	0.7	1.3	47	0.8	13	31	0.7			

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Rapporti preferenziali**  
Preferred ratios

**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico**  
**Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.**



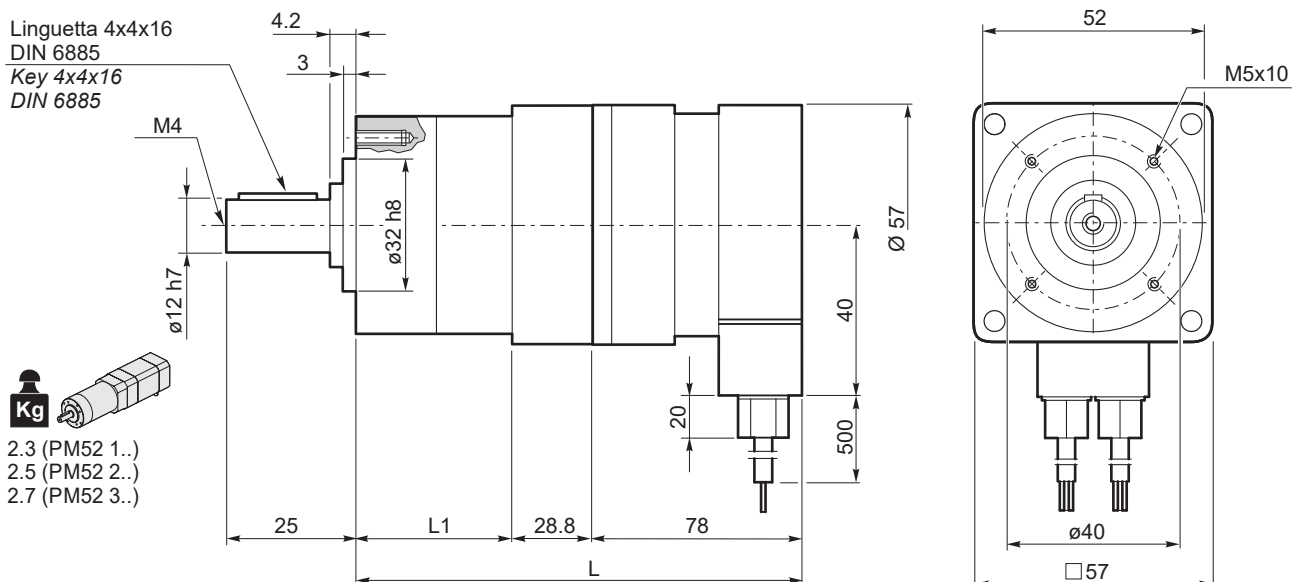
PM52 con motore brushless

PM52 with brushless motor

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS022.240	4	3	36	4000	0.22	92
			24	3000		70
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BLS022.240	0.44	3.7	0.64	3.1	7.4	0.72



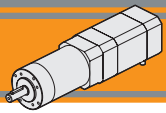
PM52..  
+  
BLS022.240



- Kg**
- 2.3 (PM52 1..)
  - 2.5 (PM52 2..)
  - 2.7 (PM52 3..)

PM52	BLS022.240	
	Ns	L
	1	47.2
	2	61.3
	3	75.6
		L
		155.5
		169.5
		183.5





PM52 con motore brushless

PM52 with brushless motor

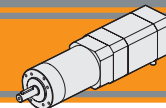
PM52			BLS043.240													
			24V						36V							
Ns	ir	in	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]
			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf		
1	<b>3.7</b>	<b>4</b>	81	1.3	4.6	811	1.3	3.1	3000	108	1.3	4.6	1081	1.3	2.8	4000
	4.28	4	70	1.5	4.0	701	1.5	2.7		93	1.5	4.0	935	1.5	2.4	
	5.18	5	58	1.8	3.3	579	1.8	2.2		77	1.8	3.3	772	1.8	2.0	
	<b>6.75</b>	<b>7</b>	44	2.3	2.5	444	2.3	1.7		59	2.3	2.5	593	2.3	1.5	
<b>13.73</b>	<b>14</b>	22	4.4	3.9	218	4.4	2.6	29		4.4	3.9	291	4.4	2.3		
15.88	16	19	5.1	3.4	189	5.1	2.3	25		5.1	3.4	252	5.1	2.0		
18.36	18	16	5.9	2.9	163	5.9	2.0	22		5.9	2.9	218	5.9	1.7		
19.2	19	16	6.2	2.8	156	6.2	1.9	21		6.2	2.8	208	6.2	1.7		
22.2	22	14	7.2	2.4	135	7.2	1.6	18		7.2	2.4	180	7.2	1.4		
<b>25.01</b>	<b>25</b>	12	8.1	2.1	120	8.1	1.5	16		8.1	2.1	160	8.1	1.3		
26.9	27	11	8.7	2.0	112	8.7	1.4	15		8.7	2.0	149	8.7	1.2		
28.9	29	10	9.3	1.8	104	9.3	1.3	14		9.3	1.8	138	9.3	1.1		
35.0	35	8.6	11	1.5	86	11.3	1.0	11		11	1.5	114	11	0.9		
<b>45.6</b>	<b>46</b>	6.6	15	1.2	66	14.7	0.8	8.8		15	1.2	88	15	0.7		
50.9	51	5.9	15	2.4	59	15.3	1.6	7.9		15	2.4	79	15	1.4		
58.9	59	5.1	18	2.1	51	17.7	1.4	6.8		18	2.1	68	18	1.2		
<b>68.1</b>	<b>68</b>	4.4	20	1.8	44	20	1.2	5.9	20	1.8	59	20	1.1			
71.2	71	4.2	21	1.7	42	21	1.2	5.6	21	1.7	56	21	1.0			
78.7	79	3.8	24	1.6	38	24	1.1	5.1	24	1.6	51	24	0.9			
<b>92.7</b>	<b>93</b>	3.2	28	1.3	32	28	0.9	4.3	28	1.3	43	28	0.8			
95.2	95	3.2	29	1.3	32	29	0.9	4.2	29	1.3	42	29	0.8			
99.5	100	3.0	30	1.2	30	30	0.8	4.0	30	1.2	40	30	0.7			
107.2	107	2.8	32	1.1	28	32	0.8	3.7	32	1.1	37	31	0.7			
115.07	115	2.6	35	1.1	26	35	0.7	3.5	35	1.1	35	31	0.7			
123.97	124	2.4	37	1.0	24	36	0.7	3.2	37	1.0	32	31	0.7			
129.62	130	2.3	39	0.9	23	36	0.7	3.1	39	0.9	31	31	0.7			
139.13	139	2.2	42	0.9	22	36	0.7	2.9	42	0.9	29	31	0.7			
149.9	150	2.0	45	0.8	20	36	0.7	2.7	45	0.8	27	31	0.7			
<b>168.84</b>	<b>169</b>	1.8	51	0.7	18	36	0.7	2.4	51	0.7	24	31	0.7			
181.24	181	1.7	53	0.7	17	36	0.7	2.2	53	0.7	22	31	0.7			
195.26	195	1.5	53	0.7	15	36	0.7	2.0	53	0.7	20	31	0.7			
236.09	236	1.3	53	0.7	13	36	0.7	1.7	53	0.7	17	31	0.7			
<b>307.54</b>	<b>308</b>	1.0	53	0.7	9.8	36	0.7	1.3	53	0.7	13	31	0.7			

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Rapporti preferenziali**  
Preferred ratios

**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1. Contattare il ns. servizio tecnico**  
**Attention: rated torque withstood by gear reducer for service in S1 is exceeded. Please, contact our technical office.**



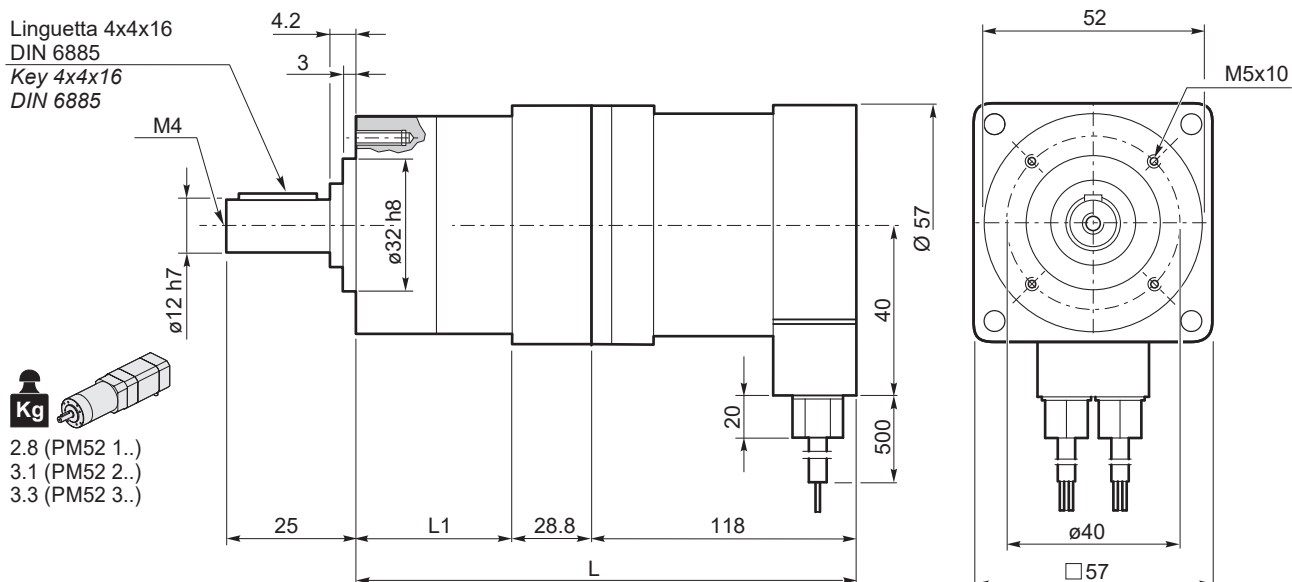
PM52 con motore brushless

PM52 with brushless motor

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BLS043.240	4	3	36	4000	0.43	180
			24	3000		130
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BL043.240	0.86	6	0.35	1	12.0	1.25

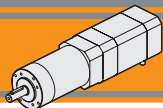


PM52..  
+  
BLS043.240



PM52	Ns	L1	BLS043.240	
			L	L
	1	47.2	195.5	
	2	61.3	209.5	
	3	75.6	223.5	





PM62 con motore brushless

PM62 with brushless motor

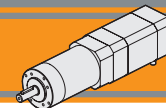
PM62			BL070.240 / BL070.24B BL070.480 / BL070.48B						BL140.480										
			24V / 48V						48V										
Ns	ir	in	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]	n <sub>2MIN</sub> [ rpm ]			n <sub>2MAX</sub> [ rpm ]			n <sub>1MAX</sub> [ rpm ]			
			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf			M <sub>2</sub> [Nm]	sf		M <sub>2</sub> [Nm]	sf					
1	3.7	4	81	2.1	5.6	811	2.1	3.8	3000	81	4.1	2.8	811	4.1	1.9	3000			
	4.28	4	70	2.4	4.8	701	2.4	3.3		70	4.8	2.4	701	4.8	1.6				
	5.18	5	58	2.9	4.0	579	2.9	2.7		58	5.8	2.0	579	5.8	1.3				
	6.75	7	44	3.8	3.0	444	3.8	2.1		44	7.6	1.5	444	7.6	1.0				
2	13.73	14	22	7.2	5.1	218	7.2	3.5	3000	22	14.4	2.6	218	14.4	1.7	3000			
	15.88	16	19	8.3	4.4	189	8.3	3.0		19	16.7	2.2	189	16.7	1.5				
	18.36	18	16	9.6	3.8	163	9.6	2.6		16	19.3	1.9	163	19.3	1.3				
	19.2	19	16	10	3.7	156	10	2.5		16	20	1.8	156	20	1.2				
	22.2	22	14	12	3.2	135	12	2.1		14	23	1.6	135	23	1.1				
	25.01	25	12	13	2.8	120	13	1.9		12	26	1.4	120	26	1.0				
	26.9	27	11	14	2.6	112	14	1.8		11	28	1.3	112	28	0.9				
	28.9	29	10	15	2.4	104	15	1.6		10	30	1.2	104	30	0.8				
	35.0	35	8.6	18	2.0	86	18	1.4		8.6	37	1.0	86	36	0.7				
	45.6	46	6.6	24	1.5	66	24	1.0		6.6	48	0.8	66	36	0.7				
	3	50.9	51	5.9	25	3.0	59	25		2.0	3000	5.9	50	1.5	59		50	1.0	3000
		58.9	59	5.1	29	2.6	51	29		1.7		5.1	58	1.3	51		58	0.9	
68.1		68	4.4	33	2.2	44	33	1.5	4.4	67		1.1	44	67	0.7				
71.2		71	4.2	35	2.1	42	35	1.4	4.2	70		1.1	42	70	0.7				
78.7		79	3.8	39	1.9	38	39	1.3	3.8	77		1.0	38	71	0.7				
92.7		93	3.2	45	1.6	32	45	1.1	3.2	91		0.8	32	71	0.7				
95.2		95	3.2	47	1.6	32	47	1.1	3.2	93		0.8	32	71	0.7				
99.5		100	3.0	49	1.5	30	49	1.0	3.0	98		0.8	30	71	0.7				
107.2		107	2.8	53	1.4	28	53	1.0	2.8	105		0.7	28	71	0.7				
115.07		115	2.6	56	1.3	26	56	0.9	2.6	105		0.7	26	71	0.7				
123.97		124	2.4	61	1.2	24	61	0.8	2.4	105		0.7	24	71	0.7				
129.62		130	2.3	64	1.2	23	64	0.8	2.3	105		0.7	23	71	0.7				
139.13		139	2.2	68	1.1	22	68	0.7	2.2	105		0.7	22	71	0.7				
149.9		150	2.0	73	1.0	20	71	0.7	2.0	105		0.7	20	71	0.7				
168.84	169	1.8	83	0.9	18	71	0.7	1.8	105	0.7	18	71	0.7						
181.24	181	1.7	89	0.8	17	71	0.7	1.7	105	0.7	17	71	0.7						
195.26	195	1.5	96	0.8	15	71	0.7	1.5	105	0.7	15	71	0.7						
236.09	236	1.3	105	0.7	13	71	0.7	1.3	105	0.7	13	71	0.7						
307.54	308	1.0	105	0.7	9.8	71	0.7	1.0	105	0.7	9.8	71	0.7						

**NOTA:** per servizio continuo o altamente intermittente, contattare il servizio tecnico

**NOTE:** for continuous or highly intermittent duty, please contact our technical service

**Rapporti preferenziali**  
Preferred ratios

**Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1.**  
Contattare il ns. servizio tecnico  
**Attention: rated torque withstood by gear reducer for service in S1 is exceeded.**  
Please, contact our technical office.



PM62 con motore brushless

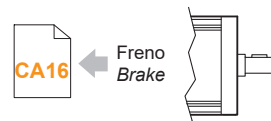
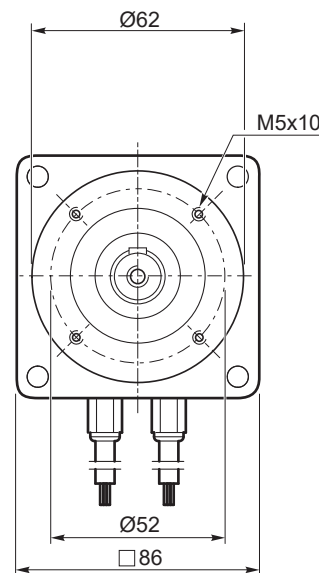
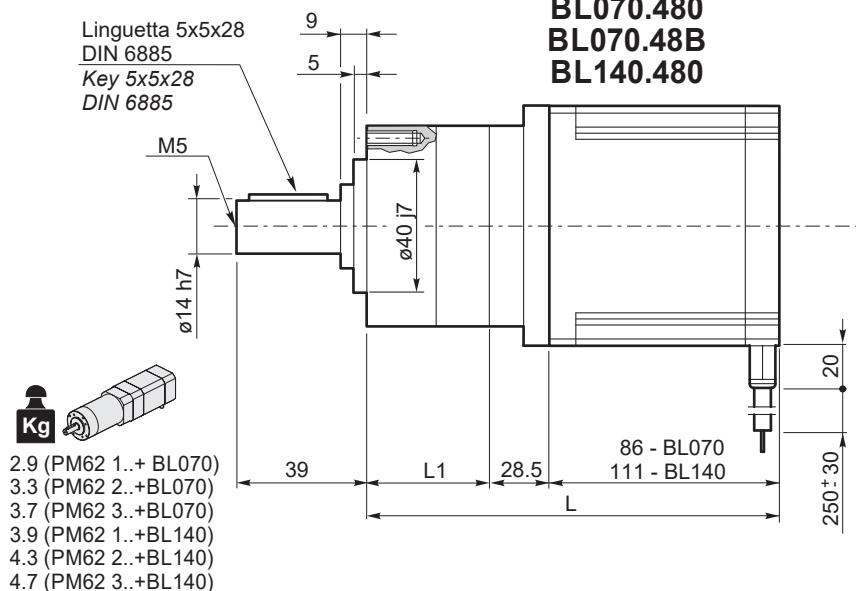
PM62 with brushless motor

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [ V ]	Numero di giri Rated speed [ rpm ]	Coppia nominale Rated torque [ Nm ]	Potenza nominale Rated power [ W ]
BL070.240 BL070.24B	8	3	24	3000	0.7	220
BL070.480 BL070.48B	8	3	48	3000	0.7	220
BL140.480	8	3	48	3000	1.4	440
Tipo Type	Coppia massima Peak torque [ Nm ]	Corrente nominale Rated current [ A ]	Resistenza Resistance [ ohm ]	Induttanza Inductance [ mH ]	Corrente massima Peak current [ A ]	Peso Weight [ kg ]
BL070.240 BL070.24B	2.1	13	0.091	0.23	26	2.1
BL070.480 BL070.48B	1.4	6.5	0.34	1.0	13	2.1
BL140.480	2.8	13	0.16	0.5	26	3.15



PM62..

- + BL070.240
- + BL070.480
- + BL070.48B
- + BL140.480



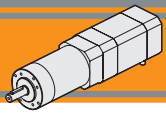
BL070.24B  
BL070.48B

PM62	Ns	L1	BL 070.480	BL 140.480
			L	L
	1	45.3	163.5	188.5
	2	62.2	179.5	204.5
	3	79.2	195.5	220.5



PM62.. AS...

PM62.. C...



**BLP**

Motoriduttori brushless CC epicicloidali  
Brushless DC planetary gearmotors

**MINI**  
TECNO

Dati tecnici

$n_1 = 3000$  rpm

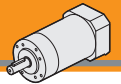
Technical data

Ns	ir	in	PM52			PM62		
			R <sub>d</sub>	M <sub>n2</sub> [Nm]	R <sub>2</sub> [N]	R <sub>d</sub>	M <sub>n2</sub> [Nm]	R <sub>2</sub> [N]
1	3.70	4	0.80	4	200	0.80	8	240
	4.28	4						
	5.18	5						
	6.75	7						
2	13.73	14	0.75	12	320	0.75	25	360
	15.88	16						
	18.36	18						
	19.20	19						
	22.20	22						
	25.01	25						
	26.85	27						
	28.93	29						
	34.97	35						
	45.56	46						
3	50.89	51	0.70	25	450	0.70	50	520
	58.85	59						
	68.06	68						
	71.16	71						
	78.71	79						
	92.70	93						
	95.17	95						
	99.50	100						
	107.20	107						
	115.07	115						
	123.97	124						
	129.62	130						
	139.13	139						
	149.90	150						
	168.84	169						
181.24	181							
195.26	195							
236.09	236							
307.54	308							

**Rapporti preferenziali per le taglie P52 e P62.**  
*Preferred ratios for sizes P52 e P62.*

Disponibili 4 stadi con rapporti fino a 2076 / Available 4 stages with ratio up to 2076

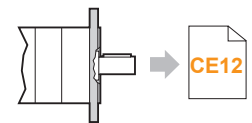
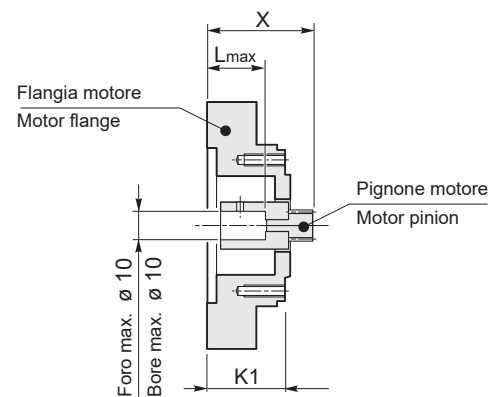
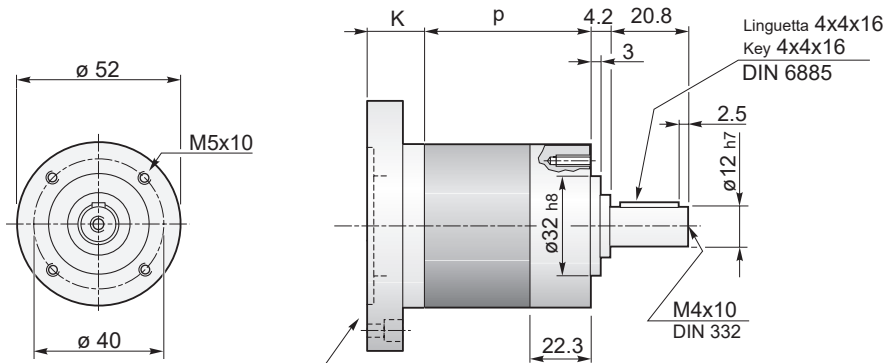




Dimensioni PM con flange motore AS

PM dimensions with motor flanges AS

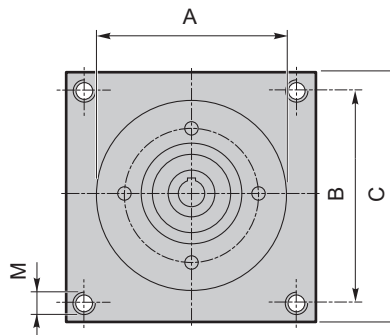
PM52 - U - AS...



PM52.. C...

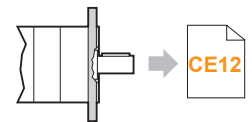
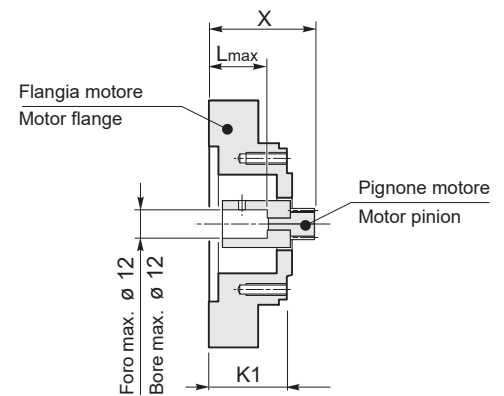
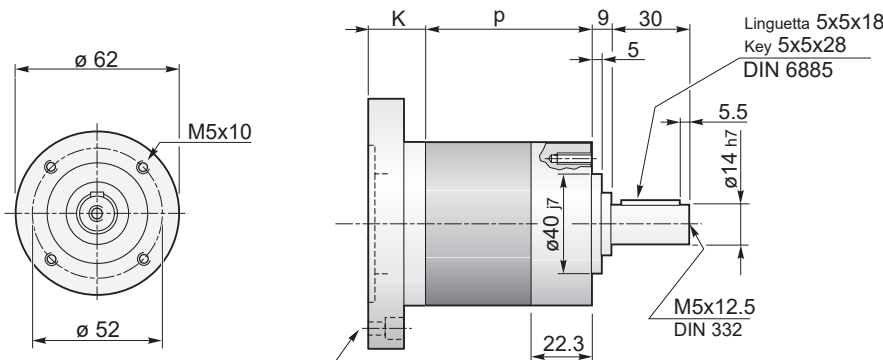
Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.  
Flange's thickness may vary depending on motorshaft's length.

Dimensioni / Dimensions							
AS	A	B	C	M	K1	L <sub>max</sub>	X
AS394PM	38.1	47.1	57	M5	31.2	23	41.5
...	...	...	...	...	...	...	...



	Lunghezza riduttore Gearbox length		Kg
	P		
PM52...	1	47.2	0.7
	2	61.3	0.9
	3	75.6	1.1

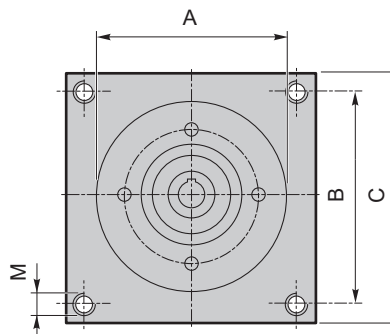
PM62 - U - AS...



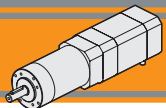
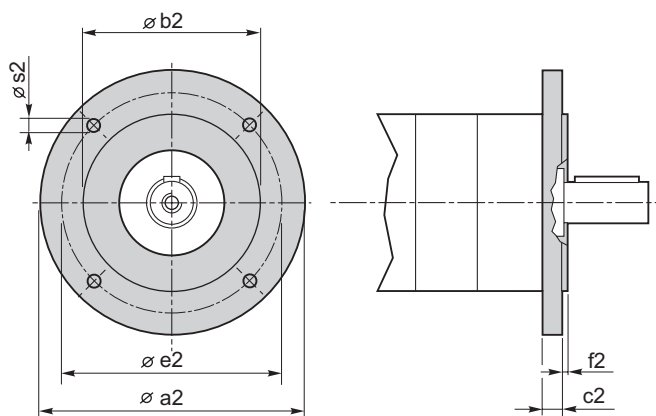
PM62.. C...

Lo spessore della flangia è variabile in funzione delle diverse lunghezze dell'albero motore.  
Flange's thickness may vary depending on motorshaft's length.

Dimensioni / Dimensions							
AS	A	B	C	M	K1	L <sub>max</sub>	X
AS389PM	73	69.6	86	M5	30.8	23	44.3
...	...	...	...	...	...	...	...



	Lunghezza riduttore Gearbox length		Kg
	P		
PM62...	1	45.3	0.8
	2	62.2	1.2
	3	79.2	1.6

**Dimensioni flange uscita****Output flange dimensions****PM.. C..**

Flange uscita / Output flanges							
PM	a2	b2	c2	e2	f2	s2	Flangia Flange
52	80	50 j7	9	65	2.5	M5	<b>C80</b>
	90	60 j7	9	75	2.5	5.5	<b>C90</b>
	105	70 j7	9	85	2.5	6.5	<b>C105</b>
	120	80 j7	9	100	3.0	6.5	<b>C120</b>
62	80	50 j7	9	65	2.5	M5	<b>C80</b>
	90	60 j7	9	75	2.5	5.5	<b>C90</b>
	105	70 j7	9	85	2.5	6.5	<b>C105</b>
	120	80 j7	9	100	3.0	6.5	<b>C120</b>

Azionamenti per motori brushless CC  
Brushless DC motor controls







	<b>Indice</b>	<b>Index</b>	Pag. Page
	<b>Selezione azionamento</b> Selezione azionamento per motori Brushless	<b>Drive selection</b> <i>Brushless motor drive selection guide</i>	<b>CF1</b>
<b>BLD07-IT</b>	<b>AZIONAMENTO 4Q PER MOTORI BRUSHLESS CC</b>	<b>4Q DRIVE FOR DC BRUSHLESS MOTORS</b>	
	Caratteristiche tecniche	<i>Technical features</i>	<b>CF2</b>
	Dimensioni	<i>Dimensions</i>	<b>CF2</b>
	Collegamenti	<i>Connections</i>	<b>CF3</b>
<b>BLD15</b>	<b>AZIONAMENTO 4Q PER MOTORI BRUSHLESS CC</b>	<b>4Q DRIVE FOR DC BRUSHLESS MOTORS</b>	
	Caratteristiche standard	<i>Standard characteristic</i>	<b>CF5</b>
	Dati tecnici principali	<i>Specifications</i>	<b>CF5</b>
	Dimensioni	<i>Dimensions</i>	<b>CF6</b>
	Collegamenti	<i>Connection</i>	<b>CF7</b>
<b>BLD60 DIGITAL</b>	<b>AZIONAMENTO 4Q PER MOTORI BRUSHLESS CC</b>	<b>4Q DRIVE FOR DC BRUSHLESS MOTORS</b>	
	Caratteristiche standard	<i>Standard characteristic</i>	<b>CF9</b>
	Dati tecnici principali	<i>Specifications</i>	<b>CF9</b>
	Dimensioni	<i>Dimensions</i>	<b>CF9</b>
	Collegamenti per motore Brushless serie BL	<i>Connections for Brushless motor BL series</i>	<b>CF10</b>

**SELEZIONE AZIONAMENTO**

**DRIVE SELECTION**

**Selezione azionamento per motore brushless**

**Brushless motor drive selection guide**

Motori applicabili <i>Suitable motors</i>	Scheda / <i>Type</i>	Corrente Nominale / <i>Rated Current</i> (A)	Corrente di Picco / <i>Peak Current</i> (A)
<b>BLS022.240</b>	BLD07-IT / BLD15	7 / 15	14 / 30
<b>BLS043.240</b>	BLD07-IT / BLD15	7 / 15	14 / 30
<b>BL070.240 / BL070.24B</b>	BLD15	15	30
<b>BL070.480 / BL070.48B</b>	BLD15	15	30
<b>BL140.480</b>	BLD15 / BLD60 DIGITAL	15 / 50	30 / 75
<b>BL210.480 / BL210.48E</b>	BLD60 DIGITAL	50	75

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**BLD07-IT****AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC****4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

L'azionamento BLD07-IT è un driver che nelle sue piccole dimensioni implementa una completa gestione in velocità del motore brushless con retroazione da sensori di Hall. Il driver è stato pensato per essere di facile utilizzo, affidabile ed economico.

The BLD07-IT drive is a driver that in its small size implements a complete speed management of the brushless motor with feedback from Hall sensors. The driver has been designed to be easy to use, reliable and economical.

**Caratteristiche standard****Standard features**

- Azionamento bidirezionale rigenerativo
  - Alimentazione singola CC
  - 3 Leds per la diagnostica (stato ed allarmi)
  - Protetto per corto circuito, min/max tensione, mancanza celle di Hall
  - Protezione termica motore Ixt
  - Connettori estraibili (segnali e potenza)
  - Comando di velocità analogico 0 +10Vcc e PWM (2 kHz)
  - 4 Ingressi digitali – optoisolati
  - 2 Uscite NPN - allarmi e frequenza di lavoro
  - Regolazione rampa di accelerazione
- Bidirectional regenerative operation
  - Single supply DC voltage
  - 3 diagnostic Leds (State and Alarms)
  - Protections for: Over/Under voltage, Over current, Hall missing
  - Ixt motor current protection
  - Power and signals extractable connectors
  - Analog speed command 0 + 10Vdc and PWM (2 kHz)
  - 4 Digital inputs – optoisolated
  - 2 NPN - fault drive and running frequency
  - Acceleration adjustment

**Dati tecnici principali****Specifications**

- Idoneo per motori BLDC trifase 4/8 poli
  - Retroazione digitale sensori di Hall
  - Controllo motore in frequenza PWM 20 kHz
  - Temperatura operativa 0/+40°C
  - Ingresso analogico 0/+10Vcc
  - Rampa accelerazione regolabile 0.1/1.0sec (tramite dip switch)
  - Regolazione corrente max
  - Regolazione della velocità (potenziometro esterno o interno) esterno 10KΩ
- Suitable for 3ph BLDC motors 4/8 poles
  - Digital feedback Hall sensors
  - Motor control in PWM frequency 20 kHz
  - Operative temperature 0/+40°C
  - Analog inputs range 0/+10Vdc
  - Acceleration ramp adjustable (by dip switch) 0.1/1.0sec
  - Current max regulation
  - Speed change regulation (by external or internal pot) external 10KΩ

MODELLO / MODEL		BLD07-IT
Tensione nominale motore <i>Motor DC Voltage</i>	(Vdc)	24 - 36
Tensione di alimentazione min / max <i>Supply DC Voltage Range min / max</i>	(Vdc)	20-40
Corrente nominale <i>Rated Current</i>	(A)	7
Corrente di picco (1) <i>Peak Current</i>	(A)	14
Potenza nominale (2) <i>Rated Power</i>	(W)	230
Potenza di picco (3) <i>Peak Power</i>	(W)	460

(1) La corrente di picco viene erogata per un tempo di circa 2 secondi  
(1) *Peak current (Adc) for 2 sec.*

(2) La potenza nominale è riferita al valore di tensione e di corrente nominale  
(2) *Power of amplifier at the rated current and rated voltage*

(3) La potenza di picco è riferita al valore di tensione nominale e di corrente di picco  
(3) *Power of amplifier at the peak current and rated voltage*



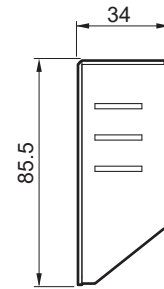
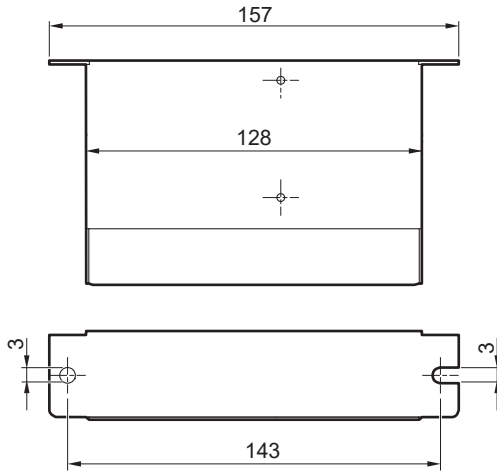
**BLD07-IT**

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

**Dimensioni**

**Dimensions**



**Collegamenti**

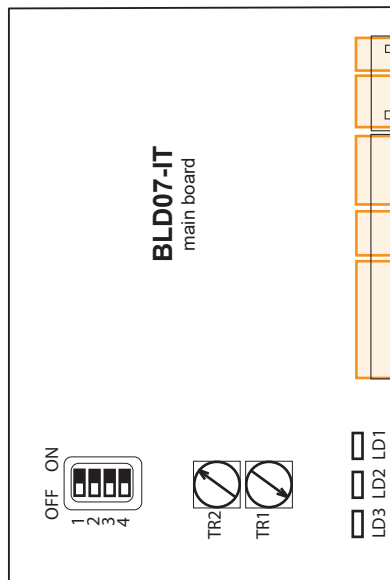
**Connections**

L'azionamento BLD07-IT è dotato di:

- connettore estraibile a 5 poli per la parte di potenza
- tre connettori estraibili, per un totale di 16 morsetti, per la gestione dei segnali in ingresso ed in uscita.

The BLD07-IT drive is equipped with:

- Removable connector with 5 terminals for the power part;
- 3 removable connectors, for a total of 16 terminals, for the management of the input and output signal.



<b>V+</b>	Alimentazione: positivo Vcc	Voltage supply: positive Vdc
<b>GND</b>	Alimentazione: negativo	Voltage supply: negative

<b>U</b>	Motore fase U	Motor phase U
<b>V</b>	Motore fase V	Motor phase V
<b>W</b>	Motore fase W	Motor phase W

<b>H-</b>	Alimentazione sensore Hall (negativo)	Sensor Hall (negative)
<b>HW</b>	Sensore Hall: fase W	Hall sensor phase W
<b>HV</b>	Sensore Hall: fase V	Hall sensor phase V
<b>HU</b>	Sensore Hall: fase U	Hall sensor phase U
<b>H+</b>	Alimentazione sensore Hall (+12V)	Sensor Hall: positive (+12V)

<b>+10V</b>	Potenzimetro esterno 10k	External pot. 10k
<b>SIG</b>		
<b>GND</b>		

<b>FREQ</b>	Uscita onda quadra proporzionale alla velocità (NPN open coll.)	Square wave output proportional to the speed (NPN Open coll.)
<b>FAULT</b>	Uscita di allarme (NPN open coll.)	Alarm output (NPN open coll.)
<b>+12V</b>	Sorgente tensione	Voltage source
<b>F/R</b>	Senso di marcia	Selection of the direction
<b>R/S</b>	Avvio/arresto	Start/stop
<b>GND</b>	Comune R/S e F/R	R/S and F/R
<b>IN1</b>	Input digitale	Digital input
<b>IN2</b>	Input digitale	Digital input



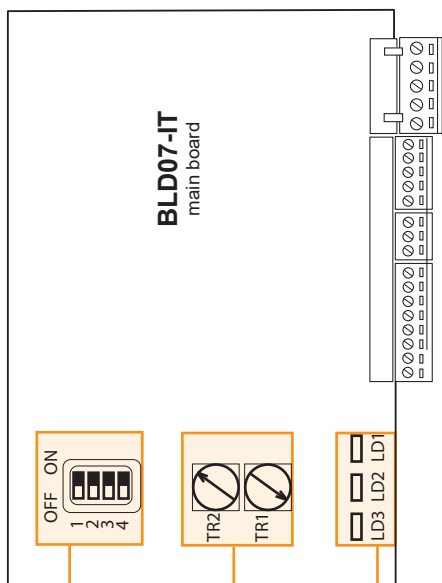
### BLD07-IT

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

Collegamenti

Connections



Led		
LD1	Verde - power ON	Green - power ON
LD2	Rosso - allarme in corso	Red - alarm
LD3	Giallo - superamento corrente max.	Yellow - the drive is in limit of current
	Presenti 2 Leds per la chiusura dei contatti R/S e F/R	2 LEDs for the closing of R/S and F/R

Trimmer		
TR1	Regolazione velocità (crescente con rotazione oraria)	External speed pot (clockwise to increase)
TR2	Limitazione corrente (crescente con rotazione antioraria)	Current limitation (counter clockwise to increase)

Dip Switch		
1	OFF = Controllo velocità da pot. interno TR1	Internal speed pot TR1
	ON = Controllo velocità da pot. esterno o segnale analogico 0/+10V	External speed pot or analog signal 0/+10V
2	OFF = Funzionamento in anello chiuso	Operating in closed loop
	ON = Funzionamento in anello aperto	Operating in open loop
3	OFF = Rampe rapide (0.1 s)	Fast Acceleration (about 0.1 sec)
	ON = Rampe lente (1.0 s)	Slow acceleration (about 1.0 sec)
4	OFF = per motori a 4 poli	4 poles motors
	ON = per motori a 8 poli	8 poles motors





**BLD15**

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

L'azionamento BLD15 è l'evoluzione sia in potenza che in controllo dell'azionamento BLD07-IT. La BLD15 è in grado di effettuare un controllo del motore brushless sia in coppia che in velocità con retroazione da sensori di Hall, la gestione in coppia o in velocità può avvenire con l'utilizzo di un segnale analogico o di un segnale digitale su network tramite i protocolli: ModBus RTU RS485 o CANOpen CIA301-CIA402.

The BLD15 drive is the evolution in both power and control of the BLD07-IT drive. The BLD15 is able to control the brushless motor both in torque and in speed with feedback from Hall sensors, the management in torque or in speed can have an analog signal or a digital signal on the network through the protocols: ModBus RTU RS485 or CANOpen CIA301-CIA402.

**Caratteristiche standard**

**Standard features**

- Azionamento bidirezionale rigenerativo
- Alimentazione singola CC
- 3 Leds per la diagnostica (stato ed allarmi)
- Protetto per corto circuito, min/max tensione, mancanza celle di Hall
- Protezione termica motore Ixt
- Connettori estraibili (segnali e potenza)
- Comando di velocità analogico 0 +10Vcc e PWM (2 kHz)
- 4 Ingressi digitali – optoisolati
- 2 Uscite NPN - allarmi e frequenza di lavoro
- Regolazione rampa di accelerazione
- Versione TORQUE control
- Versione ModBus RTU RS485
- Versione CANOpen CIA301-CIA402

**Dati tecnici principali**

**Specifications**

- Idoneo per motori BLDC trifase 4/8 poli
- Retroazione digitale sensori di Hall
- Controllo motore in frequenza PWM 20 kHz
- Temperatura operativa 0/+40°C
- Ingresso analogico 0/+10Vcc
- Rampa accelerazione regolabile 0.1/1.0sec (tramite dip switch)
- Regolazione corrente max
- Regolazione della velocità (potenziometro esterno o interno) esterno 10KΩ

- Suitable for 3ph BLDC motors 4/8 poles
- Digital feedback Hall sensors
- Motor control in PWM frequency 20 kHz
- Operative temperature 0/+40°C
- Analog inputs range 0/+10Vdc
- Acceleration ramp adjustable 0.1/1.0sec (by dip switch)
- Current max regulation
- Speed change regulation (by external or internal pot) external 10KΩ

MODELLO / MODEL		BLD15
Tensione nominale motore <i>Motor DC Voltage</i>	(Vdc)	24 - 36 - 48
Tensione di alimentazione min / max <i>Supply DC Voltage Range min / max</i>	(Vdc)	20-65
Corrente nominale <i>Rated Current</i>	(A)	15
Corrente di picco (1) <i>Peak Current</i>	(A)	30
Potenza nominale (2) <i>Rated Power</i>	(W)	650
Potenza di picco (3) <i>Peak Power</i>	(W)	1300

(1) La corrente di picco viene erogata per un tempo di circa 2 secondi  
(1) Peak current (Adc) for 2 sec.

(2) La potenza nominale è riferita al valore di tensione e di corrente nominale  
(2) Power of amplifier at the rated current and rated voltage

(3) La potenza di picco è riferita al valore di tensione nominale e di corrente di picco  
(3) Power of amplifier at the peak current and rated voltage



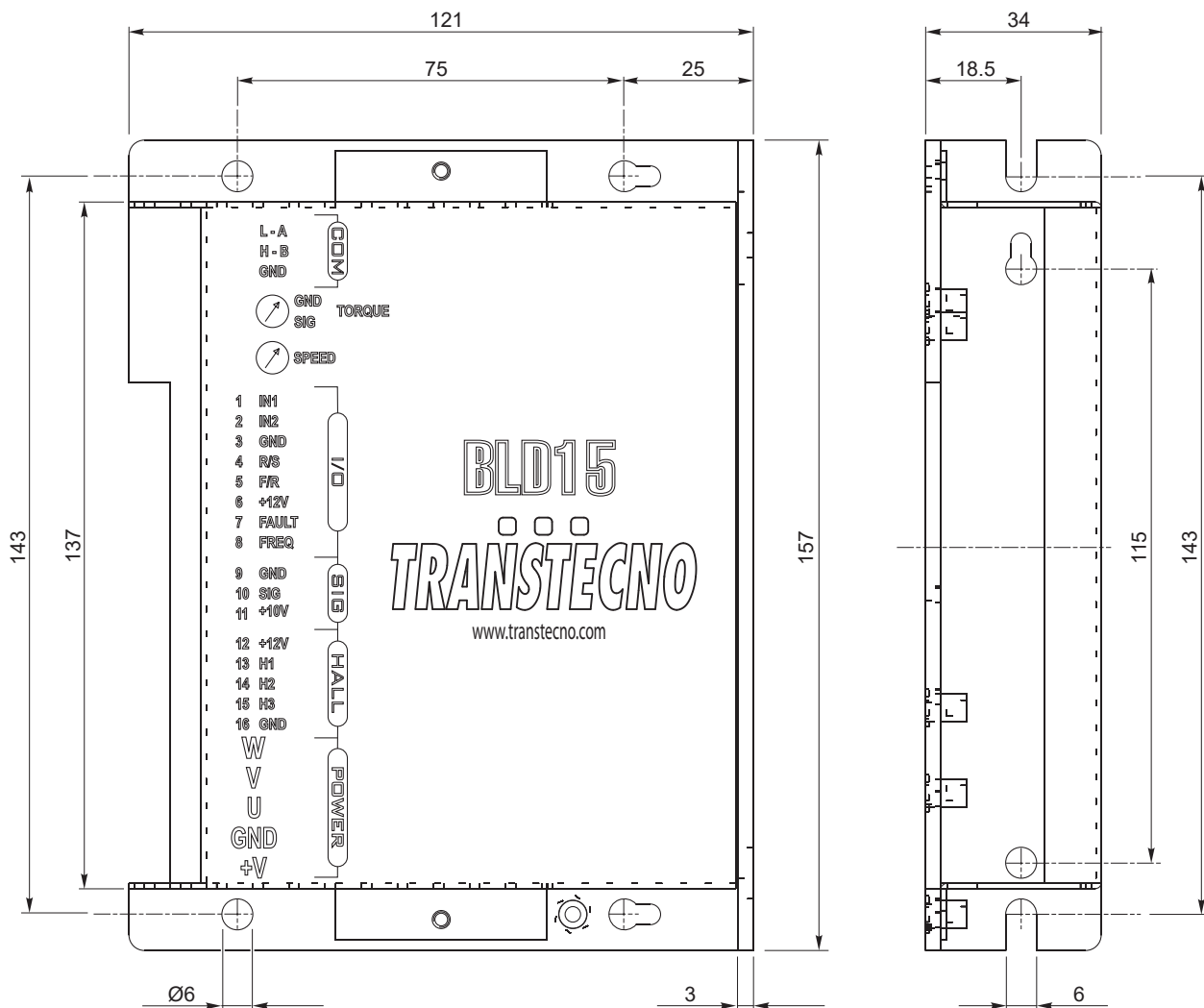
## BLD15

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

**Dimensioni**

**Dimensions**





**BLD15**

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

**Collegamenti**

**Connections**

L'azionamento BLD15 è dotato di:

- connettore estraibile a 5 poli per la parte di potenza;
- tre connettori estraibili, per un totale di 16 morsetti, per la gestione dei segnali in ingresso ed in uscita.

**Versione TORQUE**

- connettore estraibile a 2 morsetti

**Versione ModBus/CANOpen**

- connettore estraibile a 3 morsetti

The BLD15 drive is equipped with:

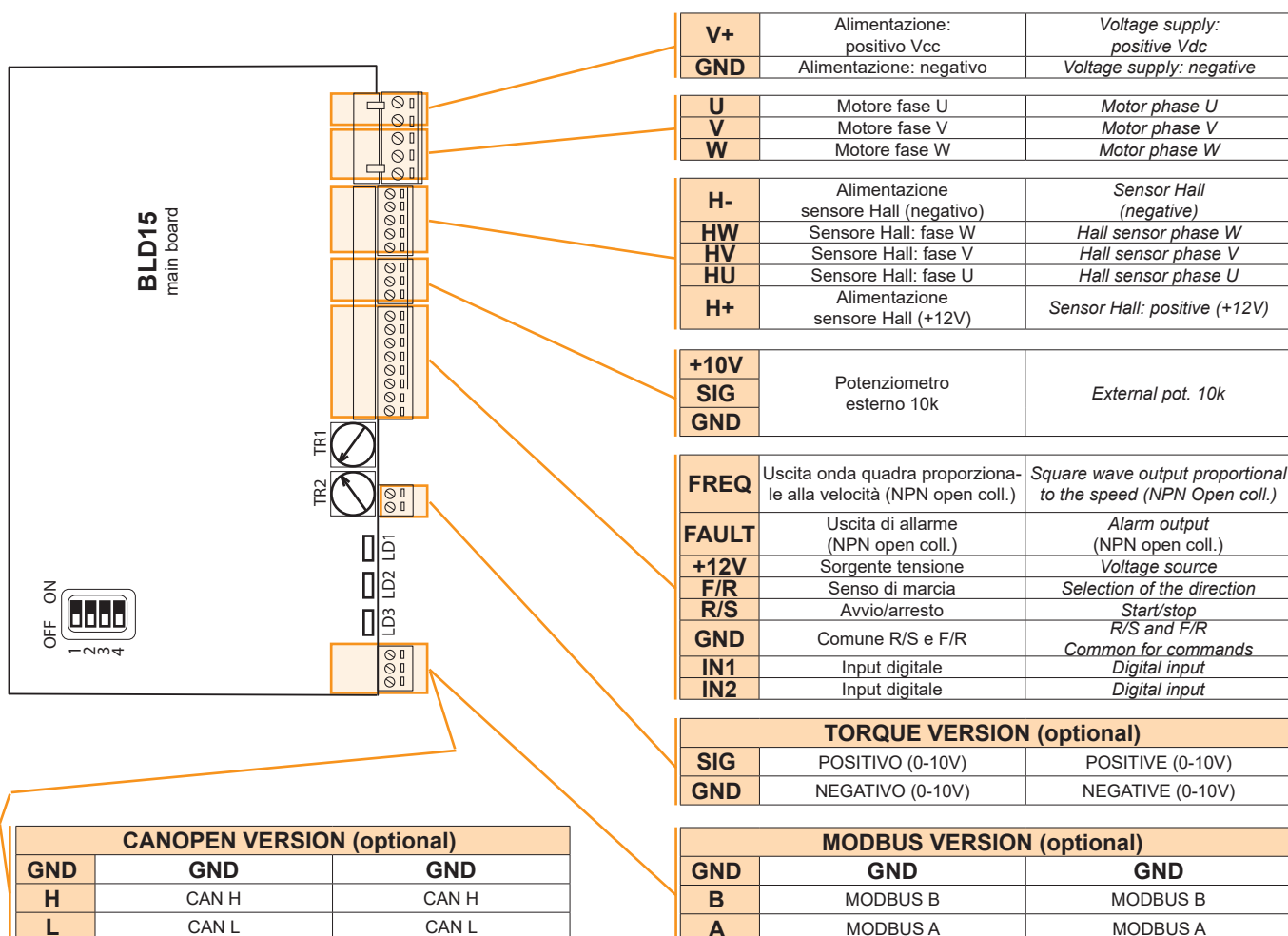
- removable connector with 5 terminals for the power part;
- 3 removable connectors, for a total of 16 terminals, for the management of the input and output signal.

**TORQUE Version**

- removable connector with 2 terminals

**ModBus/CANOpen Version**

- removable connector with 3 terminals





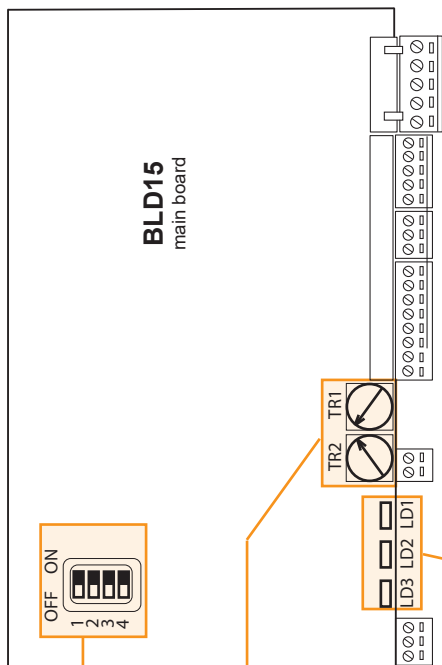
### BLD15

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

Collegamenti

Connections



Led		
LD1	Verde - power ON	Green - power ON
LD2	Rosso - allarme in corso	Red - alarm
LD3	Giallo - superamento corrente max.	Yellow - the drive is in limit of current
Presenti 2 Leds per la chiusura dei contatti R/S e F/R		2 LEDs for the closing of R/S and F/R

Trimmer		Opzionale	Optional
TR1	Regolazione velocità (crescente con rotazione oraria)	Regolazione della rampa in accelerazione	Acceleration ramp adjustable
TR2*	Limitazione corrente (crescente con rotazione antioraria)	Regolazione della rampa in decelerazione	Deceleration ramp adjustable

(\*) Non presente con versione torque  
(\*) Not designed for torque version

Dip Switch		
1	OFF = Controllo velocità da pot. interno TR1	Internal speed pot TR1
	ON = Controllo velocità da pot. esterno o segnale analogico 0/+10V	External speed pot or analog signal 0/+10V
2	OFF = Funzionamento in anello chiuso	Operating in closed loop
	ON = Funzionamento in anello aperto	Operating in open loop
3	OFF = Rampe rapide (0.1 s)	Fast Acceleration (about 0.1 sec)
	ON = Rampe lente (1.0 s)	Slow acceleration (about 1.0 sec)
4	OFF = per motori a 4 poli	4 poles motors
	ON = per motori a 8 poli	8 poles motors



**BLD60 DIGITAL**

**AZIONAMENTO 4Q  
PER MOTORI BRUSHLESS CC**

BLD60 Digital è un controller di velocità ad anello chiuso che utilizza componenti di potenza IGBT e MOSFET. Utilizza il segnale di Hall del motore brushless per eseguire il controllo della velocità ad anello chiuso, e riduce l'errore tramite il regolatore dei PID. E' in grado di raggiungere la coppia massima anche alle basse velocità da 150 a 4000 giri al minuto. Il drive utilizza il protocollo ModbusRS485 RTU per poter comunicare i parametri e gestire i motori su di un Network.

**Caratteristiche standard**

- **Azionamento trifase a quattro quadranti per motori Brushless**
- Alimentazione singola DC
- Display digitale (gestione azionamento e stato allarmi)
- Protetto per corto circuito, min/max tensione, sovratemperatura, mancanza celle di hall.
- Protezione termica
- Connettori estraibili 8 vie (segnali) e 5 vie (sensori di Hall).
- 1 Comando di velocità differenziale analogico +5V
- 1 Comando di coppia analogico +5V per realizzare avvitatori, svolgitori, macchine test, ecc
- Feedback da sensori di HALL
- 2 Uscita NPN segnalazione allarme azionamento feedback velocità
- 2 trimmer (gestione velocità e corrente).

**Dati tecnici principali**

- Idoneo per motori BLDC trifase 4/8 poli
- Retroazione digitale sensori di Hall
- Controllo motore in frequenza PWM 20 kHz
- Temperatura operativa 0/+40°C
- Ingresso analogico 0/5 Vcc
- Rampa accelerazione regolabile 0.1/10 sec (tramite display digitale)
- Regolazione corrente max
- Regolazione della velocità esterno 10kΩ (potenziometro esterno o interno)
- Controllo motore in digitale RS485

**Dimensioni**

BLD60 DIGITAL		48
Tensione nominale DC Voltage Supply	(V)	48
Tensione min / max DC Voltage Range	(V)	24 - 36 - 48
Corrente nominale Rated Current	(A)	50
Corrente di picco (1) Peak Current	(A)	75
Potenza nominale (2) Rated Power	(W)	1500
Potenza di picco (3) Peak Power	(W)	2120

- (1) La corrente di picco viene erogata per un tempo di circa 2 secondi  
(1) *Peak current (A<sub>dc</sub>) for 2 sec.*
- (2) La potenza nominale è riferita al valore di tensione e di corrente nominale  
(2) *Power of amplifier at the rated current and rated voltage*
- (3) La potenza di picco è riferita al valore di tensione nominale e di corrente di picco  
(3) *Power of amplifier at the peak current and rated voltage*

**4Q DRIVE  
FOR DC BRUSHLESS MOTORS**

BLD30 Digital BLDC motor driver is a closed-loop speed controller, which uses IGBT and MOS power, uses the Hall signal of the DC brushless motor to perform double-loop speed control, and has a PID speed regulator in the control link. The system control is stable and reliable.

It can always reach the maximum torque at low speed, and the speed control range is 150 to 4000rpm. The driver use the protocol Modbus RS485 RTU to communicate in a network.

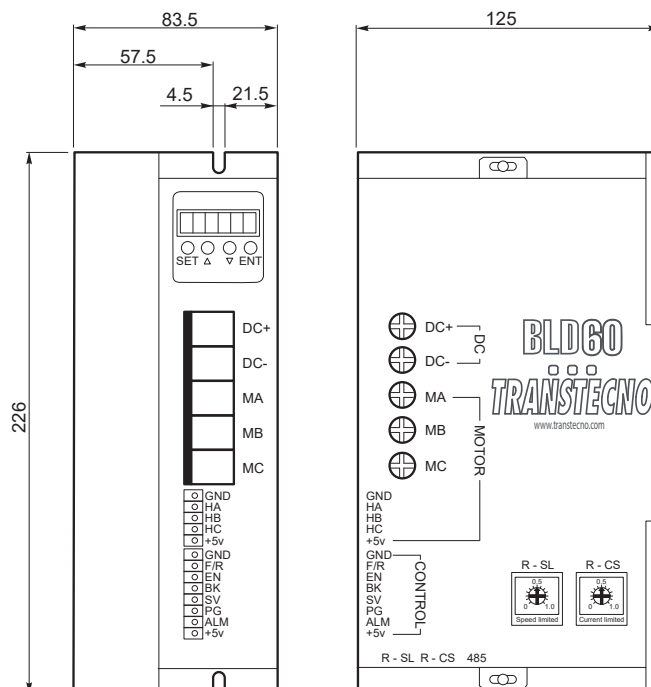
**Standard characteristic**

- **Four quadrant regenerative drive for Brushless motor**
- Single supply DC voltage
- Digital display (drive management and alarm status)
- Protections for: Over/Under voltage, max. temperature, Over current
- thermal protection
- signals extractable connectors (8 ways and 5 ways)..
- 1 Differential velocity input +5V
- 1 Torque mode (demand current) input +5V
- Feedback by HALL sensors
- 2 NPN output (feedback speed and fault)
- 2 Potentiometer (Speed, current)

**Specifications**

- Suitable for 3ph BLDC motors 4/8 poli
- Digital feedback Hall sensors
- Motor control in PWM frequency 20 kHz
- Operative temperature 0/+40°C
- Analog inputs range 0/5 Vdc
- Acceleration ramp adjustable 0.1/10 sec (by digital display)
- Current max regulation
- Speed change regulation external 10kΩ (by external or internal pot))
- Digital motor control RS485

**Dimensions**





## BLD60 DIGITAL

### AZIONAMENTO 4Q PER MOTORI BRUSHLESS CC

### 4Q DRIVE FOR DC BRUSHLESS MOTORS

#### Collegamenti per motori brushless serie BL

#### Connections for brushless motors BL series

##### Fili di potenza:

- fase motore U: pin MA
- fase motore V: pin MB
- fase motore W: pin MC

##### Power wires:

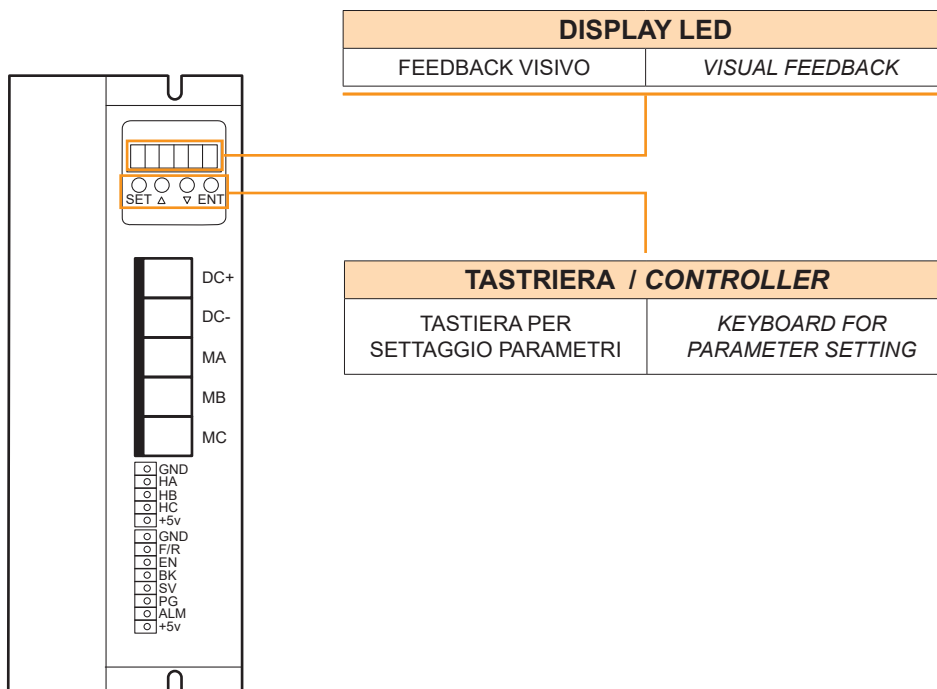
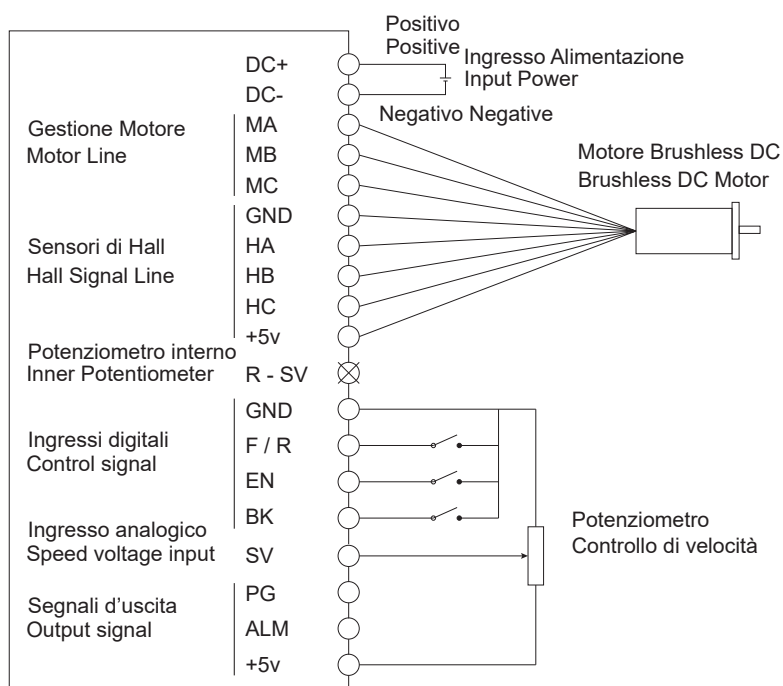
- phase motor U: pin MA
- phase motor V: pin MB
- phase motor W: pin MC

##### Fili di segnale:

- Rosso piccolo (+Vcc): pin +5V
- Nero piccolo (GND): pin GND
- Blue (hall U): pin HA
- Verde (hall V): pin NB
- Bianco (hall W): pin HC

##### Fili di segnale:

- Red small (+Vdc): pin +5V
- Black small (GND): pin GND
- Blue (hall U): pin HA
- Green (hall V): pin HB
- White (hall W): pin HC







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