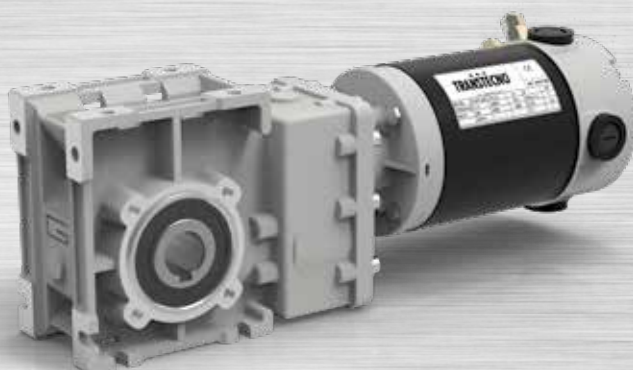
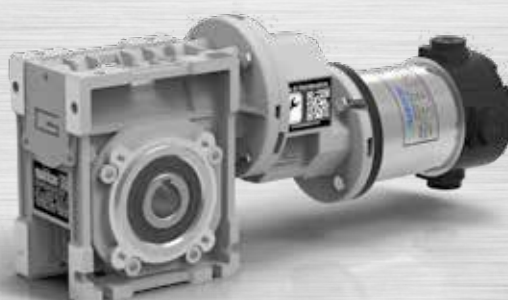


TRANSTECNO[®]
the modular gearmotor



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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.

General information

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.

Velocità entrata

n_1 [min⁻¹]

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⁻¹]

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

M_{r2} [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

Mn₂ [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

M₂ [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

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.

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

Reversibility and irreversibility

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.

Potenza in entrata

P₁ [kW]

Input power

È la potenza motore applicata in entrata al riduttore e riferita alla velocità n₁.

Può essere calcolata come segue:

This is the power applied by the motor at the gearbox input in reference to speed n₁.

It can be calculated with the following formula:

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

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.

A - Uniforme	$fa \leq 0.3$
B - Medio	$fa \leq 3$
C - Forte	$fa \leq 10$

A - Uniform	$fa \leq 0.3$
B - Moderate shocks	$fa \leq 3$
C - Heavy shocks	$fa \leq 10$

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

- Je (kgm²) momento d'inerzia esterno ridotto all'albero motore.
- Jm (kgm²) momento d'inerzia motore.

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

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

- Je (kgm²) moment of reduced external inertia at the drive-shaft.
- Jm (kgm²) moment of inertia of motor.

If $fa > 10$ call our Technical Service.

A

Classe di carico / Load class

Carico uniforme / Uniform load

sf									
h/d	n. avviamenti/ora / n. start-up/hour								
	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									
h/d	n. avviamenti/ora / n. start-up/hour								
	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									
h/d	n. avviamenti/ora / n. start-up/hour								
	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; R₂ [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_2 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_2 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; A₂ [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_2 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_2 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_2 contattate il ns. Servizio Tecnico.

If axial load A that acts on the shaft is greater than A_2 , 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 giornaliero 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_1 [kW] richiesta, passare al punto 3); se è nota la coppia in uscita M_2 richiesta è necessario calcolare la potenza motore P_1 con la formula:

2. If the required motor power output P_1 [kW] is known, go to item 3); if the required output torque M_2 is known, determine motor output P_1 by using the following formula:

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

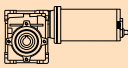
dove Rd è il rendimento dinamico e n_2 il numero di giri richiesti in uscita al motoriduttore.

where Rd stands for the dynamic efficiency and n_2 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 ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
140						
(3000 min ⁻¹)	600	2.0	5.0	5	ECM100/026	120/240/24E
	400	2.9	3.8	7.5		
	300	3.8	2.9	10		
	200	5.5	2.0	15		
	150	7.1	1.5	20		
	100	10	1.2	30		
	75	12	0.9	40		
	60	14	0.7	50		
	50	13	0.7	60		

Esempio / Example:

Applicazione / Application:

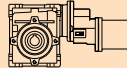
Carrello automatico / Automatic carriage

P_1 : 140 W
 sf : 1.5
 n_2 : 150 min⁻¹

Motorizzazione scelta / Power unit selected:

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

ECMP

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

Esempio / Example:

Applicazione / Application:

Carrello automatico / Automatic carriage

M_2 : 58 Nm
 sf : 1.5
 n_2 : 25 min⁻¹

Motorizzazione scelta / Power unit selected:

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

Giunto elastico

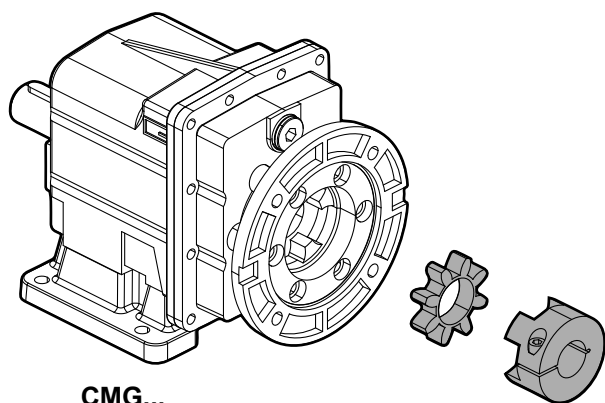
Flexible coupling

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

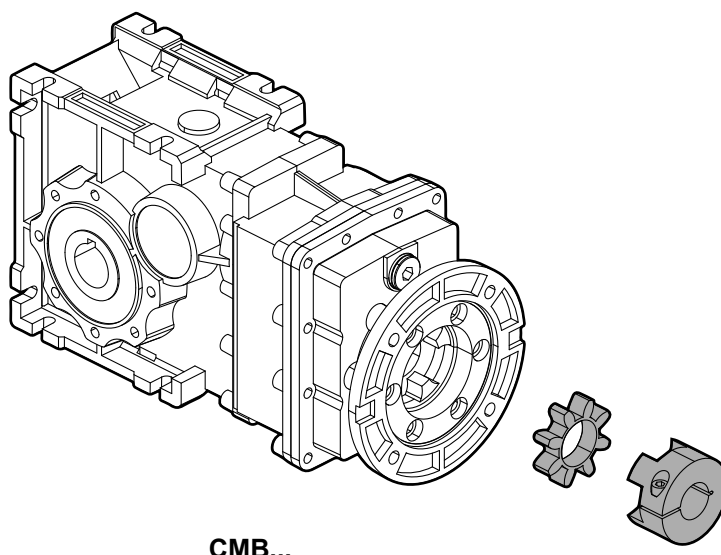
- Maggiore rigidità torsionale;
- Smorzamento delle vibrazioni;
- Smorzamento dei picchi d'inerzia del motore;
- Eliminazione dell'ossidazione tra l'albero motore ed il manicotto per tribocorrosione;
- Temperatura di funzionamento inferiore;
- Facilità di smontaggio del motore anche dopo lunghi periodi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

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



CMG...



CMB...

Installazione e verifiche

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.

Installation and inspection

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

In tutti questi casi consultare il Servizio Tecnico

- utilizzo come argano 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
- utilizzo in applicazioni con forti inerzie

Critical applications

In these cases please contact the Technical Service

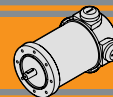
- *used as a hoist;*
- *used in mounting positions not shown in the catalogue;*
- *used in environment pressure other than atmospheric pressure;*
- *used in places with temperature $<0^{\circ}\text{C}$ or $>+40^{\circ}\text{C}$*
- *when used outdoors*
- *continuous or highly intermittent duty*
- *used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



Neodymium

Motori elettrici CC DC electric motors

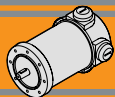




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	Classe di isolamento termico	<i>Insulation class</i>	B3
	Tipi di servizio IEC	<i>IEC duty cycle ratings</i>	B3
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Caratteristiche tecniche

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

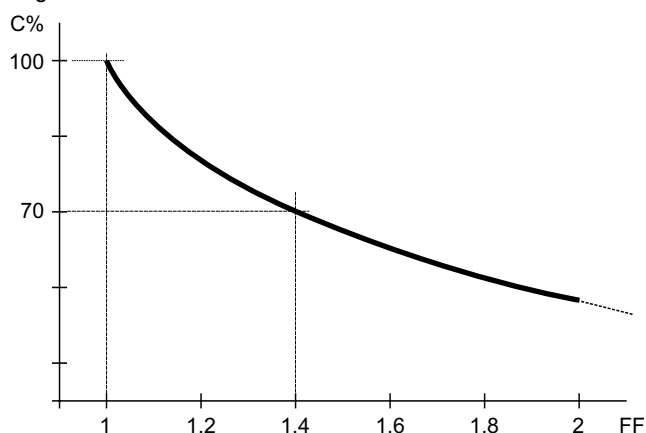
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

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

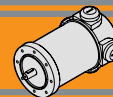
This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

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.

1^a cifra: protezione alla penetrazione di corpi solidi.

2^a cifra: protezione contro la penetrazione d'acqua.

Indicates the degree of mechanical insulation of the motor body.

1st figure: indicating level of protection against the penetration of solid bodies.

2nd figure: indicating degree to which the motor is waterproof.

0	Non protetto / No protection	0	Non protetto / No protection
1	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (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 matters (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 matters (over Ø 2.5 mm)</i>	3	Protetto contro la pioggia. <i>Rain proof fixture</i>
4	Protetto da corpi solidi superiori a Ø 1 mm. <i>Protected against solid matters (over Ø 1 mm)</i>	4	Protetto contro gli spruzzi. <i>Splash proof fixture</i>
5	Protetto contro la polvere <i>Dust proof</i>	5	Protetto contro getti d'acqua <i>Water jet proof</i>
6	Totalmente protetto contro la polvere <i>Fully dust proof</i>	6	Protetto dalle ondate <i>Wave proof</i>
7	N.A.	7	Protetto contro immersione <i>Watertight immersion fixture.</i>
8	N.A.	8	Protetto contro immersione/sommersione prolungata <i>Watertight immersion fixture for a long time.</i>

Classe di isolamento termico

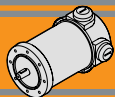
Insulation class

Classe / Class	Δt °C Temp. ambiente: 40°C Ambient temperature: 40°C
A	65°C
B	90°C
F	115°C
H	140°C

Tipi di servizio IEC

IEC duty cycle ratings

S1	Servizio continuo. Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	Continuous duty. The motor works at a constant load for enough time to reach temperature equilibrium
S2	Servizio di durata limitata. 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.	Short time duty. 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.
S3	Servizio periodico intermittente. 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.	Intermittent periodic duty. Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
S4	Servizio periodico intermittente con avviamento. 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.	Intermittent periodic duty with starting. Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
S5	Servizio periodico intermittente con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	Intermittent periodic duty with electric braking. Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
S6	Servizio periodico ininterrotto con carico intermittente. Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	Continuous operation with intermittent load. Sequential, identical cycles of running with constant load and running with no load. No rest periods.
S7	Servizio periodico ininterrotto con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	Continuous operation with electric braking. Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
S8	Servizio periodico ininterrotto con variazioni di carico e di velocità. 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.	Continuous operation with periodic changes in load and speed. 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

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

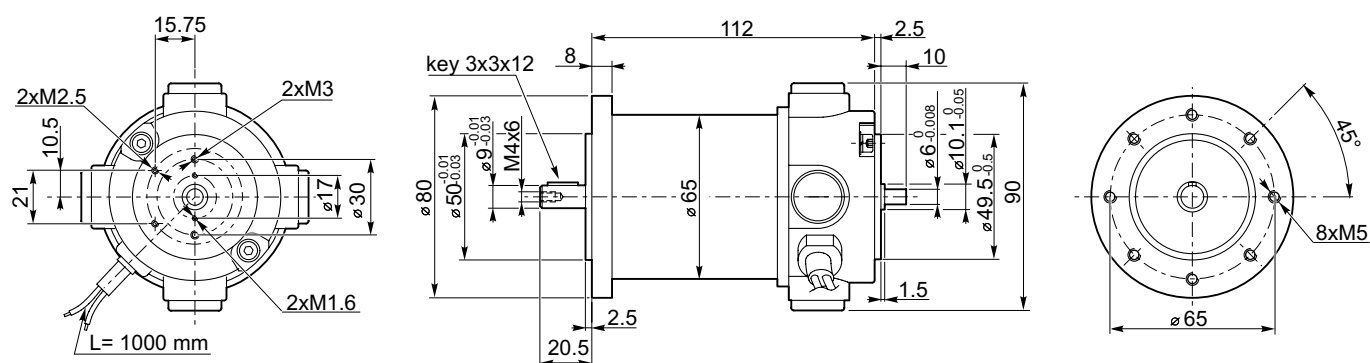
Features

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 ₁ [min ⁻¹]	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			0.38			
	S2 20'	160		9.0			0.51			

Dimensioni

Dimensions

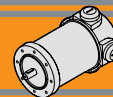


Freno / Brake



Encoder



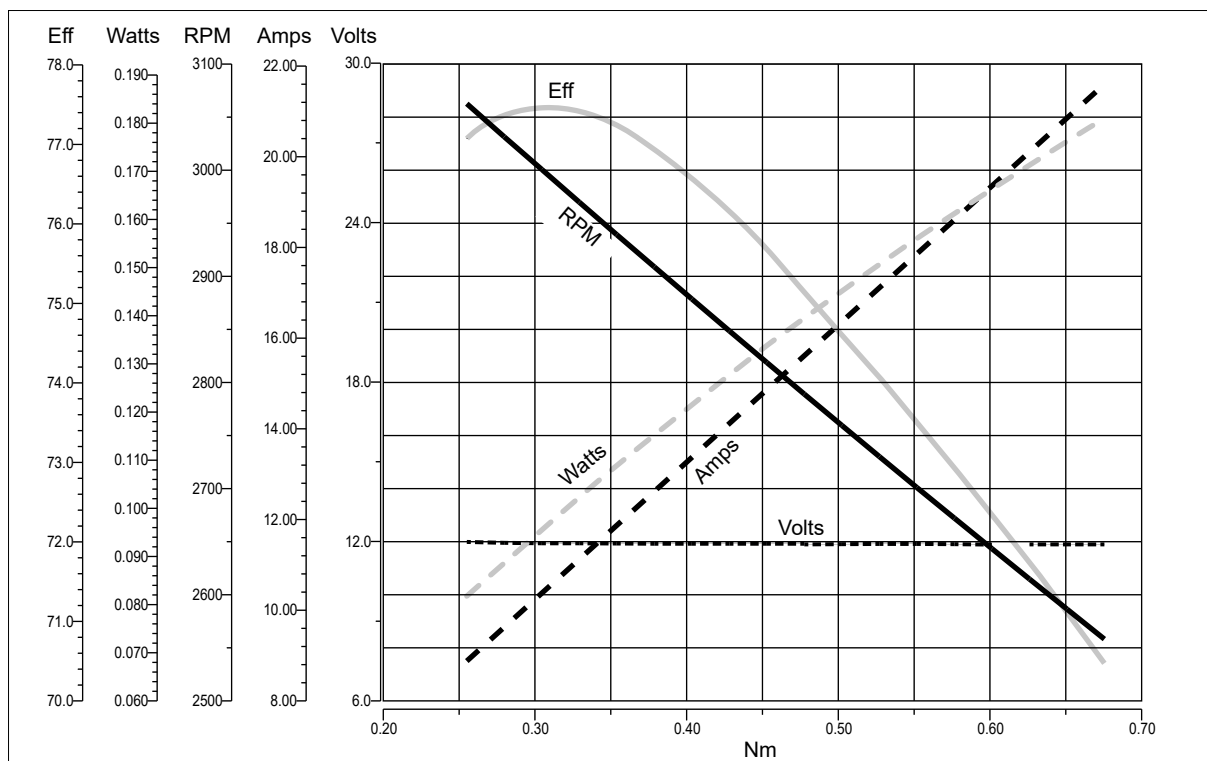


ND120.120 - ND120.240

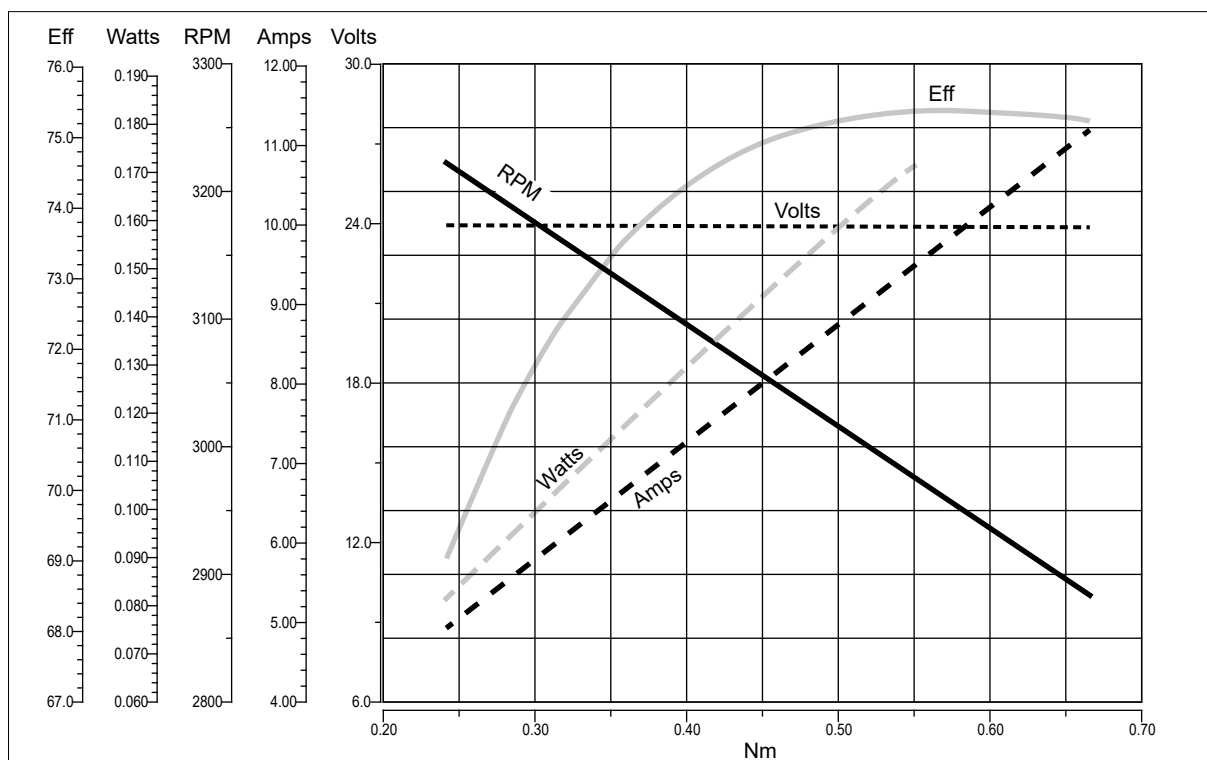
Prestazioni

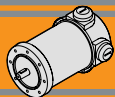
Performances

ND120.120



ND120.240





ND180.120 - ND180.240

Caratteristiche

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

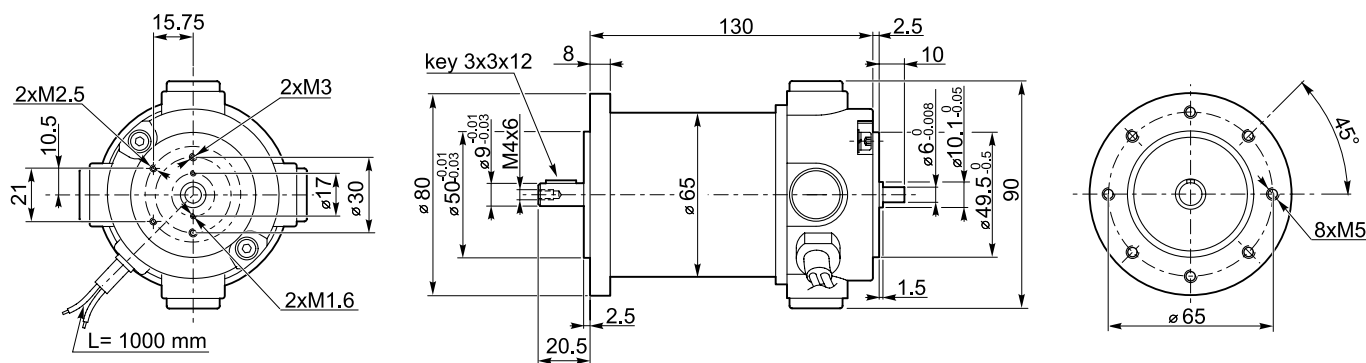
Features

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 ₁ [min ⁻¹]	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			0.57			
	S2 20'	250		14			0.80			

Dimensioni

Dimensions

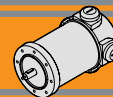


Freno / Brake



Encoder





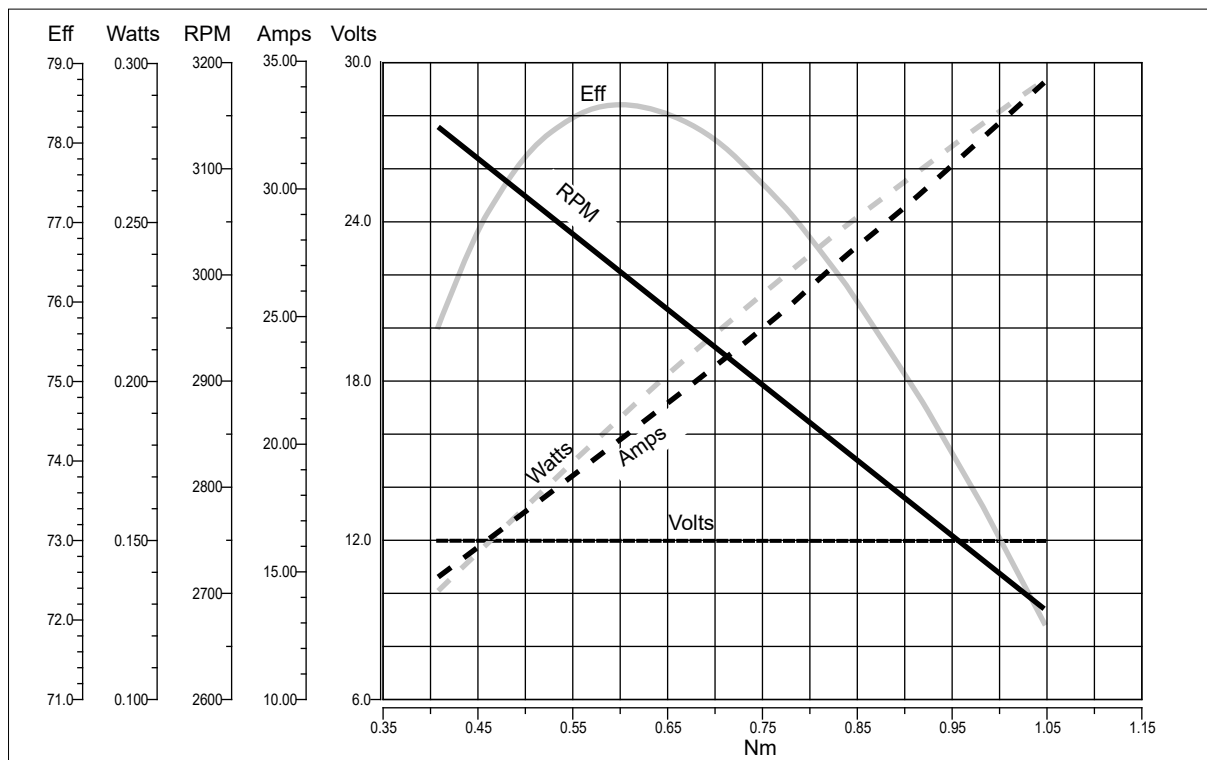
ND180.120 - ND180.240

Prestazioni

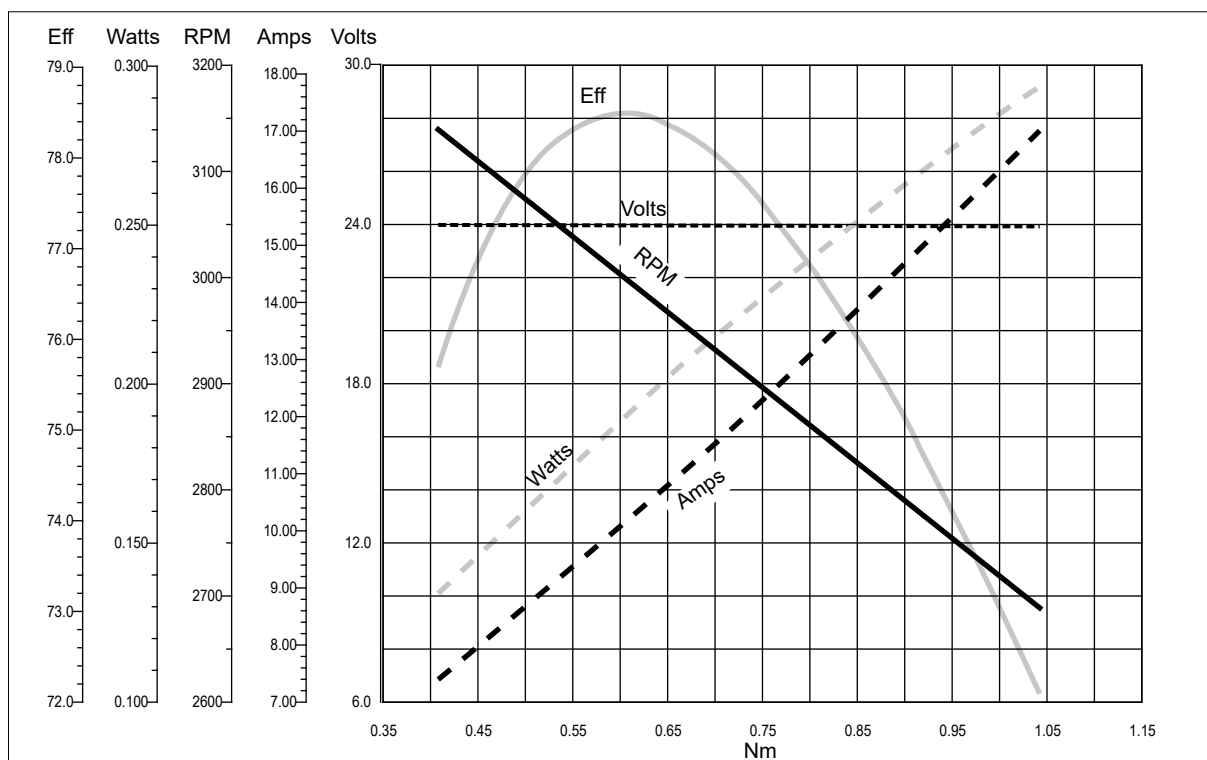
Performances

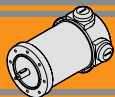
ND

ND180.120



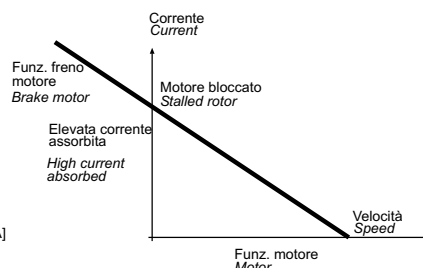
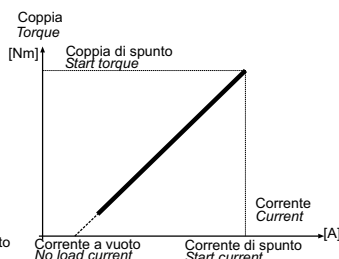
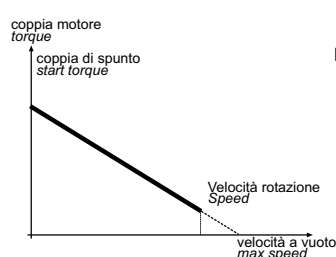
ND180.240





Legenda / Glossario dei grafici

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.



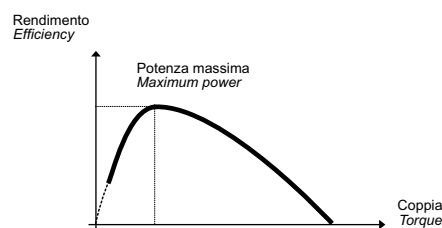
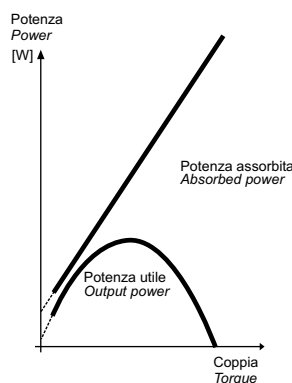
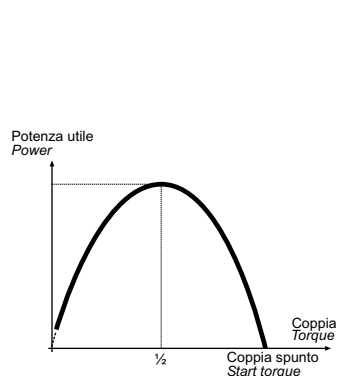
With a DC motor, the rotational speed is a linear function of the torque. In the same way, the absorbed current is also a linear function of the torque. Speed and current change a lot against applied torque.

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

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Esempio 2 HP = circa 1500 W.

Useful formulas

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

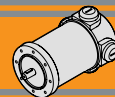
$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Example 2 HP = approx. 1500 W.

S	—	Servizio	Duty
P_n	[W]	Potenza in uscita	Rated power
P_a	[W]	Potenza assorbita	Absorbed power
M_n	[Nm]	Coppia nominale	Rated torque
V	[V]	Tensione	Voltage
I	[A]	Corrente assorbita	Absorbed current
n₁	[min ⁻¹]	Numero giri motore	Motor speed
S_v	[rad/s]	Velocità angolare	Angular speed
IC	—	Classe d'isolamento termico	Thermal insulation class
FF	—	Fattore di forma	Form factor
IP	—	Classe di protezione	Protection class
η	—	Rendimento	Efficiency
Kg	—	Peso	Weight



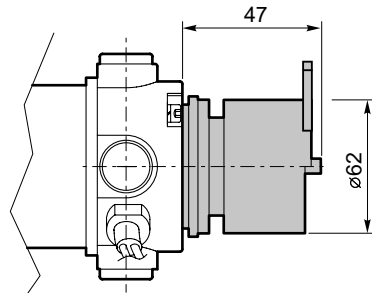
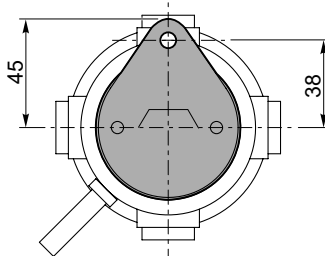
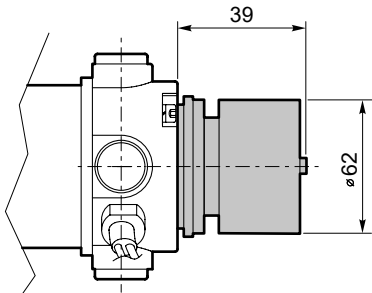
Freno

Brake

ND

ND...BR Freno / Brake

ND...BRL Freno con leva di sblocco/ Brake with hand release

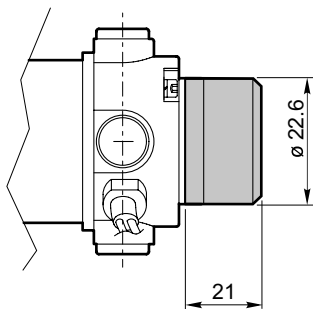


	P_n [W]	V [V]	M_n [Nm]	n₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	1.8	3000
		24		

Encoder

Encoder

ND...ME22



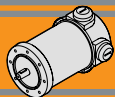
Nota: Fornito con cavo lungo 300 mm

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.



ND

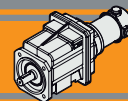
Motori elettrici CC
DC Electric motors

Note/Notes



Motoriduttori CC ad ingranaggi cilindrici DC helical in-line gearmotors

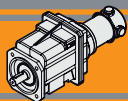




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Caratteristiche tecniche	<i>Technical features</i>	C2
Designazione	<i>Classification</i>	C3
Sensi di rotazione	<i>Direction of rotation</i>	C3
Lubrificazione	<i>Lubrication</i>	C3
Simbologia	<i>Symbols</i>	C4
Carichi radiali	<i>Radial loads</i>	C4
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	C5
Motori applicabili	<i>IEC Motor adapters</i>	C6
Dimensioni	<i>Dimensions</i>	C7

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**

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Caratteristiche tecniche

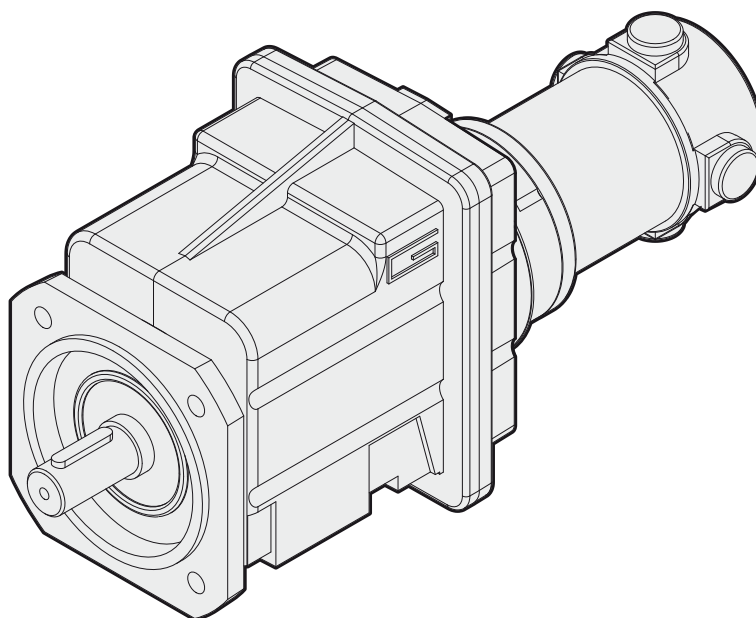
Le caratteristiche principali dei motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio NDCMG sono:

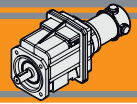
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 160 a 250W S2
- Magneti in Neodimio
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati

Technical features

The main features of NDCMG neodymium permanent magnets DC helical in-line gearmotors range are:

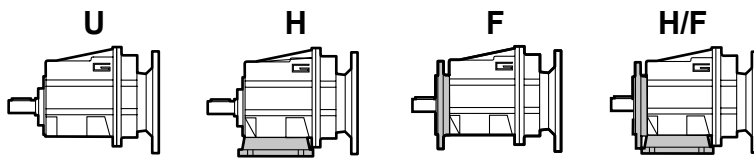
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder assembly*
- *Motor power ratings available from 160 to 250W S2*
- *Neodymium magnets*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground helical gears*



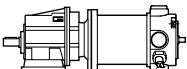


Designazione

Classification

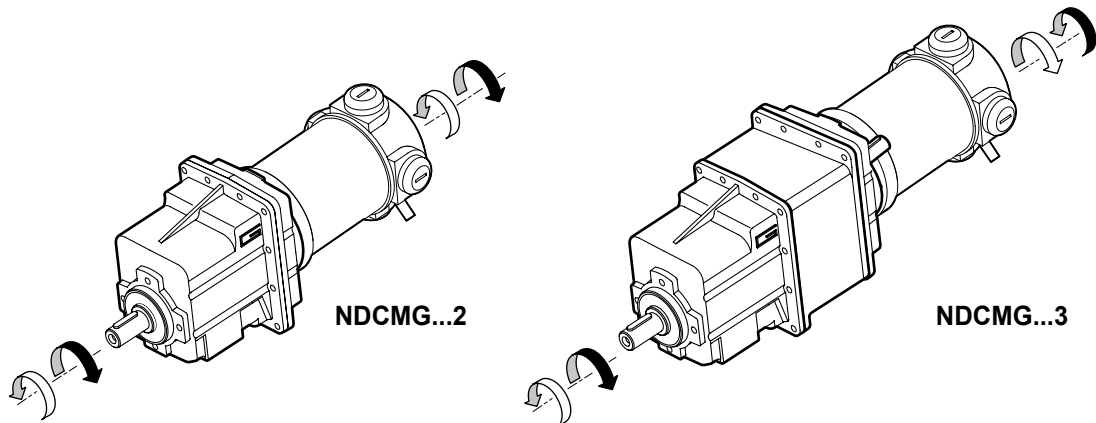


NDCMG

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...	vedi tabelle see tables	vedi tabelle see tables	120 240
	120/012	180/012	H...			
	120/013	180/013	F...			
	120/022	180/022	H.../F...			
	120/023	180/023				
	120/033	180/033				
	120/043	180/043				

Sensi di rotazione

Direction of rotation

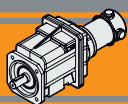


Lubrificazione

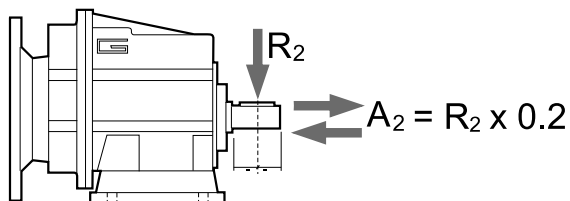
Lubrication

Tutti i riduttori nelle taglie 002 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 002 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

**Simbologia****Symbols**

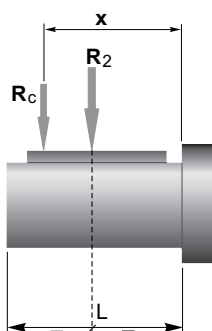
n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[min ⁻¹]	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	[kW]	Potenza in entrata / <i>Input power</i>
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
sf		Fattore 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_2 [min ⁻¹]	R_2 [N]				
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
700	416	764	1529	1987	2379
600	437	805	1609	2092	2504
500	465	855	1710	2223	2661
400	501	921	1842	2395	2866
250	586	1077	2154	2801	3353
180	653	1323	2554	3321	3897
150	748	1406	2714	3529	4244
120	806	1631	3467	3801	4572
100	958	1842	3684	4507	5234
80	1032	1984	3969	5042	5991
60	1136	2184	4368	5549	6594
40	1300	2500	5000	6500	8000
10	1300	2500	5000	6500	8000

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:

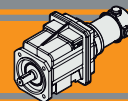


	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
a	73	104	117	132	150
b	53	84	92	102	115
R_{2MAX}	1300	2500	5000	6500	8000

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

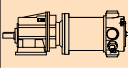
a, b = valori riportati nella tabella
 a, b = values given in the table

$$R \leq R_c$$



Dati tecnici per servizio S2

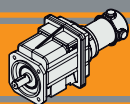
Technical data for S2 duty

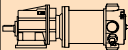
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160						
(3000 min ⁻¹)	596	2.5	12.6	5.03	120/002	120/240
	492	3.0	10.4	6.10		
	401	3.7	8.5	7.49		
	334	4.4	8.9	8.99		
	295	5.0	7.9	10.16		
	249	5.9	6.6	12.07		
	224	6.6	8.4	13.40		
	198	7.4	7.4	15.14		
	165	8.9	6.2	18.17		
	139	11	5.2	21.58		
	128	12	4.8	23.51		
	120	12	4.5	25.10		
	111	13	4.2	27.08		
	92	16	3.5	32.49		
	71	21	2.7	42.04		
	67	22	2.5	44.89		
	61	24	2.3	48.86		
	54	27	2.0	55.10		
	85	17	5.4	35.47	120/012	120/240
	65	22	4.2	45.89		
	61	24	3.9	49.00		
	56	26	3.6	53.33		
	50	29	3.2	60.15		
	47	30	3.1	63.22	120/013	120/240
	40	36	2.6	75.08		
	34	43	2.2	89.17		
	27	54	1.7	113.05		
	22	64	1.5	134.27		
	17	83	1.1	173.72		
	15	97	1.0	202.16		
	11	125	0.8	261.57		
	10	134	0.7	304.00		
	7.6	134	0.7	393.33		
	6.8	134	0.7	443.59		
	33	43	3.6	90.29	120/023	120/240
	26	55	2.8	114.46		
	22	65	2.4	135.95		
	17	84	1.9	175.89		
	15	98	1.6	204.69		
	11	127	1.2	264.84		
	10	147	1.1	307.80		
	7.5	191	0.8	398.25		
	6.7	215	0.7	449.14		
	17	83	2.8	174.26	120/033	120/240
	13	108	2.2	225.47		
	11	125	1.9	262.05		
	9.2	156	1.5	325.79		
	7.9	181	1.3	378.64		
	7.0	204	1.1	427.03		
	11	125	3.1	262.05	120/043	120/240
	9.2	156	2.5	325.79		
	7.9	181	2.2	378.64		
	7.0	204	1.9	427.03		
250						
(3000 min ⁻¹)	596	3.8	8.1	5.03	180/002	120/240
	492	4.7	6.7	6.10		
	401	5.7	5.4	7.49		
	334	6.9	5.7	8.99		
	295	7.8	5.0	10.16		
	249	9.2	4.2	12.07		
	224	10	5.4	13.40		
	198	12	4.8	15.14		
	165	14	4.0	18.17		
	139	17	3.3	21.58		
	128	18	3.1	23.51		
	120	19	2.9	25.10		
	111	21	2.7	27.08		
	92	25	2.2	32.49		
	71	32	1.7	42.04		
	67	34	1.6	44.89		
	61	37	1.5	48.86		
	127	18	5.2	23.56	180/012	120/240
	101	23	4.2	29.56		
	85	27	3.5	35.47		
	65	35	2.7	45.89		
	61	37	2.5	49.00		
	56	41	2.3	53.33		
	50	46	2.0	60.15		
	47	47	2.0	63.22	180/013	120/240
	40	56	1.7	75.08		
	34	67	1.4	89.17		
	27	85	1.1	113.05		
	22	100	0.9	134.27		
	17	130	0.7	173.72		
	15	134	0.7	202.16		
	11	134	0.7	261.57		
	10	134	0.7	304.00		
	7.6	134	0.7	393.33		
	6.8	134	0.7	443.59		
	65	35	4.4	46.46	180/022	120/240
	60	38	4.1	49.61		
	56	41	3.8	54.00		
	49	47	3.4	60.90		

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

**NDCMG****Motoriduttori CC ad ingranaggi cilindrici**
DC helical in-line gearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
-----------------------	--	------------------------	----	---	---	----------------------------------

250

(3000 min ⁻¹)	47	48	3.3	64.01	180/023	120/240
	39	57	2.7	76.02		
	33	68	2.3	90.29		
	26	86	1.8	114.46		
	22	102	1.5	135.95		
	17	132	1.2	175.89		
	15	153	1.0	204.69		
	11	198	0.8	264.84		
	10	223	0.7	307.80		
	7.5	223	0.7	398.25		
	6.7	223	0.7	449.14		

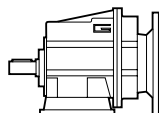
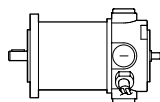
250

(3000 min ⁻¹)	41	54	4.3	72.83	180/033	120/240
	31	73	3.2	97.45		
	26	87	2.7	115.74		
	21	105	2.2	140.81		
	17	130	1.8	174.26		
	13	169	1.4	225.47		
	11	196	1.2	262.05		
	9.2	244	1.0	325.79		
	7.9	283	0.8	378.64		
	7.0	319	0.7	427.03		
	21	105	3.7	140.81	180/043	120/240
	17	130	3.0	174.26		
	13	169	2.3	225.47		
	11	196	2.0	262.05		
	9.2	244	1.6	325.79		
	7.9	283	1.4	378.64		
	7.0	319	1.2	427.03		

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

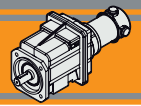
NOTE: for continuous or highly intermittent duty, please contact
our technical service

Motori applicabili**IEC Motor adapters**

		ND	
		120.120 120.240	180.120 180.240
CMG	002	5.03 - 55.10	
	012	3.82 - 60.15	
	013	63.22 - 443.59	
	022	3.66 - 60.9	
	023	64.01 - 449.14	
	033	72.83 - 427.03	
	043	72.83 - 427.03	

5.03 - 55.10

Rapporti di riduzione i
Ratio i

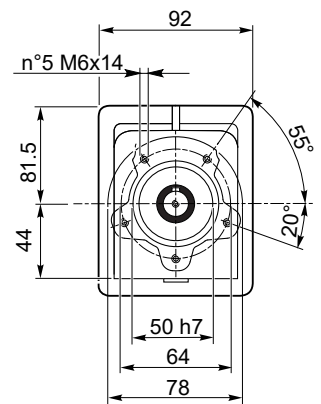
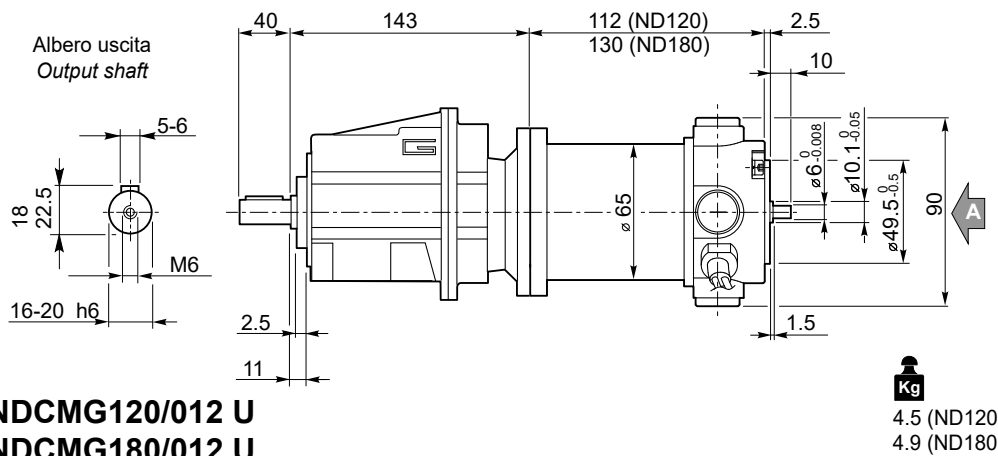


Dimensioni

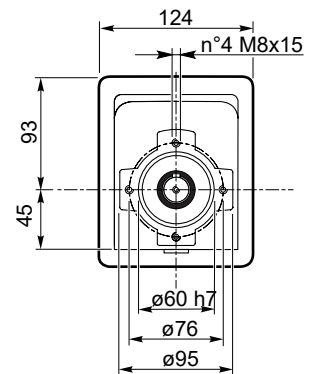
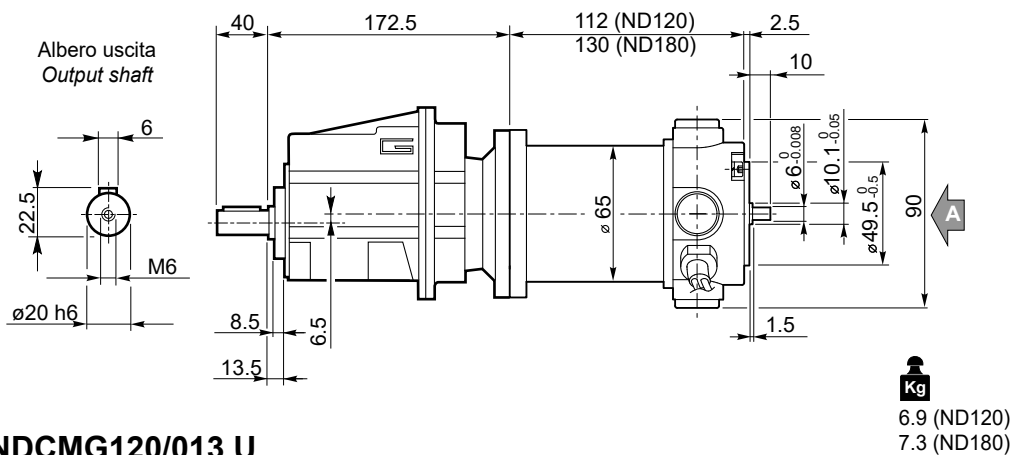
Dimensions

NDCMG..U

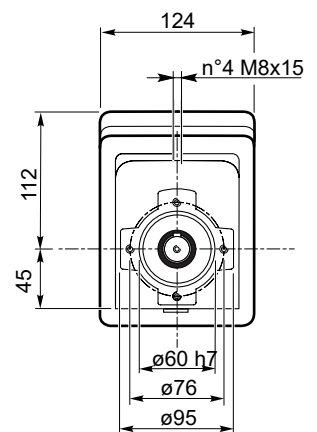
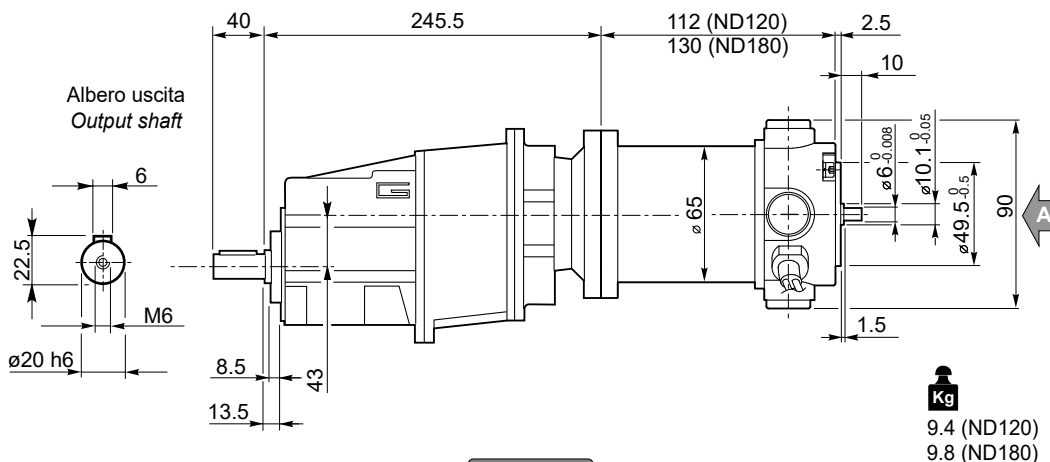
NDCMG120/002 U
NDCMG180/002 U



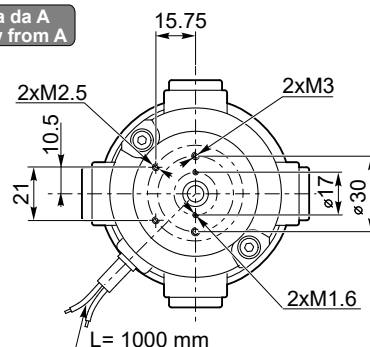
NDCMG120/012 U
NDCMG180/012 U



NDCMG120/013 U
NDCMG180/013 U



Vista da A
View from A



NDCMG...H



NDCMG...F



NDCMG...H/F

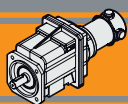
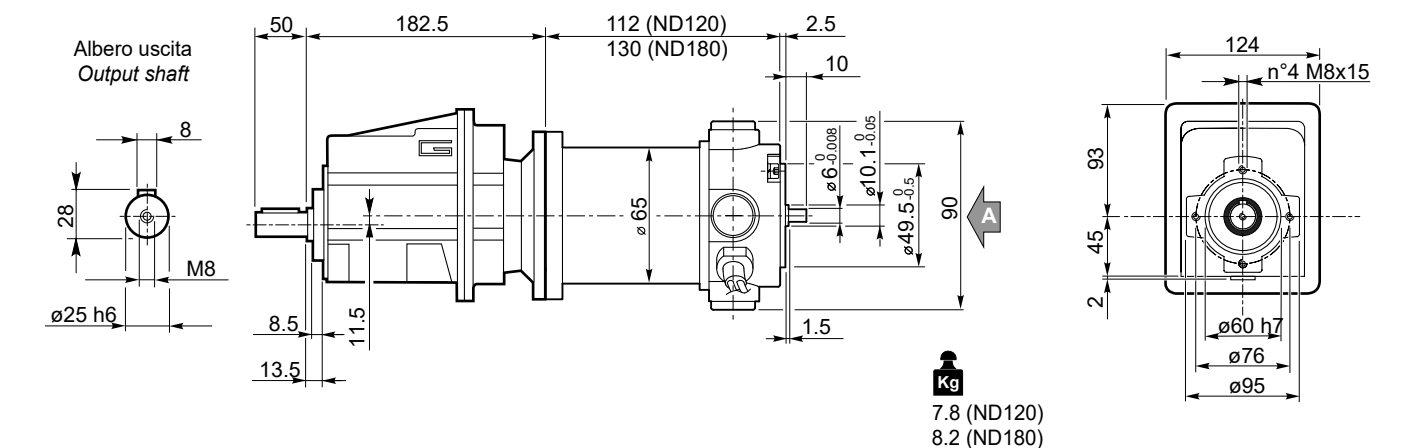
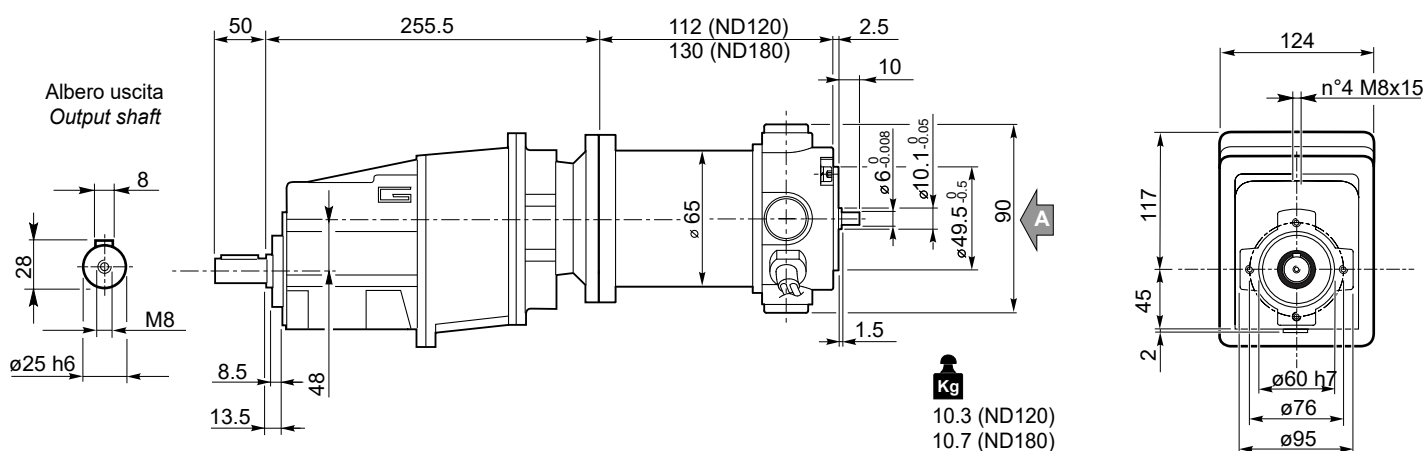
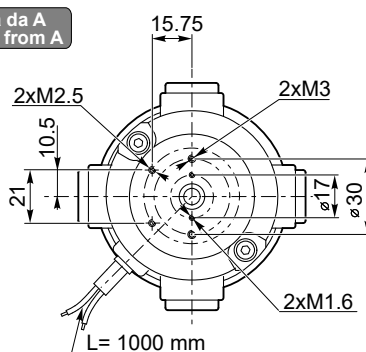


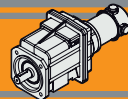
Freno / Brake



Encoder



**NDCMG****Motoriduttori CC ad ingranaggi cilindrici**
DC helical in-line gearmotors**Dimensioni****Dimensions****NDCMG..U****NDCMG120/022 U****NDCMG180/022 U****NDCMG120/023U****NDCMG180/023 U****Vista da A**
View from A**NDCMG...H****NDCMG...F****NDCMG...H/F****Freno / Brake****Encoder**

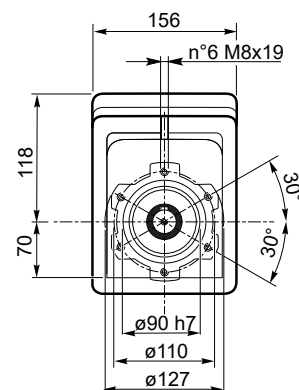
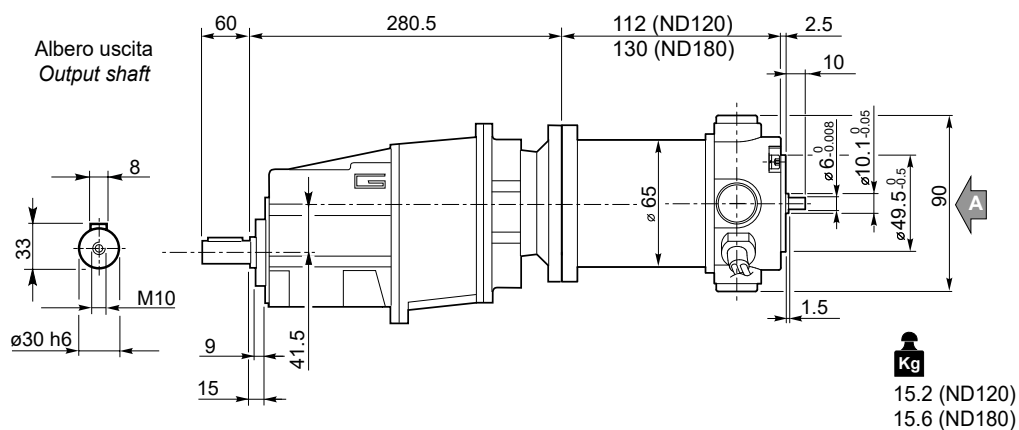


Dimensioni

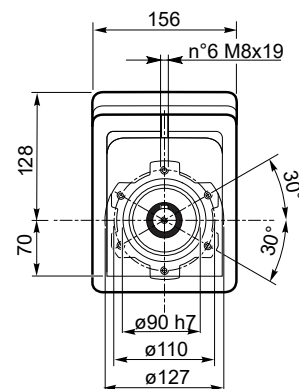
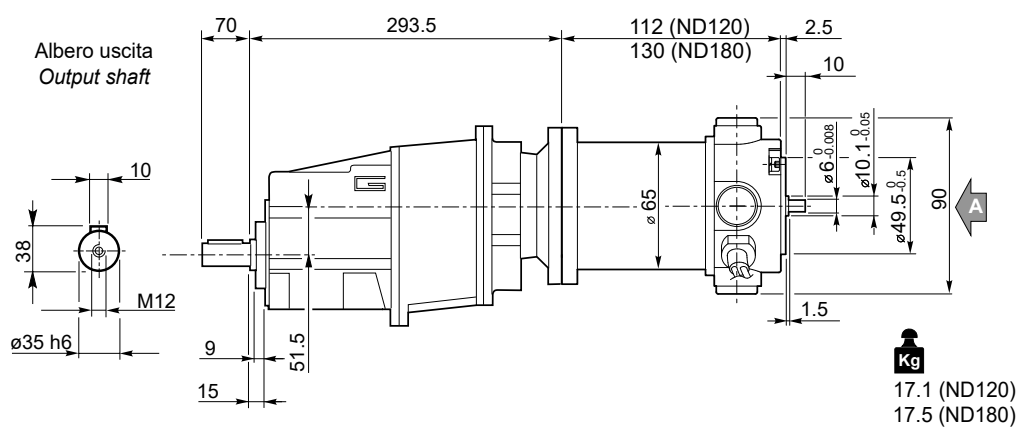
Dimensions

NDCMG..U

NDCMG120/033 U
NDCMG180/033 U



NDCMG120/043 U
NDCMG180/043 U



NDCMG...H



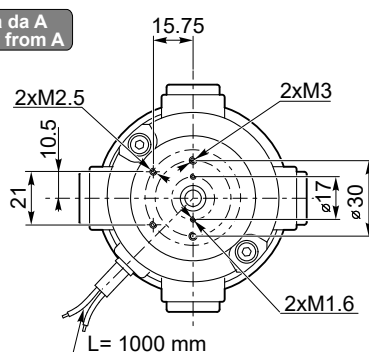
NDCMG...F



NDCMG...H/F



Vista da A
View from A

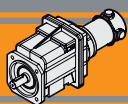


Freno / Brake



Encoder





NDCMG

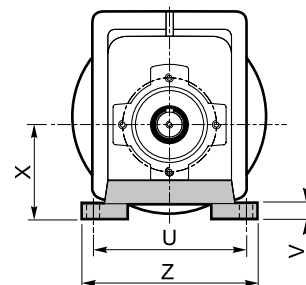
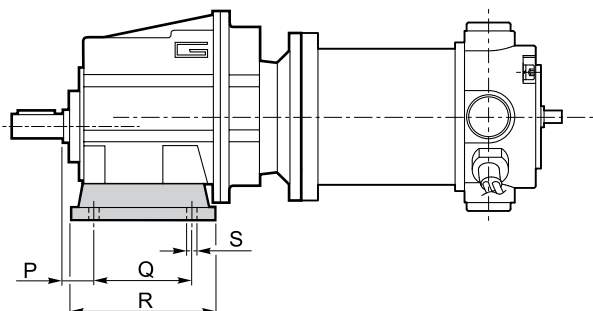
Motoriduttori CC ad ingranaggi cilindrici
DC helical in-line gearmotors

Dimensioni

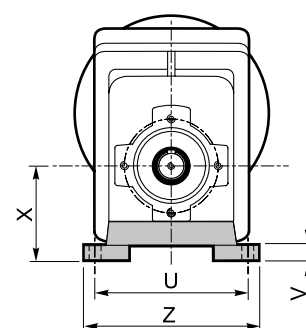
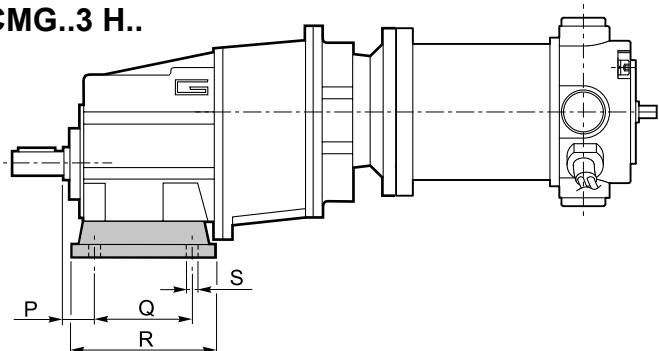
Dimensions

NDCMG..H

NDCMG..2 H..



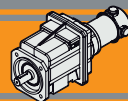
NDCMG..3 H..



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
012 013	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
022 023	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
033	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
043	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6

Preferenziale / Preferred

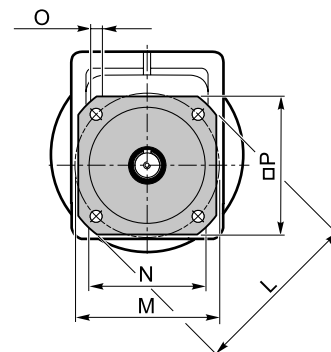
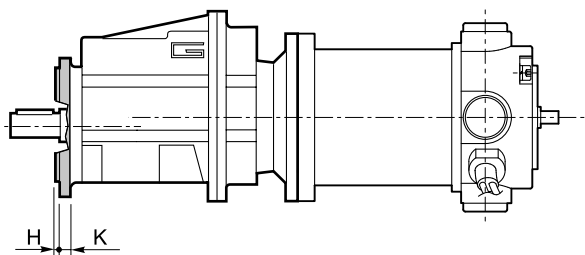


Dimensioni

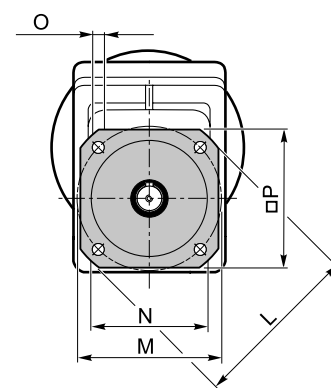
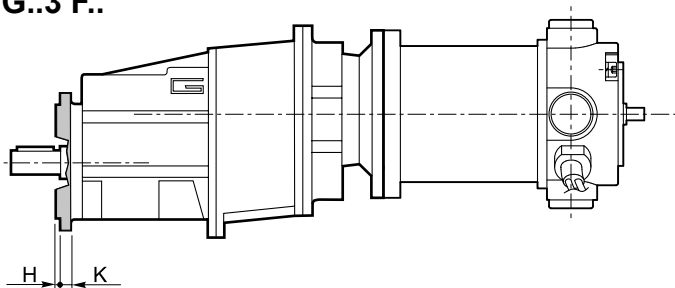
Dimensions

NDCMG..F

NDCMG..2 F..



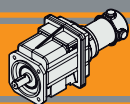
NDCMG..3 F..



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
012 013	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
022 023	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
033	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9
043	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9

NDCMG

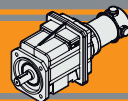
**NDCMG****Motoriduttori CC ad ingranaggi cilindrici**
DC helical in-line gearmotors**Dimensioni****Dimensions**

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	•	•	•				
012 013	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
022 023	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
033	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70			160												
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
043	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70			160												
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	

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
012 013	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
022 023	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
033	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	150	14	215	F250	2.9
043	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	150	14	215	F250	2.9

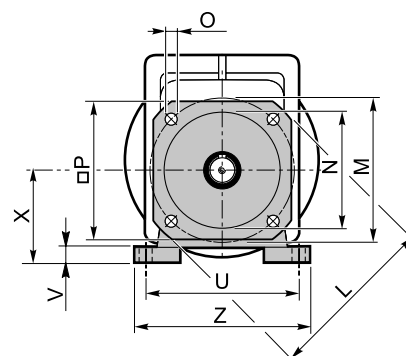
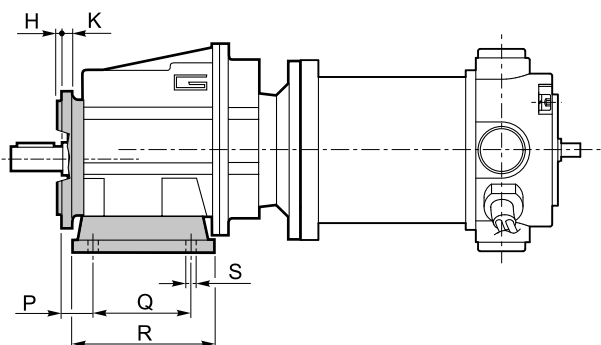


Dimensioni

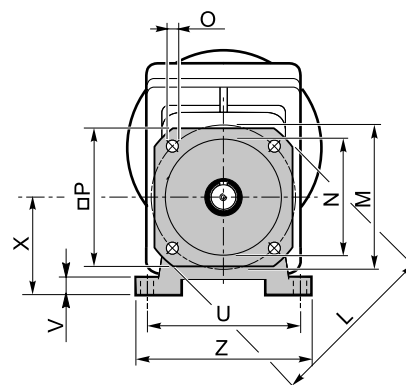
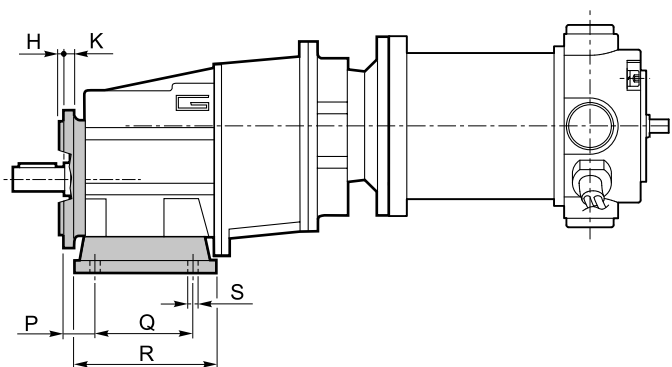
Dimensions

NDCMG..H../F..

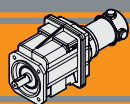
NDCMG..2 H../F..



NDCMG..3 H../F..



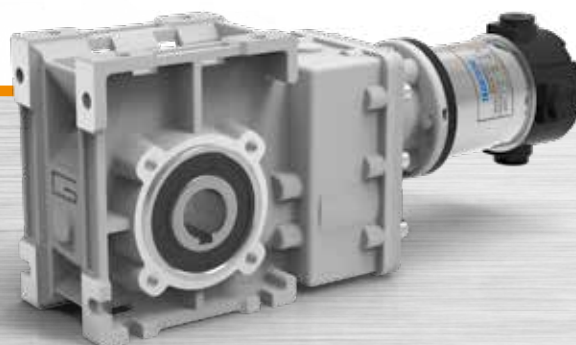
NDCMG

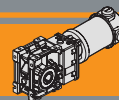


Note



Motoriduttori CC ad assi ortogonali DC helical bevel gearmotors

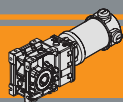




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Sensi di rotazione	<i>Direction of rotation</i>	D2
Simbologia	<i>Symbols</i>	D3
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NDCMB

Motoriduttori CC ad assi ortogonali DC Helical bevel gearmotors

Caratteristiche tecniche

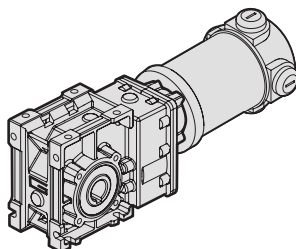
Technical features

Le caratteristiche principali dei motoriduttori CC ad assi ortogonali a magneti permanenti in neodimio NDCMB sono:

The main features of NDCMB neodymium permanent magnets DC helical bevel gearmotors range are:

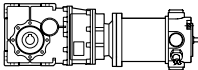
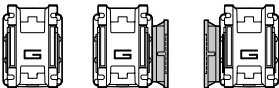
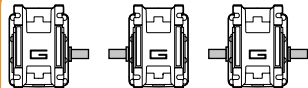
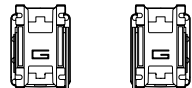
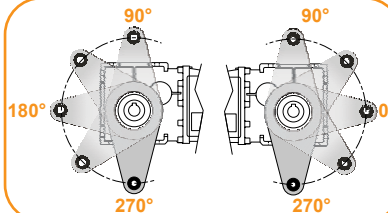
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 160 a 250W S2
- Magneti in Neodimio
- Carcasce dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati

- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 160 to 250W S2
- Neodymium magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground helical gears



Designazione

Classification

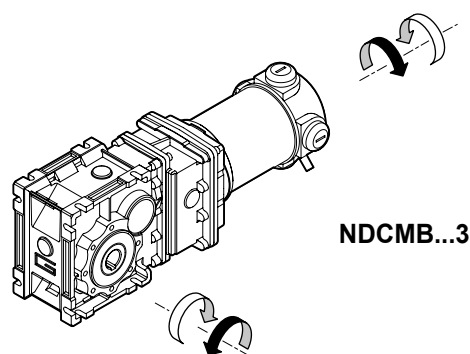
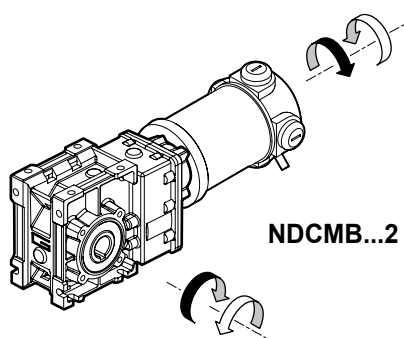
MOTORIDUTTORE / GEARMOTOR									
NDCMB	120/402		U	9.2	D20	SZDX	BRSX	90	240
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version
	120/402	180/402	U FD FS FLD FLS FBD FBS	Vedere tabella	Vedere tabella	SZDX SZSX DZ	BRDX BRSX	0°	120
	120/502	180/502		90°					
	120/633	180/633		180°	240				
				270°					
Versione Riduttore Gearbox Version			Albero di uscita Output shaft		Braccio di reazione (*) Torque arm		Angolo (*) Angle		
									
U FD FLD FLS FBD FBS			SZDX SZSX DZ		BRDX BRSX				

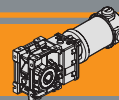
(*) NOTA:
Il braccio di reazione viene fornito smontato.

NOTE:
The torque arm will be supplied not assembled

Sensi di rotazione

Direction of rotation





Simbologia

Symbols

n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[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 in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
sf		Fattore di servizio / <i>Service factor</i>
A_2	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
R_2	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>

Lubrificazione

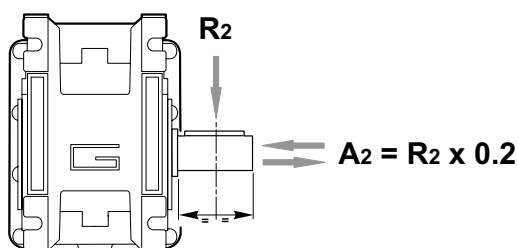
Lubrication

Tutti i riduttori nelle taglie 402 e 502 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 and 502 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Carichi radiali

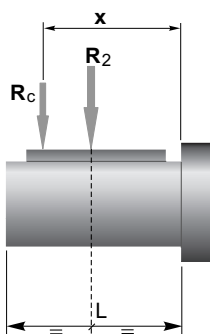
Radial loads



n_2 [min ⁻¹]	R_2 [N]		
	CMB 402	CMB 502	CMB 633
400	905	1116	1835
300	996	1228	2020
200	1141	1406	2312
170	1204	1484	2441
140	1414	1743	2604
100	1582	1949	2913
90	1638	2019	3321
60	2047	2490	3801
40	2524	3029	4492
30	2778	3334	5159
20	3180	3816	5906
15	3500	4200	6500
10	3500	4200	6500

Quando il carico radiale risultante non è applicato sulla mezzes-
soria 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:*

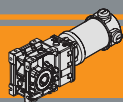


	CMB 402	CMB 502	CMB 633
a	86	104	118
b	66	79	93
R_{2MAX}	3500	4200	6500

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

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

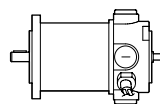
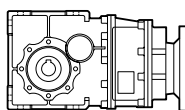
$$R \leq R_c$$

**NDCMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	485	3.0	10.5	6.18	120/402	120/240	(3000 min ⁻¹)	485	4.6	6.7	6.18	180/402	120/240
	401	3.6	8.6	7.49				401	5.6	5.5	7.49		
	326	4.4	7.0	9.20				326	6.9	4.5	9.20		
	254	5.7	6.2	11.83				254	8.8	4.0	11.83		
	240	6.0	5.9	12.48				240	9.3	3.7	12.48		
	202	7.1	4.9	14.83				202	11	3.2	14.83		
	170	8.4	4.1	17.63				170	13	2.7	17.63		
	161	8.9	4.8	18.60				161	14	3.1	18.60		
	134	10	4.0	22.33				134	17	2.6	22.33		
	125	11	3.8	23.91				125	18	2.4	23.91		
	104	14	3.7	28.89				104	22	2.4	28.89		
	97	15	3.5	30.84				97	23	2.2	30.84		
	89	16	3.2	33.57				89	25	2.0	33.57		
	84	17	3.0	35.63				84	27	1.9	35.63		
	70	21	2.5	42.75				70	32	1.6	42.75		
	54	27	1.9	55.31				54	41	1.2	55.31		
	51	29	1.8	59.06				51	44	1.2	59.06		
	47	31	1.7	64.29				47	48	1.1	64.29		
	41	35	1.5	72.50				41	54	0.9	72.50		
	70	21	4.8	42.75	120/502	120/240		134	17	5.1	22.33	180/502	120/240
	54	27	3.7	55.31				125	18	4.8	23.91		
	51	28	3.5	59.06				104	22	4.5	28.89		
	47	31	3.2	64.29				97	23	4.2	30.84		
	41	35	2.8	72.50				89	25	3.9	33.57		
	41	35	5.5	73.96	120/633	120/240		84	27	3.7	35.63	180/633	120/240
	38	38	5.2	78.58				70	32	3.1	42.75		
	32	45	4.4	93.33				54	41	2.4	55.31		
	21	67	2.9	140.52				51	44	2.2	59.06		
	17	87	2.2	181.81				47	48	2.0	64.29		
	14	101	1.9	211.31				41	54	1.8	72.50		
	13	114	1.7	238.31				52	43	4.5	57.93		
								49	46	4.2	61.63		
								41	55	3.5	73.96		
								38	59	3.3	78.58		
								32	70	2.8	93.33		
								21	105	1.9	140.52		
								17	136	1.4	181.81		
								14	158	1.2	211.31		
								13	178	1.1	238.31		

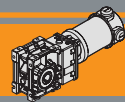
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Motori applicabili**Motor adapters**

		ND	
		120.120 120.240	180.120 180.240
CMB	402	6.18 - 72.50	
	502	6.18 - 72.50	
	633	6.58 - 238.31	

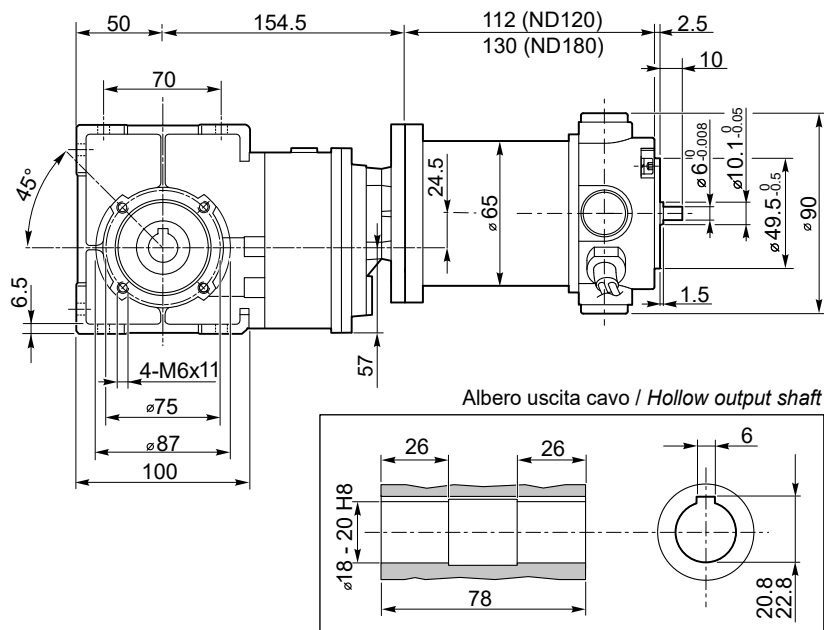
Rapporti di riduzione i
Ratio i



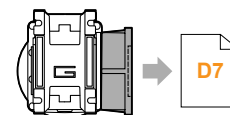
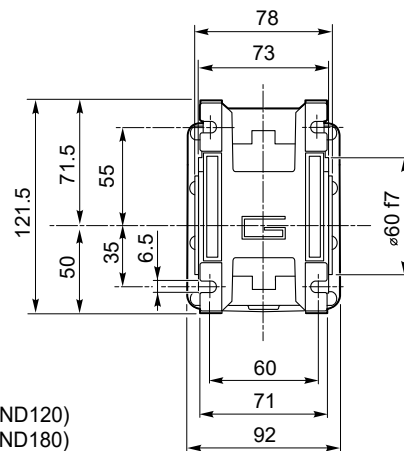
Dimensioni

Dimensions

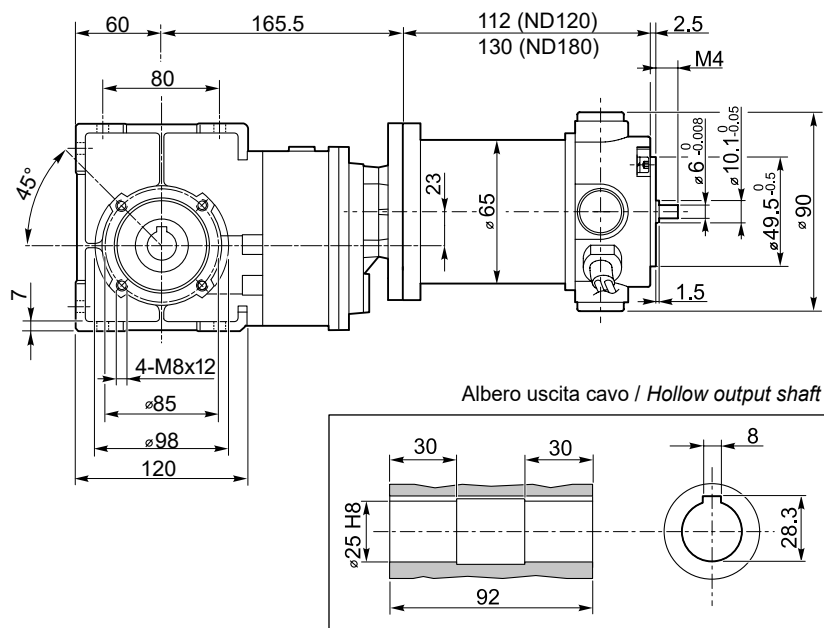
NDCMB120/402 U
NDCMB180/402 U



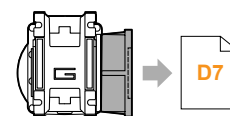
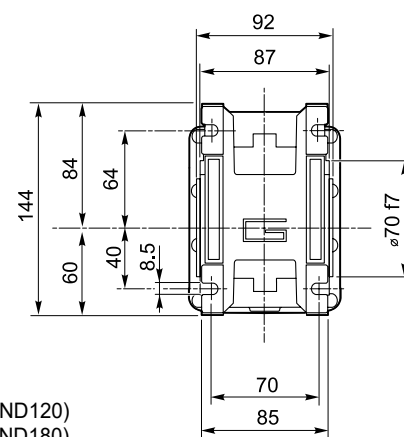
5.0 (ND120)
5.4 (ND180)



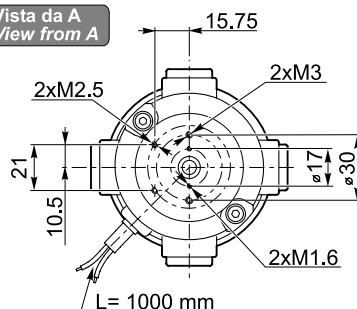
NDCMB120/502 U
NDCMB180/502 U



6.3 (ND120)
6.7 (ND180)



Vista da A
View from A

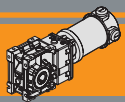


Freno / Brake

B9

Encoder

B9



NDCMB

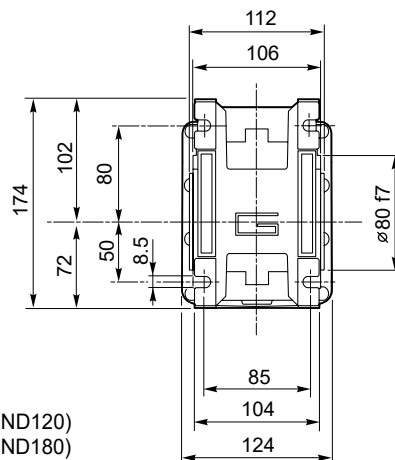
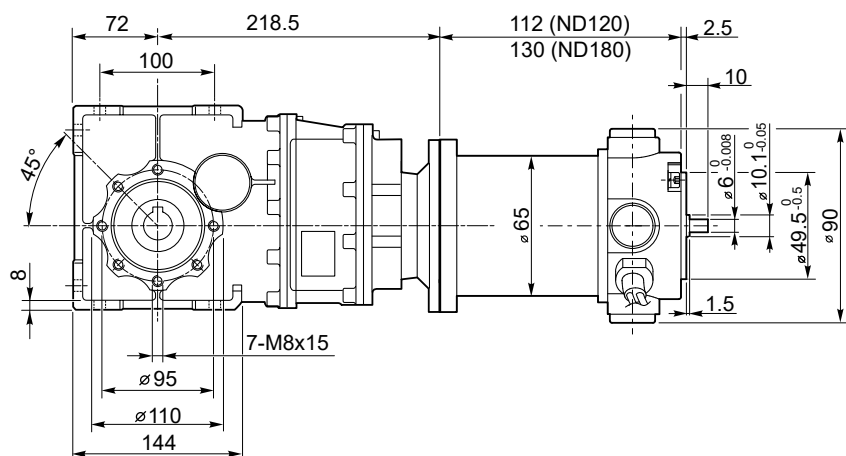
Motoriduttori CC ad assi ortogonali
DC Helical bevel gearmotors

Dimensioni

Dimensions

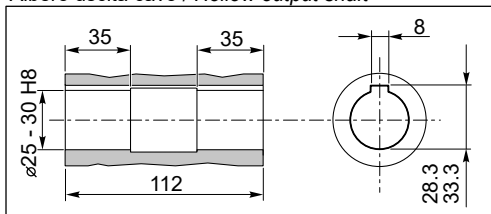
NDCMB120/633 U

NDCMB180/633 U

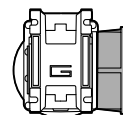
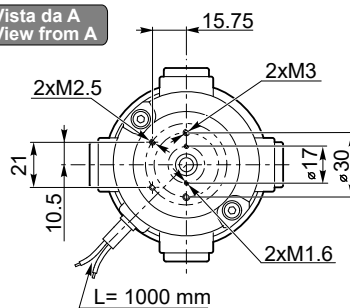


11.1 (ND120)
11.5 (ND180)

Albero uscita cavo / Hollow output shaft



Vista da A
View from A



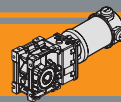
D7

Freno / Brake

B9

Encoder

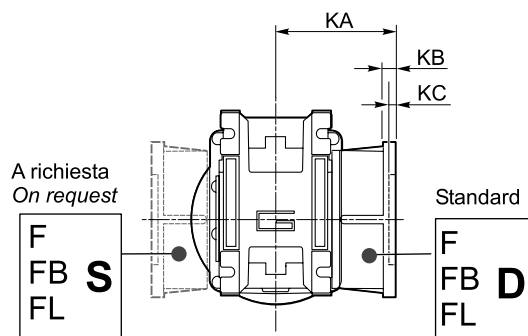
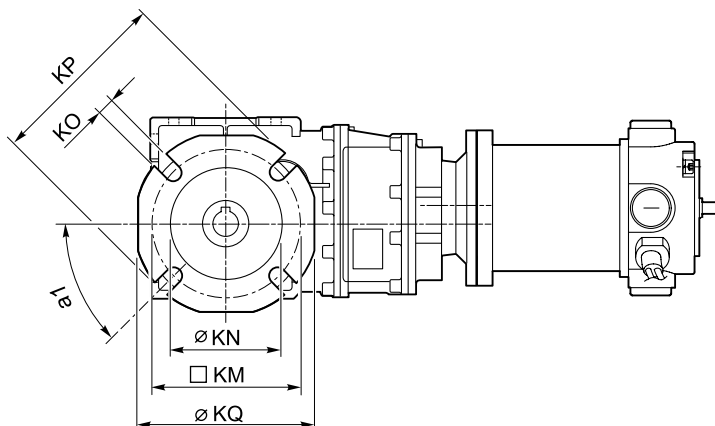
B9



Dimensioni

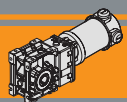
Dimensions

NDCMB.../... F... Flange uscita / Output flanges



NDCMB

	Flange uscita / Output flanges																										
	F									FL									FB								
CMB	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	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
502	45°	90	9	5	90-110	70	11	125	110	45°	120	9	5	90-110	70	11	125	110	45°	89	9	5	130-145	110	9.5	160	132
633	45°	82	10	6	150 - 160	115	11	180	142	45°	112	10	8	150 - 160	115	11	180	142	45°	98	11	5	165	130	11	200	160

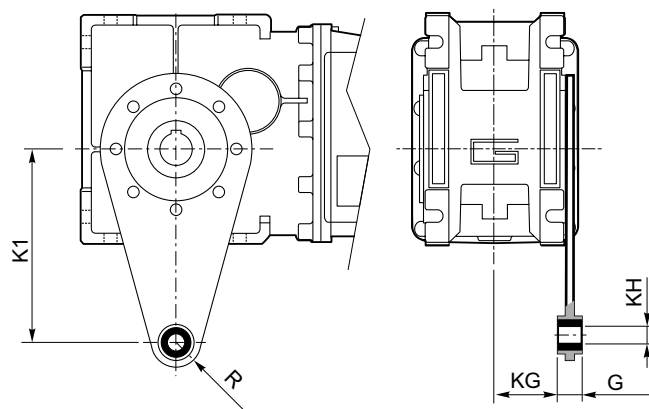
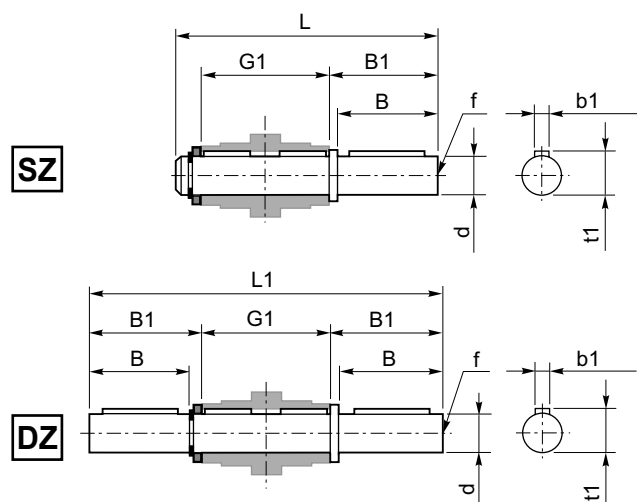


NDCMB

Motoriduttori CC ad assi ortogonali DC Helical bevel gearmotors

Accessori

Accessories



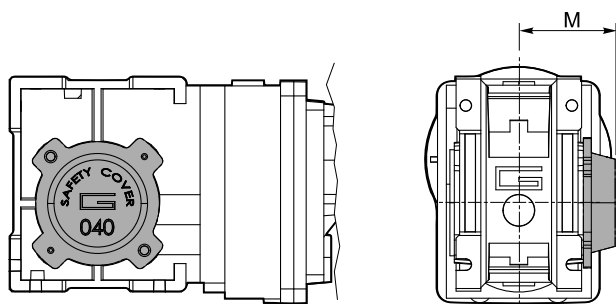
Albero lento / Output shaft

CMB	d h7	B	B1	G1	L	L1	f	b1	t1
402	18	40	43	78	128	164	M6	6	20.5
502	25	50	53.5	92	153	199	M10	8	28
633	25	50	53.5	112	173	219	M10	8	28

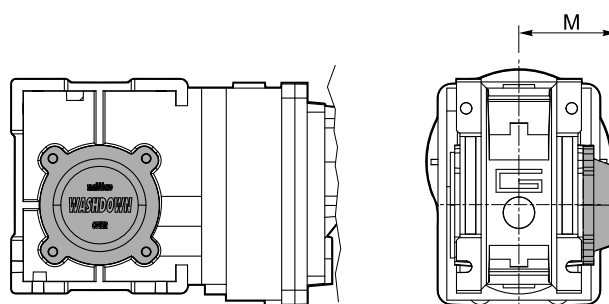
Braccio di reazione / Torque arm

CMB	K1	G	KG	KH	R
402	100	14	31	10	18
502	100	14	38	10	18
633	150	14	47.5	10	18

SC - Safety cover



WD - Washdown cover



CMB	M
402	54.5
502	62.5
633	73

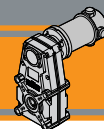
CMB CMBIS	M
402	55.5
502	63.5
633	71.5



Neodymium

Motoriduttori CC pendolari
DC helical parallel gearmotors

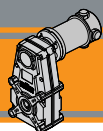




Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	E2
Designazione	<i>Classification</i>	E2
Sensi di rotazione	<i>Direction of rotation</i>	E3
Simbologia	<i>Symbols</i>	E3
Lubrificazione	<i>Lubrication</i>	E3
Carichi radiali	<i>Radial loads</i>	E4
Dati tecnici	<i>Technical data</i>	E5
Motori applicabili	<i>Motor adapters</i>	E5
Dimensioni	<i>Dimensions</i>	E6

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*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***



NDFT

Motoriduttori CC pendolari DC Helical parallel gearmotors

Caratteristiche tecniche

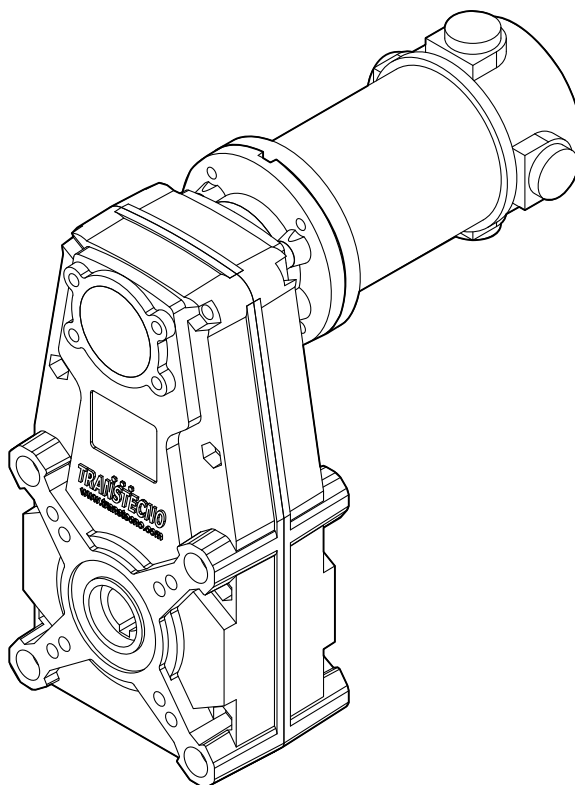
I motoriduttori CC pendolari a magneti permanenti in neodimio NDFT hanno le seguenti caratteristiche principali:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250W S2
- Magneti in Neodimio
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali.

Technical features

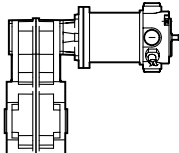
NDFT neodymium permanent magnets DC helical parallel gearmotors range has the following main features:

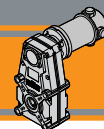
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250W S2
- Neodymium magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- helical gears.



Designazione

Classification

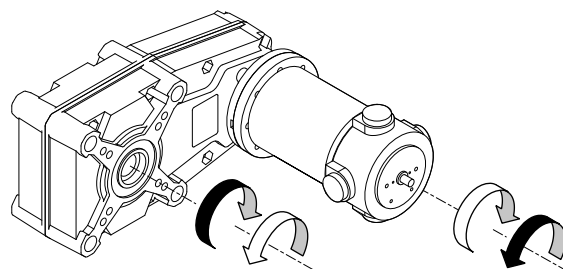
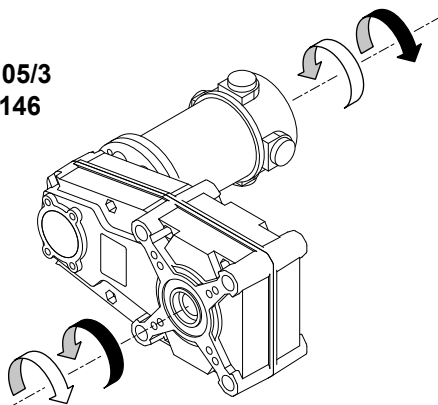
MOTORIDUTTORE / GEARMOTOR						
NDFT	120/146		U	60.63	O20	240
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Versione Motore Motor Version
			U...	Vedere tabella	Vedere tabella	120
				See tables	See tables	240
NDFT	120/105/3 120/105/4 120/146	180/105/3 180/146				



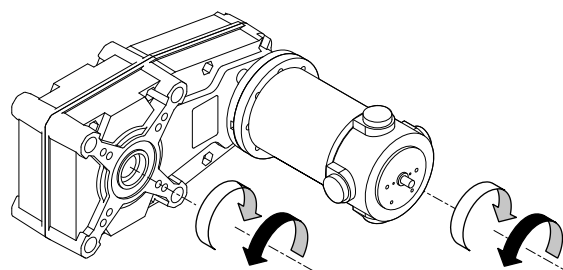
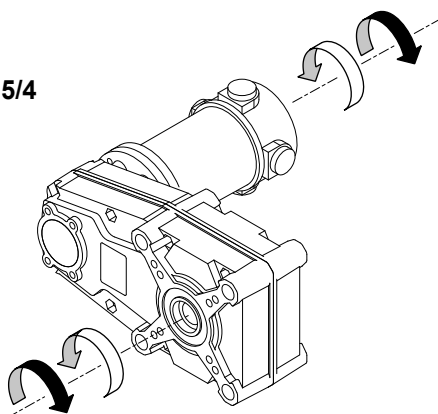
Sensi di rotazione

Direction of rotation

FT105/3
FT146



FT105/4



NDFT

Simbologia

Symbols

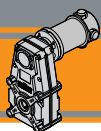
n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[min ⁻¹]	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	[kW]	Potenza in entrata / <i>Input power</i>
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
P_{n1}	[kW]	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 P_{n1}</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

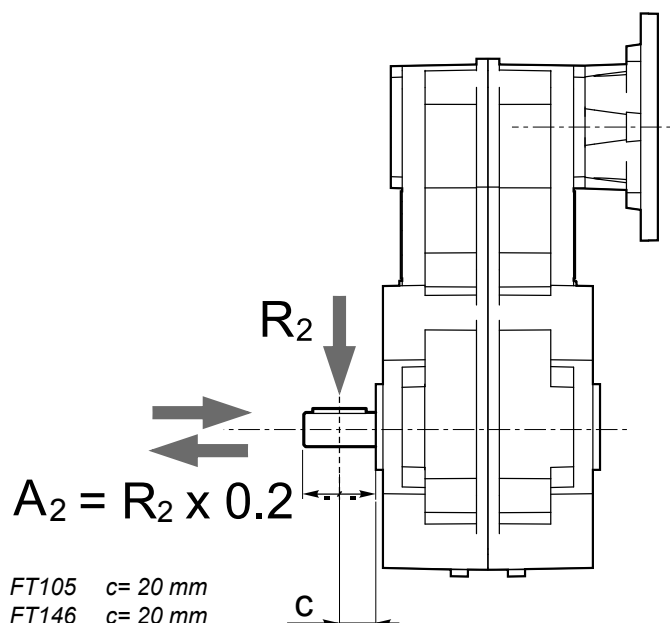
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

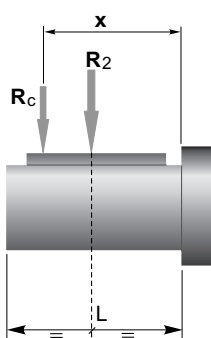
Radial loads



n_2 [min ⁻¹]	R_2 [N]	
	FT105	FT146
70	1500	2500
40	1700	2700
30	1850	2850
20	2000	3000
10	2000	3000
5	2000	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:

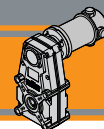


	FT105	FT146
a	82	82,5
b	62	62,5
R_{2MAX}	2000	3000

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

$$R \leq R_c$$

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



Dati tecnici

Technical data

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	146	10	3.2	20.57	120/105/3	120/240	(3000 min ⁻¹)	146	15	2.0	20.57	180/105/3	120/240
	90	16	2.4	33.32				90	25	1.6	33.32		
	68	21	2.4	44.36				68	33	1.5	44.36		
	55	26	1.9	54.87				55	41	1.2	54.87		
	42	34	1.5	71.84				42	54	0.9	71.84		
	39	37	1.4	77.07				39	58	0.9	77.07		
	34	43	1.2	88.87				34	66	0.8	88.87		
	24	60	0.8	124.81									
	17	86	0.6	181.35				160	14	4.4	18.75	180/146	120/240
	13	86	0.6	224.32				131	17	5.0	22.89		
	9.5	86	0.6	315.05				115	20	3.2	26.17		
					120/105/4	120/240		106	21	3.0	28.26		
	8.1	86	0.6	368.19				86	26	3.0	35.07		
	5.6	86	0.6	534.98				76	30	2.6	39.44		
	4.5	86	0.6	661.76				65	35	2.2	46.44		
	3.2	86	0.6	929.40				57	40	2.0	52.86		
					120/146	120/240		49	45	1.9	60.63		
	160	9	7.0	18.75				43	52	1.6	70.00		
	131	11	5.7	22.89				41	55	1.5	74.02		
	115	13	5.0	26.17				35	63	1.4	84.63		
	106	14	4.6	28.26				31	72	1.2	95.61		
	86	17	4.6	35.07				26	85	1.0	113.40		
	76	19	4.1	39.44				22	100	0.9	133.45		
	65	22	3.5	46.44				20	112	0.8	150.18		
	57	25	3.1	52.86				19	120	0.8	160.43		
	49	29	3.0	60.63				17	134	0.7	178.83		
	43	34	2.6	70.00									
	41	35	2.4	74.02									
	35	41	2.1	84.63									
	31	46	1.9	95.61									
	26	54	1.6	113.40									
	22	64	1.3	133.45									
	20	72	1.2	150.18									
	19	77	1.2	160.43									
	17	86	1.1	178.83									
	15	94	1.0	195.85									
	13	107	0.9	223.92									
	13	113	0.8	236.83									
	10	134	0.7	300.07									
	7.5	134	0.7	397.38									

N.B.

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

N.B.

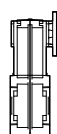
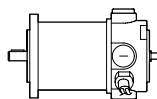
Please check that the output torque M₂ does not exceed the value in the grey areas

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Motori applicabili

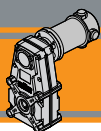
Motor adapters



		ND	
		120.120 120.240	180.120 180.240
FT	105/3	20.57 - 315.05	20.57 - 315.05
	105/4	368.19 - 929.4	368.19 - 929.4
	146	18.75 - 397.38	18.75 - 397.38

18.75 - 397.38

Rapporti di riduzione i
Ratio i

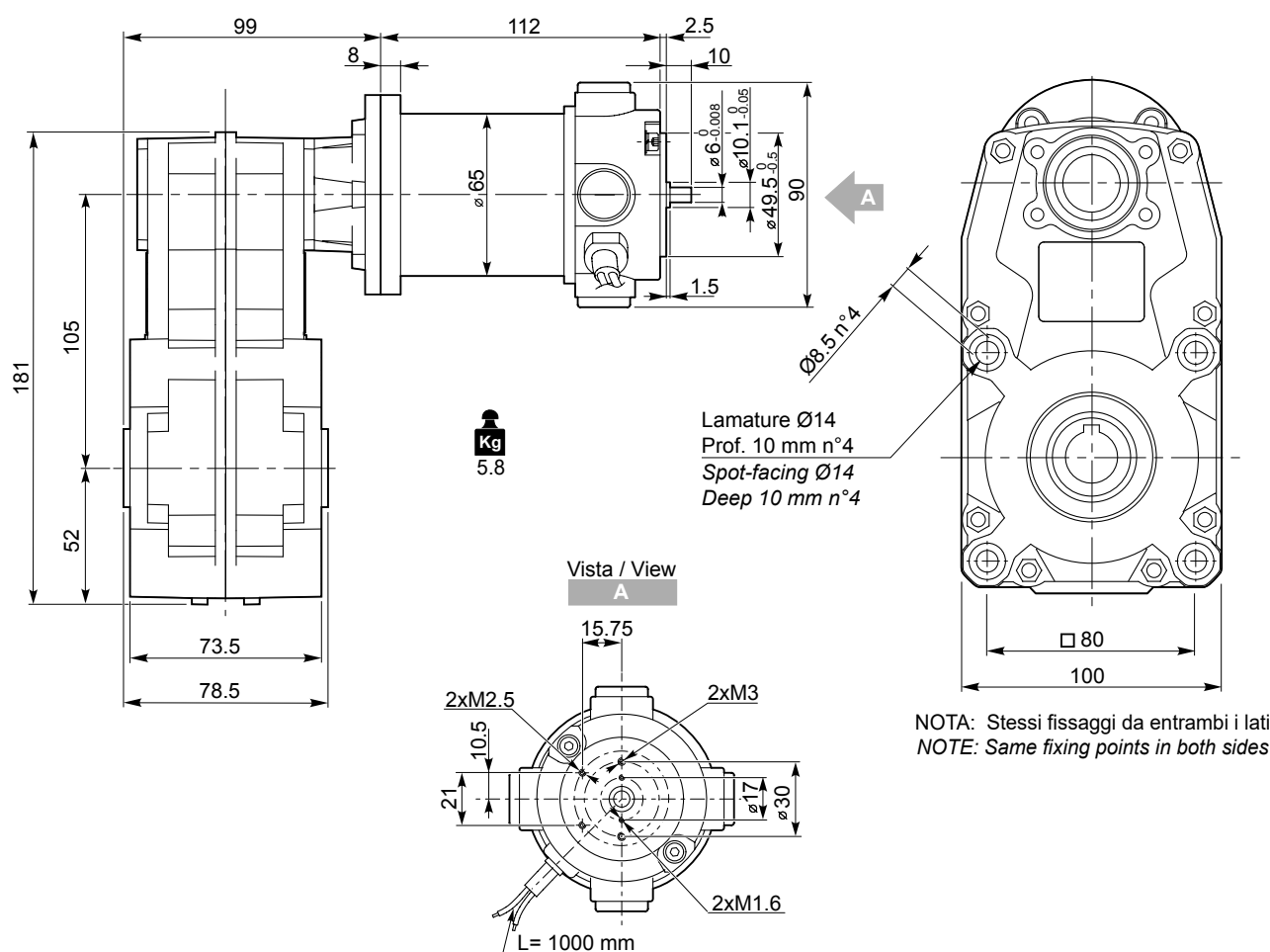


Dimensioni

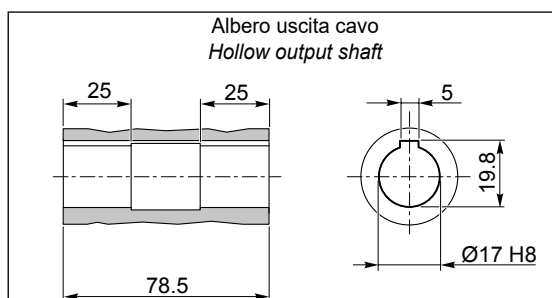
Dimensions

NDFT 120/105

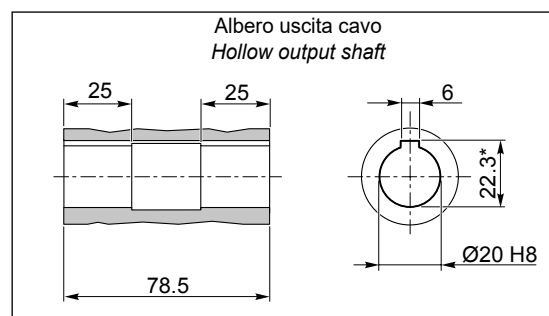
NDFT 120/105...U



O17



O20



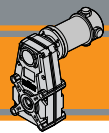
*: Sede linguetta ribassata / Special keyway

Freno / Brake

B9

Encoder

B9

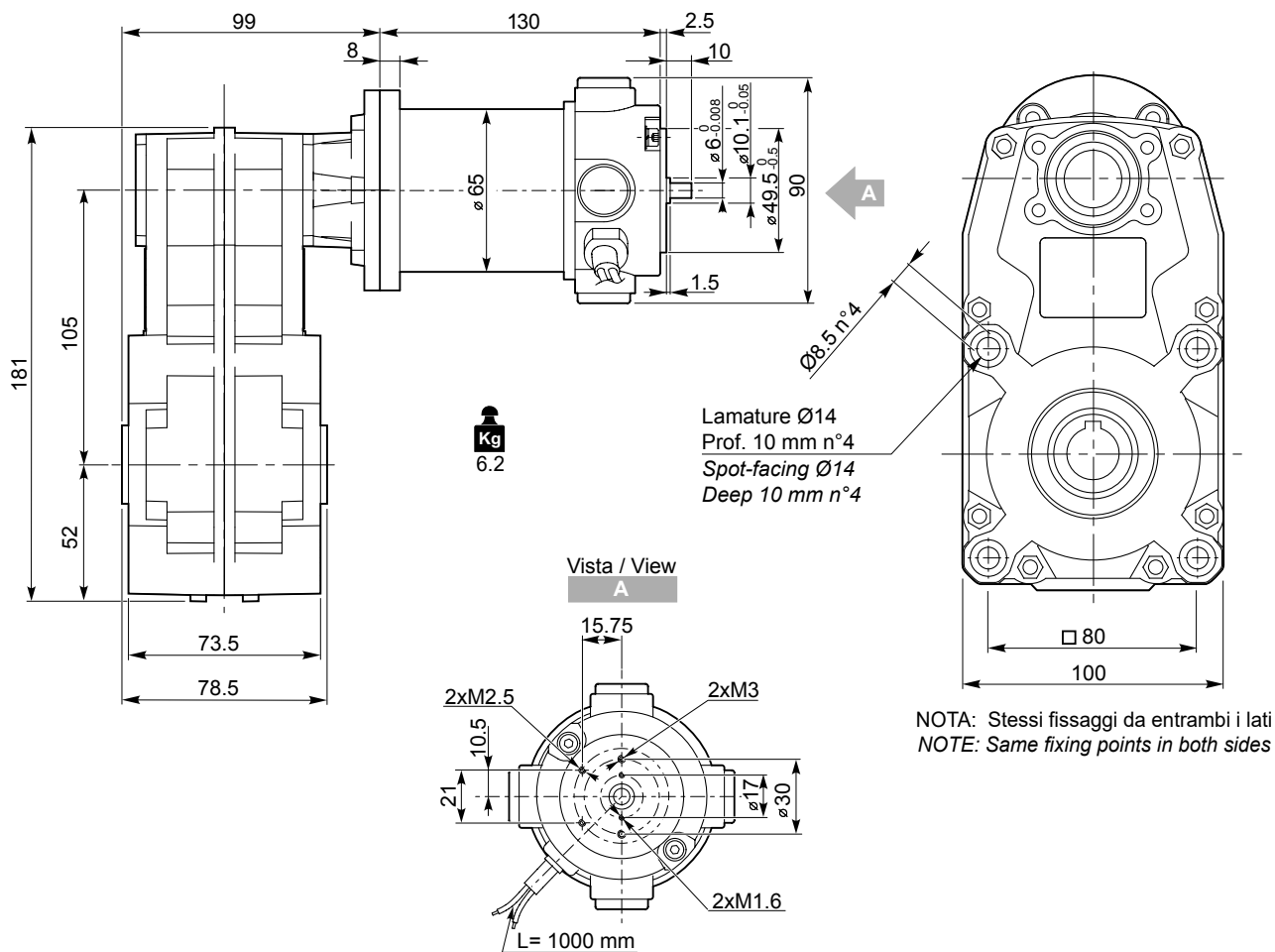


Dimensioni

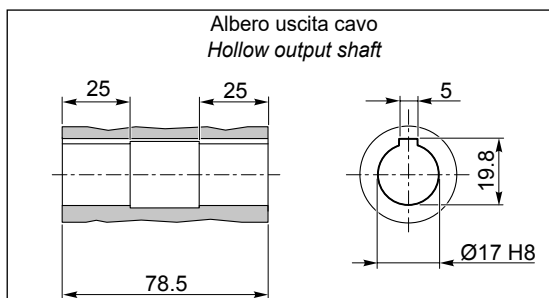
Dimensions

NDFT 180/105

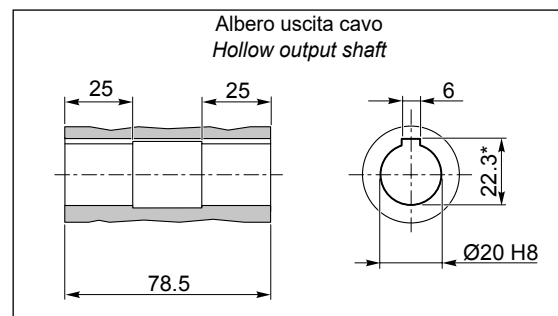
NDFT 180/105...U



O17



O20



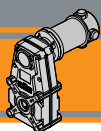
*: Sede linguetta ribassata / Special keyway

Freno / Brake



Encoder



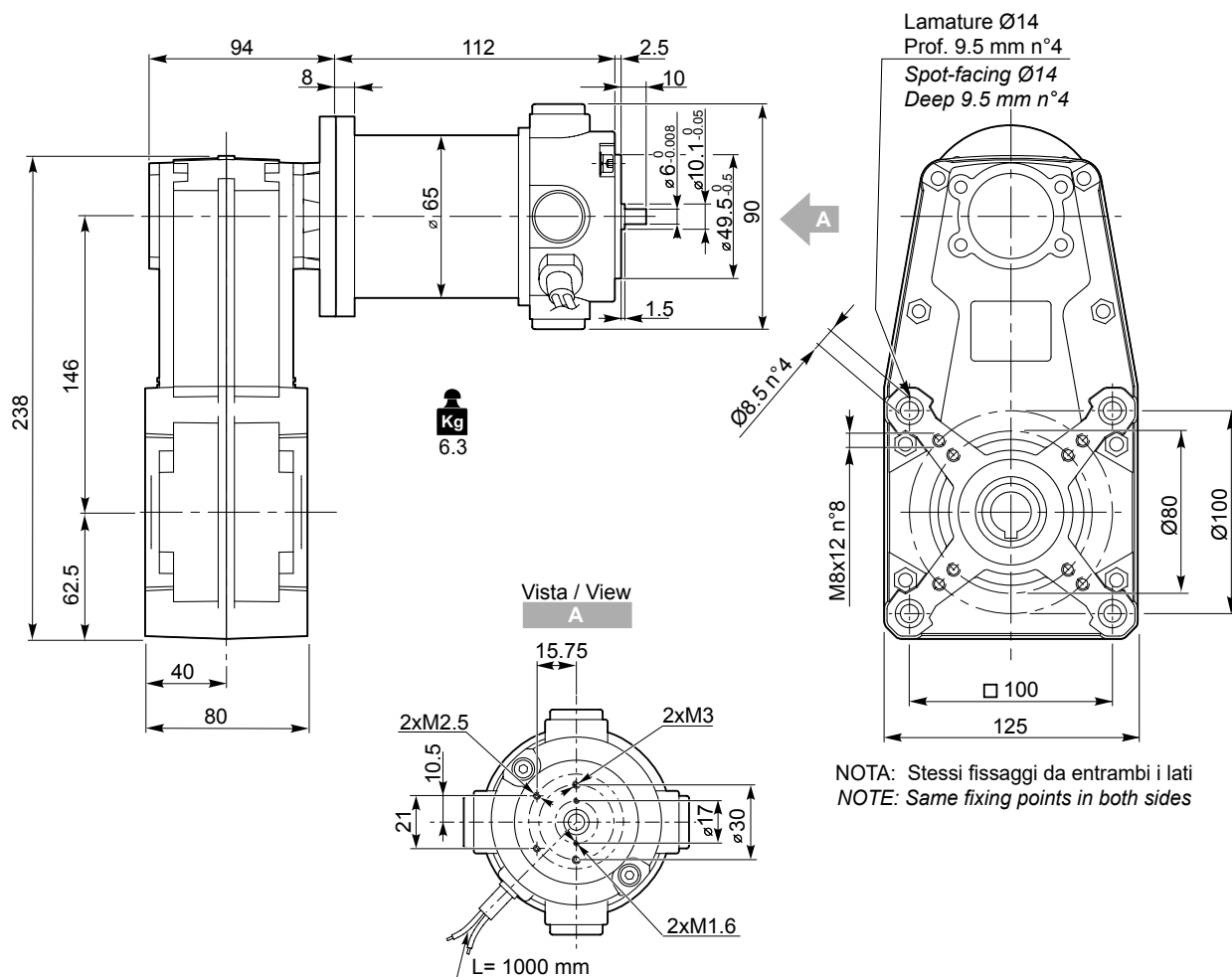


Dimensioni

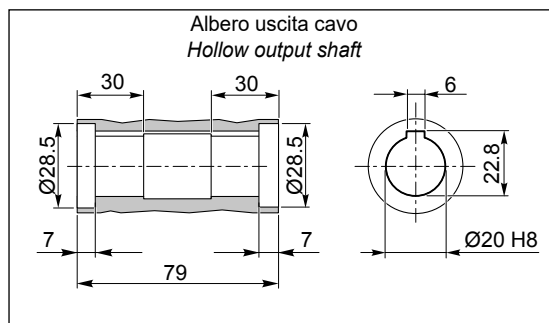
Dimensions

NDFT 120/146

NDFT 120/146...U



O20

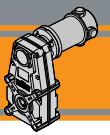


Freno / Brake

B9

Encoder

B9

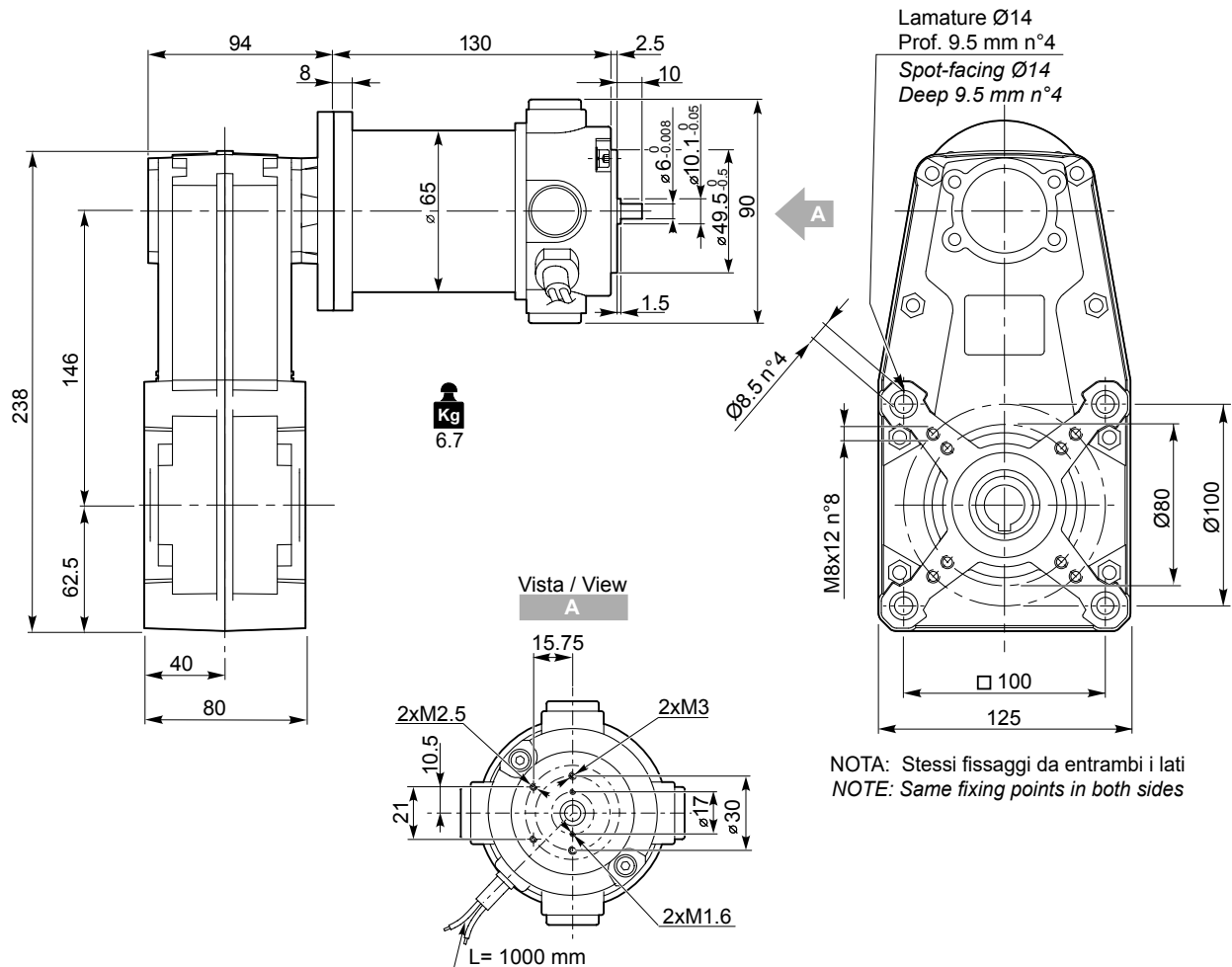


Dimensioni

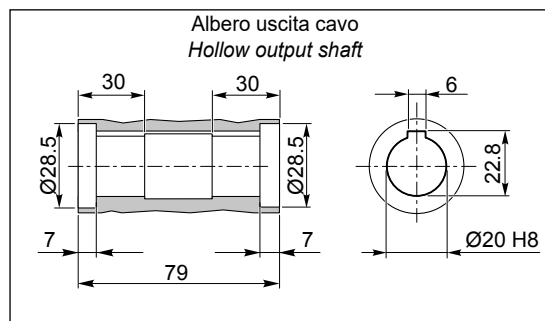
Dimensions

NDFT 180/146

NDFT 180/146...U



O20

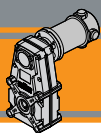


Freno / *Brake*



Encoder





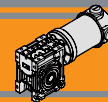
Note/Notes



Neodymium

Motoriduttori CC a vite senza fine DC wormgearmotors





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Rendimento	<i>Efficiency</i>	F4
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Opzioni	<i>Options</i>	F10
Accessori	<i>Accessories</i>	F11

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**

*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***

**NDCM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Caratteristiche tecniche****Technical features**

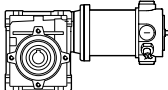
Le caratteristiche principali dei motoriduttori CC a vite senza fine a magneti permanenti in neodimio NDCM sono:

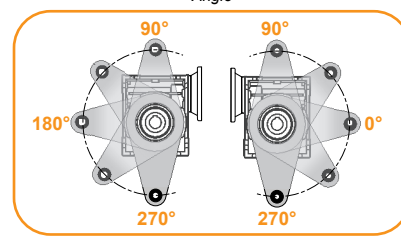
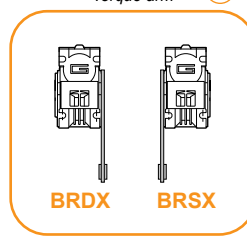
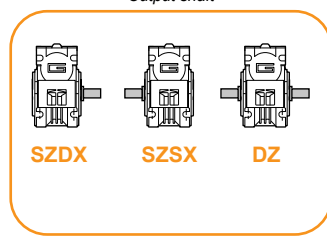
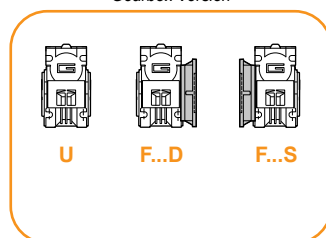
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250 W S2
- Magneti in Neodimio
- Carcasce dei riduttori a vite senza fine in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

The main features of NDCM neodymium permanent magnets DC wormgearmotors range are:

- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250 W S2
- Neodymium magnets
- Die-cast aluminum housing on wormgearboxes
- Permanent synthetic oil long-life lubrication

Designazione**Classification**

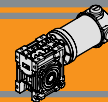
MOTORIDUTTORE / GEARMOTOR									
NDCM	120/030		U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size		Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
			U F...	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX *	0° 90° 180° 270°	120 — 240	VS
	120/026	180/026							
	120/026 (D11)	180/026 (D11)							
	120/026 (D14)	180/026 (D14)							
	120/030	180/030							
	120/040	180/040							

Versione Riduttore
Gearbox VersionAlbero di uscita
Output shaftBraccio 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 ⁻¹]	Velocità in ingresso / Input speed	R_d	%	Rendimento dinamico / Dynamic efficiency
n_2	[min ⁻¹]	Velocità in uscita / Output speed	A_2	[N]	Carico assiale ammissibile in uscita / Permitted output axial load
i		Rapporto di riduzione / Ratio	R_s	%	Rendimento statico / Static efficiency
P_1	[kW]	Potenza in entrata / Input power	R_2	[N]	Carico radiale ammissibile in uscita / Permitted output radial load
M_2	[Nm]	Coppia in uscita in funzione di P_1 / Output torque referred to P_1	Z		Numero di principi della vite / Worm starts
sf		Fattore di servizio / Service factor	β		Angolo d'elica / Helix angle



Lubrificazione

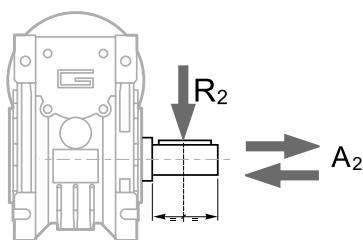
Lubrication

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

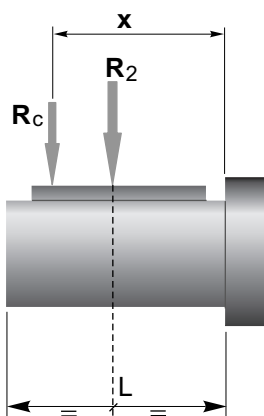


$$A_2 = R_2 \times 0.2$$

n_2 [min ⁻¹]	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 mezzera 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
a	56	65	84
b	43	50	64
R_{2MAX}	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'

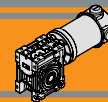
Rendimento

Efficiency

	n ₁ [min ⁻¹]	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

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160						
(3000 min ⁻¹)	600	2	4.4	5	120/026	120/240
	400	3	3.3	7.5	120/026	
	300	4	2.5	10	120/026	
	200	6	1.7	15	120/026	
	150	8	1.3	20	120/026	
	100	11	1.1	30	120/026	
	75	14	0.8	40	120/026	
	60	14	0.7	50	120/026	
	50	13	0.7	60	120/026	
	600	2	5.7	5	120/030	120/240
	400	3	4.5	7.5	120/030	
	300	4	3.7	10	120/030	
	200	6	2.5	15	120/030	
	150	8	1.7	20	120/030	
	120	10	1.5	25	120/030	
	100	11	1.6	30	120/030	
	75	14	1.1	40	120/030	
	60	17	0.9	50	120/030	
	50	20	0.7	60	120/030	
	38	17	0.7	80	120/030	
	30	16	0.7	100	120/030	120/240
	150	8	3.7	20	120/040	
	120	10	2.7	25	120/040	
	100	12	3.2	30	120/040	
	75	15	2.3	40	120/040	
	60	18	1.8	50	120/040	
	50	20	1.4	60	120/040	
	38	24	1.1	80	120/040	
	30	29	0.8	100	120/040	

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
250						
(3000 min ⁻¹)	600	4	2.8	5	180/026	120/240
	400	5	2.1	7.5	180/026	
	300	7	1.6	10	180/026	
	200	10	1.1	15	180/026	
	150	13	0.9	20	180/026	
	100	17	0.7	30	180/026	
	75	16	0.7	40	180/026	
	60	14	0.7	50	180/026	
	50	13	0.7	60	180/026	
	600	4	3.7	5	180/030	120/240
	400	5	2.9	7.5	180/030	
	300	7	2.3	10	180/030	
	200	10	1.6	15	180/030	
	150	13	1.1	20	180/030	
	120	16	1.0	25	180/030	
	100	18	1.0	30	180/030	
	75	22	0.7	40	180/030	
	60	21	0.7	50	180/030	
	50	20	0.7	60	180/030	
	38	17	0.7	80	180/030	
	30	16	0.7	100	180/030	120/240
	600	4	8.1	5	180/040	
	400	5	5.8	7.5	180/040	
	300	7	4.8	10	180/040	
	200	10	3.5	15	180/040	
	150	13	2.3	20	180/040	
	120	16	1.8	25	180/040	
	100	18	2.1	30	180/040	120/240
	75	23	1.5	40	180/040	
	60	27	1.2	50	180/040	
	50	32	0.9	60	180/040	
	38	38	0.7	80	180/040	
	30	34	0.7	100	180/040	

N.B.

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

N.B.

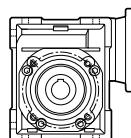
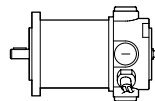
Please check that the output torque M₂ does not exceed the value in the grey areas

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Motori applicabili

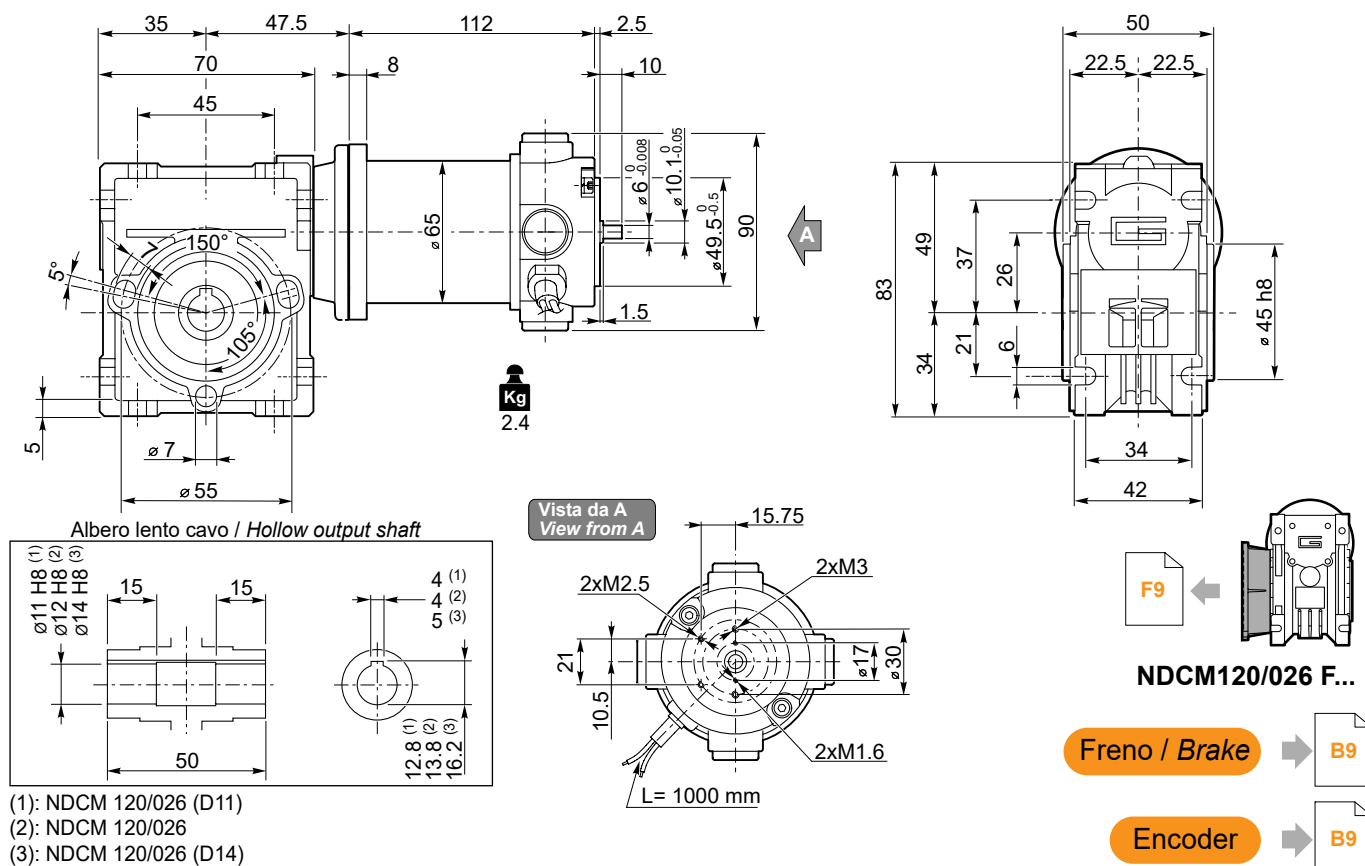
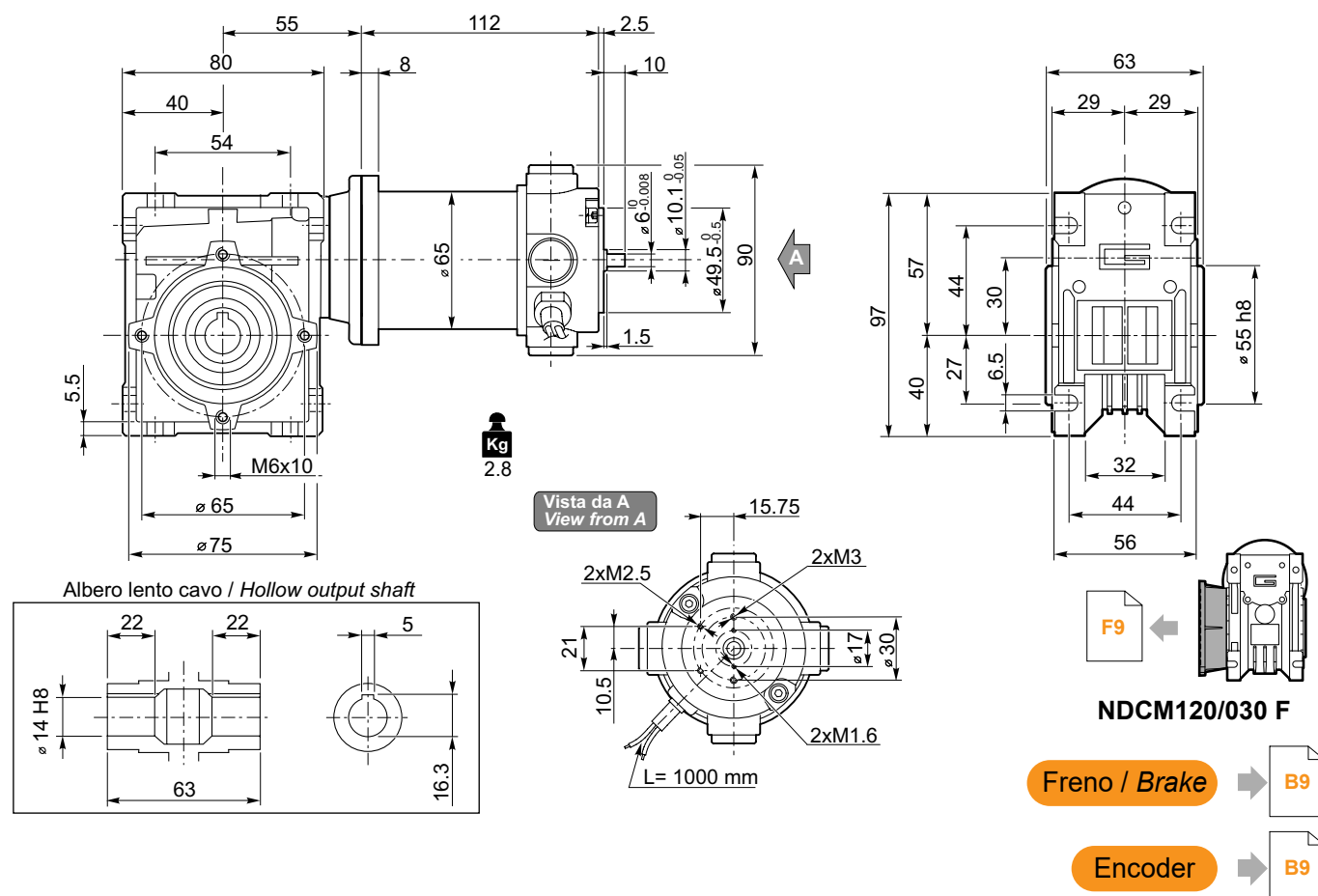
IEC Motor adapters

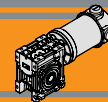


		ND	
		120.120 120.240	180.120 180.240
CM	026	5 - 60	5 - 60
	030	5 - 100	5 - 100
	040	5 - 100	5 - 100

5-100

Rapporti di riduzione i
Ratio i

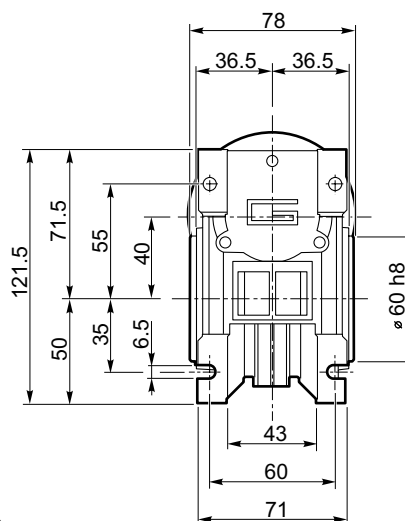
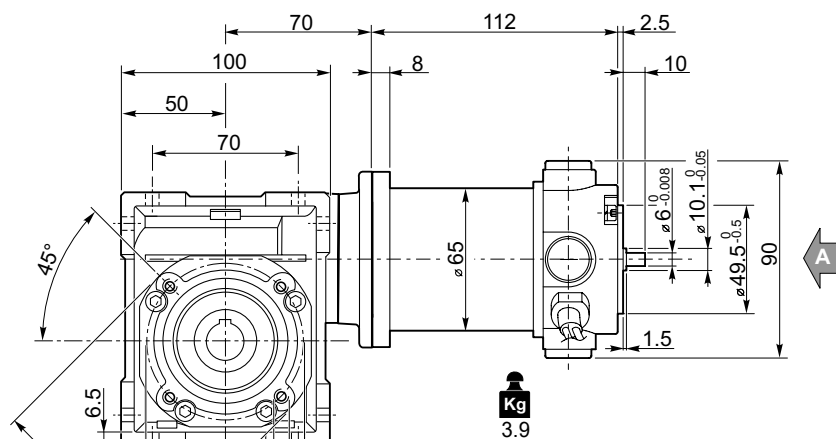
**NDCM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****NDCM120/026 U****NDCM120/030 U**



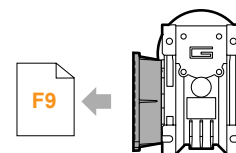
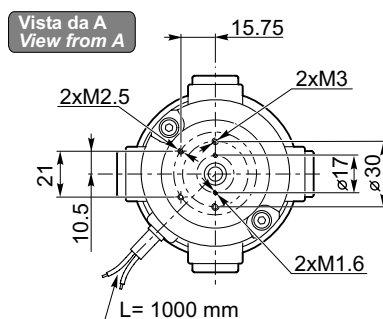
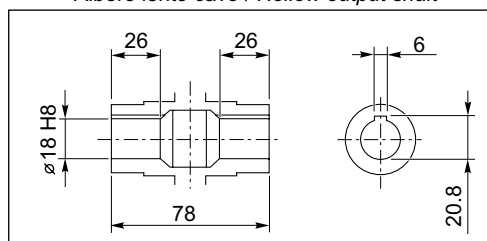
Dimensioni

Dimensions

NDCM120/040 U



Albero lento cavo / Hollow output shaft



NDCM120/040 F
NDCM120/040 FB
NDCM120/040 FL

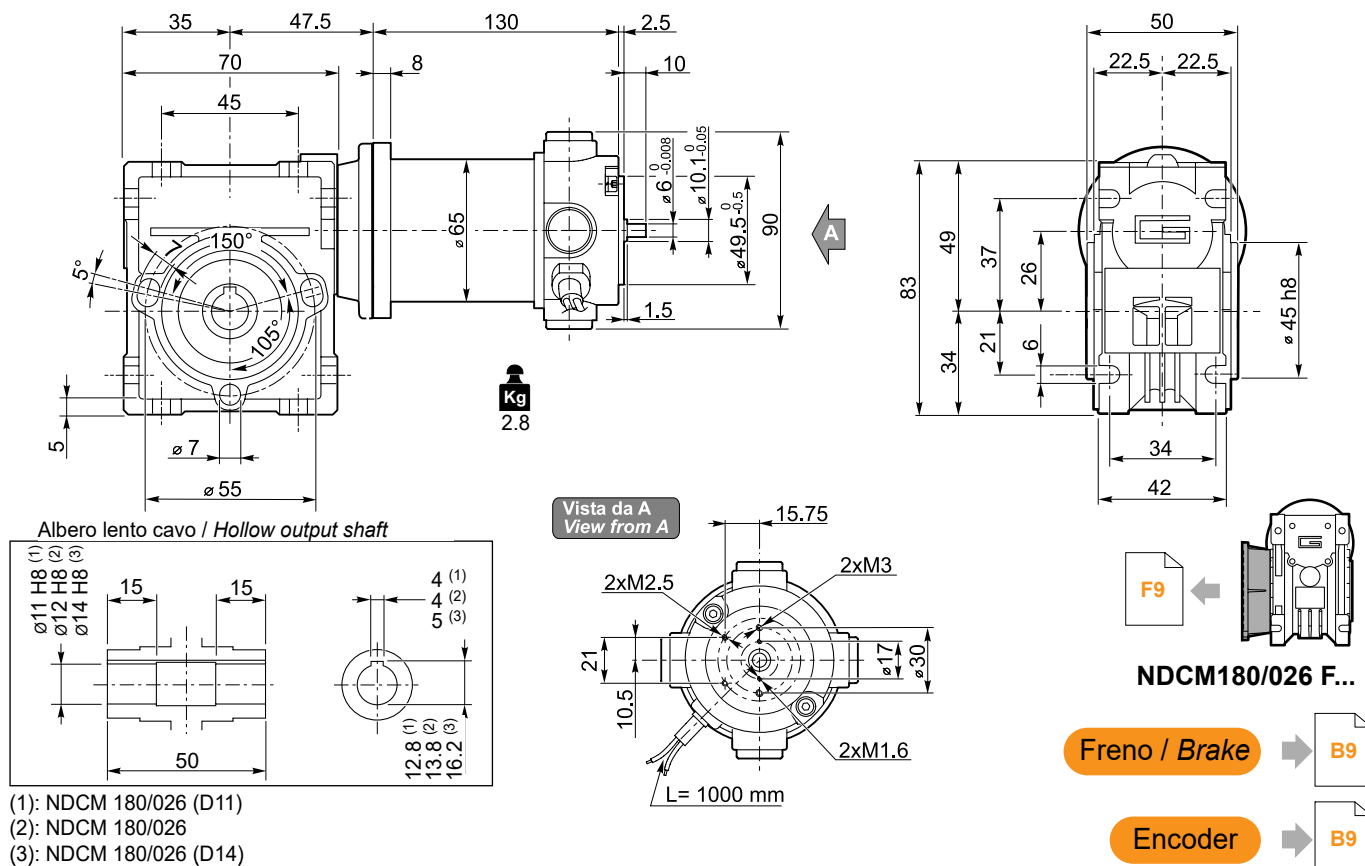
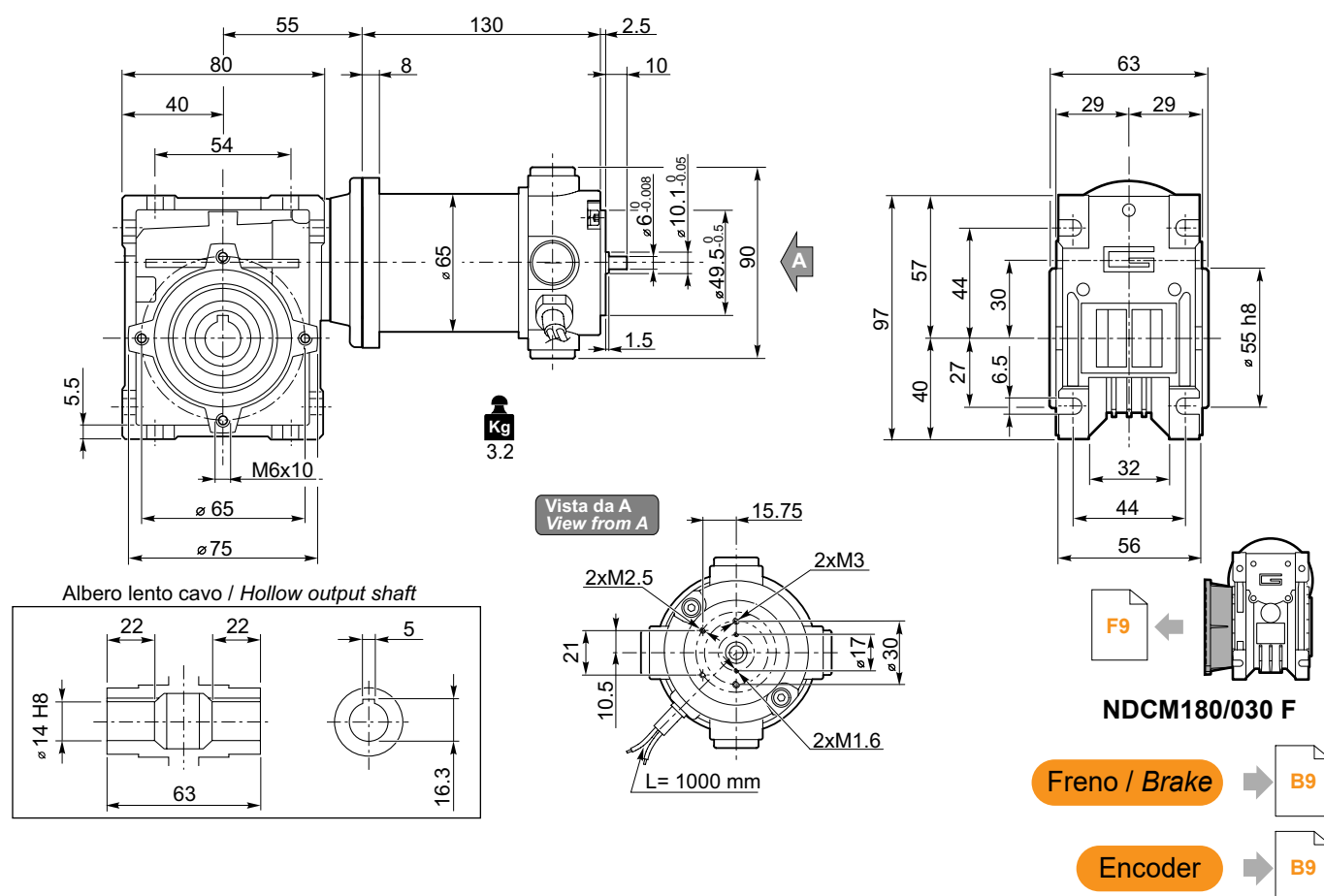
Freno / Brake

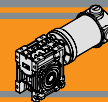
B9

Encoder

B9

NDCM

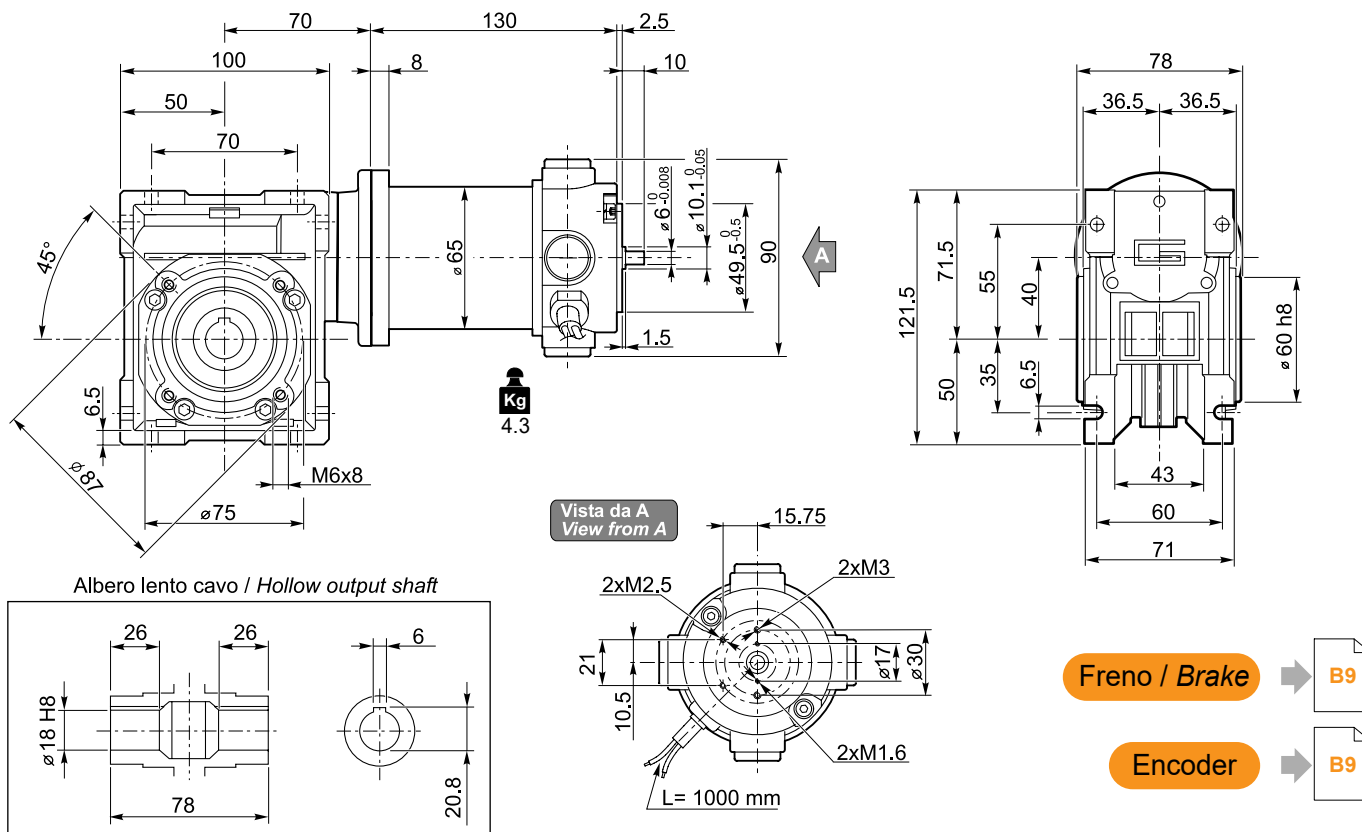
**NDCM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****NDCM180/026 U****NDCM180/030 U**



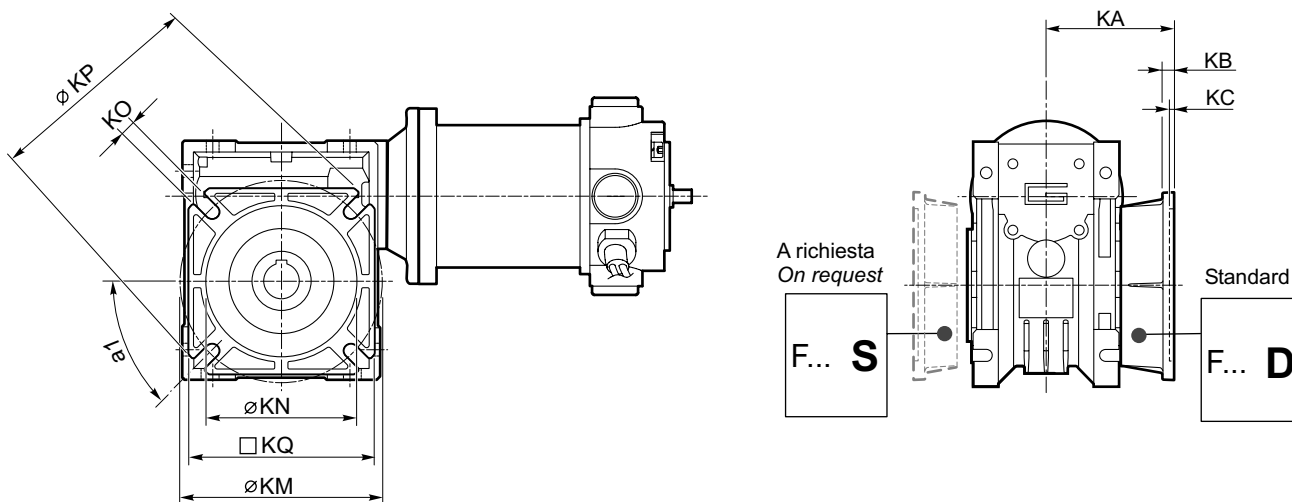
Dimensioni

Dimensions

NDCM180/040 U



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

[illegible]

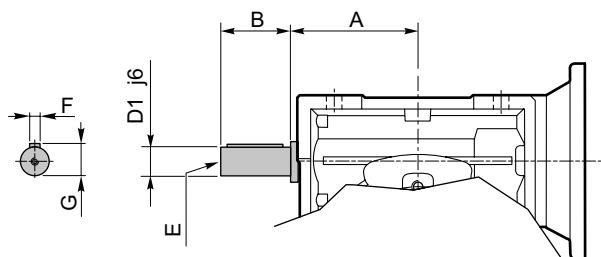
	CM..F									CM..FB								CM..FL							
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040	45°	67	7.5	4.5	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	10(n.4)	110	95



Opzioni

Options

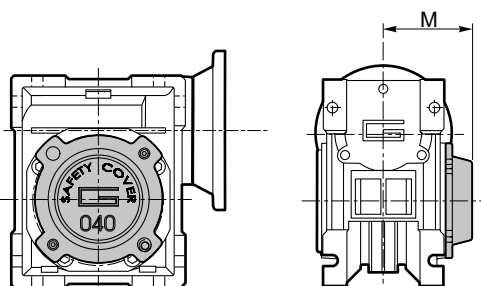
VS - Vite sporgente / Extended input shaft



	A	B	D ₁ j6	E	F	G
CM 030	45	20	9	M4	3	10.2
CM 040	53	23	11	M5	4	12.5

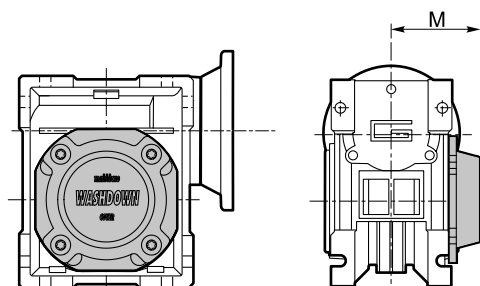
Costruito su richiesta
Built on request

SC - Safety cover

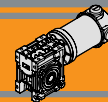


	M
CM 030	47
CM 040	54.5

WD - Washdown cover



CM	M
030	48
040	55.5

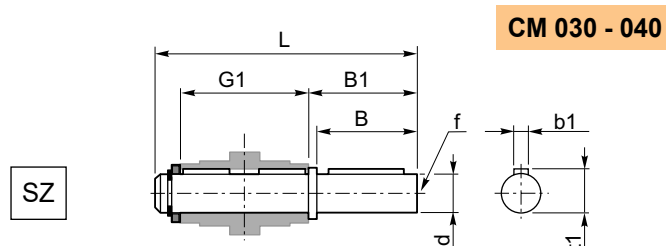
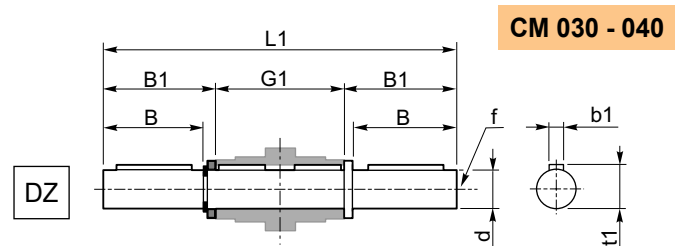


Accessori

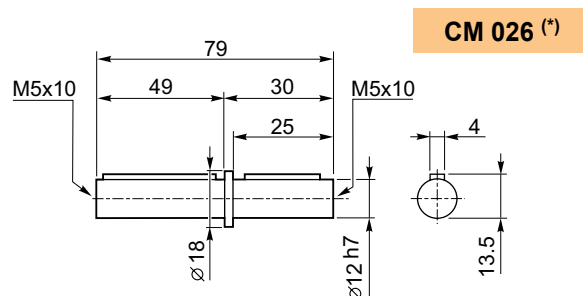
Accessories

Albero lento

Output shaft



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



(*)

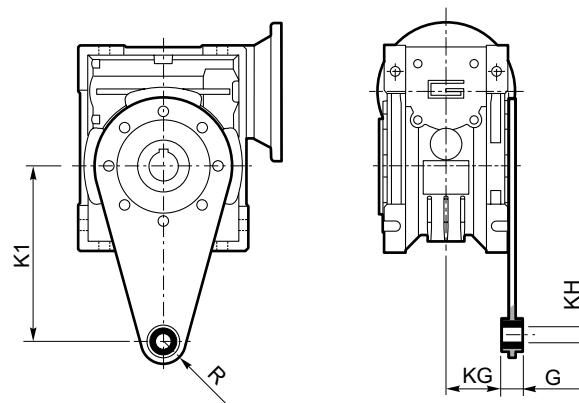
Nota: disponibile solo per cavo uscita Ø12

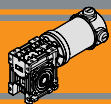
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

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

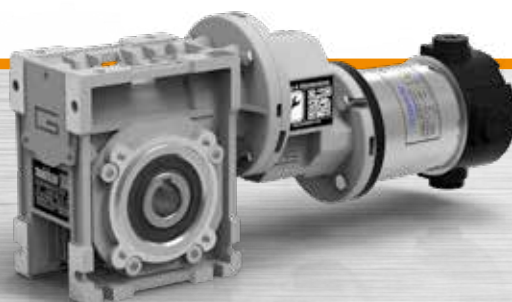


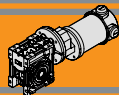


Note



Motoriduttori CC a vite senza fine con precoppia DC pre stage wormgearmotors

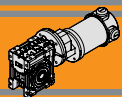




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Caratteristiche tecniche	<i>Technical features</i>	G2
Designazione	<i>Classification</i>	G2
Simbologia	<i>Symbols</i>	G3
Lubrificazione	<i>Lubrication</i>	G3
Carichi radiali	<i>Radial loads</i>	G3
Dati tecnici	<i>Technical data</i>	G4
Motori applicabili	<i>IEC Motor adapters</i>	G4
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Accessori	<i>Accessories</i>	G8

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NDCMP

Motoriduttori CC a vite senza fine con precoppia DC Pre stage wormgearmotors

Caratteristiche tecniche

Technical features

Le caratteristiche principali dei motoriduttori CC a vite senza fine con precoppia a magneti permanenti in neodimio NDCMP sono:

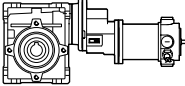
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250 W S2
- Magneti in Neodimio
- Sia le carcasse dei riduttori a vite senza fine che delle precoppie sono in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.

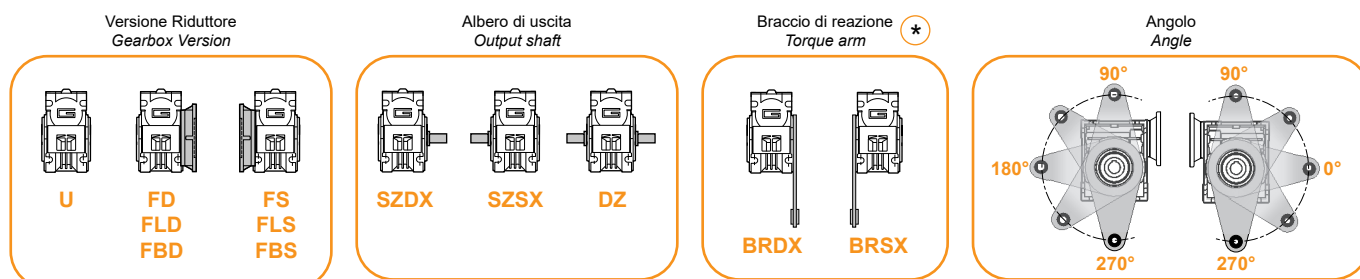
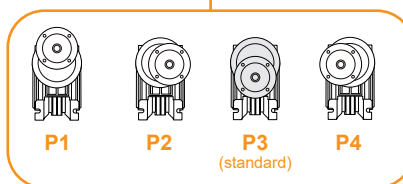
The main features of NDCMP neodymium permanent magnets DC pre stage wormgearmotors range are:

- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250 W S2
- Neodymium magnets
- Die-cast aluminum housing on pre-stage and wormgearboxes
- Permanent synthetic oil long-life lubrication.

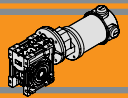
Designazione

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
NDCMP 	120/056/030	180/056/030	U	Vedere tabella See tables	SZDX	BRDX	0°	P1	120 — 240	VS
	120/056/040	180/056/040	FD FS FLD FLS FBD FRS		SZSX DZ	BRSX	90° 180° 270°	P2 P3 (standard) P4		



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



Simbologia

Symbols

n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[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 in uscita in funzione di P_1 / <i>Output torque referred to P_1</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

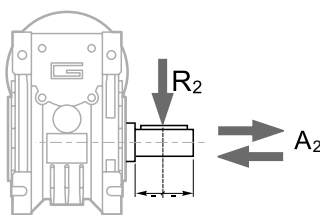
Lubrication

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 position.

Carichi radiali

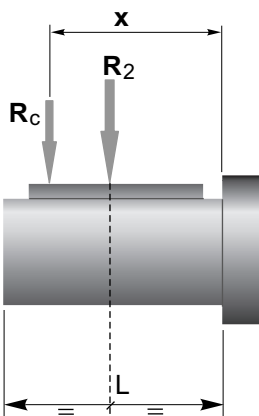
Radial loads



n_2 [min ⁻¹]	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 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:

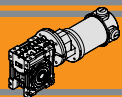


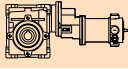
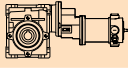
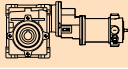
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

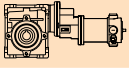
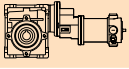
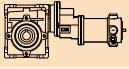
$$R \leq R_c$$

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

	CMP	
	030	040
a	65	84
b	50	64
R_{2MAX}	1600	3000

**NDCMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

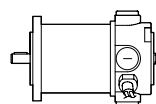
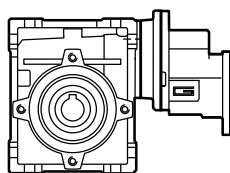
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160						
(3000 min ⁻¹)	50	21	1.0	60		120/056/030
	40	25	0.9	75		
	33	28	1.0	90		
	25	35	0.7	120		
	20	31	0.7	150		
	50	22	2.0	60		120/056/040
	40	26	1.7	75		
	33	30	1.9	90		
	25	36	1.3	120		
	20	43	1.1	150		
	17	48	0.9	180		
	13	55	0.7	240		
	10	51	0.7	300		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
250						
(3000 min ⁻¹)	50	31	0.7	60		180/056/030
	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		180/056/040
	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		

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**Motori applicabili****IEC Motor adapters**

		ND	
		120.120 120.240	180.120 180.240
CMP	056/030	150	300
	056/040	150	300

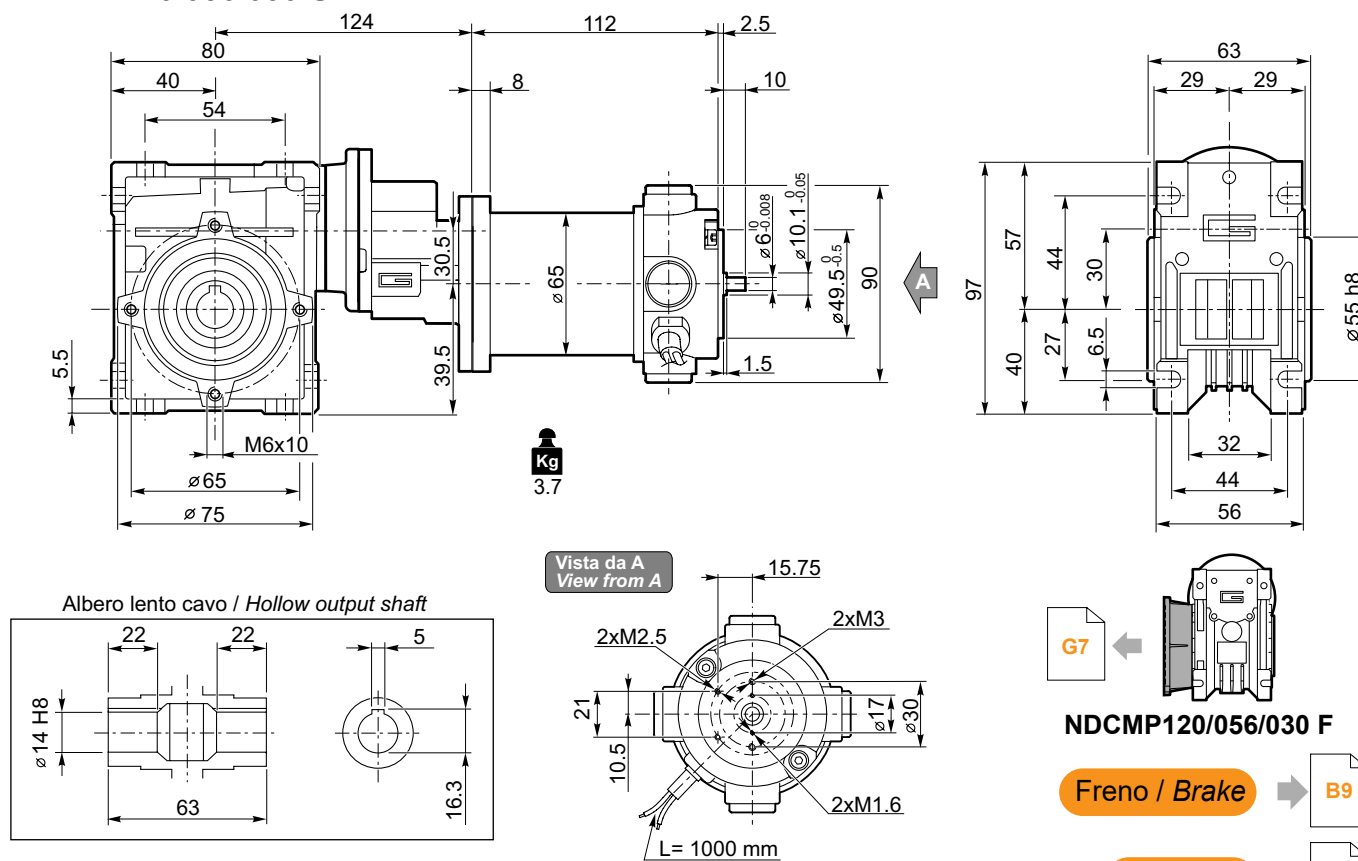
150

Rapporto di riduzione massimo i_{max}
Maximum ratio i_{max}

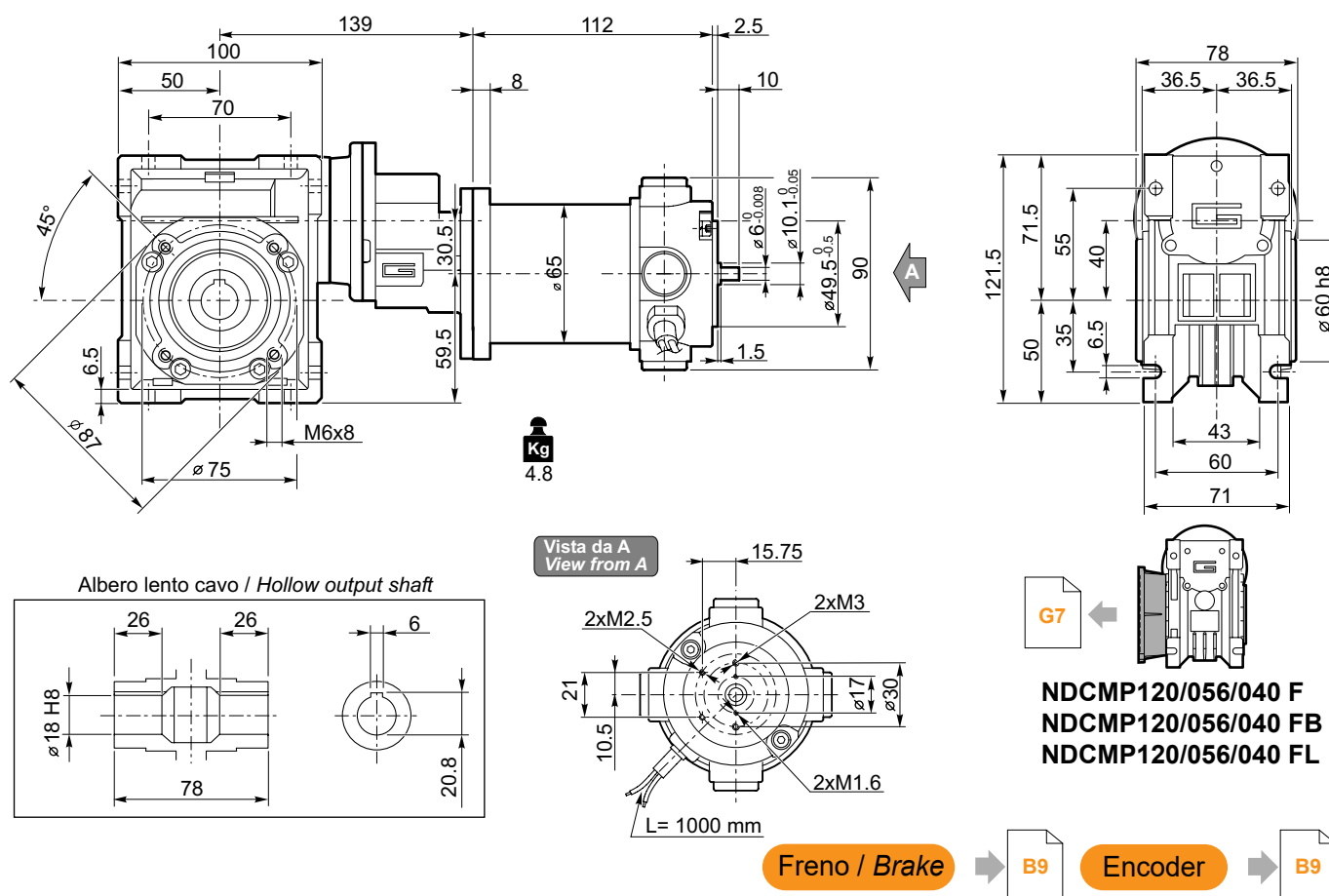
Dimensioni

Dimensions

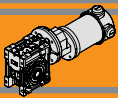
NDCMP120/056/030 U



NDCMP120/056/040 U



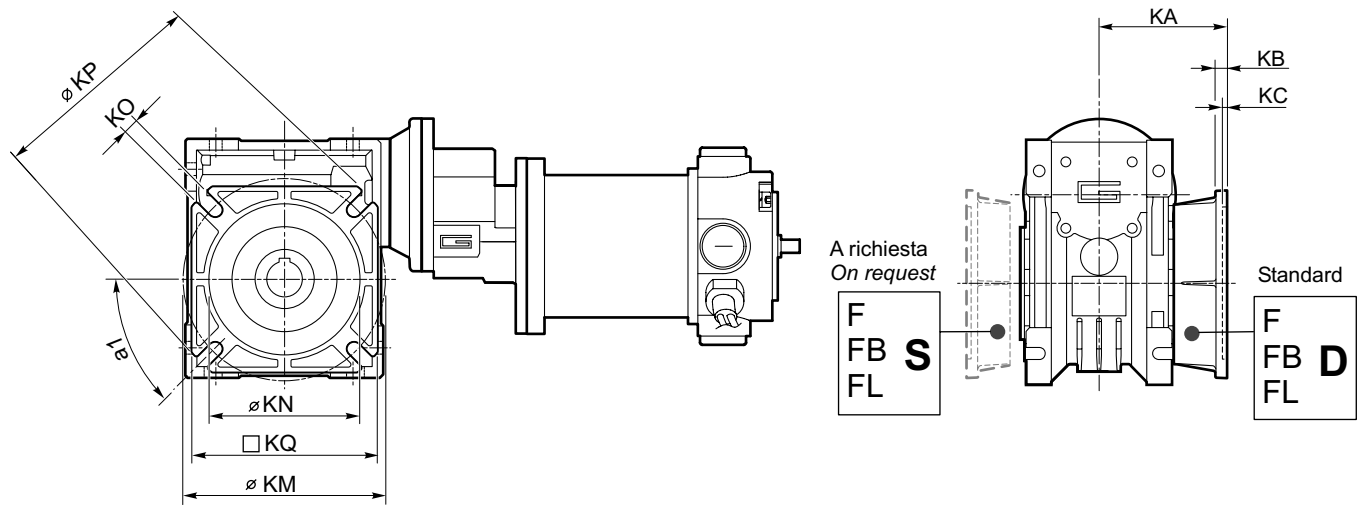
NDCMP



Dimensioni

Dimensions

NDCMP.../... F... Flange uscita / Output flanges



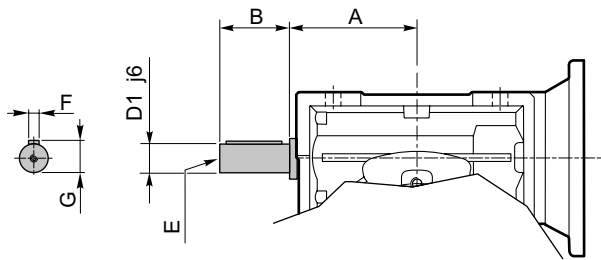
NDCMP

CMP	CMP..F									CMP..FB								CMP..FL							
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ
056/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
056/040	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	10(n.4)	110	95

Opzioni

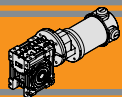
Options

VS - Vite sporgente / Extended input shaft



CMP	A	B	D ₁ j ₆	E	F	G
056/030	45	20	9	M4	3	10.2
056/040	53	23	11	M5	4	12.5

Costruito su richiesta
Built on request



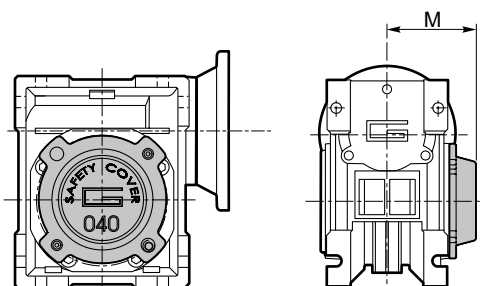
NDCMP

Motoriduttori CC a vite senza fine con precoppia
DC Pre stage wormgearmotors

Opzioni

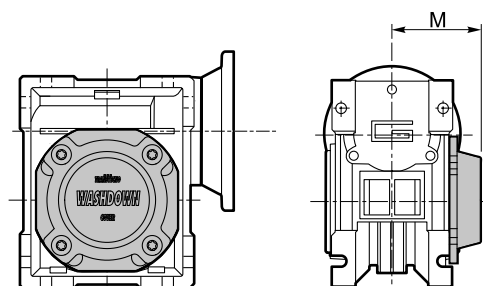
Options

SC - Safety cover



CMP	M
056/030	47
056/040	54.5

WD - Washdown cover



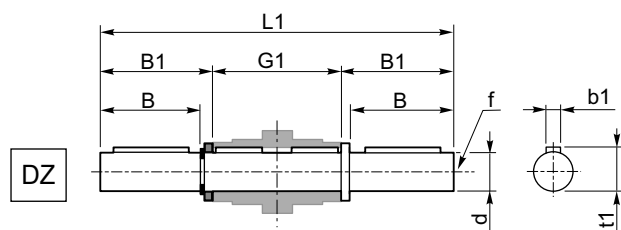
CMP	M
056/030	48
056/040	55.5

Accessori

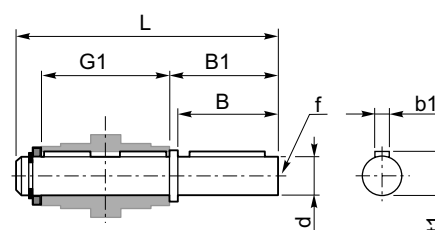
Accessories

Albero lento semplice e doppio

Single and double output shaft



SZ

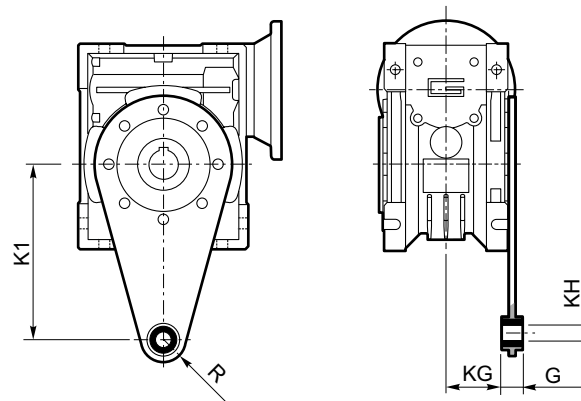


CMP	d h7	B	B1	G1	L	L1	f	b1	t1
056/030	14	30	32.5	63	102	128	M6	5	16
056/040	18	40	43	78	128	164	M6	6	20.5

Braccio di reazione

Torque arm

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

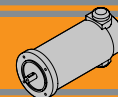




Ferrite

Motori elettrici CC DC electric motors

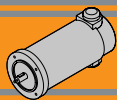




	Indice	Index	Pag. Page
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	Simbologia	<i>Symbols</i>	H2
	Grado di protezione IP	<i>IP enclosures protection indexes</i>	H3
	Classe di isolamento termico	<i>Insulation class</i>	H3
	Tipi di servizio IEC	<i>IEC duty cycle ratings</i>	H3
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EC020.24E	Dimensioni	<i>Dimensions</i>	H4
	Prestazioni	<i>Performances</i>	H5
EC035.120	Caratteristiche	<i>Features</i>	H6
EC035.240	Dimensioni	<i>Dimensions</i>	H6
	Prestazioni	<i>Performances</i>	H7
EC050.12E	Caratteristiche	<i>Features</i>	H8
EC050.24E	Dimensioni	<i>Dimensions</i>	H8
	Prestazioni	<i>Performances</i>	H9
EC070.12E	Caratteristiche	<i>Features</i>	H10
EC070.24E	Dimensioni	<i>Dimensions</i>	H10
	Prestazioni	<i>Performances</i>	H11
EC100.120	Caratteristiche	<i>Features</i>	H12
EC100.240	Dimensioni	<i>Dimensions</i>	H12
EC100.24E	Prestazioni	<i>Performances</i>	H13
EC180.120	Caratteristiche	<i>Features</i>	H14
EC180.240	Dimensioni	<i>Dimensions</i>	H14
EC180.24E	Prestazioni	<i>Performances</i>	H15
EC250.120	Caratteristiche	<i>Features</i>	H16
EC250.240	Dimensioni	<i>Dimensions</i>	H16
	Prestazioni	<i>Performances</i>	H17
EC350.120	Caratteristiche	<i>Features</i>	H18
EC350.240	Dimensioni	<i>Dimensions</i>	H18
	Prestazioni	<i>Performances</i>	H19
EC600.120	Caratteristiche	<i>Features</i>	H20
EC600.240	Dimensioni	<i>Dimensions</i>	H20
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Caratteristiche tecniche

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

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

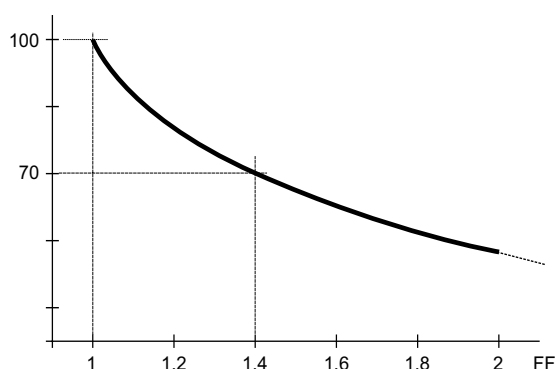
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

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:



Simbologia

S	—	Servizio / Duty
P_n	[W]	Potenza in uscita / Rated power
P_a	[W]	Potenza assorbita / Absorbed power
M_n	[Nm]	Coppia nominale / Rated torque
V	[V]	Tensione / Voltage
I	[A]	Corrente assorbita / Absorbed current
n₁	[min ⁻¹]	Numero giri motore / Motor speed
S_v	[rad/s]	Velocità angolare / Angular speed
P_e	[W]	Potenza elettrica del freno / Brake electric power

Technical features

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

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.

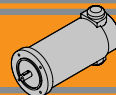
Form factor

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.

Symbols

M_{Br}	[Nm]	Coppia nominale del freno / Brake motor torque
n_{1 max}	[min ⁻¹]	Velocità massima / Max speed
T_r	[ms]	Tempo di inserzione / Engaging time
T_f	[ms]	Tempo di disimpegno / Disengaging time
IC	—	Classe d'isolamento termico / Thermal insulation class
FF	—	Fattore di forma / Form factor
IP	—	Classe di protezione / Protection class
η	—	Rendimento / Efficiency
K_g	—	Peso / Weight



Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

1^a cifra protezione alla penetrazione di corpi solidi.

2^a cifra protezione contro la penetrazione d'acqua.

Indicates the degree of mechanical insulation of the motor body.

1st figure indicating level of protection against the penetration of solid bodies.

2nd figure: indicating degree to which the motor is waterproof.

0	Non protetto / No protection	0	Non protetto / No protection
1	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (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 matters (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 matters (over Ø 2,5 mm)</i>	3	Protetto contro la pioggia. <i>Rain proof fixture</i>
4	Protetto da corpi solidi superiori a Ø1 mm. <i>Protected against solid matters (over Ø1 mm)</i>	4	Protetto contro gli spruzzi. <i>Splash proof fixture</i>
5	Protetto contro la polvere <i>Dust proof</i>	5	Protetto contro getti d'acqua <i>Water jet proof</i>
6	Totalmente protetto contro la polvere <i>Fully dust proof</i>	6	Protetto dalle ondate <i>Wave proof</i>
7	N.A.	7	Protetto contro immersione <i>Watertight immersion fixture.</i>
8	N.A.	8	Protetto contro immersione/sommersione prolungata <i>Watertight immersion fixture for a long time.</i>

Classe di isolamento termico

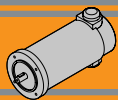
Insulation class

Classe / Class	Δt °C Temp. ambiente: 40°C <i>Ambient temperature: 40°C</i>
A	65°C
B	90°C
F	115°C
H	140°C

Tipi di servizio IEC

IEC duty cycle ratings

S1	Servizio continuo. Funzionamento a carico costante per una durata sufficiente al raggiungimento dell' equilibrio termico.	Continuous duty. The motor works at a constant load for enough time to reach temperature equilibrium
S2	Servizio di durata limitata. 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.	Short time duty. 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.
S3	Servizio periodico intermittente. 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.	Intermittent periodic duty. Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
S4	Servizio periodico intermittente con avviamento. 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.	Intermittent periodic duty with starting. Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
S5	Servizio periodico intermittente con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	Intermittent periodic duty with electric braking. Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
S6	Servizio periodico ininterrotto con carico intermittente. Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	Continuous operation with intermittent load. Sequential, identical cycles of running with constant load and running with no load. No rest periods.
S7	Servizio periodico ininterrotto con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	Continuous operation with electric braking. Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
S8	Servizio periodico ininterrotto con variazioni di carico e di velocità. 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.	Continuous operation with periodic changes in load and speed. Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.

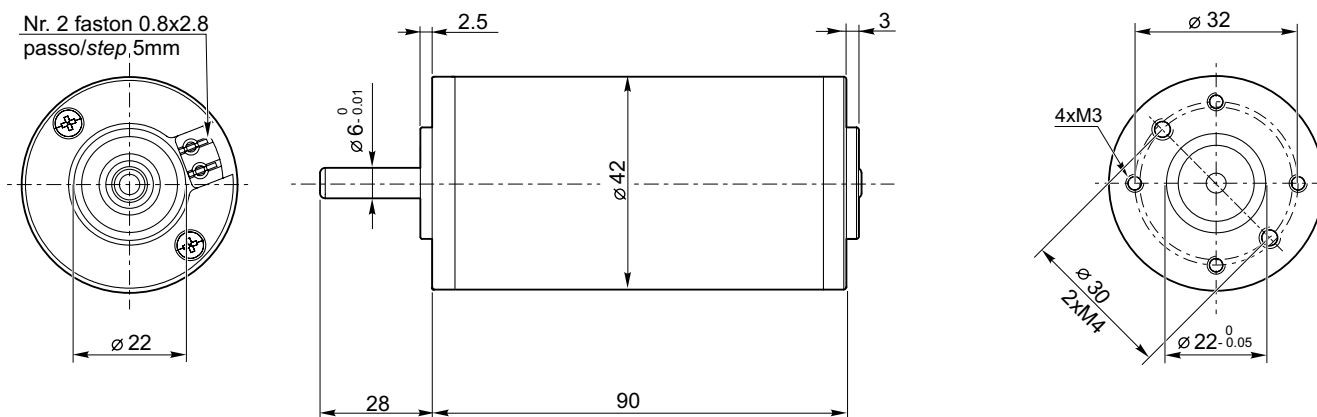
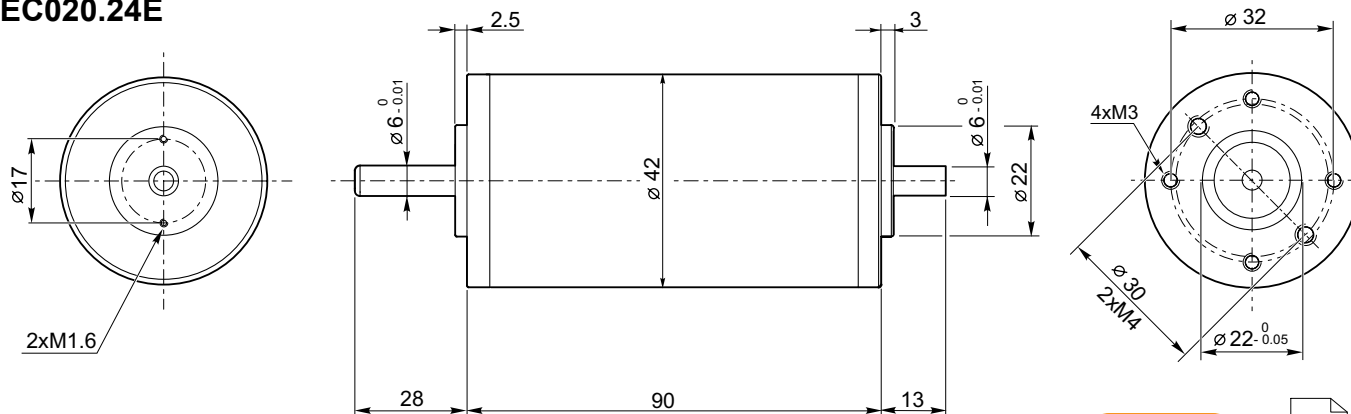
**EC****Motori elettrici CC**
DC Electric motors**EC020.120 - EC020.24E****Caratteristiche**

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)
Opzioni	Filtro EMC

Features

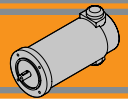
Construction	Tubular, without fan
Size	Ø 42 mm
Power	30 W S2 (20 W S1)
Magnets	2
Bearings	Ball bearing
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 brushes made of graphite/copper composite
Electric cable	Faston terminals (0.8 x 2.8 mm)
Options	EMC filter

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	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**Nr. 2 faston 0.8x2.8
passo/step, 5mm**EC020.24E**

Encoder



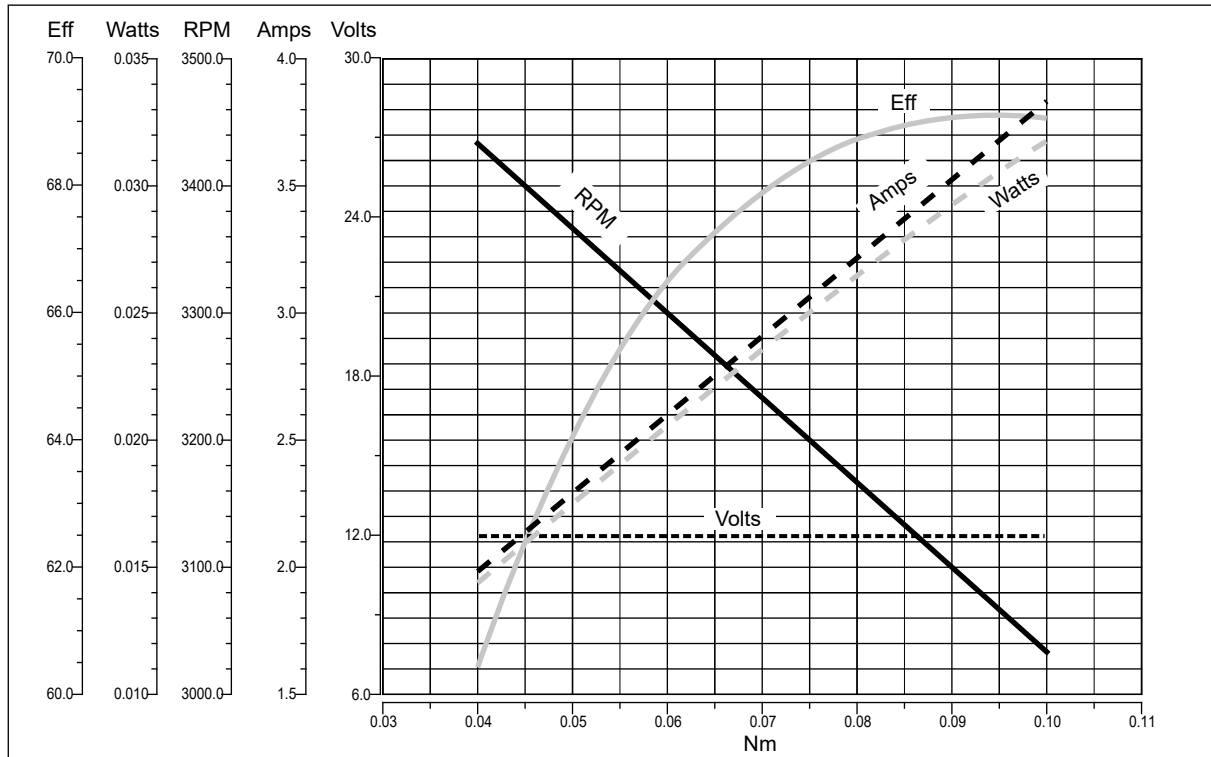


EC020.120 - EC020.24E

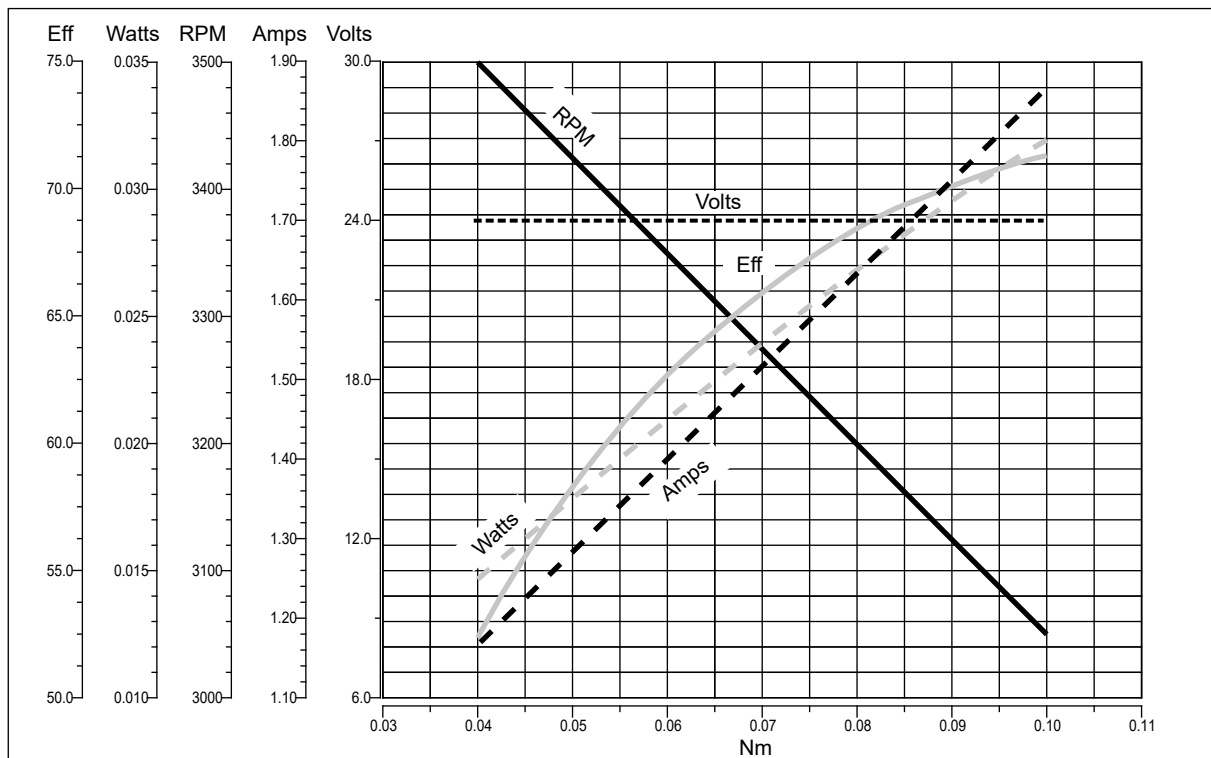
Prestazioni

Performances

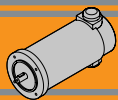
EC020.120



EC020.24E



EC

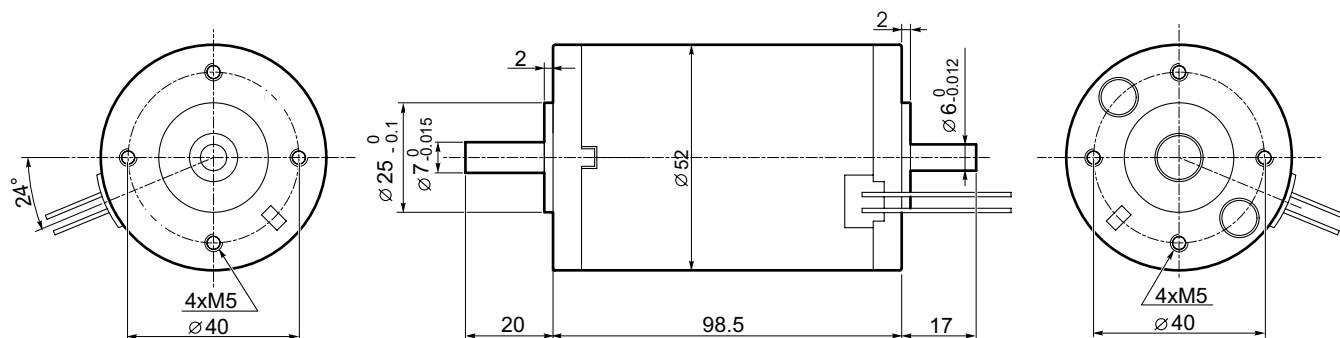
**EC****Motori elettrici CC**
DC Electric motors**EC035.120 - EC035.240****Caratteristiche**

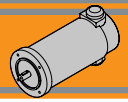
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 52 mm
Potenza	55 W S2 (35 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm

Features

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 ₁ [min ⁻¹]	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**

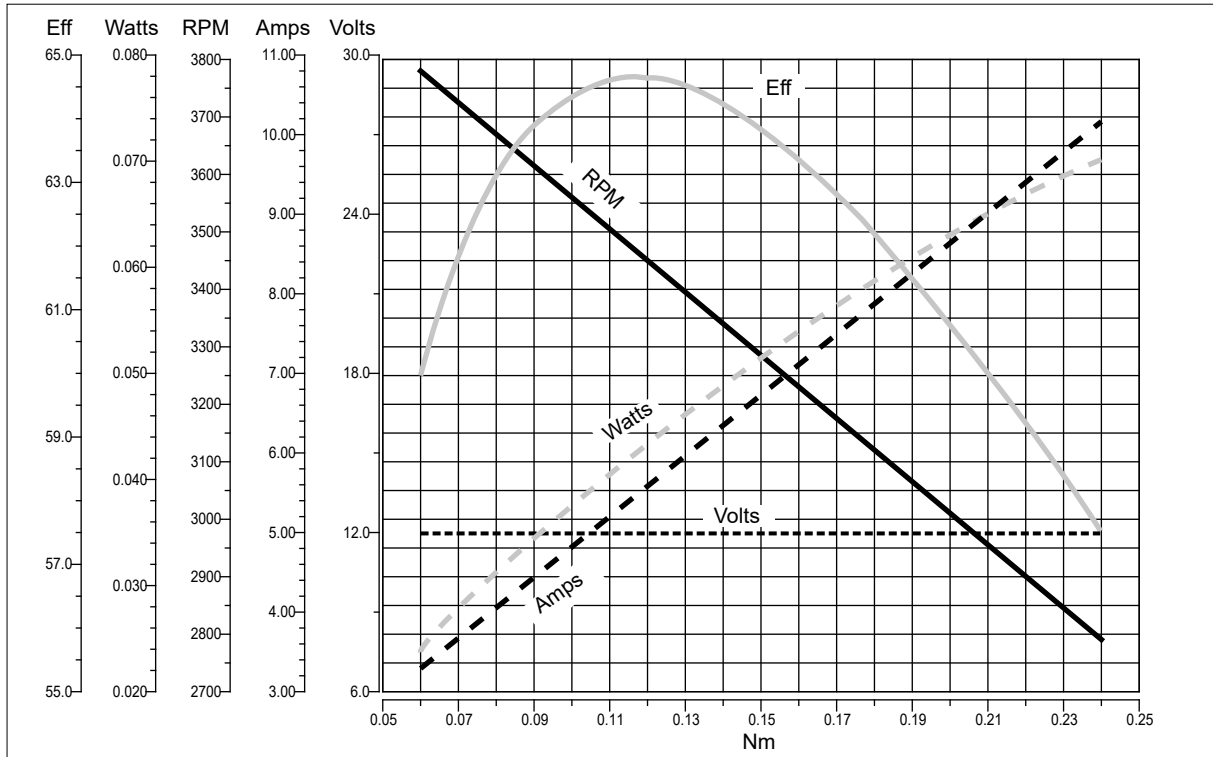


EC035.120 - EC035.240

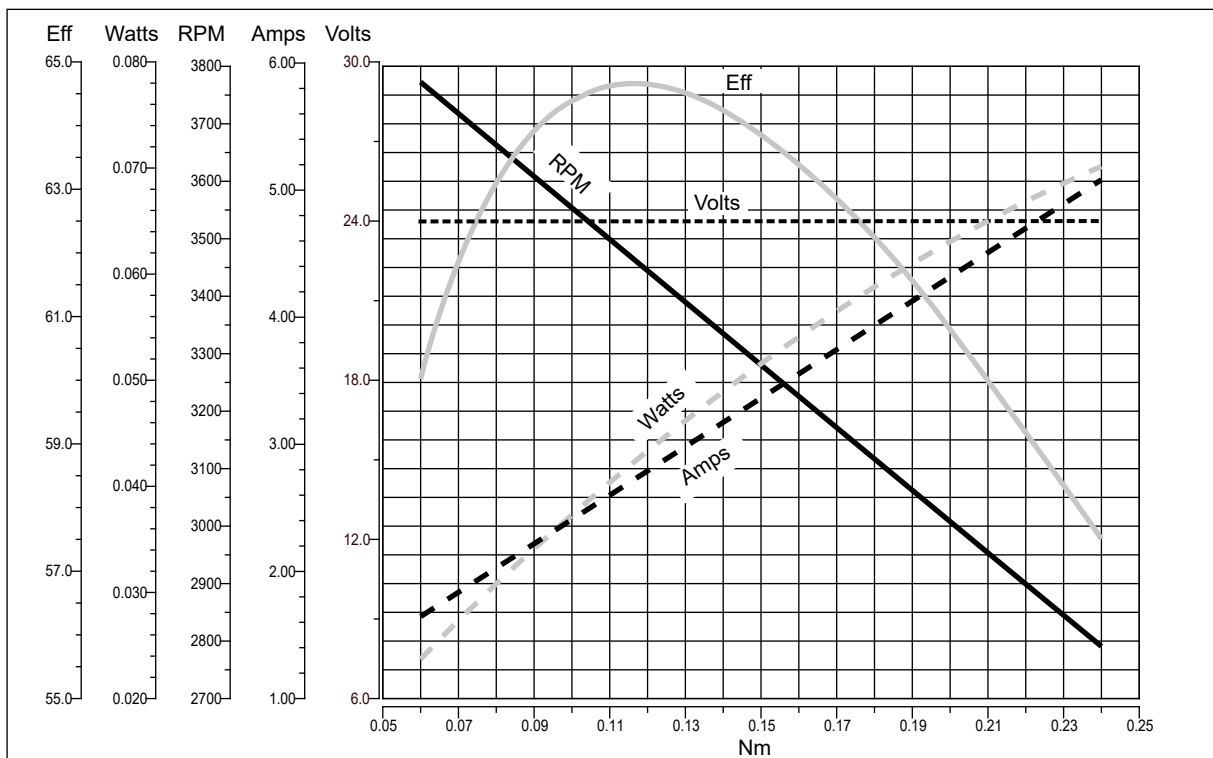
Prestazioni

Performances

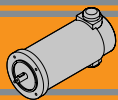
EC035.120



EC035.240



EC

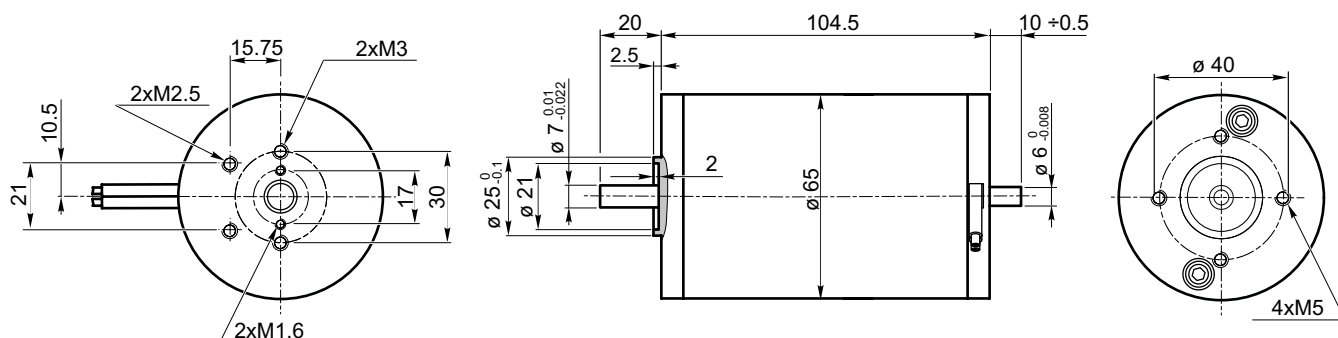
**EC****Motori elettrici CC**
DC Electric motors**EC050.12E - EC050.24E****Caratteristiche**

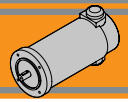
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	70 W S2 (50 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm
Bisporgenza	Standard

Features

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 ₁ [min ⁻¹]	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****Freno / Brake****H23****Encoder****H24**

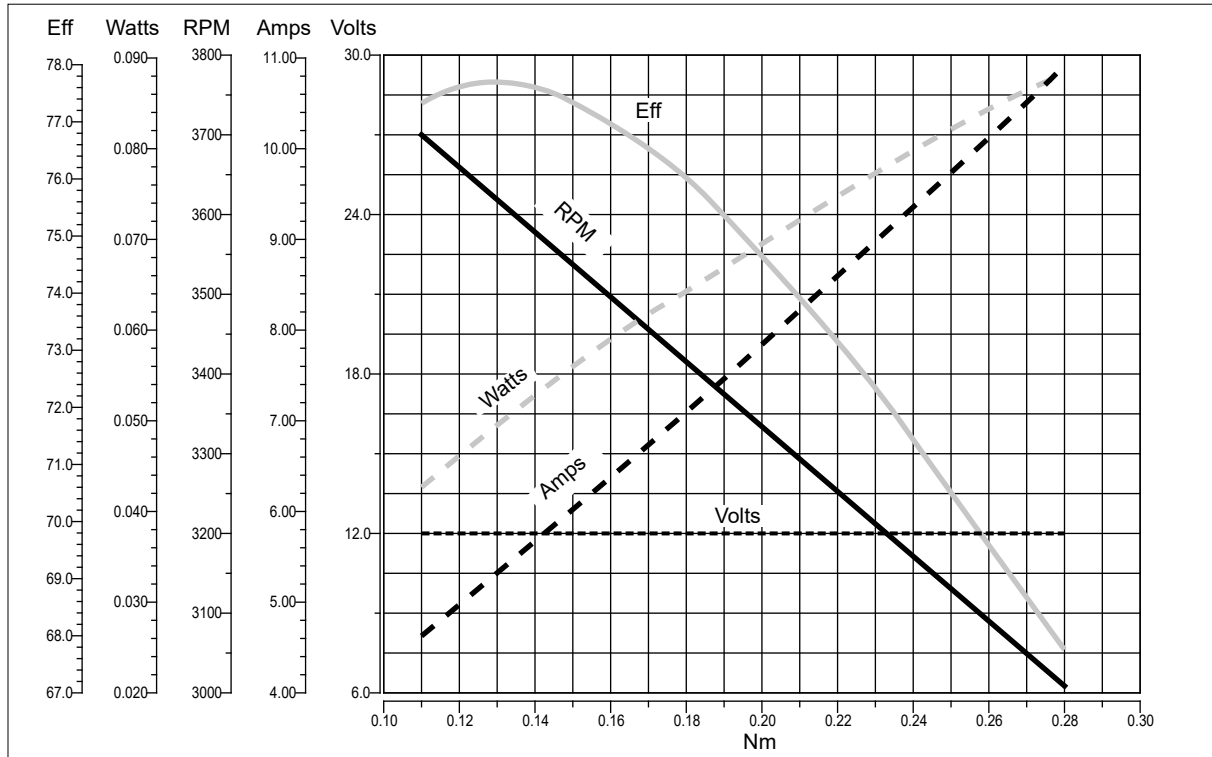


EC050.12E - EC050.24E

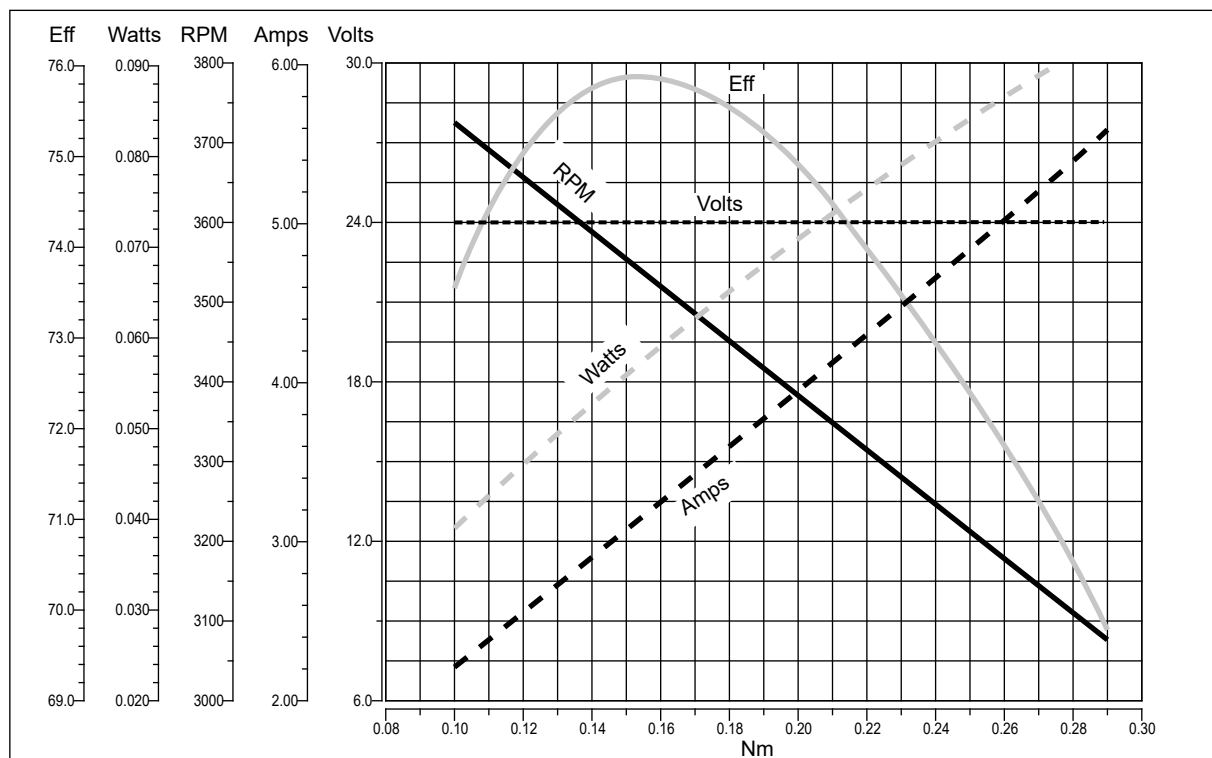
Prestazioni

Performances

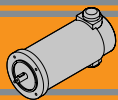
EC050.12E



EC050.24E



EC



EC070.12E - EC070.24E

Caratteristiche

Features

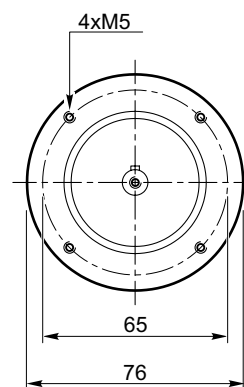
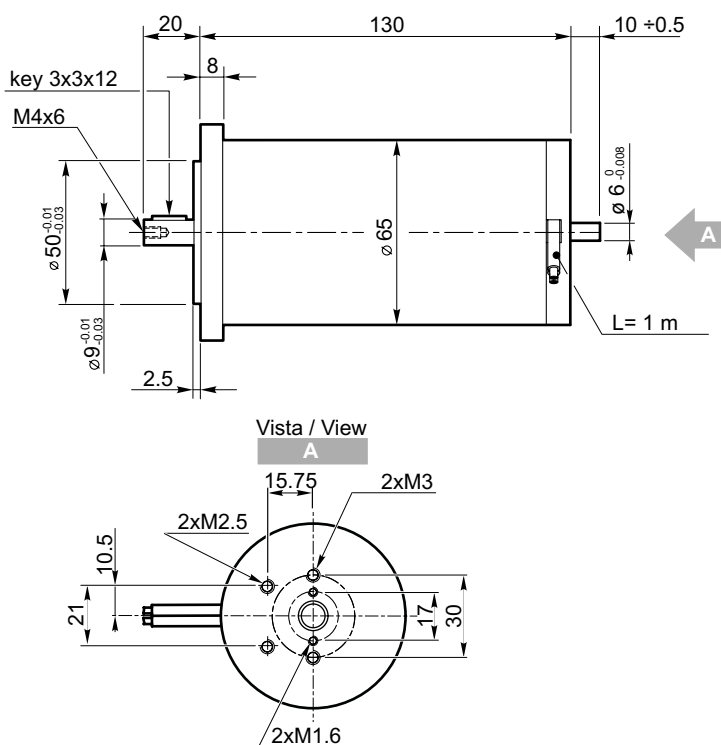
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

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 ₁ [min ⁻¹]	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			0.22			
	S2 30'	100		5.9			0.31			

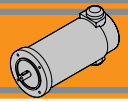
Dimensioni

Dimensions



Freno / Brake → H23

Encoder → H24

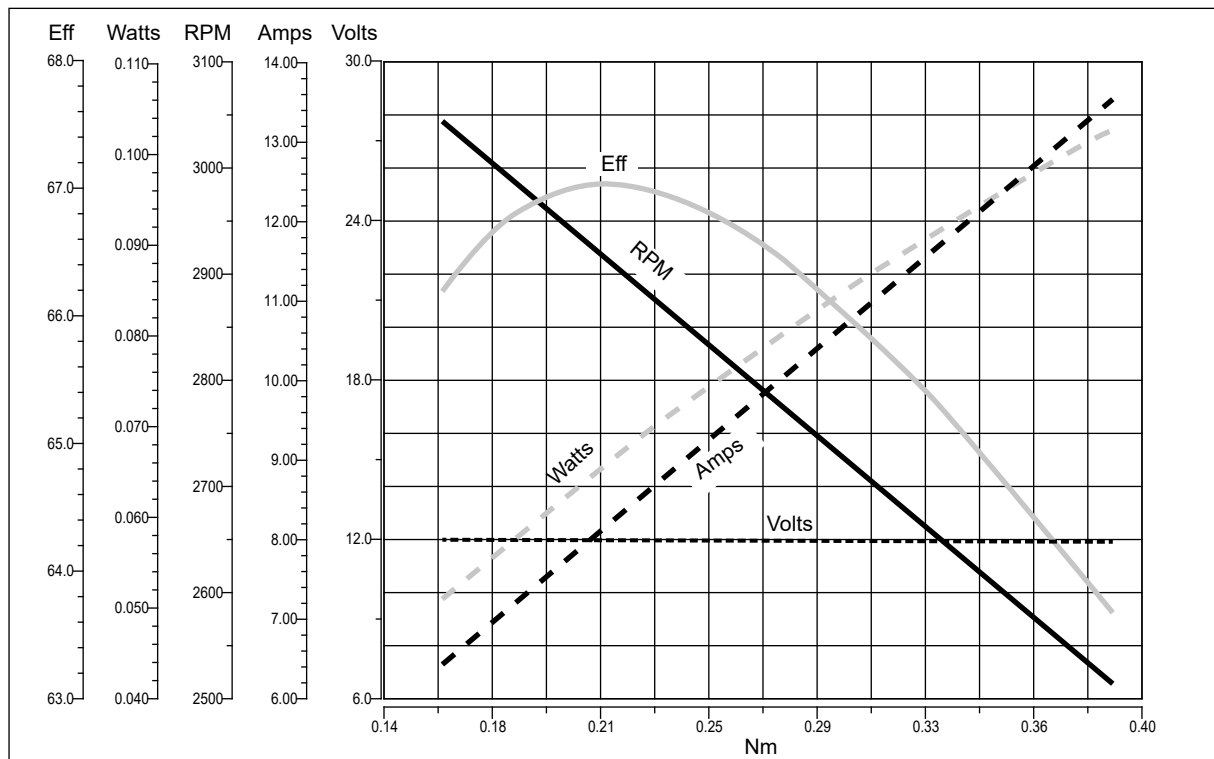


EC070.12E - EC070.24E

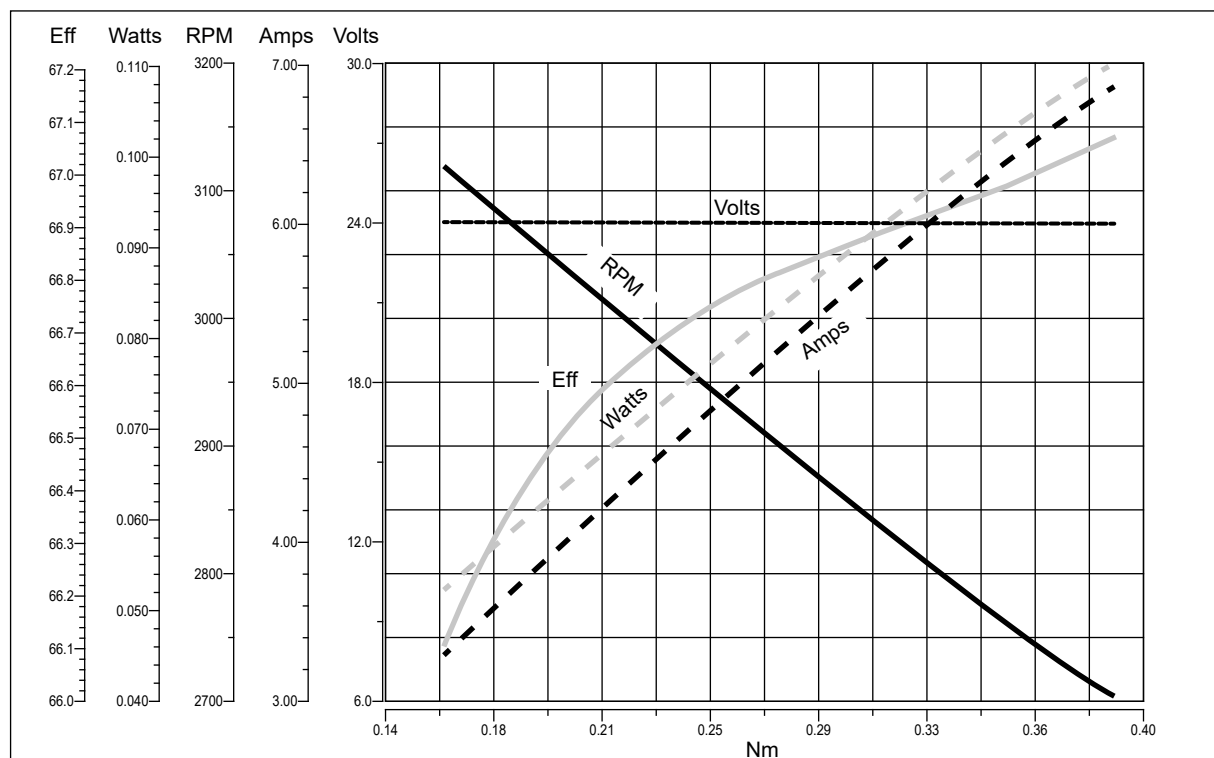
Prestazioni

Performances

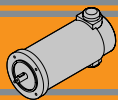
EC070.12E



EC070.24E



EC

**EC****Motori elettrici CC**
DC Electric motors**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

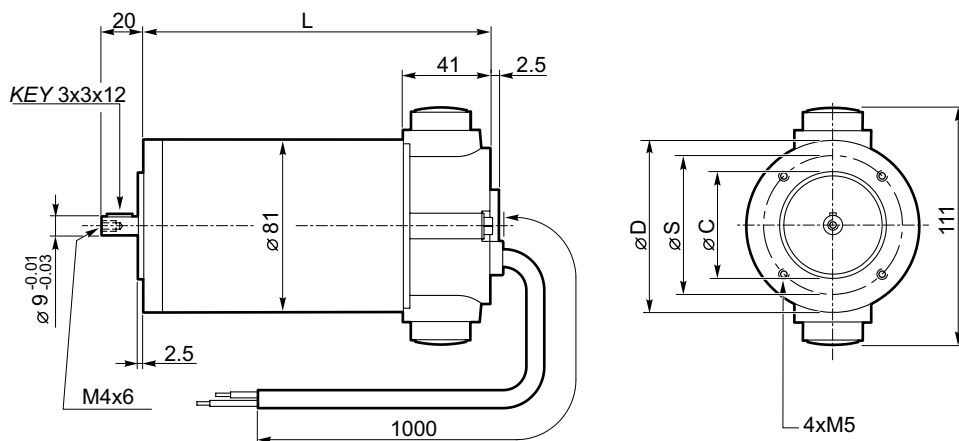
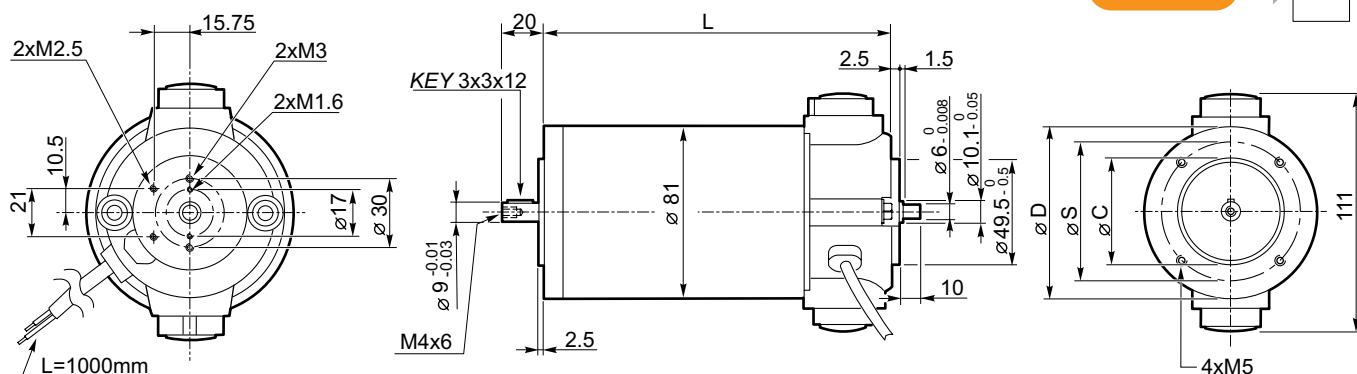
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	S1	100	24	6			0.31			
	S2 25'	140		8.4			0.43			
EC100.24E	S1	100		6			0.31		20	
	S2 25'	140		8.4			0.43			

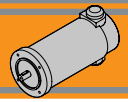
Dimensioni**Dimensions****EC100.120**
EC100.240

56 B14	
L	153
D	80
S	65
C (-0.01 / -0.03)	50
63B14*	
L	155
D	90
S	75
C (-0.01 / -0.03)	60

* Usare boccia 9/11

* Use sleeve 9/11

**Freno / Brake****H23****Encoder****H24****EC100.24E**

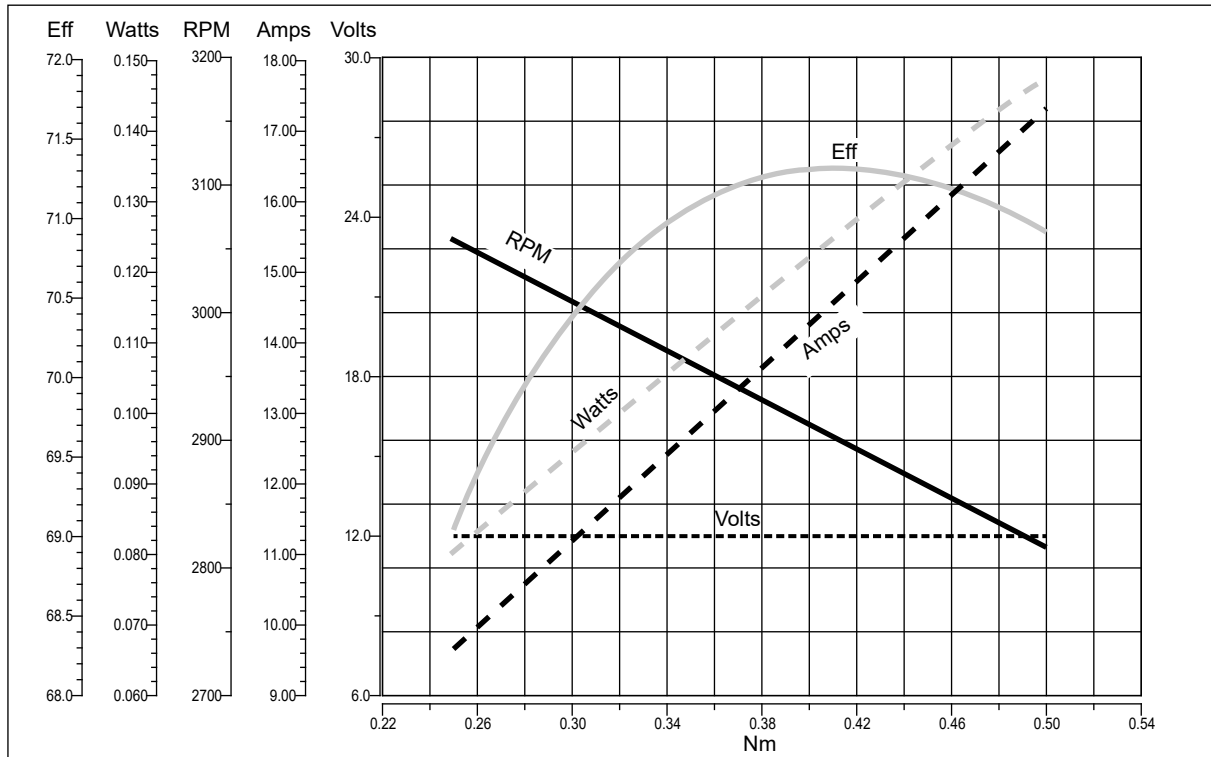


EC100.120 - EC100.240 - EC100.24E

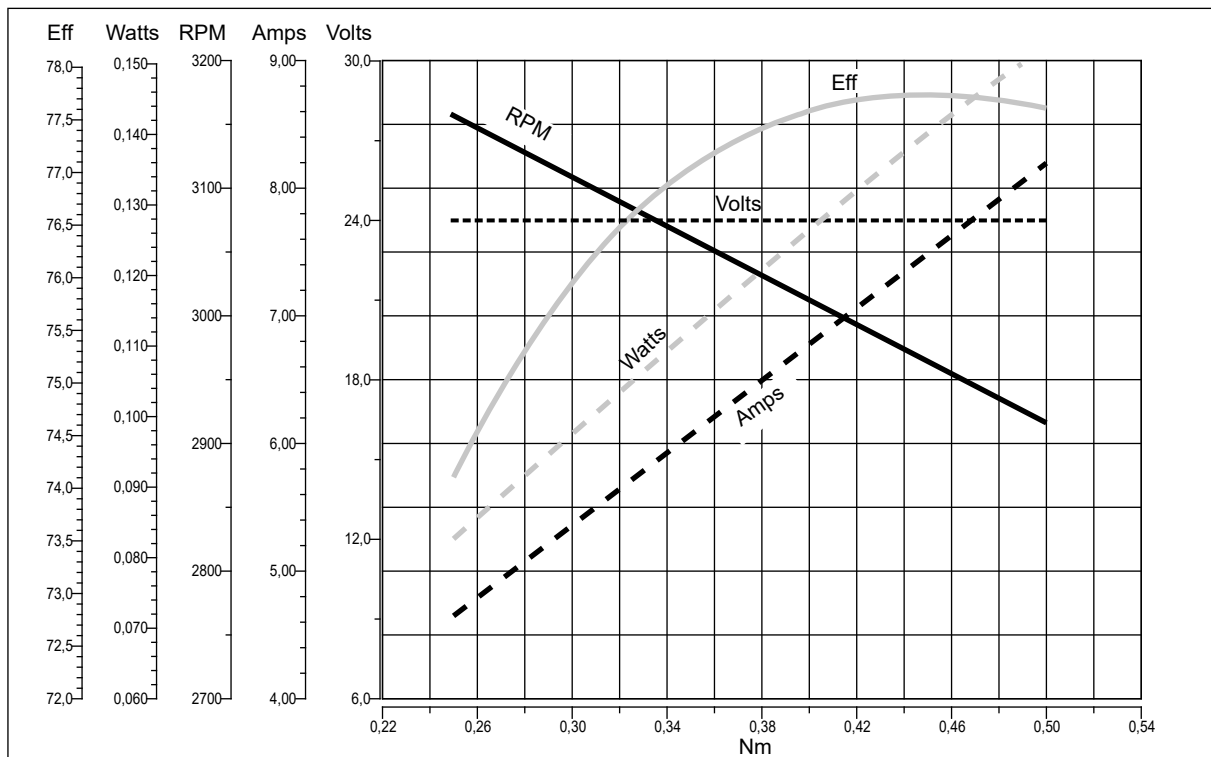
Prestazioni

Performances

EC100.120



EC100.240 - EC100.24E



EC

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

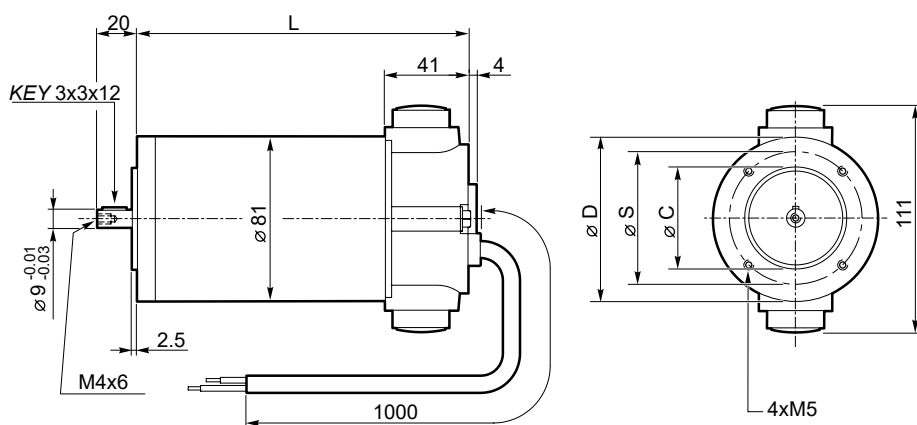
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg	
EC180.120	S1	180	12	21.5	F	1	0.57	3000	40	3.4	
	S2 25'	250		30			0.8				
EC180.240	S1	180	24	10.8			0.57				20
	S2 25'	250		15			0.8				
EC180.24E	S1	180		10.8			0.57				
	S2 25'	250		15			0.8				

Dimensioni

Dimensions

EC180.120
EC180.240

56 B14	
L	185
D	80
S	65
C (-0.01 / -0.03)	50
63B14*	
L	187
D	90
S	75
C (-0.01 / -0.03)	60



* Usare boccola 9/11

* Use sleeve 9/11

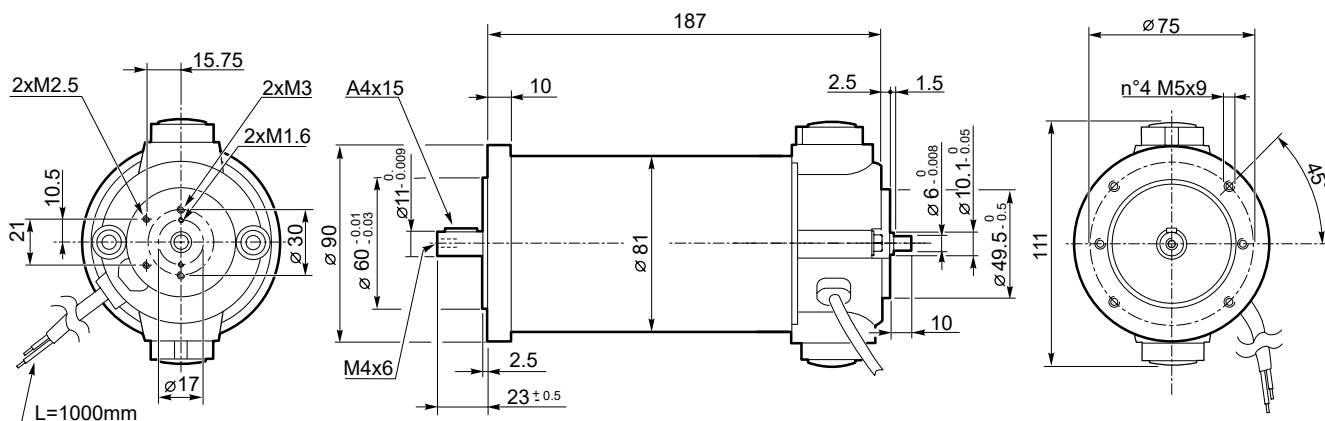
Freno / *Brake*

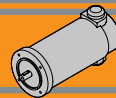
H23

EC180.24E

Encoder

H24



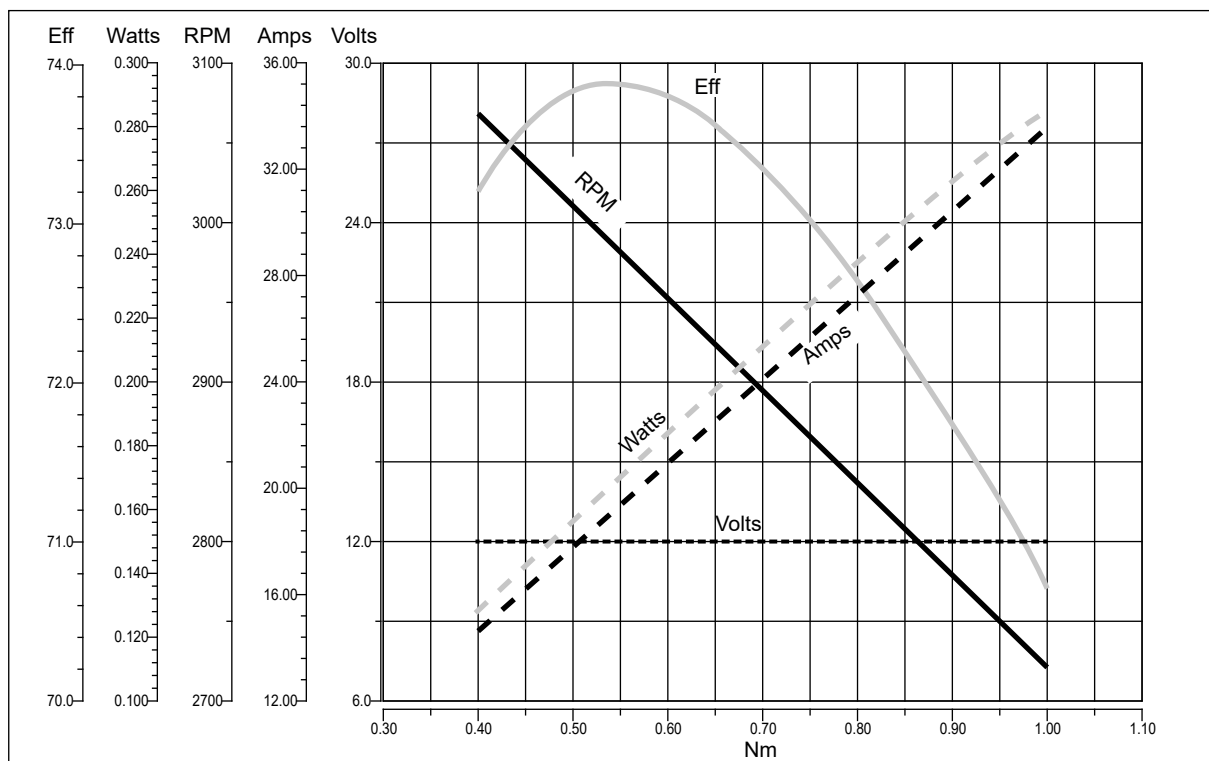


EC180.120 - EC180.240 - EC180.24E

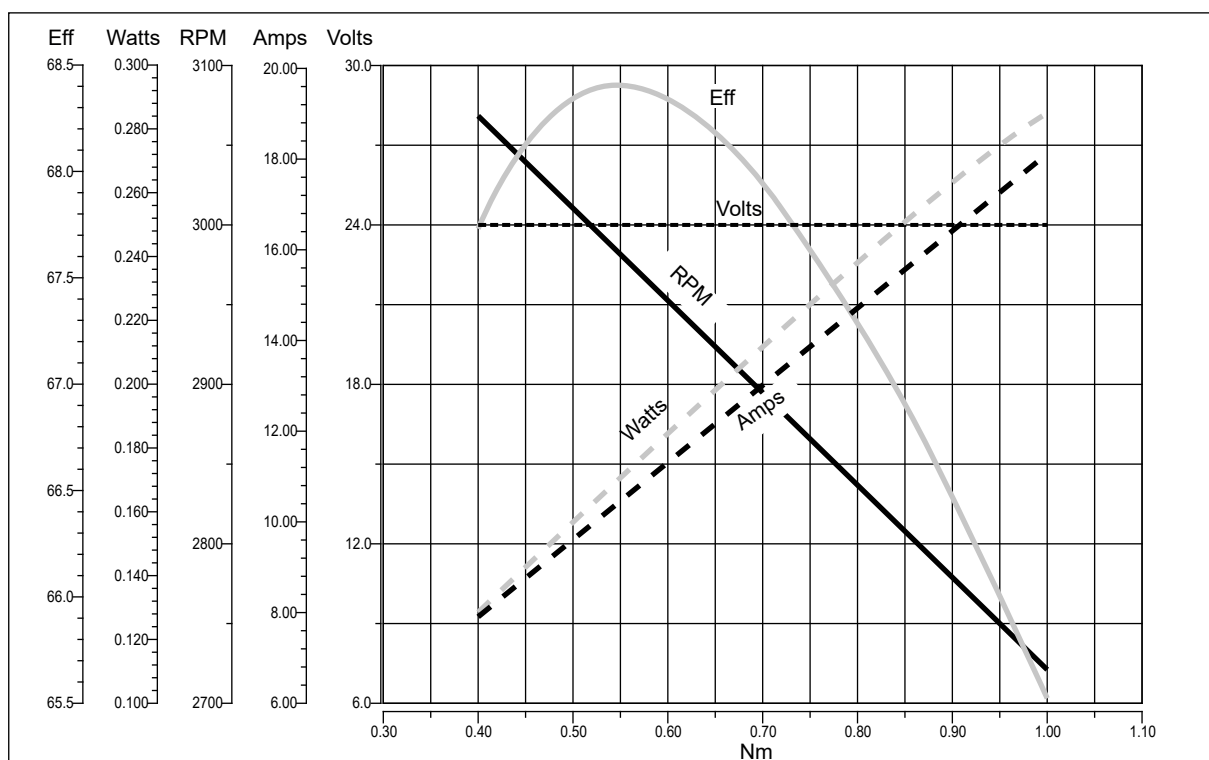
Prestazioni

Performances

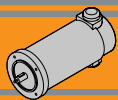
EC180.120



EC180.240 - EC180.24E



EC



EC250.120 - EC250.240

Caratteristiche

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

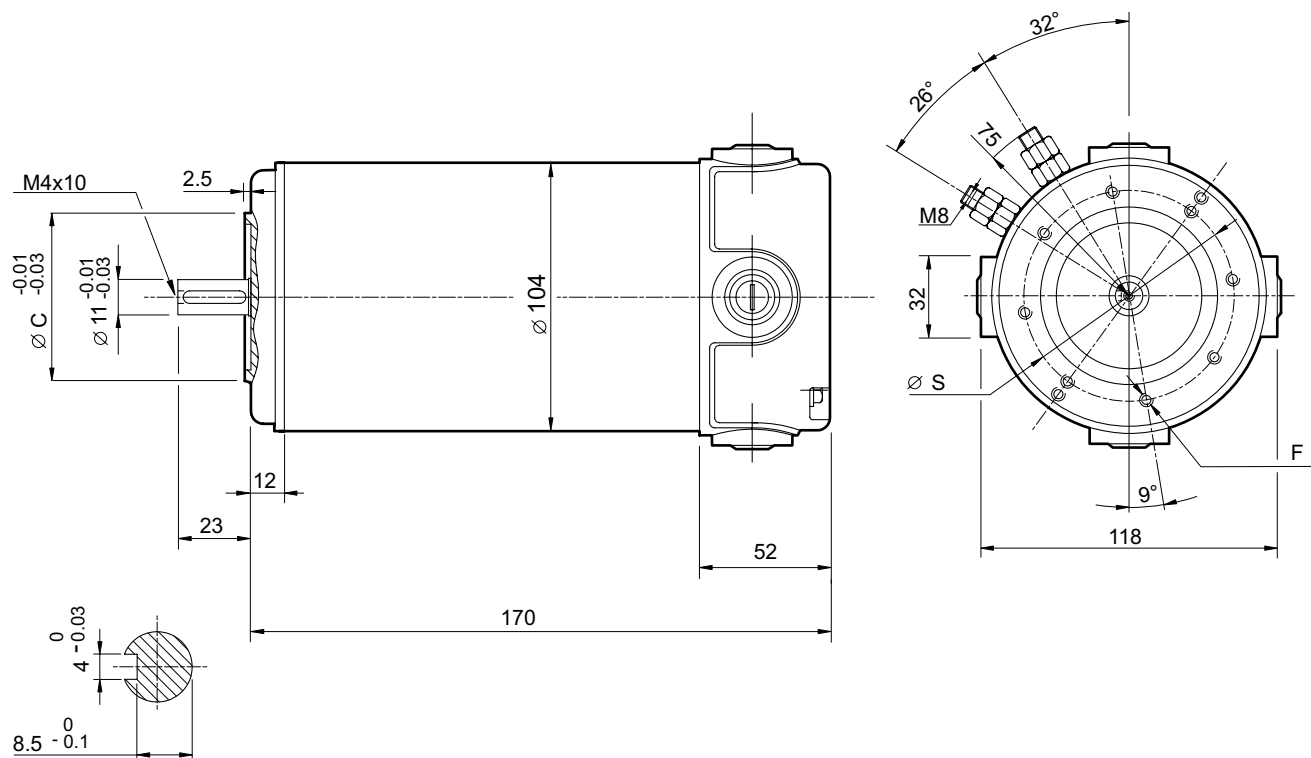
Features

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 ₁ [min ⁻¹]	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

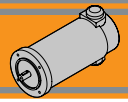
Dimensions



	63 B14	71 B14*
S	75	85
C (-0.01 / -0.03)	60	70
F	8 - M5	8 - M6

* Usare boccola 11/14

* Use sleeve 11/14

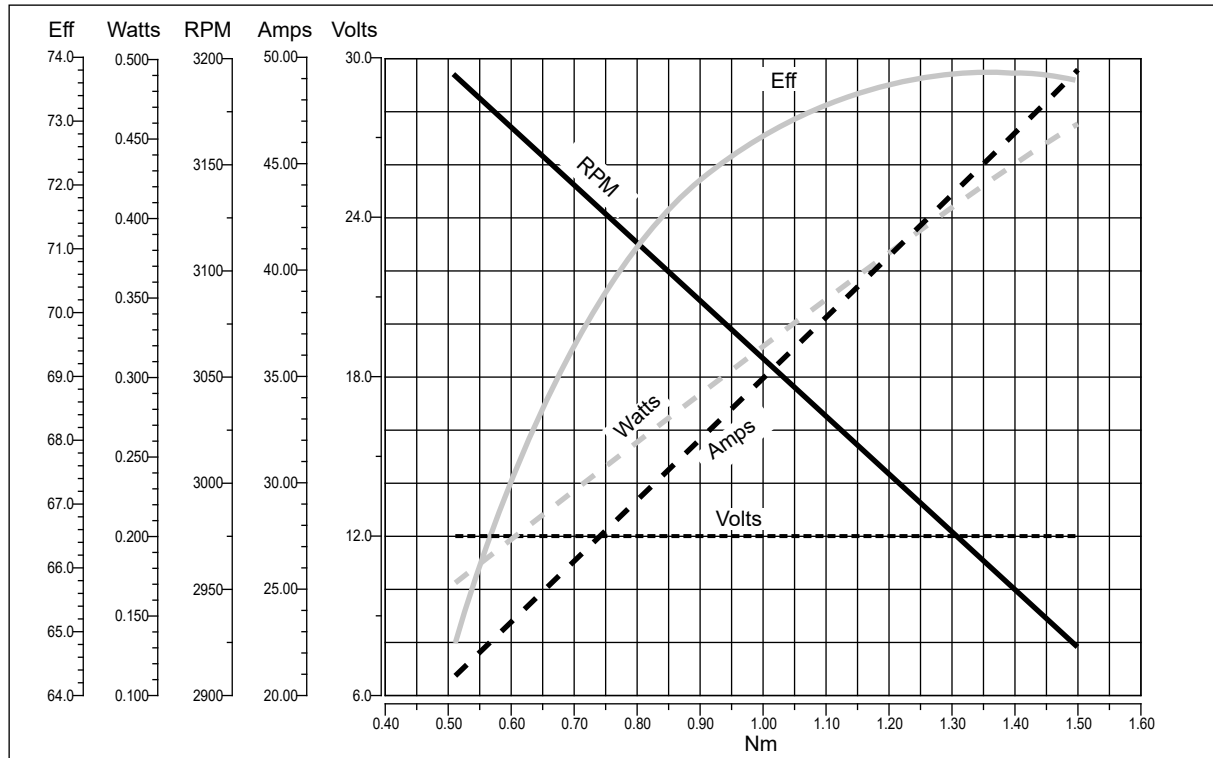


EC250.120 - EC250.240

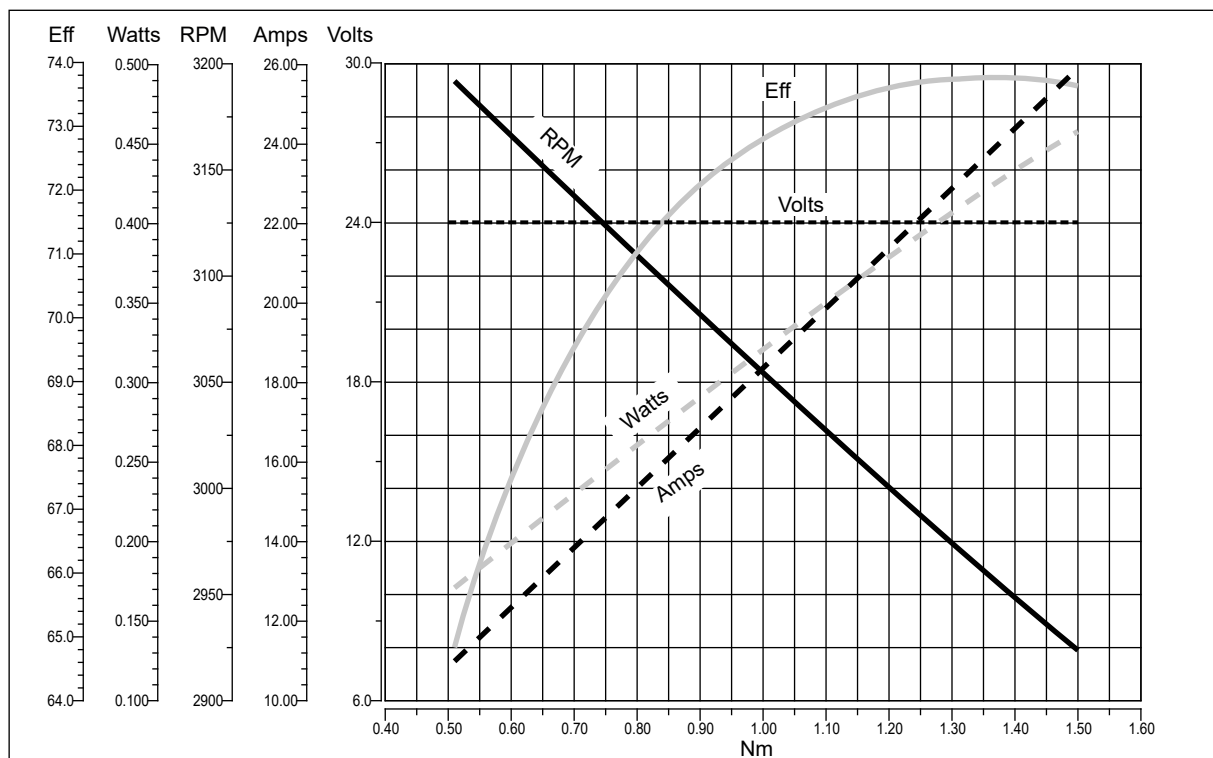
Prestazioni

Performances

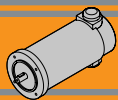
EC250.120



EC250.240



EC



EC350.120 - EC350.240

Caratteristiche

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
Freno	Elettromagnetico

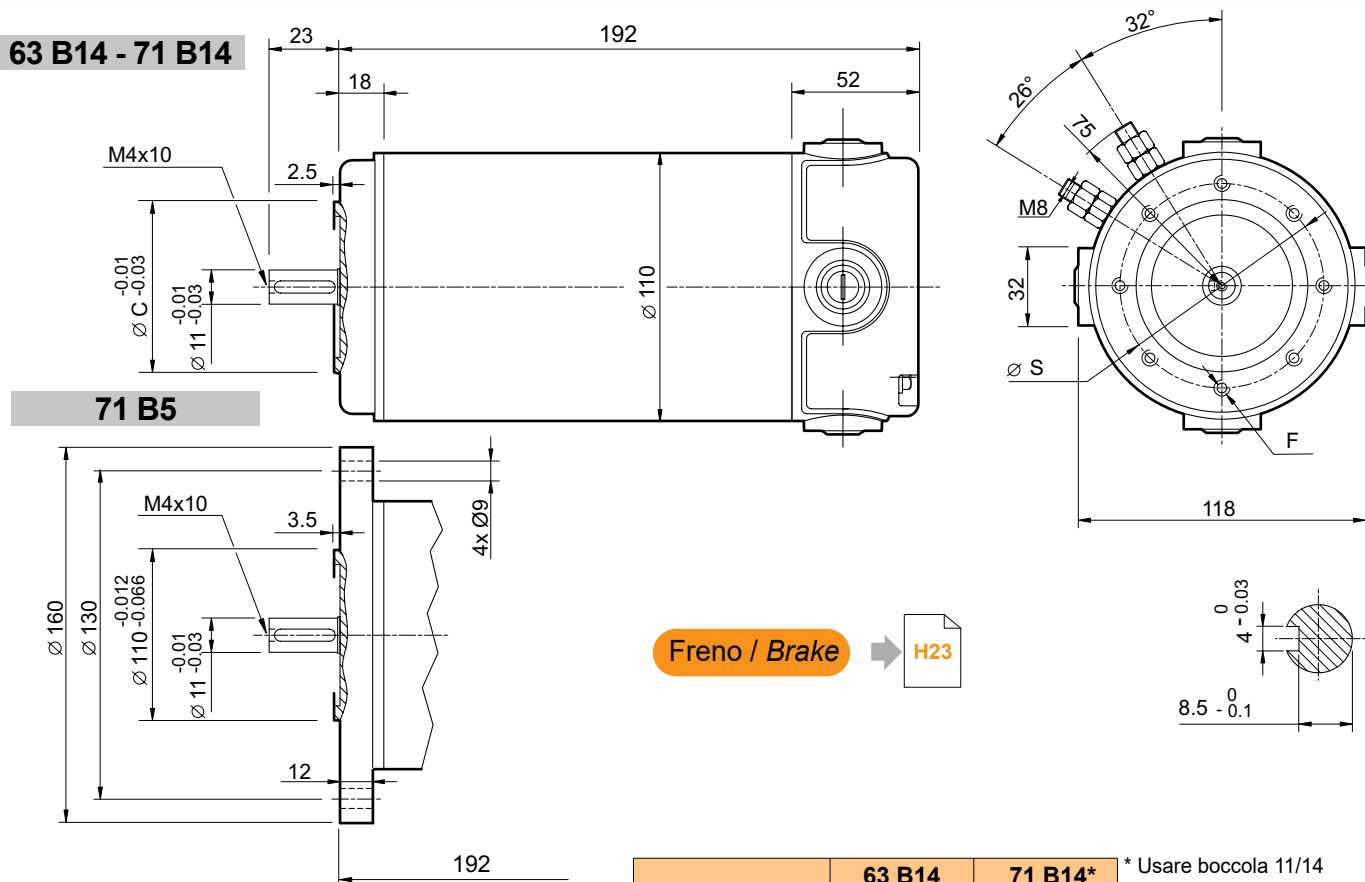
Features

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
Brake	Electromagnetic

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	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			

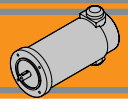
Dimensioni

Dimensions



	63 B14	71 B14*
S	75	85
C (-0.01 / -0.03)	60	70
F	8 - M5	8 - M6

* Usare boccola 11/14
* Use sleeve 11/14

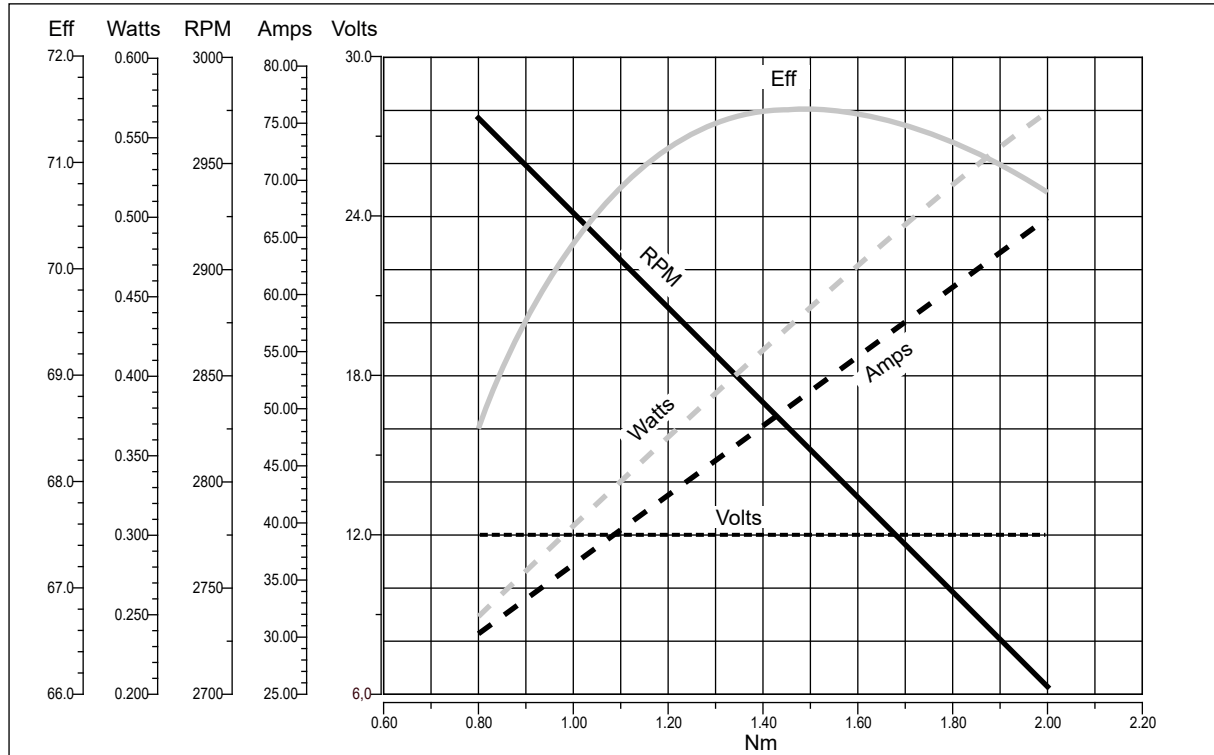


EC350.120 - EC350.240

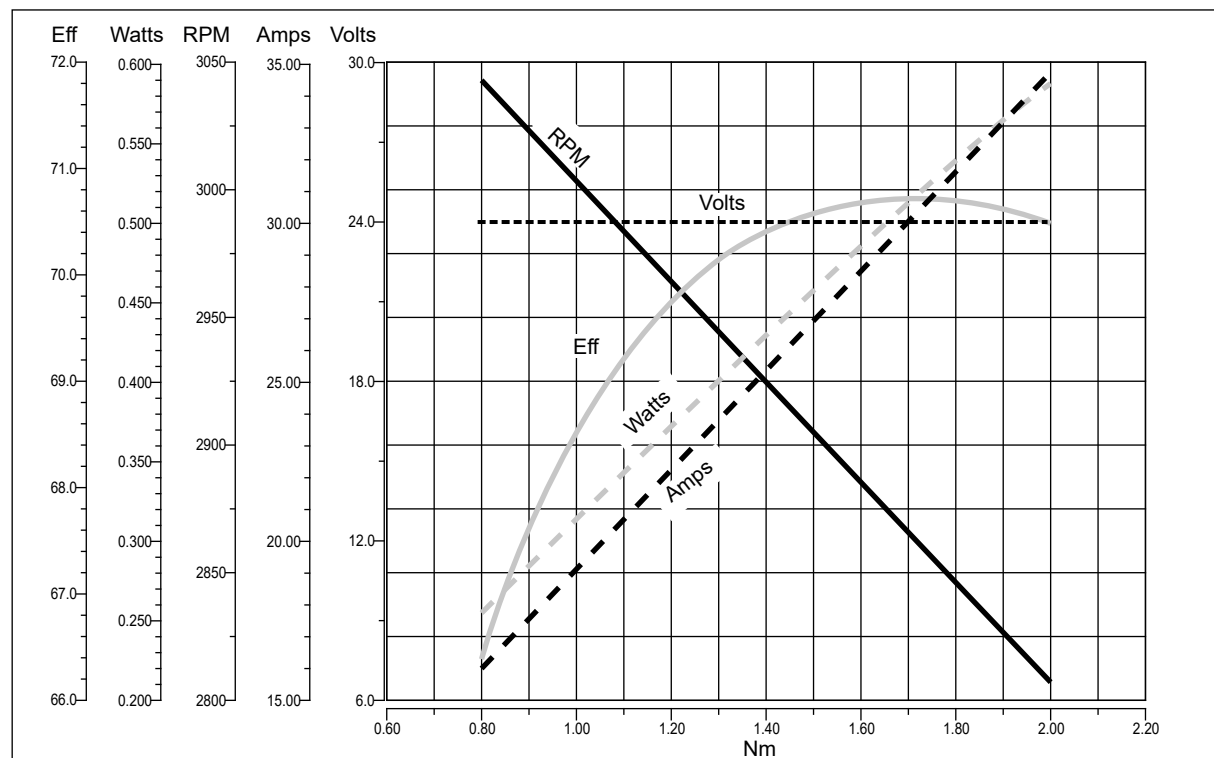
Prestazioni

Performances

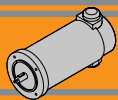
EC350.120



EC350.240



EC



EC600.120 - EC600.240

Caratteristiche

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
Freno	Elettromagnetico

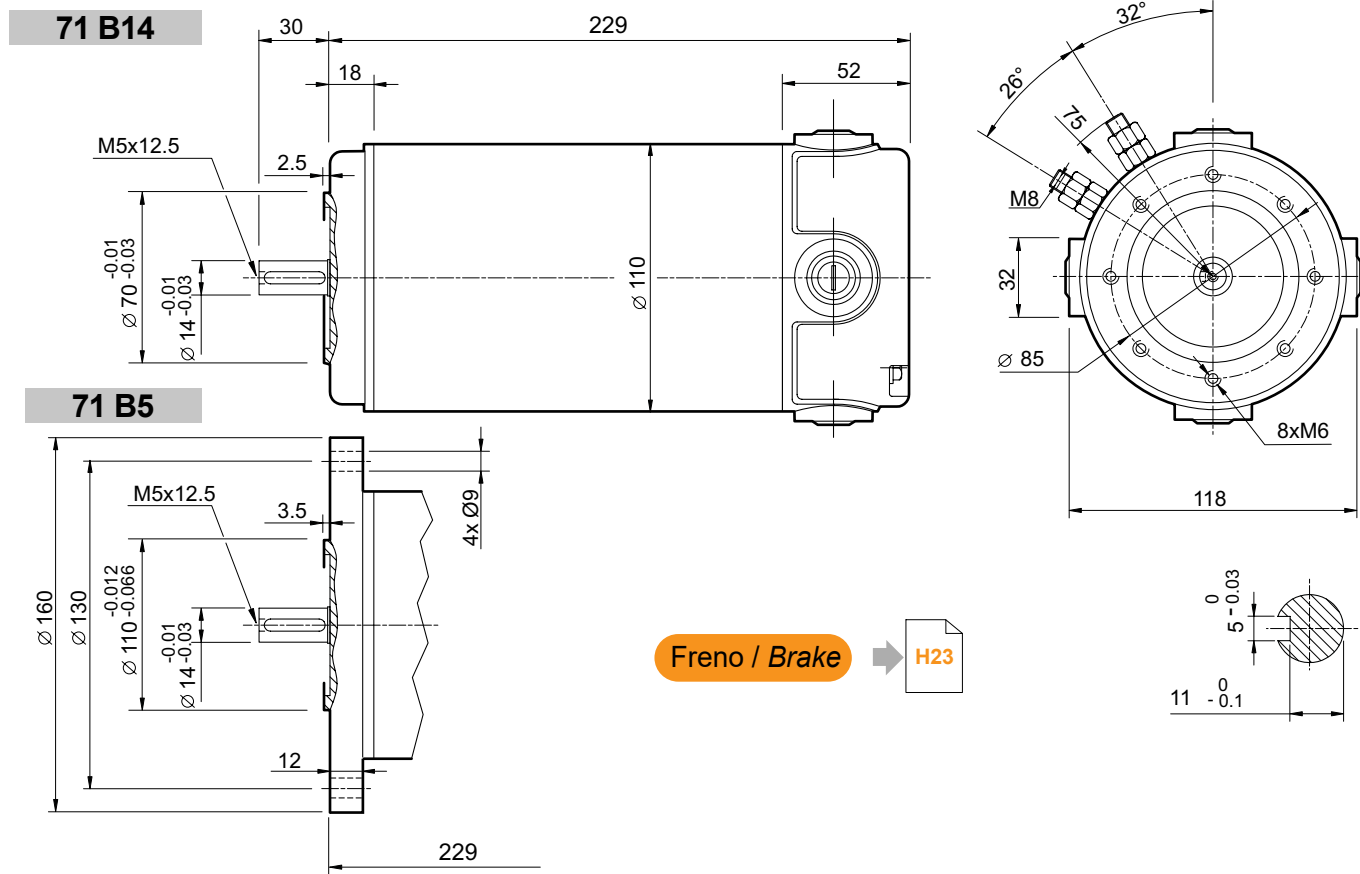
Features

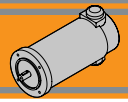
Construction	Tubular, without fan
Size	Ø 110 mm
Power	800 W S2 (600 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut
Brake	Electromagnetic

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	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



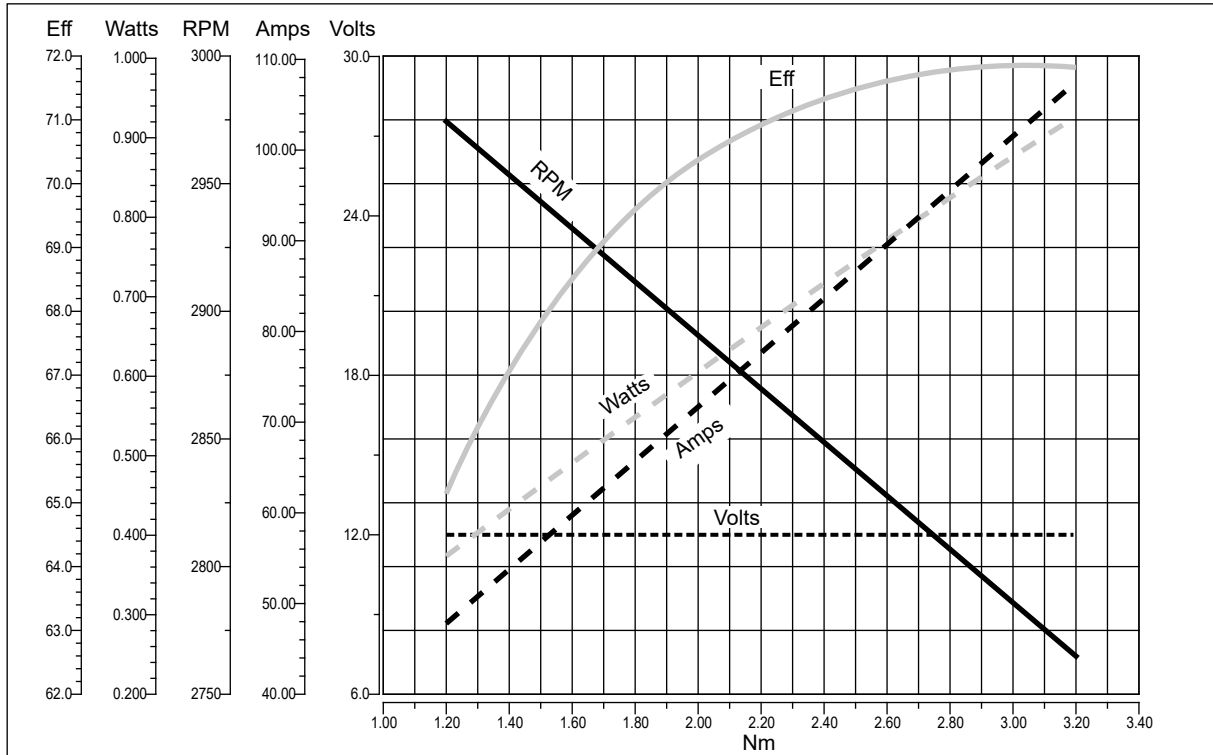


EC600.120 - EC600.240

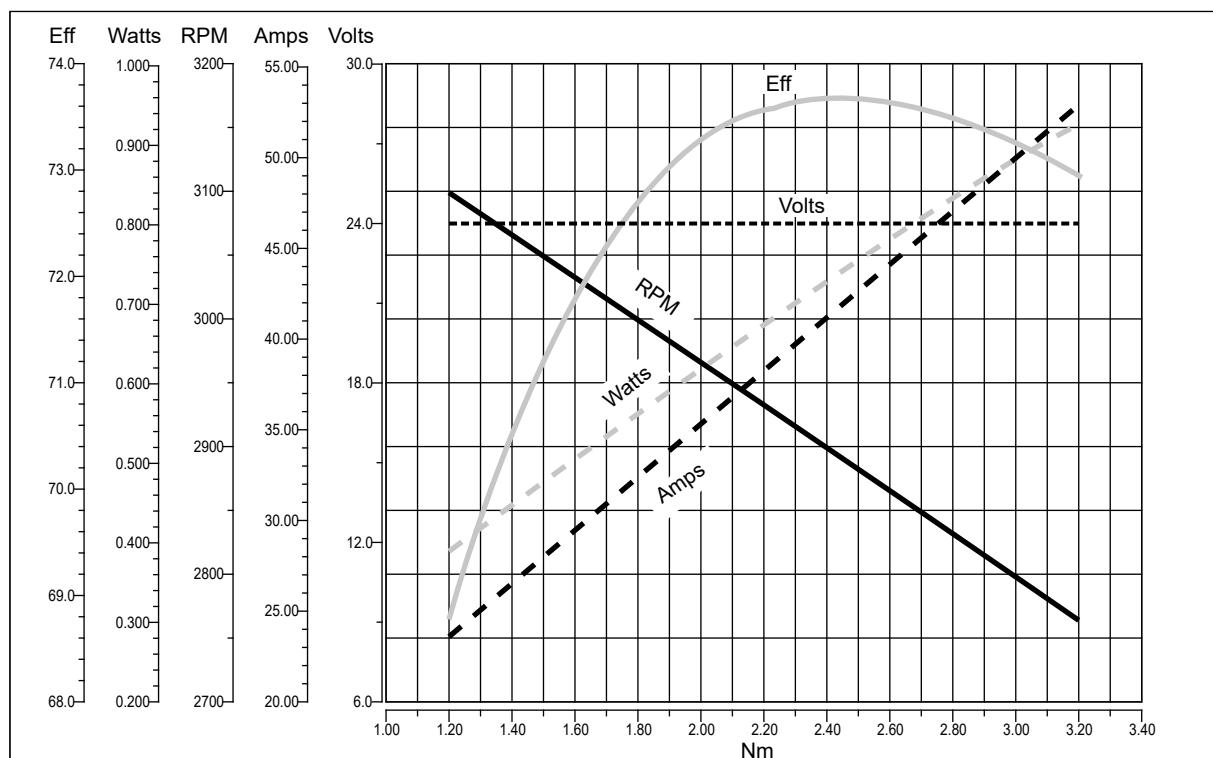
Prestazioni

Performances

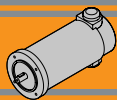
EC600.120



EC600.240



EC

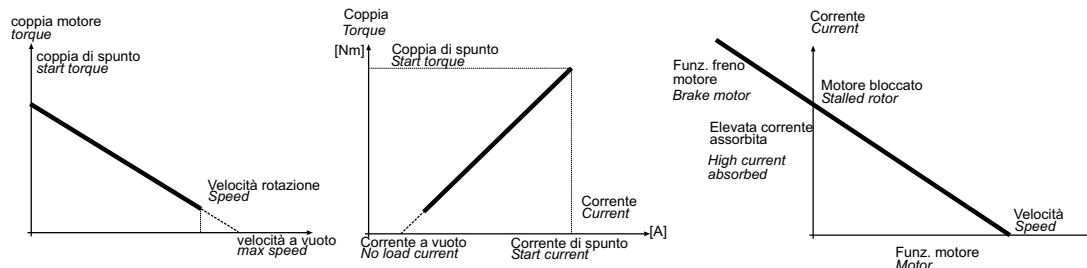


Legenda / Glossario dei grafici

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.

Key / Diagram Glossary

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.

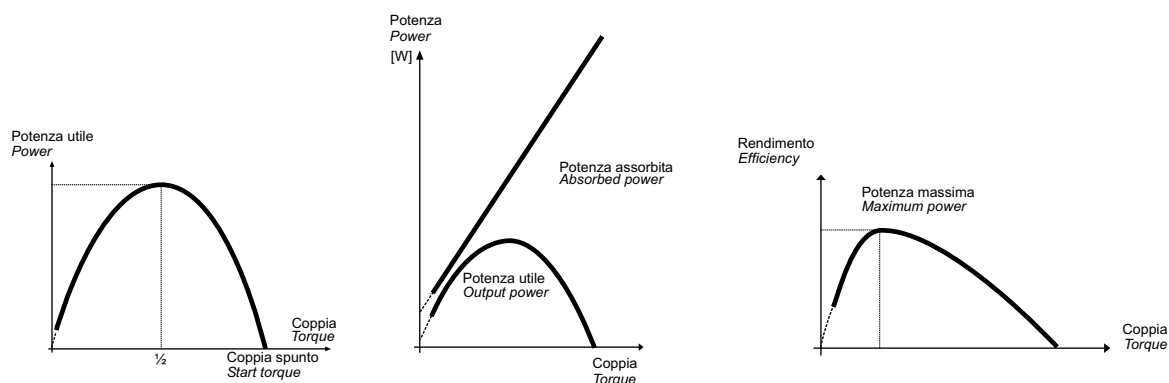


La potenza utile (potenza all' albero) si ricava dalla formula:

$$P_n [W] = M_n \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot M_n$$

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

$$\eta = \frac{P_n}{P_a}$$

$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Esempio 2 HP = circa 1500 W.

Useful formulas

$$\eta = \frac{P_n}{P_a}$$

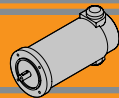
$$P_a = V \cdot I$$

$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

$$S_v = \frac{n_1}{9.55}$$

[HP] · 746 = [W].
Example 2 HP = approx. 1500 W.

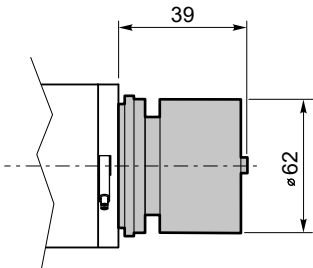


Freno

Brake

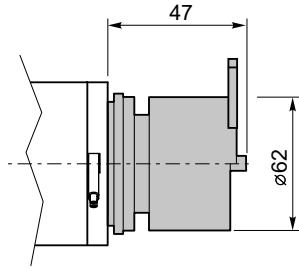
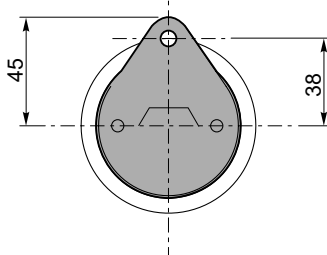
Freno / Brake

EC050...BR
EC070...BR



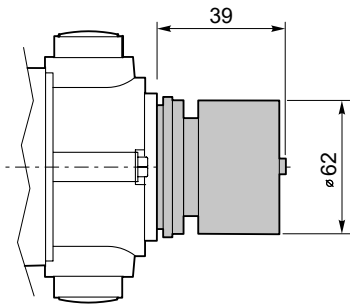
Freno con leva di sblocco/ Brake with hand release

EC050...BRL
EC070...BRL

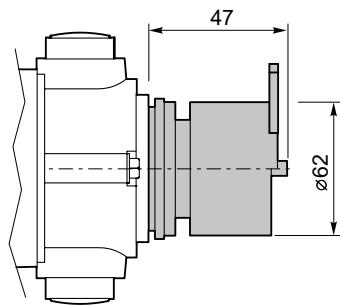
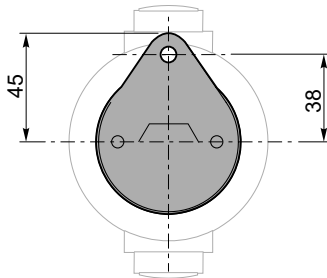


	P _n [W]	V [V]	M _n [Nm]	n ₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	1.8	3000
		24		

EC100.24E BR
EC180.24E BR

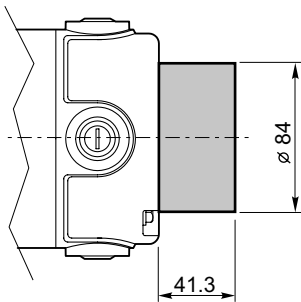


EC100.24E BRL
EC180.24E BRL

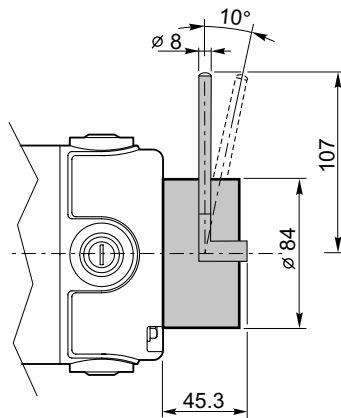


	P _n [W]	V [V]	M _n [Nm]	n ₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	1.8	3000
		24		

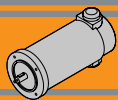
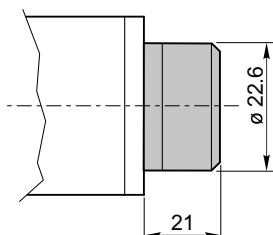
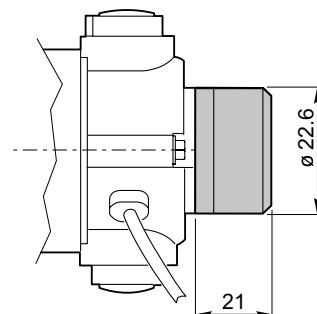
EC350...BR
EC600...BR



EC350...BRL
EC600...BRL



	P _n [W]	V [V]	M _n [Nm]	n ₁ [min ⁻¹]
Caratteristiche del freno / Break features	25	12	5	3000
		24		

**EC****Motori elettrici CC**
DC Electric motors**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

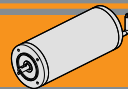
Note: Supplie with cavle 300 mm long



Ferrite

Motori elettrici CC IP66
IP66 DC electric motors

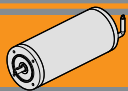




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EC070.240.66	Dimensioni	<i>Dimensions</i>	I2
	Prestazioni	<i>Performances</i>	I3
EC100.120.66	Caratteristiche	<i>Features</i>	I4
EC100.240.66	Dimensioni	<i>Dimensions</i>	I4
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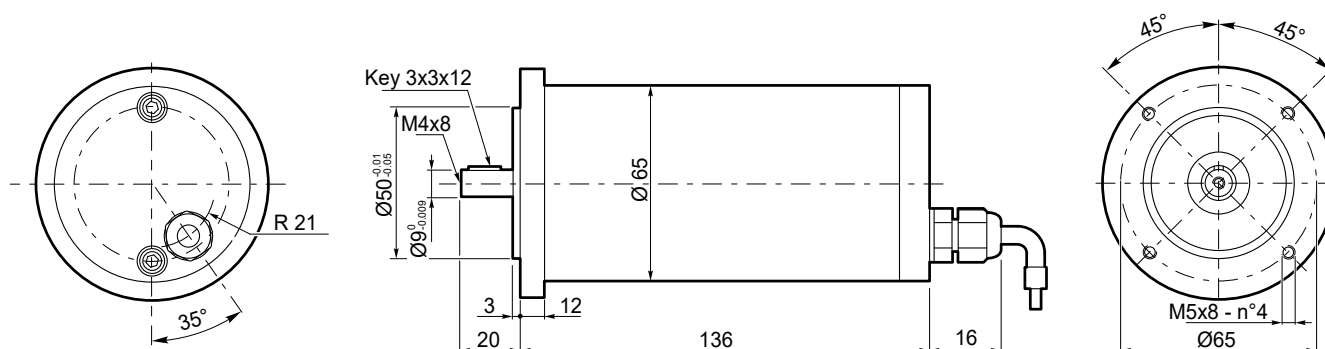
**EC IP66****Motori elettrici CC**
DC Electric motors**EC070.120.66 - EC070.240.66****Caratteristiche**

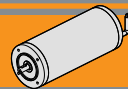
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2 (70 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

Features

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 ₁ [min ⁻¹]	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			0.22			
	S2 30'	100		5.9			0.31			

Dimensioni**Dimensions****EC070.120.66**
EC070.240.66

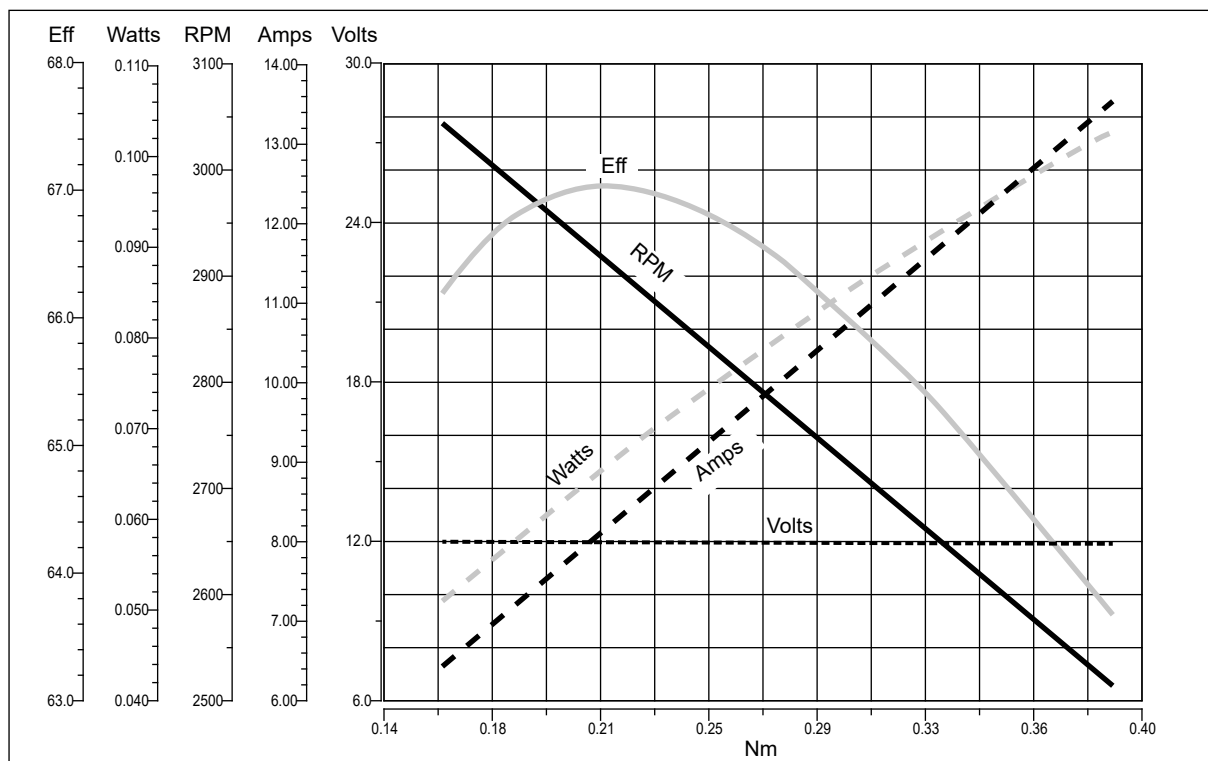


EC070.120.66 - EC070.240.66

Prestazioni

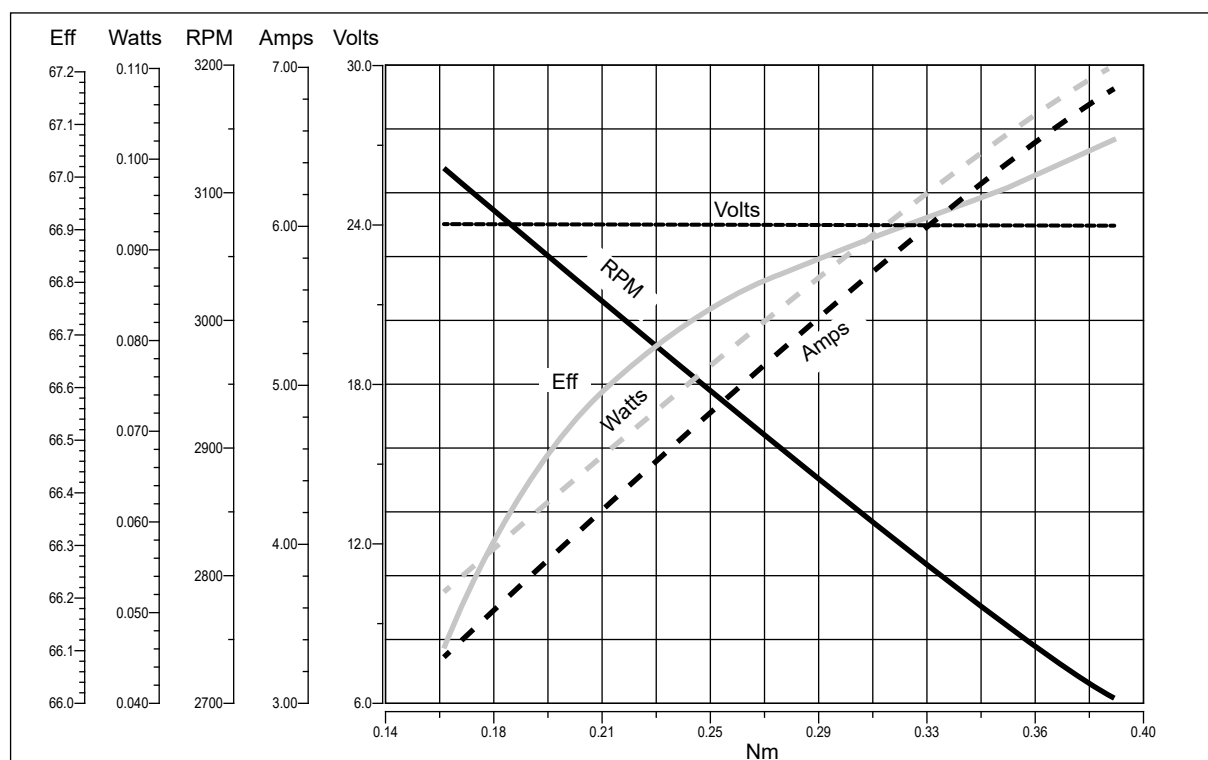
Performances

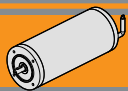
EC070.120.66



EC IP66

EC070.240.66



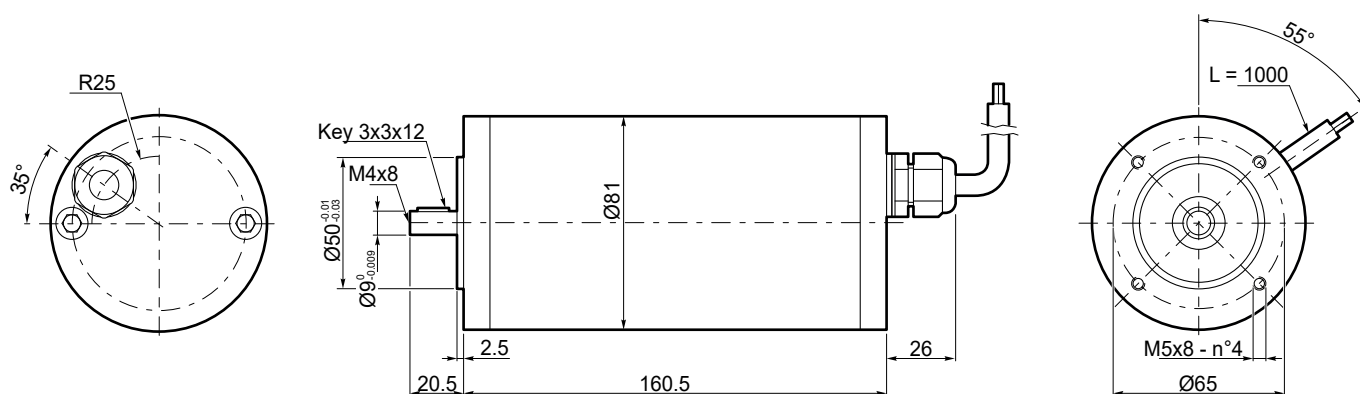
**EC IP66****Motori elettrici CC**
DC Electric motors**EC100.120.66 - EC100.240.66****Caratteristiche**

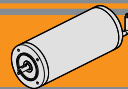
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

Features

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 ₁ [min ⁻¹]	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			

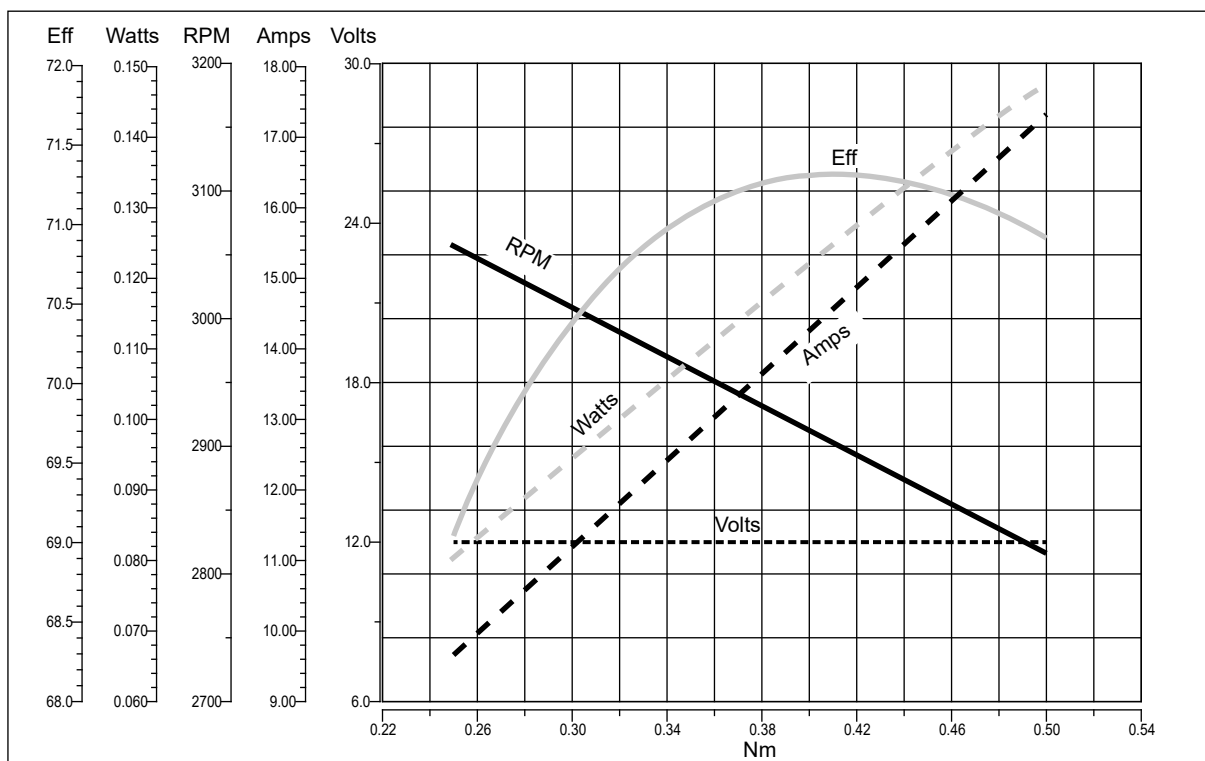
Dimensioni**Dimensions****EC100.120.66**
EC100.240.66



Prestazioni

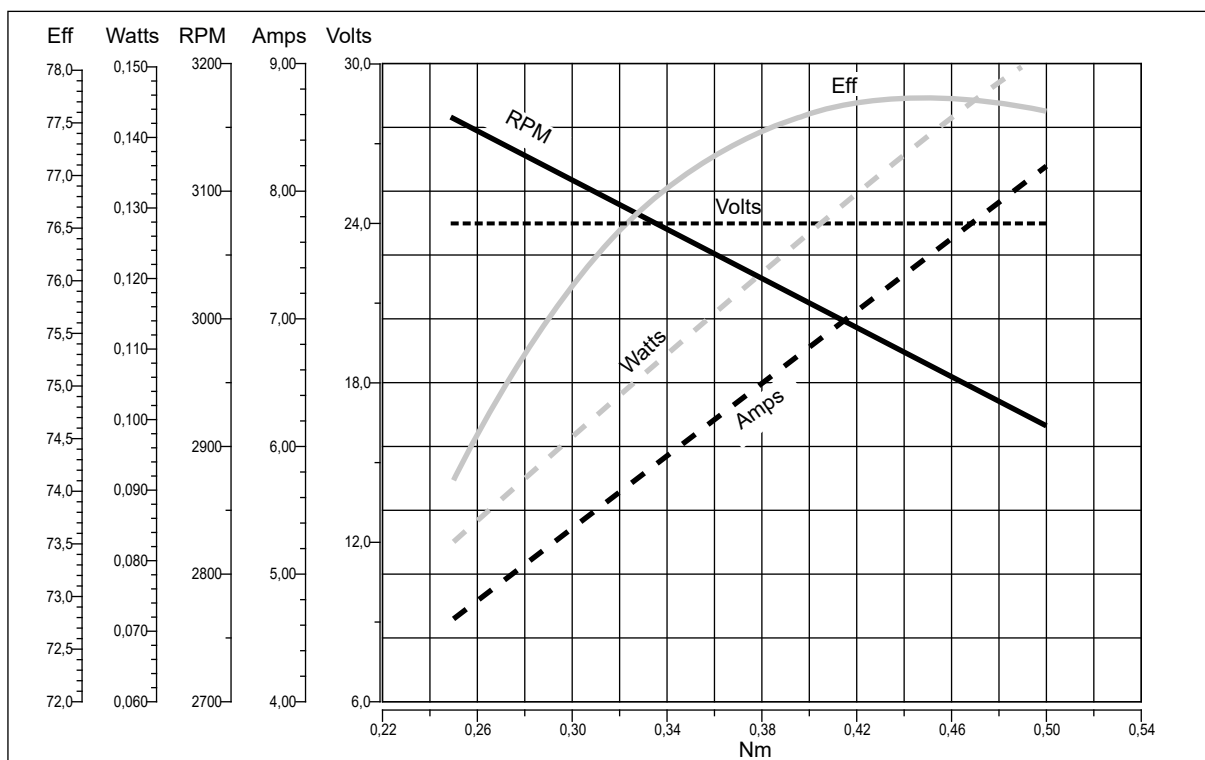
Performances

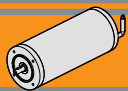
EC100.120.66



EC IP66

EC100.240.66



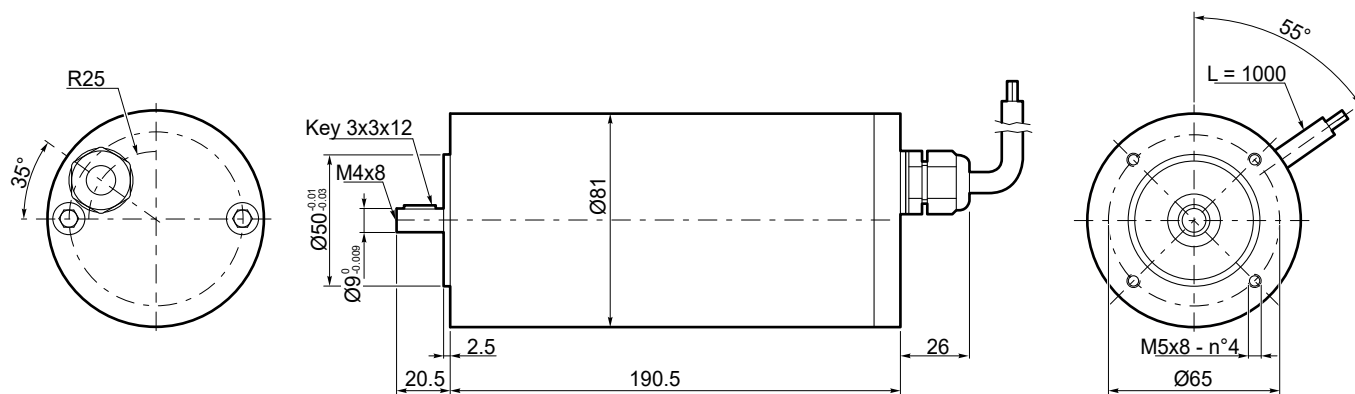
**EC IP66****Motori elettrici CC**
DC Electric motors**EC180.120.66 - EC180.240.66****Caratteristiche**

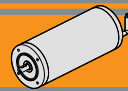
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

Features

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 ₁ [min ⁻¹]	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			0.57			
	S2 25'	250		15			0.8			

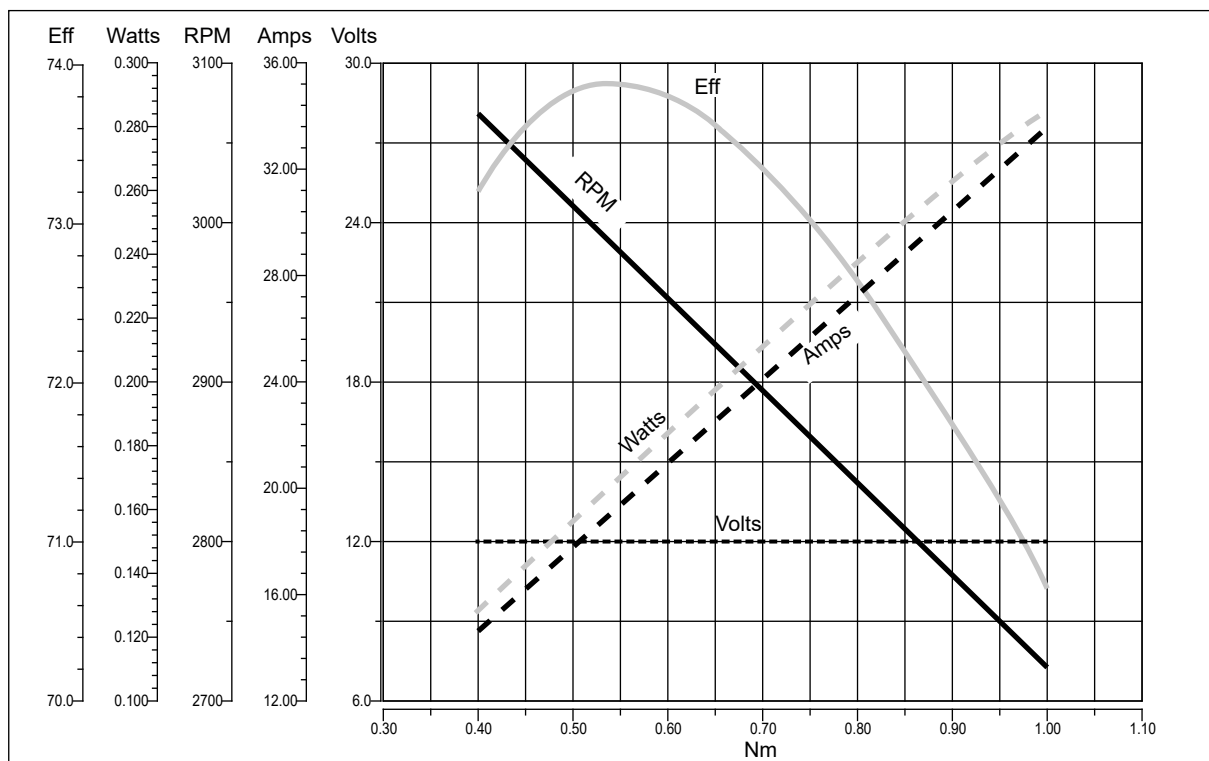
Dimensioni**Dimensions****EC180.120.66****EC180.240.66**



Prestazioni

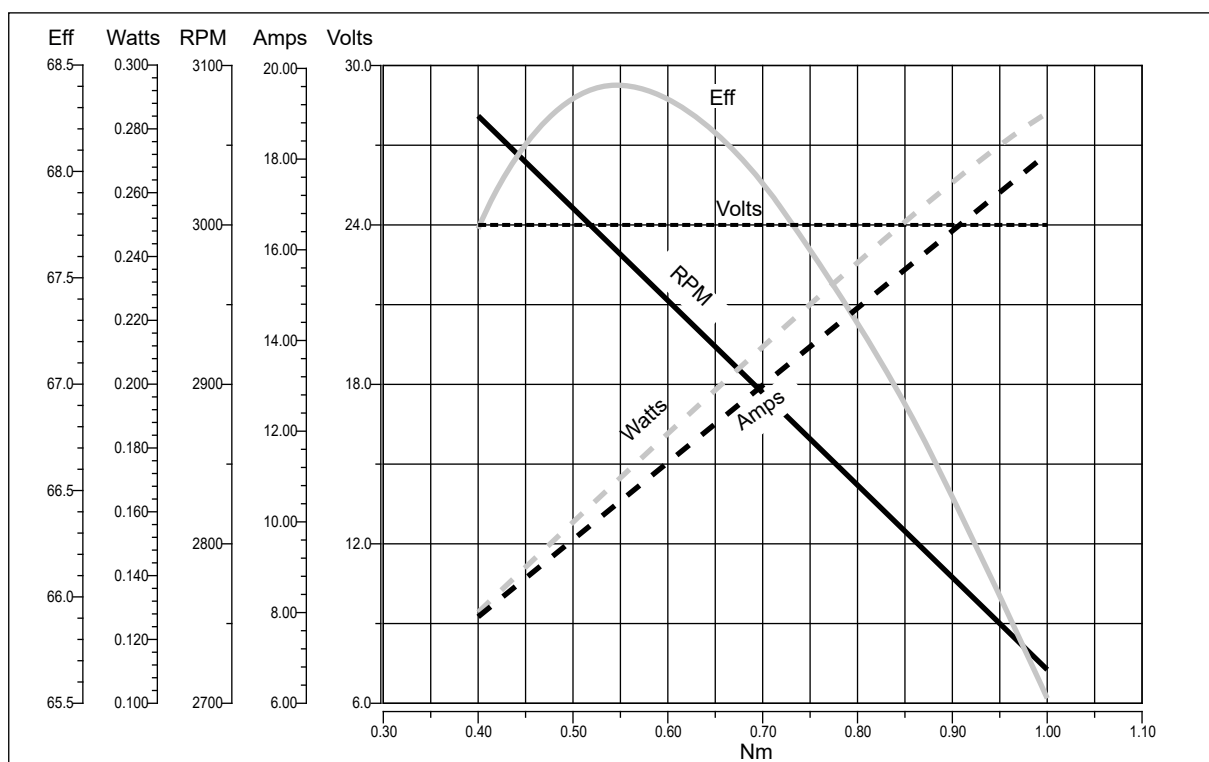
Performances

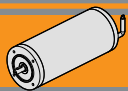
EC180.120.66



EC IP66

EC180.240.66





EC250.120.66 - EC250.240.66

Caratteristiche

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

Features

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

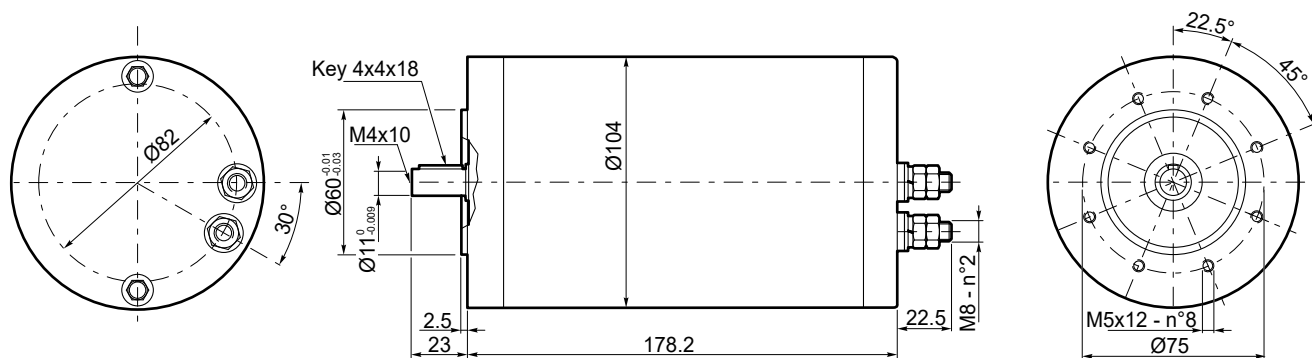
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC250.120.66	S1	250	12	30	F	1	0.8	3000	66	4.15
	S2 25'	350		38.5			1.12			
EC250.240.66	S1	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

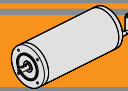
Dimensioni

Dimensions

EC250.120.66

EC250.240.66

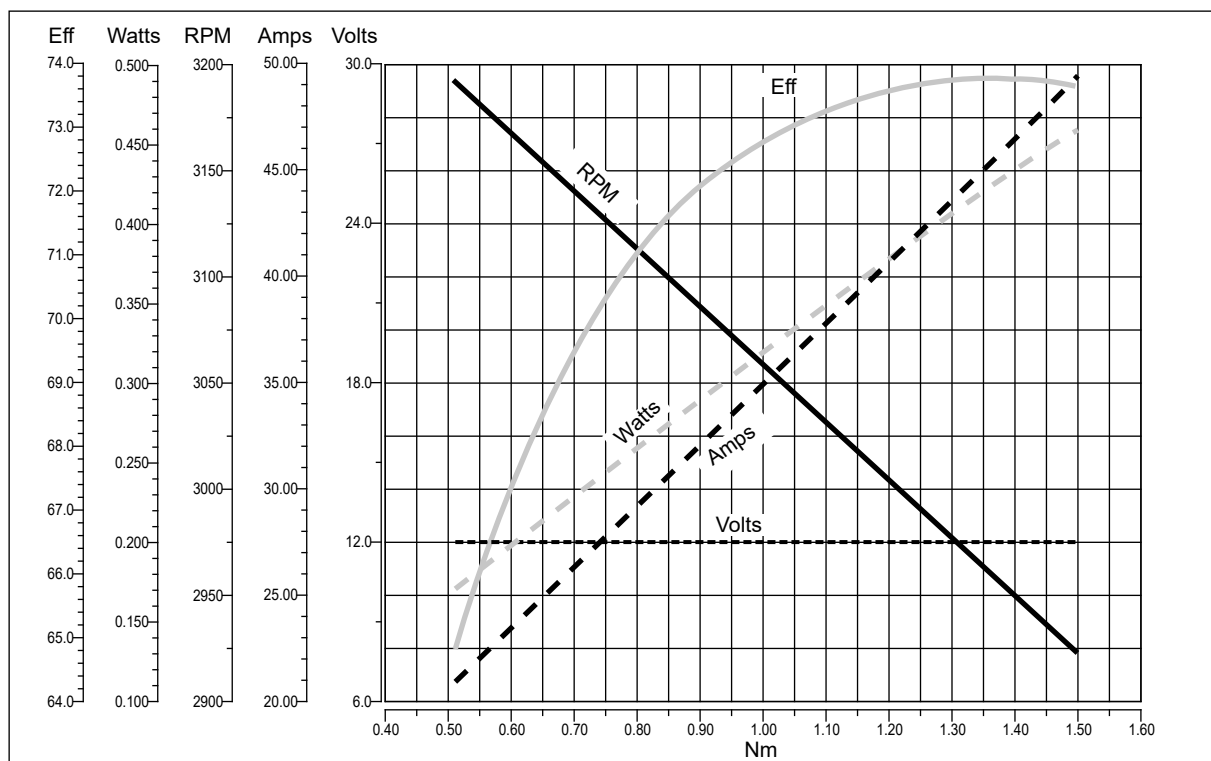




Prestazioni

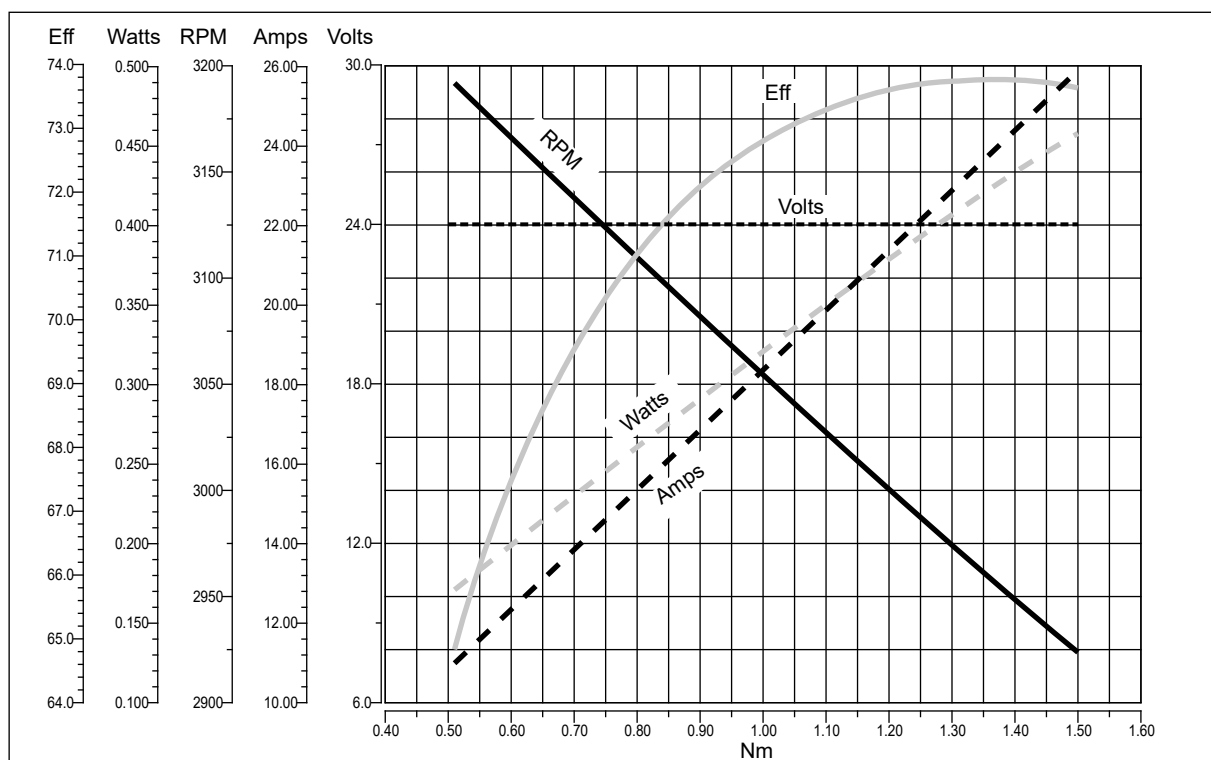
Performances

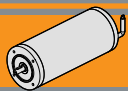
EC250.120.66



EC IP66

EC250.240.66





EC350.120.66 - EC350.240.66

Caratteristiche

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

Features

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

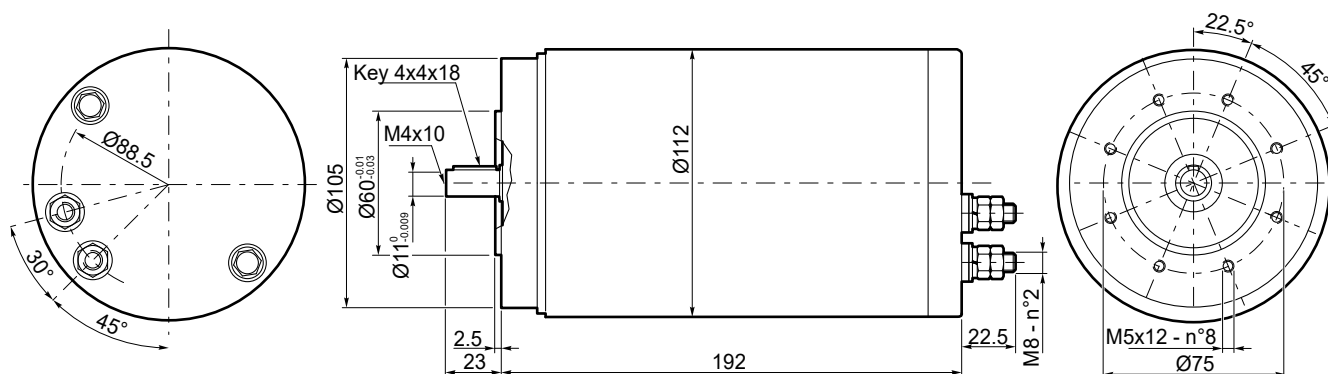
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC350.120.66	S1	350	12	42	F	1	1.12	3000	66	5.1
	S2 30'	500		58.8			1.57			
EC350.240.66	S1	350	24	21			1.12			5.3
	S2 30'	500		29.4			1.57			

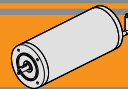
Dimensioni

Dimensions

EC350.120.66

EC350.240.66

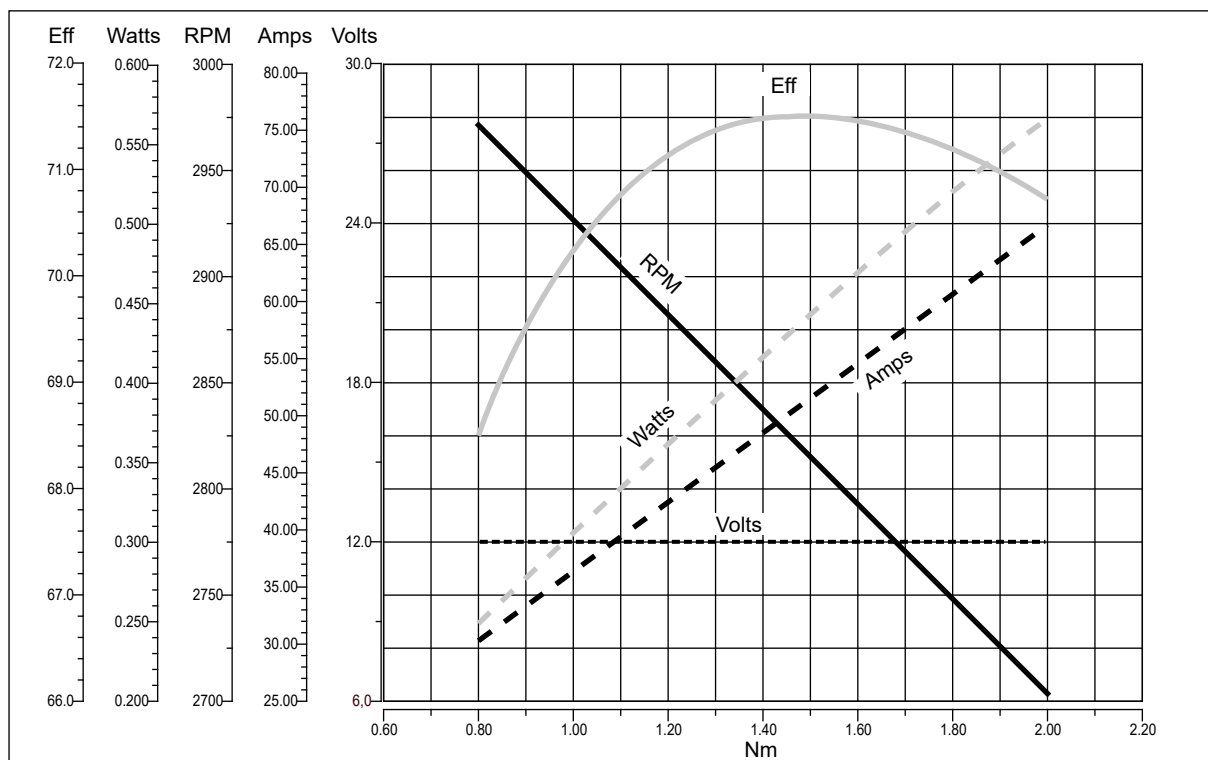




Prestazioni

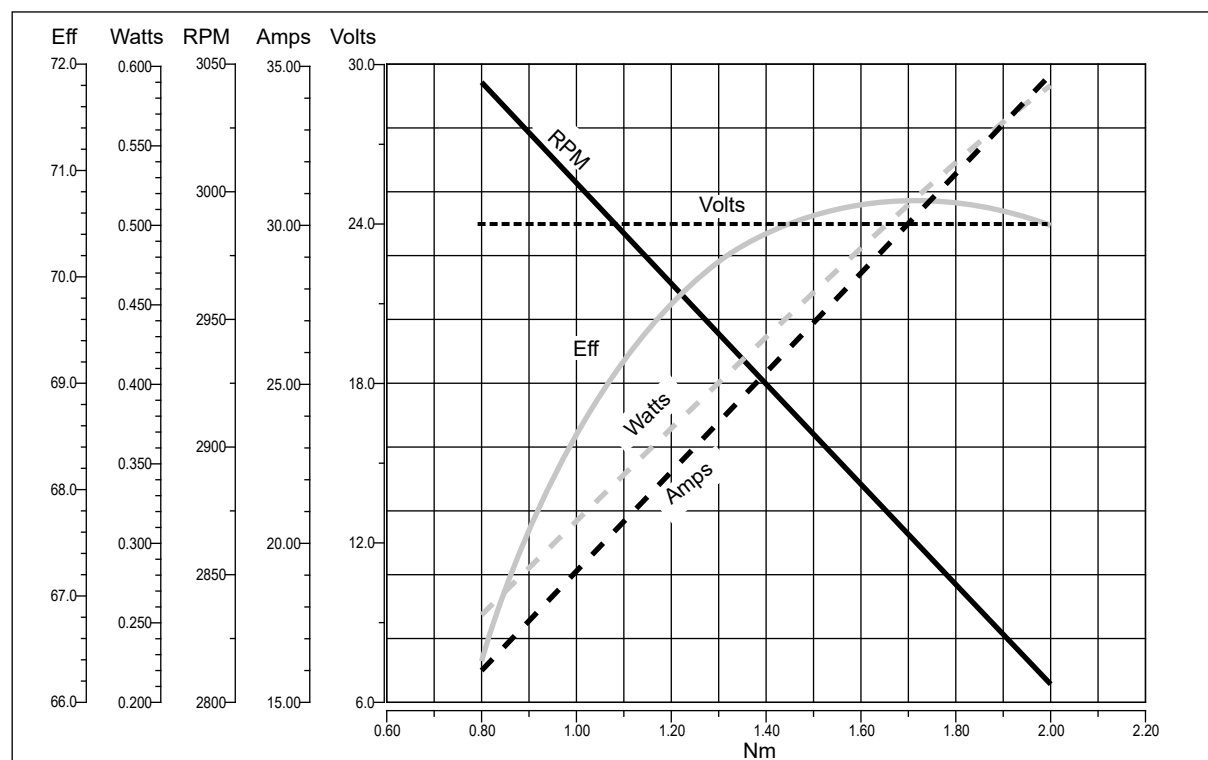
Performances

EC350.120.66



EC IP66

EC350.240.66



EC600.120.66 - EC600.240.66

Caratteristiche

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

Features

<i>Construction</i>	<i>Tubular, without fan</i>
<i>Size</i>	<i>Ø 110 mm</i>
<i>Power</i>	<i>800 W S2 (600 W S1)</i>
<i>Magnets</i>	<i>4</i>
<i>Bearings</i>	<i>Ball bearings</i>
<i>Mounting holes</i>	<i>8</i>
<i>Power supply</i>	<i>Low voltage, 12 or 24 Vdc</i>
<i>Leads terminals</i>	<i>2, with double nut</i>

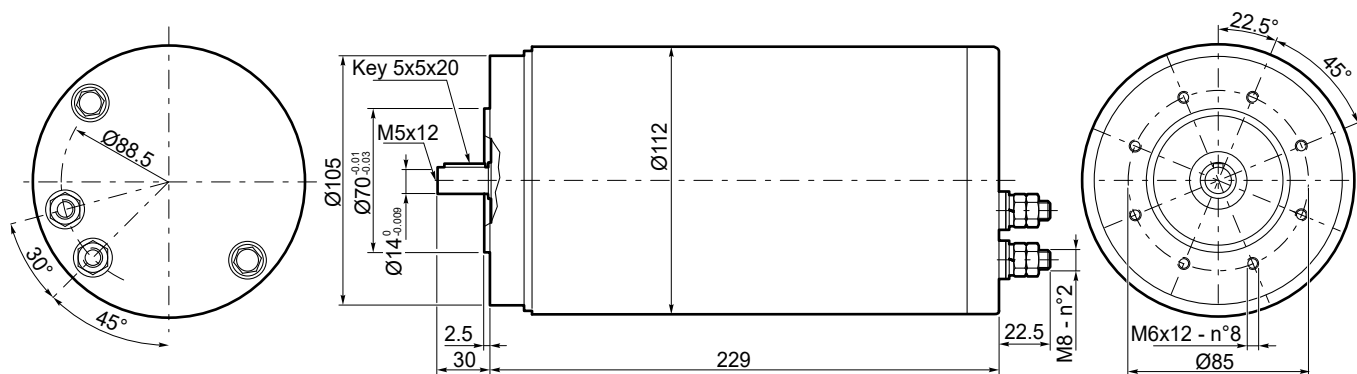
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC600.120.66	S1	600	12	71	F	1	1.91	3000	66	6.6
	S2 30'	800		94.4			2.54			
EC600.240.66	S1	600	24	35.5			1.91			7.1
	S2 30'	800		47.2			2.54			

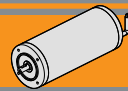
Dimensioni

Dimensions

EC600.120.66

EC600.240.66

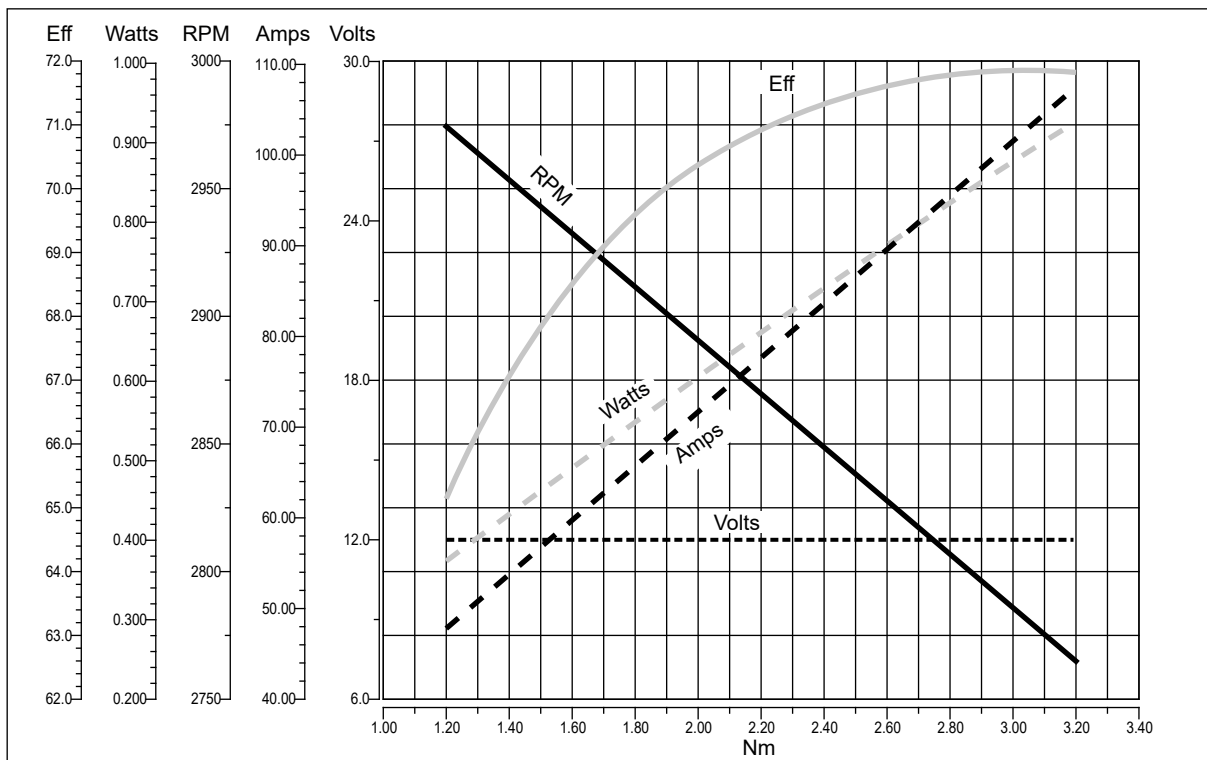




Prestazioni

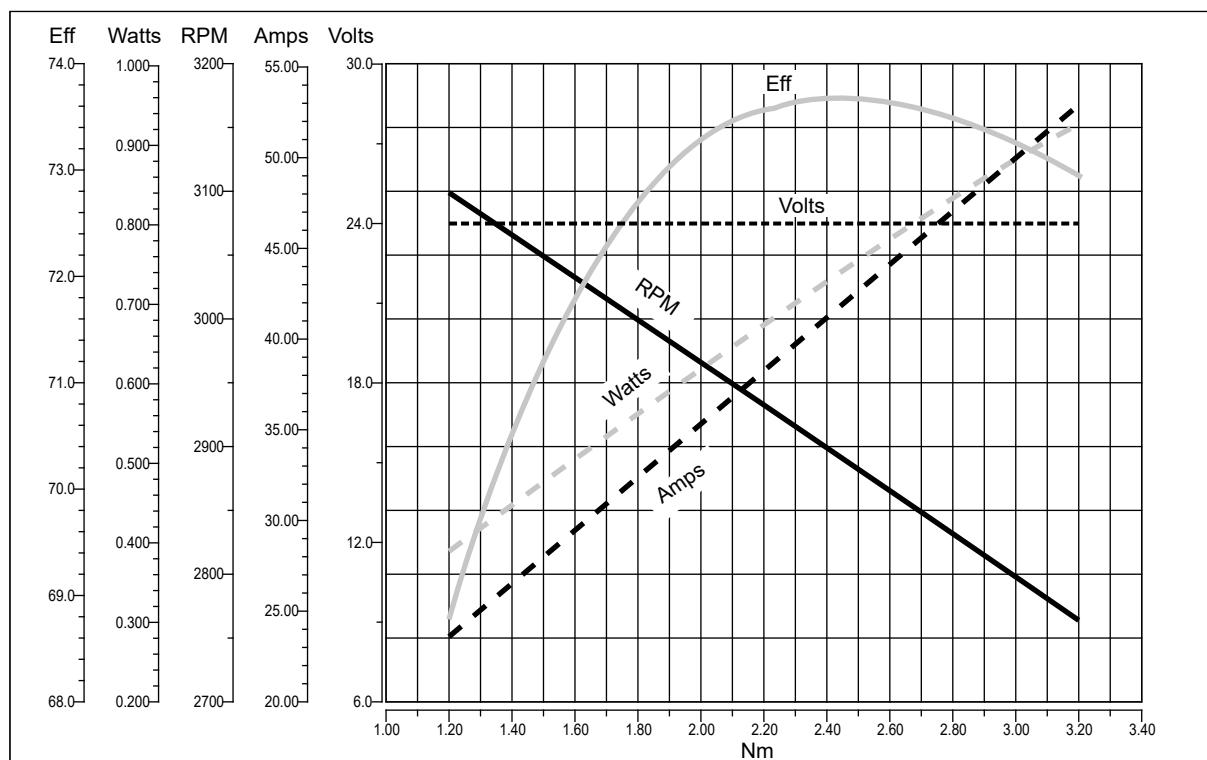
Performances

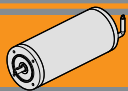
EC600.120.66



EC IP66

EC600.240.66



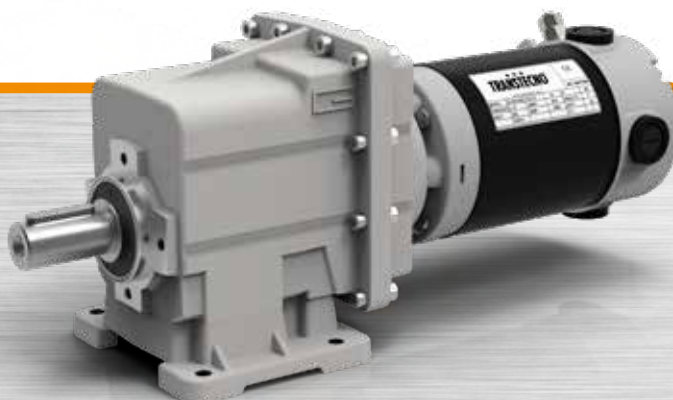


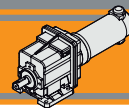
Note/Notes



Ferrite

Motoriduttori CC ad ingranaggi cilindrici DC helical in-line gearmotors

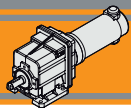




Indice	Index	Pag. Page
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Designazione	<i>Classification</i>	L2
Sensi di rotazione	<i>Direction of rotation</i>	L3
Lubrificazione	<i>Lubrication</i>	L3
Simbologia	<i>Symbols</i>	L3
Carichi radiali	<i>Radial loads</i>	L4
Motori applicabili	<i>IEC Motor adapters</i>	L4
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	L5
Dimensioni	<i>Dimensions</i>	L9

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**

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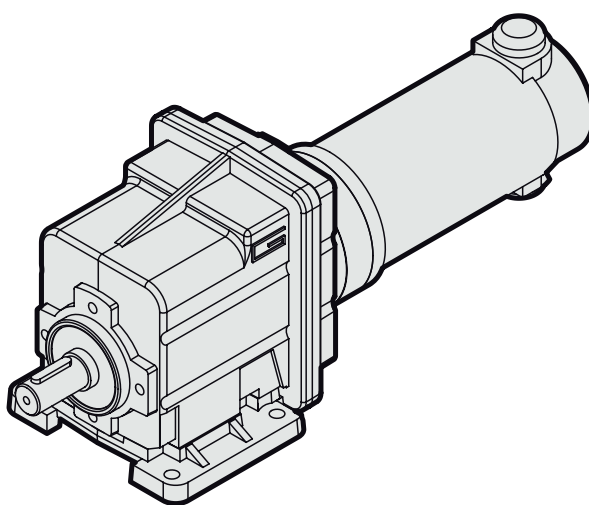
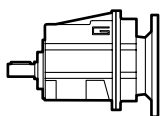
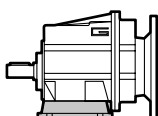
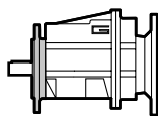
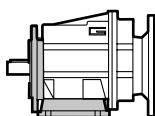
**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Caratteristiche tecniche****Technical features**

Le caratteristiche principali dei motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in ferrite serie ECMG sono:

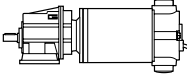
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasce dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati
- Disponibili con giunto elastico in entrata

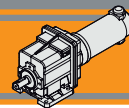
The main features of ECMG ferrite permanent magnets DC helical in-line gearmotors range are:

- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground helical gears
- Input flexible coupling available

**Designazione****Classification****U****H****F****H/F**

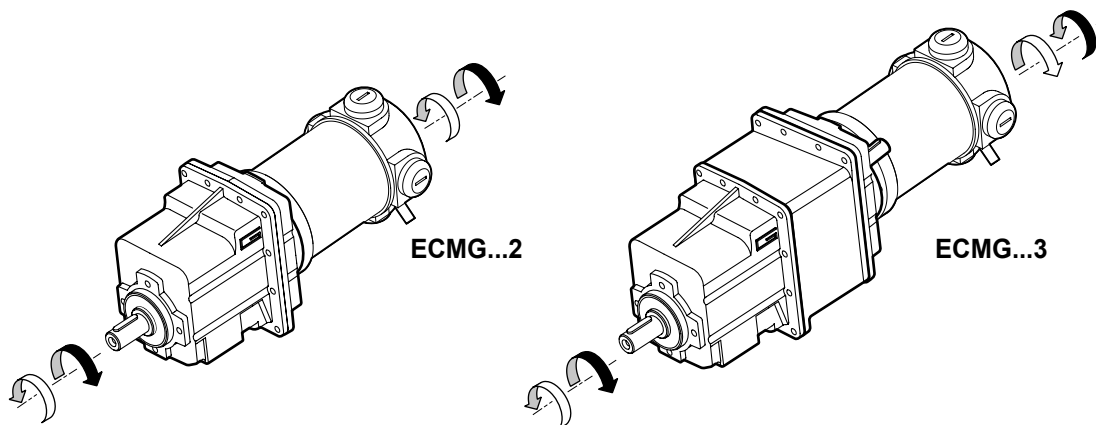
MOTORIDUTTORE / GEARMOTOR

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...	vedi tabelle see tables	vedi tabelle see tables	120 240 24E	FX 
	070/012	100/012	180/012	250/012	350/012	600/012	H...				
	070/013	100/013	180/013	250/013	350/013	600/013	F...				
	070/022	100/022	180/022	250/022	350/022	600/022	H.../F...				
	070/023	100/023	180/023	250/023	350/023	600/023					
	070/033	100/033	180/033	250/033	350/033	600/032					
	070/043	100/043	180/043	250/043	350/043	600/033					
						600/042					
						600/043					



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.

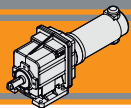
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

ECMG

Simbologia

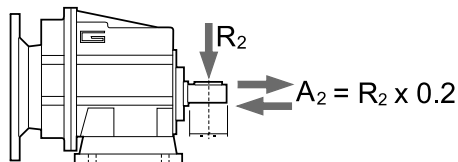
Symbols

n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[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 P_1</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

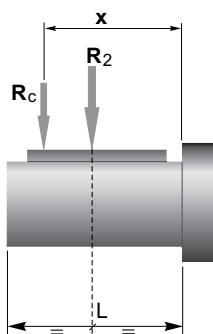
Radial loads



n ₂ [min ⁻¹]	R ₂ [N]				
	CMG 00	CMG 01	CMG 02	CMG 03	CMG 04
700	416	764	1529	1987	2379
600	437	805	1609	2092	2504
500	465	855	1710	2223	2661
400	501	921	1842	2395	2866
250	586	1077	2154	2801	3353
180	653	1323	2554	3321	3897
150	748	1406	2714	3529	4244
120	806	1631	3467	3801	4572
100	958	1842	3684	4507	5234
80	1032	1984	3969	5042	5991
60	1136	2184	4368	5549	6594
40	1300	2500	5000	6500	8000
10	1300	2500	5000	6500	8000

Quando il carico radiale risultante non è applicato sulla mezzera 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 00	CMG 01	CMG 02	CMG 03	CMG 04
a	73	104	117	132	150
b	53	84	92	102	115
R _{2MAX}	1300	2500	5000	6500	8000

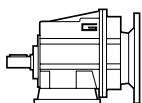
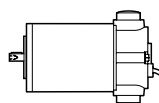
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

Motori applicabili

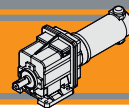
IEC Motor adapters



		EC					
		070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240 600.120 600.240
CMG	002	5.03 - 55.10	5.03 - 55.10 *	5.03 - 55.10			
	012	3.82 - 60.15	3.82 - 60.15 *	3.82 - 60.15			
	013	63.22 - 443.59	63.22 - 443.59 *	63.22 - 443.59			
	022	3.66 - 60.90	3.66 - 60.90 *	3.66 - 60.90			
	023	64.01 - 449.14	64.01 - 449.14 *	64.01 - 449.14			
	032						** 3.74 - 60.80 (!)
	033	72.83 - 427.03	72.83 - 427.03 *	72.83 - 427.03			
	042						** 3.74 - 60.80 (!)
	043	72.83 - 427.03	72.83 - 427.03 *	72.83 - 427.03			
		5.03 - 55.10	Rapporti di riduzione i Ratio i			(!): Solo IEC 71B5 con giunto FX 71 B5 only with FX coupling	

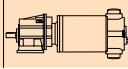
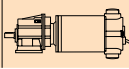
*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

**.: Contattare il servizio tecnico
Please contact our technical service



Dati tecnici per servizio S2

Technical data for S2 duty

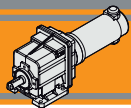
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
100							140						
(3000 min ⁻¹)	596	1.5	20.2	5.03	070/002	12E/24E	(3000 min ⁻¹)	596	2.2	14.4	5.03	100/002	120/240/24E *
	492	1.9	16.6	6.10		120.66/240.66		492	2.6	11.9	6.10		120.66/240.66
	401	2.3	13.5	7.49				401	3.2	9.7	7.49		
	334	2.7	14.2	8.99				334	3.8	10.1	8.99		
	295	3.1	12.6	10.16				295	4.3	9.0	10.16		
	249	3.7	10.6	12.07				249	5.2	7.6	12.07		
	224	4.1	13.4	13.40				224	5.7	9.6	13.40		
	198	4.6	11.9	15.14				198	6.5	8.5	15.14		
	165	5.5	9.9	18.17				165	7.8	7.1	18.17		
	139	6.6	8.3	21.58				139	9.2	6.0	21.58		
	128	7.2	7.7	23.51				128	10	5.5	23.51		
	120	7.7	7.2	25.10				120	11	5.1	25.10		
	111	8.3	6.6	27.08				111	12	4.7	27.08		
	92	9.9	5.5	32.49				92	14	4.0	32.49		
	71	13	4.3	42.04				71	18	3.1	42.04		
	67	14	4.0	44.89				67	19	2.9	44.89		
	61	15	3.7	48.86				61	21	2.6	48.86		
	54	17	3.3	55.10				54	24	2.3	55.10		
	61	15	6.3	49.00	070/012	12E/24E		85	15	6.2	35.47	100/012	120/240/24E*
	56	16	5.8	53.33		120.66/240.66		65	20	4.8	45.89		120.66/240.66
	50	18	5.1	60.15				61	21	4.5	49.00		
	47	19	5.0	63.22	070/013	12E/24E		56	23	4.1	53.33	100/013	120/240/24E*
	40	22	4.2	75.08		120.66/240.66		50	26	3.7	60.15		120.66/240.66
	34	27	3.5	89.17				47	26	3.5	63.22		
	27	34	2.8	113.05				40	31	3.0	75.08		
	22	40	2.3	134.27				34	37	2.5	89.17		
	17	52	1.8	173.72				27	47	2.0	113.05		
	15	60	1.6	202.16				22	56	1.7	134.27		
	11	78	1.2	261.57				17	73	1.3	173.72		
	10	91	1.0	304.00				15	85	1.1	202.16		
	7.6	118	0.8	393.33				11	110	0.9	261.57		
	6.8	133	0.7	443.59	070/023	12E/24E		10	127	0.7	304.00	100/023	120/240/24E*
	22	41	3.8	135.95		120.66/240.66		7.6	134	0.7	393.33		120.66/240.66
	17	53	3.0	175.89				6.8	134	0.7	443.59		
	15	61	2.5	204.69				33	38	4.1	90.29		
	11	79	2.0	264.84				26	48	3.3	114.46		
	10	92	1.7	307.80				22	57	2.7	135.95		
	7.5	119	1.3	398.25				17	74	2.1	175.89		
	6.7	134	1.2	449.14				15	86	1.8	204.69		
	13	67	3.5	225.47		12E/24E		11	111	1.4	264.84		
	11	78	3.0	262.05		120.66/240.66		10	129	1.2	307.80		
	9.2	97	2.4	325.79	070/033			7.5	167	0.9	398.25	100/033	120/240/24E*
	7.9	113	2.1	378.64				6.7	188	0.8	449.14		120.66/240.66
	7.0	128	1.8	427.03				17	73	3.2	174.26		
	9.2	97	4.0	325.79		12E/24E		13	94	2.5	225.47		
	7.9	113	3.4	378.64		120.66/240.66		11	110	2.1	262.05		
	7.0	128	3.1	427.03	070/043			9.2	136	1.7	325.79	100/043	120/240/24E*
	7.9	113	3.4	378.64				7.9	159	1.5	378.64		120.66/240.66
	7.0	128	3.1	427.03				7.0	179	1.3	427.03		
								11	110	3.6	262.05		
								9.2	136	2.9	325.79		
								7.9	159	2.5	378.64		
								7.0	179	2.2	427.03		

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

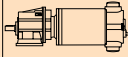
NOTE: for continuous or highly intermittent duty, please contact
our technical service

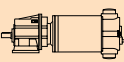
*: Motore inclinato con portaspaazzole a 45°
Motor assembly with brush holder inclined 45°



Dati tecnici per servizio S2

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
250						
(3000 min ⁻¹)	596	3.8	8.1	5.03	180/002	120/240*
	492	4.7	6.7	6.10		24E
	401	5.7	5.4	7.49		120.66/240.66
	334	6.9	5.7	8.99		
	295	7.8	5.0	10.16		
	249	9.2	4.2	12.07		
	224	10	5.4	13.40		
	198	12	4.8	15.14		
	165	14	4.0	18.17		
	139	17	3.3	21.58		
	128	18	3.1	23.51		
	120	19	2.9	25.10		
	111	21	2.7	27.08		
	92	25	2.2	32.49		
	71	32	1.7	42.04		
	67	34	1.6	44.89		
	61	37	1.5	48.86		
	54	42	1.3	55.10		
	127	18	5.2	23.56	180/012	120/240*
	101	23	4.2	29.56		24E
	85	27	3.5	35.47		120.66/240.66
	65	35	2.7	45.89		
	61	37	2.5	49.00		
	56	41	2.3	53.33		
	50	46	2.0	60.15	180/013	120/240*
	47	47	2.0	63.22		24E
	40	56	1.7	75.08		120.66/240.66
	34	67	1.4	89.17		
	27	85	1.1	113.05		
	22	100	0.9	134.27		
	17	130	0.7	173.72		
	15	134	0.7	202.16		
	11	134	0.7	261.57		
	10	134	0.7	304.00		
	65	35	4.4	46.46	180/022	120/240*
	60	38	4.1	49.61		24E
	56	41	3.8	54.00		120.66/240.66
	49	47	3.4	60.90		
	47	48	3.3	64.01	180/023	120/240*
	39	57	2.7	76.02		24E
	33	68	2.3	90.29		120.66/240.66
	26	86	1.8	114.46		
	22	102	1.5	135.95		
	17	132	1.2	175.89		
	15	153	1.0	204.69		
	11	198	0.8	264.84		
	10	223	0.7	307.80		
	7.5	223	0.7	398.25		
	6.7	223	0.7	449.14		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version		
250								
(3000 min ⁻¹)	41	54	4.3	72.83	180/033	120/240* 24E		
	31	73	3.2	97.45		120.66/240.66		
	26	87	2.7	115.74				
	21	105	2.2	140.81				
	17	130	1.8	174.26				
	13	169	1.4	225.47				
	11	196	1.2	262.05				
	9.2	244	1.0	325.79				
	7.9	283	0.8	378.64				
	7.0	319	0.7	427.03				
	21	105	3.7	140.81	180/043	120/240* 24E		
	17	130	3.0	174.26		120.66/240.66		
	13	169	2.3	225.47				
	11	196	2.0	262.05				
	9.2	244	1.6	325.79				
	7.9	283	1.4	378.64				
	7.0	319	1.2	427.03				
	350							
	(3000 min ⁻¹)	596	5.4	5.8		5.03	250/002	120/240
		492	6.5	4.8		6.10		120.66/240.66
401		8.0	3.9	7.49				
334		10	4.1	8.99				
295		11	3.6	10.16				
249		13	3.0	12.07				
224		14	3.8	13.40				
198		16	3.4	15.14				
165		19	2.8	18.17				
139		23	2.4	21.58				
128		25	2.2	23.51				
120		27	2.0	25.10				
111		29	1.9	27.08				
92		35	1.6	32.49				
71		45	1.2	42.04				
67		48	1.1	44.89				
61		52	1.1	48.86				
54		59	0.9	55.10				
127		25	3.7	23.56	250/012	120/240		
101		32	3.0	29.56		120.66/240.66		
85		38	2.5	35.47				
65		49	1.9	45.89				
61		52	1.8	49.00				
56		57	1.6	53.33				
50		64	1.5	60.15				
47		66	1.4	63.22		250/013	120/240	
40		79	1.2	75.08			120.66/240.66	
34		93	1.0	89.17				
27		118	0.8	113.05				
22		141	0.7	134.27				
17		134	0.7	173.72				

NOTA

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

NOTE

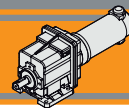
Please check that the output torque M₂ does not exceed the value in the grey areas

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

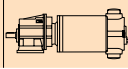
*: Motore inclinato con portaspazzole a 45°

Motor assembly with brush holder inclined 45°

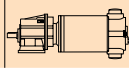


Dati tecnici per servizio S2

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
350						
(3000 min ⁻¹)	84	38	4.1	35.91	250/022	120/240
	65	50	3.1	46.46		120.66/240.66
	60	53	2.9	49.61		
	56	58	2.7	54.00		
	49	65	2.4	60.90		
	47	67	2.3	64.01	250/023	120/240
	39	80	2.0	76.02		120.66/240.66
	33	95	1.6	90.29		
	26	120	1.3	114.46		
	22	142	1.1	135.95		
	17	184	0.8	175.89		
	15	214	0.7	204.69		
	11	223	0.7	264.84		
	41	76	3.1	72.83	250/033	120/240
	31	102	2.3	97.45		120.66/240.66
	26	121	1.9	115.74		
	21	147	1.6	140.81		
	17	183	1.3	174.26		
	13	236	1.0	225.47		
	11	274	0.9	262.05		
	9.2	341	0.7	325.79		
	7.9	334	0.7	378.64		
	7.0	334	0.7	427.03		
	41	76	5.1	72.83	250/043	120/240
	31	102	3.8	97.45		120.66/240.66
	26	121	3.2	115.74		
	21	147	2.6	140.81		
	17	183	2.1	174.26		
	13	236	1.7	225.47		
	11	274	1.4	262.05		
	9.2	341	1.1	325.79		
	7.9	397	1.0	378.64		
	7.0	447	0.9	427.03		

500						
(3000 min ⁻¹)	596	7.7	4.0	5.03	350/002	120/240
	492	9.3	3.3	6.10		120.66/240.66
	401	11	2.7	7.49		
	334	14	2.8	8.99		
	295	16	2.5	10.16		
	249	18	2.1	12.07		
	224	20	2.7	13.40		
	198	23	2.4	15.14		
	165	28	2.0	18.17		
	139	33	1.7	21.58		
	128	36	1.5	23.51		
	120	38	1.4	25.1		
	111	41	1.3	27.08		
	92	50	1.1	32.49		
	71	64	0.9	42.04		
	67	69	0.8	44.89		
	61	75	0.7	48.86		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
500						
(3000 min ⁻¹)	785	5.8	8.1	3.82	350/012	120/240
	648	7.1	6.6	4.63		120.66/240.66
	527	8.7	5.4	5.69		
	389	12	5.3	7.72		
	327	14	4.4	9.17		
	306	15	4.1	9.81		
	261	18	4.4	11.5		
	252	18	4.3	11.9		
	217	21	4.5	13.80		
	205	22	4.2	14.62		
	168	27	3.4	17.86		
	157	29	3.2	19.07		
	151	30	3.1	19.83		
	127	36	2.6	23.56		
	101	45	2.1	29.56		
	85	54	1.7	35.47		
	65	70	1.3	45.89		
	61	75	1.3	49.00		
	56	81	1.2	53.33		
	50	92	1.0	60.15		
	47	95	1.0	63.22	350/013	120/240
	40	112	0.8	75.08		120.66/240.66
	34	133	0.7	89.17		
	27	134	0.7	113.05		
	22	134	0.7	134.27	350/022	120/240
	126	36	4.3	23.85		120.66/240.66
	100	46	3.4	29.93		
	84	55	2.8	35.91		
	65	71	2.2	46.46		
	60	76	2.1	49.61		
	56	83	1.9	54.00		
	49	93	1.7	60.90		
	47	96	1.6	64.01	350/023	120/240
	39	114	1.4	76.02		120.66/240.66
	33	135	1.2	90.29		
	26	171	0.9	114.46		
	22	203	0.8	135.95		
	17	223	0.7	175.89		
	41	109	2.1	72.83	350/033	120/240
	31	146	1.6	97.45		120.66/240.66
	26	173	1.4	115.74		
	21	211	1.1	140.81		
	17	261	0.9	174.26		
	13	334	0.7	225.47		
	11	334	0.7	262.05		

NOTA

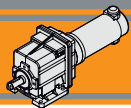
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio

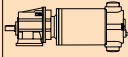
NOTE

Please check that the output torque M₂ does not exceed the value in the grey areas

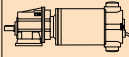
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
500						
(3000 min ⁻¹)	41	109	3.6	72.83	350/043	120/240
	31	146	2.7	97.45		120.66/240.66
	26	173	2.3	115.74		
	21	211	1.9	140.81		
	17	261	1.5	174.26		
	13	337	1.2	225.47		
	11	392	1.0	262.05		
	9.2	487	0.8	325.79		
	7.9	557	0.7	378.64		
	7.0	557	0.7	427.03		

800						
(3000 min ⁻¹)	596	12	2.5	5.03	600/002	120/240
	492	15	2.1	6.10		120.66/240.66
	401	18	1.7	7.49		
	334	22	1.8	8.99		
	295	25	1.6	10.16		
	249	30	1.3	12.07		
	224	33	1.7	13.40		
	198	37	1.5	15.14		
	165	44	1.2	18.17		
	139	53	1.0	21.58		
	128	57	1.0	23.51	600/012	
	120	61	0.9	25.10		
	111	66	0.8	27.08		
	92	79	0.7	32.49		
	71	79	0.7	42.04		
	67	79	0.7	44.89		
	785	9	5.0	3.82		120/240
	648	11	4.2	4.63		120.66/240.66
	527	14	3.4	5.69		
	389	19	3.3	7.72		
	327	22	2.8	9.17	600/013	
	306	24	2.6	9.81		
	261	28	2.8	11.5		
	252	29	2.7	11.9		
	217	34	2.8	13.8		
	205	36	2.6	14.62		
	168	44	2.2	17.86		
	157	47	2.0	19.07		
	151	48	1.9	19.83		
	127	58	1.6	23.56		
	101	72	1.3	29.56	600/013	
	85	87	1.1	35.47		
	65	112	0.8	45.89		
	61	120	0.8	49.00		
	56	130	0.7	53.33		
	47	134	0.7	63.22		120/240
	40	134	0.7	75.08		120.66/240.66

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
800						
(3000 min ⁻¹)	302	24	3.9	9.93	600/022	120/240
	272	27	5.8	11.01		120.66/240.66
	249	29	5.3	12.05		
	227	32	3.9	13.21		
	203	36	4.3	14.81		
	175	42	2.4	17.1		
	149	49	3.2	20.08		
	126	58	2.7	23.85		
	100	73	2.1	29.93		
	84	88	1.8	35.91		
	65	114	1.4	46.46	600/023	
	60	121	1.3	49.61		
	56	132	1.2	54.00		
	49	149	1.0	60.90		
	47	153	1.0	64.01		120/240
	39	182	0.9	76.02		120.66/240.66
	33	216	0.7	90.29		
	26	223	0.7	114.46		
	22	223	0.7	135.95		
	120	61	3.8	24.99	600/032	120/240
	98	75	3.1	30.57		IEC 71B5
	88	84	2.8	34.20		
	78	94	2.5	38.63		+
	68	108	2.2	44.18		Giunto FX
	58	125	1.9	51.30		FX Coupling
	49	149	1.6	60.80		Solo / Only
	41	174	1.3	72.83	600/033	120/240
	31	233	1.0	97.45		120.66/240.66
	26	277	0.8	115.74		
	21	334	0.7	140.81		
	17	334	0.7	174.26		
	78	94	4.1	38.63	600/042	120/240
	68	108	3.6	44.18		IEC 71B5
	58	125	3.1	51.30		
	49	149	2.5	60.80		+
						Giunto FX
						FX Coupling
						Solo / Only
	41	174	2.2	72.83	600/043	120/240
	31	233	1.7	97.45		120.66/240.66
	26	277	1.4	115.74		
	21	337	1.2	140.81		
	17	417	0.9	174.26		
	13	540	0.7	225.47		
	11	557	0.7	262.05		
	9	557	0.7	325.79		

NOTA

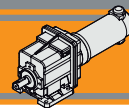
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio

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

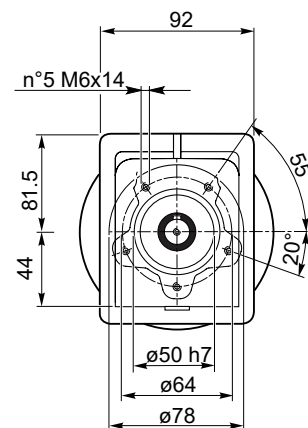
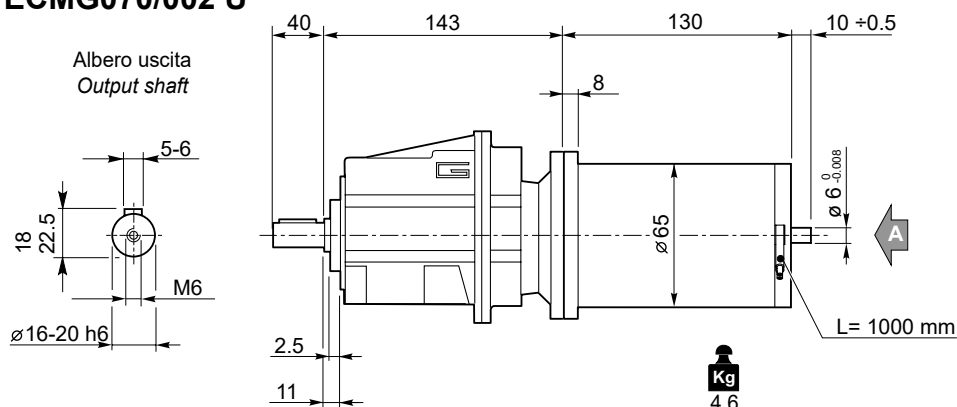


Dimensioni

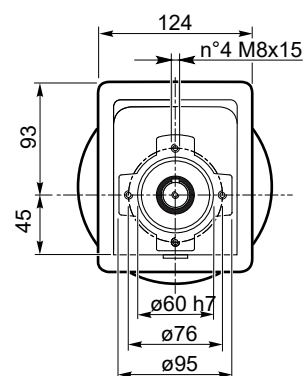
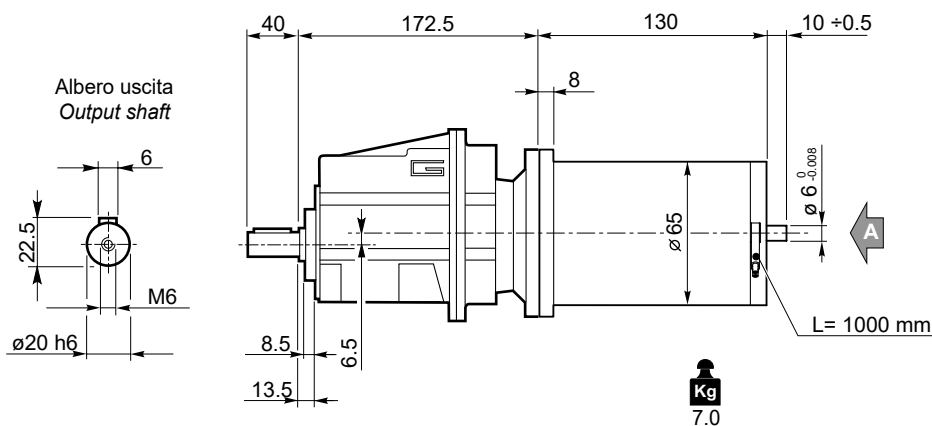
Dimensions

ECMG..U

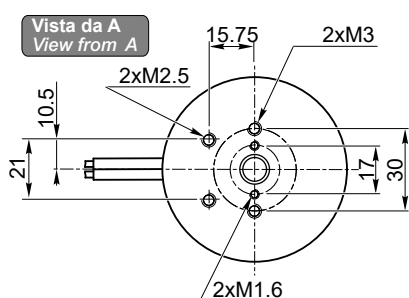
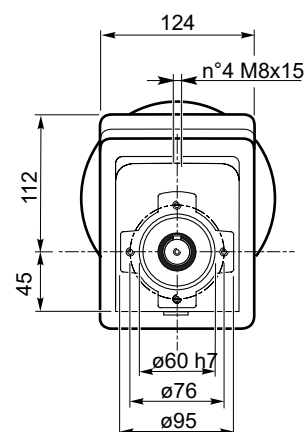
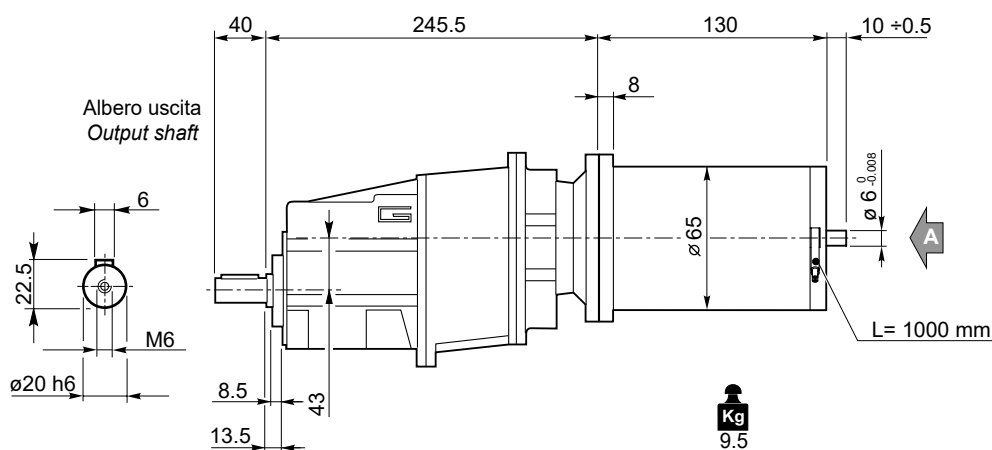
ECMG070/002 U



ECMG070/012 U



ECMG070/013 U



Freno / Brake



H23

Encoder



H24

Motori / Motors IP66



I2

ECMG...H



L30

ECMG...F

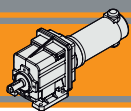


L31

ECMG...H/F



L32



ECMG

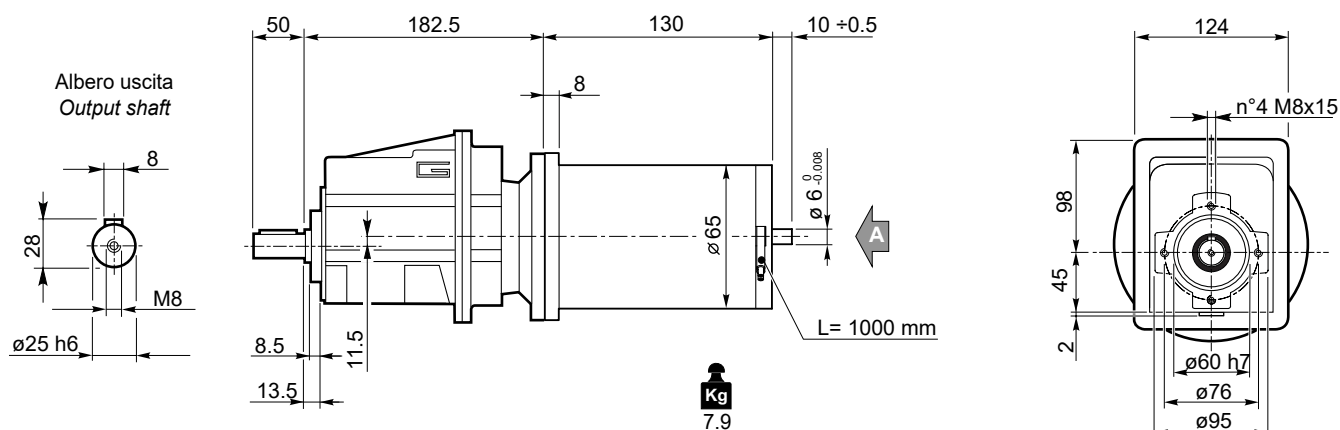
Motoriduttori CC ad ingranaggi cilindrici DC Helical in-line gearmotors

Dimensioni

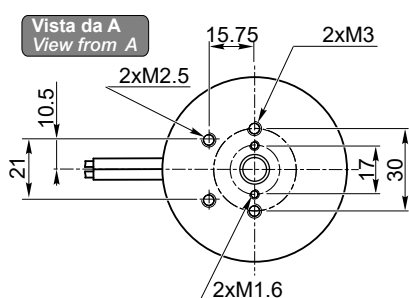
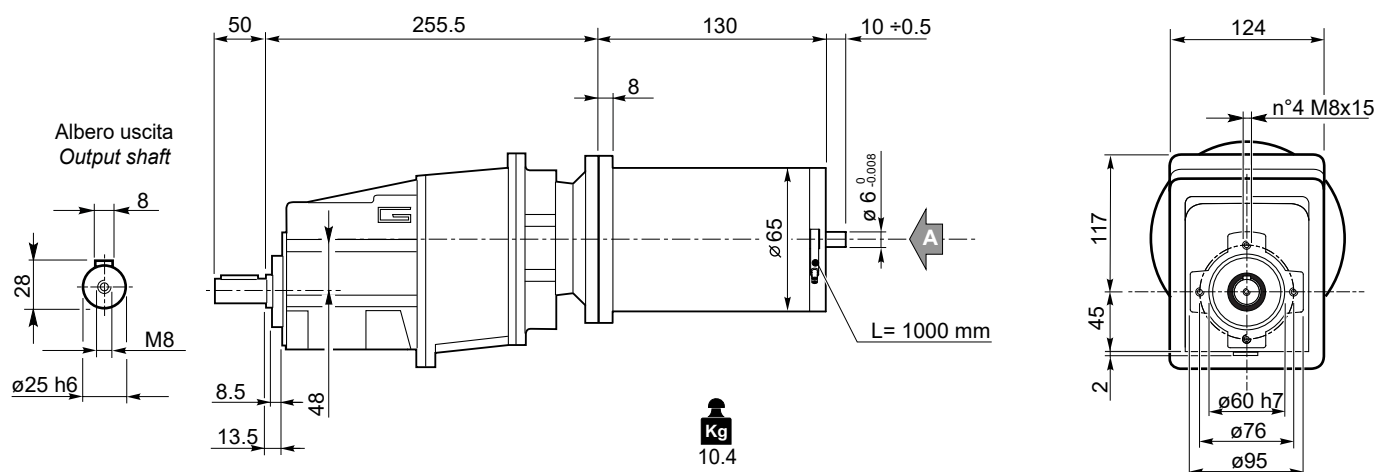
Dimensions

ECMG..U

ECMG070/022 U



ECMG070/023 U



Freno / Brake



ECMG...H



Encoder



ECMG...F

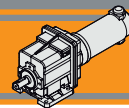


Motori / Motors IP66



ECMG...H/F



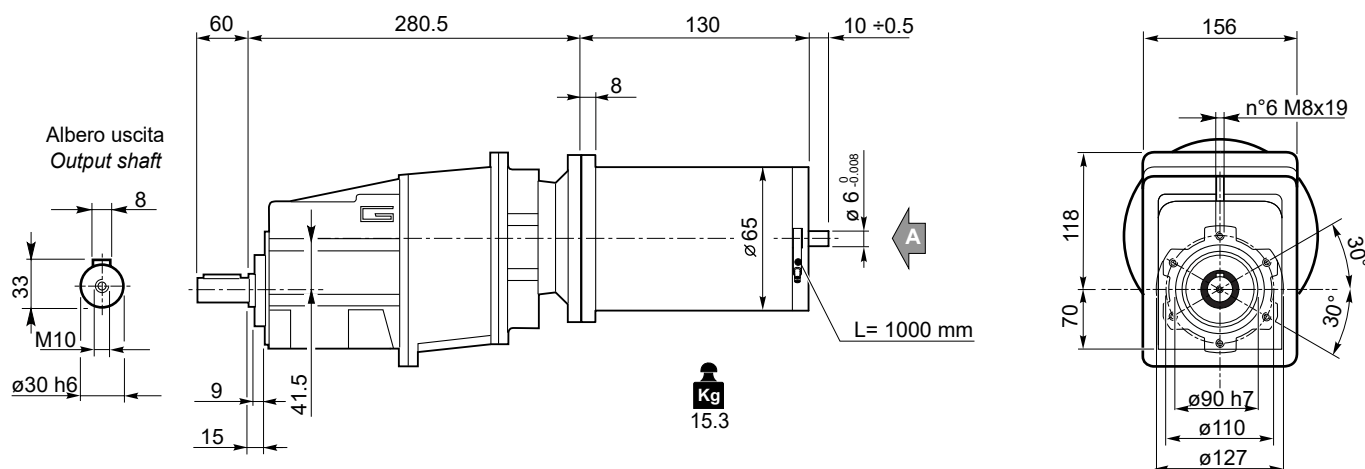


Dimensioni

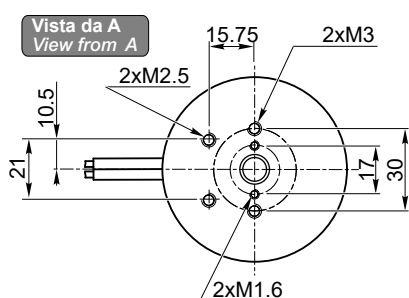
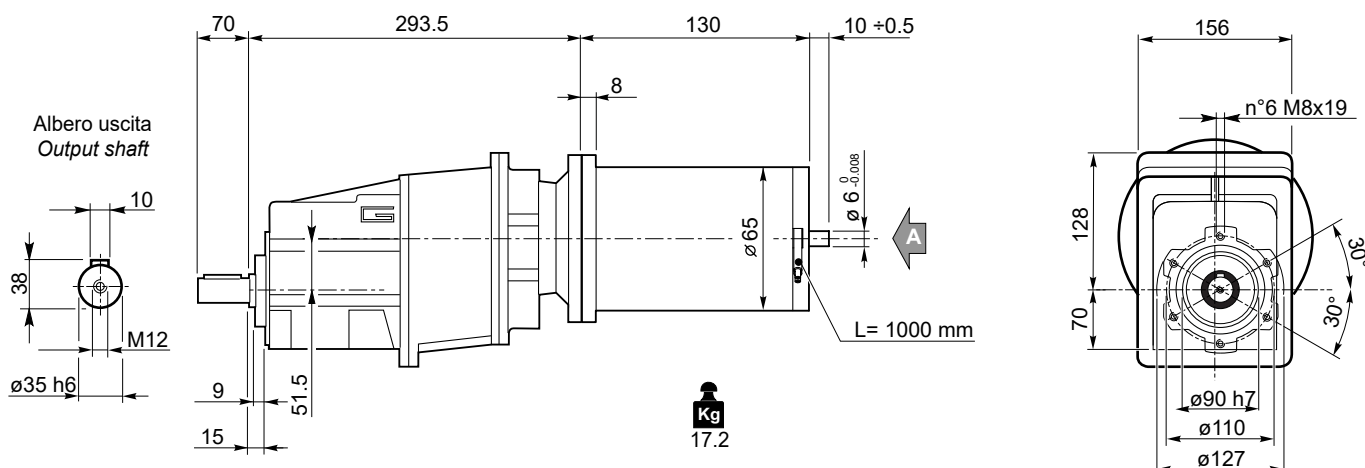
Dimensions

ECMG..U

ECMG070/033 U



ECMG070/043 U



Freno / Brake



ECMG...H



Encoder



ECMG...F

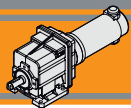


Motori / Motors IP66



ECMG...H/F





ECMG

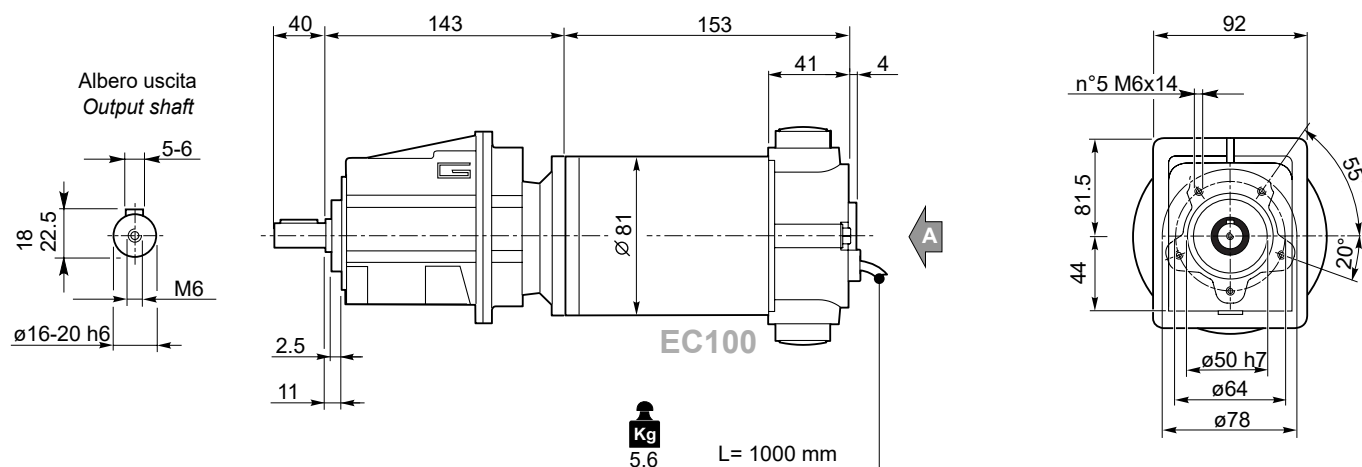
Motoriduttori CC ad ingranaggi cilindrici DC Helical in-line gearmotors

Dimensioni

Dimensions

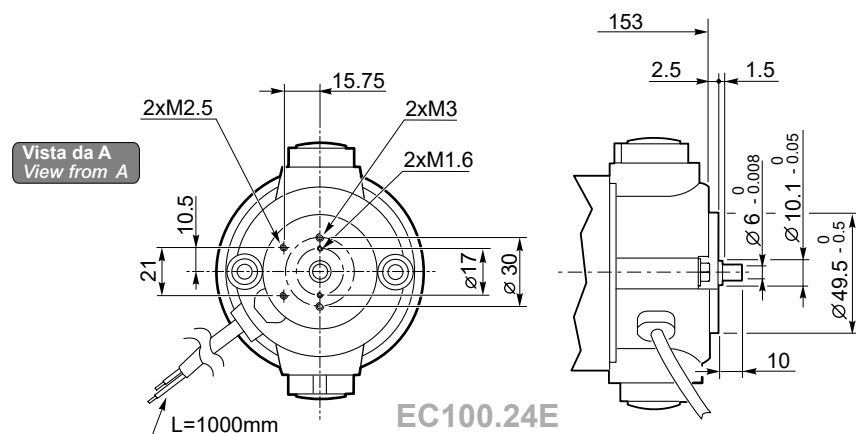
ECMG..U

ECMG100/002 U



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°

Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I4

ECMG...H

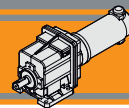
L30

ECMG...F

L31

ECMG...H/F

L32

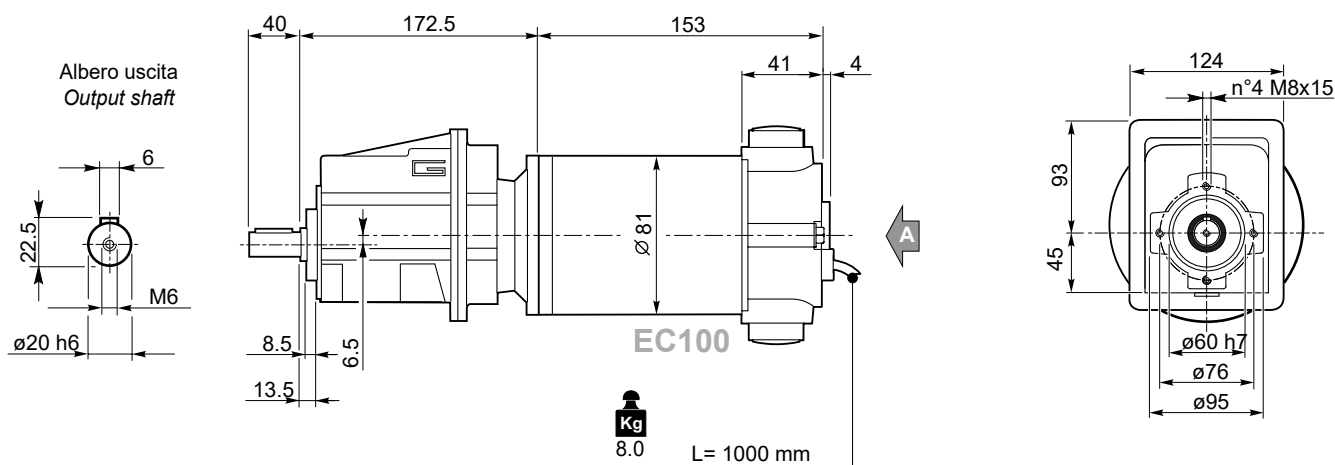


Dimensioni

Dimensions

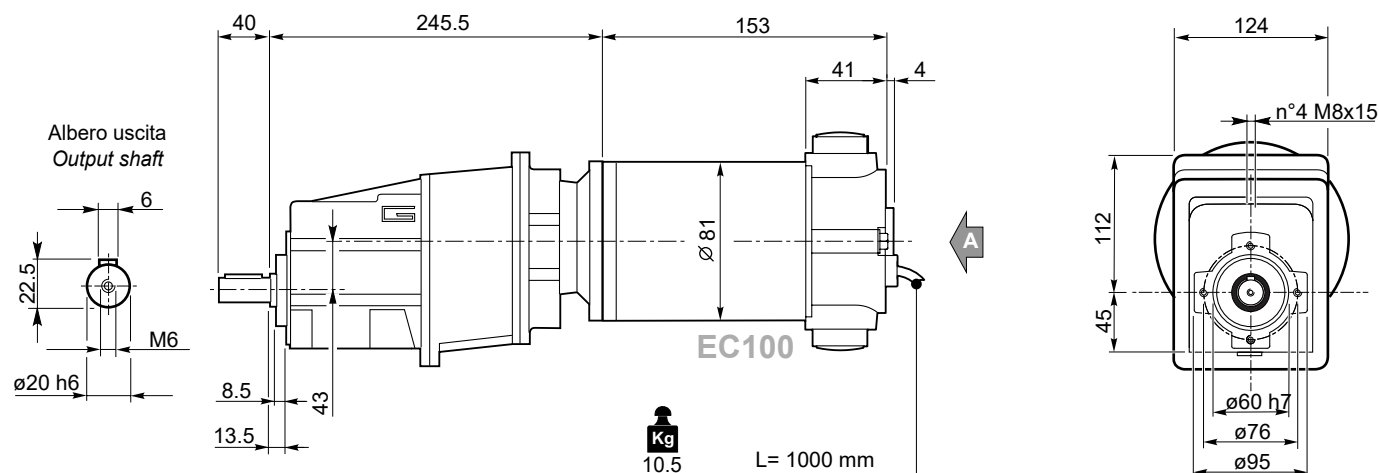
ECMG..U

ECMG100/012 U

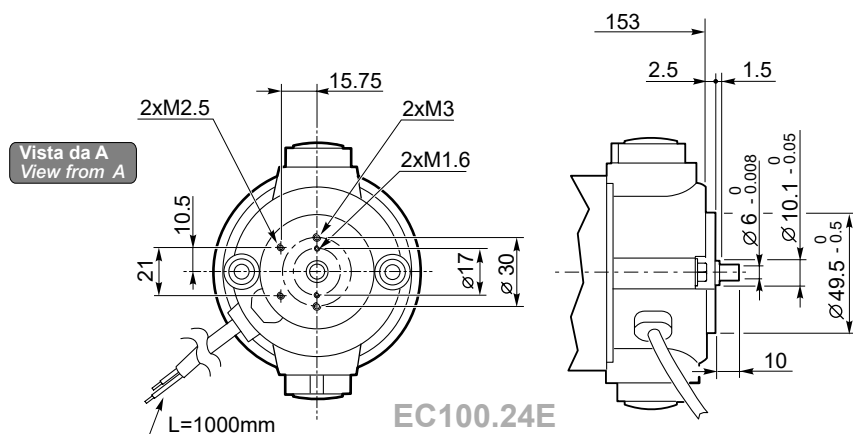


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMG100/013 U



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I4

ECMG...H

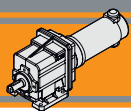
L30

ECMG...F

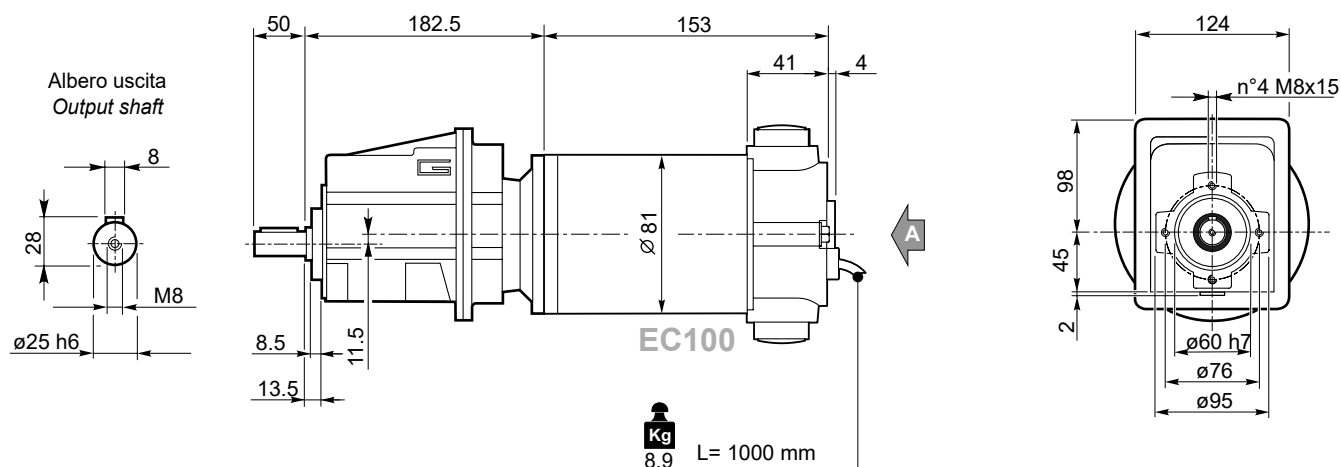
L31

ECMG...H/F

L32

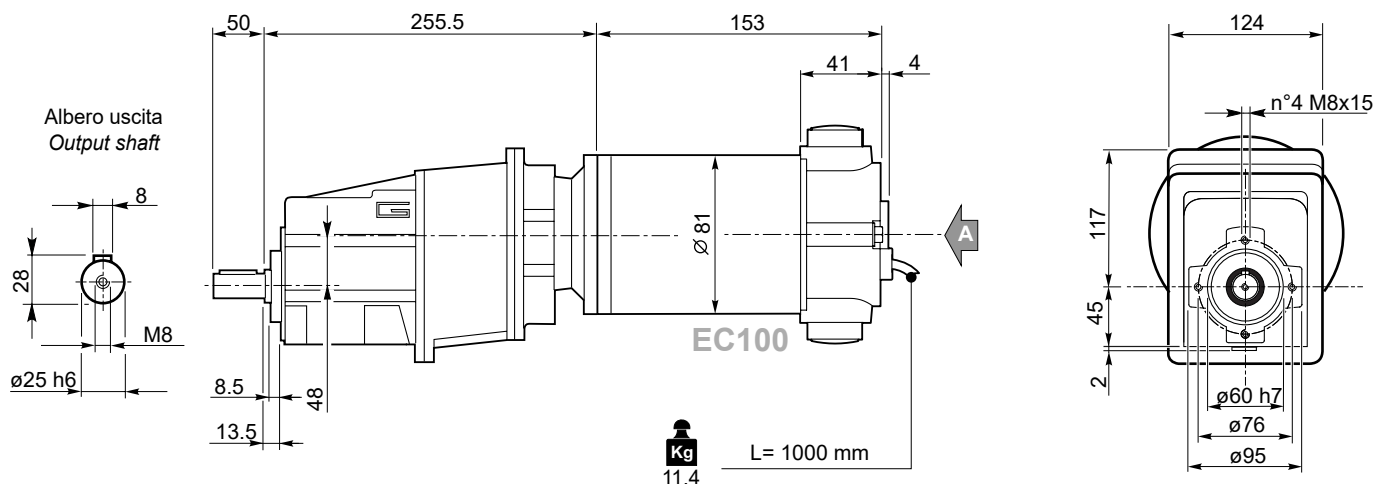
**ECMG**

Motoriduttori CC ad ingranaggi cilindrici
DC Helical in-line gearmotors

Dimensioni**ECMG..U****ECMG100/022 U**

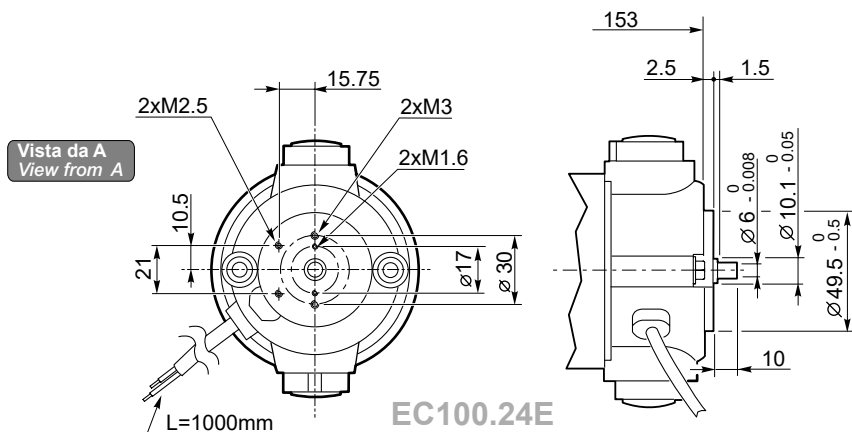
Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°

ECMG100/023 U

Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°

Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I4

ECMG...H

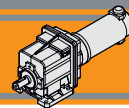
L30

ECMG...F

L31

ECMG...H/F

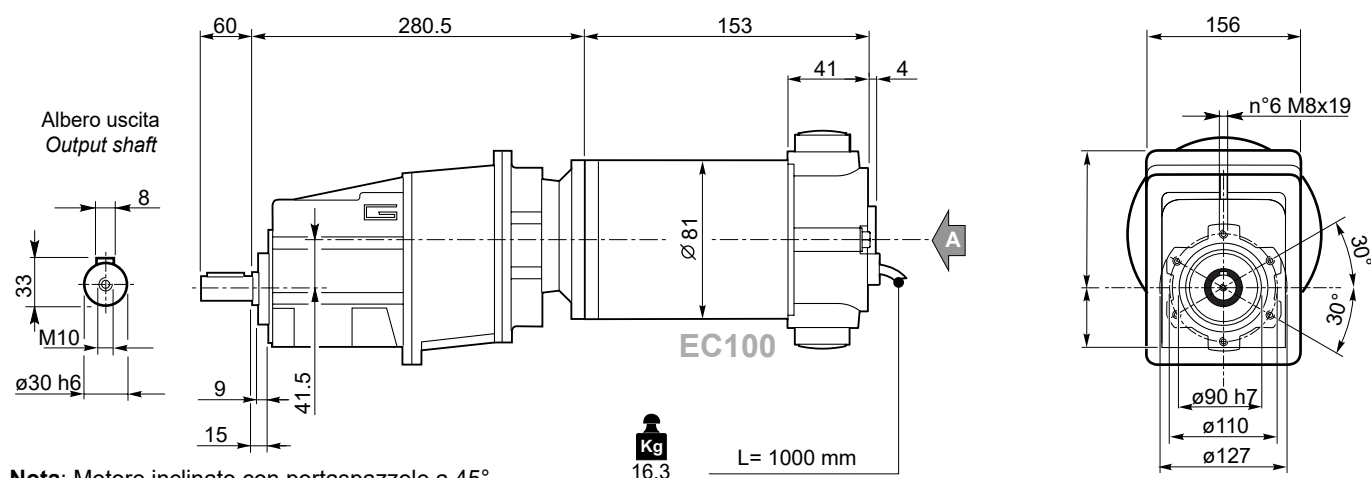
L32



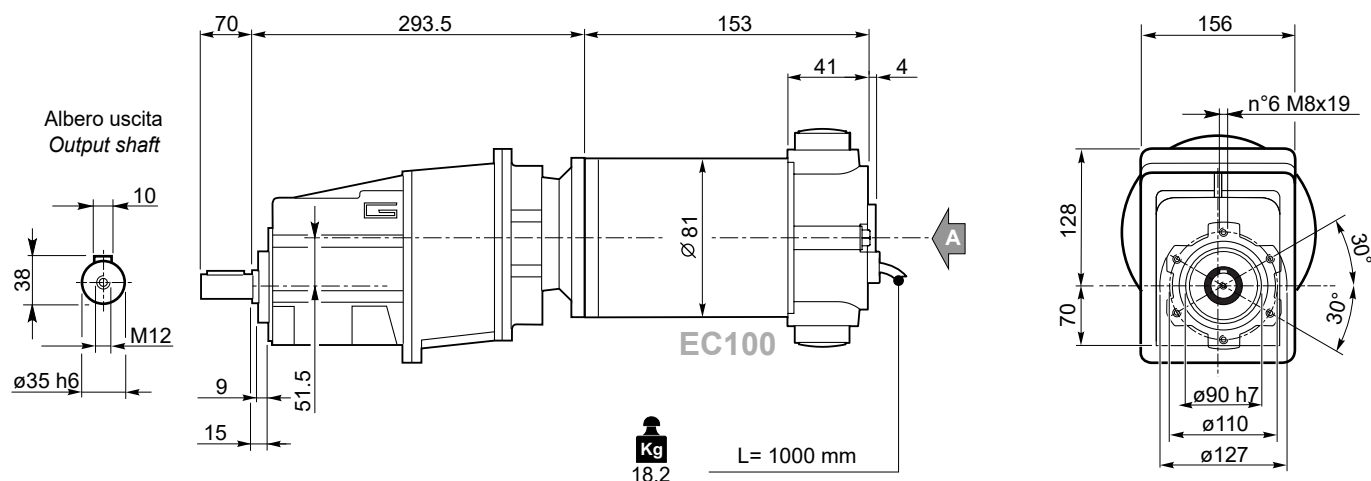
Dimensioni

ECMG..U

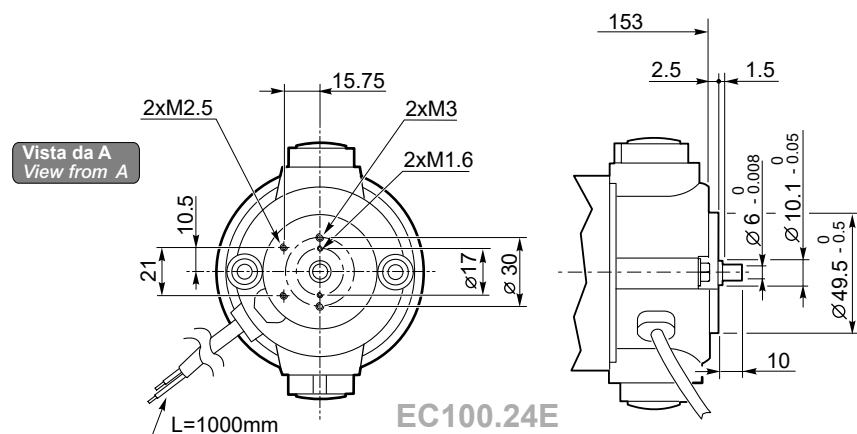
ECMG100/033 U



ECMG100/043 U



ECMG



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I4

ECMG...H

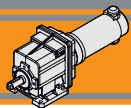
L30

ECMG...F

L31

ECMG...H/F

L32



ECMG

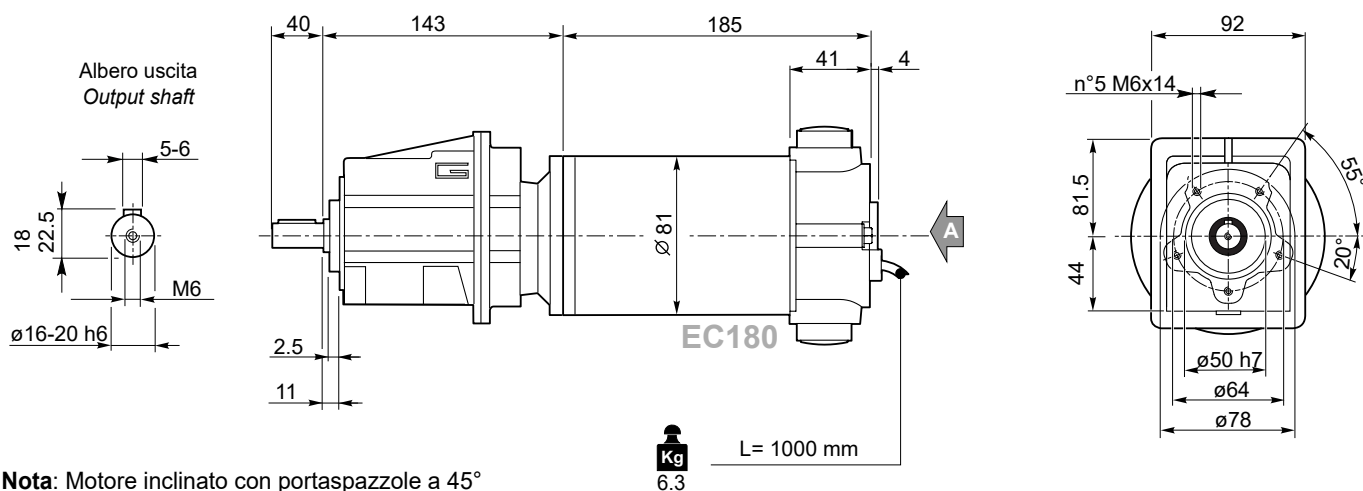
Motoriduttori CC ad ingranaggi cilindrici DC Helical in-line gearmotors

Dimensioni

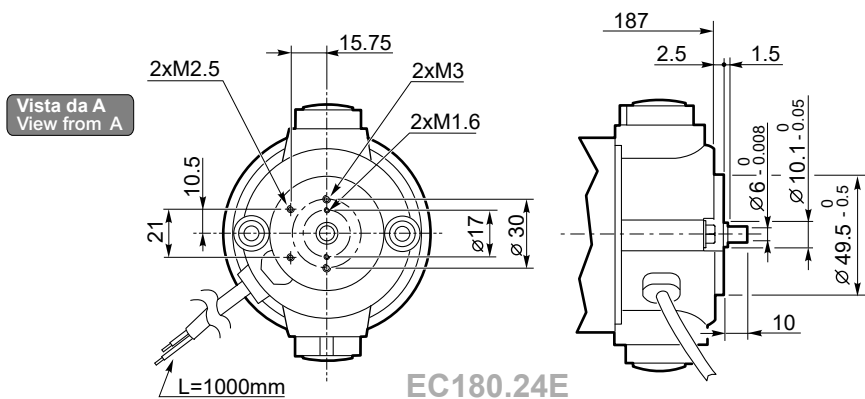
Dimensions

ECMG..U

ECMG180/002 U



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°



Freno / Brake → H23

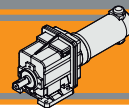
Encoder → H24

Motori / Motors IP66 → I6

ECMG...H → L30

ECMG...F → L31

ECMG...H/F → L32

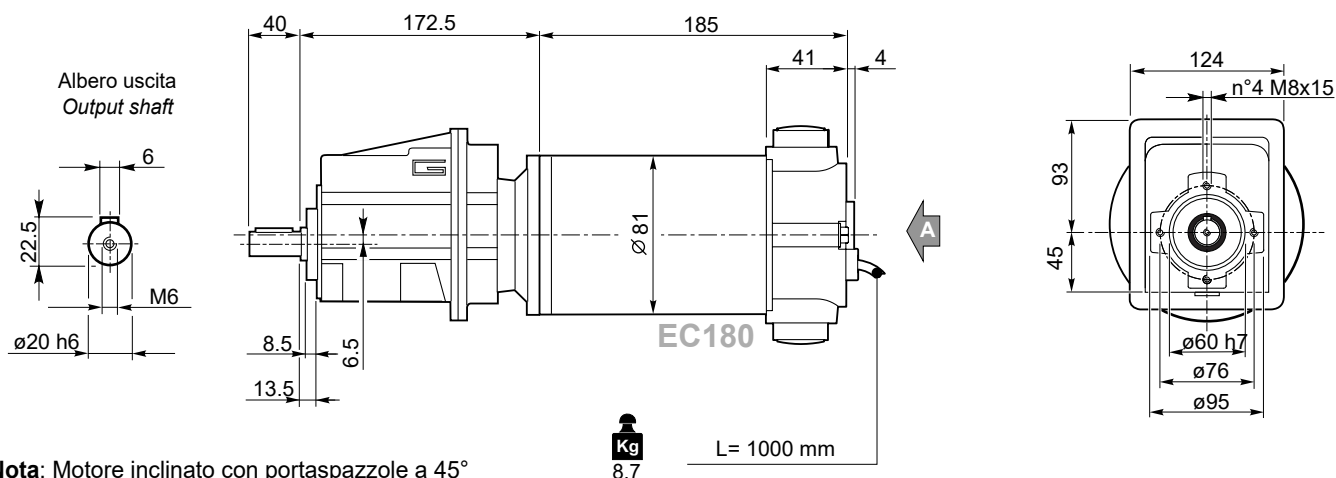


Dimensioni

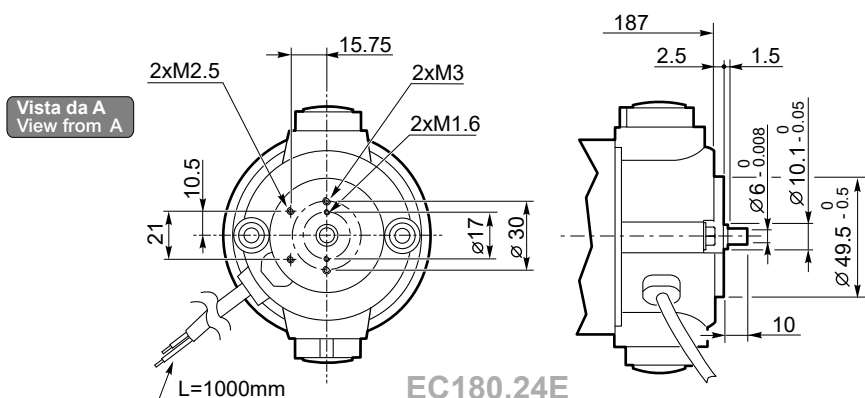
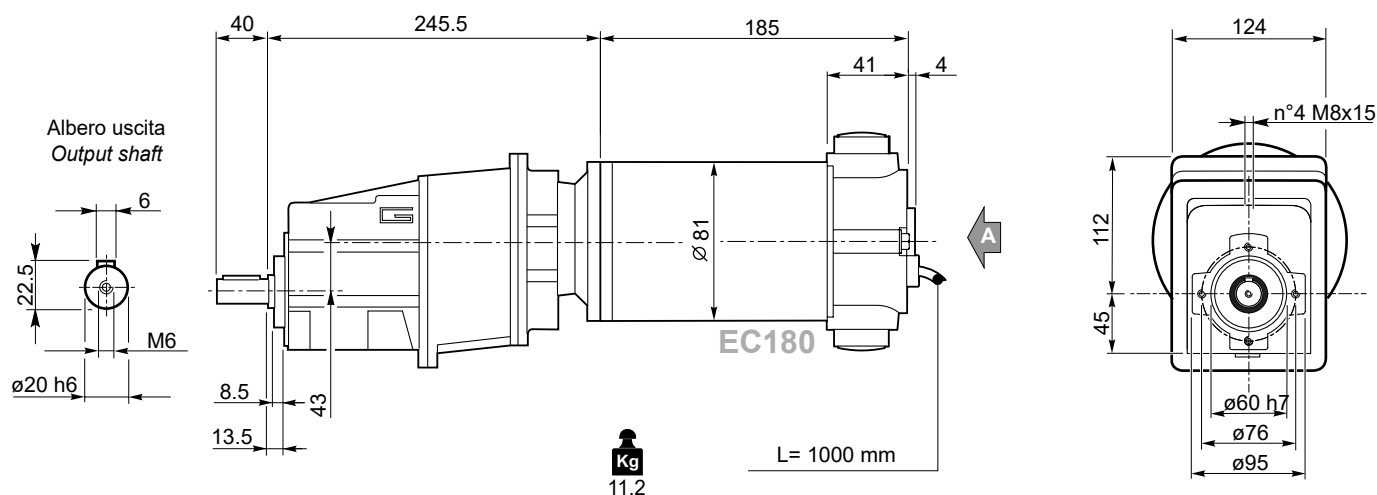
Dimensions

ECMG..U

ECMG180/012 U



ECMG180/013 U



Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I6

ECMG...H

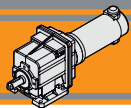
L30

ECMG...F

L31

ECMG...H/F

L32



ECMG

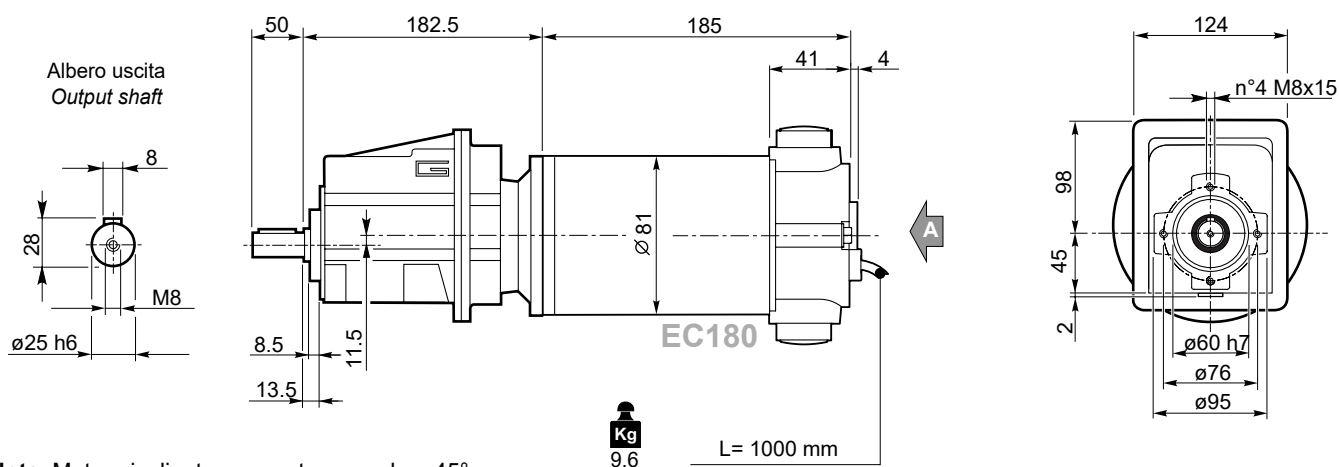
Motoriduttori CC ad ingranaggi cilindrici
DC Helical in-line gearmotors

Dimensioni

Dimensions

ECMG..U

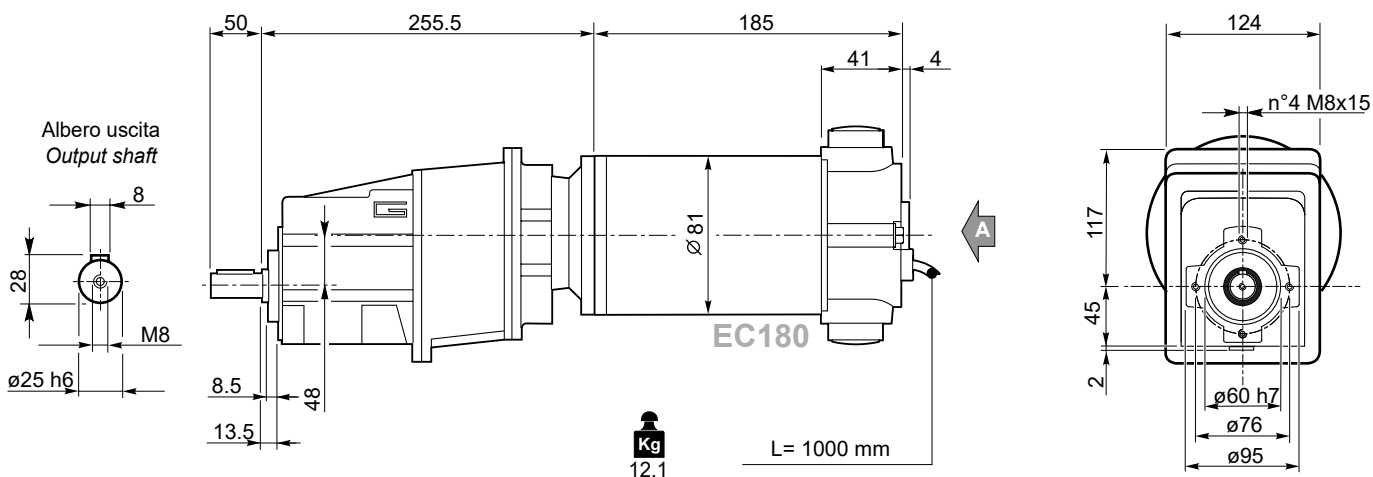
ECMG180/022 U



Nota: Motore inclinato con portaspazzole a 45°

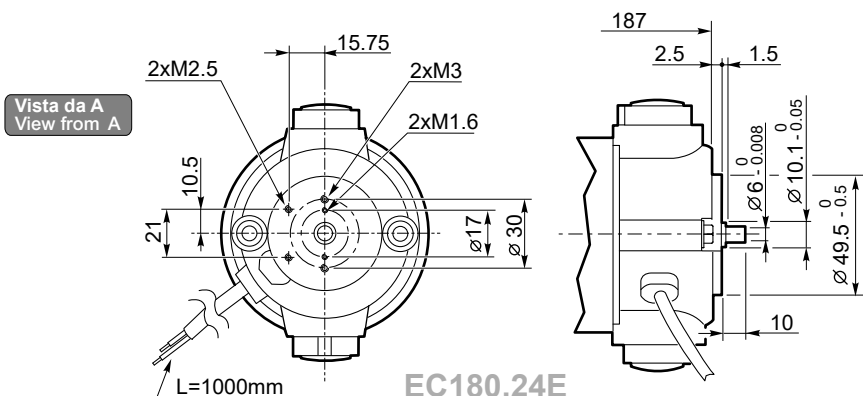
Note: Motor assembly with brush holder inclined 45°

ECMG180/023 U



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°



Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I6

ECMG...H

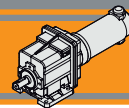
L30

ECMG...F

L31

ECMG...H/F

L32

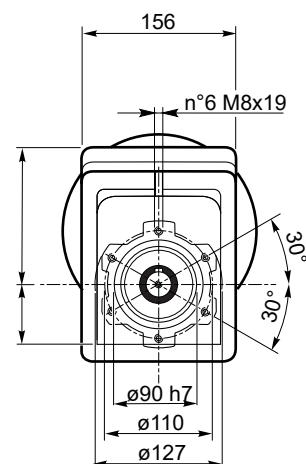
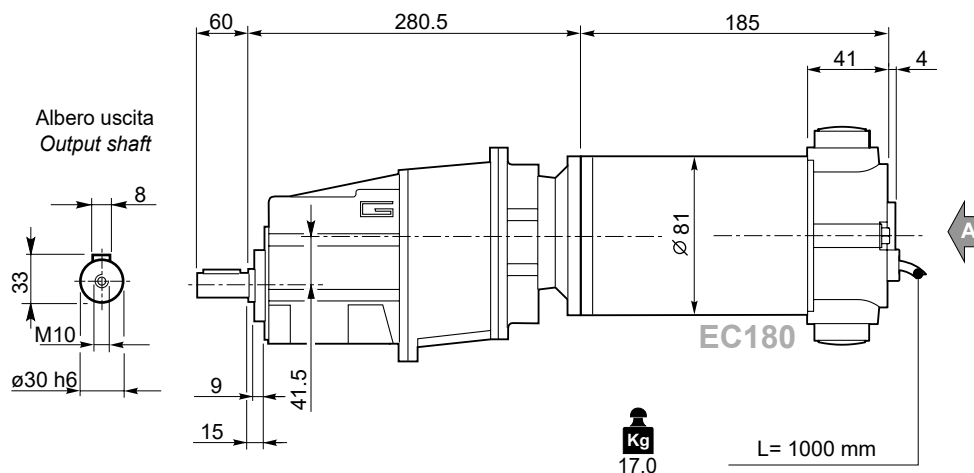


Dimensioni

Dimensions

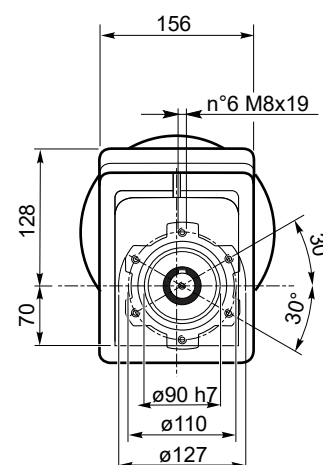
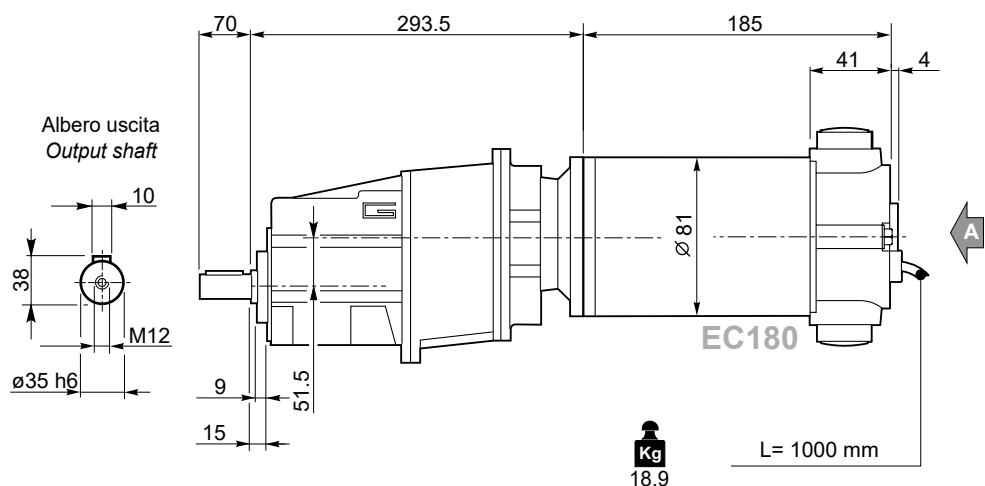
ECMG..U

ECMG180/033 U

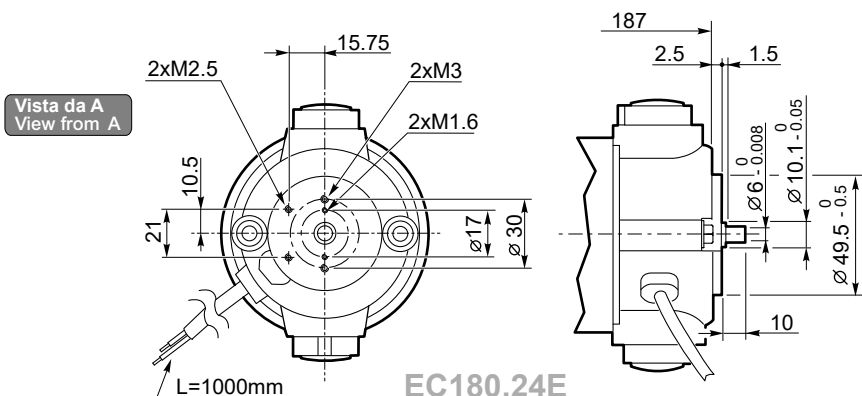


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMG180/043 U



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°



Freno / Brake

H23

Encoder

H24

Motori / Motors IP66

I6

ECMG...H

L30

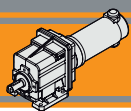
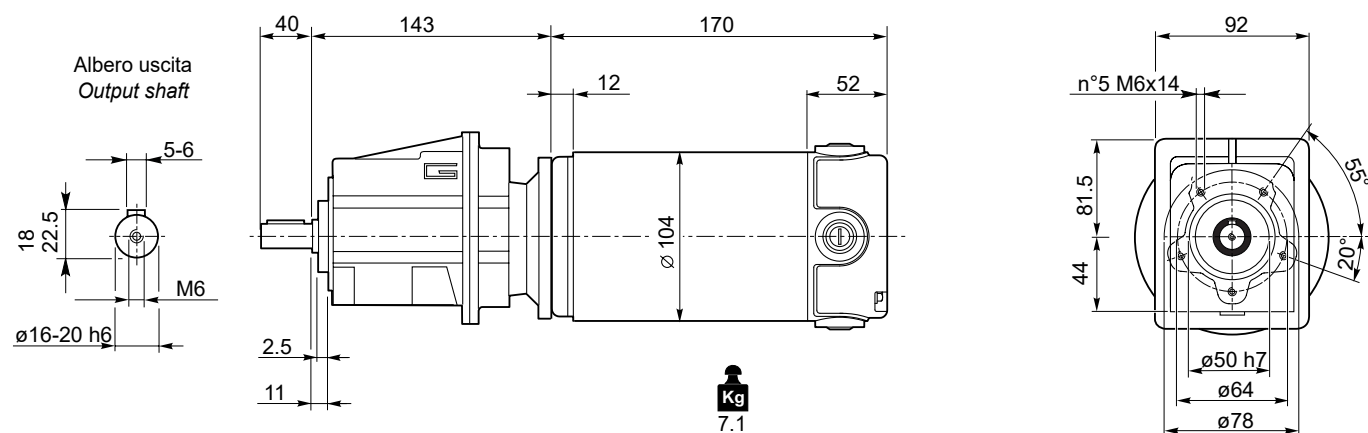
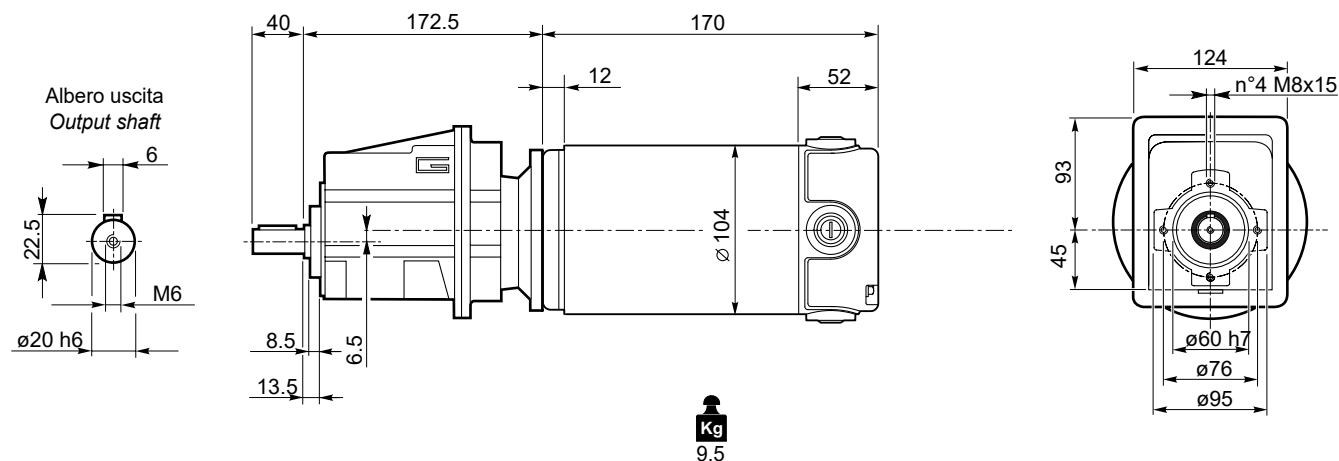
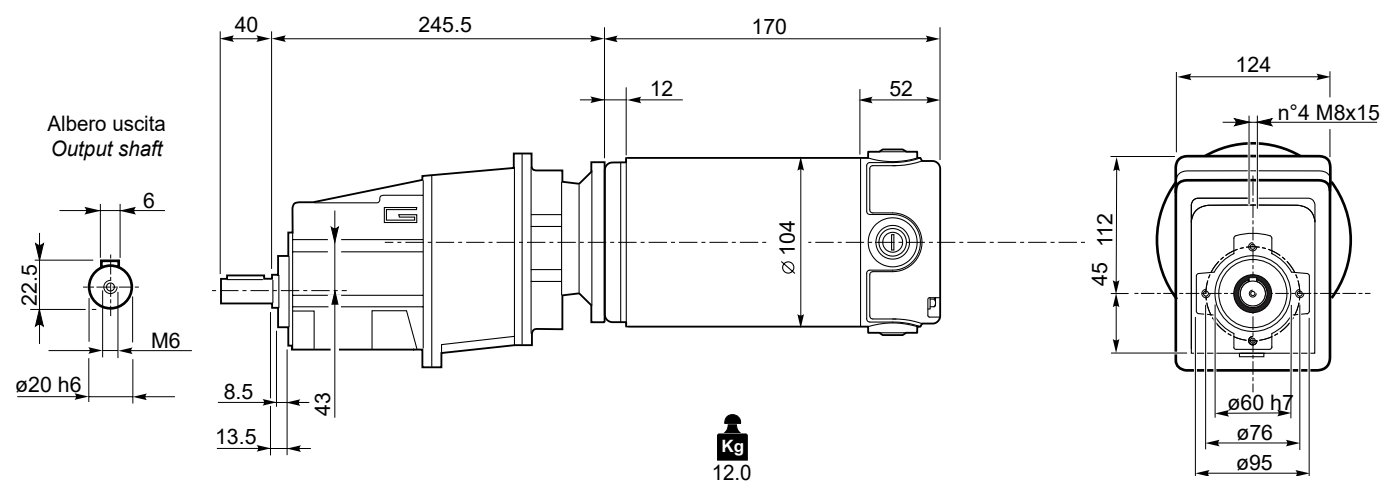
ECMG...F

L31

ECMG...H/F

L32

ECMG

**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Dimensioni****Dimensions****ECMG..U****ECMG250/002 U****ECMG250/012 U****ECMG250/013 U**

Motori / Motors IP66



ECMG...H

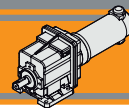


ECMG...F



ECMG...H/F



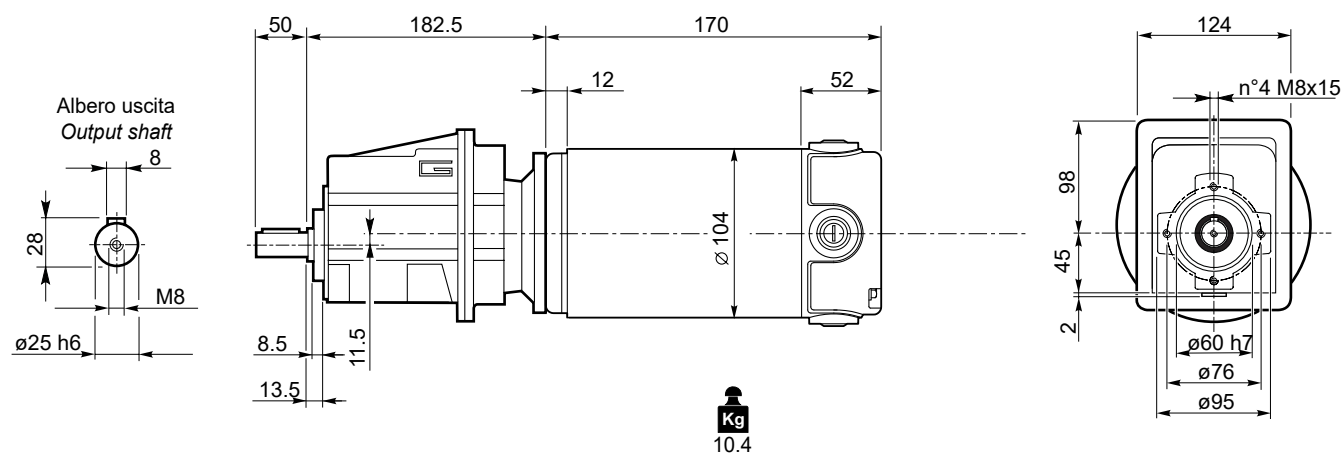


Dimensioni

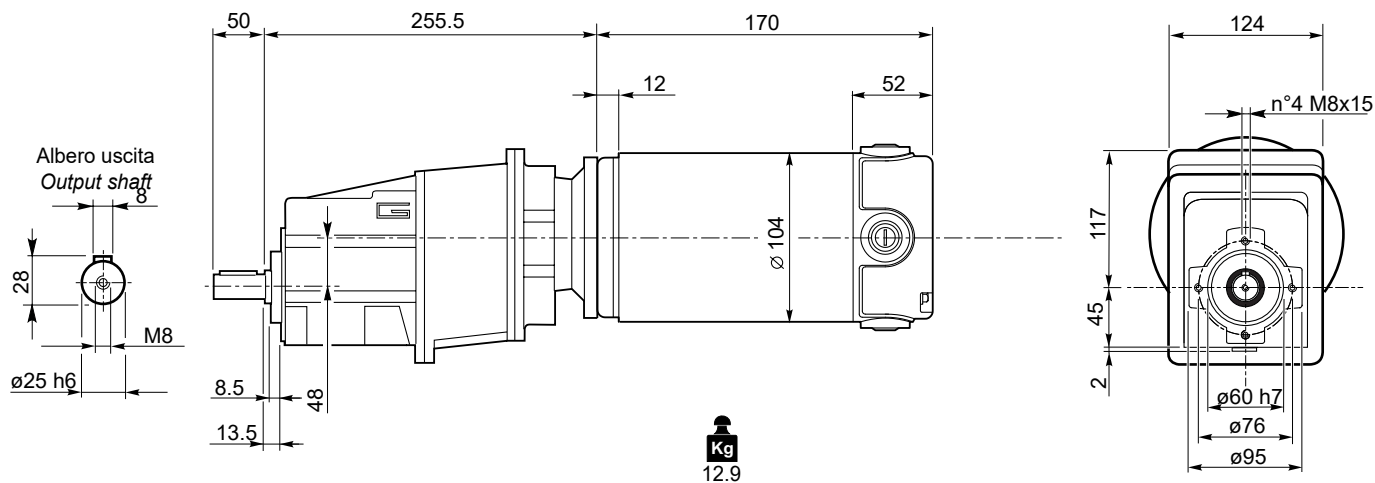
Dimensions

ECMG..U

ECMG250/022 U



ECMG250/023 U



ECMG

Motori / Motors IP66



ECMG...H

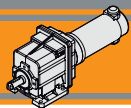
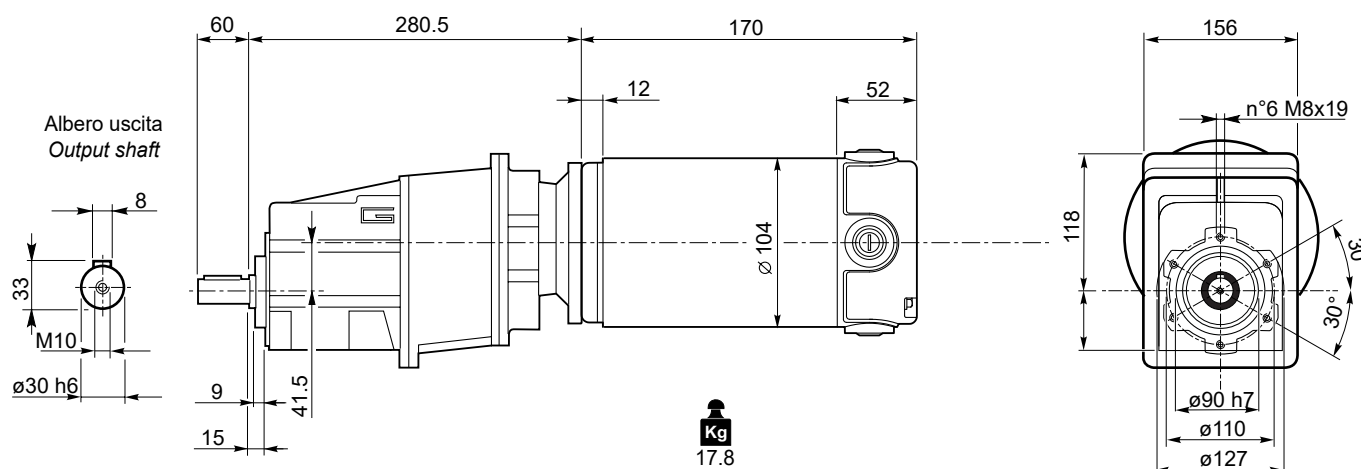
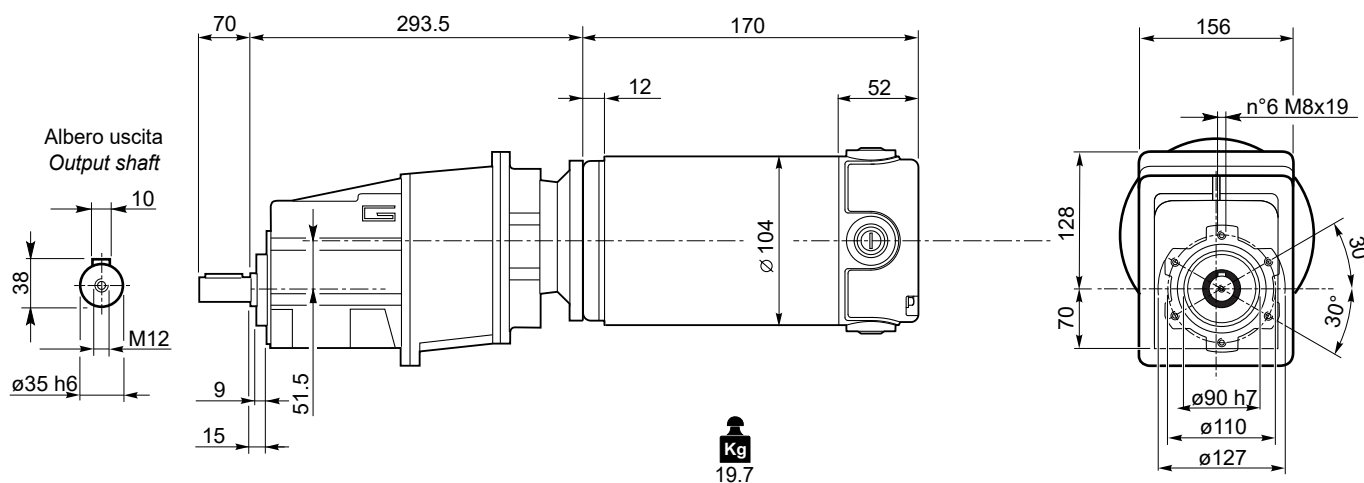


ECMG...F



ECMG...H/F



**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Dimensioni****Dimensions****ECMG..U****ECMG250/033 U****ECMG250/043 U**

Motori / Motors IP66



ECMG...H

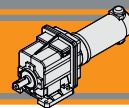


ECMG...F



ECMG...H/F



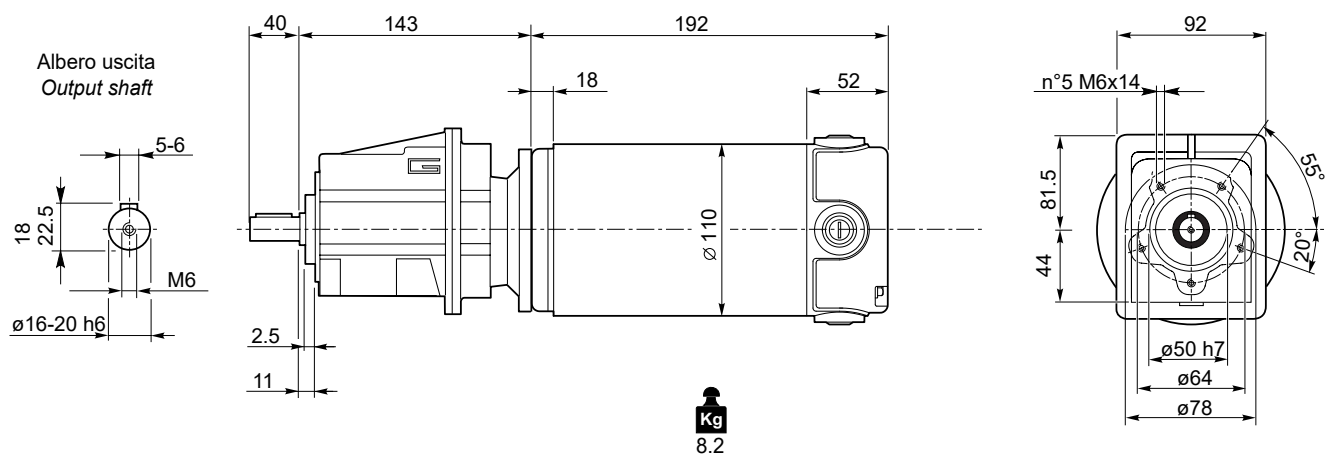


Dimensioni

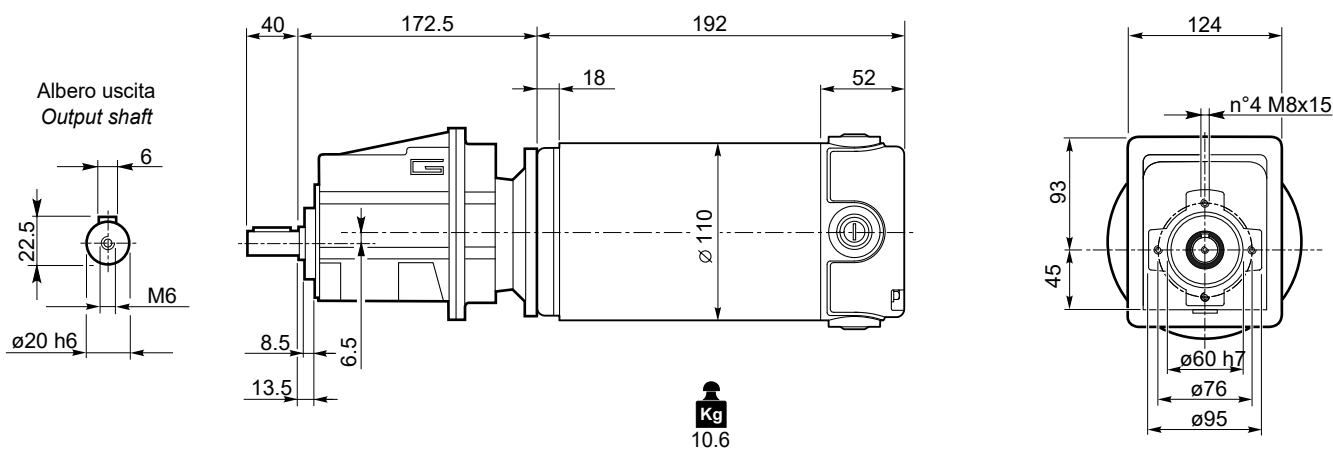
Dimensions

ECMG..U

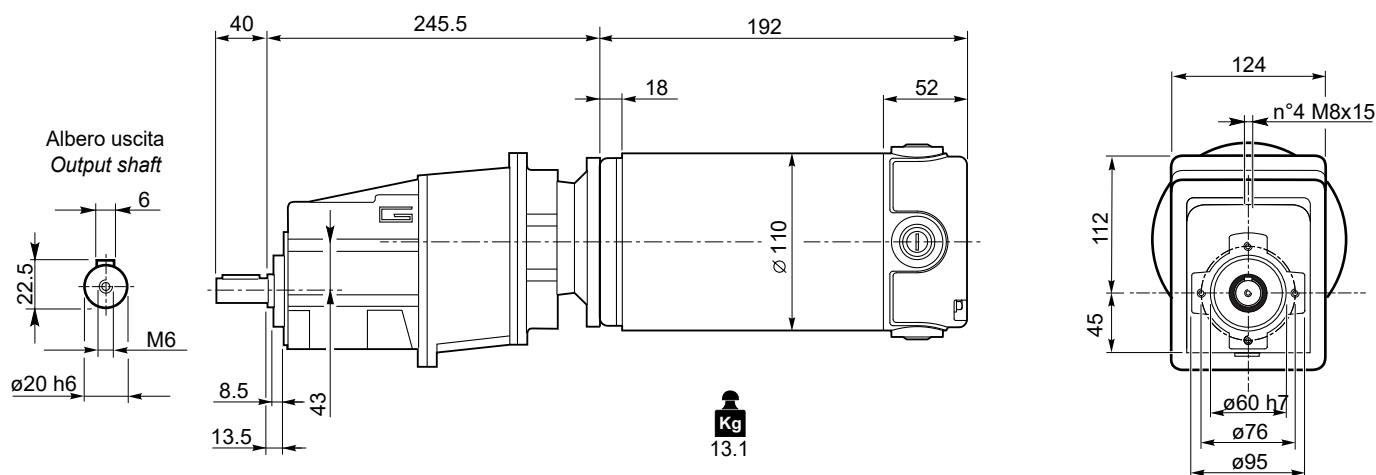
ECMG350/002 U



ECMG350/012 U



ECMG350/013 U



Freno / Brake



H23

Motori / Motors IP66



I10

ECMG...H



L30

ECMG...F

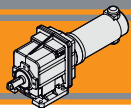
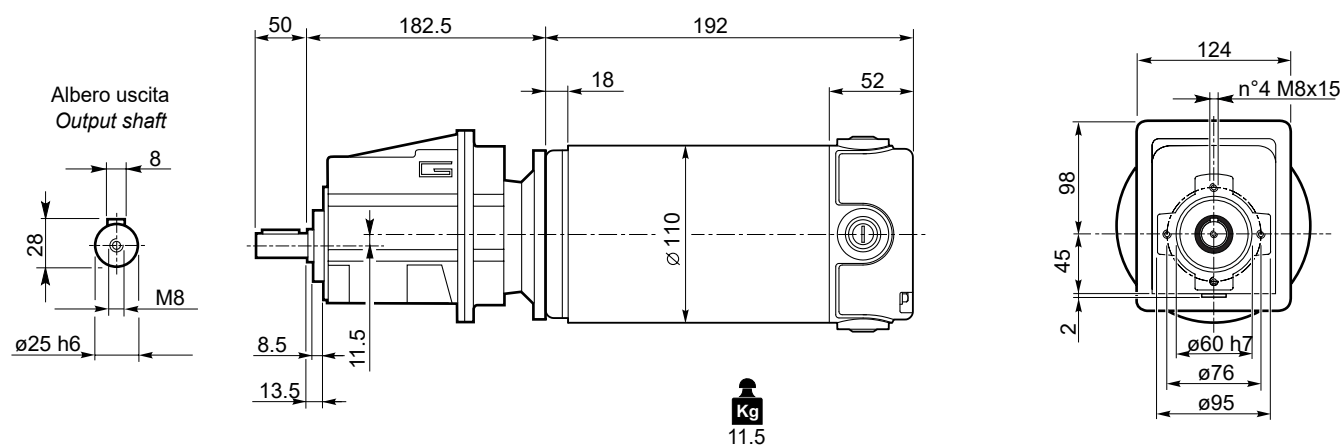
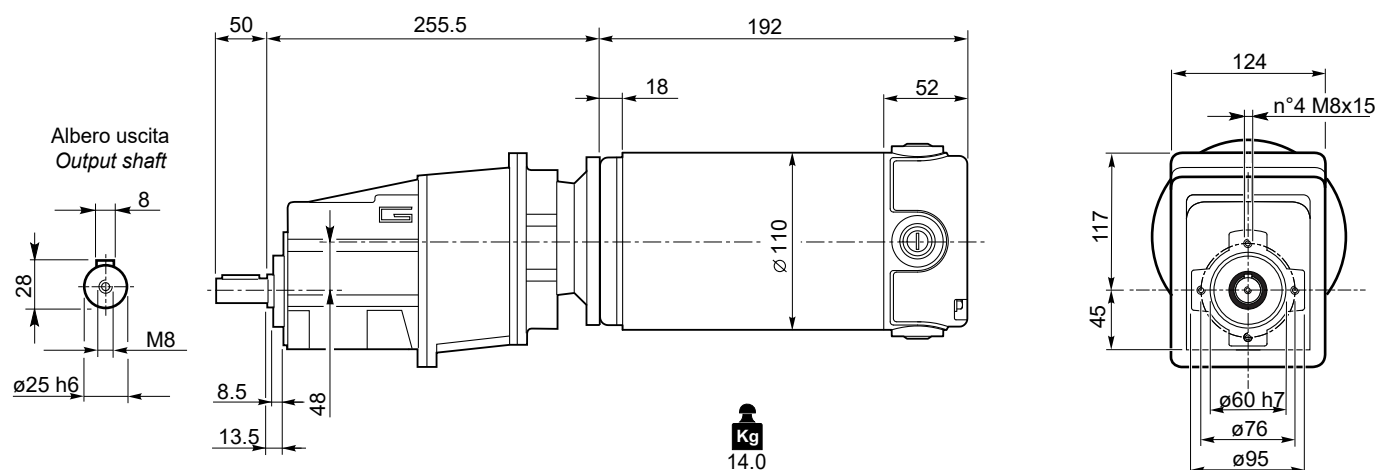


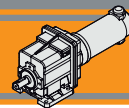
L31

ECMG...H/F



L32

**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Dimensioni****Dimensions****ECMG..U****ECMG350/022 U****ECMG350/023 U****Freno / Brake****H23****ECMG...H****L30****ECMG...F****L31****ECMG...H/F****L32****Motori / Motors IP66****I10**

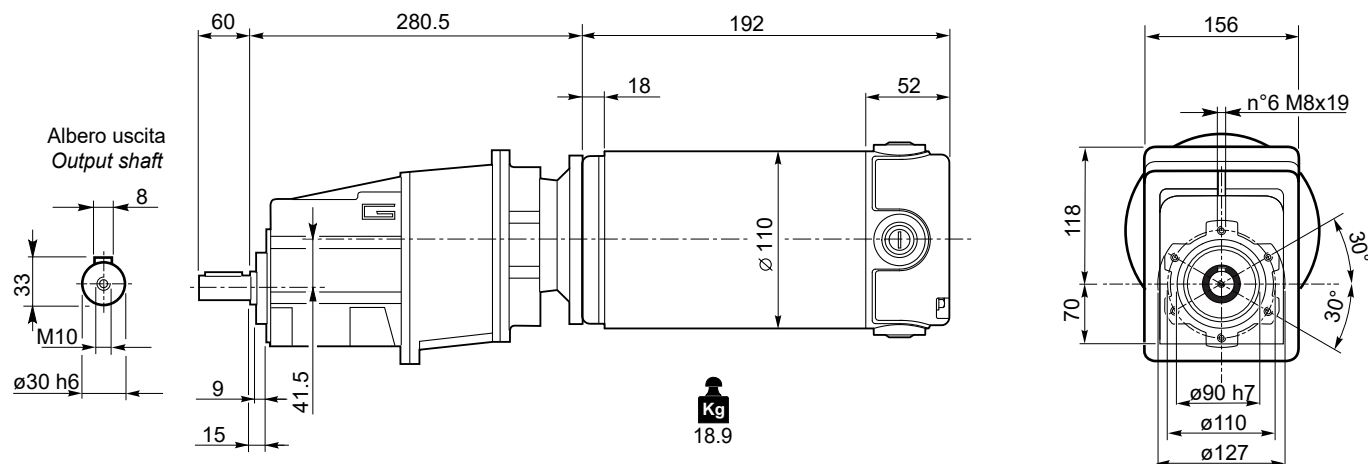


Dimensioni

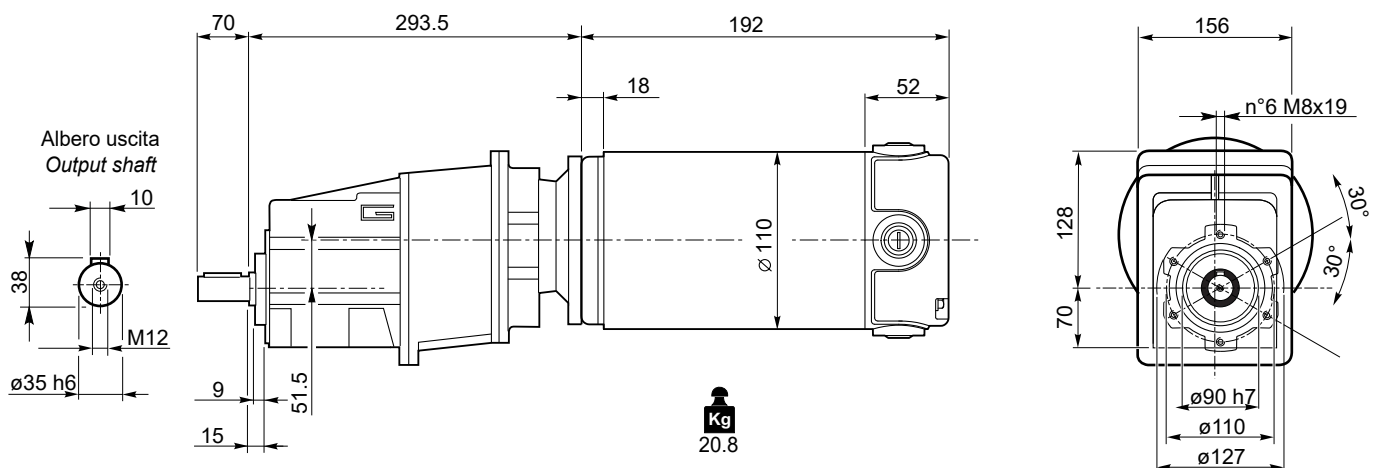
Dimensions

ECMG..U

ECMG350/033 U



ECMG350/043 U



Freno / Brake



H23

ECMG...H



L30

ECMG...F



L31

ECMG...H/F

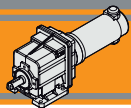
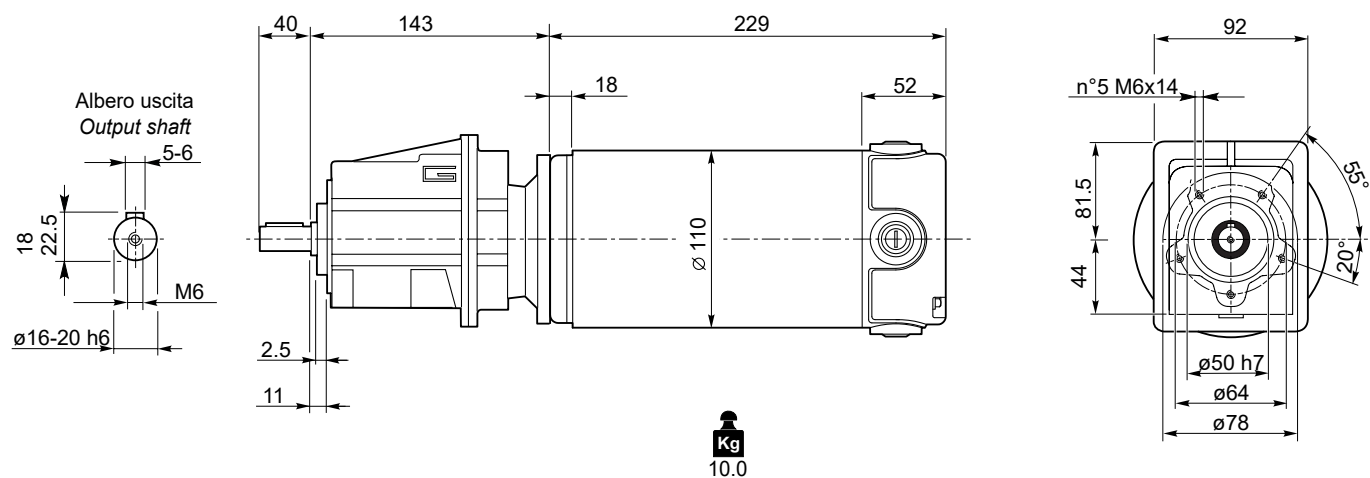


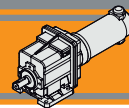
L32

Motori / Motors IP66



I10

**ECMG****Motoriduttori CC ad ingranaggi cilindrici**
DC Helical in-line gearmotors**Dimensioni****Dimensions****ECMG..U****ECMG600/002 U****Freno / Brake****H23****Motori / Motors IP66****I12****ECMG...H****L30****ECMG...F****L31****ECMG...H/F****L32**

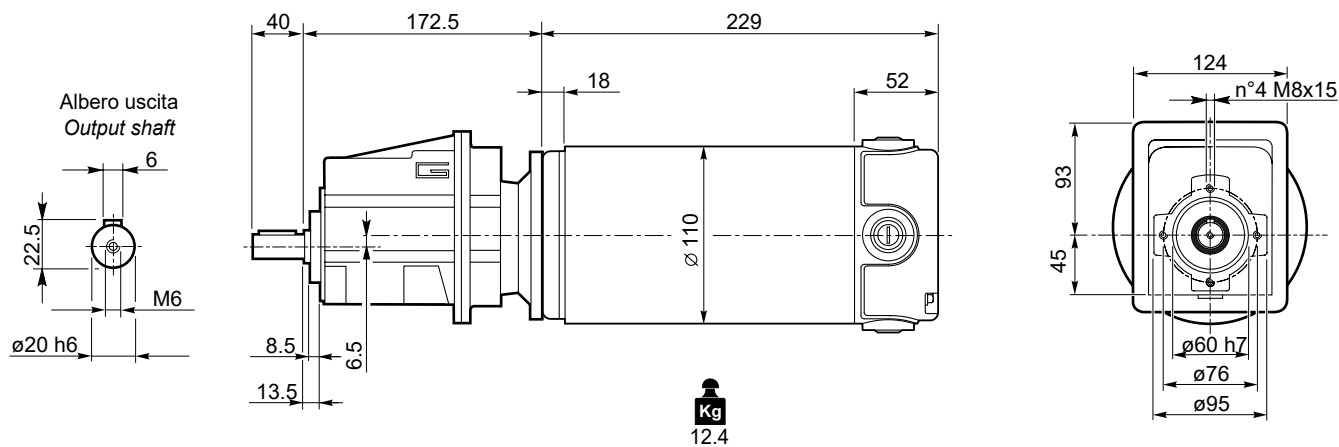


Dimensioni

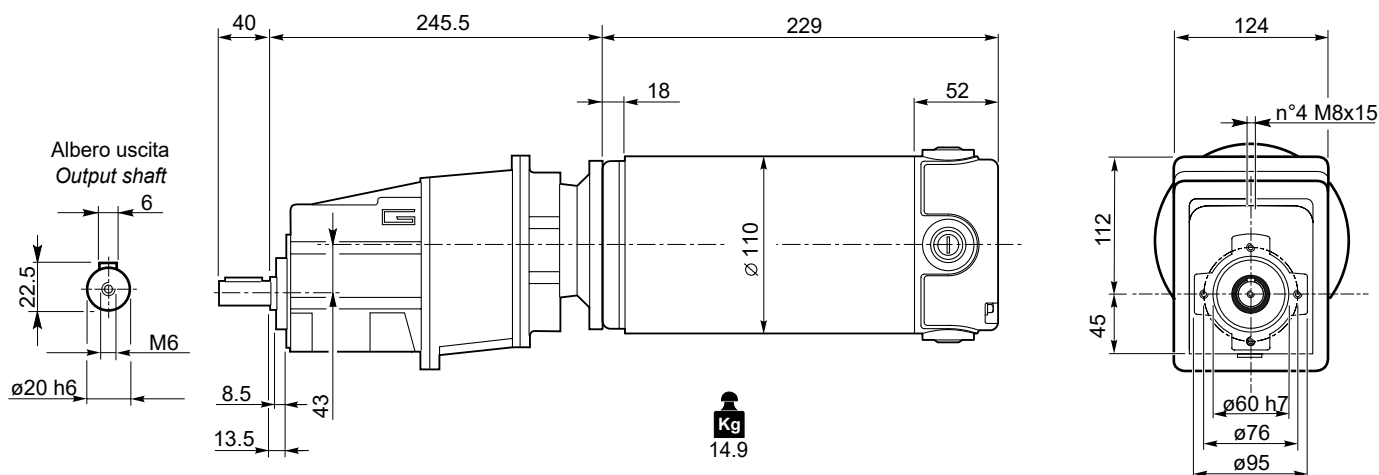
Dimensions

ECMG..U

ECMG600/012 U



ECMG600/013 U



ECMG

Freno / Brake



H23

Motori / Motors IP66



I12

ECMG...H



L30

ECMG...F

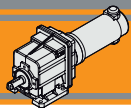
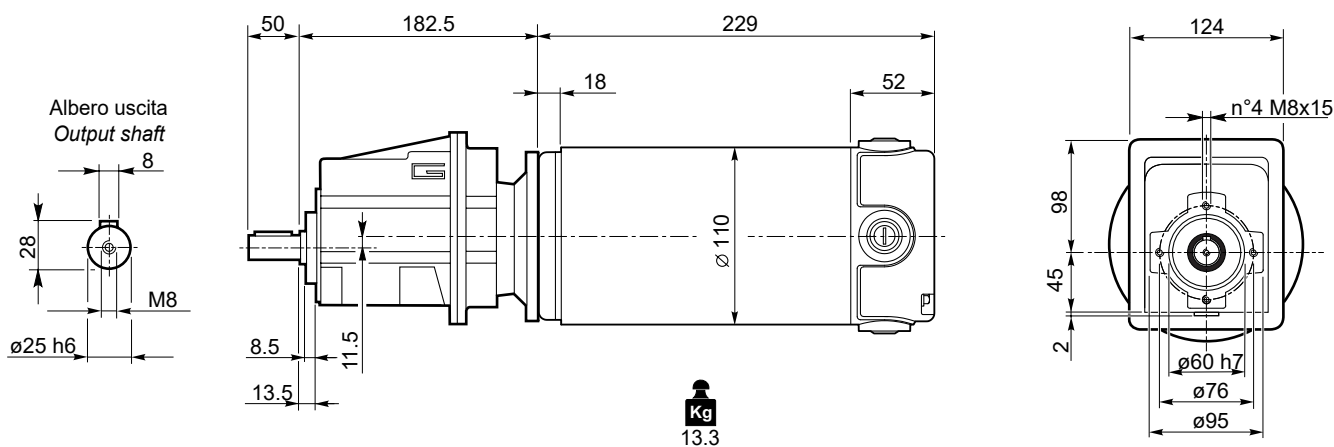
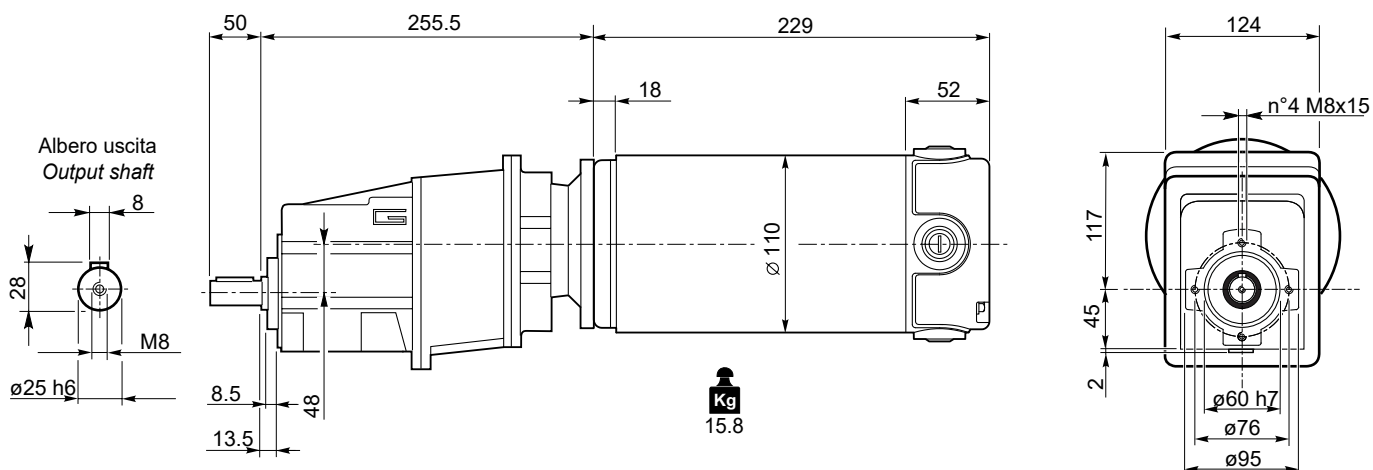
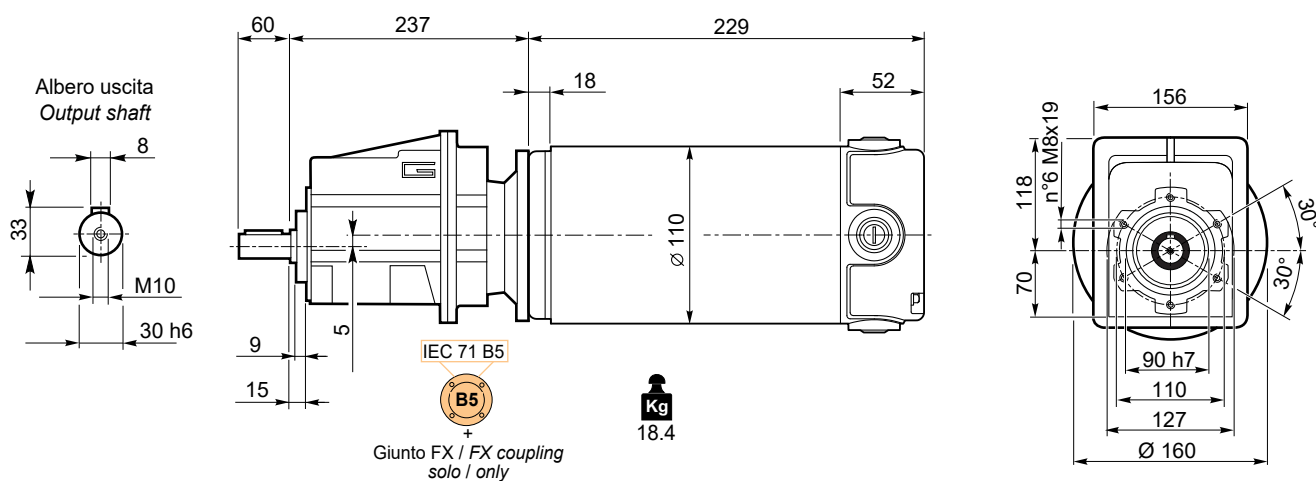


L31

ECMG...H/F



L32

**ECMG**Motoriduttori CC ad ingranaggi cilindrici
DC Helical in-line gearmotors**Dimensioni****Dimensions****ECMG..U****ECMG600/022 U****ECMG600/023 U****ECMG600/032 U**

Freno / Brake

**H23**

ECMG...H

**L30**

ECMG...F

**L31**

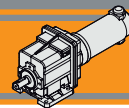
ECMG...H/F

**L32**

Motori / Motors IP66

**I12**

Nota: Motore IP66 non disponibile per ECMG600/032
Note: IP66 motor not available for ECMG600/032

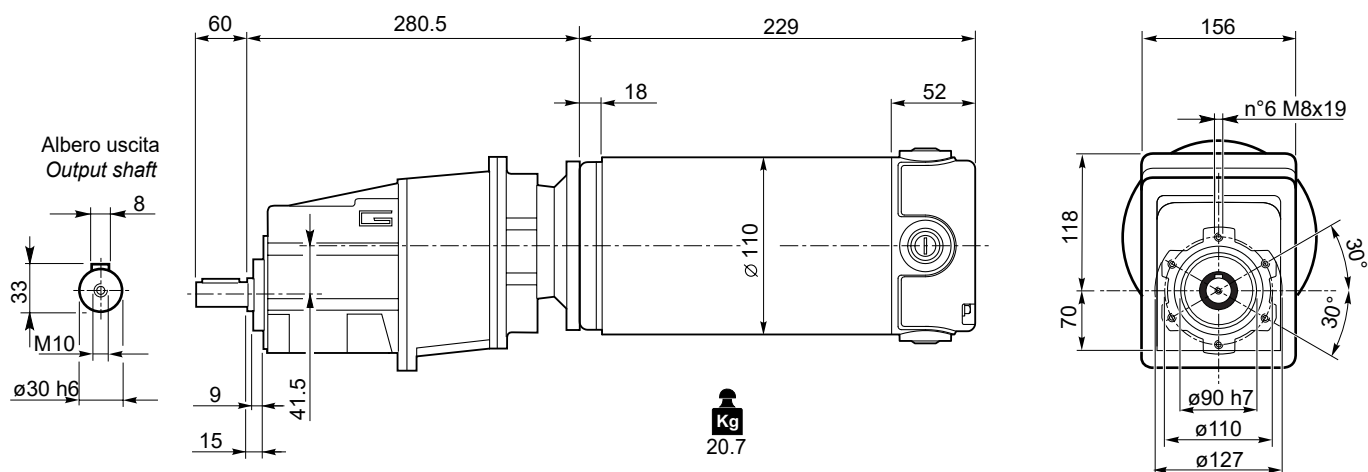


Dimensioni

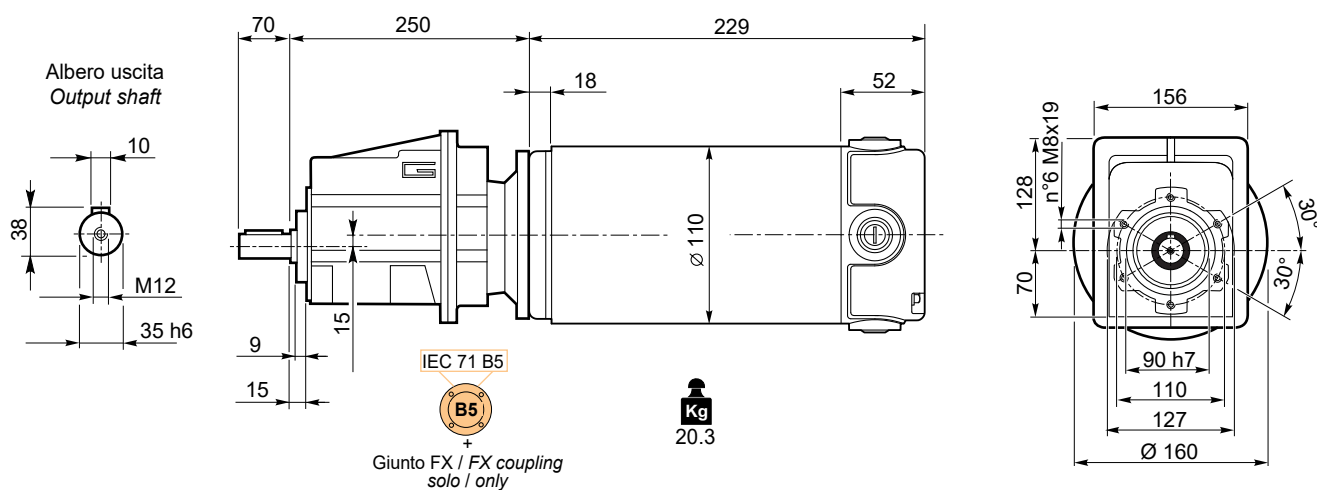
Dimensions

ECMG..U

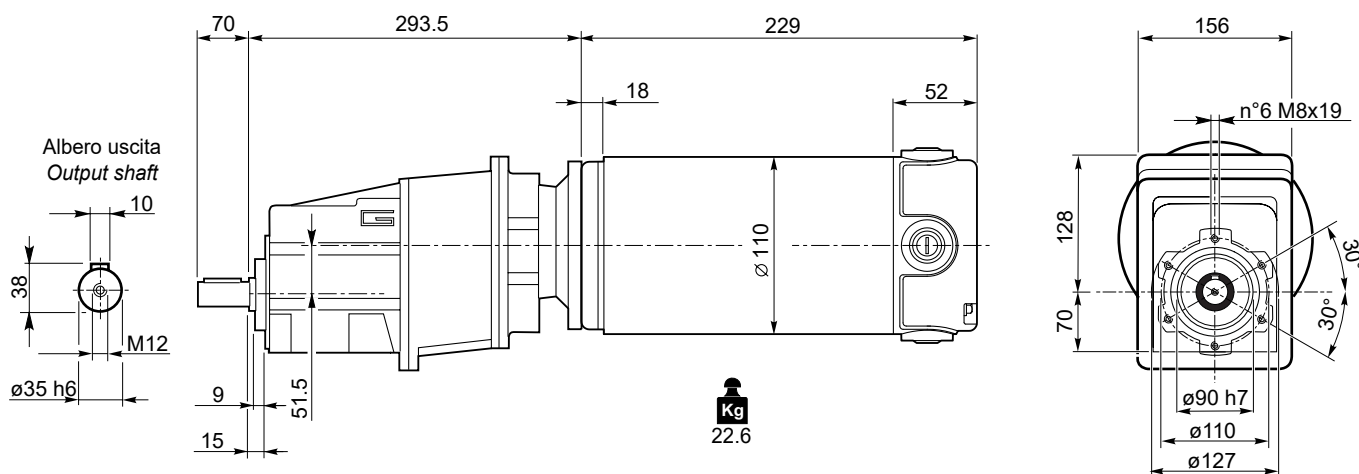
ECMG600/033 U



ECMG600/042 U



ECMG600/043 U



Freno / Brake



H23

ECMG...H



L30

ECMG...F



L31

ECMG...H/F



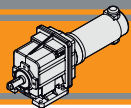
L32

Motori / Motors IP66



I12

Nota: Motore IP66 non disponibile per ECMG600/042
Note: IP66 motor not available for ECMG600/042



ECMG

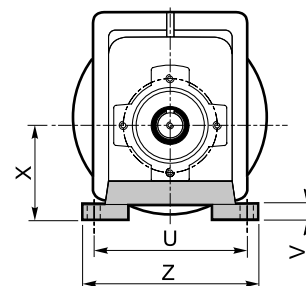
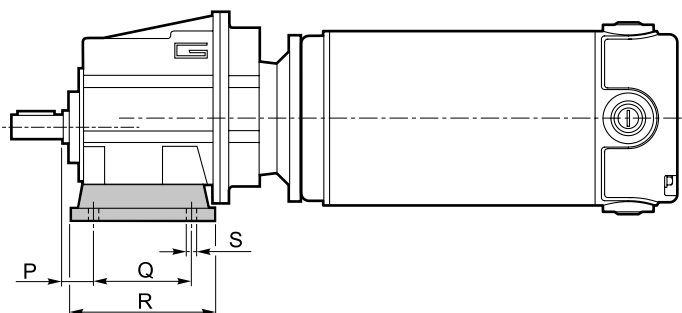
Motoriduttori CC ad ingranaggi cilindrici DC Helical in-line gearmotors

Dimensioni

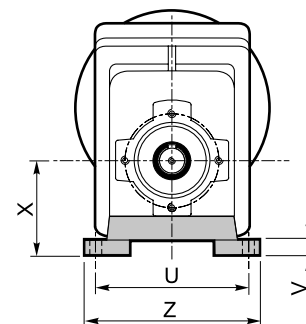
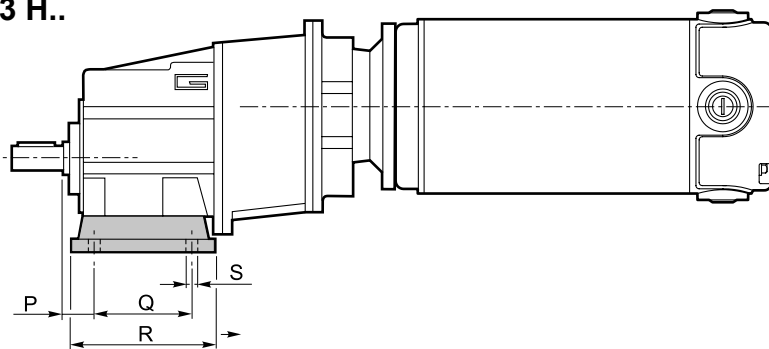
Dimensions

ECMG..H

ECMG..2 H..

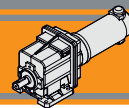


ECMG..3 H..



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
012 013	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
022 023	20	85	108	9	115	12	65	139	H65	0.7
	18	80	118	9	110	12	75	140	H75	1.0
	25	85	120	9	120	12	80	140	H80	1.1
	18	50 - 87	118	9	110	12	85	130	H85	1.2
	25	130	154	9	110	12	90	135	H90	1.5
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7
032 033	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6
042 043	30	105	136	14	160	14	95	194	H95	1.5
	30	100	150	11	150	14	110	185	H110	1.9
	18	70			160					
	30	165	195	14	135	14	115	170	H115	2.2
	35	110	160	14	170	14	120	210	H120	2.6

Preferenziale / Preferred

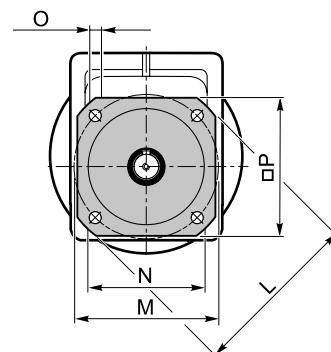
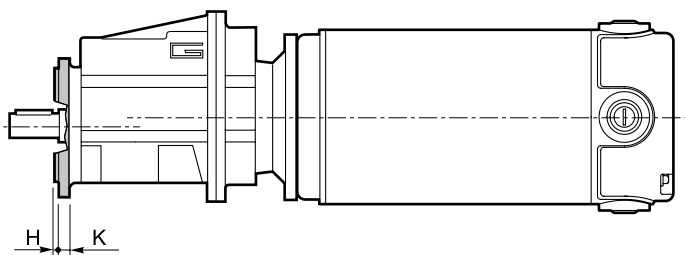


Dimensioni

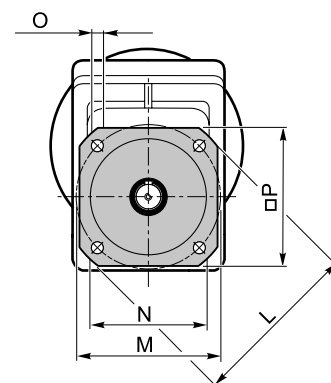
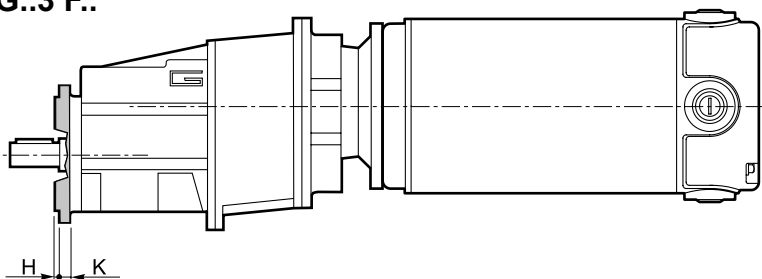
Dimensions

ECMG..F

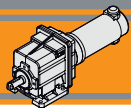
ECMG..2 F..



ECMG..3 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
012 013	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
022 023	3	9	120	100	80	9	106	F120	0.5
	3.5	9	140	115	95	9	115	F140	0.8
	3.5	9	160	130	110	9	126	F160	1.1
	3.5	11	200	165	130	11	165	F200	1.8
032 033	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9
042 043	3.5	11	160	130	110	9	140	F160	1.0
	3.5	11	200	165	130	11	165	F200	1.8
	4	13	250	215	180	14	215	F250	2.9



ECMG

Motoriduttori CC ad ingranaggi cilindrici DC Helical in-line gearmotors

Dimensioni

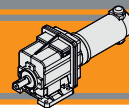
Dimensions

Versione H / H Version											Combinazioni possibili H/F <i>Possible combinations H/F</i>						
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	•	•	•				
012 013	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
022 023	20	85	108	9	115	12	65	139	H65	0.7		•	•				
	18	80	118	9	110	12	75	140	H75	1.0		•	•	•			
	25	85	120	9	120	12	80	140	H80	1.1		•	•	•			
	18	50 - 87	118	9	110	12	85	130	H85	1.2		•	•	•			
	25	130	154	9	110	12	90	135	H90	1.5		•	•	•	•		
	18	60 - 107.5	135	11	130	12	100	155	H100	1.7		•	•	•	•		
032 033	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70			160												
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	
042 043	30	105	136	14	160	14	95	194	H95	1.5				•	•		
	30	100	150	11	150	14	110	185	H110	1.9				•	•		
	18	70			160												
	30	165	195	14	135	14	115	170	H115	2.2				•	•	•	
	35	110	160	14	170	14	120	210	H120	2.6				•	•	•	

Preferenziale / Preferred

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

Versione F / F Version										Flangia / Flange	
CMG	H	K	L	M	N f7	O	P			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
012 013	3	9	120	100	80	9	106			F120	0.5
	3.5	9	140	115	95	9	115			F140	0.8
	3.5	9	160	130	110	9	126			F160	1.1
	3.5	11	200	165	130	11	165			F200	1.8
022 023	3	9	120	100	80	9	106			F120	0.5
	3.5	9	140	115	95	9	115			F140	0.8
	3.5	9	160	130	110	9	126			F160	1.1
	3.5	11	200	165	130	11	165			F200	1.8
032 033	3.5	11	160	130	110	9	140			F160	1.0
	3.5	11	200	165	130	11	165			F200	1.8
	4	13	250	215	150	14	215			F250	2.9
042 043	3.5	11	160	130	110	9	140			F160	1.0
	3.5	11	200	165	130	11	165			F200	1.8
	4	13	250	215	150	14	215			F250	2.9

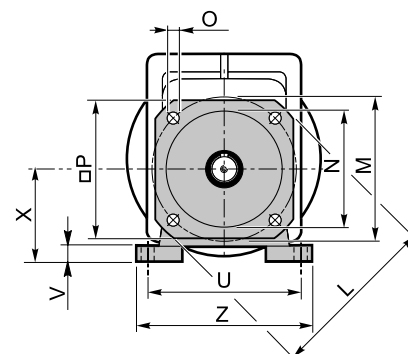
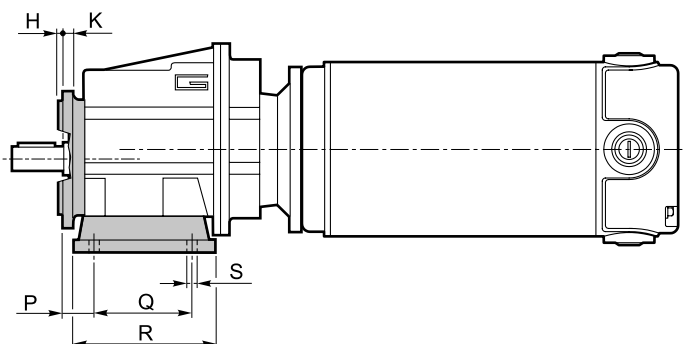


Dimensioni

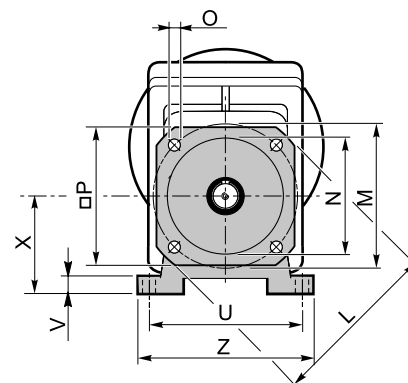
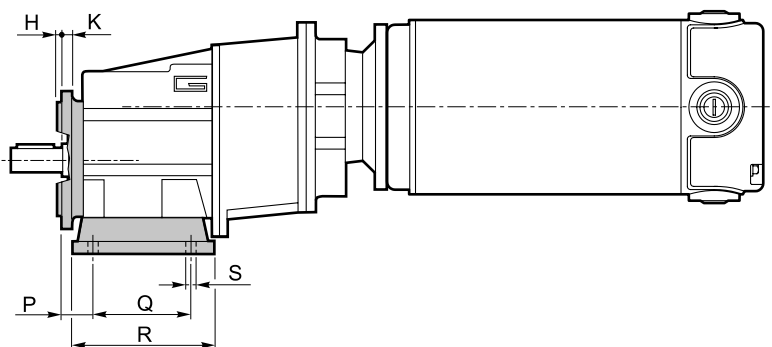
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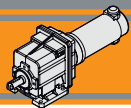
ECMG..H../F..

ECMG..2 H../F..



ECMG..3 H../F..



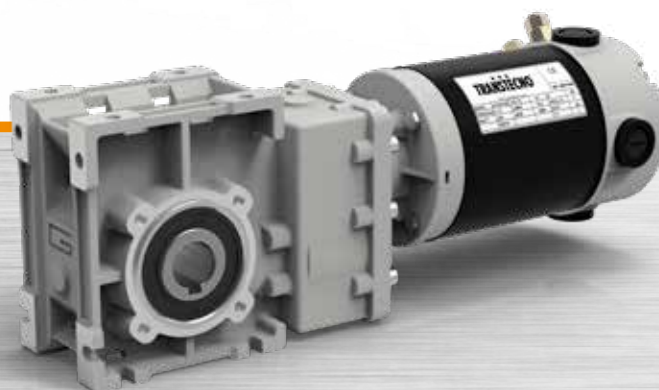


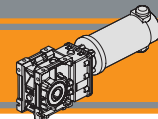
Note



Ferrite

Motoriduttori CC ad assi ortogonali DC helical bevel gearmotors

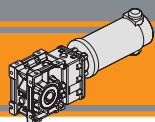




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Designazione	<i>Classification</i>	M2
Sensi di rotazione	<i>Direction of rotation</i>	M2
Simbologia	<i>Symbols</i>	M3
Lubrificazione	<i>Lubrication</i>	M3
Carichi radiali	<i>Radial loads</i>	M3
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	M4
Motori applicabili	<i>Motor adapters</i>	M6
Dimensioni	<i>Dimensions</i>	M7
Accessori	<i>Accessories</i>	M18

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ECMB

Motoriduttori CC ad assi ortogonali DC Helical bevel gearmotors

Caratteristiche tecniche

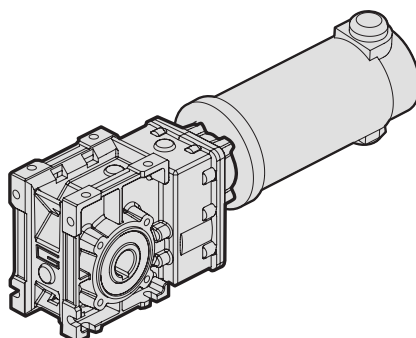
Technical features

Le caratteristiche principali dei motoriduttori CC ad assi ortogonali a magneti permanenti in ferrite serie ECMB sono:

The main features of ECMB ferrite permanent magnets DC helical bevel gearmotors range are:

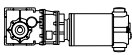
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati
- Disponibili con giunto elastico in entrata

- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground helical gears
- Input flexible coupling available



Designazione

Classification

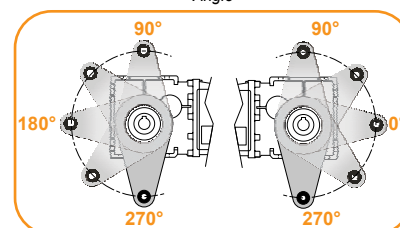
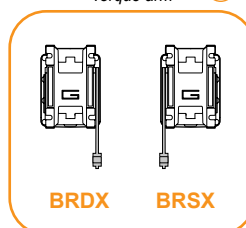
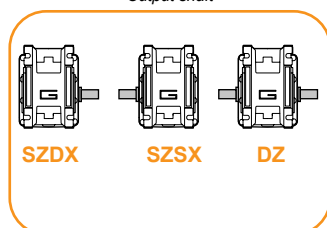
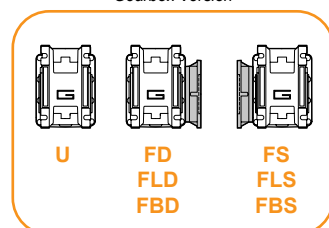
MOTORIDUTTORE / GEARMOTOR															
ECMB		100/402						U	9.2	D20	SZDX	BRSX	90	240	FX
Tipo Type		Grandezza Size						Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Giunto elastico Flexible coupling
ECMB		070/402	100/402	180/402	250/402	350/402	600/402	U	Vedere tabella See tables	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX *	0° 90° 180° 270°	120 240 24E	FX
		070/502	100/502	180/502	250/502	350/502	600/502	FD							
		070/633	100/633	180/633	250/633	350/633	600/633	FS							
							600/903	FLD FLS FBD FBS							
															

Versione Riduttore
Gearbox Version

Albero di uscita
Output shaft

Braccio di reazione
Torque arm *

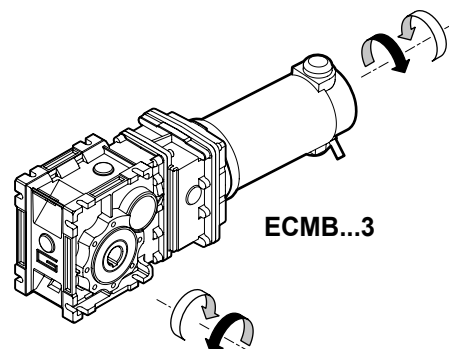
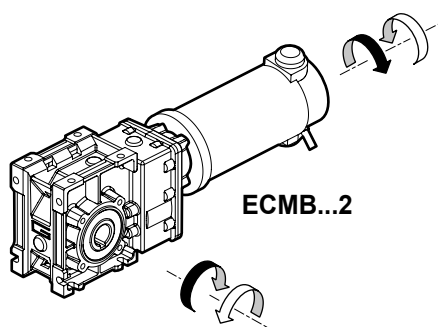
Angolo
Angle

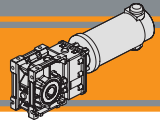


* NOTA: il braccio di reazione viene fornito smontato.
NOTE: the torque arm will be supplied not assembled.

Sensi di rotazione

Direction of rotation





Simbologia

Symbols

n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[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 in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
sf		Fattore di servizio / <i>Service factor</i>
A_2	[N]	Carico assiale ammissibile in uscita / <i>Permitted output axial load</i>
R_2	[N]	Carico radiale ammissibile in uscita / <i>Permitted output radial load</i>

Lubrificazione

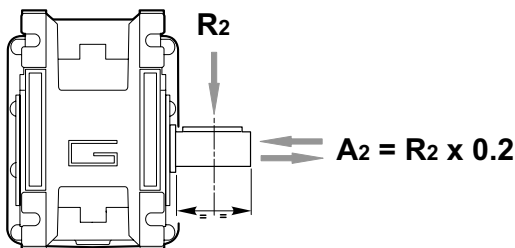
Lubrication

Tutti i riduttori nelle taglie 402, 502 e 633 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, 502 and 603 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Carichi radiali

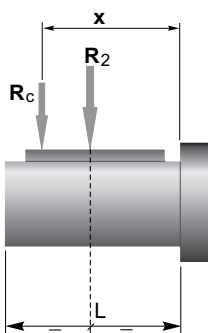
Radial loads



n_2 [min ⁻¹]	R_2 [N]			
	CMB 402	CMB 502	CMB 633	CMB 903
400	905	1116	1835	2682
300	996	1228	2020	2952
200	1141	1406	2312	3379
170	1204	1484	2441	3567
140	1414	1743	2604	3806
100	1582	1949	2913	4686
90	1638	2019	3321	4853
60	2047	2490	3801	5556
40	2524	3029	4492	6614
30	2778	3334	5159	7540
20	3180	3816	5906	8631
15	3500	4200	6500	9500
10	3500	4200	6500	9500

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:*

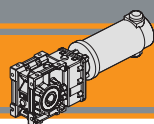


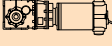
	CMB 402	CMB 502	CMB 633	CMB 903
a	86	104	118	157
b	66	79	93	117
R_{2MAX}	3500	4200	6500	9500

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

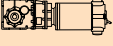
$$R \leq R_c$$

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

**ECMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
100						
(3000 min ⁻¹)	485	1.8	16.8	6.18	070/402	12E/24E
	401	2.2	13.8	7.49		120.66/240.66
	326	2.8	11.3	9.20		
	254	3.5	9.9	11.83		
	240	3.7	9.4	12.48		
	202	4.4	7.9	14.83		
	170	5.3	6.6	17.63		
	161	5.6	7.7	18.60		
	134	6.7	6.4	22.33		
	125	7.2	6.0	23.91		
	104	8.6	5.9	28.89		
	97	9.2	5.5	30.84		
	89	10	5.1	33.57		
	84	11	4.8	35.63		
	70	13	4.0	42.75		
	54	17	3.1	55.31		
	51	18	2.9	59.06		
	47	19	2.7	64.29		
	41	22	2.4	72.50		
	54	17	5.9	55.31	070/502	12E/24E
	51	18	5.5	59.06		120.66/240.66
	47	19	5.1	64.29		
	41	22	4.5	72.50		
	41	22	8.8	73.96	070/633	12E/24E
	38	24	8.3	78.58		120.66/240.66
	32	28	7.0	93.33		
	21	42	4.6	140.52		
	17	54	3.6	181.81		
	14	63	3.1	211.31		
	13	71	2.7	238.31		

140						
(3000 min ⁻¹)	485	2.6	12.0	6.18	100/402	120/240/24E*
	401	3.1	9.9	7.49		120.66/240.66
	326	3.9	8.0	9.20		
	254	5.0	7.1	11.83		
	240	5.2	6.7	12.48		
	202	6.2	5.6	14.83		
	170	7.4	4.7	17.63		
	161	7.8	5.5	18.60		
	134	9.4	4.6	22.33		
	125	10	4.3	23.91		
	104	12	4.2	28.89		
	97	13	3.9	30.84		
	89	14	3.6	33.57		
	84	15	3.4	35.63		
	70	18	2.8	42.75		
	54	23	2.2	55.31		
	51	25	2.1	59.06		
	47	27	1.9	64.29		
	41	30	1.7	72.50		
	54	23	4.2	55.31	100/502	120/240/24E*
	51	25	4.0	59.06		120.66/240.66
	47	27	3.6	64.29		
	41	30	3.2	72.50		

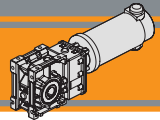
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
140						
(3000 min ⁻¹)	41	31	6.3	73.96	100/633	120/240/24E*
	38	33	5.9	78.58		120.66/240.66
	32	39	5.0	93.33		
	21	59	3.3	140.52		
	17	76	2.6	181.81		
	14	89	2.2	211.31		
	13	100	2.0	238.31		

250						
(3000 min ⁻¹)	485	4.6	6.7	6.18	180/402	120/240*
	401	5.6	5.5	7.49		24E
	326	6.9	4.5	9.20		120.66/240.66
	254	8.8	4.0	11.83		
	240	9.3	3.7	12.48		
	202	11	3.2	14.83		
	170	13	2.7	17.63		
	161	14	3.1	18.60		
	134	17	2.6	22.33		
	125	18	2.4	23.91		
	104	22	2.4	28.89		
	97	23	2.2	30.84		
	89	25	2.0	33.57		
	84	27	1.9	35.63		
	70	32	1.6	42.75		
	54	41	1.2	55.31		
	51	44	1.2	59.06		
	47	48	1.1	64.29		
	41	54	0.9	72.50		
	134	17	5.1	22.33	180/502	120/240*
	125	18	4.8	23.91		24E
	104	22	4.5	28.89		120.66/240.66
	97	23	4.2	30.84		
	89	25	3.9	33.57		
	84	27	3.7	35.63		
	70	32	3.1	42.75		
	54	41	2.4	55.31		
	51	44	2.2	59.06	180/633	120/240*
	47	48	2.0	64.29		24E
	41	54	1.8	72.50		120.66/240.66
	52	43	4.5	57.93		
	49	46	4.2	61.63		
	41	55	3.5	73.96		
	38	59	3.3	78.58		
	32	70	2.8	93.33		
	21	105	1.9	140.52		
	17	136	1.4	181.81		
	14	158	1.2	211.31		
	13	178	1.1	238.31		

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

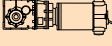
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

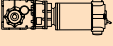
NOTE: for continuous or highly intermittent duty, please contact our technical service



Dati tecnici per servizio S2

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
350						
(3000 min ⁻¹)	485	6.5	4.8	6.18	250/402	120/240
	401	7.8	4	7.49		120.66/240.66
	326	9.6	3.2	9.20		
	254	12	2.8	11.83		
	240	13	2.7	12.48		
	202	16	2.3	14.83		
	170	19	1.9	17.63		
	161	20	2.2	18.60		
	134	23	1.8	22.33		
	125	25	1.7	23.91		
	104	30	1.7	28.89		
	97	32	1.6	30.84		
	89	35	1.5	33.57		
	84	37	1.4	35.63		
	70	45	1.1	42.75		
	54	58	0.9	55.31		
	51	62	0.8	59.06		
	47	67	0.8	64.29		
	41	72	0.7	72.50		
	485	6.5	8.5	6.18	250/502	120/240
	401	7.8	7.0	7.49		120.66/240.66
	326	9.6	5.7	9.2		
	254	12	5.7	11.83		
	240	13	5.4	12.48		
	202	16	4.5	14.83		
	170	19	3.8	17.63		
	161	20	4.4	18.6		
	134	23	3.7	22.33		
	125	25	3.4	23.91		
	104	30	3.2	28.89		
	97	32	3.0	30.84		
	89	35	2.8	33.57		
	84	37	2.6	35.63		
	70	45	2.2	42.75		
	54	58	1.7	55.31		
	51	62	1.6	59.06		
	47	67	1.5	64.29		
	41	76	1.3	72.50		
	106	30	5.8	28.17	250/633	120/240
	89	35	4.9	33.81		120.66/240.66
	84	38	4.6	35.92		
	77	41	4.8	38.88		
	64	49	4.0	47.16		
	52	61	3.2	57.93		
	49	65	3.0	61.63		
	41	78	2.5	73.96		
	38	82	2.4	78.58		
	32	98	2.0	93.33		
	21	147	1.3	140.52		
	17	190	1.0	181.81		
	14	221	0.9	211.31		
	13	250	0.8	238.31		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
500						
(3000 min ⁻¹)	485	9	3.4	6.18	350/402	120/240
	401	11	2.8	7.49		120.66/240.66
	326	14	2.3	9.2		
	254	18	2.0	11.83		
	240	19	1.9	12.48		
	202	22	1.6	14.83		
	170	26	1.3	17.63		
	161	28	1.5	18.6		
	134	33	1.3	22.33		
	125	36	1.2	23.91		
	104	43	1.2	28.89		
	97	46	1.1	30.84		
	89	50	1.0	33.57		
	84	53	1.0	35.63		
	70	64	0.8	42.75		
	54	73	0.7	55.31		
	51	73	0.7	59.06		
	47	73	0.7	64.29		
	326	14	4.0	9.20	350/502	120/240
	254	18	4.0	11.83		120.66/240.66
	240	19	3.7	12.48		
	202	22	3.2	14.83		
	170	26	2.7	17.63		
	161	28	3.1	18.60		
	134	33	2.6	22.33		
	125	36	2.4	23.91		
	104	43	2.3	28.89		
	97	46	2.1	30.84		
	89	50	2.0	33.57		
	84	53	1.8	35.63		
	70	64	1.5	42.75		
	54	83	1.2	55.31		
	51	88	1.1	59.06		
	47	96	1.0	64.29		
	41	109	0.9	72.50		
	139	32	5.3	21.56	350/633	120/240
	113	40	4.3	26.48		120.66/240.66
	106	42	4.1	28.17		
	89	51	3.4	33.81		
	84	54	3.2	35.92		
	77	58	3.4	38.88		
	64	71	2.8	47.16		
	52	87	2.2	57.93		
	49	92	2.1	61.63		
	41	111	1.8	73.96		
	38	118	1.7	78.58		
	32	140	1.4	93.33		
	21	210	0.9	140.52		
	17	272	0.7	181.81		
	14	279	0.7	211.31		

NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

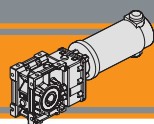
NOTE: for continuous or highly intermittent duty, please contact our technical service

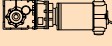
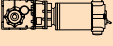
NOTA

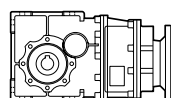
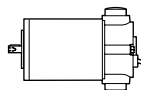
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE

Please check that the output torque M₂ does not exceed the value in the grey areas

**ECMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

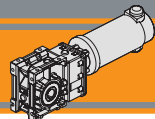
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
800							800						
(3000 min ⁻¹)	485	15	2.1	6.18	600/402	120/240	(3000 min ⁻¹)	97	74	1.3	30.84	600/502	120/240
	401	18	1.7	7.49		120.66/240.66		89	80	1.2	33.57		120.66/240.66
	326	22	1.4	9.20				84	85	1.1	35.63		
	254	28	1.2	11.83				70	102	1.0	42.75		
	240	30	1.2	12.48				54	132	0.7	55.31		
	202	36	1.0	14.83				51	140	0.7	59.06		
	170	42	0.8	17.63				47	140	0.7	64.29		
	161	45	1.0	18.60				41	140	0.7	72.50		
	134	53	0.8	22.33									
	125	57	0.8	23.91				306	23	5.0	9.81	600/633	120/240
	104	69	0.7	28.89				287	25	4.7	10.44		120.66/240.66
	97	73	0.7	30.84				239	30	3.9	12.53		
	89	73	0.7	33.57				225	32	3.7	13.31		
	84	73	0.7	35.63				190	38	3.5	15.81		
	70	73	0.7	42.75				169	43	4.0	17.77		
								139	52	3.3	21.56		
								113	63	2.7	26.48		
	485	15	3.7	6.18	600/502	120/240		106	67	2.6	28.17		
	401	18	3.1	7.49		120.66/240.66		89	81	2.1	33.81		
	326	22	2.5	9.20				84	86	2.0	35.92		
	254	28	2.5	11.83				77	93	2.1	38.88		
	240	30	2.3	12.48				64	113	1.7	47.16		
	202	36	2.0	14.83				52	139	1.4	57.93		
	170	42	1.7	17.63				49	148	1.3	61.63		
	161	45	1.9	18.60				41	177	1.1	73.96		
	134	53	1.6	22.33				38	188	1.0	78.58		
	125	57	1.5	23.91				32	223	0.9	93.33		
	104	69	1.4	28.89				21	279	0.7	140.52		
								114	63	5.6	26.30	600/903	120/240
								99	72	4.8	30.25		IEC 71B5
								76	94	4.1	39.26		
								63	113	3.4	47.25		+
								52	138	2.8	57.52		Giunto FX
								45	158	2.5	66.17		FX Coupling
								36	199	2.0	83.20		Solo / Only
								28	259	1.5	108.09		
								23	317	1.2	132.23		
								20	354	1.1	147.92		
								18	400	1.0	167.09		
								16	457	0.9	191.06		
								14	531	0.7	221.88		
								11	557	0.7	262.96		

NOTAVerificare sempre che la coppia M₂ utilizzata non
eccessi 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**Motori applicabili****Motor adapters**

		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	600.120 600.240
CMB	402	6.18 - 72.50	6.18 - 72.50 *			6.18 - 72.50	
	502	6.18 - 72.50	6.18 - 72.50 *			6.18 - 72.50	
	633	6.58 - 238.31	6.58 - 238.31 *			6.58 - 238.31	
	933					**	6.65 - 262.96 (!)

6.18 - 72.50

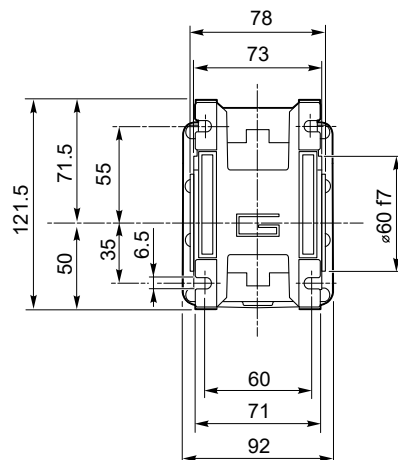
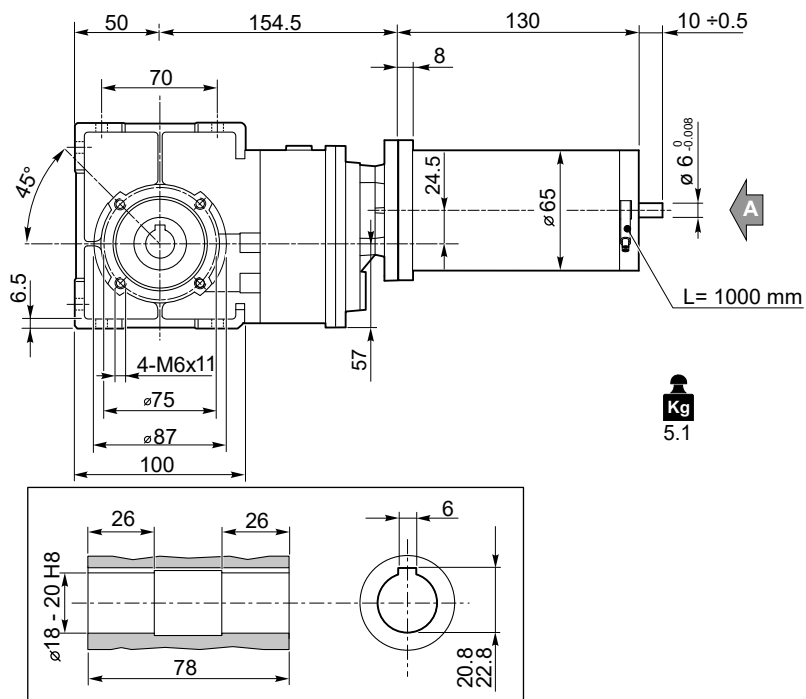
Rapporti di riduzione i
Ratio i(!): Solo IEC 71B5 con giunto FX
71 B5 only with FX coupling*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°**: Contattare il servizio tecnico
Please contact our technical service



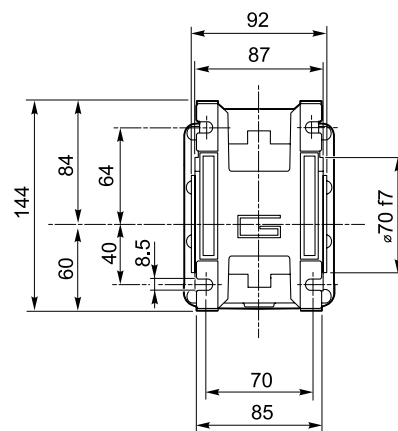
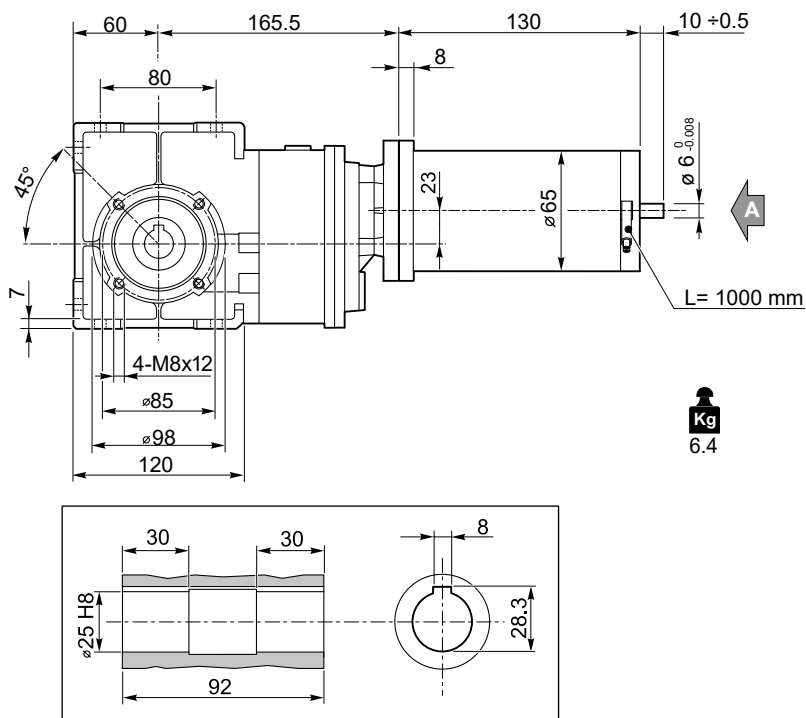
Dimensioni

Dimensions

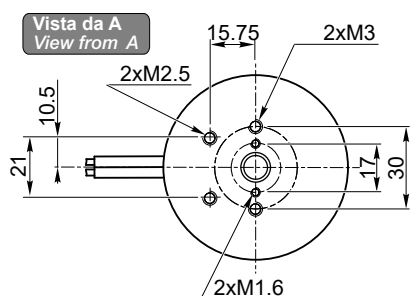
ECMB070/402 U



ECMB070/502 U



ECMB



Freno / Brake

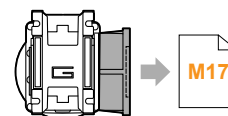
H23

Encoder

H24

Motori / Motors IP66

I2

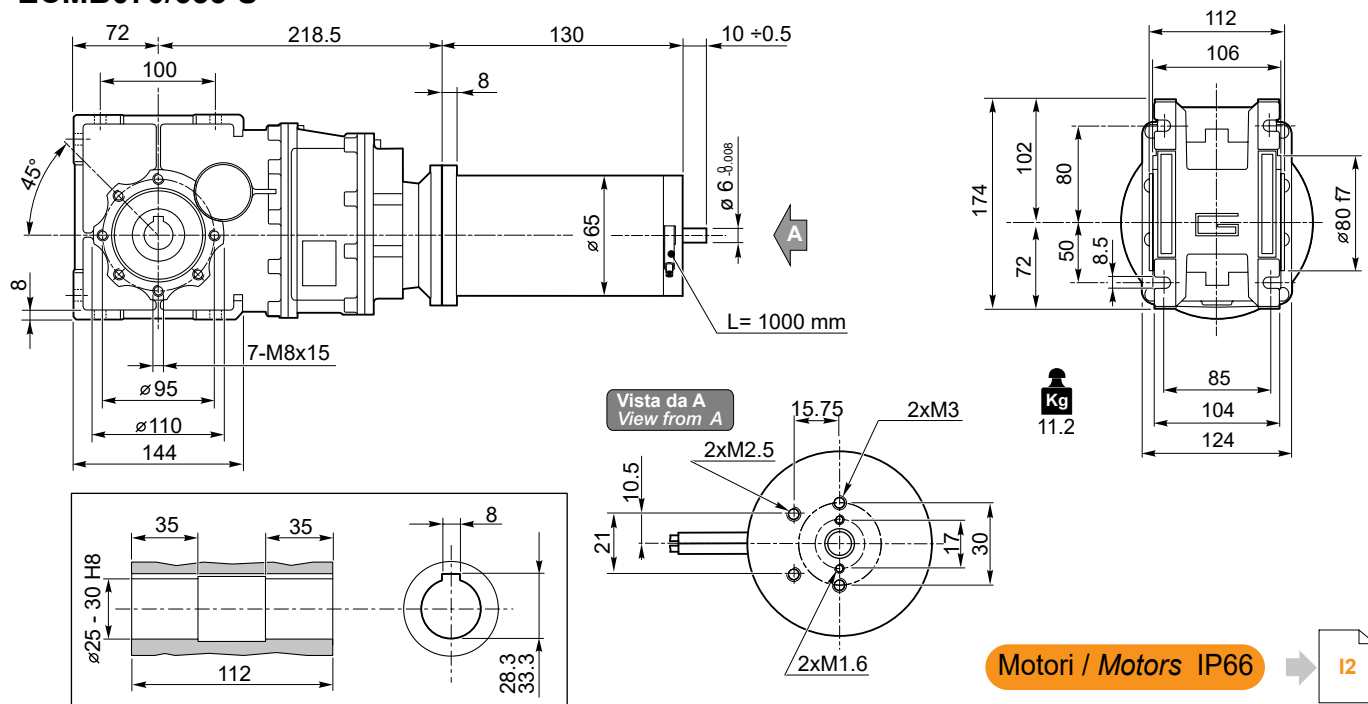


M17

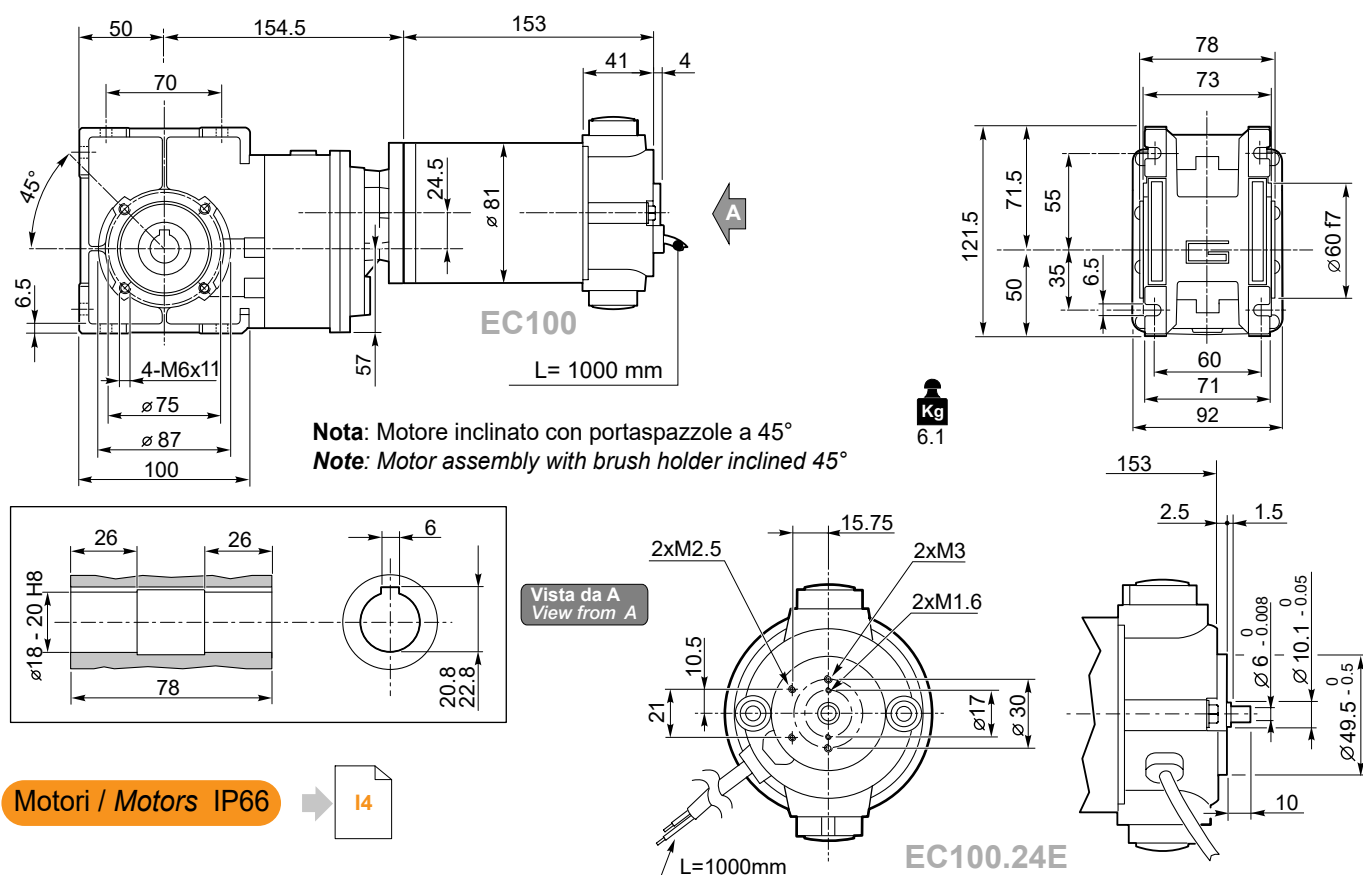
Dimensioni

Dimensions

ECMB070/633 U



ECMB100/402 U

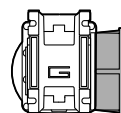


Encoder

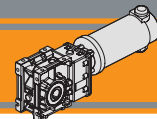
H24

Freno / *Brake*

H23



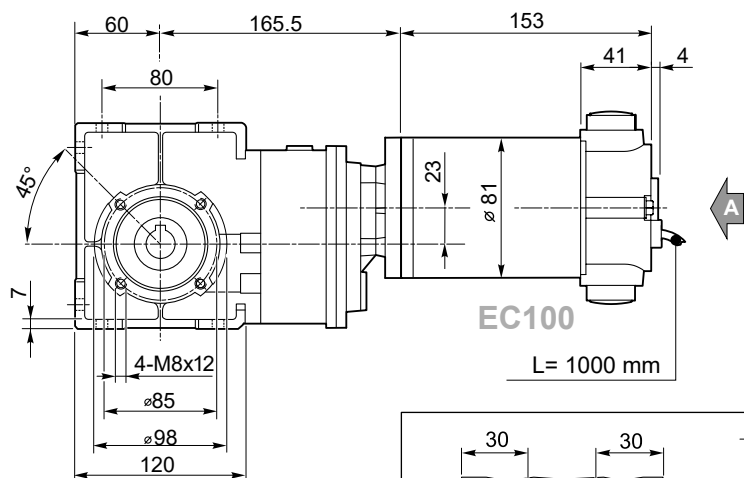
M17



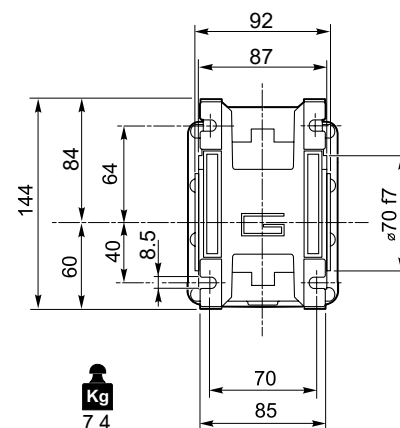
Dimensioni

Dimensions

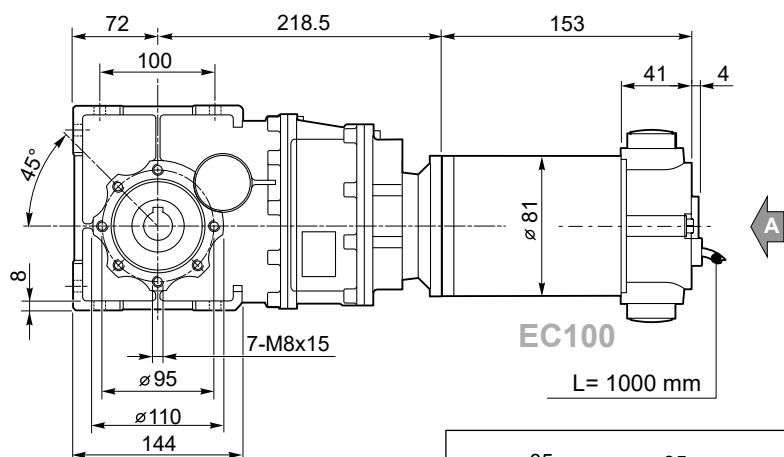
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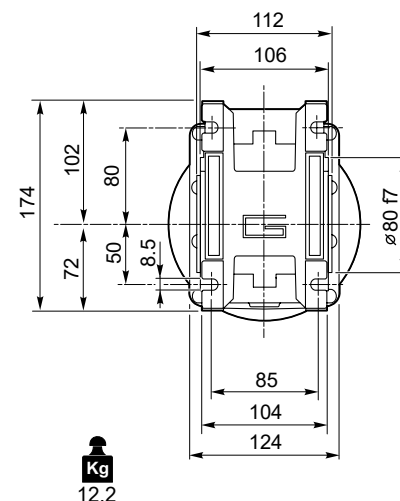
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°



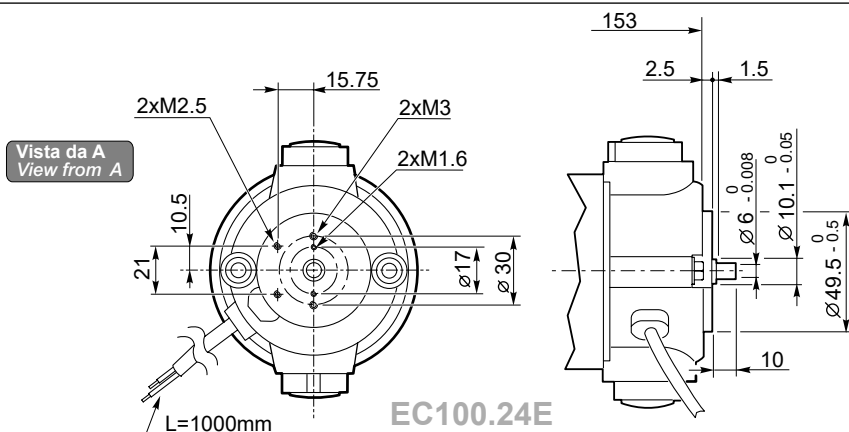
ECMB100/633 U



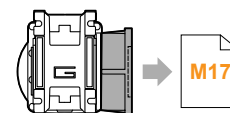
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°



ECMB



Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

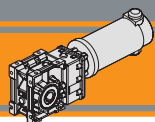


M17

Freno / Brake → H23

Encoder → H24

Motori / Motors IP66 → I4



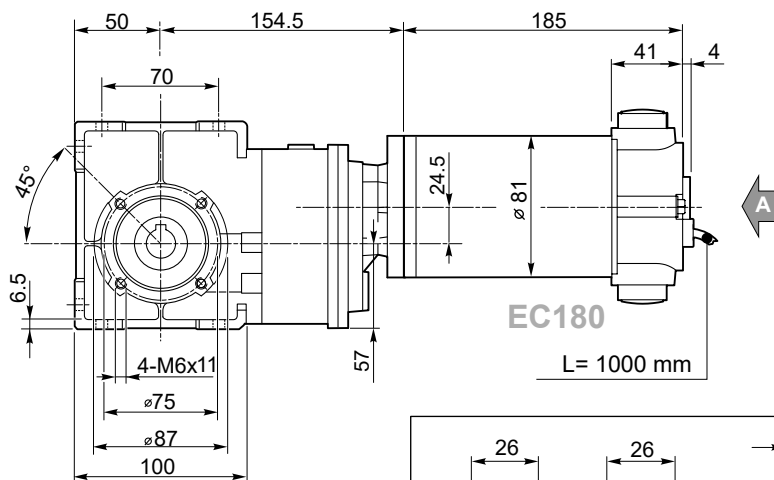
ECMB

Motoriduttori CC ad assi ortogonali DC Helical bevel gearmotors

Dimensioni

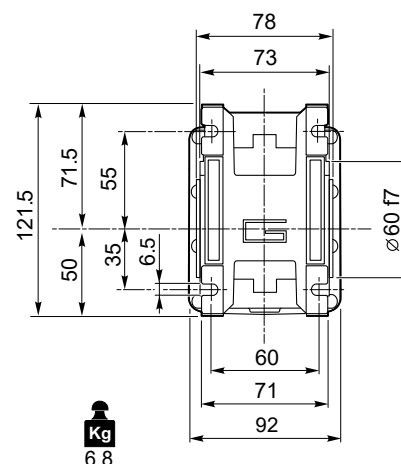
Dimensions

ECMB180/402 U

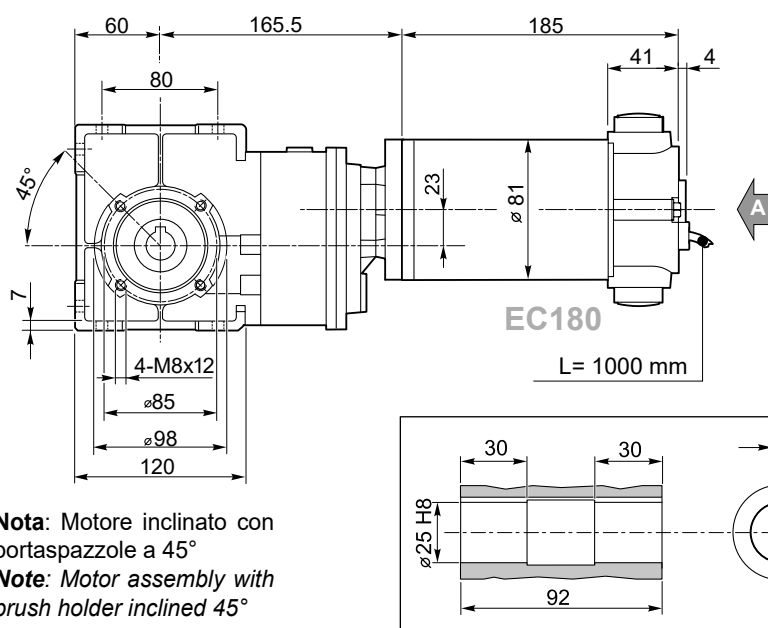


Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°

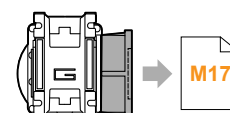
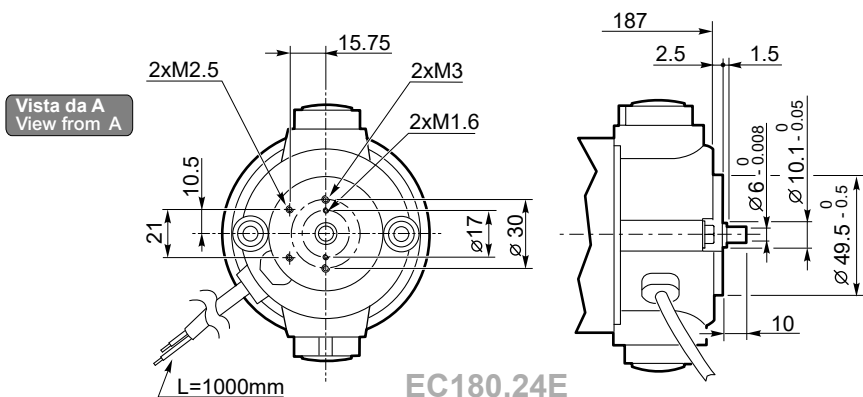
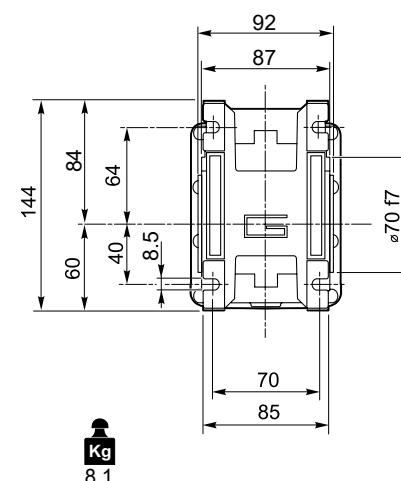


ECMB180/502 U



Nota: Motore inclinato con portaspazzole a 45°

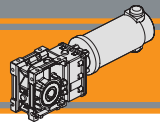
Note: Motor assembly with brush holder inclined 45°



Freno / Brake → H23

Encoder → H24

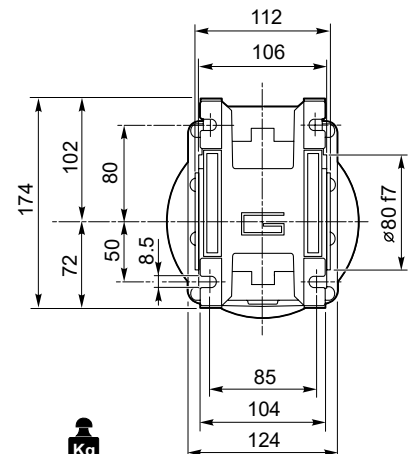
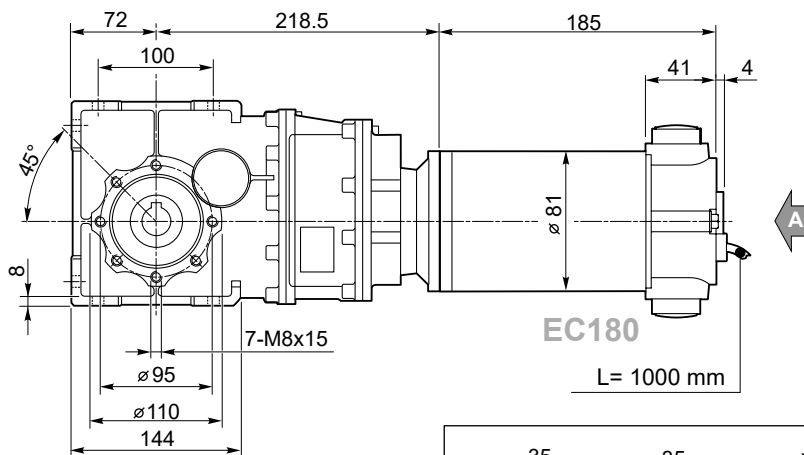
Motori / Motors IP66 → I6



Dimensioni

Dimensions

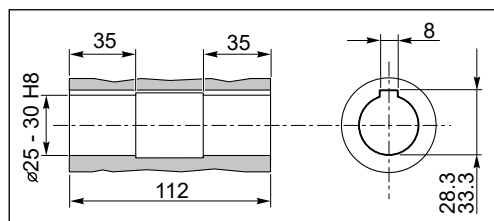
ECMB180/633 U



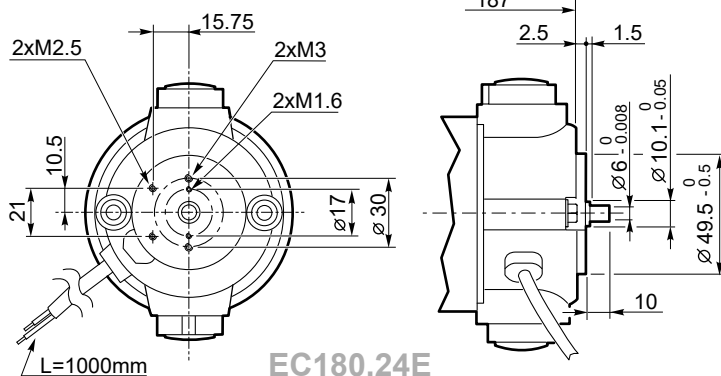
Kg
11.9

Nota: Motore inclinato con
portaspazzole a 45°

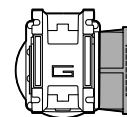
Note: Motor assembly with
brush holder inclined 45°



Vista da A
View from A



EC180.24E



M17

Freno / Brake

H23

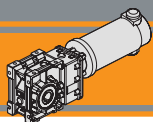
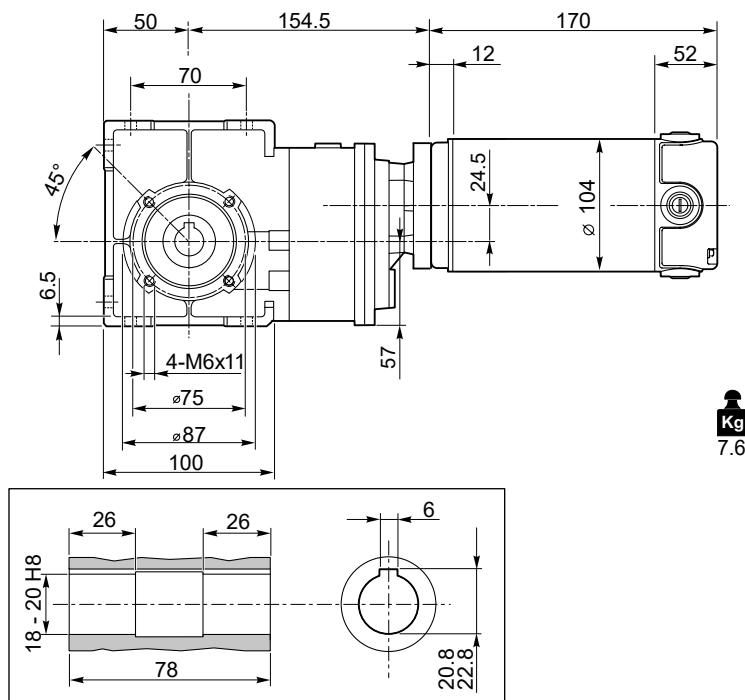
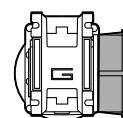
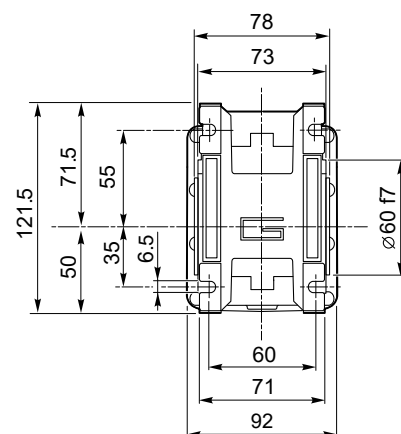
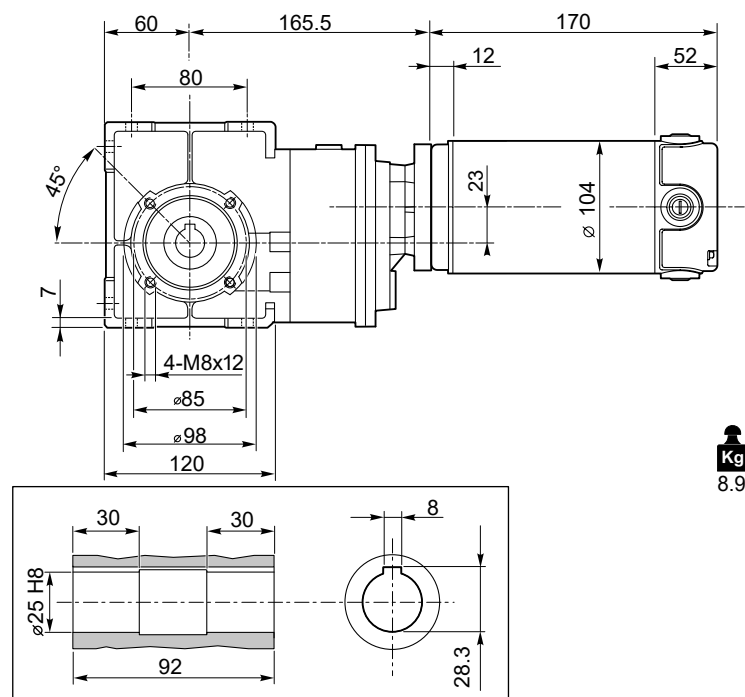
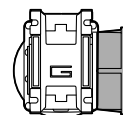
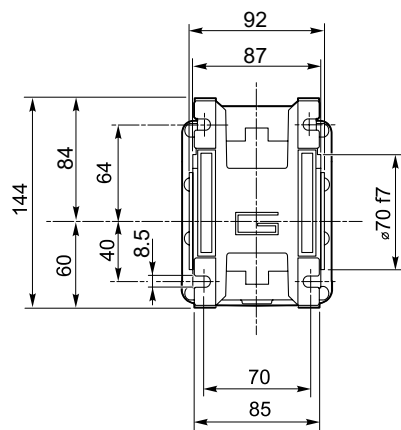
Encoder

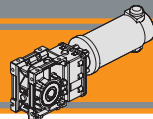
H24

Motori / Motors IP66

I6

ECMB

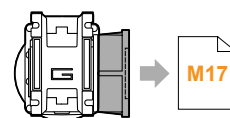
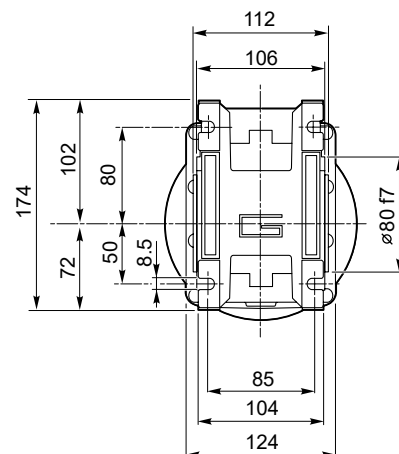
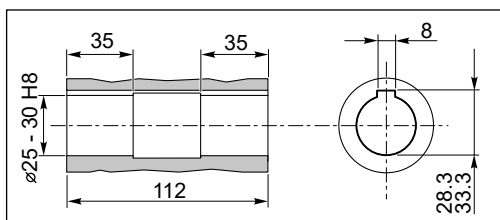
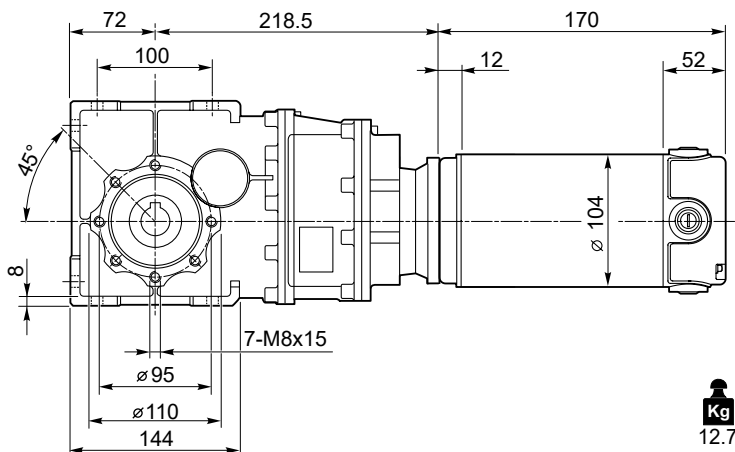
**ECMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dimensioni****Dimensions****ECMB250/402 U****Kg**
7.6**M17****Motori / Motors IP66****I8****ECMB250/502 U****Kg**
8.9**M17****Motori / Motors IP66****I8**



Dimensioni

Dimensions

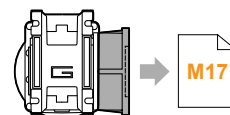
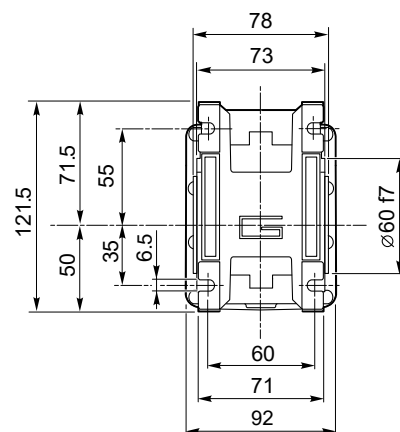
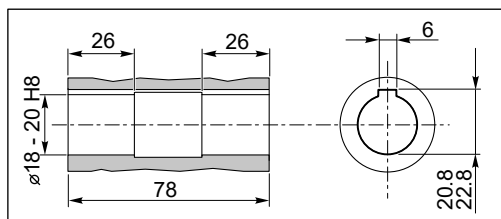
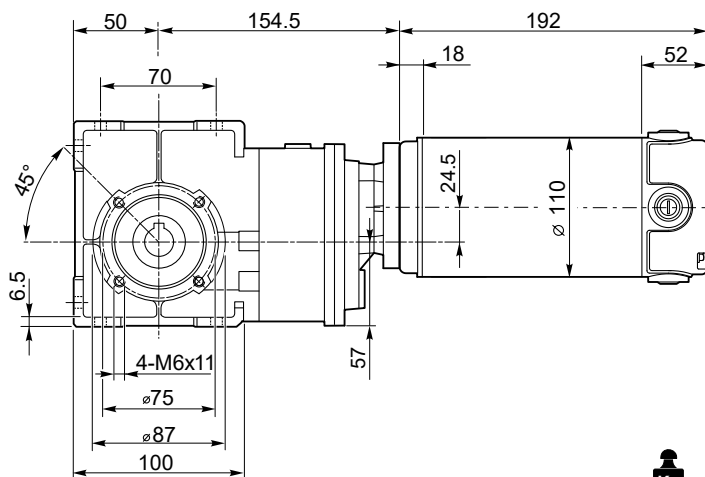
ECMB250/633 U



Motori / Motors IP66

I8

ECMB350/402 U



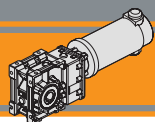
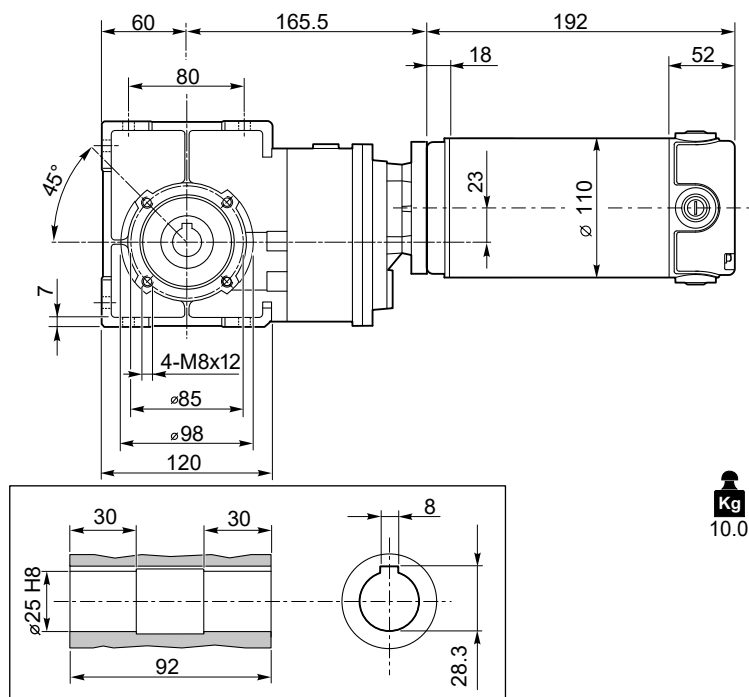
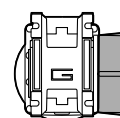
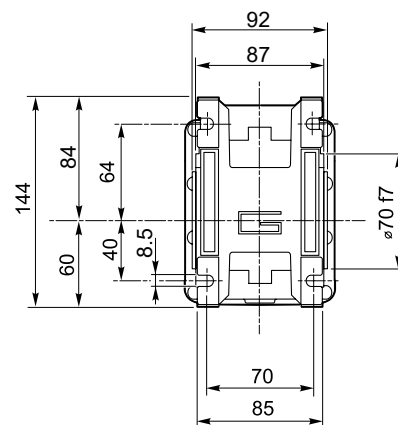
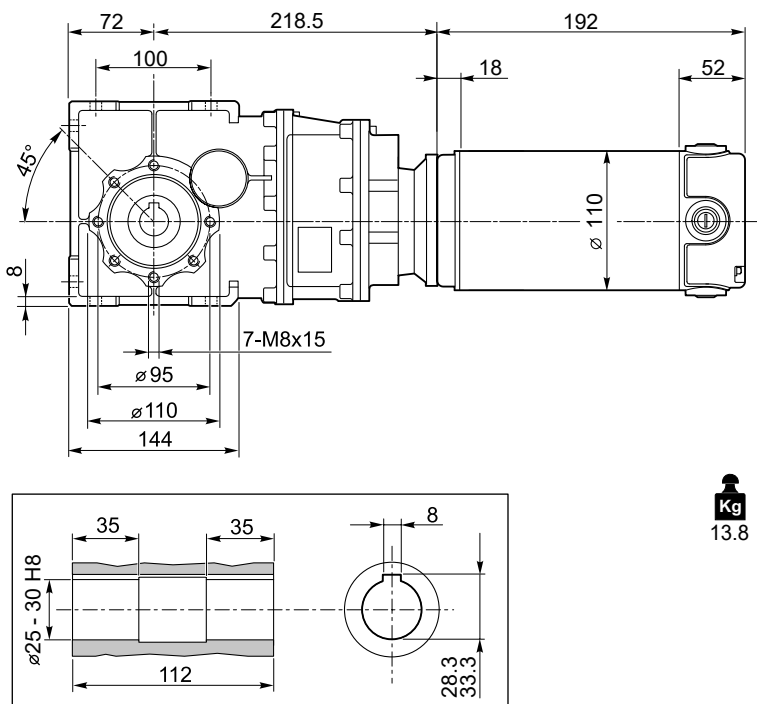
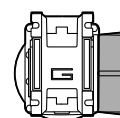
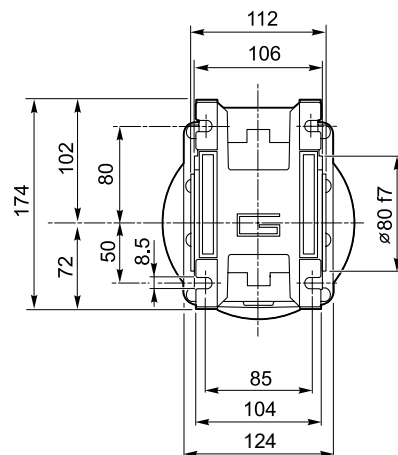
Freno / Brake

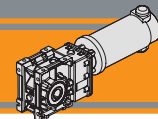
H23

Motori / Motors IP66

I10

ECMB

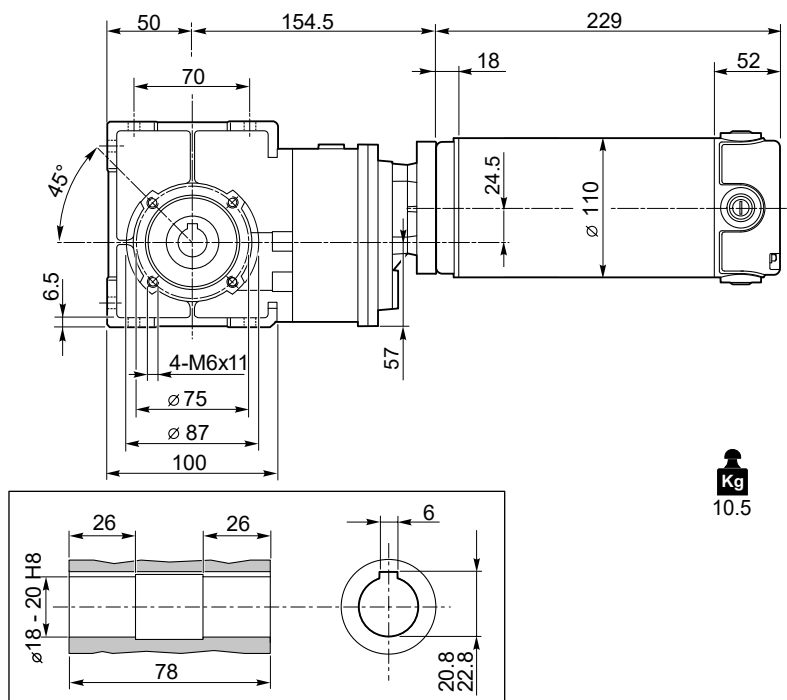
**ECMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dimensioni****Dimensions****ECMB350/502 U****Kg**
10.0**M17****Freno / Brake****H23****Motori / Motors IP66****I10****ECMB350/633 U****Kg**
13.8**M17****Freno / Brake****H23****Motori / Motors IP66****I10**



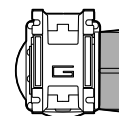
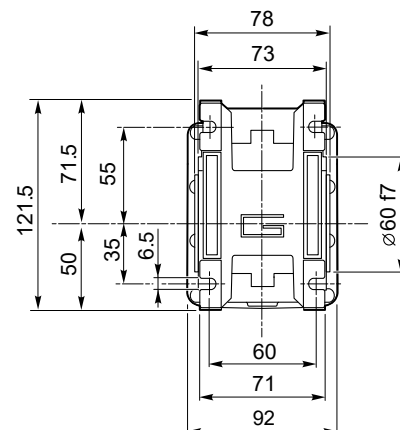
Dimensioni

Dimensions

ECMB600/402 U



Kg
10.5



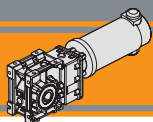
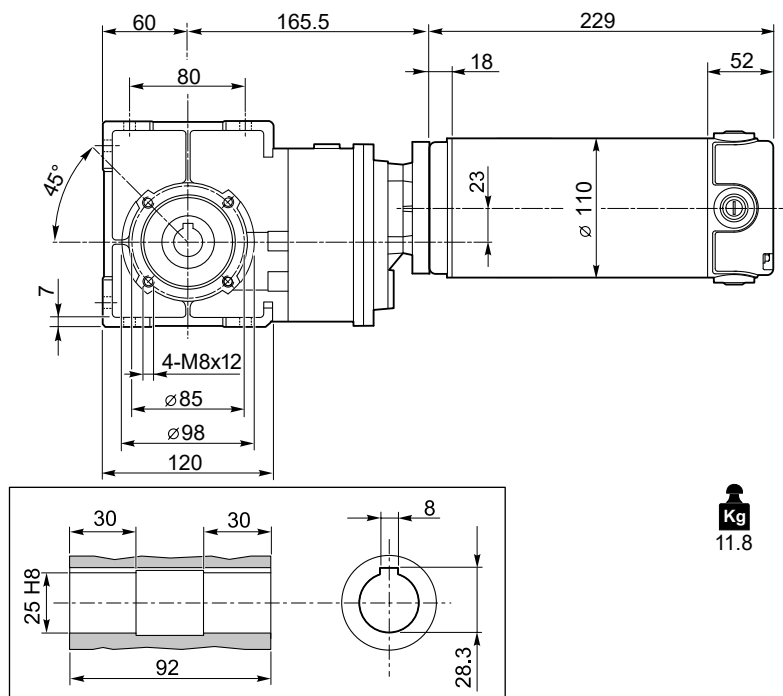
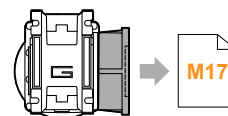
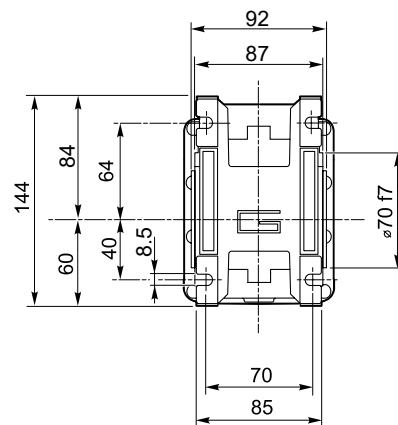
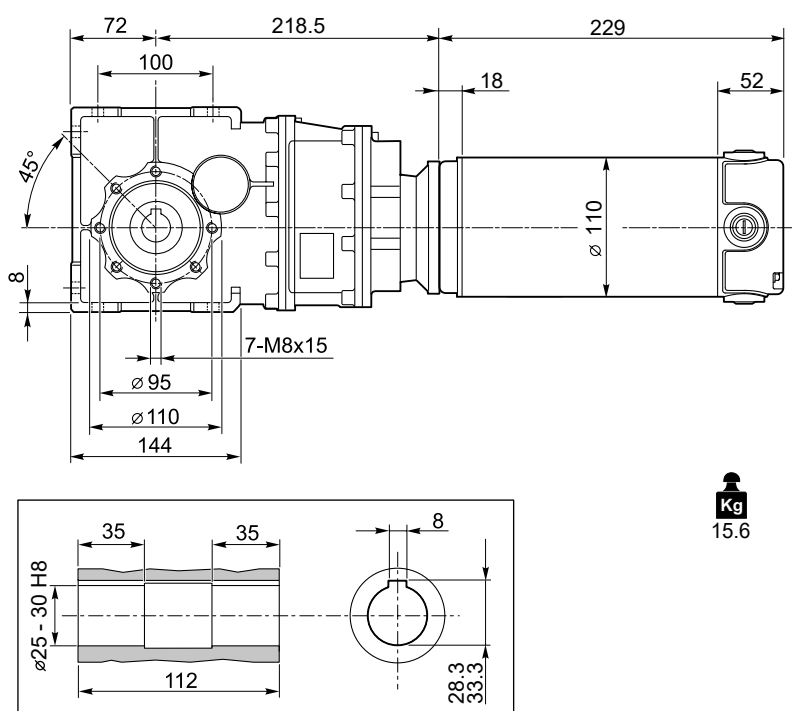
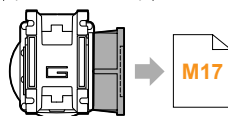
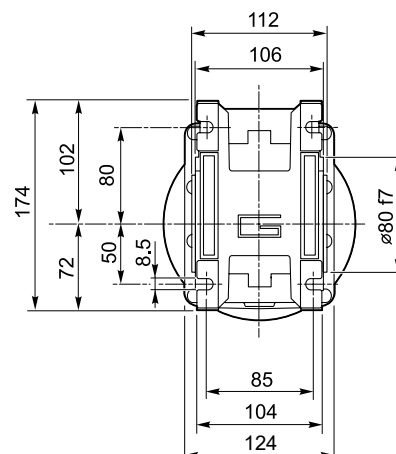
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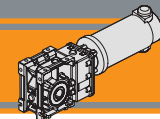
Freno / Brake

H23

Motori / Motors IP66

I12

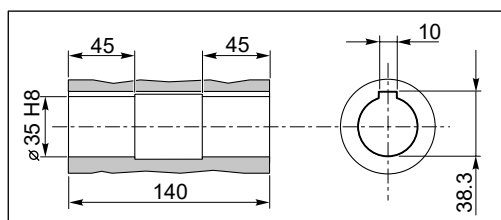
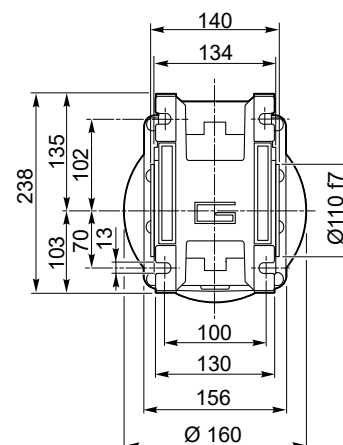
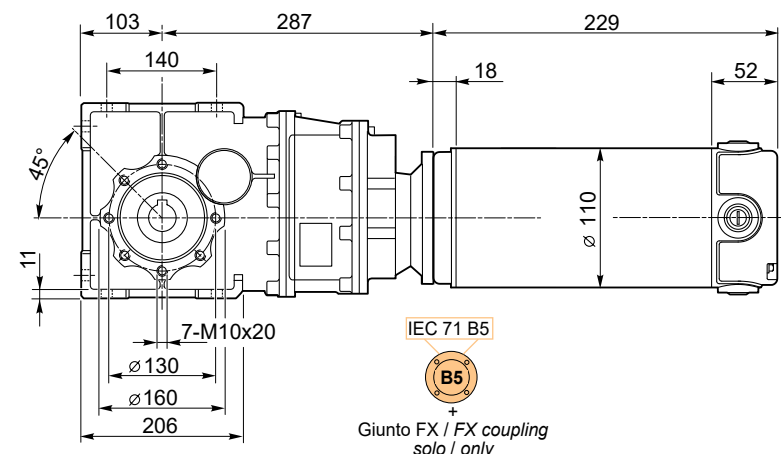
**ECMB****Motoriduttori CC ad assi ortogonali**
DC Helical bevel gearmotors**Dimensioni****Dimensions****ECMB600/502 U****Kg**
11.8**M17****Freno / Brake****H23****Motori / Motors IP66****I12****ECMB600/633 U****Kg**
15.6**M17****Freno / Brake****H23****Motori / Motors IP66****I12**



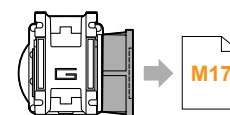
Dimensioni

Dimensions

ECMB600/903 U

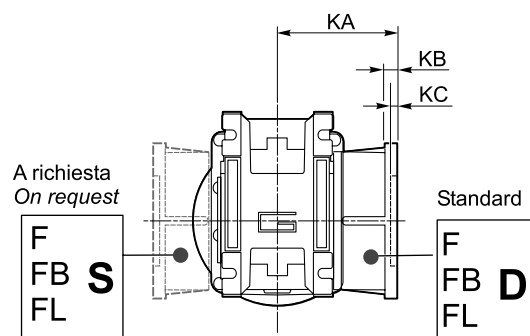
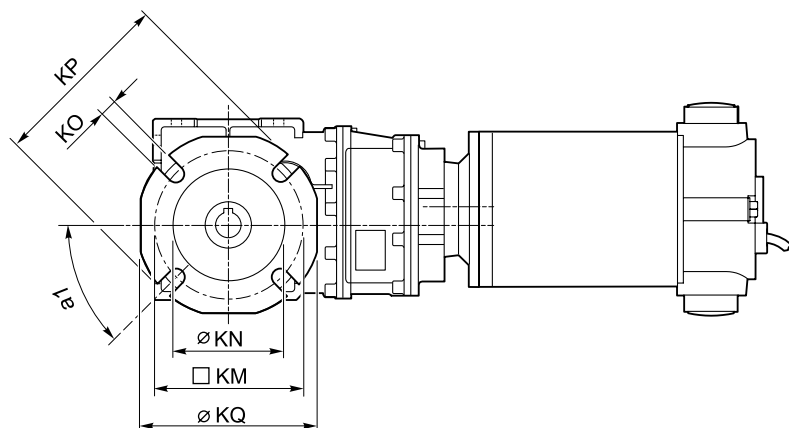


Kg
25.5



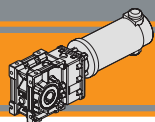
Freno / Brake **H23**

ECMB.../... F... Flange uscita / Output flanges



ECMB

	Flange uscita / Output flanges																										
	F									FL									FB								
CMB	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	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
502	45°	90	9	5	90-110	70	11	125	110	45°	120	9	5	90-110	70	11	125	110	45°	89	9	5	130-145	110	9.5	160	132
633	45°	82	10	6	150 - 160	115	11	180	142	45°	112	10	8	150 - 160	115	11	180	142	45°	98	11	5	165	130	11	200	160
933	45°	111	13	6	175-188	152	14	210	200	-									-								

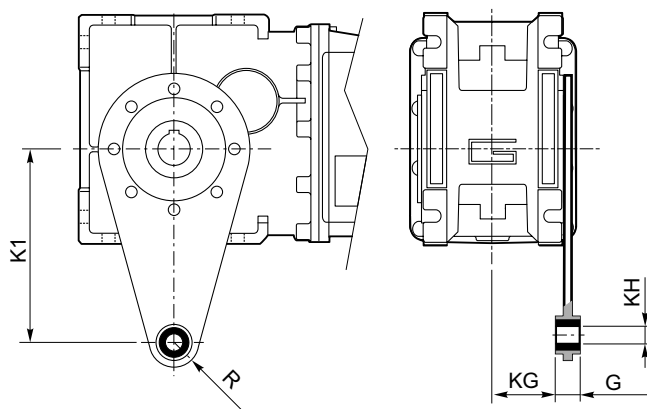
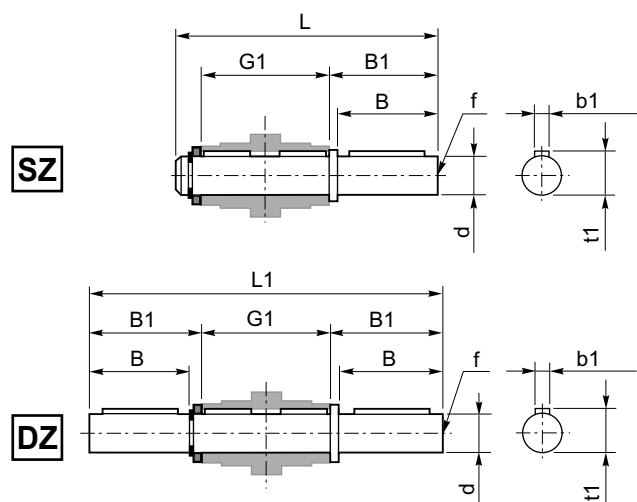


ECMB

Motoriduttori CC ad assi ortogonali DC Helical bevel gearmotors

Accessori

Accessories



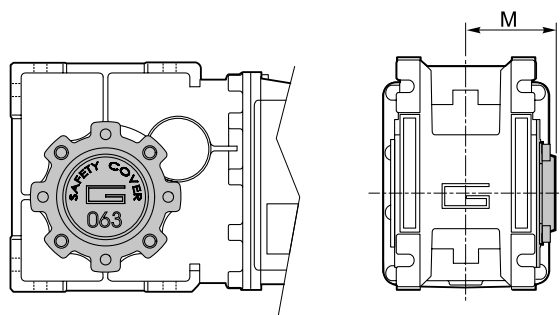
Albero lento / Output shaft

CMB CMBIS	d h7	B	B1	G1	L	L1	f	b1	t1
402	18	40	43	78	128	164	M6	6	20.5
502	25	50	53.5	92	153	199	M10	8	28
633	25	50	53.5	112	173	219	M10	8	28
903	35	80	84.5	140	234	309	M12	10	38

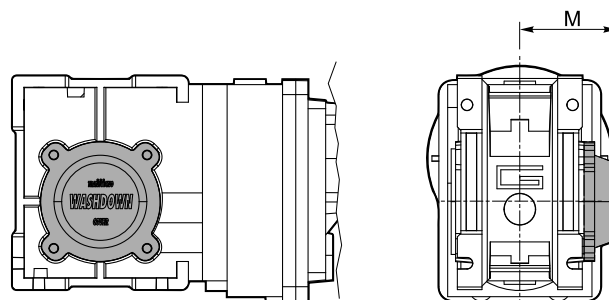
Braccio di reazione / Torque arm

CMB CMBIS	K1	G	KG	KH	R
402	100	14	31	10	18
502	100	14	38	10	18
633	150	14	47.5	10	18
903	200	25	56.5	20	30

SC - Safety cover



WD - Washdown cover

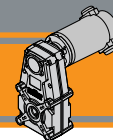


CMB CMBIS	M
402	54.5
502	62.5
633	73
903	94

CMB CMBIS	M
402	55.5
502	63.5
633	71.5
903	95

Motoriduttori CC pendolari
DC helical parallel gearmotors

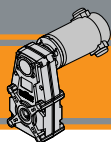




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Lubrificazione	<i>Lubrication</i>	N3
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ECFT

Motoriduttori CC pendolari DC Helical parallel gearmotors

Caratteristiche tecniche

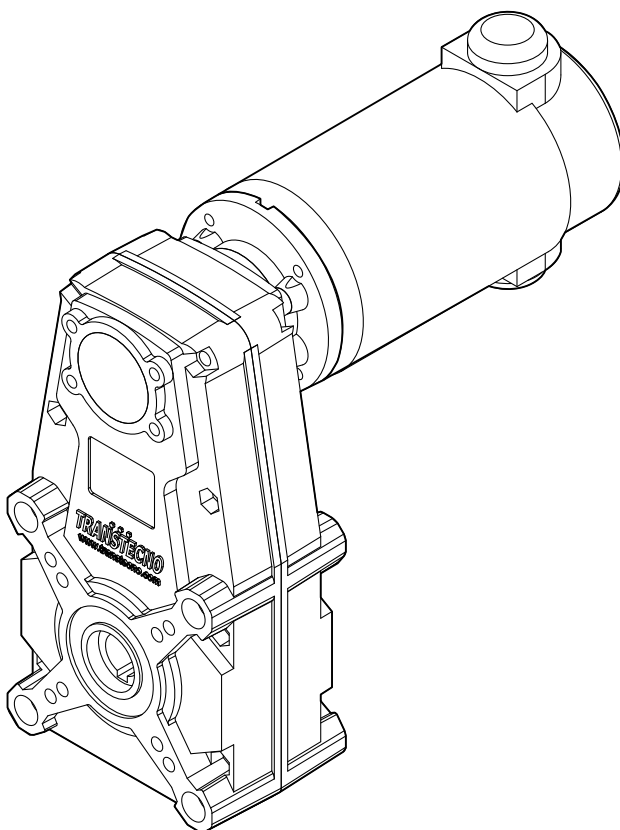
Technical features

I motoriduttori CC pendolari a magneti permanenti in ferrite ECFT hanno le seguenti caratteristiche principali:

ECFT ferrite permanent magnets DC helical parallel gearmotors range has the following main features:

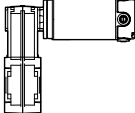
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Magnet in ferrite
- Carcasa pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Ingranaggi cilindrici a denti elicoidali.

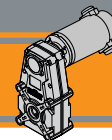
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.
- helical gears.



Designazione

Classification

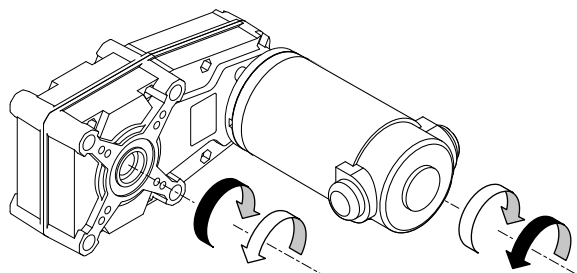
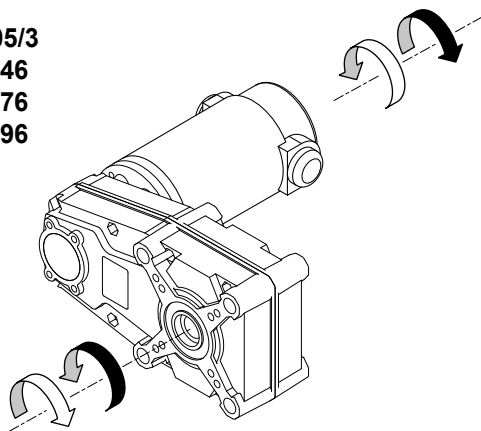
MOTORIDUTTORE / GEARMOTORS										
ECFT	180/146						U	60.63	O20	240
Tipo Type	Grandezza Size						Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	Versione motore Motor version
ECFT	070/105/3	100/105/3	180/105/3	250/146	350/146	600/146	U...	vedi tabelle see tables	vedi tabelle see tables	120 240 12E 24E
	070/105/4	100/146	180/146	250/176	350/176	600/176				
	070/146		180/176	250/196	350/196	600/196				
			180/196							



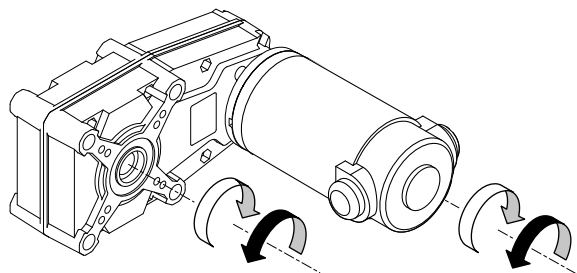
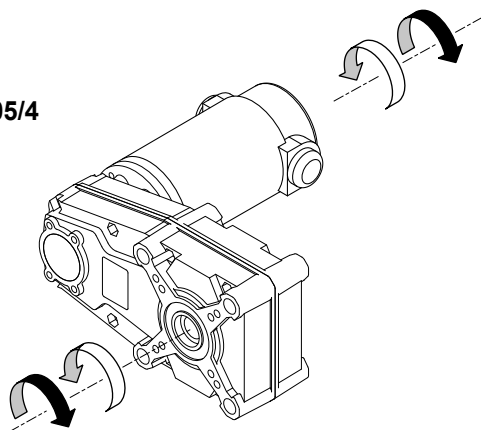
Sensi di rotazione

Direction of rotation

FT105/3
FT146
FT176
FT196



FT105/4



Simbologia

Symbols

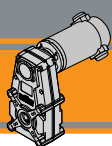
n_1	[min ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[min ⁻¹]	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	[kW]	Potenza in entrata / <i>Input power</i>
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
P_{n1}	[kW]	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 P_{n1}</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

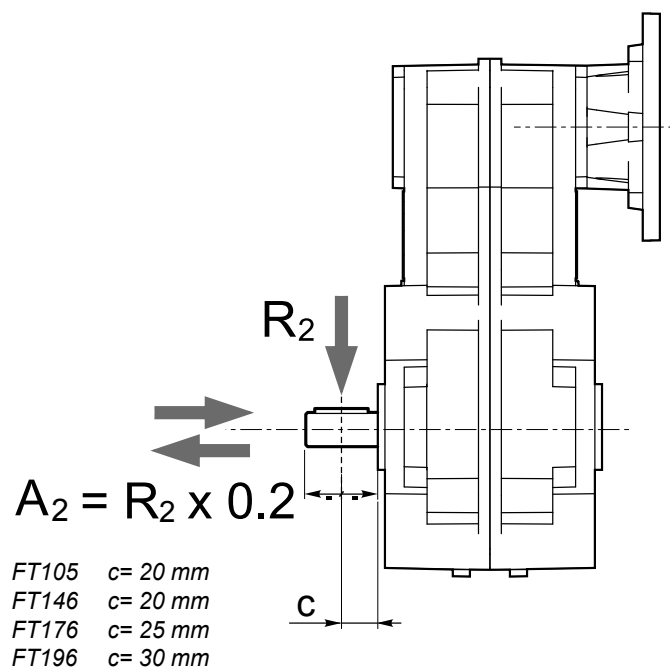
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

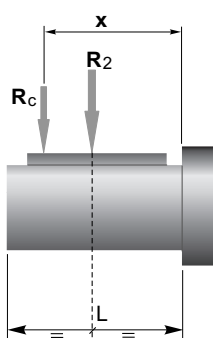
Radial loads



n_2 [min ⁻¹]	R_2 [N]			
	FT105	FT146	FT176	FT196
70	1500	2500	3000	3500
40	1700	2700	3500	4000
30	1850	2850	4000	4600
20	2000	3000	4500	5500
10	2000	3000	5000	7000
5	2000	3000	5000	7000

Quando il carico radiale risultante non è applicato sulla mezzera 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:

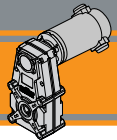


	FT105	FT146	FT176	FT196
a	82	82,5	115	132
b	62	62,5	90	102
R_{2MAX}	2000	3000	5000	7000

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

$$R \leq R_c$$

$a, b = \text{valori riportati nella tabella}$
 $a, b = \text{values given in the table}$



Dati tecnici

Technical data

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
100							140						
(3000 min ⁻¹)	146	6	5.1	20.57	070/105/3	12E/24E	(3000 min ⁻¹)	41	31	2.8	74.02	100/146	120/240/24E*
	90	10	3.9	33.32		120.66/240.66		35	35	2.4	84.63		120.66/240.66
	68	13	3.8	44.36				31	40	2.1	95.61		
	55	16	3.1	54.87				26	48	1.8	113.40		
	42	21	2.4	71.84				22	56	1.5	133.45		
	39	23	2.2	77.07				20	63	1.4	150.18		
	34	27	1.9	88.87				19	67	1.4	160.43		
	24	37	1.4	124.81				17	75	1.2	178.83		
	17	54	0.9	181.35				15	82	1.1	195.85		
	13	67	0.8	224.32				13	94	1.0	223.92		
	9.5	86	0.6	315.05	070/105/4	12E/24E		13	99	0.9	236.83		
	8.1	86	0.6	368.19		120.66/240.66		10	126	0.7	300.07		
	5.6	86	0.6	534.98									
	4.5	86	0.6	661.76									
	3.2	86	0.6	929.40									
	160	6	11.1	18.75	070/146	12E/24E		146	15	2.0	20.57	180/105/3	120/240
	131	7	9.1	22.89		120.66/240.66		90	25	1.6	33.32		120.66/240.66
	115	8	8.0	26.17				68	33	1.5	44.36		
	106	8	7.4	28.26				55	41	1.2	54.87		
	86	10	7.4	35.07				42	54	0.9	71.84		
	76	12	6.6	39.44				39	58	0.9	77.07		
	65	14	5.6	46.44				34	66	0.8	88.87		
	57	16	4.9	52.86				160	14	4.4	18.75	180/146	120/240/24E*
	49	18	4.7	60.63				131	17	3.6	22.89		120.66/240.66
	43	21	4.1	70.00				115	20	3.2	26.17		
	41	22	3.9	74.02				106	21	3.0	28.26		
	35	25	3.4	84.63				86	26	3.0	35.07		
	31	29	3.0	95.61				76	30	2.6	39.44		
	26	34	2.5	113.40				65	35	2.2	46.44		
	22	40	2.1	133.45				57	40	2.0	52.86		
	20	45	1.9	150.18				49	45	1.9	60.63		
	19	48	1.9	160.43				43	52	1.6	70.00		
	17	54	1.7	178.83				41	55	1.5	74.02		
	15	59	1.6	195.85				35	63	1.4	84.63		
	13	67	1.4	223.92				31	72	1.2	95.61		
	13	71	1.3	236.83				26	85	1.0	113.40		
	10	90	1.0	300.07				22	100	0.9	133.45		
	7.5	119	0.8	397.38				20	112	0.8	150.18		
								19	120	0.8	160.43		
								17	134	0.7	178.83		
140							250						
(3000 min ⁻¹)	146	9	3.6	20.57	100/105/3	120/240/24E		146	15	2.0	20.57	180/105/3	120/240
	90	14	2.8	33.32		120.66/240.66		90	25	1.6	33.32		120.66/240.66
	68	19	2.7	44.36				68	33	1.5	44.36		
	55	23	2.2	54.87				55	41	1.2	54.87		
	42	30	1.7	71.84				42	54	0.9	71.84		
	39	32	1.6	77.07				39	58	0.9	77.07		
	34	37	1.4	88.87				34	66	0.8	88.87		
	24	52	1.0	124.81				160	14	4.4	18.75	180/146	120/240/24E*
	16.5	76	0.7	181.35				131	17	3.6	22.89		120.66/240.66
	160	8	7.9	18.75	100/146	120/240/24E*		115	20	3.2	26.17		
	131	10	6.5	22.89		120.66/240.66		106	21	3.0	28.26		
	115	11	5.7	26.17				86	26	3.0	35.07		
	106	12	5.3	28.26				76	30	2.6	39.44		
	86	15	5.3	35.07				65	35	2.2	46.44		
	76	17	4.7	39.44				57	40	2.0	52.86		
	65	19	4.0	46.44				49	45	1.9	60.63		
	57	22	3.5	52.86				43	52	1.6	70.00		
	49	25	3.4	60.63				41	55	1.5	74.02		
	43	29	2.9	70.00				35	63	1.4	84.63		

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

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

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

NOTA

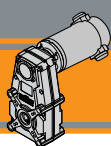
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio

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

**ECFT****Motoriduttori CC pendolari**
DC Helical parallel gearmotors**Dati tecnici****Technical data**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
-----------------------	--	------------------------	----	---	---	----------------------------------

250

(3000 min ⁻¹)	60	37	4.6	50.10	180/176	24E*
	55	41	4.4	54.26		
	47	48	3.8	63.55		
	40	57	3.4	75.90		
	35	64	3.1	85.40		
	33	67	3.3	89.60		
	28	80	2.8	107.02		
	24	95	2.5	126.92		
	21	108	2.2	144.74		
	18	122	1.9	163.25		
	15	153	1.5	204.08		
	14	161	1.5	215.11		
	11	207	1.1	276.68		
	10	227	1.0	303.29		
	7.7	292	0.8	390.11		
	24	93	4.6	123.95	180/196	24E*
	19	118	3.6	158.02		
	15	151	2.8	201.80		
	11	202	2.1	269.47		

350

(3000 min ⁻¹)	160	20	3.2	18.75	250/146	120/240 120.66/240.66
	131	24	2.6	22.89		
	115	27	2.3	26.17		
	106	30	2.1	28.26		
	86	37	2.1	35.07		
	76	41	1.9	39.44		
	65	49	1.6	46.44		
	57	55	1.4	52.86		
	49	64	1.4	60.63		
	43	73	1.2	70.00		
	41	78	1.1	74.02		
	35	89	1.0	84.63		
	31	100	0.9	95.61		
	26	119	0.7	113.40		
	207	15	7.2	14.49	250/176	120/240 120.66/240.66
	173	18	6.5	17.31		
	143	22	5.7	20.97		
	122	26	5.5	24.56		
	102	31	4.6	29.33		
	87	36	4.1	34.62		
	80	39	3.8	37.50		
	73	43	3.6	41.35		
	67	47	3.5	44.79		
	60	52	3.3	50.10		
	55	57	3.2	54.26		
	47	67	2.7	63.55		
	40	79	2.5	75.90		
	35	89	2.2	85.40		
	33	94	2.3	89.60		
	28	112	2.0	107.02		
	24	133	1.8	126.92		
	21	152	1.5	144.74		
	18	171	1.4	163.25		
	15	214	1.1	204.08		
	14	225	1.0	215.11		
	11	290	0.8	276.68		
	10	318	0.7	303.29		

350

(3000 min ⁻¹)	24	130	3.3	123.95	250/196	120/240 120.66/240.66
	19	165	2.6	158.02		
	15	211	2.0	201.80		
	11	282	1.5	269.47		

500

(3000 min ⁻¹)	160	28	2.2	18.75	350/146	120/240 120.66/240.66
	131	34	1.8	22.89		
	115	39	1.6	26.17		
	106	42	1.5	28.26		
	86	52	1.5	35.07		
	76	59	1.3	39.44		
	65	69	1.1	46.44		
	57	79	1.0	52.86		
	49	91	0.9	60.63		
	43	105	0.8	70.00		
	41	111	0.8	74.02		
	207	22	5.0	14.49	350/176	120/240 120.66/240.66
	173	26	4.5	17.31		
	143	31	4.0	20.97		
	122	37	3.8	24.56		
	102	44	3.2	29.33		
	87	52	2.9	34.62		
	80	56	2.6	37.50		
	73	62	2.5	41.35		
	67	67	2.4	44.79		
	60	75	2.3	50.10		
	55	81	2.2	54.26		
	47	95	1.9	63.55		
	40	114	1.7	75.90		
	35	128	1.5	85.40		
	33	134	1.6	89.60		
	28	160	1.4	107.02		
	24	190	1.2	126.92		
	21	217	1.1	144.74		
	18	244	1.0	163.25		
	15	305	0.8	204.08		
	14	322	0.7	215.11		
	51	89	4.4	59.36	350/196	120/240 120.66/240.66
	41	109	3.9	72.68		
	32	139	3.1	92.82		
	24	185	2.3	123.95		
	19	236	1.8	158.02		
	15	302	1.4	201.80		
	11	403	1.1	269.47		

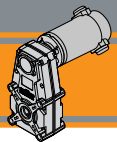
800

(3000 min ⁻¹)	160	45	1.4	18.75	600/146	120/240 120.66/240.66
	131	55	1.1	22.89		
	115	63	1.0	26.17		
	106	68	0.9	28.26		
	86	84	0.9	35.07		
	76	94	0.8	39.44		
	65	111	0.7	46.44		

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

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

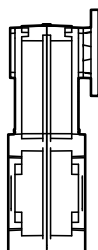
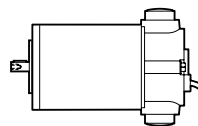
Technical data

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
800						
(3000 min ⁻¹)	207	35	3.1	14.49	600/176	120/240
	173	41	2.8	17.31		120.66/240.66
	143	50	2.5	20.97		
	122	59	2.4	24.56		
	102	70	2.0	29.33		
	87	83	1.8	34.62		
	80	90	1.7	37.50		
	73	99	1.6	41.35		
	67	107	1.5	44.79		
	60	120	1.4	50.10		
	55	130	1.4	54.26		
	47	152	1.2	63.55		
	40	182	1.1	75.90		
	35	204	1.0	85.40		
	33	214	1.0	89.60		
	28	256	0.9	107.02		
	24	304	0.8	126.92		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
800						
(3000 min ⁻¹)	147	49	5.6	20.41	600/196	120/240
	86	83	3.7	34.81		120.66/240.66
	70	102	3.4	42.61		
	51	142	2.7	59.36		
	41	174	2.5	72.68		
	32	222	1.9	92.82		
	24	297	1.4	123.95		
	19	378	1.1	158.02		
	15	483	0.9	201.80		

Motori applicabili

Motor adapters

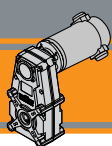


		EC						
		070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
FT	105/3	20.57 - 315.05						
	105/4	368.19 - 929.4						
	146	18.75 - 397.38	* 18.75 - 397.38		18.75 - 397.38	18.75 - 397.38		
	176				* 14.49 - 390.11	14.49 - 390.11		
	196				* 20.41 - 269.47	20.41 - 269.47		

20.57 - 315.05

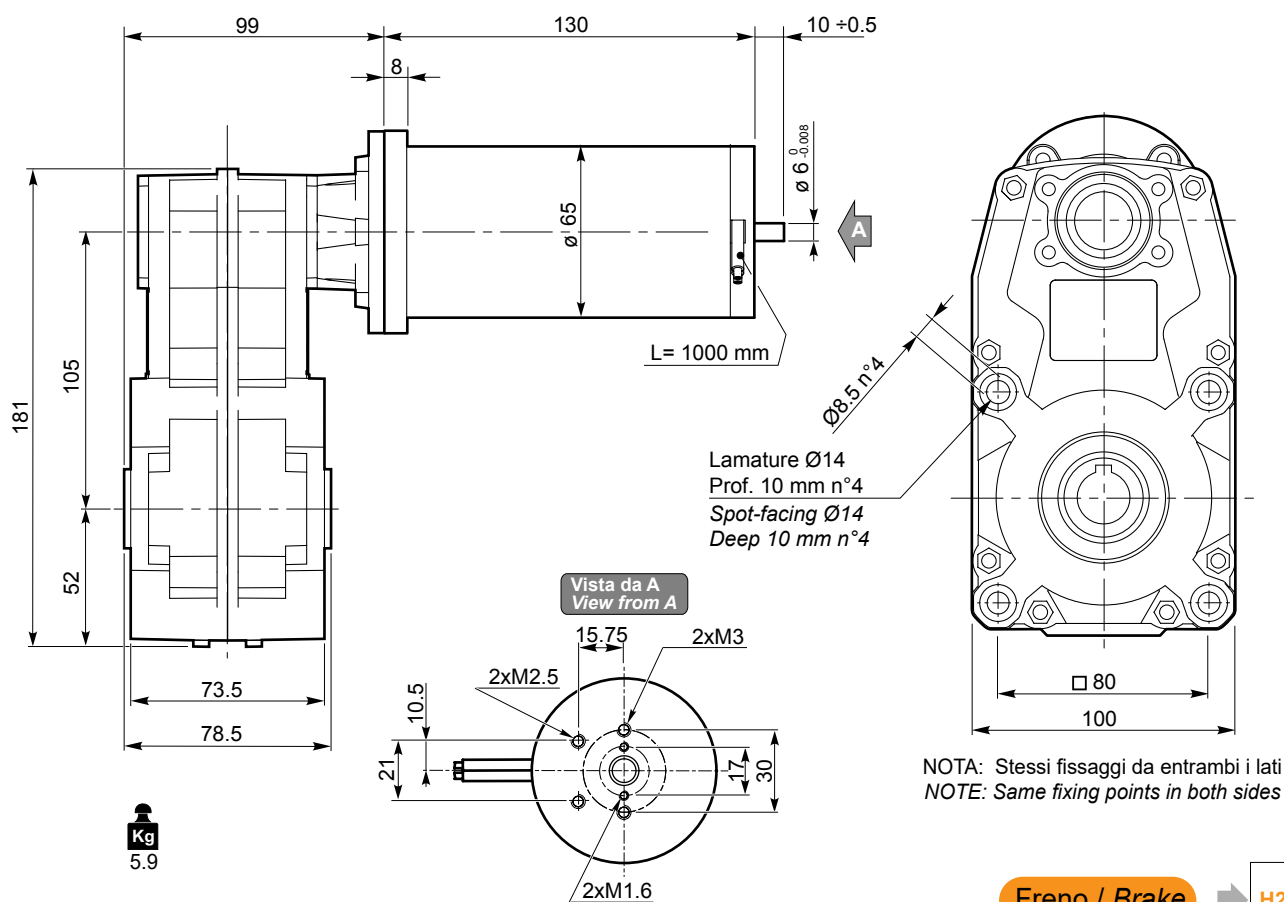
Rapporti di riduzione i
Ratio i

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°



ECFT 070/105

ECFT 070/105...U

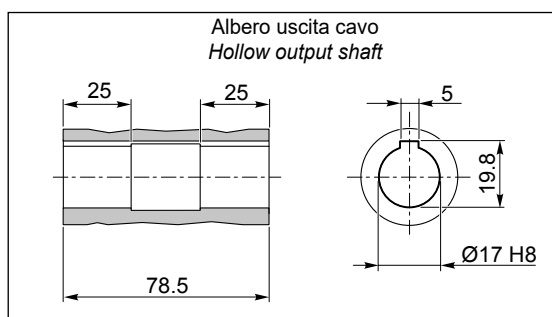


Freno / Brake → **H23**

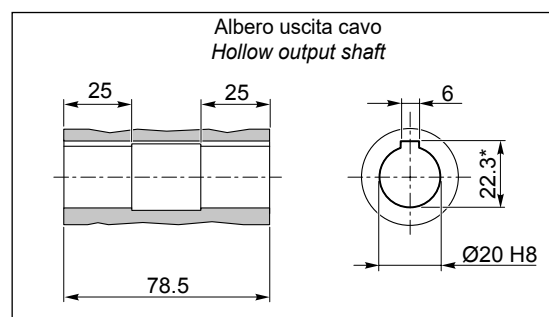
Encoder → **H24**

Motori / Motors IP66 → **I2**

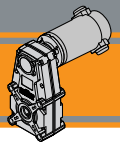
O17



O20



*: Sede linguetta ribassata / Special keyway

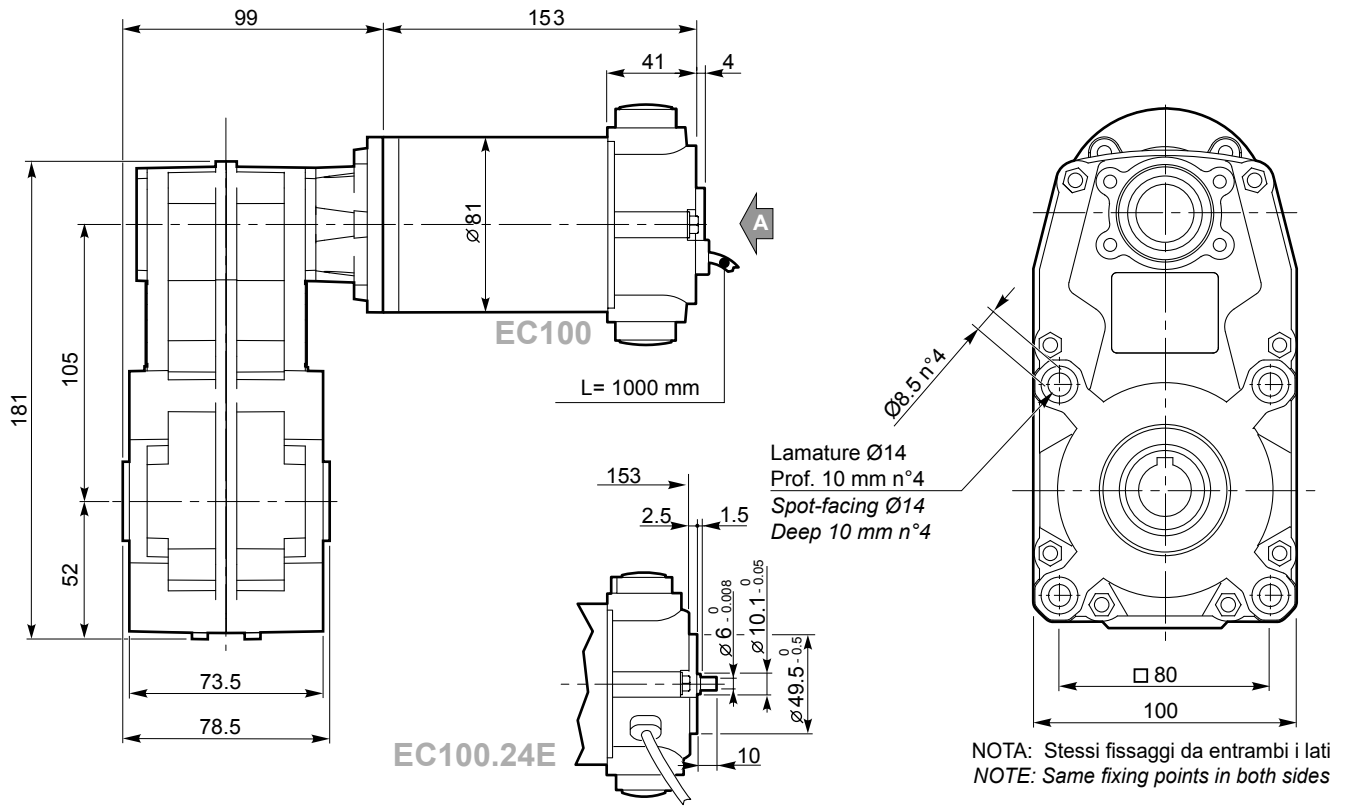


Dimensioni

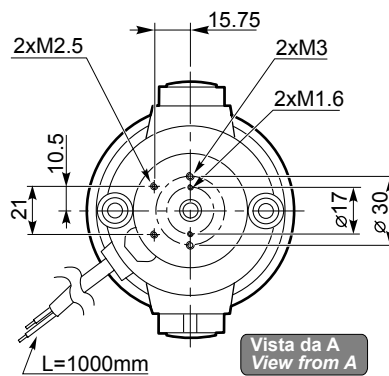
Dimensions

ECFT 100/105

ECFT 100/105...U



Kg
6.9



Freno / Brake

H23

Encoder

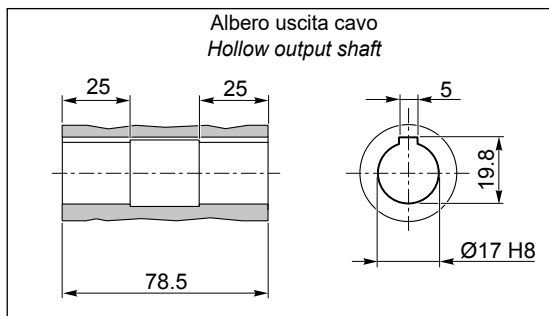
H24

Motori / Motors IP66

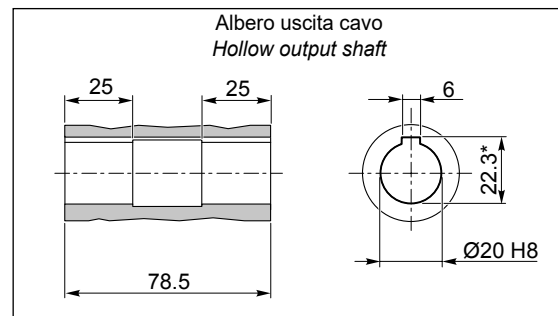
I4

ECFT

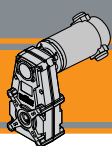
O17



O20



*: Sede linguetta ribassata / Special keyway

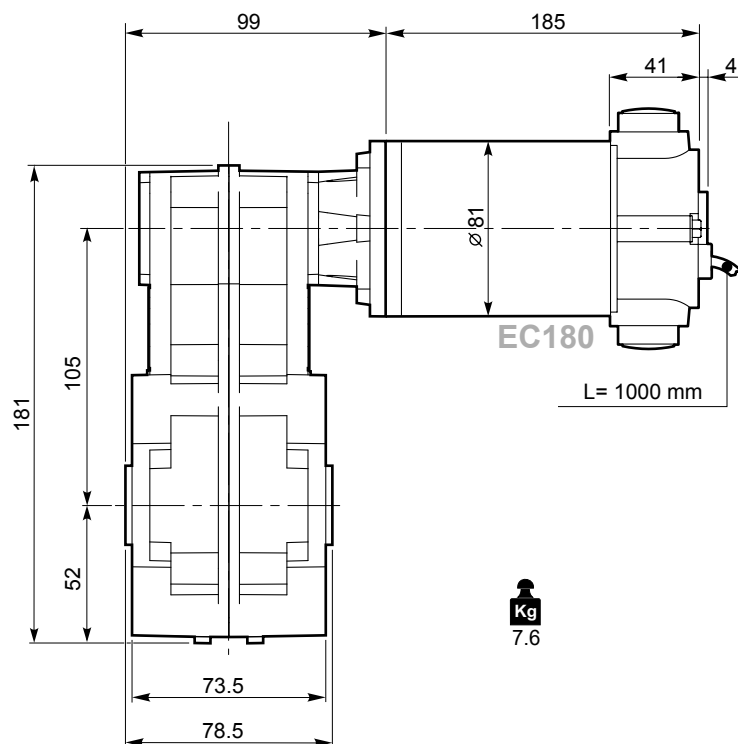


Dimensioni

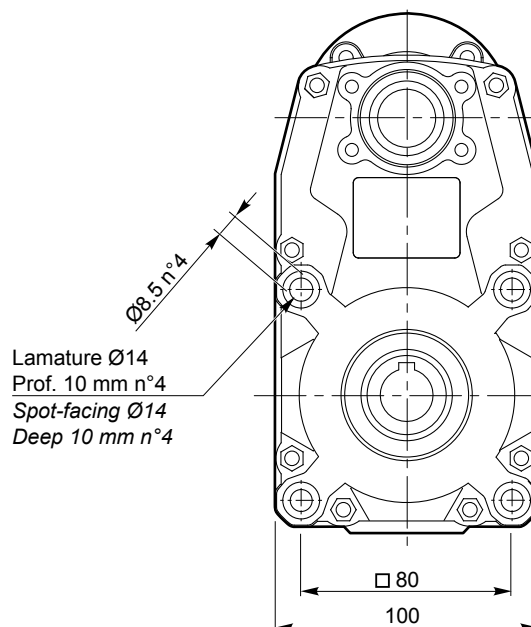
Dimensions

ECFT 180/105

ECFT 180/105...U



Kg
7.6



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

Freno / Brake

H23

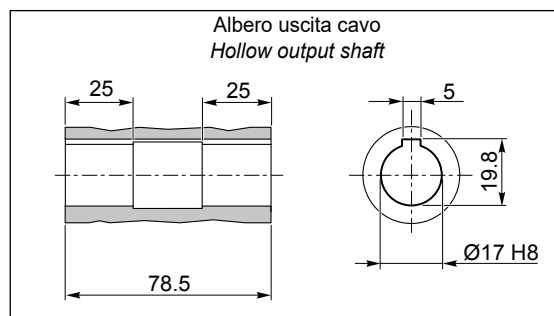
Encoder

H24

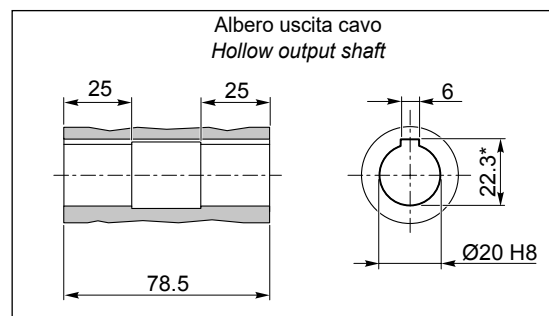
Motori / Motors IP66

I6

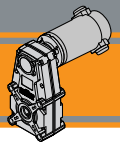
O17



O20



*: Sede linguetta ribassata / Special keyway

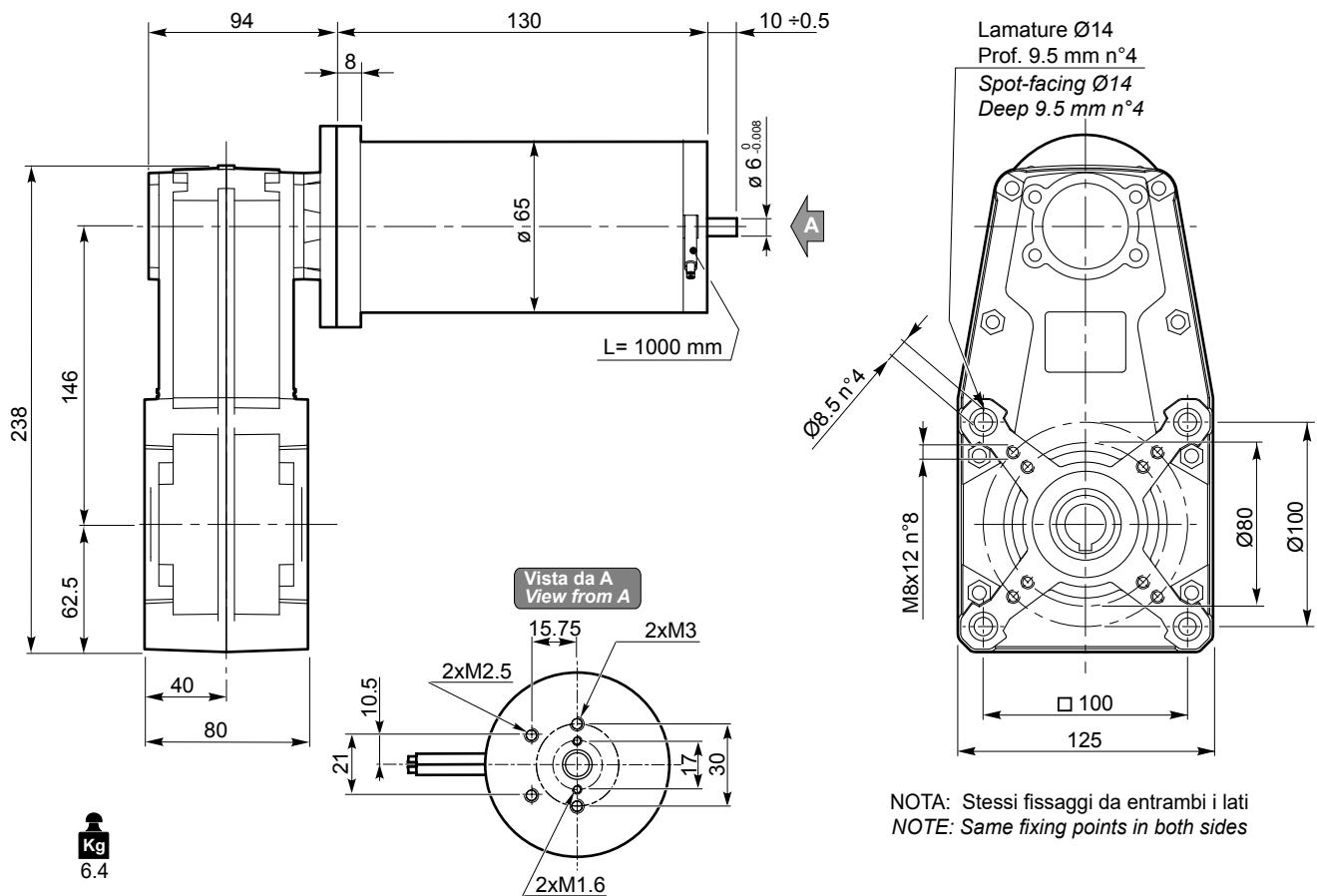


Dimensioni

Dimensions

ECFT 070/146

ECFT 070/146 U



Freno / Brake

H23

Encoder

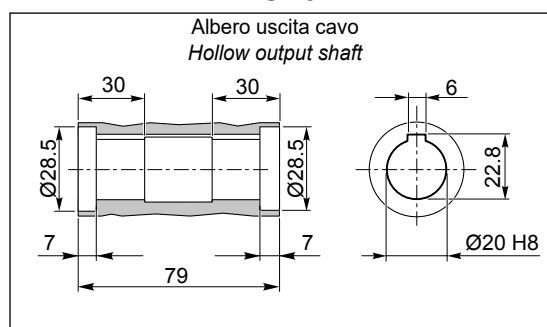
H24

Motori / Motors IP66

I2

ECFT

O20

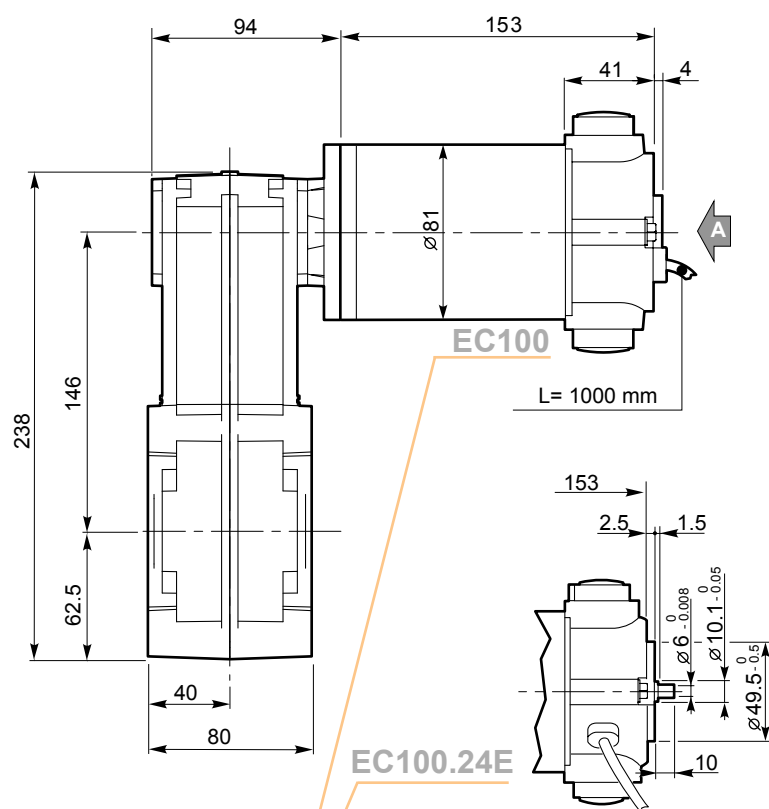


Dimensioni

Dimensions

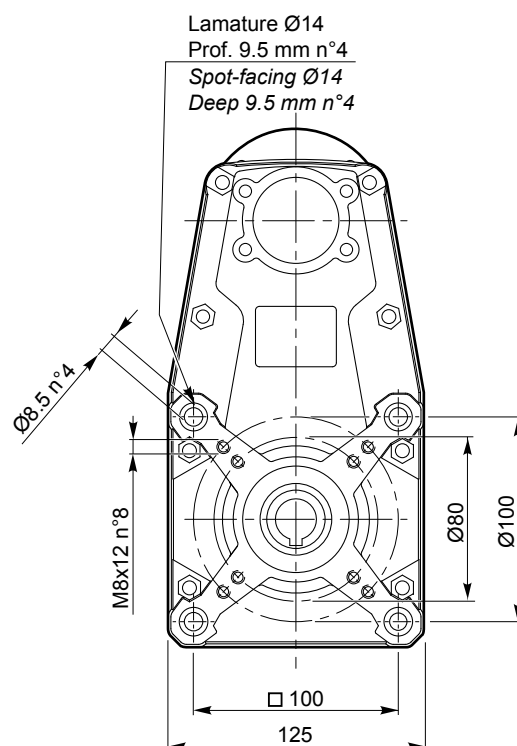
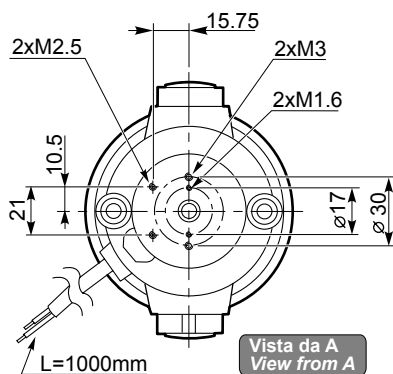
ECFT 100/146

ECFT 100/146 U



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°



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

NOTE: Same fixing points in both sides

Freno / *Brake*

H23

Encoder

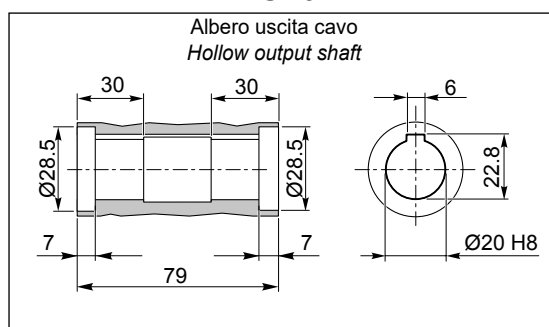
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Motori / Motors IP66

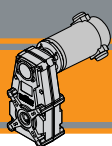
14

O20

Albero uscita cavo
Hollow output shaft





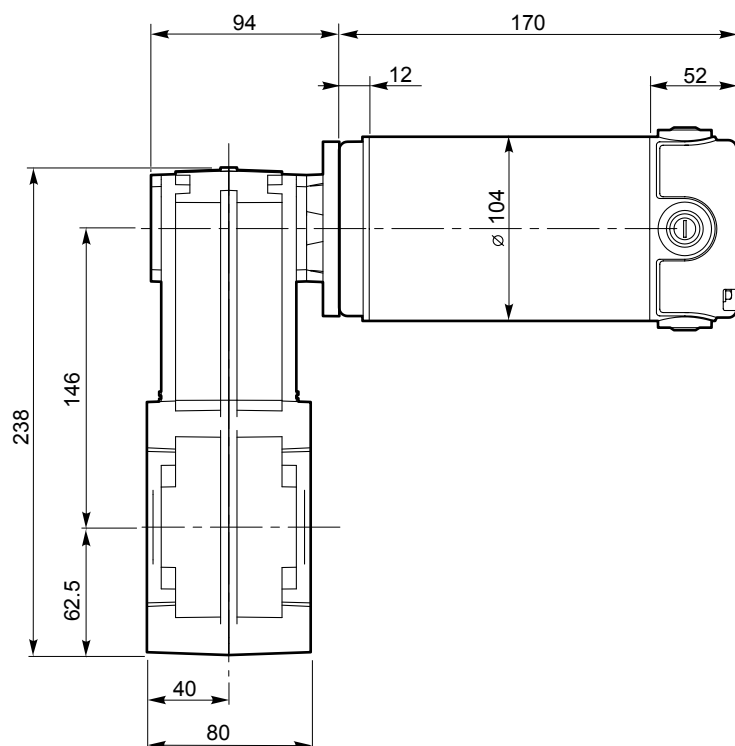


Dimensioni

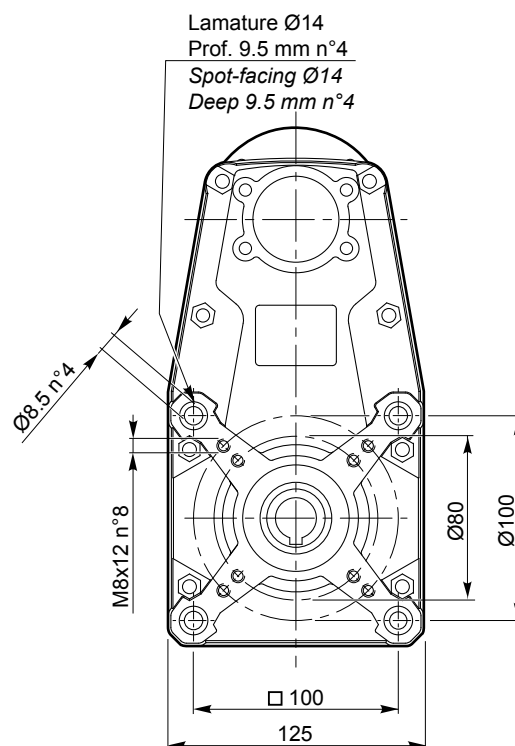
Dimensions

ECFT 250/146

ECFT 250/146 U



Kg
8.9

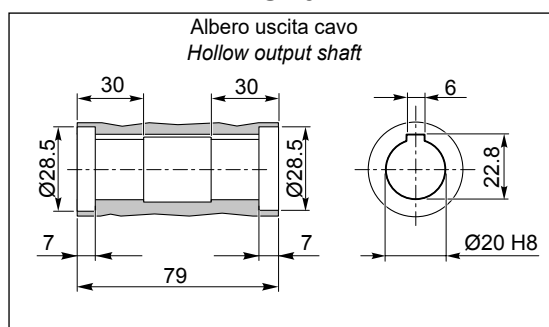


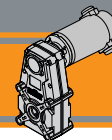
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

Motori / Motors IP66

I8

O20



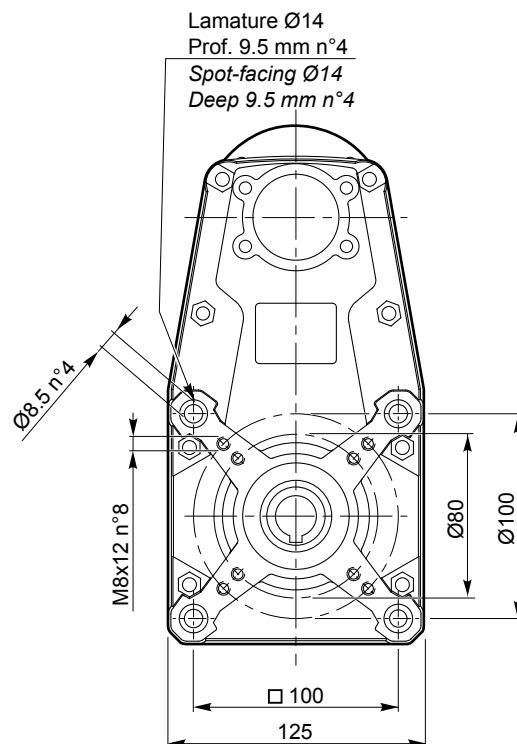
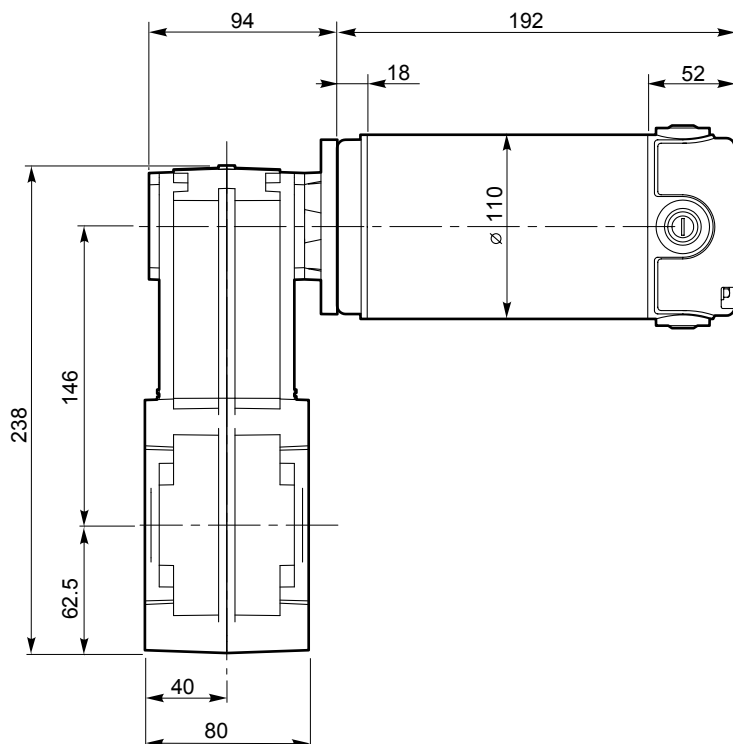


Dimensioni

Dimensions

ECFT 350/146

ECFT 350/146 U



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

Kg
10.0

Freno / Brake

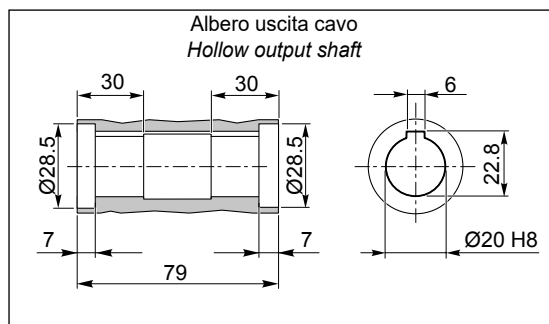
H23

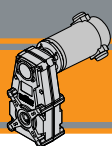
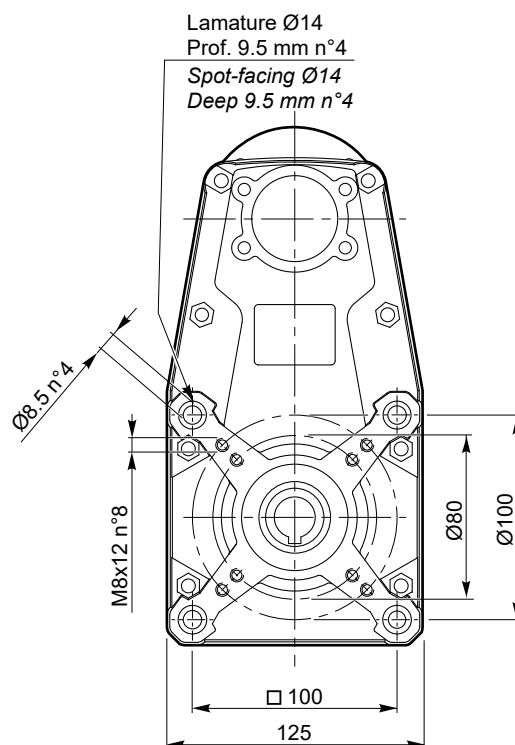
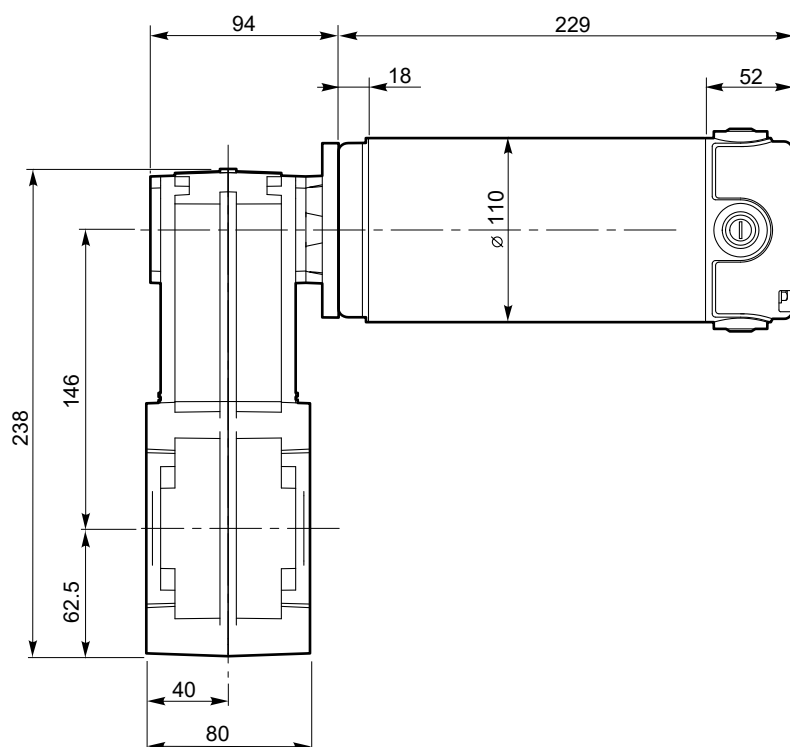
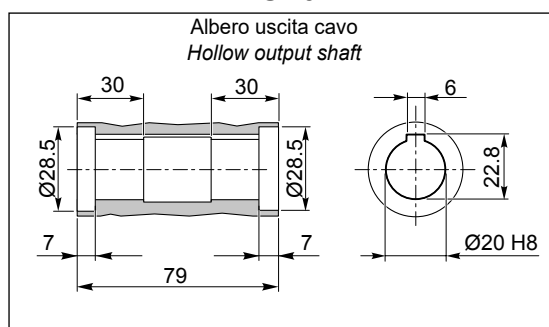
Motori / Motors IP66

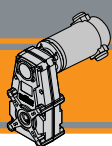
I10

ECFT

O20



**ECFT****Motoriduttori CC pendolari**
DC Helical parallel gearmotors**Dimensioni****Dimensions****ECFT 600/146****ECFT 600/146 U**
11.8NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides**Freno / Brake****Motori / Motors IP66****O20**



ECFT

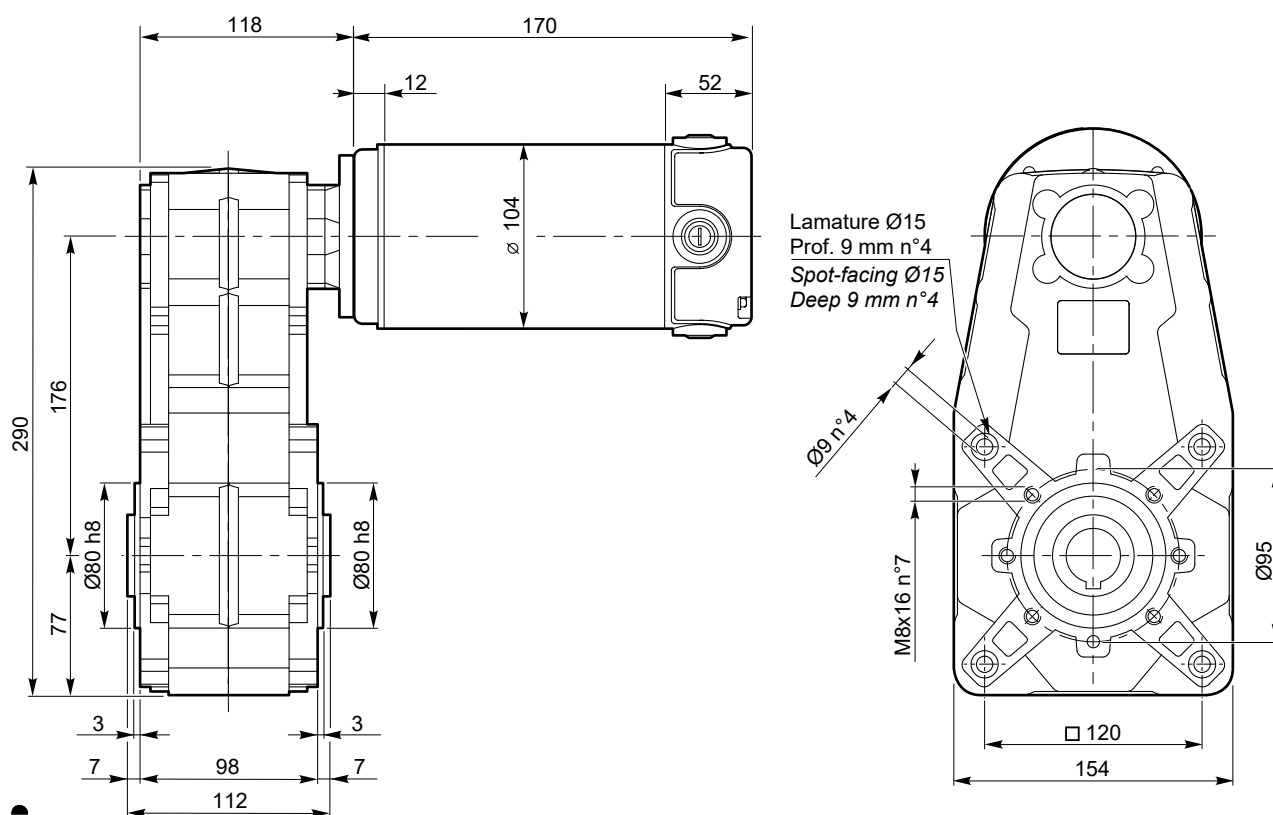
Motoriduttori CC pendolari
DC Helical parallel gearmotors

Dimensioni

Dimensions

ECFT 250/176

ECFT 250/176 U



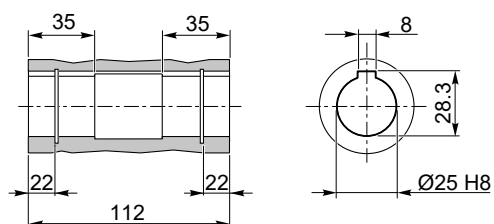
Kg
14.2

Motori / Motors IP66

110

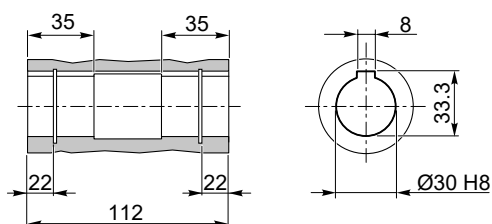
O25

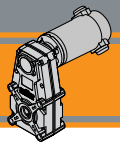
Albero uscita cavo
Hollow output shaft



O30

Albero uscita cavo
Hollow output shaft



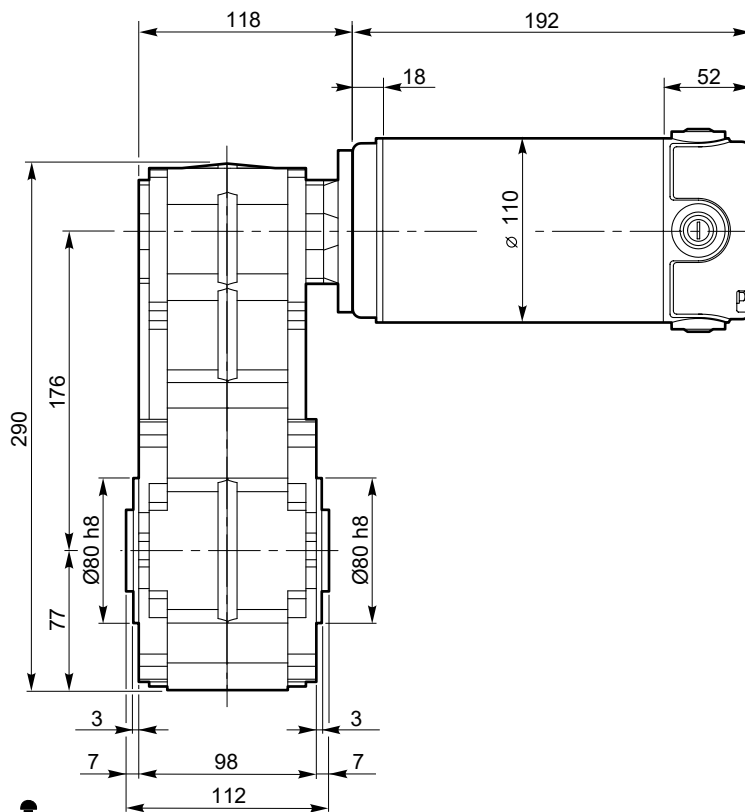


Dimensioni

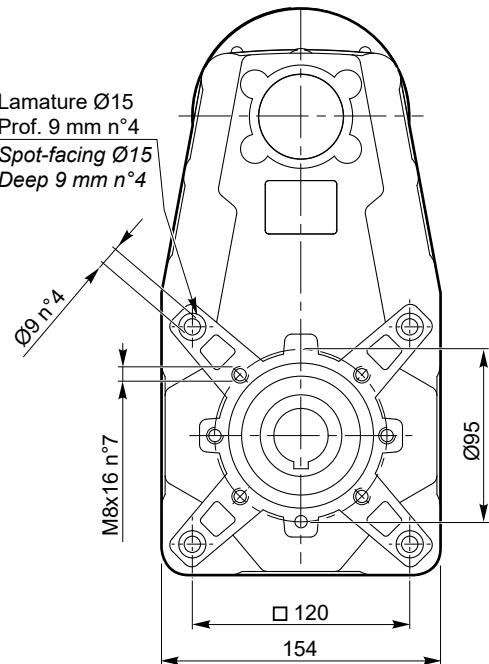
Dimensions

ECFT 350/176

ECFT 350/176 U



Lamature $\varnothing 15$
Prof. 9 mm n°4
Spot-facing $\varnothing 15$
Deep 9 mm n°4



Kg
15.3

Freno / Brake

H23

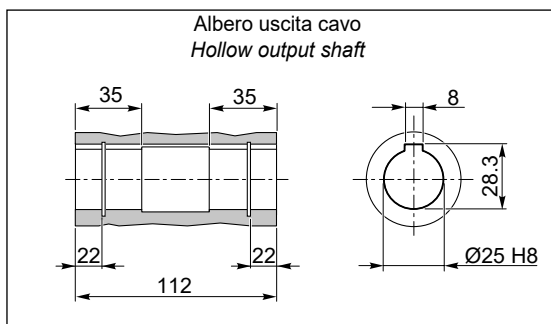
Motori / Motors IP66

I10

ECFT

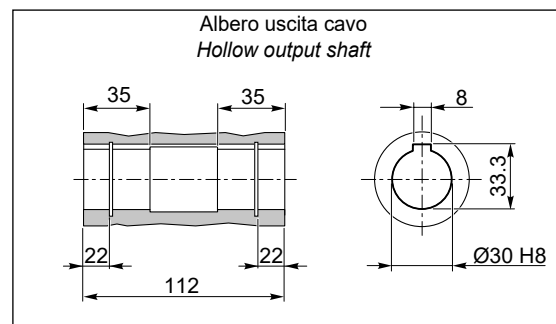
O25

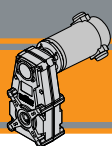
Albero uscita cavo
Hollow output shaft



O30

Albero uscita cavo
Hollow output shaft





ECFT

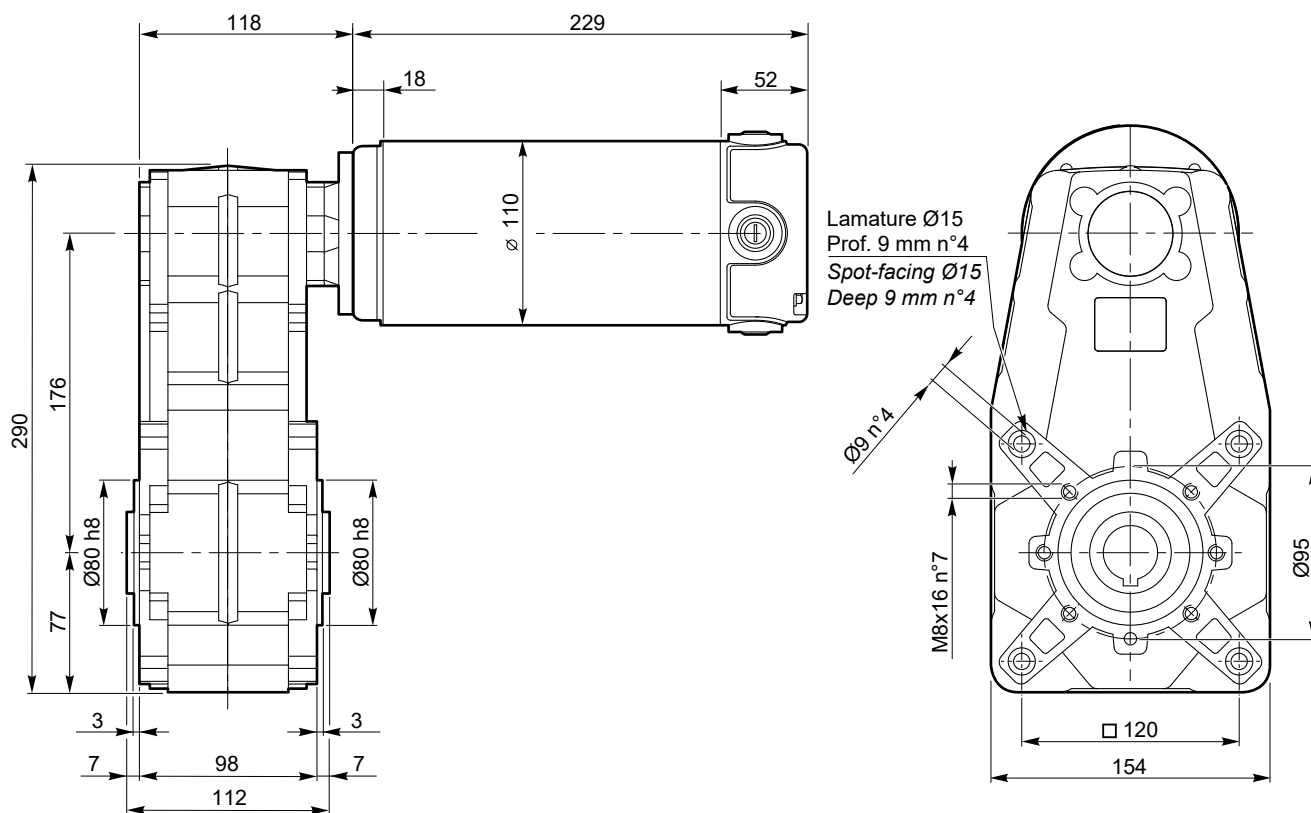
Motoriduttori CC pendolari
DC Helical parallel gearmotors

Dimensioni

Dimensions

ECFT 600/176

ECFT 600/176 U



Kg
17.1

Freno / Brake

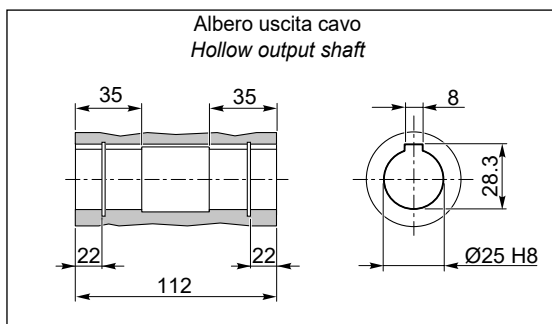
H23

Motori / Motors IP66

I10

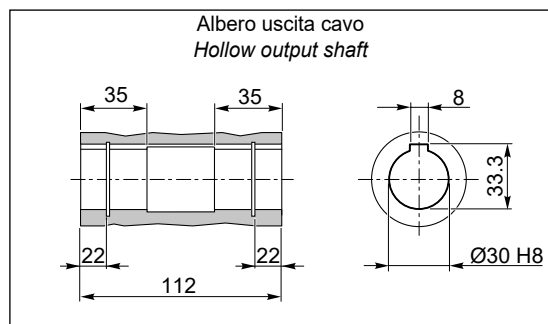
O25

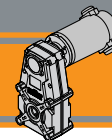
Albero uscita cavo
Hollow output shaft



O30

Albero uscita cavo
Hollow output shaft



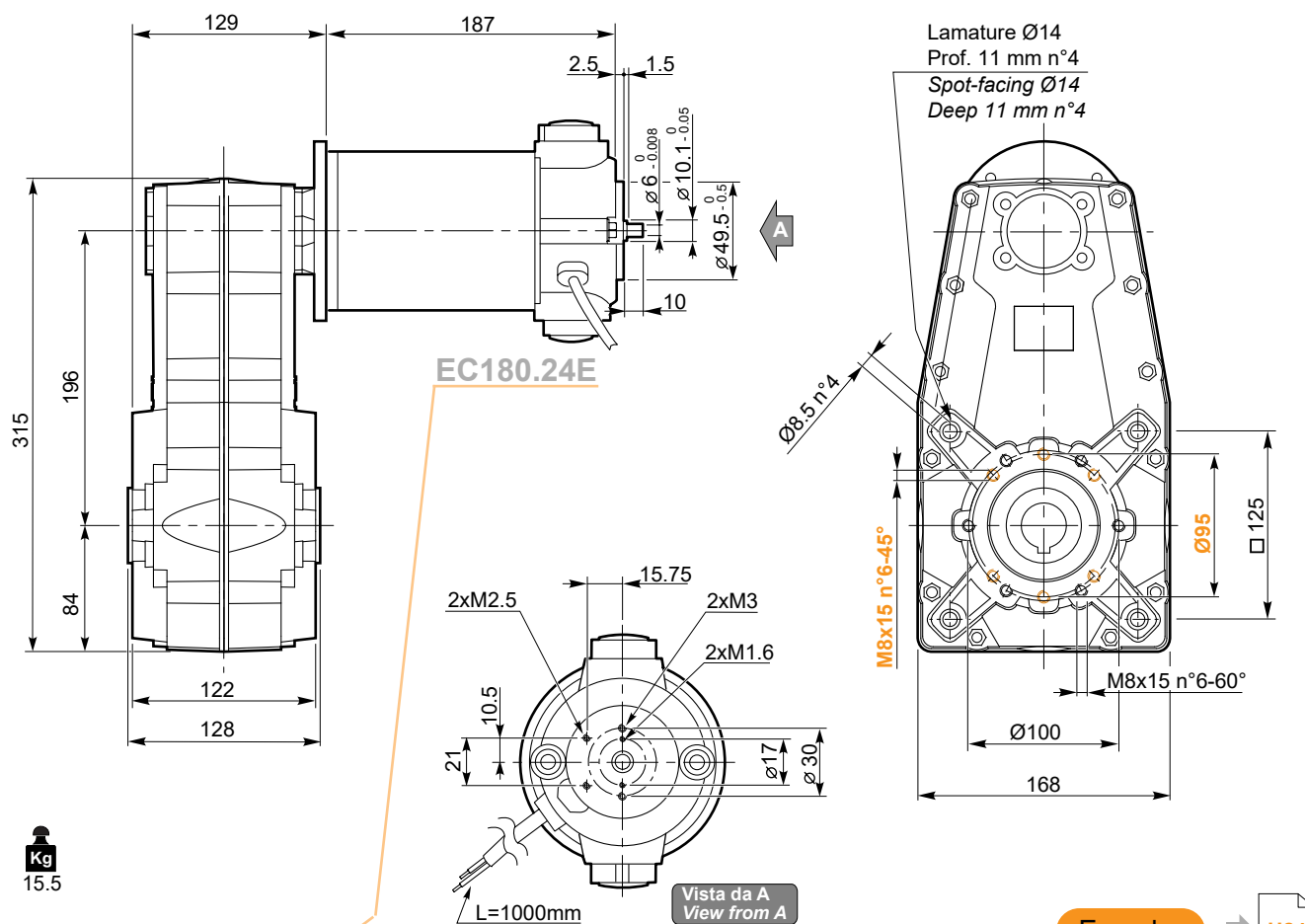


Dimensioni

Dimensions

ECFT 180/196.24E

ECFT 180/196.24E U



Nota: Motore inclinato con portaspazzole a 45°

Note: Motor assembly with brush holder inclined 45°

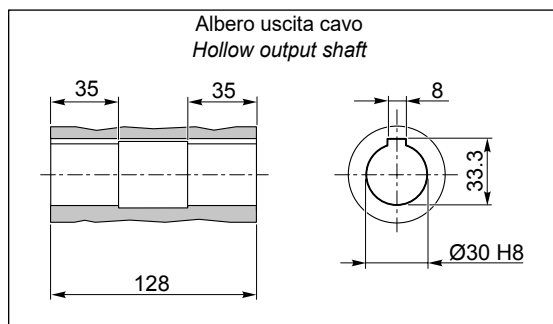
Encoder

H24

EFT

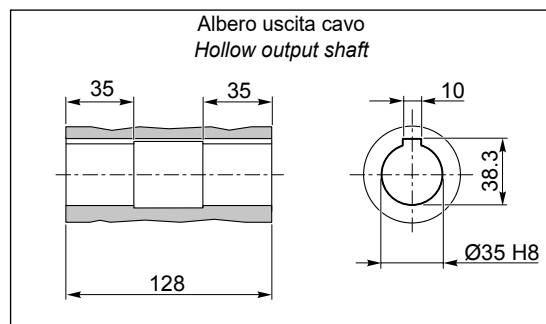
O30

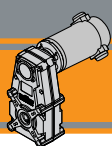
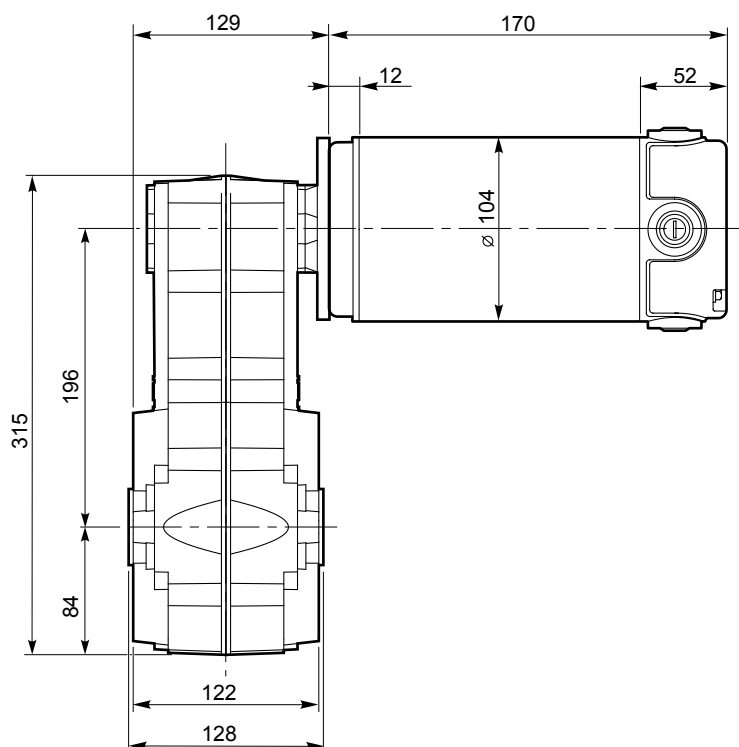
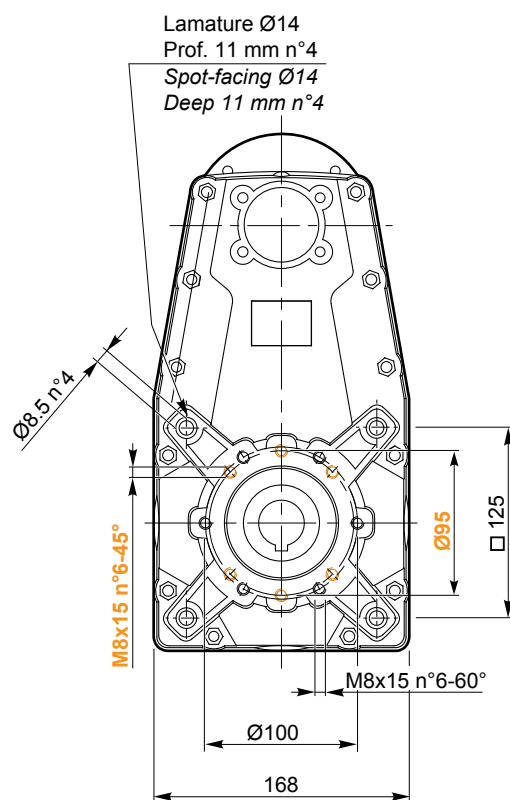
Albero uscita cavo
Hollow output shaft



O35

Albero uscita cavo
Hollow output shaft

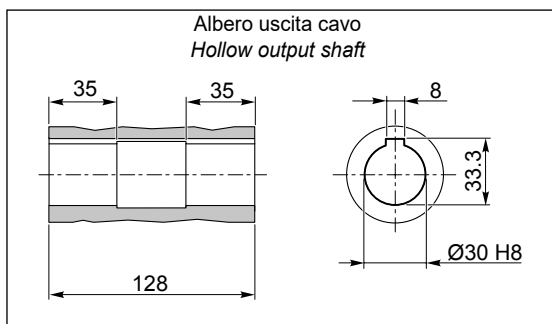


**ECFT****Motoriduttori CC pendolari**
DC Helical parallel gearmotors**Dimensioni****Dimensions****ECFT 250/196****ECFT 250/196 U**
kg
16.3

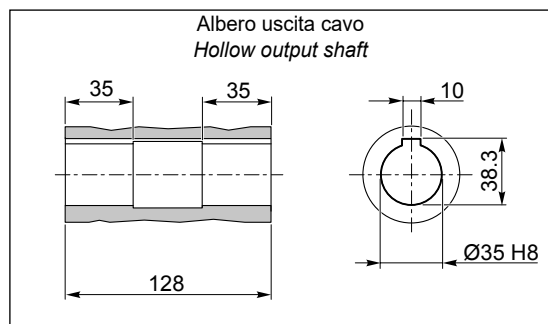
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

Motori / Motors IP66**I8****O30**

Albero uscita cavo
Hollow output shaft

**O35**

Albero uscita cavo
Hollow output shaft

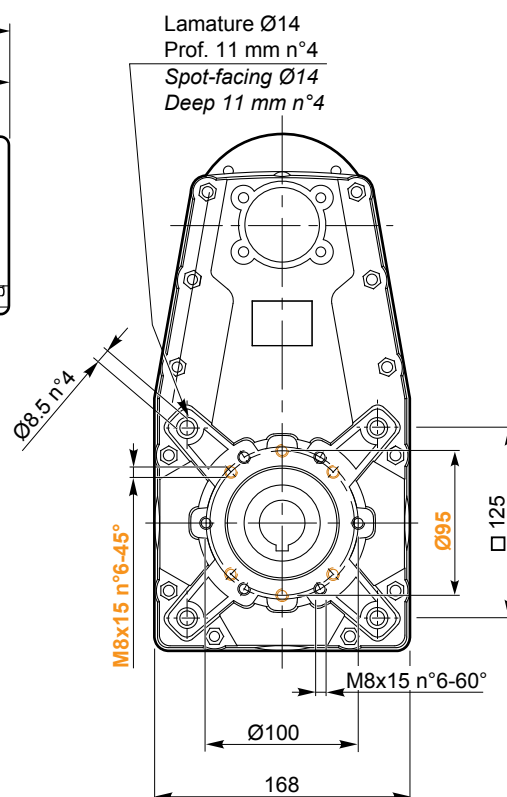






Dimensions

ECFT 600/196 U



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

Kg
19.2

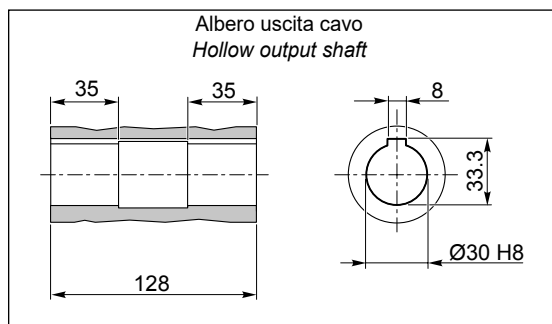
Freno / *Brake*

H23

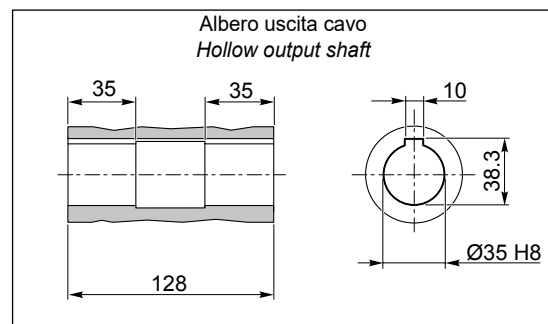
Motori / Motors IP66

112

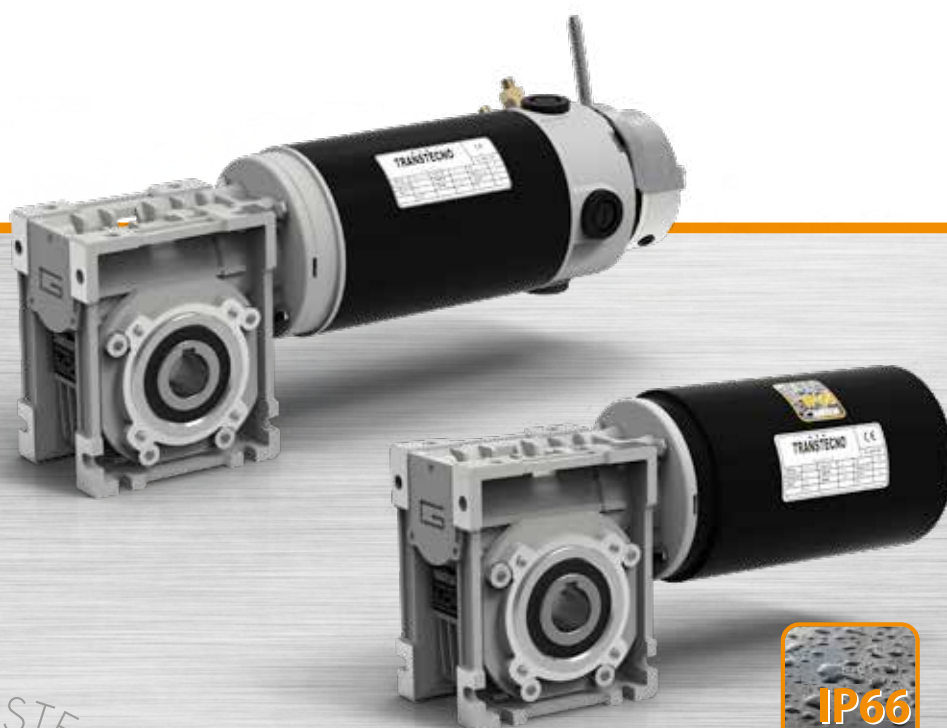
Albero uscita cavo
Hollow output shaft

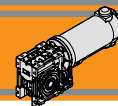


Albero uscita cavo
Hollow output shaft



Motoriduttori CC a vite senza fine DC wormgearmotors

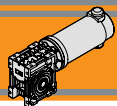




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Opzioni	<i>Options</i>	020
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*This section replaces any previous edition and revision. If you obtained this catalogue other than through controlled distribution channels, the most up to date content is not guaranteed. **In this case the latest version is available on our web site www.transtecno.com***

**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Caratteristiche tecniche****Technical features**

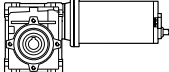
Le caratteristiche principali dei motoriduttori CC a vite senza fine a magneti permanenti in ferrite serie ECM sono:

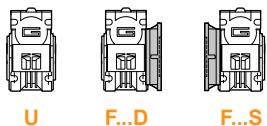
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasce dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.

The main features of ECM ferrite permanent magnets DC wormgearmotors range are:

- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication.

Designazione**Classification**

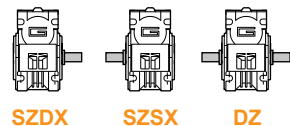
MOTORIDUTTORE / GEARMOTOR													
ECM	070/026						U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size						Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
 ECM	070/026	100/026	180/026	250/030	350/030	600/040	U F...	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX 	0°	120	VS
	070/026 (D11)	100/0026 (D11)	180/026 (D11)	250/040	350/040	600/050					90°		
	070/026 (D14)	100/026 (D14)	180/026 (D14)	250/050	350/050	600/063					180°	240	
	100/030		180/030	250/063	350/063	600/070					270°		
	070/030	100/040	180/040		350/070							24E	

Versione Riduttore
Gearbox Version

U

F...D

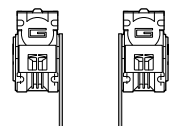
F...S

Albero di uscita
Output shaft

SZDX

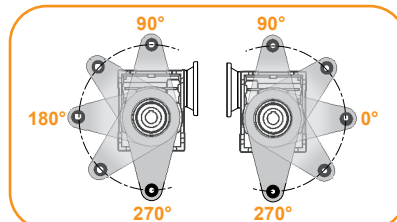
SZSX

DZ

Braccio di reazione
Torque arm *

BRDX

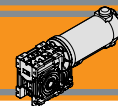
BRSX

Angolo
Angle

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

Simbologia**Symbols**

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



Lubrificazione

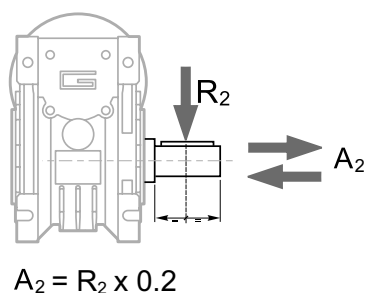
Lubrication

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

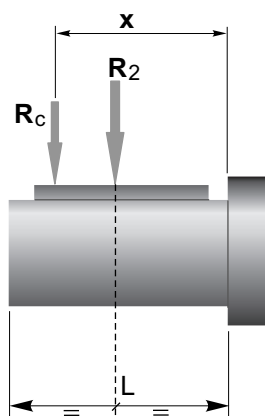
Radial loads



n_2 [min ⁻¹]	R_2 [N]					
	CM026	CM030	CM040	CM050	CM063	CM070
187	400	674	1264	1770	2445	2613
140	490	743	1392	1949	2692	2878
93	580	851	1596	2234	3085	3298
70	610	936	1754	2456	3392	3626
56	610	1008	1890	2646	3654	3906
47	610	1069	2004	2805	3874	4141
35	610	1179	2210	3095	4273	4568
28	610	1270	2381	3334	4603	4921
23	610	1356	2542	3559	4915	5254
18	610	1471	2759	3862	5334	5702
14	610	1600	3000	4200	5800	6200

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:

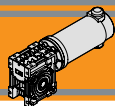


$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

	CM					
	026	030	040	050	063	070
a	56	65	84	101	120	122
b	43	50	64	76	95	92
R_{2MAX}	610	1600	3000	4200	5800	6200



ECM

Motoriduttori CC a vite senza fine
DC Wormgearmotors

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'
CM050	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	33° 37'	23° 54'	18° 23'	12° 29'	10° 6'	8° 28'	6° 19'	5° 5'	4° 15'	3° 39'	2° 51'	2° 20'
CM063	Z	6	4	3	2	2	2	1	1	1	1	1	1
	β	34° 23'	24° 31'	18° 53'	12° 50'	10° 24'	8° 44'	6° 30'	5° 14'	4° 23'	3° 47'	2° 57'	2° 25'
CM070	Z		4	3	2	2	2	1	1	1	1	1	1
	β		26° 12'	20° 15'	13° 49'	11° 15'	9° 29'	7° 0'	5° 41'	4° 46'	4° 7'	3° 13'	2° 39'

Rendimento

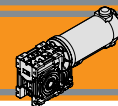
Efficiency

	n ₁ [min ⁻¹]	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
CM050	2800	Rd	91	90	88	86	84	82	78	74	71	68	62	58
	1400		89	87	85	82	79	76	72	67	63	60	54	49
	900		87	85	84	79	75	72	68	62	59	55	48	43
		Rs	73	70	66	59	55	51	44	39	35	32	27	23
CM063	2800	Rd	91	90	88	86	84	83	79	76	73	70	65	60
	1400		90	88	86	84	81	78	75	70	66	63	57	52
	900		89	86	84	81	78	75	70	65	61	58	52	47
		Rs	73	71	67	60	55	51	45	40	36	33	28	24
CM070	2800	Rd		90	89	87	85	84	80	77	74	72	67	62
	1400			89	87	84	82	80	76	72	68	65	60	53
	900			87	85	82	79	77	72	67	63	60	54	49
		Rs		72	69	62	60	55	48	43	38	36	31	26



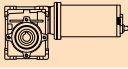
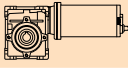
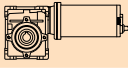
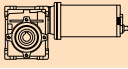
Rendimento teorico del riduttore dopo il rodaggio

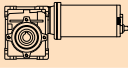
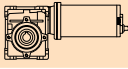
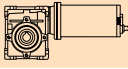
Theoretical efficiency of the gearbox after the first running period

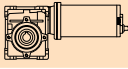
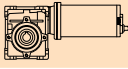
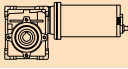


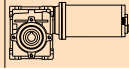
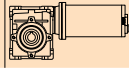
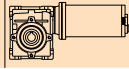
Dati tecnici per servizio S2

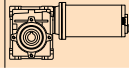
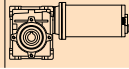
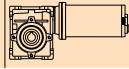
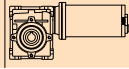
Technical data for S2 duty

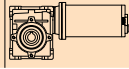
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
100						
(3000 min ⁻¹)	600	1.4	7.1	5		ECM070/026 12E/24E
	400	2.1	5.3	7.5		120.66/240.66
	300	2.7	4.1	10		
	200	4.0	2.8	15		
	150	5.1	2.2	20		
	100	7.0	1.7	30		
	75	8.7	1.3	40		
	60	10	1.0	50		
	50	11	0.8	60		
	150	5.2	2.7	20		ECM070/030 12E/24E
	120	6.2	2.4	25		120.66/240.66
	100	7.1	2.5	30		
	75	8.9	1.8	40		
	60	10	1.4	50		
	50	12	1.2	60		
	38	15	0.8	80		
	30	17	0.7	100		
	50	13	2.3	60		ECM070/040 12E/24E
	38	15	1.8	80		120.66/240.66
	30	18	1.4	100		
	30	18	1.4	100		

140						
(3000 min ⁻¹)	600	2.0	5.0	5		ECM100/026 120/240/24E
	400	2.9	3.8	7.5		120.66/240.66
	300	3.8	2.9	10		
	200	5.5	2.0	15		
	150	7.1	1.5	20		
	100	10	1.2	30		
	75	12	0.9	40		
	60	14	0.7	50		
	50	13	0.7	60		
	200	5.6	2.8	15		ECM100/030 120/240/24E
	150	7.2	1.9	20		120.66/240.66
	120	8.7	1.7	25		
	100	10	1.8	30		
	75	12	1.3	40		
	60	14	1.0	50		
	50	17	0.8	60		
	38	17	0.7	80		
	30	16	0.7	100		
	100	10	3.7	30		ECM100/040 120/240*
	75	13	2.6	40		24E
	60	15	2.1	50		120.66/240.66
	50	18	1.6	60		
	38	21	1.3	80		
	30	25	1.0	100		

250						
(3000 min ⁻¹)	600	3.5	2.8	5		ECM180/026 120/240
	400	5.2	2.1	7.5		120.66/240.66
	300	6.8	1.6	10		
	200	10	1.1	15		
	150	13	0.9	20		
	100	17	0.7	30		
	75	16	0.7	40		
	60	14	0.7	50		
	50	13	0.7	60		
	600	3.5	3.7	5		ECM180/030 120/240/24E
	400	5.3	2.9	7.5		120.66/240.66
	300	6.8	2.3	10		
	200	10	1.6	15		
	150	13	1.1	20		
	120	16	1.0	25		
	100	18	1.0	30		
	75	22	0.7	40		
	60	21	0.7	50		
	50	20	0.7	60		
	38	17	0.7	80		120/240
	30	16	0.7	100		120.66/240.66

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
250						
(3000 min ⁻¹)	200	10	3.5	15		ECM180/040 120/240*
	150	13	2.3	20		24E
	120	16	1.8	25		120.66/240.66
	100	18	2.1	30		
	75	23	1.5	40		
	60	27	1.2	50		
	50	32	0.9	60		
	38	38	0.7	80		
	30	34	0.7	100		
	75	24	2.5	40		ECM180/050 120/240/24E*
	60	28	2.0	50		IEC 63B14
	50	32	1.6	60		
	38	39	1.2	80		
	30	46	0.9	100		
	30	46	0.9	100		
	30	46	0.9	100		

350						
(3000 min ⁻¹)	600	5.0	2.6	5		ECM250/030 120/240
	400	7.4	2.0	7.5		120.66/240.66
	300	10	1.7	10		
	200	14	1.1	15		
	150	18	0.8	20		
	120	22	0.7	25		
	100	25	0.7	30		
	75	22	0.7	40		
	60	21	0.7	50		
	200	14	2.5	15		ECM250/040 120/240
	150	18	1.7	20		120.66/240.66
	120	22	1.3	25		
	100	26	1.5	30		
	75	33	1.0	40		
	60	38	0.8	50		
	50	44	0.7	60		
	38	38	0.7	80		
	30	35	0.7	100		
	150	19	2.9	20		ECM250/050 120/240
	120	23	2.2	25		120.66/240.66
	100	26	2.6	30		
	75	33	1.8	40		
	60	40	1.4	50		
	50	45	1.1	60		
	38	55	0.8	80		
	30	65	0.7	100		
	75	34	3.3	40		ECM250/063 120/240
	60	41	2.5	50		IEC 71B14
	50	47	2.1	60		
	38	58	1.5	80		
	30	67	1.2	100		
	30	67	1.2	100		
	30	67	1.2	100		

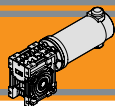
500						
(3000 min ⁻¹)	600	7.1	1.8	5		ECM350/030 120/240
	400	11	1.4	7.5		120.66/240.66
	300	14	1.2	10		
	200	20	0.8	15		
	150	20	0.7	20		
	120	21	0.7	25		
	100	26	0.7	30		
	75	23	0.7	40		
	60	21	0.7	50		
	60	21	0.7	50		

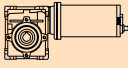
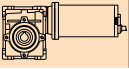
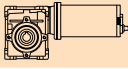
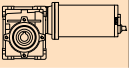
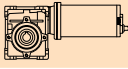
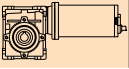
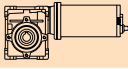
N.B.
Verificare sempre che la coppia M₂ utilizzata non
ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M₂ does not
exceed the value in the grey areas

NOTA: per servizio continuo o altamente intermittente, contattare
il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact
our technical service

*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

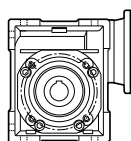
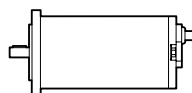
**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
500							800						
(3000 min ⁻¹)	600	7.2	4.0	5		ECM350/040 120/240	(3000 min ⁻¹)	600	11	2.5	5		ECM600/040 120/240
	400	11	2.9	7.5		120.66/240.66		400	17	1.8	7.5		120.66/240.66
	300	14	2.4	10				300	22	1.5	10		
	200	20	1.7	15				200	32	1.1	15		
	150	26	1.2	20				150	42	0.7	20		
	120	32	0.9	25				120	40	0.7	25		
	100	37	1.0	30				100	54	0.7	30		
	75	46	0.7	40				75	49	0.7	40		
	60	46	0.7	50				600	12	4.7	5		ECM600/050 120/240
	50	41	0.7	60				400	17	3.3	7.5		120.66/240.66
	38	39	0.7	80				300	22	2.7	10		
	30	34	0.7	100				200	33	1.9	15		
	200	21	3.0	15		ECM350/050 120/240		150	43	1.3	20		
	150	27	2.1	20		120.66/240.66		120	52	1.0	25		
	120	33	1.6	25				100	60	1.1	30		
	100	37	1.8	30				75	75	0.8	40		
	75	47	1.3	40				60	81	0.7	50		
	60	57	1.0	50				50	74	0.7	60		
	50	65	0.8	60				38	66	0.7	80		
	38	66	0.7	80				200	33	3.5	15		ECM600/063 120/240
	30	61	0.7	100				150	43	2.4	20		120.66/240.66
	75	48	2.3	40		ECM350/063 120/240		120	53	1.8	25		
	60	58	1.8	50		IEC 71B14		100	60	2.1	30		
	50	67	1.5	60				75	77	1.4	40		
	38	83	1.1	80		Solo / Only		60	93	1.1	50		
	30	96	0.8	100				50	107	0.9	60		
	60	59	2.5	50				38	132	0.7	80		
	50	69	2.1	60		ECM350/070 120/240		30	114	0.7	100		
	38	85	1.5	80		IEC 71B5		120	53	2.6	25		ECM600/070 120/240
	30	99	1.2	100				100	61	3.0	30		IEC 71B5
						Solo / Only		75	78	2.1	40		
								60	94	1.6	50		Solo / Only
								50	110	1.3	60		
								38	137	0.9	80		
								30	158	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

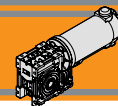
NOTE: for continuous or highly intermittent duty, please contact
our technical service

Motori applicabili**Motor adapters**

		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	600.120 600.240
CM	026	5-60	5-60	5-60				
	030	5-100	5-100	5-100	5-50	5-50	5-50	
	040		5-100	5-100	5-100	5-100	5-100	5-40
	050			40-100 ⁽¹⁾	5-100	5-100	15-100	5-80
	063					40-100 ⁽²⁾	40-100 ⁽²⁾	15-100
	070						50-100 ⁽³⁾	25-100 ⁽³⁾

5-100

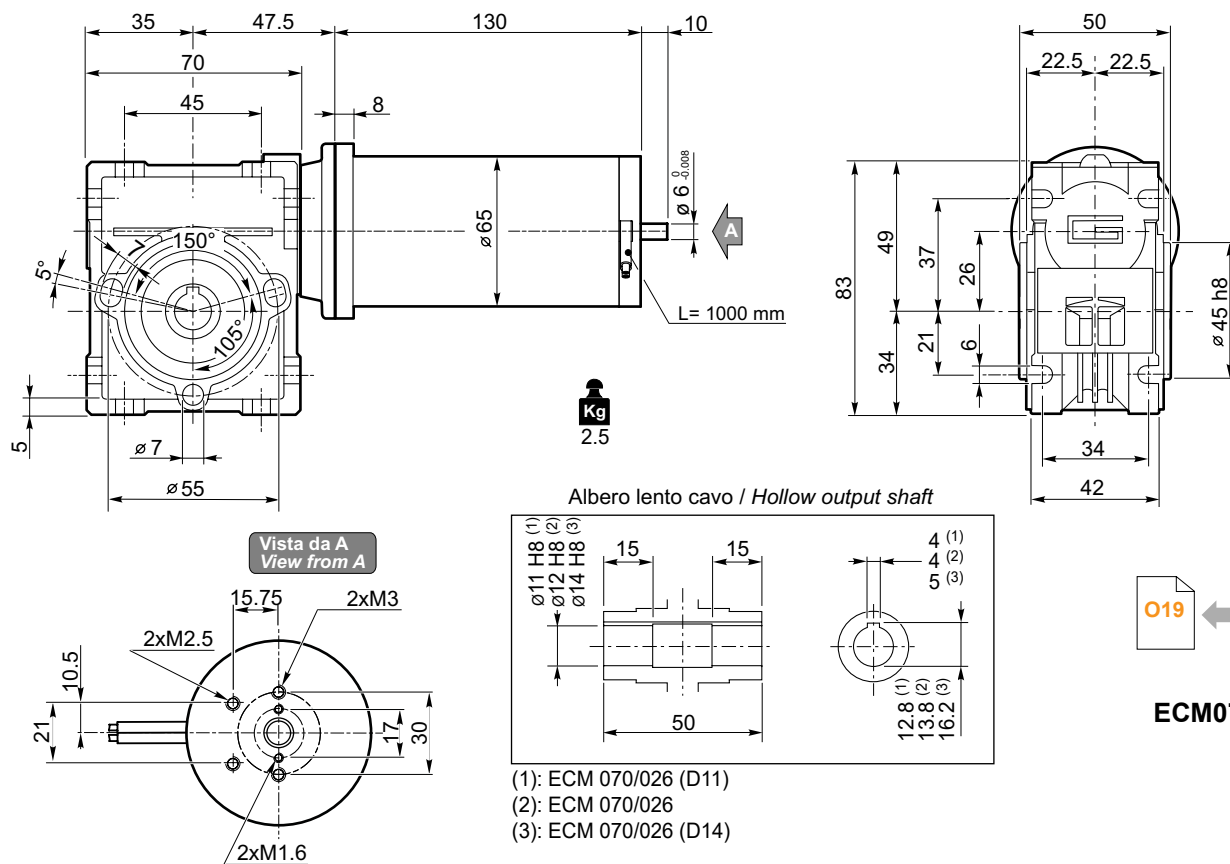
Rapporti di riduzione i
Ratio i(1): Solo IEC 63 B14
63 B14 only(3): Solo IEC 71 B5
71 B5 only(2): Solo IEC 71 B14
71 B14 only



Dimensioni

Dimensions

ECM070/026 U



Motori / Motors IP66

I2

Freno / Brake

H23

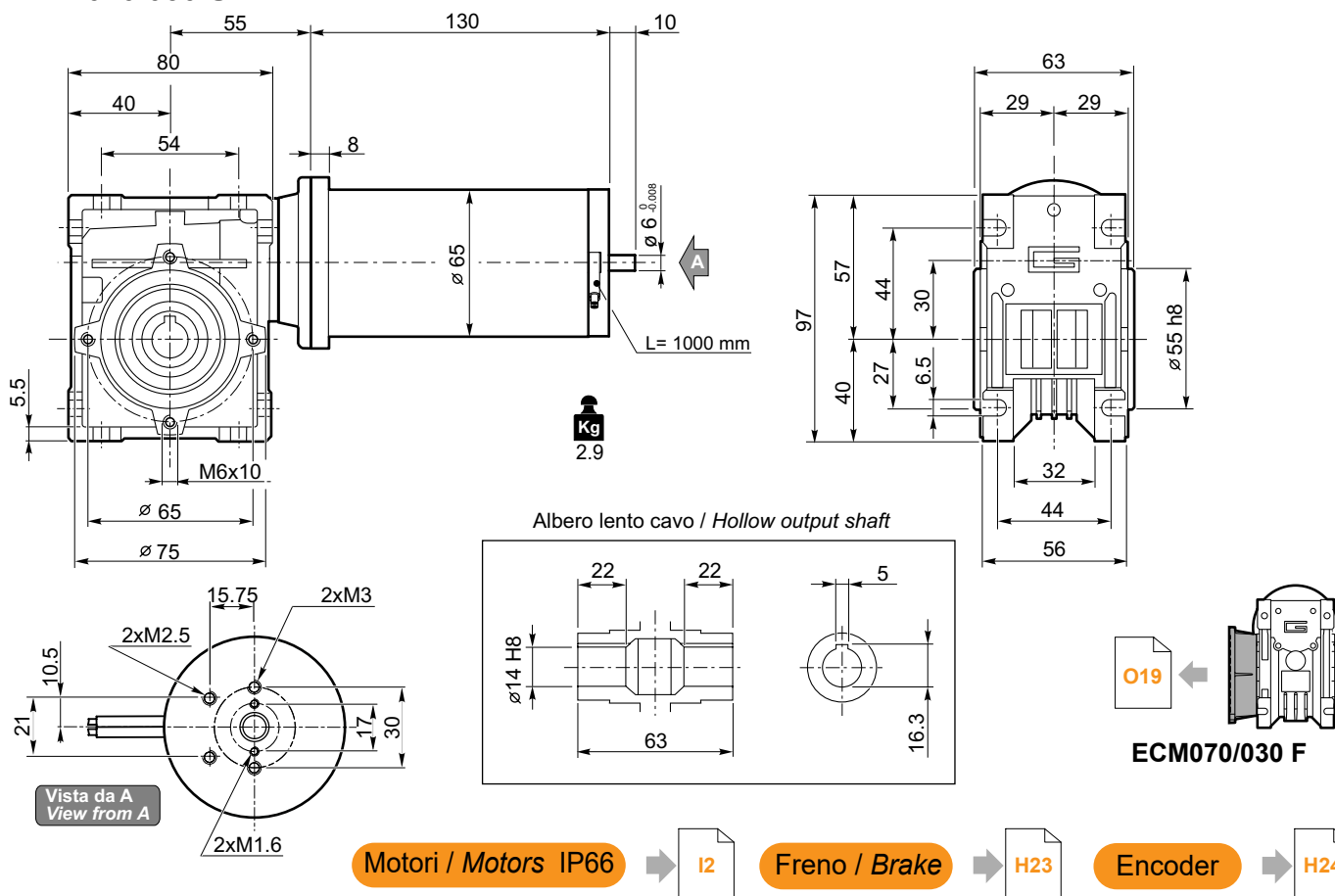
Encoder

H24

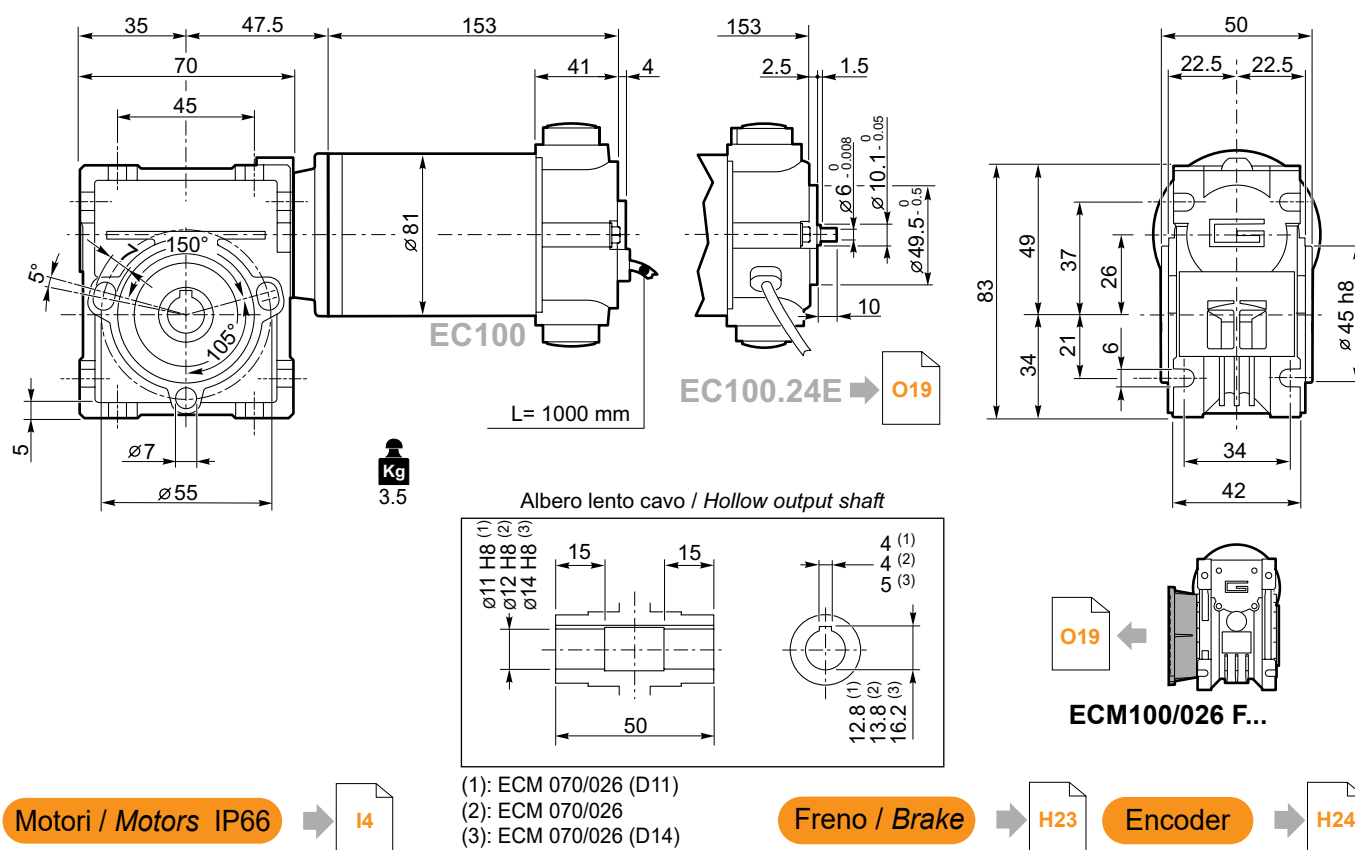
Dimensioni

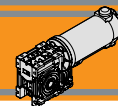
Dimensions

ECM070/030 U



ECM100/026 U

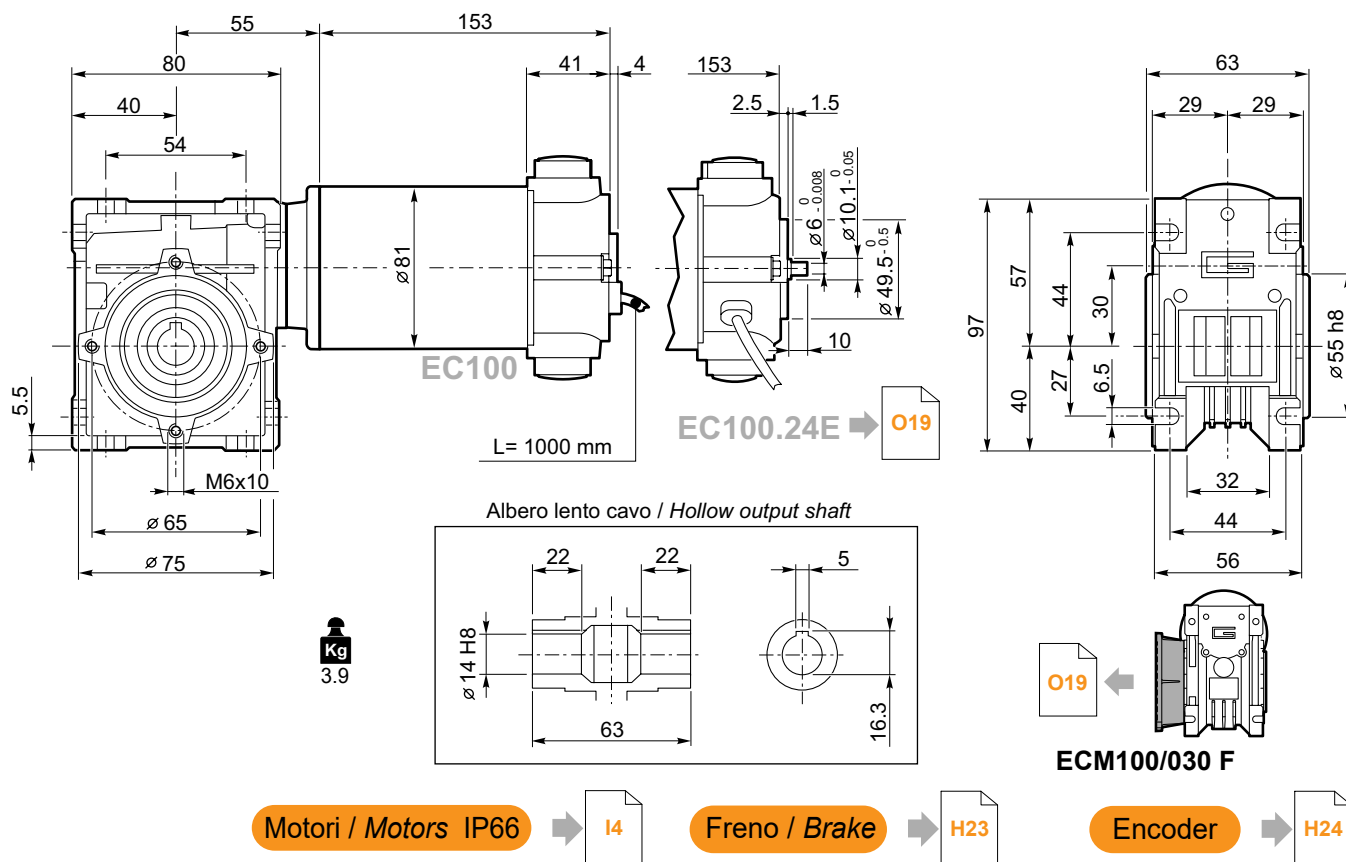




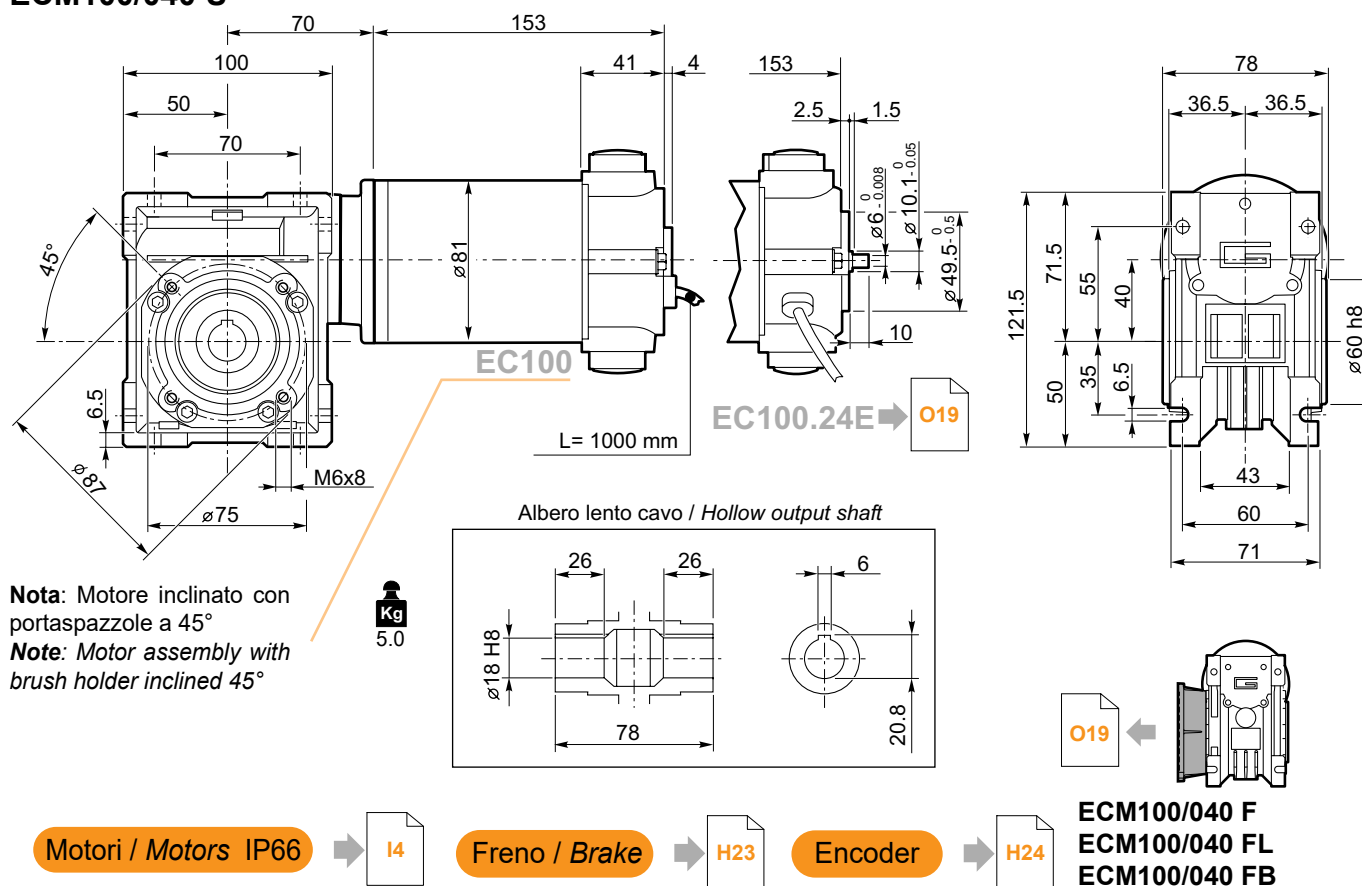
Dimensioni

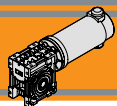
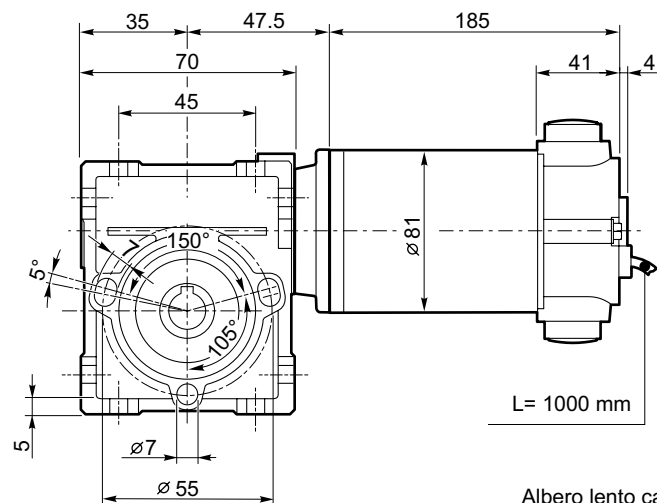
Dimensions

ECM100/030 U

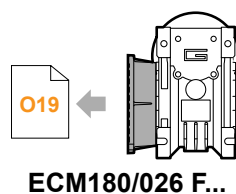
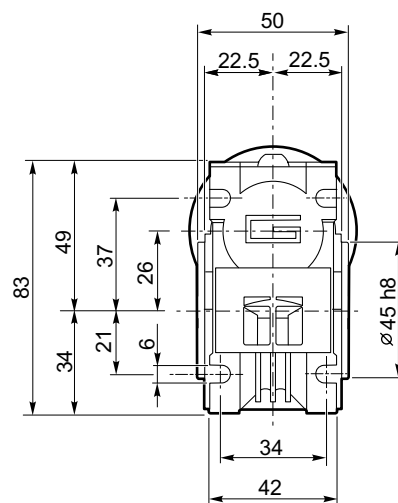
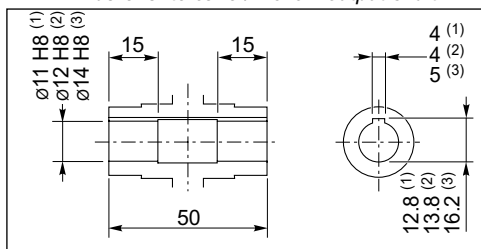


ECM100/040 U



**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****ECM180/026 U****Kg**
4.2

Albero lento cavo / Hollow output shaft



Motori / Motors IP66

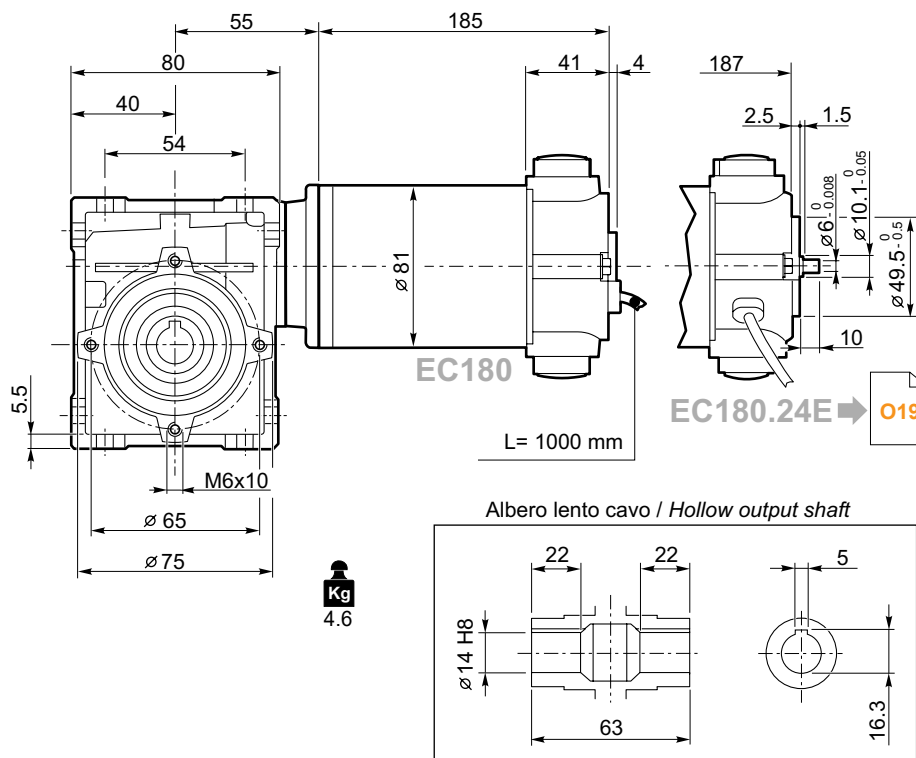


- (1): ECM 070/026 (D11)
(2): ECM 070/026
(3): ECM 070/026 (D14)

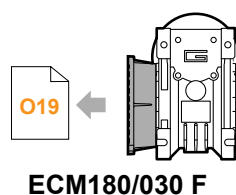
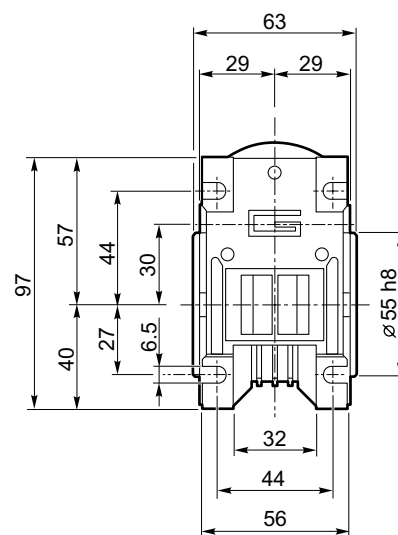
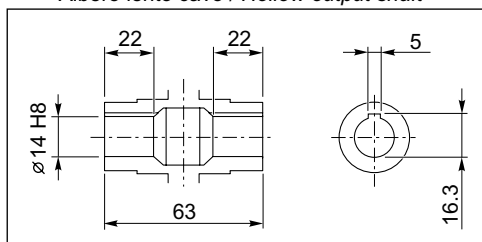
Freno / Brake



Encoder

**ECM180/030 U****Kg**
4.6

Albero lento cavo / Hollow output shaft



Motori / Motors IP66

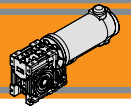


Freno / Brake



Encoder

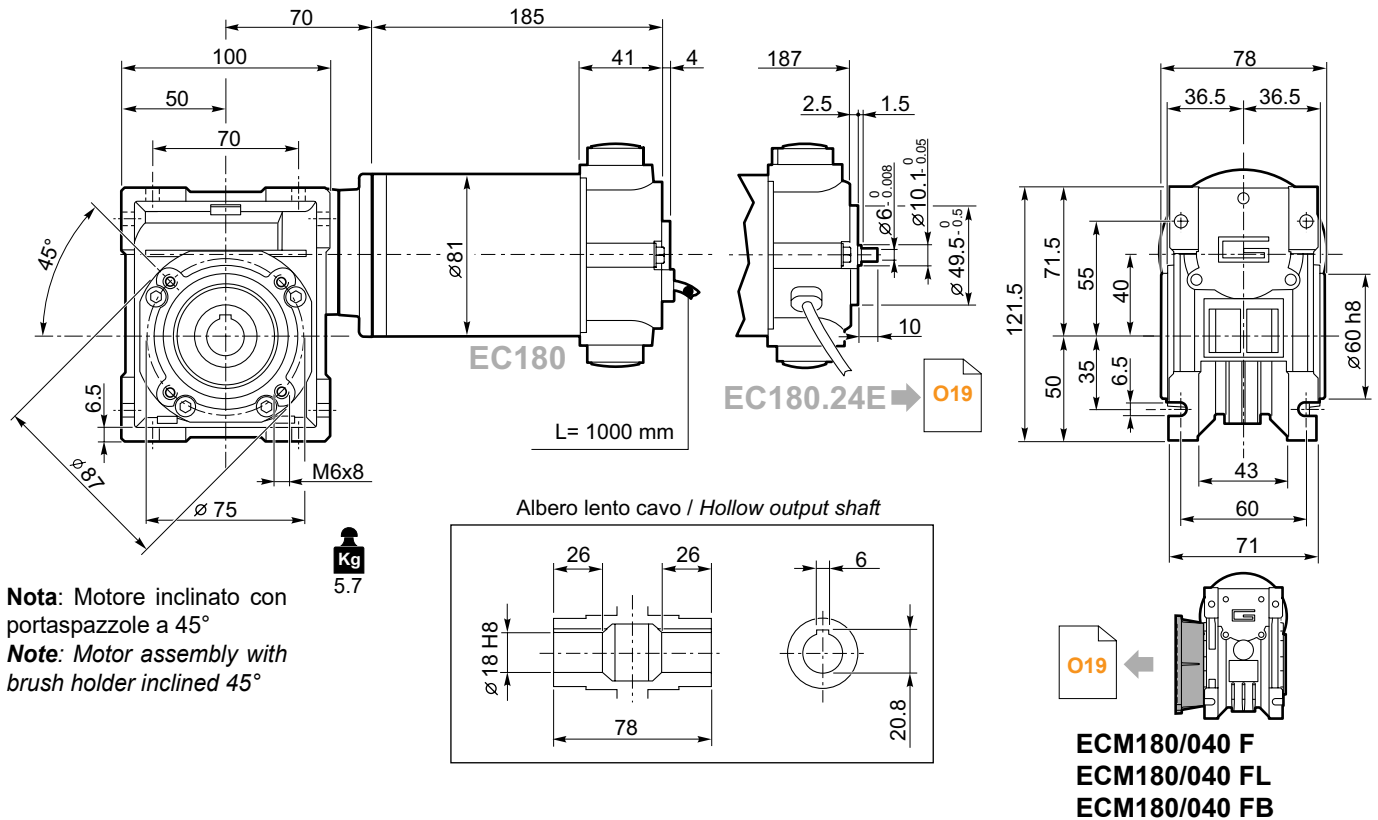




Dimensioni

Dimensions

ECM180/040 U



Motori / Motors IP66

16

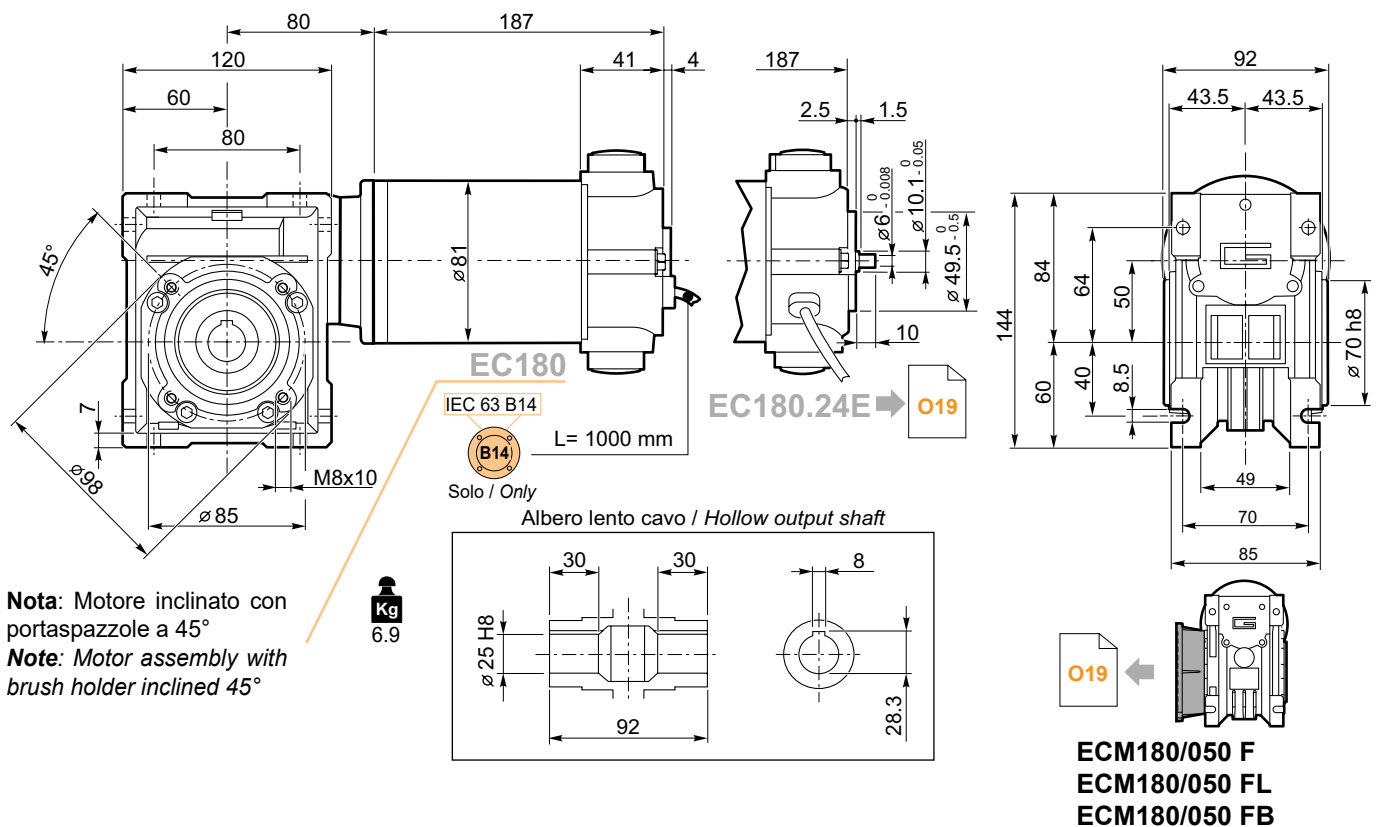
Freno / Brake

H23

Encoder

H24

ECM180/050 U



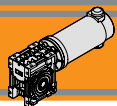
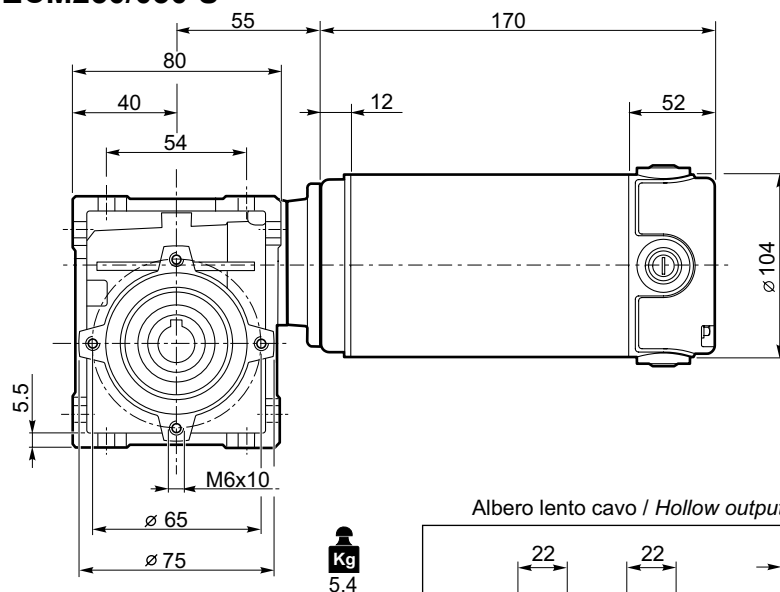
Freno / Brake

H23

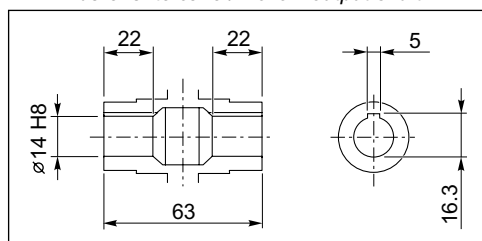
Encoder

H24

ECM

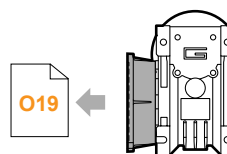
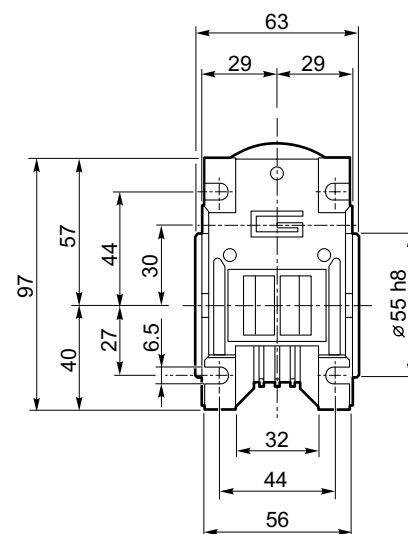
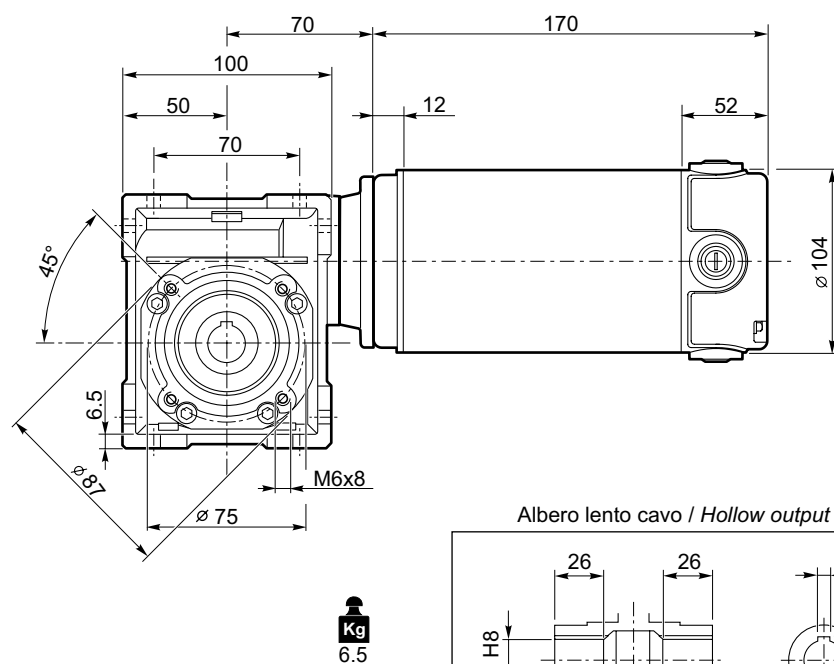
**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****ECM250/030 U**

Albero lento cavo / Hollow output shaft

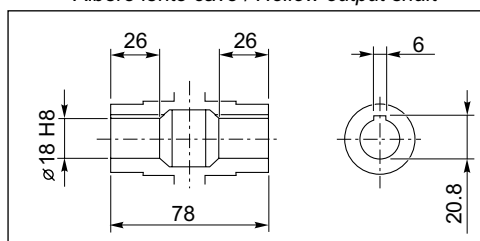


Motori / Motors IP66

I8

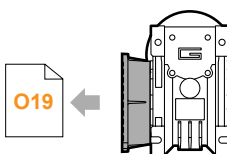
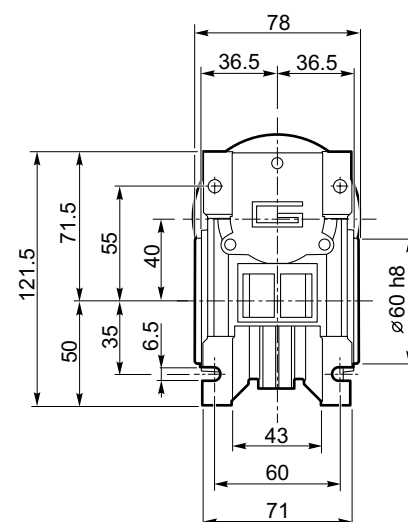
**ECM250/030 F****ECM250/040 U**

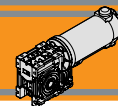
Albero lento cavo / Hollow output shaft



Motori / Motors IP66

I8

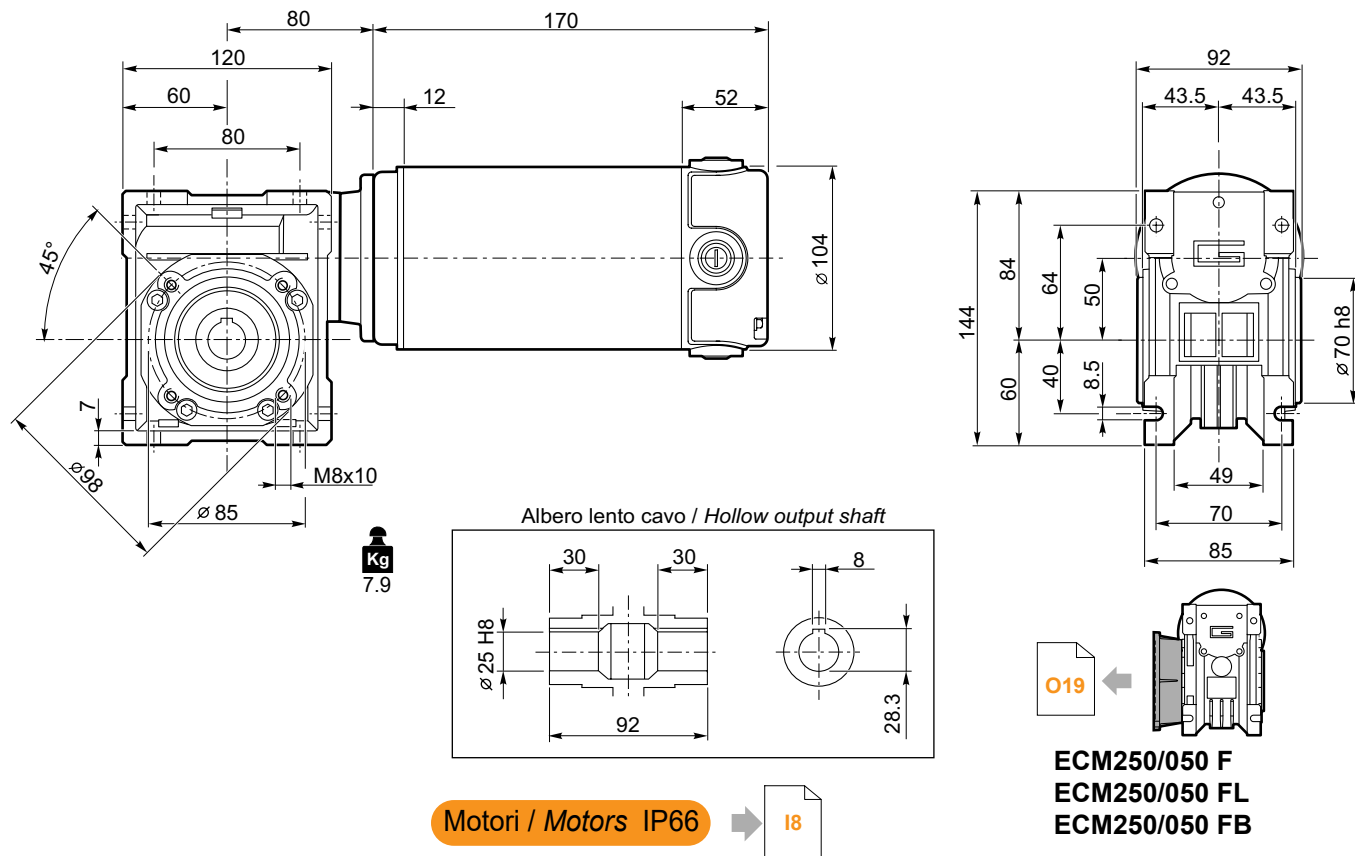
**ECM250/040 F**
ECM250/040 FL
ECM250/040 FB



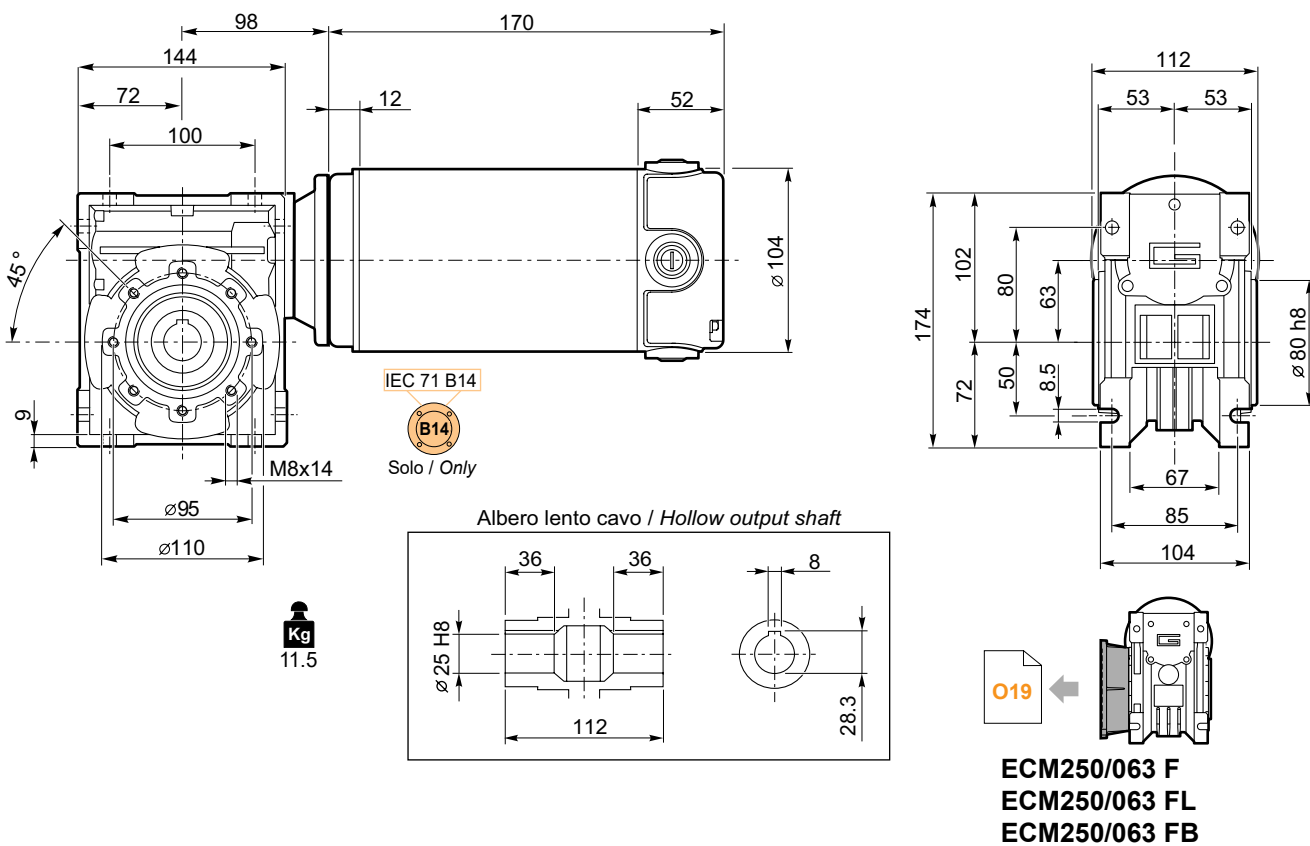
Dimensioni

Dimensions

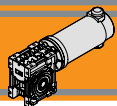
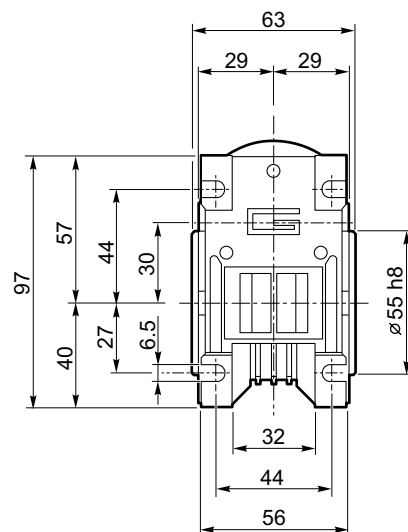
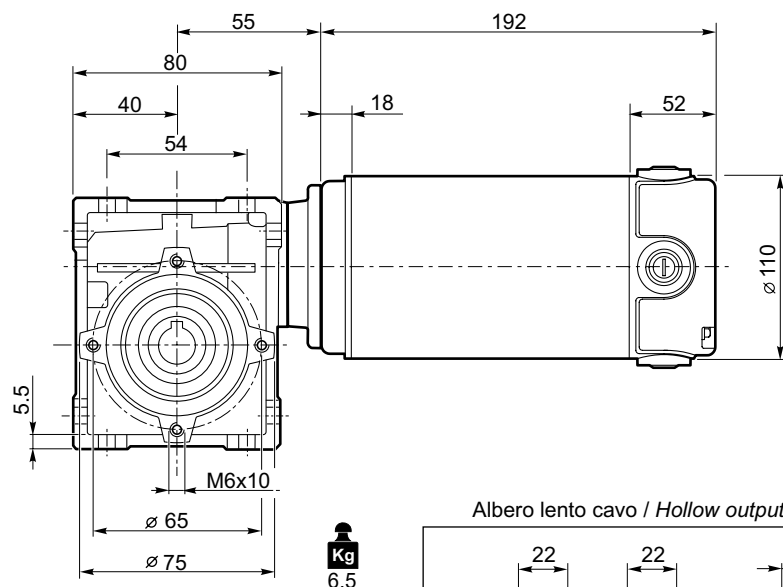
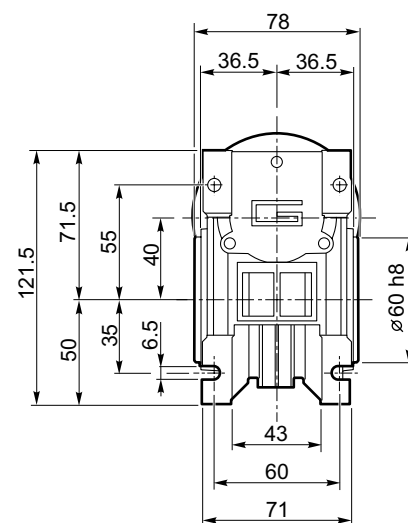
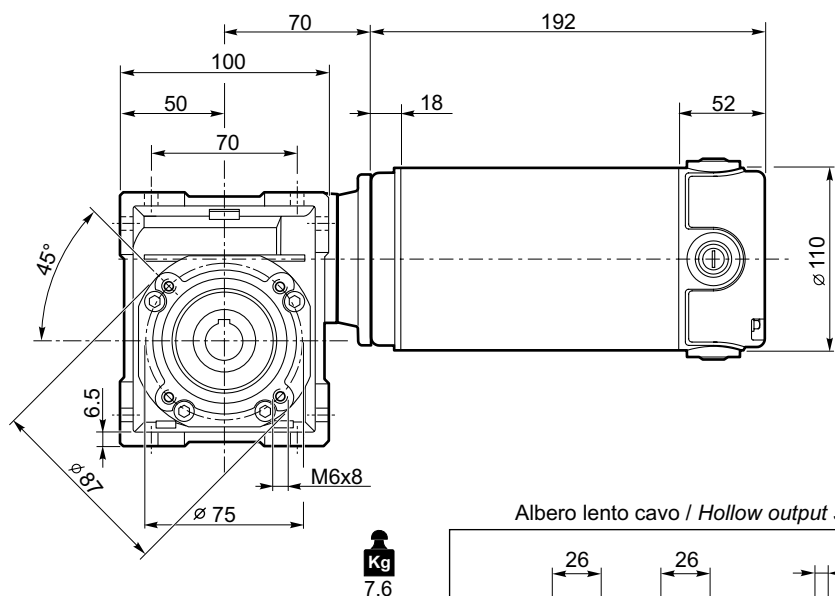
ECM250/050 U

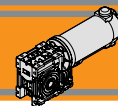


ECM250/063 U



ECM

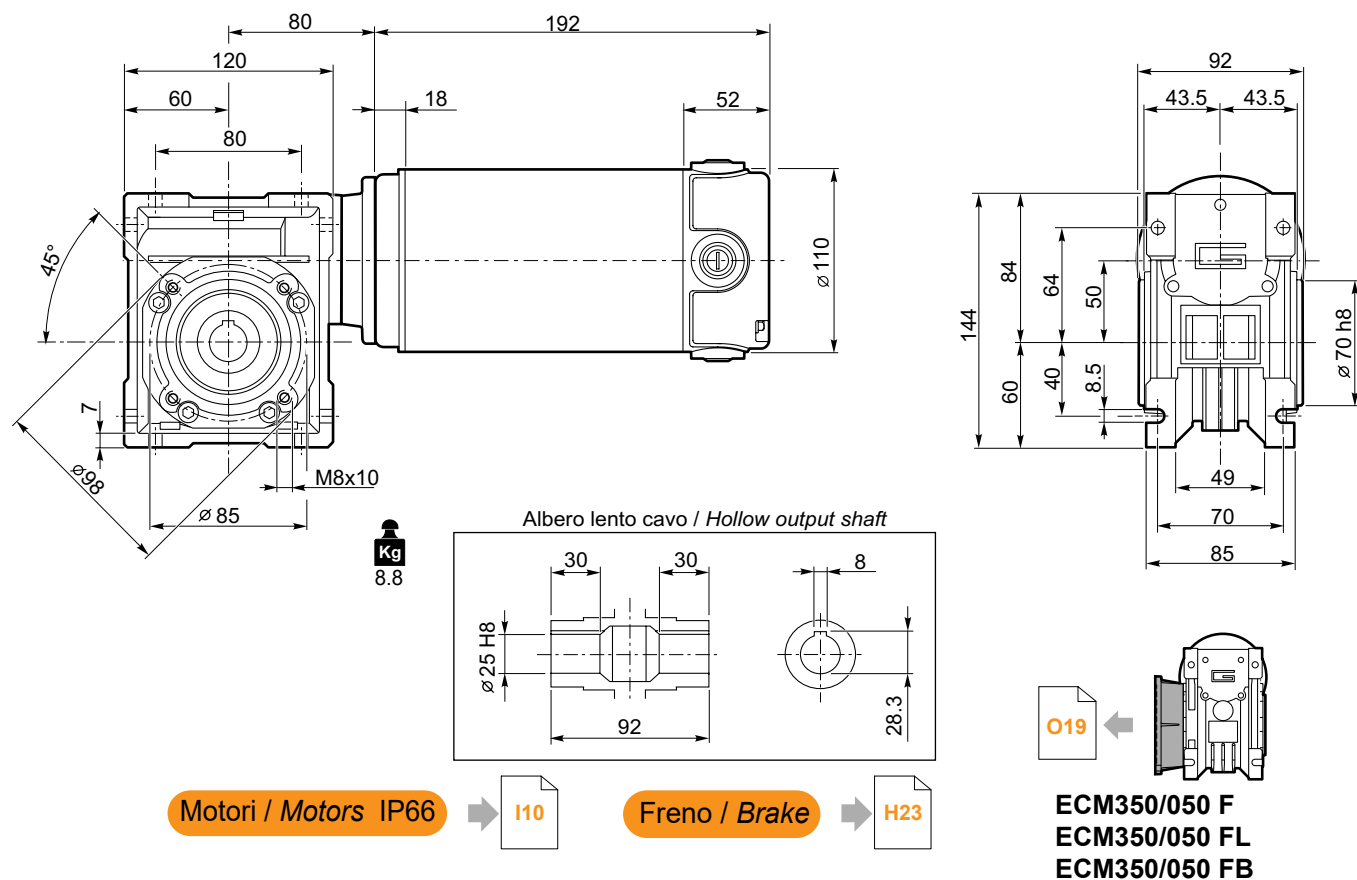
**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****ECM350/030 U****Motori / Motors IP66****I10****Freno / Brake****H23****ECM350/030 F****ECM350/040 U****Motori / Motors IP66****I10****Freno / Brake****H23****ECM350/040 F**
ECM350/040 FL
ECM350/040 FB



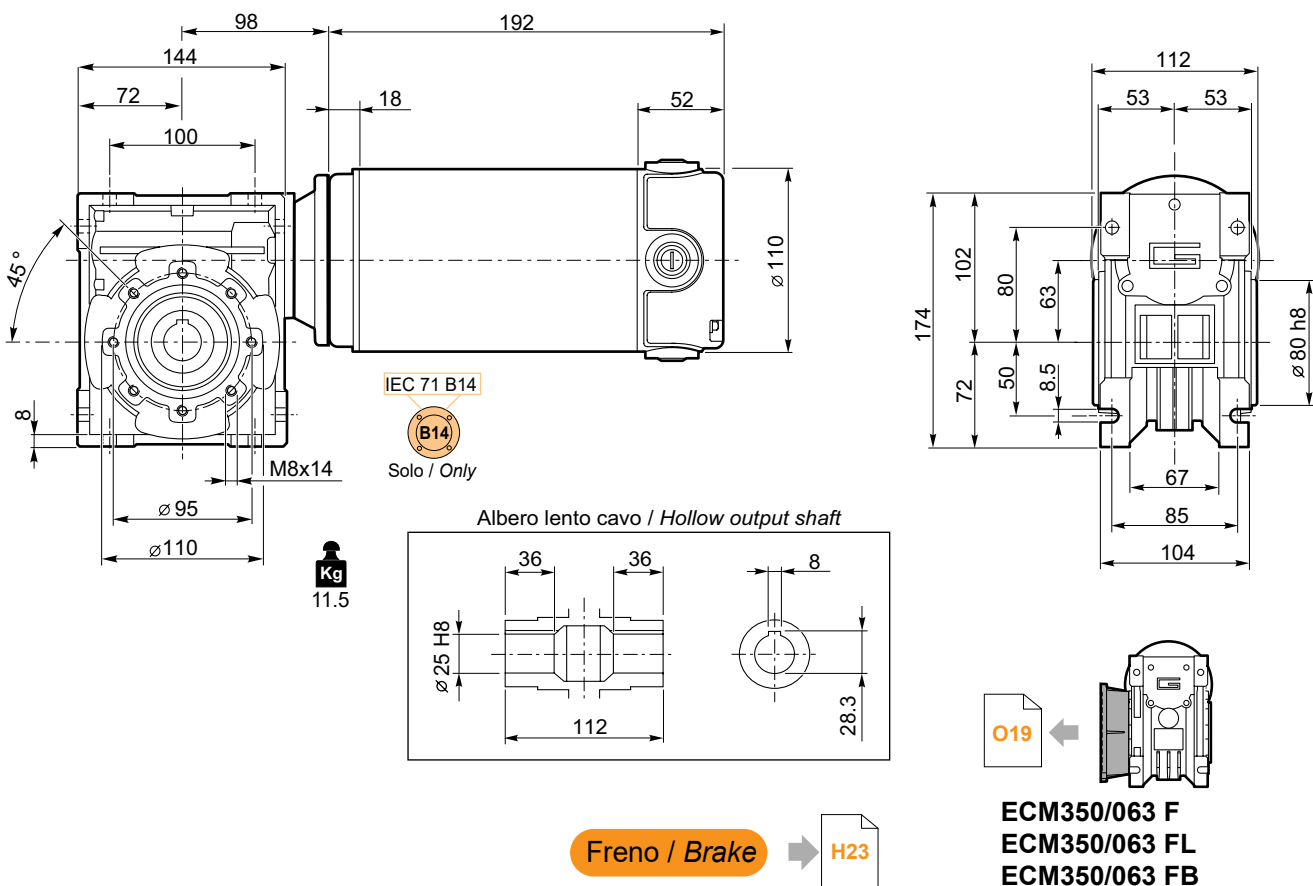
Dimensioni

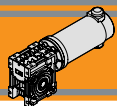
Dimensions

ECM350/050 U



ECM350/063 U

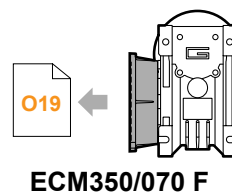
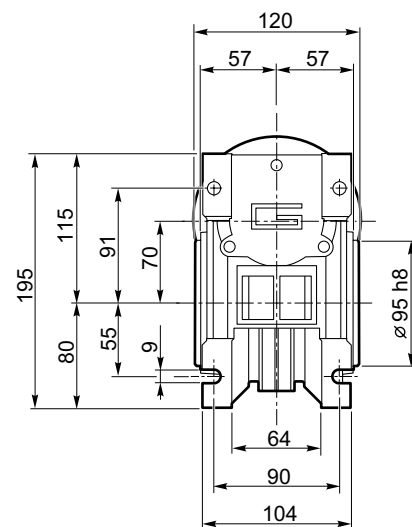
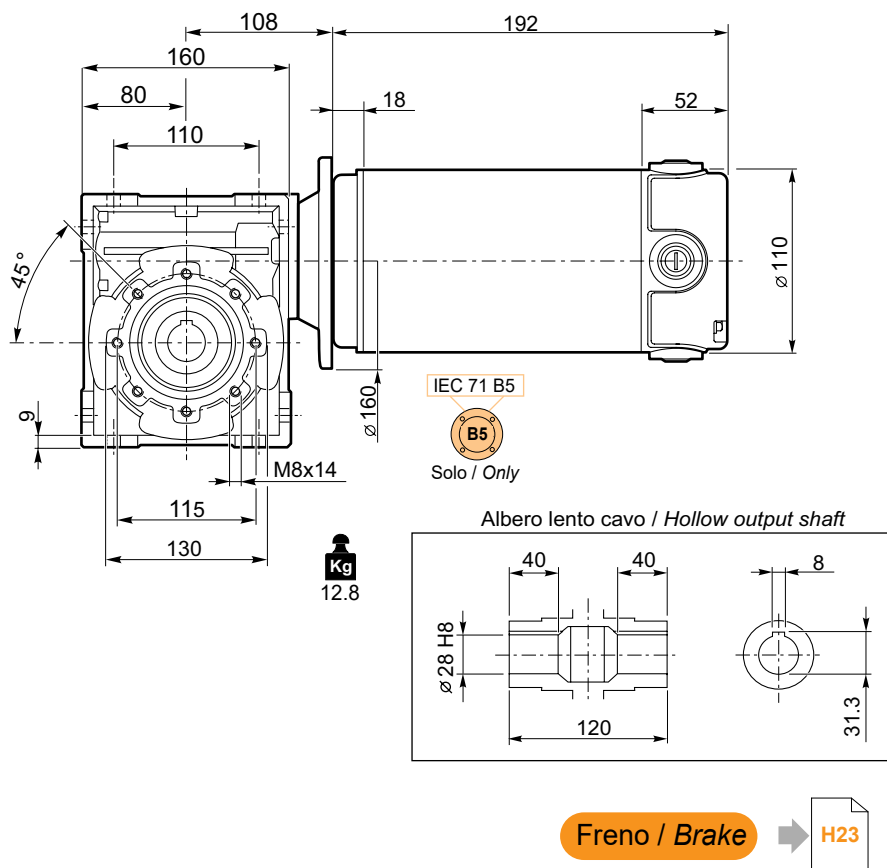


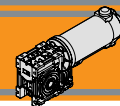


Dimensioni

Dimensions

ECM350/070 U

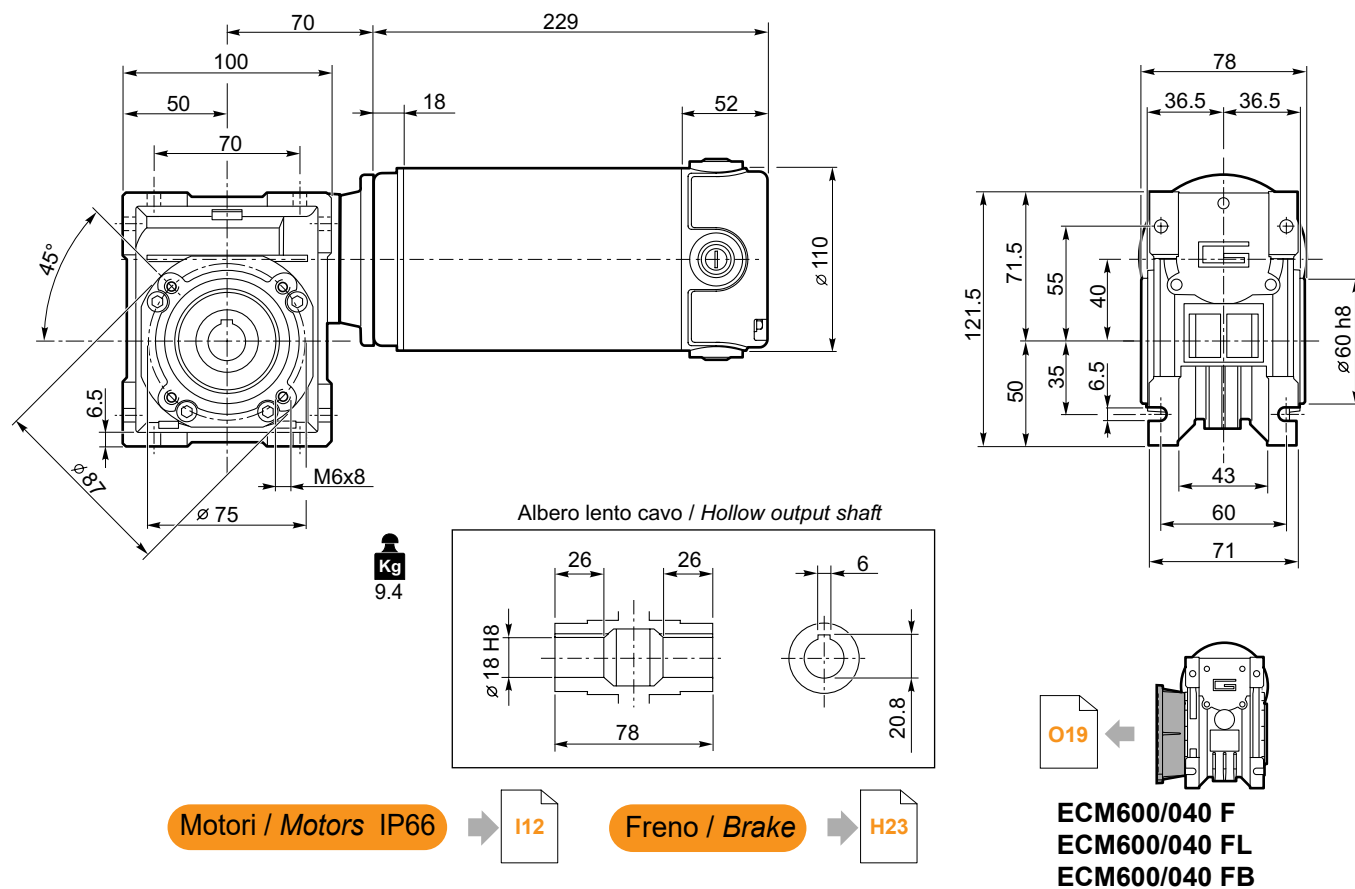




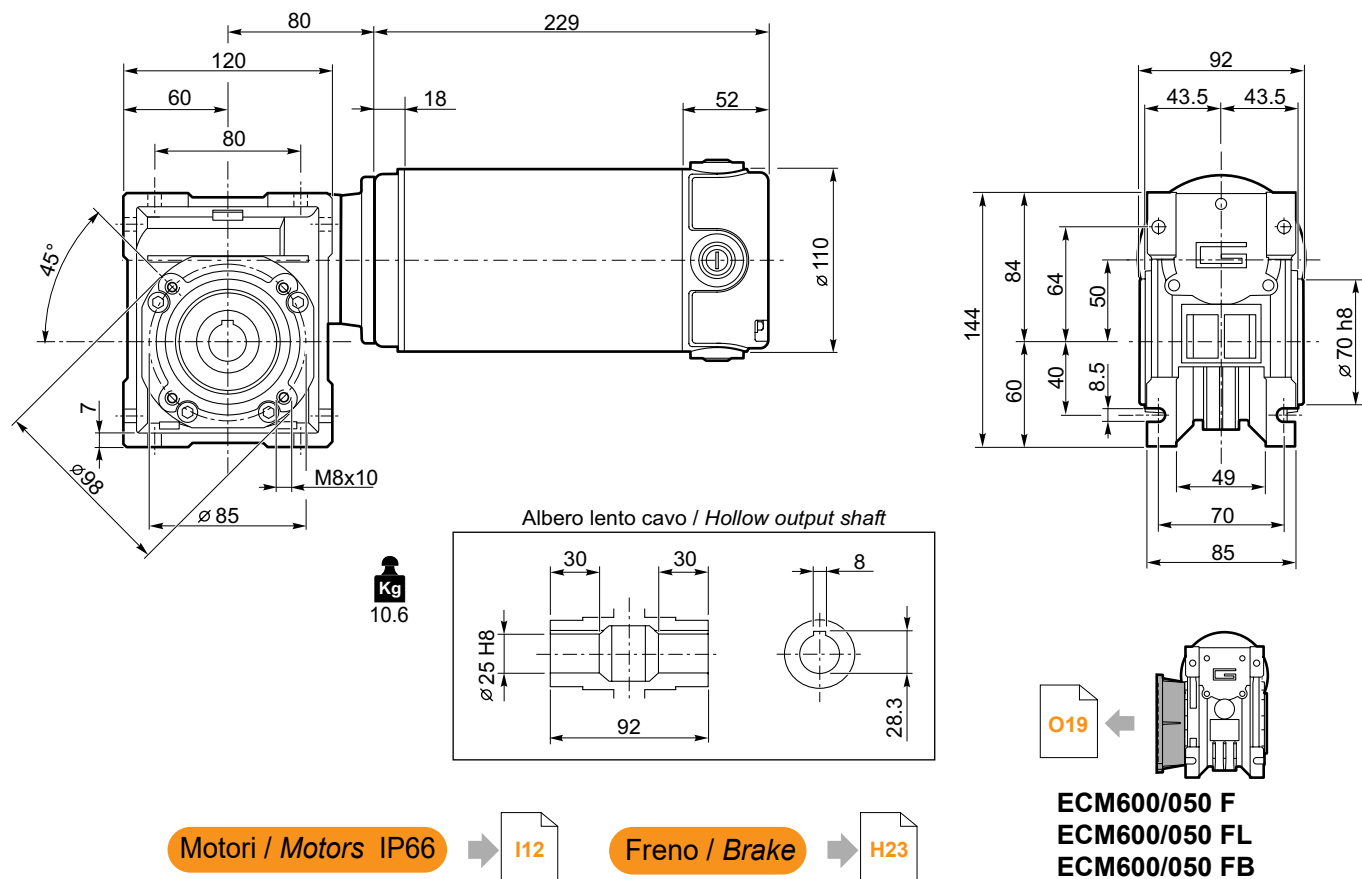
Dimensioni

Dimensions

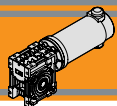
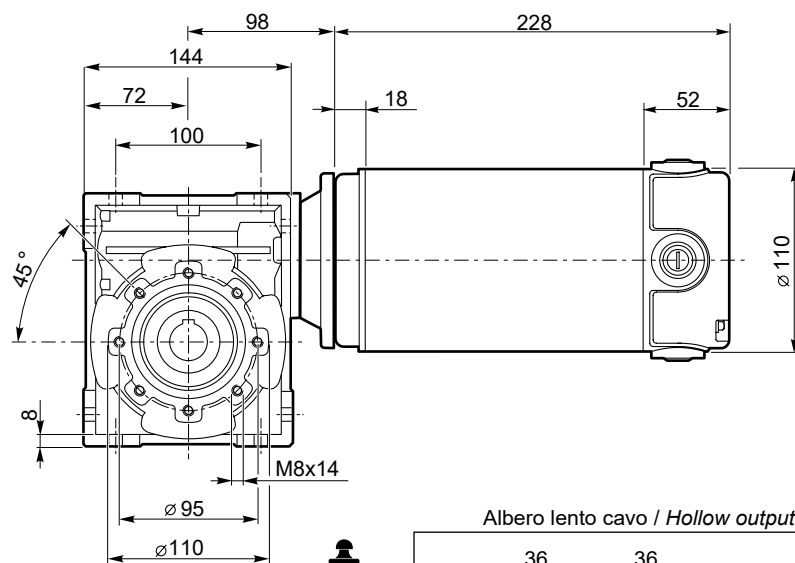
ECM600/040 U



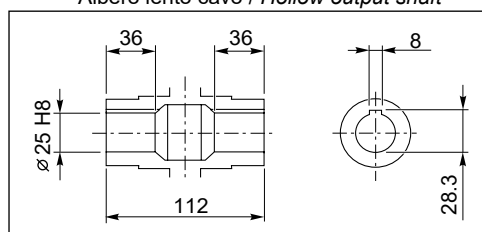
ECM600/050 U



ECM

**ECM****Motoriduttori CC a vite senza fine**
DC Wormgearmotors**Dimensioni****Dimensions****ECM600/063 U****Kg**
13.3

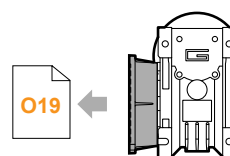
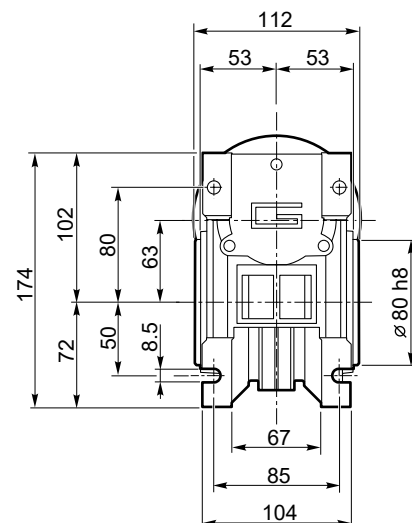
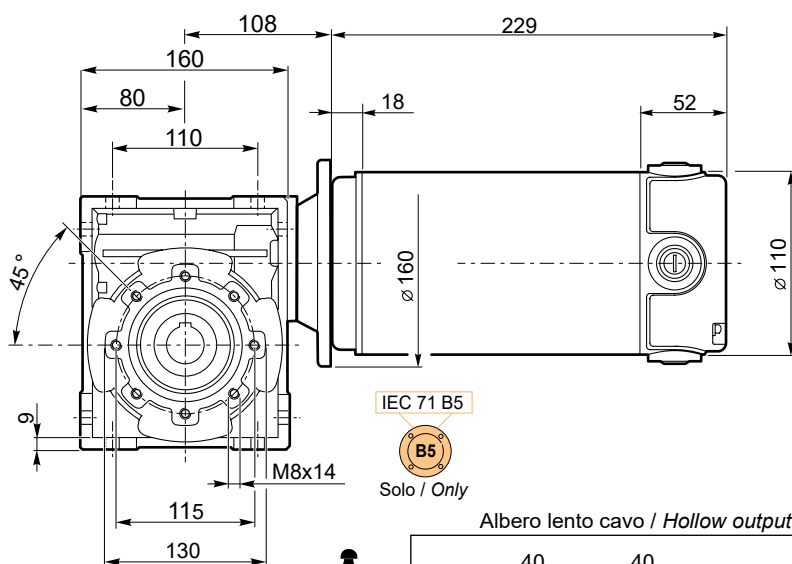
Albero lento cavo / Hollow output shaft



Motori / Motors IP66



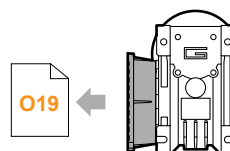
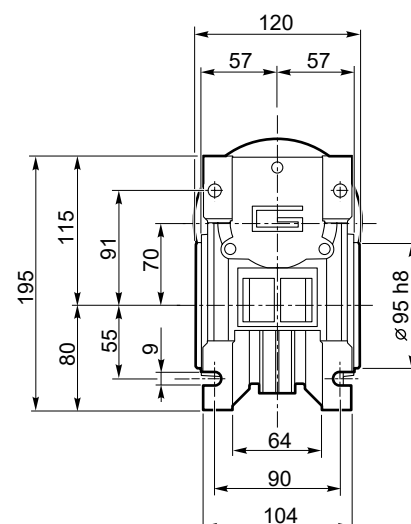
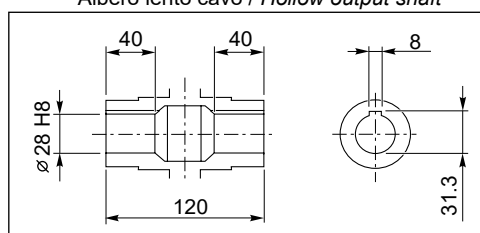
Freno / Brake

**ECM600/063 F**
ECM600/063 FL
ECM600/063 FB**ECM600/070 U****Kg**
14.6

IEC 71 B5

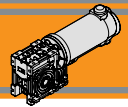
B5
Solo / Only

Albero lento cavo / Hollow output shaft

**ECM600/070 F**

Freno / Brake

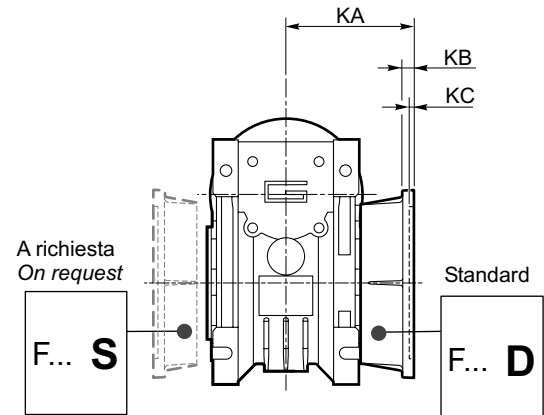
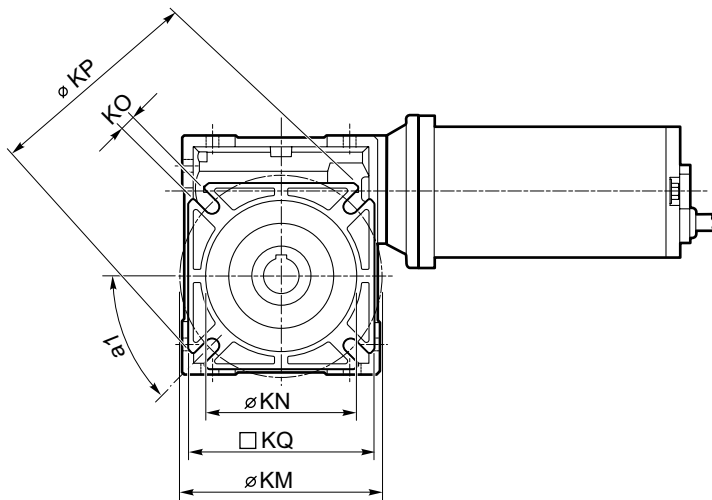




Dimensioni

Dimensions

ECM.../... F... Flange uscita / Output flanges

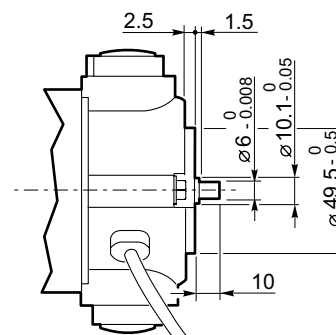
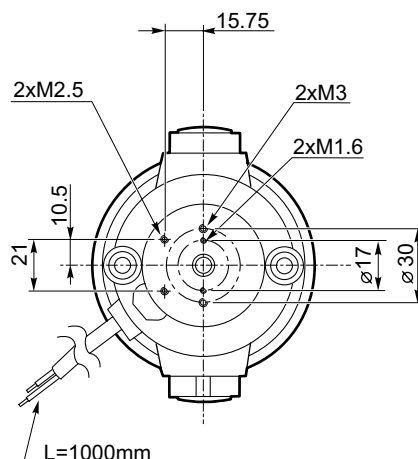


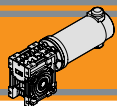
	CM..F								CM..F28								CM..F30								
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ
026 (D11) 026 026 (D14)	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70

CM	CM..F									CM..FB								CM..FL							
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	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
050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110
063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	160	112	10	6	150-160	115	11(n.4)	180	142
070	45°	107	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

EC100.24E

EC180.24E





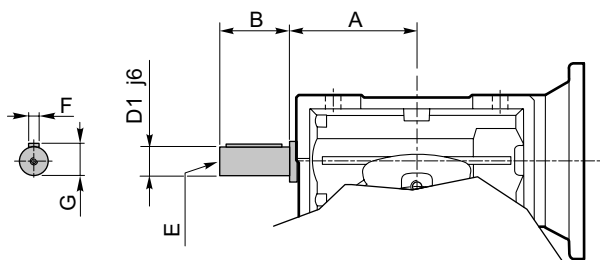
ECM

Motoriduttori CC a vite senza fine
DC Wormgearmotors

Opzioni

Options

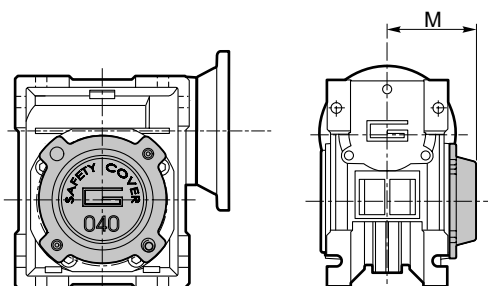
VS - Vite sporgente / Extended input shaft



	A	B	D ₁ j6	E	F	G
CM 030	45	20	9	M4	3	10.2
CM 040	53	23	11	M5	4	12.5
CM 050	64	30	14	M6	5	16
CM 063	75	40	19	M6	6	21.5
CM 070	84	40	19	M6	6	21.5

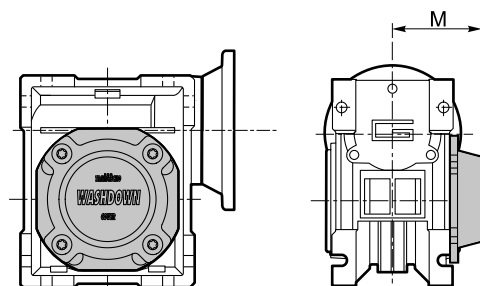
 Costruito su richiesta
Built on request

SC - Safety cover

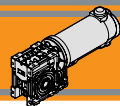


	M
CM 030	47
CM 040	54.5
CM 050	62.5
CM 063	73
CM 070	75

WD - Washdown cover



	M
CM 030	48
CM 040	55.5
CM 050	63.5
CM 063	71.5
CM 070	76

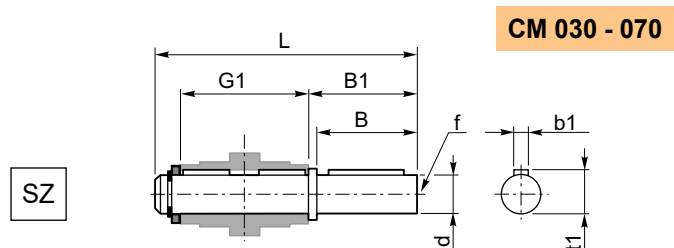
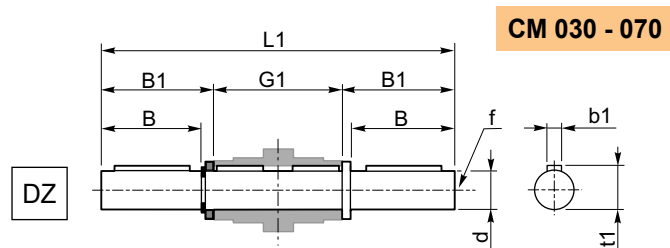


Accessori

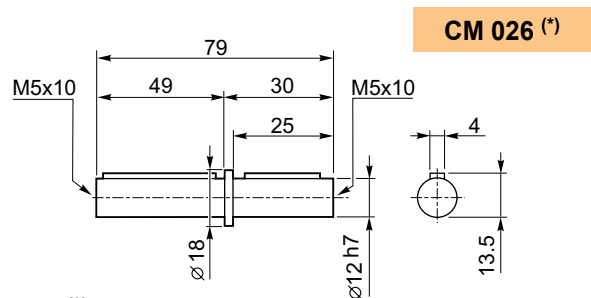
Accessories

Albero lento

Output shaft



	d h7	B	B1	G1	L	L1	f	b1	t1
CM 030	14	30	32.5	63	102	128	M6	5	16
CM 040	18	40	43	78	128	164	M6	6	20.5
CM 050	25	50	53.5	92	153	199	M10	8	28
CM 063	25	50	53.5	112	173	219	M10	8	28
CM 070	28	60	63.5	120	192	247	M10	8	31

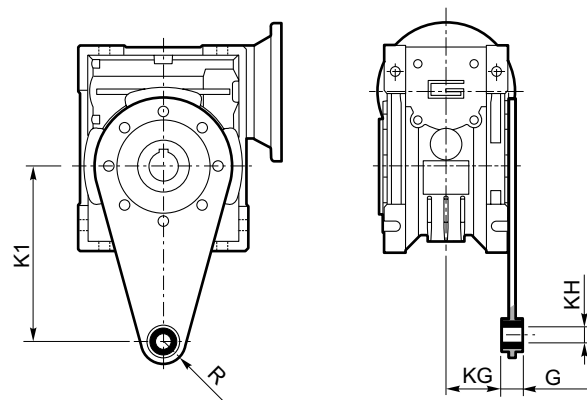


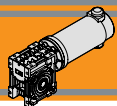
(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

	K1	G	KG	KH	R
CM 030	85	14	23	8	15
CM 040	100	14	31	10	18
CM 050	100	14	38	10	18
CM 063	150	14	47.5	10	18
CM 070	200	25	46.5	20	30





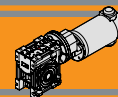
Note



Ferrite

Motoriduttori CC a vite senza fine con precoppia **DC pre stage wormgearmotors**

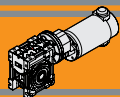




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Simbologia	<i>Symbols</i>	P3
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Carichi radiali	<i>Radial loads</i>	P3
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	P4
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Opzioni	<i>Options</i>	P19
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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**

*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***

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

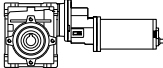
Le caratteristiche principali dei motoriduttori CC a vite senza fine con precoppia a magneti permanenti in ferrite serie ECMP sono:

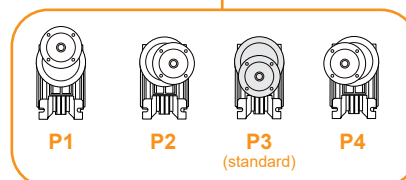
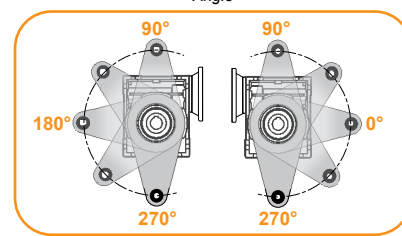
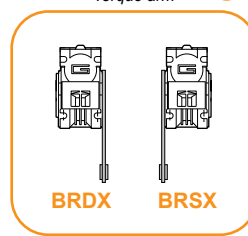
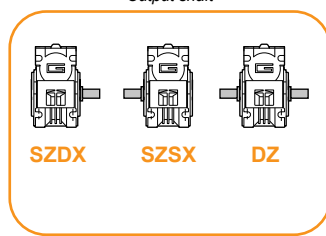
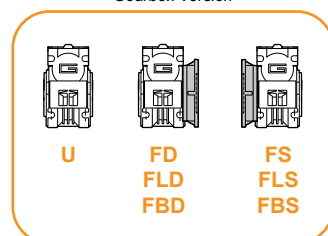
The main features of ECMP ferrite permanent magnets DC pre stage wormgearmotors range are:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Sia le carcasse dei riduttori a vite senza fine che delle precoppie sono in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

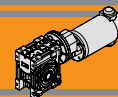
- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 up to 800W S2
- Ferrite magnets
- Die-cast aluminum housing on pre-stage and wormgearboxes
- Permanent synthetic oil long-life lubrication.

Designazione**Classification**

MOTORIDUTTORE / GEARMOTOR													
ECMP		070/056/030				U	90	SZDX	BR SX	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 montag- gio precoppia Pre stage mounting position	Versione Motore Motor Version	Opzioni Options
	ECMP	070/056/030	180/056/030	350/063/050	600/071/050	U	Vedere tabella	SZDX	BRDX	0°	P1	120	VS
	070/056/040	180/056/040	350/063/063	600/071/063	FD	SZSX		BR SX	90°	P2			
		180/063/040	350/071/063	600/071/070	FS	See tables	DZ	★	P3 (standard)	240			
		180/063/050	350/071/070	600/071/075	FLD								
		180/063/063	350/071/075		FLS								
					FBD								
					FBS								
	100/056/030												
	100/056/040	250/063/040											
	100/063/050	250/063/050											
		250/063/063											
		250/071/070											
		250/071/075											

Versione Riduttore
Gearbox VersionAlbero di uscita
Output shaftBraccio 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 ⁻¹]	Velocità in ingresso / <i>Input speed</i>
n_2	[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 in uscita in funzione di P_1 / <i>Output torque referred to P_1</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

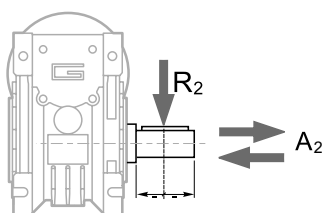
Lubrication

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

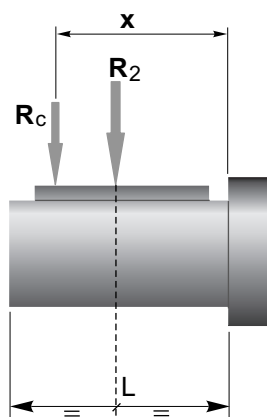
Radial loads



n_2 [min ⁻¹]	R_2 [N]					
	CM030	CM040	CM050	CM063	CM070	CM075
35	1179	2210	3095	4273	4568	4937
28	1270	2381	3334	4603	4921	5318
23	1356	2542	3559	4915	5254	5678
18	1471	2759	3862	5334	5702	6162
14	1600	3000	4200	5800	6200	6700

Quando il carico radiale risultante non è applicato sulla mezzera 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:

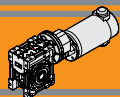


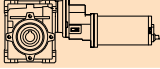
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

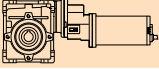
	CM					
	030	040	050	063	070	075
a	65	84	101	120	122	131
b	50	64	76	95	92	101
R_{2MAX}	1600	3000	4200	5800	6200	6700

**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dati tecnici per servizio S2****Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
100						
(3000 min ⁻¹)	50	13	1.7	60	ECMP070/056/030	12E/24E
	40	16	1.4	75		120.66/240.66
	33	17	1.6	90		
	25	22	1.1	120		
	20	25	0.9	150		
	50	14	3.2	60	ECMP070/056/040	12E/24E
	40	16	2.7	75		120.66/240.66
	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		

140						
(3000 min ⁻¹)	50	19	1.2	60	ECMP100/056/030	120/240/24E
	40	22	1.0	75		120.66/240.66
	33	24	1.1	90		
	25	30	0.8	120		
	20	31	0.7	150		
	50	19	2.3	60	ECMP100/056/040	120/240/24E
	40	23	1.9	75		120.66/240.66
	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		
	50	20	4.1	60	ECMP100/063/050	120/240/24E
	40	24	3.2	75		IEC 63B14
	33	27	3.7	90		
	25	32	2.6	120		Solo / Only
	20	39	2.1	150		
	17	43	1.8	180		
	13	50	1.4	240		

250						
(3000 min ⁻¹)	50	33	0.7	60	ECMP180/056/030	120/240
	40	31	0.7	75		120.66/240.66
	33	39	0.7	90		
	25	33	0.7	120		
	20	31	0.7	150		
	50	35	1.3	60	ECMP180/056/040	120/240
	40	41	1.1	75		120.66/240.66
	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	ECMP180/063/040	24E
	40	41	1.1	75		IEC 63B14
	33	46	1.2	90		
	25	56	0.9	120		Solo / Only
	50	35	2.3	60	ECMP180/063/050	120/240/24E
	40	42	1.8	75		IEC 63B14
	33	48	2.1	90		
	25	58	1.5	120		Solo / Only
	20	69	1.2	150		
	17	77	1.0	180		
	13	90	0.8	240		
	50	37	4.2	60	ECMP180/063/063	120/240/24E
	40	44	3.1	75		IEC 63B14
	33	49	3.8	90		
	25	61	2.6	120		Solo / Only
	20	71	2.1	150		
	17	81	1.7	180		
	13	97	1.3	240		
	10	110	1.1	300		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
350						
(3000 min ⁻¹)	50	48	0.9	60	ECMP250/063/040	120/240
	40	57	0.8	75		120.66/240.66
	33	65	0.9	90		
	25	69	0.7	120		
	20	75	0.7	150		
	50	49	1.6	60	ECMP250/063/050	120/240
	40	59	1.3	75		120.66/240.66
	33	67	1.5	90		
	25	81	1.0	120		
	20	97	0.8	150		
	17	108	0.7	180		
	13	99	0.7	240		
	50	51	3.0	60	ECMP250/063/063	120/240
	40	61	2.2	75		120.66/240.66
	33	69	2.7	90		
	25	85	1.9	120		
	20	100	1.5	150		
	17	114	1.2	180		
	13	136	0.9	240		
	10	154	0.8	300		
	25	88	2.7	120	ECMP250/071/070	120/240
	20	103	2.1	150		IEC 71B14
	17	118	1.8	180		
	13	142	1.3	240		Solo / Only
	10	161	1.0	300	ECMP250/071/075	120/240
	17	118	2.1	180		IEC 71B14
	13	144	1.6	240		
	10	164	1.3	300		Solo / Only

500						
(3000 min ⁻¹)	50	70	1.1	60	ECMP350/063/050	120/240
	40	84	0.9	75		120.66/240.66
	33	95	1.0	90		
	25	116	0.7	120		
	20	116	0.7	150		
	17	109	0.7	180	ECMP350/063/063	120/240
	13	99	0.7	240		120.66/240.66
	50	73	2.1	60		
	40	88	1.6	75		
	33	98	1.9	90		
	25	122	1.3	120		
	20	143	1.1	150		
	17	163	0.9	180		
	13	195	0.7	240		
	10	174	0.7	300		

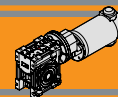
NOTA

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

NOTE

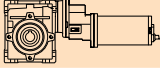
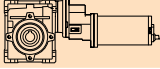
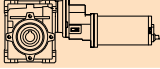
Please check that the output torque M2 does not exceed the value in the grey areas

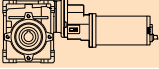
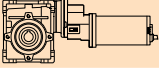
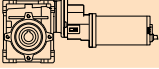
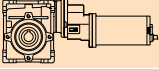
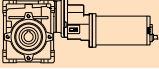
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico**NOTE:** for continuous or highly intermittent duty, please contact our technical service



Dati tecnici per servizio S2

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
500						
(3000 min ⁻¹)	50	74	3.1	60		ECMP350/071/070
	40	90	2.2	75		
	33	101	2.7	90		
	25	125	1.9	120		
	20	147	1.5	150		
	17	168	1.3	180		
	13	202	0.9	240		
	10	229	0.7	300		
	50	75	3.7	60		ECMP350/071/075
	40	90	2.7	75		
	33	102	3.2	90		
	25	127	2.3	120		
	20	150	1.7	150		
	17	168	1.5	180		
	13	206	1.1	240		
	10	234	0.9	300		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
800						
(3000 min ⁻¹)	50	112	0.7	60		ECMP600/071/050
	40	107	0.7	75		
	33	141	0.7	90		
	50	117	1.3	60		
	40	140	1.0	75		
	33	157	1.2	90		
	25	195	0.8	120		
	20	228	0.7	150		ECMP600/071/063
	17	203	0.7	180		
	50	118	1.9	60		
	40	144	1.4	75		
	33	162	1.7	90		
	25	201	1.2	120		
	20	236	0.9	150		
	17	270	0.8	180		ECMP600/071/070
	50	118	2.3	60		
	40	144	1.7	75		
	33	164	2.0	90		
	25	204	1.4	120		
	20	240	1.1	150		
	17	270	0.9	180		
	13	329	0.7	240		ECMP600/071/075
	10	293	0.7	300		
	50	118	2.3	60		
	40	144	1.7	75		
	33	164	2.0	90		
	25	204	1.4	120		
	20	240	1.1	150		
	17	270	0.9	180		
	13	329	0.7	240		
	10	293	0.7	300		

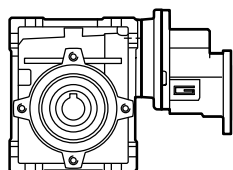
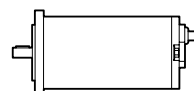
N.B.
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M₂ does not exceed the value in the grey areas

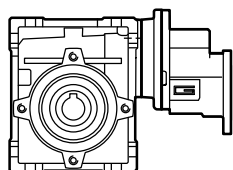
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact our technical service

Motori applicabili

Motor adapters



		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	600.120 600.240
	056/030	150	150	150				
	056/040	300	300	300				
	063/040				120	120		
	063/050		240 ⁽¹⁾	240 ⁽¹⁾	240	240	240	
	063/063			300 ⁽¹⁾	300	300	300	
	071/050							90
	071/063						180 ⁽²⁾	180
	071/070					300 ⁽²⁾	300 ⁽²⁾	180
	071/075					300 ⁽²⁾	300 ⁽²⁾	300

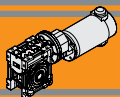
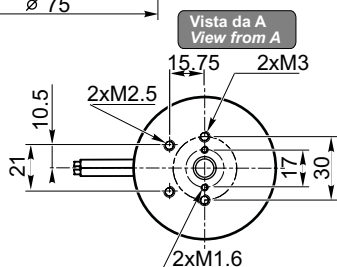
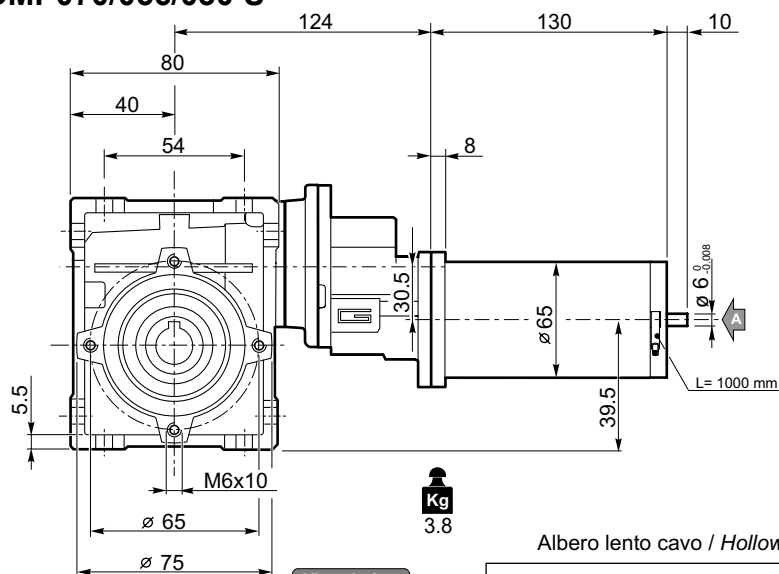
150

Rapporto di riduzione massimo i_{max}
Maximum ratio i_{max}

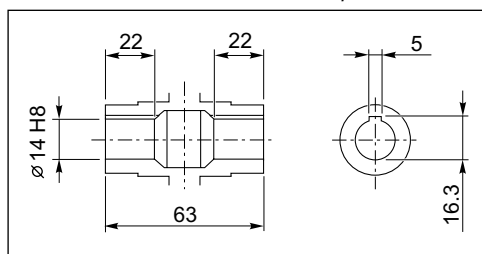
(1): Solo IEC 63 B14
IEC 63 B14 only

(2): Solo IEC 71 B14
IEC 71 B14 only

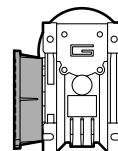
ECMP

**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dimensioni****Dimensions****ECMP070/056/030 U**

Albero lento cavo / Hollow output shaft



P18

**ECMP070/056/030 F**

Motori / Motors IP66

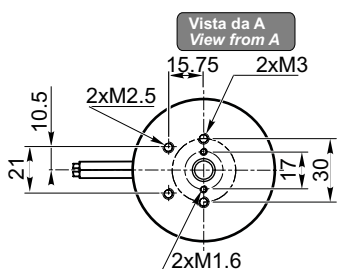
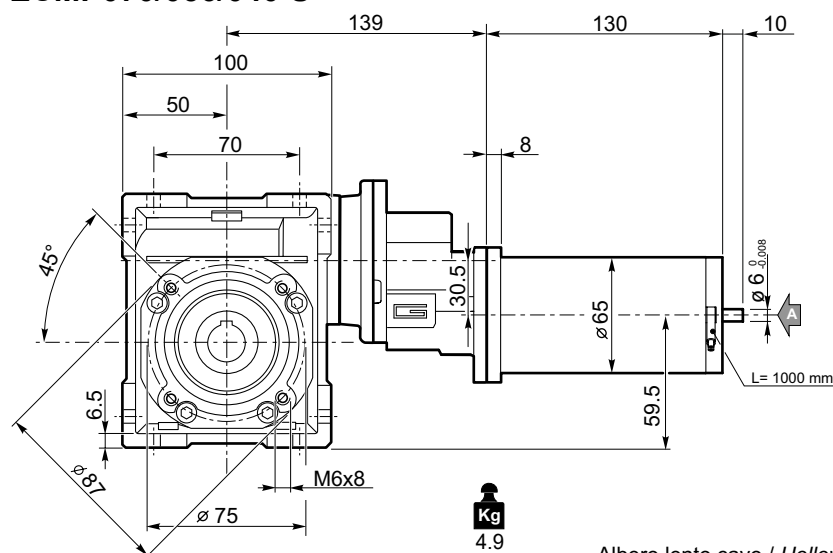
I2

Freno / Brake

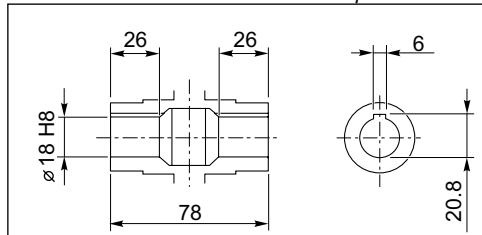
H23

Encoder

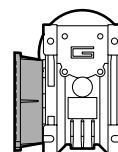
H24

ECMP070/056/040 U

Albero lento cavo / Hollow output shaft



P18

**ECMP070/056/040 F**
ECMP070/056/040 FL
ECMP070/056/040 FB

Motori / Motors IP66

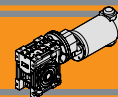
I2

Freno / Brake

H23

Encoder

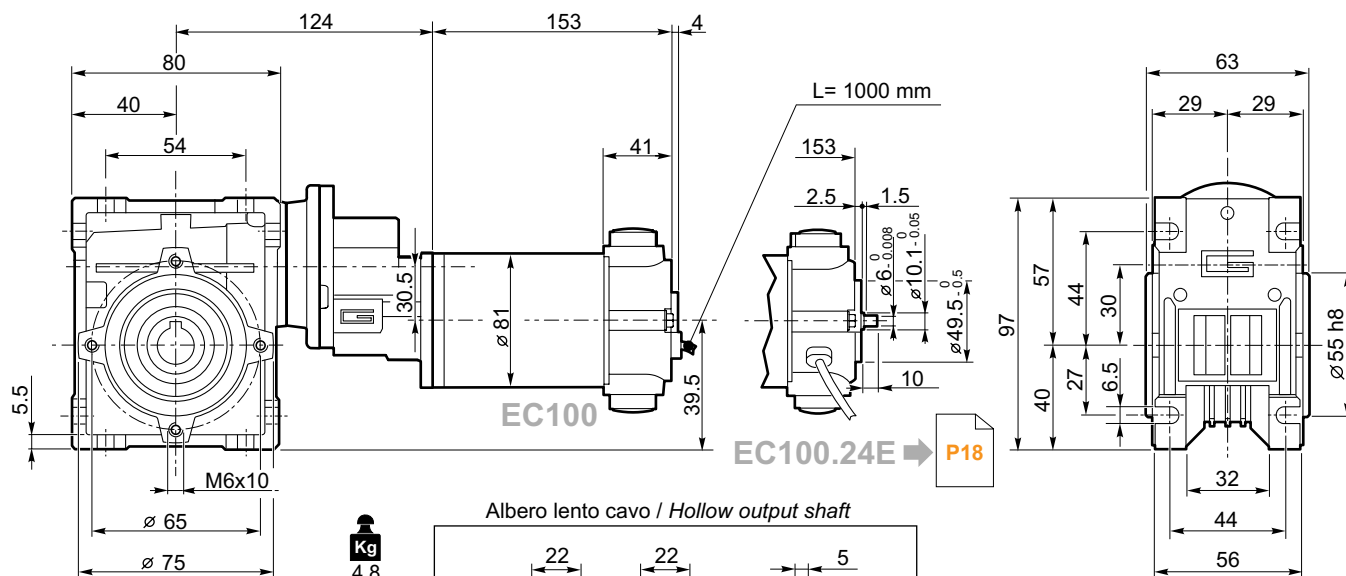
H24



Dimensioni

Dimensions

ECMP100/056/030 U



Motori / Motors IP66

I4

Freno / Brake

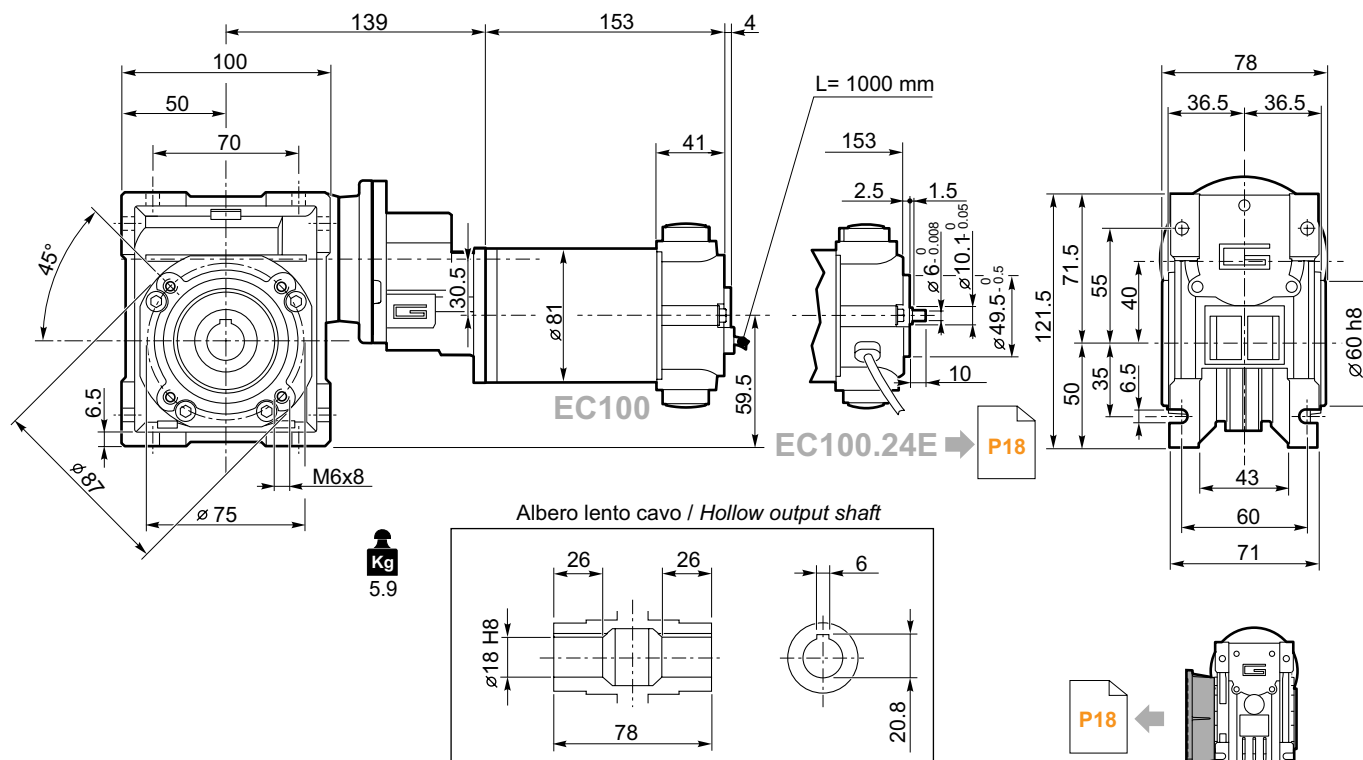
H23

Encoder

H24

ECMP100/056/030 F

ECMP100/056/040 U



Motori / Motors IP66

I4

Freno / Brake

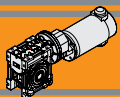
H23

Encoder

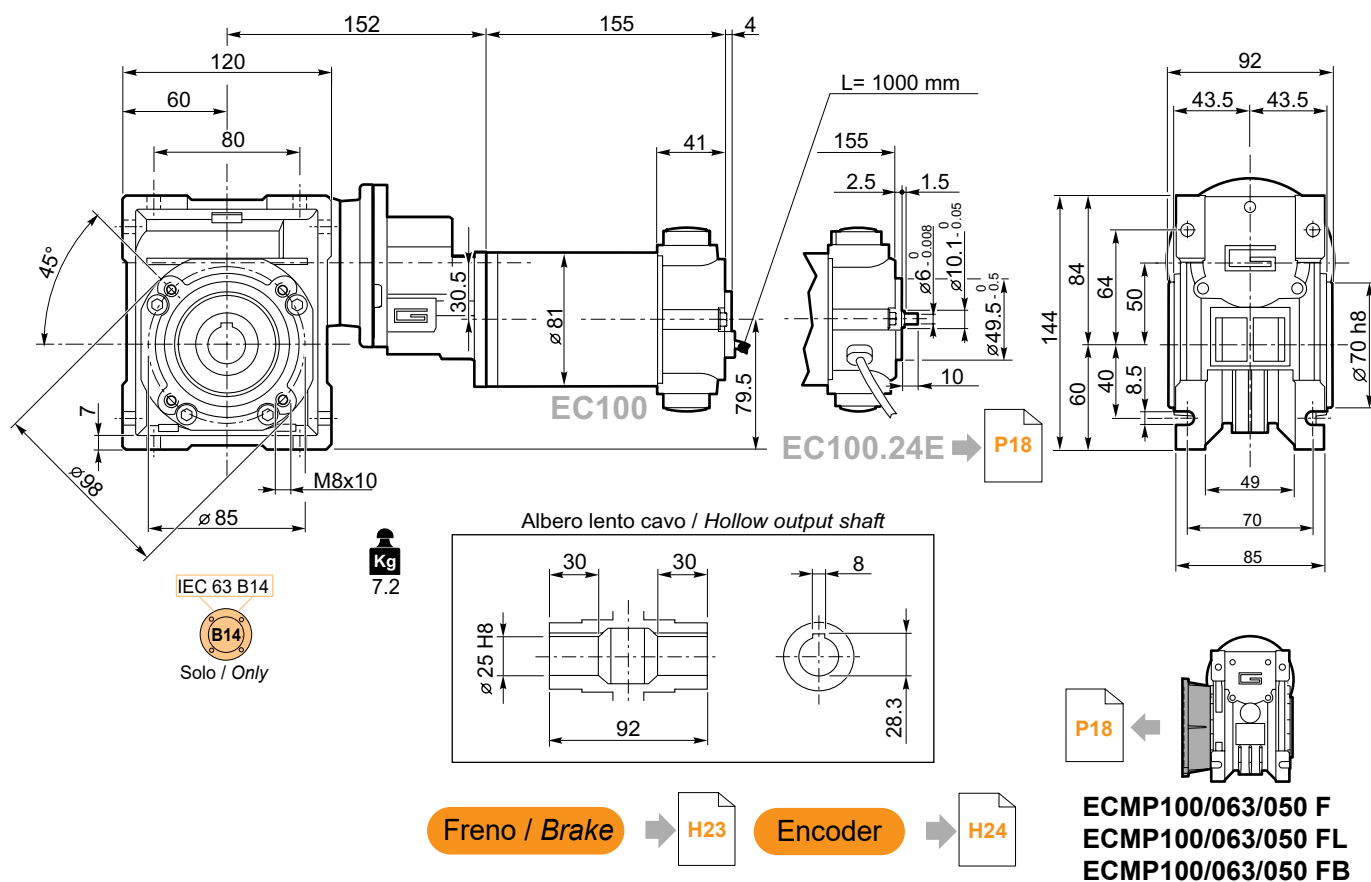
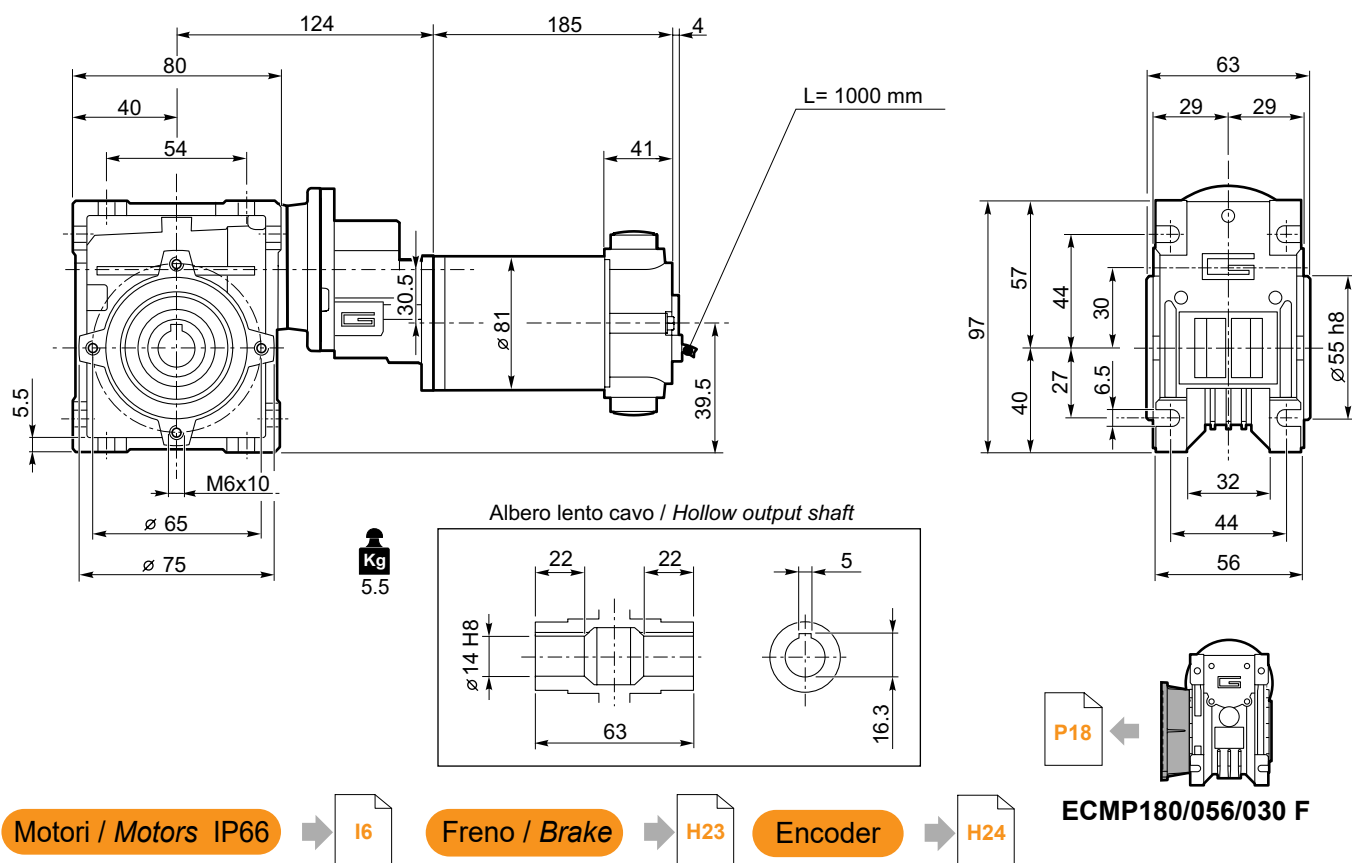
H24

ECMP100/056/040 F
ECMP100/05/040 FL
ECMP100/05/040 FB

ECMP

**ECMP**

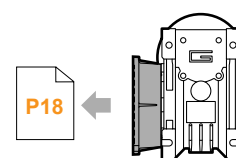
Motoriduttori CC a vite senza fine con precoppia
DC Pre stage wormgearmotors

Dimensioni**Dimensions****ECMP100/063/050 U****ECMP180/056/030 U**

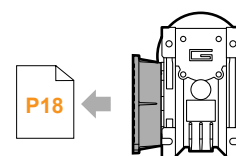
Dimensions

Technical drawing showing the front view of a mechanical component with the following dimensions:

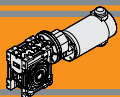
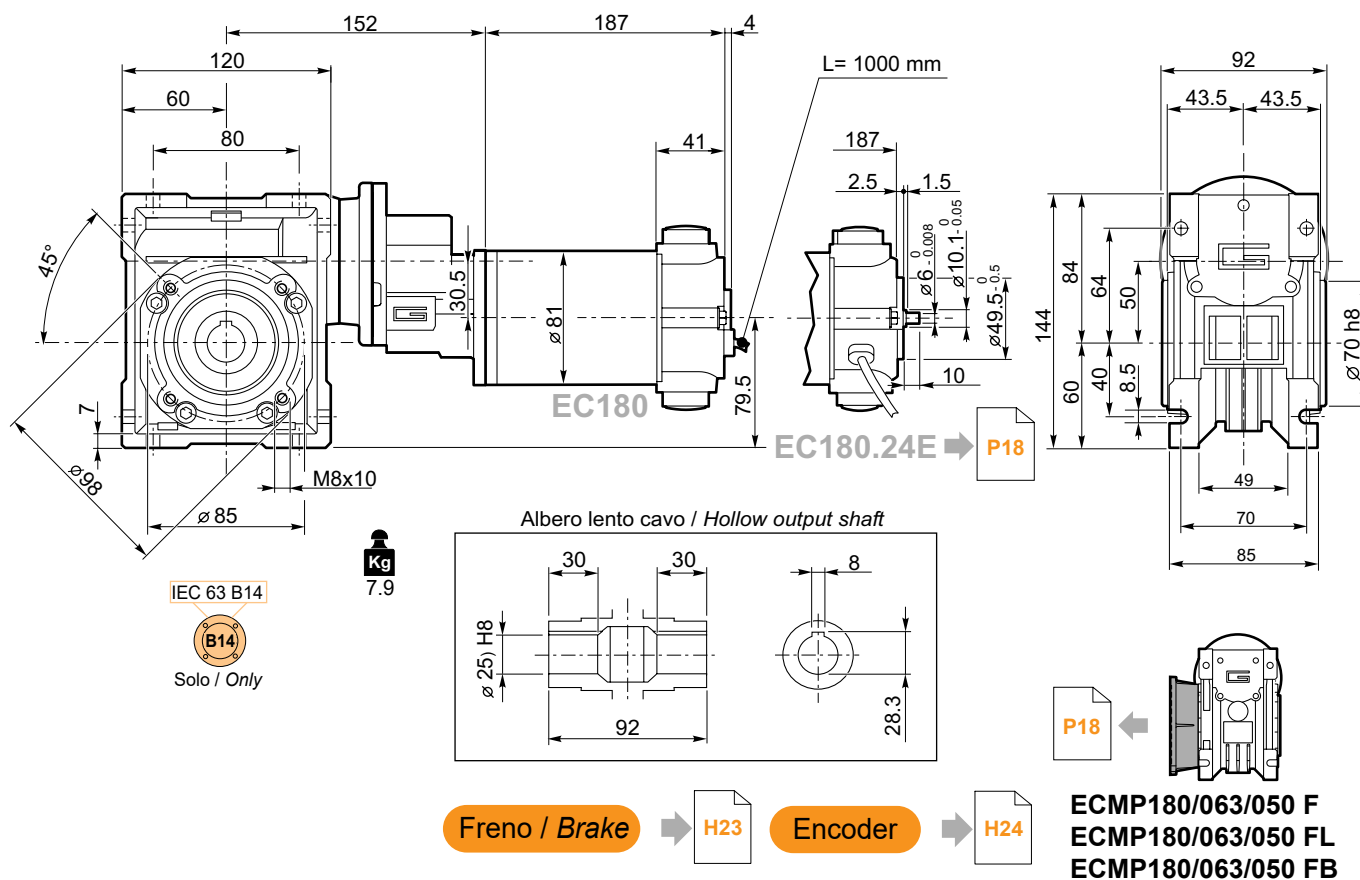
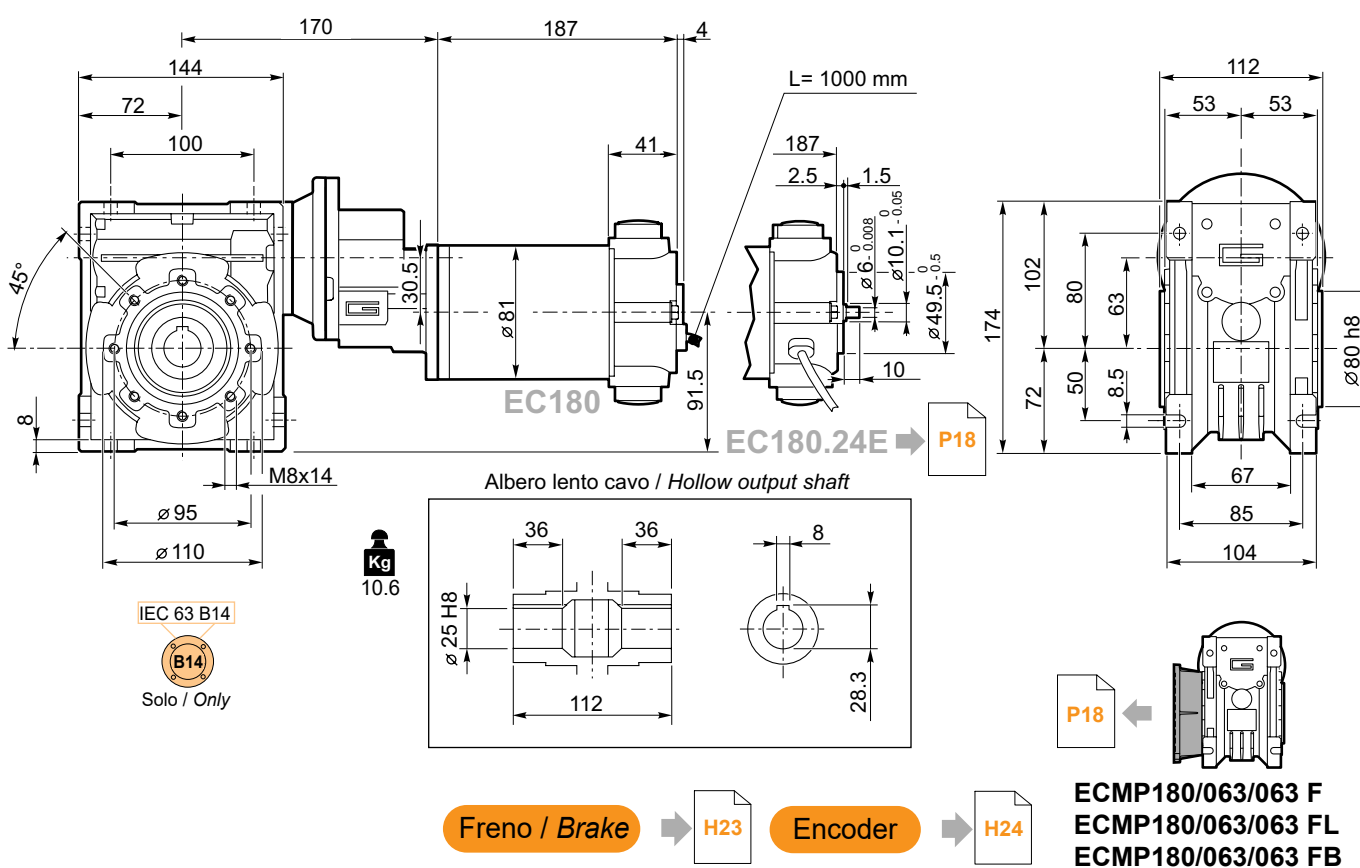
- Overall Width: 78
- Top Flange Diameter: $\varnothing 60 \text{ h}8$
- Mounting Hole Diameter: $\varnothing 60 \text{ h}8$
- Central Opening Diameter: 43
- Base Width: 60
- Total Height: 121.5
- Vertical Dimensions from Top: 71.5, 55, 40, 35, 6.5, 50
- Horizontal Dimensions from Center: 36.5, 36.5
- Bottom Mounting Hole Diameter: 71

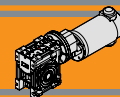


H24



H24

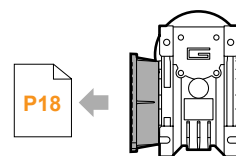
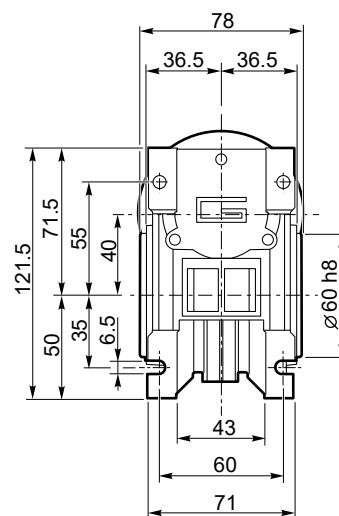
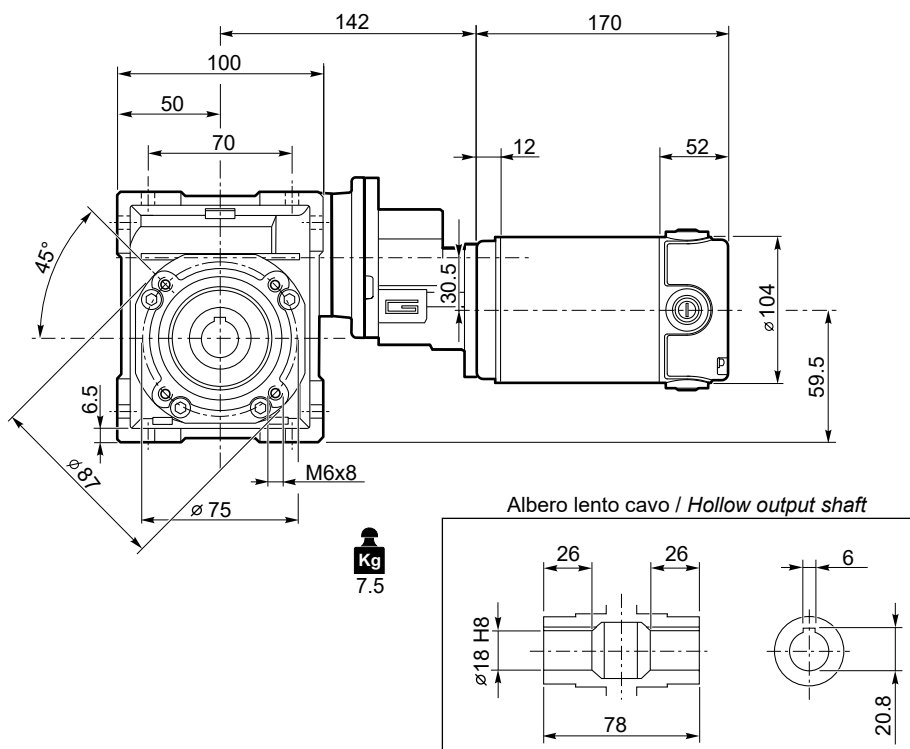
**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dimensioni****Dimensions****ECMP180/063/050 U****ECMP180/063/063 U**



Dimensioni

Dimensions

ECMP250/063/040 U

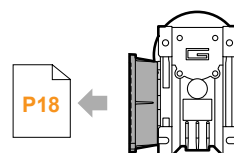
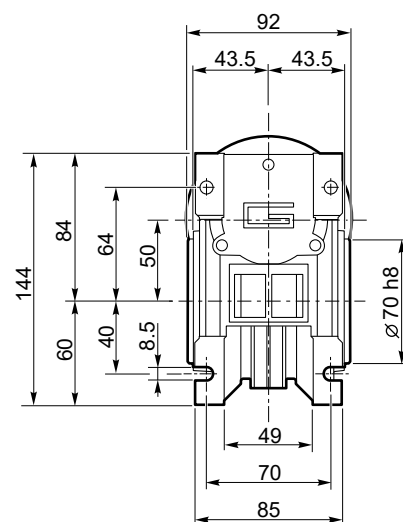
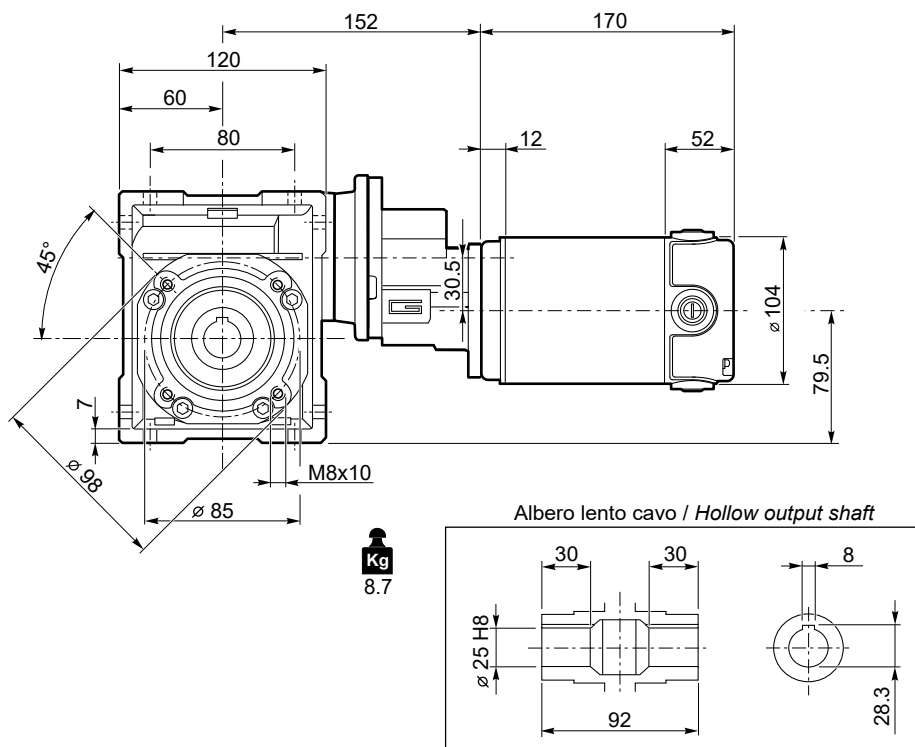


ECMP250/063/040 F
ECMP250/063/040 FL
ECMP250/063/040 FB

Motori / Motors IP66

I8

ECMP250/063/050 U

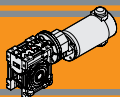
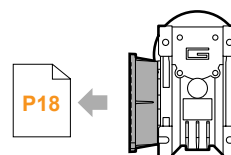
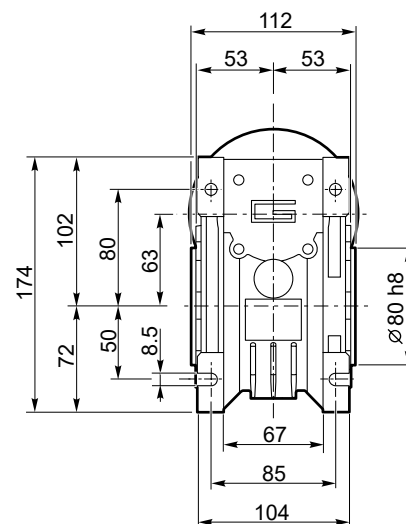
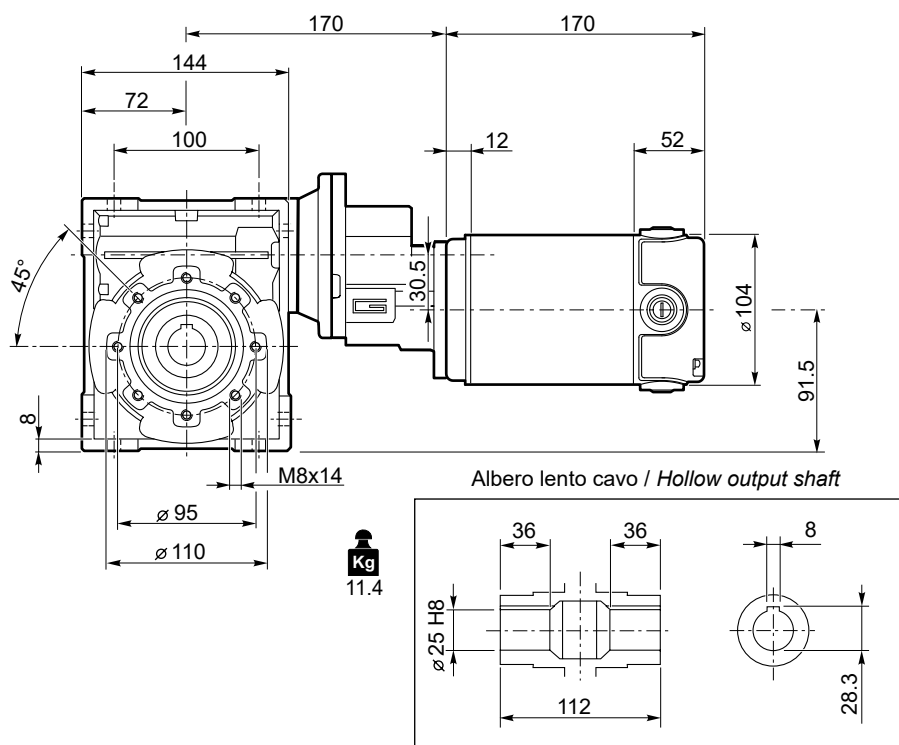
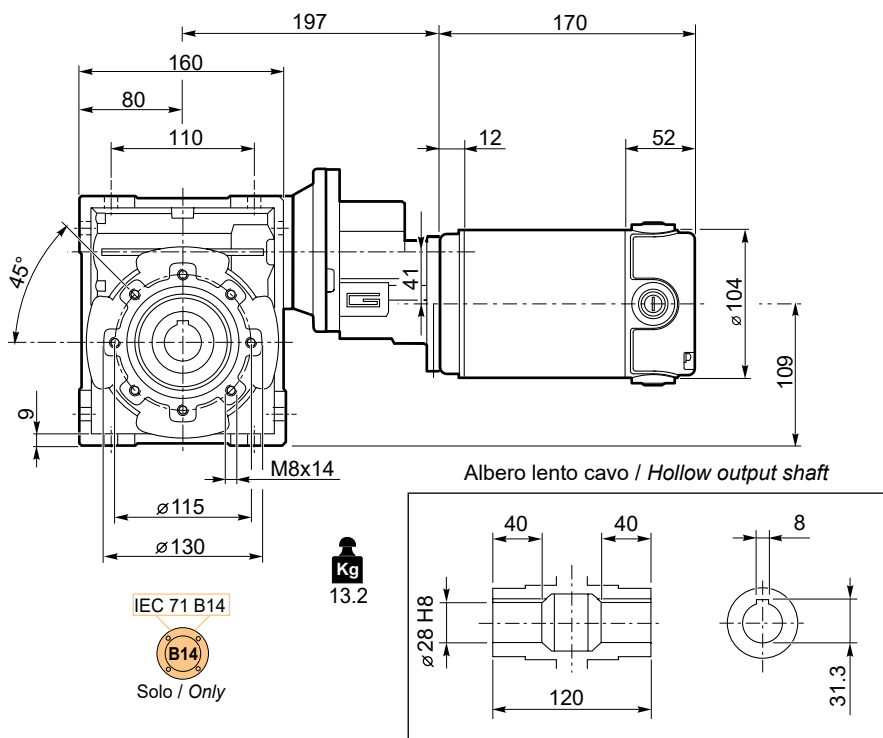
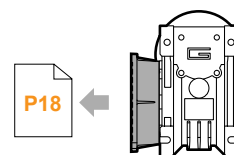
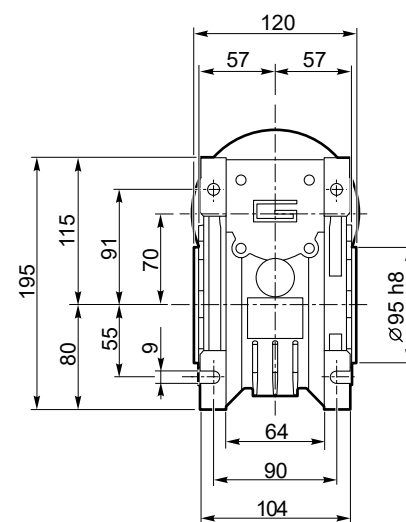


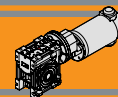
ECMP250/063/050 F
ECMP250/063/050 FL
ECMP250/063/050 FB

Motori / Motors IP66

I8

ECMP

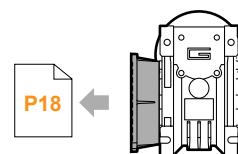
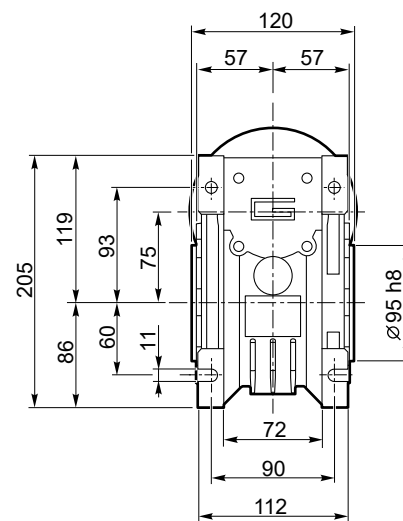
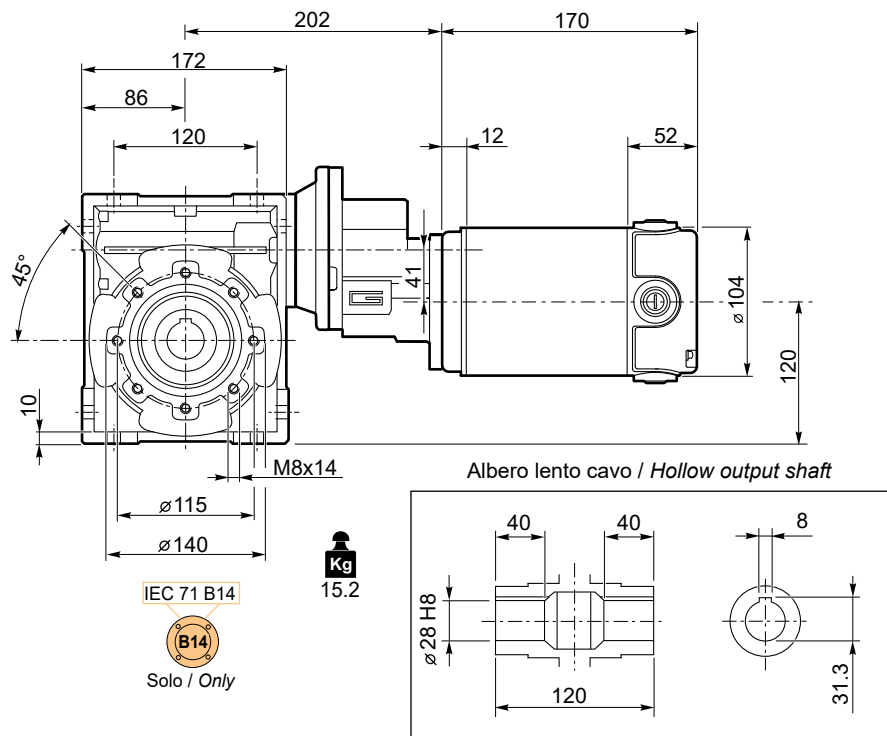
**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dimensioni****Dimensions****ECMP250/063/063 U****ECMP250/063/063 F**
ECMP250/063/063 FL
ECMP250/063/063 FB**Motori / Motors IP66****ECMP250/071/070 U****IEC 71 B14**
B14
Solo / Only**ECMP250/071/070 F**



Dimensioni

Dimensions

ECMP250/071/075 U

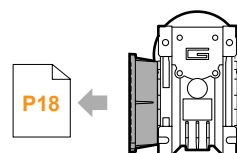
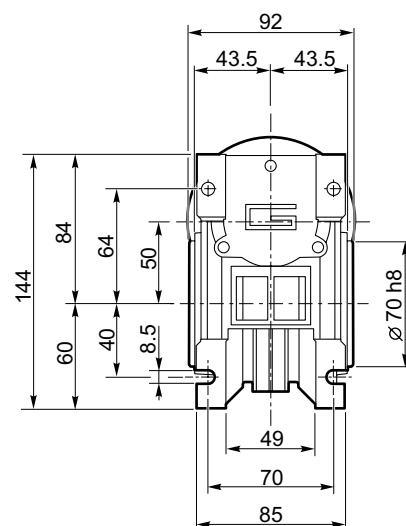
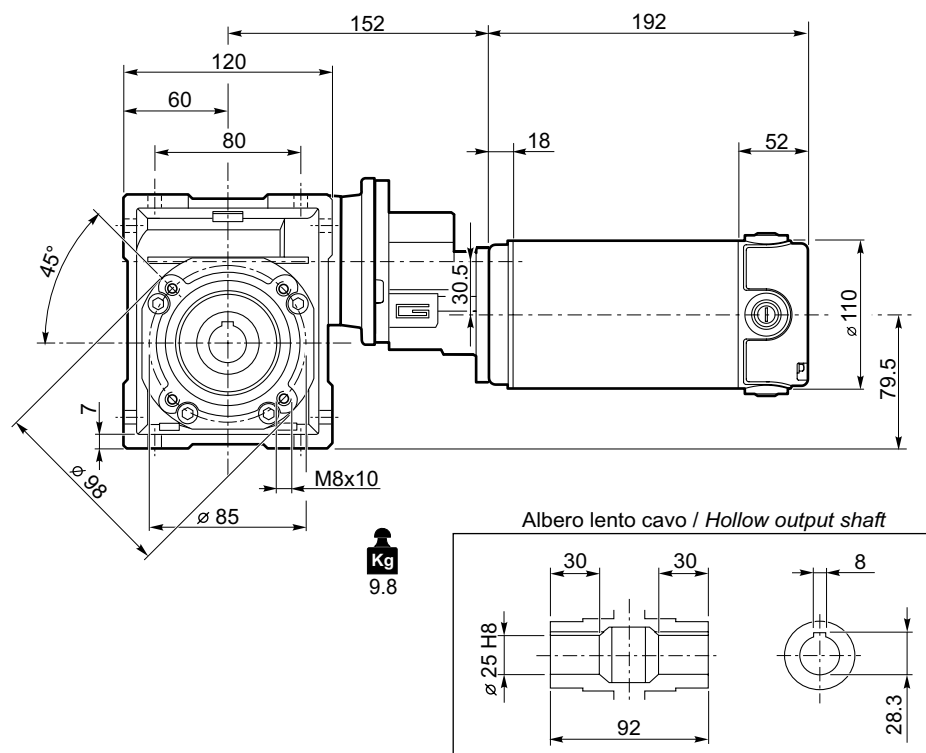


ECMP350/071/075 F

Freno / Brake

H23

ECMP350/063/050 U



ECMP350/063/050 F
ECMP350/063/050 FL
ECMP350/063/050 FB

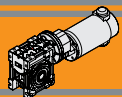
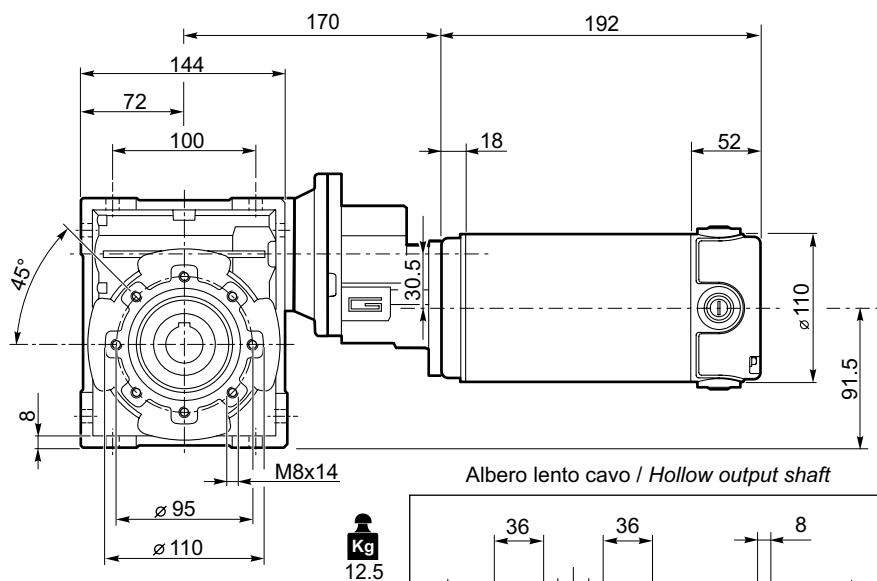
Motori / Motors IP66

I10

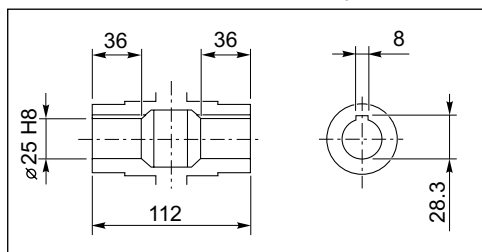
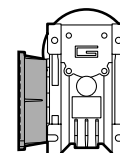
Freno / Brake

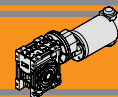
H23

ECMP

**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dimensioni****Dimensions****ECMP350/063/063 U**

Albero lento cavo / Hollow output shaft

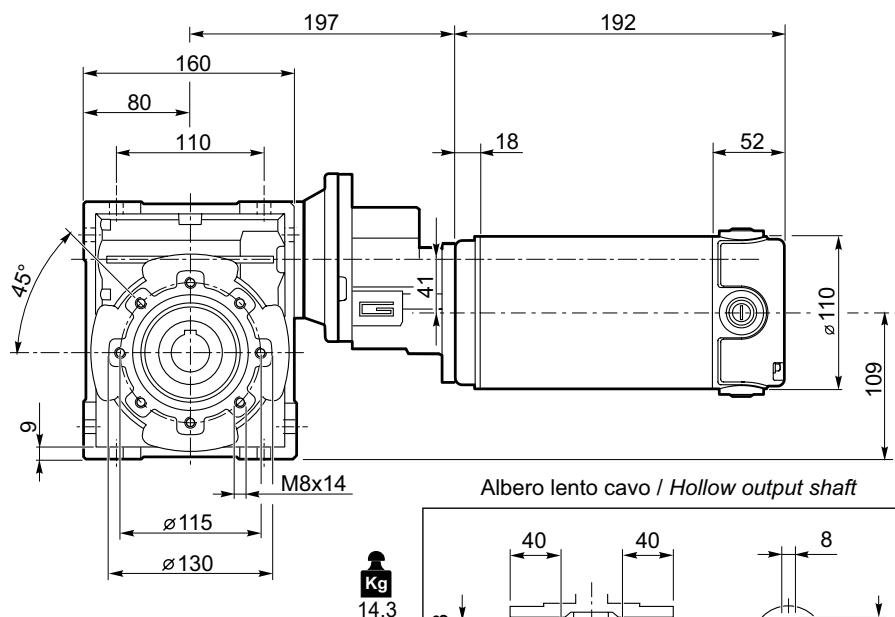
**Kg**
12.5**Motori / Motors IP66****I10****Freno / Brake****H23****P18****ECMP350/063/063 F**
ECMP350/063/063 FL
ECMP350/063/063 FB



Dimensioni

Dimensions

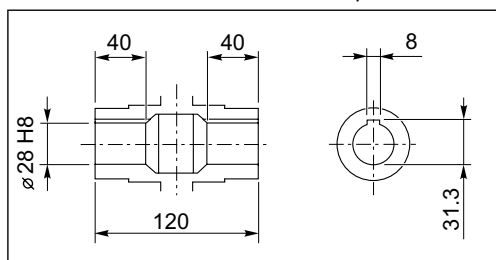
ECMP350/071/070 U



IEC 71 B14
B14
Solo / Only

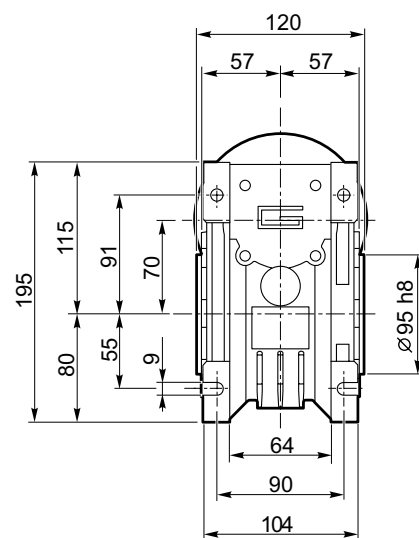
kg
14.3

Albero lento cavo / Hollow output shaft



Freno / Brake

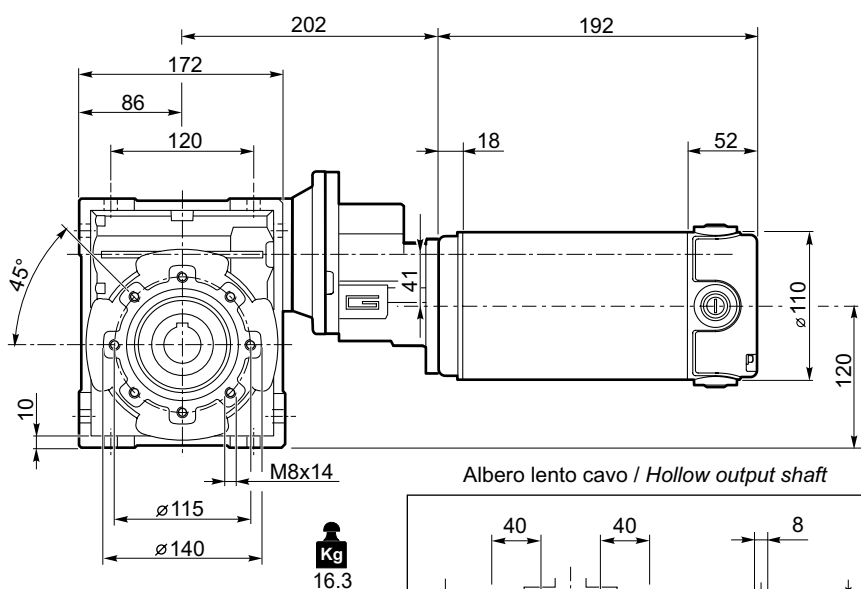
H23



P18

ECMP350/071/070 F

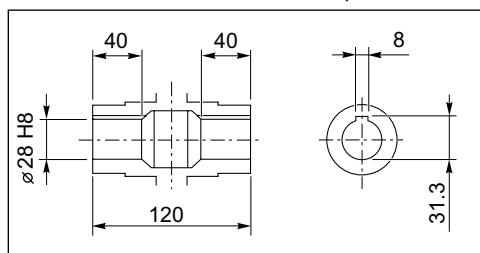
ECMP350/071/075 U



IEC 71 B14
B14
Solo / Only

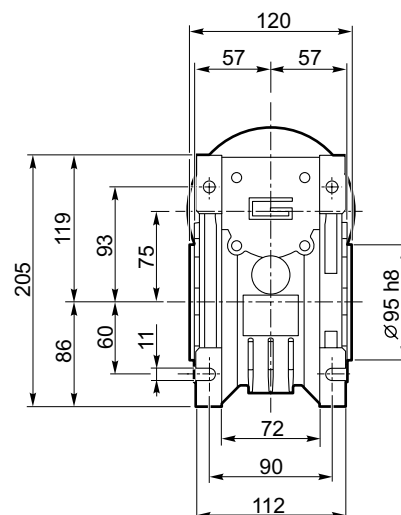
kg
16.3

Albero lento cavo / Hollow output shaft



Freno / Brake

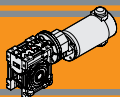
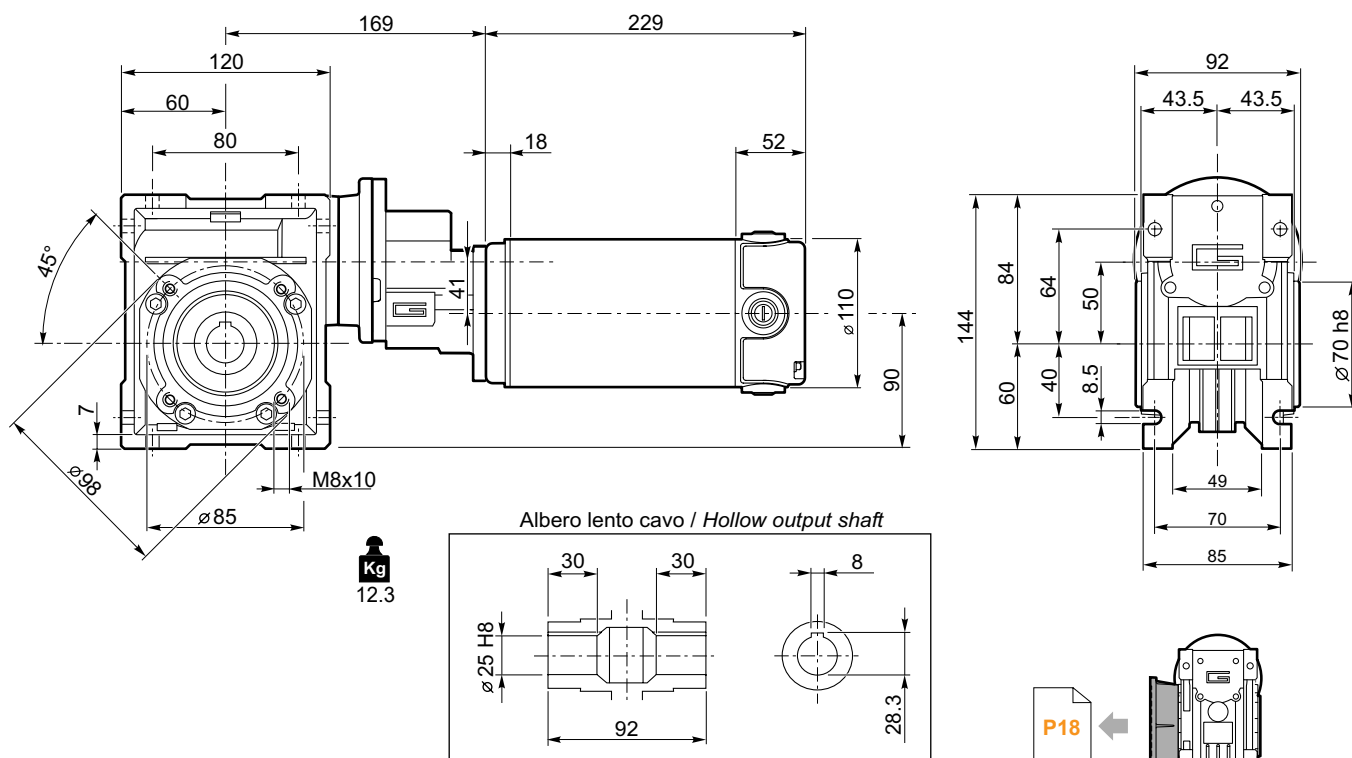
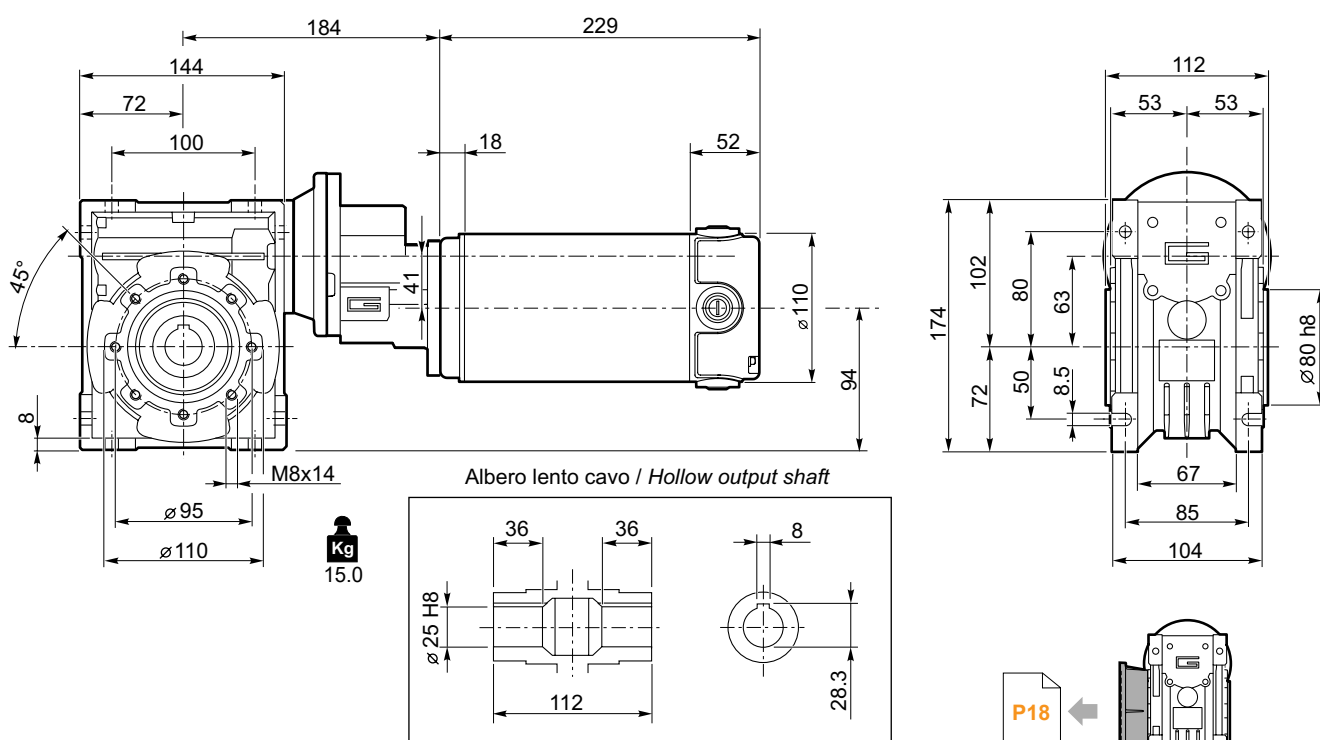
H23

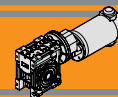


P18

ECMP350/071/075 F

ECMP

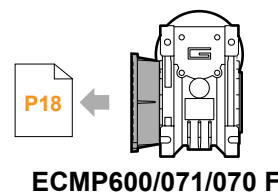
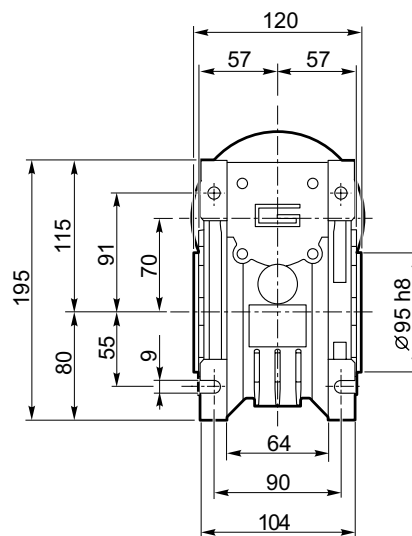
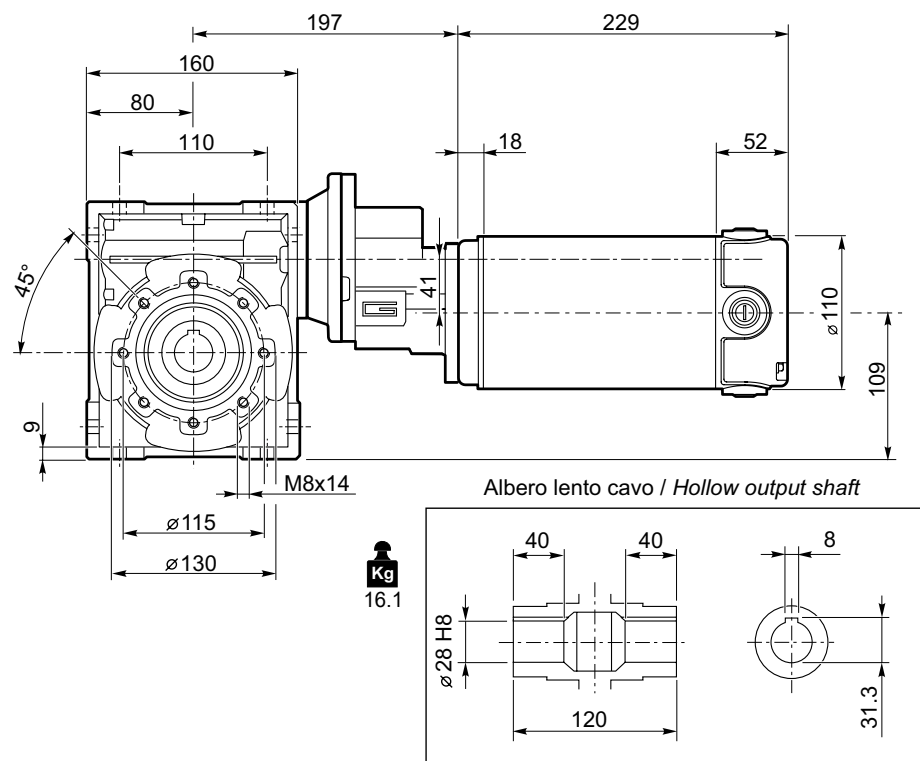
**ECMP****Motoriduttori CC a vite senza fine con precoppia**
DC Pre stage wormgearmotors**Dimensioni****Dimensions****ECMP600/071/050 U****Motori / Motors IP66****I12****Freno / Brake****H23****ECMP600/071/050 F**
ECMP600/071/050 FL
ECMP600/071/050 FB**ECMP600/071/063 U****Motori / Motors IP66****I12****Freno / Brake****H23****ECMP600/071/063 F**
ECMP600/071/063 FL
ECMP600/071/063 FB



Dimensioni

Dimensions

ECMP600/071/070 U



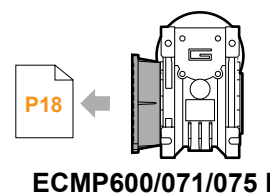
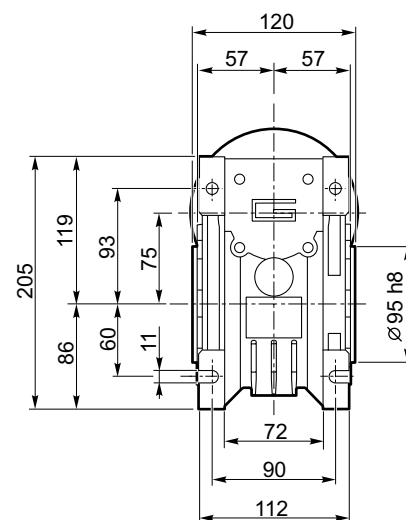
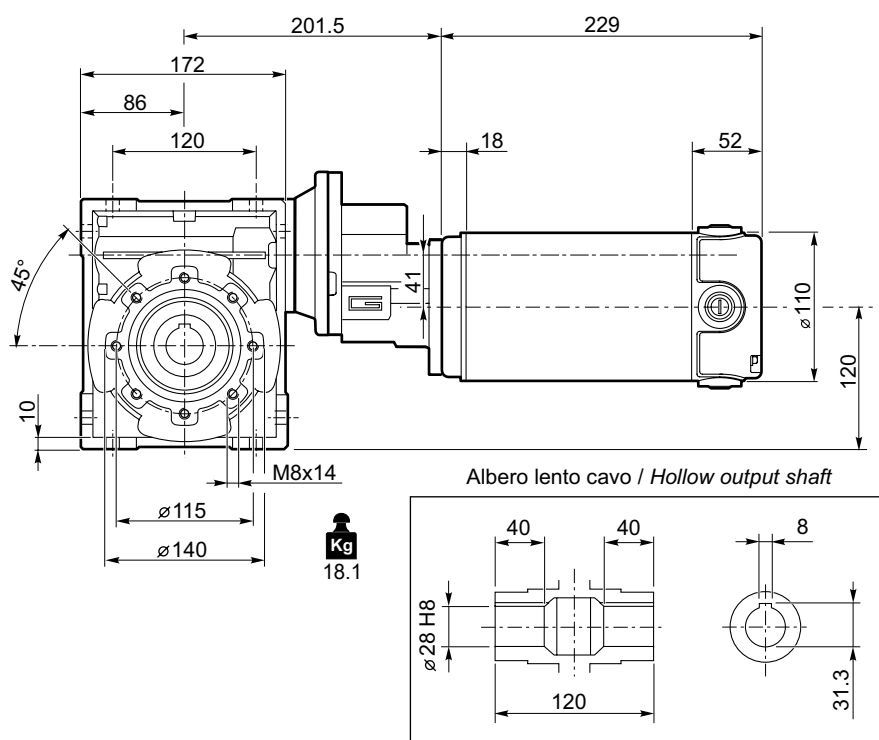
Motori / Motors IP66

I12

Freno / Brake

H23

ECMP600/071/075 U



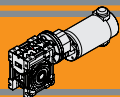
Motori / Motors IP66

I12

Freno / Brake

H23

ECMP



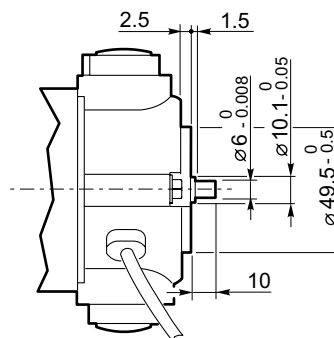
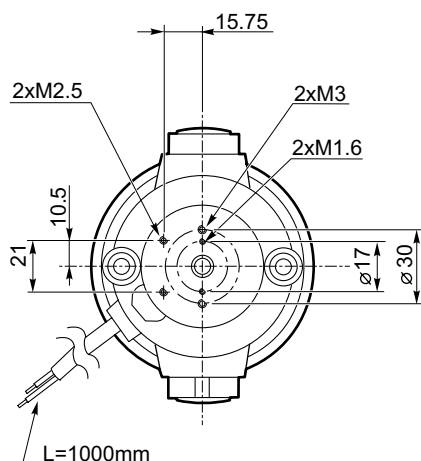
ECMP

Motoriduttori CC a vite senza fine con precoppia
DC Pre stage wormgearmotors

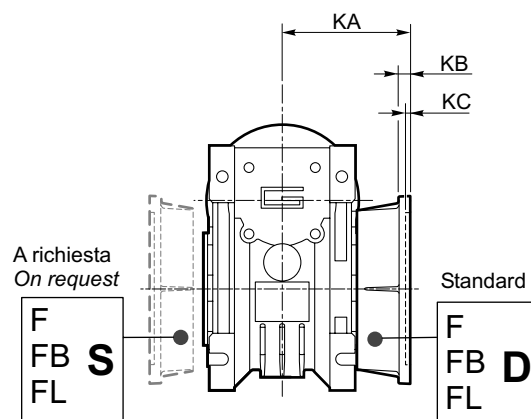
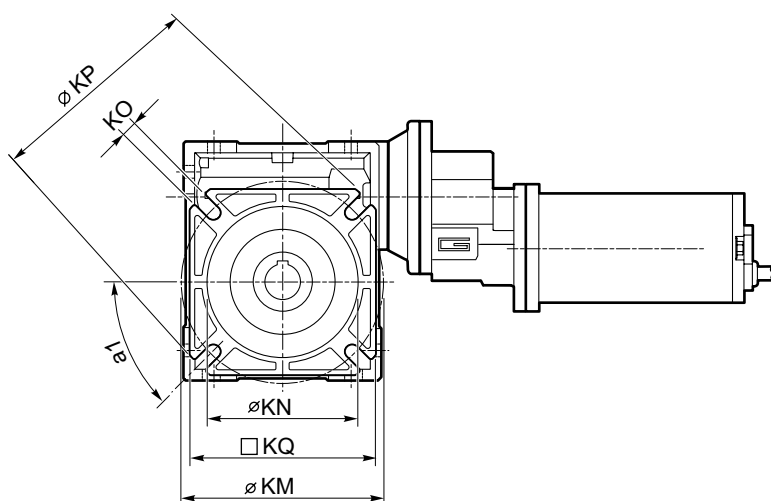
Dimensioni

Dimensions

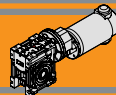
EC100.24E EC180.24E



ECMP.../... F... Flange uscita / Output flanges



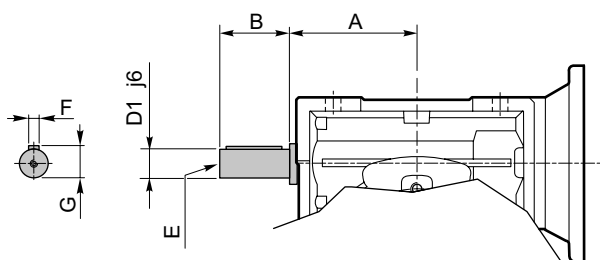
ECMP	ECMP..F									ECMP..FB								ECMP..FL							
	a1	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ
056/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
056/040 063/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95	60	9(n.4)	110	95
063/050 071/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110
063/063 071/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	160	112	10	6	150-160	115	11(n.4)	180	142
071/070	45°	107	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
071/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Opzioni

Options

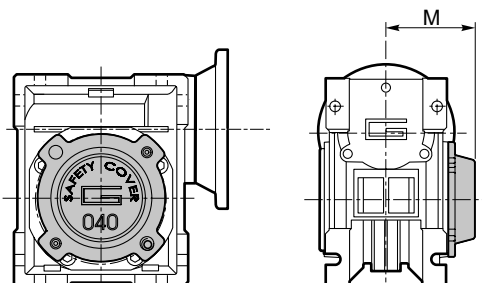
VS - Vite sporgente / Extended input shaft



ECMP	A	B	D ₁ j6	E	F	G
056/030	45	20	9	M4	3	10.2
056/040 063/040	53	23	11	M5	4	12.5
063/050	64	30	14	M6	5	16
063/063 071/063 080/063	75	40	19	M6	6	21.5
071/070	84	40	19	M6	6	21.5
071/075	90	50	24	M8	8	27

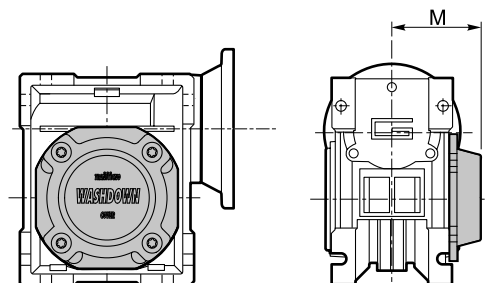
Costruito su richiesta
Built on request

SC - Safety cover

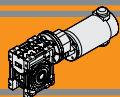


ECMP	M
... 030	47
... 040	54.5
... 050	62.5
... 063	73
... 070	75
... 075	79

WD - Washdown cover



ECMP	M
... 030	48
... 040	55.5
... 050	63.5
... 063	71.5
... 070	76
... 075	80



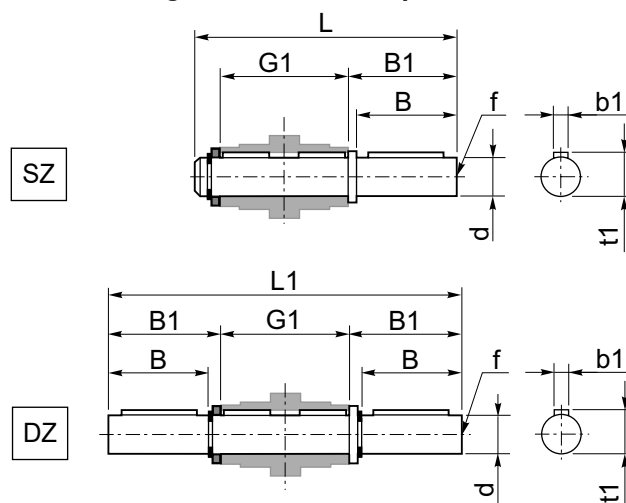
Accessori

Accessories

Albero lento semplice e doppio

CMP	d _{h7}	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
063/050	25	50	53.5	92	153	199	M10	8	28
063/063 071/063 080/063	25	50	53.5	112	173	219	M10	8	28
071/070	28	60	63.5	120	192	247	M10	8	31
071/075	28	60	63.5	120	192	247	M10	8	31

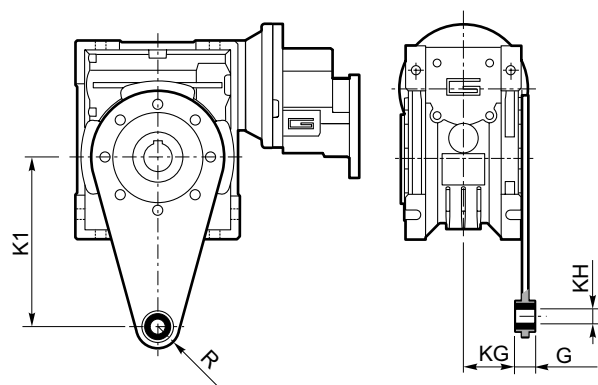
Single and double output shaft



Braccio di reazione

CMP	K1	G	KG	KH	R
056/030	85	14	23	8	15
056/040 063/040	100	14	31	10	18
063/050	100	14	38	10	18
063/063 071/063 080/063	150	14	47.5	10	18
071/070	200	25	46.5	20	30
071/075	200	25	46.5	20	30

Torque arm





Ferrite

Motoriduttori CC a vite senza fine combinati **DC double reduction wormgearmotors**

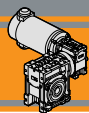




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Designazione	<i>Classification</i>	Q2
Simbologia	<i>Symbols</i>	Q2
Esecuzioni di montaggio	<i>Mounting executions</i>	Q2
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Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	Q4
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**ECMM****Motoriduttori CC a vite senza fine combinati**
DC Double reduction wormgearmotors**Caratteristiche tecniche****Technical features**

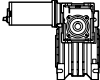
Le caratteristiche principali dei motoriduttori CC a vite senza fine combinati a magneti permanenti in ferrite serie ECMM sono:

- Alimentazione in bassa tensione 12/24Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcassa in pressofusione di alluminio nelle grandezze 026, 030, 040, 050, 063, 075, 090 e 110. La grandezza 130 è costruita con carcassa in ghisa
- Lubrificazione permanente con olio sintetico

The main features of ECMM ferrite permanent magnets DC reduction wormgearmotors range are:

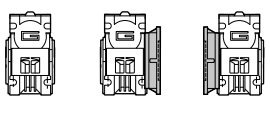
- Low voltage power supply 12/24Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 up to 800W S2
- Ferrite magnets
- Die cast aluminium housing on sizes 026, 030, 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130
- Permanent synthetic oil long life lubrication

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	
	ECMM	070/026/026	100/026/026	180/026/040	350/030/040	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)	180/026/050	350/030/050										
	070/026/026 (D14)	100/026/026 (D14)	180/030/040	350/030/063										
	070/026/030	100/026/030	180/030/050	350/040/070										
	070/026/040	100/026/040	180/030/063	350/040/075										
	070/026/050	100/026/050	180/040/070	350/040/090										
	070/030/040	100/030/040	180/040/075	350/050/110										
	070/030/050	100/030/050	180/040/090	350/063/130										
	070/030/063	100/030/063	180/050/110											
	070/040/070	100/040/075												
	070/040/075	100/040/090												
	070/040/090													
			250/030/040	600/040/070										
			250/030/050	600/040/075										
			250/030/063	600/040/090										
			250/040/070	600/050/110										
			250/040/075	600/063/130										
			250/040/090											
			250/050/110											

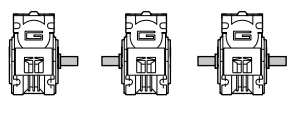
* NOTA: il braccio di reazione viene fornito smontato.
NOTE: the torque arm will be supplied not assembled.

Versione Riduttore
Gearbox Version



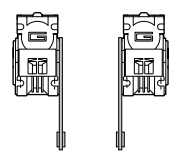
U F...D F...S

Albero di uscita
Output shaft



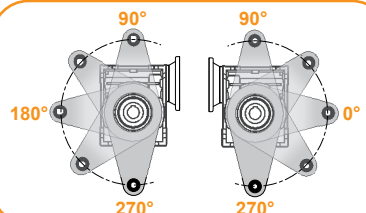
SZDX SZSX DZ

Braccio di reazione
Torque arm



BRDX BRSX

Angolo
Angle

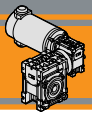


90° 90°
180° 0°
270° 270°

Simbologia**Symbols**

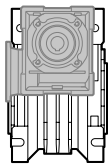
n_1 [min⁻¹] Velocità in ingresso / Input speed
 n_2 [min⁻¹] Velocità in uscita / Output speed
i Rapporto di riduzione / Ratio
 P_1 [kW] Potenza in entrata / Input power

M_2 [Nm] Coppia 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

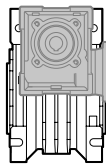


Esecuzioni di montaggio

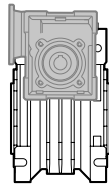
Mounting executions



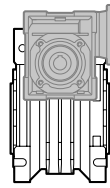
UB1



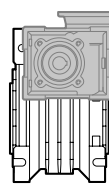
UB2



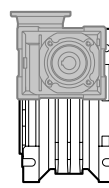
US1



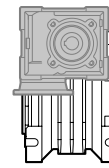
US2



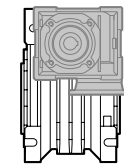
UV1



UV2



UC1



UC2

Combinazioni rapporti

Combination ratio

CMM 026/026 - CMM 026/030 - CMM 026/040 - CMM 026/050												
	i (i ₁ x 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 - CMM 030/050 - CMM 030/063 - CMM 040/070 - CMM 040/075 - CMM 040/090 - CMM 050/110 - CMM 063/130																
	i (i ₁ x i ₂)															
	75	100	150	200	250	300	400	500	600	750	900	1200	1500	1800	2400	3000
i ₁	7.5	10	10	10	10	10	10	10	20	25	30	40	50	60	60	60
i ₂	10	10	15	20	25	30	40	50	30	30	30	30	30	30	40	50

Lubrificazione

Lubrication

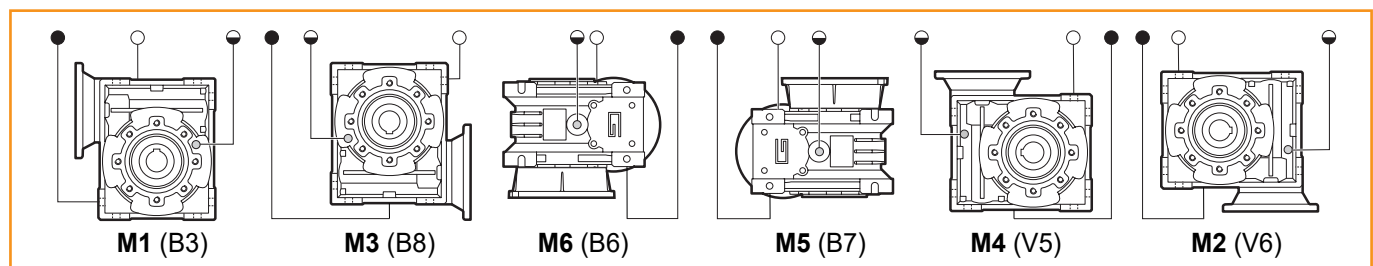
Tutti i motoriduttori nelle taglie 26, 30, 40, 50, 63, 70, 75, 90, 110 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione. Per la taglia 130 la lubrificazione dipende dalla posizione di montaggio

Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use the gearmotors size 26, 30, 40, 50, 63, 70, 75, 90, 110 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance. Only for size 130, the lubrication depended of mounting positions

Quantità di olio (litri) / Oil quantity (litres)						
	M1 (B3)	M3 (B8)	M6 (B6)	M5 (B7)	M4 (V5)	M2 (V6)
CM130	4.5	3.3	3.5	3.5	4.5	3.3

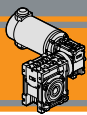
Lubrificato a vita
Life lubrication

Posizioni di montaggio / Mounting positions



(standard)

- Sfiato e tappo di riempimento / Breather and filling plug
- Livello olio / Oil level plug
- Tappo di scarico / Oil drain plug

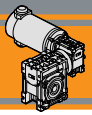
**ECMM**
Motoriduttori CC a vite senza fine combinati
DC Double reduction wormgearmotors
Dati tecnici per servizio S2**Technical data for S2 duty**

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
100							100						
(3000 min ⁻¹)	20.0	26	1.0	150	ECMM 070/026/026	12E/24E	(3000 min ⁻¹)	40.0	15	5.5	75	ECMM 070/030/040	12E/24E
	13.3	26	1.0	225		120.66/240.66		30.0	20	4.2	100		120.66/240.66
	10.0	27	1.0	300				20.0	28	3.2	150		
	6.7	27	1.0	450				15.0	36	2.1	200		
	5.0	27	1.0	600				12.0	43	1.6	250		
	3.3	27	1.0	900				10.0	46	2.0	300		
	2.5	27	1.0	1200				7.5	55	1.3	400		
	2.0	27	1.0	1500				6.0	63	1.1	500		
	1.7	27	1.0	1800				5.0	86	1.0	600		
	1.3	22	1.0	2400				4.0	103	0.9	750		
	1.0	20	1.0	3000				3.3	118	0.8	900		
	0.8	18	1.0	3600				2.5	74	1.0	1200		
								2.0	90	1.0	1500		
								1.7	90	1.0	1800		
								1.3	74	1.0	2400		
								1.0	68	1.0	3000		
	20.0	26	1.5	150	ECMM 070/026/030	12E/24E						ECMM 070/030/050	12E/24E
	13.3	39	1.0	225		120.66/240.66							120.66/240.66
	10.0	40	1.0	300									
	6.7	40	1.0	450									
	5.0	40	1.0	600				15.0	36	7.1	200		12E/24E
	3.3	40	1.0	900				12.0	43	5.8	250		120.66/240.66
	2.5	40	1.0	1200				10.0	46	3.5	300		
	2.0	40	1.0	1500				7.5	57	2.4	400		
	1.7	40	1.0	1800				6.0	64	2.0	500		
	1.3	34	1.0	2400				5.0	87	1.9	600		
	1.0	30	1.0	3000				4.0	105	1.5	750		
	0.8	27	1.0	3600				3.3	120	1.4	900		
								2.5	146	0.9	1200		
								2.0	175	0.9	1500		
								1.7	201	0.8	1800		
								1.3	135	1.0	2400		
								1.0	125	1.0	3000		
	20.0	27	3.2	150	ECMM 070/026/040	12E/24E						ECMM 070/030/063	12E/24E
	13.3	40	2.2	225		120.66/240.66							120.66/240.66
	10.0	45	2.0	300									
	6.7	66	1.4	450				4.0	109	2.4	750		12E/24E
	5.0	85	1.1	600				3.3	124	2.5	900		120.66/240.66
	3.3	90	1.0	900				2.5	149	1.7	1200		
	2.5	90	1.0	1200				2.0	181	1.4	1500		
	2.0	90	1.0	1500				1.7	208	1.2	1800		
	1.7	90	1.0	1800				1.3	249	1.0	2400		
	1.3	74	1.0	2400				1.0	288	0.8	3000		
	1.0	68	1.0	3000									
	0.8	62	1.0	3600				2.5	155	2.5	1200	ECMM 070/040/070	12E/24E
								2.0	193	2.4	1500		120.66/240.66
								1.7	221	2.1	1800		
								1.3	265	1.4	2400		
								1.0	307	1.1	3000		
	20.0	28	4.1	150	ECMM 070/026/050	12E/24E						ECMM 070/040/075	12E/24E
	13.3	42	2.8	225		120.66/240.66			2.5	158	3.0		120.66/240.66
	10.0	46	3.5	300				2.0	193	2.8	1500		
	6.7	67	2.4	450				1.7	221	2.5	1800		
	5.0	86	1.9	600				1.3	270	1.7	2400		
	3.3	118	1.4	900				1.0	307	1.3	3000		
	2.5	147	1.1	1200								ECMM 070/040/090	12E/24E
	2.0	162	1.0	1500				1.3	285	2.9	2400		12E/24E
	1.7	162	1.0	1800				1.0	331	2.1	3000		120.66/240.66
	1.3	135	1.0	2400									
	1.0	125	1.0	3000									
	0.8	113	1.0	3600									

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 per servizio S2

Technical data for S2 duty

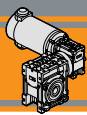
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
140							140						
(3000 min ⁻¹)	20.0	26	1.0	150	ECMM 100/026/026	120/240/24E	(3000 min ⁻¹)	40.0	21	3.9	75	ECMM 100/030/040	120/240/24E
	13.3	26	1.0	225		120.66/240.66		30.0	28	3.0	100		120.66/240.66
	10.0	27	1.0	300				20.0	38	2.3	150		
	6.7	27	1.0	450				15.0	50	1.5	200		
	5.0	27	1.0	600				12.0	59	1.1	250		
	3.3	27	1.0	900				10.0	63	1.4	300		
	2.5	27	1.0	1200				7.5	77	1.0	400		
	2.0	27	1.0	1500				6.0	87	0.8	500		
	1.7	27	1.0	1800				5.0	119	0.8	600		
	1.3	22	1.0	2400				4.0	90	1.0	750		
	1.0	20	1.0	3000				3.3	90	1.0	900		
	0.8	18	1.0	3600				2.5	74	1.0	1200		
	20.0	37	1.1	150	ECMM 100/026/030	120/240/24E		1.7	90	1.0	1800		
	13.3	39	1.0	225		120.66/240.66		1.3	74	1.0	2400		
	10.0	40	1.0	300				1.0	68	1.0	3000		
	6.7	40	1.0	450				15.0	50	2.7	200	ECMM 100/030/050	120/240/24E
	5.0	40	1.0	600				12.0	59	2.1	250		120.66/240.66
	3.3	40	1.0	900				10.0	64	2.5	300		
	2.5	40	1.0	1200				7.5	78	1.7	400		
	2.0	40	1.0	1500				6.0	89	1.4	500		
	1.7	40	1.0	1800				5.0	121	1.3	600		
	1.3	34	1.0	2400				4.0	146	1.1	750		
	1.0	30	1.0	3000				3.3	166	1.0	900		
	0.8	27	1.0	3600				2.5	202	0.7	1200		
	20.0	38	2.3	150	ECMM 100/026/040	120/240/24E		2.0	243	0.7	1500		
	13.3	55	1.6	225		120.66/240.66		1.7	162	1.0	1800		
	10.0	63	1.4	300				1.3	135	1.0	2400		
	6.7	92	1.0	450				1.0	125	1.0	3000		
	5.0	90	1.0	600				6.0	92	2.5	500	ECMM 100/030/063	120/240/24E
	3.3	90	1.0	900				5.0	125	1.9	600		120.66/240.66
	2.5	90	1.0	1200				4.0	151	1.7	750		
	2.0	90	1.0	1500				3.3	172	1.8	900		
	1.7	90	1.0	1800				2.5	206	1.3	1200		
	1.3	74	1.0	2400				2.0	252	1.0	1500		
	1.0	68	1.0	3000				1.7	288	0.8	1800		
	0.8	62	1.0	3600				1.3	346	0.8	2400		
	20.0	39	2.9	150	ECMM 100/026/050	120/240/24E		1.0	232	1.0	3000		
	13.3	58	2.7	225		120.66/240.66		3.3	179	2.5	900	ECMM 100/040/070	120/240/24E*
	10.0	64	2.5	300				2.5	215	1.8	1200		120.66/240.66
	6.7	93	1.7	450				2.0	267	1.7	1500		
	5.0	120	1.4	600				1.7	307	1.5	1800		
	3.3	164	1.0	900				1.3	368	1.0	2400		
	2.5	162	1.0	1200				1.0	426	0.8	3000		
	2.0	162	1.0	1500				3.3	179	3.1	900	ECMM 100/040/075	120/240/24E*
	1.7	162	1.0	1800				2.5	219	2.2	1200		120.66/240.66
	1.3	135	1.0	2400				2.0	267	2.0	1500		
	1.0	125	1.0	3000				1.7	307	1.8	1800		
	0.8	113	1.0	3600				1.3	375	1.3	2400		
								1.0	426	0.9	3000		
								1.7	322	2.9	1800	ECMM 100/040/090	120/240/24E*
								1.3	395	1.6	2400		120.66/240.66
								1.0	460	1.6	3000		

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

*: Motore inclinato con portaspazzola a 45°
Motor assembly with brush holder inclined 45°

**ECMM**
Motoriduttori CC a vite senza fine combinati
DC Double reduction wormgearmotors
Dati tecnici per servizio S2**Technical data for S2 duty**

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
250							250						
(3000 min ⁻¹)	20.0	70	1.2	150	ECMM 180/026/040	120/240	(3000 min ⁻¹)	12.0	113	3.6	250	ECMM 180/040/075	120/240*
	13.3	103	0.8	225		120.66/240.66		10.0	125	4.4	300		24E
	10.0	116	0.8	300				7.5	153	3.1	400		120.66/240.66
	20.0	73	1.6	150	ECMM 180/026/050	120/240		6.0	174	2.3	500		
	13.3	108	1.1	225		120.66/240.66	5.0	239	2.3	600			
	10.0	118	1.4	300			4.0	288	1.9	750			
	6.7	173	0.9	450			3.3	333	1.6	900			
	5.0	223	0.7	600			2.5	407	1.2	1200			
							2.0	497	1.1	1500			
	40.0	40	2.1	75	ECMM 180/030/040	120/240/24E		1.7	570	1.0	1800		
	30.0	52	1.6	100		120.66/240.66	1.3	470	1.0	2400			
	20.0	71	1.2	150			1.0	403	1.0	3000			
	15.0	92	0.8	200			5.0	251	2.3	600	ECMM 180/040/090	120/240*	
	12.0	67	1.0	250			4.0	302	1.8	750		24E	
	10.0	90	1.0	300			3.3	349	2.1	900		120.66/240.66	
	7.5	74	1.0	400			2.5	429	1.9	1200			
	6.0	68	1.0	500			2.0	522	1.2	1500			
	5.0	90	1.0	600			1.7	599	0.9	1800			
	4.0	90	1.0	750			1.3	735	0.9	2400			
	3.3	90	1.0	900			1.0	855	0.8	3000			
	40.0	40	2.9	75	ECMM 180/030/050	120/240/24E	3.3	359	3.6	900	ECMM 180/050/110	120/240/24E*	
	30.0	52	2.3	100		120.66/240.66	2.5	457	3.2	1200		IEC 63B14	
	20.0	74	2.2	150			2.0	545	2.0	1500			
	15.0	94	1.5	200			1.7	627	1.6	1800		Solo / Only	
	12.0	110	1.1	250			1.3	796	1.6	2400			
	10.0	120	1.4	300			1.0	947	1.3	3000			
	7.5	146	0.9	400									
	6.0	165	0.8	500									
	5.0	226	0.7	600									
	4.0	162	1.0	750									
	3.3	162	1.0	900									
	2.5	135	1.0	1200									
	2.0	162	1.0	1500									
	1.7	162	1.0	1800									
	15.0	92	2.3	200	ECMM 180/030/063	120/240/24E	40.0	55	1.5	75	ECMM 250/030/040	120/240	
	12.0	108	2.1	250		120.66/240.66	30.0	72	1.2	100		120.66/240.66	
	10.0	124	2.3	300			20.0	100	0.9	150			
	7.5	149	1.7	400			15.0	74	1.0	200			
	6.0	172	1.3	500			12.0	67	1.0	250			
	5.0	233	1.1	600			10.0	90	1.0	300			
	4.0	281	1.0	750			7.5	74	1.0	400			
	3.3	320	1.0	900			6.0	68	1.0	500			
	2.5	384	0.7	1200			5.0	90	1.0	600			
	2.0	468	0.7	1500			4.0	90	1.0	750			
	1.7	310	1.0	1800			3.3	90	1.0	900			
	1.3	260	1.0	2400			2.5	74	1.0	1200			
	1.0	232	1.0	3000			2.0	90	1.0	1500			
	12.0	113	3.0	250	ECMM 180/040/070	120/240/24E*	40.0	56	2.0	75	ECMM 250/030/050	120/240	
	10.0	125	3.6	300		120.66/240.66	30.0	73	1.7	100		120.66/240.66	
	7.5	150	2.5	400			20.0	104	1.5	150			
	6.0	174	1.9	500			15.0	131	1.0	200			
	5.0	239	1.9	600			12.0	154	0.8	250			
	4.0	288	1.8	750			10.0	168	1.0	300			
	3.3	333	1.4	900			7.5	204	0.7	400			
	2.5	399	0.9	1200			6.0	125	1.0	500			
	2.00	497	0.9	1500			5.0	162	1.0	600			
	1.67	570	0.9	1800			4.0	162	1.0	750			
	1.25	379	1.0	2400			3.3	162	1.0	900			
	1.00	336	1.0	3000			2.5	135	1.0	1200			
							2.00	162	1.0	1500			

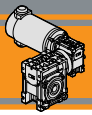
N.B.
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M2 does not exceed the value in the grey areas

*: Motore inclinato con portaspazzole a 45°
 Motor assembly with brush holder inclined 45°

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 per servizio S2

Technical data for S2 duty

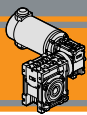
P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
350						
(3000 min ⁻¹)	30.0	74	1.7	100	ECMM 250/030/063	120/240
	20.0	103	1.7	150		120.66/240.66
	15.0	129	1.7	200		
	12.0	152	1.5	250		
	10.0	173	1.7	300		
	7.5	208	1.2	400		
	6.0	241	1.0	500		
	5.0	327	0.8	600		
	4.0	393	0.7	750		
	3.3	448	0.7	900		
	2.5	260	1.0	1200		
	2.00	310	1.0	1500		
	15.0	133	2.9	200	ECMM 250/040/070	120/240
	12.0	158	2.2	250		120.66/240.66
	10.0	175	2.6	300		
	7.5	210	1.8	400		
	6.0	244	1.4	500		
	5.0	335	1.4	600		
	4.0	403	1.1	750		
	3.3	466	1.0	900		
	2.5	379	1.0	1200		
	2.00	453	1.0	1500		
	1.67	453	1.0	1800		
	1.25	379	1.0	2400		
	1.00	336	1.0	3000		
	15.0	134	3.5	200	ECMM 250/040/075	120/240
	12.0	158	2.6	250		120.66/240.66
	10.0	175	3.1	300		
	7.5	214	2.2	400		
	6.0	244	1.7	500		
	5.0	335	1.6	600		
	4.0	403	1.4	750		
	3.3	466	1.2	900		
	2.5	569	0.8	1200		
	2.00	696	0.8	1500		
	1.67	547	1.0	1800		
	1.25	470	1.0	2400		
	1.00	403	1.0	3000		
	12.0	168	3.4	250	ECMM 250/040/090	120/240
	10.0	184	3.4	300		120.66/240.66
	7.5	226	3.4	400		
	6.0	263	2.6	500		
	5.0	351	1.7	600		
	4.0	423	1.3	750		
	3.3	489	1.5	900		
	2.5	600	0.8	1200		
	2.00	730	0.7	1500		
	1.67	838	0.7	1800		
	1.25	1029	0.8	2400		
	1.00	689	1.0	3000		

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
350						
(3000 min ⁻¹)	6.0	286	4.5	500	ECMM 250/050/110	120/240
	5.0	361	2.9	600		120.66/240.66
	4.0	441	2.2	750		
	3.3	503	2.6	900		
	2.5	639	2.3	1200		
	2.00	763	1.4	1500		
	1.67	877	1.1	1800		
	1.25	1115	1.1	2400		
	1.00	1325	1.0	3000		
500						
(3000 min ⁻¹)	40.0	78	1.1	75	ECMM 350/030/040	120/240
	30.0	101	0.8	100		120.66/240.66
	20.0	87	1.0	150		
	15.0	74	1.0	200		
	12.0	67	1.0	250		
	10.0	90	1.0	300		
	7.5	74	1.0	400		
	40.0	79	1.4	75	ECMM 350/030/050	120/240
	30.0	103	1.2	100		120.66/240.66
	20.0	146	1.1	150		
	15.0	184	0.7	200		
	12.0	216	0.6	250		
	10.0	235	0.7	300		
	7.5	135	1.0	400		
	6.0	125	1.0	500		
	5.0	162	1.0	600		
	4.0	162	1.0	750		
	3.3	162	1.0	900		
	40.0	80	1.4	75	ECMM 350/030/063	120/240
	30.0	104	1.2	100		120.66/240.66
	20.0	144	1.2	150		
	15.0	181	1.2	200		
	12.0	213	1.1	250		
	10.0	243	1.2	300		
	7.5	292	0.9	400		
	6.0	338	0.7	500		
	5.0	458	0.7	600		
	4.0	310	1.0	750		
	3.3	310	1.0	900		
	2.5	260	1.0	1200		
2.0	310	1.0	1500			

N.B.
Verificare sempre che la coppia M2 utilizzata non
eccessa 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

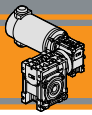
**ECMM**
Motoriduttori CC a vite senza fine combinati
DC Double reduction wormgearmotors
Dati tecnici per servizio S2**Technical data for S2 duty**

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
500							800						
(3000 min ⁻¹)	20.0	148	2.4	150	ECMM 350/040/070	120/240	(3000 min ⁻¹)	40.0	132	1.8	75	ECMM 600/040/070	120/240
	15.0	186	2.1	200		120.66/240.66		30.0	172	1.5	100		120.66/240.66
	12.0	222	1.5	250				20.0	239	1.5	150		
	10.0	246	1.8	300				15.0	301	1.3	200		
	7.5	295	1.3	400				12.0	359	0.9	250		
	6.0	341	1.0	500				10.0	398	1.1	300		
	5.0	469	1.0	600				7.5	477	0.8	400		
	4.0	565	0.8	750				6.0	336	1.0	500		
	3.3	653	0.7	900				5.0	453	1.0	600		
	2.5	379	1.0	1200				4.0	453	1.0	750		
	2.00	453	1.0	1500				3.3	453	1.0	900		
	1.67	453	1.0	1800				2.5	379	1.0	1200		
	1.25	379	1.0	2400									
	20.0	150	2.4	150	ECMM 350/040/075	120/240		40.0	132	1.8	75	ECMM 600/040/075	120/240
	15.0	188	2.4	200		120.66/240.66		30.0	172	1.5	100		120.66/240.66
	12.0	222	1.8	250				20.0	242	1.5	150		
	10.0	246	2.2	300				15.0	305	1.5	200		
	7.5	300	1.6	400				12.0	359	1.1	250		
	6.0	341	1.2	500				10.0	398	1.4	300		
	5.0	469	1.2	600				7.5	486	1.0	400		
	4.0	565	0.9	750				6.0	403	1.0	500		
	3.3	653	0.8	900				5.0	547	1.0	600		
	2.5	470	1.0	1200				4.0	547	1.0	750		
	2.0	547	1.0	1500				3.3	547	1.0	900		
	1.7	547	1.0	1800				2.5	470	1.0	1200		
	1.3	470	1.0	2400									
	12.0	236	2.4	250	ECMM 350/040/090	120/240		20.0	249	1.5	150	ECMM 600/040/090	120/240
	10.0	258	2.4	300		120.66/240.66		15.0	318	1.5	200		120.66/240.66
	7.5	317	2.4	400				12.0	381	1.5	250		
	6.0	369	1.9	500				10.0	418	1.5	300		
	5.0	493	1.2	600				7.5	513	1.5	400		
	4.0	593	0.9	750				6.0	597	1.2	500		
	3.3	685	1.0	900				5.0	797	1.2	600		
	2.5	841	1.0	1200				2.5	813	1.0	1200		
	2.0	1024	0.9	1500									
	1.7	1175	0.8	1800				12.0	402	2.7	250	ECMM 600/050/110	120/240
	1.3	813	1.0	2400				10.0	429	2.7	300		120.66/240.66
	1.0	689	1.0	3000				7.5	545	2.6	400		
	6.0	401	3.2	500	ECMM 350/050/110	120/240		6.0	648	2.0	500		
	5.0	506	2.1	600		120.66/240.66		5.0	819	1.3	600		
	4.0	618	1.6	750				4.0	1000	1.0	750		
	3.3	705	1.8	900				3.3	1141	1.1	900		
	2.5	896	1.6	1200				2.5	1450	1.0	1200		
	2.0	1070	1.0	1500				2.0	1731	0.9	1500		
	1.7	1230	0.8	1800				1.7	1990	0.8	1800		
	1.3	1563	0.8	2400				1.3	1443	1.0	2400		
	1.0	1272	1.0	3000				1.0	1272	1.0	3000		
	4.0	645	2.6	750	ECMM 350/063/130	120/240		7.5	563	2.8	400	ECMM 600/063/130	120/240
	3.3	737	2.3	900		IEC 71B14		6.0	682	2.2	500		120.66/240.66
	2.5	938	1.7	1200				5.0	845	2.0	600		
	2.0	1135	1.5	1500		Solo / Only		4.0	1044	1.6	750		
	1.7	1306	1.3	1800				3.3	1192	1.4	900		
	1.3	1662	1.0	2400				2.5	1517	1.1	1200		
	1.0	2011	0.7	3000				2.0	1836	0.9	1500		
								1.7	2112	0.8	1800		
								1.3	1600	1.0	2400		
								1.0	1500	1.0	3000		

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

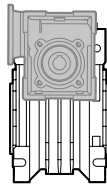
NOTA: per servizio continuo o altamente intermittente, contattare
 il servizio tecnico

NOTE: for continuous or highly intermittent duty, please contact
 our technical service

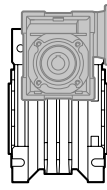


Motori applicabili

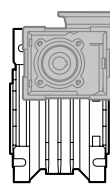
Motor adapters



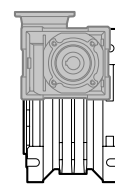
US1



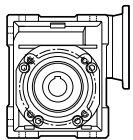
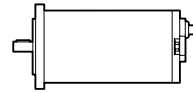
US2



UV1



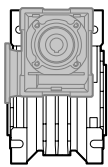
UV2



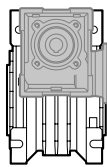
		EC			
		070.12E 070.24E	100.120 100.240	100.24E	180.120 180.240
CMM	026/026	150 - 3600	150 - 3600	150 - 3600	150 - 3600

150 - 3600

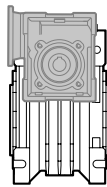
Rapporti di riduzione i
Ratio i



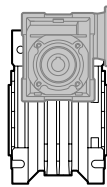
UB1



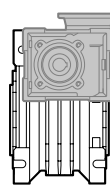
UB2



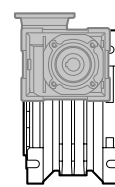
US1



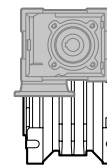
US2



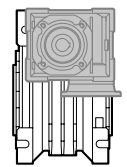
UV1



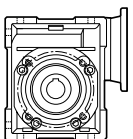
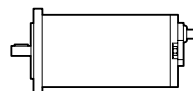
UV2



UC1



UC2



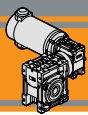
		EC							
		070.12E 070.24E	100.120 100.240	100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CMM	026/030	150 - 3600	150 - 3600	150 - 3600	150 - 3600				
	026/040	150 - 3600	150 - 3600	150 - 3600	150 - 3600				
	026/050	150 - 3600	150 - 3600	150 - 3600	150 - 3600				
	030/040	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1500	75 - 1500	75 - 1500	
	030/050	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1500	75 - 1500	75 - 1500	
	030/063	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1500	75 - 1500	75 - 1500	
	040/070	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1200
	040/075	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1200
	040/090	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1200
	050/110				1200 - 3000 ⁽¹⁾	75 - 3000	75 - 3000	75 - 3000	75 - 3000
	063/130							75 - 3000 ⁽²⁾	75 - 3000

150 - 3600

Rapporti di riduzione i
Ratio i

(1): Solo IEC 63 B14
63 B14 only

(2): Solo IEC 71 B14
71 B14 only



ECMM

Motoriduttori CC a vite senza fine combinati
DC Double reduction wormgearmotors

Dimensioni

Dimensions

CMM..U - CMM..F...																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{h8}	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
026/050	80	120	25	144	49	47.5	92	60	34	50	26	70	85	85	70	43.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/070	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5

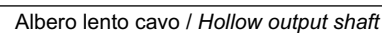
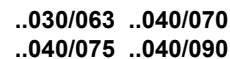
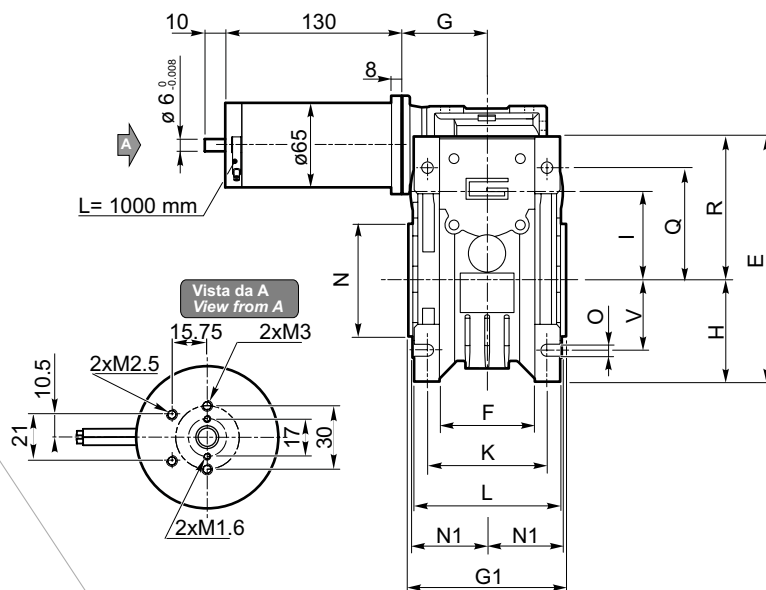
CMM..U - CMM..F...														
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (!)
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3
026/026												4	13.8	
026/026 (D14)												5	16.2	
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	4.1
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	5.2
026/050	8.5	98	64	84	49	7	30	40	100.5	M8x10(n.4)	45°	8	28.3	6.7
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	5.6
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3	6.7
030/063	8.5	110	80	102	57	8	36	50	145	M8x14(n.8)	45°	8	28.3	8.7
040/070	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	12.7
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	13.7
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	17.3

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 070 /...

Note: The weight in kg is referred to the gearmotor ECMM 070 /...

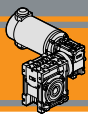
Dimensions

Technical drawing of a pump assembly showing front and side views with dimension lines labeled H, A, Z, N2, Q, V, C, S, I1, R1, H1.



H23

 H24



Dimensioni

Dimensions

CMM..U - CMM..F...																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{H8}	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
026/050	80	120	25	144	49	47.5	92	60	34	50	26	70	85	85	70	43.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/070 *	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075 *	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090 *	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5

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	
026/050	8.5	98	64	84	49	7	30	40	100.5	M8x10(n.4)	45°	8	28.3	7.7	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	6.6	
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3	7.7	
030/063	8.5	110	80	102	57	8	36	50	145	M8x14(n.8)	45°	8	28.3	9.7	
040/070 *	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	13.7	
040/075 *	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	14.7	
040/090 *	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	18.3	

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 100 /...

Note: The weight in kg is referred to the gearmotor ECMM 100 /...

*: Motore inclinato con portaspazzole a 45°

Motor assembly with brush holder inclined 45°

Dimensions

Technical drawing of a pump assembly showing front and side views with dimension lines and labels.

Front View Dimensions:

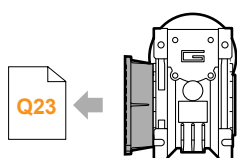
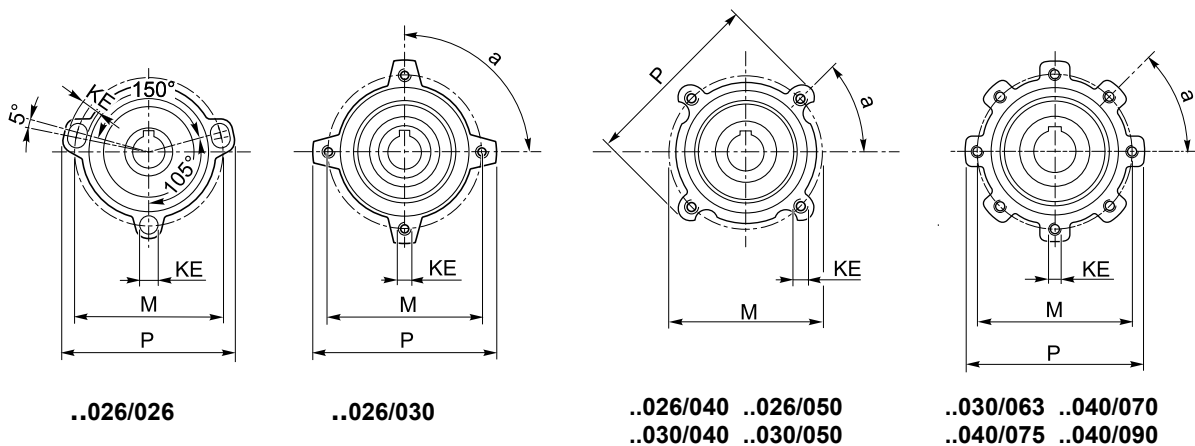
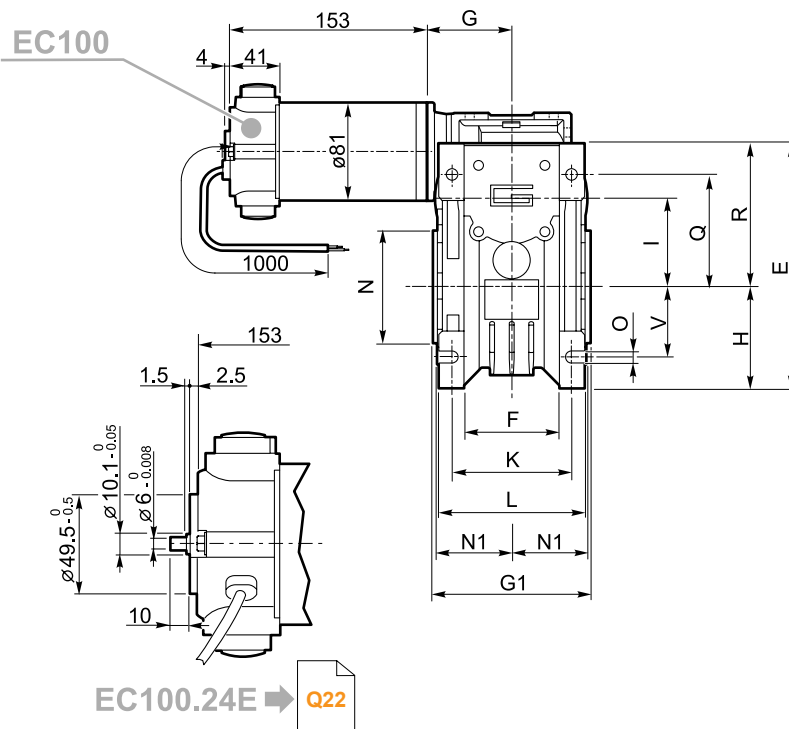
- H:** Total height of the front flange.
- A:** Distance from the center to the outer edge of the front flange.
- Q:** Total width of the front flange.
- V:** Distance from the center to the outer edge of the front flange (width).
- C:** Total width of the pump body.
- S:** Thickness of the pump body.

Side View Dimensions:

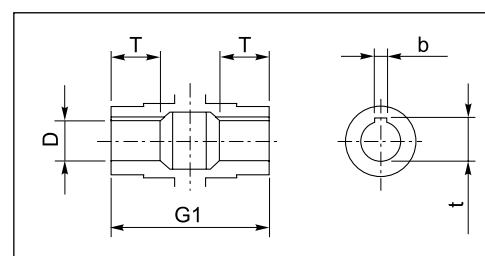
- Z:** Total length of the pump assembly.
- N2:** Distance from the center to the outer edge of the side flange.
- I1:** Distance from the center to the outer edge of the side flange.
- R1:** Total height of the side flange.
- H1:** Distance from the center to the outer edge of the side flange (height).

Labels:

- U:** Label for the side flange.
- W:** Label for the pump body.



ECMM100/... F...
ECMM100/... FL
ECMM100/... FB

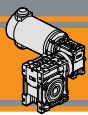


Albero lento cavo / *Hollow output shaft*

14

Н

H

**ECMM****Motoriduttori CC a vite senza fine combinati**
DC Double reduction wormgearmotors**Dimensioni****Dimensions**

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{H8}	N1	N2
026/040 ⁽¹⁾	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
026/050 ⁽¹⁾	80	120	25	144	49	47.5	92	60	34	50	26	70	85	85	70	43.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/070 *	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075 *	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090 *	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110 ⁽²⁾	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5

CMM..U - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (!)	
026/040 ⁽¹⁾	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	6.9	
026/050 ⁽¹⁾	8.5	98	64	84	49	7	30	40	100.5	M8x10(n.4)	45°	8	28.3	8.4	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	7.3	
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3	8.4	
030/063	8.5	110	80	102	57	8	36	50	145	M8x14(n.8)	45°	8	28.3	10.4	
040/070 *	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	14.4	
040/075 *	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	15.4	
040/090 *	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	19	
050/110 ⁽²⁾	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	33.6	

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 180 /...**Note:** The weight in kg is referred to the gearmotor ECMM 180 /...

*: Motore inclinato con portaspazzole a 45°

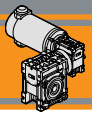
Motor assembly with brush holder inclined 45°

(1): Versione 24E non disponibile

Version 24E not available

(2): Solo IEC 63 B14. Versione IP66 non disponibile

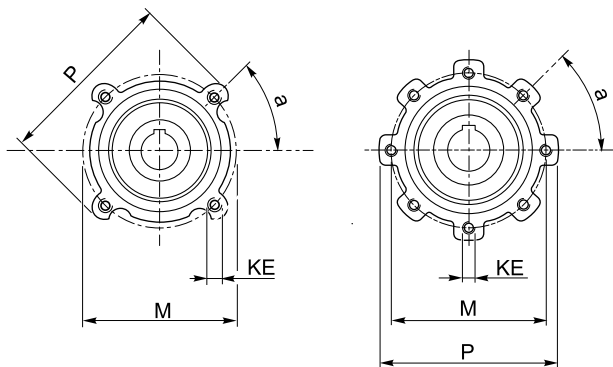
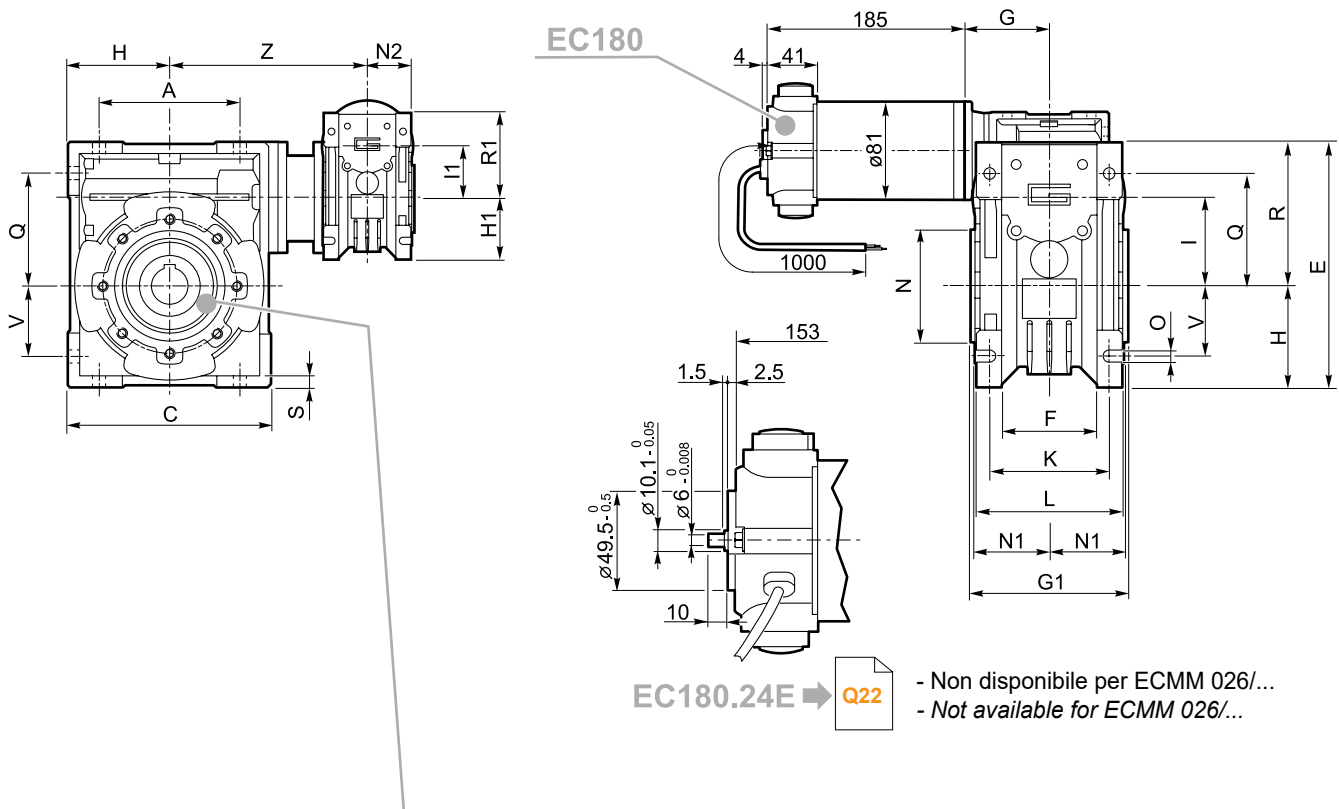
IEC 63 B14 only. IP66 version not available



Dimensioni

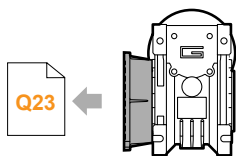
Dimensions

ECMM180/..../..U

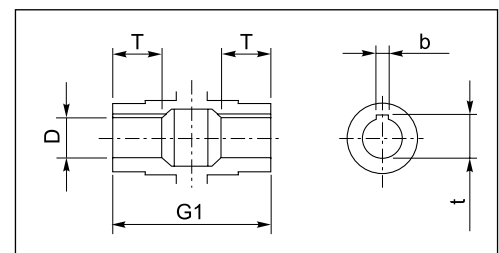


..026/040 ..026/050
..030/040 ..030/050

..030/063 ..040/070
..040/075 ..040/090
..050/110



ECMM180/... F
ECMM180/... FL
ECMM180/... FB



Albero lento cavo / *Hollow output shaft*

Motori / Motors IP66



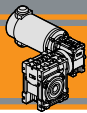
- Non disponibile per ECMM 180/050/110
- *Not available for ECMM 180/050/110*

Freno / *Brake*



Encoder



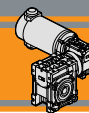

Dimensioni
Dimensions

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{H8}	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/070	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5

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
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3	9.3
030/063	8.5	110	80	102	57	8	36	50	145	M8x14(n.8)	45°	8	28.3	11.3
040/070	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	15.3
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	16.3
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	19.9
050/110	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	34.5

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 250 /...

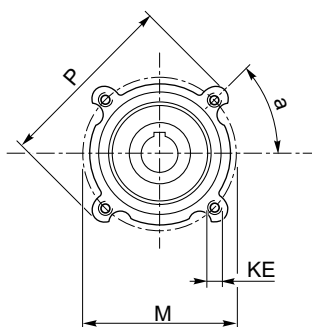
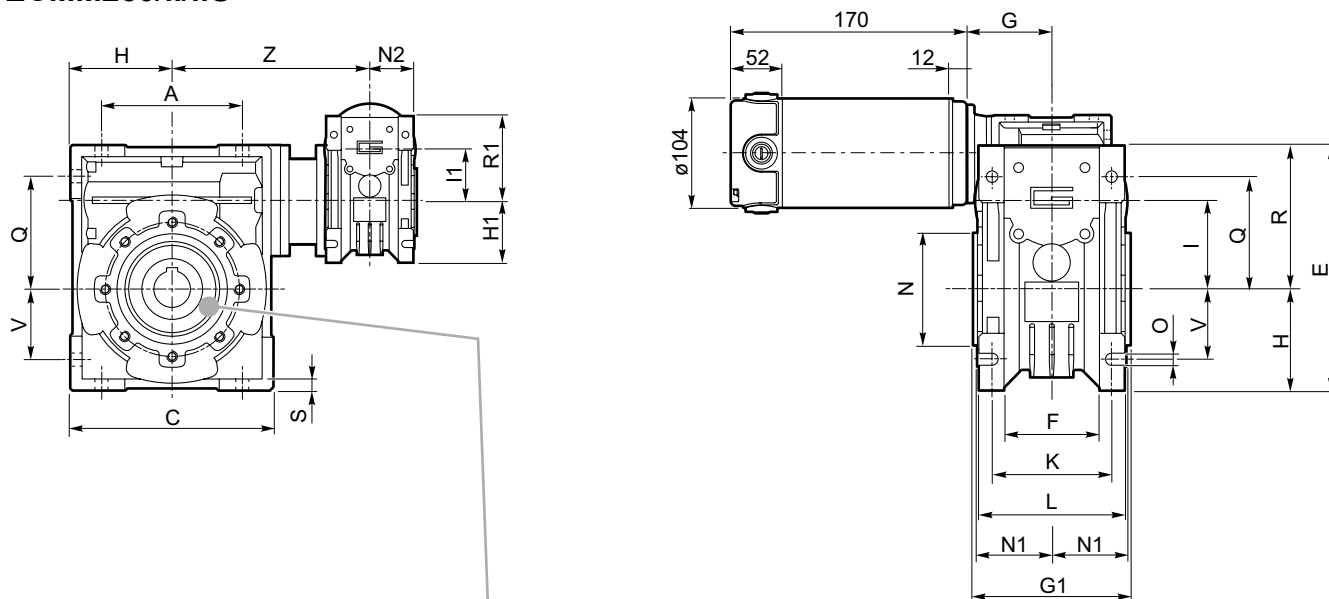
Note: The weight in kg is referred to the gearmotor ECMM 250 /...



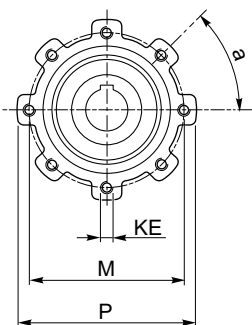
Dimensioni

Dimensions

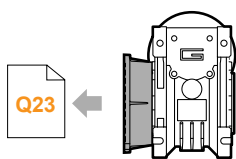
ECMM250/...U



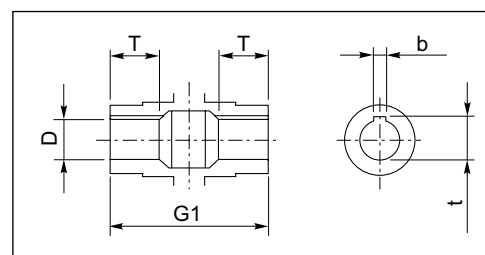
..030/040 ..030/050



**..030/063 ..040/070
..040/075 ..040/090
..050/110**



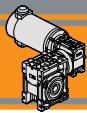
**ECMM250/... F
ECMM250/... FL
ECMM250/... FB**



Albero lento cavo / Hollow output shaft

Motori / Motors IP66



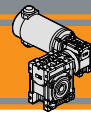

Dimensioni
Dimensions

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{h8}	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29
030/050	80	120	25	144	49	55	92	60	40	50	30	70	85	85	70	43.5	29
030/063	100	144	25	174	67	55	112	72	40	63	30	85	104	95	80	53	29
040/070	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5
063/130 ⁽¹⁾	200	292.5	45	335	—	95	170	147.5	72	130	63	120	155	215	180	81	53

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	9.2
030/050	8.5	98	64	84	57	7	30	40	132	M8x10(n.4)	45°	8	28.3	10.3
030/063	8.5	110	80	102	57	8	36	50	145	M8x10(n.8)	45°	8	28.3	12.3
040/070	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	16.3
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	17.3
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	20.9
050/110	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	35.5
063/130 ⁽¹⁾	16	250	140	187.5	102	15	60	100	245	M12x21(n.8)	45°	14	48.8	60.3

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 350 /...
Note: The weight in kg is referred to the gearmotor ECMM 350 /...

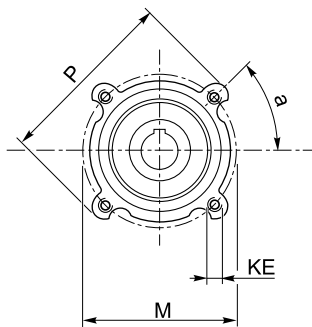
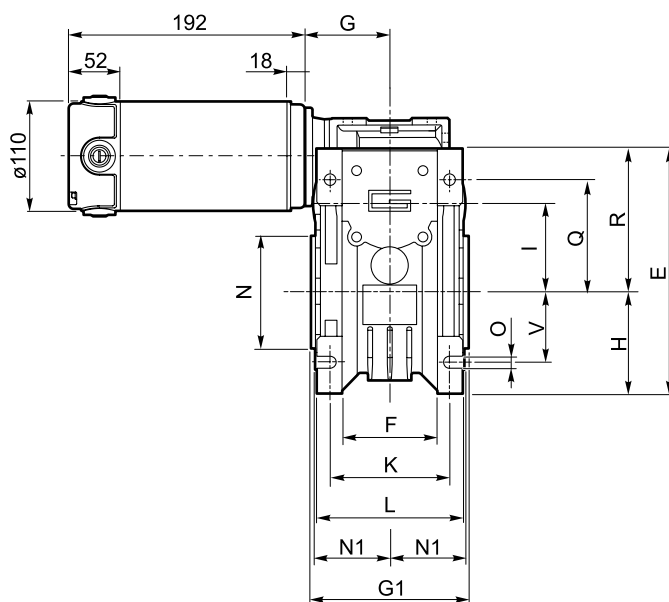
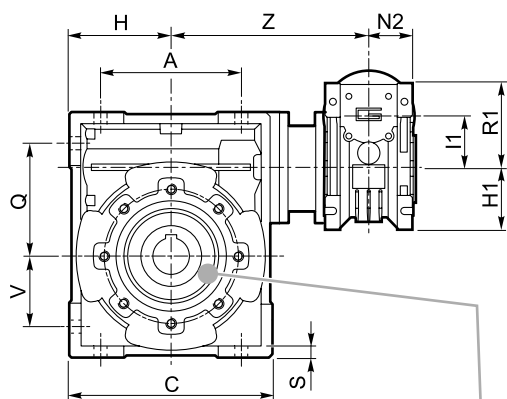
(1): Solo IEC 71 B14. Versione IP66 non disponibile
 IEC 71 B14 only. IP66 version not available



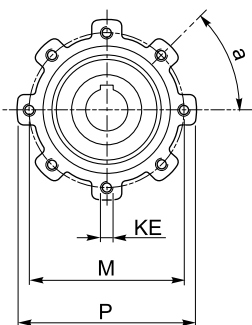
Dimensioni

Dimensions

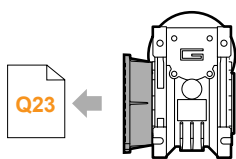
ECMM350/...U



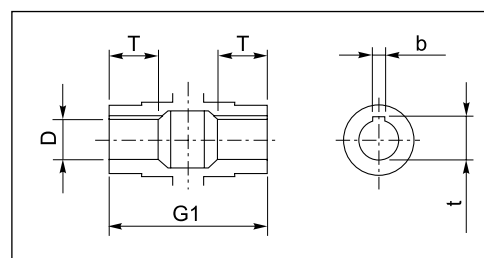
..030/040 ..030/050



..030/063 ..040/070
..040/075 ..040/090
..050/110 ..063/130



ECMM350/... F
ECMM350/... FL
ECMM350/... FB



Albero lento cavo / Hollow output shaft

Motori / Motors IP66

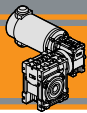
I10

- Non disponibile per
ECMM 350/063/130
- Not available for
ECMM 350/063/130

Freno / Brake

H23

ECMM

**ECMM**
Motoriduttori CC a vite senza fine combinati
DC Double reduction wormgearmotors
Dimensioni**Dimensions**

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D _{H8}	E	F	G	G1	H	H1	I	I1	K	L	M	N _{H8}	N1	N2
040/070	110	160	28	195	64	70	120	80	50	70	40	90	104	115	95	57	35.5
040/075	120	172	28	205	72	70	120	86	50	75	40	90	112	115	95	57	36.5
040/090	140	208	35	238	74	70	140	103	50	90	40	100	130	130	110	67	36.5
050/110	170	252.5	42	295	—	80	155	127.5	60	110	50	115	144	165	130	74	43.5
063/130	200	292.5	45	335	—	95	170	147.5	72	130	63	120	155	215	180	81	53

CMM..U - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (!)	
040/070	9	130	91	115	71.5	9	40	55	160	M8x14(n.8)	45°	8	31.3	18.3	
040/075	11	140	93	119	71.5	10	40	60	165	M8x14(n.8)	45°	8	31.3	19.3	
040/090	13	160	102	135	71.5	11	45	70	182	M10x18(n.8)	45°	10	38.3	22.7	
050/110	14	200	125	167.5	84	14	50	85	225	M10x18(n.8)	45°	12	45.3	37.3	
063/130	16	250	140	187.5	102	15	60	100	245	M12x21(n.8)	45°	14	48.8	62.1	

(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 600 /...

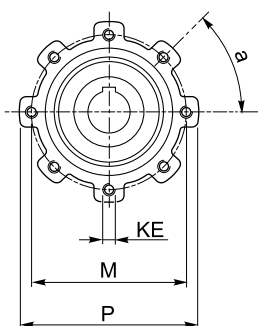
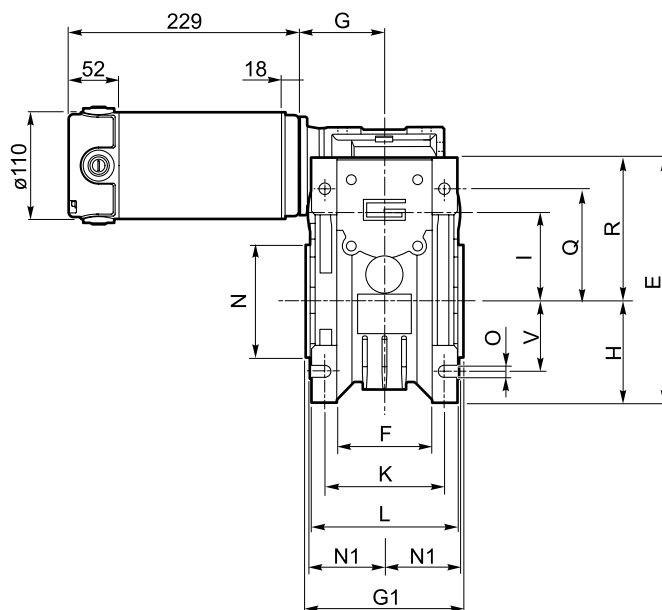
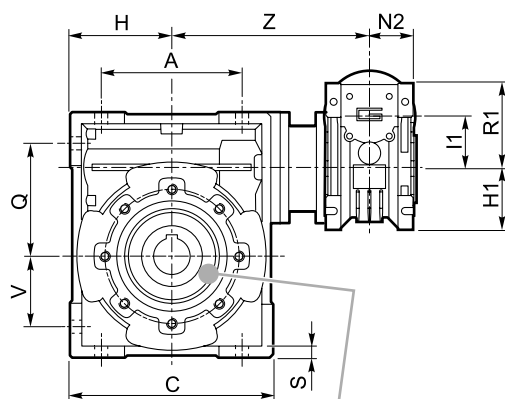
Note: The weight in kg is referred to the gearmotor ECMM 600 /...



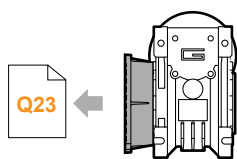
Dimensioni

Dimensions

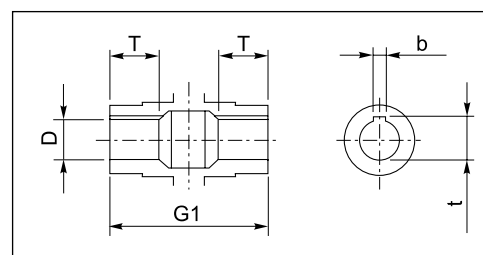
ECMM600/...U



..040/070 ..040/075
..040/090 ..050/110
..063/130



ECMM600/... F
ECMM600/... FL
ECMM600/... FB



Albero lento cavo / Hollow output shaft

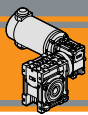
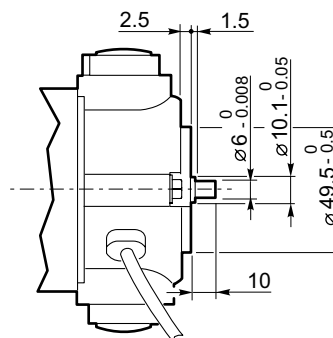
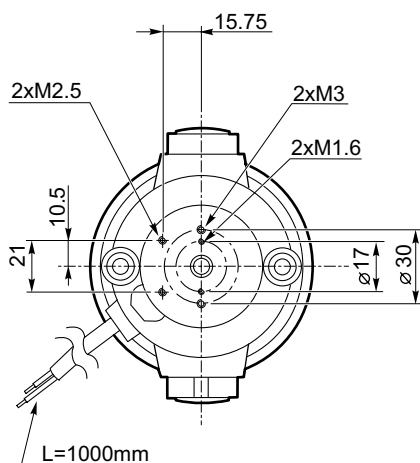
Motori / Motors IP66

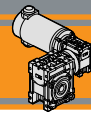
I12

Freno / Brake

H23

ECMM

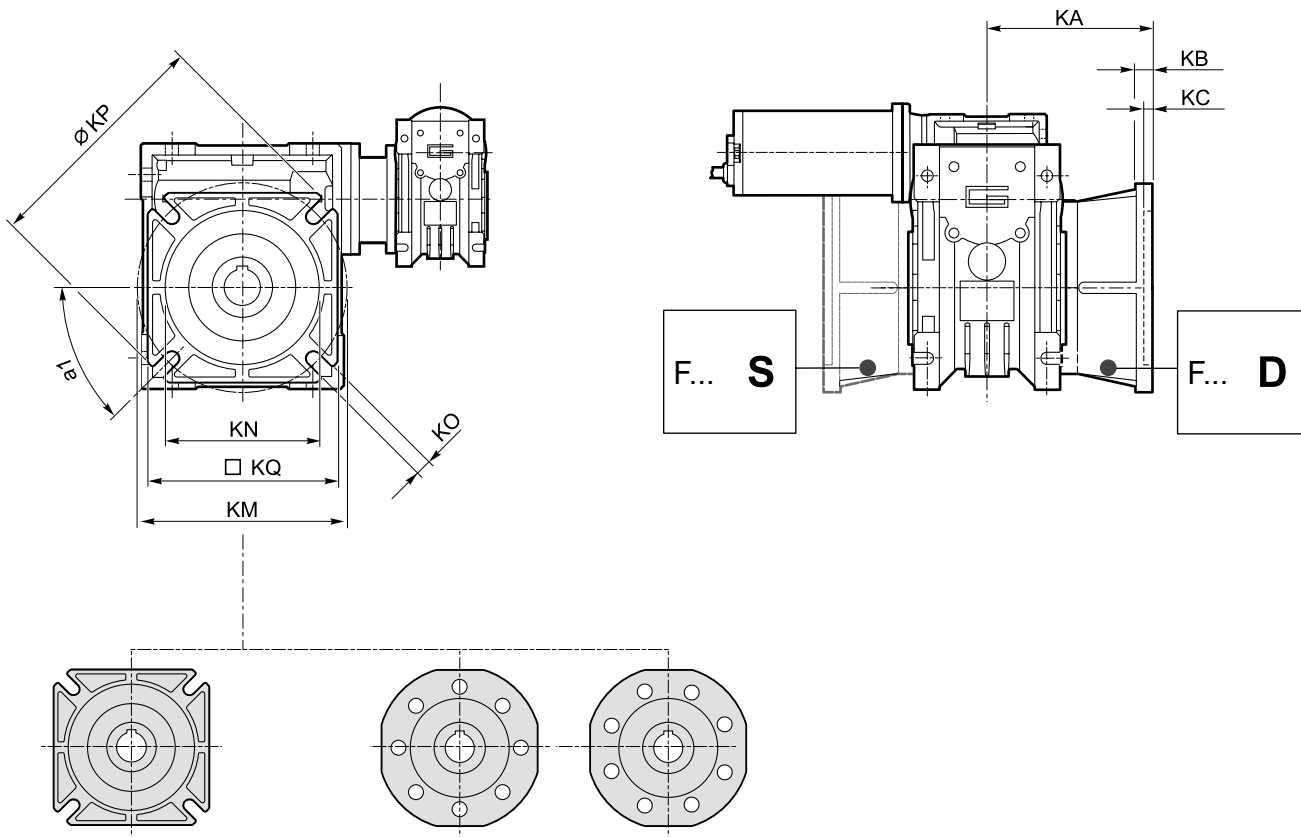
**ECMM****Motoriduttori CC a vite senza fine combinati**
DC Double reduction wormgearmotors**Dimensioni****Dimensions****EC100.24E**
EC180.24E



Dimensioni

Dimensions

ECMM.../... F... Flange uscita / Output flanges



CMM..F...

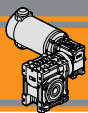
(../026 - ../030 - ../040 - ../050
../063 - ../070 - ../075 - ../090)

CMM..F

(../110) (../130)

	CMM..F								CMM..F28								CMM..F30								
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ
026/026 (D11) 026/026 026/026 (D14)	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

	CMM..F									CMM..FB									CMM..FL								
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ		
026/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
026/040 030/040	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		
026/050 030/050	45°	90	9	5	90-110	70	11(n.4)	125	110	89	9	5	130-145	110	9.5(n.4)	160	132	120	9	5	90-110	70	11(n.4)	125	110		
030/063	45°	82	10	6	150-160	115	11(n.4)	180	142	98	10	5	165-180	130	11(n.4)	200	112	112	10	6	150-160	115	11(n.4)	180	142		
040/070	45°	107	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
040/075	45°	111	13	6	165-180	130	14(n.4)	200	170	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
040/090	45°	111	13	6	175-190	152	14(n.4)	210	200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
050/110	45°	131	15	6	230	170	14(n.8)	280	260	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			
063/130	22.5°	140	15	6	255	180	16(n.8)	320	290	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—			



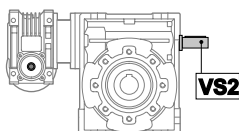
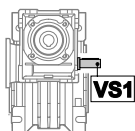
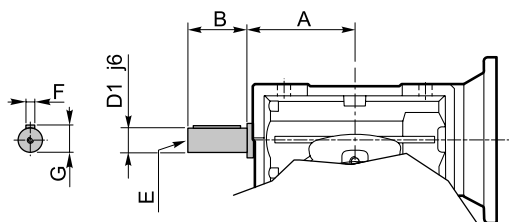
ECMM

Motoriduttori CC a vite senza fine combinati DC Double reduction wormgearmotors

Opzioni

Options

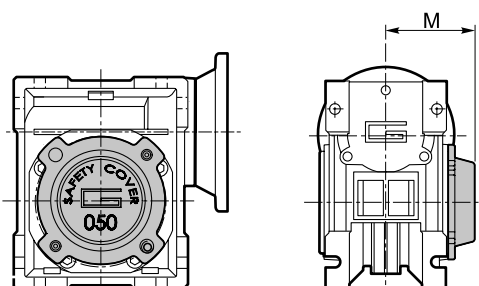
VS1 - VS2 - Vite sporgente / Extended input shaft



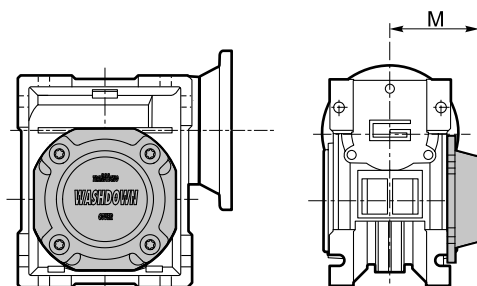
CMM	VS1						VS2					
	A	B	D ₁ j6	E	F	G	A	B	D ₁ j6	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
026/050	—	—	—	—	—	—	64	30	14	M6	5	16
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5
030/050	45	20	9	M4	3	10.2	64	30	14	M6	5	16
030/063	45	20	9	M4	3	10.2	75	40	19	M6	6	21.5
040/070	53	23	11	M5	4	12.5	84	40	19	M6	6	21.5
040/075	53	23	11	M5	4	12.5	90	50	24	M8	8	27
040/090	53	23	11	M5	4	12.5	108	50	24	M8	8	27
050/110	64	30	14	M6	5	16	135	60	28	M10	8	31
063/130	75	40	19	M6	6	21.5	—	—	—	—	—	—

Costruito su richiesta
Built on request

SC - Safety cover

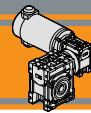


WD - Washdown cover



	CM								
	30	40	50	63	70	75	90	110	130
M	47	54.5	62.5	73	79	79	94	102	117

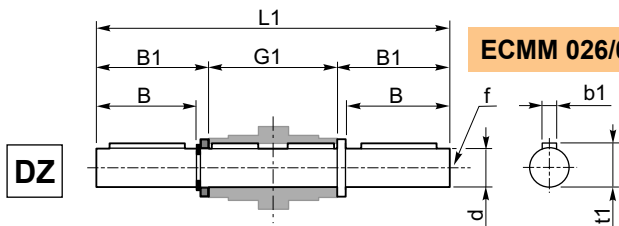
	CM								
	30	40	50	63	70	75	90	110	
M	48	55.5	63.5	71.5	76	80	95	103	



Accessori

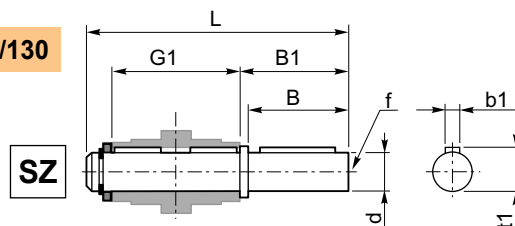
Accessories

Albero lento semplice e doppio

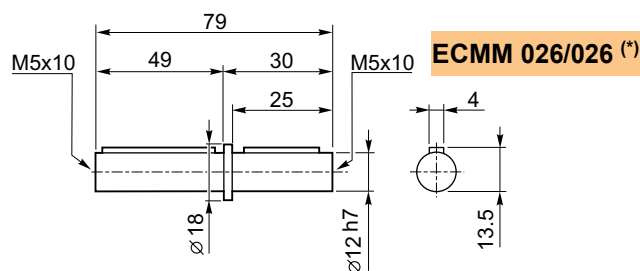


ECMM 026/030 - ECMM 063/130

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
026/050 030/050	25	50	53.5	92	153	199	M10	8	28
030/063	25	50	53.5	112	173	219	M10	8	28
040/070	28	60	63.5	120	192	247	M10	8	31
040/075	28	60	63.5	120	192	247	M10	8	31
040/090	35	80	84.5	140	234	309	M12	10	38
050/110	42	80	84.5	155	249	324	M16	12	45
063/130	45	80	85	170	265	340	M16	14	48.5



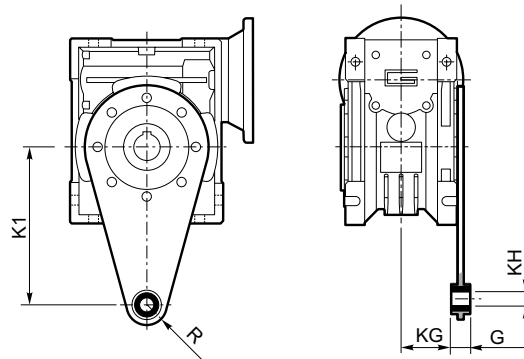
ECMM 026/026 (*)

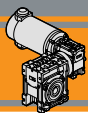
(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only

Braccio di reazione

ECMM	K1	G	KG	KH	R
026/030	85	14	23	8	15
026/040 030/040	100	14	31	10	18
026/050 030/050	100	14	38	10	18
030/063	150	14	47.5	10	18
040/070	200	25	46.5	20	30
040/075	200	25	46.5	20	30
040/090	200	25	56.5	20	30
050/110	250	30	62	25	35
063/130	250	30	69	25	35

Torque arm



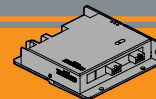


Note



Azionamenti per motori CC DC motor controls

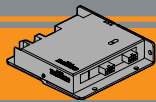




	Indice	Index	Pag. Page
PLN19-8	Schema dei collegamenti	<i>Main connection diagram</i>	R2
	Caratteristiche tecniche	<i>Technical features</i>	R2
	Dimensioni	<i>Dimensions</i>	R3
	Opzioni	<i>Options</i>	R3
PLN20 PLN40	Schema dei collegamenti	<i>Main connection diagram</i>	R4
	Caratteristiche tecniche	<i>Technical features</i>	R5
	Dotazioni	<i>Equipment</i>	R5
	Manuale	<i>User manual</i>	R5
	Dimensioni	<i>Dimensions</i>	R6
	GUIDA alla selezione dell'azionamento	<i>Drive selection GUIDE</i>	R7
	Note	<i>Note</i>	R8

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**

*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***



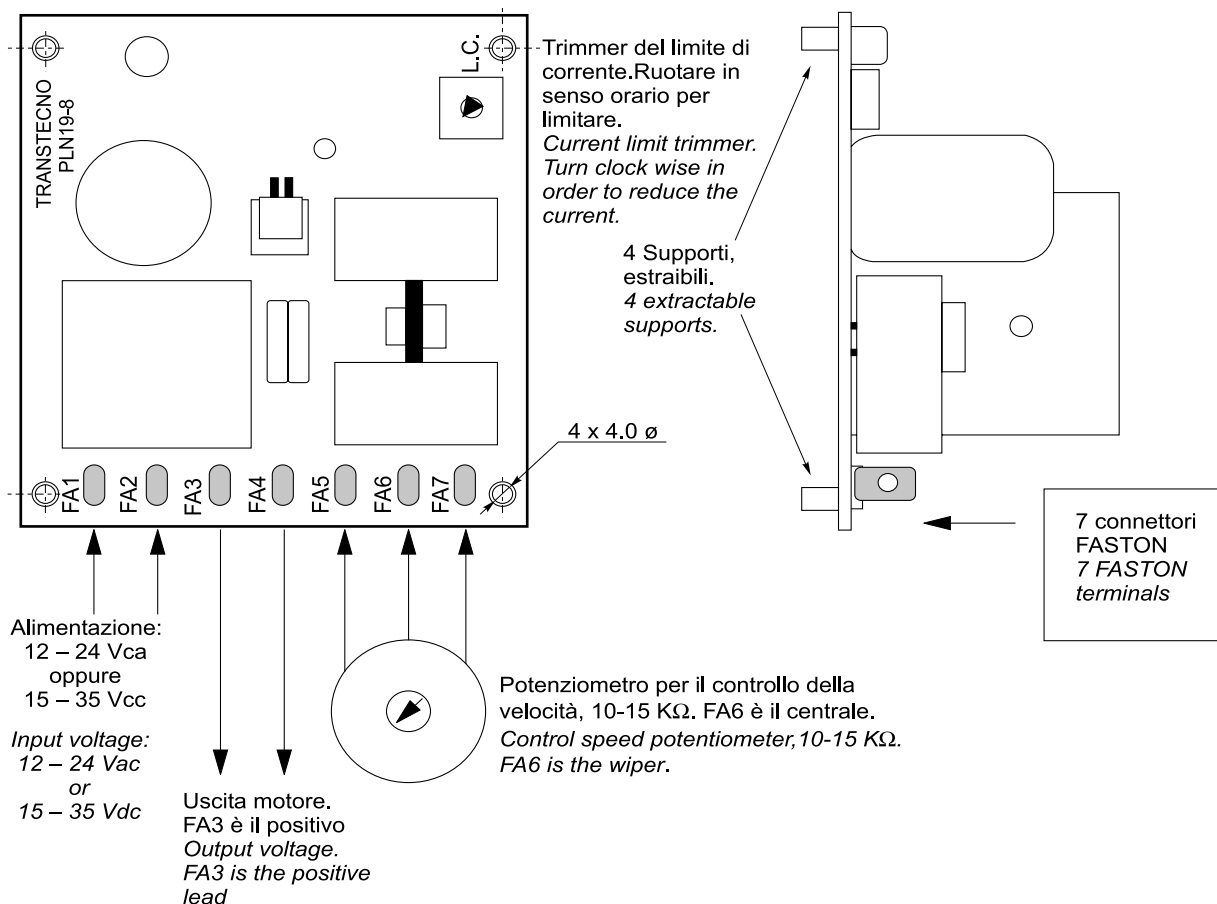
PLN19-8

Azionamenti per motori CC DC motor controls

**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



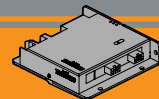
Attenzione: se si scollega il potenziometro con la scheda alimentata, il motore ruota alla velocità nominale.

Warning: if speed pot is disconnected when the board is powered, the motor runs at its maximum speed.

Caratteristiche tecniche

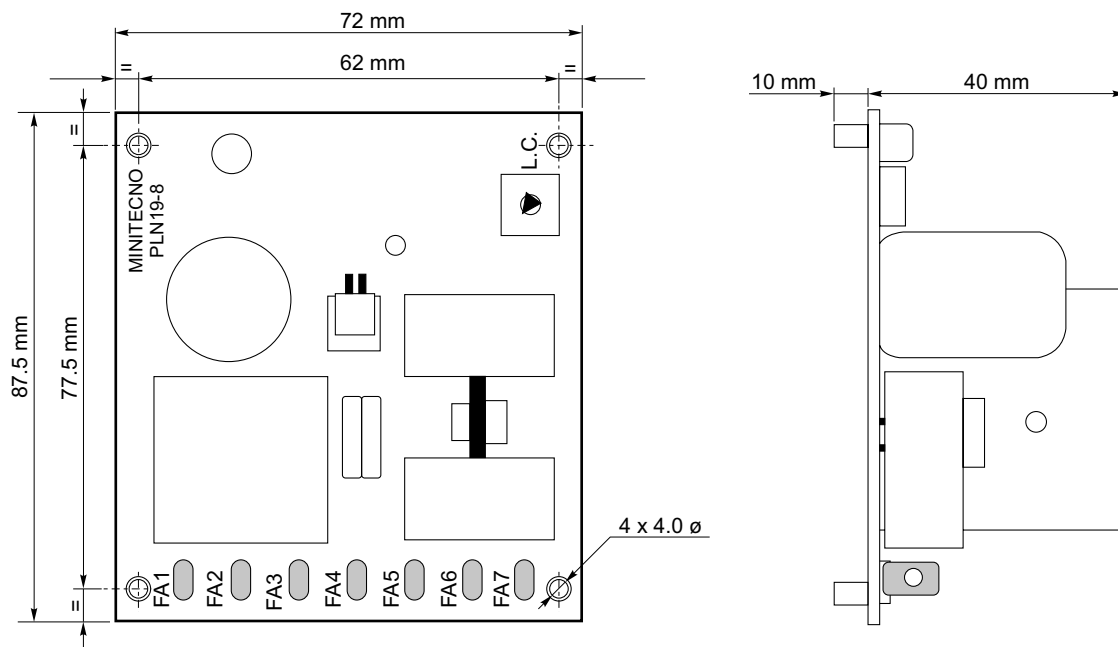
Technical features

- 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

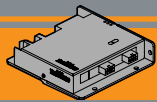
Options

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.

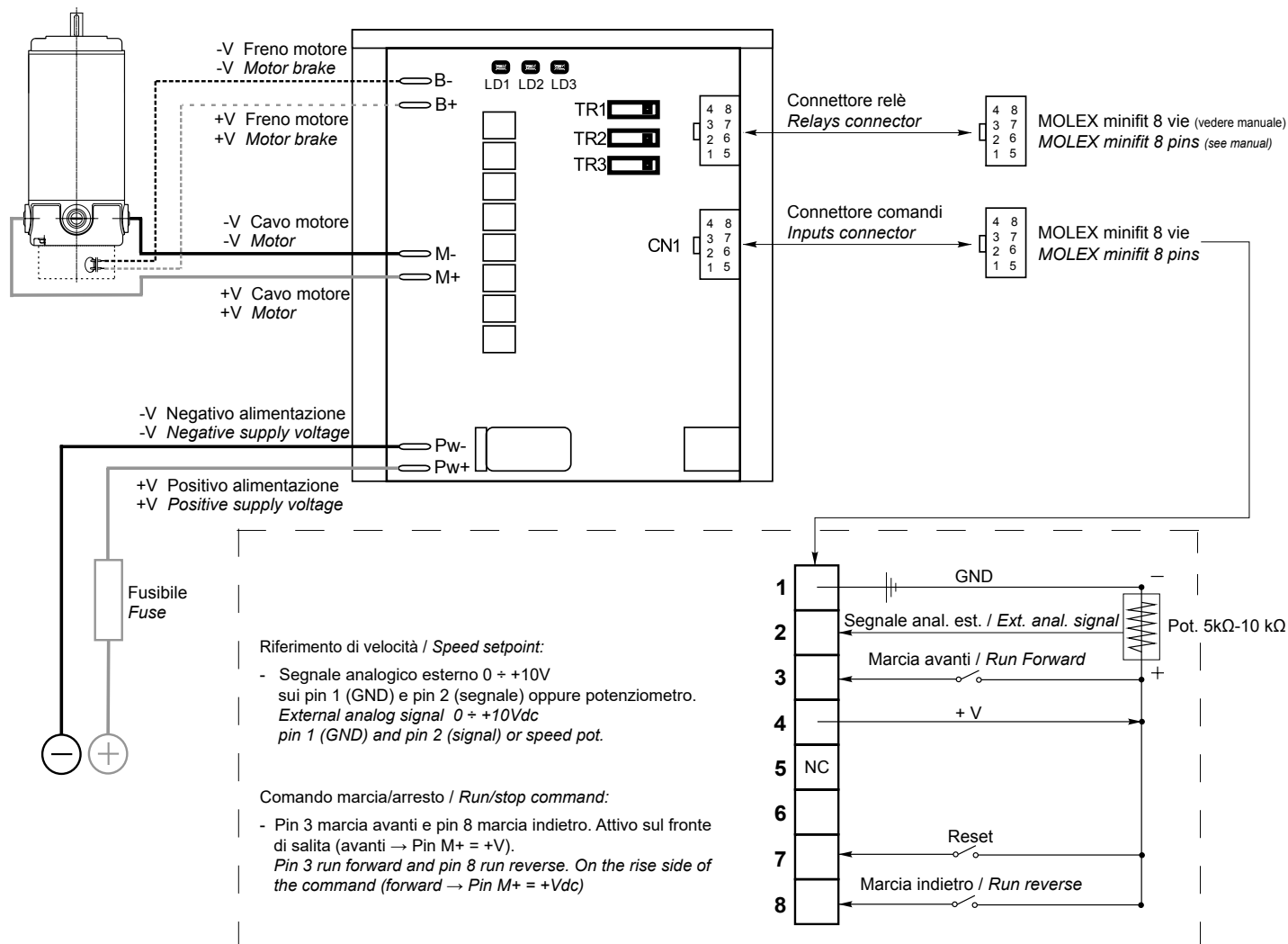
(*) the maximum output current value must be used in a **ventilated environment**. Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.



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

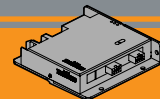
LD3: Segnalazione presenza alimentazione.

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]
PLN20	12 ÷ 24	0 ÷ Vin	20	60 (4 sec)	10 ÷ 30
PLN40	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 / Selection Trimmer ACCEL, DECEL, CURRENT LIMIT	■
2 contatti: marcia avanti e marcia indietro / 2 contacts : forward and reverse	■
Riferimento di velocità / Speed setpoint reference	■
3 LEDs di segnalazione / 3 LEDs signals	■
Segnale di comando di eventuale freno negativo di stazionamento / Command signal for possible negative electromagnetic brake	■
Predisposizione per montaggio a libro e a zoccolo / Arranged for 2 different ways of mounting	■
Memorizzazione e segnalazione degli allarmi / Memory storage and report of alarm	■
2 ingressi digitali ausiliari / 2 auxiliary digital inputs	■#
1 relè segnalazione allarmi / Alarm output relays	■

uno impegnato dal reset / one committed by reset



Manuale



User manual

Per approfondimenti si raccomanda di scaricare il manuale d'uso dal nostro sito www.transtecno.com alla pagina dei prodotti.

Please, download the user manual for more information from our web site www.transtecno.com from the product page.



Technical drawing of the TRAMSTECNO 164, showing front and side views with dimensions.

Front View Dimensions:

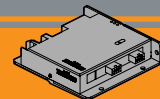
- Overall width: 34
- Distance from left edge to center of top hole: 17
- Distance from left edge to center of bottom hole: 117
- Overall height: 140
- Distance from bottom edge to center of bottom hole: 3

Side View Dimensions:

- Overall depth: 6.5
- Distance from front face to center of bottom hole: 6.5

Product Details:

- Brand: TRAMSTECNO
- Model: 164
- Website: www.tramstecno.com



GUIDA alla selezione dell'azionamento

Drive selection GUIDE

Corrente di uso
del motore $\leq$ Corrente nominale
dell'azionamento

Real motor
current $\leq$ 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 Motor code	Corrente motore Motor current S1	Scheda-Drive (servizio motore-motor duty) S1	Corrente motore Motor current S2	Scheda-Drive (servizio motore-motor duty) S2
EC020.120	3.2	PLN19-8 – PLN20	4	PLN19-8 – PLN20
EC020.240	1.5	PLN19-8 – PLN20	2	PLN19-8 - PLN20
EC035.120	5.2	PLN19-8 – PLN20	8	PLN20
EC035.240	2.6	PLN19-8 - PLN20	4	PLN19-8 - PLN20
EC050.120	6.8	PLN20	9.4	PLN20
EC050.240	3.4	PLN19-8 - PLN20	4.7	PLN19-8 - PLN20
EC070.120	8.4	PLN20	11.8	PLN20
EC070.240	4.2	PLN19-8 - PLN20	5.9	PLN19-8 - PLN20
EC100.120	12	PLN20	16.8	PLN20
EC100.240	6	PLN19-8 - PLN20	8.4	PLN20
EC100.24E	6	PLN19-8 - PLN20	8.4	PLN20
ND100.120	13.9	PLN20	19	PLN20
ND100.240	6.9	PLN20	9.0	PLN20
EC180.120	21.5	PLN20	30	PLN40
EC180.240	10.8	PLN20	15	PLN20
EC180.24E	10.8	PLN20	15	PLN20
ND180.120	20	PLN20	30	PLN40
ND180.240	10	PLN20	14	PLN20
EC250.120	30	PLN40	39	PLN40
EC250.240	15	PLN20	19.5	PLN20
EC350.240	21	PLN20	29.4	PLN40
EC350.240BR				
EC600.240	35.5	PLN40	47	PLN40
EC600.240BR				

PLN



TRANSTECNO SRL HEADQUARTERS

Company subject to the management
and coordination of INTERPUMP GROUP SPA
Via Caduti di Sabbiuno, 11/D-E
40011 Anzola dell'Emilia (BO)
ITALY
T+39 051 64 25 811
F +39 051 73 49 43
sales@transtecno.com
www.transtecno.com

TRANSTECNO®
the modular gearmotor

MEMBER OF INTERPUMP GROUP

CATDCALU0223



**HANGZHOU TRANSTECNO POWER
TRANSMISSIONS CO LTD**
No.4 Xiuyan Road Fengdu Industry Zone
Pingyao Town Yuhang District
Hangzhou City, Zhejiang Province
311115 – CHINA
T +86 571 86 92 02 60
info-china@transtecno.cn
www.transtecno.cn



MA TRANSTECNO S.A.P.I. DE C.V.
Av. Mundial # 176, Parque Industrial
JM Apodaca, Nuevo León,
C.P. 66600 - MÉXICO
T +52 8113340920
info@transtecno.com.mx
www.transtecno.com.mx



**TRANSTECNO IBÉRICA
THE MODULAR GEARMOTOR, S.A.**
Carrer de la Ciència, 45
08840 Viladecans (Barcelona) - SPAIN
T +34 931 598 950
info@transtecno.es
www.transtecno.es



TRANSTECNO B.V.
Siliciumweg 32
3812 SX Amersfoort - NETHERLANDS
T +31 (0) 33 45 19 505
info@transtecno.nl
www.transtecno.nl



TRANSTECNO AANDRIJFTECHNIEK B.V.
Siliciumweg 32
3812 SX Amersfoort - NETHERLANDS
T +31 (0) 33 20 47 006
info@transtecnoaandrijftechniek.nl
www.transtecnoaandrijftechniek.nl



TRANSTECNO USA
8 Creek Parkway,
Boothwyn PA 19061-8136 - UNITED STATES
T + 1 (610) 4970154

TRANSTECNO USA – WEST COAST BRANCH
14561 Frylands Blvd SE
Monroe, WA 98272 - UNITED STATES
T +1 360-863-1300
usaoffice@transtecno.com
www.transtecno.com



TRANSTECNO CANADA
51 B Caldari Road Unit 10
Vaughan, ON L4K 4G3 - CANADA
T +1 905 761 0762
canadaoffice@transtecno.com
www.transtecno.com



TRANSTECNO CHILE-PERU
Av. Los Libertadores 41
Parque Industrial - Los Libertadores 16.500
Santiago, Colina - CHILE
T +56 2 29633870

Carretera Panamericana Sur KM 29.5,
Interior I-3, Z.I. Lurin - PERU
T +51 1 3546259 / + 51 1 3434231
chileoffice@transtecno.com
www.transtecno.com



TRANSTECNO INDIA
#6A, Sipcot Industrial complex, Phase-1, Elasagiri Road
Hosur – 635126 Tamilnadu - INDIA
T +91 4344 274434
M +91 81443 88800

TRANSTECNO INDIA – NORTH BRANCH
Plot No: 3 A, Sector 2, IIE, Sidcul, Pantnagar
U.S. Nagar, Uttarakhand – 263153 - INDIA
indiaoffice@transtecno.com
www.transtecno.com



TRANSTECNO BRAZIL
Rua Gilberto de Zorzi, 525 Forqueta - CEP. 95115-730
CX Postal 3544 Caxias do Sul RS – BRAZIL

TRANSTECNO BRAZIL – SÃO PAULO BRANCH
R. Mafalda Barnabe Soliane, 314 – CEP. 13347-610
Indaiatuba, São Paulo - BRAZIL
T +55 19 3437 2520

TRANSTECNO BRAZIL – PORTO ALEGRE BRANCH
Rua Dr. Freire Alemão 155 / 402 - CEP. 90450-060
Auxiliadora Porto Alegre RS - BRAZIL
T +55 51 3251 5447
M +55 51 811 45 962
braziloffice@transtecno.com
www.transtecno.com.br



INTERPUMP ANTRIEBSTECHNIK - TRANSTECNO
Vertriebsbüro Stuttgart - GERMANY
T +49 (0) 171 4781909
germanoffice@transtecno.com
www.transtecno.com



SALES OFFICE OCEANIA
Unit 5, 12 Nyholt Drive, Yatala 4207
Queensland - AUSTRALIA
T +61 07 3800 0103
M +61 04 38060997

UNIT 9, 94 Boundary Rd, Sunshine West 3020
Victoria - AUSTRALIA
T +61 9312 4722
oceaniaoffice@transtecno.com
www.transtecno.com.au



SALES OFFICE SOUTH KOREA
772-41, Bongdong-ro, Bongdong-eup, Wanju-goon
Chonbuk, 55313
SOUTH KOREA
T +82 70 8867 8897
M +82 10 5094 2107
koreaoffice@transtecno.com
www.transtecno.com

www.transtecno.com