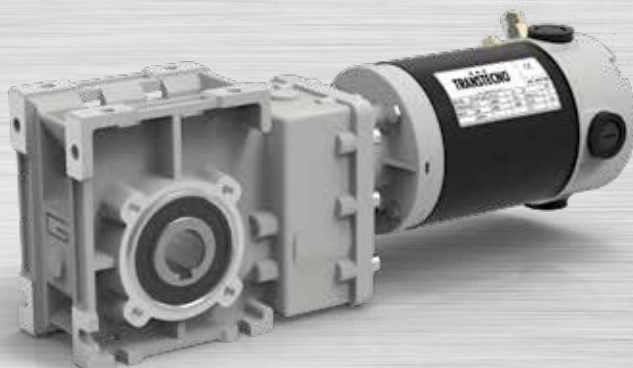
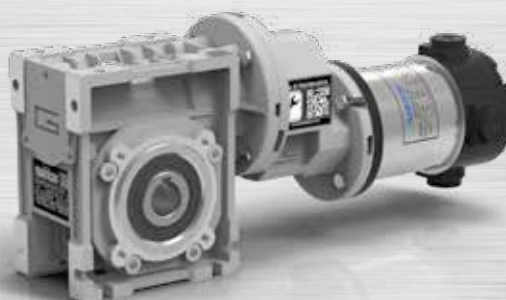
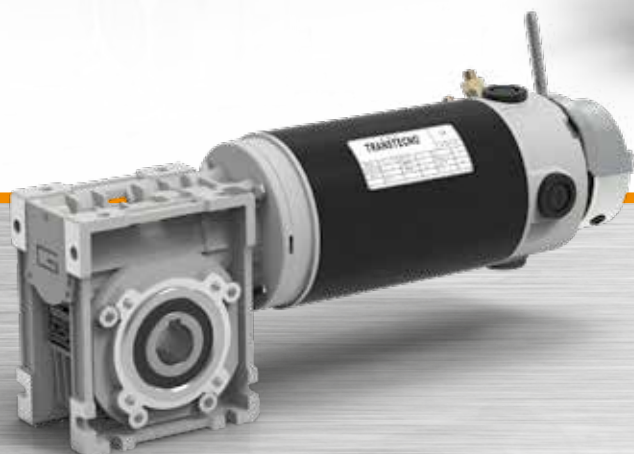


TRANSTECNO[®]
the modular gearmotor



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
 **B** Motori elettrici CC ND DC Electric motors ND B1

 **C** Motoriduttori CC ad ingranaggi cilindrici NDCMG DC Helical in-line gearmotors NDCMG C1

 **D** Motoriduttori CC ad assi ortogonali NDCMB DC Helical bevel gearmotors NDCMB D1

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 **H** Motori elettrici CC EC DC Electric motors EC H1

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
 **L** Motoriduttori CC ad ingranaggi cilindrici ECMG DC Helical in-line gearmotors ECMG L1


 **M** Motoriduttori CC ad assi ortogonali ECMB DC Helical bevel gearmotors ECMB M1

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 **O** Motoriduttori CC a vite senza fine ECM DC Wormgearmotors ECM O1

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 **R** Azionamenti per motori CC PLN DC Motor controls PLN R1

Questo catalogo annulla e sostituisce ogni precedente edizione o revisione. Ci riserviamo inoltre il diritto di apportare modifiche senza preavviso. La versione più aggiornata è disponibile sul sito www.transtecno.com

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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

Mr_2 [Nm]

Requested torque

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

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

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

Coppia nominale

Mn_2 [Nm]

Nominal torque

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

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

$$Mn_2 = M_2 \cdot sf$$

Coppia trasmessa

M_2 [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.

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.

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

Potenza in entrata

P_1 [kW]

Input power

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

Può essere calcolata come segue:

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

It can be calculated with the following formula:

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

Fattore di servizio

sf

Service factor

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

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

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

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

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

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

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

| | | |
|----------------|---------------------|---------------|
| | A - Uniforme | $fa \leq 0.3$ |
| Tipo di carico | B - Medio | $fa \leq 3$ |
| | C - Forte | $fa \leq 10$ |

| | | |
|--------------|----------------------------|---------------|
| | A - Uniform | $fa \leq 0.3$ |
| Type of load | 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 R₂ 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 R₂ 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 A₂ 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 A₂ 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 A₂ contattate il ns. Servizio Tecnico.

If axial load A that acts on the shaft is greater than A₂, contact the Technical Service.

Scelta dei motoriduttori

Selecting the gearmotors

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

To select the required gearmotor perform the procedure below:

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

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

2. Se si conosce la potenza motore P₁ [kW] richiesta, passare al punto 3); se è nota la coppia in uscita M₂ richiesta è necessario calcolare la potenza motore P₁ con la formula:

2. If the required motor power output P₁ [kW] is known, go to item 3); if the required output torque M₂ is known, determine motor output P₁ by using the following formula:

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


dove Rd è il rendimento dinamico e n₂ il numero di giri richiesti in uscita al motoriduttore.

where Rd stands for the dynamic efficiency and n₂ 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

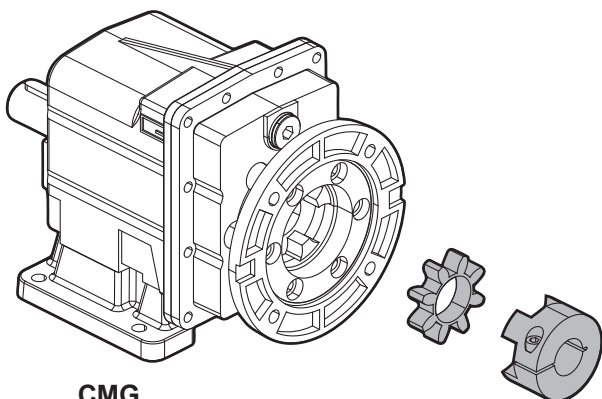
L'accoppiamento al motore tramite giunto elastico a morsetto ha i seguenti vantaggi:

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

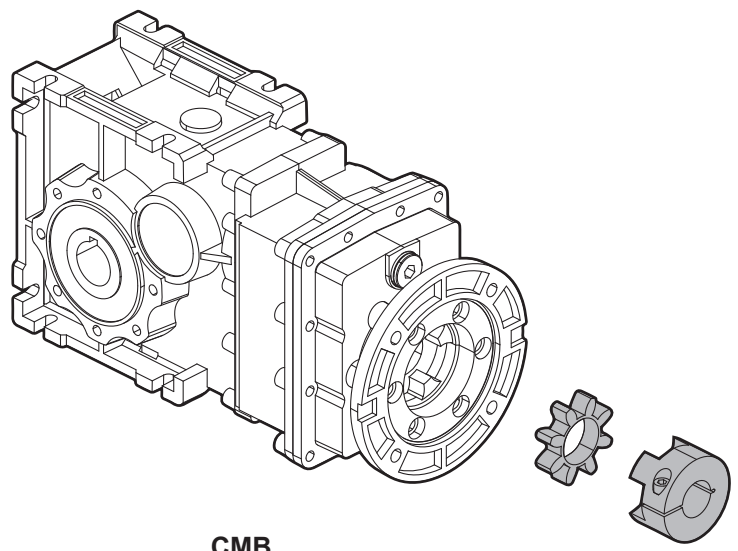
Flexible coupling

Motor connection by clamp flexible coupling allows the following benefits:

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



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

Critical applications

In these cases please contact the Technical Service

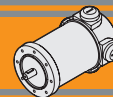
- *used as a hoist;*
- *used in mounting positions not shown in the catalogue;*
- *used in environment pressure other than atmospheric pressure;*
- *used in places with temperature $<0^{\circ}\text{C}$ or $>+40^{\circ}\text{C}$*
- *when used outdoors*
- *continuous or highly intermittent duty*
- *used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



Neodymium

Motori elettrici CC
DC electric motors

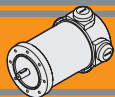




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| | Grado di protezione IP | <i>IP enclosures protection indexes</i> | B3 |
| | Classe di isolamento termico | <i>Insulation class</i> | B3 |
| | Tipi di servizio IEC | <i>IEC duty cycle ratings</i> | B3 |
| ND120.120 | Caratteristiche | <i>Features</i> | B4 |
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**Caratteristiche tecniche**

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

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

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

Classe di isolamento termico

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

Servizio

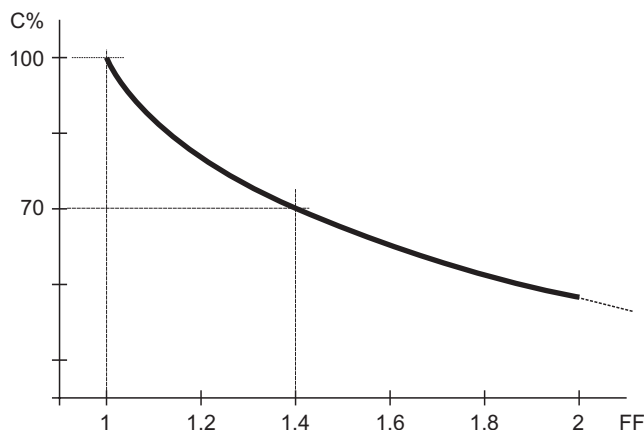
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

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

Fattore di forma

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

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

**Technical features**

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

The main features of ND neodymium permanent magnets DC electric motors range are:

- *Magnetic field generated by Neodymium (NdFeB) permanent magnets*
- *Tubular construction without fan*
- *Available in one size diameter 65*
- *Low voltage power supply 12 or 24 Vdc*
- *Power ratings available 160W and 250W S2*
- *High starting torque*
- *Higher torque and higher power than standard permanent magnet D.C. motors.*
- *Suitable for encoder / brake assembly*

Thermal insulation class

The windings of the rotor can overheat just like other parts of the motor too. The degree of insulation indicates the maximum allowable temperature above which the insulation of the windings, as well as that of all the parts which heat up to a high temperature, loses its insulating properties and the motor therefore risks being damaged.

Duty cycle

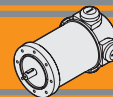
This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

Intermittent operation (S2, S3, etc.) = alternating periods of work and rest so that the motor can cool down. The output power for continuous operation is lower than that for intermittent operation.

Form factor

It indicates how much spurious alternating current is present in the D.C. motor power supply. The higher the factor, the lower the motor's efficiency. SCR power supplies = F.F 1.40. Battery supply = FF 1 Transistor supply (PWM modulation) = FF 1.05.

The graph below indicates the torque trend (percentage) in relation to the form factor:



Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

Indicates the degree of mechanical insulation of the motor body.

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

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

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

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

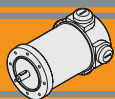
Insulation class

| Classe / Class | Δ t °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

Features

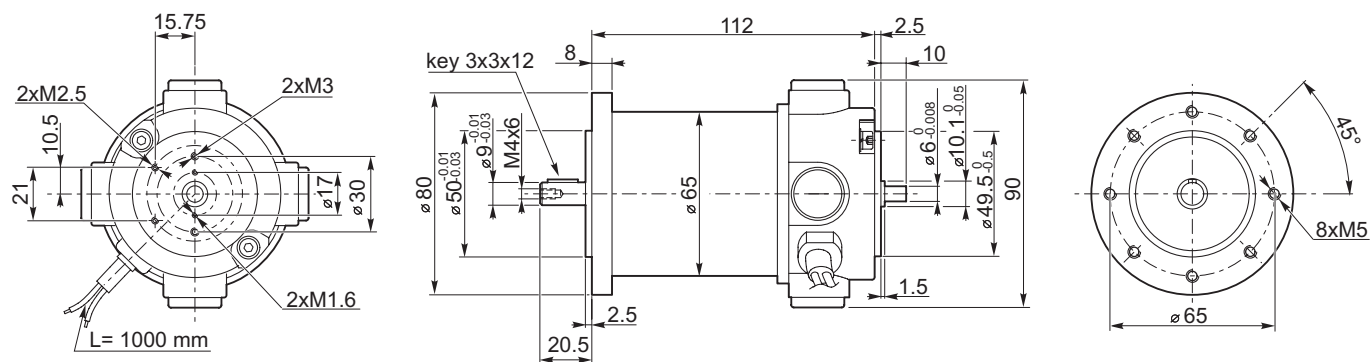
| | |
|-----------------------|-------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 65 mm |
| Potenza | 160 W S2 (120 W S1) |
| Magneti | 4 magneti in terre rare |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Spazzole | N° 4 di composto grafite-rame |
| Cavo di alimentazione | Lunghezza: 1000 mm |
| Bisporgenza | Standard |

| | |
|----------------|---|
| Construction | Tubular, without fan |
| Size | Ø 65 mm |
| Power | 160 W S2 (120 W S1) |
| Magnets | 4 rare earth magnets |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 4 brushes made of graphite/copper composite |
| Electric cable | Length: 1000 mm |
| Rear Shaft | Standard |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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 | | | |

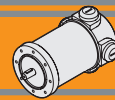
Dimensioni

Dimensions



Freno / Brake → B9

Encoder → B9



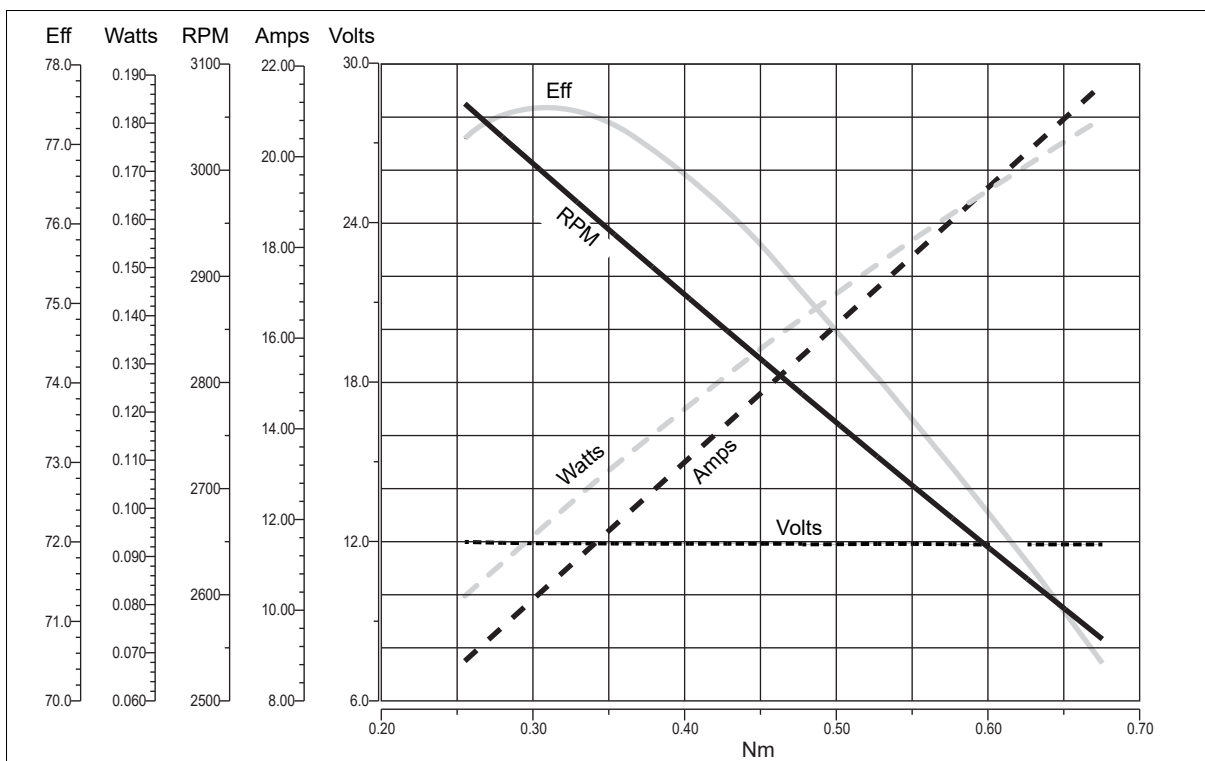
ND120.120 - ND120.240

Prestazioni

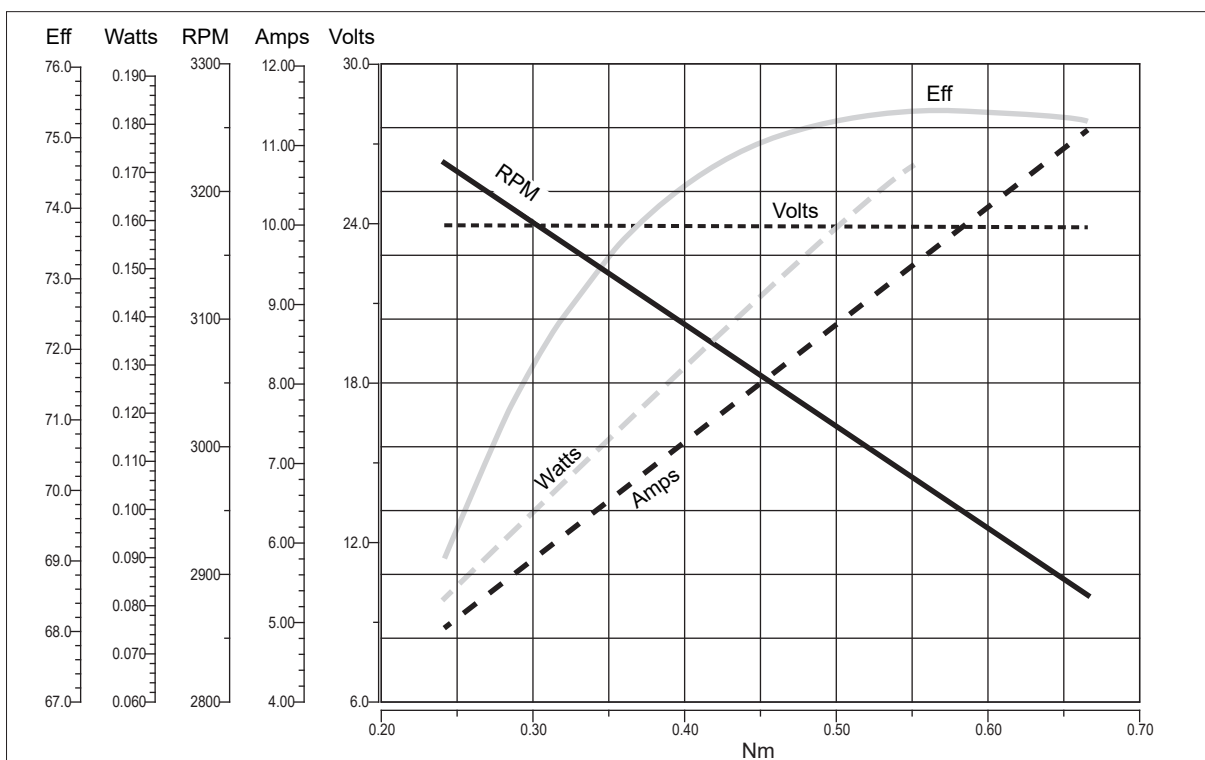
Performances

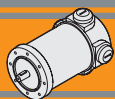
ND

ND120.120



ND120.240





ND180.120 - ND180.240

Caratteristiche

Features

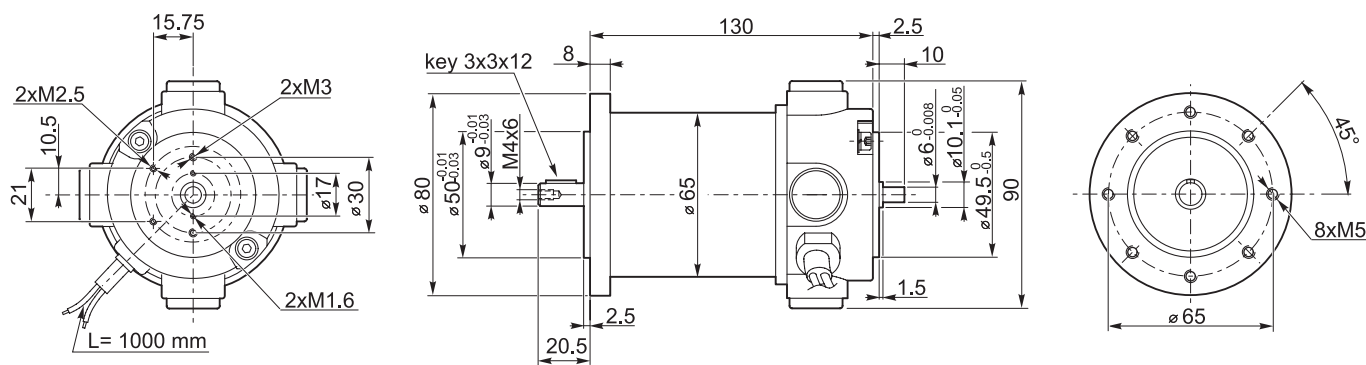
| | |
|-----------------------|-------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 65 mm |
| Potenza | 250 W S2 (180 W S1) |
| Magneti | 4 magneti in terre rare |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Spazzole | N° 4 di composto grafite-rame |
| Cavo di alimentazione | Lunghezza: 1000 mm |
| Bisporgenza | Standard |

| | |
|----------------|---|
| Construction | Tubular, without fan |
| Size | Ø 65 mm |
| Power | 250 W S2 (180 W S1) |
| Magnets | 4 rare earth magnets |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 4 brushes made of graphite/copper composite |
| Electric cable | Length: 1000 mm |
| Rear Shaft | Standard |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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 | | | | | | |
| | S2 20' | 250 | | 14 | | | 0.57 | | | |
| | | | | | | | 0.80 | | | |

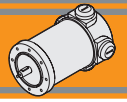
Dimensioni

Dimensions



Freno / Brake → B9

Encoder → B9

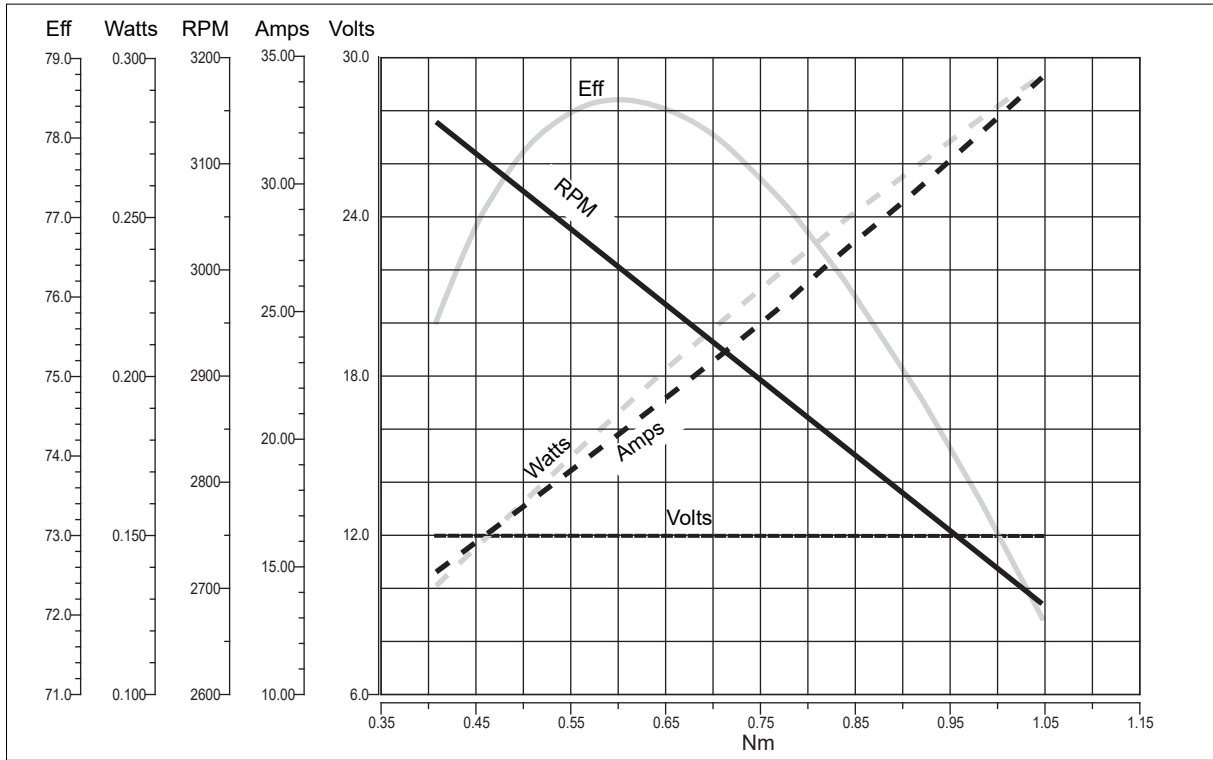


ND180.120 - ND180.240

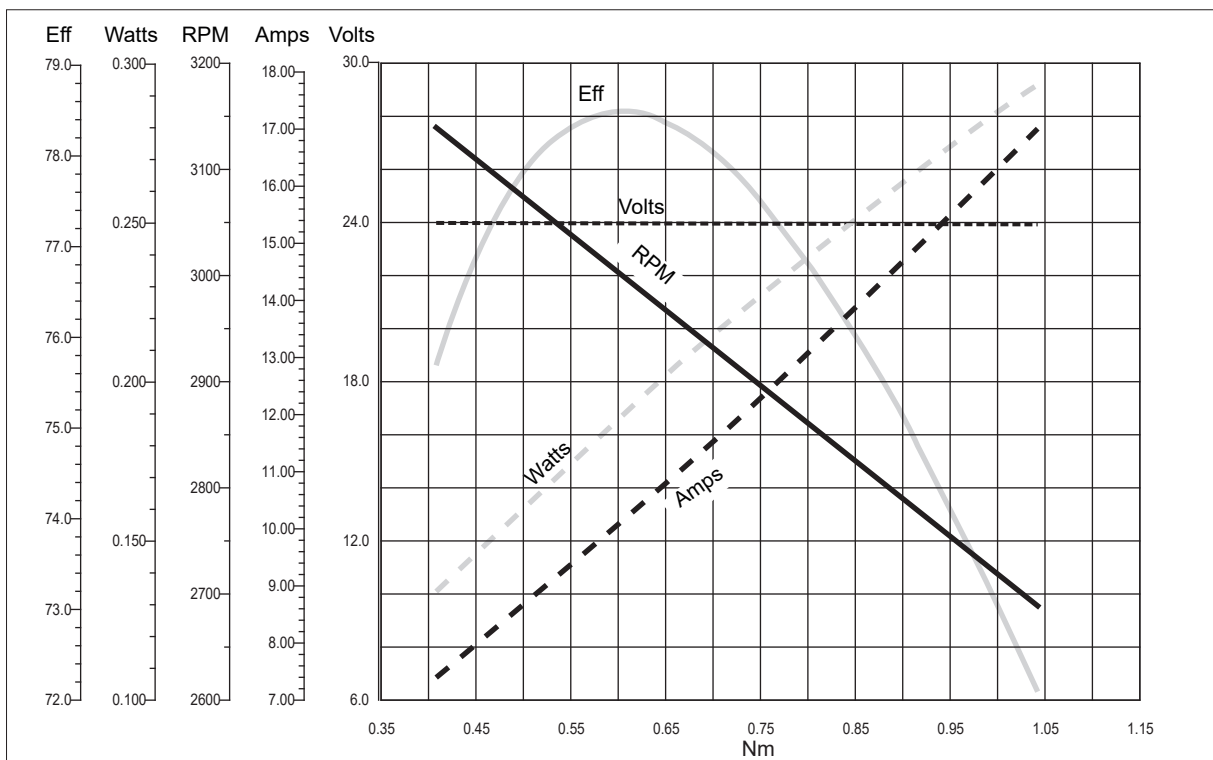
Prestazioni

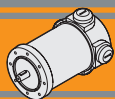
Performances

ND180.120



ND180.240



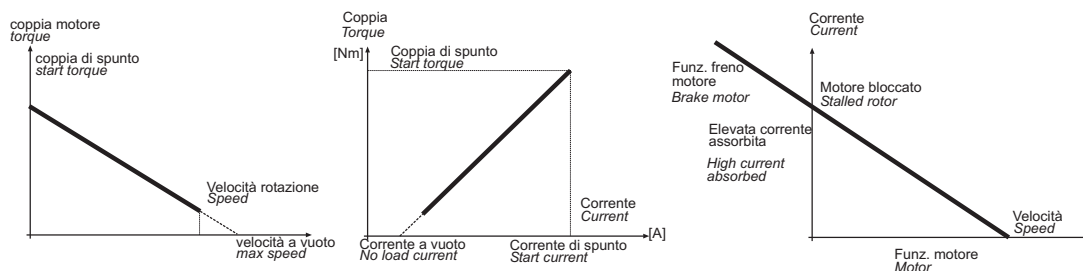


Legenda / Glossario dei grafici

Key / Diagram Glossary

Dato un motore in CC, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

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

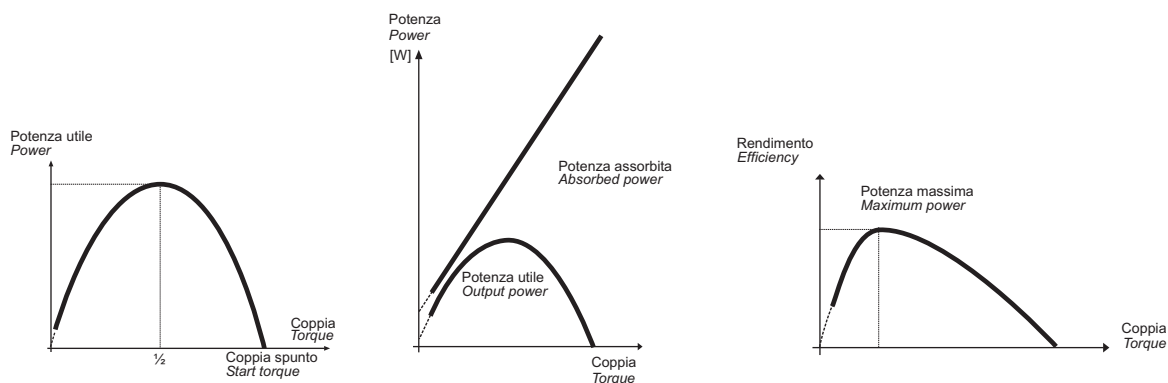


La potenza utile (potenza all'albero) si ricava dalla formula:

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

The output power is calculated using the formula:

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



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è una retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

Formule utili

Useful formulas

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

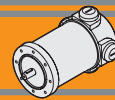
$$[HP] \cdot 746 = [W]$$

Esempio 2 HP = circa 1500 W.

$$[HP] \cdot 746 = [W]$$

Example 2 HP = approx. 1500 W.

| | | | |
|----------------------|----------------------|-----------------------------|--------------------------|
| 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 |

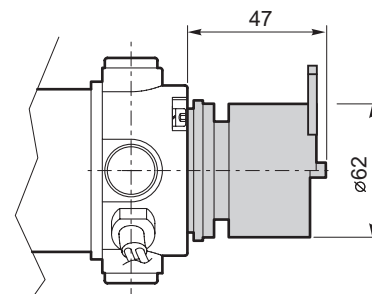
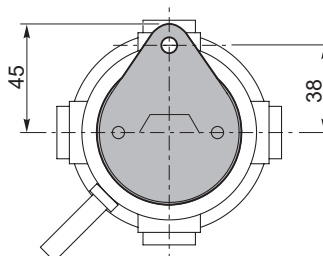
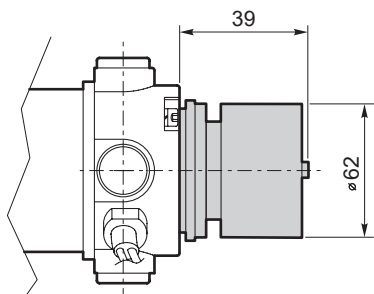


Freno

Brake

ND...BR Freno / Brake

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

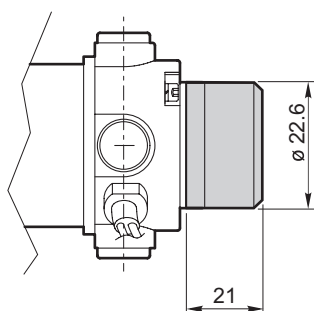


| | Pn [W] | V [V] | Mn [Nm] | n ₁ [min ⁻¹] |
|---|-----------|----------|------------|--|
| Caratteristiche del freno / Break features | 14 | 12 | 1.8 | 3000 |
| | | 24 | | |

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.

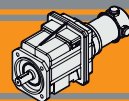
For non-standard encoder resolution, please contact our Technical Department.



Neodymium

Motoriduttori CC ad ingranaggi cilindrici DC helical in-line gearmotors

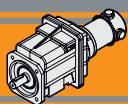




| Indice | Index | Pag. Page |
|------------------------------|-----------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | C2 |
| Designazione | <i>Classification</i> | C3 |
| Sensi di rotazione | <i>Direction of rotation</i> | C3 |
| Lubrificazione | <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**

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

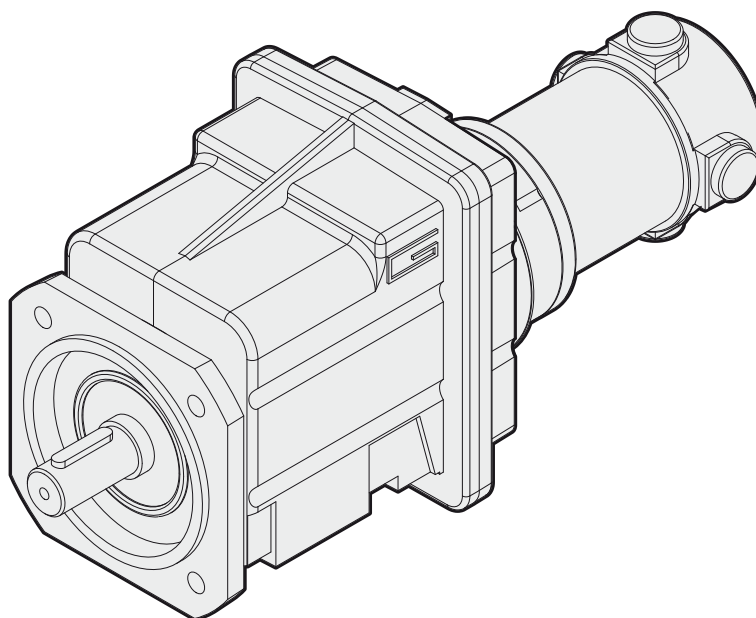
Le caratteristiche principali dei motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio NDCMG sono:

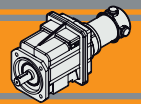
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 160 a 250W S2
- Magneti in Neodimio
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati

Technical features

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

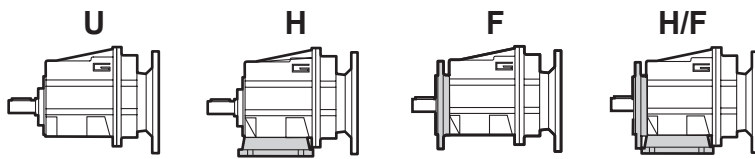
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder assembly*
- *Motor power ratings available from 160 to 250W S2*
- *Neodymium magnets*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground helical gears*

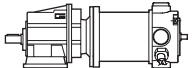




Designazione

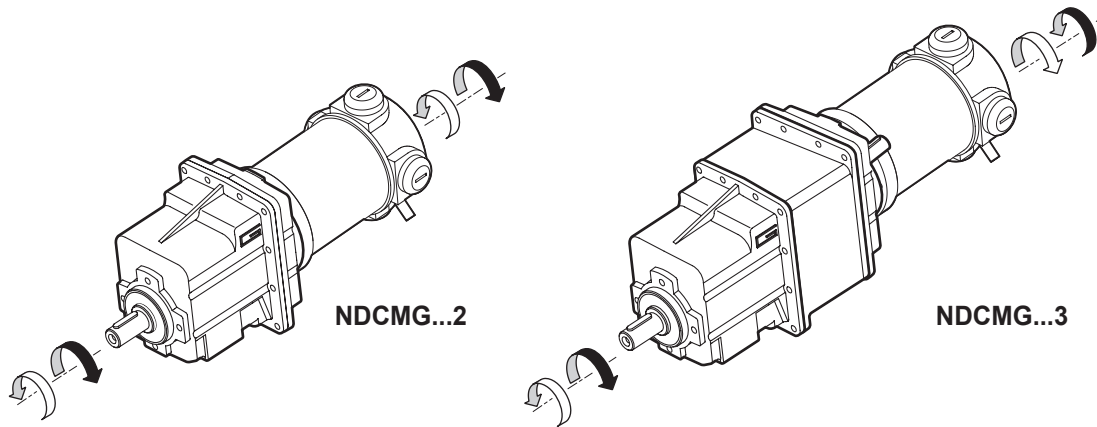
Classification



| 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  | 120/002 120/012 120/013 120/022 120/023 120/033 120/043 | 180/002 180/012 180/013 180/022 180/023 180/033 180/043 | U... H... F... H.../F... | vedi tabelle see tables | vedi tabelle see tables | 120 240 |

Sensi di rotazione

Direction of rotation

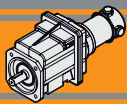


Lubrificazione

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.



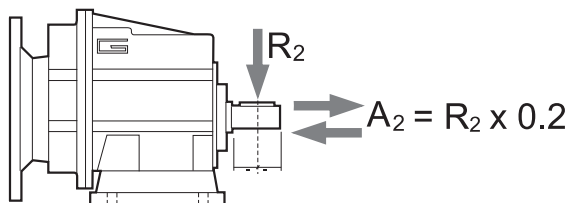
Simbologia

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

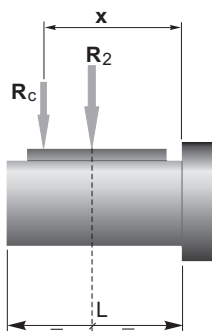
Radial loads



| 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 mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

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

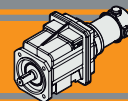


| | CMG 00 | CMG 01 | CMG 02 | CMG 03 | CMG 04 |
|------------|--------|--------|--------|--------|--------|
| a | 73 | 104 | 117 | 132 | 150 |
| b | 53 | 84 | 92 | 102 | 115 |
| R_{2MAX} | 1300 | 2500 | 5000 | 6500 | 8000 |

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

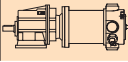
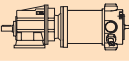
a, b = valori riportati nella tabella
 a, b = values given in the table

$$R \leq R_c$$



Dati tecnici per servizio S2

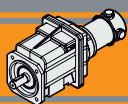
Technical data for S2 duty

| P_1 [W] | n_2 [min ⁻¹] | M_2 [Nm] | sf | i |  | Versione motore Motor version | P_1 [W] | n_2 [min ⁻¹] | M_2 [Nm] | sf | i |  | Versione motore Motor version | | | |
|---------------------------|-------------------------------|---------------|------|--------|---|----------------------------------|---------------------------|-------------------------------|---------------|------------|--------|---|----------------------------------|---------|-------|----------------|
| 160 | | | | | | | 250 | | | | | | | | | |
| (3000 min ⁻¹) | 596 | 2.5 | 12.6 | 5.03 | 120/002 | 120/240 | (3000 min ⁻¹) | 596 | 3.8 | 8.1 | 5.03 | 180/002 | 120/240 | | | |
| | 492 | 3.0 | 10.4 | 6.10 | | | | | 492 | 4.7 | 6.7 | | | 6.10 | | |
| | 401 | 3.7 | 8.5 | 7.49 | | | | | 401 | 5.7 | 5.4 | | | 7.49 | | |
| | 334 | 4.4 | 8.9 | 8.99 | | | | | 334 | 6.9 | 5.7 | | | 8.99 | | |
| | 295 | 5.0 | 7.9 | 10.16 | | | | | 295 | 7.8 | 5.0 | | | 10.16 | | |
| | 249 | 5.9 | 6.6 | 12.07 | | | | | 249 | 9.2 | 4.2 | | | 12.07 | | |
| | 224 | 6.6 | 8.4 | 13.40 | | | | | 224 | 10 | 5.4 | | | 13.40 | | |
| | 198 | 7.4 | 7.4 | 15.14 | | | | | 198 | 12 | 4.8 | | | 15.14 | | |
| | 165 | 8.9 | 6.2 | 18.17 | | | | | 165 | 14 | 4.0 | | | 18.17 | | |
| | 139 | 11 | 5.2 | 21.58 | | | | | 139 | 17 | 3.3 | | | 21.58 | | |
| | 128 | 12 | 4.8 | 23.51 | | | | | 128 | 18 | 3.1 | | | 23.51 | | |
| | 120 | 12 | 4.5 | 25.10 | | | | | 120 | 19 | 2.9 | | | 25.10 | | |
| | 111 | 13 | 4.2 | 27.08 | | | | | 111 | 21 | 2.7 | | | 27.08 | | |
| | 92 | 16 | 3.5 | 32.49 | | | | | 92 | 25 | 2.2 | | | 32.49 | | |
| | 71 | 21 | 2.7 | 42.04 | | | | | 71 | 32 | 1.7 | | | 42.04 | | |
| | 67 | 22 | 2.5 | 44.89 | | | | | 67 | 34 | 1.6 | | | 44.89 | | |
| | 61 | 24 | 2.3 | 48.86 | | | | | 61 | 37 | 1.5 | | | 48.86 | | |
| | 54 | 27 | 2.0 | 55.10 | | | | | | | | | | | | |
| | 85 | 17 | 5.4 | 35.47 | | | 120/012 | 120/240 | | 127 | 18 | | | 5.2 | 23.56 | 180/012 |
| | 65 | 22 | 4.2 | 45.89 | | | | | 101 | 23 | 4.2 | 29.56 | | | | |
| | 61 | 24 | 3.9 | 49.00 | | | | | 85 | 27 | 3.5 | 35.47 | | | | |
| | 56 | 26 | 3.6 | 53.33 | | | | | 65 | 35 | 2.7 | 45.89 | | | | |
| | 50 | 29 | 3.2 | 60.15 | | | | | 61 | 37 | 2.5 | 49.00 | | | | |
| | 47 | 30 | 3.1 | 63.22 | 120/013 | 120/240 | | 56 | 41 | 2.3 | 53.33 | | | | | |
| | 40 | 36 | 2.6 | 75.08 | | | | | 50 | 46 | 2.0 | 60.15 | | | | |
| | 34 | 43 | 2.2 | 89.17 | | | | | 47 | 47 | 2.0 | 63.22 | 180/013 | 120/240 | | |
| | 27 | 54 | 1.7 | 113.05 | | | | | 40 | 56 | 1.7 | 75.08 | | | | |
| | 22 | 64 | 1.5 | 134.27 | | | | | 34 | 67 | 1.4 | 89.17 | | | | |
| | 17 | 83 | 1.1 | 173.72 | | | | | 27 | 85 | 1.1 | 113.05 | | | | |
| | 15 | 97 | 1.0 | 202.16 | | | | | 22 | 100 | 0.9 | 134.27 | | | | |
| | 11 | 125 | 0.8 | 261.57 | | | | | 17 | 130 | 0.7 | 173.72 | | | | |
| | 10 | 134 | 0.7 | 304.00 | | | | | 15 | 134 | 0.7 | 202.16 | | | | |
| | 7.6 | 134 | 0.7 | 393.33 | | | | | 11 | 134 | 0.7 | 261.57 | | | | |
| | 6.8 | 134 | 0.7 | 443.59 | | | 10 | 134 | 0.7 | 304.00 | | | | | | |
| | | | | | | | 7.6 | 134 | 0.7 | 393.33 | | | | | | |
| | 33 | 43 | 3.6 | 90.29 | 120/023 | 120/240 | | 6.8 | 134 | 0.7 | 443.59 | | | | | |
| | 26 | 55 | 2.8 | 114.46 | | | | | 65 | 35 | 4.4 | 46.46 | 180/022 | 120/240 | | |
| | 22 | 65 | 2.4 | 135.95 | | | | | 60 | 38 | 4.1 | 49.61 | | | | |
| | 17 | 84 | 1.9 | 175.89 | | | | | 56 | 41 | 3.8 | 54.00 | | | | |
| | 15 | 98 | 1.6 | 204.69 | | | | | 49 | 47 | 3.4 | 60.90 | | | | |
| | 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 | | | | | | | | | | | | |

NDCMG

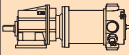
N.B.
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M2 does not exceed the value in the grey areas

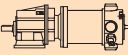
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico
NOTE: for continuous or highly intermittent duty, please contact our technical service



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 |
|---------------------------|-------------------------------|---------------|-----|--------|---|----------------------------------|
| 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 | | |

| 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 |
| | 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 | | |

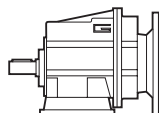
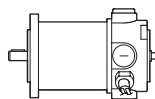
N.B.
Verificare sempre che la coppia M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M_2 does not exceed the value in the grey areas

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

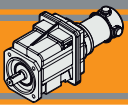
IEC Motor adapters



| | | 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

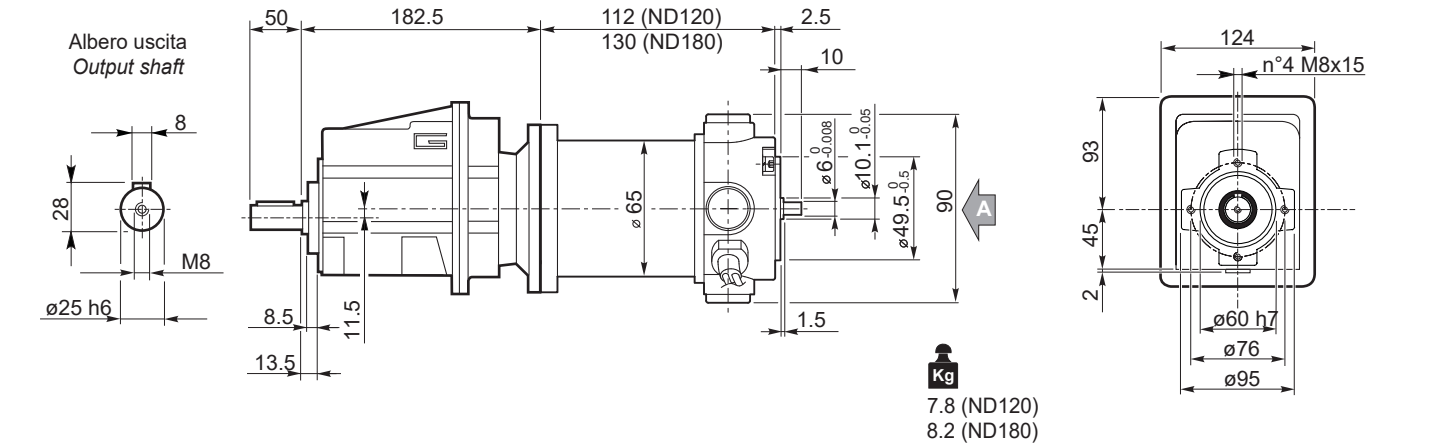


Dimensioni

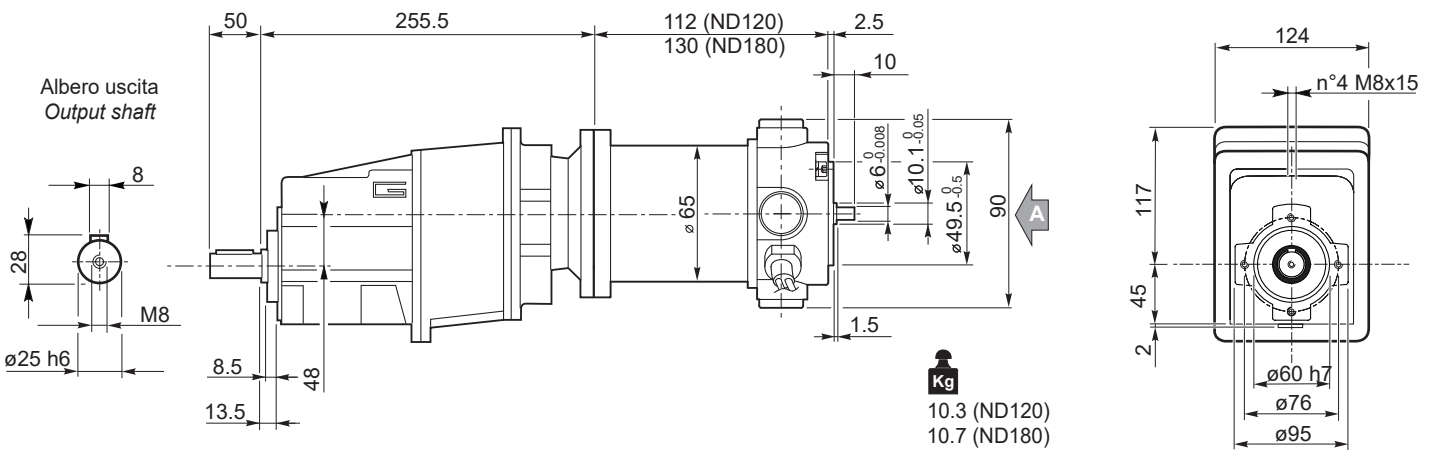
Dimensions

NDCMG..U

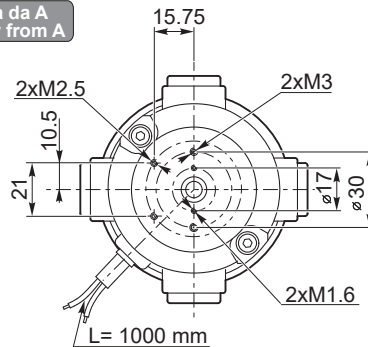
NDCMG120/022 U NDCMG180/022 U



NDCMG120/023U NDCMG180/023 U



Vista da A
View from A



NDCMG...H



NDCMG...F



NDCMG...H/F

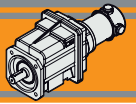


Freno / Brake



Encoder



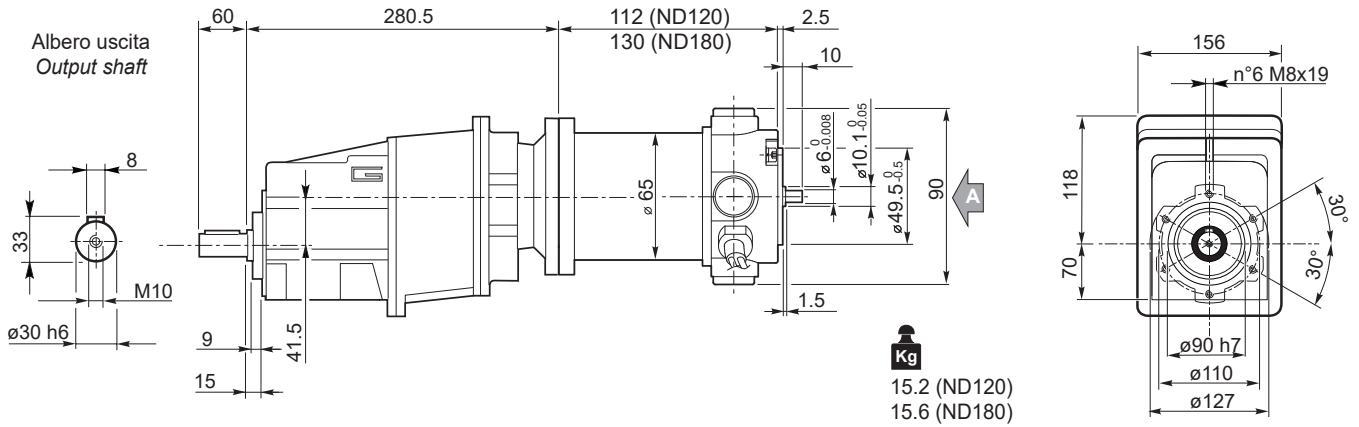


Dimensioni

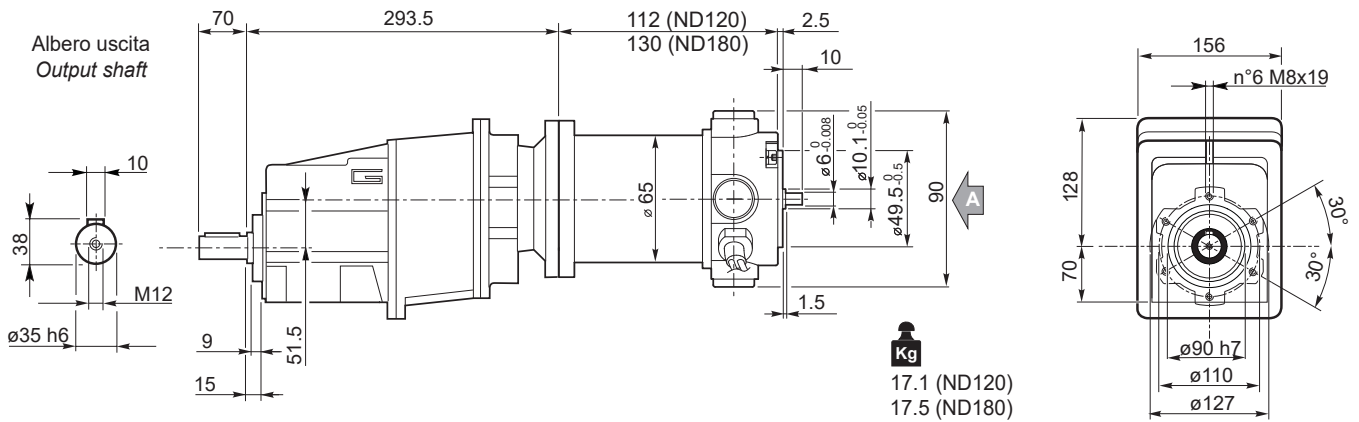
Dimensions

NDCMG..U

NDCMG120/033 U
NDCMG180/033 U



NDCMG120/043 U
NDCMG180/043 U



NDCMG...H



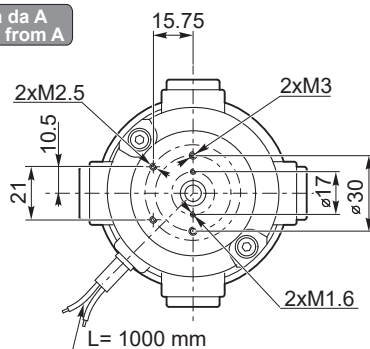
NDCMG...F



NDCMG...H/F



Vista da A
View from A



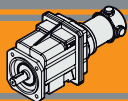
Freno / Brake



Encoder

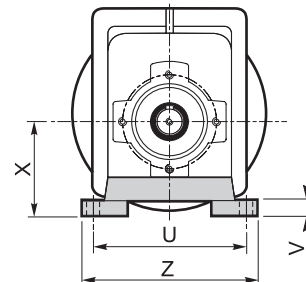
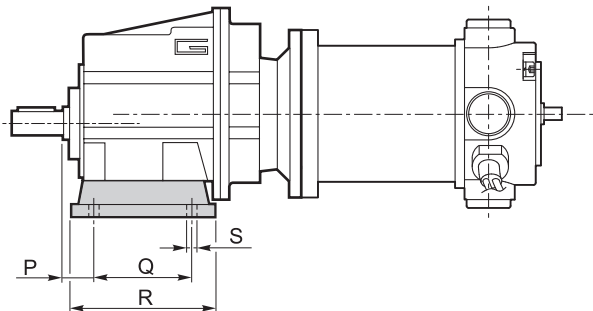


NDCMG

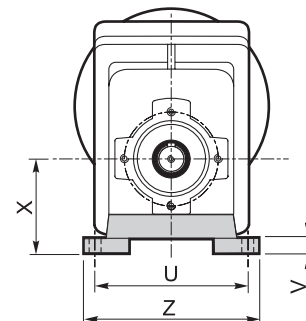
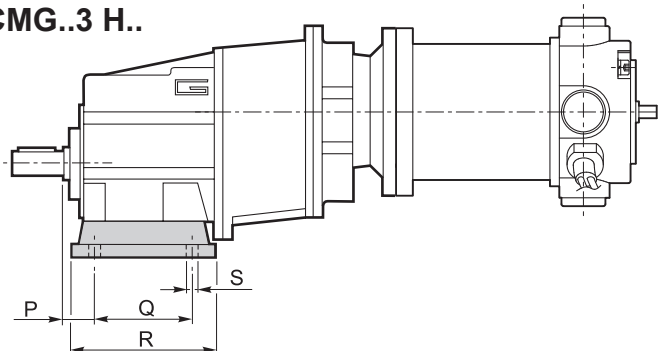


NDCMG..H

NDCMG..2 H..



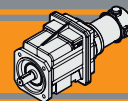
NDCMG..3 H..



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 |
| 022 023 | 18 | 60 - 107.5 | 135 | 11 | 130 | 12 | 100 | 155 | H100 | 1.7 |
| | 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 |
| 033 | 18 | 60 - 107.5 | 135 | 11 | 130 | 12 | 100 | 155 | H100 | 1.7 |
| | 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

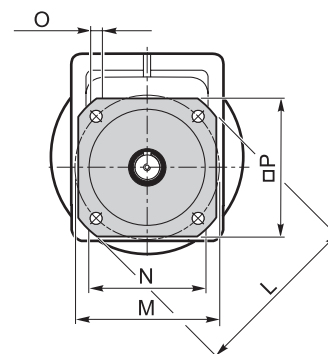
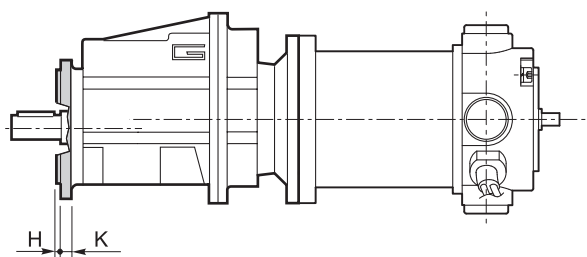


Dimensioni

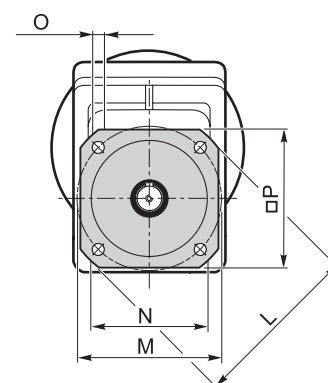
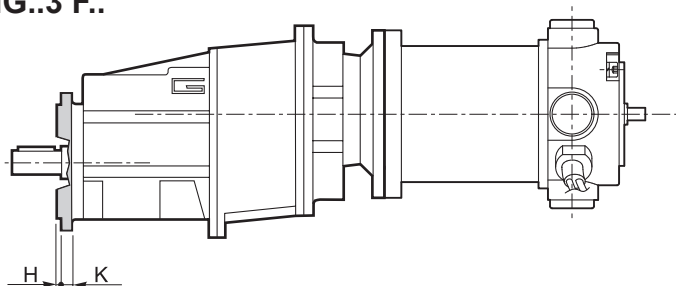
Dimensions

NDCMG..F

NDCMG..2 F..



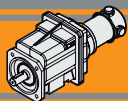
NDCMG..3 F..



NDCMG

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 |



Dimensioni

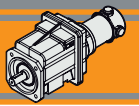
Dimensions

| 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 |

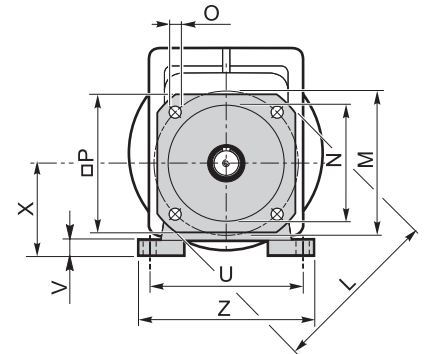
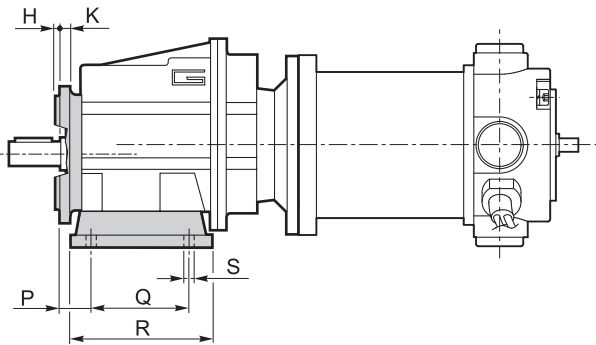


Dimensioni

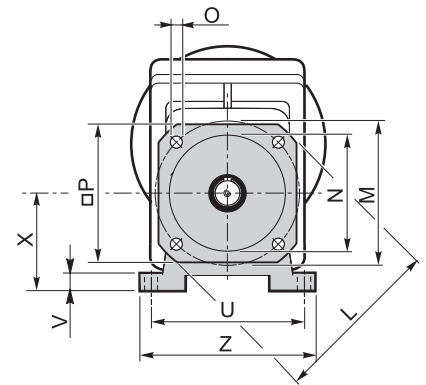
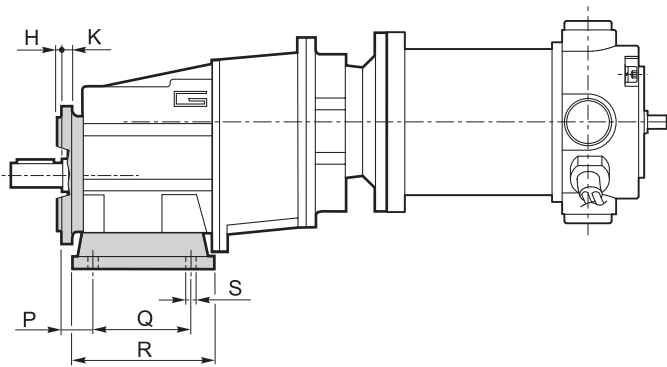
Dimensions

NDCMG..H../F..

NDCMG..2 H../F..



NDCMG..3 H../F..

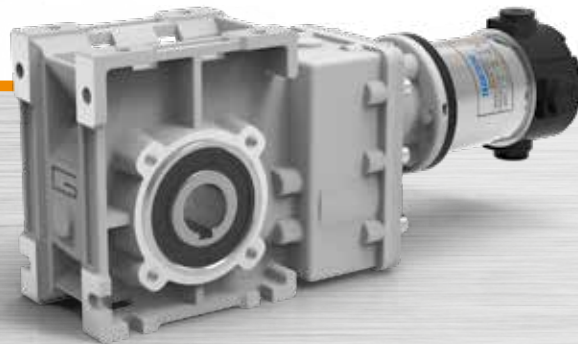


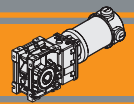
NDCMG



Neodymium

Motoriduttori CC ad assi ortogonali DC helical bevel gearmotors

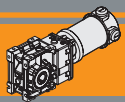




| Indice | Index | Pag. Page |
|--------------------------|------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | D2 |
| Designazione | <i>Classification</i> | D2 |
| Sensi di rotazione | <i>Direction of rotation</i> | D2 |
| Simbologia | <i>Symbols</i> | D3 |
| Lubrificazione | <i>Lubrication</i> | D3 |
| Carichi radiali | <i>Radial loads</i> | D3 |
| Dati tecnici | <i>Technical data</i> | D4 |
| Motori applicabili | <i>Motor adapters</i> | D4 |
| Dimensioni | <i>Dimensions</i> | D5 |
| Accessori | <i>Accessories</i> | D8 |

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Caratteristiche tecniche

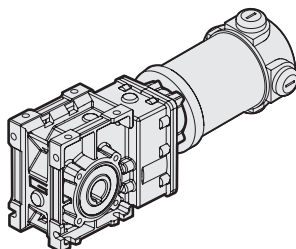
Technical features

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
- Carcasse 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

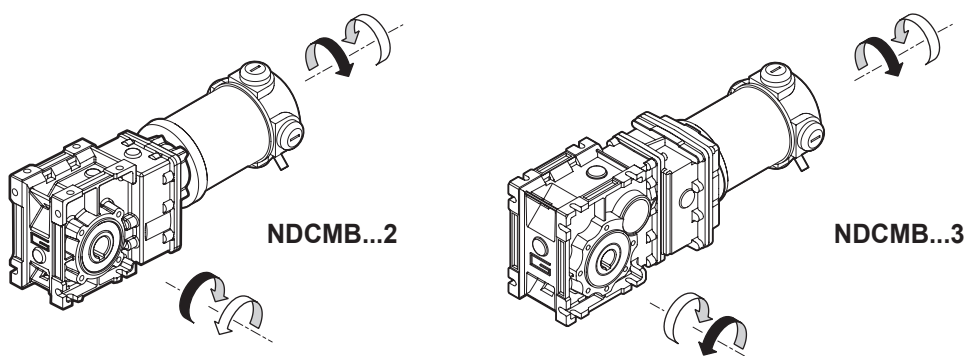
| MOTORIDUTTORE / GEARMOTOR | | | | | | | | | |
|---------------------------|-------------------|---------|---------------------------------------|-------------------|----------------------------------|----------------------------------|-----------------------------------|-----------------|----------------------------------|
| 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 | Vedere tabella | Vedere tabella | SZDX | BRDX | 0° | 120 |
| | 120/502 | 180/502 | FD | See tables | See tables | SZSX | BRSX | 90° | 240 |
| | 120/633 | 180/633 | FS | | | DZ | | 180° | |
| | | | FLS | | | | | 270° | |
| | | | FBD | | | | | | |
| | | | FBS | | | | | | |

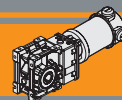
| | | | |
|---------------------------------------|----------------------------------|---------------------------------------|---------------------|
| Versione Riduttore Gearbox Version | Albero di uscita Output shaft | Braccio di reazione (*) Torque arm | Angolo (*) Angle |
| | | | |

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

Lubrificazione

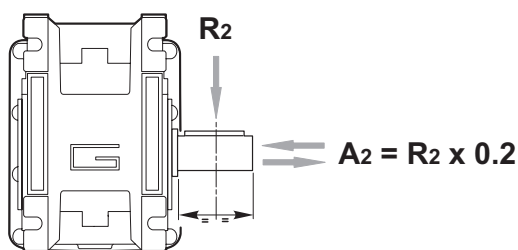
Lubrication

Tutti i riduttori nelle taglie 402 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

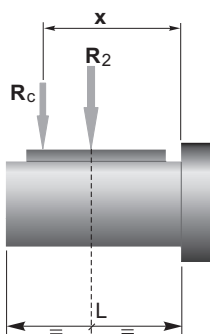
Radial loads



| 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 mezzeria dell'albero occorre calcolare quello effettivo con la seguente formula:

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

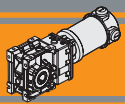


| | CMB 402 | CMB 502 | CMB 633 |
|------------|---------|---------|---------|
| a | 86 | 104 | 118 |
| b | 66 | 79 | 93 |
| R_{2MAX} | 3500 | 4200 | 6500 |

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

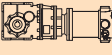
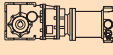
$$R \leq R_c$$

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



Dati tecnici per servizio S2

Technical data for S2 duty

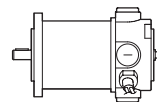
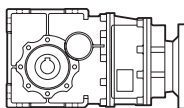
| P_1 [W] | n_2 [min ⁻¹] | M_2 [Nm] | sf | i |  | Versione motore Motor version | P_1 [W] | n_2 [min ⁻¹] | M_2 [Nm] | sf | i |  | Versione motore Motor version | | | | |
|---------------------------|-------------------------------|---------------|------|--------|---|----------------------------------|---------------------------|-------------------------------|---------------|------------|--------|---|----------------------------------|----------------|---------|--|--|
| 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 | | | | | | |
| | 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 | 180/633 | 120/240 | | |
| | | | | | | | | 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

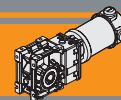
Motori applicabili

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 | |

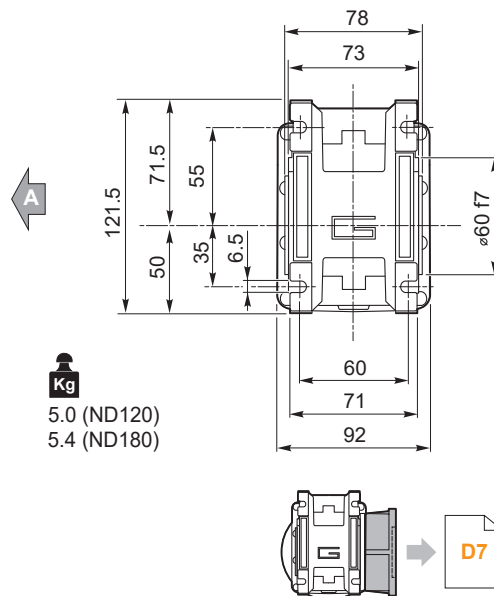
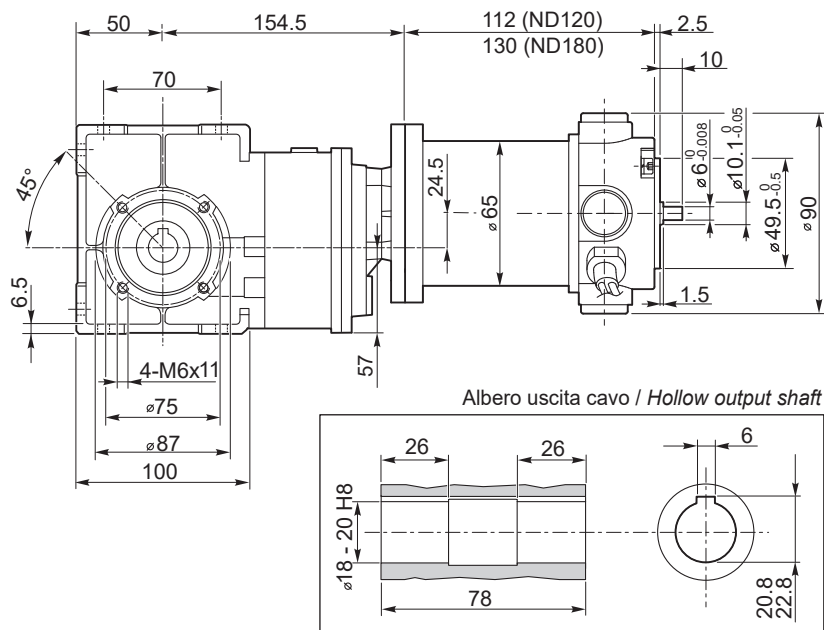
Rapporti di riduzione i
Ratio i



Dimensioni

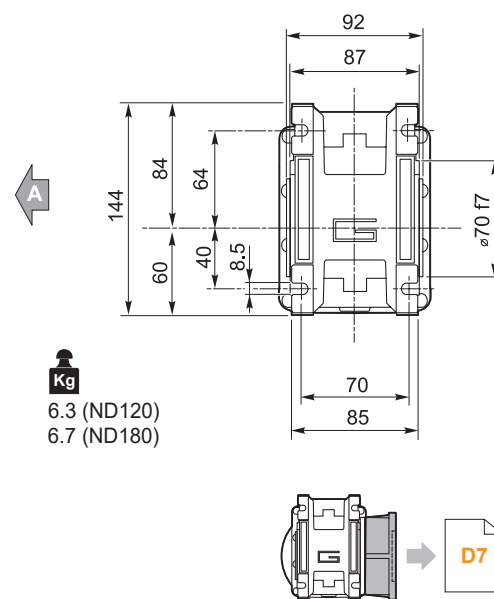
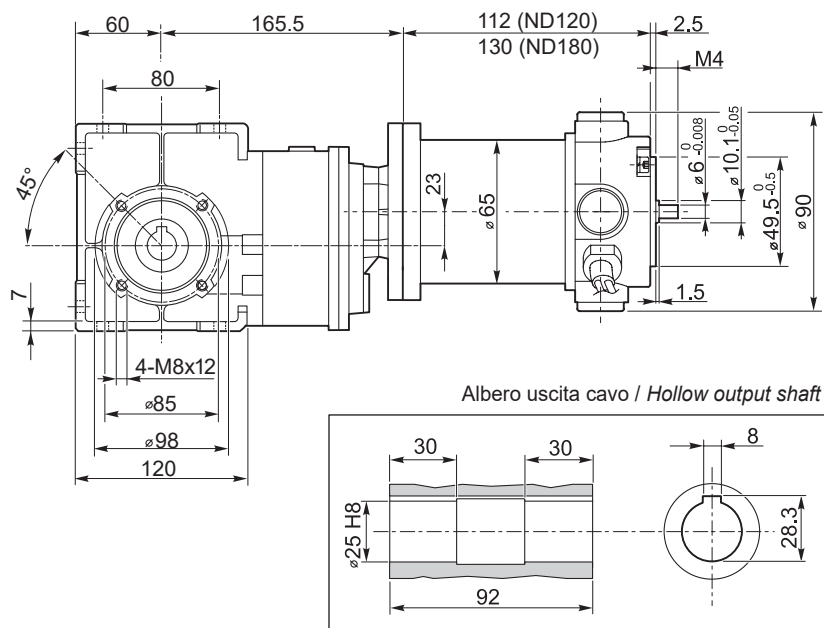
Dimensions

NDCMB120/402 U
NDCMB180/402 U

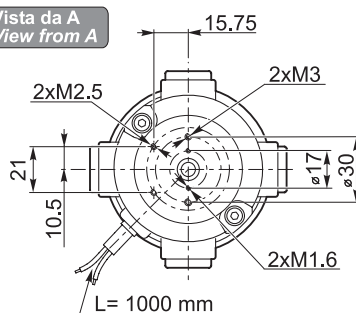


NDCMB

NDCMB120/502 U
NDCMB180/502 U

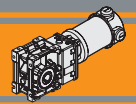


Vista da A
View from A



Freno / Brake → **B9**

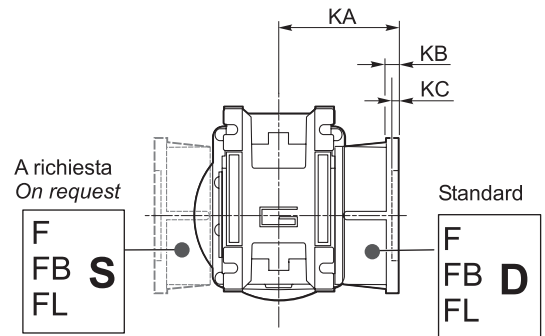
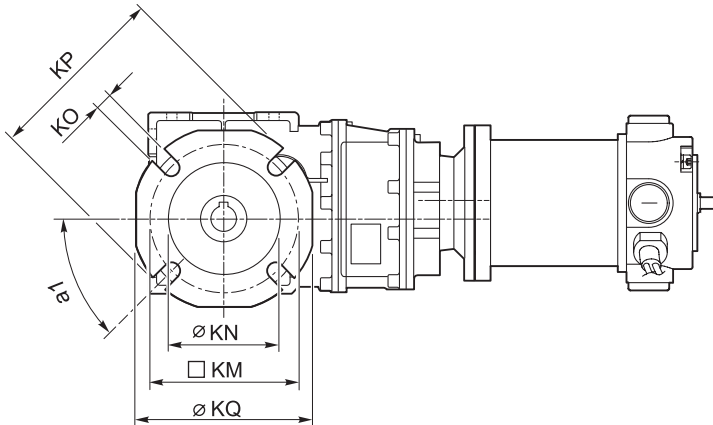
Encoder → **B9**



Dimensioni

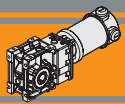
Dimensions

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



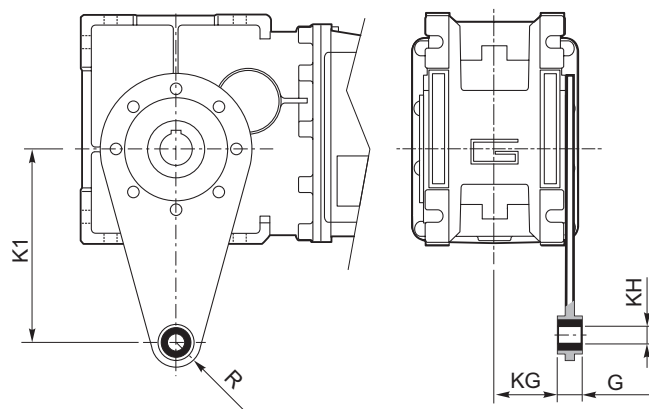
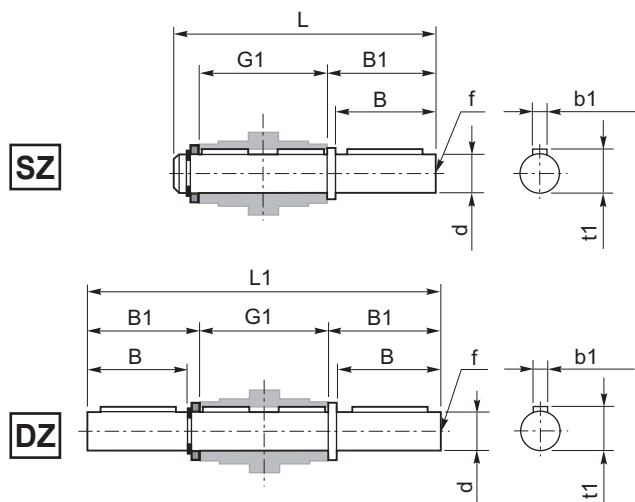
NDCMB

| CMB | Flange uscita / Output flanges | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------|--------------------------------|----|-----|-----|-----------|----------|----|-----|-----|----------------|-----|-----|-----|-----------|----------|----|-----|-----|----------------|----|-----|----|---------|----------|-----|-----|-----|
| | F | | | | | | | | | FL | | | | | | | | | FB | | | | | | | | |
| | 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 |



Accessori

Accessories



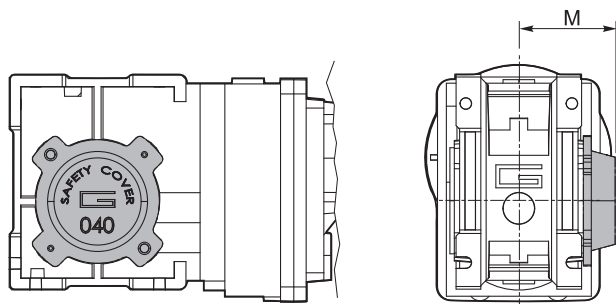
Albero lento / Output shaft

| 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

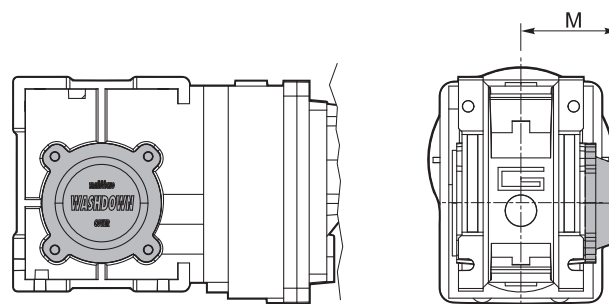
| CMB | K1 | G | KG | KH | R |
|-----|-----|----|------|----|----|
| 402 | 100 | 14 | 31 | 10 | 18 |
| 502 | 100 | 14 | 38 | 10 | 18 |
| 633 | 150 | 14 | 47.5 | 10 | 18 |

SC - Safety cover



| CMB | M |
|-----|------|
| 402 | 54.5 |
| 502 | 62.5 |
| 633 | 73 |

WD - Washdown cover



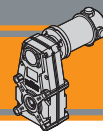
| CMB CMBIS | M |
|--------------|------|
| 402 | 55.5 |
| 502 | 63.5 |
| 633 | 71.5 |



Neodymium

Motoriduttori CC pendolari
DC helical parallel gearmotors

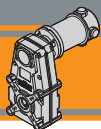




| Indice | Index | Pag. Page |
|--------------------------|------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | E2 |
| Designazione | <i>Classification</i> | E2 |
| Sensi di rotazione | <i>Direction of rotation</i> | E3 |
| Simbologia | <i>Symbols</i> | 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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NDFT Motoriduttori CC pendolari DC Helical parallel gearmotors

Caratteristiche tecniche

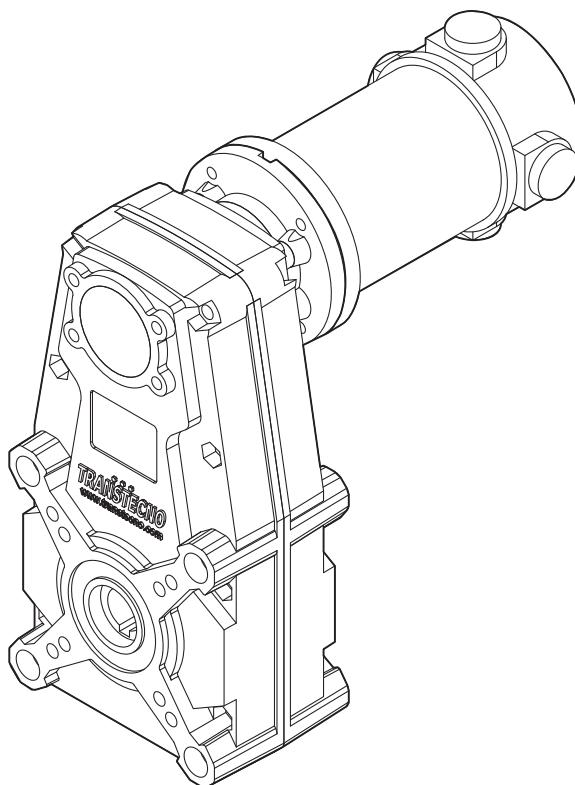
Technical features

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

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

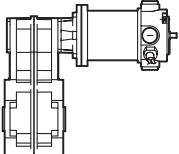
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250W S2
- Magneti in Neodimio
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali.

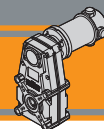
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250W S2
- Neodymium magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- helical gears.



Designazione

Classification

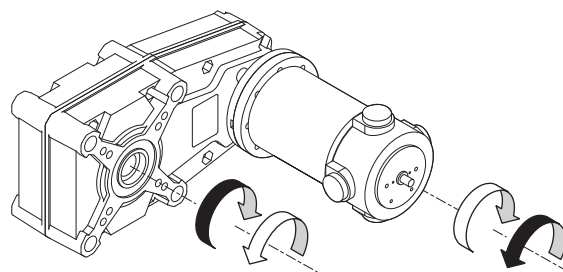
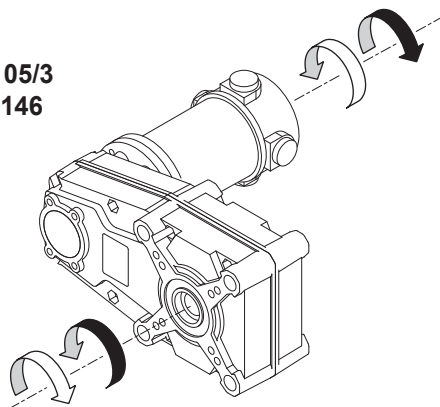
| MOTORIDUTTORE / GEARMOTOR | | | | | | |
|---|-----------------------------------|----------------------|---------------------------------------|------------------------------|-------------------------------------|----------------------------------|
| NDFT | 120/146 | | U | 60.63 | O20 | 240 |
| Tipo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



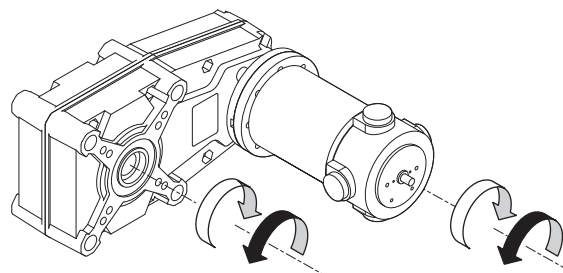
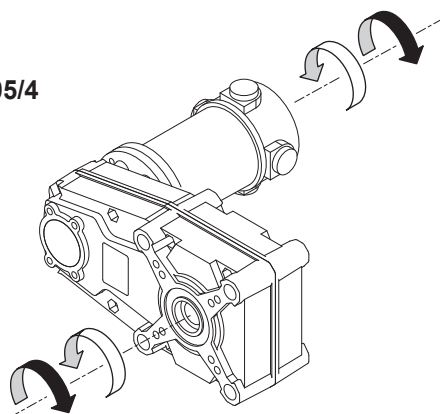
Sensi di rotazione

Direction of rotation

FT105/3
FT146



FT105/4



NDFT

Simbologia

Symbols

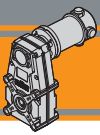
| | | |
|----------|----------------------|--|
| n_1 | [min ⁻¹] | Velocità in ingresso / <i>Input speed</i> |
| n_2 | [min ⁻¹] | Velocità in uscita / <i>Output speed</i> |
| i | | Rapporto di riduzione / <i>Ratio</i> |
| P_1 | [kW] | Potenza in entrata / <i>Input power</i> |
| M_2 | [Nm] | Coppia nominale 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

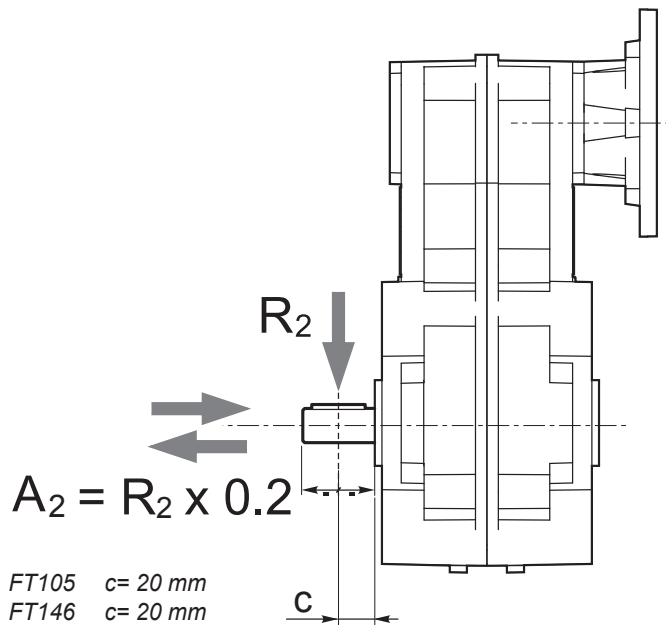
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

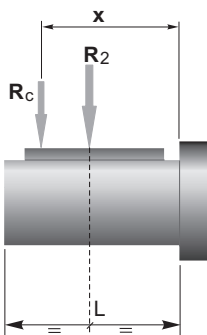
Radial loads



| 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:

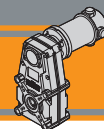


| | FT105 | FT146 |
|-------------------------|-------|-------|
| a | 82 | 82,5 |
| b | 62 | 62,5 |
| R_{2MAX} | 2000 | 3000 |

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



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

$$R \leq R_c$$



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 | | | | | | |
| | | | | | | 106 | 21 | 3.0 | 28.26 | | | | | | |
| | 8.1 | 86 | 0.6 | 368.19 | 120/105/4 | 120/240 | 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 | | | | |
| | 160 | 9 | 7.0 | 18.75 | 120/146 | 120/240 | 49 | 45 | 1.9 | 60.63 | | | | | |
| | 131 | 11 | 5.7 | 22.89 | | | | 43 | 52 | 1.6 | 70.00 | | | | |
| | 115 | 13 | 5.0 | 26.17 | | | | 41 | 55 | 1.5 | 74.02 | | | | |
| | 106 | 14 | 4.6 | 28.26 | | | | 35 | 63 | 1.4 | 84.63 | | | | |
| | 86 | 17 | 4.6 | 35.07 | | | | 31 | 72 | 1.2 | 95.61 | | | | |
| | 76 | 19 | 4.1 | 39.44 | | | | 26 | 85 | 1.0 | 113.40 | | | | |
| | 65 | 22 | 3.5 | 46.44 | | | | 22 | 100 | 0.9 | 133.45 | | | | |
| | 57 | 25 | 3.1 | 52.86 | | | | 20 | 112 | 0.8 | 150.18 | | | | |
| | 49 | 29 | 3.0 | 60.63 | | | | 19 | 120 | 0.8 | 160.43 | | | | |
| | 43 | 34 | 2.6 | 70.00 | | | | 17 | 134 | 0.7 | 178.83 | | | | |
| | 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

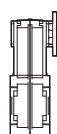
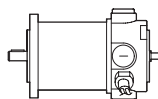
N.B.
Please check that the output torque M2 does not exceed the value in the grey areas

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

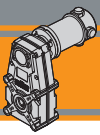
Motor adapters



| | | 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 |

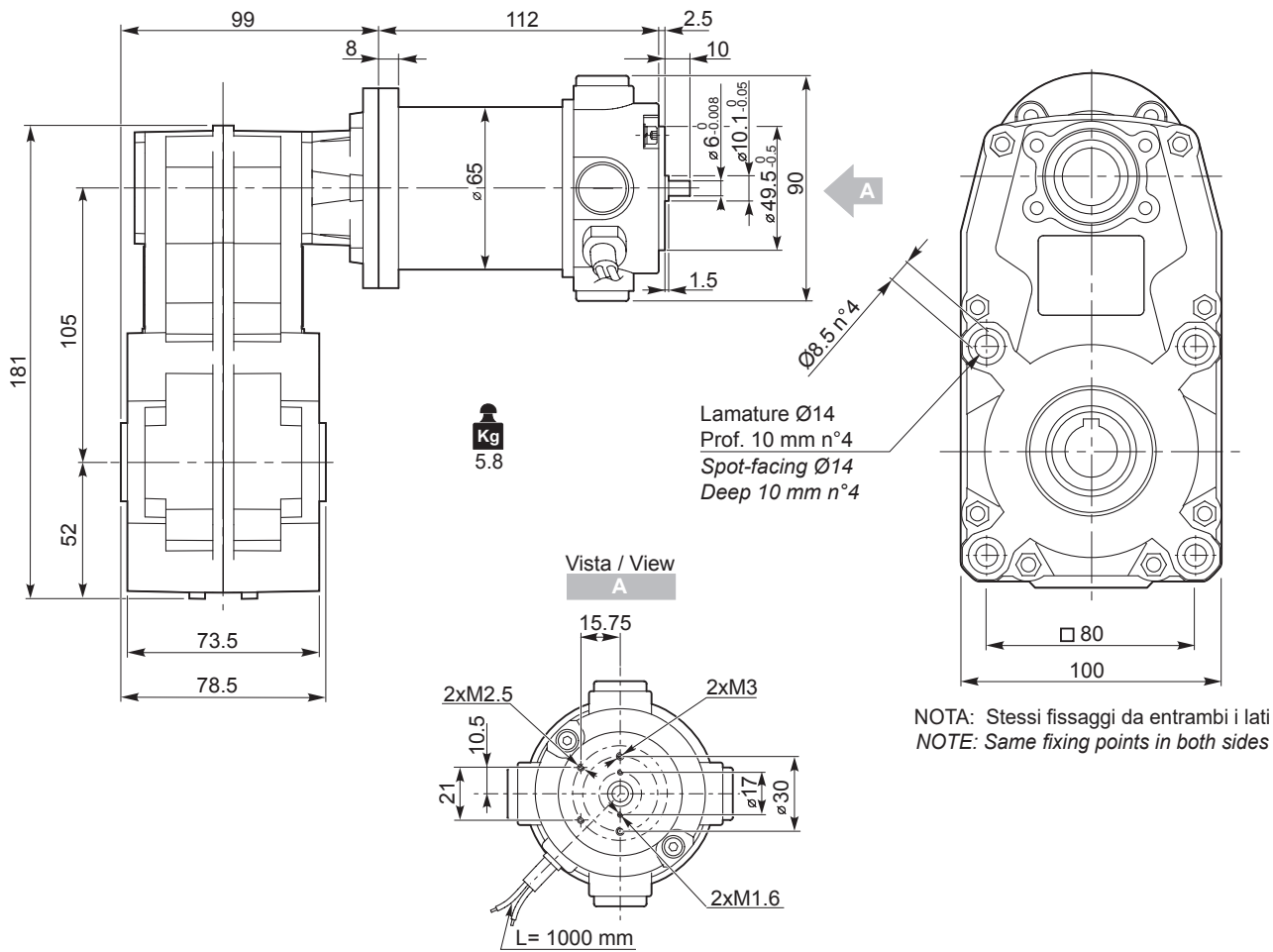
18.75 - 397.38

Rapporti di riduzione i
Ratio i

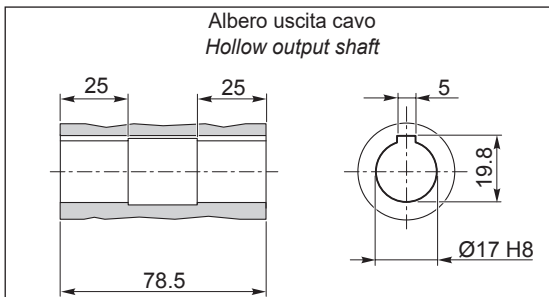


NDFT 120/105

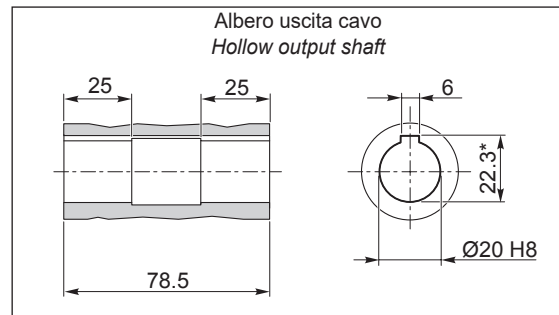
NDFT 120/105...U



O17



O20



*: Sede linguetta ribassata / Special keyway

Freno / Brake

B9

Encoder

B9

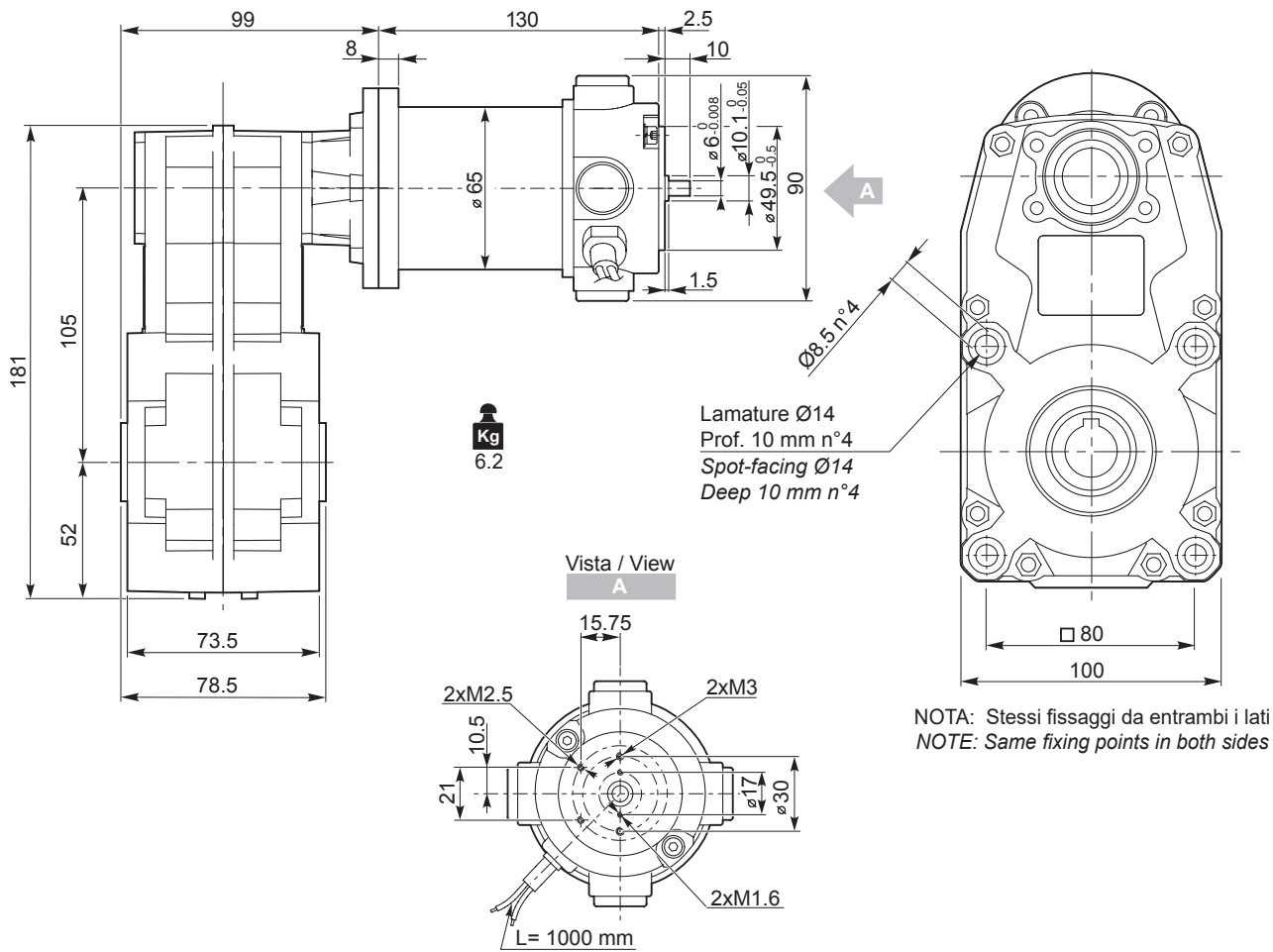


Dimensioni

Dimensions

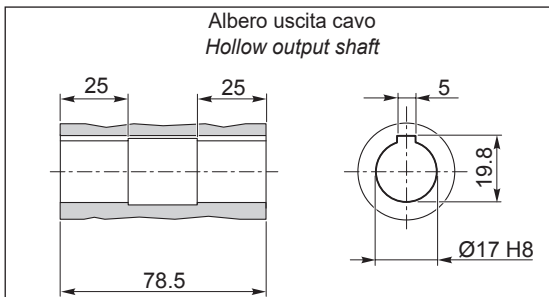
NDFT 180/105

NDFT 180/105...U

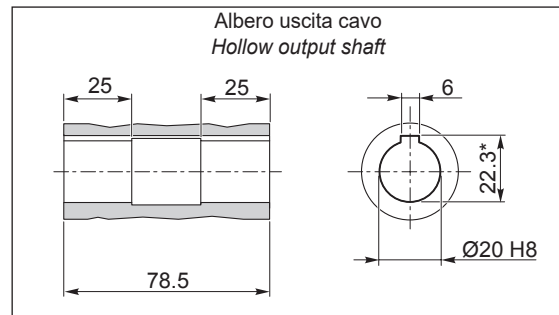


NDFT

O17



O20



*: Sede linguetta ribassata / Special keyway

Freno / Brake



Encoder

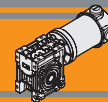




Neodymium

Motoriduttori CC a vite senza fine
DC wormgearmotors

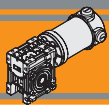




| Indice | Index | Pag. Page |
|--------------------------|---------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | F2 |
| Designazione | <i>Classification</i> | F2 |
| Simbologia | <i>Symbols</i> | F2 |
| Lubrificazione | <i>Lubrication</i> | F3 |
| Carichi radiali | <i>Radial loads</i> | F3 |
| Dati di dentatura | <i>Toothing data</i> | F4 |
| Rendimento | <i>Efficiency</i> | F4 |
| Dati tecnici | <i>Technical data</i> | F5 |
| Motori applicabili | <i>IEC Motor adapters</i> | F5 |
| Dimensioni | <i>Dimensions</i> | F6 |
| 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**

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Caratteristiche tecniche

Technical features

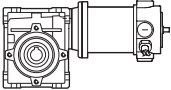
Le caratteristiche principali dei motoriduttori CC a vite senza fine a magneti permanenti in neodimio NDCM sono:

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

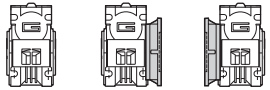
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250 W S2
- Magneti in Neodimio
- Carcasse dei riduttori a vite senza fine in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 160 to 250 W S2
- Neodymium magnets
- Die-cast aluminum housing on wormgearboxes
- Permanent synthetic oil long-life lubrication

Designazione

Classification

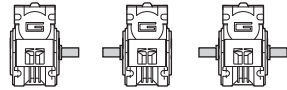
| MOTORIDUTTORE / GEARMOTOR | | | | | | | | | |
|---|-------------------|---------------|---------------------------------------|------------------------------|----------------------------------|-----------------------------------|---------------------------|----------------------------------|--------------------|
| 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 |
|  | 120/026 | 180/026 | U F... | Vedere tabella See tables | SZDX SZSX DZ | BRDX BRSX * | 0° 90° 180° 270° | 120 — 240 | VS |
| | 120/026 (D11) | 180/026 (D11) | | | | | | | |
| | 120/026 (D14) | 180/026 (D14) | | | | | | | |
| | 120/030 | 180/030 | | | | | | | |
| | 120/040 | 180/040 | | | | | | | |

Versione Riduttore
Gearbox Version



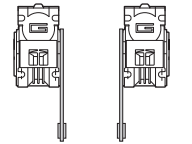
U F...D F...S

Albero di uscita
Output shaft



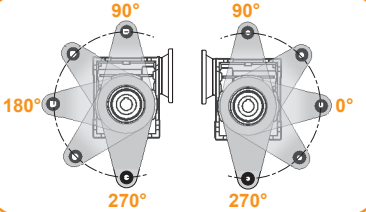
SZDX SZSX DZ

Braccio di reazione
Torque arm *



BRDX BRSX

Angolo
Angle



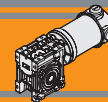
90° 90°
180° 0°
270° 270°

* 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

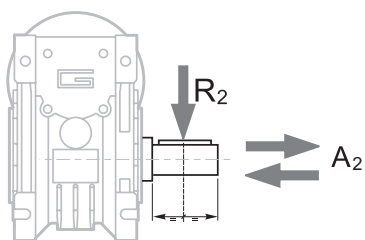
Lubrication

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

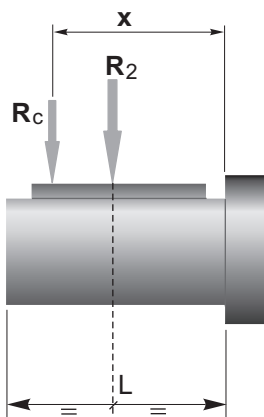


$A_2 = R_2 \times 0.2$

| 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 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:

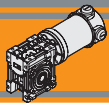


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

| | CM | | |
|------------------------------|-----|------|------|
| | 026 | 030 | 040 |
| 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' |

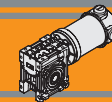
Rendimento

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 |
| 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 |

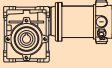
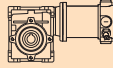


Rendimento teorico del riduttore dopo il rodaggio
Theoretical efficiency of the gearbox after the first running period



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 | P_1 [W] | n_2 [min ⁻¹] | M_2 [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|-------------------------------|---------------|-----|-----|---|----------------------------------|---------------------------|-------------------------------|---------------|-----|-----|---|----------------------------------|
| 160 | | | | | | | 250 | | | | | | |
| (3000 min ⁻¹) | 600 | 2 | 4.4 | 5 | 120/026 | 120/240 | (3000 min ⁻¹) | 600 | 4 | 2.8 | 5 | 180/026 | 120/240 |
| | 400 | 3 | 3.3 | 7.5 | 120/026 | | | 400 | 5 | 2.1 | 7.5 | 180/026 | |
| | 300 | 4 | 2.5 | 10 | 120/026 | | | 300 | 7 | 1.6 | 10 | 180/026 | |
| | 200 | 6 | 1.7 | 15 | 120/026 | | | 200 | 10 | 1.1 | 15 | 180/026 | |
| | 150 | 8 | 1.3 | 20 | 120/026 | | | 150 | 13 | 0.9 | 20 | 180/026 | |
| | 100 | 11 | 1.1 | 30 | 120/026 | | | 100 | 17 | 0.7 | 30 | 180/026 | |
| | 75 | 14 | 0.8 | 40 | 120/026 | | | 75 | 16 | 0.7 | 40 | 180/026 | |
| | 60 | 14 | 0.7 | 50 | 120/026 | | | 60 | 14 | 0.7 | 50 | 180/026 | |
| | 50 | 13 | 0.7 | 60 | 120/026 | | | 50 | 13 | 0.7 | 60 | 180/026 | |
| | 600 | 2 | 5.7 | 5 | 120/030 | 120/240 | | 600 | 4 | 3.7 | 5 | 180/030 | 120/240 |
| | 400 | 3 | 4.5 | 7.5 | 120/030 | | | 400 | 5 | 2.9 | 7.5 | 180/030 | |
| | 300 | 4 | 3.7 | 10 | 120/030 | | | 300 | 7 | 2.3 | 10 | 180/030 | |
| | 200 | 6 | 2.5 | 15 | 120/030 | | | 200 | 10 | 1.6 | 15 | 180/030 | |
| | 150 | 8 | 1.7 | 20 | 120/030 | | | 150 | 13 | 1.1 | 20 | 180/030 | |
| | 120 | 10 | 1.5 | 25 | 120/030 | | | 120 | 16 | 1.0 | 25 | 180/030 | |
| | 100 | 11 | 1.6 | 30 | 120/030 | | | 100 | 18 | 1.0 | 30 | 180/030 | |
| | 75 | 14 | 1.1 | 40 | 120/030 | | | 75 | 22 | 0.7 | 40 | 180/030 | |
| | 60 | 17 | 0.9 | 50 | 120/030 | | | 60 | 21 | 0.7 | 50 | 180/030 | |
| | 50 | 20 | 0.7 | 60 | 120/030 | | | 50 | 20 | 0.7 | 60 | 180/030 | |
| | 38 | 17 | 0.7 | 80 | 120/030 | | | 38 | 17 | 0.7 | 80 | 180/030 | |
| | 30 | 16 | 0.7 | 100 | 120/030 | | | 30 | 16 | 0.7 | 100 | 180/030 | |
| | 150 | 8 | 3.7 | 20 | 120/040 | 120/240 | | 600 | 4 | 8.1 | 5 | 180/040 | 120/240 |
| | 120 | 10 | 2.7 | 25 | 120/040 | | | 400 | 5 | 5.8 | 7.5 | 180/040 | |
| | 100 | 12 | 3.2 | 30 | 120/040 | | | 300 | 7 | 4.8 | 10 | 180/040 | |
| | 75 | 15 | 2.3 | 40 | 120/040 | | | 200 | 10 | 3.5 | 15 | 180/040 | |
| | 60 | 18 | 1.8 | 50 | 120/040 | | | 150 | 13 | 2.3 | 20 | 180/040 | |
| | 50 | 20 | 1.4 | 60 | 120/040 | | | 120 | 16 | 1.8 | 25 | 180/040 | |
| | 38 | 24 | 1.1 | 80 | 120/040 | | | 100 | 18 | 2.1 | 30 | 180/040 | |
| | 30 | 29 | 0.8 | 100 | 120/040 | | | 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 M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio

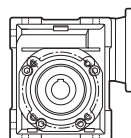
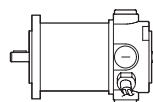
N.B.
Please check that the output torque M_2 does not exceed the value in the grey areas

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

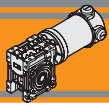
IEC Motor adapters



| | | 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

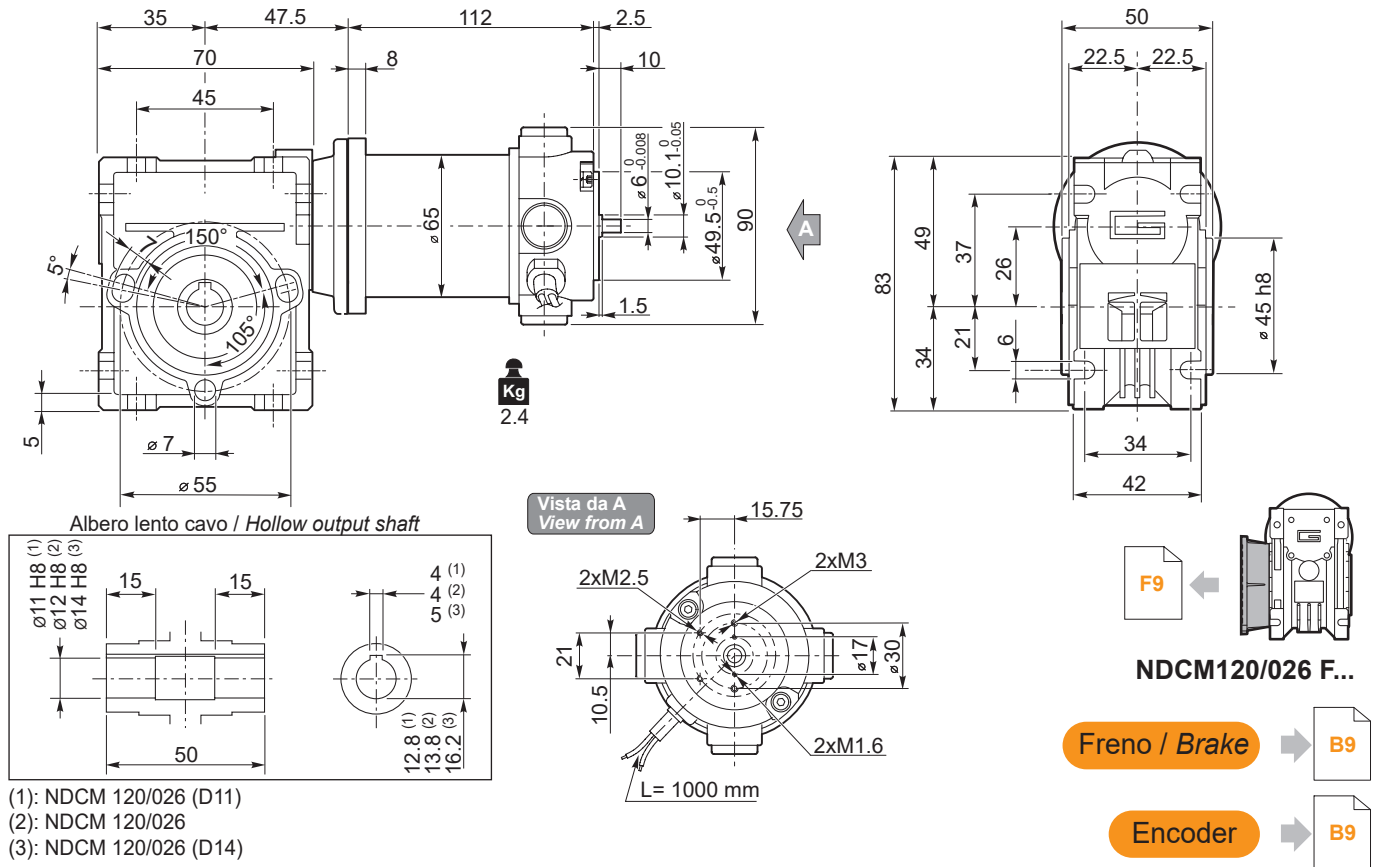
Rapporti di riduzione i
Ratio i



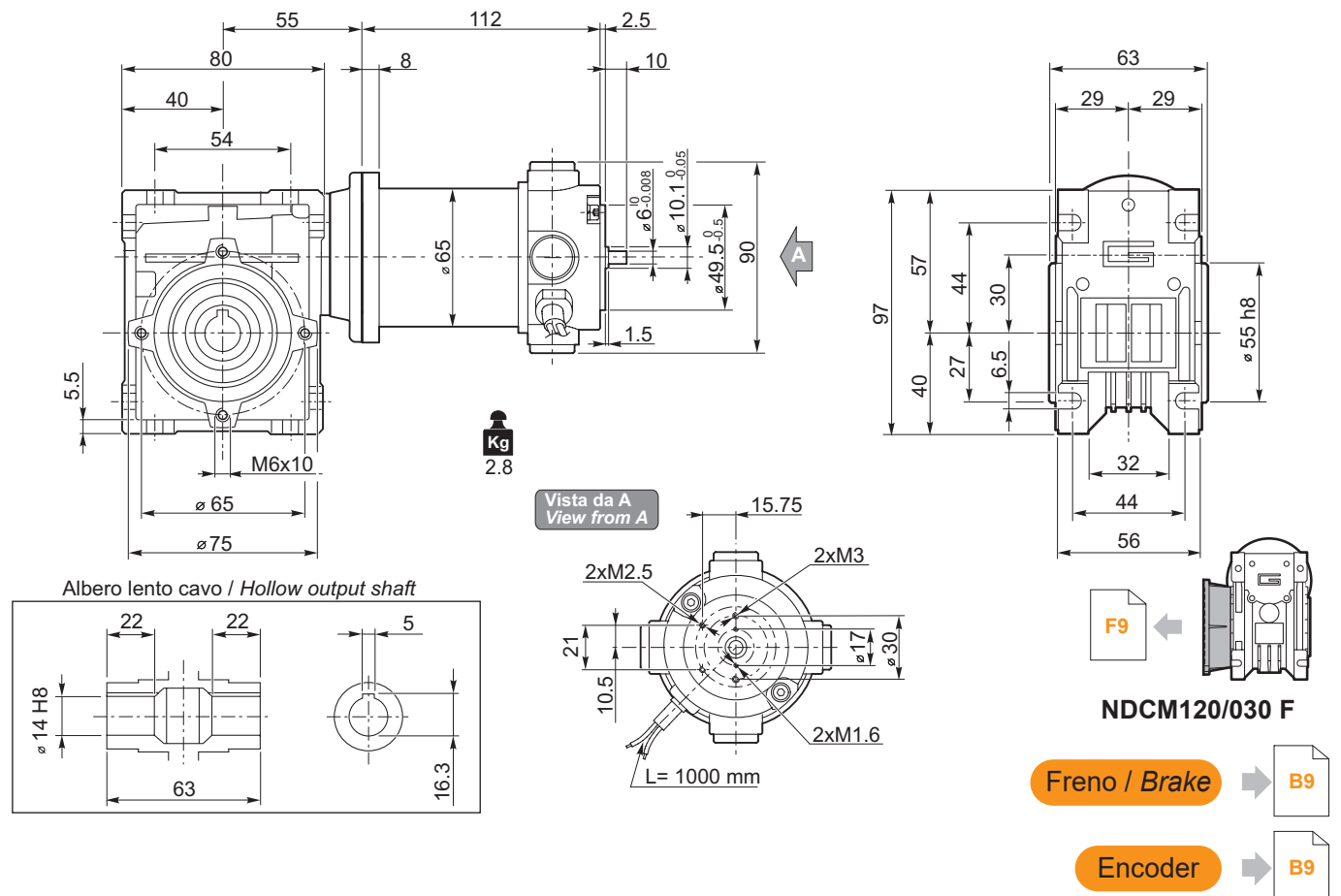
Dimensioni

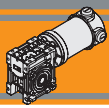
Dimensions

NDCM120/026 U



NDCM120/030 U

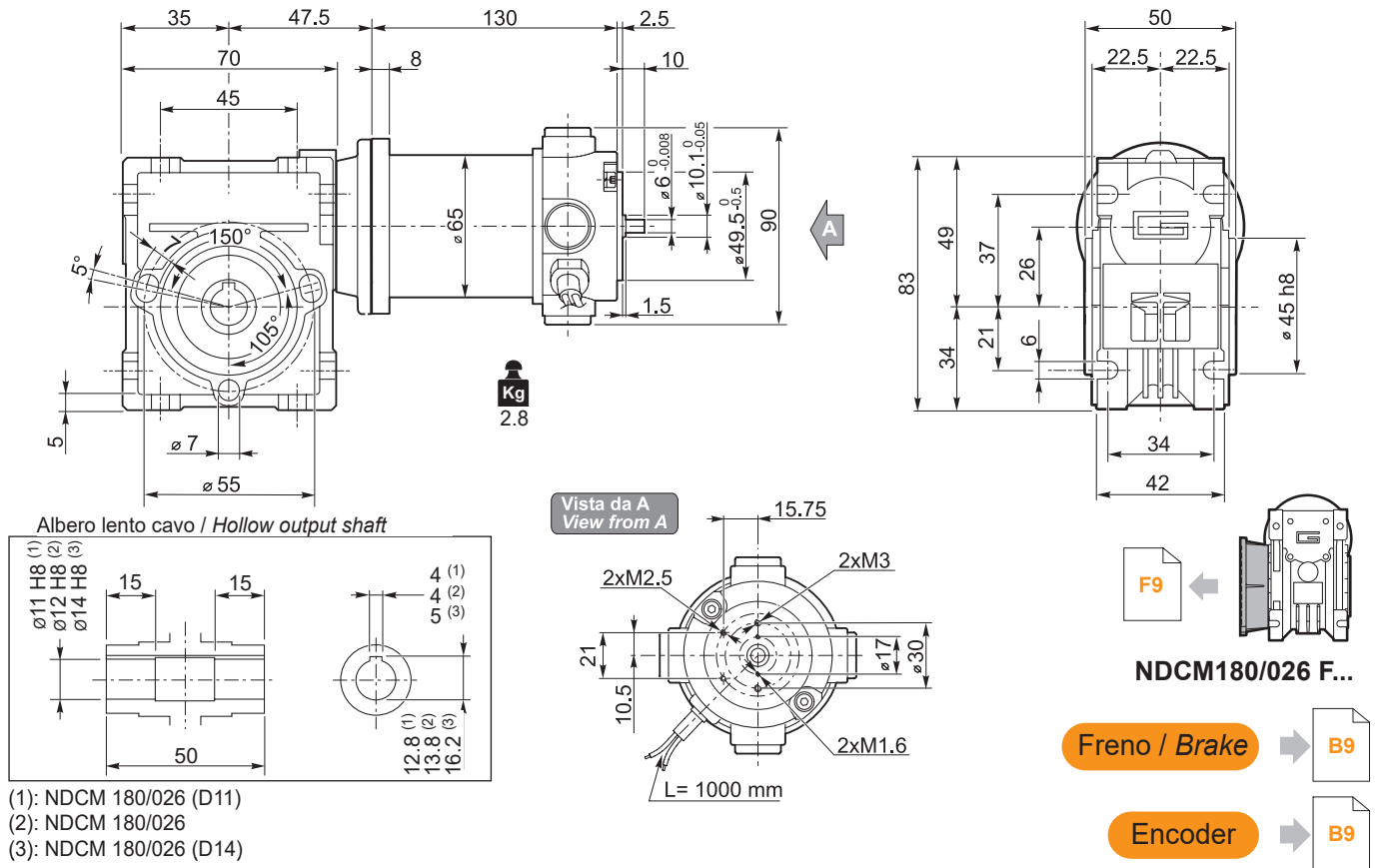




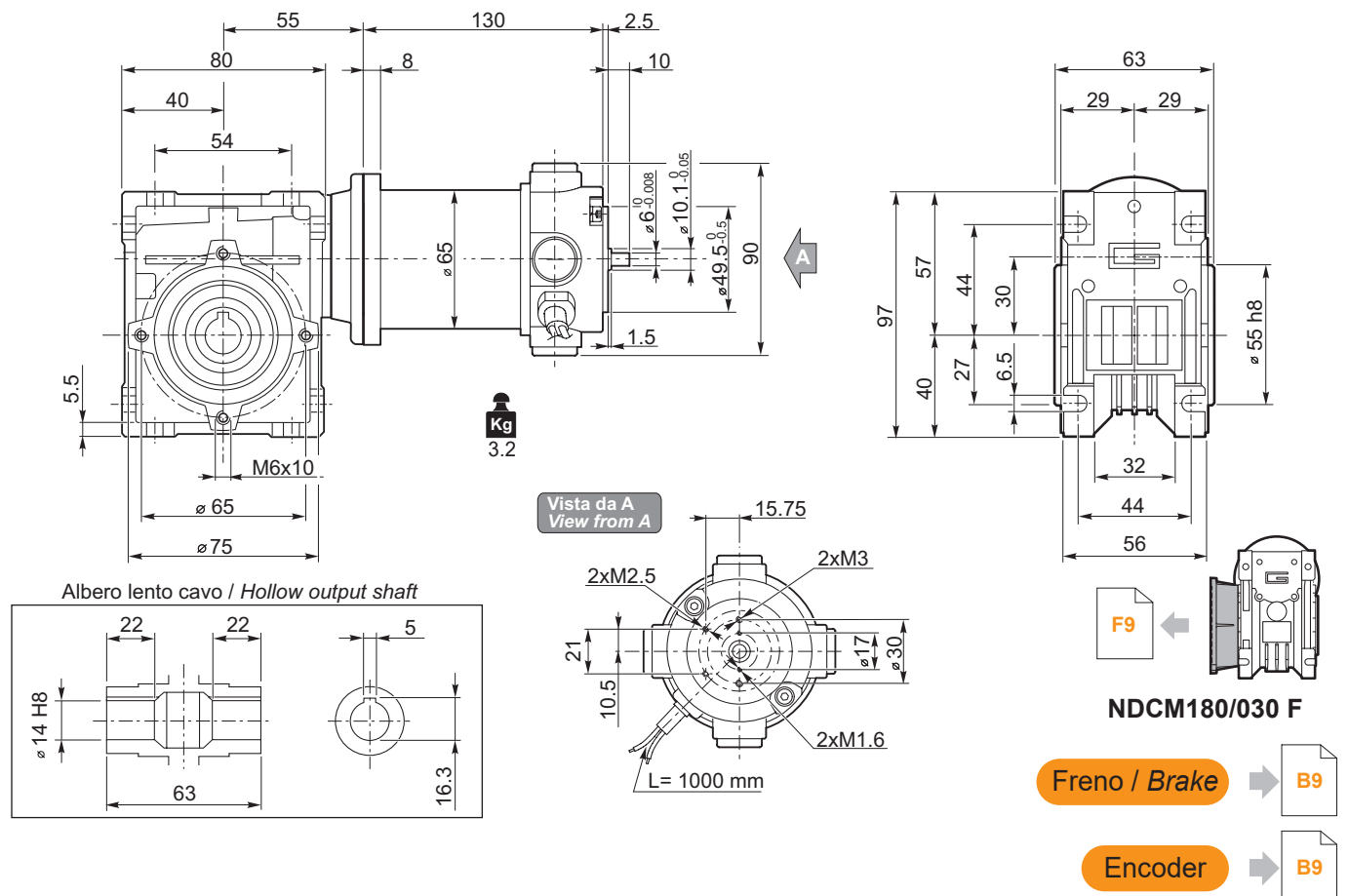
Dimensioni

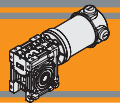
Dimensions

NDCM180/026 U



NDCM180/030 U

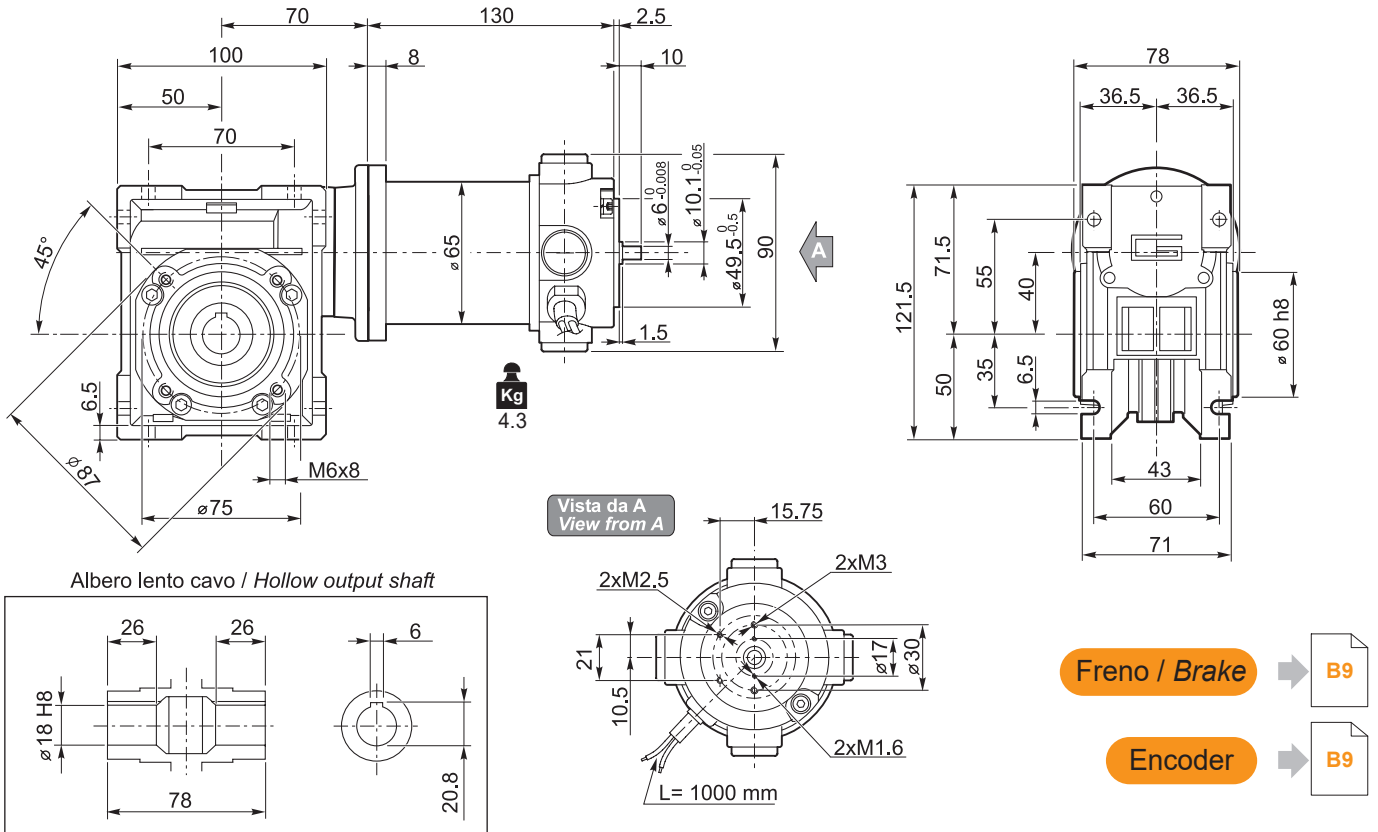




Dimensioni

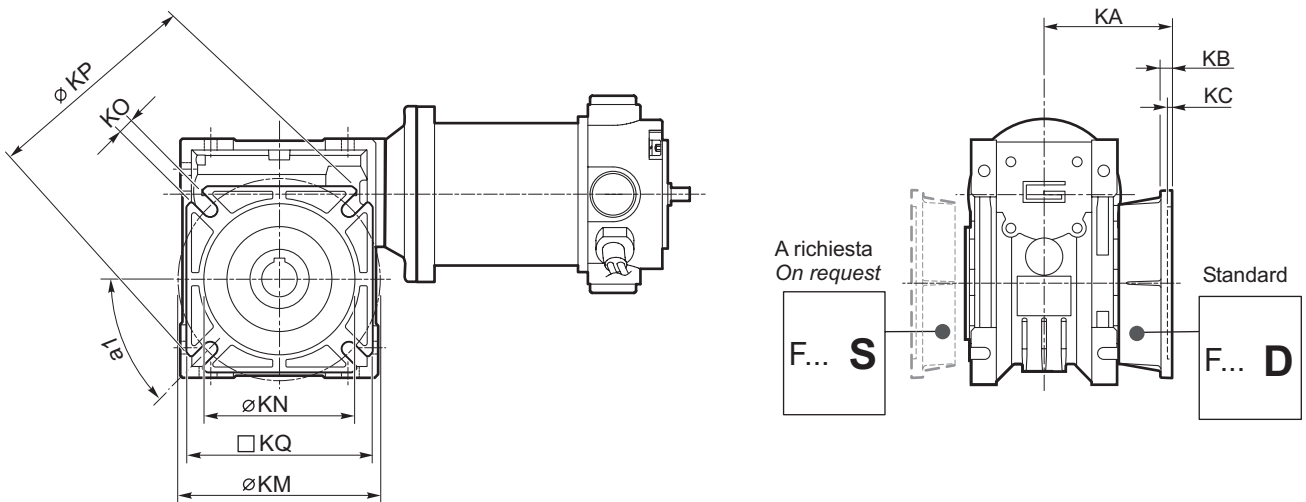
Dimensions

NDCM180/040 U



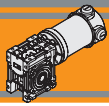
NDCM

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

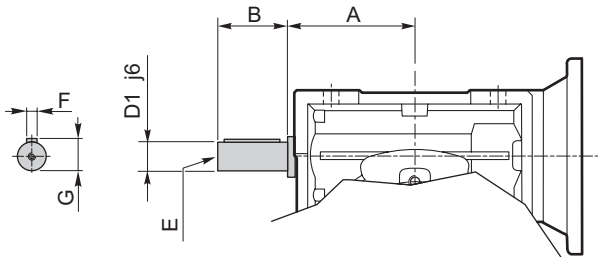


| | CM..F | | | | | | | CM..F28 | | | | | | | CM..F30 | | | | | | | | | | |
|------------------|-------|----|----|-----|-------|------------------|----------|---------|----|----|-----|----|-------|------------------|---------|----|----|----|-----|----|----|------------------|-----|----|----|
| | a1 | 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) | 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 |
| 026 (D14) | | | | | | | | | | | | | | | | | | | | | | | | | |

| | 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 |



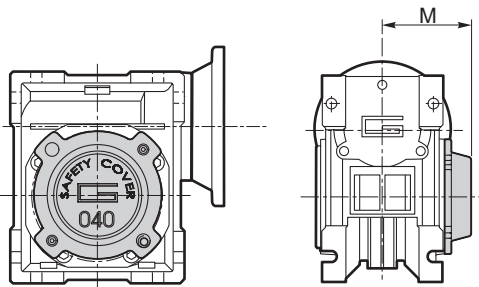
VS - Vite sporgente / Extended input shaft



| | 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 |

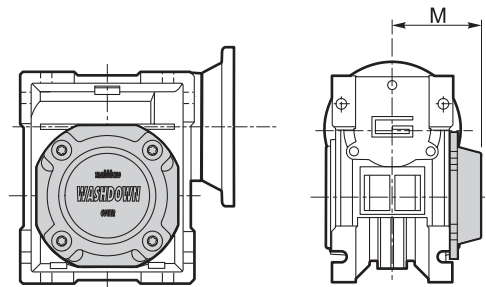
Costruito su richiesta
Built on request

SC - Safety cover

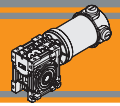


| | M |
|--------|------|
| CM 030 | 47 |
| CM 040 | 54.5 |

WD - Washdown cover



| CM | M |
|-----|------|
| 030 | 48 |
| 040 | 55.5 |

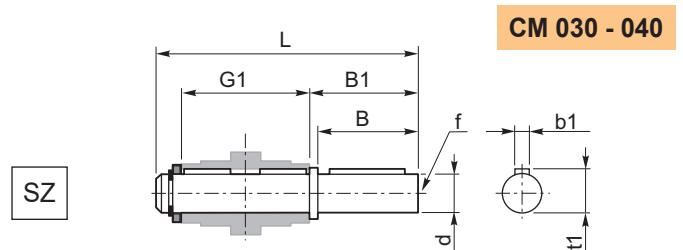
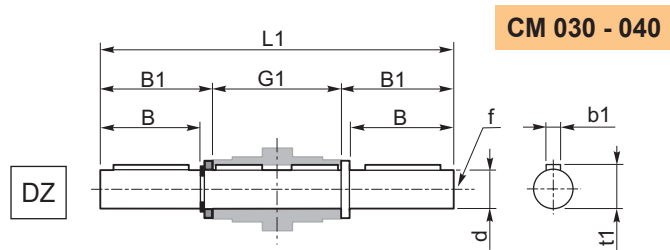


Accessori

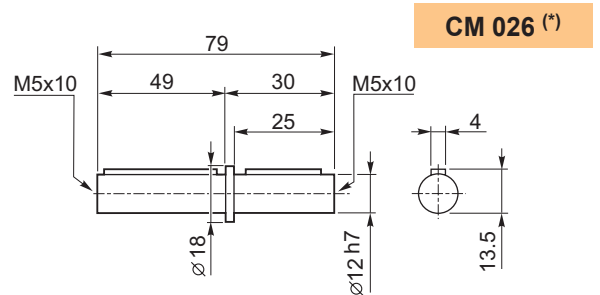
Accessories

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 |

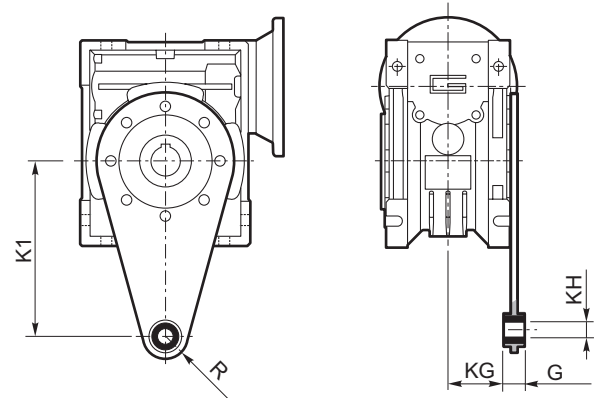


(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

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

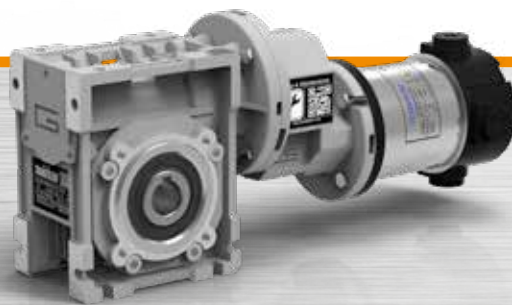


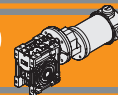
NDCM



Neodymium

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

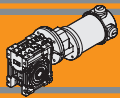




| Indice | Index | Pag. Page |
|--------------------------|---------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | G2 |
| Designazione | <i>Classification</i> | G2 |
| Simbologia | <i>Symbols</i> | G3 |
| Lubrificazione | <i>Lubrication</i> | G3 |
| Carichi radiali | <i>Radial loads</i> | G3 |
| Dati tecnici | <i>Technical data</i> | G4 |
| Motori applicabili | <i>IEC Motor adapters</i> | G4 |
| Dimensioni | <i>Dimensions</i> | G5 |
| Opzioni | <i>Options</i> | G7 |
| Accessori | <i>Accessories</i> | G8 |

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Caratteristiche tecniche

Technical features

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

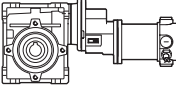
The main features of NDCMP neodymium permanent magnets DC pre stage wormgearmotors range are:

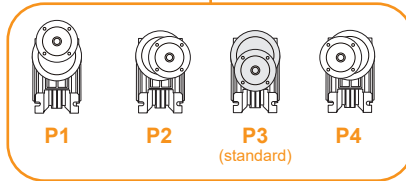
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 160 a 250 W S2
- Magneti in Neodimio
- Sia le carcasse dei riduttori a vite senza fine che delle precoppie sono in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.

- 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.

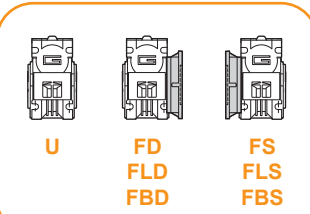
Designazione

Classification

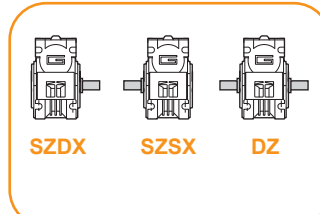
| MOTORIDUTTORE / GEARMOTOR | | | | | | | | | | |
|---|-------------------|-------------|--|---|---|--------------------------------------|---|--|----------------------------------|--------------------|
| NDCMP | 120/056/030 | | U | 90 | SZDX | BRSX | 90 | P4 | 240 | VS |
| Tipo Type | Grandezza Size | | 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 |
|  | 120/056/030 | 180/056/030 | U FD FS FLD FLS FBD FBS | Vedere tabella <i>See tables</i> | SZDX SZSX DZ | BRDX BRSX * | 0° 90° 180° 270° | P1 P2 P3 (standard) P4 | 120 — 240 | VS |
| | 120/056/040 | 180/056/040 | | | | | | | | |



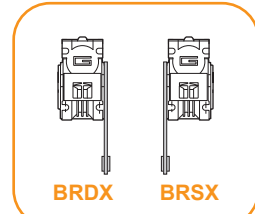
Versione Riduttore
Gearbox Version



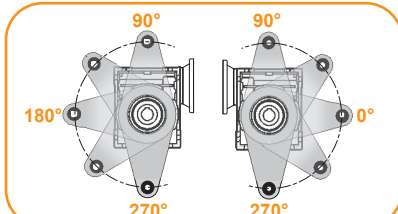
Albero di uscita
Output shaft



Braccio di reazione
Torque arm *



Angolo
Angle



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

Simbologia

Symbols

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

Lubrificazione

Lubrication

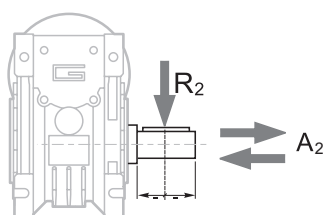
I riduttori a vite senza fine con precoppia della serie CMP sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

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

NDCMP

Carichi radiali

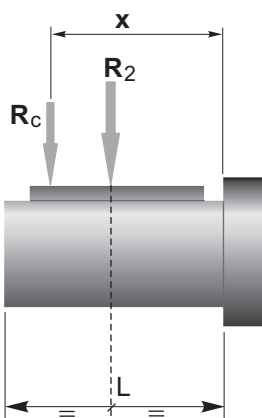
Radial loads



| 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:

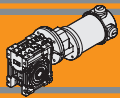


$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

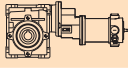
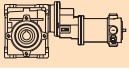
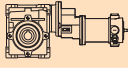
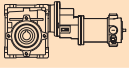
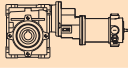
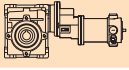
*a, b = valori riportati nella tabella
a, b = values given in the table*

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



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) | 50 | 21 | 1.0 | 60 |  | 120/056/030 | 120/240 | (3000 min ⁻¹) | 50 | 31 | 0.7 | 60 |  | 180/056/030 | 180/240 |
| | 40 | 25 | 0.9 | 75 | | | | 40 | 31 | 0.7 | 75 | | | | |
| | 33 | 28 | 1.0 | 90 | | | | 33 | 39 | 0.7 | 90 | | | | |
| | 25 | 35 | 0.7 | 120 | | | | 25 | 33 | 0.7 | 120 | | | | |
| | 20 | 31 | 0.7 | 150 | | | | 20 | 31 | 0.7 | 150 | | | | |
| | 50 | 22 | 2.0 | 60 |  | 120/056/040 | 120/240 | | 50 | 35 | 1.3 | 60 |  | 180/056/040 | 180/240 |
| | 40 | 26 | 1.7 | 75 | | | | 40 | 41 | 1.1 | 75 | | | | |
| | 33 | 30 | 1.9 | 90 | | | | 33 | 46 | 1.2 | 90 | | | | |
| | 25 | 36 | 1.3 | 120 | | | | 25 | 56 | 0.9 | 120 | | | | |
| | 20 | 43 | 1.1 | 150 | | | | 20 | 66 | 0.7 | 150 | | | | |
| | 17 | 48 | 0.9 | 180 | | | | 17 | 61 | 0.7 | 180 | | | | |
| | 13 | 55 | 0.7 | 240 | | | | 13 | 57 | 0.7 | 240 | | | | |
| | 10 | 51 | 0.7 | 300 | | | | 10 | 51 | 0.7 | 300 | | | | |

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

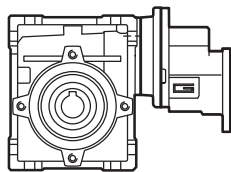
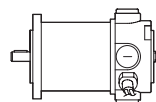
N.B.
Please check that the output torque M2 does not exceed the value in the grey areas

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

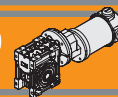
IEC Motor adapters



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

150

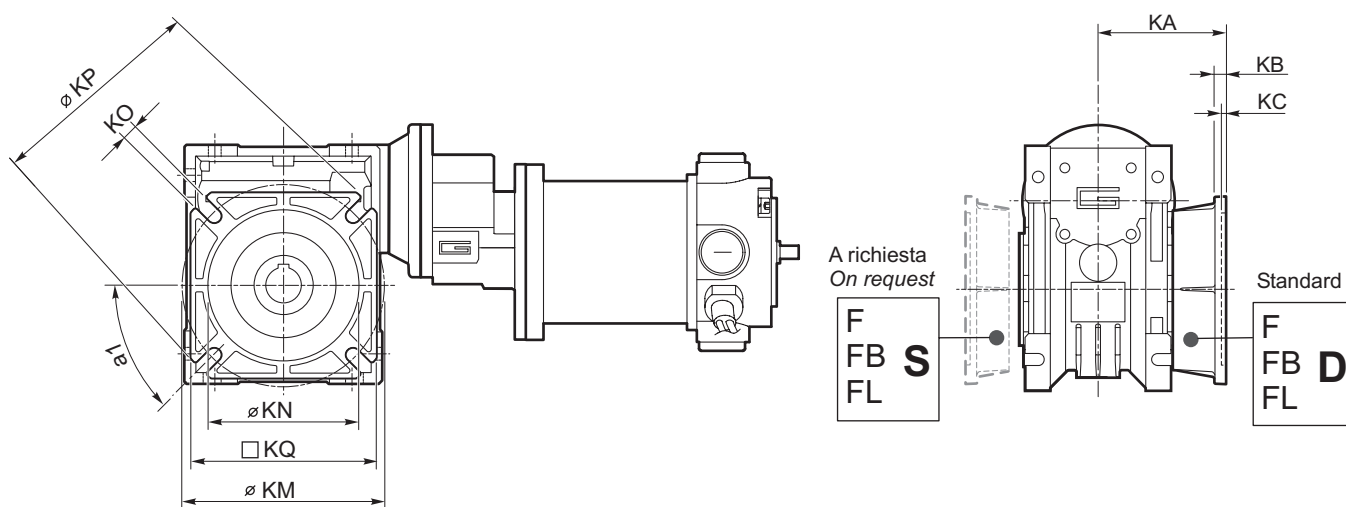
Rapporto di riduzione massimo i_{max}
Maximum ratio i_{max}



Dimensioni

Dimensions

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



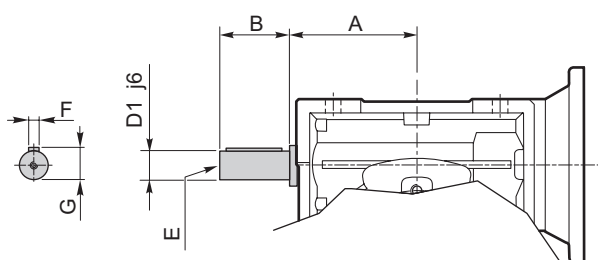
NDCMP

| 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

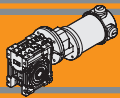
Options

VS - Vite sporgente / Extended input shaft



| CMP | A | B | D ₁ j6 | E | F | G |
|---------|----|----|-------------------|----|---|------|
| 056/030 | 45 | 20 | 9 | M4 | 3 | 10.2 |
| 056/040 | 53 | 23 | 11 | M5 | 4 | 12.5 |

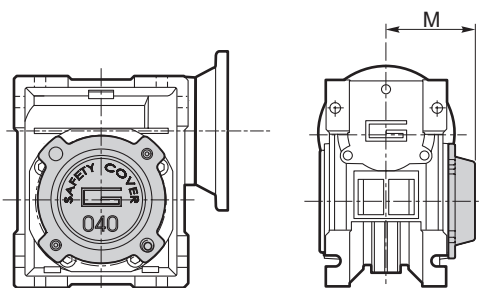
Costruito su richiesta
Built on request



Opzioni

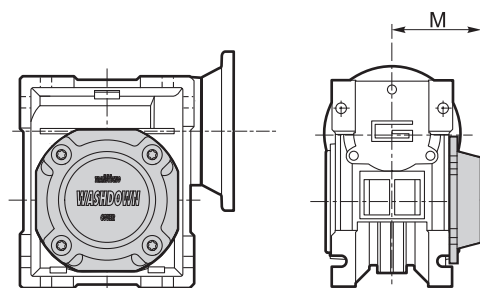
Options

SC - Safety cover



| CMP | M |
|---------|------|
| 056/030 | 47 |
| 056/040 | 54.5 |

WD - Washdown cover



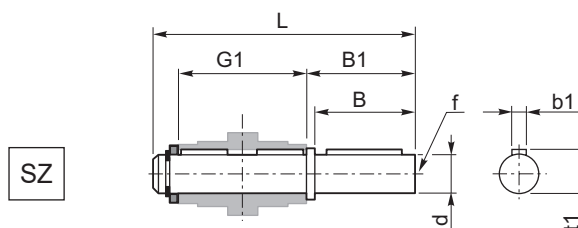
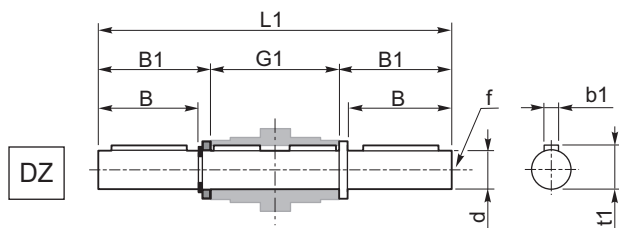
| CMP | M |
|---------|------|
| 056/030 | 48 |
| 056/040 | 55.5 |

Accessori

Accessories

Albero lento semplice e doppio

Single and double output shaft

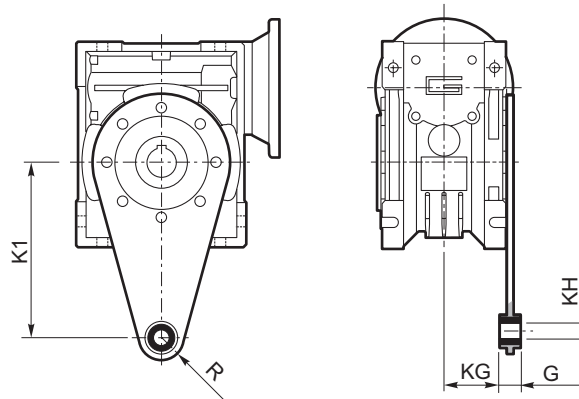


| CMP | d h7 | B | B1 | G1 | L | L1 | f | b1 | t1 |
|---------|---------|----|------|----|-----|-----|----|----|------|
| 056/030 | 14 | 30 | 32.5 | 63 | 102 | 128 | M6 | 5 | 16 |
| 056/040 | 18 | 40 | 43 | 78 | 128 | 164 | M6 | 6 | 20.5 |

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 |



TRANSTECNO[®]
the modular gearmotor

EC

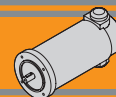
EC



Ferrite

Motori elettrici CC DC electric motors

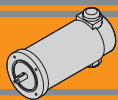




| | Indice | Index | Pag. Page |
|------------------|---------------------------------|---|----------------------|
| | Caratteristiche tecniche | <i>Technical features</i> | H2 |
| | Simbologia | <i>Symbols</i> | H2 |
| | Grado di protezione IP | <i>IP enclosures protection indexes</i> | H3 |
| | Classe di isolamento termico | <i>Insulation class</i> | H3 |
| | Tipi di servizio IEC | <i>IEC duty cycle ratings</i> | H3 |
| EC020.120 | Caratteristiche | <i>Features</i> | H4 |
| 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 |
| | Prestazioni | <i>Performances</i> | H21 |
| | Legenda / Glossario dei grafici | <i>Key / Diagram Glossary</i> | H22 |
| | Formule utili | <i>Useful formulas</i> | H22 |
| | Freni | <i>Brakes</i> | H23 |
| | Encoder | <i>Encoder</i> | H24 |

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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

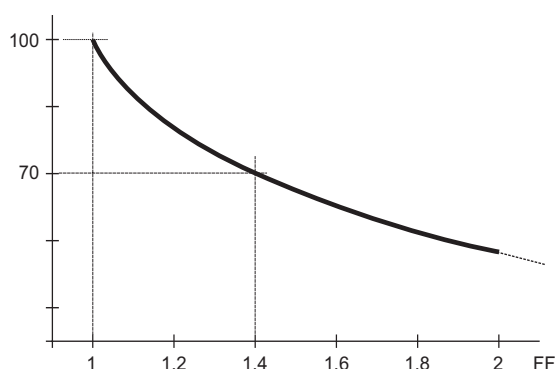
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

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 |

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.

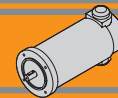
Form factor

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 |
| Kg | — | 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

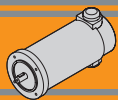
Insulation class

| 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. |



EC020.120 - EC020.24E

Caratteristiche

Features

| | |
|-----------------------|----------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 42 mm |
| Potenza | 30 W S2 (20 W S1) |
| Magneti | 2 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 4 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Spazzole | N° 2 di composto grafite-rame |
| Cavo di alimentazione | Connettori faston (0.8 x 2.8 mm) |
| Opzioni | Filtro EMC |

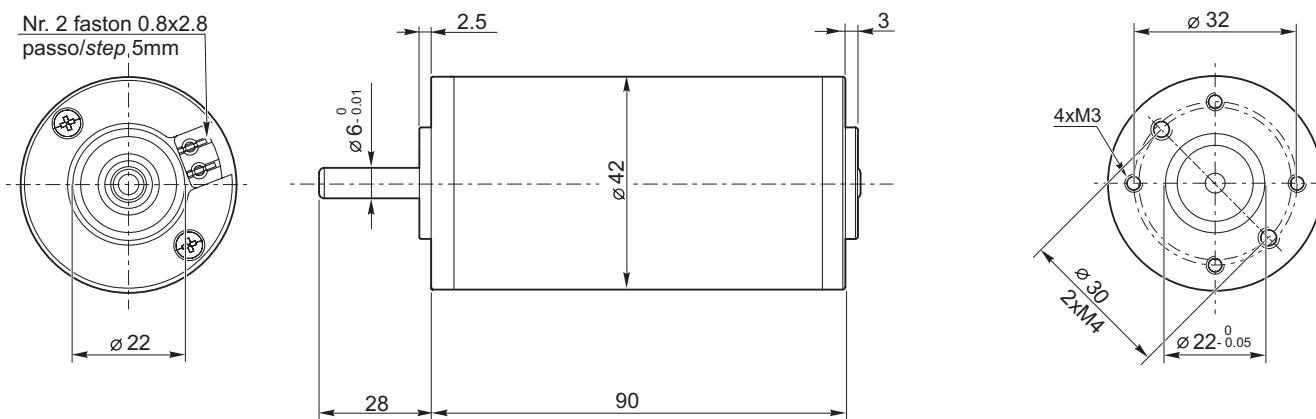
| | |
|----------------|---|
| Construction | Tubular, without fan |
| Size | Ø 42 mm |
| Power | 30 W S2 (20 W S1) |
| Magnets | 2 |
| Bearings | Ball bearing |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 2 brushes made of graphite/copper composite |
| Electric cable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

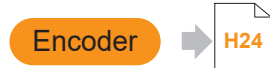
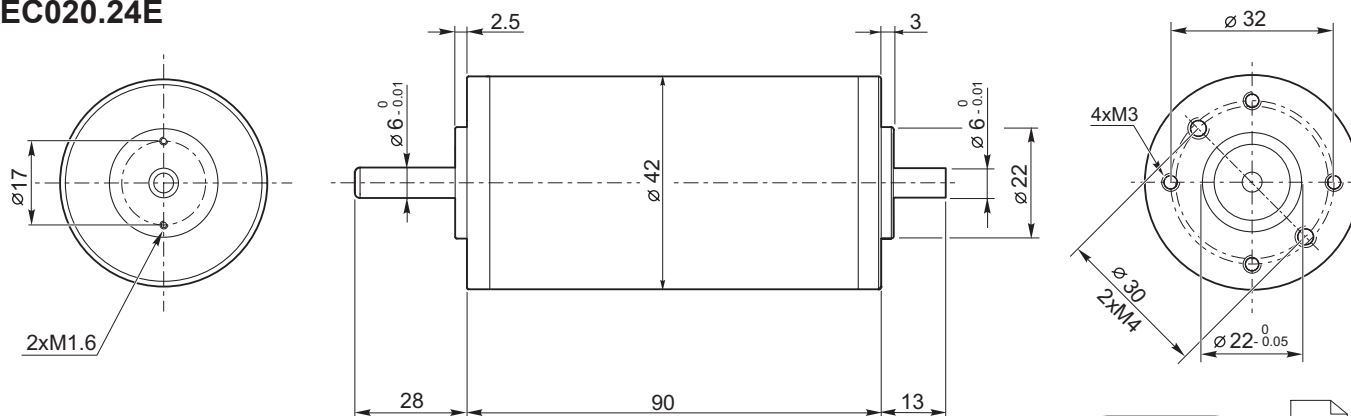
Dimensioni

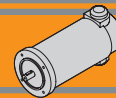
Dimensions

EC020.120



EC020.24E



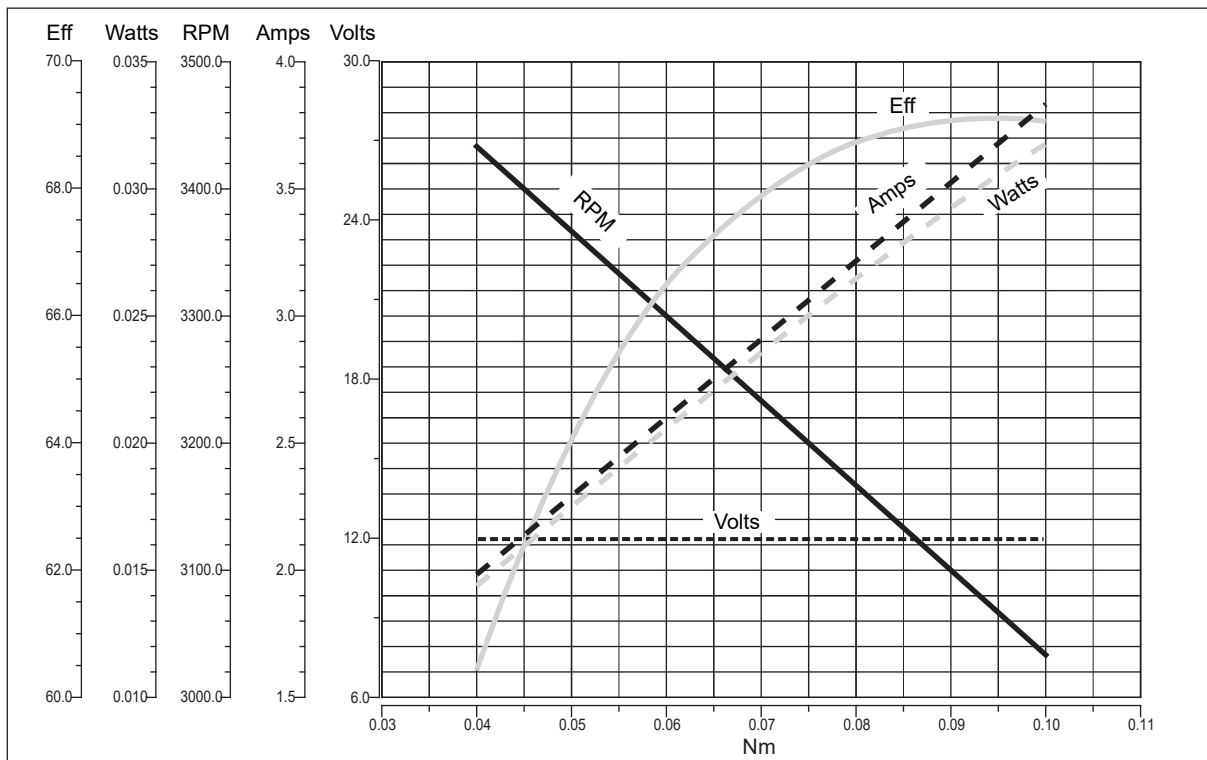


EC020.120 - EC020.24E

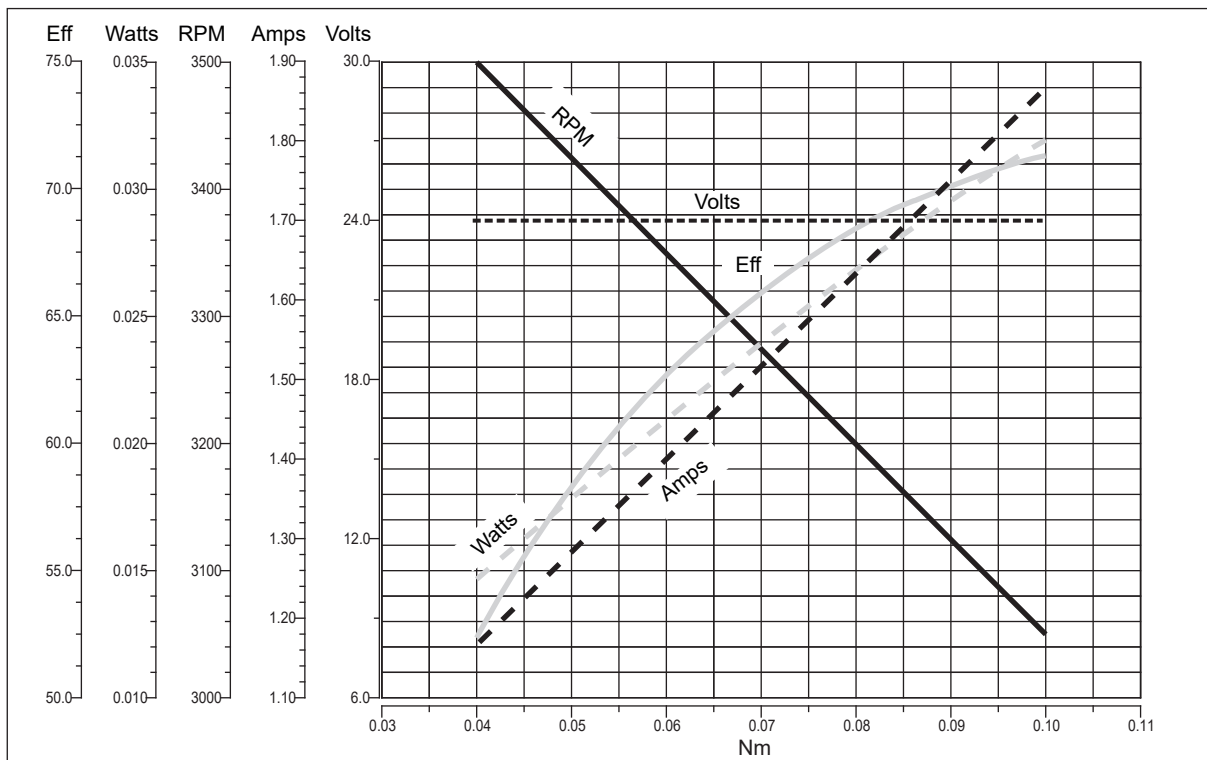
Prestazioni

Performances

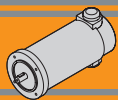
EC020.120



EC020.24E



EC



EC035.120 - EC035.240

Caratteristiche

Features

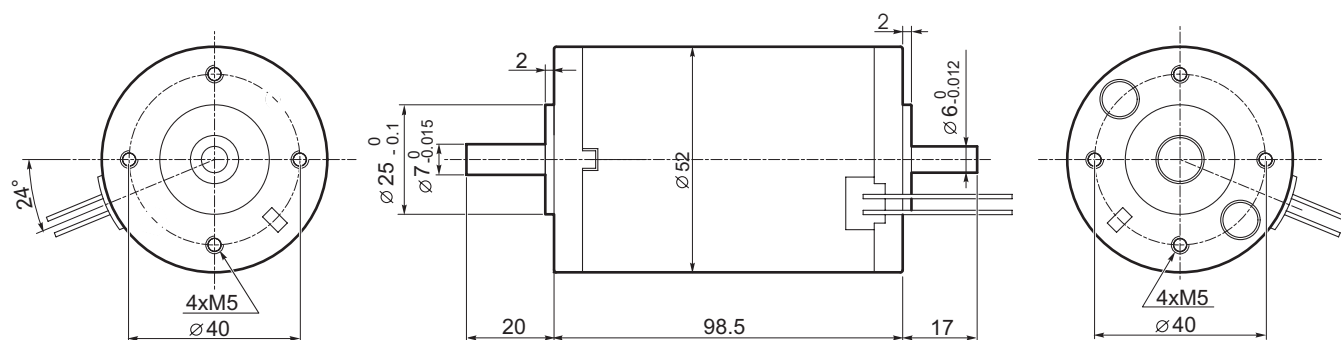
| | |
|-----------------------|---------------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 52 mm |
| Potenza | 55 W S2 (35 W S1) |
| Magneti | 2 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 4 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
|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

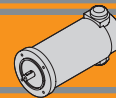
| | |
|----------------|--|
| Construction | Tubular, without fan |
| Size | Ø 52 mm |
| Power | 55 W S2 (35 W S1) |
| Magnets | 2 |
| Bearings | Ball bearings |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 2 inside brushes made of graphite/copper composite |
| Electric cable | Length: 200 mm |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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



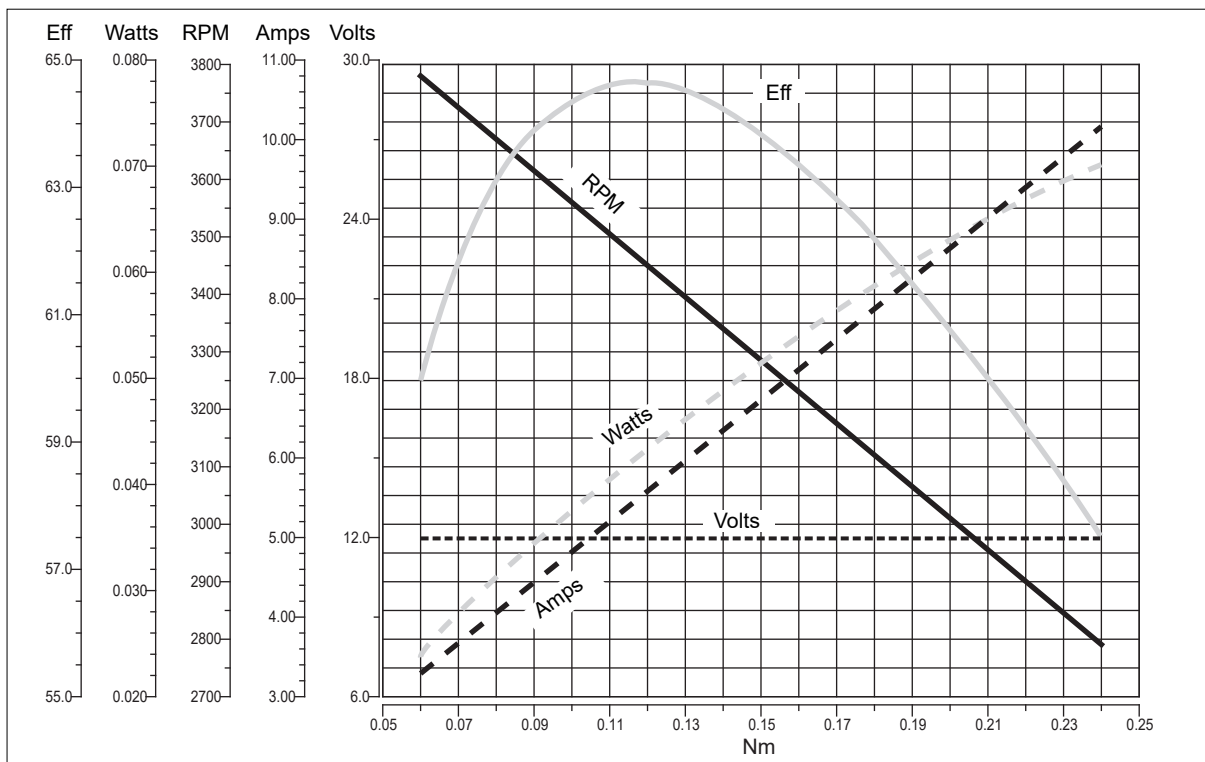


EC035.120 - EC035.240

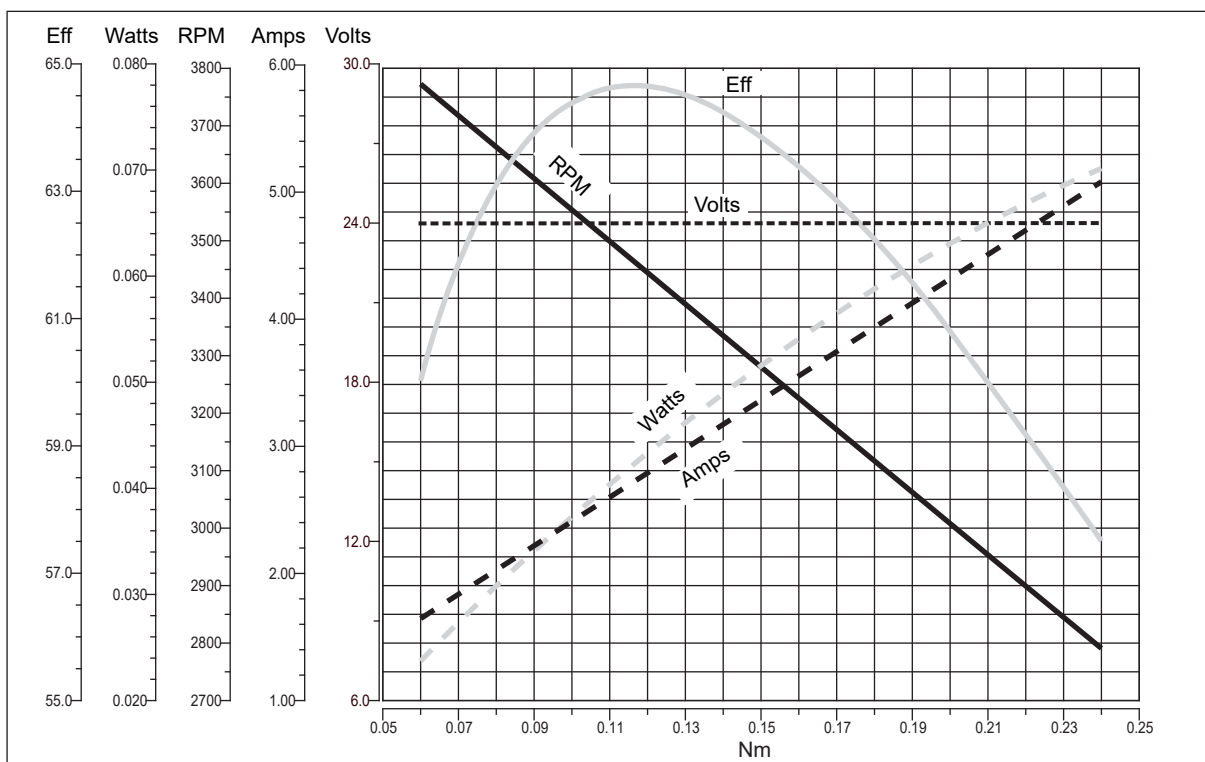
Prestazioni

Performances

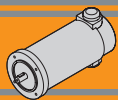
EC035.120



EC035.240



EC



EC050.12E - EC050.24E

Caratteristiche

Features

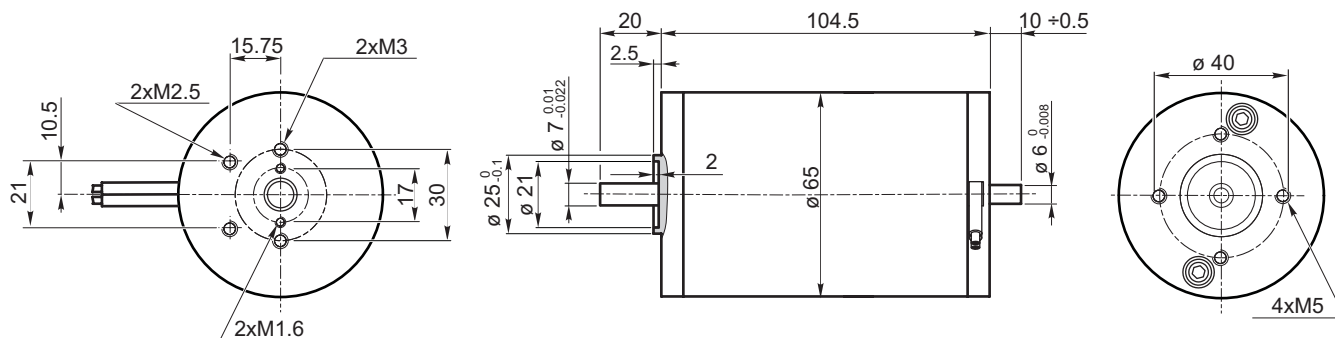
| | |
|-----------------------|---------------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 65 mm |
| Potenza | 70 W S2 (50 W S1) |
| Magneti | 2 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 4 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
|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

| | |
|----------------|--|
| Construction | Tubular, without fan |
| Size | Ø 65 mm |
| Power | 70 W S2 (50 W S1) |
| Magnets | 2 |
| Bearings | Ball bearings |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 2 inside brushes made of graphite/copper composite |
| Electric cable | Length: 200 mm |
| Rear Shaft | Standard |

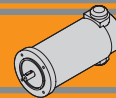
| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n ₁ [min ⁻¹] | IP | Kg |
|-----------|--------|--------|-------|-------|----|----|---------|-------------------------------------|----|-----|
| EC050.12E | S1 | 50 | 12 | 6.5 | F | 1 | 0.16 | 3000 | 20 | 1.2 |
| | S2 30' | 70 | | 9.0 | | | 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**

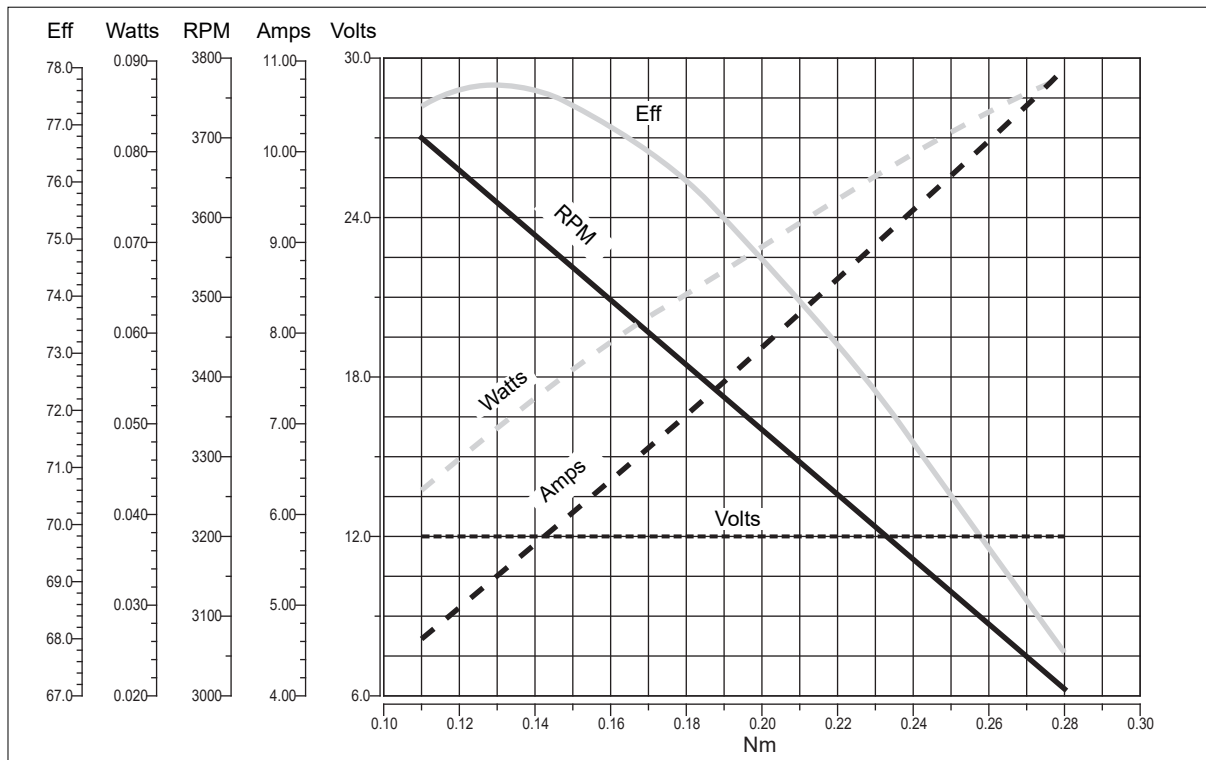


EC050.12E - EC050.24E

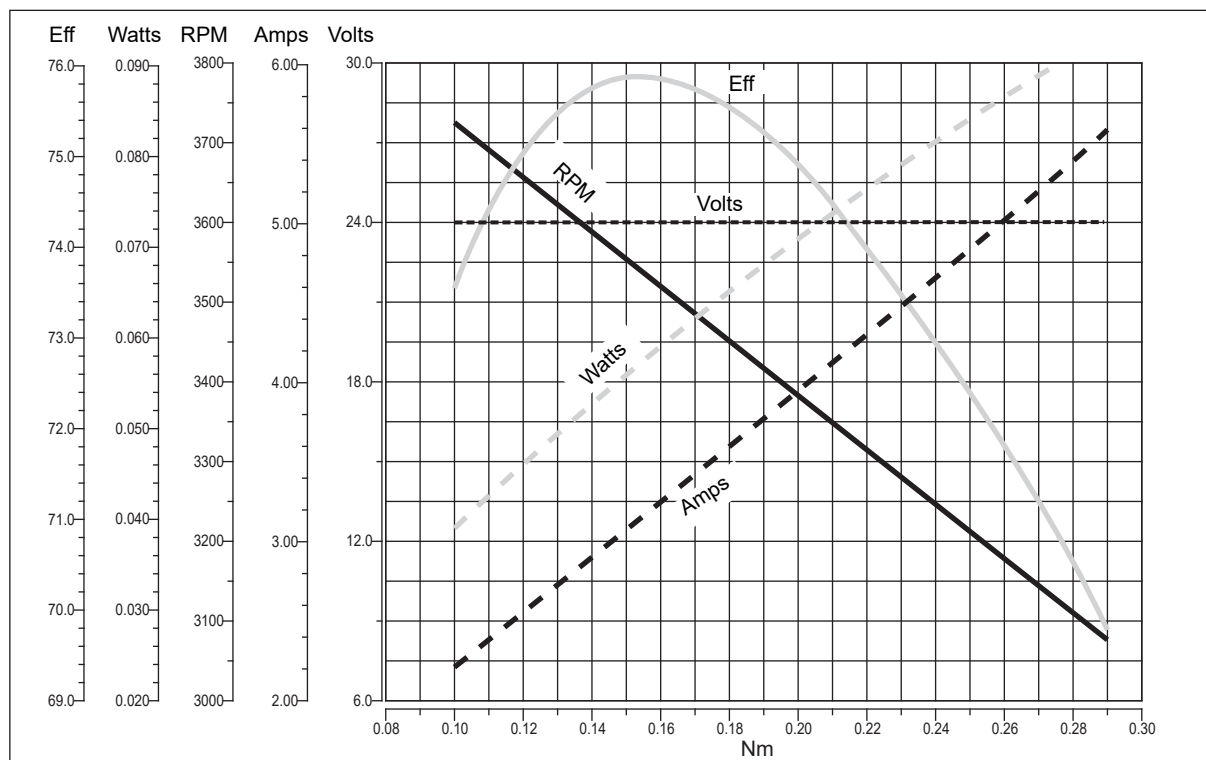
Prestazioni

Performances

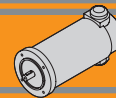
EC050.12E



EC050.24E



EC

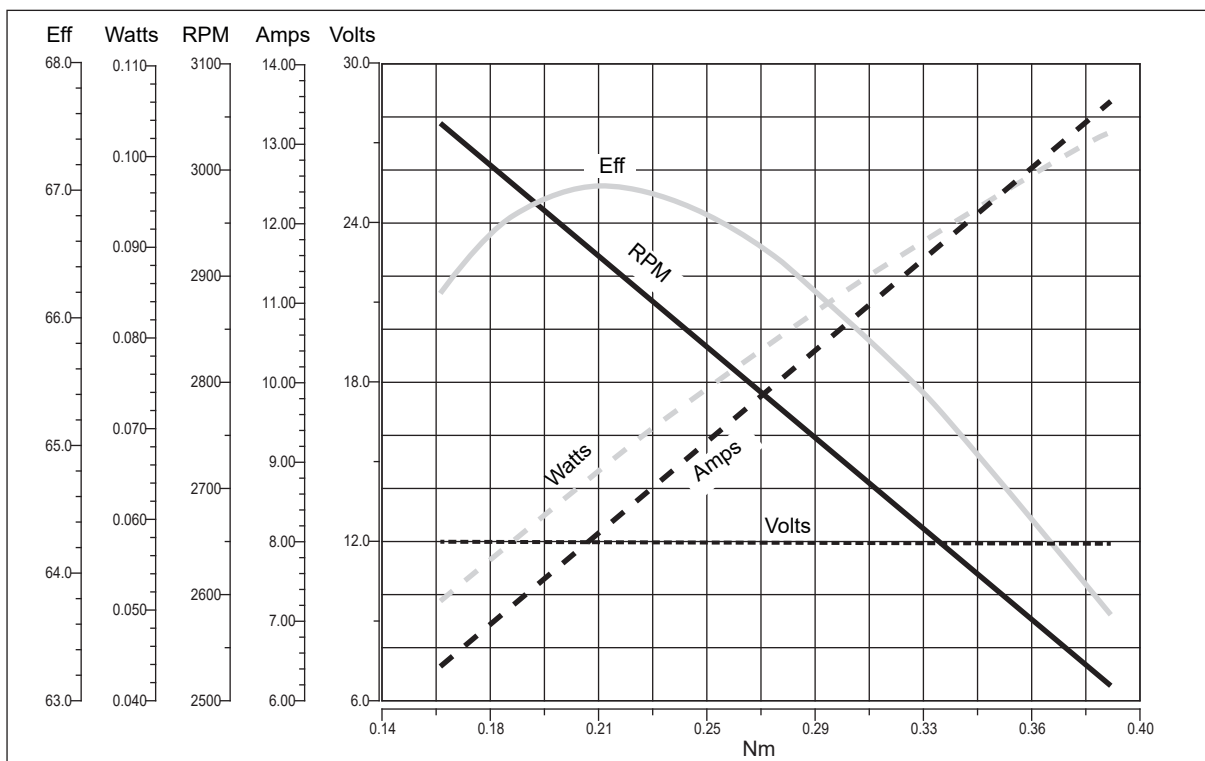


EC070.12E - EC070.24E

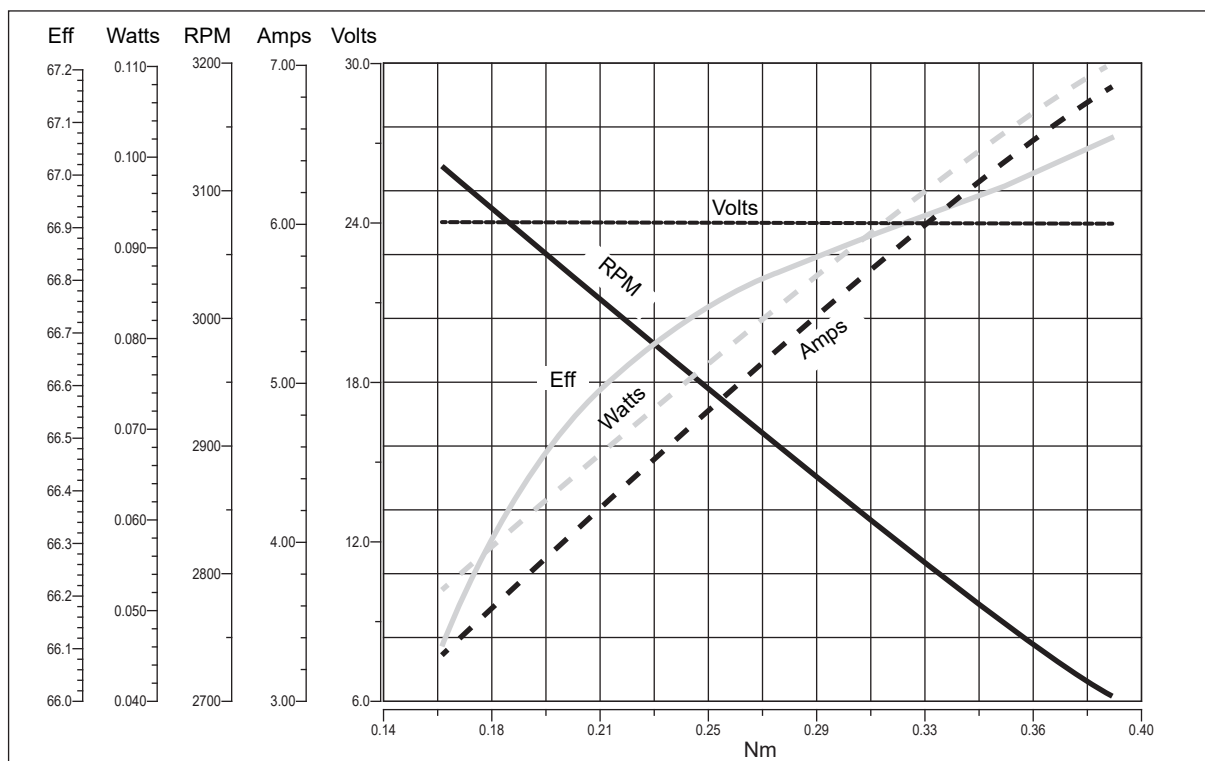
Prestazioni

Performances

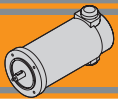
EC070.12E



EC070.24E



EC



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 |

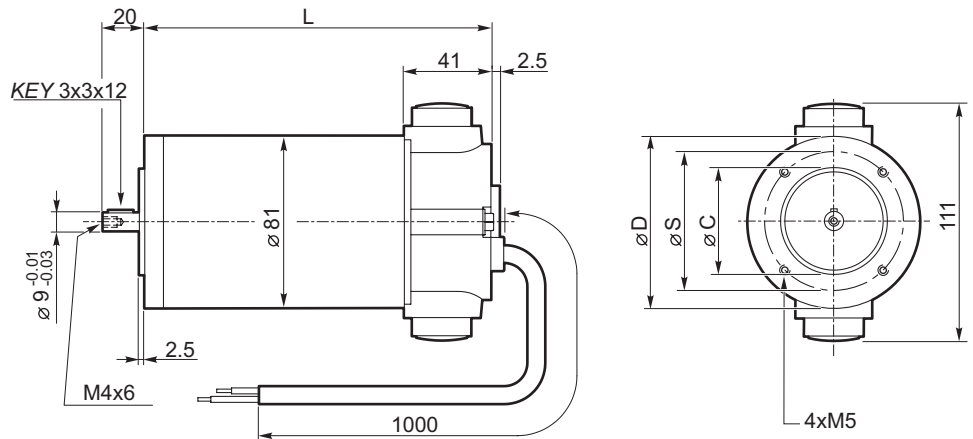
| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n ₁ [min ⁻¹] | IP | Kg |
|-----------|--------|--------|-------|-------|----|----|---------|-------------------------------------|----|-----|
| EC100.120 | S1 | 100 | 12 | 12 | F | 1 | 0.31 | 3000 | 40 | 2.7 |
| | S2 25' | 140 | | 16.8 |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

Dimensioni

Dimensions

**EC100.120
EC100.240**

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



* Usare boccola 9/11
* Use sleeve 9/11

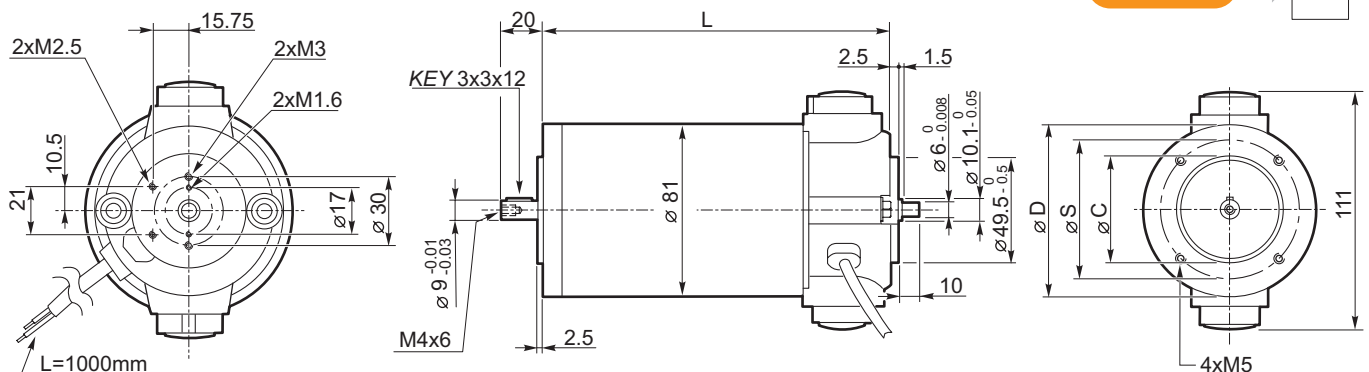
Freno / Brake

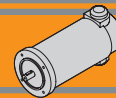
H23

Encoder

H24

EC100.24E



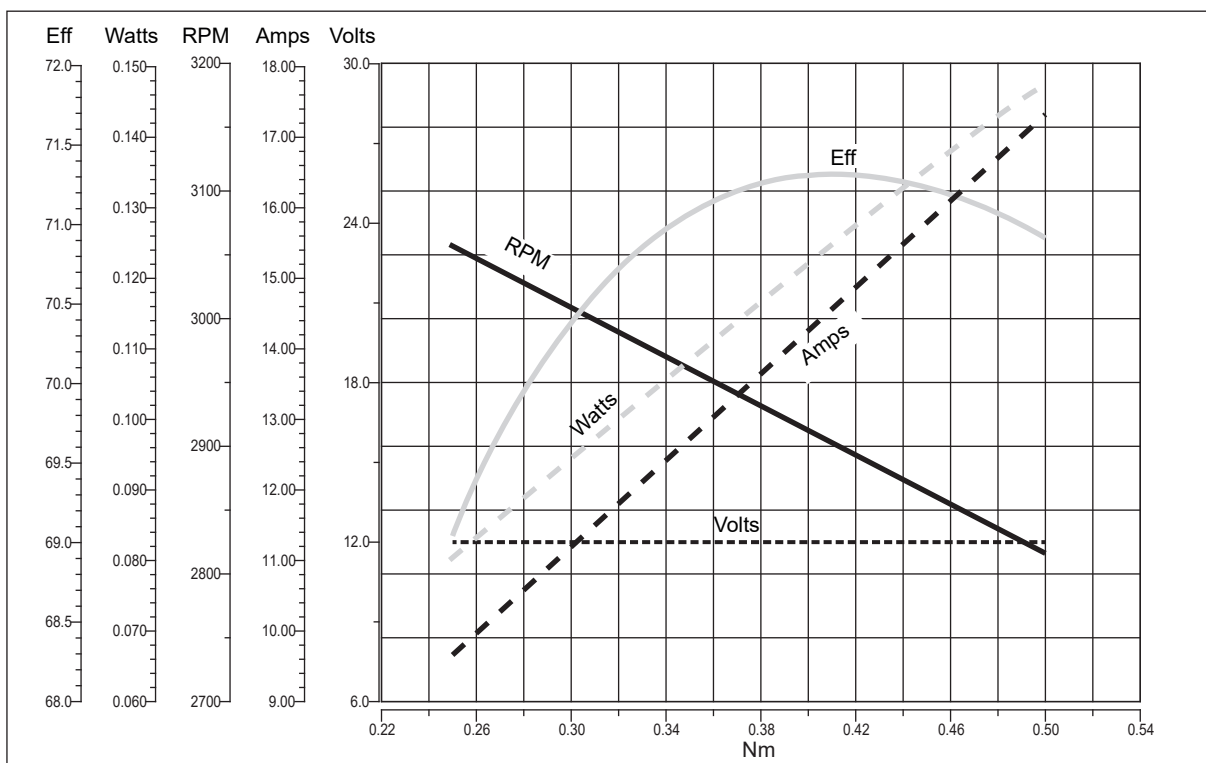


EC100.120 - EC100.240 - EC100.24E

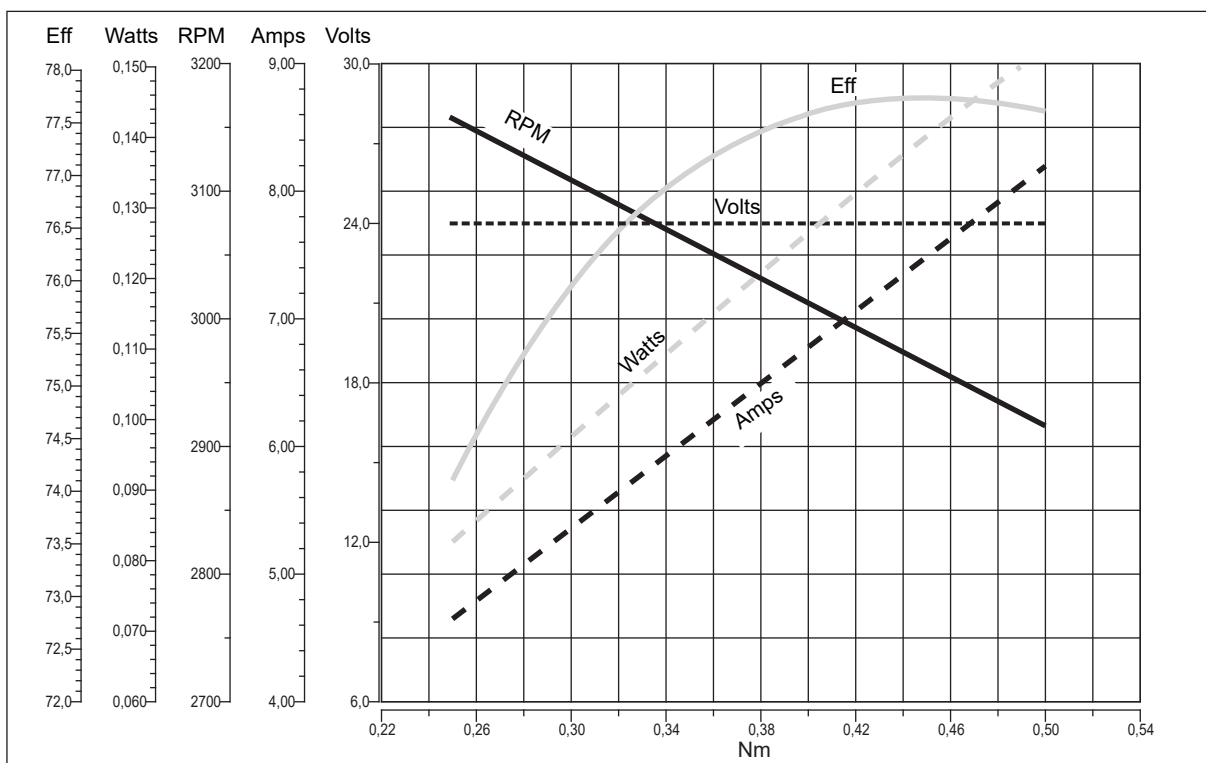
Prestazioni

Performances

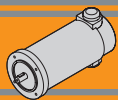
EC100.120



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 |

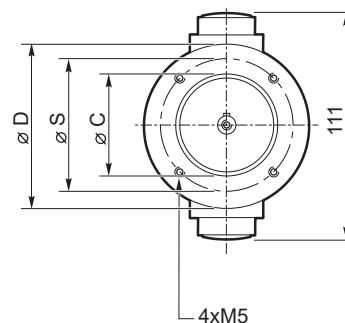
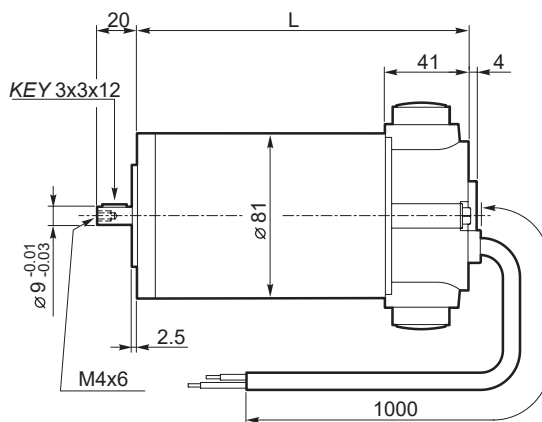
| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n ₁ [min ⁻¹] | IP | Kg |
|--------------|--------|-----------|----------|----------|----|----|------------|--|----|-----|
| EC180.120 | S1 | 180 | 12 | 21.5 | F | 1 | 0.57 | 3000 | 40 | 3.4 |
| | S2 25' | 250 | | 30 | | | 0.8 | | | |
| EC180.240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

Dimensioni

Dimensions

**EC180.120
EC180.240**

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

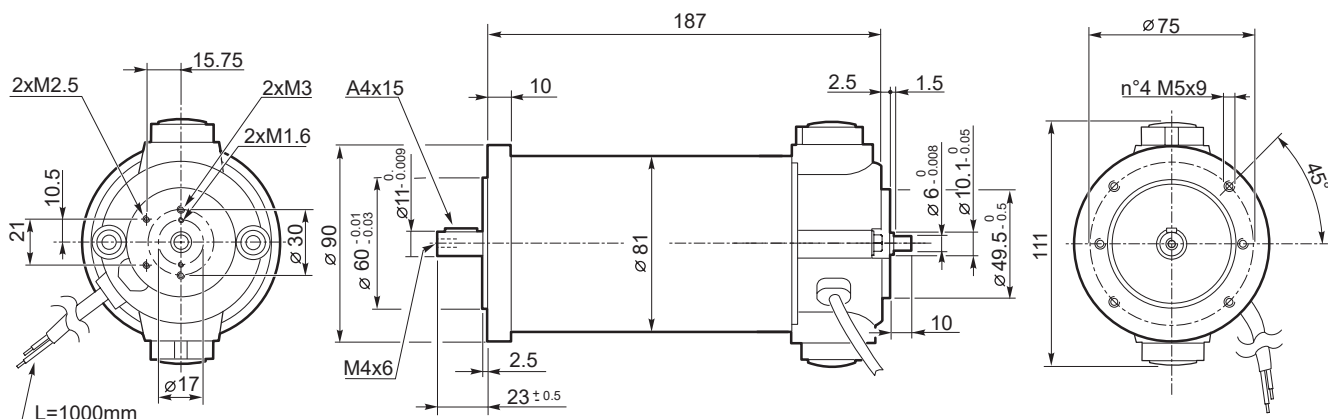


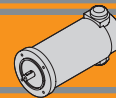
* Usare boccola 9/11
* Use sleeve 9/11

Freno / Brake → H23

Encoder → H24

EC180.24E



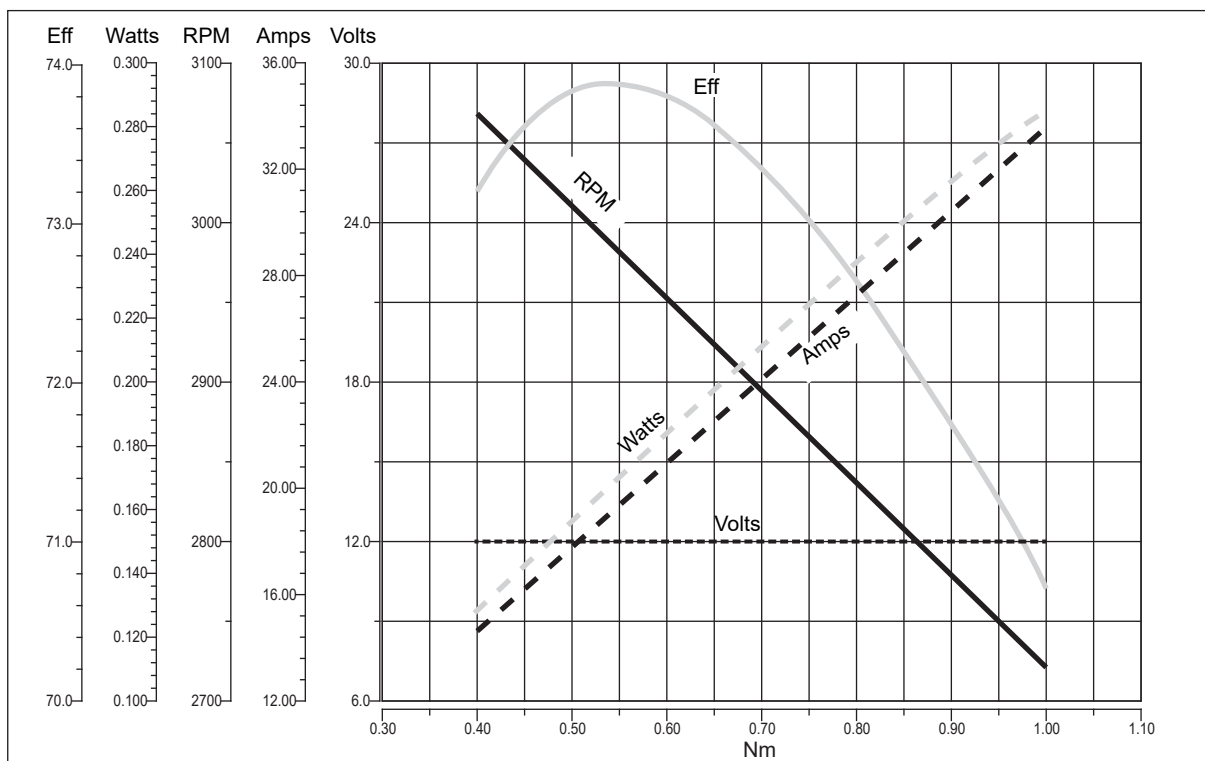


EC180.120 - EC180.240 - EC180.24E

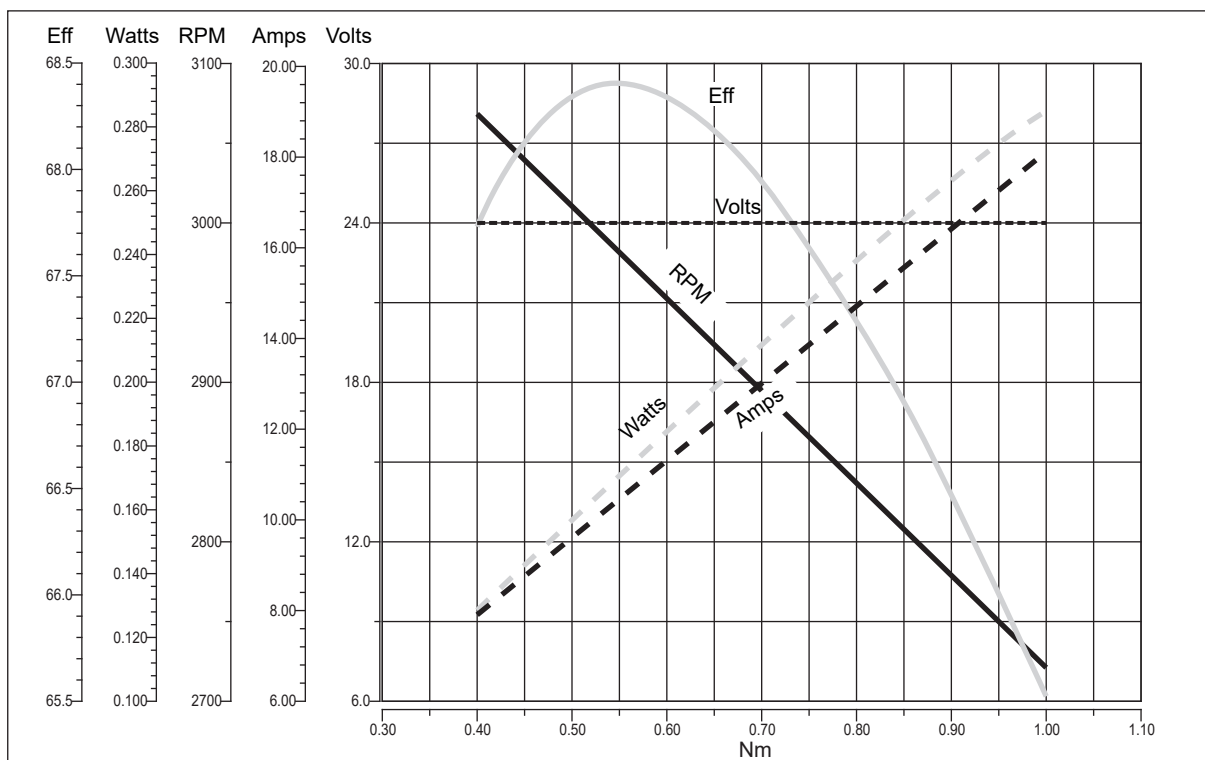
Prestazioni

Performances

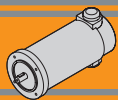
EC180.120



EC180.240 - EC180.24E



EC



EC250.120 - EC250.240

Caratteristiche

Features

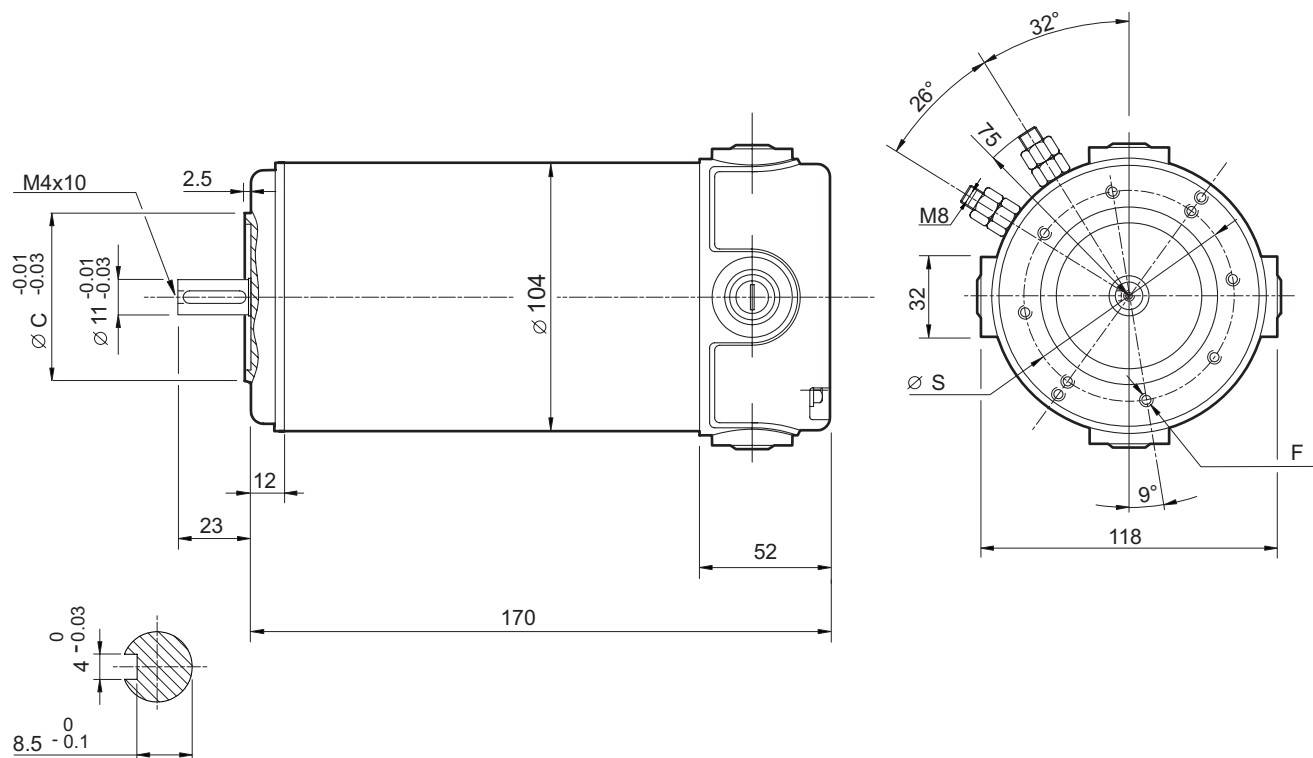
| | |
|---------------------|--------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 104 mm |
| Potenza | 350 W S2 (250 W S1) |
| Magneti | 4 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Spazzole | N° 4 di composto grafite-rame |
| Dimensione spazzole | LxPxH = 18.9 x 9.5 x 16.7 mm |
| Terminali | 2 con doppio dado di fissaggio |

| | |
|-----------------|--|
| Construction | Tubular, without fan |
| Size | Ø 104 mm |
| Power | 350 W S2 (250 W S1) |
| Magnets | 4 |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 4 inside brushes made of graphite/copper composite |
| Brushes size | LxPxH = 18.9 x 9.5 x 16.7 mm |
| Leads terminals | 2, with double nut |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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 | | | |

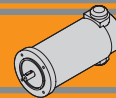
Dimensioni

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

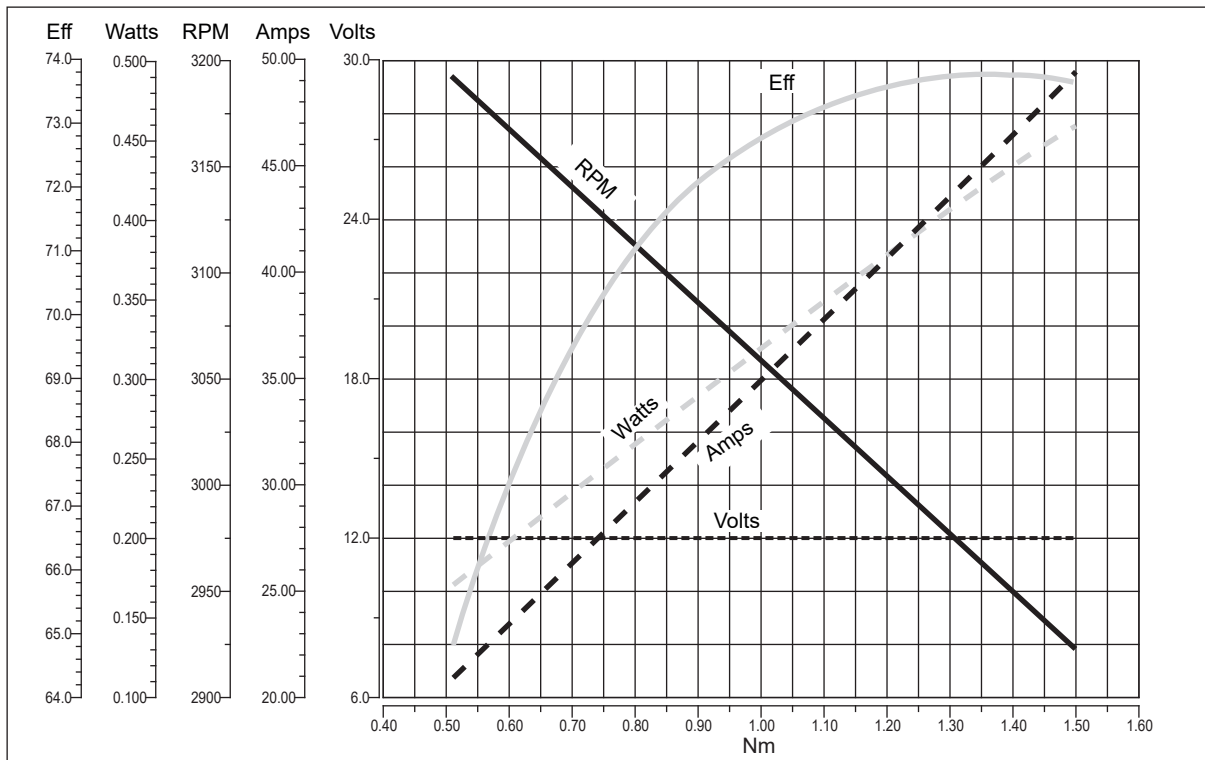


EC250.120 - EC250.240

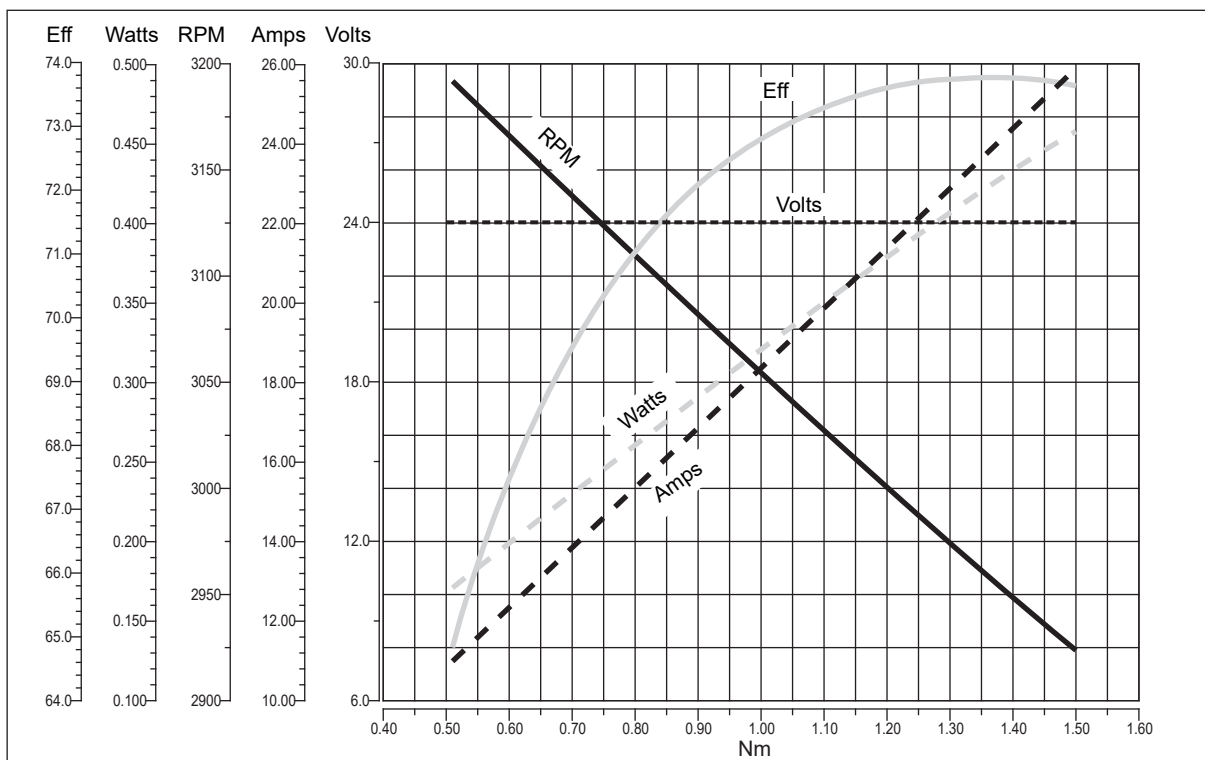
Prestazioni

Performances

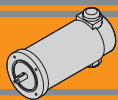
EC250.120



EC250.240



EC



EC350.120 - EC350.240

Caratteristiche

Features

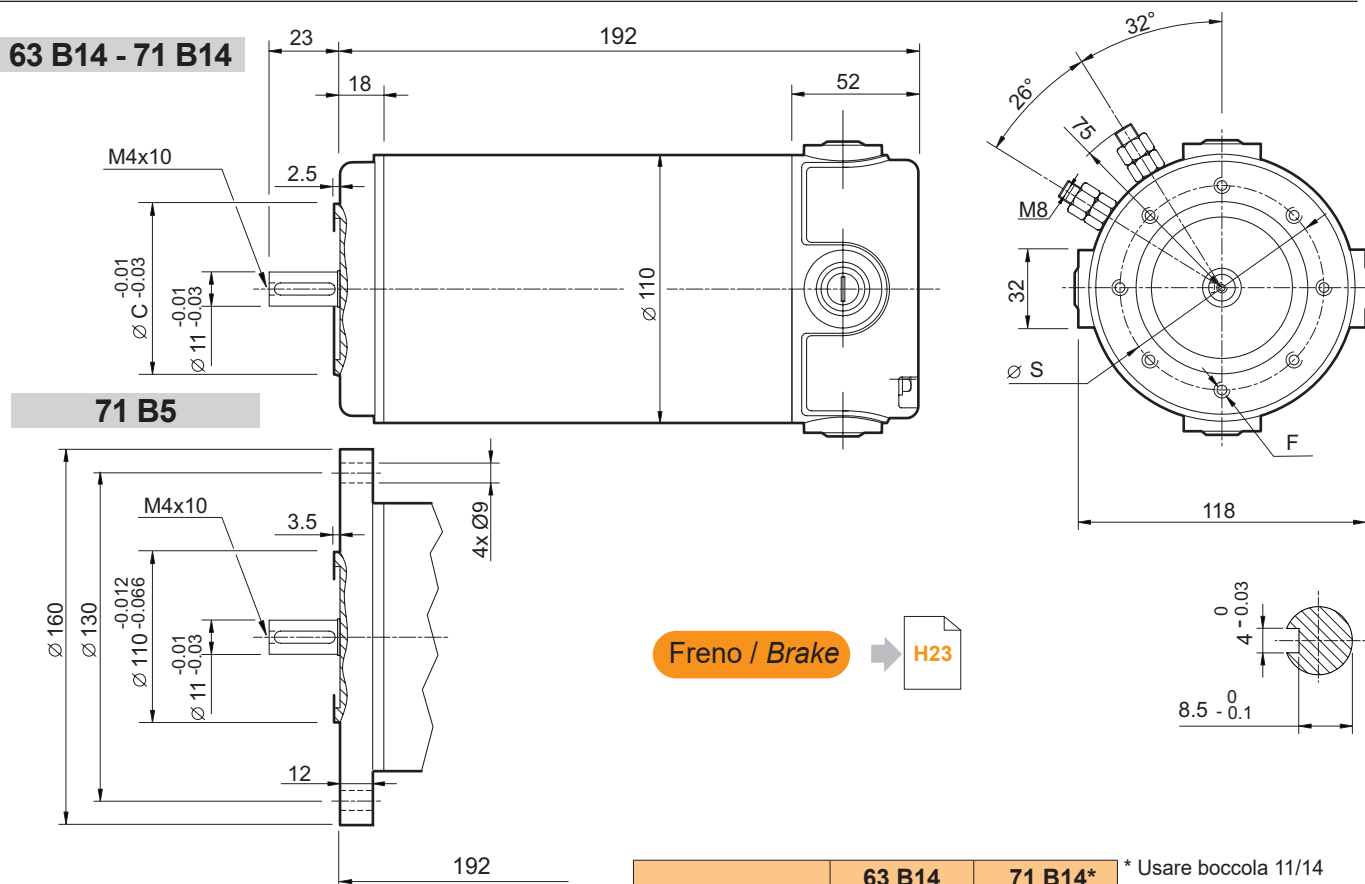
| | |
|---------------------|-------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 110 mm |
| Potenza | 500 W S2 (350 W S1) |
| Magneti | 4 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Spazzole | N° 4 di composto grafite-rame |
| Dimensione spazzole | LxPxH = 18.9 x 9.5 x 16.7 mm |
| Terminali | 2 con dadi di fissaggio |
| Freno | Elettromagnetico |

| | |
|-----------------|---|
| 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 | | | |

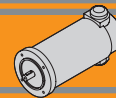
Dimensioni

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

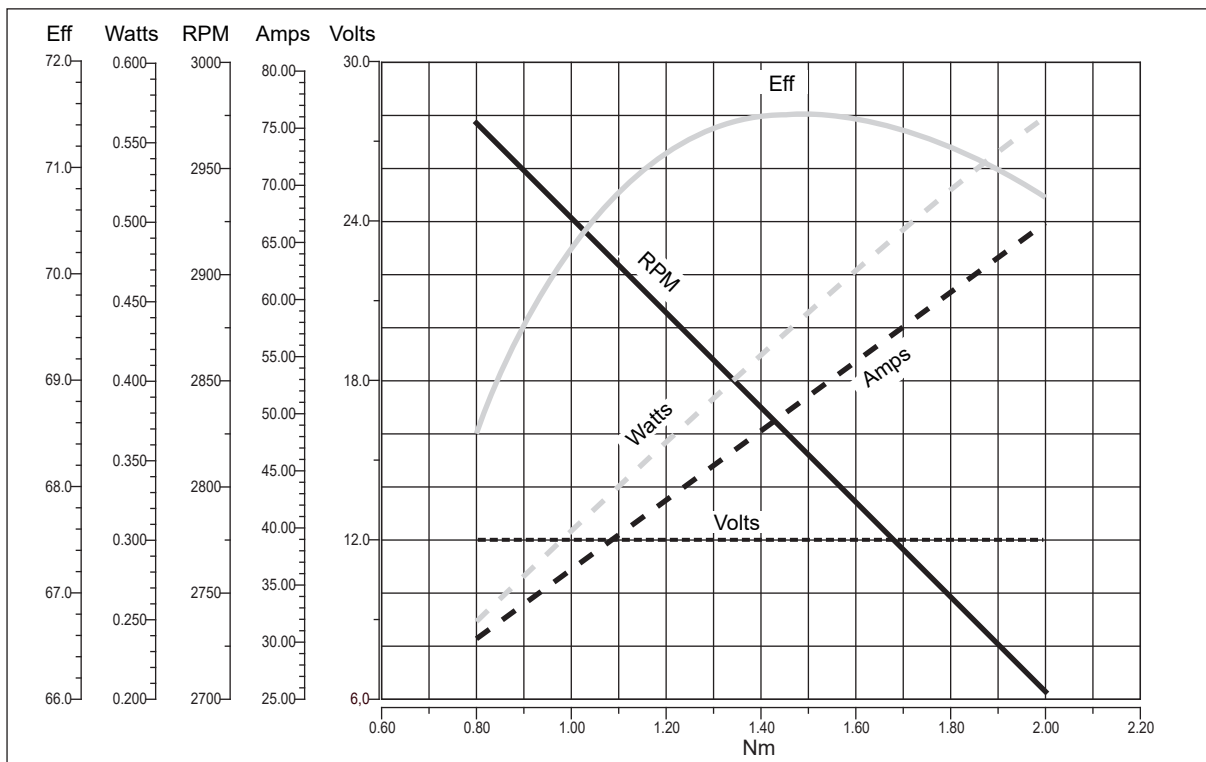


EC350.120 - EC350.240

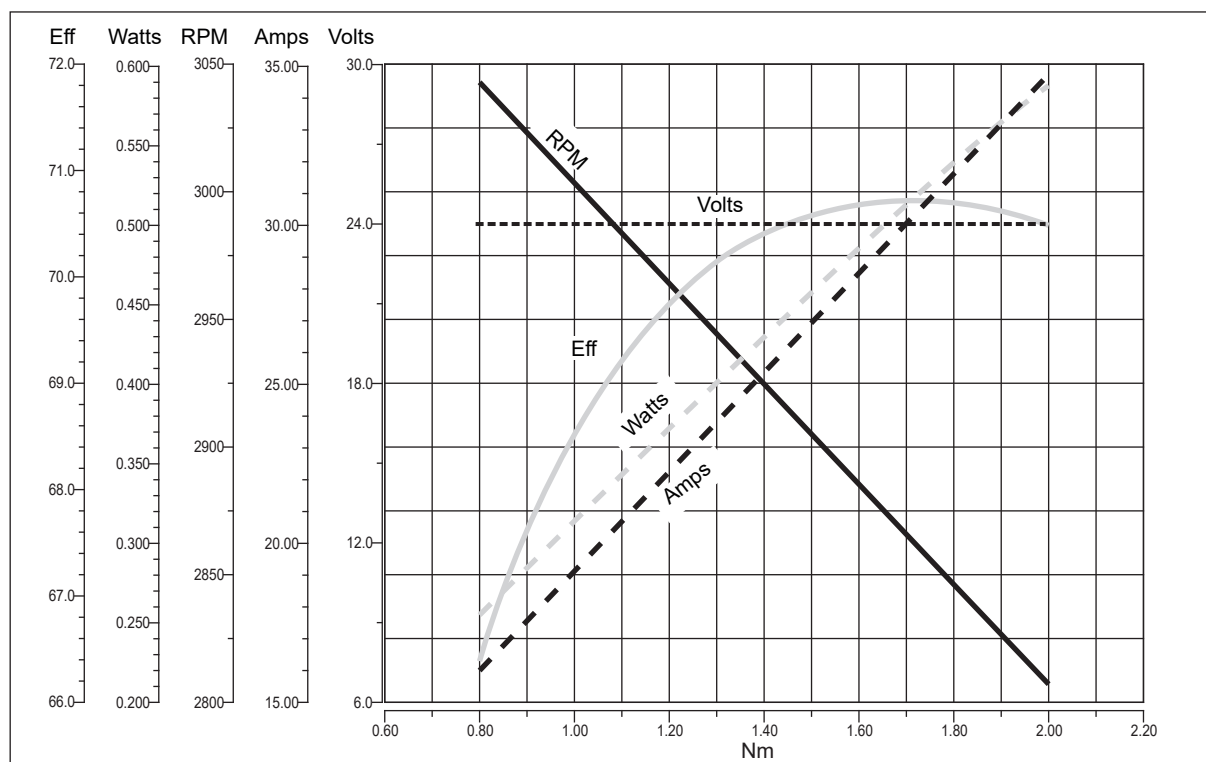
Prestazioni

Performances

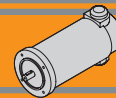
EC350.120



EC350.240



EC

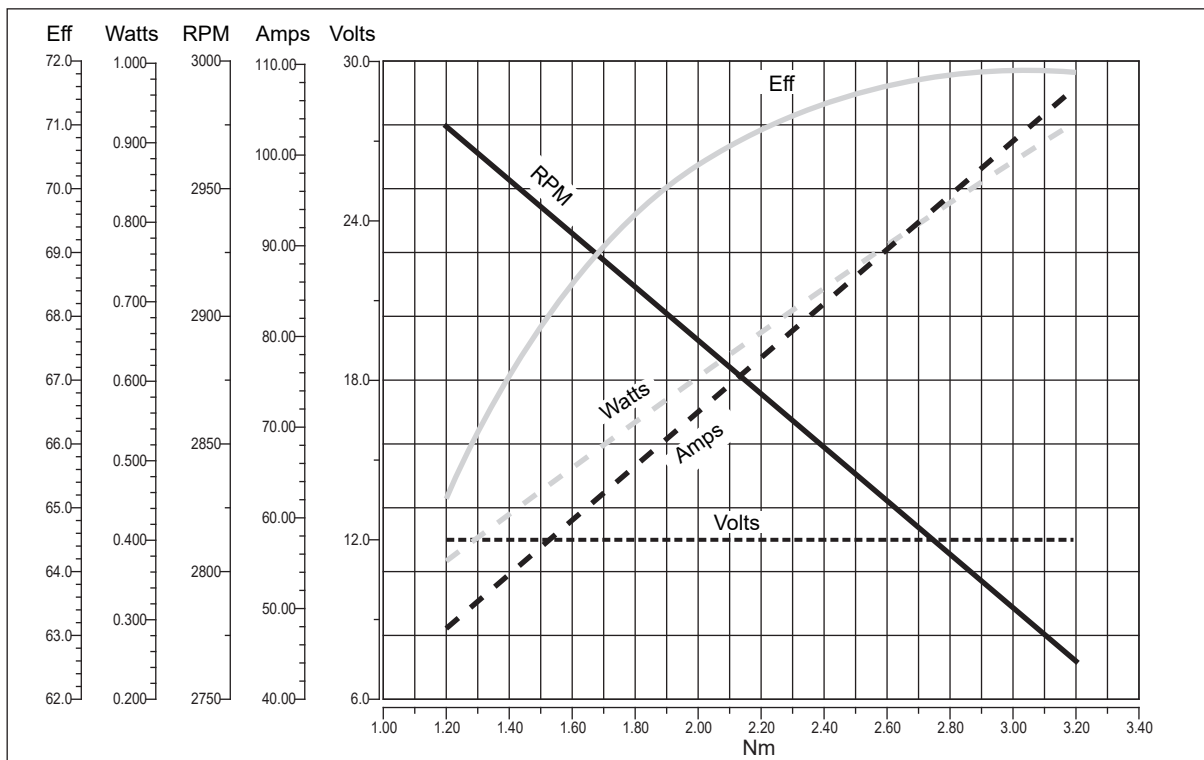


EC600.120 - EC600.240

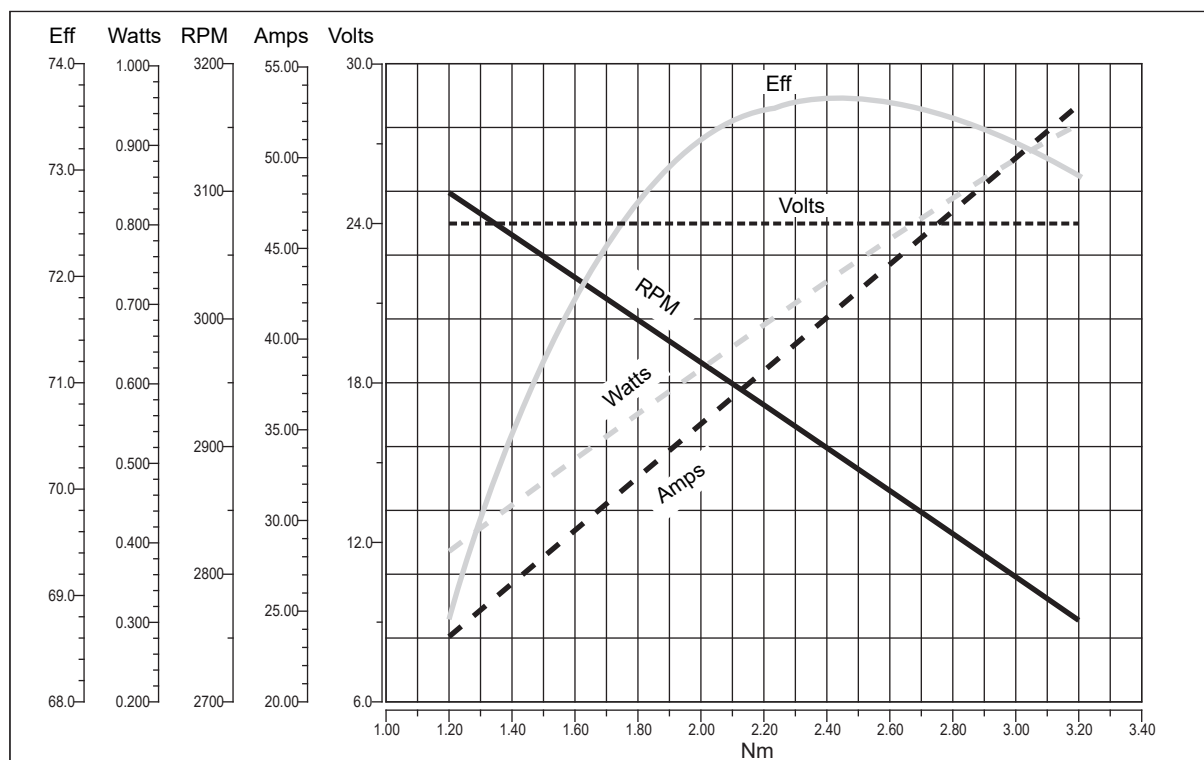
Prestazioni

Performances

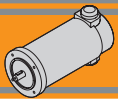
EC600.120



EC600.240



EC

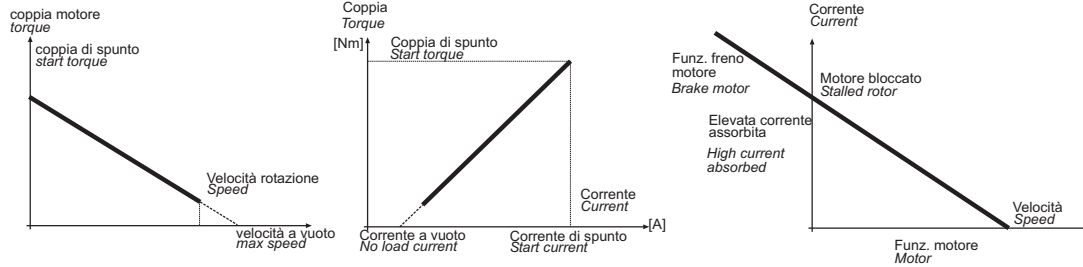


Legenda / Glossario dei grafici

Key / Diagram Glossary

Dato un motore in C.C, la velocità di rotazione è funzione lineare della coppia; così pure la corrente assorbita è una funzione lineare della coppia. Velocità e corrente variano in maniera sensibile al variare del carico.

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

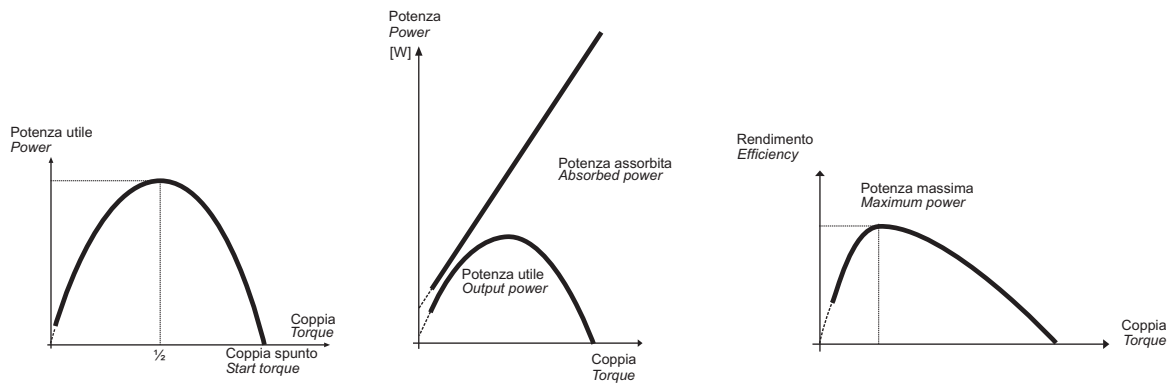


La potenza utile (potenza all' albero) si ricava dalla formula:

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

The output power is calculated using the formula:

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



Poiché la tensione di alimentazione è costante mentre la corrente è linearmente crescente al crescere della coppia, l'andamento della potenza assorbita è un retta crescente. Dal rapporto tra la potenza meccanica e la potenza assorbita si ottiene il grafico dell'efficienza.

Since the supply voltage is constant, whereas the current increases in a linear manner as the torque increases, the absorbed power trend is a straight line going up. Efficiency is shown from the ratio between the output power and the absorbed power.

Formule utili

Useful formulas

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

$$[HP] \cdot 746 = [W].$$

Esempio 2 HP = circa 1500 W.

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

$$P_a = V \cdot I$$

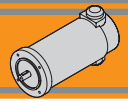
$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

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

$$[HP] \cdot 746 = [W].$$

Example 2 HP = approx. 1500 W.



Freno

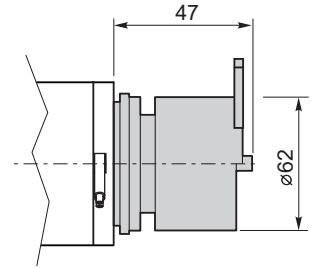
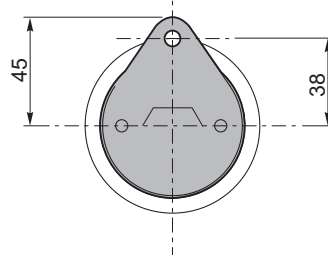
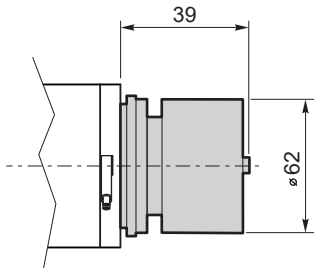
Brake

Freno / Brake

Freno con leva di sblocco/ Brake with hand release

EC050...BR
EC070...BR

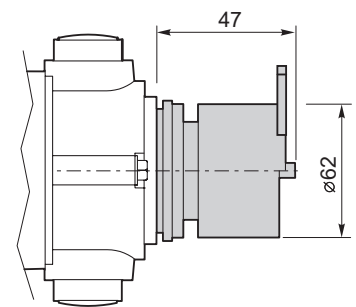
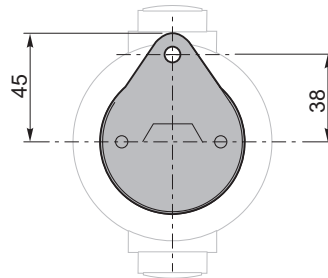
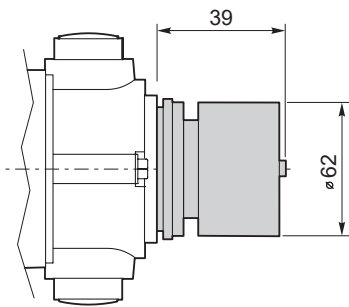
EC050...BRL
EC070...BRL



| | Pn [W] | V [V] | Mn [Nm] | n ₁ [min ⁻¹] |
|---|-----------|----------|------------|--|
| Caratteristiche del freno / Break features | 14 | 12 24 | 1.8 | 3000 |

EC100.24E BR
EC180.24E BR

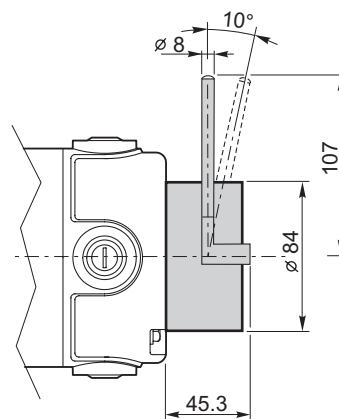
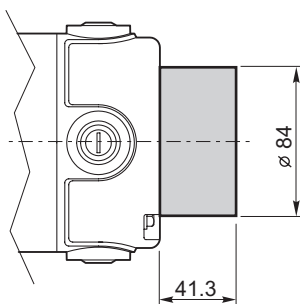
EC100.24E BRL
EC180.24E BRL



| | Pn [W] | V [V] | Mn [Nm] | n ₁ [min ⁻¹] |
|---|-----------|----------|------------|--|
| Caratteristiche del freno / Break features | 14 | 12 24 | 1.8 | 3000 |

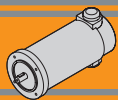
EC350...BR
EC600...BR

EC350...BRL
EC600...BRL



| | Pn [W] | V [V] | Mn [Nm] | n ₁ [min ⁻¹] |
|---|-----------|----------|------------|--|
| Caratteristiche del freno / Break features | 25 | 12 24 | 5 | 3000 |

EC



Encoder

Encoder

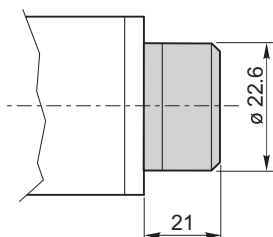
EC020.24E ME22

EC050.12E ME22

EC050.24E ME22

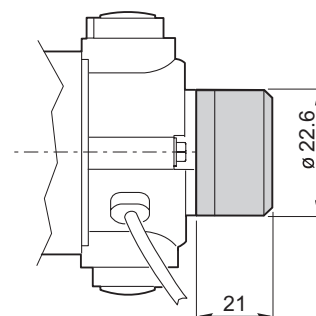
EC070.12E ME22

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

TRANSTECNO[®]
the modular gearmotor

EC IP66

EC IP66



Ferrite

Motori elettrici CC IP66
IP66 DC electric motors





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| EC070.240.66 | Dimensioni | <i>Dimensions</i> | 12 |
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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***



EC070.120.66 - EC070.240.66

Caratteristiche

Features

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

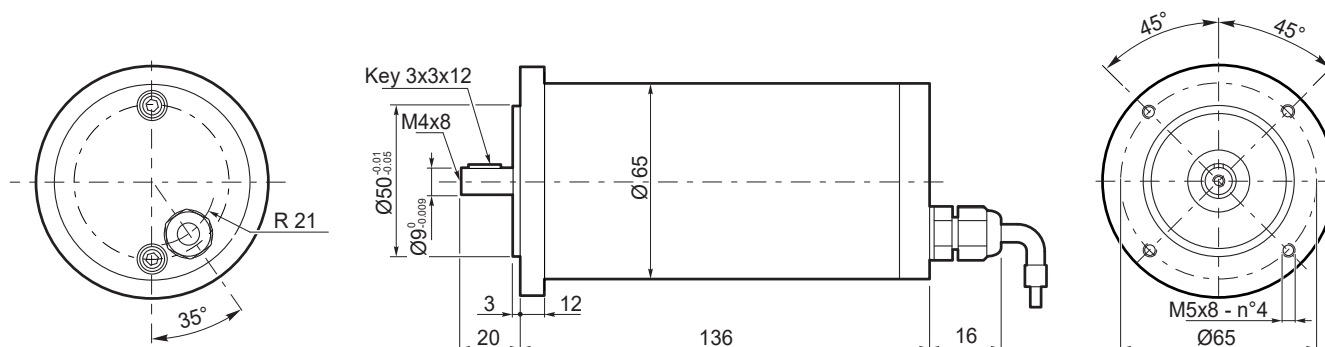
| | |
|----------------|--|
| Construction | Tubular, without fan |
| Size | Ø 65 mm |
| Power | 100 W S2 (70 W S1) |
| Magnets | 2 |
| Bearings | Ball bearings |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Brushes | 2 inside brushes made of graphite/copper composite |
| Electric cable | Length: 1000 mm |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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



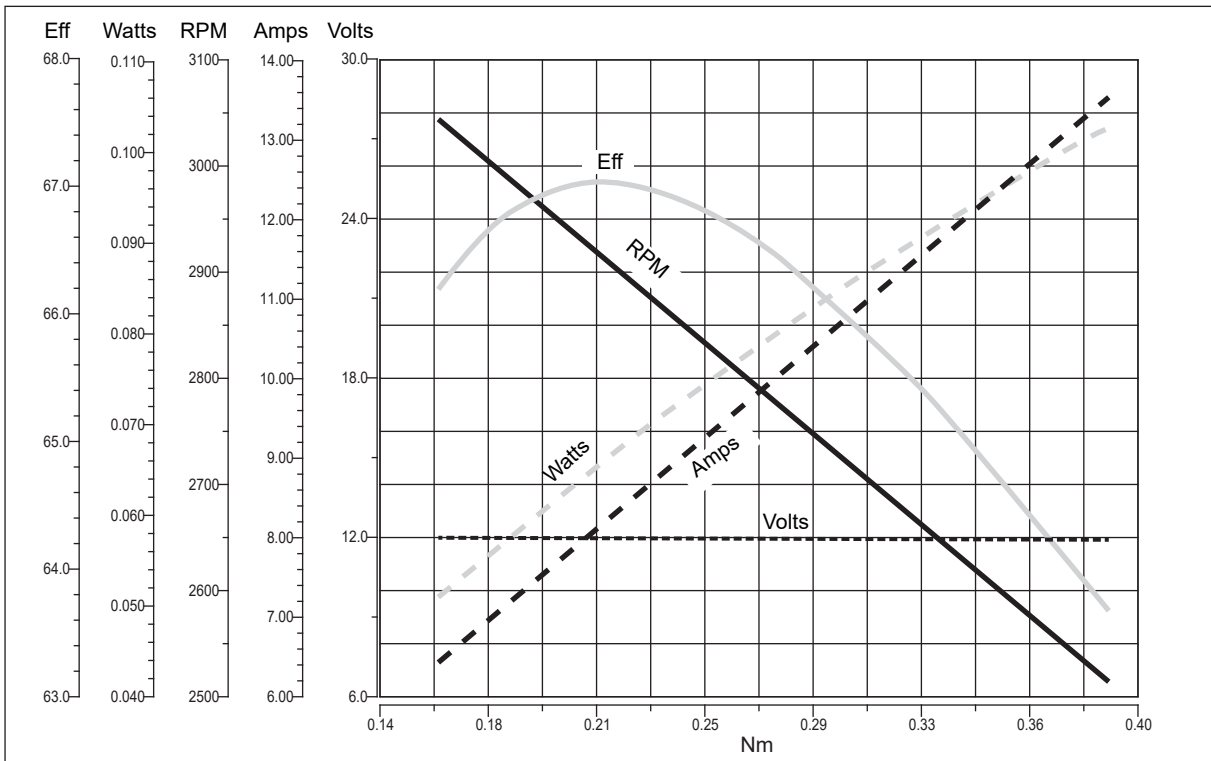


EC070.120.66 - EC070.240.66

Prestazioni

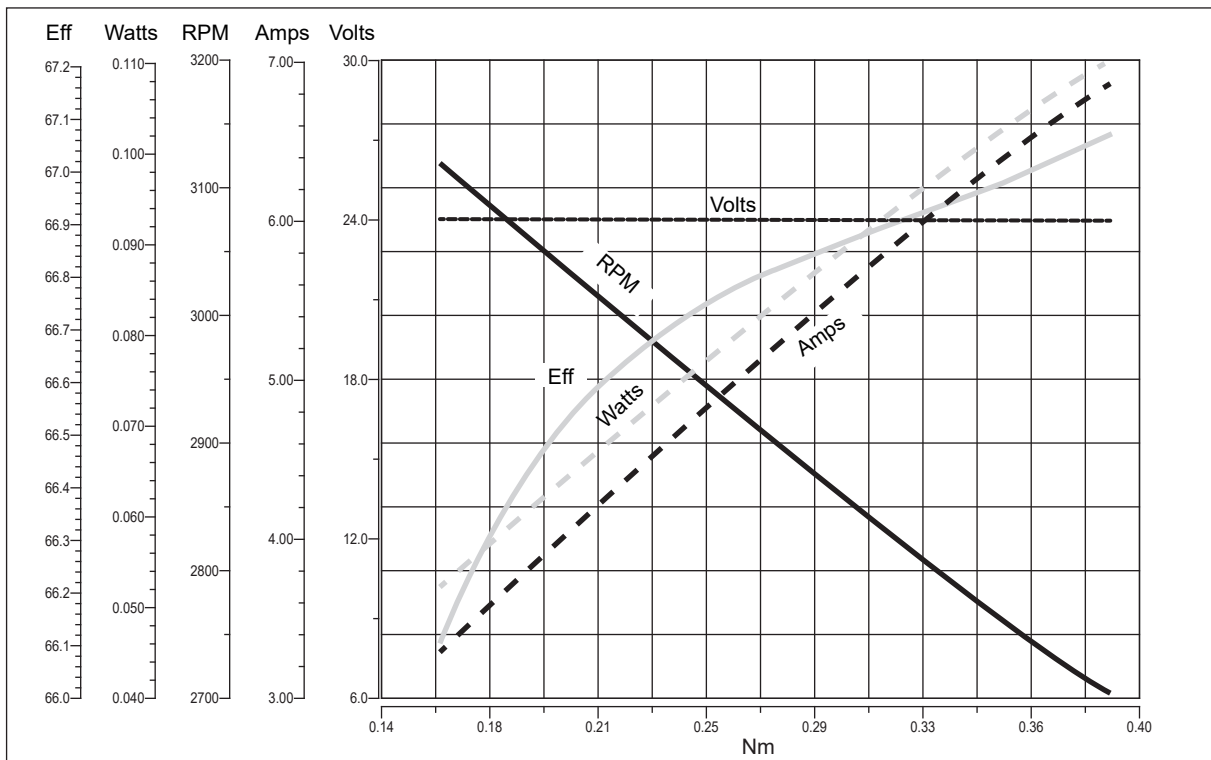
Performances

EC070.120.66



EC IP66

EC070.240.66





EC100.120.66 - EC100.240.66

Caratteristiche

Features

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

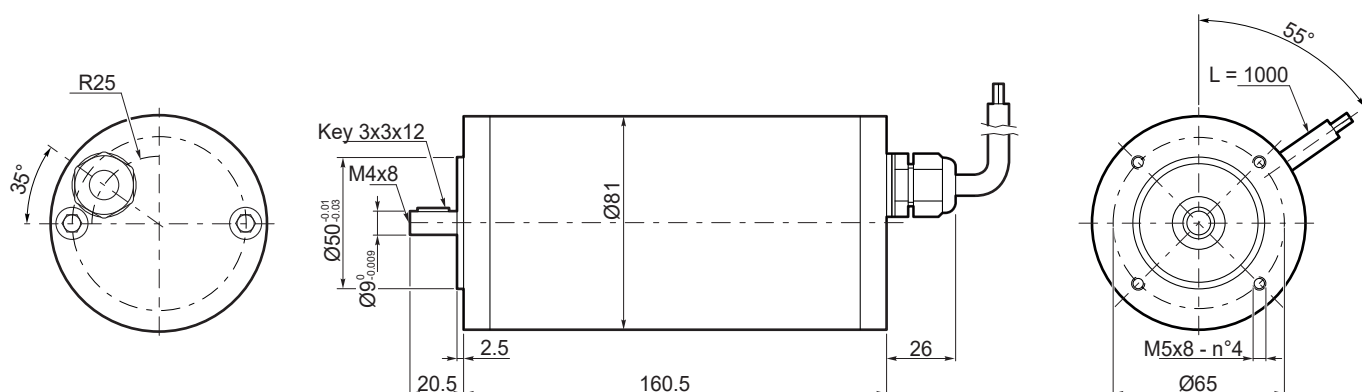
| | |
|----------------|---------------------------|
| Construction | Tubular, without fan |
| Size | Ø 80 mm |
| Power | 140 W S2 (100 W S1) |
| Magnets | 2 |
| Bearings | Ball bearings |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Electric cable | Length: 1000 mm |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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

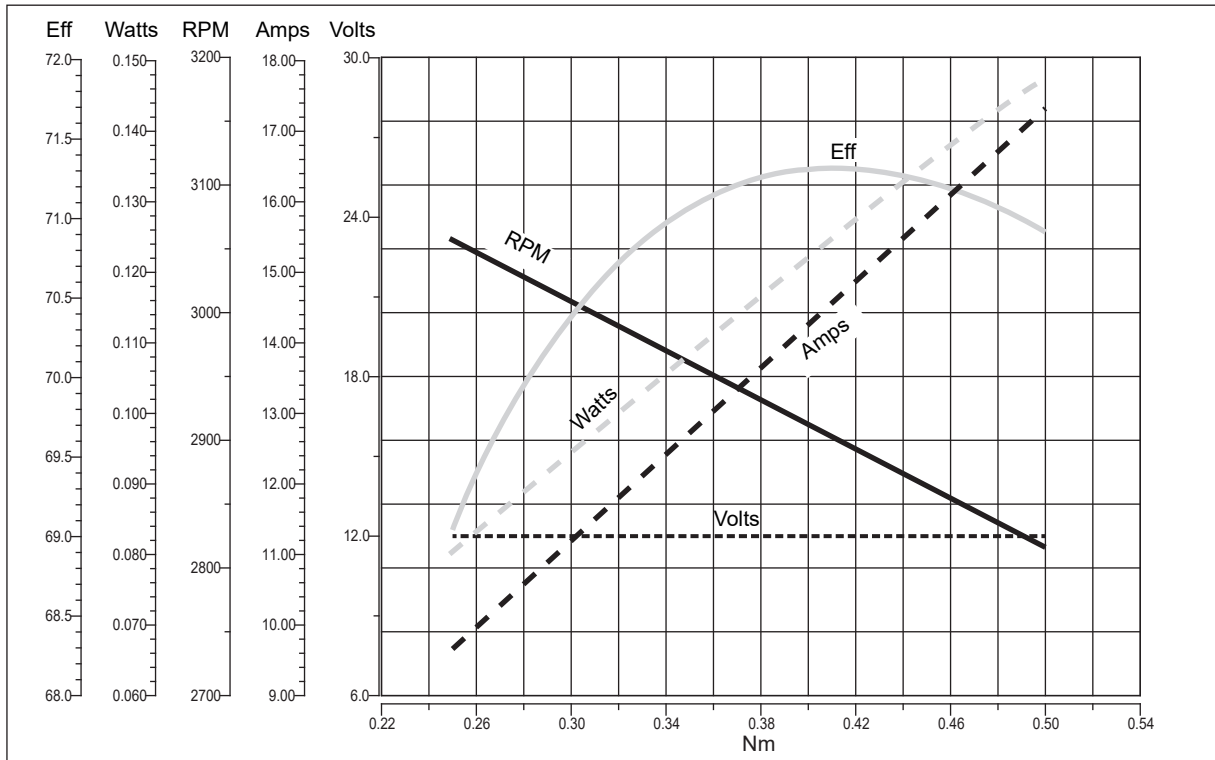
Dimensions

EC100.120.66 EC100.240.66



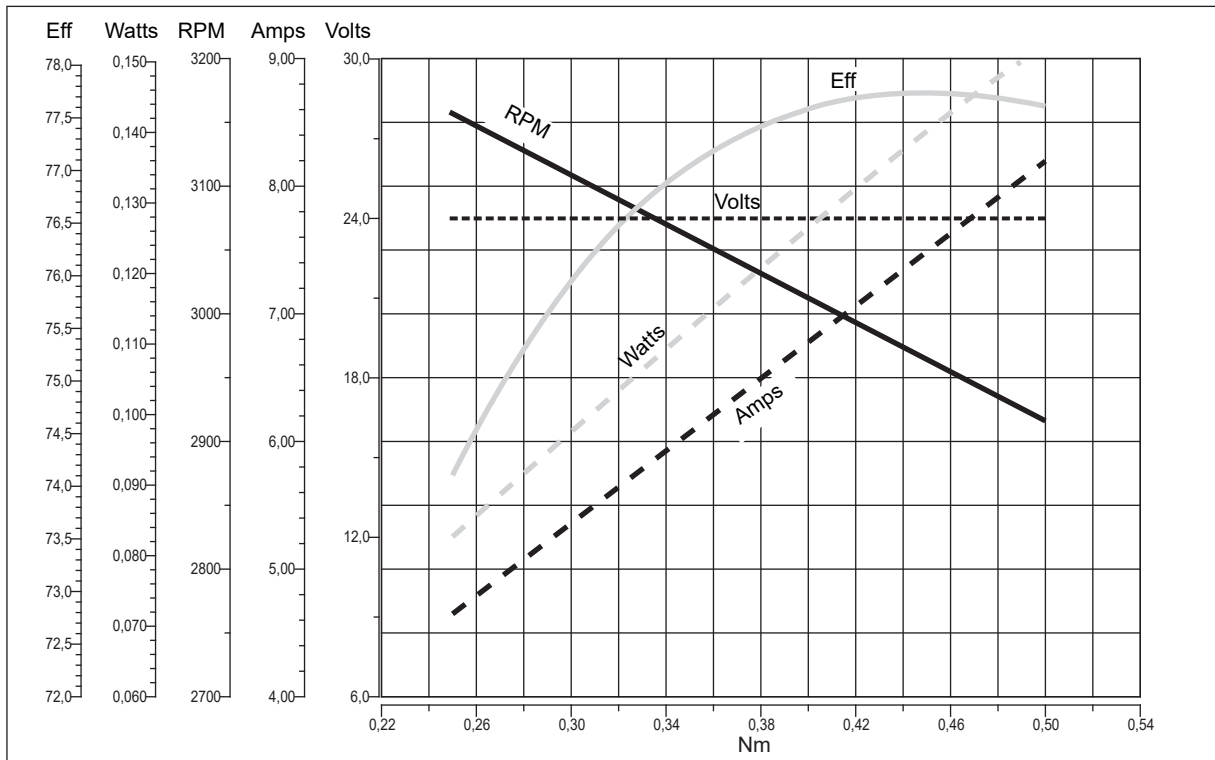


EC100.120.66



EC IP66

EC100.240.66





EC180.120.66 - EC180.240.66

Caratteristiche

Features

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

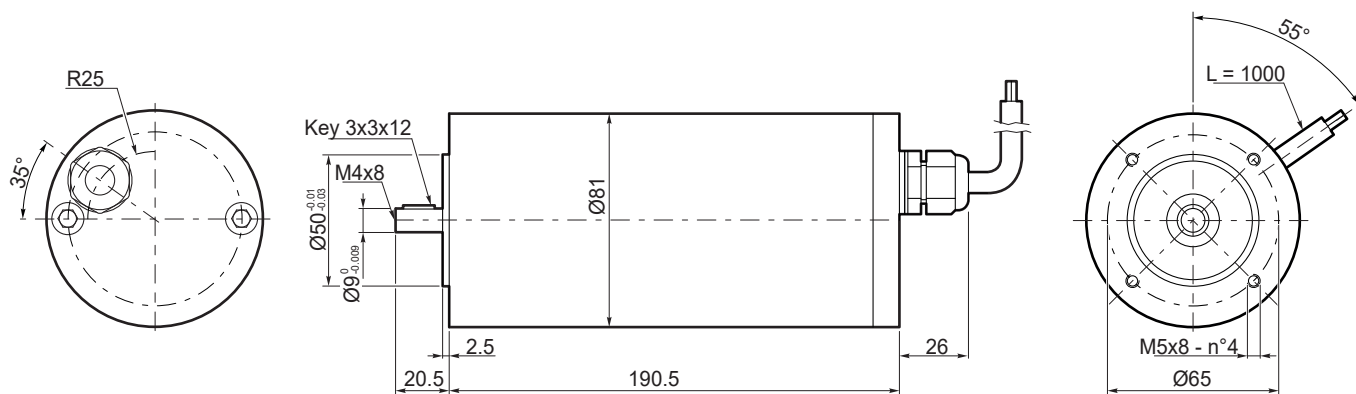
| | |
|----------------|---------------------------|
| Construction | Tubular, without fan |
| Size | Ø 80 mm |
| Power | 250 W S2 (180 W S1) |
| Magnets | 2 |
| Bearings | Ball bearings |
| Mounting holes | 4 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Electric cable | Length: 1000 mm |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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 | | | | | | |
| | S2 25' | 250 | | 15 | | | 0.8 | | | |

Dimensioni

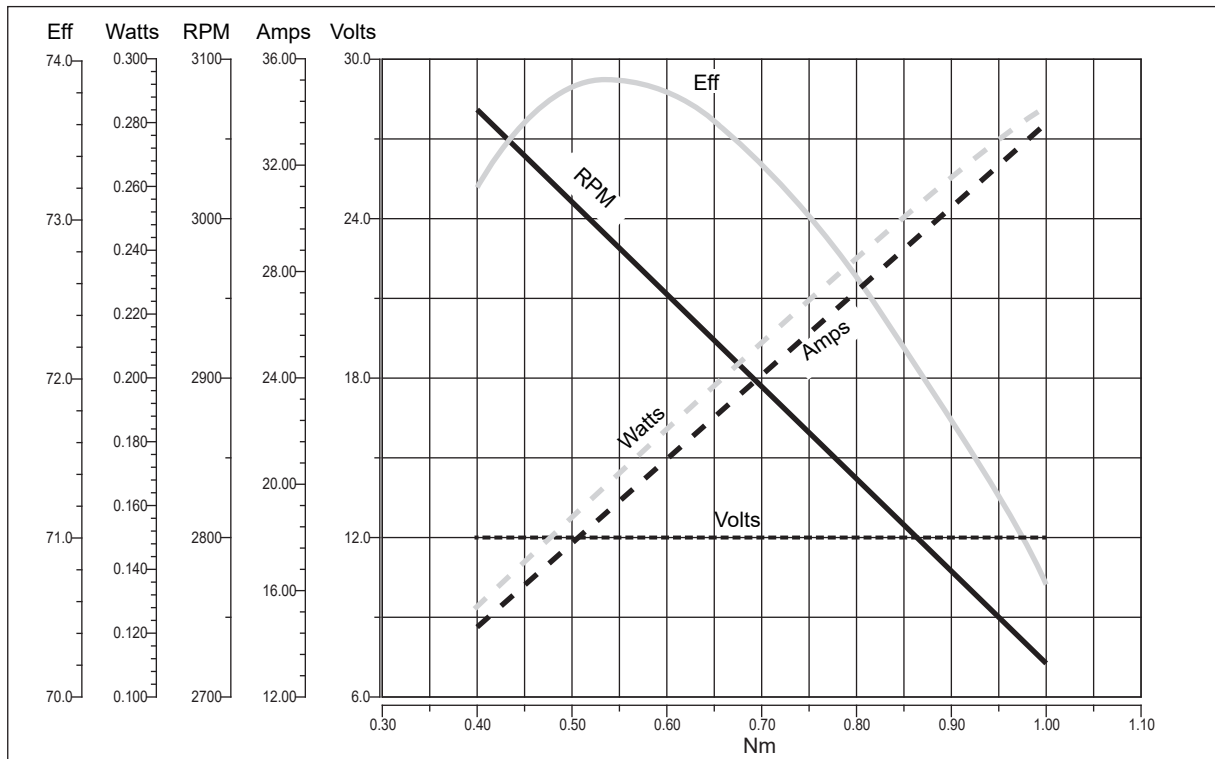
Dimensions

EC180.120.66
EC180.240.66



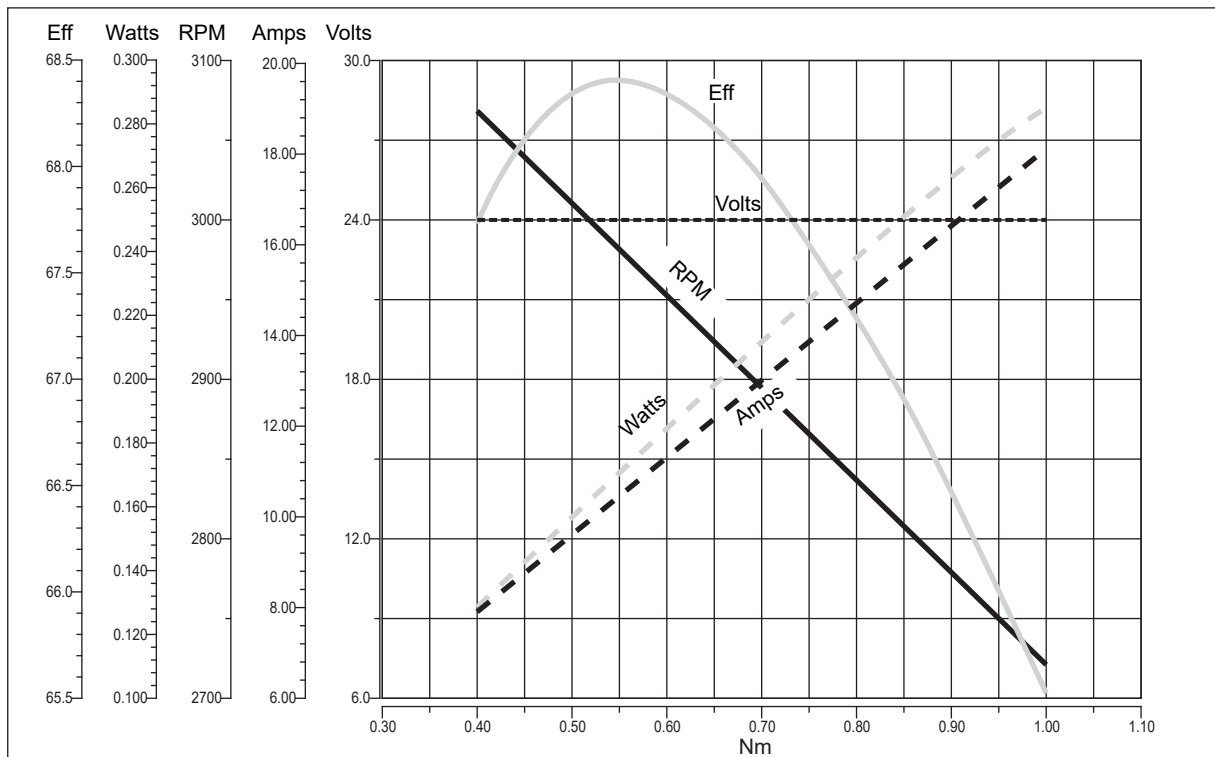


EC180.120.66



EC IP66

EC180.240.66





EC250.120.66 - EC250.240.66

Caratteristiche

Features

| | |
|-------------------|--------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 104 mm |
| Potenza | 350 W S2 (250 W S1) |
| Magneti | 4 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Terminali | 2 con doppio dado di fissaggio |

| | |
|-----------------|---------------------------|
| Construction | Tubular, without fan |
| Size | Ø 104 mm |
| Power | 350 W S2 (250 W S1) |
| Magnets | 4 |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Leads terminals | 2, with double nut |

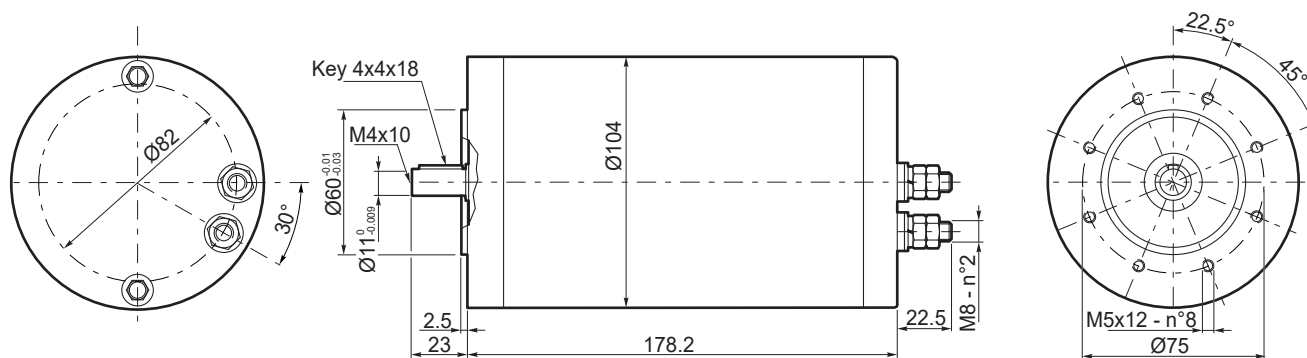
| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n ₁ [min ⁻¹] | IP | Kg |
|--------------|--------|-----------|----------|----------|----|----|------------|--|----|------|
| EC250.120.66 | S1 | 250 | 12 | 30 | F | 1 | 0.8 | 3000 | 66 | 4.15 |
| | S2 25' | 350 | | 38.5 | | | 1.12 | | | |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

Dimensioni

Dimensions

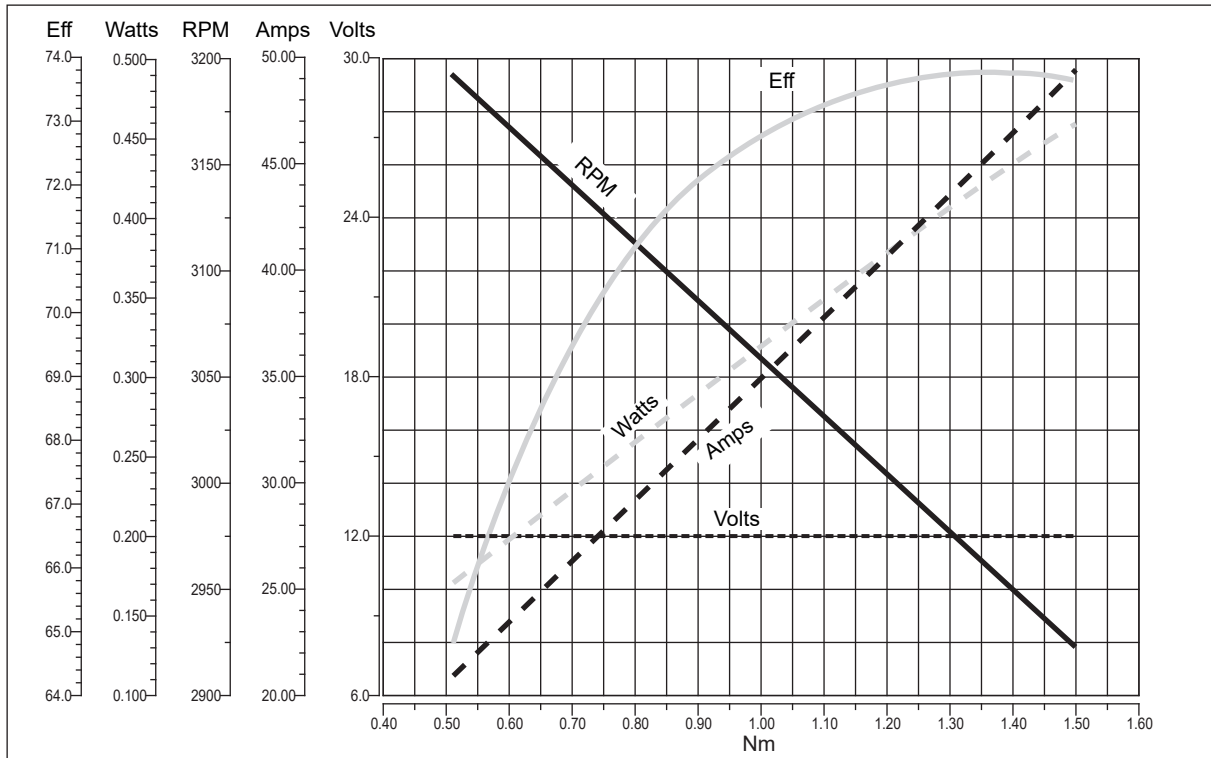
EC250.120.66

EC250.240.66



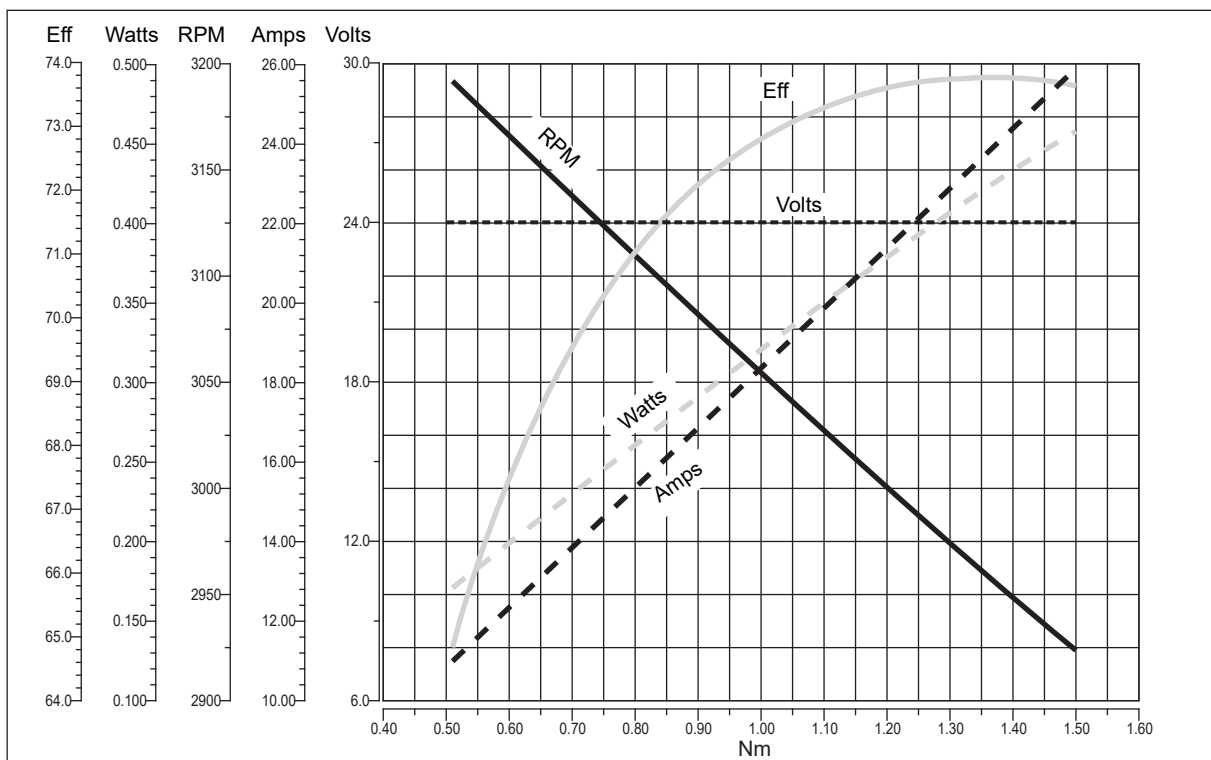


EC250.120.66



EC IP66

EC250.240.66





EC350.120.66 - EC350.240.66

Caratteristiche

Features

| | |
|-------------------|------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 110 mm |
| Potenza | 500 W S2 (350 W S1) |
| Magneti | 4 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Terminali | 2 con dadi di fissaggio |

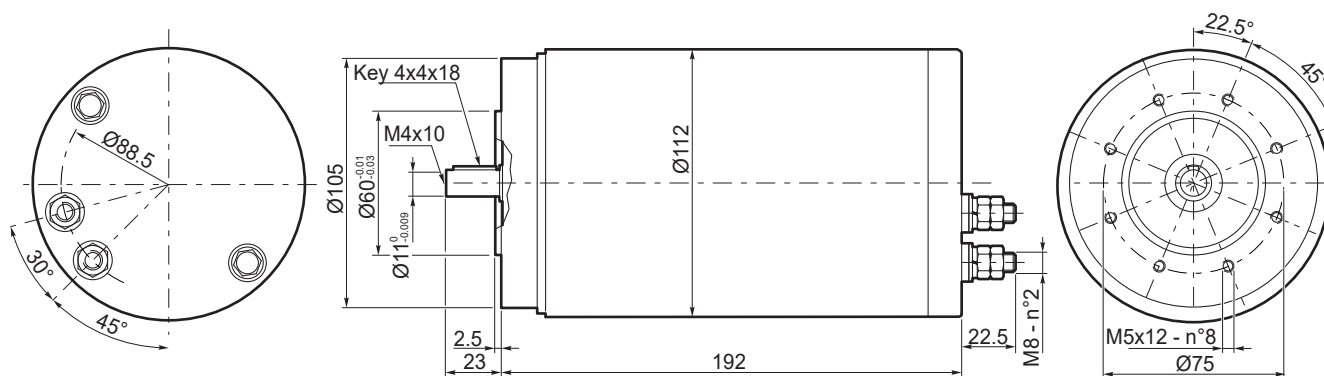
| | |
|-----------------|---------------------------|
| Construction | Tubular, without fan |
| Size | Ø 110 mm |
| Power | 500 W S2 (350 W S1) |
| Magnets | 4 |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Leads terminals | 2, with double nut |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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

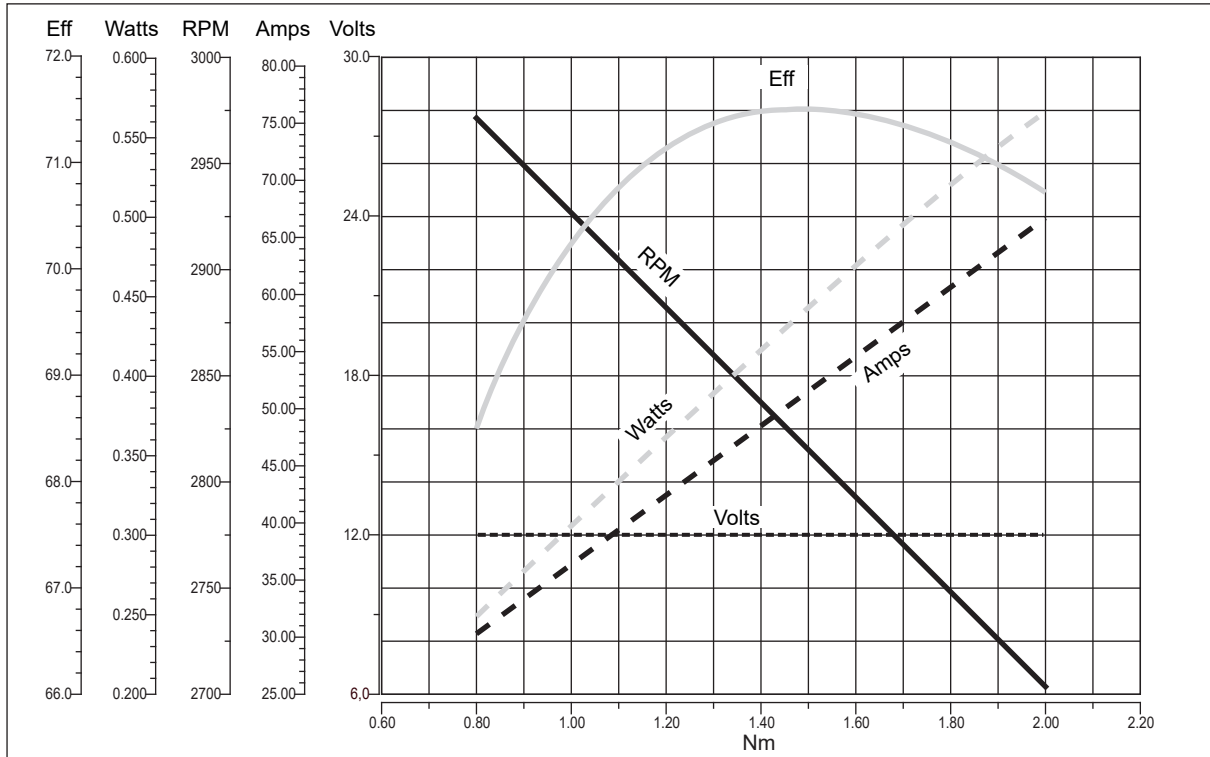
Dimensions

EC350.120.66
EC350.240.66



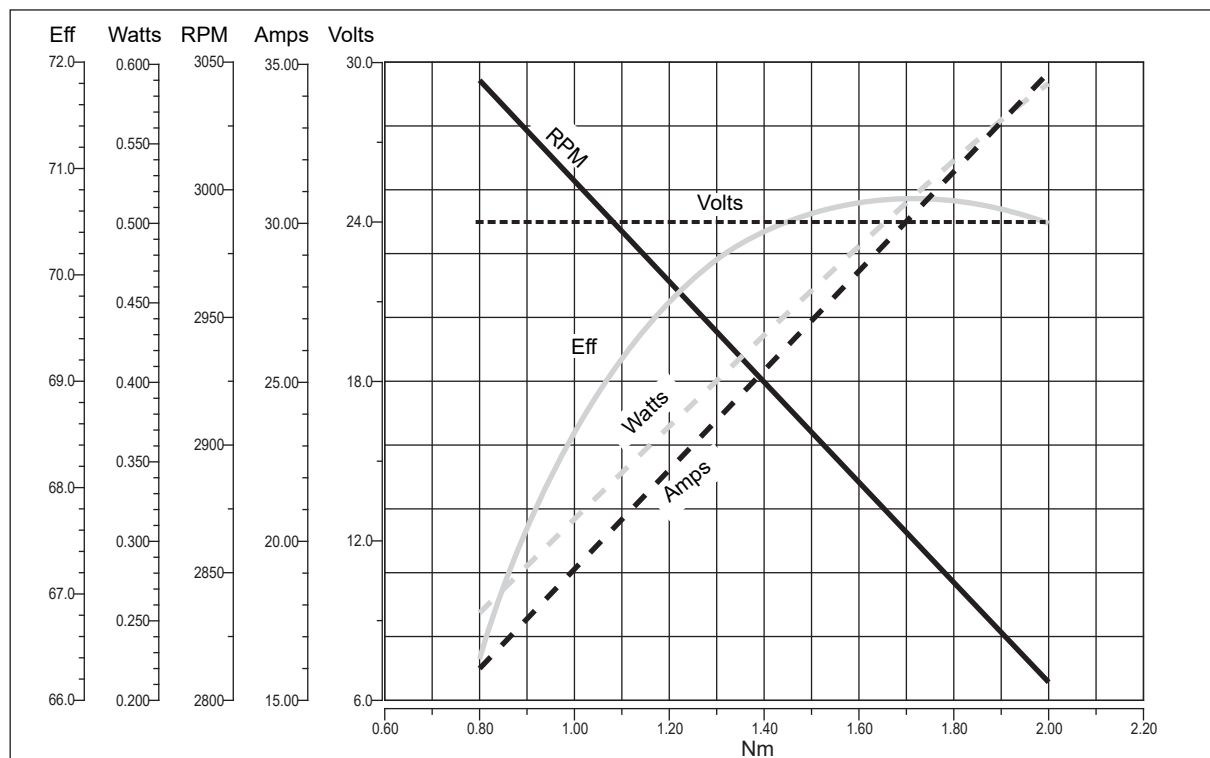


EC350.120.66



EC IP66

EC350.240.66





EC600.120.66 - EC600.240.66

Caratteristiche

Features

| | |
|-------------------|--------------------------------|
| Costruzione | Tubolare, senza ventilazione |
| Grandezza | Ø 110 mm |
| Potenza | 800 W S2 (600 W S1) |
| Magneti | 4 |
| Supporti | Cuscinetti a sfera |
| Fori di montaggio | 8 |
| Alimentazione | Bassa tensione, 12 o 24 Vcc |
| Terminali | 2 con doppio dado di fissaggio |

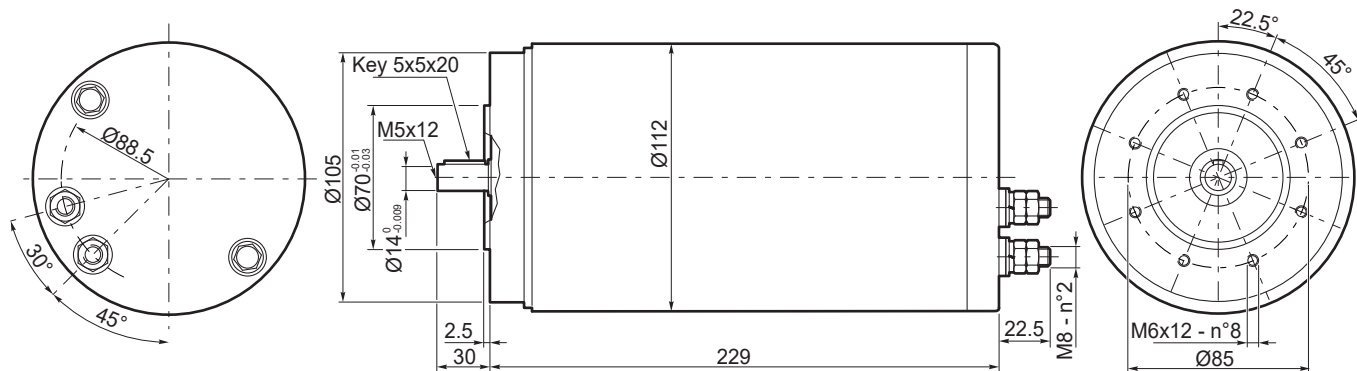
| | |
|-----------------|---------------------------|
| Construction | Tubular, without fan |
| Size | Ø 110 mm |
| Power | 800 W S2 (600 W S1) |
| Magnets | 4 |
| Bearings | Ball bearings |
| Mounting holes | 8 |
| Power supply | Low voltage, 12 or 24 Vdc |
| Leads terminals | 2, with double nut |

| Tipo Type | S | Pn [W] | V [V] | I [A] | IC | FF | Mn [Nm] | n 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

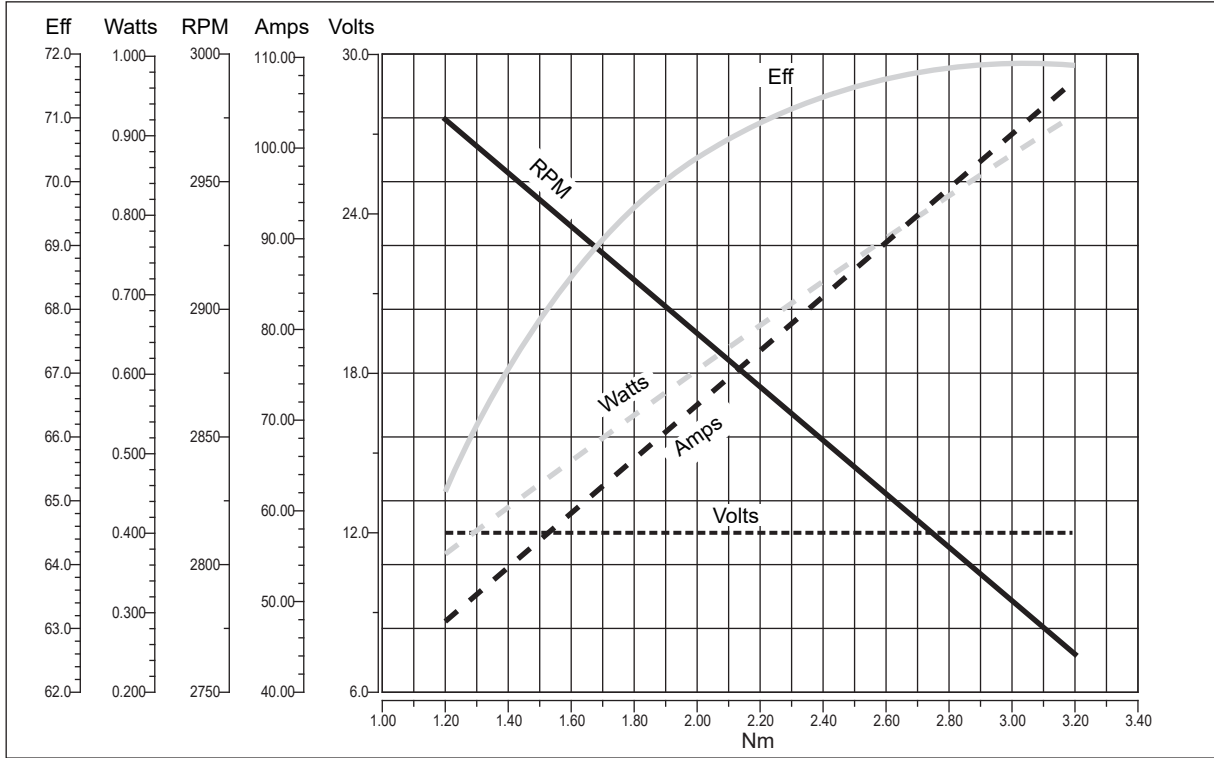
Dimensions

EC600.120.66
EC600.240.66



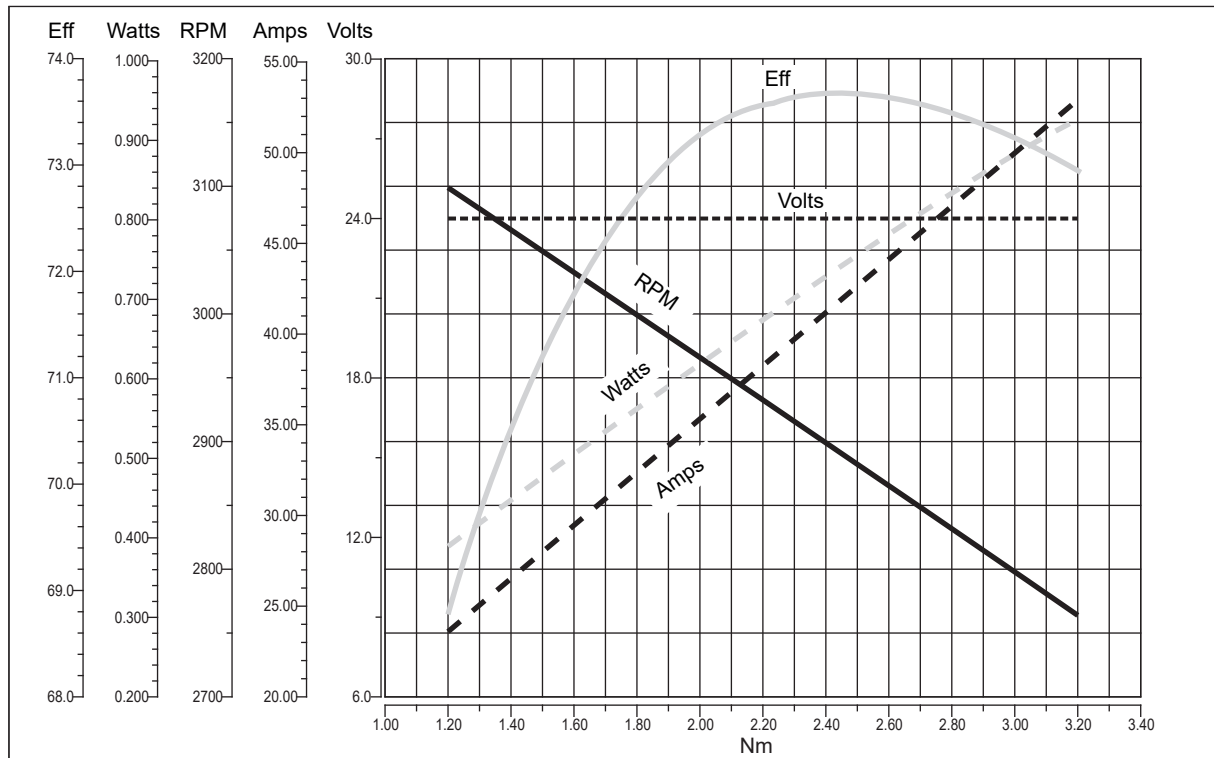


EC600.120.66



EC IP66

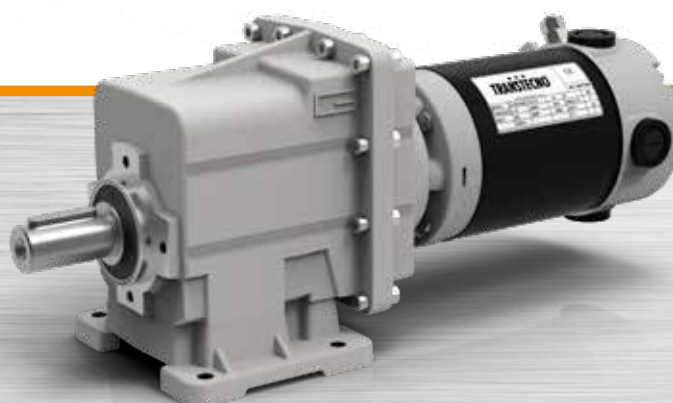
EC600.240.66

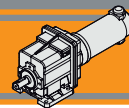




Ferrite

Motoriduttori CC ad ingranaggi cilindrici
DC helical in-line gearmotors

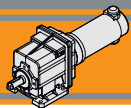




| Indice | Index | Pag. Page |
|------------------------------|-----------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | L2 |
| Designazione | <i>Classification</i> | L2 |
| Sensi di rotazione | <i>Direction of rotation</i> | L3 |
| Lubrificazione | <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 |

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Caratteristiche tecniche

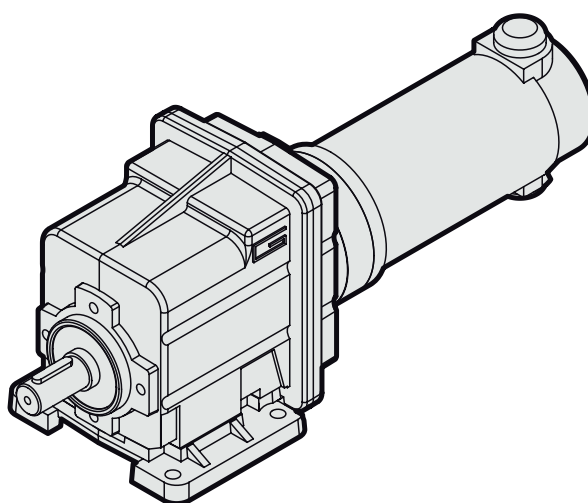
Technical features

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

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

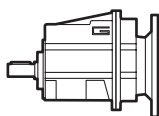
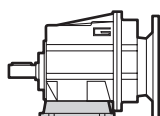
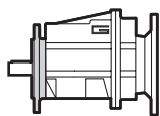
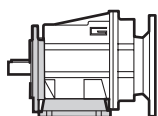
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati
- Disponibili con giunto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

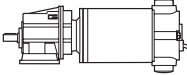



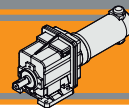
Designazione

Classification

U**H****F****H/F**

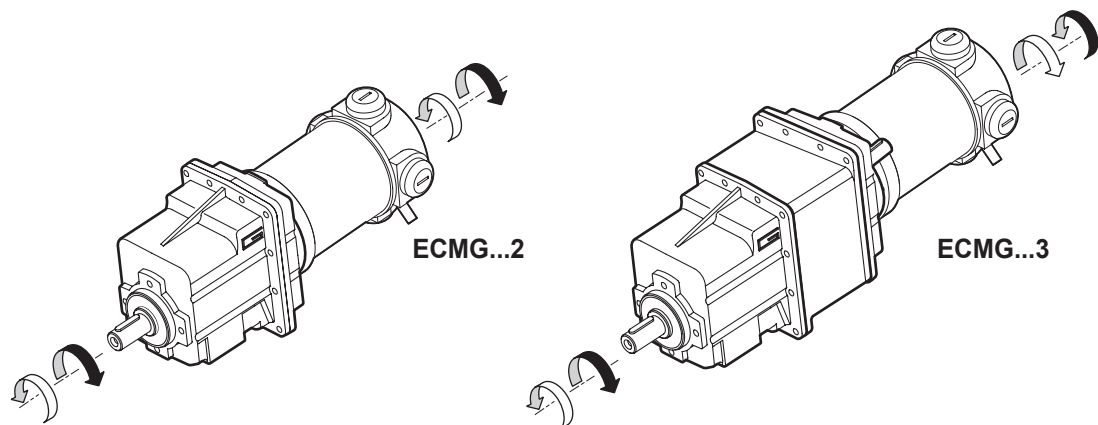
MOTORIDUTTORE / GEARMOTOR

| 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... H... F... H.../F... | vedi tabelle <i>see tables</i> | vedi tabelle <i>see tables</i> | 120 240 24E | FX  |
| | 070/012 | 100/012 | 180/012 | 250/012 | 350/012 | 600/012 | | | | | |
| | 070/013 | 100/013 | 180/013 | 250/013 | 350/013 | 600/013 | | | | | |
| | 070/022 | 100/022 | 180/022 | 250/022 | 350/022 | 600/022 | | | | | |
| | 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 | | | | | |
| | | | | | | 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.

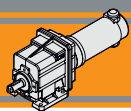
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

ECMG

Simbologia

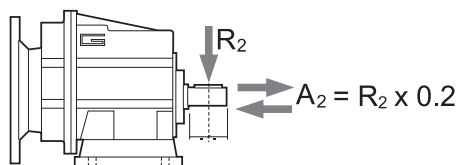
Symbols

| | | |
|-------|----------------------|--|
| 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

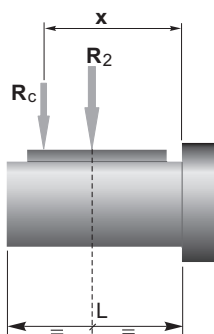
Radial loads



| 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 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 |

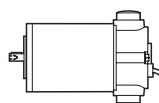
$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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 | | | | |

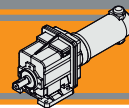
5.03 - 55.10

Rapporti di riduzione i
Ratio i

(!): Solo IEC 71B5 con giunto FX
71 B5 only with FX coupling

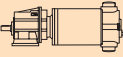
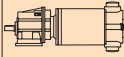
*: Motore inclinato con portaspazzole a 45°
Motor assembly with brush holder inclined 45°

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



Dati tecnici per servizio S2

Technical data for S2 duty

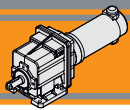
| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | |
|---------------------------|--|------------------------|------|--------|---|----------------------------------|---------------------------|--|------------------------|------|--------|---|----------------------------------|---------------|
| 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 | | | |
| | 40 | 22 | 4.2 | 75.08 | | 120.66/240.66 | | | 50 | 26 | 3.7 | 60.15 | | |
| | 34 | 27 | 3.5 | 89.17 | | | | | 47 | 26 | 3.5 | 63.22 | 100/013 | 120/240/24E* |
| | 27 | 34 | 2.8 | 113.05 | | | | | 40 | 31 | 3.0 | 75.08 | | 120.66/240.66 |
| | 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 | | | | 10 | 127 | 0.7 | 304.00 | | | |
| | 22 | 41 | 3.8 | 135.95 | 070/023 | 12E/24E | | 7.6 | 134 | 0.7 | 393.33 | | | |
| | 17 | 53 | 3.0 | 175.89 | | 120.66/240.66 | | | 6.8 | 134 | 0.7 | 443.59 | | |
| | 15 | 61 | 2.5 | 204.69 | | | | 33 | 38 | 4.1 | 90.29 | 100/023 | 120/240/24E* | |
| | 11 | 79 | 2.0 | 264.84 | | | | 26 | 48 | 3.3 | 114.46 | | 120.66/240.66 | |
| | 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 | 070/033 | 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 | | | | | 7.5 | 167 | 0.9 | 398.25 | | |
| | 7.9 | 113 | 2.1 | 378.64 | | | | | 6.7 | 188 | 0.8 | 449.14 | | |
| | 7.0 | 128 | 1.8 | 427.03 | | | | | 17 | 73 | 3.2 | 174.26 | 100/033 | 120/240/24E* |
| | 9.2 | 97 | 4.0 | 325.79 | | | | | 13 | 94 | 2.5 | 225.47 | | 120.66/240.66 |
| | 7.9 | 113 | 3.4 | 378.64 | | | | | 11 | 110 | 2.1 | 262.05 | | |
| | 7.0 | 128 | 3.1 | 427.03 | | | | 9.2 | 136 | 1.7 | 325.79 | | | |
| | | | | | 070/043 | 12E/24E | | 7.9 | 159 | 1.5 | 378.64 | | | |
| | | | | | | 120.66/240.66 | | | 7.0 | 179 | 1.3 | 427.03 | | |
| | | | | | | | | | 11 | 110 | 3.6 | 262.05 | 100/043 | 120/240/24E* |
| | | | | | | | | | 9.2 | 136 | 2.9 | 325.79 | | 120.66/240.66 |
| | | | | | | | | | 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

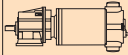
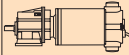
NOTE: for continuous or highly intermittent duty, please contact our technical service

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



Dati tecnici per servizio S2

Technical data for S2 duty

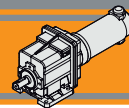
| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | | |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|---------------------------|--|------------------------|-------|--------|---|----------------------------------|----------------|---------|
| 250 | | | | | | | 250 | | | | | | | | |
| (3000 min ⁻¹) | 596 | 3.8 | 8.1 | 5.03 | 180/002 | 120/240* | (3000 min ⁻¹) | 41 | 54 | 4.3 | 72.83 | 180/033 | 120/240* | | |
| | 492 | 4.7 | 6.7 | 6.10 | | 24E | | 31 | 73 | 3.2 | 97.45 | | 24E | | |
| | 401 | 5.7 | 5.4 | 7.49 | | 120.66/240.66 | | 26 | 87 | 2.7 | 115.74 | | 120.66/240.66 | | |
| | 334 | 6.9 | 5.7 | 8.99 | | | | 21 | 105 | 2.2 | 140.81 | | | | |
| | 295 | 7.8 | 5.0 | 10.16 | | | | 17 | 130 | 1.8 | 174.26 | | | | |
| | 249 | 9.2 | 4.2 | 12.07 | | | | 13 | 169 | 1.4 | 225.47 | | | | |
| | 224 | 10 | 5.4 | 13.40 | | | | 11 | 196 | 1.2 | 262.05 | | | | |
| | 198 | 12 | 4.8 | 15.14 | | | | 9.2 | 244 | 1.0 | 325.79 | | | | |
| | 165 | 14 | 4.0 | 18.17 | | | | 7.9 | 283 | 0.8 | 378.64 | | | | |
| | 139 | 17 | 3.3 | 21.58 | | | | 7.0 | 319 | 0.7 | 427.03 | | | | |
| | 128 | 18 | 3.1 | 23.51 | | | | | | | | | | | |
| | 120 | 19 | 2.9 | 25.10 | | | | 21 | 105 | 3.7 | 140.81 | | 180/043 | 120/240* | |
| | 111 | 21 | 2.7 | 27.08 | | | | 17 | 130 | 3.0 | 174.26 | | | 24E | |
| | 92 | 25 | 2.2 | 32.49 | | | | 13 | 169 | 2.3 | 225.47 | | 120.66/240.66 | | |
| | 71 | 32 | 1.7 | 42.04 | | | | 11 | 196 | 2.0 | 262.05 | | | | |
| | 67 | 34 | 1.6 | 44.89 | | | | 9.2 | 244 | 1.6 | 325.79 | | | | |
| | 61 | 37 | 1.5 | 48.86 | | | | 7.9 | 283 | 1.4 | 378.64 | | | | |
| | 54 | 42 | 1.3 | 55.10 | | | | 7.0 | 319 | 1.2 | 427.03 | | | | |
| | 127 | 18 | 5.2 | 23.56 | | 180/012 | 120/240* | 350 | | | | | | | |
| | 101 | 23 | 4.2 | 29.56 | | | 24E | (3000 min ⁻¹) | 596 | 5.4 | 5.8 | | 5.03 | 250/002 | 120/240 |
| | 85 | 27 | 3.5 | 35.47 | 120.66/240.66 | | | 492 | 6.5 | 4.8 | 6.10 | 120.66/240.66 | | | |
| | 65 | 35 | 2.7 | 45.89 | | | | 401 | 8.0 | 3.9 | 7.49 | | | | |
| | 61 | 37 | 2.5 | 49.00 | | | | 334 | 10 | 4.1 | 8.99 | | | | |
| | 56 | 41 | 2.3 | 53.33 | | | | 295 | 11 | 3.6 | 10.16 | | | | |
| | 50 | 46 | 2.0 | 60.15 | | | | 249 | 13 | 3.0 | 12.07 | | | | |
| | 47 | 47 | 2.0 | 63.22 | 180/013 | 120/240* | 224 | 14 | 3.8 | 13.40 | | | | | |
| | 40 | 56 | 1.7 | 75.08 | | 24E | | 198 | 16 | 3.4 | 15.14 | | | | |
| | 34 | 67 | 1.4 | 89.17 | | 120.66/240.66 | | 165 | 19 | 2.8 | 18.17 | | | | |
| | 27 | 85 | 1.1 | 113.05 | | | | 139 | 23 | 2.4 | 21.58 | | | | |
| | 22 | 100 | 0.9 | 134.27 | | | | 128 | 25 | 2.2 | 23.51 | | | | |
| | 17 | 130 | 0.7 | 173.72 | | | | 120 | 27 | 2.0 | 25.10 | | | | |
| | 15 | 134 | 0.7 | 202.16 | | | | 111 | 29 | 1.9 | 27.08 | | | | |
| | 11 | 134 | 0.7 | 261.57 | | | | 92 | 35 | 1.6 | 32.49 | | | | |
| | 10 | 134 | 0.7 | 304.00 | | | | 71 | 45 | 1.2 | 42.04 | | | | |
| | | | | | | | | 67 | 48 | 1.1 | 44.89 | | | | |
| | 65 | 35 | 4.4 | 46.46 | 180/022 | 120/240* | 61 | 52 | 1.1 | 48.86 | | | | | |
| | 60 | 38 | 4.1 | 49.61 | | 24E | | 54 | 59 | 0.9 | 55.10 | | | | |
| | 56 | 41 | 3.8 | 54.00 | | 120.66/240.66 | | 127 | 25 | 3.7 | 23.56 | 250/012 | 120/240 | | |
| | 49 | 47 | 3.4 | 60.90 | | | | 101 | 32 | 3.0 | 29.56 | | 120.66/240.66 | | |
| | 47 | 48 | 3.3 | 64.01 | 180/023 | 120/240* | 85 | 38 | 2.5 | 35.47 | | | | | |
| | 39 | 57 | 2.7 | 76.02 | | 24E | | 65 | 49 | 1.9 | 45.89 | | | | |
| | 33 | 68 | 2.3 | 90.29 | | 120.66/240.66 | | 61 | 52 | 1.8 | 49.00 | | | | |
| | 26 | 86 | 1.8 | 114.46 | | | | 56 | 57 | 1.6 | 53.33 | | | | |
| | 22 | 102 | 1.5 | 135.95 | | | | 50 | 64 | 1.5 | 60.15 | | | | |
| | 17 | 132 | 1.2 | 175.89 | | | | | | | | | | | |
| | 15 | 153 | 1.0 | 204.69 | | | | 47 | 66 | 1.4 | 63.22 | 250/013 | 120/240 | | |
| | 11 | 198 | 0.8 | 264.84 | | | | 40 | 79 | 1.2 | 75.08 | | 120.66/240.66 | | |
| | 10 | 223 | 0.7 | 307.80 | | | | 34 | 93 | 1.0 | 89.17 | | | | |
| | 7.5 | 223 | 0.7 | 398.25 | | | | 27 | 118 | 0.8 | 113.05 | | | | |
| | 6.7 | 223 | 0.7 | 449.14 | | | | 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

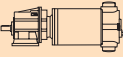
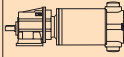
NOTE: for continuous or highly intermittent duty, please contact our technical service

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



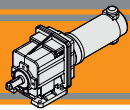
Dati tecnici per servizio S2

Technical data for S2 duty

| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|---------------------------|--|------------------------|--------|----------------|---|----------------------------------|
| 350 | | | | | | | 500 | | | | | | |
| (3000 min ⁻¹) | 84 | 38 | 4.1 | 35.91 | 250/022 | 120/240 | (3000 min ⁻¹) | 785 | 5.8 | 8.1 | 3.82 | 350/012 | 120/240 |
| | 65 | 50 | 3.1 | 46.46 | | 120.66/240.66 | | 648 | 7.1 | 6.6 | 4.63 | | 120.66/240.66 |
| | 60 | 53 | 2.9 | 49.61 | | | | 527 | 8.7 | 5.4 | 5.69 | | |
| | 56 | 58 | 2.7 | 54.00 | | | | 389 | 12 | 5.3 | 7.72 | | |
| | 49 | 65 | 2.4 | 60.90 | | | | 327 | 14 | 4.4 | 9.17 | | |
| | 47 | 67 | 2.3 | 64.01 | 250/023 | 120/240 | | 306 | 15 | 4.1 | 9.81 | | |
| | 39 | 80 | 2.0 | 76.02 | | 120.66/240.66 | | 261 | 18 | 4.4 | 11.5 | | |
| | 33 | 95 | 1.6 | 90.29 | | | | 252 | 18 | 4.3 | 11.9 | | |
| | 26 | 120 | 1.3 | 114.46 | | | | 217 | 21 | 4.5 | 13.80 | | |
| | 22 | 142 | 1.1 | 135.95 | | | | 205 | 22 | 4.2 | 14.62 | | |
| | 17 | 184 | 0.8 | 175.89 | | | 168 | 27 | 3.4 | 17.86 | | | |
| | 15 | 214 | 0.7 | 204.69 | | | 157 | 29 | 3.2 | 19.07 | | | |
| | 11 | 223 | 0.7 | 264.84 | | | 151 | 30 | 3.1 | 19.83 | | | |
| | 41 | 76 | 3.1 | 72.83 | 250/033 | 120/240 | | 127 | 36 | 2.6 | 23.56 | | |
| | 31 | 102 | 2.3 | 97.45 | | 120.66/240.66 | | 101 | 45 | 2.1 | 29.56 | | |
| | 26 | 121 | 1.9 | 115.74 | | | | 85 | 54 | 1.7 | 35.47 | | |
| | 21 | 147 | 1.6 | 140.81 | | | | 65 | 70 | 1.3 | 45.89 | | |
| | 17 | 183 | 1.3 | 174.26 | | | | 61 | 75 | 1.3 | 49.00 | | |
| | 13 | 236 | 1.0 | 225.47 | | | 56 | 81 | 1.2 | 53.33 | | | |
| | 11 | 274 | 0.9 | 262.05 | | | 50 | 92 | 1.0 | 60.15 | | | |
| | 9.2 | 341 | 0.7 | 325.79 | | | 47 | 95 | 1.0 | 63.22 | 350/013 | 120/240 | |
| | 7.9 | 334 | 0.7 | 378.64 | | | 40 | 112 | 0.8 | 75.08 | | 120.66/240.66 | |
| | 7.0 | 334 | 0.7 | 427.03 | | | 34 | 133 | 0.7 | 89.17 | | | |
| | 41 | 76 | 5.1 | 72.83 | 250/043 | 120/240 | | 27 | 134 | 0.7 | | 113.05 | |
| | 31 | 102 | 3.8 | 97.45 | | 120.66/240.66 | | 22 | 134 | 0.7 | | 134.27 | |
| | 26 | 121 | 3.2 | 115.74 | | | | 126 | 36 | 4.3 | 23.85 | 350/022 | 120/240 |
| | 21 | 147 | 2.6 | 140.81 | | | | 100 | 46 | 3.4 | 29.93 | | 120.66/240.66 |
| | 17 | 183 | 2.1 | 174.26 | | | | 84 | 55 | 2.8 | 35.91 | | |
| | 13 | 236 | 1.7 | 225.47 | | | 65 | 71 | 2.2 | 46.46 | | | |
| | 11 | 274 | 1.4 | 262.05 | | | 60 | 76 | 2.1 | 49.61 | | | |
| | 9.2 | 341 | 1.1 | 325.79 | | | 56 | 83 | 1.9 | 54.00 | | | |
| | 7.9 | 397 | 1.0 | 378.64 | | | 49 | 93 | 1.7 | 60.90 | | | |
| | 7.0 | 447 | 0.9 | 427.03 | | | 47 | 96 | 1.6 | 64.01 | 350/023 | 120/240 | |
| | 41 | 76 | 5.1 | 72.83 | | | 39 | 114 | 1.4 | 76.02 | | 120.66/240.66 | |
| | 31 | 102 | 3.8 | 97.45 | | | 33 | 135 | 1.2 | 90.29 | | | |
| | 26 | 121 | 3.2 | 115.74 | | | 26 | 171 | 0.9 | 114.46 | | | |
| | 21 | 147 | 2.6 | 140.81 | | | 22 | 203 | 0.8 | 135.95 | | | |
| | 17 | 183 | 2.1 | 174.26 | | | 17 | 223 | 0.7 | 175.89 | | | |
| | 13 | 236 | 1.7 | 225.47 | | | 41 | 109 | 2.1 | 72.83 | 350/033 | 120/240 | |
| | 11 | 274 | 1.4 | 262.05 | | | 31 | 146 | 1.6 | 97.45 | | 120.66/240.66 | |
| | 9.2 | 341 | 1.1 | 325.79 | | | 26 | 173 | 1.4 | 115.74 | | | |
| | 7.9 | 397 | 1.0 | 378.64 | | | 21 | 211 | 1.1 | 140.81 | | | |
| | 7.0 | 447 | 0.9 | 427.03 | | | 17 | 261 | 0.9 | 174.26 | | | |
| | 596 | 7.7 | 4.0 | 5.03 | 350/002 | 120/240 | | 13 | 334 | 0.7 | 225.47 | | |
| (3000 min ⁻¹) | 492 | 9.3 | 3.3 | 6.10 | | 120.66/240.66 | | 11 | 334 | 0.7 | 262.05 | | |
| | 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 | | | | | | | | | |

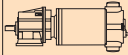
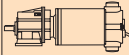


NOTA
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio
NOTE
Please check that the output torque M2 does not exceed the value in the grey areas

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



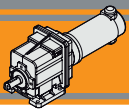
Dati tecnici per servizio S2

Technical data for S2 duty

| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|---------------------------|--|------------------------|--------|----------------|---|---|
| 500 | | | | | | | 800 | | | | | | |
| (3000 min ⁻¹) | 41 | 109 | 3.6 | 72.83 | 350/043 | 120/240 | (3000 min ⁻¹) | 302 | 24 | 3.9 | 9.93 | 600/022 | 120/240 |
| | 31 | 146 | 2.7 | 97.45 | | 120.66/240.66 | | 272 | 27 | 5.8 | 11.01 | | 120.66/240.66 |
| | 26 | 173 | 2.3 | 115.74 | | | | 249 | 29 | 5.3 | 12.05 | | |
| | 21 | 211 | 1.9 | 140.81 | | | | 227 | 32 | 3.9 | 13.21 | | |
| | 17 | 261 | 1.5 | 174.26 | | | | 203 | 36 | 4.3 | 14.81 | | |
| | 13 | 337 | 1.2 | 225.47 | | | | 175 | 42 | 2.4 | 17.1 | | |
| | 11 | 392 | 1.0 | 262.05 | | | | 149 | 49 | 3.2 | 20.08 | | |
| | 9.2 | 487 | 0.8 | 325.79 | | | | 126 | 58 | 2.7 | 23.85 | | |
| | 7.9 | 557 | 0.7 | 378.64 | | | | 100 | 73 | 2.1 | 29.93 | | |
| | 7.0 | 557 | 0.7 | 427.03 | | | | 84 | 88 | 1.8 | 35.91 | | |
| | | | | | | | 65 | 114 | 1.4 | 46.46 | | | |
| | | | | | | | 60 | 121 | 1.3 | 49.61 | | | |
| | | | | | | | 56 | 132 | 1.2 | 54.00 | | | |
| | | | | | | | 49 | 149 | 1.0 | 60.90 | | | |
| | | | | | | | 47 | 153 | 1.0 | 64.01 | 600/023 | 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

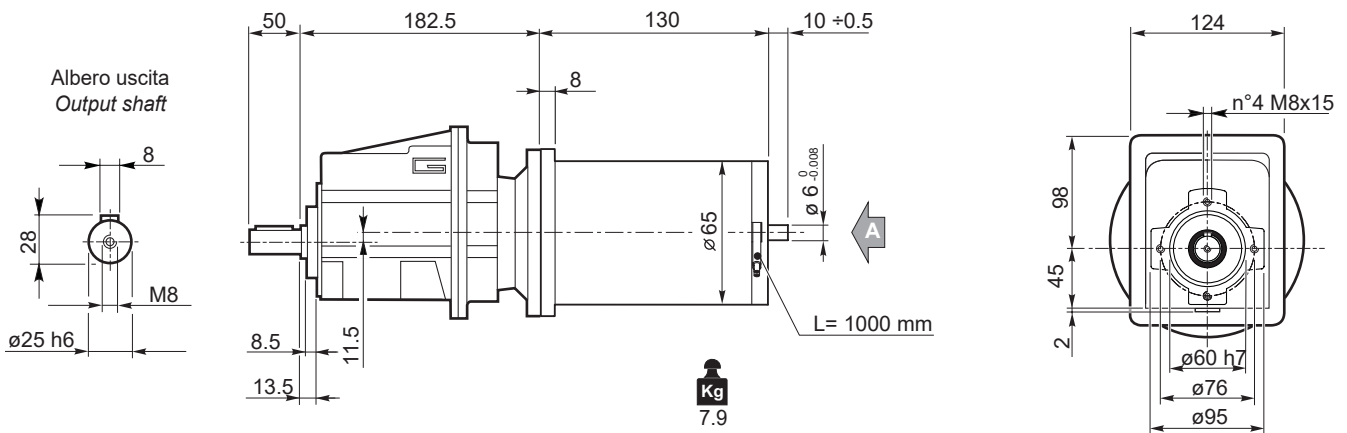


Dimensioni

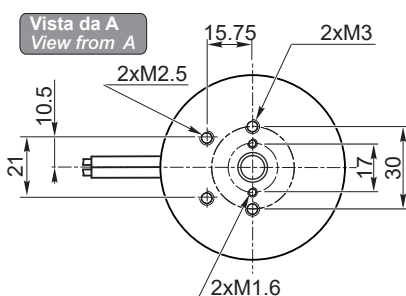
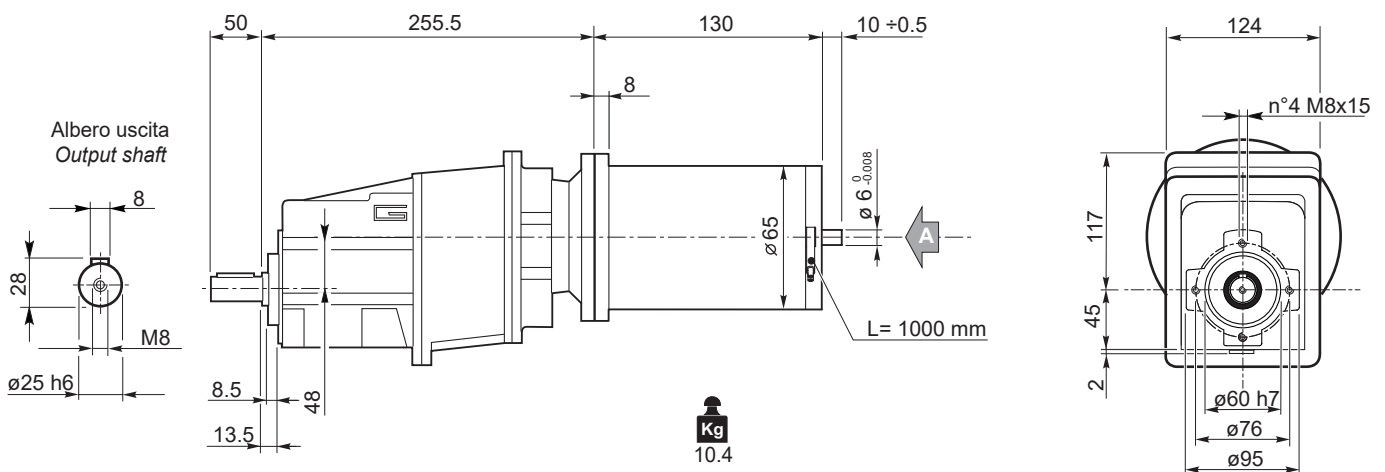
Dimensions

ECMG..U

ECMG070/022 U



ECMG070/023 U



Freno / Brake



H23

ECMG...H



L30

Encoder



H24

ECMG...F



L31

Motori / Motors IP66

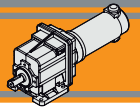


I2

ECMG...H/F



L32

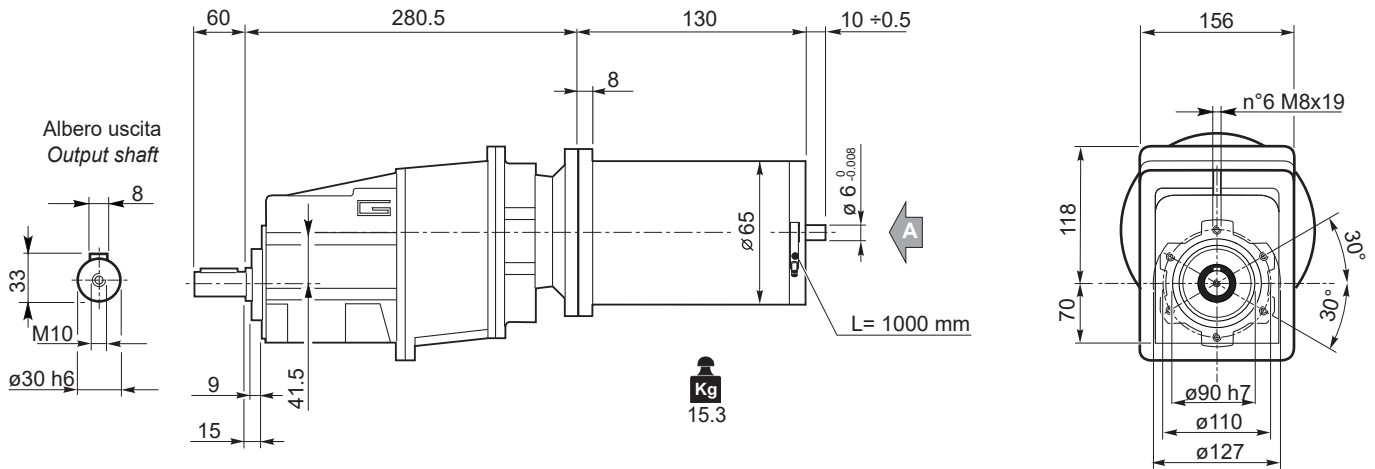


Dimensioni

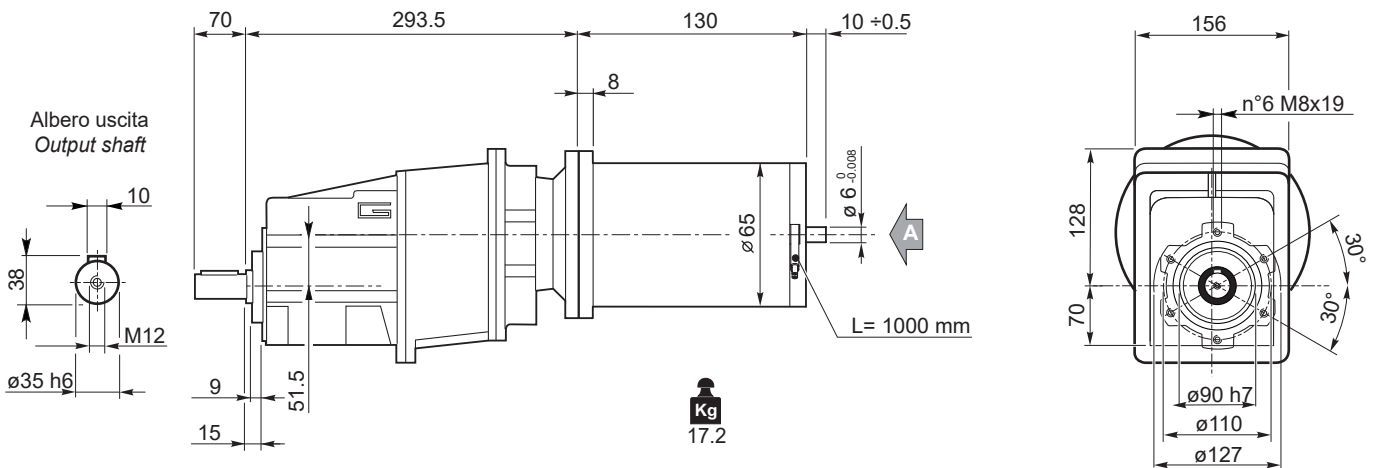
Dimensions

ECMG..U

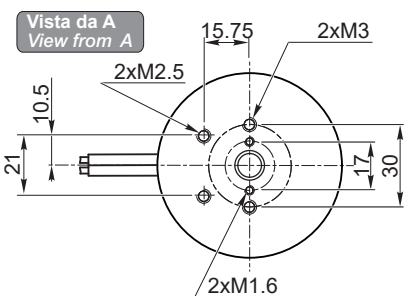
ECMG070/033 U



ECMG070/043 U



ECMG



Freno / Brake



H23

ECMG...H



L30

Encoder



H24

ECMG...F



L31

Motori / Motors IP66

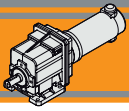


I2

ECMG...H/F



L32

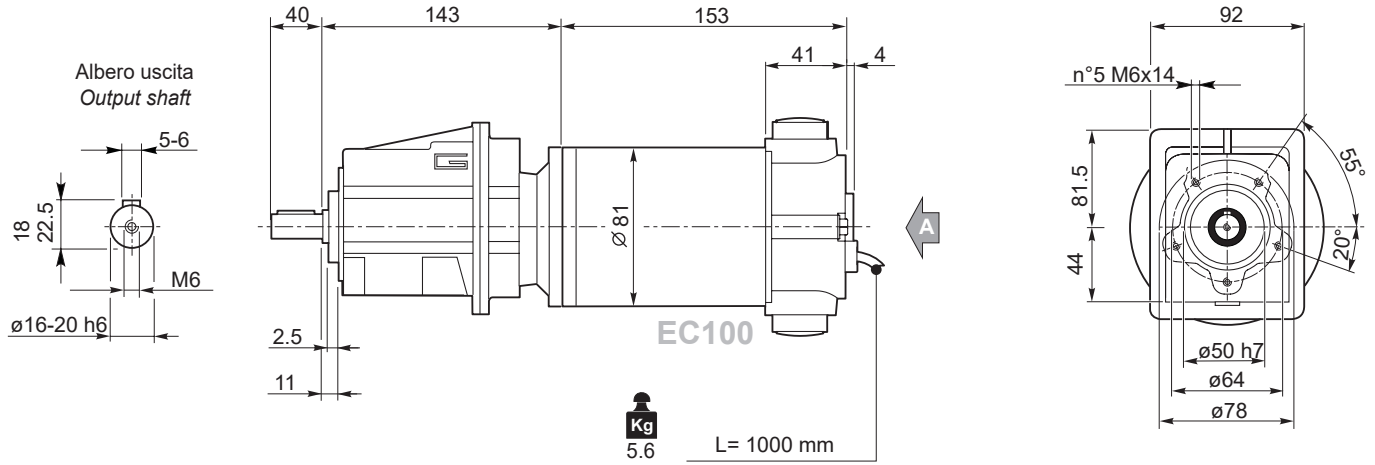


Dimensioni

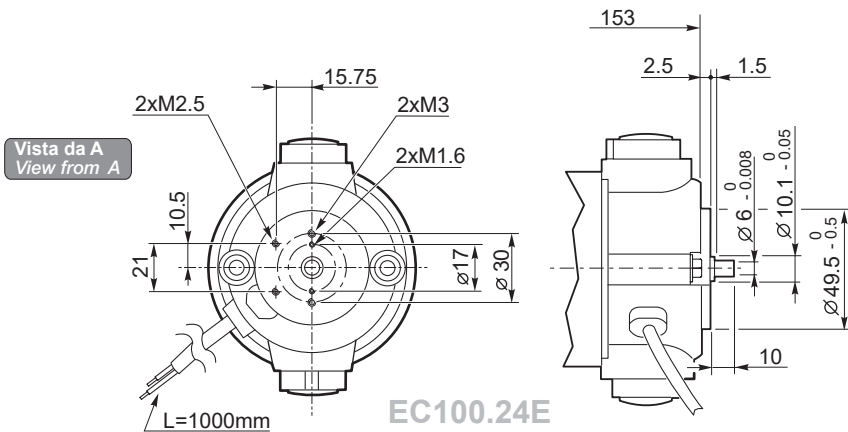
Dimensions

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



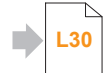
Encoder



Motori / Motors IP66



ECMG...H

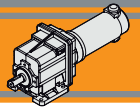


ECMG...F



ECMG...H/F



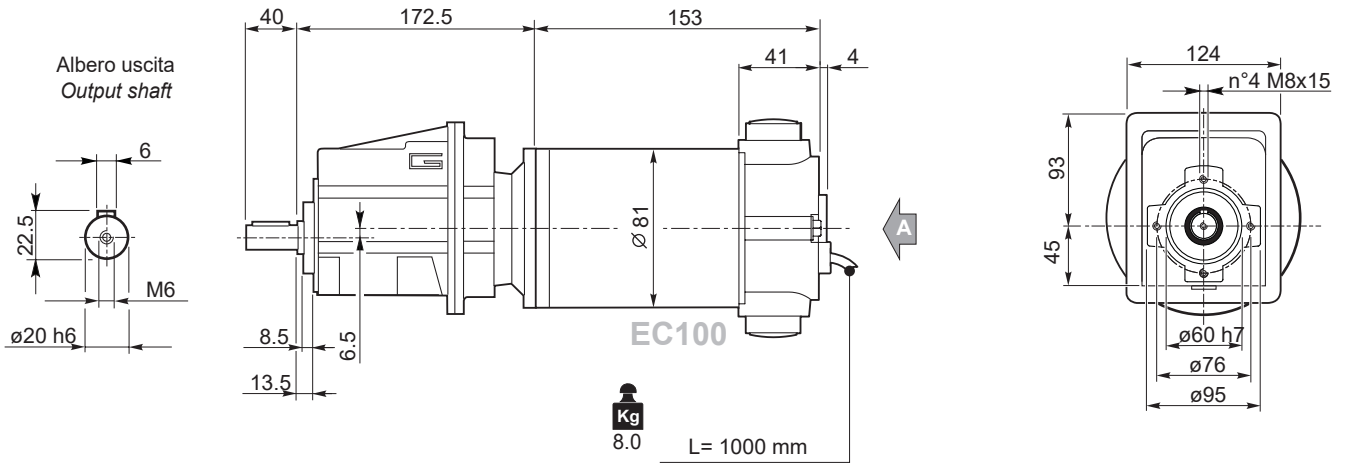


Dimensioni

Dimensions

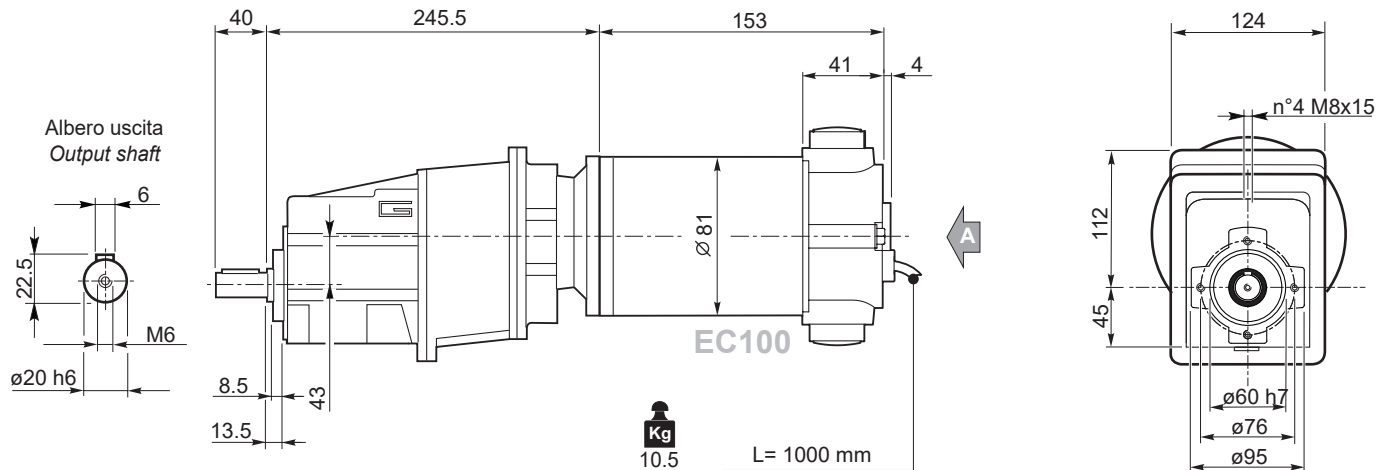
ECMG..U

ECMG100/012 U

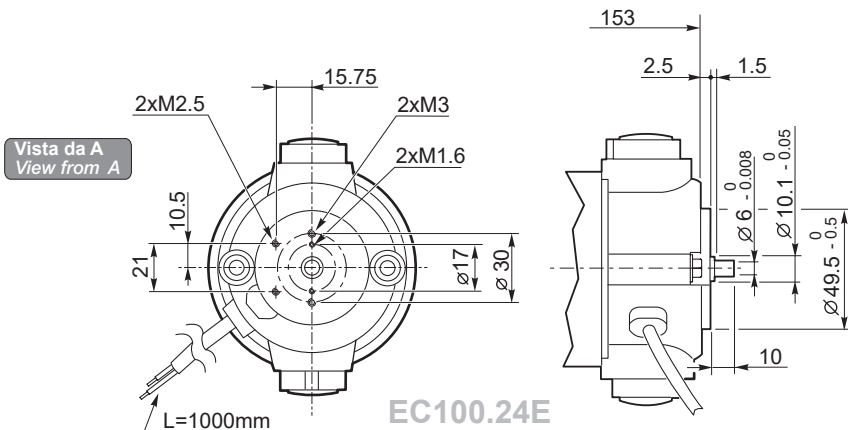


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

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



Encoder



Motori / Motors IP66



ECMG...H



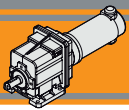
ECMG...F



ECMG...H/F



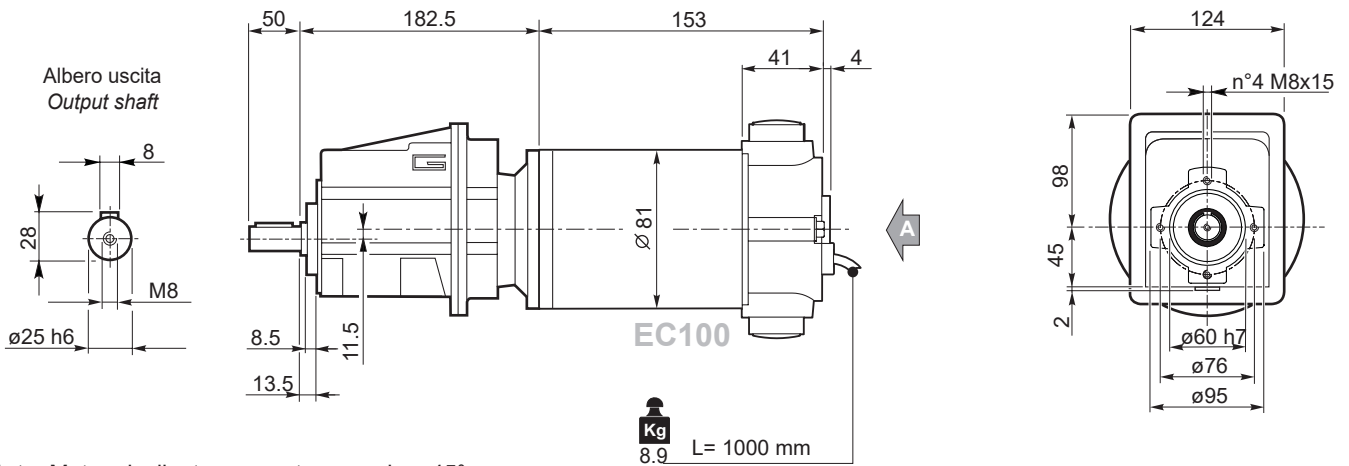
ECMG



Dimensioni

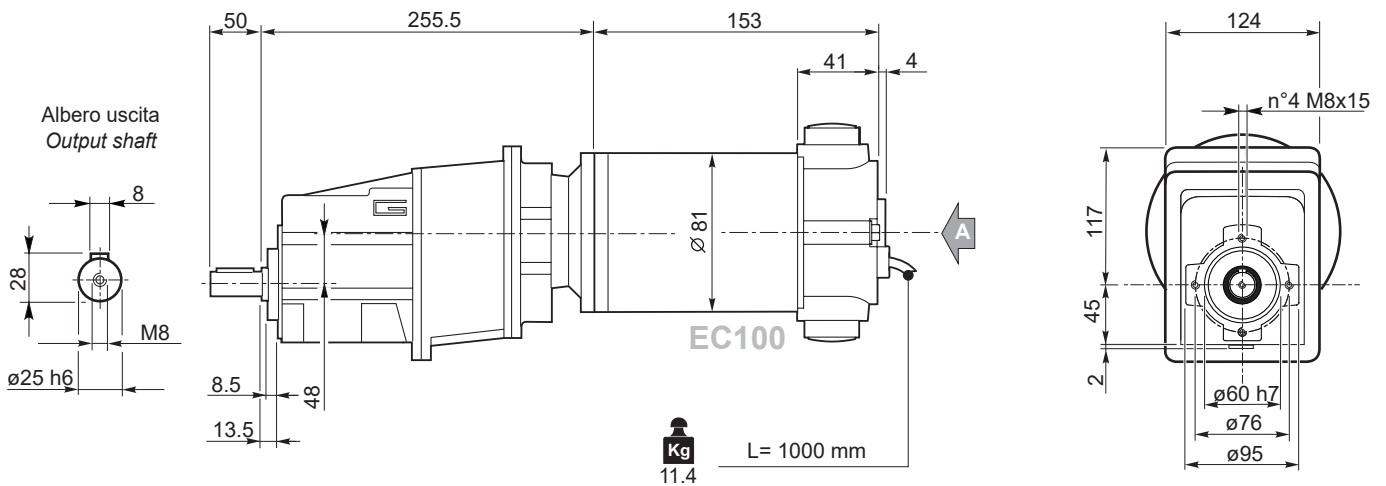
ECMG..U

ECMG100/022 U

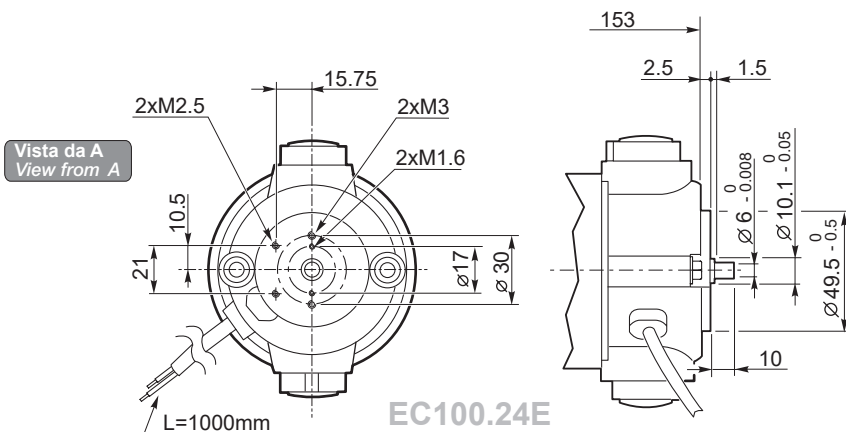


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

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

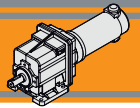
Encoder → H24

Motori / Motors IP66 → I4

ECMG...H → L30

ECMG...F → L31

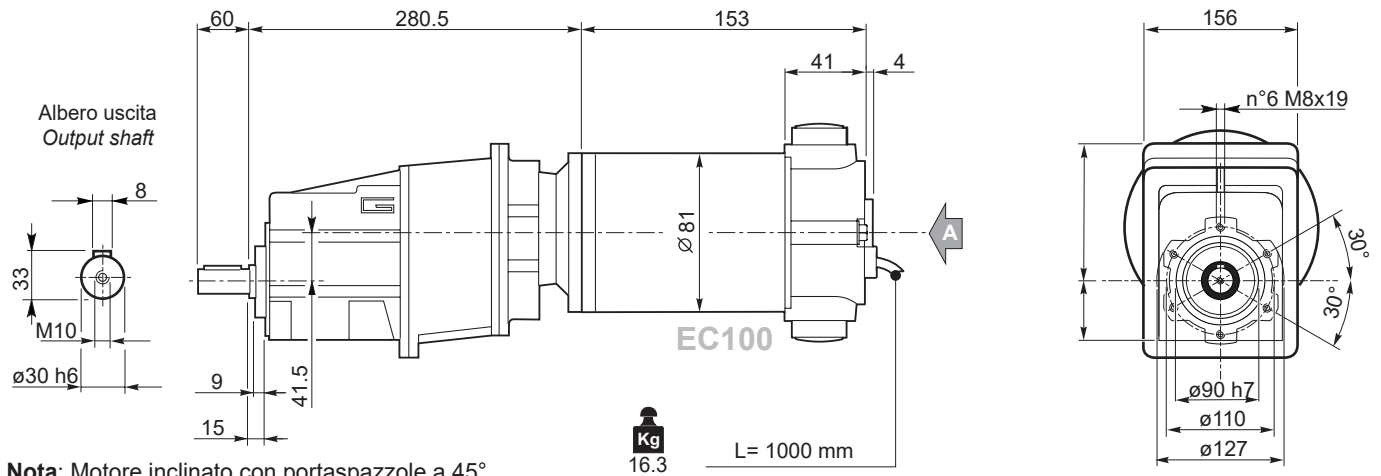
ECMG...H/F → L32



Dimensioni

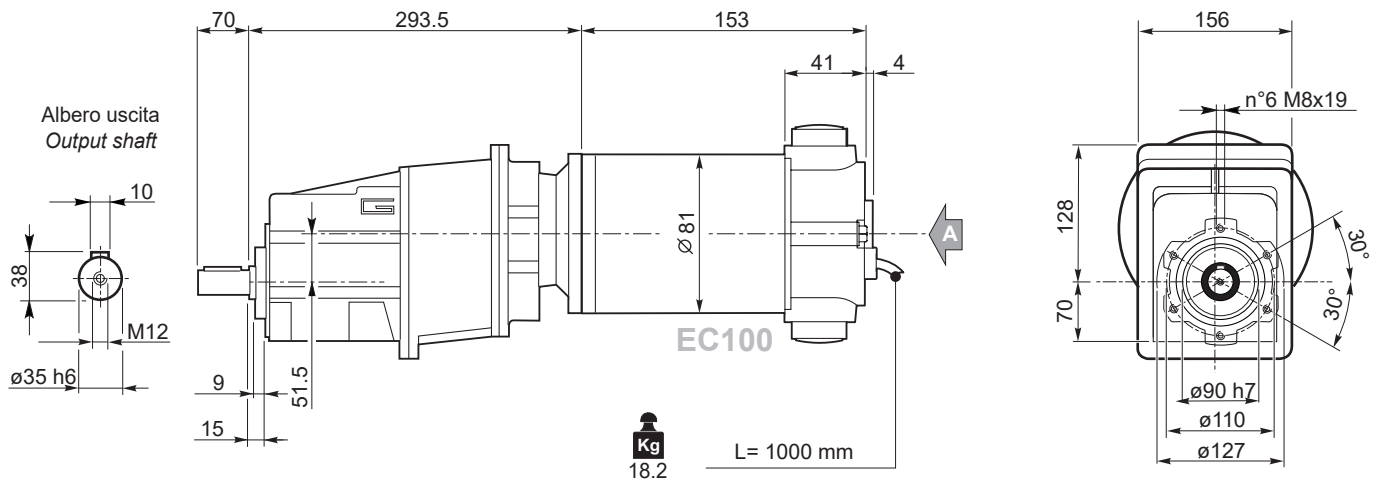
ECMG..U

ECMG100/033 U

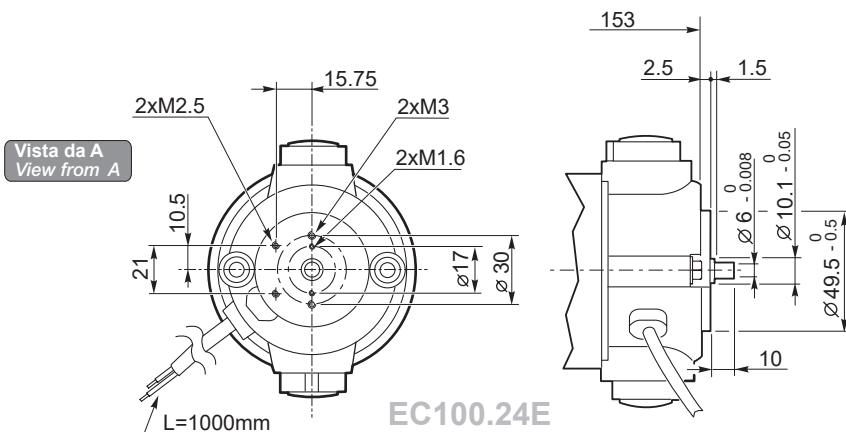


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMG100/043 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

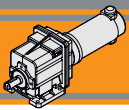
Encoder → H24

Motori / Motors IP66 → I4

ECMG...H → L30

ECMG...F → L31

ECMG...H/F → L32

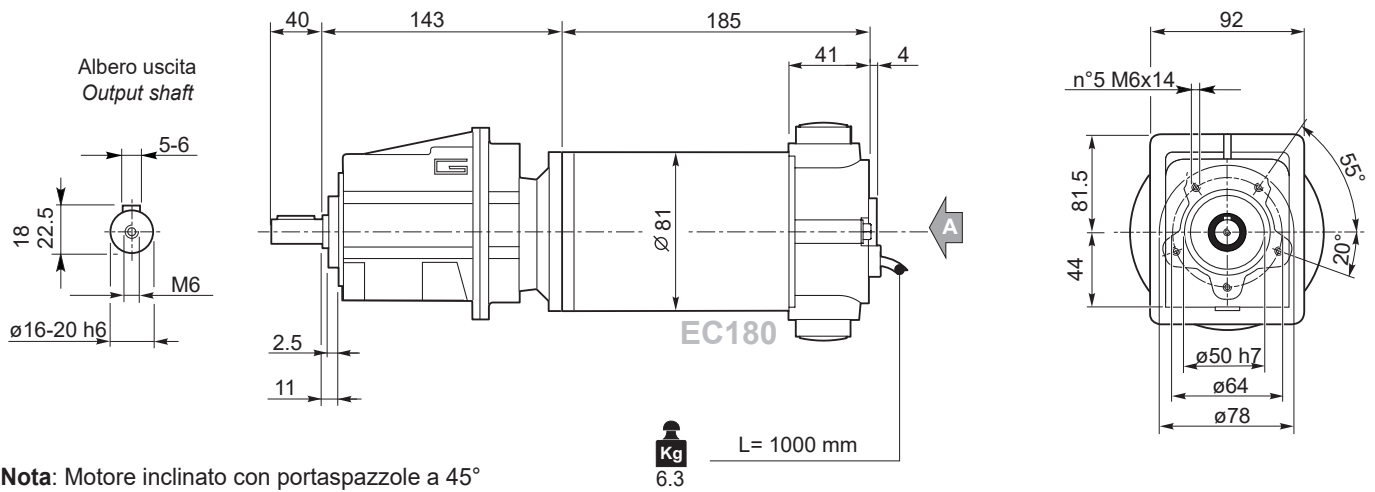


Dimensioni

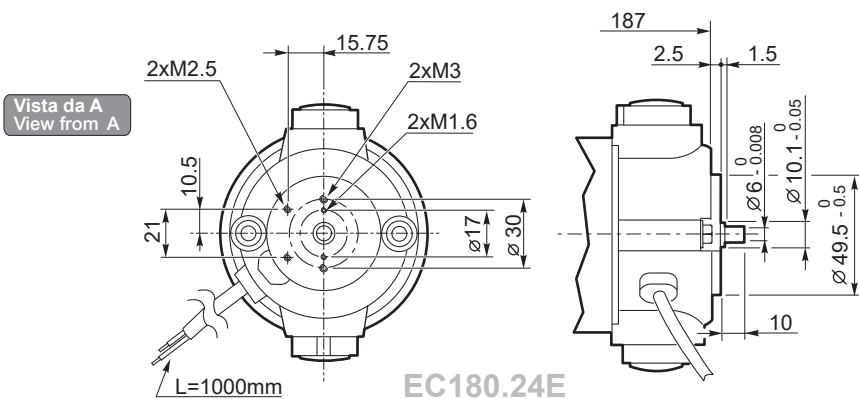
Dimensions

ECMG..U

ECMG180/002 U



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



Freno / Brake → **H23**

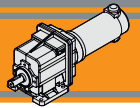
Encoder → **H24**

Motori / Motors IP66 → **I6**

ECMG...H → **L30**

ECMG...F → **L31**

ECMG...H/F → **L32**

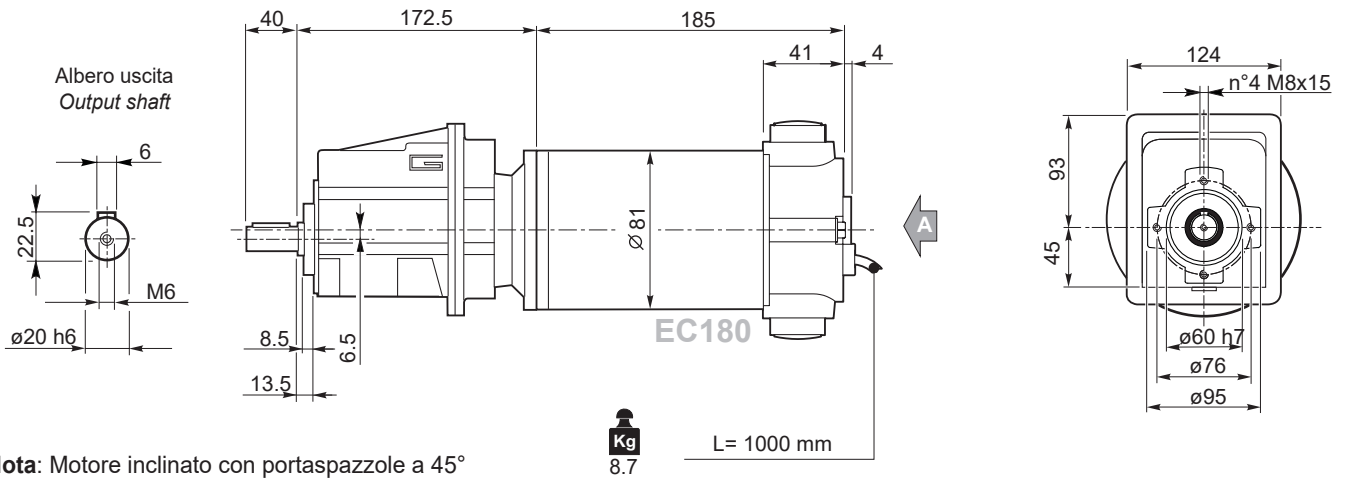


Dimensioni

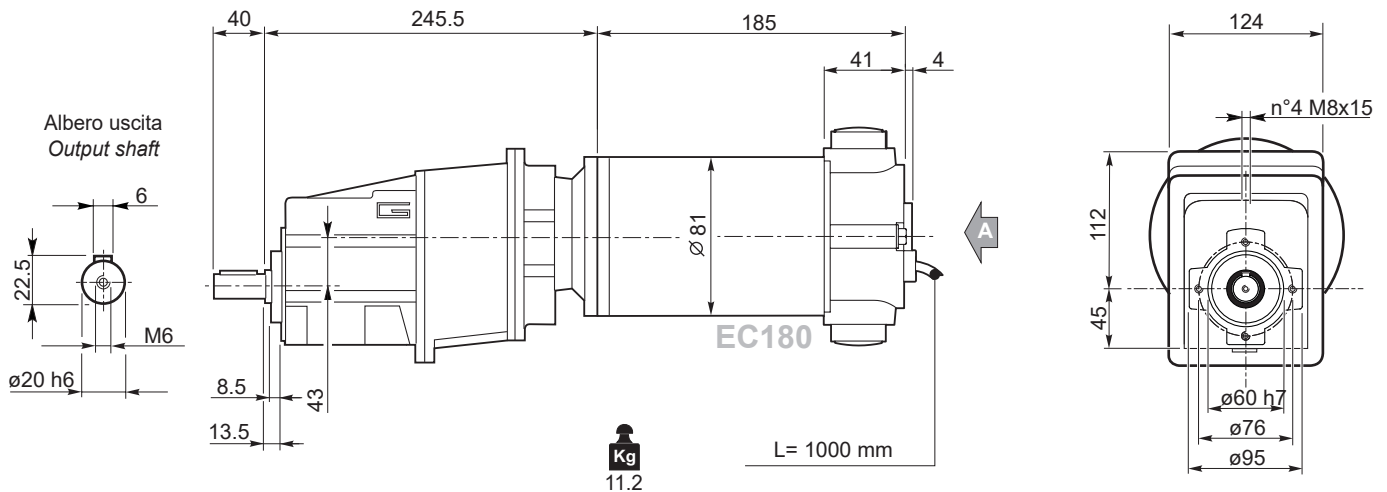
Dimensions

ECMG..U

ECMG180/012 U



ECMG180/013 U



ECMG

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

Freno / Brake → H23

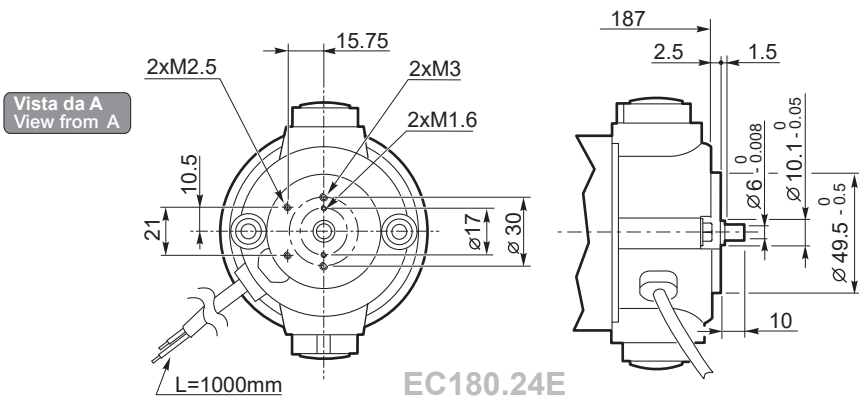
Encoder → H24

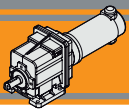
Motori / Motors IP66 → I6

ECMG...H → L30

ECMG...F → L31

ECMG...H/F → L32



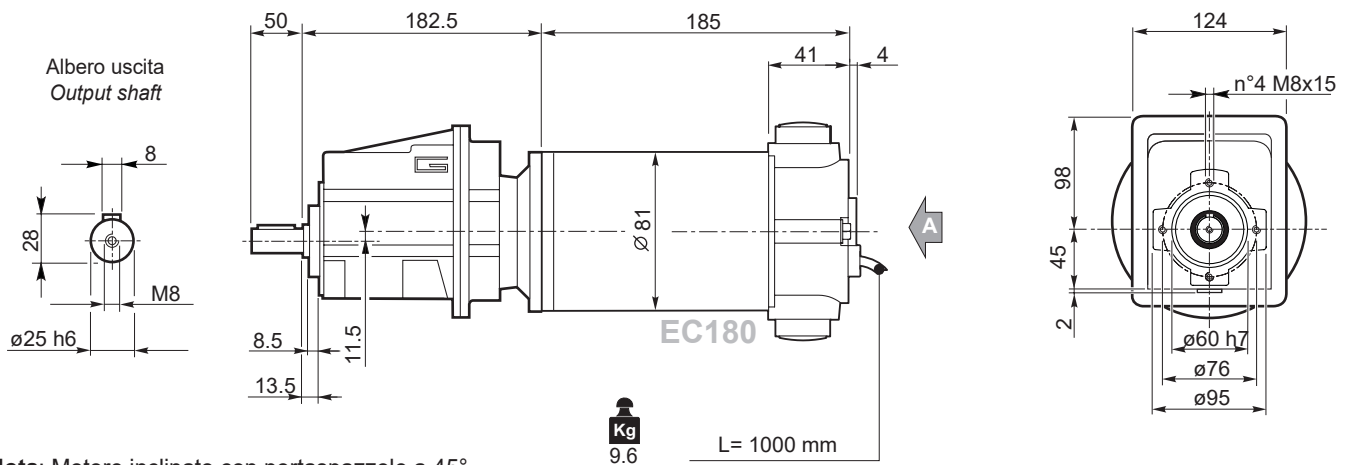


Dimensioni

Dimensions

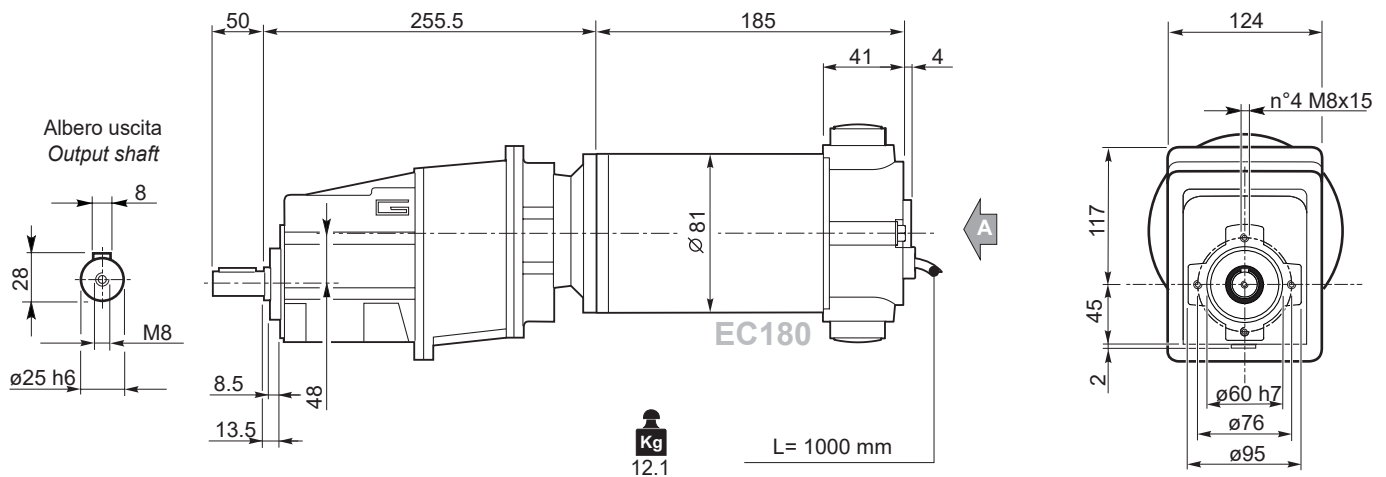
ECMG..U

ECMG180/022 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

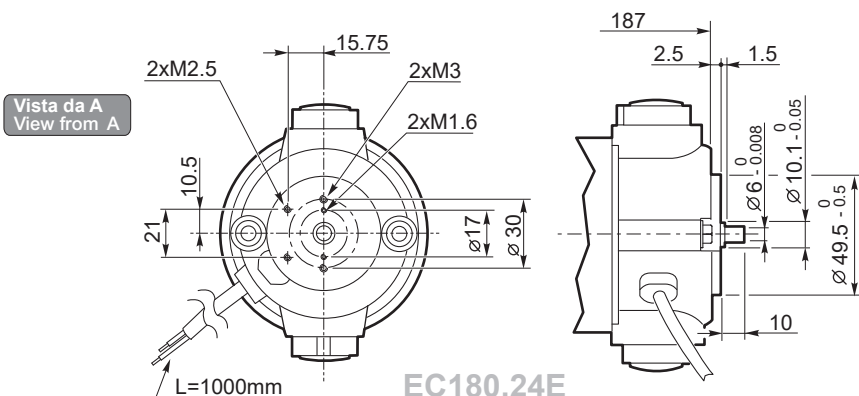
Encoder → H24

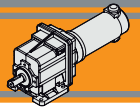
Motori / Motors IP66 → I6

ECMG...H → L30

ECMG...F → L31

ECMG...H/F → L32



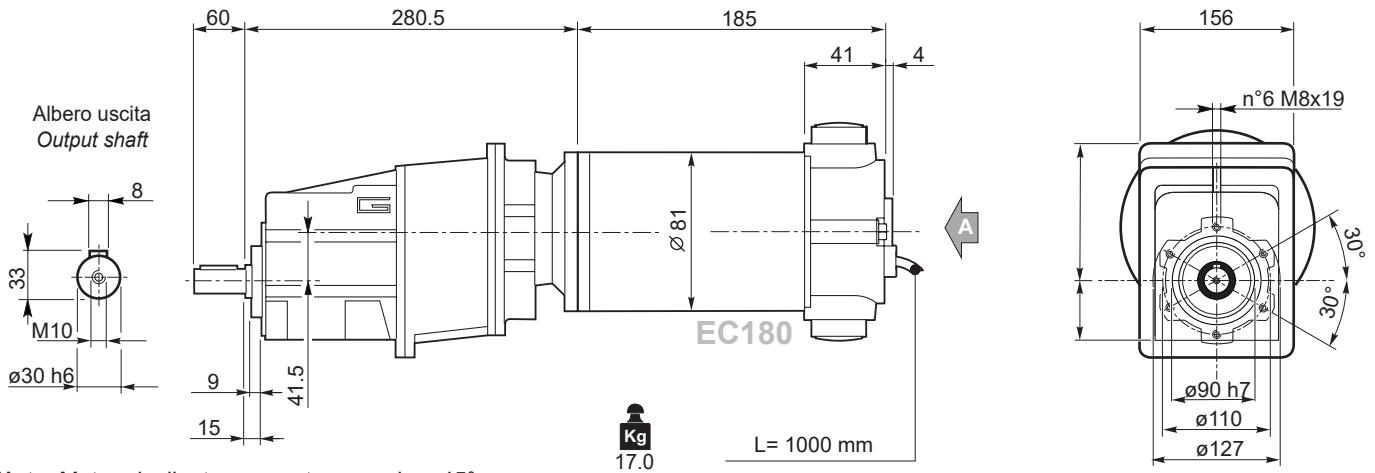


Dimensioni

Dimensions

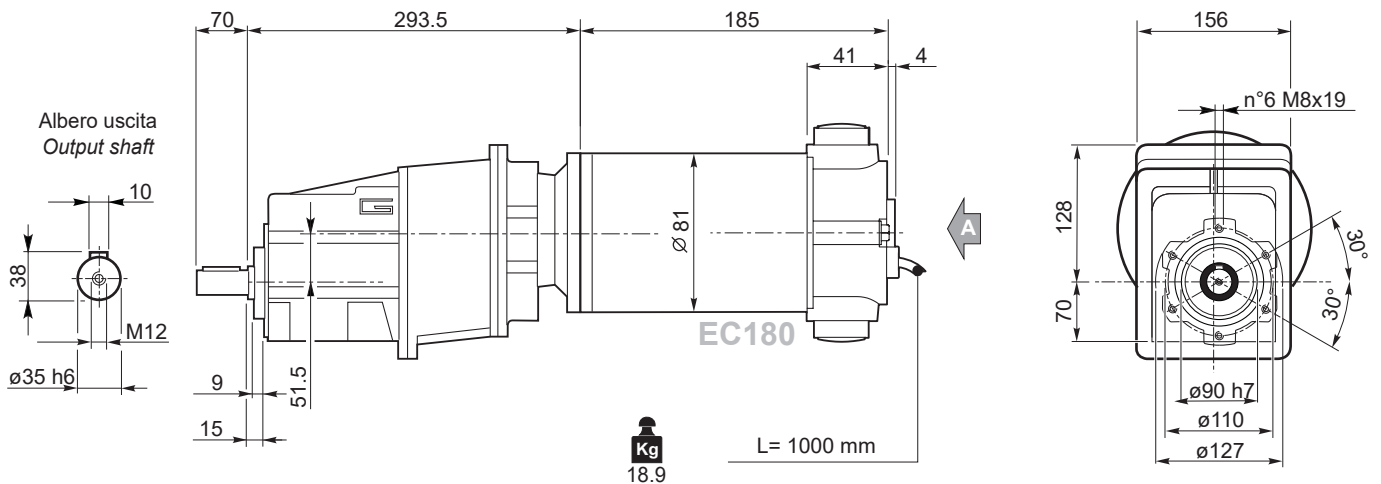
ECMG..U

ECMG180/033 U



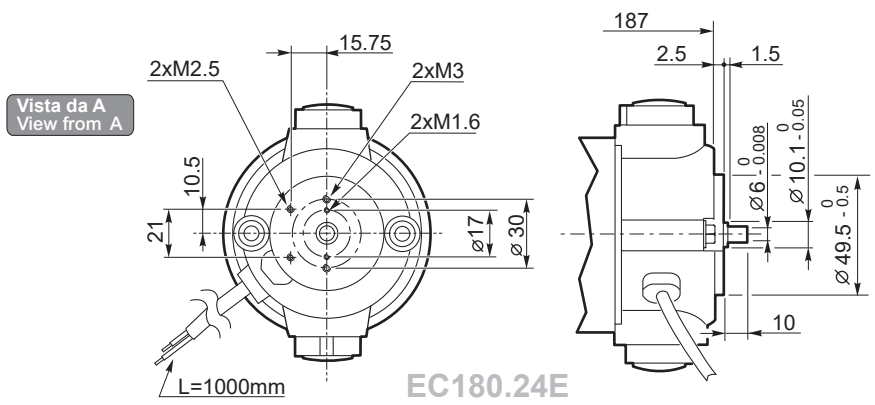
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMG180/043 U



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

ECMG



Freno / Brake → H23

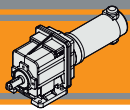
Encoder → H24

Motori / Motors IP66 → I6

ECMG...H → L30

ECMG...F → L31

ECMG...H/F → L32

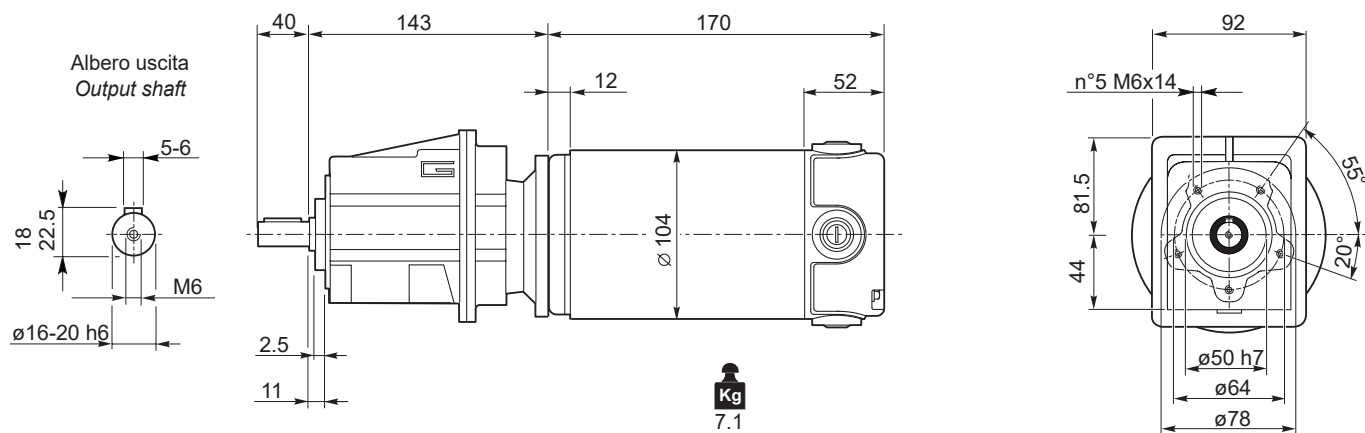


Dimensioni

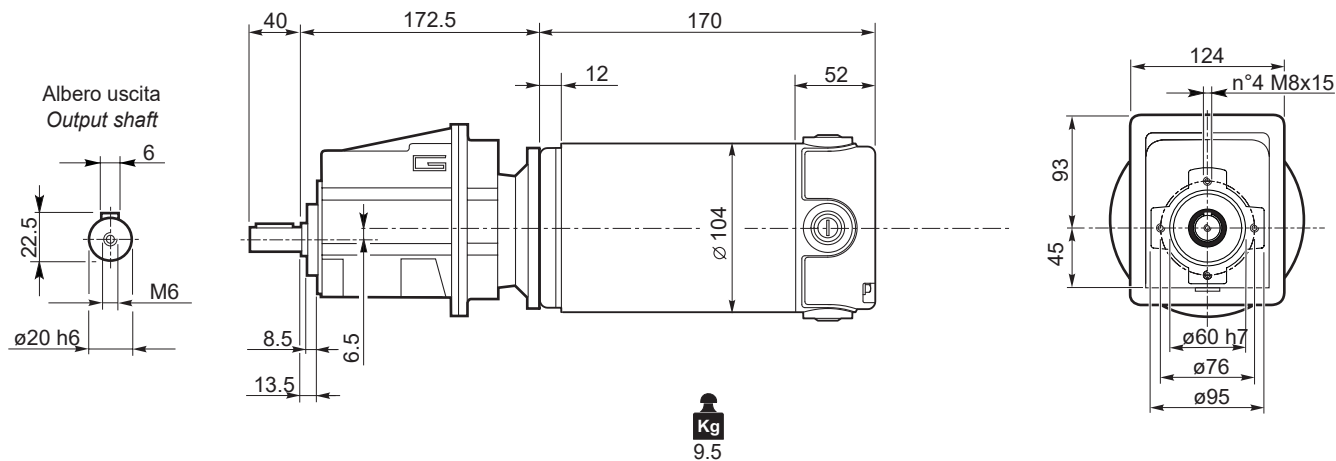
Dimensions

ECMG..U

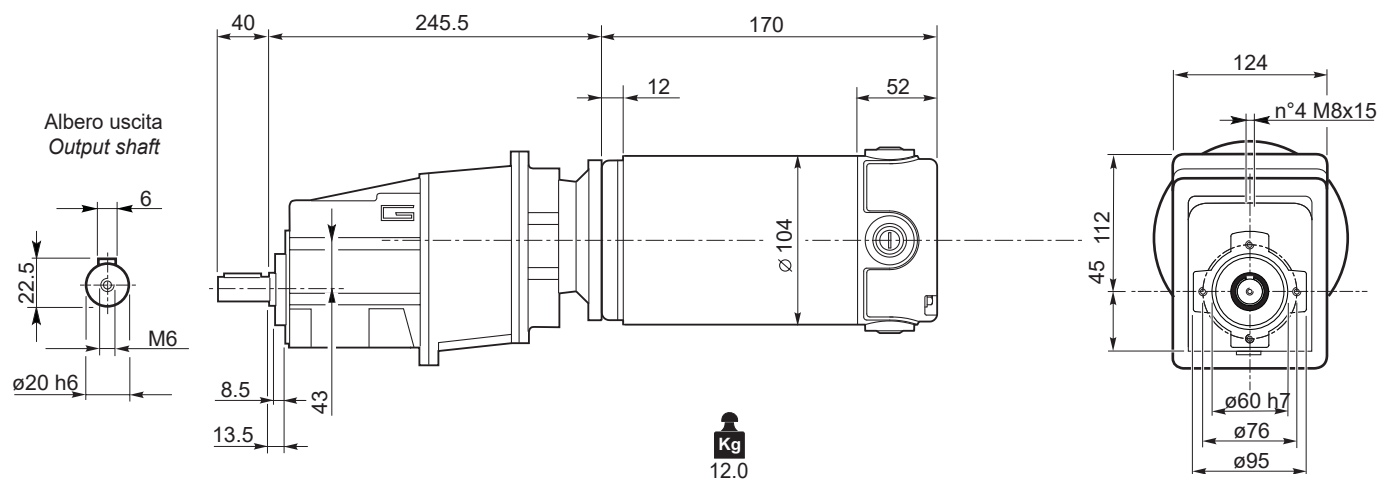
ECMG250/002 U



ECMG250/012 U



ECMG250/013 U



Motori / Motors IP66



ECMG...H

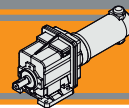


ECMG...F



ECMG...H/F



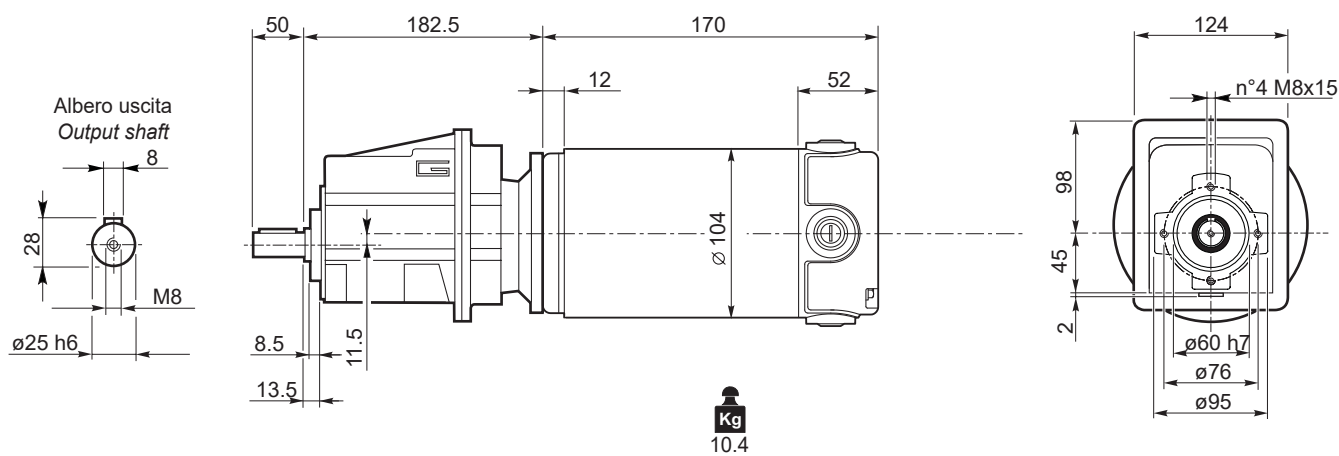


Dimensioni

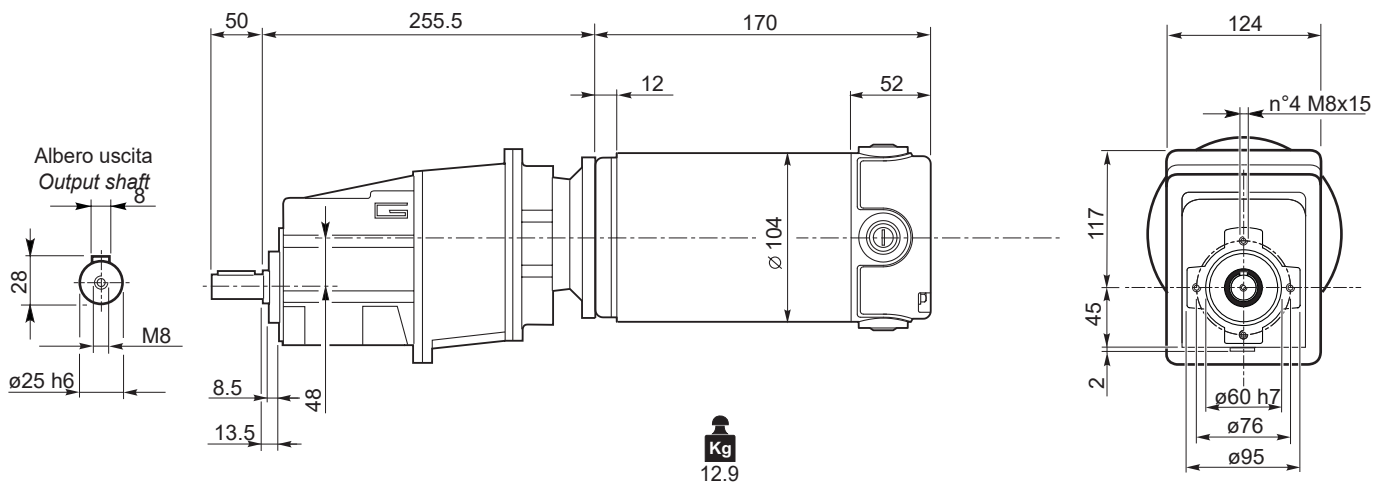
Dimensions

ECMG..U

ECMG250/022 U



ECMG250/023 U



ECMG

Motori / Motors IP66



ECMG...H

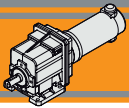


ECMG...F



ECMG...H/F



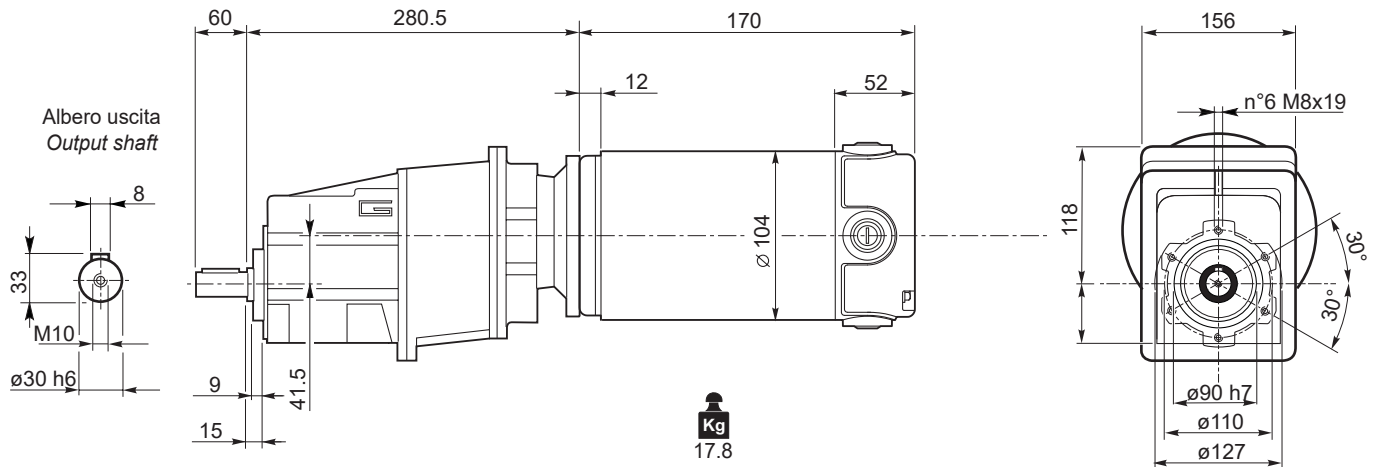


Dimensioni

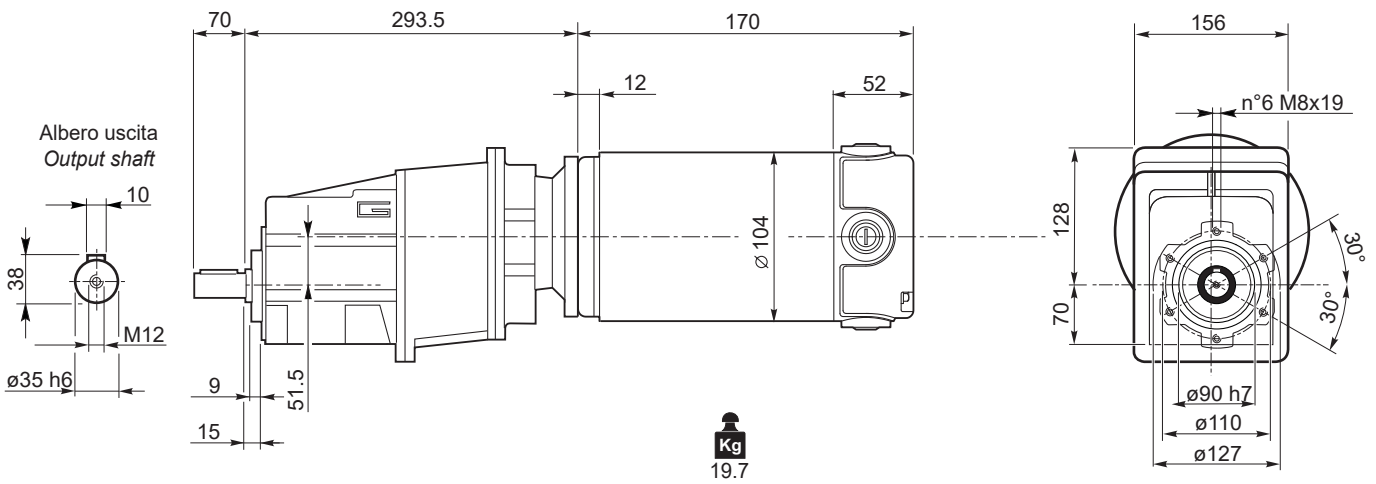
Dimensions

ECMG..U

ECMG250/033 U



ECMG250/043 U



Motori / Motors IP66



ECMG...H

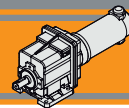


ECMG...F



ECMG...H/F



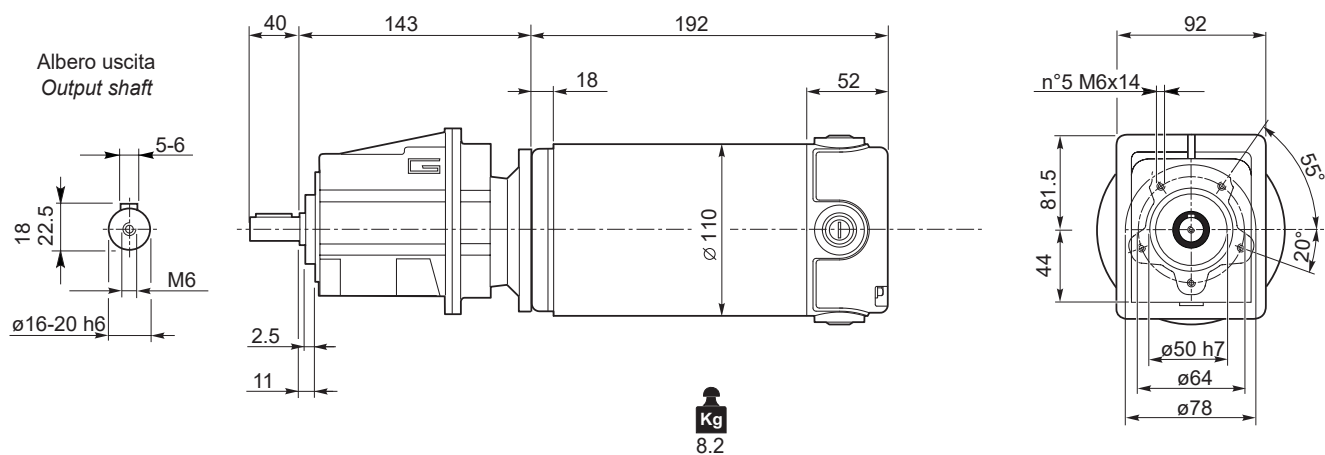


Dimensioni

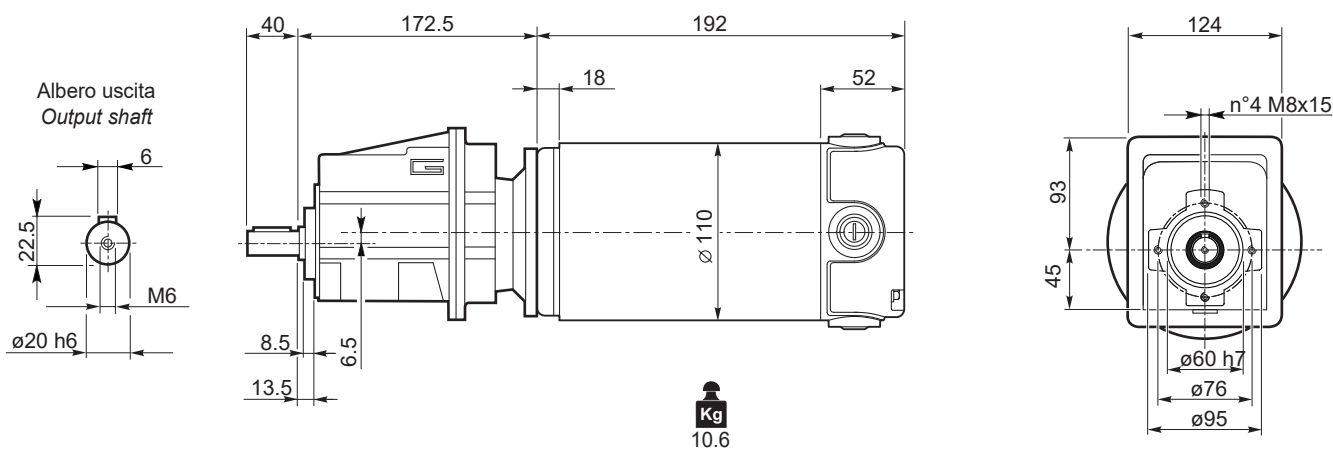
Dimensions

ECMG..U

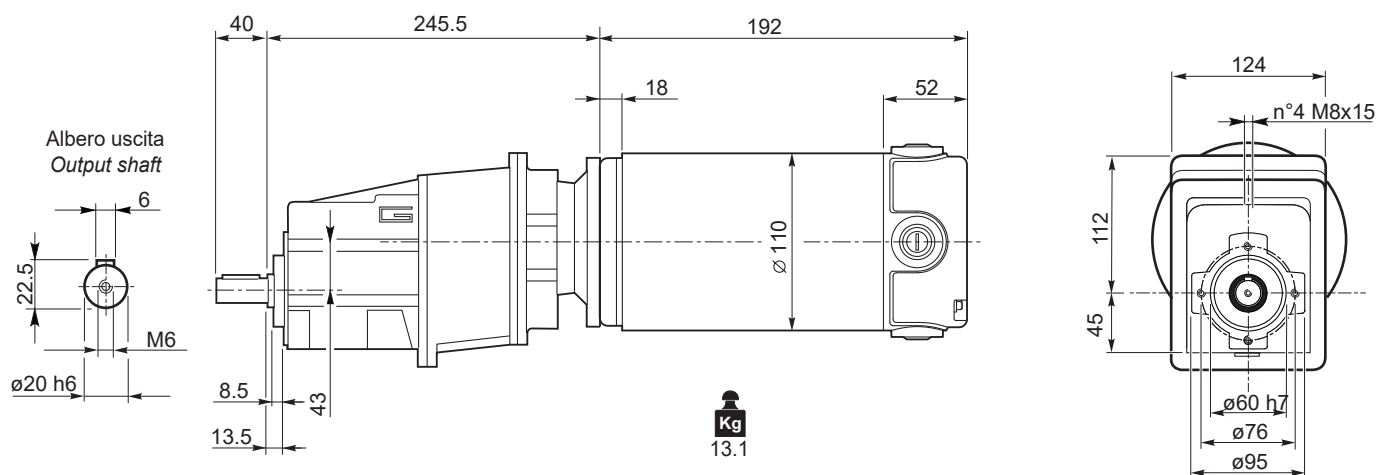
ECMG350/002 U



ECMG350/012 U



ECMG350/013 U



Freno / Brake



H23

Motori / Motors IP66



I10

ECMG...H



L30

ECMG...F

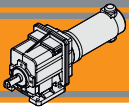


L31

ECMG...H/F



L32

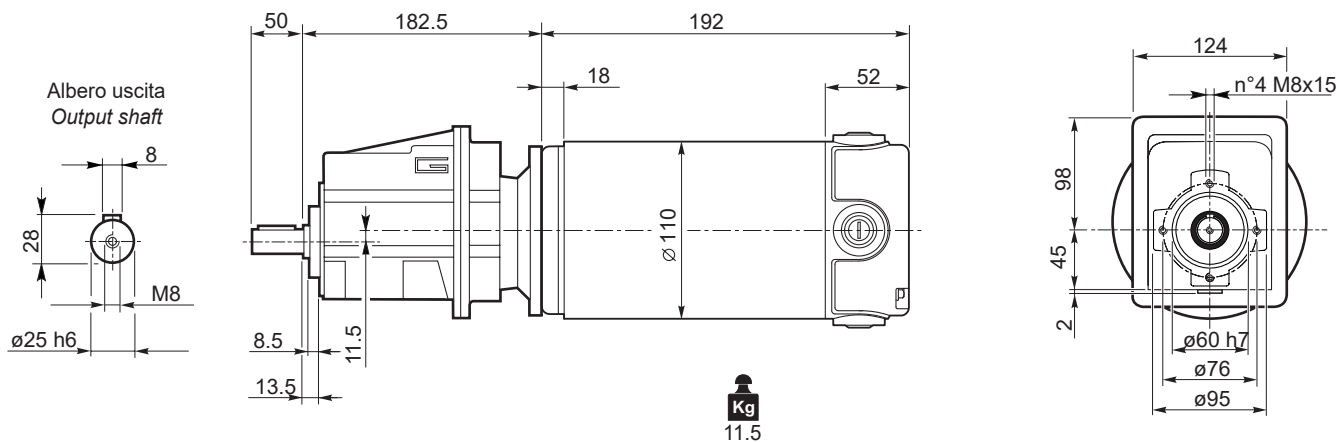


Dimensioni

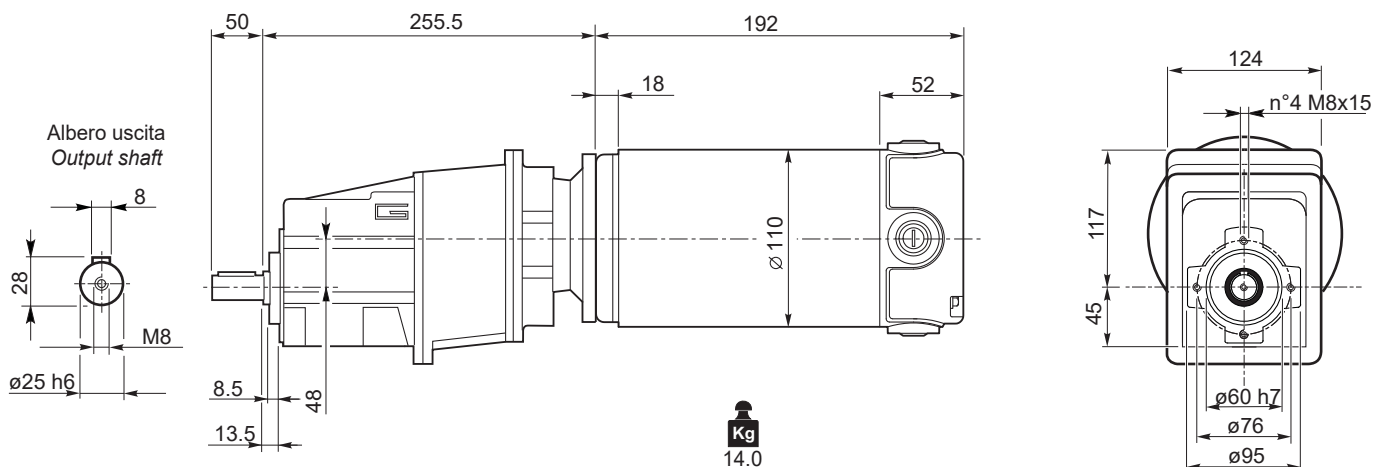
Dimensions

ECMG..U

ECMG350/022 U



ECMG350/023 U



Freno / Brake



ECMG...H



ECMG...F

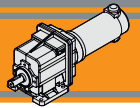


ECMG...H/F



Motori / Motors IP66



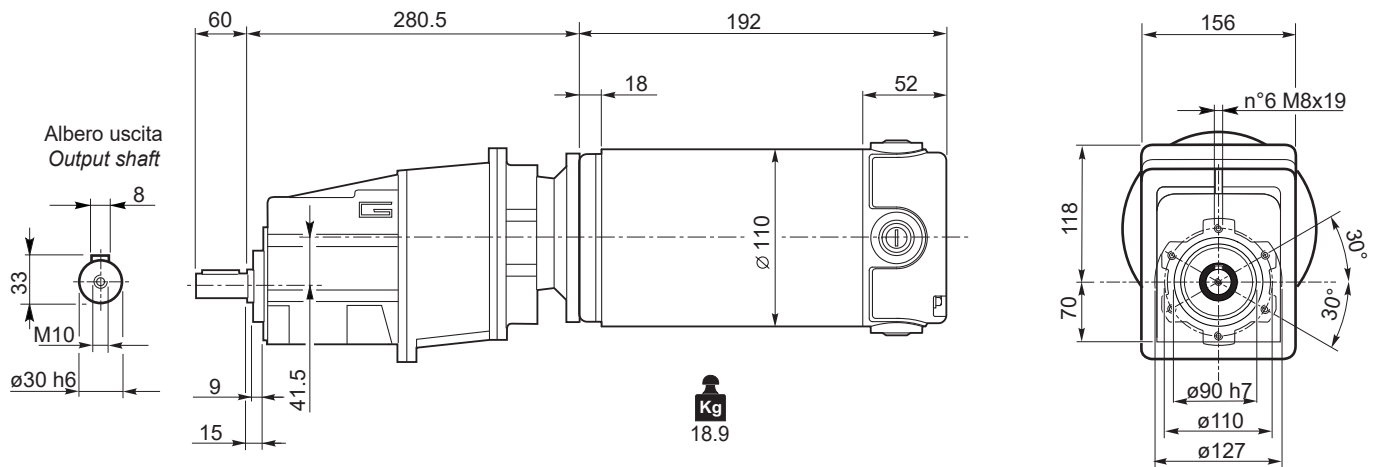


Dimensioni

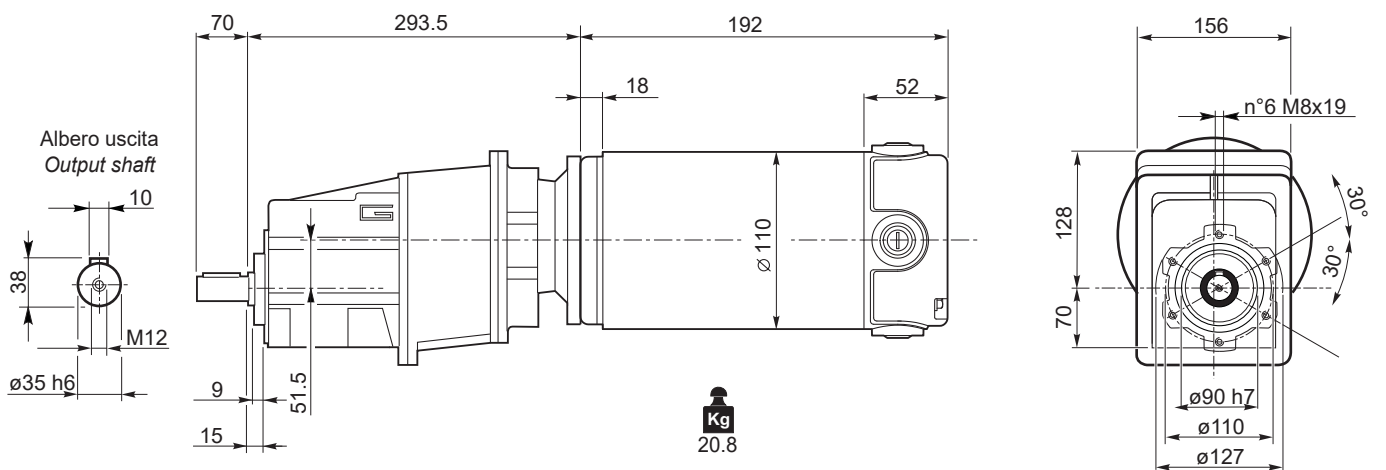
Dimensions

ECMG..U

ECMG350/033 U



ECMG350/043 U



ECMG

Freno / Brake



H23

ECMG...H



L30

ECMG...F



L31

ECMG...H/F

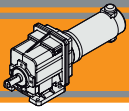


L32

Motori / Motors IP66



I10

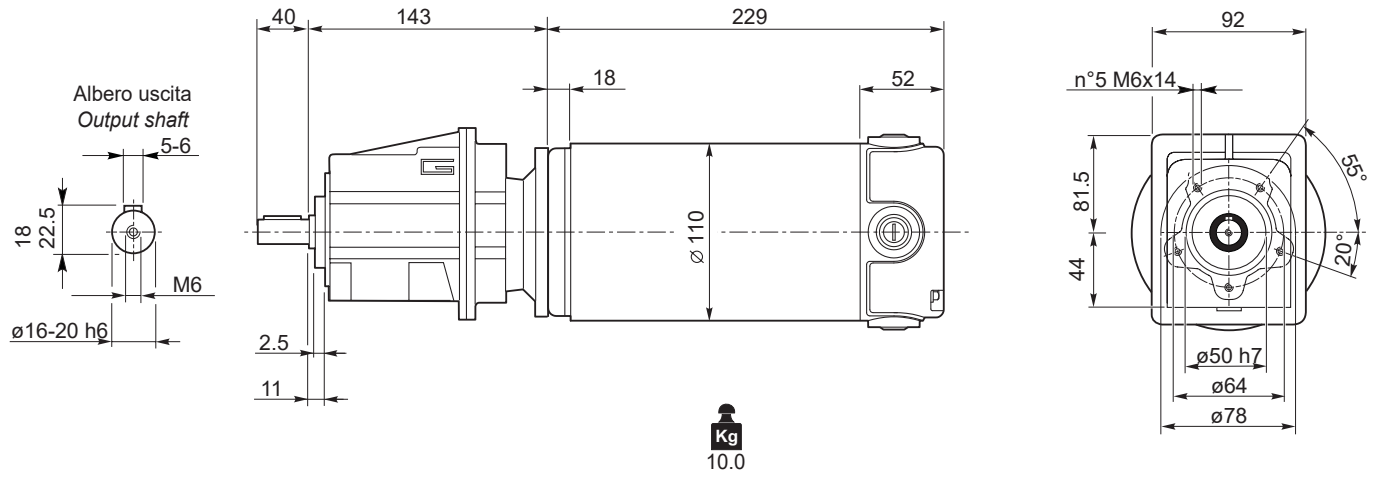


Dimensioni

Dimensions

ECMG..U

ECMG600/002 U



Freno / Brake



H23

Motori / Motors IP66



I12

ECMG...H



L30

ECMG...F

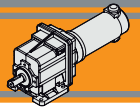


L31

ECMG...H/F



L32

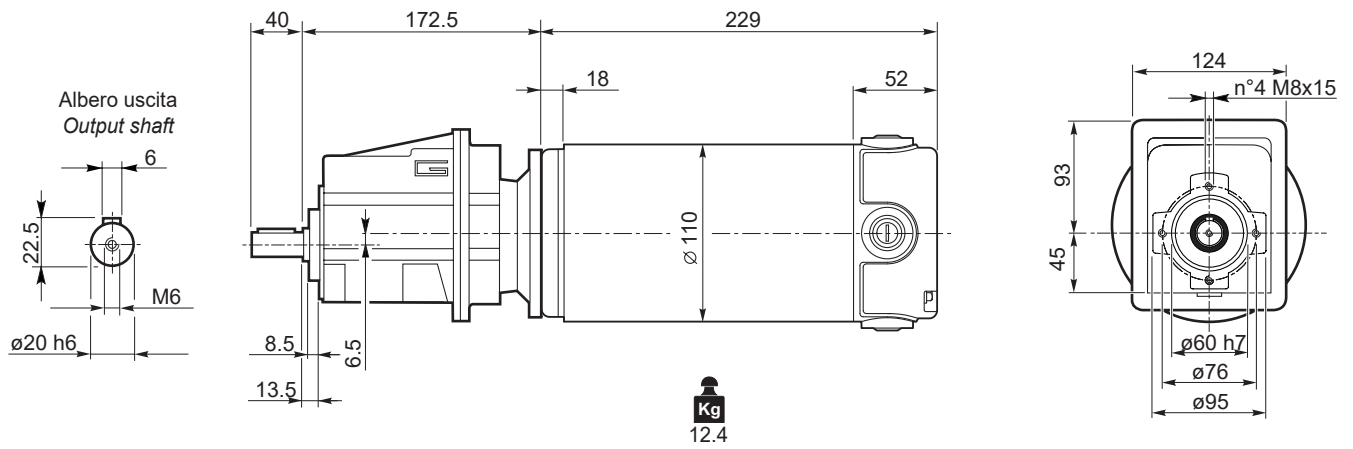


Dimensioni

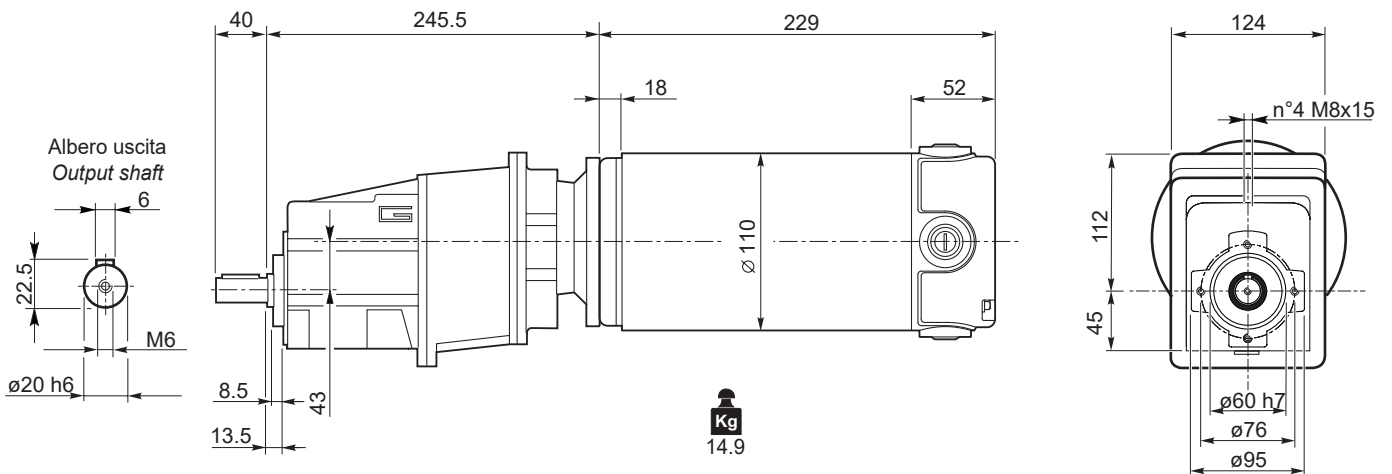
Dimensions

ECMG..U

ECMG600/012 U



ECMG600/013 U



ECMG

Freno / Brake



H23

Motori / Motors IP66



I12

ECMG...H



L30

ECMG...F

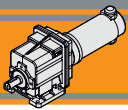


L31

ECMG...H/F



L32

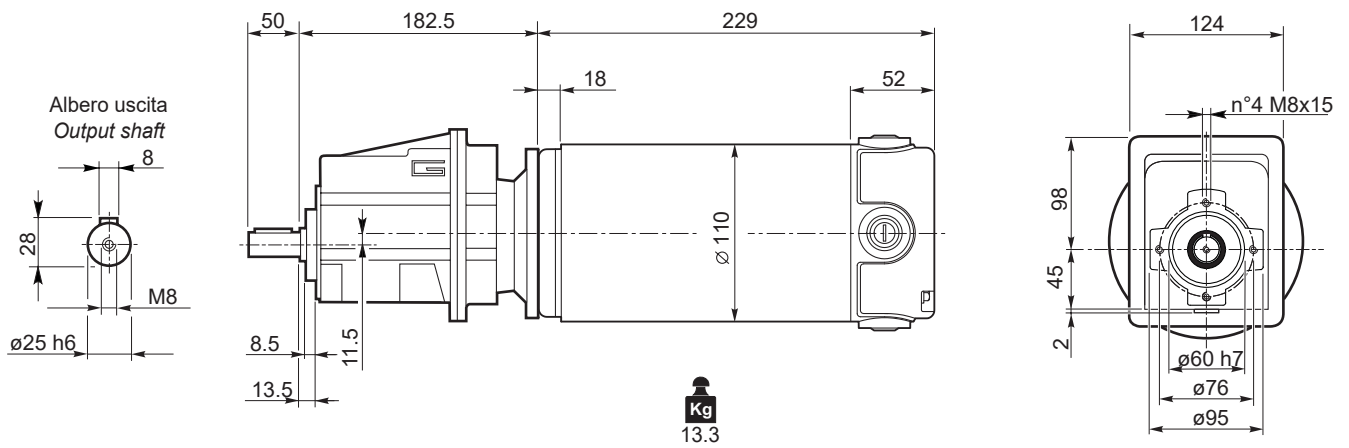


Dimensioni

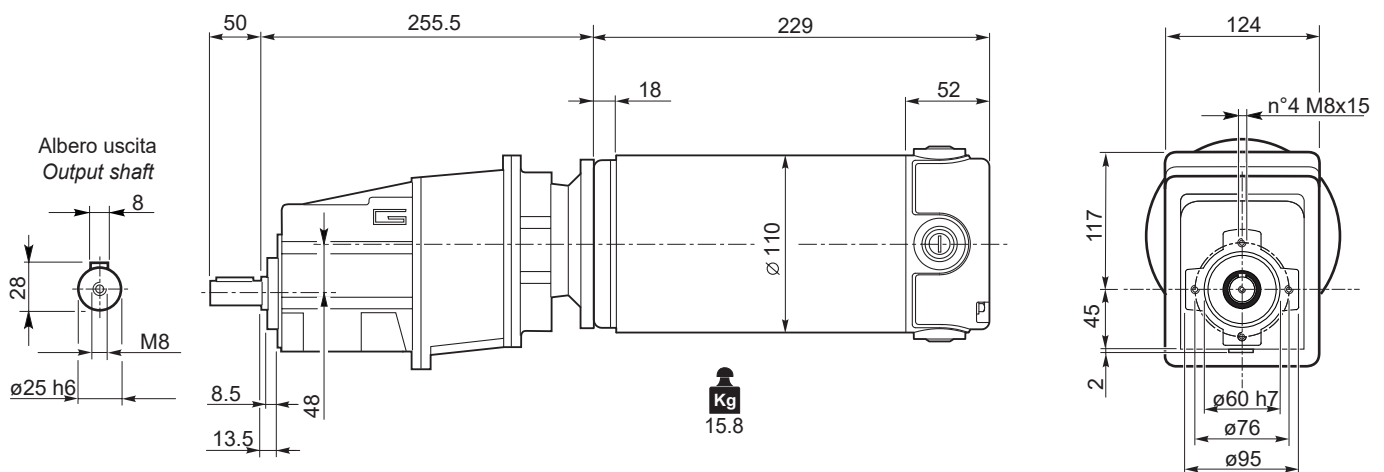
Dimensions

ECMG..U

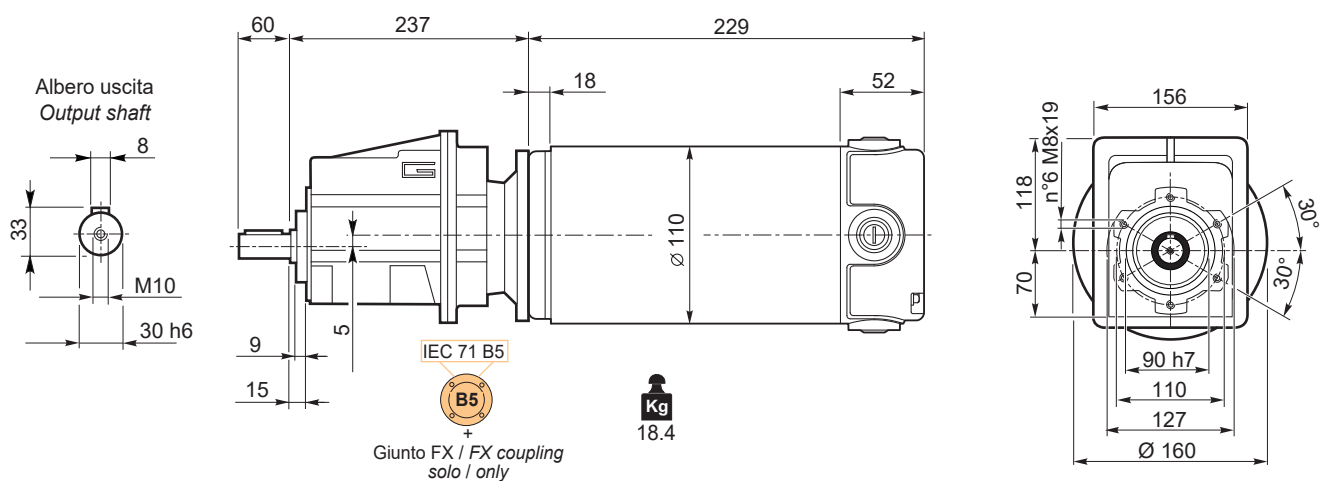
ECMG600/022 U



ECMG600/023 U



ECMG600/032 U



Freno / Brake



H23

ECMG...H



L30

ECMG...F



L31

ECMG...H/F



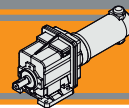
L32

Motori / Motors IP66



I12

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

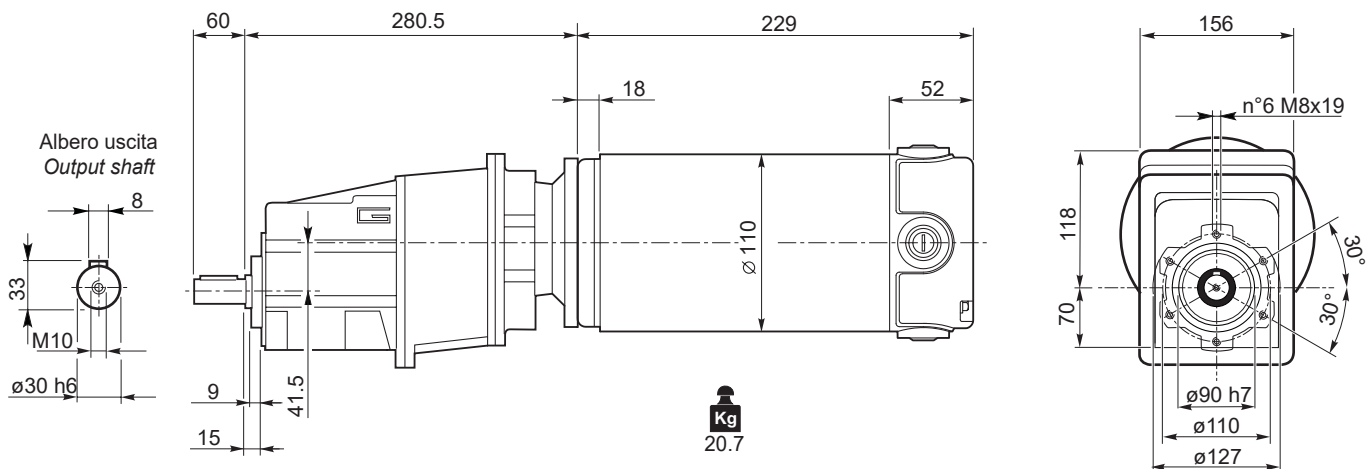


Dimensioni

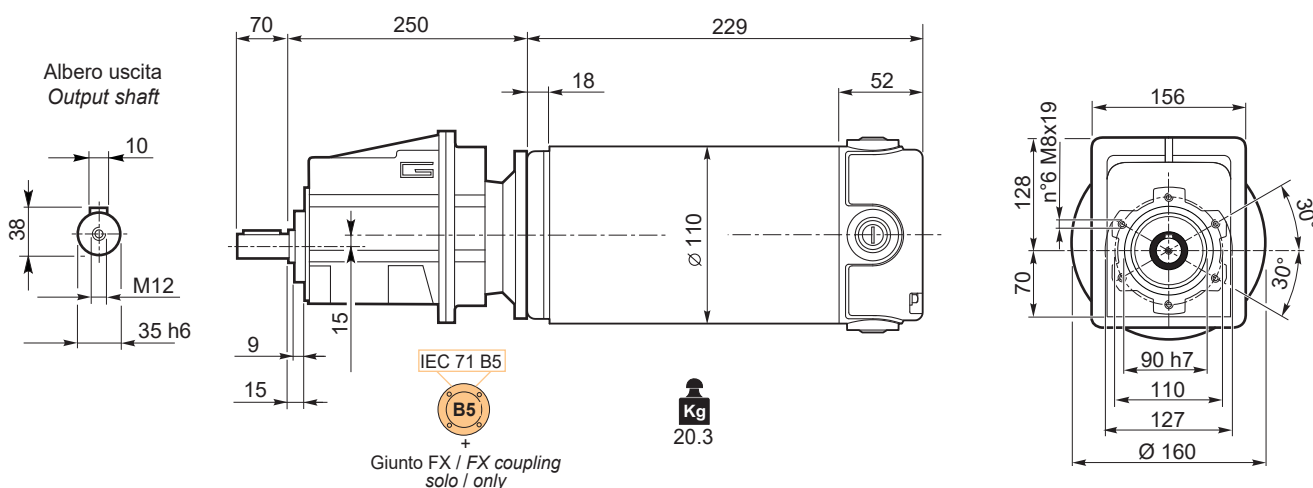
Dimensions

ECMG..U

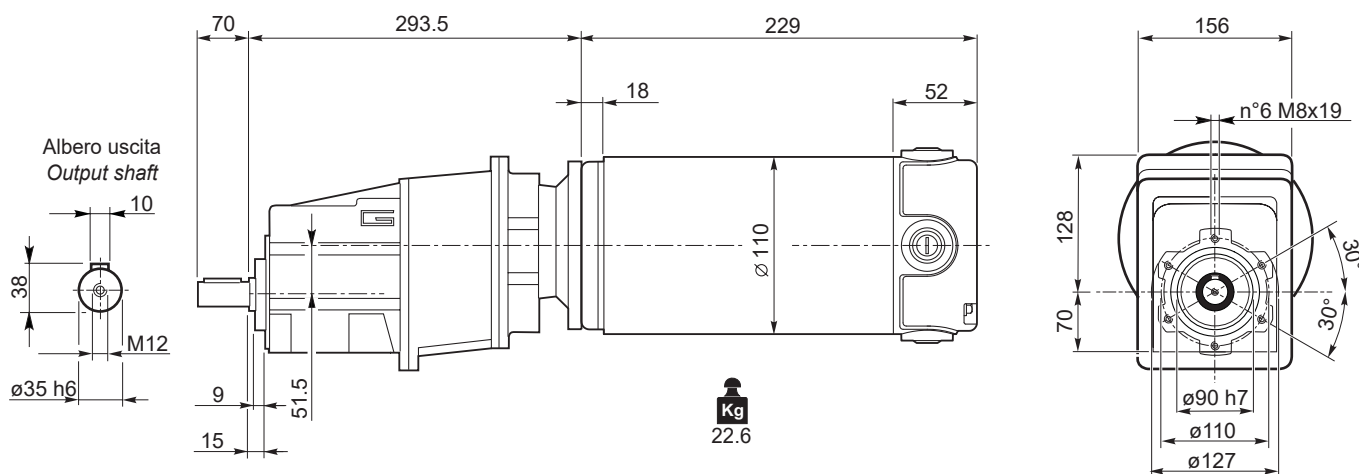
ECMG600/033 U



ECMG600/042 U



ECMG600/043 U



Freno / Brake

H23

ECMG...H

L30

ECMG...F

L31

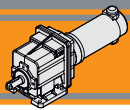
ECMG...H/F

L32

Motori / Motors IP66

I12

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

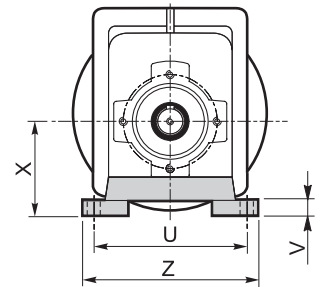
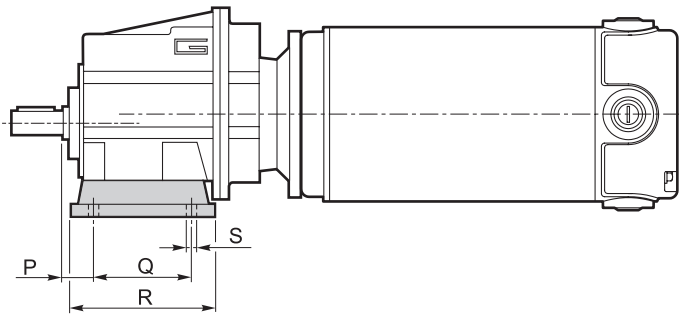


Dimensioni

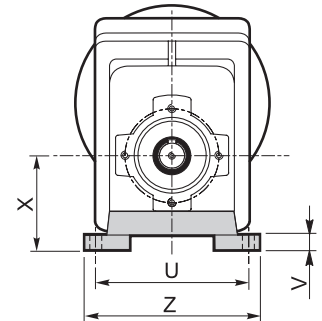
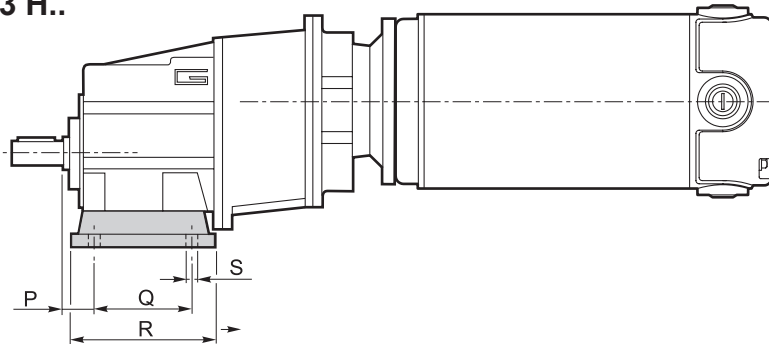
Dimensions

ECMG..H

ECMG..2 H..



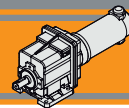
ECMG..3 H..



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

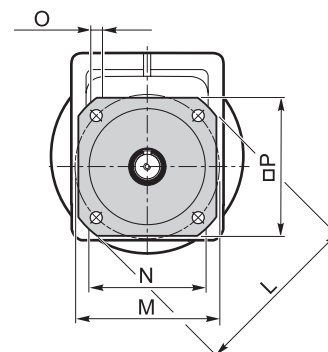
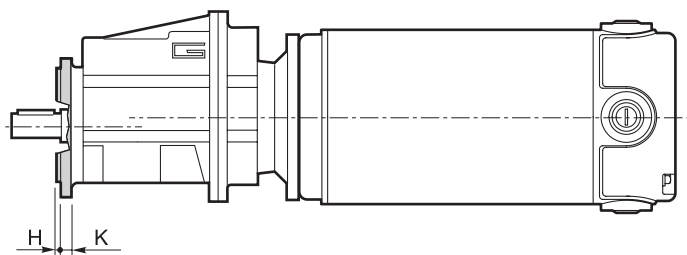


Dimensioni

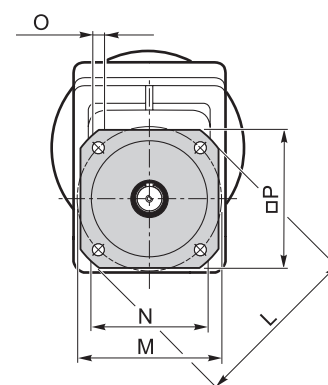
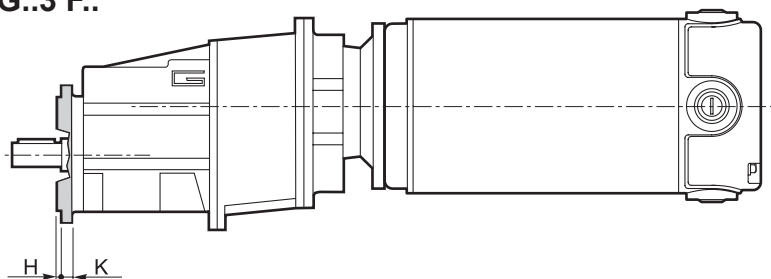
Dimensions

ECMG..F

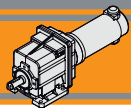
ECMG..2 F..



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 |



Dimensioni

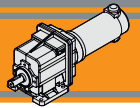
Dimensions

| 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 | | • | • | • | • | | |
| 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 | | | | | | | | | |
|------------------------|-----|----|-----|-----|---------|-----|-----|------------------|--------------------|
| 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 | 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 |

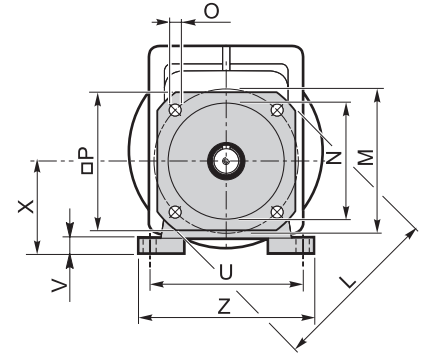
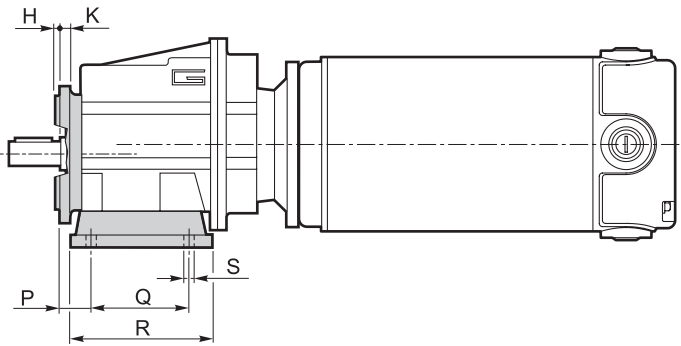


Dimensioni

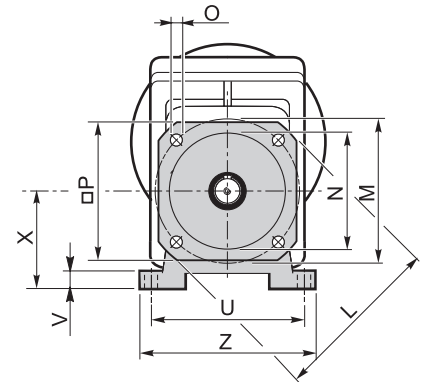
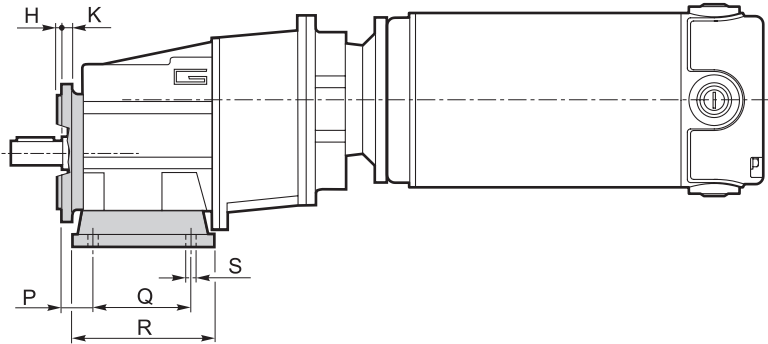
Dimensions

ECMG..H../F..

ECMG..2 H../F..



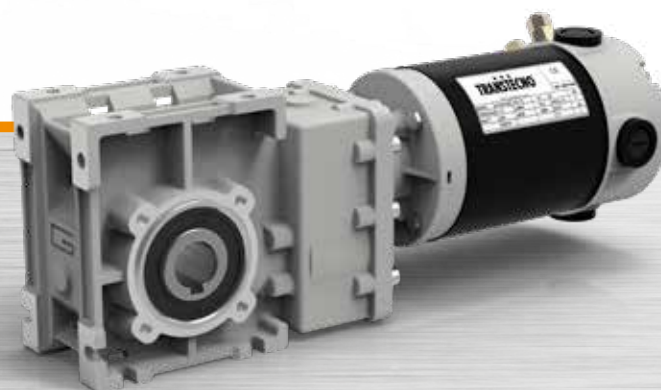
ECMG..3 H../F..

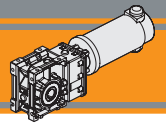




Ferrite

Motoriduttori CC ad assi ortogonali
DC helical bevel gearmotors

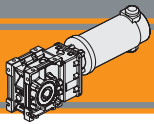




| Indice | Index | Pag. Page |
|------------------------------|-----------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | M2 |
| Designazione | <i>Classification</i> | M2 |
| Sensi di rotazione | <i>Direction of rotation</i> | M2 |
| Simbologia | <i>Symbols</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 |

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

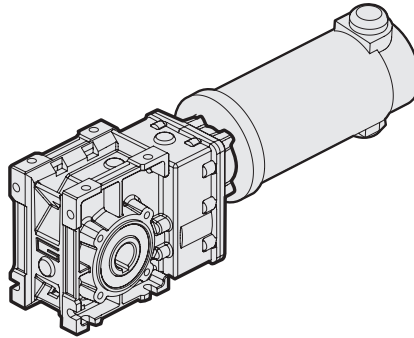
Technical features

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:

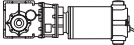

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati
- Disponibili con giunto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

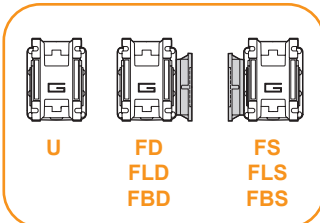


Designazione

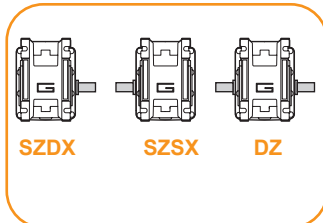
Classification

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

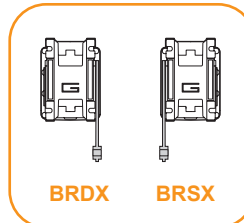
Versione Riduttore
Gearbox Version



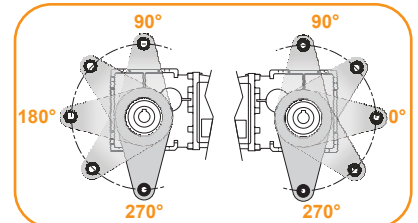
Albero di uscita
Output shaft



Braccio di reazione
Torque arm *



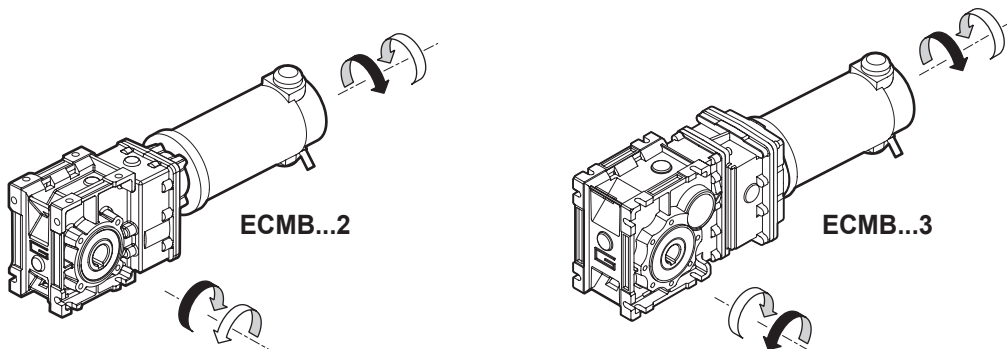
Angolo
Angle

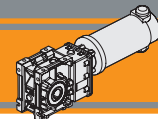


* NOTA: il braccio di reazione viene fornito smontato.
NOTE: the torque arm will be supplied not assembled.

Sensi di rotazione

Direction of rotation





Simbologia

Symbols

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

Lubrificazione

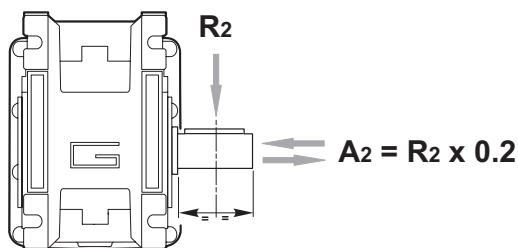
Lubrication

Tutti i riduttori nelle taglie 402, 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

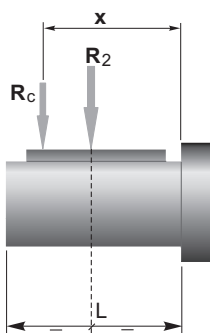
Radial loads



| 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:

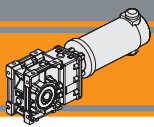


| | CMB 402 | CMB 502 | CMB 633 | CMB 903 |
|------------|---------|---------|---------|---------|
| a | 86 | 104 | 118 | 157 |
| b | 66 | 79 | 93 | 117 |
| R_{2MAX} | 3500 | 4200 | 6500 | 9500 |

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

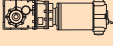
$$R \leq R_c$$

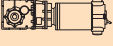
*a, b = valori riportati nella tabella
a, b = values given in the table*




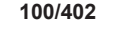
Dati tecnici per servizio S2

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 |
| | 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 | | |

| 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 | | |

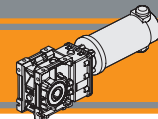
| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|
| 250 | | | | | | |
| (3000 min ⁻¹) | 485 | 4.6 | 6.7 | 6.18 | 180/402 | 120/240* |
| | 401 | 5.6 | 5.5 | 7.49 | | 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 |
| | 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 | | |
| | 47 | 48 | 2.0 | 64.29 | | |
| | 41 | 54 | 1.8 | 72.50 | | |
| | 52 | 43 | 4.5 | 57.93 | 180/633 | 120/240* |
| | 49 | 46 | 4.2 | 61.63 | | 24E |
| | 41 | 55 | 3.5 | 73.96 | | 120.66/240.66 |
| | 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 | | |

| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|------|-------|---|----------------------------------|
| 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 |
| | 51 | 25 | 4.0 | 59.06 | 120.66/240.66 | |
| | 47 | 27 | 3.6 | 64.29 | | |
| | 41 | 30 | 3.2 | 72.50 | | |

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

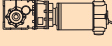
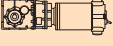
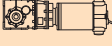
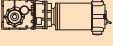
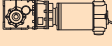
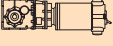
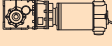
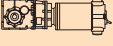
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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 | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | | | | | |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|-----------------------|--|------------------------|--------|-------|---|---|---------|------------|--------|-----|-------|
| 350 | | | | | | | 500 | | | | | | | | | | | |
| (3000 min ⁻¹) | 485 | 6.5 | 4.8 | 6.18 |  | 250/402 | 120/240 | (3000 min ⁻¹) | 485 | 9 | 3.4 | 6.18 |  | 350/402 | 120/240 | | | |
| | 401 | 7.8 | 4 | 7.49 | | 120.66/240.66 | | 401 | 11 | 2.8 | 7.49 | 120.66/240.66 | | | 401 | 11 | 2.8 | 7.49 |
| | 326 | 9.6 | 3.2 | 9.20 | | | 326 | 14 | 2.3 | 9.2 | | | 326 | 14 | 2.3 | 9.2 | | |
| | 254 | 12 | 2.8 | 11.83 | | | 254 | 18 | 2.0 | 11.83 | | | 254 | 18 | 2.0 | 11.83 | | |
| | 240 | 13 | 2.7 | 12.48 | | | 240 | 19 | 1.9 | 12.48 | | | 240 | 19 | 1.9 | 12.48 | | |
| | 202 | 16 | 2.3 | 14.83 | | | 202 | 22 | 1.6 | 14.83 | | | 202 | 22 | 1.6 | 14.83 | | |
| | 170 | 19 | 1.9 | 17.63 | | | 170 | 26 | 1.3 | 17.63 | | | 170 | 26 | 1.3 | 17.63 | | |
| | 161 | 20 | 2.2 | 18.60 | | | 161 | 28 | 1.5 | 18.6 | | | 161 | 28 | 1.5 | 18.6 | | |
| | 134 | 23 | 1.8 | 22.33 | | | 134 | 33 | 1.3 | 22.33 | | | 134 | 33 | 1.3 | 22.33 | | |
| | 125 | 25 | 1.7 | 23.91 | | | 125 | 36 | 1.2 | 23.91 | | | 125 | 36 | 1.2 | 23.91 | | |
| | 104 | 30 | 1.7 | 28.89 | | | 104 | 43 | 1.2 | 28.89 | | | 104 | 43 | 1.2 | 28.89 | | |
| | 97 | 32 | 1.6 | 30.84 | | | 97 | 46 | 1.1 | 30.84 | | | 97 | 46 | 1.1 | 30.84 | | |
| | 89 | 35 | 1.5 | 33.57 | | | 89 | 50 | 1.0 | 33.57 | | | 89 | 50 | 1.0 | 33.57 | | |
| | 84 | 37 | 1.4 | 35.63 | | | 84 | 53 | 1.0 | 35.63 | | | 84 | 53 | 1.0 | 35.63 | | |
| | 70 | 45 | 1.1 | 42.75 | | | 70 | 64 | 0.8 | 42.75 | | | 70 | 64 | 0.8 | 42.75 | | |
| | 54 | 58 | 0.9 | 55.31 | | | 54 | 73 | 0.7 | 55.31 | | | 54 | 73 | 0.7 | 55.31 | | |
| | 51 | 62 | 0.8 | 59.06 | | | 51 | 73 | 0.7 | 59.06 | | | 51 | 73 | 0.7 | 59.06 | | |
| | 47 | 67 | 0.8 | 64.29 | | | 47 | 73 | 0.7 | 64.29 | | | 47 | 73 | 0.7 | 64.29 | | |
| | 41 | 72 | 0.7 | 72.50 | | | 41 | 73 | 0.7 | 72.50 | | | 41 | 73 | 0.7 | 72.50 | | |
| | 485 | 6.5 | 8.5 | 6.18 |  | 250/502 | 120/240 | (3000 min ⁻¹) | 326 | 14 | 4.0 | 9.20 |  | 350/502 | 120/240 | | | |
| | 401 | 7.8 | 7.0 | 7.49 | | 120.66/240.66 | | 254 | 18 | 4.0 | 11.83 | 120.66/240.66 | | | 254 | 18 | 4.0 | 11.83 |
| | 326 | 9.6 | 5.7 | 9.2 | | | 240 | 19 | 3.7 | 12.48 | | | 240 | 19 | 3.7 | 12.48 | | |
| | 254 | 12 | 5.7 | 11.83 | | | 202 | 22 | 3.2 | 14.83 | | | 202 | 22 | 3.2 | 14.83 | | |
| | 240 | 13 | 5.4 | 12.48 | | | 170 | 26 | 2.7 | 17.63 | | | 170 | 26 | 2.7 | 17.63 | | |
| | 202 | 16 | 4.5 | 14.83 | | | 161 | 28 | 3.1 | 18.60 | | | 161 | 28 | 3.1 | 18.60 | | |
| | 170 | 19 | 3.8 | 17.63 | | | 134 | 33 | 2.6 | 22.33 | | | 134 | 33 | 2.6 | 22.33 | | |
| | 161 | 20 | 4.4 | 18.6 | | | 125 | 36 | 2.4 | 23.91 | | | 125 | 36 | 2.4 | 23.91 | | |
| | 134 | 23 | 3.7 | 22.33 | | | 104 | 43 | 2.3 | 28.89 | | | 104 | 43 | 2.3 | 28.89 | | |
| | 125 | 25 | 3.4 | 23.91 | | | 97 | 46 | 2.1 | 30.84 | | | 97 | 46 | 2.1 | 30.84 | | |
| | 104 | 30 | 3.2 | 28.89 | | | 89 | 50 | 2.0 | 33.57 | | | 89 | 50 | 2.0 | 33.57 | | |
| | 97 | 32 | 3.0 | 30.84 | | | 84 | 53 | 1.8 | 35.63 | | | 84 | 53 | 1.8 | 35.63 | | |
| | 89 | 35 | 2.8 | 33.57 | | | 70 | 64 | 1.5 | 42.75 | | | 70 | 64 | 1.5 | 42.75 | | |
| | 84 | 37 | 2.6 | 35.63 | | | 54 | 83 | 1.2 | 55.31 | | | 54 | 83 | 1.2 | 55.31 | | |
| | 70 | 45 | 2.2 | 42.75 | | | 51 | 88 | 1.1 | 59.06 | | | 51 | 88 | 1.1 | 59.06 | | |
| | 54 | 58 | 1.7 | 55.31 | | | 47 | 96 | 1.0 | 64.29 | | | 47 | 96 | 1.0 | 64.29 | | |
| | 51 | 62 | 1.6 | 59.06 | | | 41 | 109 | 0.9 | 72.50 | | | 41 | 109 | 0.9 | 72.50 | | |
| | 47 | 67 | 1.5 | 64.29 | | | 139 | 32 | 5.3 | 21.56 | | | 350/633 | 120/240 | | | | |
| | 41 | 76 | 1.3 | 72.50 | | | 113 | 40 | 4.3 | 26.48 | | | 120.66/240.66 | | 113 | 40 | 4.3 | 26.48 |
| | 106 | 30 | 5.8 | 28.17 |  | 250/633 | 120/240 | (3000 min ⁻¹) | 106 | 42 | 4.1 | 28.17 |  | | | | | |
| | 89 | 35 | 4.9 | 33.81 | | 120.66/240.66 | | 89 | 51 | 3.4 | 33.81 | | | | 89 | 51 | 3.4 | 33.81 |
| | 84 | 38 | 4.6 | 35.92 | | | 84 | 54 | 3.2 | 35.92 | | | 84 | 54 | 3.2 | 35.92 | | |
| | 77 | 41 | 4.8 | 38.88 | | | 77 | 58 | 3.4 | 38.88 | | | 77 | 58 | 3.4 | 38.88 | | |
| | 64 | 49 | 4.0 | 47.16 | | | 64 | 71 | 2.8 | 47.16 | | | 64 | 71 | 2.8 | 47.16 | | |
| | 52 | 61 | 3.2 | 57.93 | | | 52 | 87 | 2.2 | 57.93 | | | 52 | 87 | 2.2 | 57.93 | | |
| | 49 | 65 | 3.0 | 61.63 | | | 49 | 92 | 2.1 | 61.63 | | | 49 | 92 | 2.1 | 61.63 | | |
| | 41 | 78 | 2.5 | 73.96 | | | 41 | 111 | 1.8 | 73.96 | | | 41 | 111 | 1.8 | 73.96 | | |
| | 38 | 82 | 2.4 | 78.58 | | | 38 | 118 | 1.7 | 78.58 | | | 38 | 118 | 1.7 | 78.58 | | |
| | 32 | 98 | 2.0 | 93.33 | | | 32 | 140 | 1.4 | 93.33 | | | 32 | 140 | 1.4 | 93.33 | | |
| | 21 | 147 | 1.3 | 140.52 | | | 21 | 210 | 0.9 | 140.52 | | | 21 | 210 | 0.9 | 140.52 | | |
| | 17 | 190 | 1.0 | 181.81 | | | 17 | 272 | 0.7 | 181.81 | | | 17 | 272 | 0.7 | 181.81 | | |
| | 14 | 221 | 0.9 | 211.31 | | | 14 | 279 | 0.7 | 211.31 | | | 14 | 279 | 0.7 | 211.31 | | |
| | 13 | 250 | 0.8 | 238.31 | | | | | | | | | | | | | | |

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

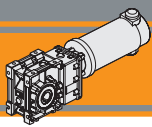
NOTE: for continuous or highly intermittent duty, please contact our technical service

NOTA

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

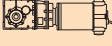
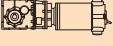

NOTE

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



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 | | | | 306 | 23 | 5.0 | 9.81 | | 600/633 | 120/240 |
| | 125 | 57 | 0.8 | 23.91 | | | | 287 | 25 | 4.7 | 10.44 | | | 120.66/240.66 |
| | 104 | 69 | 0.7 | 28.89 | | | | 239 | 30 | 3.9 | 12.53 | | | |
| | 97 | 73 | 0.7 | 30.84 | | | | 225 | 32 | 3.7 | 13.31 | | | |
| | 89 | 73 | 0.7 | 33.57 | | | | 190 | 38 | 3.5 | 15.81 | | | |
| | 84 | 73 | 0.7 | 35.63 | | | | 169 | 43 | 4.0 | 17.77 | | | |
| | 70 | 73 | 0.7 | 42.75 | | | 139 | 52 | 3.3 | 21.56 | | | | |
| | 485 | 15 | 3.7 | 6.18 | 600/502 | 120/240 | 113 | 63 | 2.7 | 26.48 | | | | |
| | 401 | 18 | 3.1 | 7.49 | | 120.66/240.66 | | 106 | 67 | 2.6 | 28.17 | | | |
| | 326 | 22 | 2.5 | 9.20 | | | | 89 | 81 | 2.1 | 33.81 | | | |
| | 254 | 28 | 2.5 | 11.83 | | | | 84 | 86 | 2.0 | 35.92 | | | |
| | 240 | 30 | 2.3 | 12.48 | | | | 77 | 93 | 2.1 | 38.88 | | | |
| | 202 | 36 | 2.0 | 14.83 | | | | 64 | 113 | 1.7 | 47.16 | | | |
| | 170 | 42 | 1.7 | 17.63 | | | | 52 | 139 | 1.4 | 57.93 | | | |
| | 161 | 45 | 1.9 | 18.60 | | | | 49 | 148 | 1.3 | 61.63 | | | |
| | 134 | 53 | 1.6 | 22.33 | | | | 41 | 177 | 1.1 | 73.96 | | | |
| | 125 | 57 | 1.5 | 23.91 | | | | 38 | 188 | 1.0 | 78.58 | | | |
| | 104 | 69 | 1.4 | 28.89 | | | | 32 | 223 | 0.9 | 93.33 | | | |
| | | | | | | | | 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 | | | | |

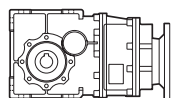
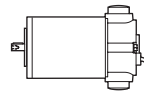
NOTA
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio
NOTE
Please check that the output torque M₂ does not exceed the value in the grey areas

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



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 (!) | |

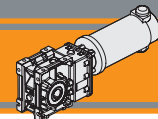
6.18 - 72.50

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°

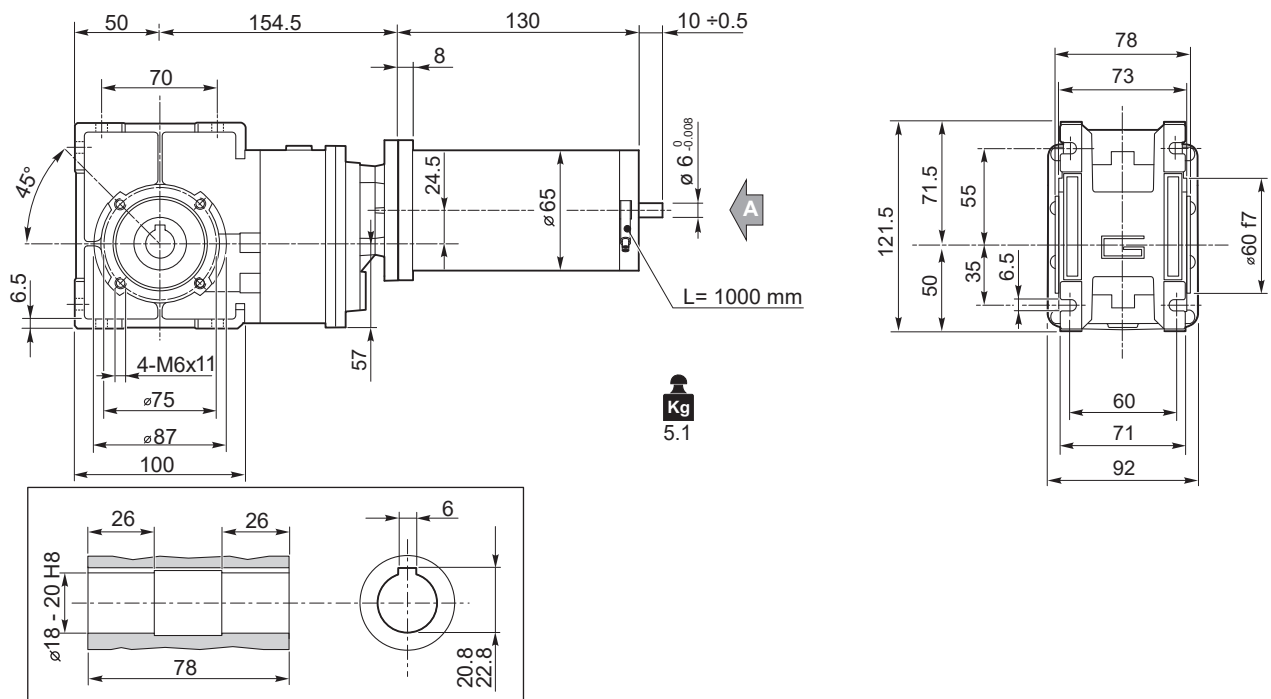
**.: Contattare il servizio tecnico
Please contact our technical service



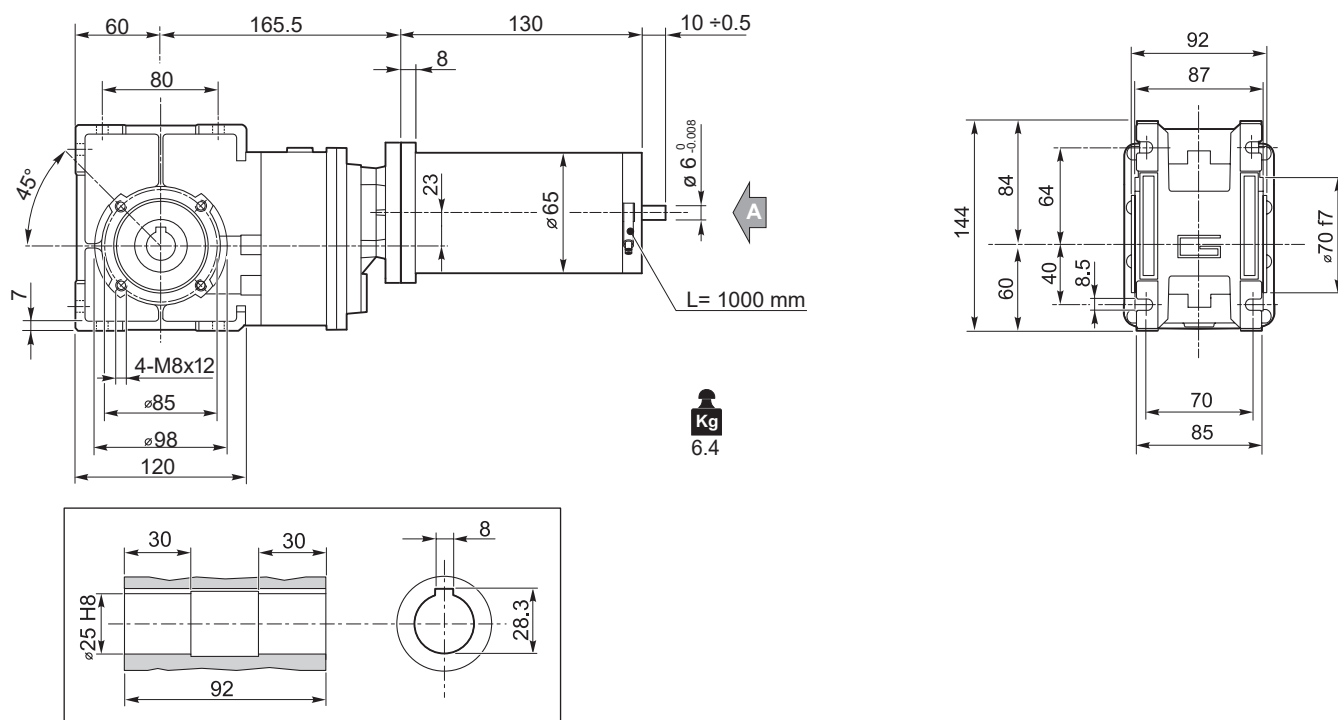
Dimensioni

Dimensions

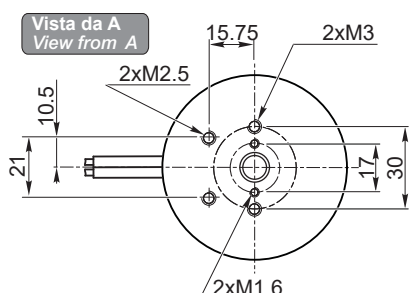
ECMB070/402 U



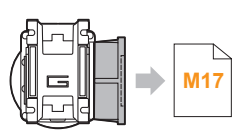
ECMB070/502 U

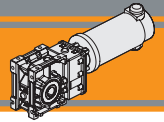


ECMB



- Freno / Brake → H23
- Encoder → H24
- Motori / Motors IP66 → I2

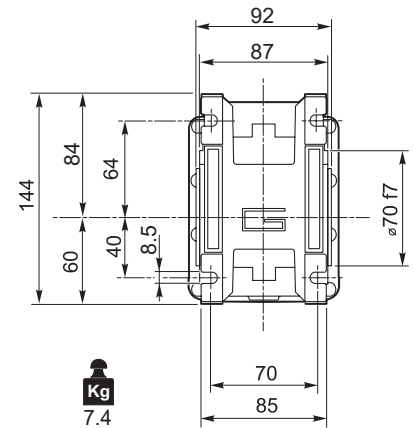
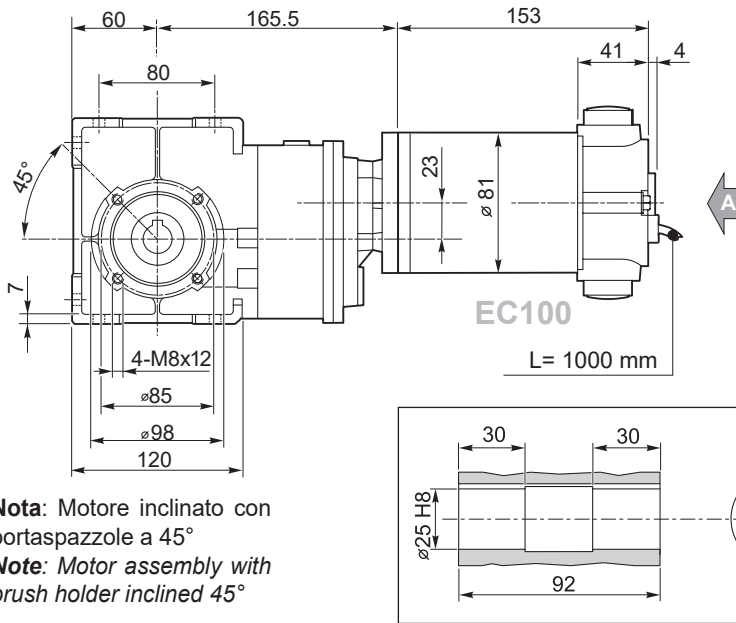




Dimensioni

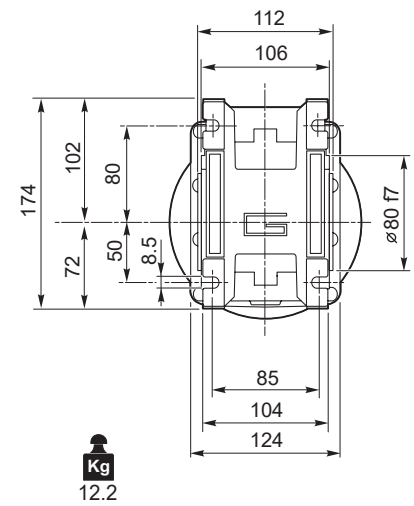
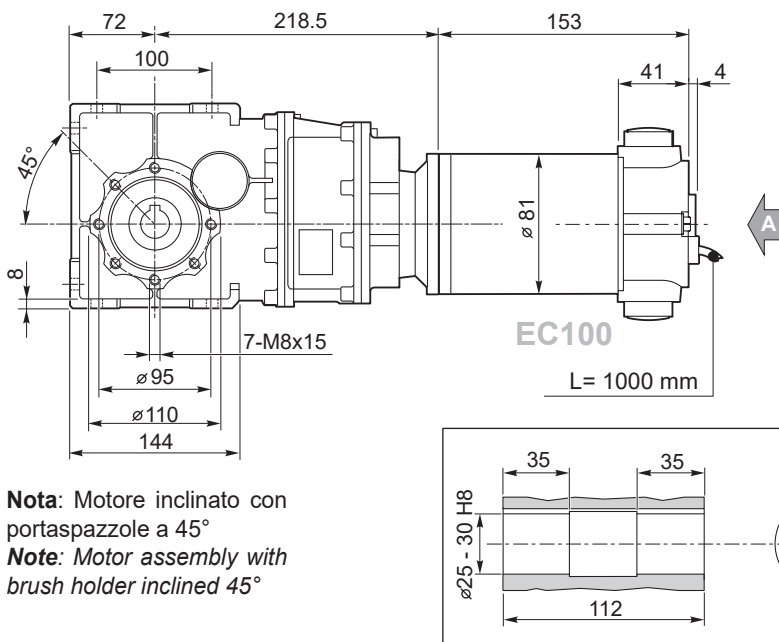
Dimensions

ECMB100/502 U



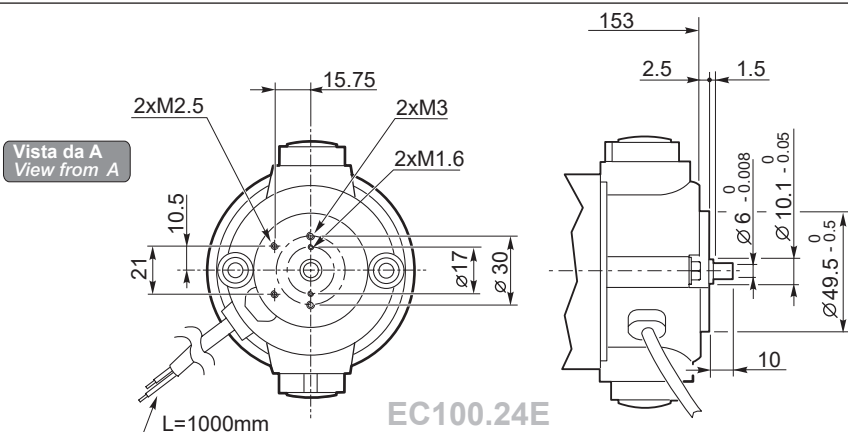
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMB100/633 U

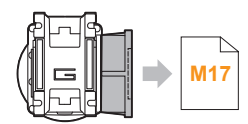


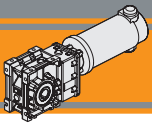
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMB



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

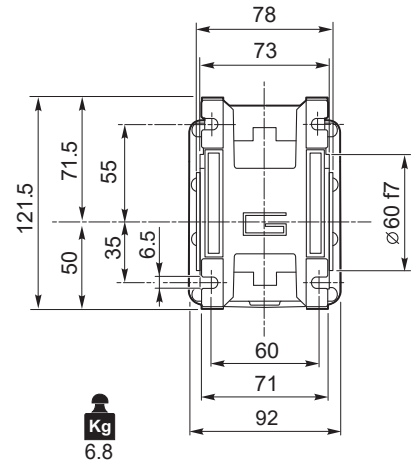
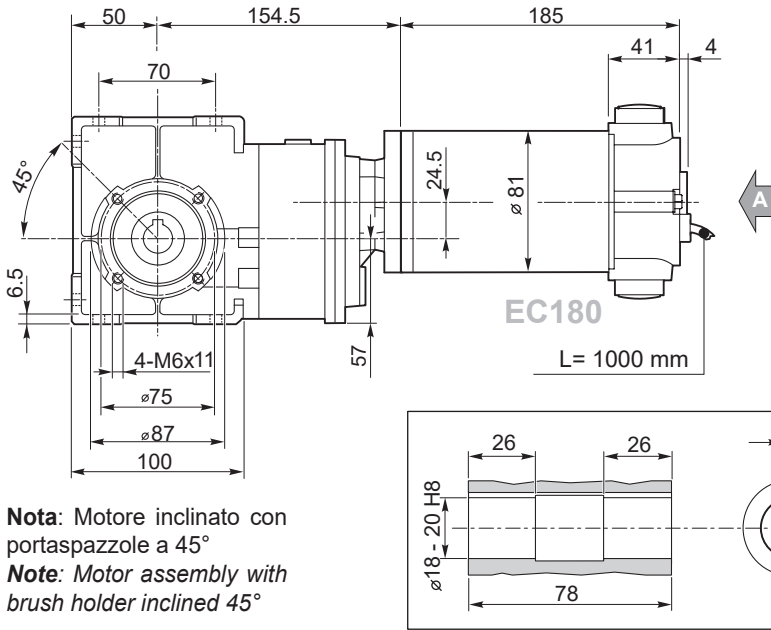




Dimensioni

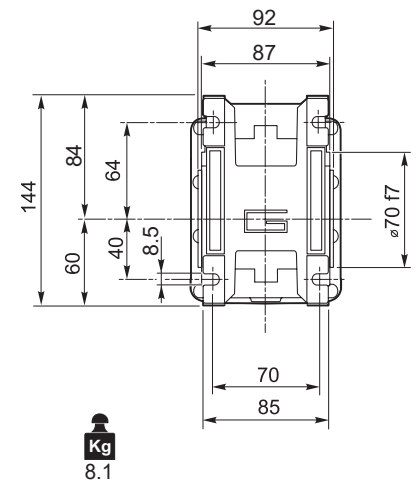
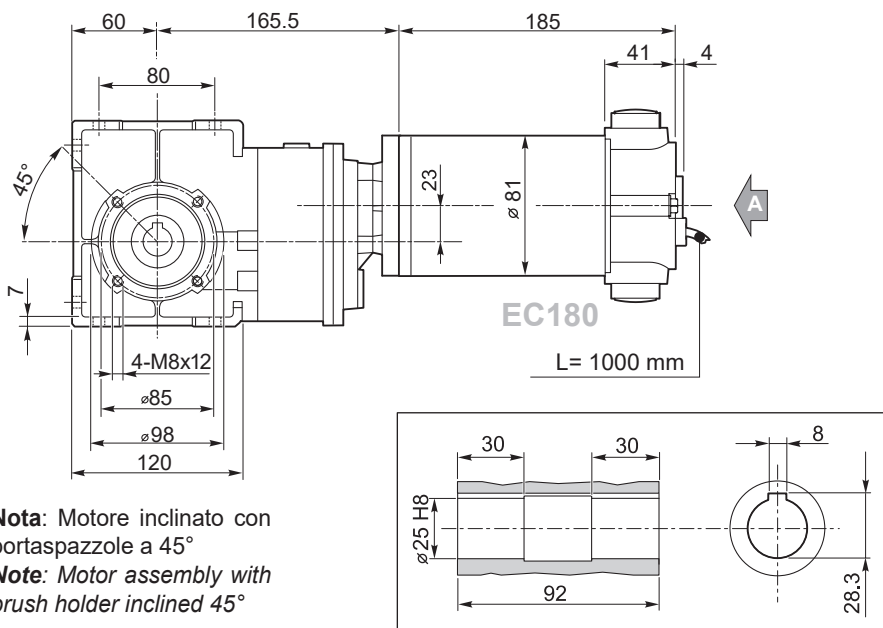
Dimensions

ECMB180/402 U

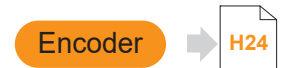
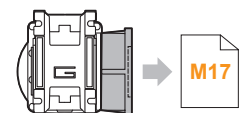
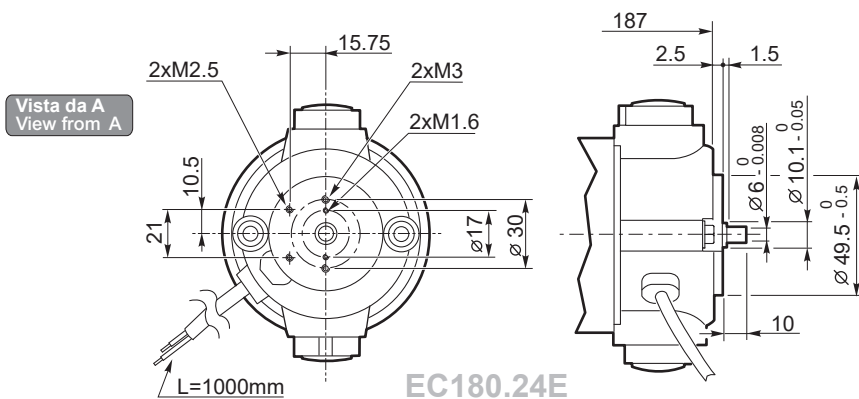


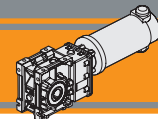
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

ECMB180/502 U



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

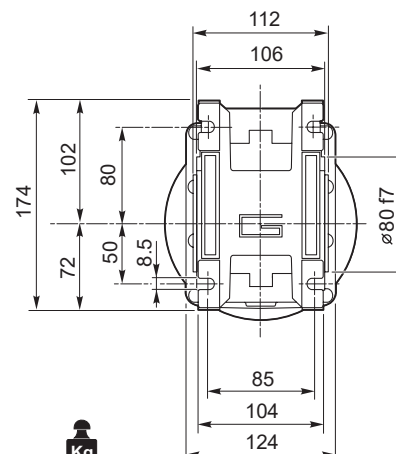
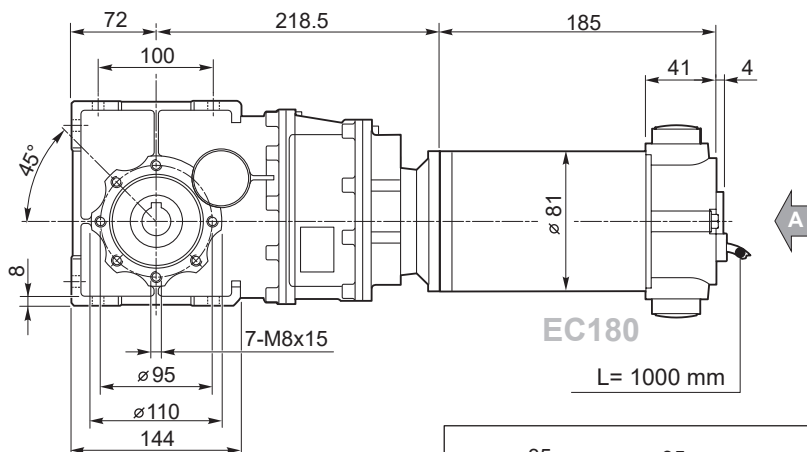




Dimensioni

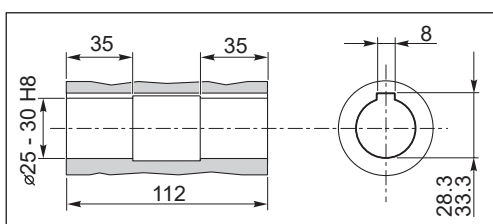
Dimensions

ECMB180/633 U

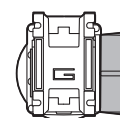
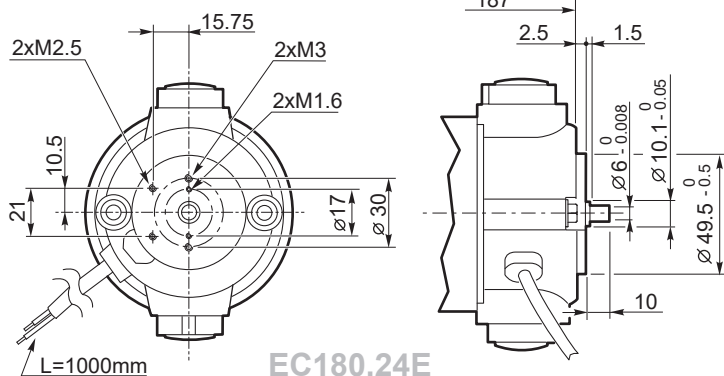


Kg
11.9

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



Vista da A
View from A



M17

Freno / Brake

H23

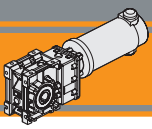
Encoder

H24

Motori / Motors IP66

I6

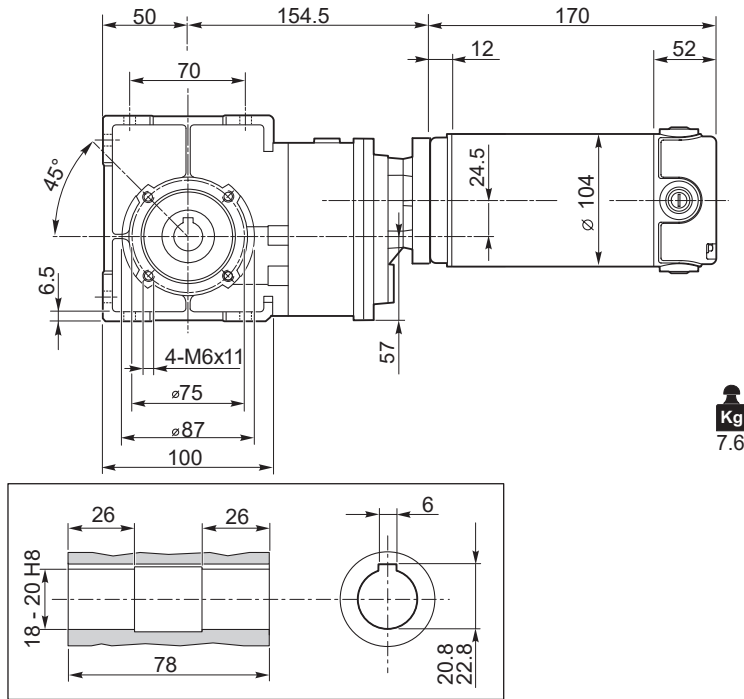
ECMB



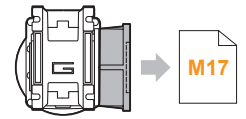
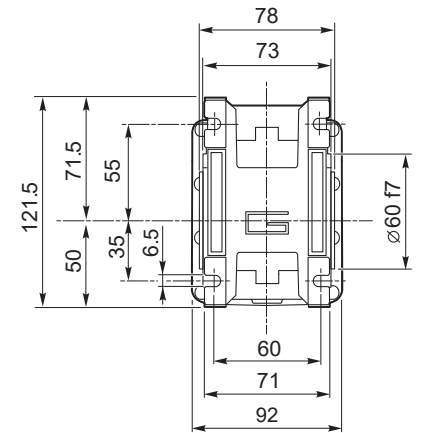
Dimensioni

Dimensions

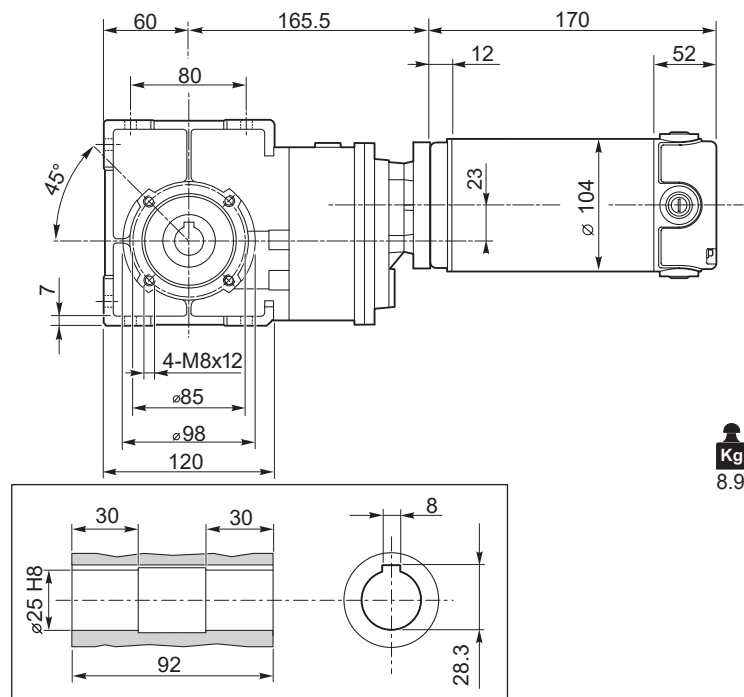
ECMB250/402 U



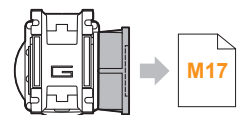
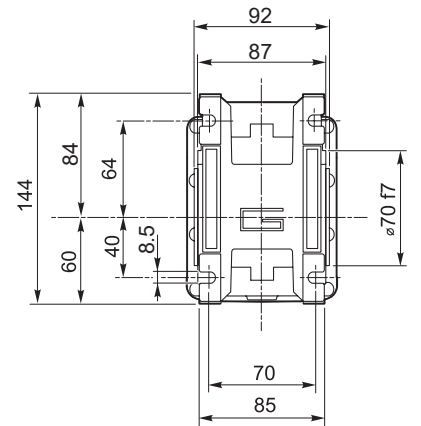
Kg
7.6

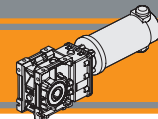


ECMB250/502 U



Kg
8.9

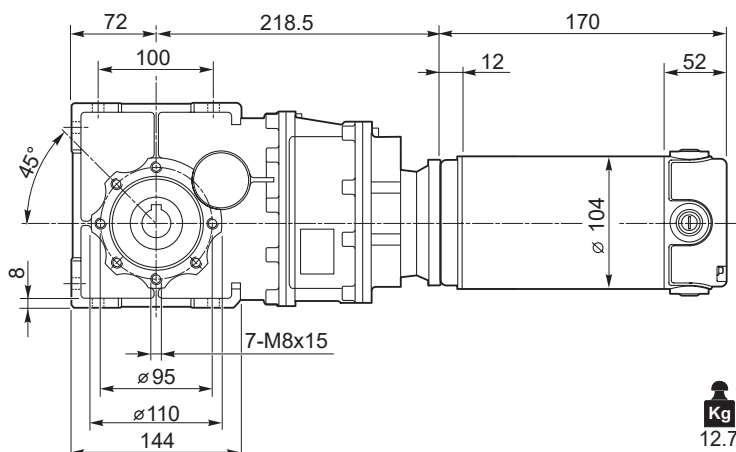




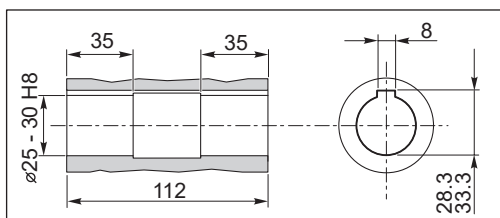
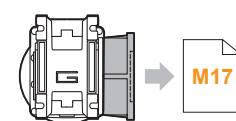
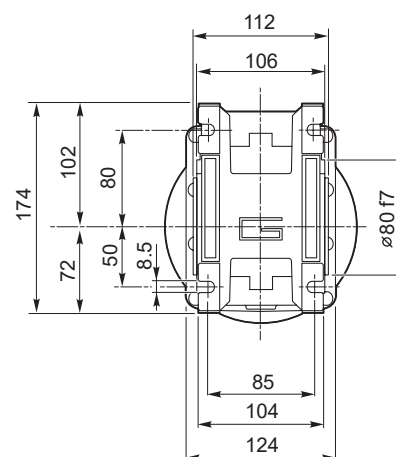
Dimensioni

Dimensions

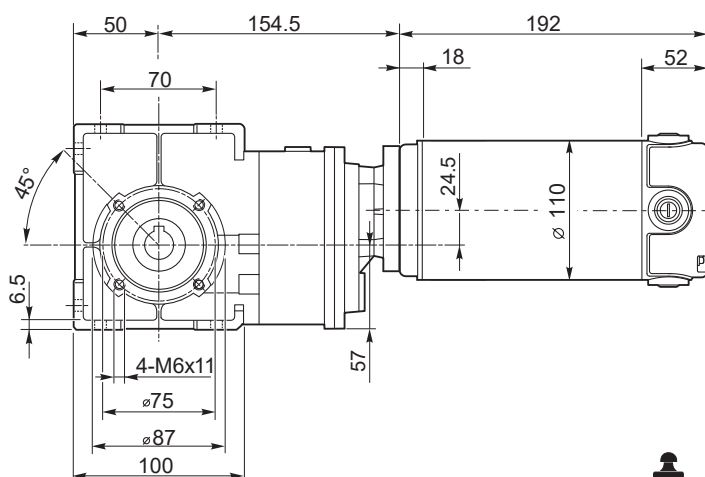
ECMB250/633 U



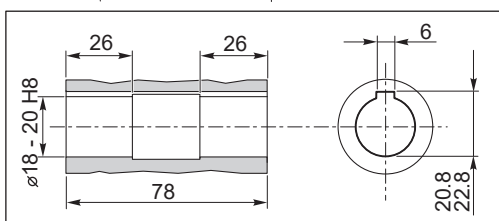
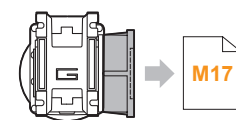
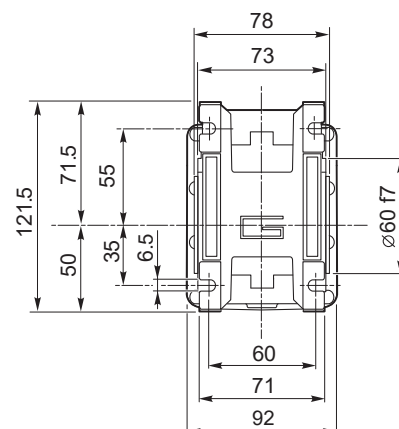
Kg
12.7

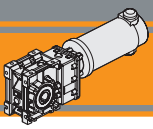


ECMB350/402 U



Kg
8.7

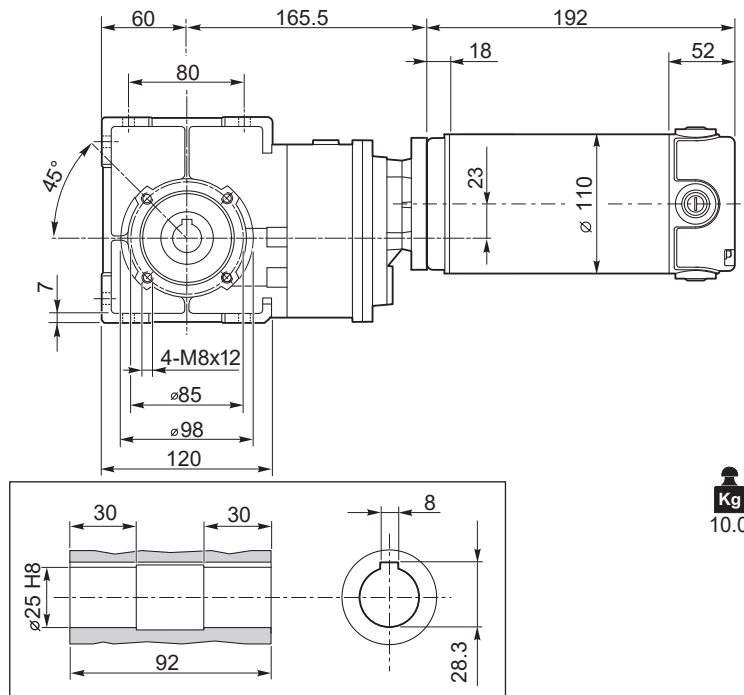




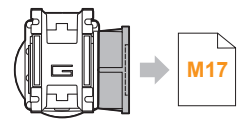
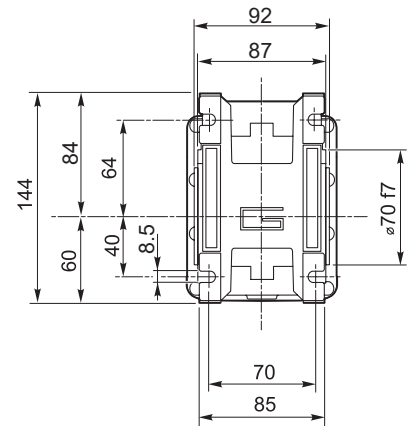
Dimensioni

Dimensions

ECMB350/502 U



Kg
10.0



M17

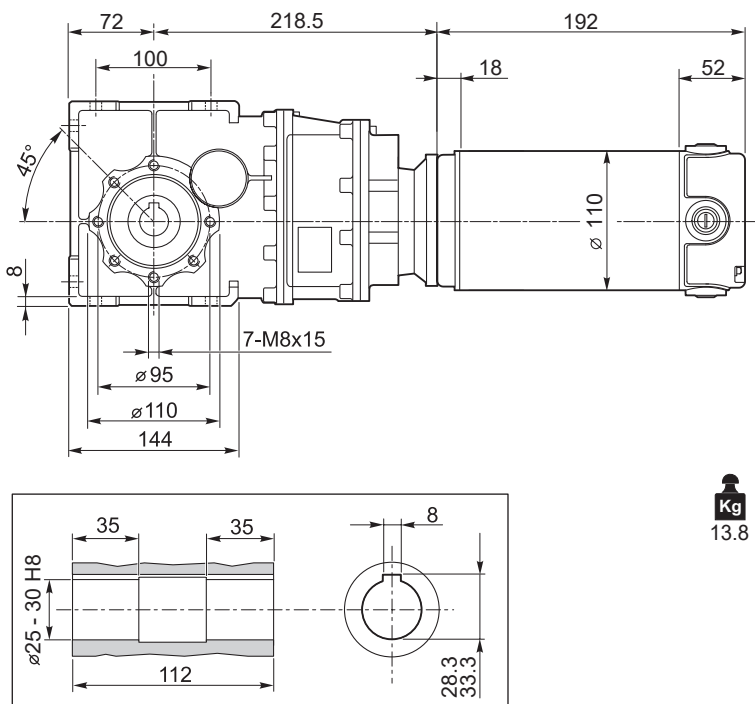
Freno / Brake

H23

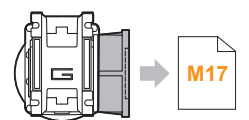
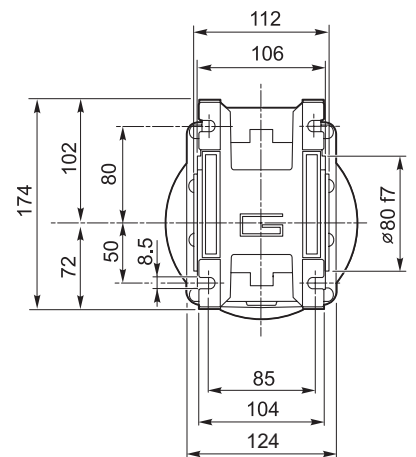
Motori / Motors IP66

I10

ECMB350/633 U



Kg
13.8



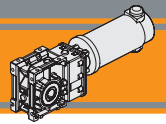
M17

Freno / Brake

H23

Motori / Motors IP66

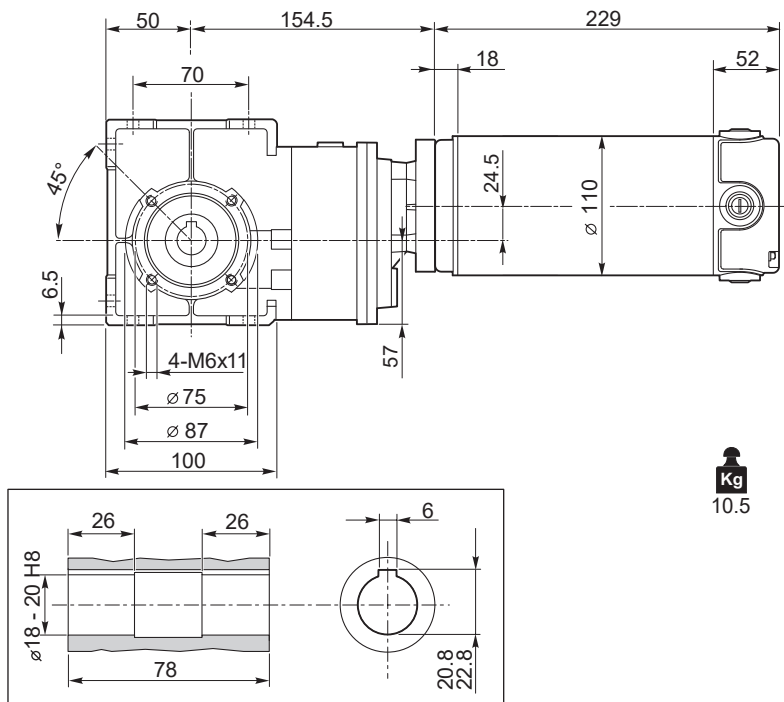
I10



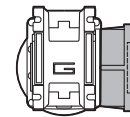
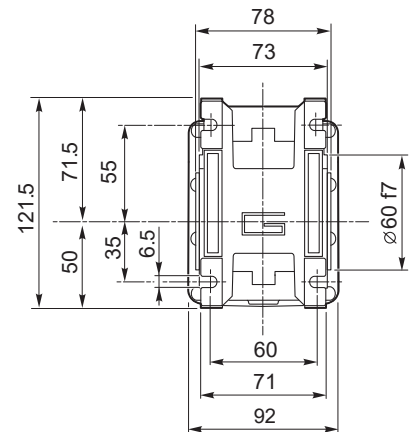
Dimensioni

Dimensions

ECMB600/402 U



Kg
10.5



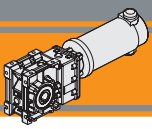
M17

Freno / Brake

H23

Motori / Motors IP66

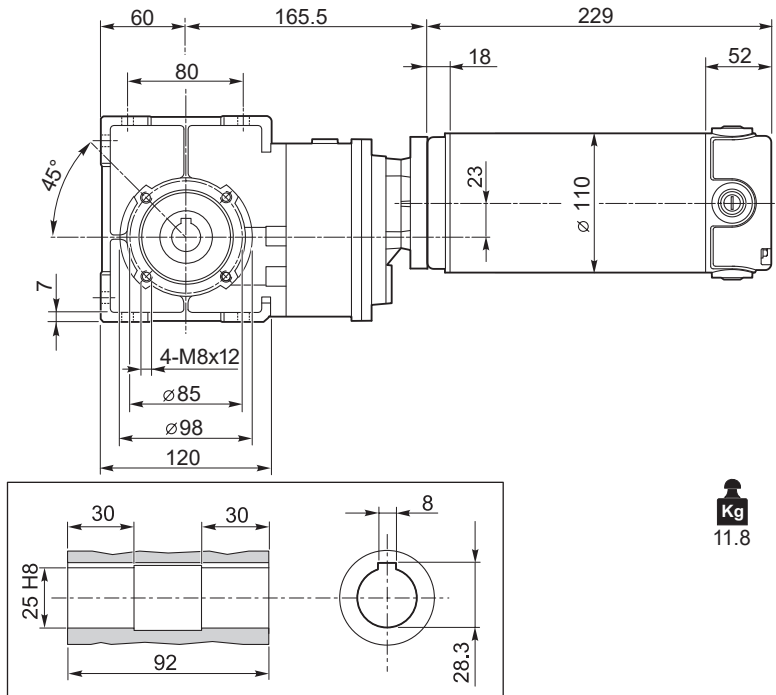
I12



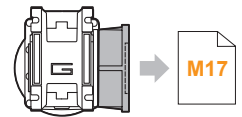
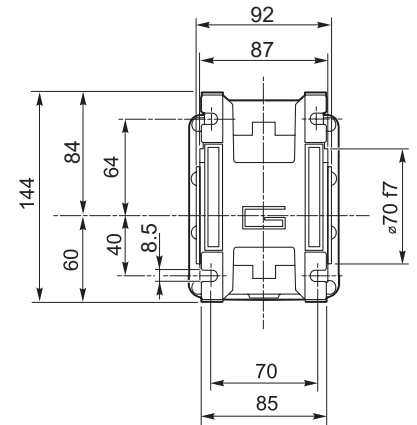
Dimensioni

Dimensions

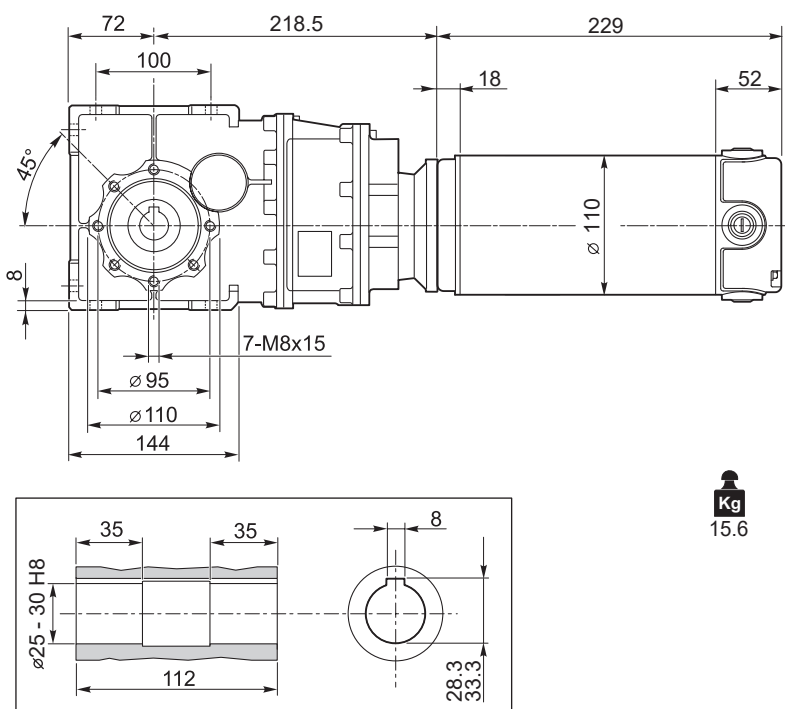
ECMB600/502 U



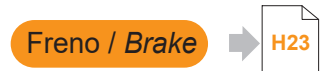
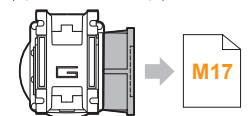
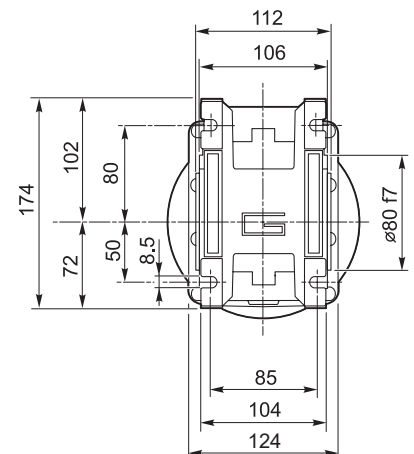
Kg
11.8

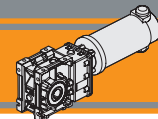


ECMB600/633 U



Kg
15.6

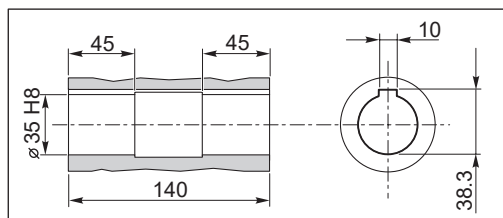
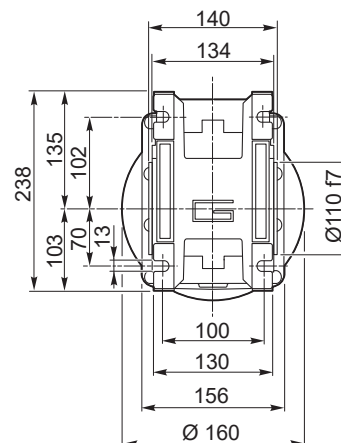
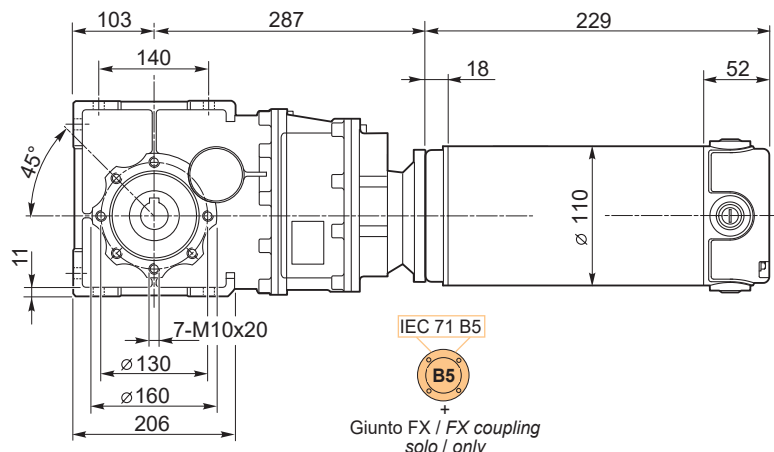




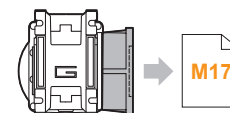
Dimensioni

Dimensions

ECMB600/903 U

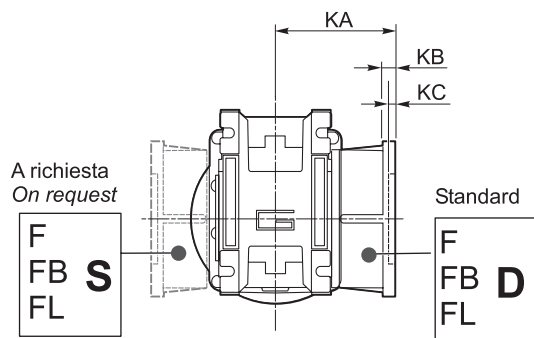
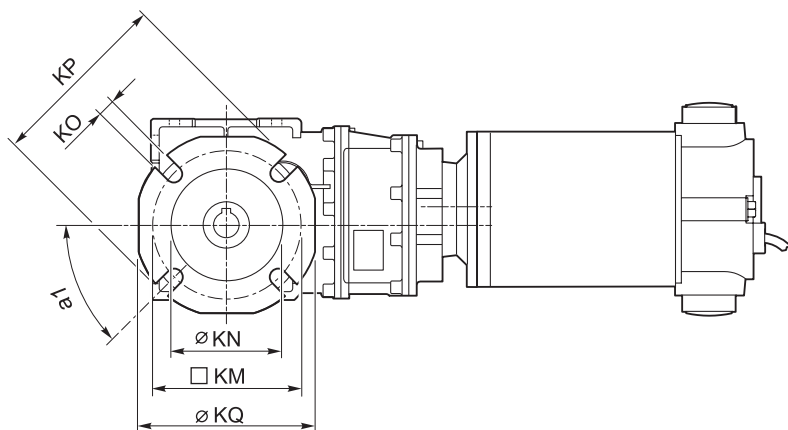


Kg
25.5



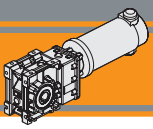
Freno / Brake → **H23**

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



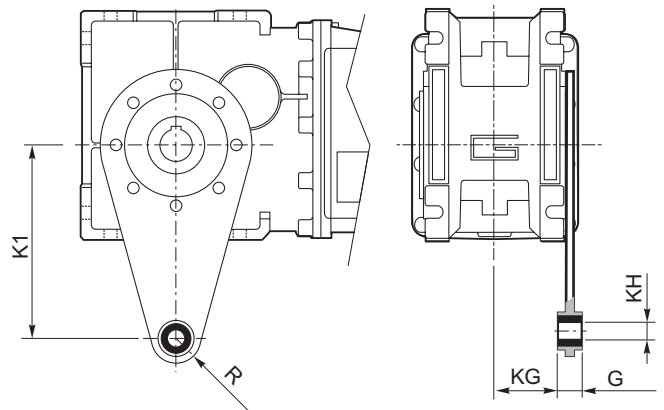
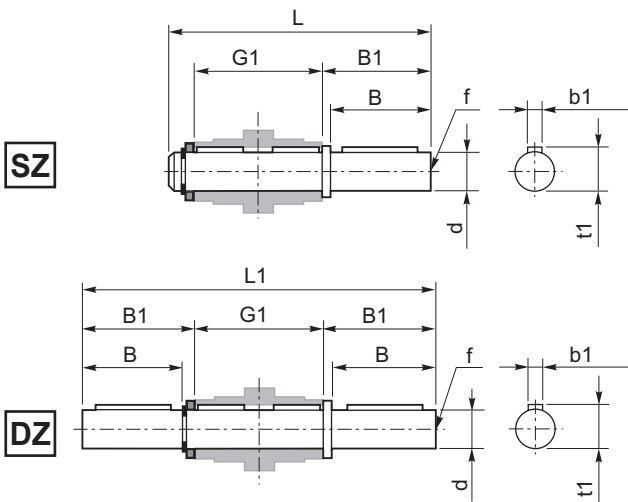
ECMB

| CMB | Flange uscita / Output flanges | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-----|--------------------------------|-----|-----|-----|-----------|----------|----|-----|-----|----------------|-----|-----|-----|-----------|----------|----|-----|-----|----------------|----|-----|----|---------|----------|-----|-----|-----|
| | F | | | | | | | | | FL | | | | | | | | | FB | | | | | | | | |
| | 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 | - | | | | | | | | | - | | | | | | | | |



Accessori

Accessories



Albero lento / Output shaft

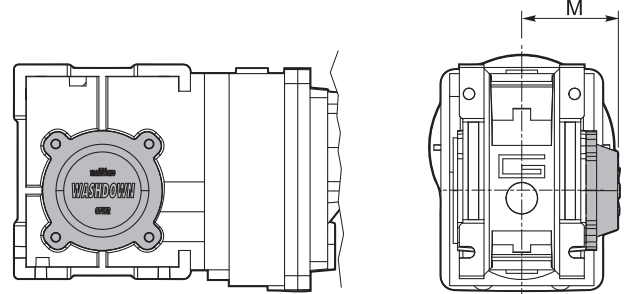
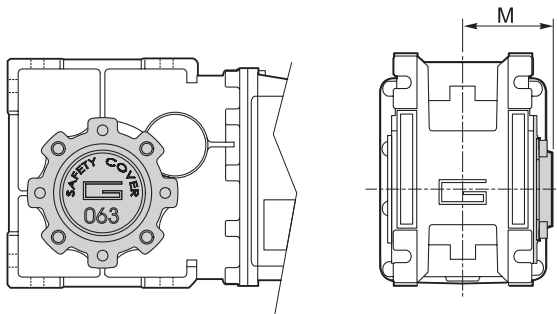
Braccio di reazione / Torque arm

| 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 |

| 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 |

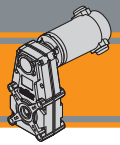
| CMB CMBIS | M |
|--------------|------|
| 402 | 55.5 |
| 502 | 63.5 |
| 633 | 71.5 |
| 903 | 95 |



Ferrite

Motoriduttori CC pendolari
DC helical parallel gearmotors

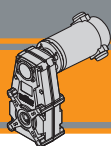




| Indice | Index | Pag. Page |
|--------------------------|------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | N2 |
| Designazione | <i>Classification</i> | N2 |
| Sensi di rotazione | <i>Direction of rotation</i> | N3 |
| Simbologia | <i>Symbols</i> | N3 |
| Lubrificazione | <i>Lubrication</i> | N3 |
| Carichi radiali | <i>Radial loads</i> | N4 |
| Dati tecnici | <i>Technical data</i> | N5 |
| Motori applicabili | <i>Motor adapters</i> | N7 |
| Dimensioni | <i>Dimensions</i> | N8 |

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

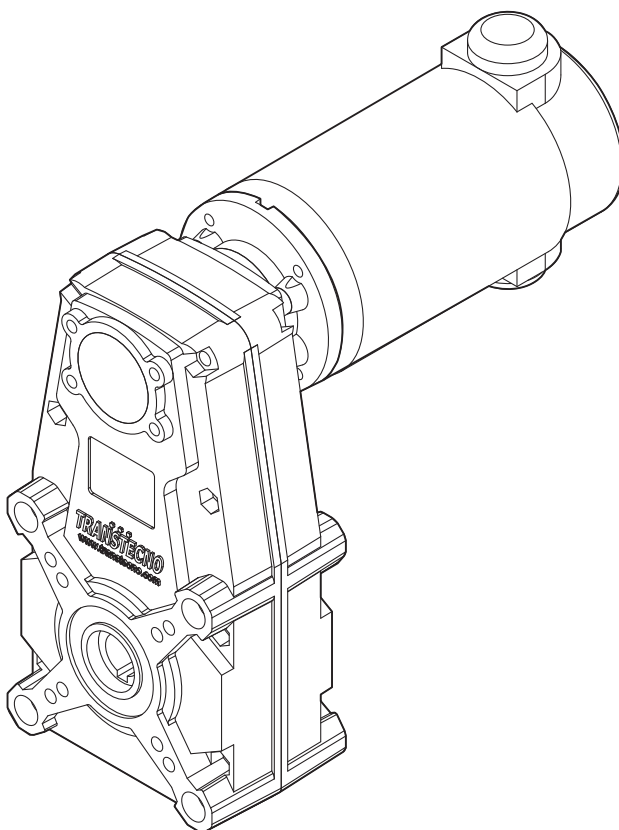
Technical features

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
- Magneti in ferrite
- Carcasa pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Ingranaggi cilindrici a denti elicoidali.

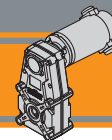
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.
- helical gears.



Designazione

Classification

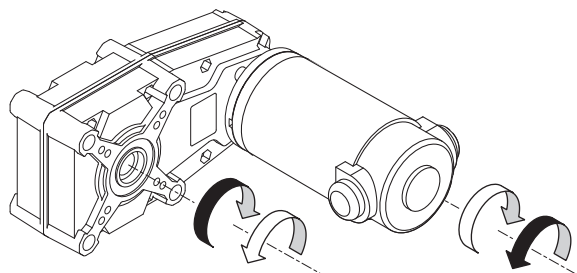
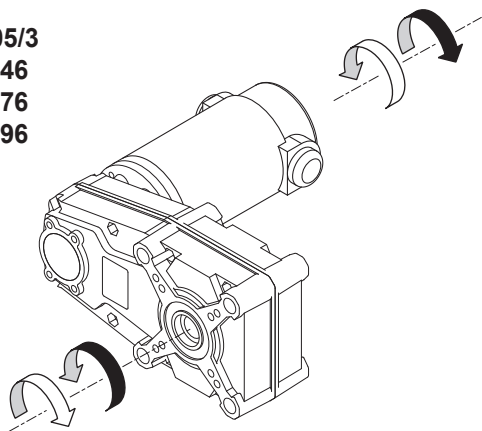
| MOTORIDUTTORE / GEARMOTORS | | | | | | | | | | |
|----------------------------|-------------------|-----------|-----------|---------|---------|---------|---------------------|----------------------------|---|----------------------------------|
| ECFT | 180/146 | | | | | | U | 60.63 | O20 | 240 |
| Tipo Type | Grandezza Size | | | | | | Versione Version | Rapporto Ratio | Albero cavo uscita Hollow output shaft | Versione motore Motor version |
| | 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 | | | | | | | |



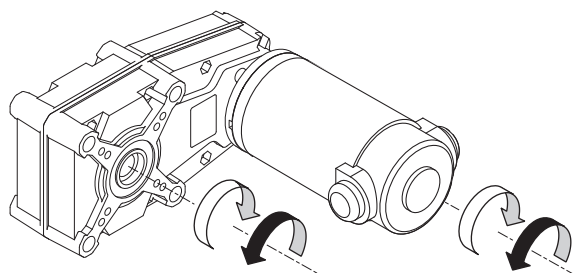
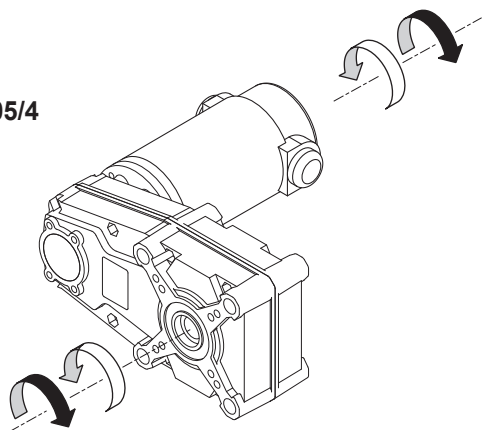
Sensi di rotazione

Direction of rotation

FT105/3
FT146
FT176
FT196



FT105/4



Simbologia

Symbols

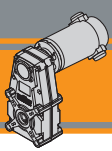
| | | |
|----------|-----------------------|--|
| n_1 | [min^{-1}] | Velocità in ingresso / <i>Input speed</i> |
| n_2 | [min^{-1}] | Velocità in uscita / <i>Output speed</i> |
| i | | Rapporto di riduzione / <i>Ratio</i> |
| P_1 | [kW] | Potenza in entrata / <i>Input power</i> |
| M_2 | [Nm] | Coppia 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

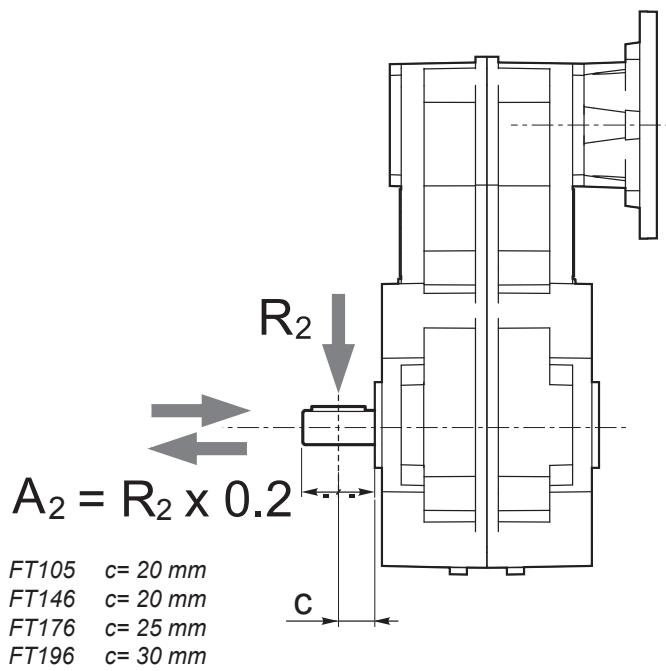
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

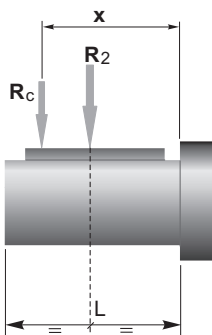
Radial loads



| 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 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:

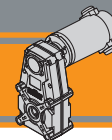


| | FT105 | FT146 | FT176 | FT196 |
|-------------------|-------|-------|-------|-------|
| a | 82 | 82,5 | 115 | 132 |
| b | 62 | 62,5 | 90 | 102 |
| R _{2MAX} | 2000 | 3000 | 5000 | 7000 |

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



$$R \leq R_c$$

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



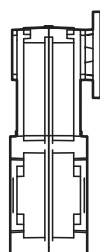
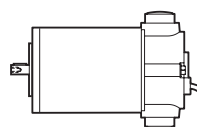
Dati tecnici

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 |
|---------------------------|--|------------------------|-----|--------|---|----------------------------------|---------------------------|--|------------------------|-----|--------|---|----------------------------------|
| 800 | | | | | | | 800 | | | | | | |
| (3000 min ⁻¹) | 207 | 35 | 3.1 | 14.49 | 600/176 | 120/240 | (3000 min ⁻¹) | 147 | 49 | 5.6 | 20.41 | 600/196 | 120/240 |
| | 173 | 41 | 2.8 | 17.31 | | 120.66/240.66 | | 86 | 83 | 3.7 | 34.81 | | 120.66/240.66 |
| | 143 | 50 | 2.5 | 20.97 | | | | 70 | 102 | 3.4 | 42.61 | | |
| | 122 | 59 | 2.4 | 24.56 | | | | 51 | 142 | 2.7 | 59.36 | | |
| | 102 | 70 | 2.0 | 29.33 | | | | 41 | 174 | 2.5 | 72.68 | | |
| | 87 | 83 | 1.8 | 34.62 | | | | 32 | 222 | 1.9 | 92.82 | | |
| | 80 | 90 | 1.7 | 37.50 | | | | 24 | 297 | 1.4 | 123.95 | | |
| | 73 | 99 | 1.6 | 41.35 | | | | 19 | 378 | 1.1 | 158.02 | | |
| | 67 | 107 | 1.5 | 44.79 | | | | 15 | 483 | 0.9 | 201.80 | | |
| | 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 | | | | | | | | | |

Motori applicabili

Motor adapters

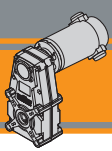


| | | EC | | | | | |
|----|-------|--------------------|-------------------------------|--------------------|----------------|--------------------|--------------------|
| | | 070.12E 070.24E | 100.120 100.240 100.24E | 180.120 180.240 | 180.24E | 250.120 250.240 | 350.120 350.240 |
| FT | 105/3 | 20.57 - 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

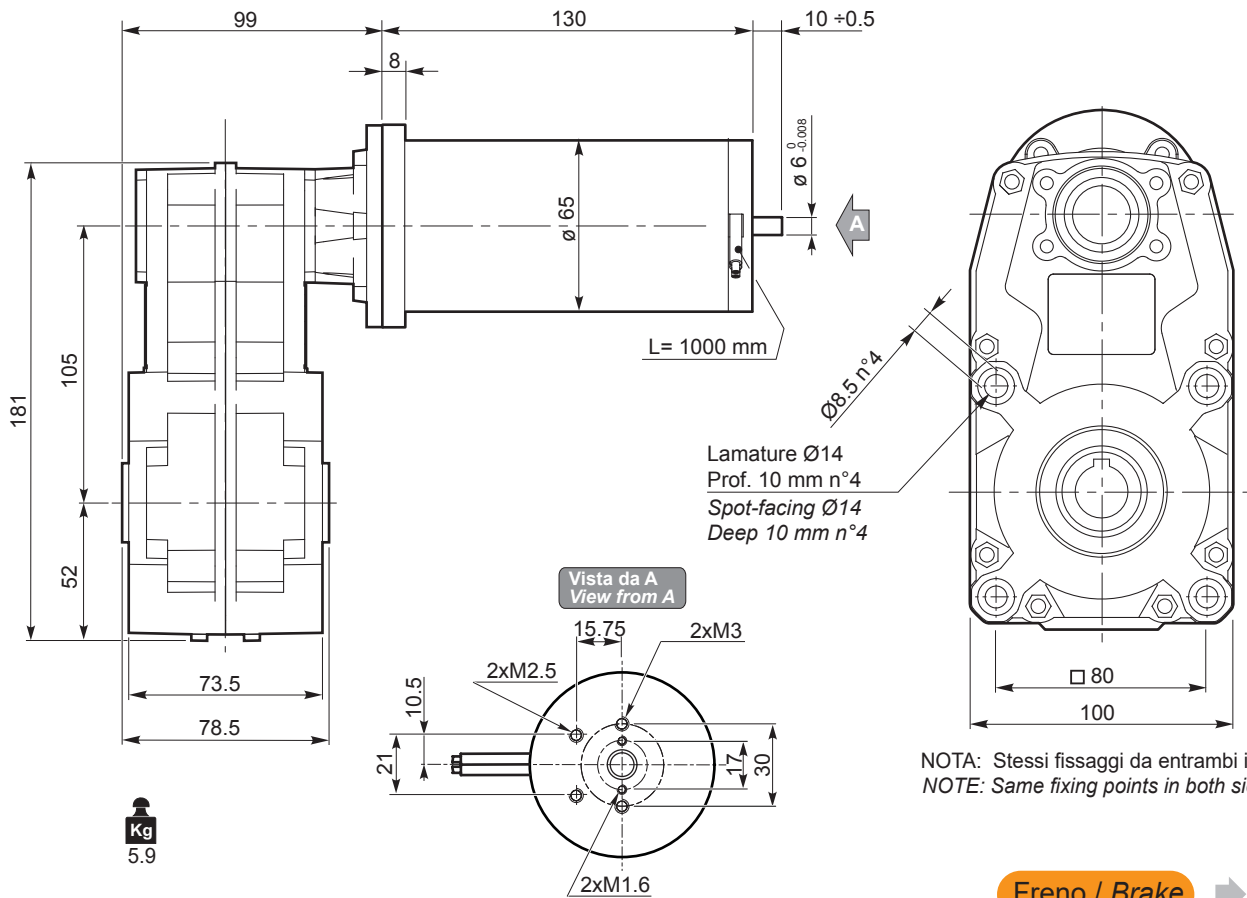
Rapporti di riduzione i
Ratio i

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



ECFT 070/105

ECFT 070/105...U

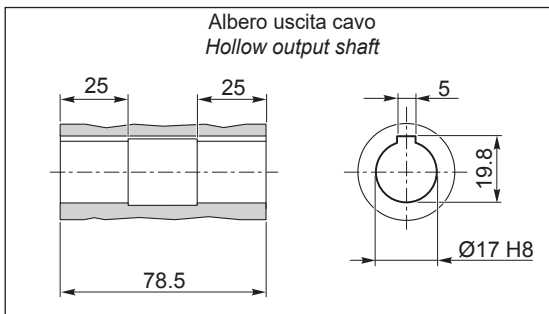


Freno / Brake → H23

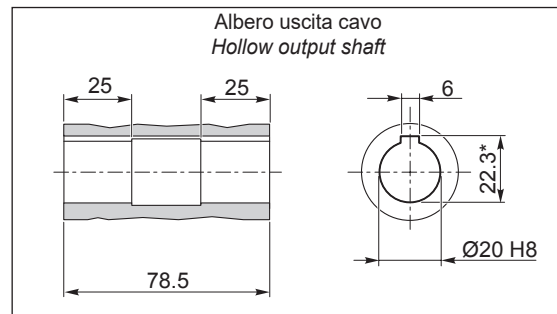
Encoder → H24

Motori / Motors IP66 → I2

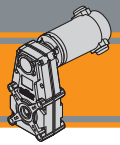
O17



O20



*: Sede linguetta ribassata / Special keyway

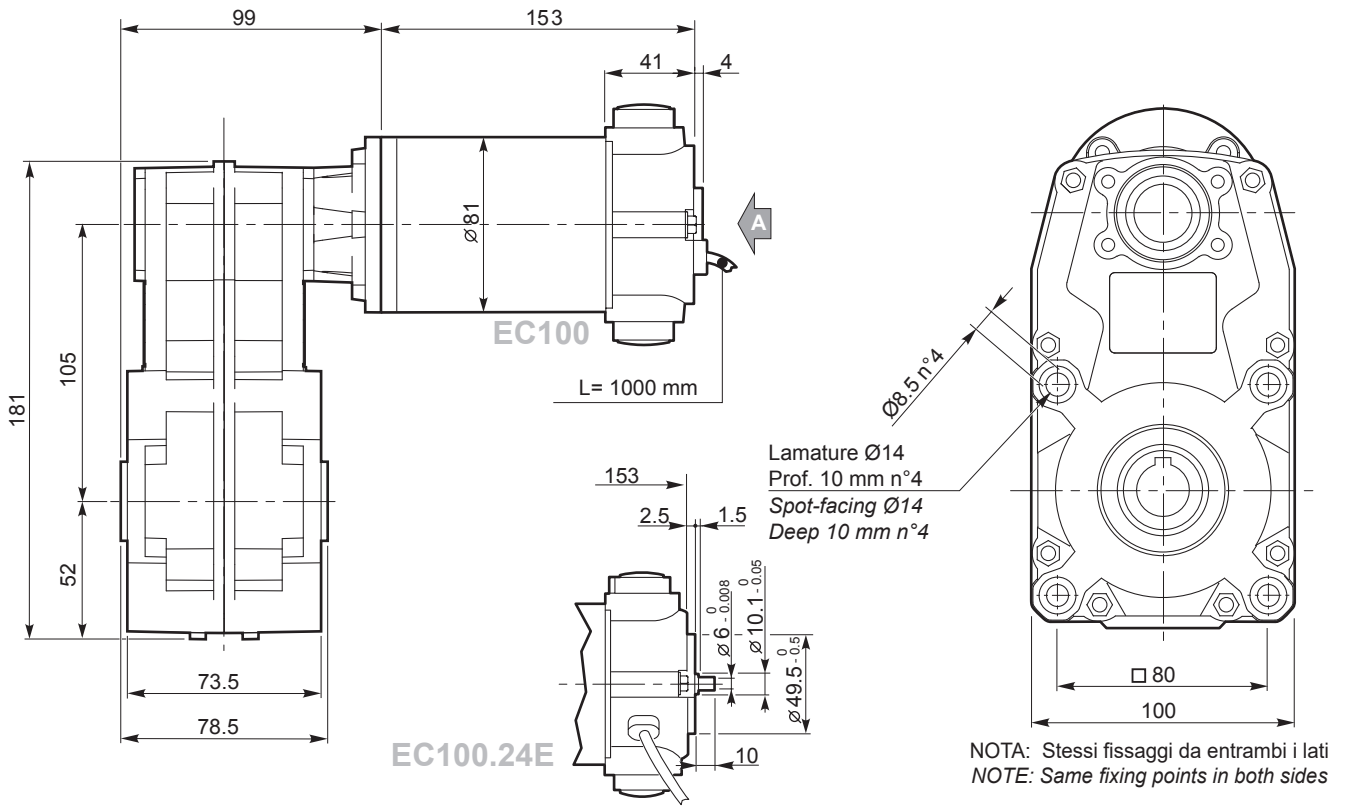


Dimensioni

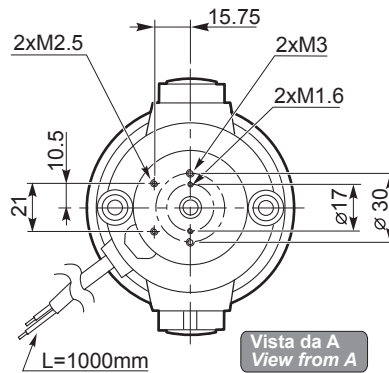
Dimensions

ECFT 100/105

ECFT 100/105...U



Kg
6.9



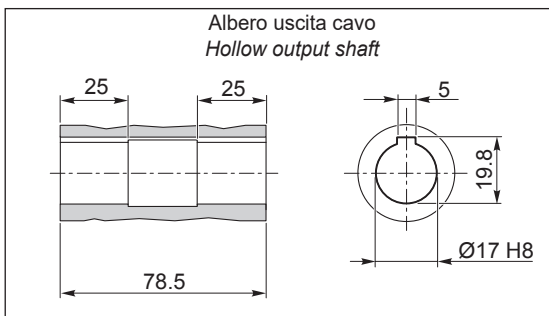
Freno / Brake → H23

Encoder → H24

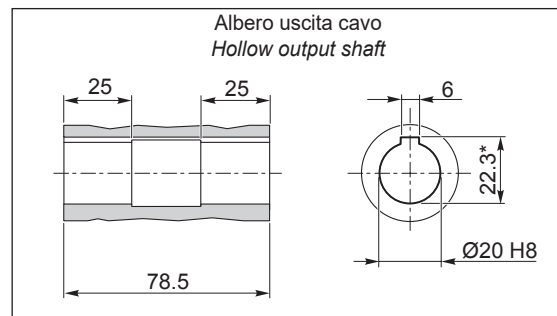
Motori / Motors IP66 → I4

ECFT

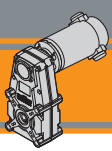
O17



O20

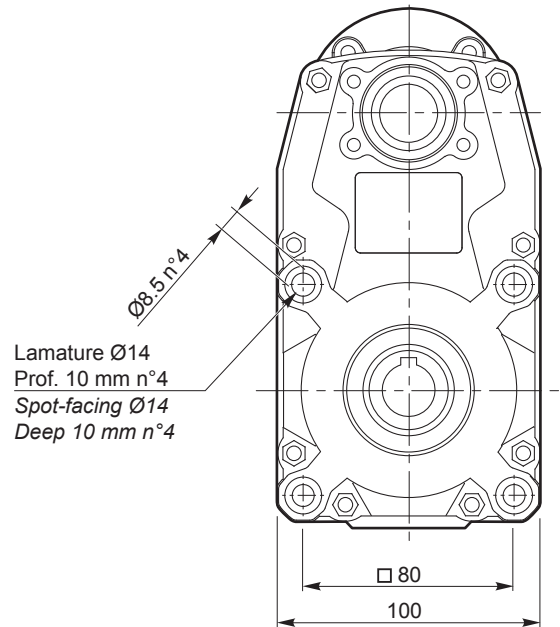
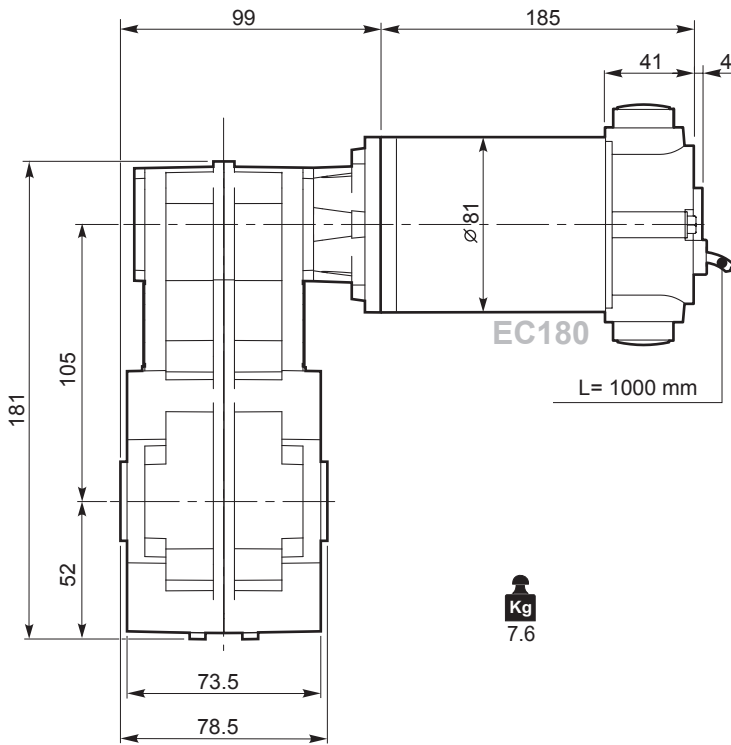


*: Sede linguetta ribassata / Special keyway



ECFT 180/105

ECFT 180/105...U



Lamature $\varnothing 14$
Prof. 10 mm n°4
Spot-facing $\varnothing 14$
Deep 10 mm n°4

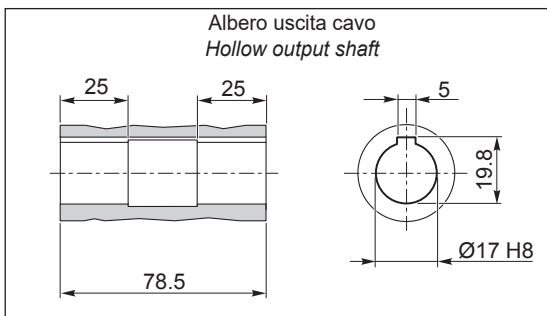
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

Freno / Brake → H23

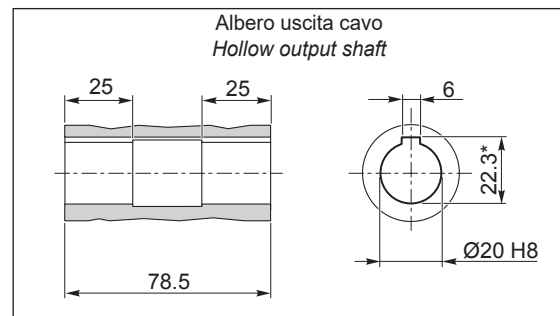
Encoder → H24

Motori / Motors IP66 → I6

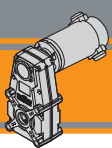
O17



O20



*: Sede linguetta ribassata / Special keyway

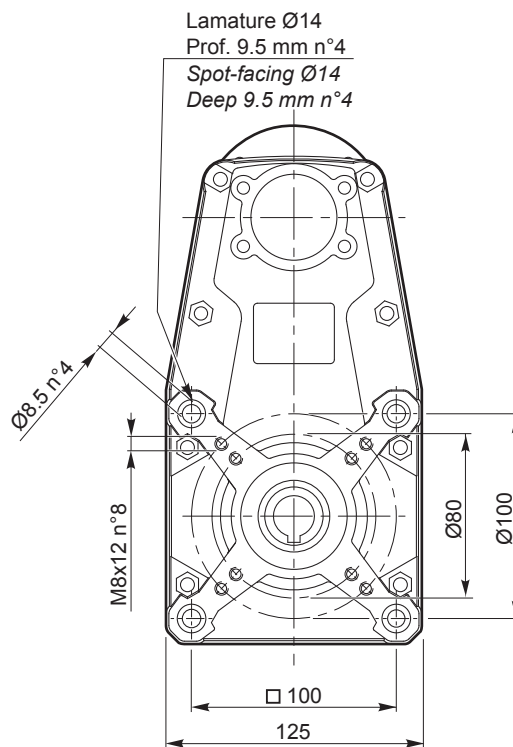
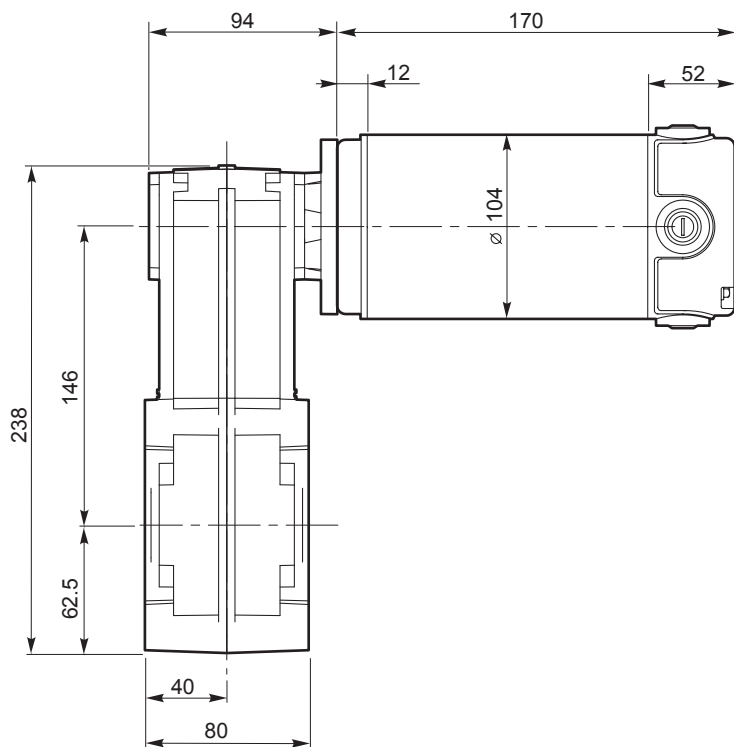


Dimensioni

Dimensions

ECFT 250/146

ECFT 250/146 U



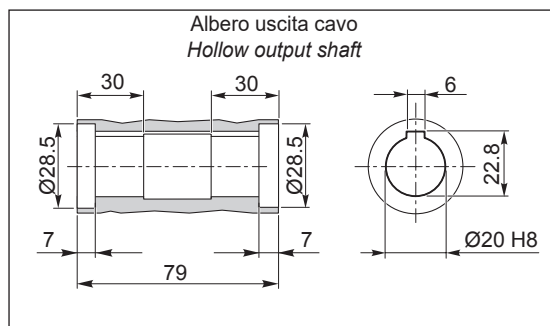
Kg
8.9

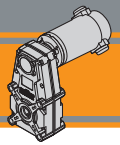
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

Motori / Motors IP66

18

O20



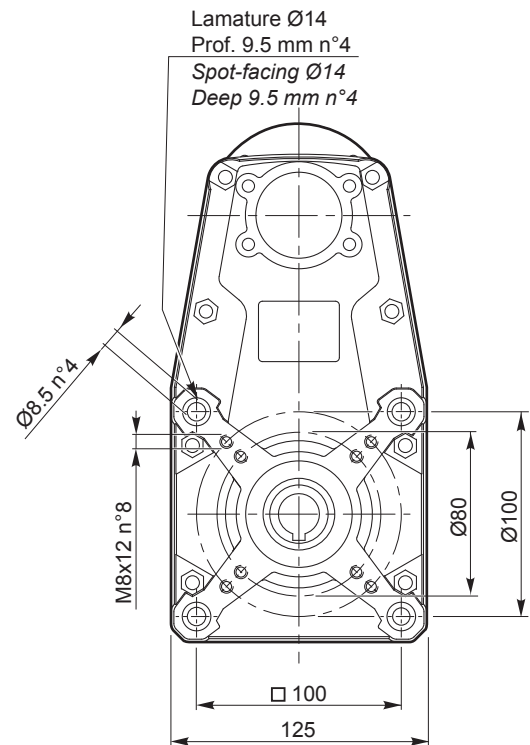
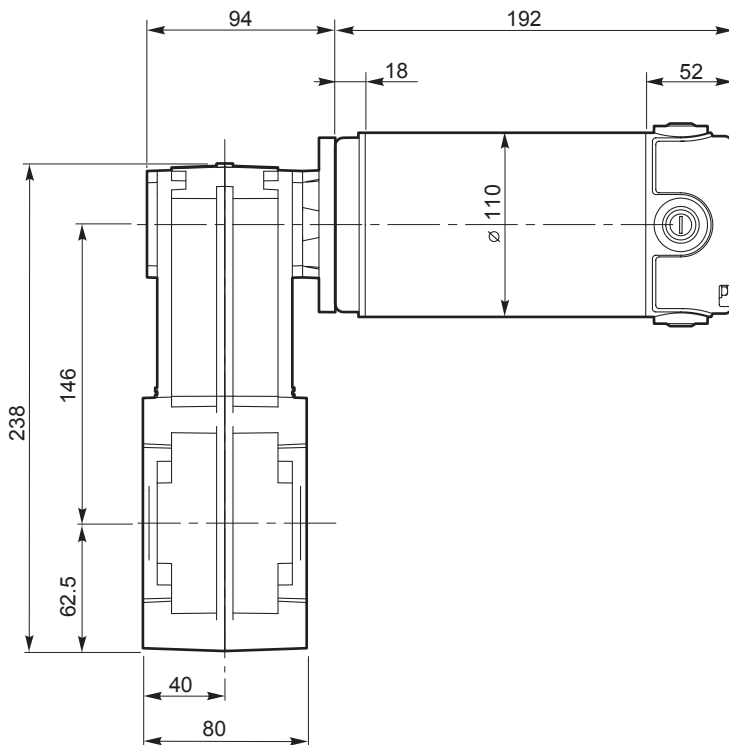


Dimensioni

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

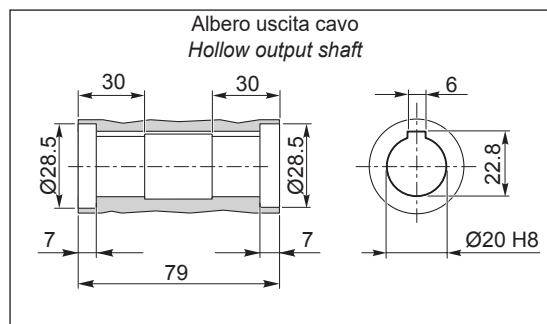


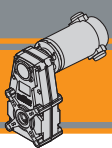
Motori / Motors IP66



ECFT

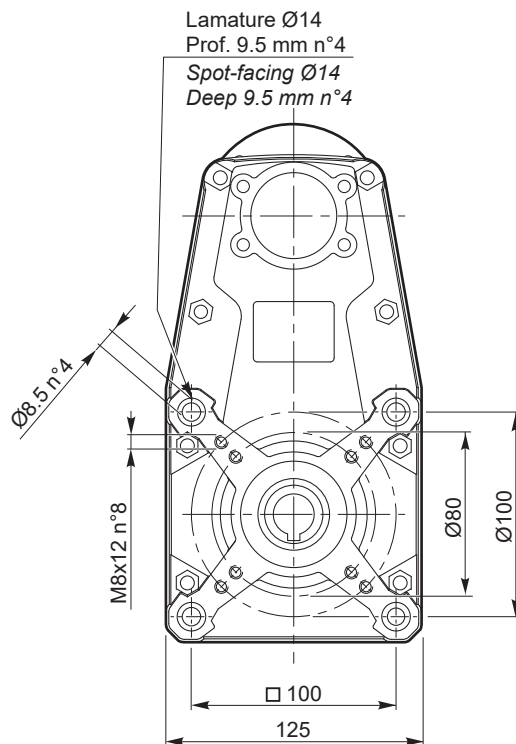
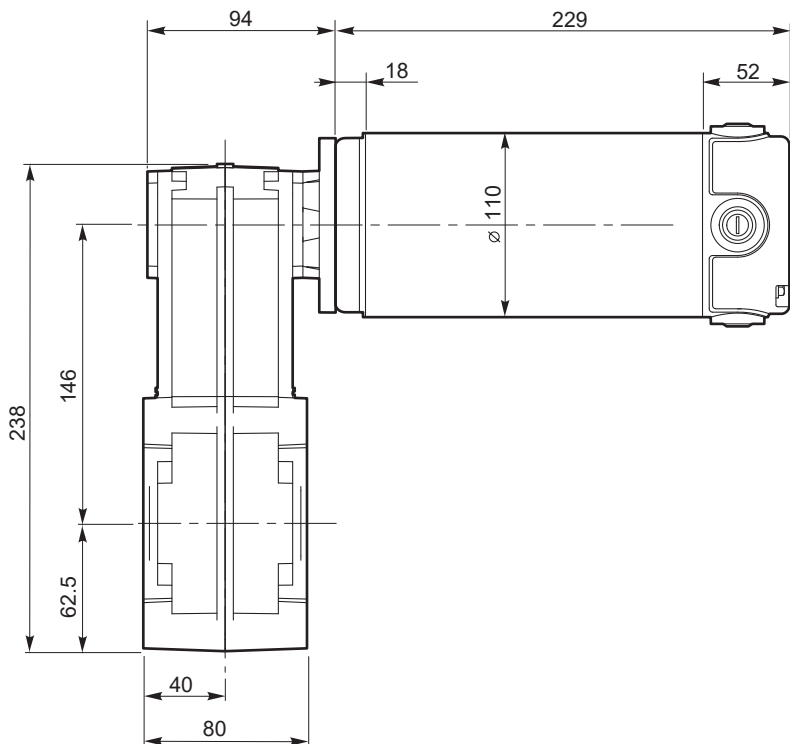
O20





ECFT 600/146

ECFT 600/146 U



Kg
11.8

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

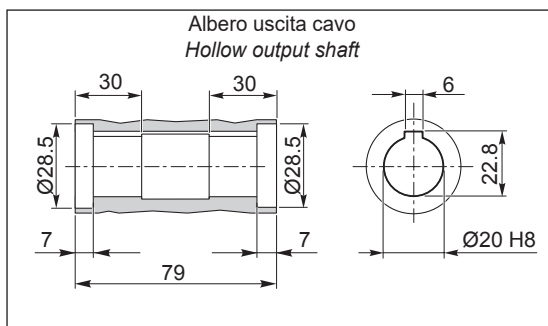
Freno / Brake

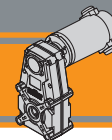


Motori / Motors IP66



O20



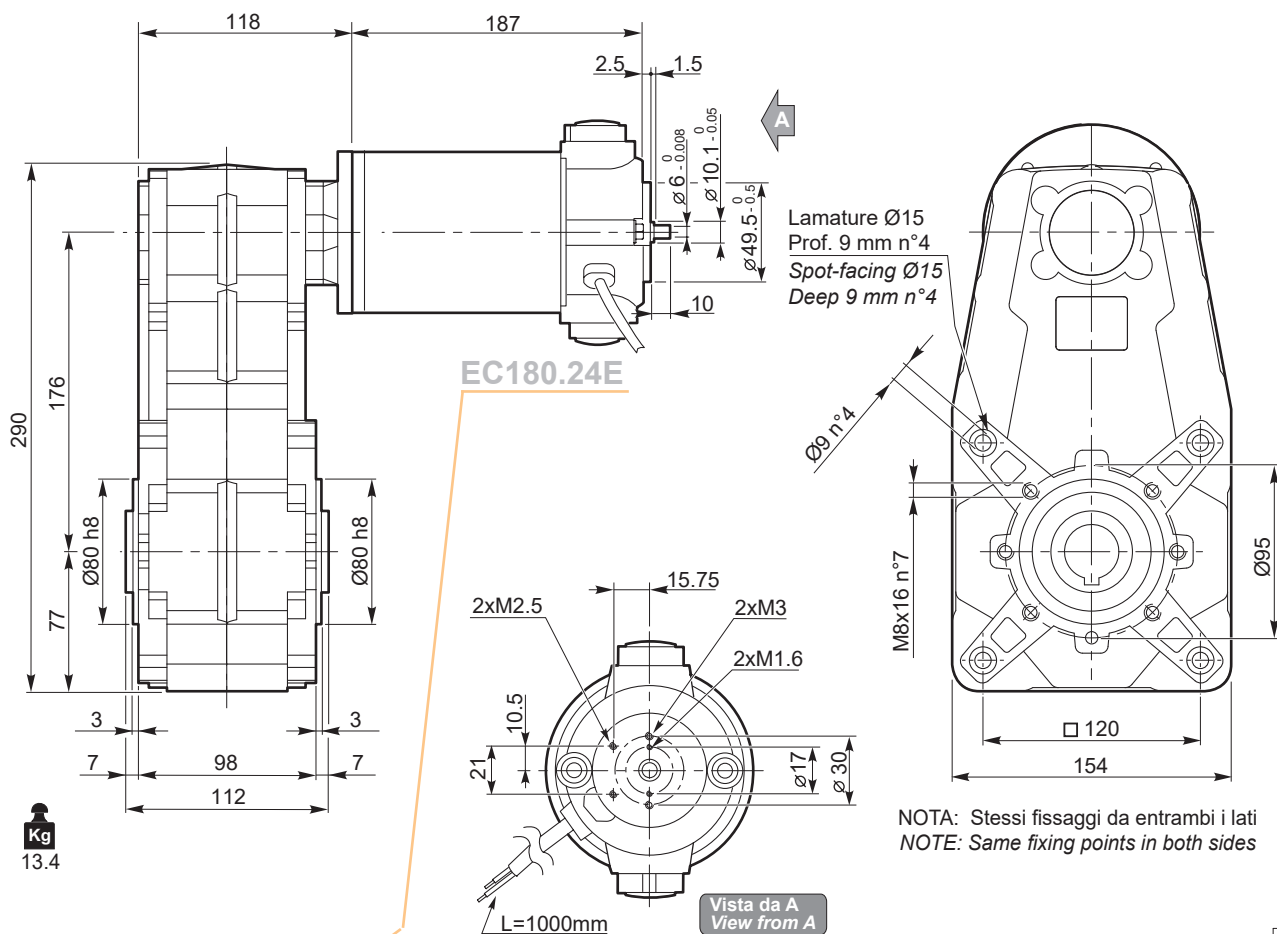


Dimensioni

Dimensions

ECFT 180/176.24E

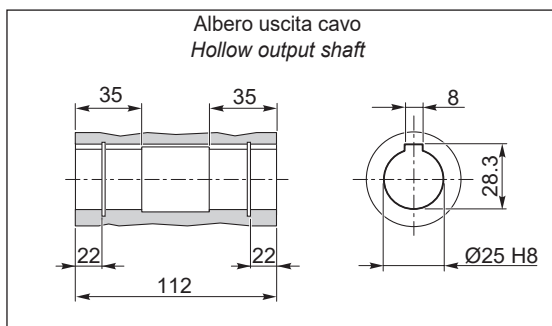
ECFT 180/176.24E U



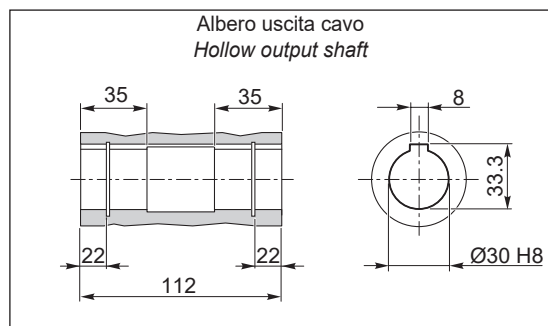
Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

Encoder → H24

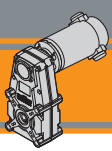
O25



O30

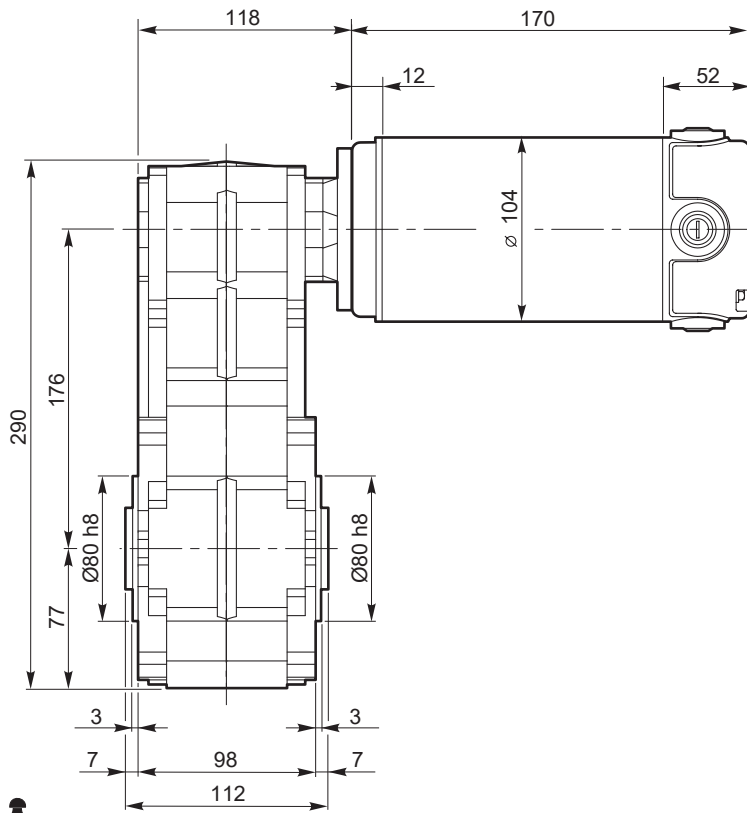


ECFT

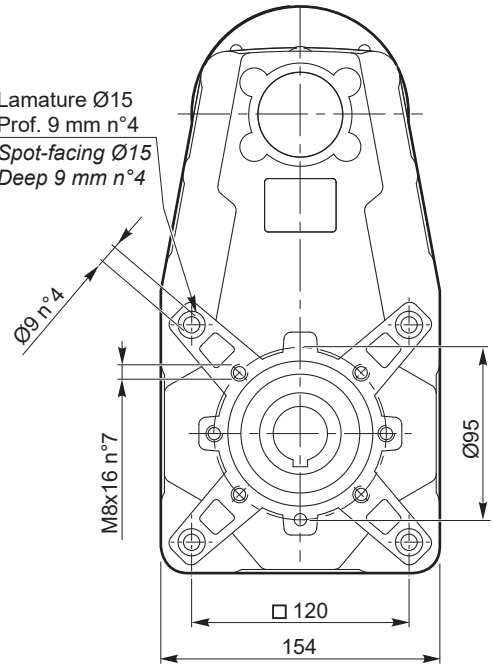


ECFT 250/176

ECFT 250/176 U



Lamature Ø15
Prof. 9 mm n°4
Spot-facing Ø15
Deep 9 mm n°4



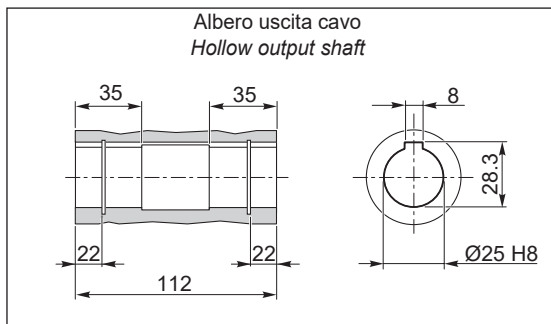
Kg
14.2

Motori / Motors IP66

110

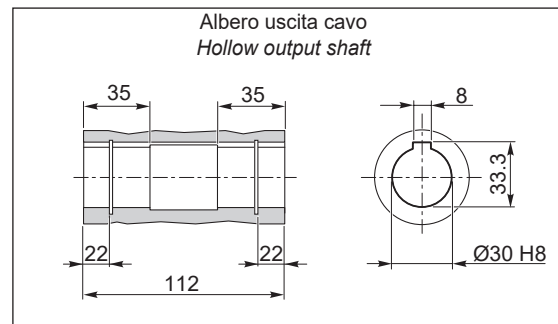
O25

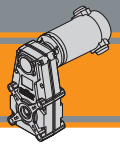
Albero uscita cavo
Hollow output shaft



O30

Albero uscita cavo
Hollow output shaft



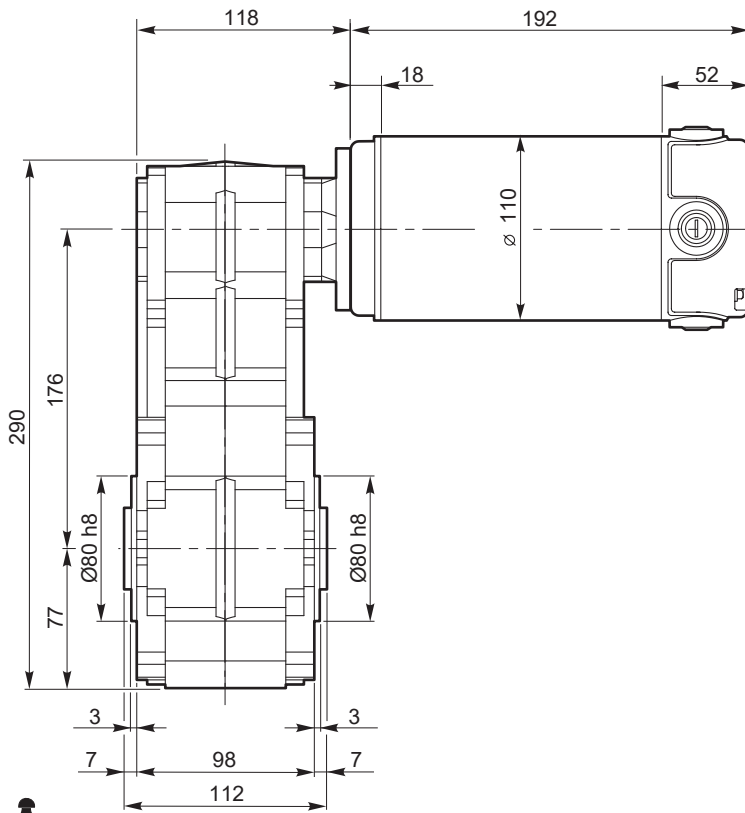


Dimensioni

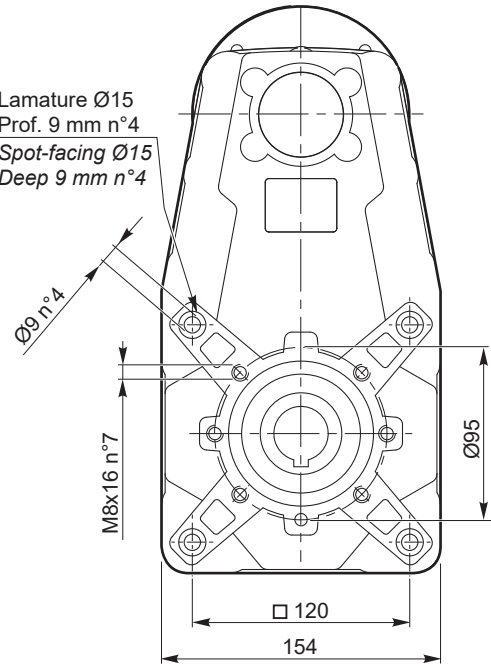
Dimensions

ECFT 350/176

ECFT 350/176 U



Lamature Ø15
Prof. 9 mm n°4
Spot-facing Ø15
Deep 9 mm n°4



Kg
15.3

Freno / Brake

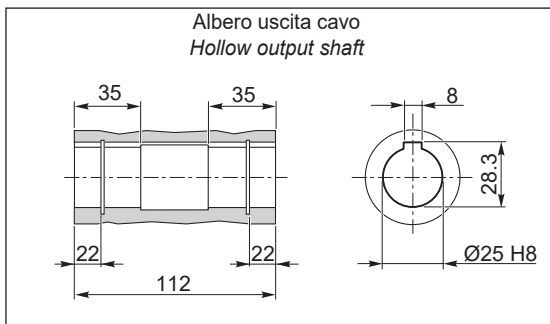
H23

Motori / Motors IP66

I10

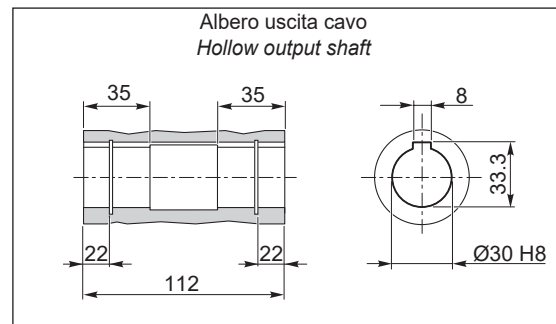
O25

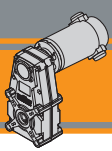
Albero uscita cavo
Hollow output shaft



O30

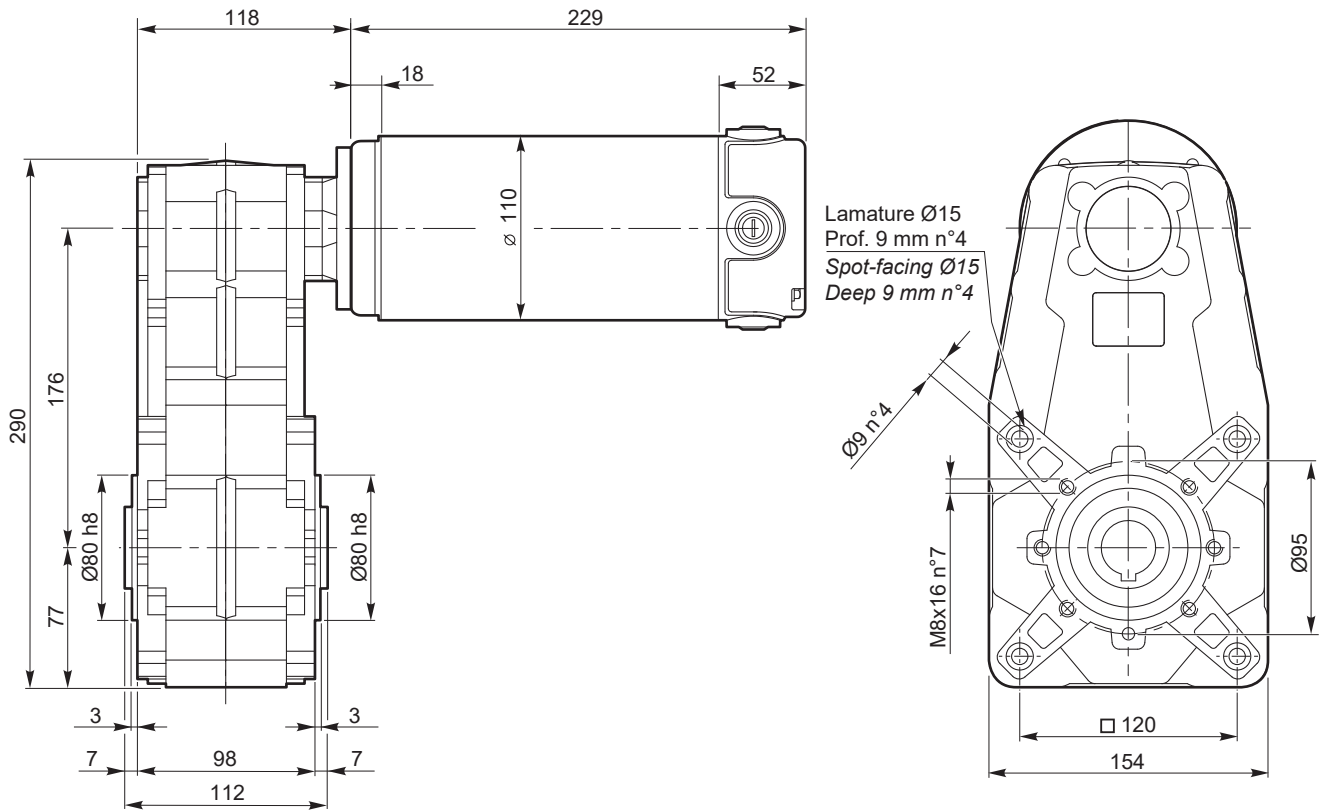
Albero uscita cavo
Hollow output shaft





ECFT 600/176

ECFT 600/176 U



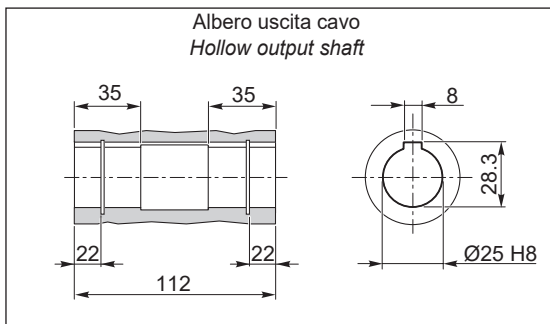
Kg
17.1

Freno / Brake → **H23**

Motori / Motors IP66 → **I10**

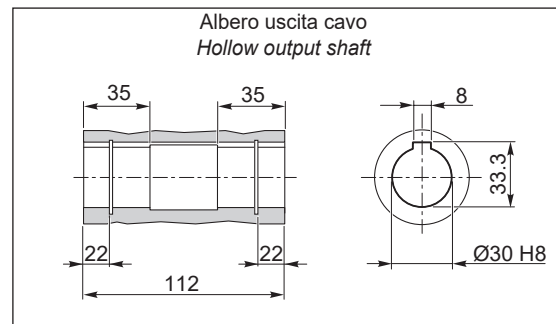
O25

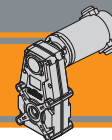
Albero uscita cavo
Hollow output shaft



O30

Albero uscita cavo
Hollow output shaft



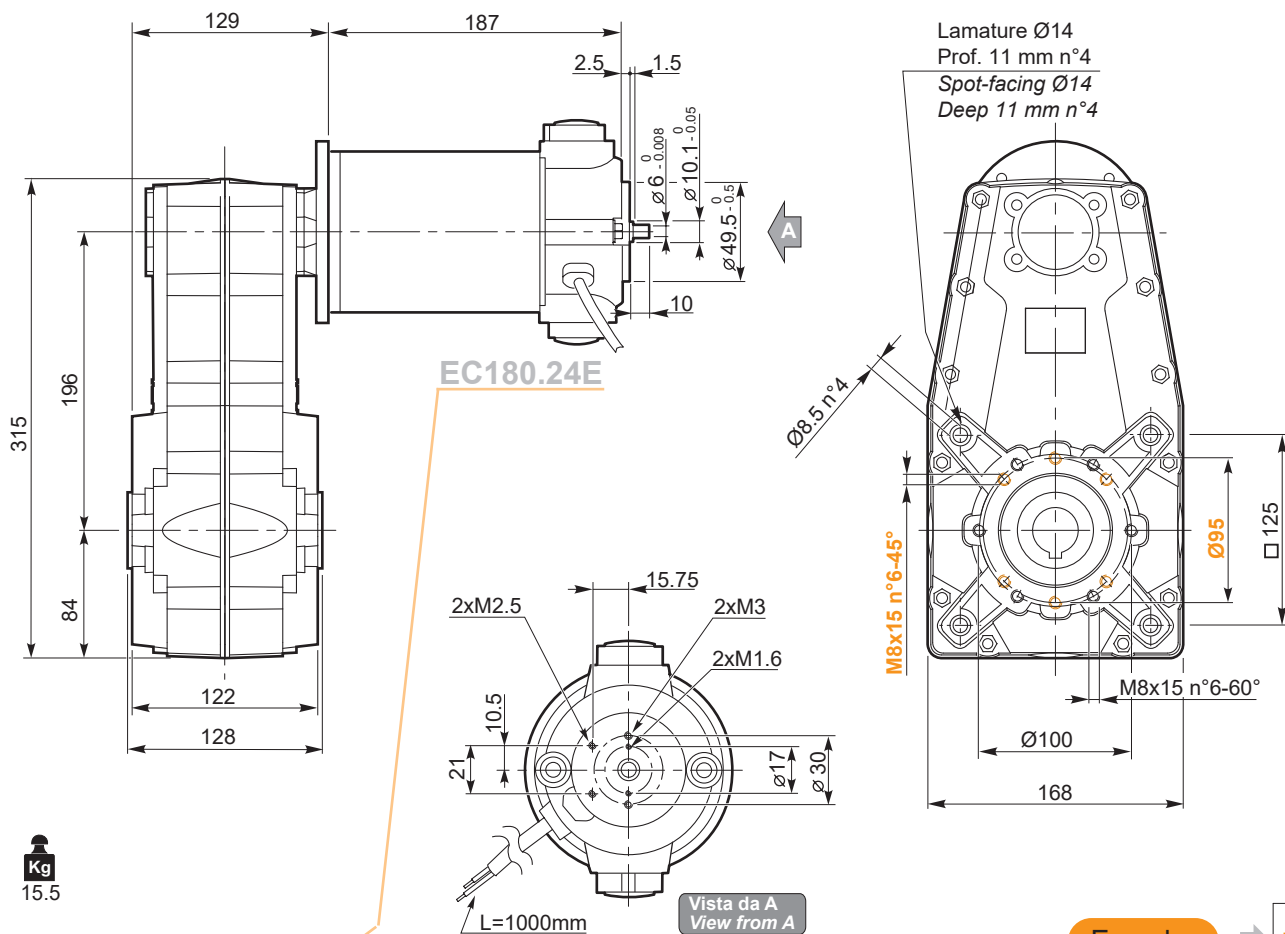


Dimensioni

Dimensions

ECFT 180/196.24E

ECFT 180/196.24E U

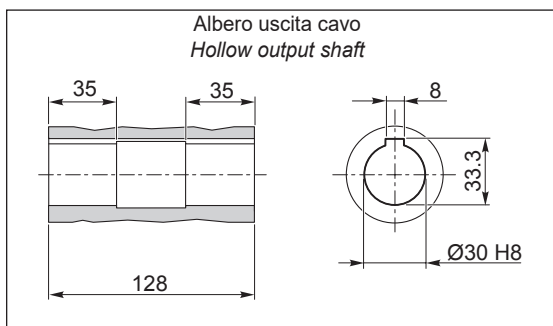


Nota: Motore inclinato con portaspazzole a 45°
Note: Motor assembly with brush holder inclined 45°

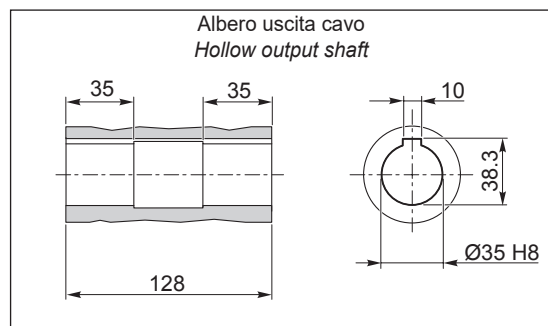
Encoder

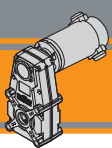
H24

O30



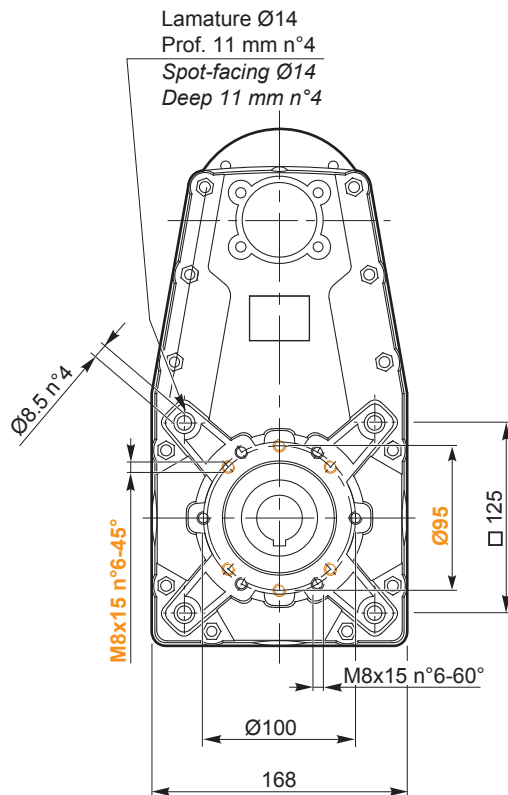
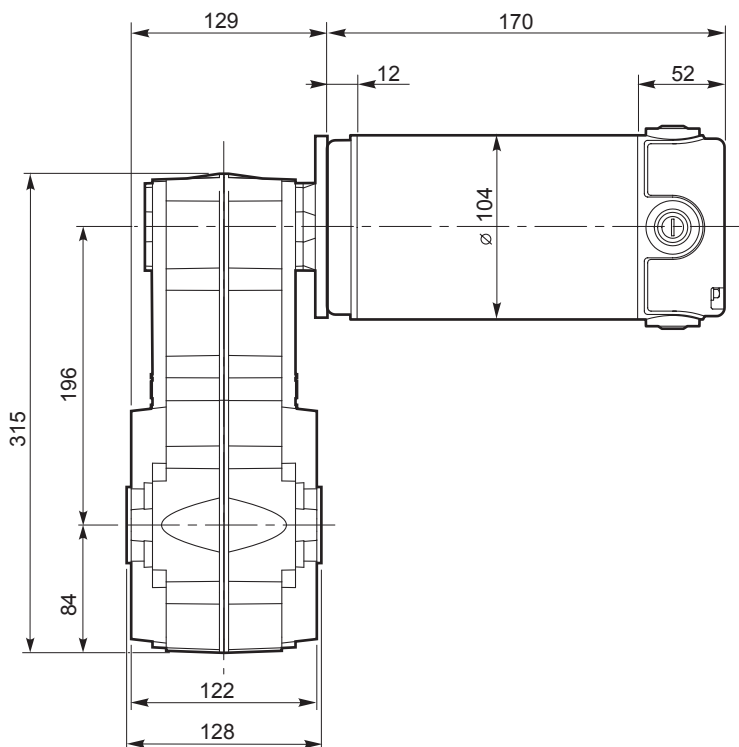
O35





ECFT 250/196

ECFT 250/196 U



Kg
16.3

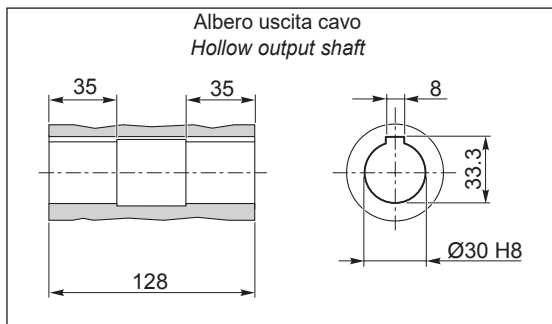
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

Motori / Motors IP66

18

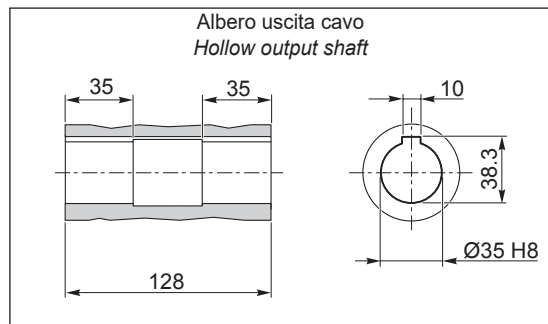
O30

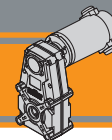
Albero uscita cavo
Hollow output shaft



O35

Albero uscita cavo
Hollow output shaft



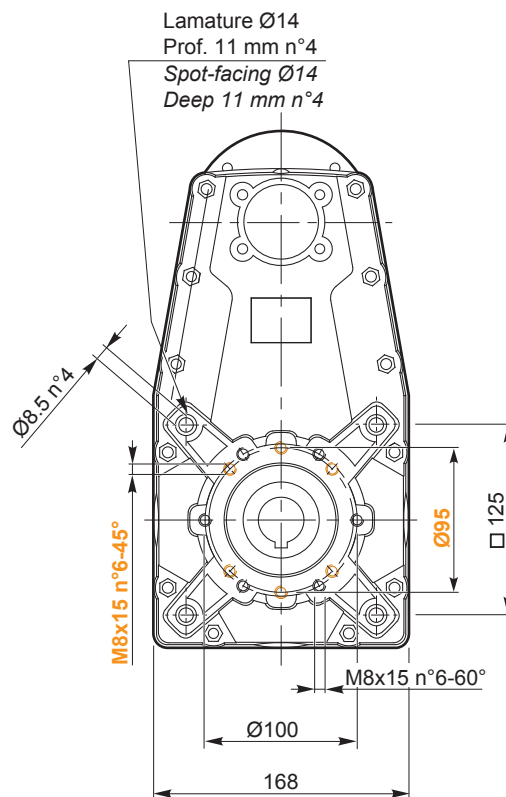
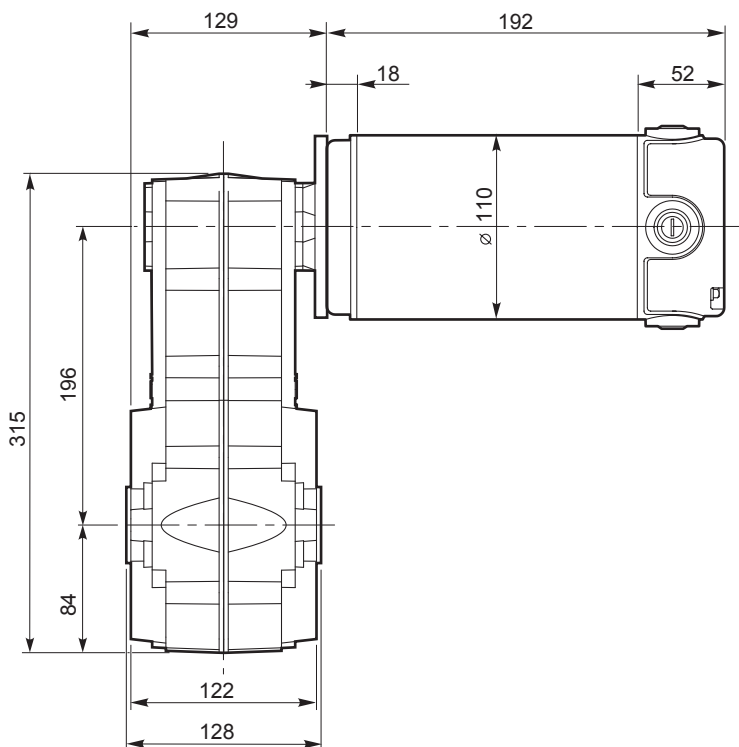


Dimensioni

Dimensions

ECFT 350/196

ECFT 350/196 U



Kg
17.4

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

Freno / Brake

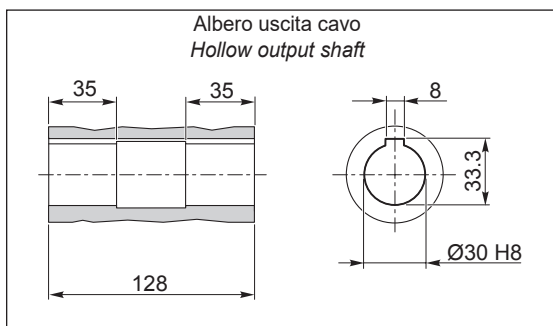
H23

Motori / Motors IP66

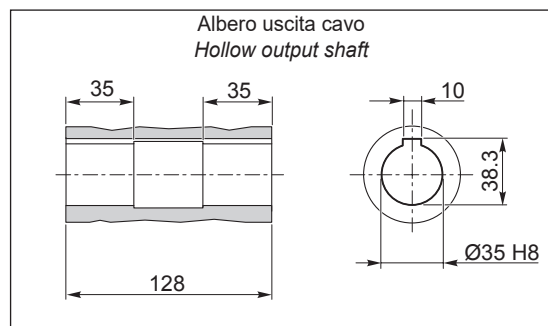
I10

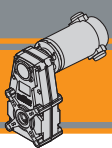
ECFT

O30



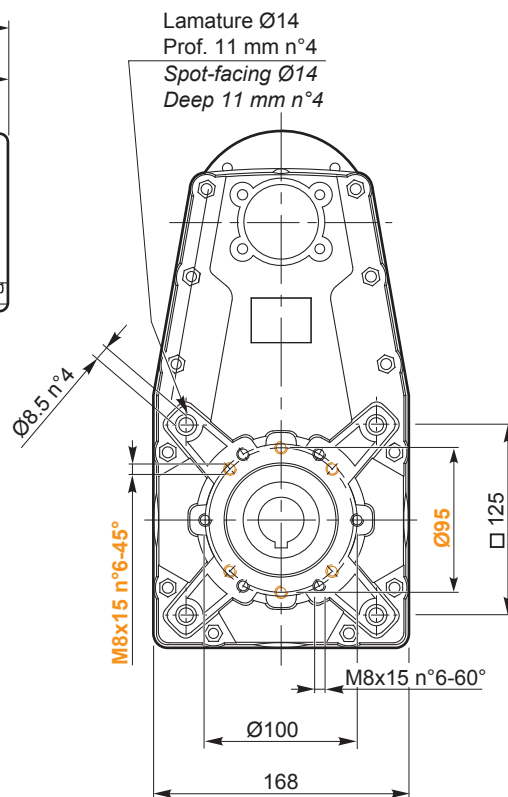
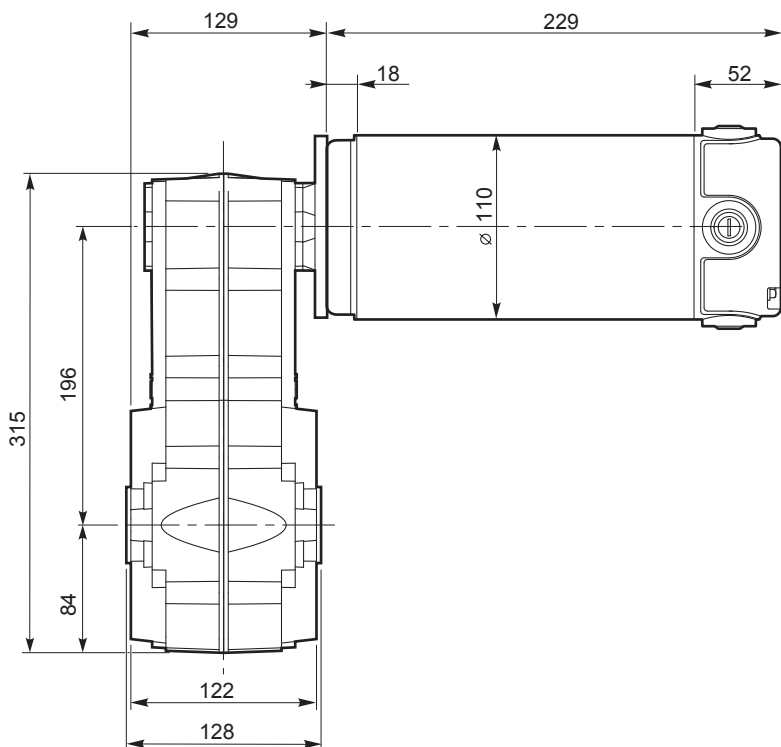
O35





ECFT 600/196

ECFT 600/196 U



Kg
19.2

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

Freno / Brake

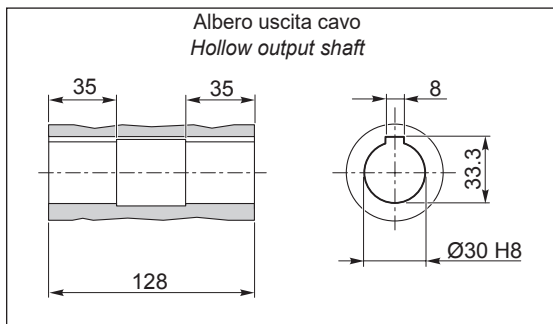
H23

Motori / Motors IP66

I12

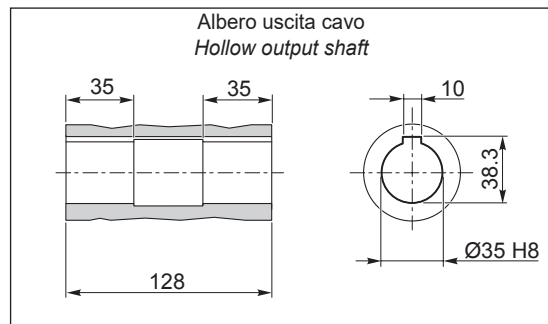
O30

Albero uscita cavo
Hollow output shaft



O35

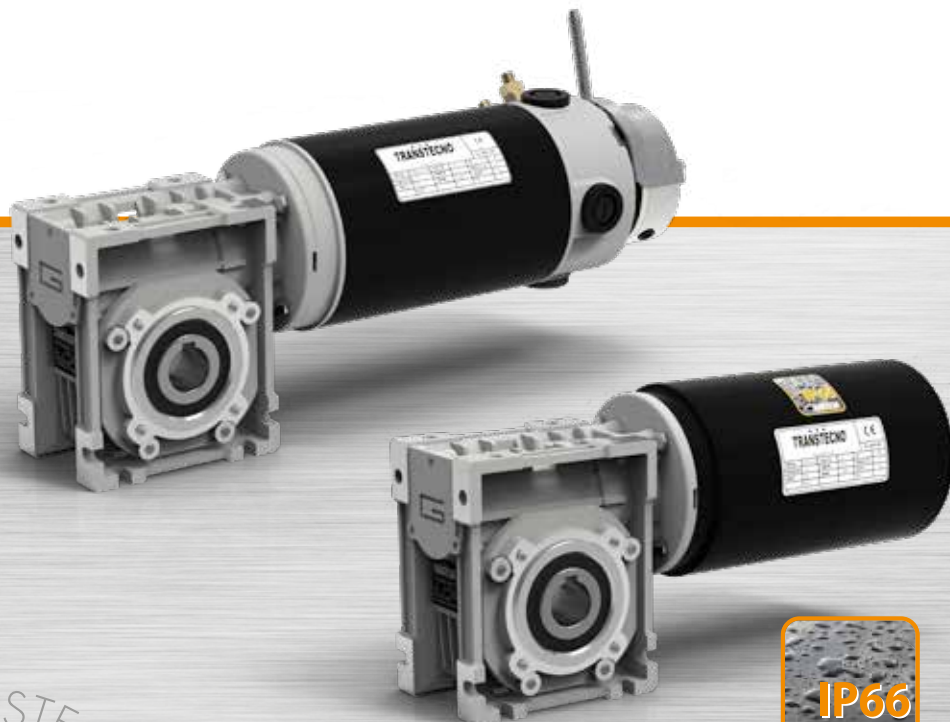
Albero uscita cavo
Hollow output shaft





Ferrite

Motoriduttori CC a vite senza fine DC wormgearmotors

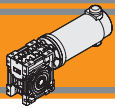




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| Designazione | <i>Classification</i> | 02 |
| Simbologia | <i>Symbols</i> | 02 |
| Lubrificazione | <i>Lubrication</i> | 03 |
| Carichi radiali | <i>Radial loads</i> | 03 |
| Dati di dentatura | <i>Toothing data</i> | 04 |
| Rendimento | <i>Efficiency</i> | 04 |
| Dati tecnici per servizio S2 | <i>Technical data for S2 duty</i> | 05 |
| Motori applicabili | <i>Motor adapters</i> | 06 |
| Dimensioni | <i>Dimensions</i> | 07 |
| Opzioni | <i>Options</i> | 020 |
| Accessori | <i>Accessories</i> | 021 |

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Caratteristiche tecniche

Technical features

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

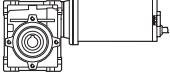
The main features of ECM ferrite permanent magnets DC wormgearmotors range are:

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

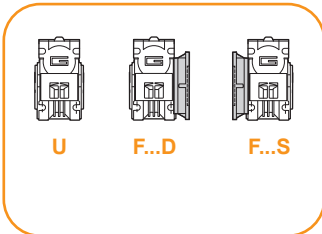
- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 to 800W S2
- Ferrite magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication.

Designazione

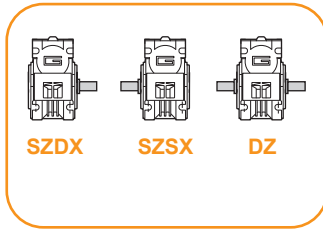
Classification

| 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 |
|  | 070/026 | 100/026 | 180/026 | 250/030 | 350/030 | 600/040 | U F... | Vedere tabella See tables | SZDX SZSX DZ | BRDX BRSX | 0° 90° 180° 270° | 120 240 24E | VS |
| | 070/026 (D11) 070/026 (D14) 070/030 | 100/0026 (D11) 100/026 (D14) 100/030 100/040 | 180/026 (D11) 180/026 (D14) 180/030 180/040 180/050 | 250/040 250/050 250/063 | 350/040 350/050 350/063 350/070 | 600/050 600/063 600/070 | | | | | | | |

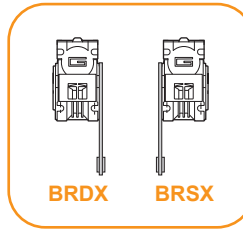
Versione Riduttore
Gearbox Version



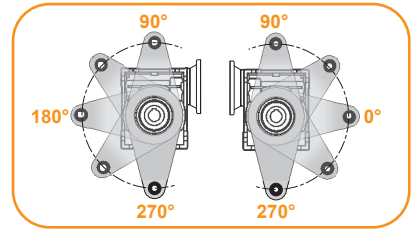
Albero di uscita
Output shaft



Braccio di reazione
Torque arm *



Angolo
Angle



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

Simbologia

Symbols

| | | | |
|----------------------------|---|-----------|---|
| n_1 [min ⁻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

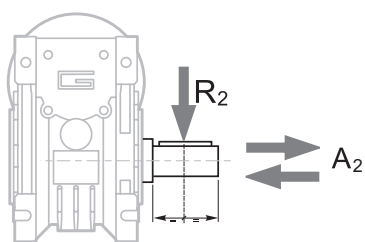
Lubrication

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

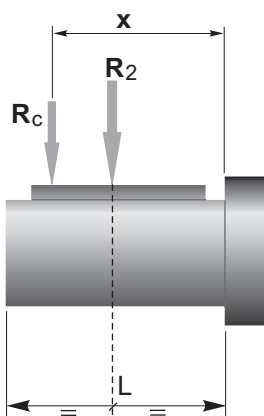


$A_2 = R_2 \times 0.2$

| n ₂ [min ⁻¹] | R ₂ [N] | | | | | |
|--|--------------------|-------|-------|-------|-------|-------|
| | CM026 | CM030 | CM040 | 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:

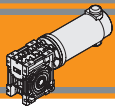


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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 |



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 |
| 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 |
| 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 |
| 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 |
| 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 |

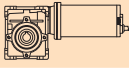
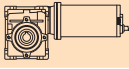
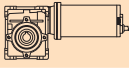
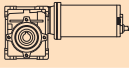


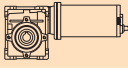
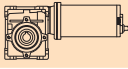
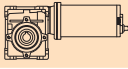
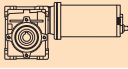
Rendimento teorico del riduttore dopo il rodaggio
Theoretical efficiency of the gearbox after the first running period

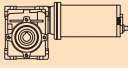
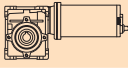
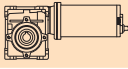


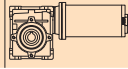
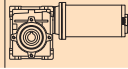
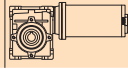

Dati tecnici per servizio S2

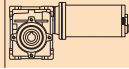
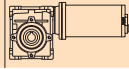
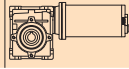
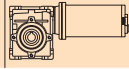
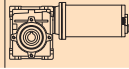

Technical data for S2 duty

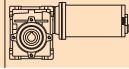
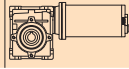
| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | |
|---------------------------|--|------------------------|-----|-----|---|---|--------------------|
| 100 | | | | | | | |
| (3000 min ⁻¹) | 600 | 1.4 | 7.1 | 5 |  | ECM070/026 12E/24E | |
| | 400 | 2.1 | 5.3 | 7.5 | | 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 | | | |

| 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 | | 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 | |  |
| | 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 |  | |
| | 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 | | |

| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|-----|---|---|
| 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 | |  |
| | 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 | | |
| | 30 | 16 | 0.7 | 100 | | |
| | | | | | | 120/240 |
| | | | | | | 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 | |  |
| | 60 | 28 | 2.0 | 50 | IEC 63B14 | |
| | 50 | 32 | 1.6 | 60 |  | |
| | 38 | 39 | 1.2 | 80 | Solo / Only | |
| | 30 | 46 | 0.9 | 100 | | |

| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|-----|---|---|
| 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 | |  |
| | 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 |  | |
| | 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 | | Solo / Only |
| | 30 | 67 | 1.2 | 100 | | |

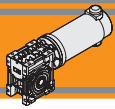
| P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version |
|---------------------------|--|------------------------|-----|-----|---|----------------------------------|
| 500 | | | | | | |
| (3000 min ⁻¹) | 600 | 7.1 | 1.8 | 5 |  | ECM350/030 120/240 |
| | 400 | 11 | 1.4 | 7.5 | | 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 | | |

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

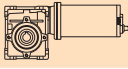
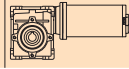
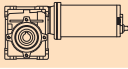
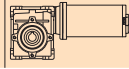
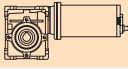
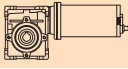

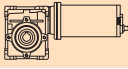

NOTE: for continuous or highly intermittent duty, please contact our technical service

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



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 | | | | 600/050 | 12 | 4.7 | 5 | 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 | 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 |  | ECM350/070 | 120/240 | 38 | 132 | 0.7 | 80 | | | | |
| | 50 | 69 | 2.1 | 60 | | IEC 71B5 | | 30 | 114 | 0.7 | 100 | | | | |
| | 38 | 85 | 1.5 | 80 | |  | | 120 | 53 | 2.6 | 25 | 120/240 | | | |
| | 30 | 99 | 1.2 | 100 | | Solo / Only | | 100 | 61 | 3.0 | 30 | IEC 71B5 | | | |
| | | | | | | | | 75 | 78 | 2.1 | 40 | | | | |
| | | | | | | | 60 | 94 | 1.6 | 50 | | | | | |
| | | | | | | | 50 | 110 | 1.3 | 60 | | | | | |
| | | | | | | | 38 | 137 | 0.9 | 80 | | | | | |
| | | | | | | | 30 | 158 | 0.7 | 100 | | | | | |

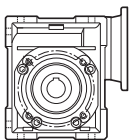
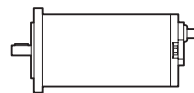
N.B.
Verificare sempre che la coppia M₂ utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M₂ does not exceed the value in the grey areas

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

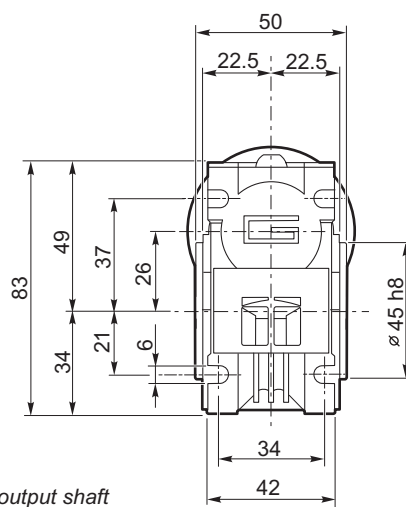
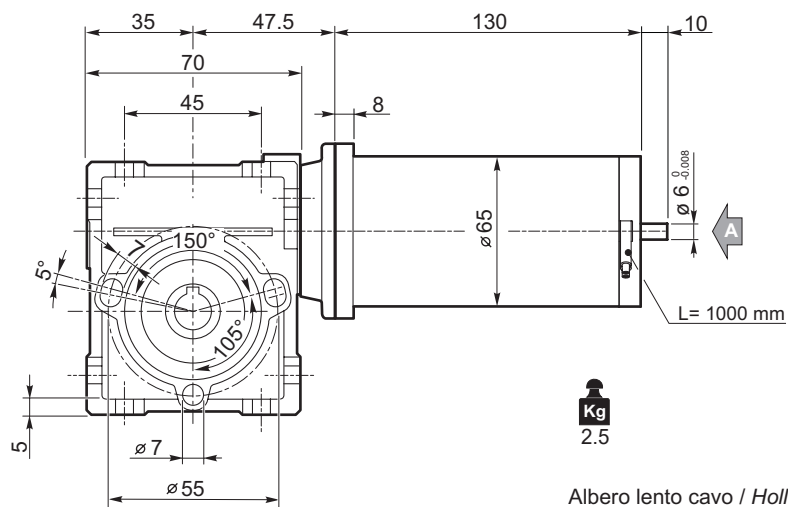
(2): Solo IEC 71 B14
71 B14 only



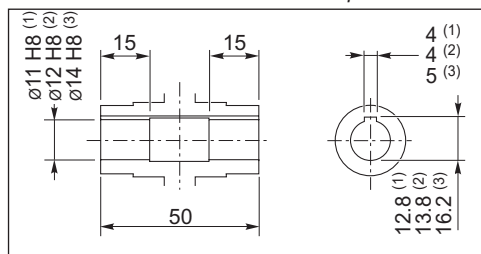
Dimensioni

Dimensions

ECM070/026 U

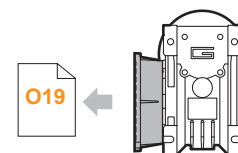
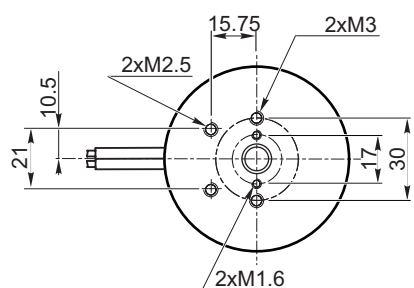


Albero lento cavo / Hollow output shaft

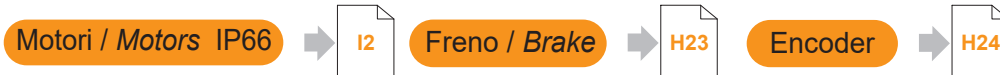


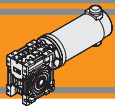
- (1): ECM 070/026 (D11)
- (2): ECM 070/026
- (3): ECM 070/026 (D14)

Vista da A
View from A



ECM070/026 F...

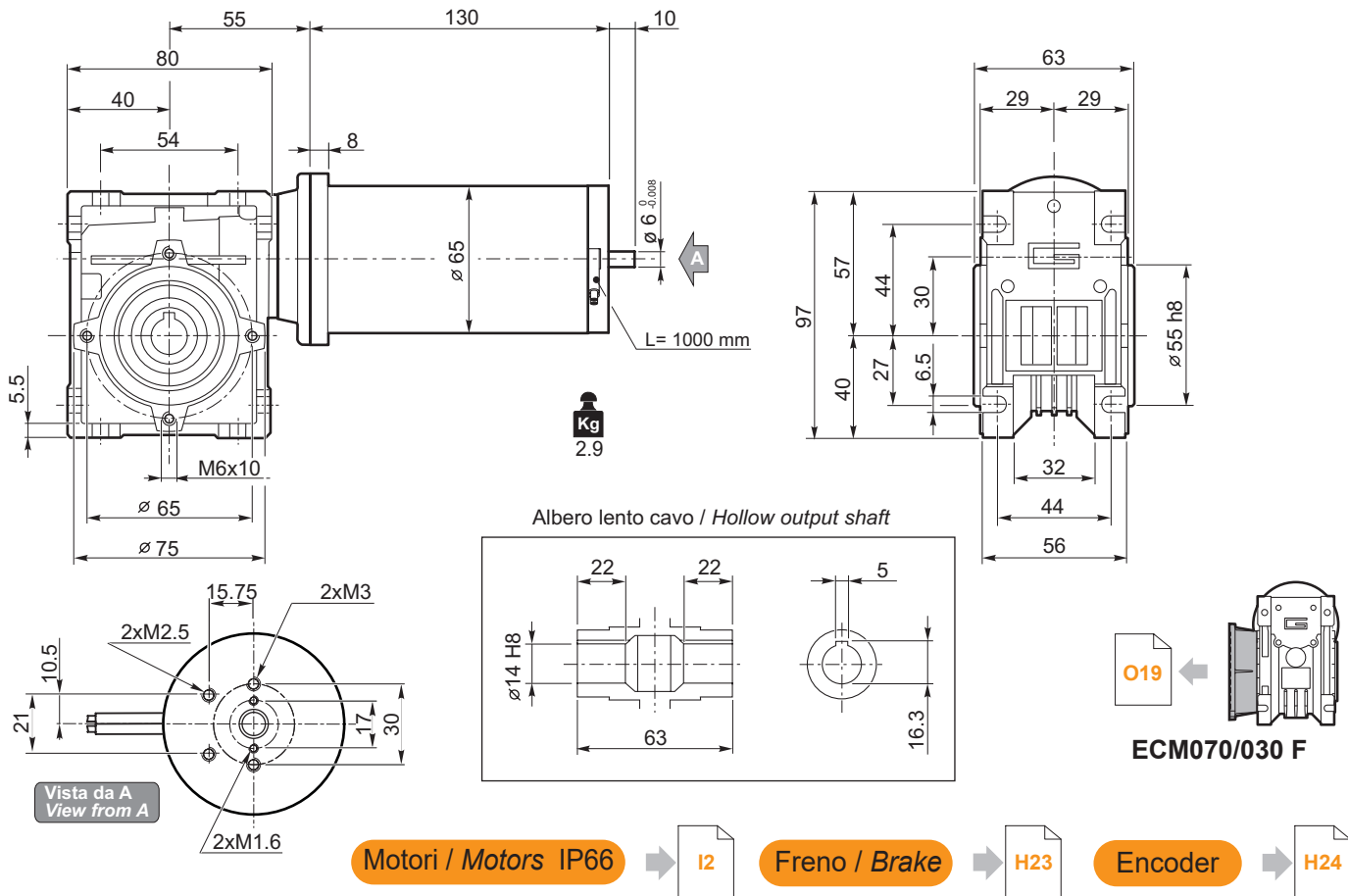




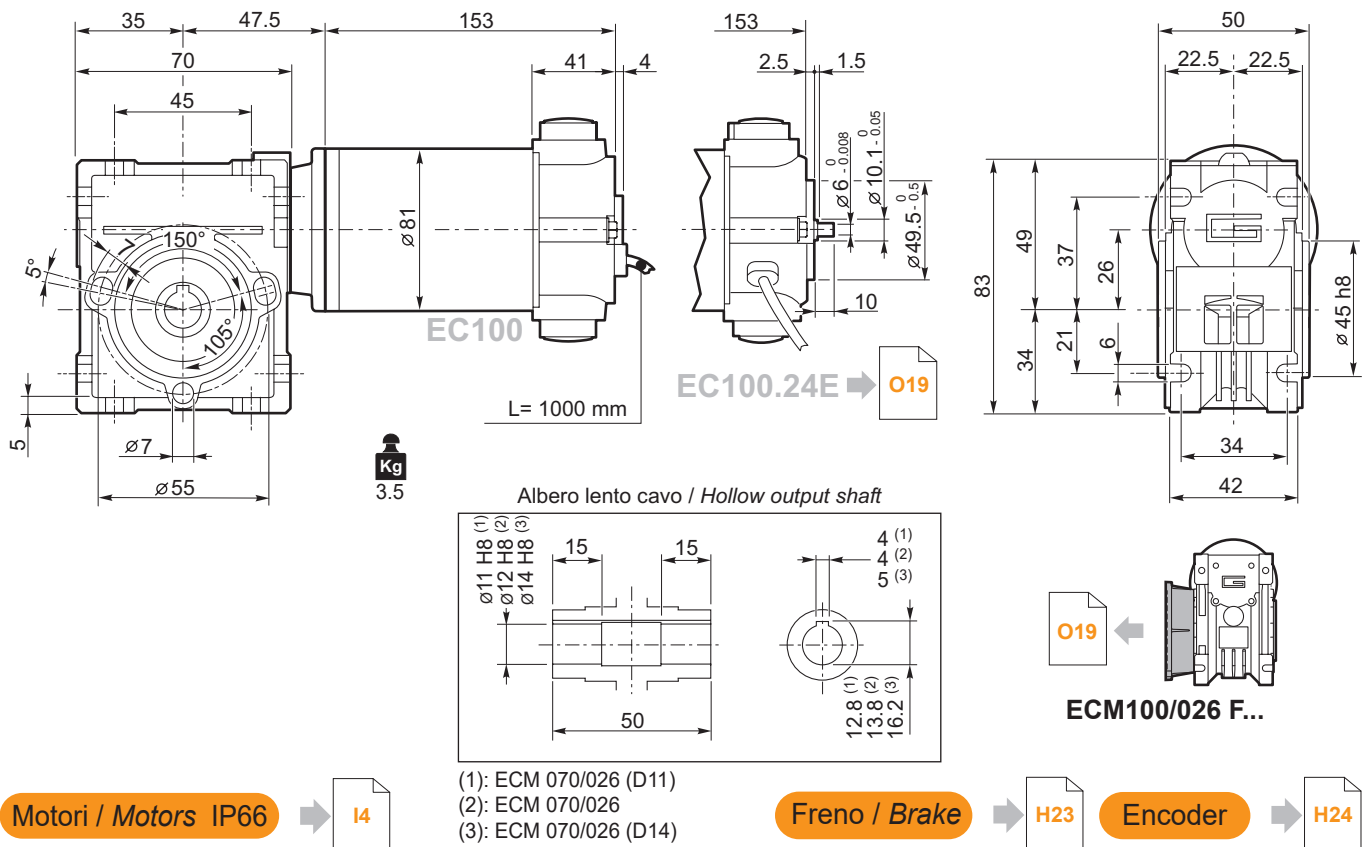
Dimensioni

Dimensions

ECM070/030 U



ECM100/026 U

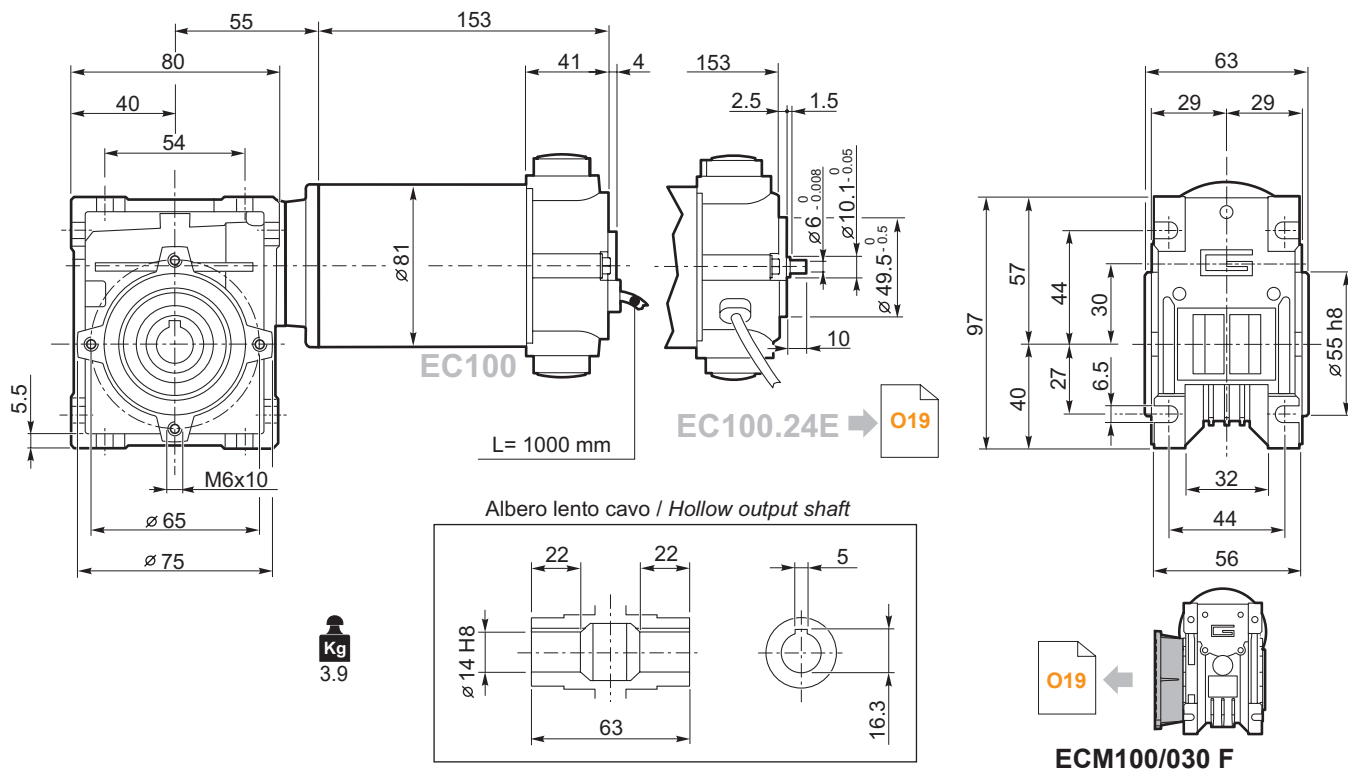




Dimensioni

Dimensions

ECM100/030 U

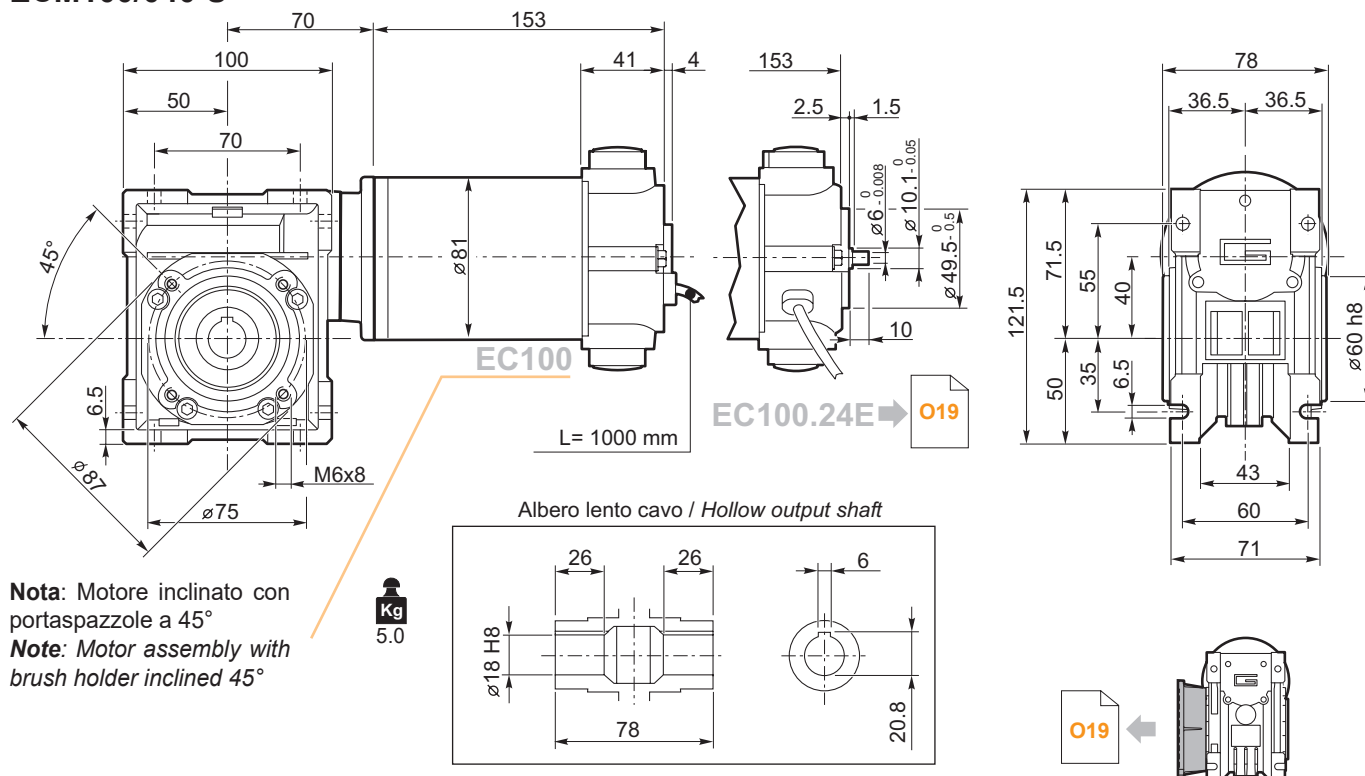


Motori / Motors IP66 → I4

Freno / Brake → H23

Encoder → H24

ECM100/040 U



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

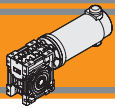
Motori / Motors IP66 → I4

Freno / Brake → H23

Encoder → H24

ECM100/040 F
ECM100/040 FL
ECM100/040 FB

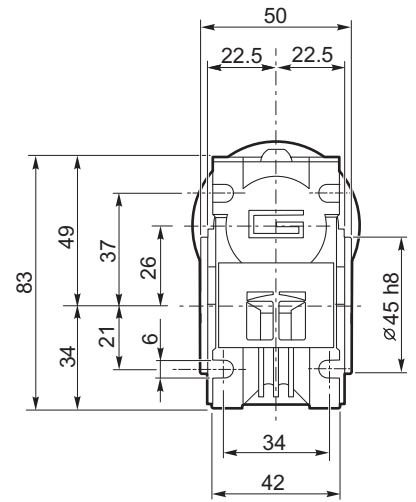
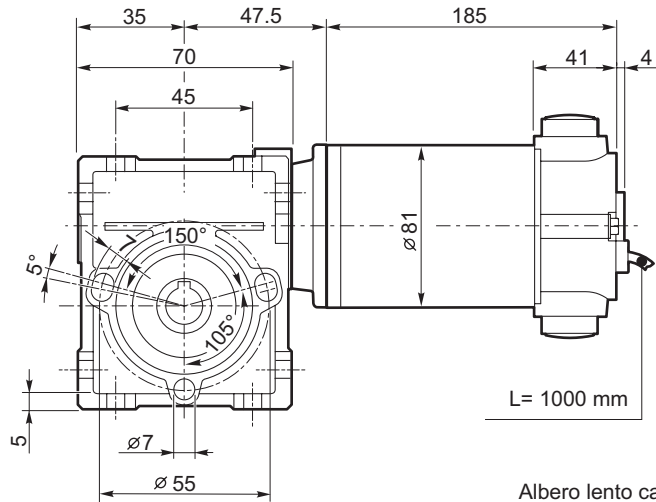
ECM



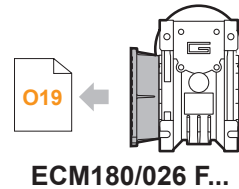
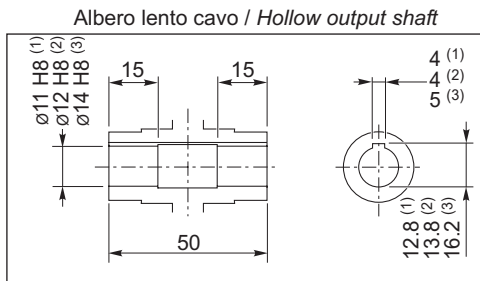
Dimensioni

Dimensions

ECM180/026 U



Kg
4.2



Motori / Motors IP66



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

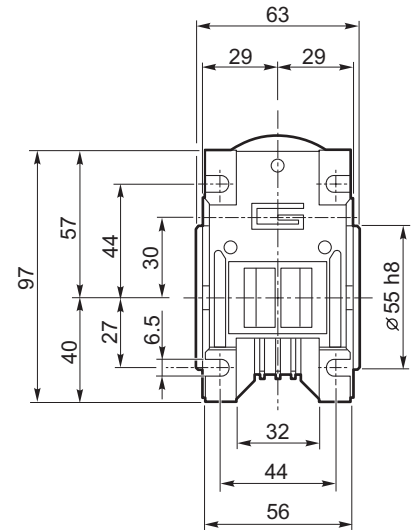
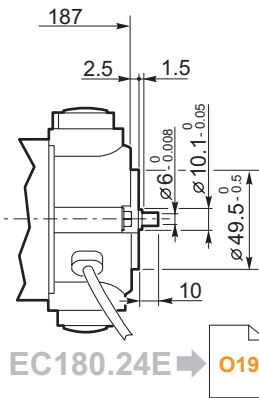
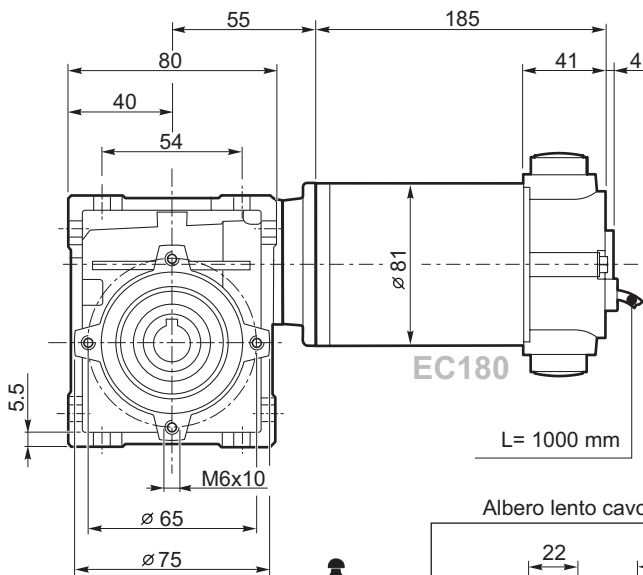
Freno / Brake



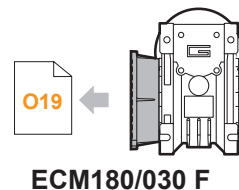
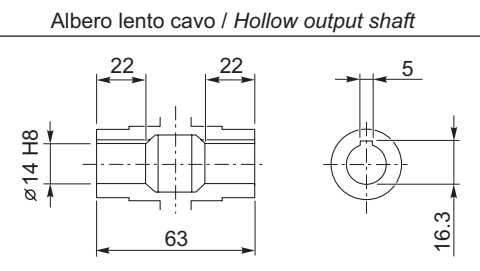
Encoder



ECM180/030 U



Kg
4.6



Motori / Motors IP66

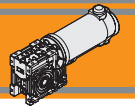


Freno / Brake



Encoder

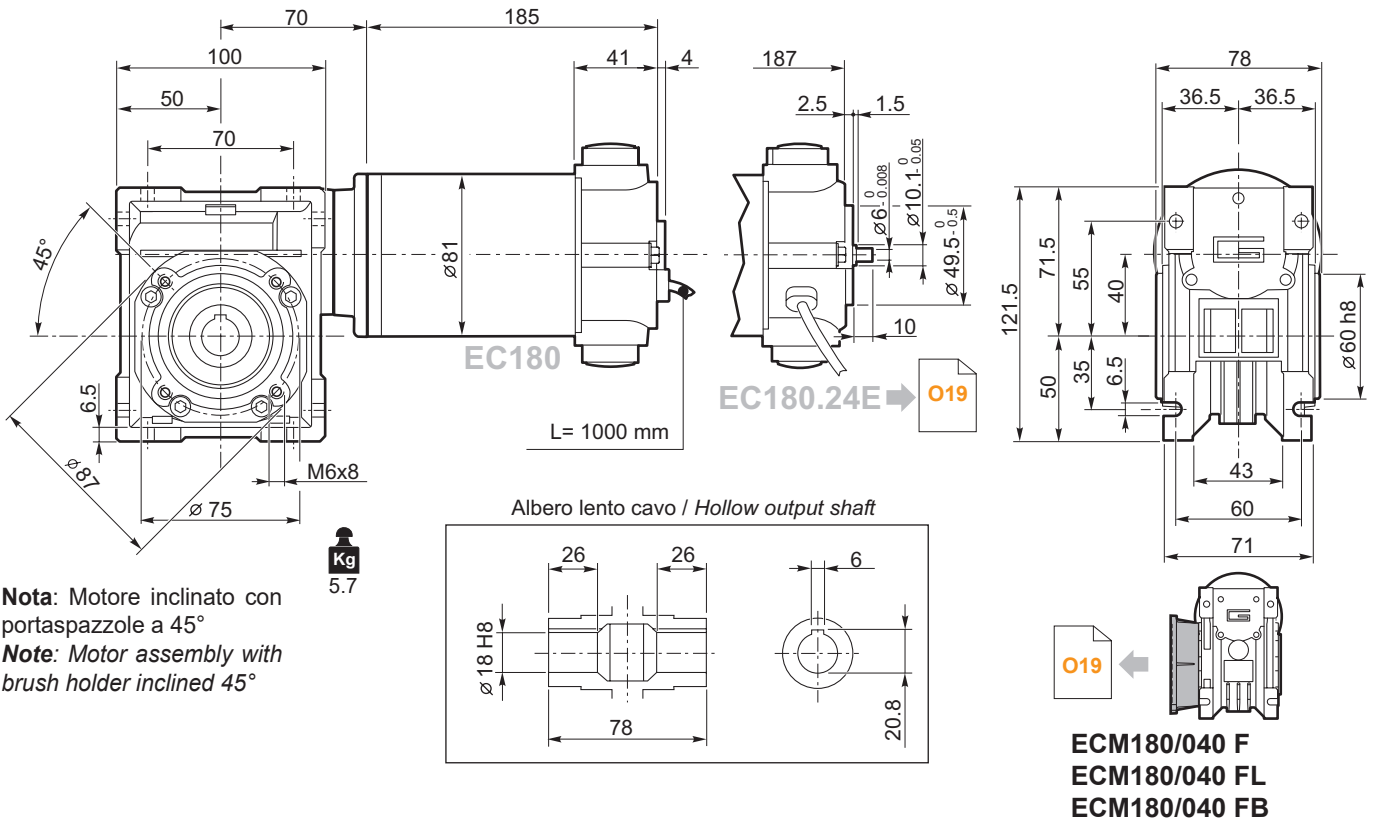




Dimensioni

Dimensions

ECM180/040 U

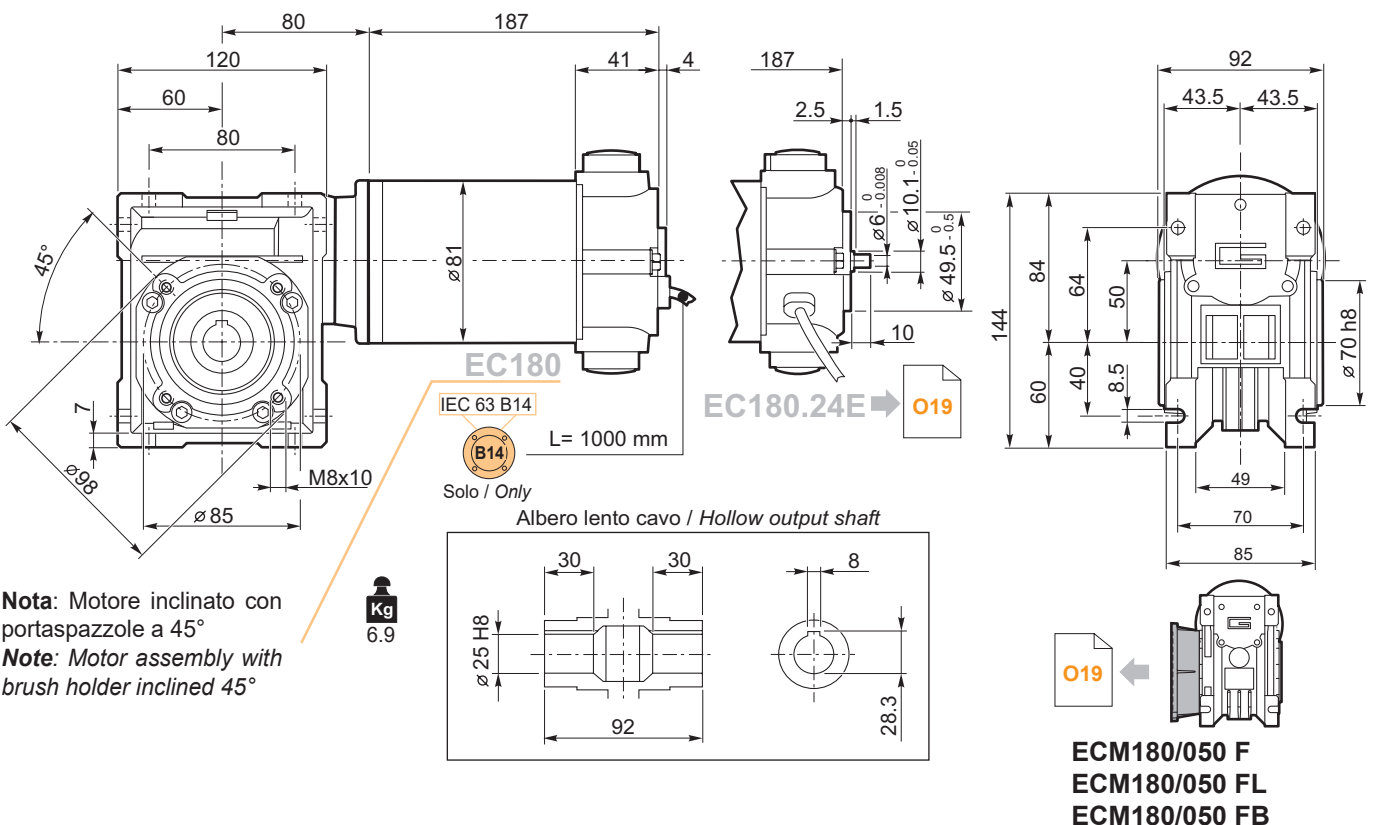


Motori / Motors IP66 → 16

Freno / Brake → H23

Encoder → H24

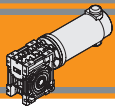
ECM180/050 U



Freno / Brake → H23

Encoder → H24

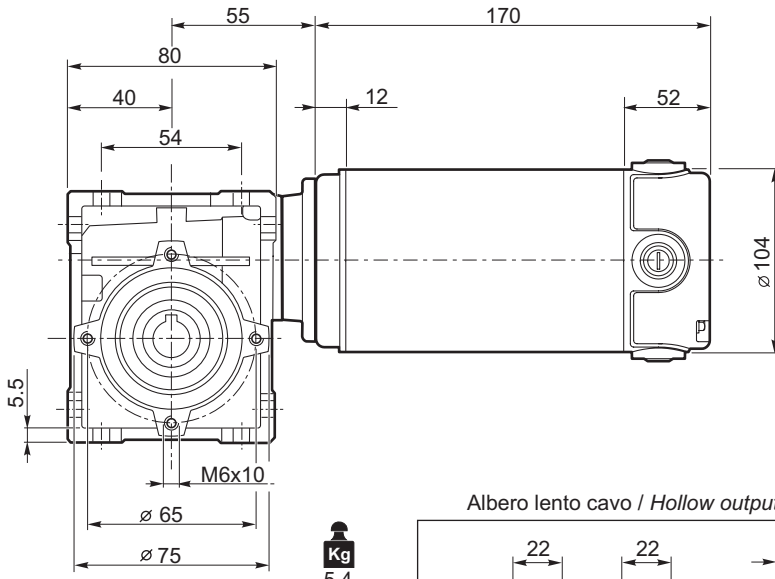
ECM



Dimensioni

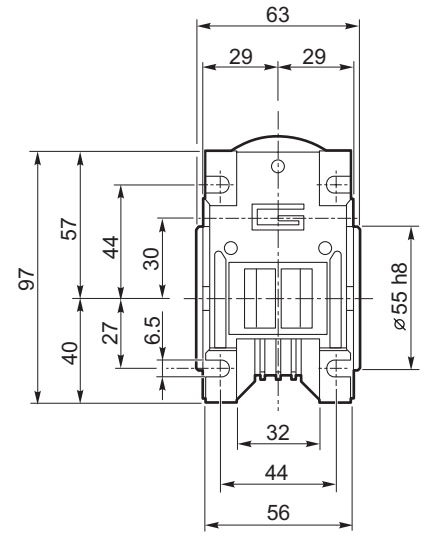
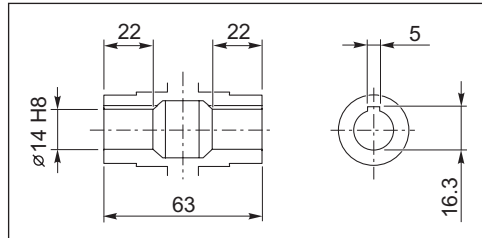
Dimensions

ECM250/030 U



Kg
5.4

Albero lento cavo / Hollow output shaft



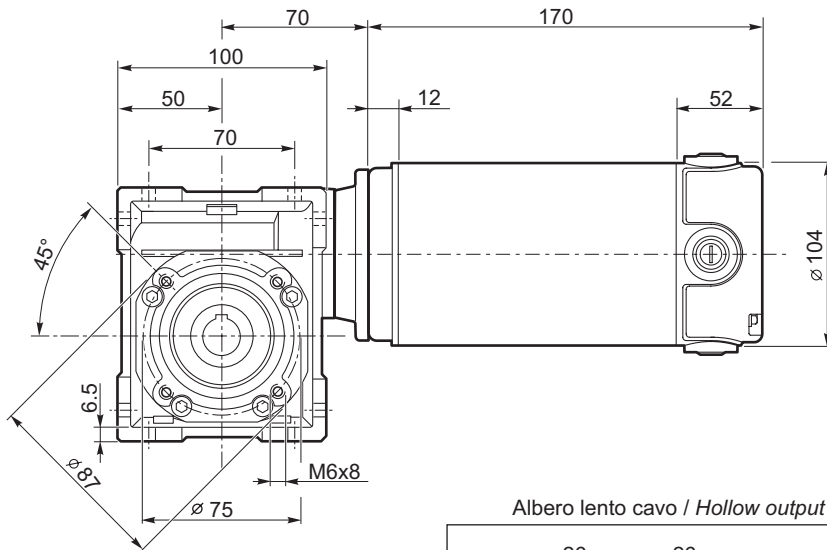
O19

ECM250/030 F

Motori / Motors IP66

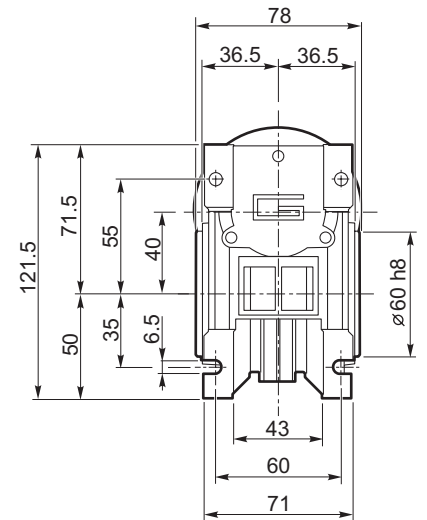
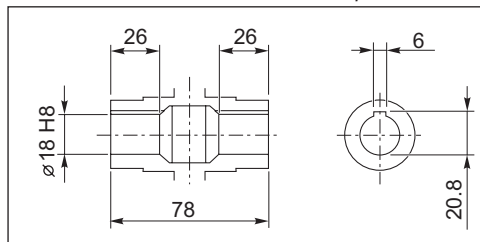
18

ECM250/040 U



Kg
6.5

Albero lento cavo / Hollow output shaft



O19

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

Motori / Motors IP66

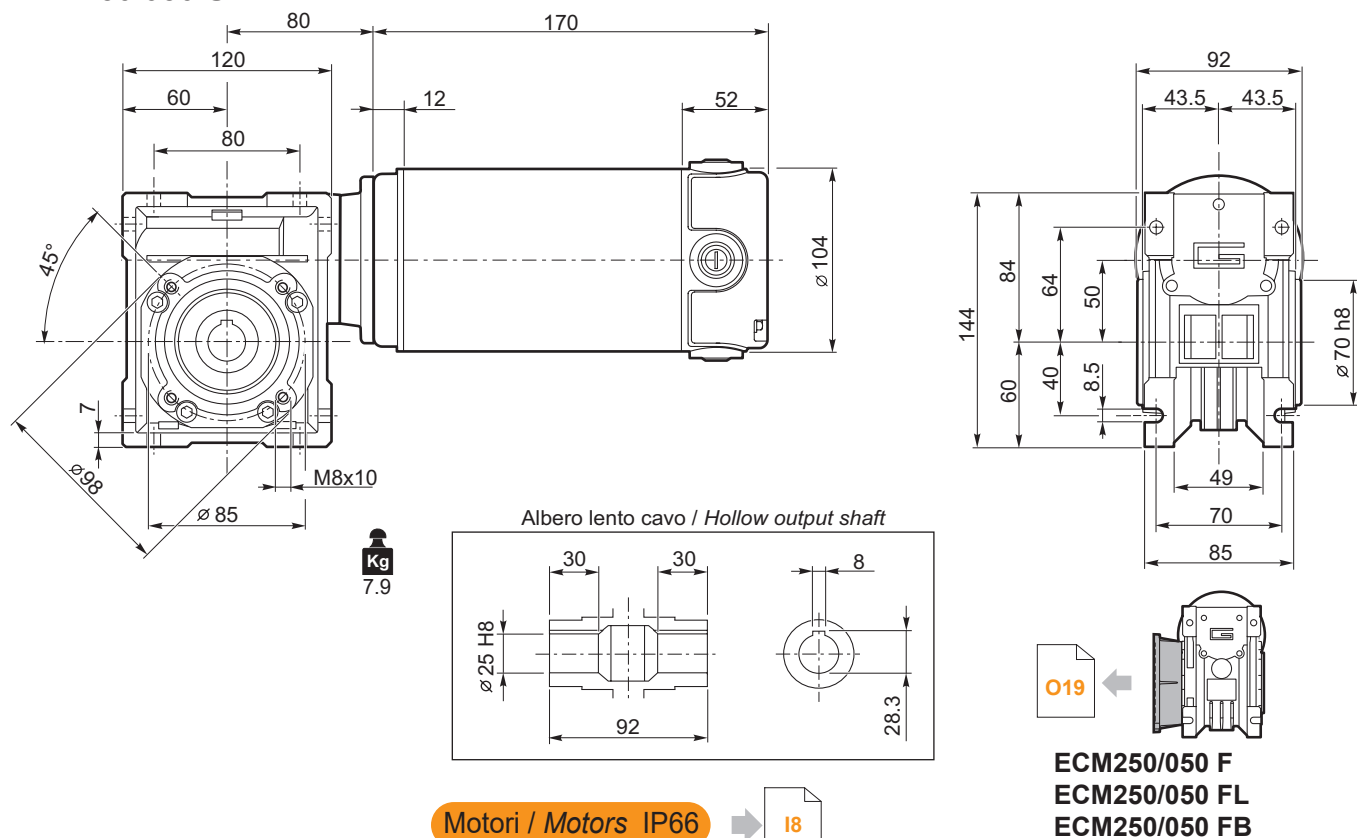
18



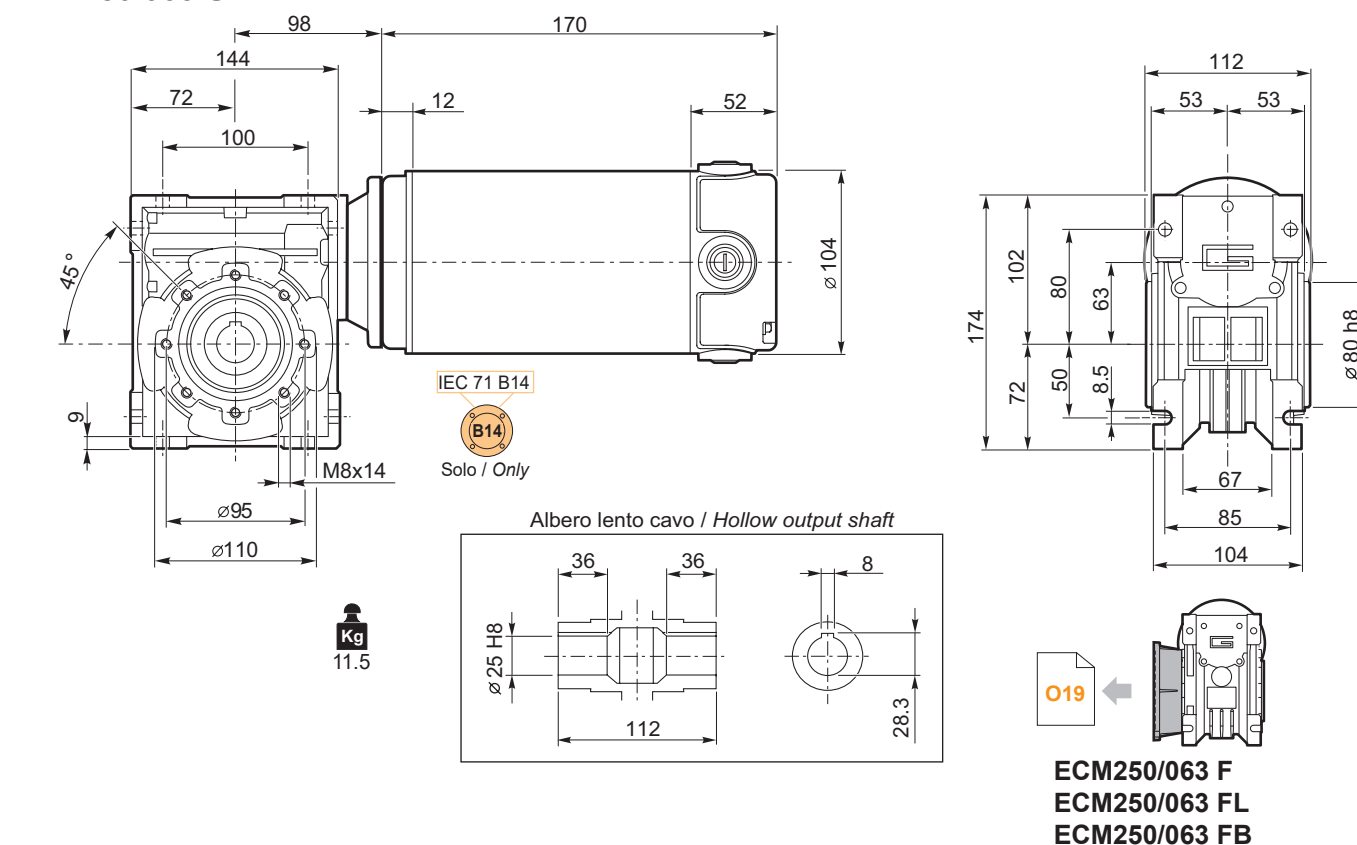
Dimensioni

Dimensions

ECM250/050 U



ECM250/063 U



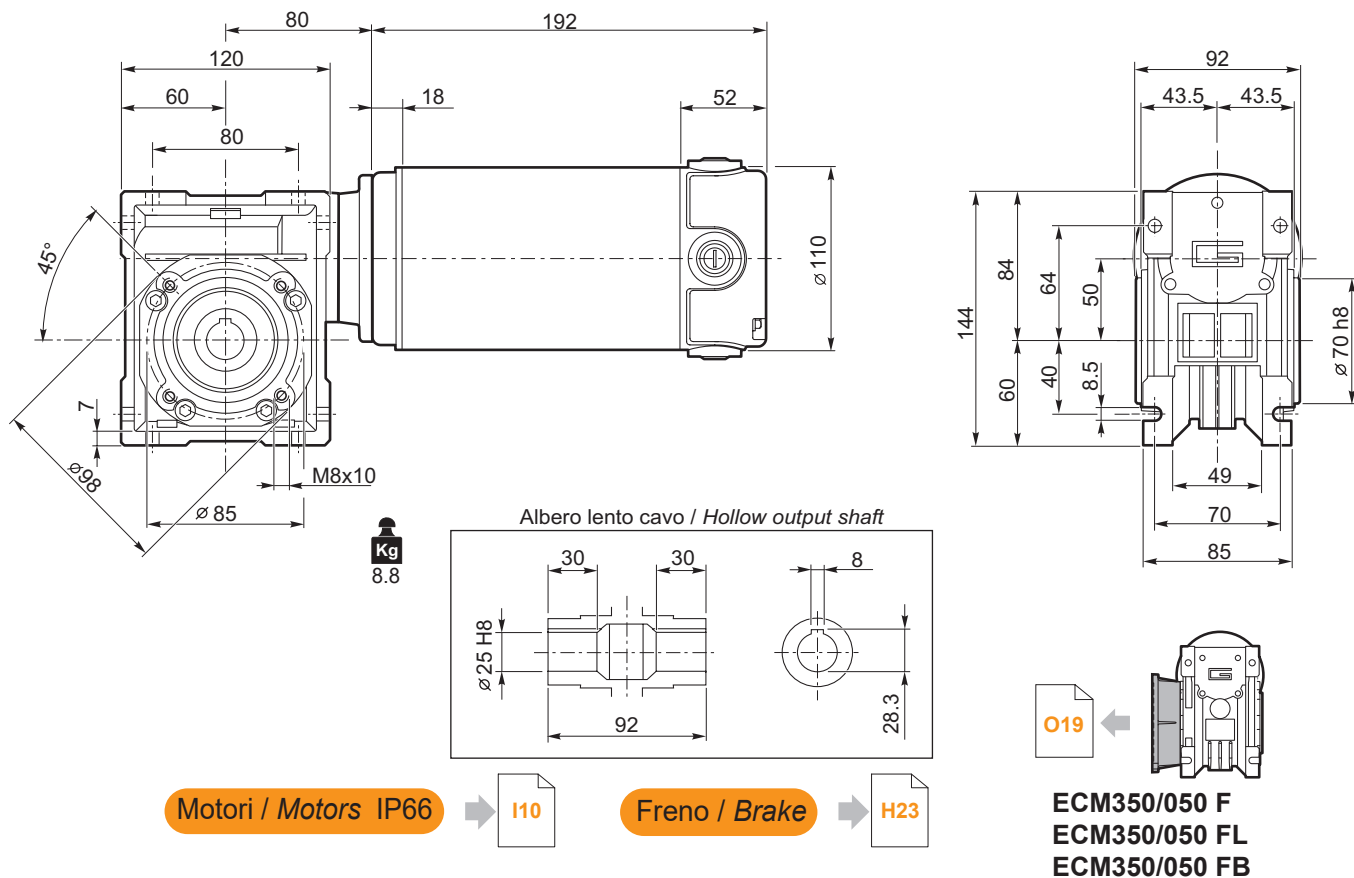
ECM



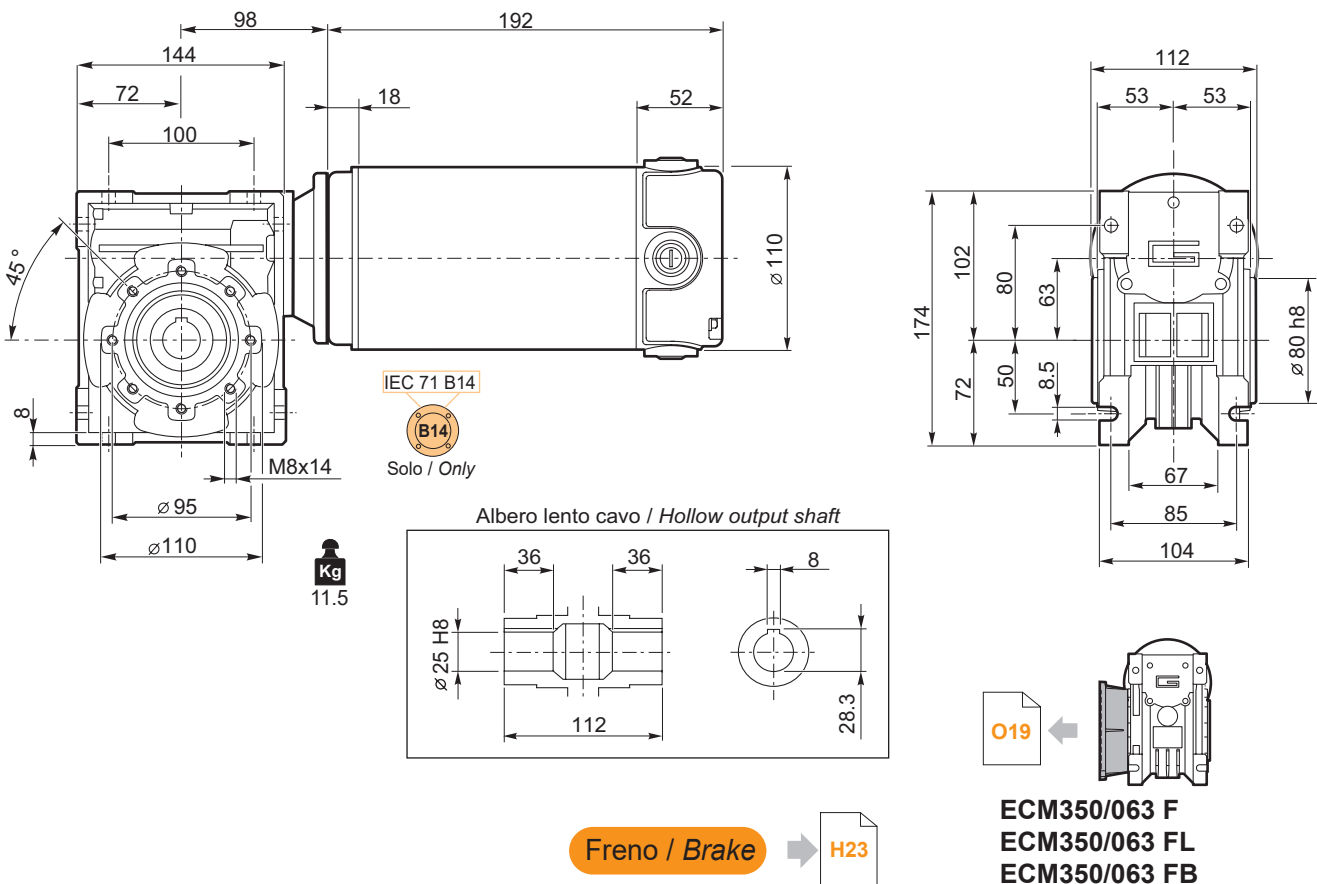
Dimensioni

Dimensions

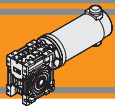
ECM350/050 U



ECM350/063 U



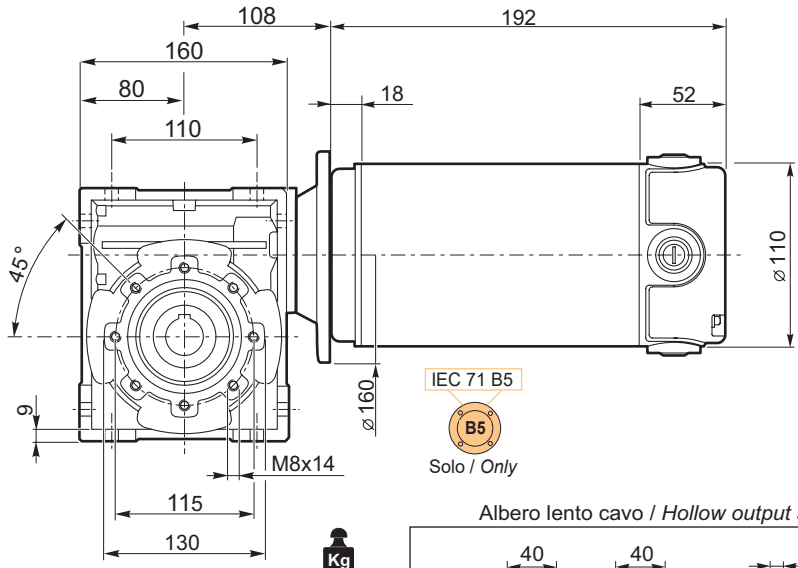
ECM



Dimensioni

Dimensions

ECM350/070 U



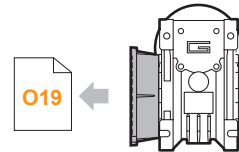
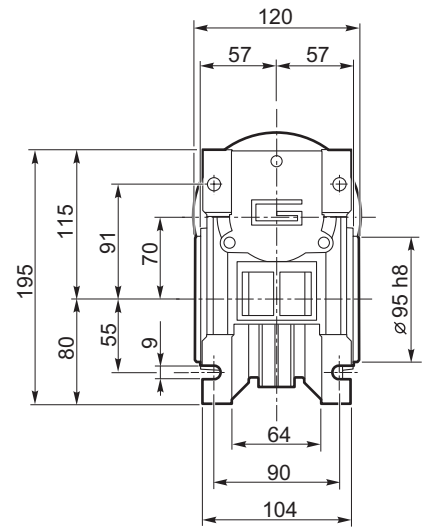
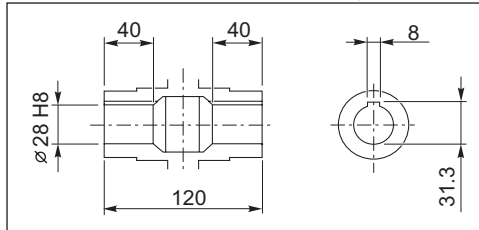
IEC 71 B5



Solo / Only

Kg
12.8

Albero lento cavo / Hollow output shaft



O19

ECM350/070 F

Freno / Brake



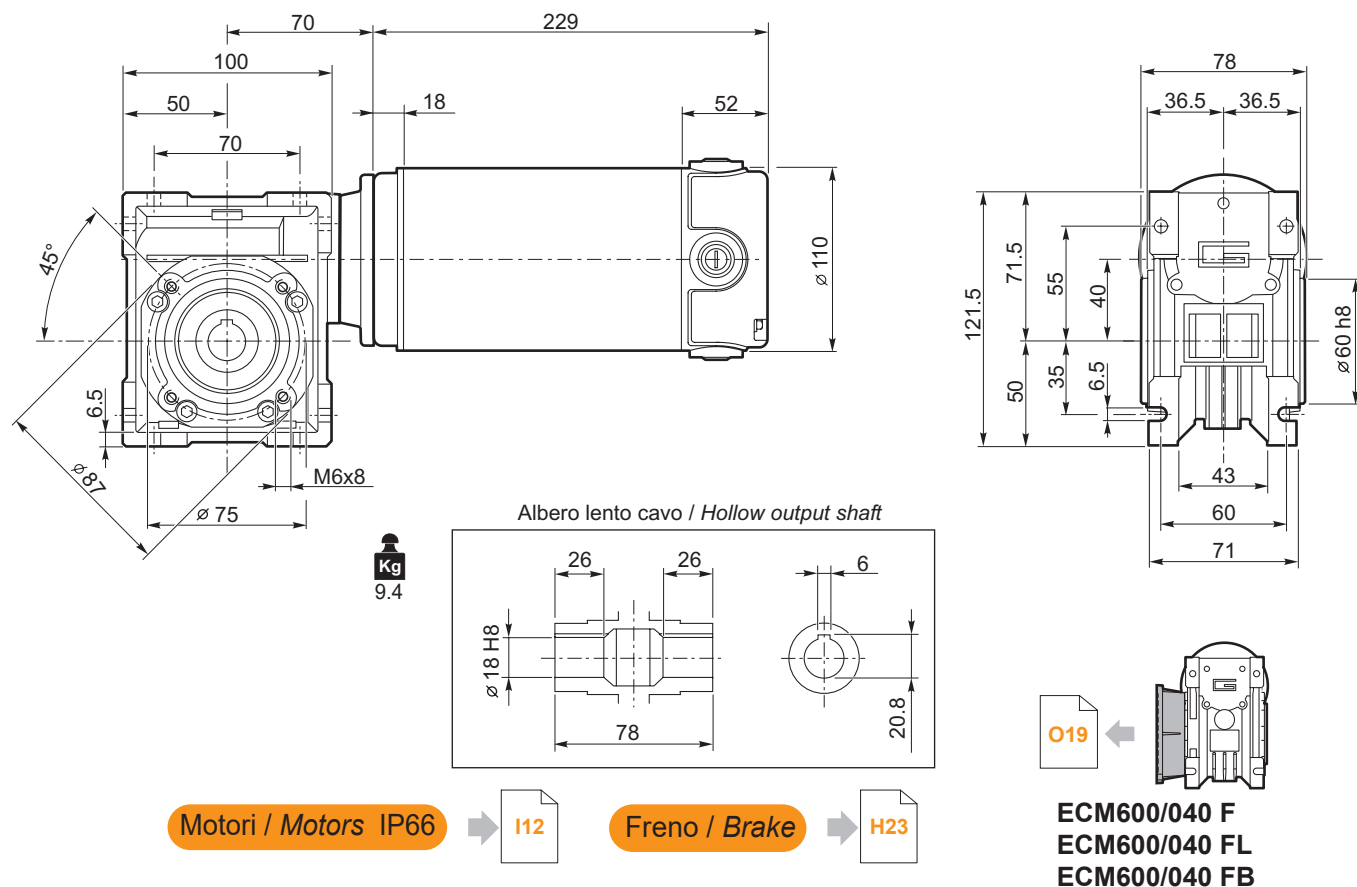
H23



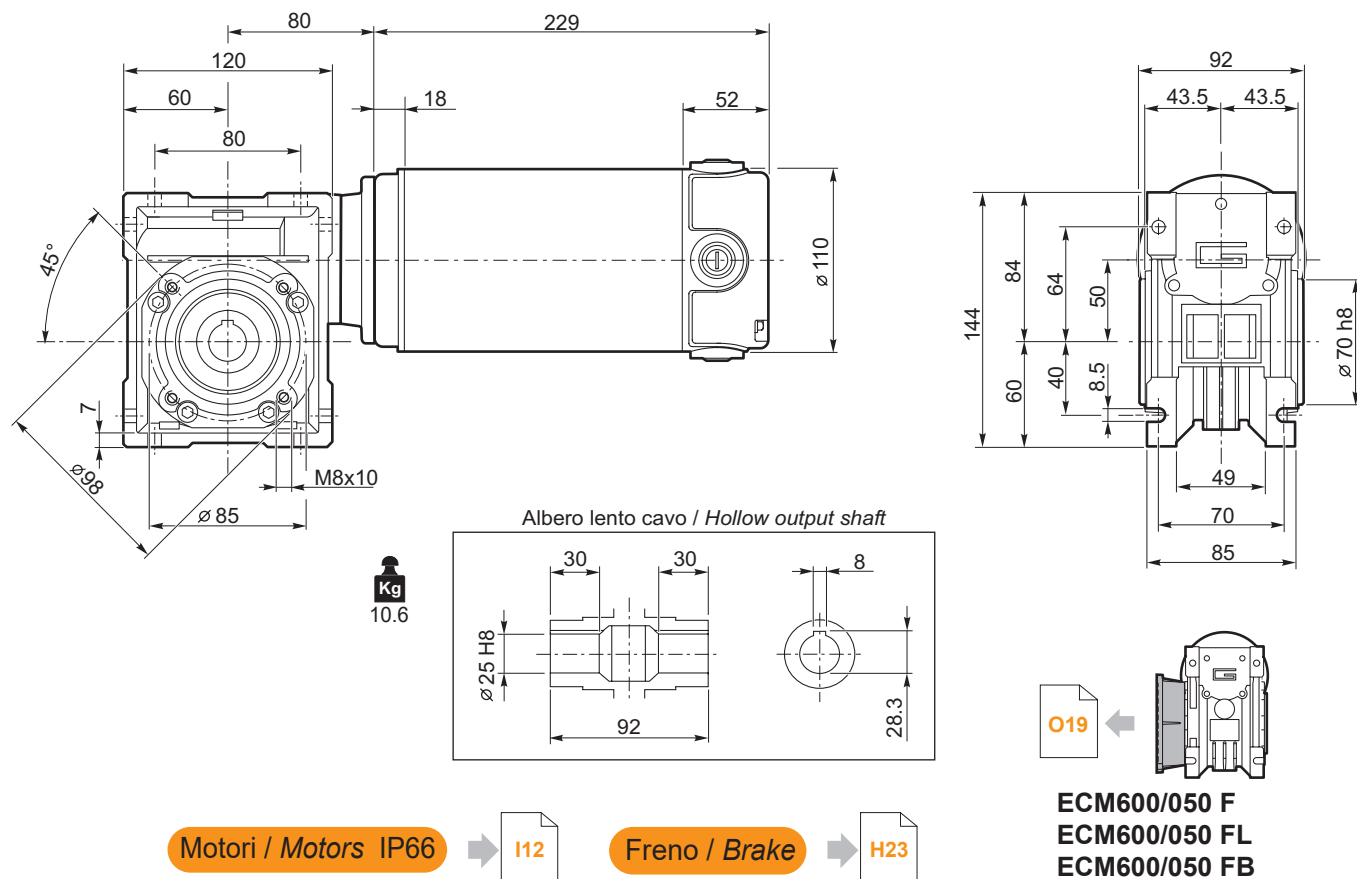
Dimensioni

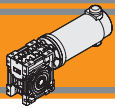
Dimensions

ECM600/040 U



ECM600/050 U

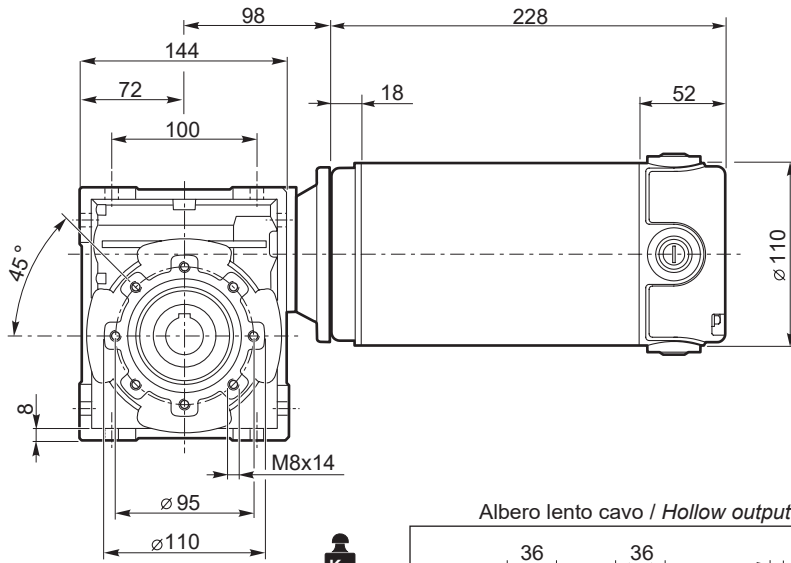




Dimensioni

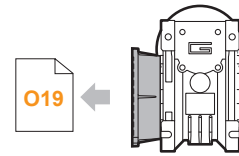
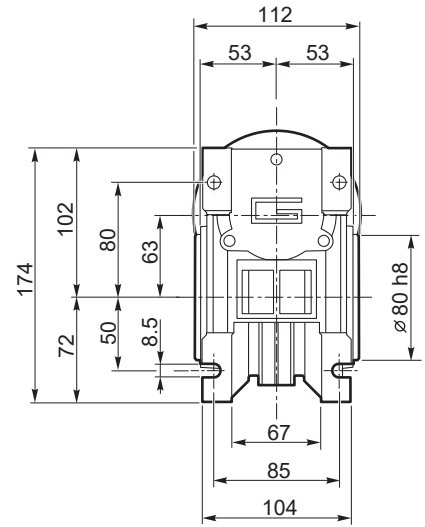
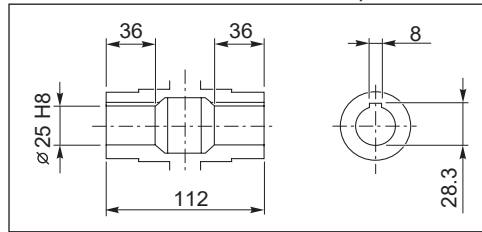
Dimensions

ECM600/063 U



Kg
13.3

Albero lento cavo / Hollow output shaft



O19

Motori / Motors IP66

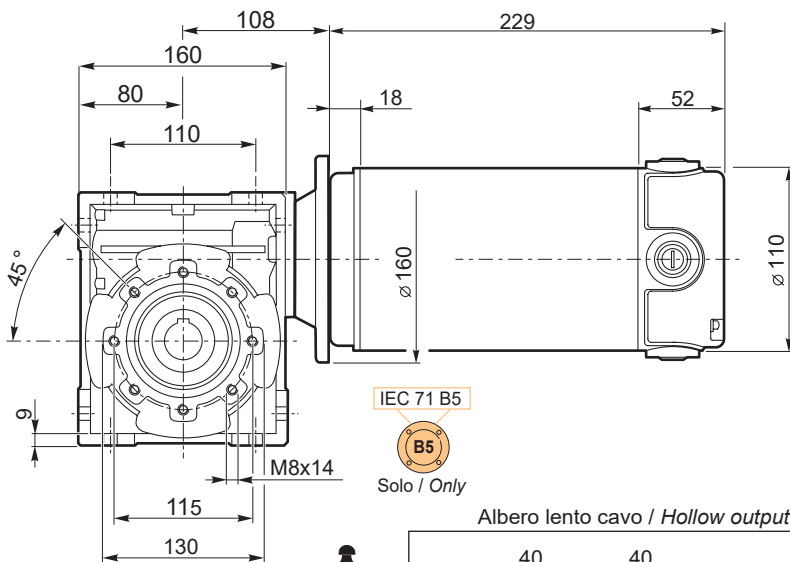


Freno / Brake



ECM600/063 F
ECM600/063 FL
ECM600/063 FB

ECM600/070 U



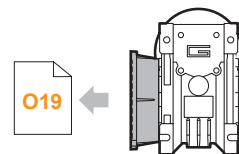
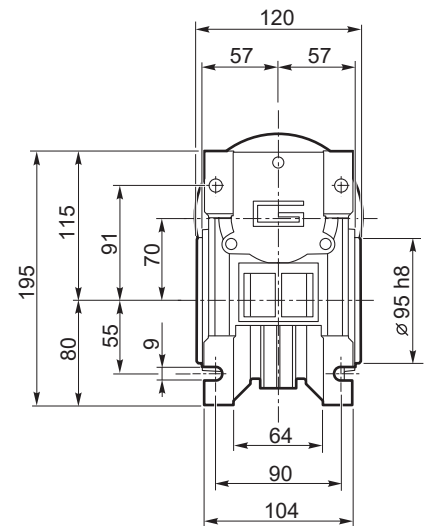
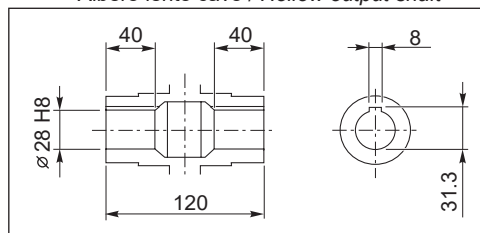
IEC 71 B5



Solo / Only

Kg
14.6

Albero lento cavo / Hollow output shaft

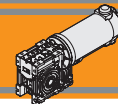


O19

Freno / Brake



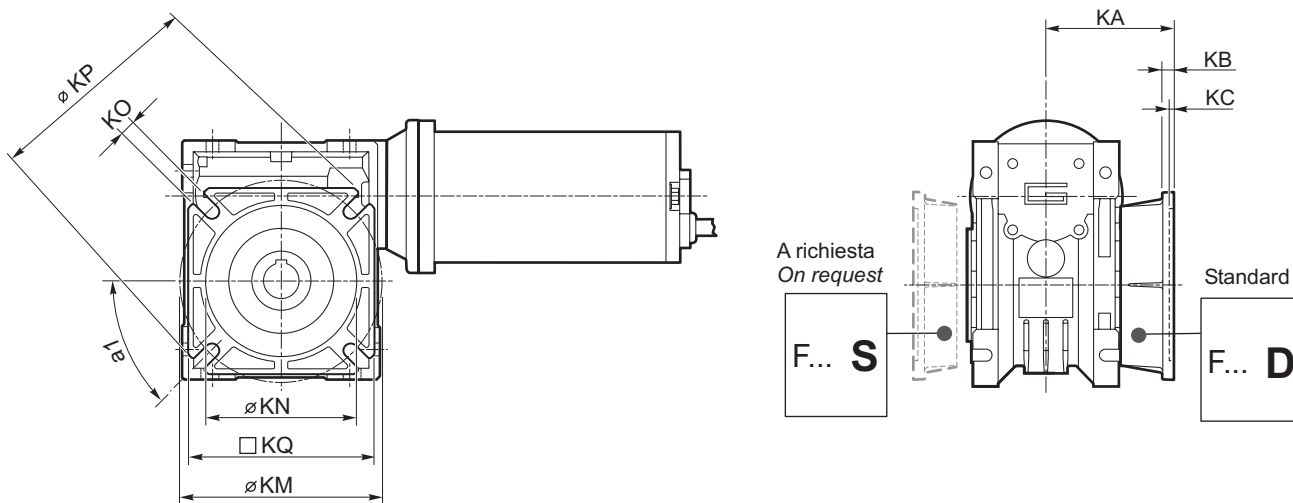
ECM600/070 F



Dimensioni

Dimensions

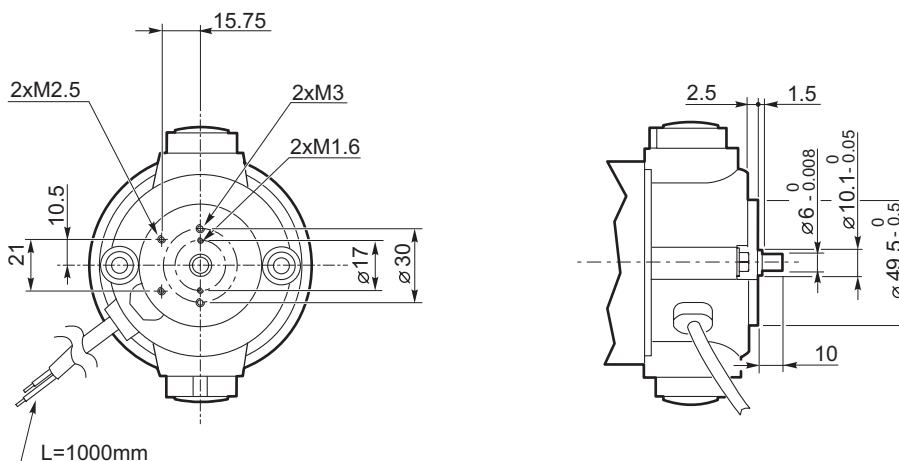
ECM.../... F... Flange uscita / Output flanges

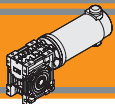


| | CM..F | | | | | | | CM..F28 | | | | | | | CM..F30 | | | | | | | | | | |
|-------------------------------|-------|----|----|-----|-------|------------------|----------|---------|----|----|-----|----|-------|------------------|---------|----|----|----|-----|----|----|------------------|-----|----|----|
| | 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 |

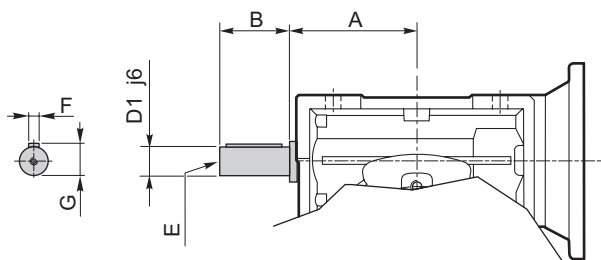
| CM | CM..F | | | | | | | CM..FB | | | | | | | CM..FL | | | | | | | | | | |
|-----|-------|------|-----|----|---------|------------------|----------|--------|-----|----|-----|----|---------|------------------|----------|-----|-----|-----|-----|-----|---------|------------------|---------|-----|-----|
| | 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





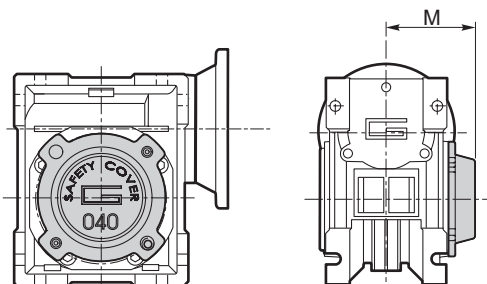
VS - Vite sporgente / Extended input shaft



| | 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 |

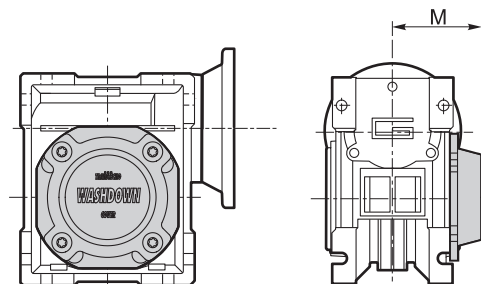
Costruito su richiesta
Built on request

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 |

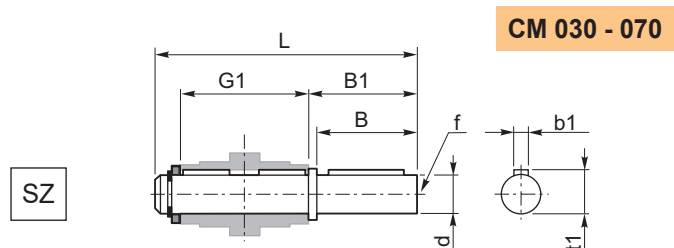
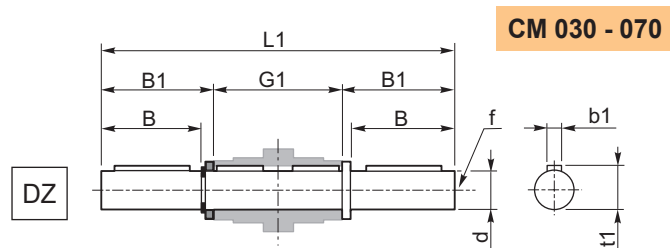


Accessori

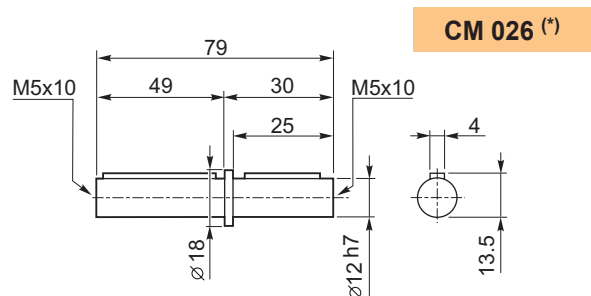
Accessories

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 |

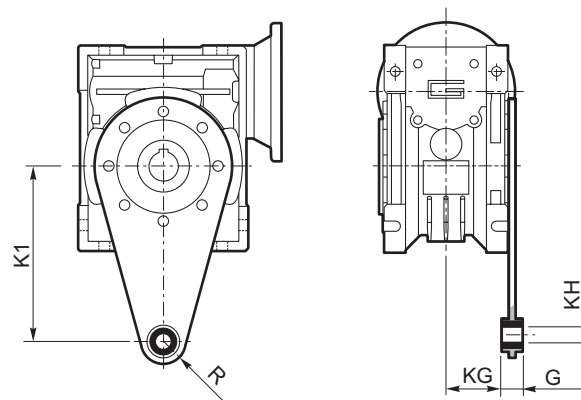


(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only

Braccio di reazione

Torque arm

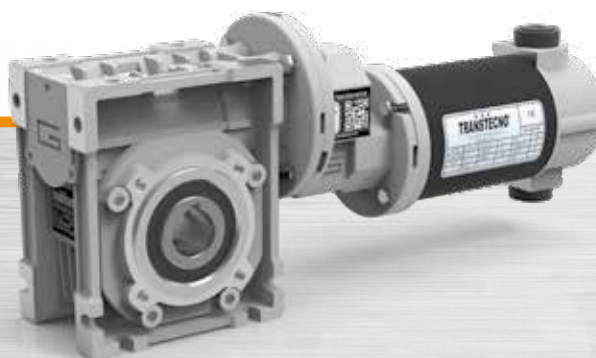
| | K1 | G | KG | KH | R |
|--------|-----|----|------|----|----|
| CM 030 | 85 | 14 | 23 | 8 | 15 |
| CM 040 | 100 | 14 | 31 | 10 | 18 |
| CM 050 | 100 | 14 | 38 | 10 | 18 |
| CM 063 | 150 | 14 | 47.5 | 10 | 18 |
| CM 070 | 200 | 25 | 46.5 | 20 | 30 |

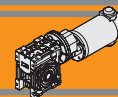




Ferrite

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

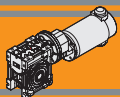




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| Designazione | <i>Classification</i> | P2 |
| Simbologia | <i>Symbols</i> | P3 |
| Lubrificazione | <i>Lubrication</i> | P3 |
| Carichi radiali | <i>Radial loads</i> | P3 |
| Dati tecnici per servizio S2 | <i>Technical data for S2 duty</i> | P4 |
| Motori applicabili | <i>Motor adapters</i> | P5 |
| Dimensioni | <i>Dimensions</i> | P6 |
| Opzioni | <i>Options</i> | P19 |
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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



Caratteristiche tecniche

Technical features

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

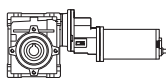
The main features of ECMP ferrite permanent magnets DC pre stage wormgearmotors range are:

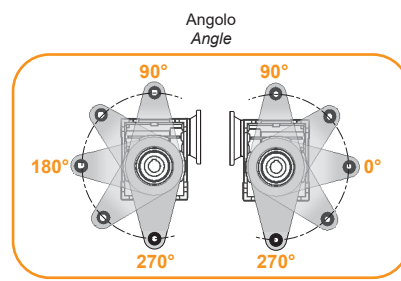
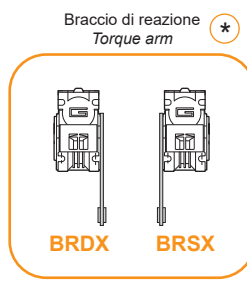
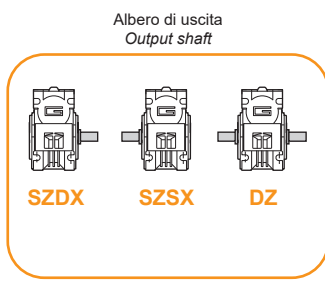
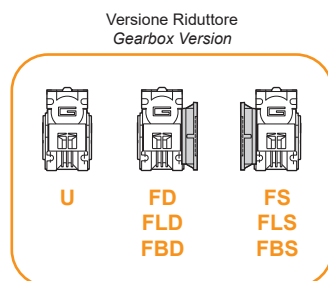
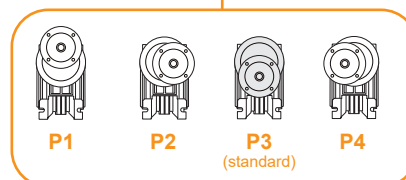
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Sia le carcasse dei riduttori a vite senza fine che delle precoppie sono in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

- 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.

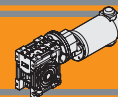
Designazione

Classification

| MOTORIDUTTORE / GEARMOTOR | | | | | | | | | | | | | | | | |
|---|-------------------|-------------|-------------|-------------|---|--|--|--------------------------------------|-----------------|---|-------------------------------------|--------------------|--|--|--|--|
| ECMP | 070/056/030 | | | | U | 90 | SZDX | 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 montag- gio precoppia Pre stage mounting position | Versione Motore Motor Version | Opzioni Options | | | | |
|  | 070/056/030 | 180/056/030 | 350/063/050 | 600/071/050 | U | Vedere tabella See tables | SZDX SZSX DZ | BRDX BRSX * | 0° | P1 | 120 | VS | | | | |
| | 070/056/040 | 180/056/040 | 350/063/063 | 600/071/063 | FD | | | | 90° | P2 | 240 | | | | | |
| | | 180/063/040 | 350/071/063 | 600/071/070 | FS | | | | 180° | P3 (standard) | 240 | | | | | |
| | | 180/063/050 | 350/071/070 | 600/071/075 | FLD | | | | 270° | P4 | 24E | | | | | |
| | | 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 | | | | | | | | | | | | | | | |



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

Lubrificazione

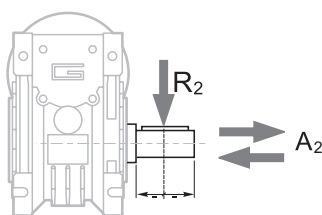
Lubrication

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

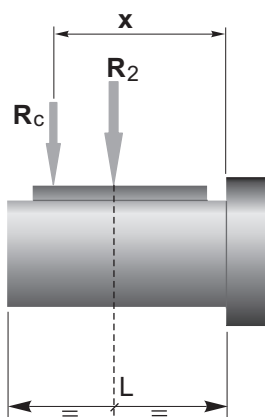
Radial loads



| 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:

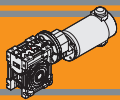


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

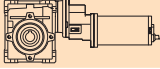
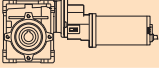
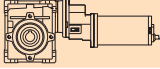
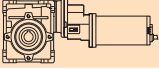
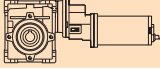
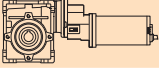
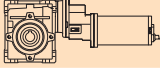
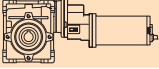
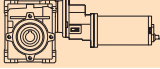
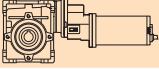
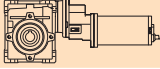
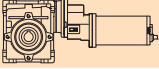
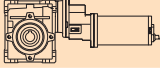
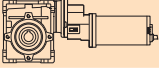
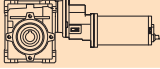
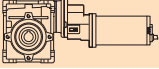
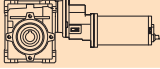
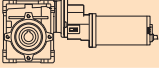
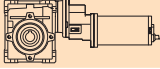
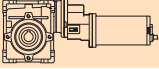
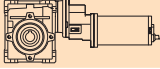
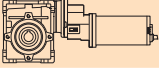
a, b = valori riportati nella tabella
a, b = values given in the table

| | 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 |



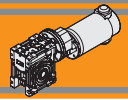
Dati tecnici per servizio S2

Technical data for S2 duty

| 100 | | | | | | | 350 | | | | | | |
|---------------------------|-------------------------------|---------------|-----|-----|---|--|---------------------------|-------------------------------|---------------|-----|-----|---|--|
| 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 | | | | | | | 350 | | | | | | |
| (3000 min ⁻¹) | 50 | 13 | 1.7 | 60 |  | ECMP070/056/030 12E/24E 120.66/240.66 | (3000 min ⁻¹) | 50 | 48 | 0.9 | 60 |  | ECMP250/063/040 120/240 120.66/240.66 |
| | 40 | 16 | 1.4 | 75 | | | | 40 | 57 | 0.8 | 75 | | |
| | 33 | 17 | 1.6 | 90 | | | | 33 | 65 | 0.9 | 90 | | |
| | 25 | 22 | 1.1 | 120 | | | | 25 | 69 | 0.7 | 120 | | |
| | 20 | 25 | 0.9 | 150 | | | | 20 | 69 | 0.7 | 120 | | |
| | 50 | 14 | 3.2 | 60 |  | ECMP070/056/040 12E/24E 120.66/240.66 | | 50 | 49 | 1.6 | 60 |  | ECMP250/063/050 120/240 120.66/240.66 |
| | 40 | 16 | 2.7 | 75 | | | | 40 | 59 | 1.3 | 75 | | |
| | 33 | 19 | 3.0 | 90 | | | | 33 | 67 | 1.5 | 90 | | |
| | 25 | 22 | 2.1 | 120 | | | | 25 | 81 | 1.0 | 120 | | |
| | 20 | 27 | 1.7 | 150 | | | | 20 | 97 | 0.8 | 150 | | |
| | 17 | 30 | 1.4 | 180 | | 17 | 108 | 0.7 | 180 | | | | |
| | 13 | 34 | 1.2 | 240 | | 13 | 99 | 0.7 | 240 | | | | |
| | 10 | 38 | 0.9 | 300 | | 10 | 99 | 0.7 | 240 | | | | |
| 140 | | | | | | | 500 | | | | | | |
| (3000 min ⁻¹) | 50 | 19 | 1.2 | 60 |  | ECMP100/056/030 120/240/24E 120.66/240.66 | (3000 min ⁻¹) | 50 | 51 | 3.0 | 60 |  | ECMP250/063/063 120/240 120.66/240.66 |
| | 40 | 22 | 1.0 | 75 | | | | 40 | 61 | 2.2 | 75 | | |
| | 33 | 24 | 1.1 | 90 | | | | 33 | 69 | 2.7 | 90 | | |
| | 25 | 30 | 0.8 | 120 | | | | 25 | 85 | 1.9 | 120 | | |
| | 20 | 31 | 0.7 | 150 | | | | 20 | 100 | 1.5 | 150 | | |
| | 50 | 19 | 2.3 | 60 |  | ECMP100/056/040 120/240/24E 120.66/240.66 | | 25 | 88 | 2.7 | 120 |  | ECMP250/071/070 120/240 IEC 71B14 Solo / Only |
| | 40 | 23 | 1.9 | 75 | | | | 20 | 100 | 1.5 | 150 | | |
| | 33 | 26 | 2.2 | 90 | | | | 17 | 114 | 1.2 | 180 | | |
| | 25 | 31 | 1.5 | 120 | | | | 13 | 136 | 0.9 | 240 | | |
| | 20 | 37 | 1.2 | 150 | | | | 10 | 154 | 0.8 | 300 | | |
| | 17 | 42 | 1.0 | 180 | | 17 | 118 | 2.1 | 180 | | | | |
| | 13 | 48 | 0.8 | 240 | | 13 | 142 | 1.3 | 240 | | | | |
| | 10 | 54 | 0.7 | 300 | | 10 | 161 | 1.0 | 300 | | | | |
| | 50 | 20 | 4.1 | 60 |  | ECMP100/063/050 120/240/24E IEC 63B14 Solo / Only | | 17 | 118 | 2.1 | 180 |  | ECMP250/071/075 120/240 IEC 71B14 Solo / Only |
| | 40 | 24 | 3.2 | 75 | | | | 13 | 144 | 1.6 | 240 | | |
| | 33 | 27 | 3.7 | 90 | | | | 10 | 164 | 1.3 | 300 | | |
| | 25 | 32 | 2.6 | 120 | | | | | | | | | |
| | 20 | 39 | 2.1 | 150 | | | | | | | | | |
| | 17 | 43 | 1.8 | 180 | | | | | | | | | |
| | 13 | 50 | 1.4 | 240 | | | | | | | | | |
| 250 | | | | | | | 500 | | | | | | |
| (3000 min ⁻¹) | 50 | 33 | 0.7 | 60 |  | ECMP180/056/030 120/240 120.66/240.66 | (3000 min ⁻¹) | 50 | 70 | 1.1 | 60 |  | ECMP350/063/050 120/240 120.66/240.66 |
| | 40 | 31 | 0.7 | 75 | | | | 40 | 84 | 0.9 | 75 | | |
| | 33 | 39 | 0.7 | 90 | | | | 33 | 95 | 1.0 | 90 | | |
| | 25 | 33 | 0.7 | 120 | | | | 25 | 116 | 0.7 | 120 | | |
| | 20 | 31 | 0.7 | 150 | | | | 20 | 116 | 0.7 | 150 | | |
| | 50 | 35 | 1.3 | 60 |  | ECMP180/056/040 120/240 120.66/240.66 | | 17 | 109 | 0.7 | 180 |  | ECMP350/063/063 120/240 120.66/240.66 |
| | 40 | 41 | 1.1 | 75 | | | | 13 | 99 | 0.7 | 240 | | |
| | 33 | 46 | 1.2 | 90 | | | | 50 | 73 | 2.1 | 60 | | |
| | 25 | 56 | 0.9 | 120 | | | | 40 | 88 | 1.6 | 75 | | |
| | 20 | 67 | 0.7 | 150 | | | | 33 | 98 | 1.9 | 90 | | |
| | 17 | 61 | 0.7 | 180 | | 25 | 122 | 1.3 | 120 | | | | |
| | 13 | 57 | 0.7 | 240 | | 20 | 143 | 1.1 | 150 | | | | |
| | 10 | 51 | 0.7 | 300 | | 17 | 163 | 0.9 | 180 | | | | |
| | 50 | 35 | 1.3 | 60 |  | ECMP180/063/040 24E IEC 63B14 Solo / Only | | 13 | 195 | 0.7 | 240 |  | ECMP350/063/063 120/240 120.66/240.66 |
| | 40 | 41 | 1.1 | 75 | | | | 10 | 174 | 0.7 | 300 | | |
| | 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 | 2.3 | 60 |  | ECMP180/063/050 120/240/24E IEC 63B14 Solo / Only | | 50 | 73 | 2.1 | 60 |  | ECMP350/063/063 120/240 120.66/240.66 |
| | 40 | 42 | 1.8 | 75 | | | | 40 | 88 | 1.6 | 75 | | |
| | 33 | 48 | 2.1 | 90 | | | | 33 | 98 | 1.9 | 90 | | |
| | 25 | 58 | 1.5 | 120 | | | | 25 | 122 | 1.3 | 120 | | |
| | 20 | 69 | 1.2 | 150 | | | | 20 | 143 | 1.1 | 150 | | |
| | 17 | 77 | 1.0 | 180 | | 17 | 163 | 0.9 | 180 | | | | |
| | 13 | 90 | 0.8 | 240 | | 13 | 195 | 0.7 | 240 | | | | |
| | 10 | 110 | 1.1 | 300 | | 10 | 174 | 0.7 | 300 | | | | |
| | 50 | 37 | 4.2 | 60 |  | ECMP180/063/063 120/240/24E IEC 63B14 Solo / Only | | 50 | 73 | 2.1 | 60 |  | ECMP350/063/063 120/240 120.66/240.66 |
| | 40 | 44 | 3.1 | 75 | | | | 40 | 88 | 1.6 | 75 | | |
| | 33 | 49 | 3.8 | 90 | | | | 33 | 98 | 1.9 | 90 | | |
| | 25 | 61 | 2.6 | 120 | | | | 25 | 122 | 1.3 | 120 | | |
| | 20 | 71 | 2.1 | 150 | | | | 20 | 143 | 1.1 | 150 | | |
| | 17 | 81 | 1.7 | 180 | | 17 | 163 | 0.9 | 180 | | | | |
| | 13 | 97 | 1.3 | 240 | | 13 | 195 | 0.7 | 240 | | | | |
| | 10 | 110 | 1.1 | 300 | | 10 | 174 | 0.7 | 300 | | | | |

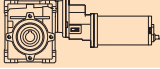
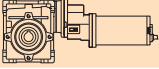
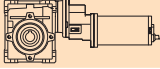
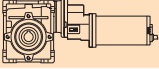


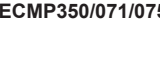


NOTA
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio
NOTE
Please check that the output torque M2 does not exceed the value in the grey areas

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 | P ₁ [W] | n ₂ [min ⁻¹] | M ₂ [Nm] | sf | i |  | Versione motore Motor version | | | | | |
|---------------------------|--|------------------------|-----|-----|---|---|---|---|------------------------|---------|-----|---|----------------------------------|---------|-----------------|---------|-----------------|---------|
| 500 | | | | | | | 800 | | | | | | | | | | | |
| (3000 min ⁻¹) | 50 | 74 | 3.1 | 60 |  | ECMP350/071/070 | (3000 min ⁻¹) | 50 | 112 | 0.7 | 60 |  | ECMP600/071/050 | | | | | |
| | 40 | 90 | 2.2 | 75 | | | 120/240 | 120/240 | 40 | 107 | 0.7 | | | 75 | 120.66/240.66 | | | |
| | 33 | 101 | 2.7 | 90 | | | IEC 71B14 | IEC 71B14 | 33 | 141 | 0.7 | | | 90 | | | | |
| | 25 | 125 | 1.9 | 120 | | |  |  | 50 | 117 | 1.3 | | | 60 | ECMP600/071/063 | 120/240 | | |
| | 20 | 147 | 1.5 | 150 | | | Solo / Only | Solo / Only | 40 | 140 | 1.0 | | | 75 | | | 120.66/240.66 | |
| | 17 | 168 | 1.3 | 180 | | | | | 33 | 157 | 1.2 | | | 90 | | | | |
| | 13 | 202 | 0.9 | 240 | | | | | 25 | 195 | 0.8 | | | 120 | | | | |
| | 10 | 229 | 0.7 | 300 | | | | | 20 | 228 | 0.7 | | | 150 | | | | |
| | 50 | 75 | 3.7 | 60 | | |  | ECMP350/071/075 | 50 | 118 | 1.9 | | | 60 | | | ECMP600/071/070 | 120/240 |
| | 40 | 90 | 2.7 | 75 | | | | | 120/240 | 120/240 | 40 | | | 144 | | | | |
| | 33 | 102 | 3.2 | 90 | IEC 71B14 | IEC 71B14 | | | 33 | 162 | 1.7 | 90 | | | | | | |
| | 25 | 127 | 2.3 | 120 |  |  | | | 25 | 201 | 1.2 | 120 | | | | | | |
| | 20 | 150 | 1.7 | 150 | Solo / Only | Solo / Only | | | 20 | 236 | 0.9 | 150 | | | | | | |
| | 17 | 168 | 1.5 | 180 | | | | | 17 | 270 | 0.8 | 180 | | | | | | |
| | 13 | 206 | 1.1 | 240 | | | | | 13 | 329 | 0.7 | 240 | | | | | | |
| | 10 | 234 | 0.9 | 300 | | | | | 10 | 293 | 0.7 | 300 | | | | | | |
| | | | | | | | | | 50 | 118 | 2.3 | 60 | ECMP600/071/075 | 120/240 | | | | |
| | | | | | | | | | 40 | 144 | 1.7 | 75 | | | 120.66/240.66 | | | |
| | | | | | | | 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 | | | | | | | | |

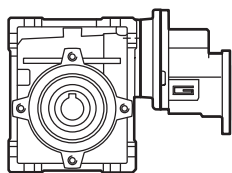
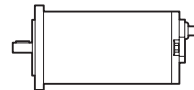
N.B.
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio
N.B.
Please check that the output torque M2 does not exceed the value in the grey areas

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



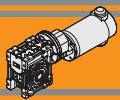
| | | EC | | | | | | |
|-----|---------|--------------------|-------------------------------|--------------------|---------|--------------------|--------------------|--------------------|
| | | 070.12E 070.24E | 100.120 100.240 100.24E | 180.120 180.240 | 180.24E | 250.120 250.240 | 350.120 350.240 | 600.120 600.240 |
| CMP | 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

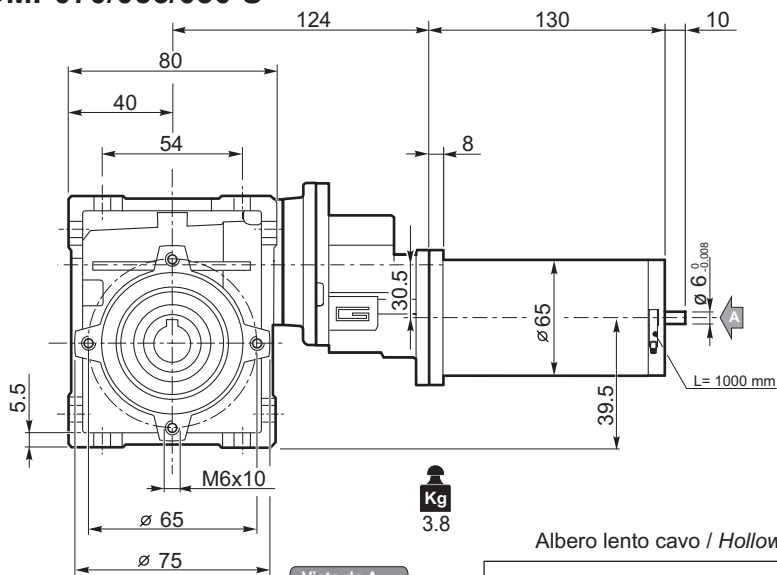
(2): Solo IEC 71 B14
IEC 71 B14 only



Dimensioni

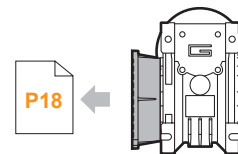
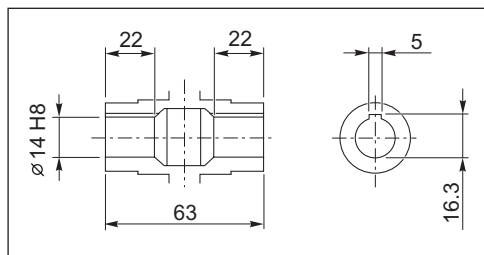
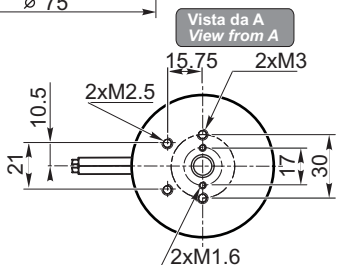
Dimensions

ECMP070/056/030 U



Kg
3.8

Albero lento cavo / Hollow output shaft



ECMP070/056/030 F

Motors / Motors IP66

I2

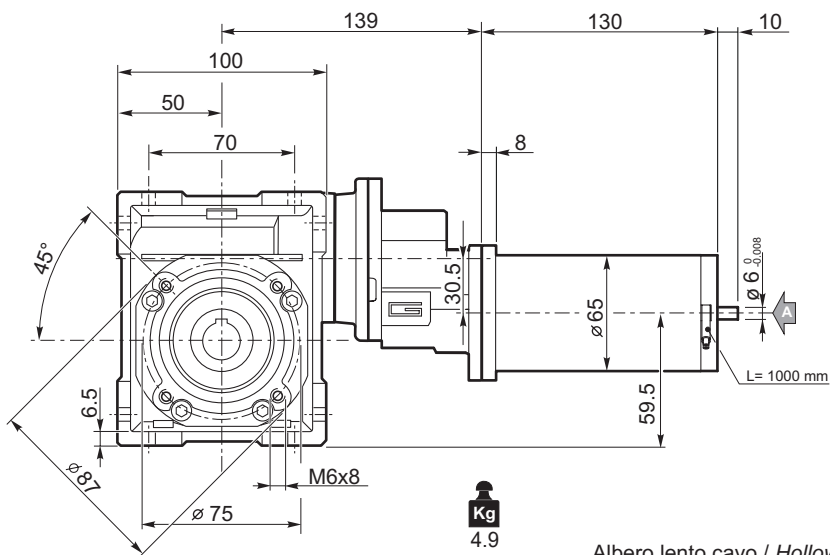
Brake / Brake

H23

Encoder

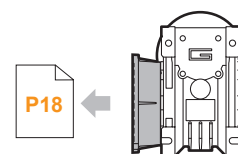
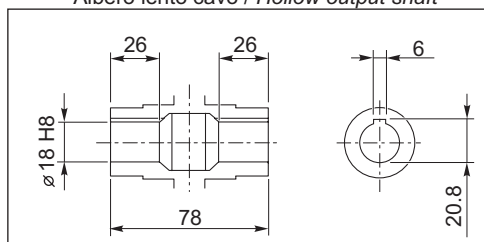
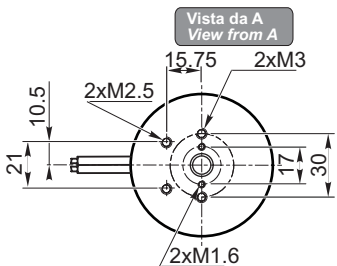
H24

ECMP070/056/040 U



Kg
4.9

Albero lento cavo / Hollow output shaft



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

Motors / Motors IP66

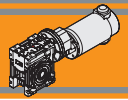
I2

Brake / Brake

H23

Encoder

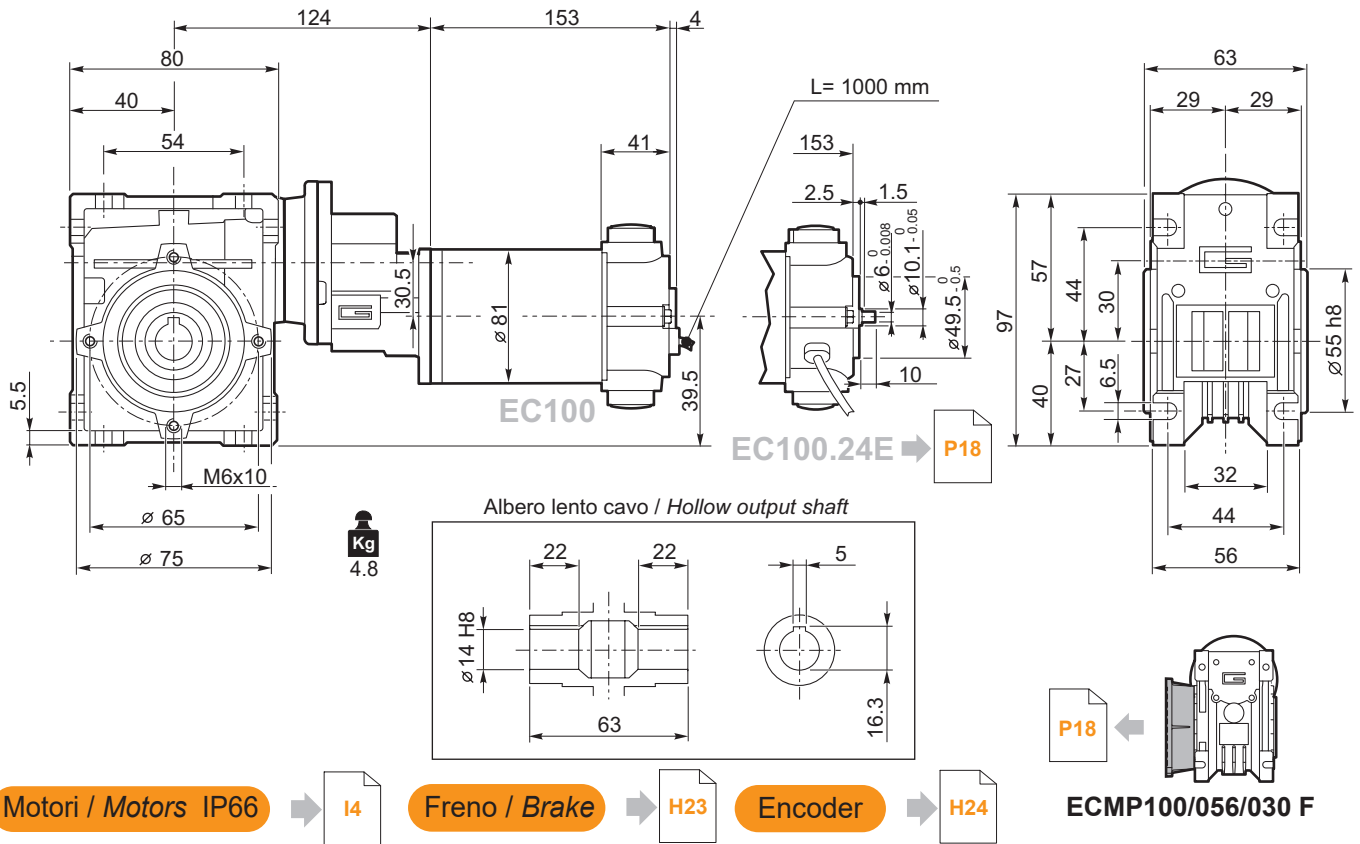
H24



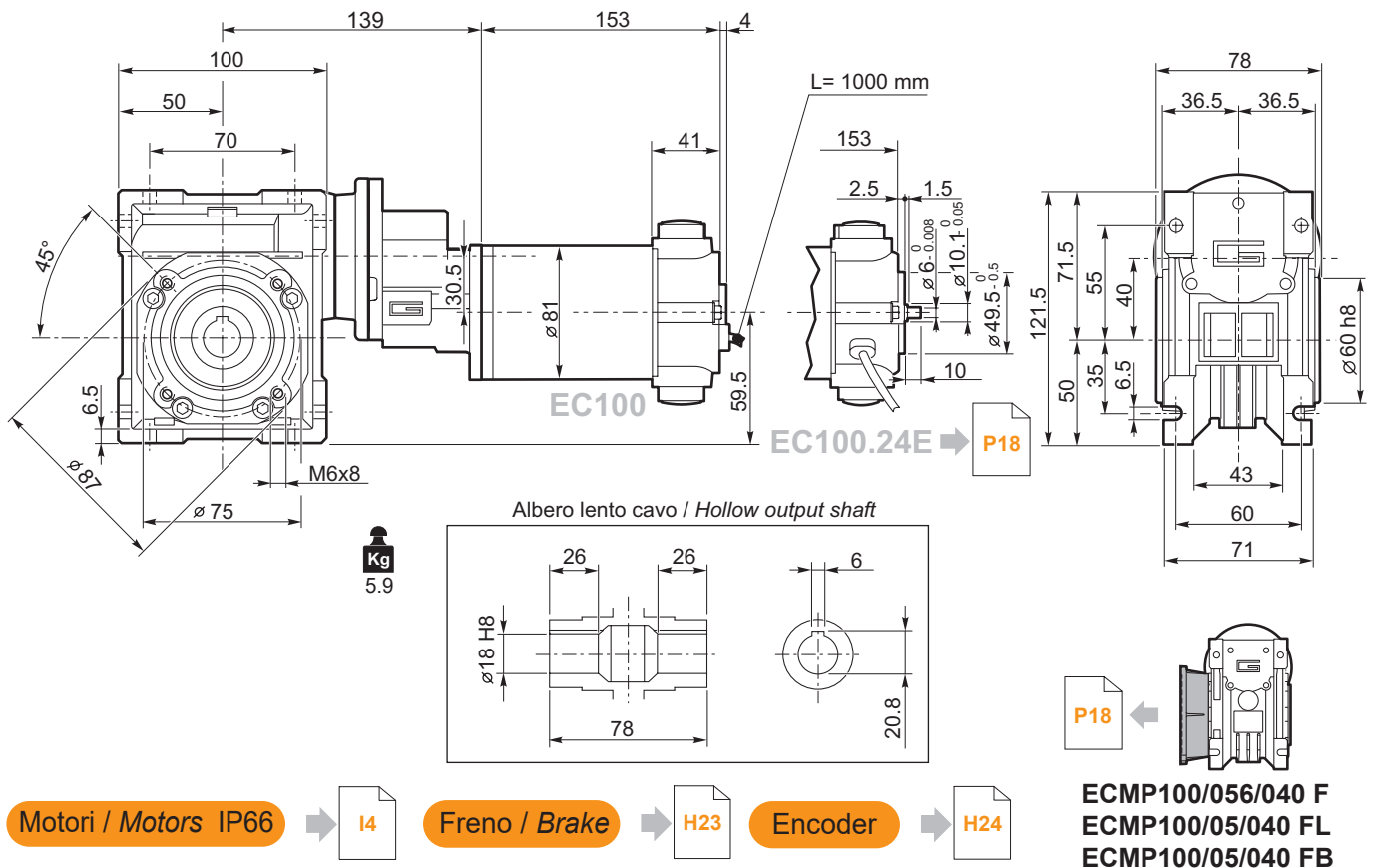
Dimensioni

Dimensions

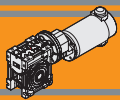
ECMP100/056/030 U



ECMP100/056/040 U



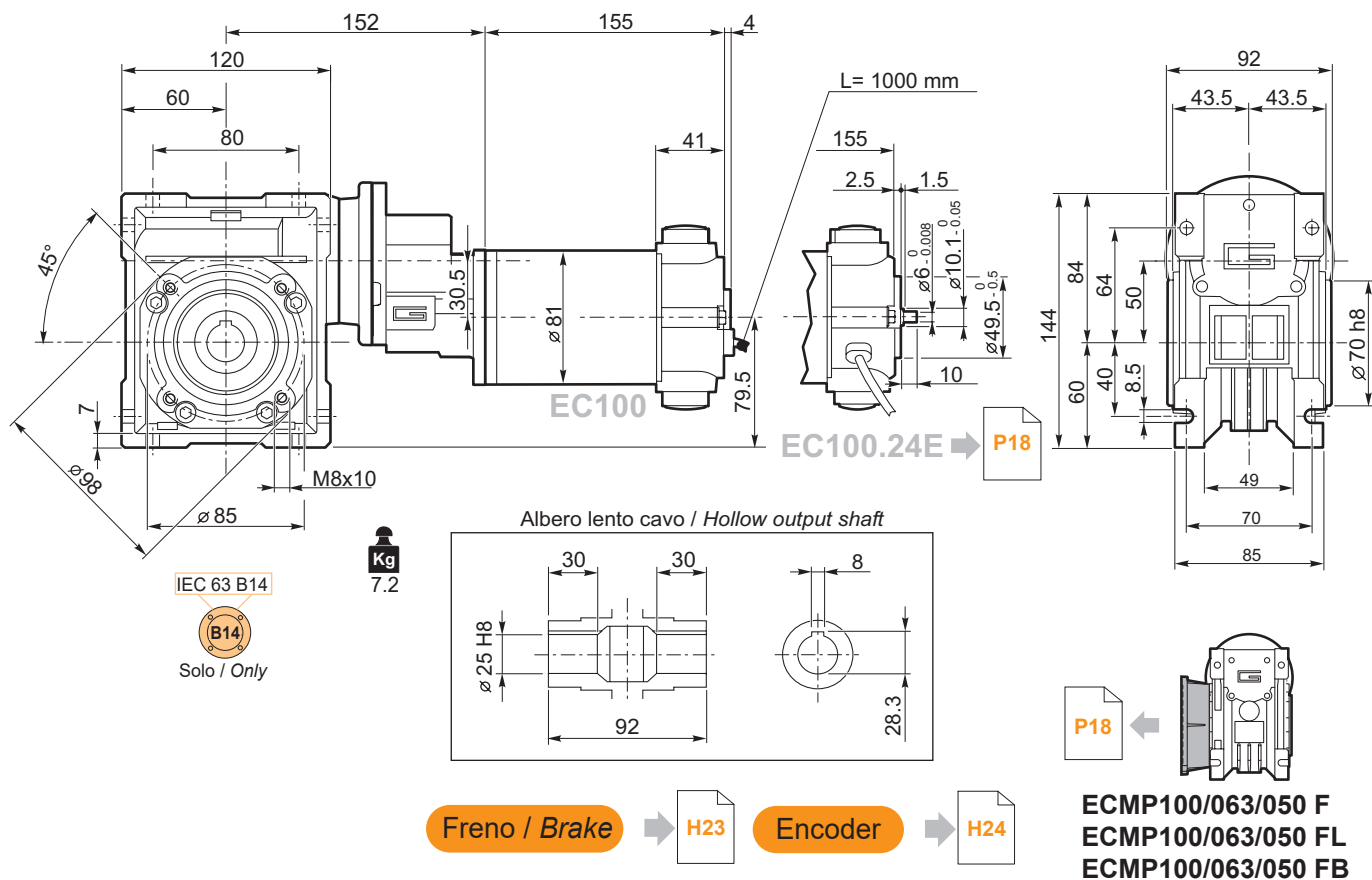
ECMP



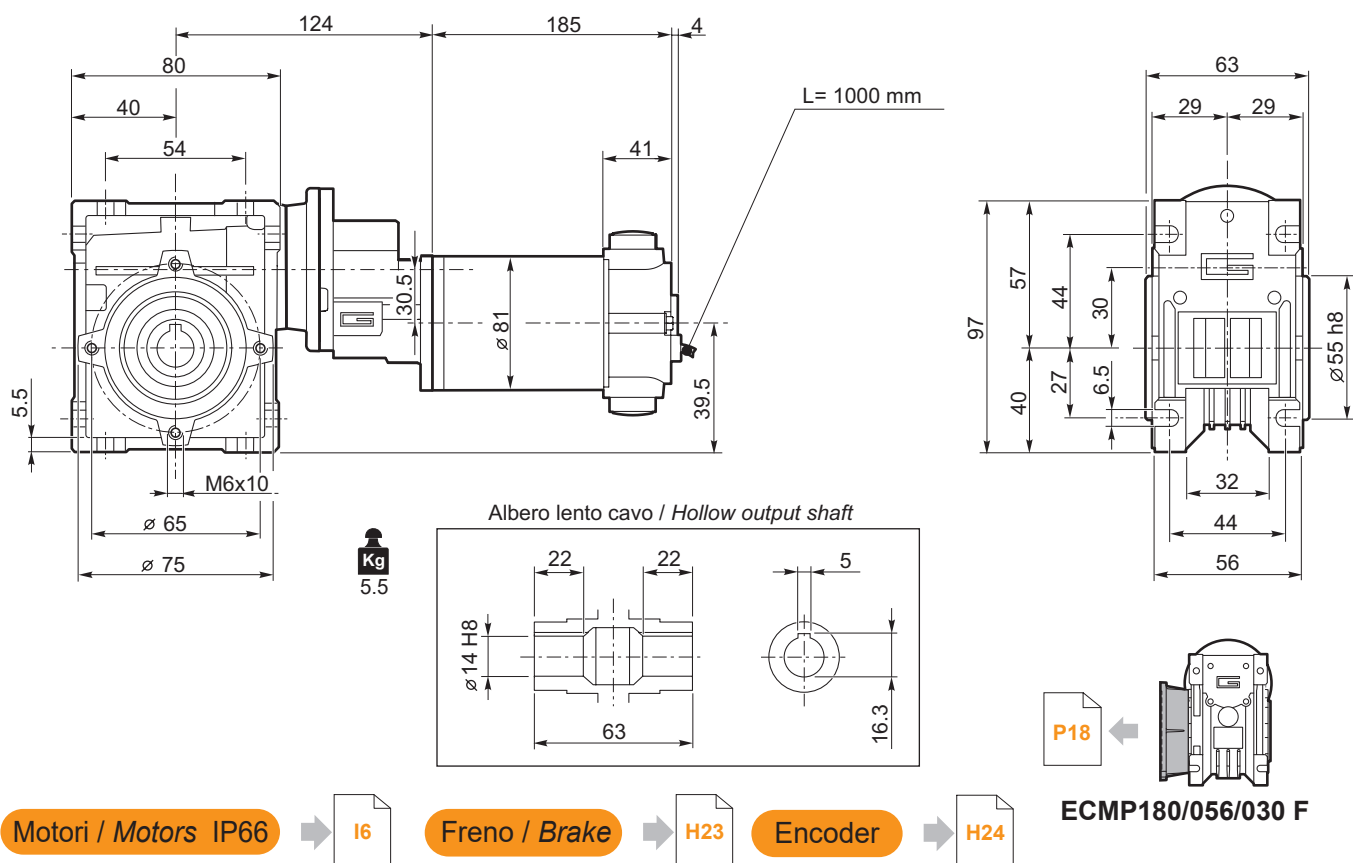
Dimensioni

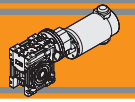
Dimensions

ECMP100/063/050 U



ECMP180/056/030 U

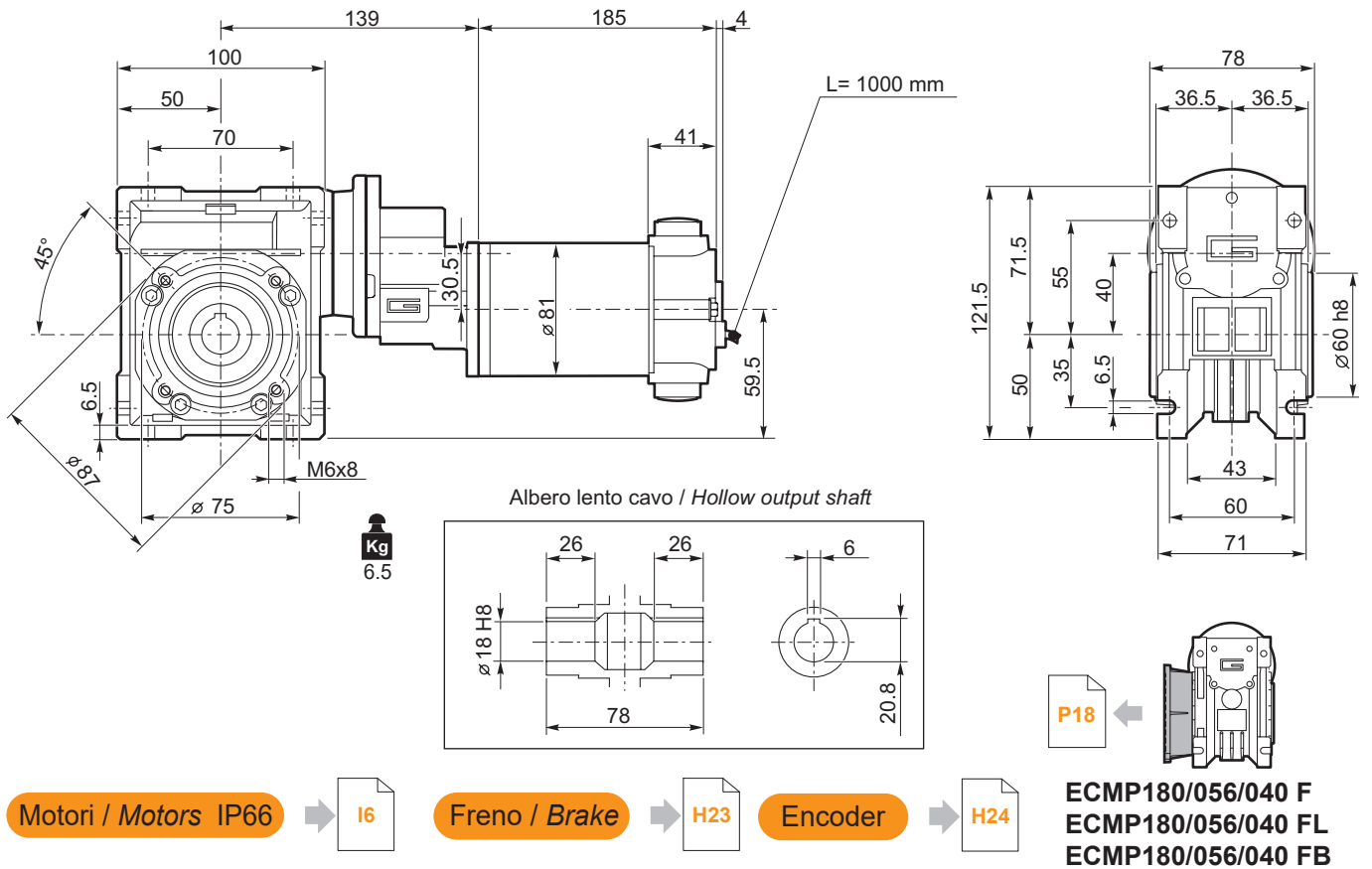




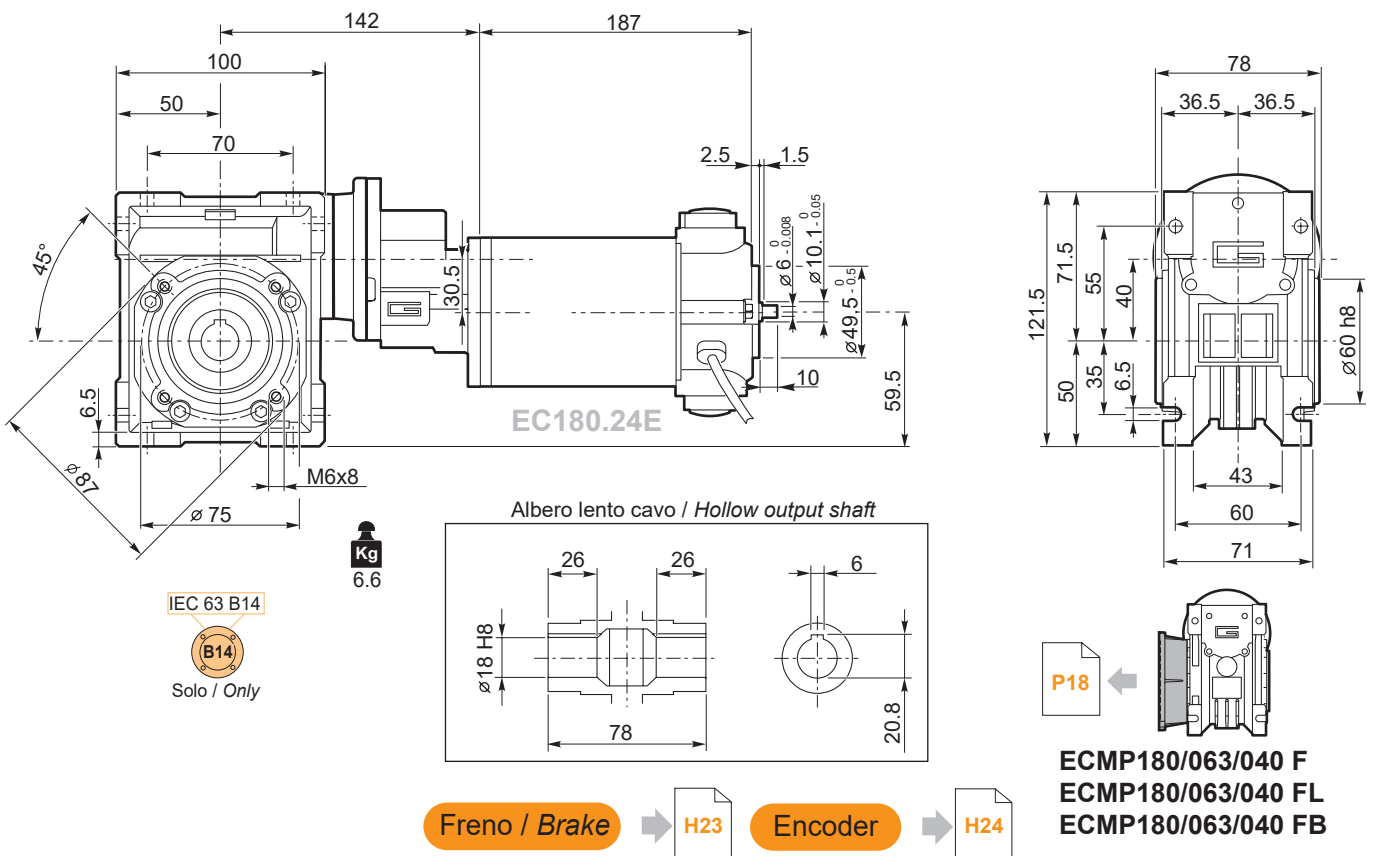
Dimensioni

Dimensions

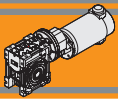
ECMP180/056/040 U



ECMP180/063/040 U.24E



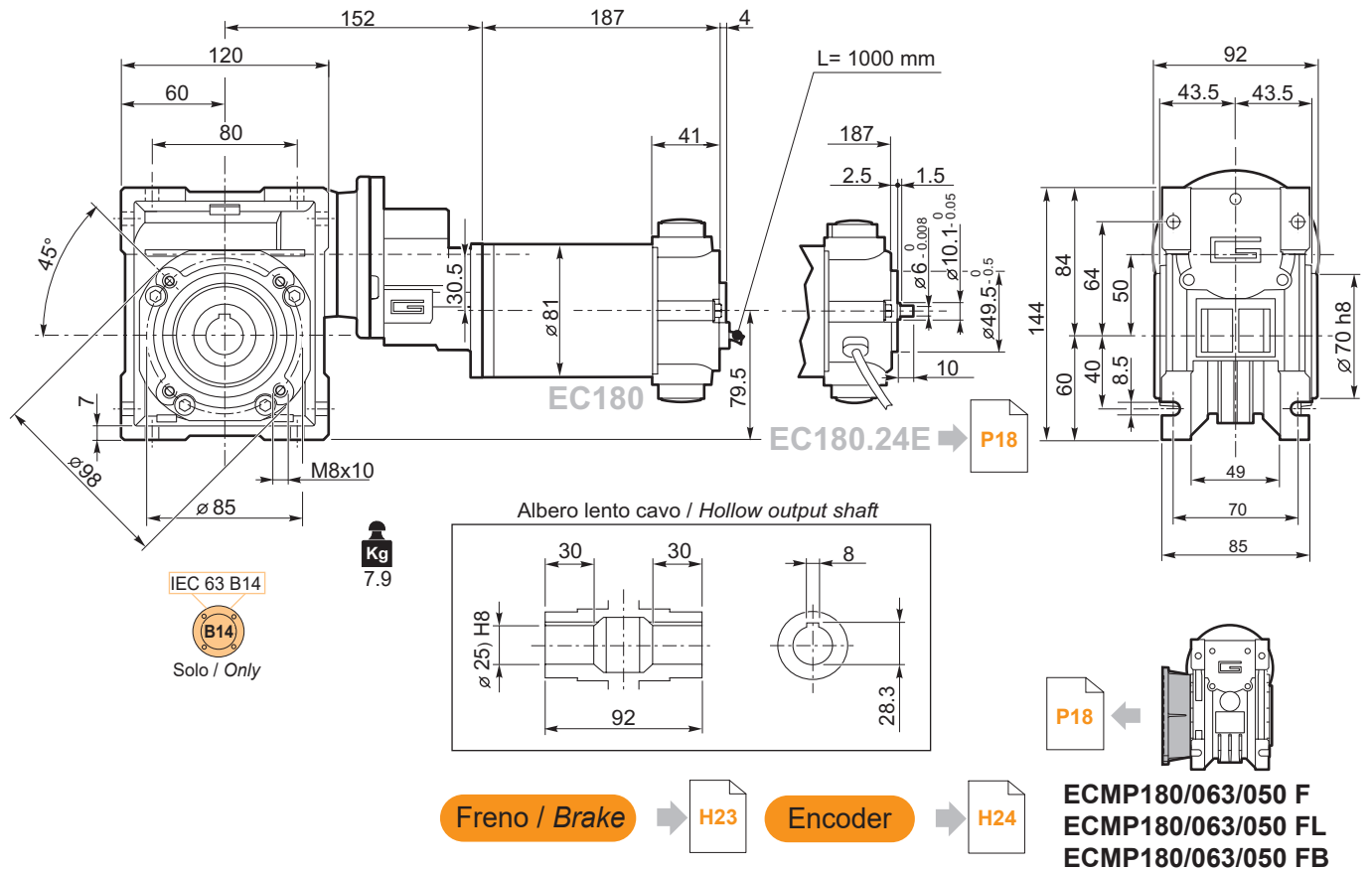
ECMP



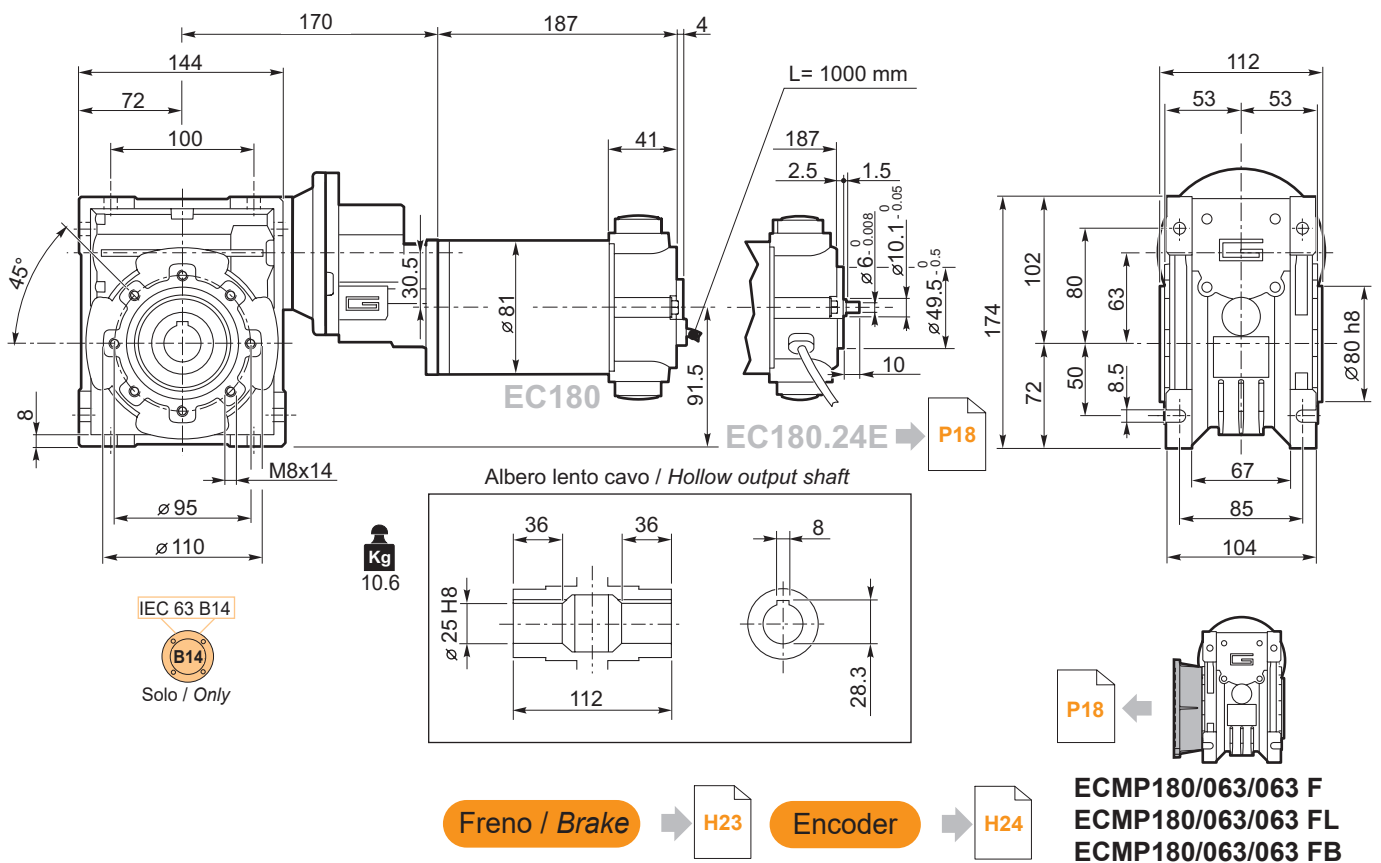
Dimensioni

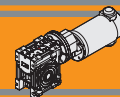
Dimensions

ECMP180/063/050 U



ECMP180/063/063 U

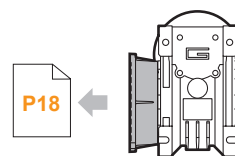
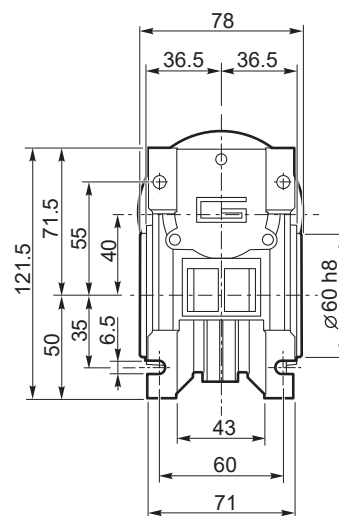
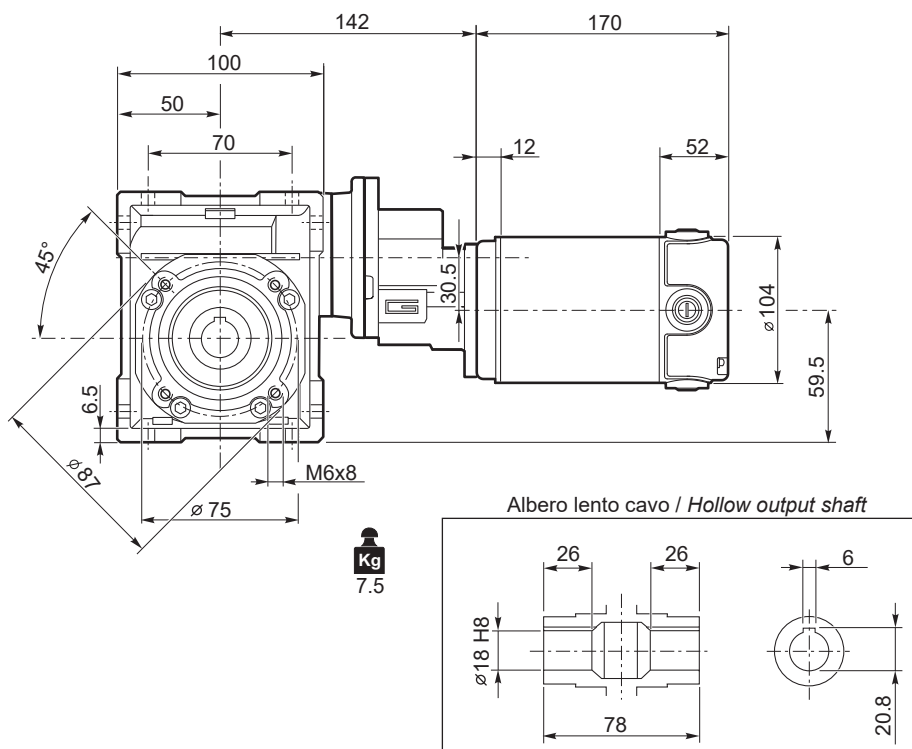




Dimensioni

Dimensions

ECMP250/063/040 U

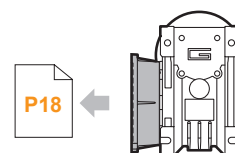
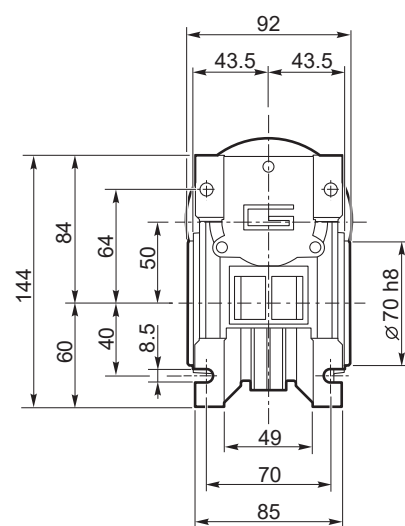
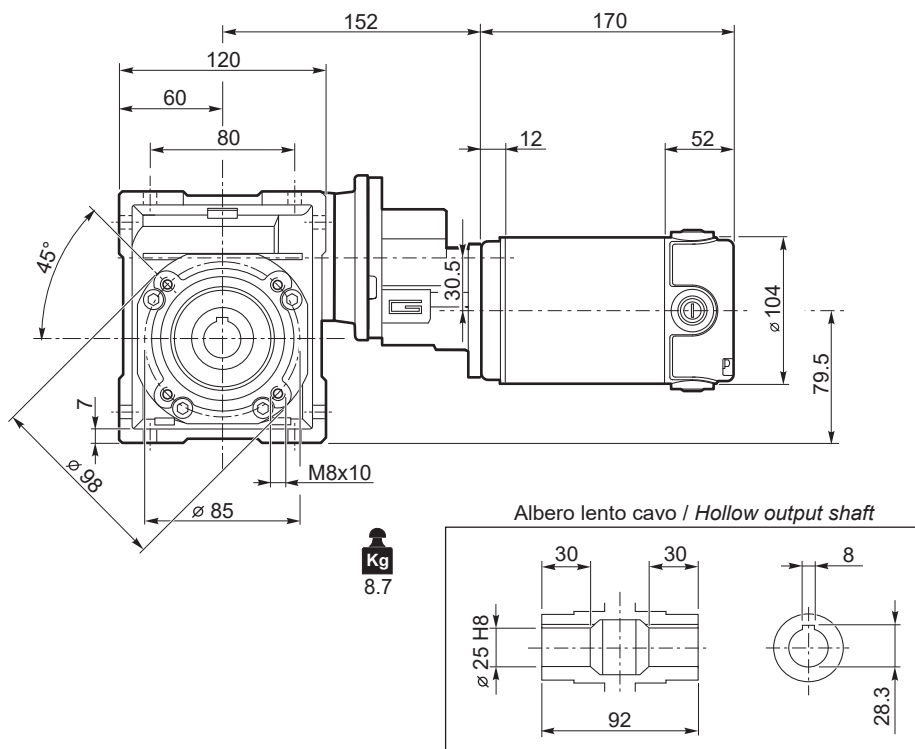


ECMP250/063/040 F
ECMP250/063/040 FL
ECMP250/063/040 FB

Motori / Motors IP66

I8

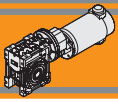
ECMP250/063/050 U



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

Motori / Motors IP66

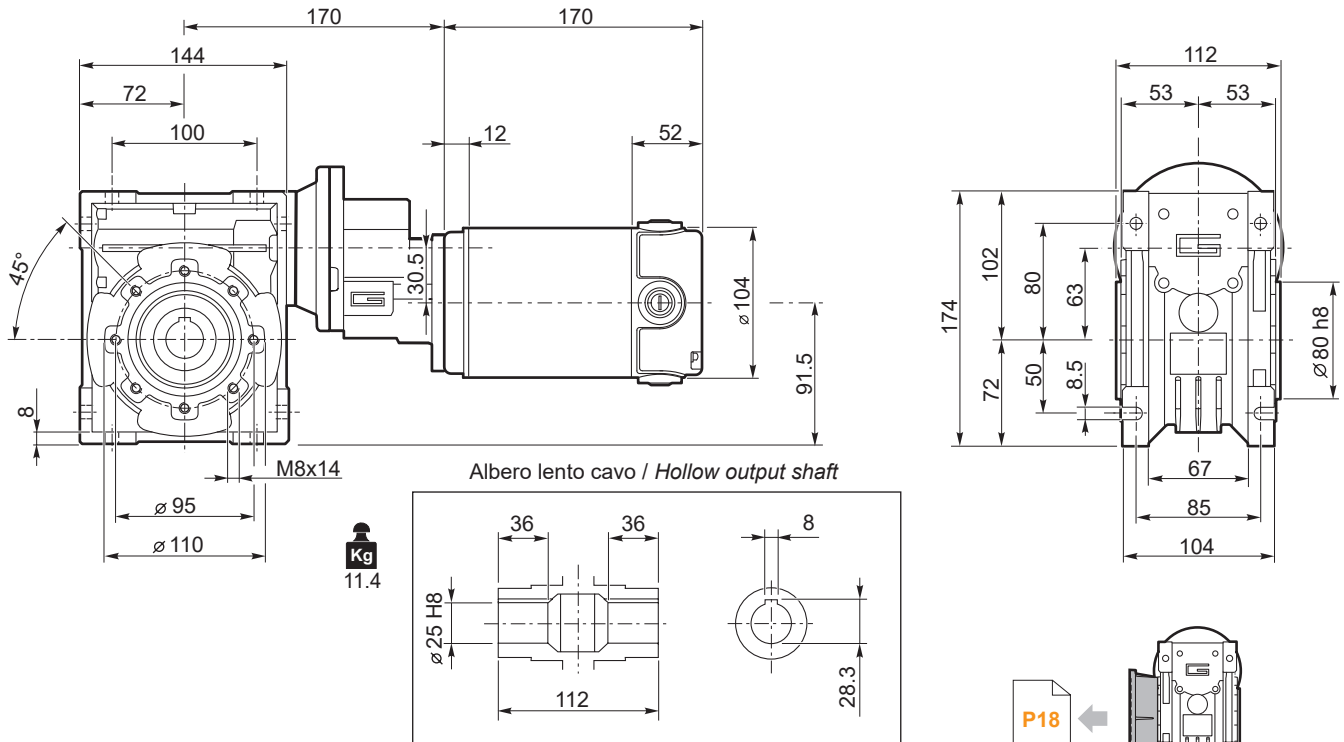
I8



Dimensioni

Dimensions

ECMP250/063/063 U



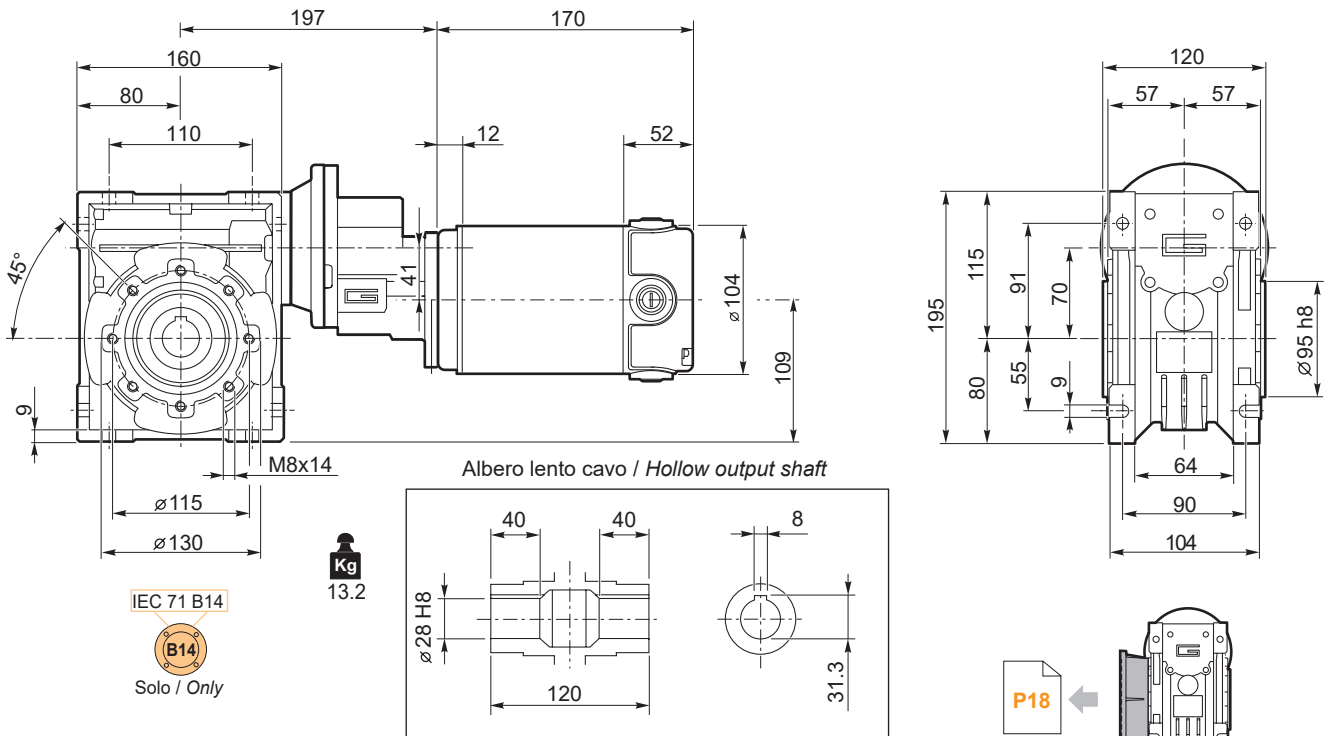
Motori / Motors IP66

I8

P18

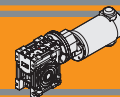
ECMP250/063/063 F
ECMP250/063/063 FL
ECMP250/063/063 FB

ECMP250/071/070 U



P18

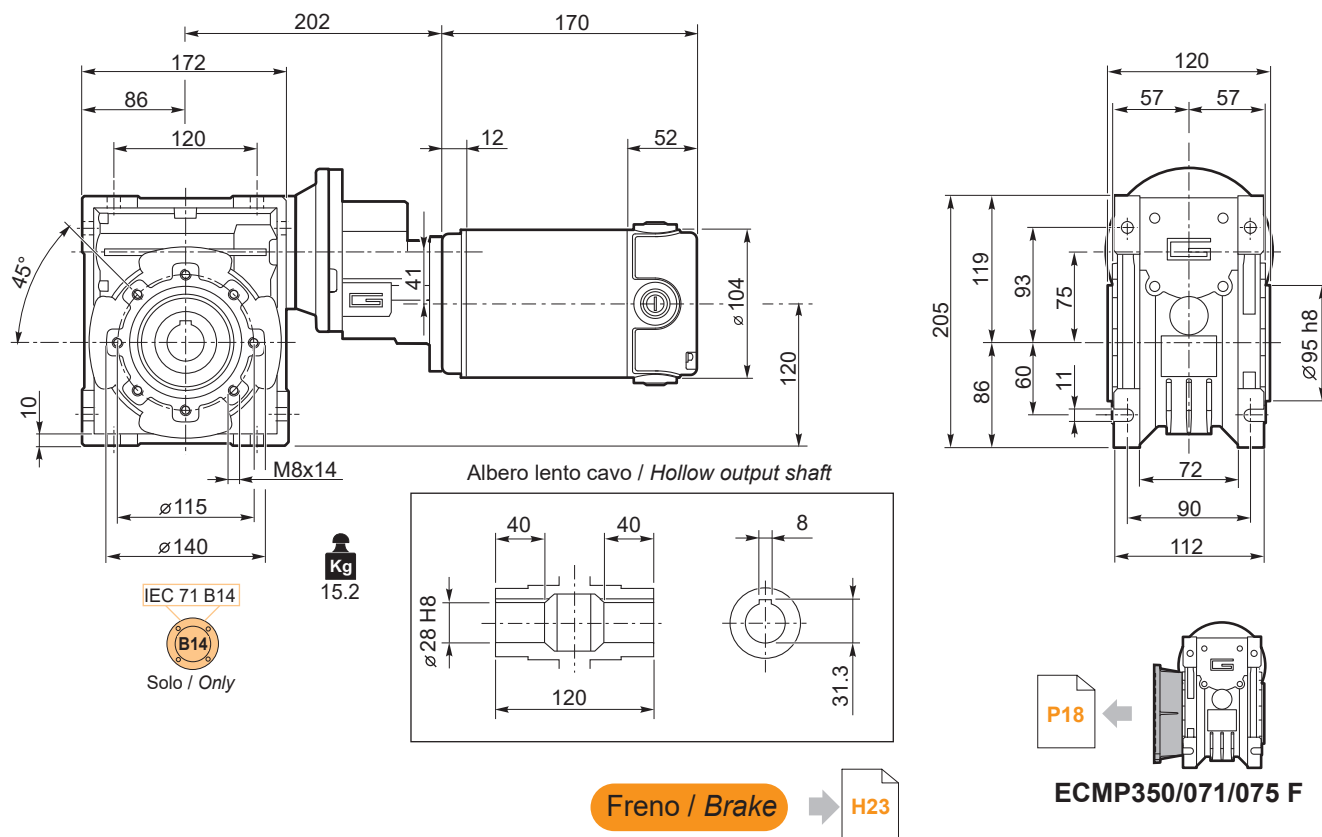
ECMP250/071/070 F



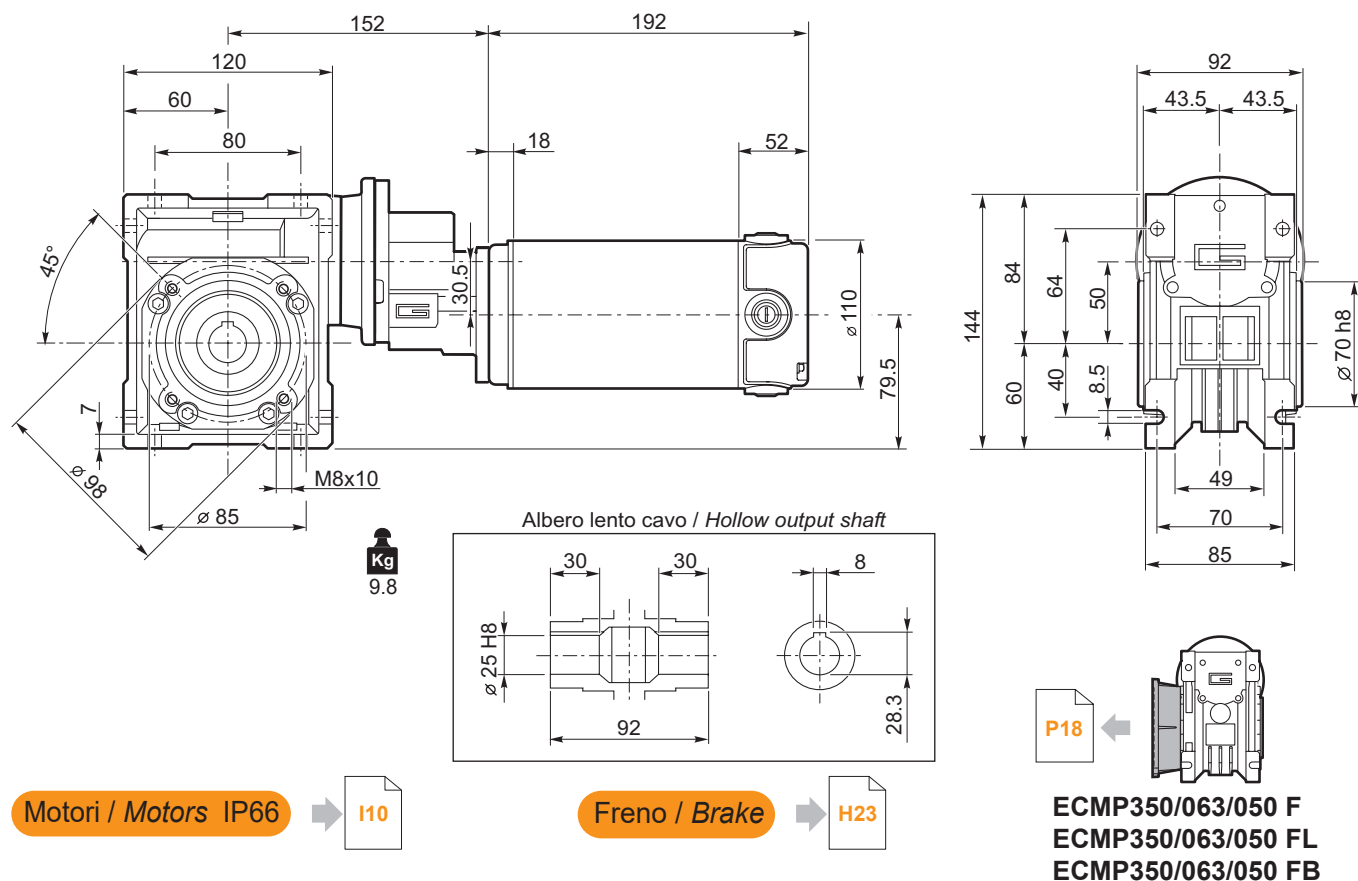
Dimensioni

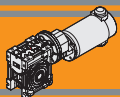
Dimensions

ECMP250/071/075 U



ECMP350/063/050 U

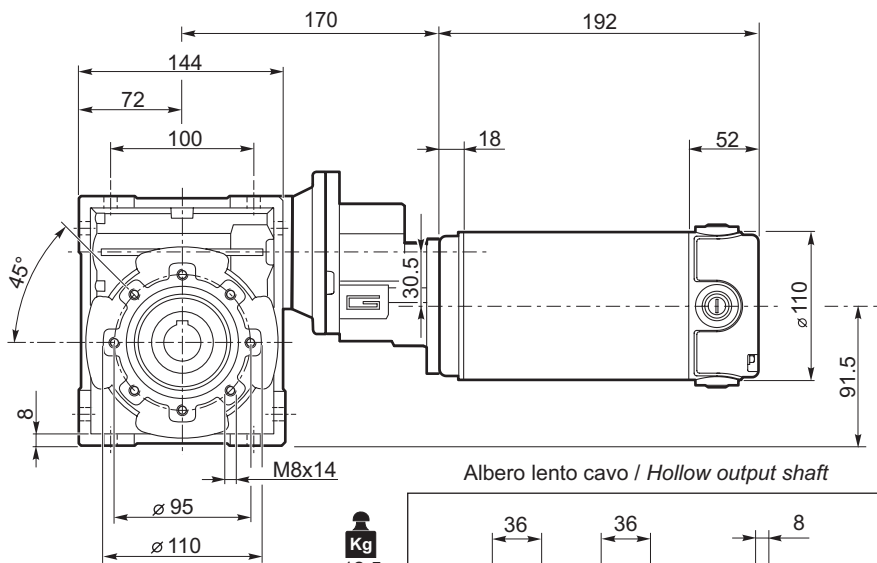




Dimensioni

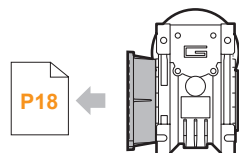
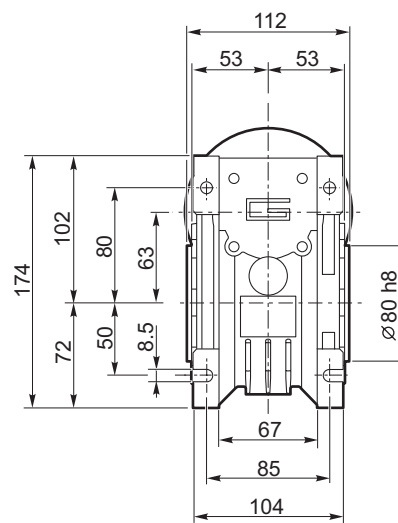
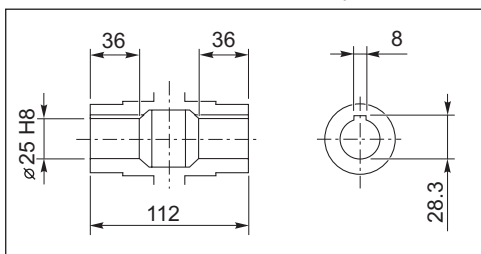
Dimensions

ECMP350/063/063 U



Kg
12.5

Albero lento cavo / Hollow output shaft



P18

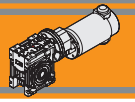
ECMP350/063/063 F
ECMP350/063/063 FL
ECMP350/063/063 FB

Motori / Motors IP66

I10

Freno / Brake

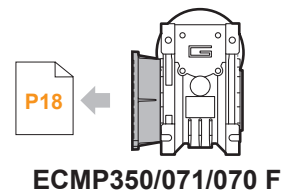
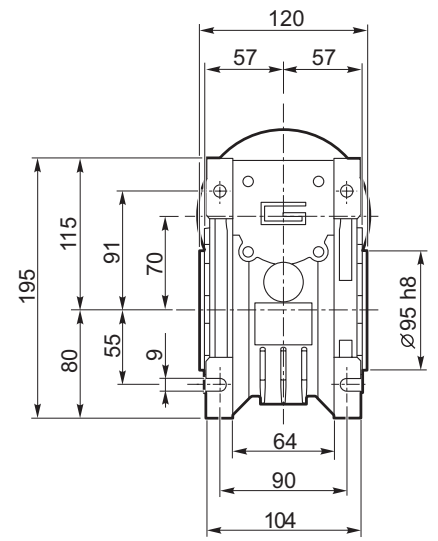
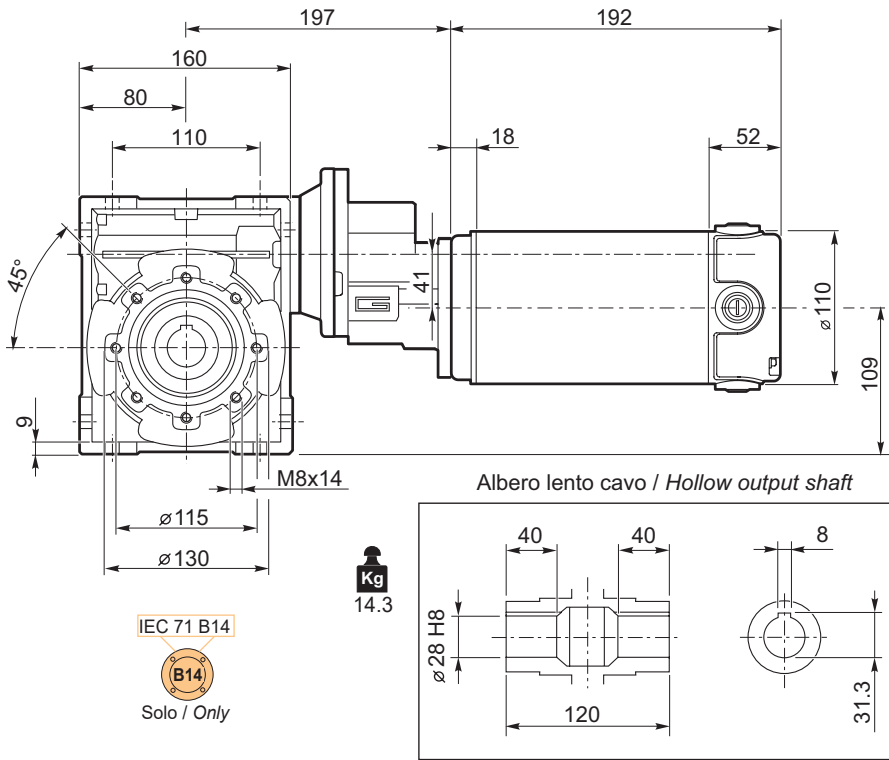
H23



Dimensioni

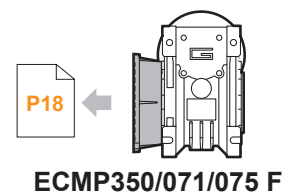
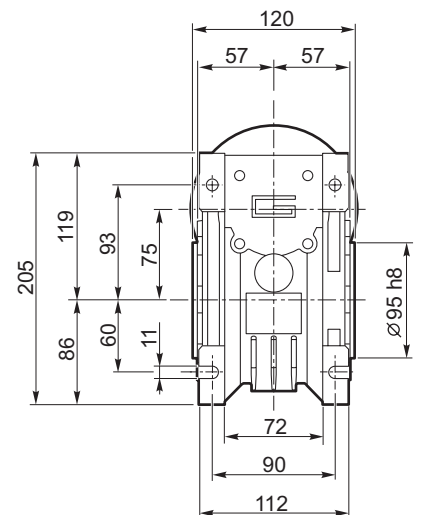
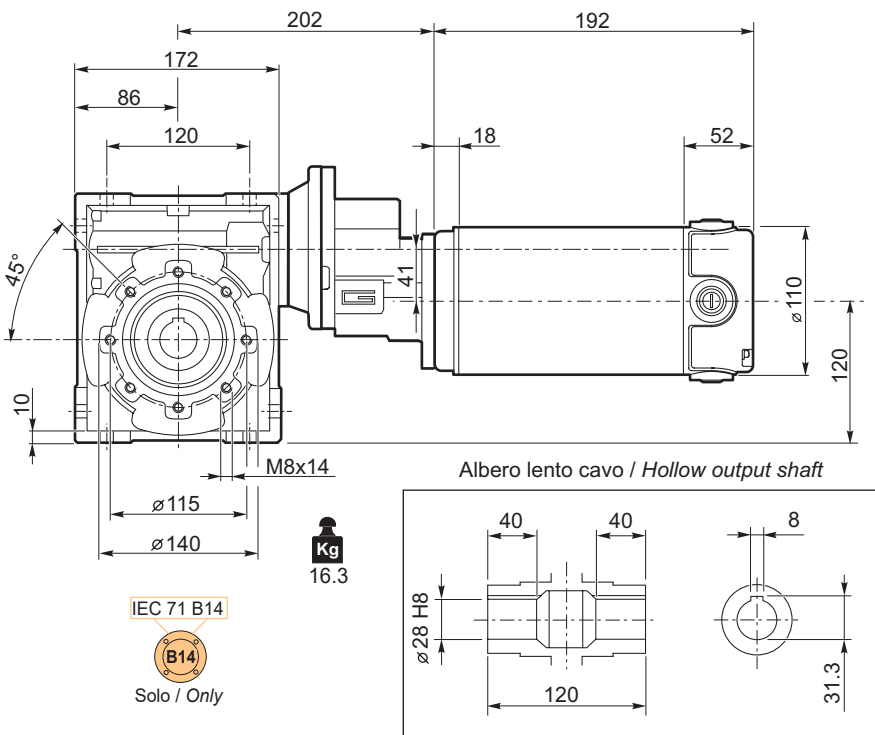
Dimensions

ECMP350/071/070 U



Freno / Brake → **H23**

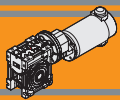
ECMP350/071/075 U



Freno / Brake → **H23**

ECMP

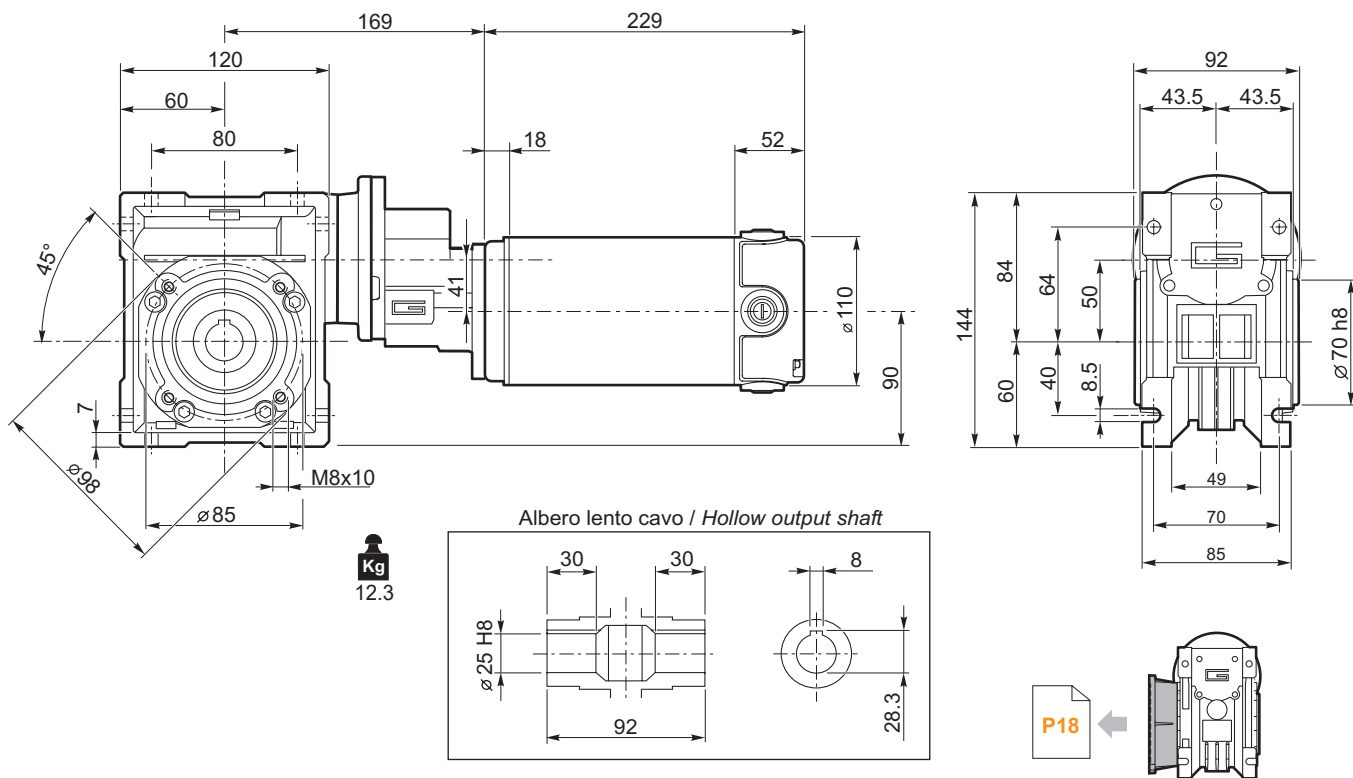
ECMP350/071/075 F



Dimensioni

Dimensions

ECMP600/071/050 U



Motori / Motors IP66

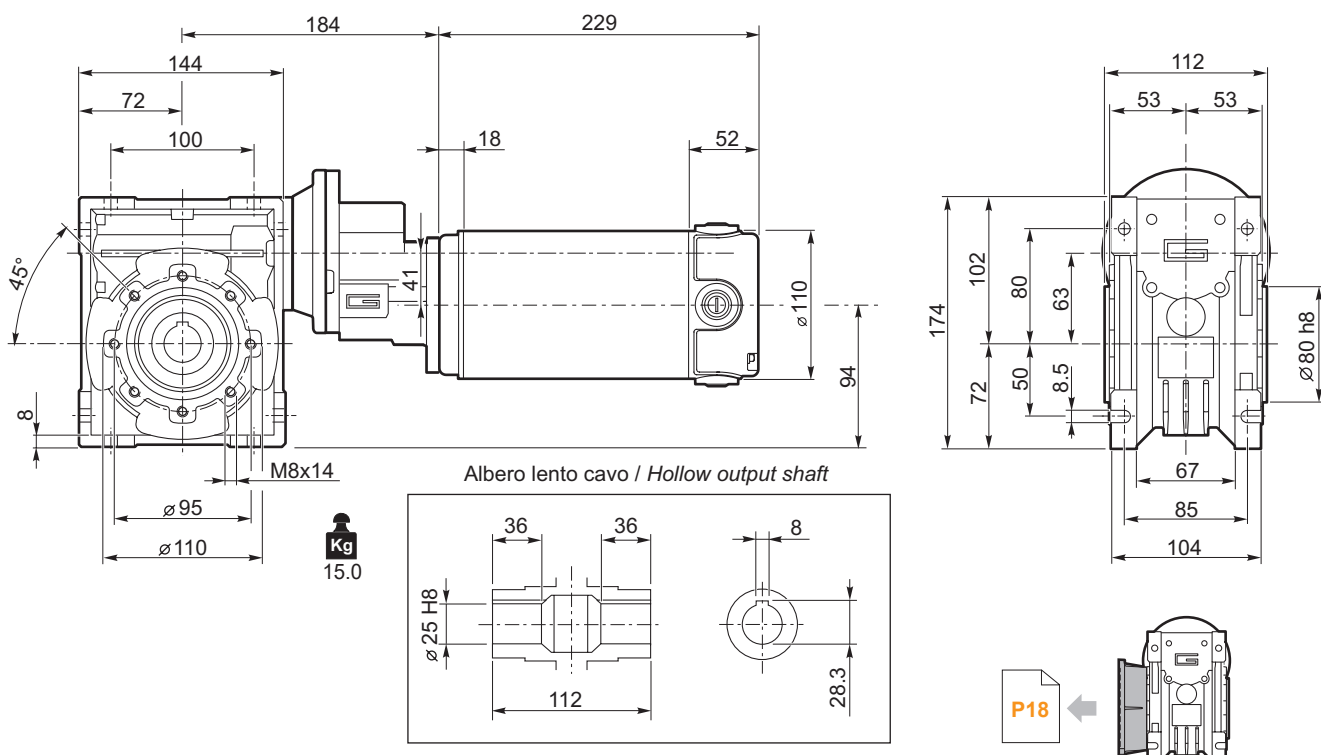
I12

Freno / Brake

H23

ECMP600/071/050 F
ECMP600/071/050 FL
ECMP600/071/050 FB

ECMP600/071/063 U



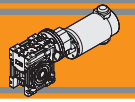
Motori / Motors IP66

I12

Freno / Brake

H23

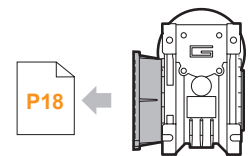
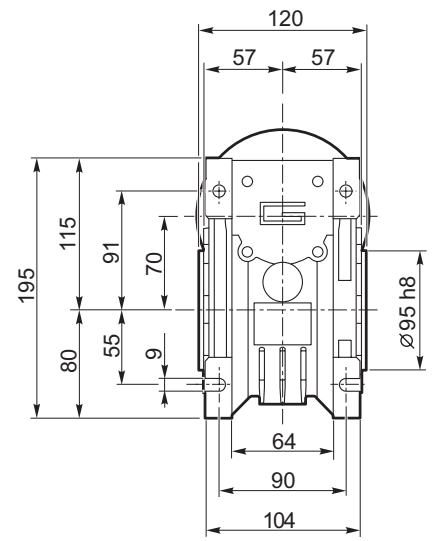
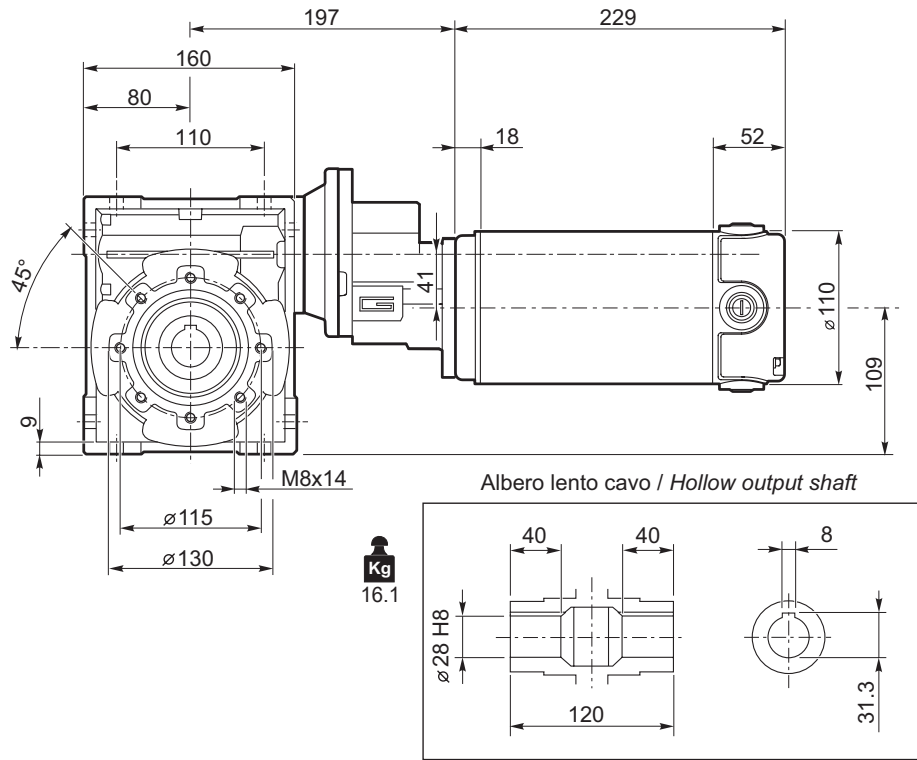
ECMP600/071/063 F
ECMP600/071/063 FL
ECMP600/071/063 FB



Dimensioni

Dimensions

ECMP600/071/070 U



ECMP600/071/070 F

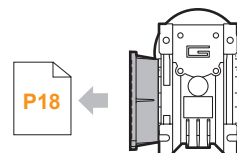
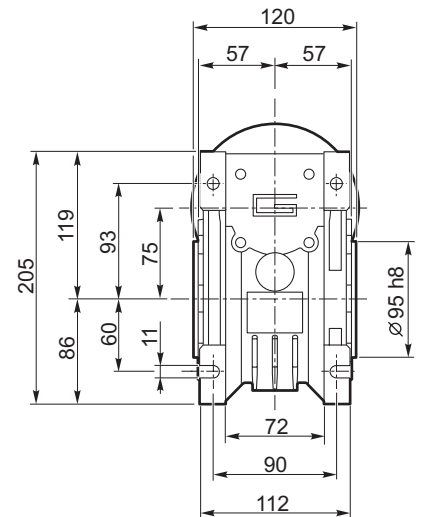
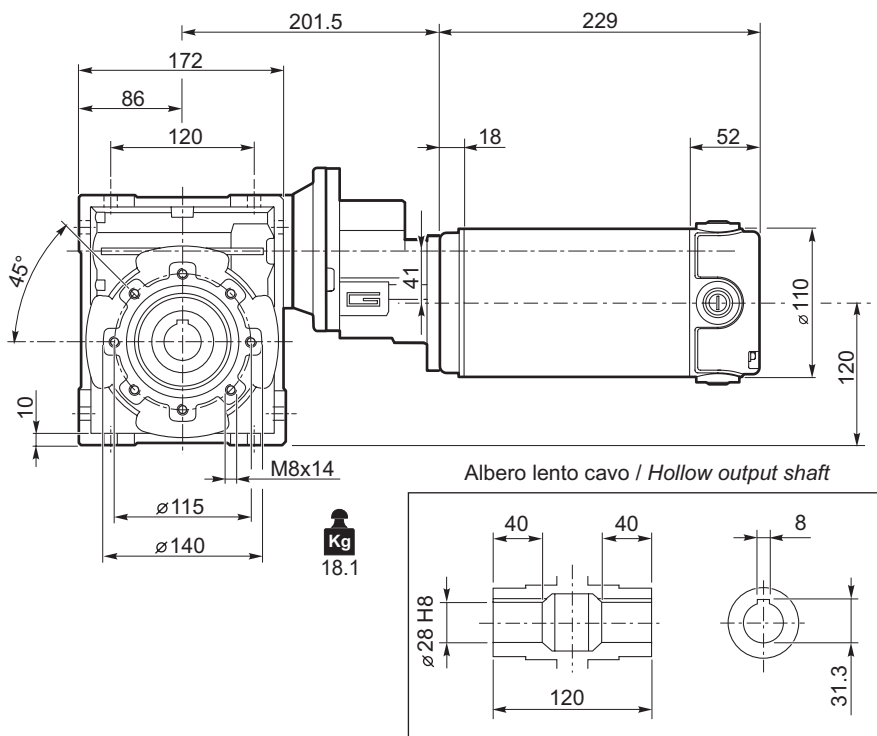
Motori / Motors IP66

112

Freno / Brake

H23

ECMP600/071/075 U



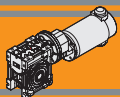
ECMP600/071/075 F

Motori / Motors IP66

112

Freno / Brake

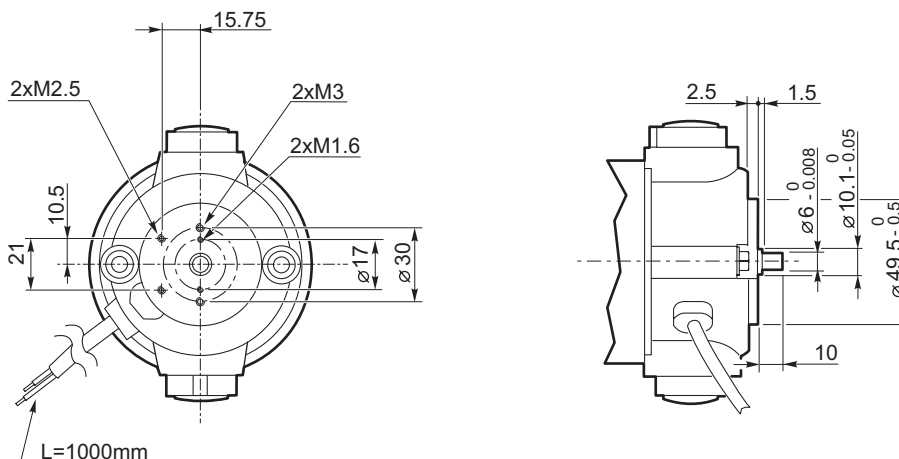
H23



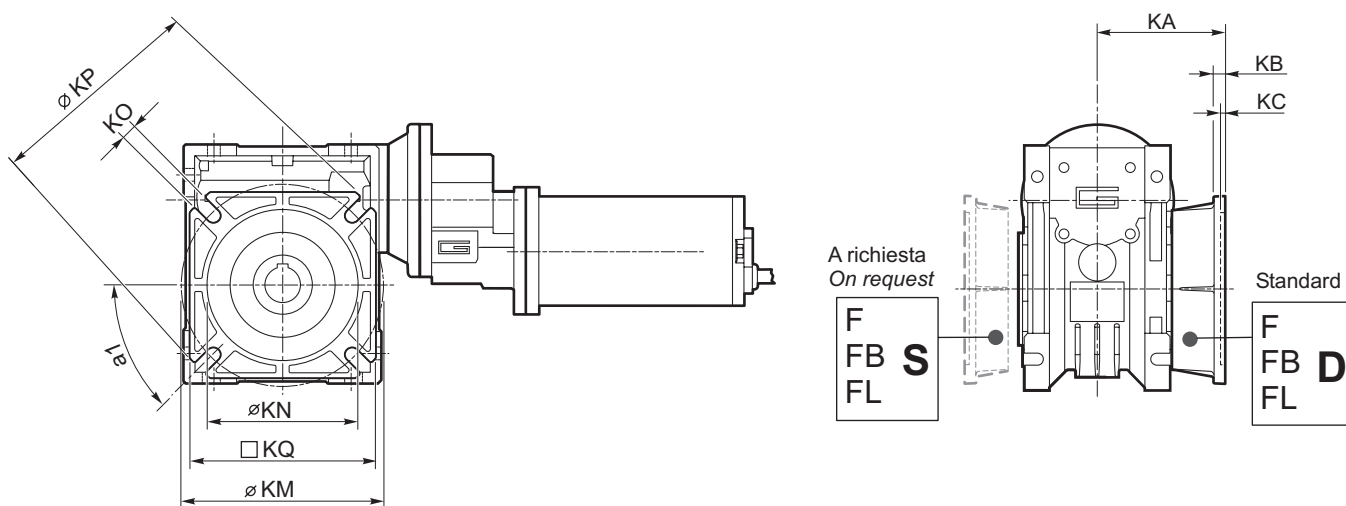
Dimensioni

Dimensions

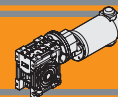
EC100.24E EC180.24E



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



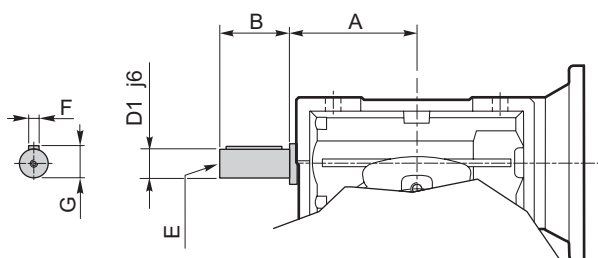
| ECMP | ECMP..F | | | | | | | | | ECMP..FB | | | | | | ECMP..FL | | | | | | | | | |
|--------------------|---------|------|-----|----|---------|------------------|----------|-----|-----|----------|-----|----|---------|------------------|----------|----------|-----|-----|-----|-----|---------|------------------|---------|-----|-----|
| | 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

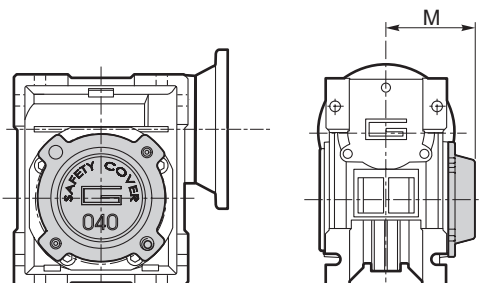
VS - Vite sporgente / *Extended input shaft*



| 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 |

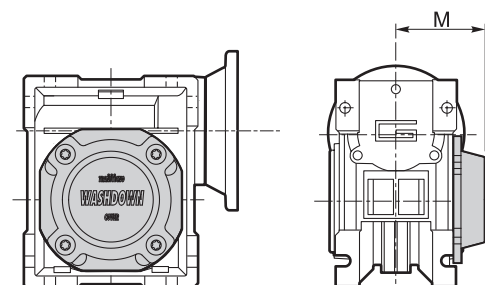
Costruito su richiesta
Built on request

SC - Safety cover

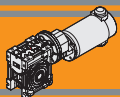


| ECMP | M |
|---------|------|
| ... 030 | 47 |
| ... 040 | 54.5 |
| ... 050 | 62.5 |
| ... 063 | 73 |
| ... 070 | 75 |
| ... 075 | 79 |

WD - Washdown cover



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



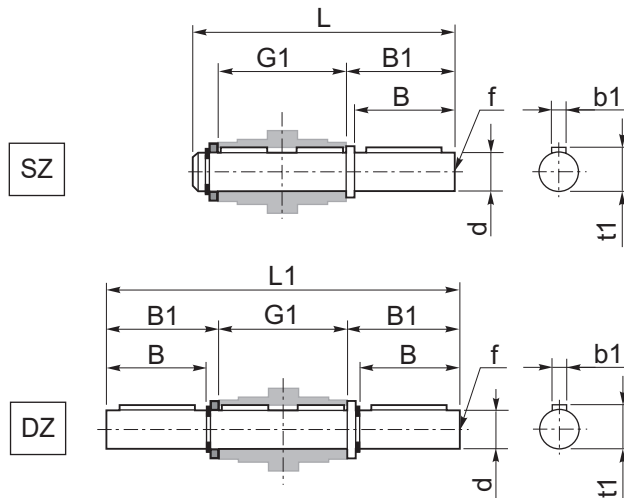
Accessori

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 |

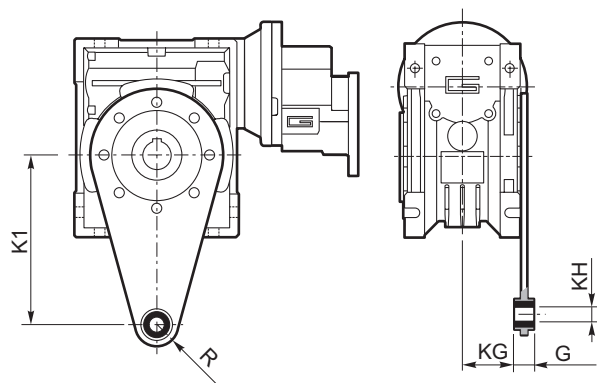
Single and double output shaft



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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|------------------------------|-----------------------------------|--------------|
| Caratteristiche tecniche | <i>Technical features</i> | Q2 |
| Designazione | <i>Classification</i> | Q2 |
| Simbologia | <i>Symbols</i> | Q2 |
| Esecuzioni di montaggio | <i>Mounting executions</i> | Q2 |
| Combinazioni rapporti | <i>Combination ratio</i> | Q3 |
| Lubrificazione | <i>Lubrication</i> | Q3 |
| Dati tecnici per servizio S2 | <i>Technical data for S2 duty</i> | Q4 |
| Motori applicabili | <i>Motor adapters</i> | Q9 |
| Dimensioni | <i>Dimensions</i> | Q10 |
| Opzioni | <i>Options</i> | Q24 |
| Accessori | <i>Accessories</i> | Q25 |

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Caratteristiche tecniche

Technical features

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

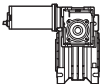
The main features of ECMM ferrite permanent magnets DC reduction wormgearmotors range are:

- 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

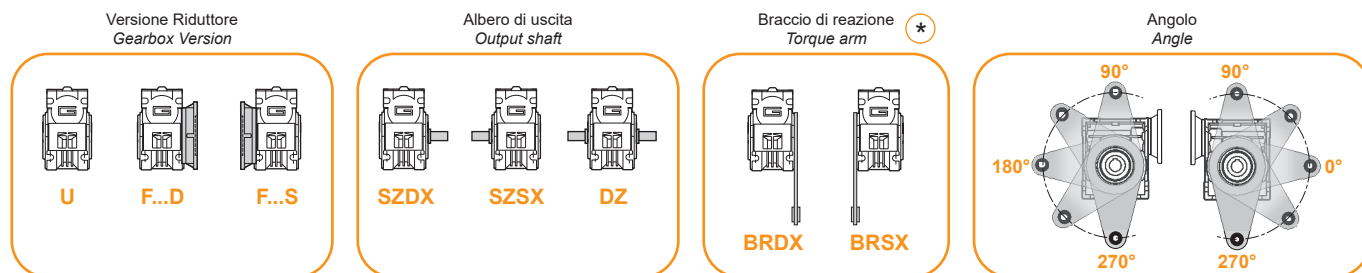
- Low voltage power supply 12/24Vdc
- Suitable for encoder assembly
- Motor power ratings available from 100 up to 800W S2
- Ferrite magnets
- Die cast aluminium housing on sizes 026, 030, 040, 050, 063, 075, 090 and 110. Cast iron housing on size 130
- Permanent synthetic oil long life lubrication

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 |
|  | 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 | 250/030/040 | 600/040/070 | | | | | | | | | |
| | 070/040/075 | 100/040/090 | 250/030/050 | 600/040/075 | | | | | | | | | |
| | 070/040/090 | | 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.



Simbologia

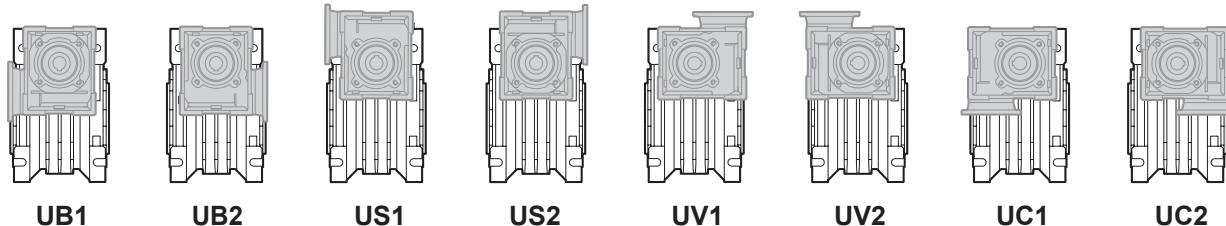
Symbols

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



Esecuzioni di montaggio

Mounting executions



Combinazioni rapporti

Combination ratio

| CMM 026/026 - CMM 026/030 - CMM 026/040 - 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

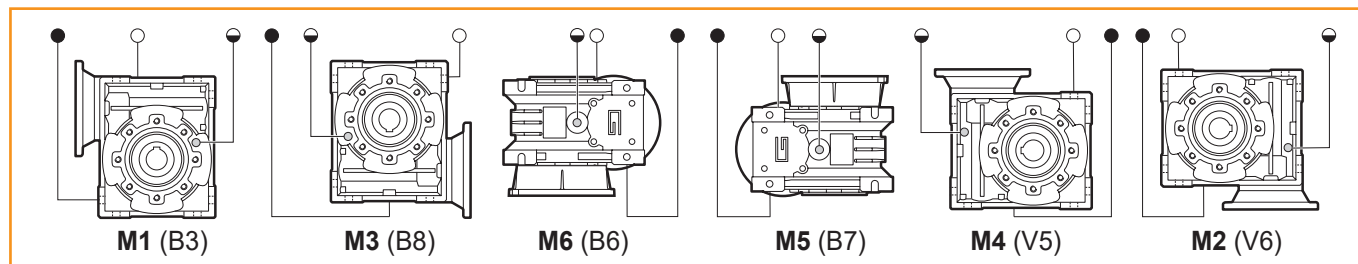
Tutti i motoriduttori nelle taglie 26, 30, 40, 50, 63, 70, 75, 90, 110 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione. Per la taglia 130 la lubrificazione dipende dalla posizione di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

**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 | | | 15.0 | 36 | | 7.1 | | 200 | 12E/24E |
| | 10.0 | 40 | 1.0 | 300 | | | | | 12.0 | 43 | 5.8 | 250 | 120.66/240.66 | | | |
| | 6.7 | 40 | 1.0 | 450 | | | | | 10.0 | 46 | 3.5 | 300 | | | | |
| | 5.0 | 40 | 1.0 | 600 | | | | | 7.5 | 57 | 2.4 | 400 | | | | |
| | 3.3 | 40 | 1.0 | 900 | | | | | 6.0 | 64 | 2.0 | 500 | | | | |
| | 2.5 | 40 | 1.0 | 1200 | | | | | 5.0 | 87 | 1.9 | 600 | | | | |
| | 2.0 | 40 | 1.0 | 1500 | | | | | 4.0 | 105 | 1.5 | 750 | | | | |
| | 1.7 | 40 | 1.0 | 1800 | | | | | 3.3 | 120 | 1.4 | 900 | | | | |
| | 1.3 | 34 | 1.0 | 2400 | | | | | 2.5 | 146 | 0.9 | 1200 | | | | |
| | 1.0 | 30 | 1.0 | 3000 | | | | | 2.0 | 175 | 0.9 | 1500 | | | | |
| | 0.8 | 27 | 1.0 | 3600 | | | | | 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 | | | 4.0 | 109 | 2.4 | | | 750 | 12E/24E |
| | 10.0 | 45 | 2.0 | 300 | | | | | | 3.3 | 124 | 2.5 | | | 900 | 120.66/240.66 |
| | 6.7 | 66 | 1.4 | 450 | | | | | | 2.5 | 149 | 1.7 | | | 1200 | |
| | 5.0 | 85 | 1.1 | 600 | | | | | 2.0 | 181 | 1.4 | 1500 | | | | |
| | 3.3 | 90 | 1.0 | 900 | | | | | 1.7 | 208 | 1.2 | 1800 | | | | |
| | 2.5 | 90 | 1.0 | 1200 | | | | | 1.3 | 249 | 1.0 | 2400 | | | | |
| | 2.0 | 90 | 1.0 | 1500 | | | | | 1.0 | 288 | 0.8 | 3000 | | | | |
| | 1.7 | 90 | 1.0 | 1800 | | | | | | | | | | | | |
| | 1.3 | 74 | 1.0 | 2400 | | | | | 2.5 | 155 | 2.5 | 1200 | | ECMM 070/040/070 | 12E/24E | |
| | 1.0 | 68 | 1.0 | 3000 | | | | | 2.0 | 193 | 2.4 | 1500 | | | 120.66/240.66 | |
| | 0.8 | 62 | 1.0 | 3600 | | | | | 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 | | | 1200 | 12E/24E |
| | 10.0 | 46 | 3.5 | 300 | | | | | | 2.0 | 193 | 2.8 | | | 1500 | 120.66/240.66 |
| | 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 | | | | | | | | | | | | |
| | 2.0 | 162 | 1.0 | 1500 | | | | | 1.3 | 285 | 2.9 | 2400 | ECMM 070/040/090 | | 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 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 | 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 | | | | | | | | |
| | | | | | | | 2.0 | 90 | 1.0 | 1500 | | | | | | | | |
| | 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 | | | | | | | | | | | | | | |
| | 5.0 | 40 | 1.0 | 600 | | | | | | 15.0 | 50 | 2.7 | 200 |  | ECMM 100/030/050 | 120/240/24E | | |
| | 3.3 | 40 | 1.0 | 900 | | | | | | 12.0 | 59 | 2.1 | 250 | | | 120.66/240.66 | | |
| | 2.5 | 40 | 1.0 | 1200 | | | | | | 10.0 | 64 | 2.5 | 300 | | | | | |
| | 2.0 | 40 | 1.0 | 1500 | | | | | | 7.5 | 78 | 1.7 | 400 | | | | | |
| | 1.7 | 40 | 1.0 | 1800 | | | | | | 6.0 | 89 | 1.4 | 500 | | | | | |
| | 1.3 | 34 | 1.0 | 2400 | | | | | | 5.0 | 121 | 1.3 | 600 | | | | | |
| | 1.0 | 30 | 1.0 | 3000 | | | | 4.0 | 146 | 1.1 | 750 | | | | | | | |
| | 0.8 | 27 | 1.0 | 3600 | | | | 3.3 | 166 | 1.0 | 900 | | | | | | | |
| | | | | | | | | 2.5 | 202 | 0.7 | 1200 | | | | | | | |
| | | | | | | | | 2.0 | 243 | 0.7 | 1500 | | | | | | | |
| | 20.0 | 38 | 2.3 | 150 |  | ECMM 100/026/040 | 120/240/24E | | 1.7 | 162 | 1.0 | 1800 | | | | | | |
| | 13.3 | 55 | 1.6 | 225 | | | 120.66/240.66 | | 1.3 | 135 | 1.0 | 2400 | | | | | | |
| | 10.0 | 63 | 1.4 | 300 | | | | | | 1.0 | 125 | 1.0 | 3000 | | | | | |
| | 6.7 | 92 | 1.0 | 450 | | | | | | | | | | | | | | |
| | 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 | | | | | | | |
| | | | | | | | | 1.0 | 232 | 1.0 | 3000 | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | 20.0 | 39 | 2.9 | 150 |  | ECMM 100/026/050 | 120/240/24E | | 3.3 | 179 | 2.5 | 900 |  | ECMM 100/040/070 | 120/240/24E* | | | |
| | 13.3 | 58 | 2.7 | 225 | | | 120.66/240.66 | | 2.5 | 215 | 1.8 | 1200 | | | 120.66/240.66 | | | |
| | 10.0 | 64 | 2.5 | 300 | | | | | 2.0 | 267 | 1.7 | 1500 | | | | | | |
| | 6.7 | 93 | 1.7 | 450 | | | | | 1.7 | 307 | 1.5 | 1800 | | | | | | |
| | 5.0 | 120 | 1.4 | 600 | | | | | 1.3 | 368 | 1.0 | 2400 | | | | | | |
| | 3.3 | 164 | 1.0 | 900 | | | | | 1.0 | 426 | 0.8 | 3000 | | | | | | |
| | 2.5 | 162 | 1.0 | 1200 | | | | | | | | | | | | | | |
| | 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 | | | | | | | |
| | | | | | | | | 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°



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 | | 120.66/240.66 | 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 | ECMM 180/040/090 | 120/240* | | |
| | 13.3 | 108 | 1.1 | 225 | | | 120.66/240.66 | | 5.0 | 239 | 2.3 | | 600 | | 120.66/240.66 | 24E | |
| | 10.0 | 118 | 1.4 | 300 | | | | | 4.0 | 288 | 1.9 | | 750 | | | | 120.66/240.66 |
| | 6.7 | 173 | 0.9 | 450 | | | | | 3.3 | 333 | 1.6 | | 900 | | | | |
| | 5.0 | 223 | 0.7 | 600 | | | | | 2.5 | 407 | 1.2 | | 1200 | | | | |
| | 40.0 | 40 | 2.1 | 75 | | ECMM 180/030/040 | 120/240/24E | | 2.0 | 497 | 1.1 | | 1500 | ECMM 180/050/110 | | 120/240/24E* | |
| | 30.0 | 52 | 1.6 | 100 | | | 120.66/240.66 | | 1.7 | 570 | 1.0 | | 1800 | | 120.66/240.66 | 24E | |
| | 20.0 | 71 | 1.2 | 150 | | | | 1.3 | 470 | 1.0 | 2400 | | IEC 63B14 | | | | |
| | 15.0 | 92 | 0.8 | 200 | | | | 1.0 | 403 | 1.0 | 3000 | |  | | | | |
| | 12.0 | 67 | 1.0 | 250 | | | | 5.0 | 251 | 2.3 | 600 | | Solo / Only | | | | |
| | 10.0 | 90 | 1.0 | 300 | | | | 4.0 | 302 | 1.8 | 750 | | | | | | |
| | 7.5 | 74 | 1.0 | 400 | | | | 3.3 | 349 | 2.1 | 900 | | | | | | |
| | 6.0 | 68 | 1.0 | 500 | | | | 2.5 | 429 | 1.9 | 1200 | | | | | | |
| | 5.0 | 90 | 1.0 | 600 | | | | 2.0 | 522 | 1.2 | 1500 | | | | | | |
| | 4.0 | 90 | 1.0 | 750 | | | | 1.7 | 599 | 0.9 | 1800 | | | | | | |
| | 3.3 | 90 | 1.0 | 900 | | | 1.3 | 735 | 0.9 | 2400 | | | | | | | |
| | 40.0 | 40 | 2.9 | 75 | ECMM 180/030/050 | 120/240/24E | | 1.0 | 855 | 0.8 | 3000 | ECMM 180/050/110 | 120/240/24E* | | | | |
| | 30.0 | 52 | 2.3 | 100 | | 120.66/240.66 | | 3.3 | 359 | 3.6 | 900 | | 120.66/240.66 | IEC 63B14 | | | |
| | 20.0 | 74 | 2.2 | 150 | | | | 2.5 | 457 | 3.2 | 1200 | | | | | | |
| | 15.0 | 94 | 1.5 | 200 | | | | 2.0 | 545 | 2.0 | 1500 | | | | | | |
| | 12.0 | 110 | 1.1 | 250 | | | | 1.7 | 627 | 1.6 | 1800 | | | | | | |
| | 10.0 | 120 | 1.4 | 300 | | | | 1.3 | 796 | 1.6 | 2400 | | | | | | |
| | 7.5 | 146 | 0.9 | 400 | | | | 1.0 | 947 | 1.3 | 3000 | | | | | | |
| | 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 | | 120/240 | | | | | | | | | | | |
| | | | | | | 120.66/240.66 | | | | | | | | | | | |
| | 15.0 | 92 | 2.3 | 200 | ECMM 180/030/063 | 120/240/24E | | | | | | | | | | | |
| | 12.0 | 108 | 2.1 | 250 | | 120.66/240.66 | | | | | | | | | | | |
| | 10.0 | 124 | 2.3 | 300 | | | | | | | | | | | | | |
| | 7.5 | 149 | 1.7 | 400 | | | | | | | | | | | | | |
| | 6.0 | 172 | 1.3 | 500 | | | | | | | | | | | | | |
| | 5.0 | 233 | 1.1 | 600 | | | | | | | | | | | | | |
| | 4.0 | 281 | 1.0 | 750 | | | | | | | | | | | | | |
| | 3.3 | 320 | 1.0 | 900 | | | | | | | | | | | | | |
| | 2.5 | 384 | 0.7 | 1200 | | | | | | | | | | | | | |
| | 2.0 | 468 | 0.7 | 1500 | | | | | | | | | | | | | |
| | 1.7 | 310 | 1.0 | 1800 | | 120/240 | | | | | | | | | | | |
| | 1.3 | 260 | 1.0 | 2400 | | 120.66/240.66 | | | | | | | | | | | |
| | 1.0 | 232 | 1.0 | 3000 | | | | | | | | | | | | | |
| | 12.0 | 113 | 3.0 | 250 | ECMM 180/040/070 | 120/240/24E* | | | | | | | | | | | |
| | 10.0 | 125 | 3.6 | 300 | | 120.66/240.66 | | | | | | | | | | | |
| | 7.5 | 150 | 2.5 | 400 | | | | | | | | | | | | | |
| | 6.0 | 174 | 1.9 | 500 | | | | | | | | | | | | | |
| | 5.0 | 239 | 1.9 | 600 | | | | | | | | | | | | | |
| | 4.0 | 288 | 1.8 | 750 | | | | | | | | | | | | | |
| | 3.3 | 333 | 1.4 | 900 | | | | | | | | | | | | | |
| | 2.5 | 399 | 0.9 | 1200 | | | | | | | | | | | | | |
| | 2.00 | 497 | 0.9 | 1500 | | | | | | | | | | | | | |
| | 1.67 | 570 | 0.9 | 1800 | | | | | | | | | | | | | |
| | 1.25 | 379 | 1.0 | 2400 | | | | | | | | | | | | | |
| | 1.00 | 336 | 1.0 | 3000 | | | | | | | | | | | | | |
| 350 | | | | | | | 350 | | | | | | | | | | |
| (3000 min ⁻¹) | 40.0 | 55 | 1.5 | 75 | ECMM 250/030/040 | 120/240 | (3000 min ⁻¹) | 40.0 | 55 | 1.5 | 75 | ECMM 250/030/050 | 120/240 | | | | |
| | 30.0 | 72 | 1.2 | 100 | | 120.66/240.66 | | 30.0 | 72 | 1.2 | 100 | | 120.66/240.66 | 120.66/240.66 | | | |
| | 20.0 | 100 | 0.9 | 150 | | | | 20.0 | 100 | 0.9 | 150 | | | | | | |
| | 15.0 | 74 | 1.0 | 200 | | | | 15.0 | 74 | 1.0 | 200 | | | | | | |
| | 12.0 | 67 | 1.0 | 250 | | | | 12.0 | 67 | 1.0 | 250 | | | | | | |
| | 10.0 | 90 | 1.0 | 300 | | | | 10.0 | 90 | 1.0 | 300 | | | | | | |
| | 7.5 | 74 | 1.0 | 400 | | | | 7.5 | 74 | 1.0 | 400 | | | | | | |
| | 6.0 | 68 | 1.0 | 500 | | | | 6.0 | 68 | 1.0 | 500 | | | | | | |
| | 5.0 | 90 | 1.0 | 600 | | | | 5.0 | 90 | 1.0 | 600 | | | | | | |
| | 4.0 | 90 | 1.0 | 750 | | | | 4.0 | 90 | 1.0 | 750 | | | | | | |
| | 3.3 | 90 | 1.0 | 900 | | | 3.3 | 90 | 1.0 | 900 | | | | | | | |
| | 2.5 | 74 | 1.0 | 1200 | | | 2.5 | 74 | 1.0 | 1200 | | | | | | | |
| | 2.0 | 90 | 1.0 | 1500 | | | 2.0 | 90 | 1.0 | 1500 | | | | | | | |
| | 40.0 | 56 | 2.0 | 75 | ECMM 250/030/050 | 120/240 | | 40.0 | 56 | 2.0 | 75 | ECMM 250/030/050 | 120/240 | | | | |
| | 30.0 | 73 | 1.7 | 100 | | 120.66/240.66 | | 30.0 | 73 | 1.7 | 100 | | 120.66/240.66 | 120.66/240.66 | | | |
| | 20.0 | 104 | 1.5 | 150 | | | | 20.0 | 104 | 1.5 | 150 | | | | | | |
| | 15.0 | 131 | 1.0 | 200 | | | | 15.0 | 131 | 1.0 | 200 | | | | | | |
| | 12.0 | 154 | 0.8 | 250 | | | | 12.0 | 154 | 0.8 | 250 | | | | | | |
| | 10.0 | 168 | 1.0 | 300 | | | | 10.0 | 168 | 1.0 | 300 | | | | | | |
| | 7.5 | 204 | 0.7 | 400 | | | | 7.5 | 204 | 0.7 | 400 | | | | | | |
| | 6.0 | 125 | 1.0 | 500 | | | | 6.0 | 125 | 1.0 | 500 | | | | | | |
| | 5.0 | 162 | 1.0 | 600 | | | | 5.0 | 162 | 1.0 | 600 | | | | | | |
| | 4.0 | 162 | 1.0 | 750 | | | | 4.0 | 162 | 1.0 | 750 | | | | | | |
| | 3.3 | 162 | 1.0 | 900 | | | 3.3 | 162 | 1.0 | 900 | | | | | | | |
| | 2.5 | 135 | 1.0 | 1200 | | | 2.5 | 135 | 1.0 | 1200 | | | | | | | |
| | 2.00 | 162 | 1.0 | 1500 | | | 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

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) | 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 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 | 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 |  | ECMM 600/063/130 | 120/240 | |
| | 5.0 | 506 | 2.1 | 600 | | | | | 120.66/240.66 | | 5.0 | 819 | | | | | 1.3 | 600 | | | 120.66/240.66 | |
| | 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

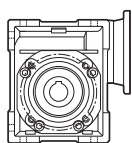
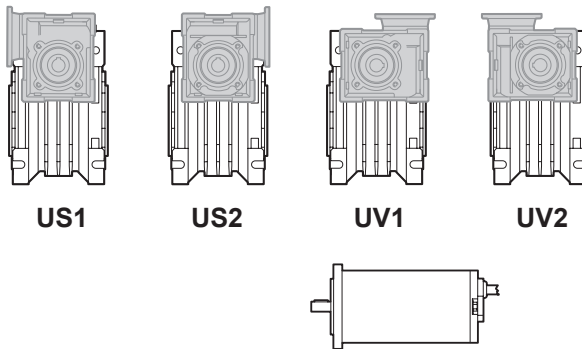
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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



Motori applicabili

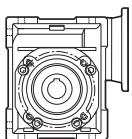
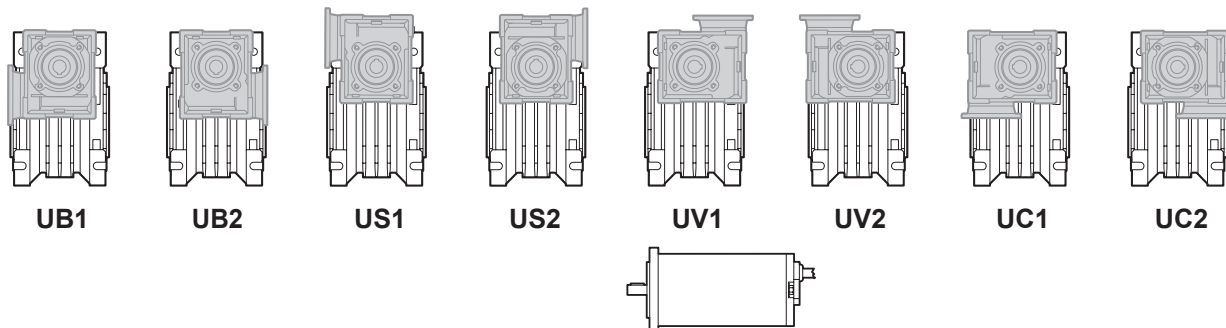
Motor adapters



| | | 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



| | | 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



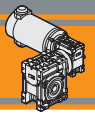
Dimensioni

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 |

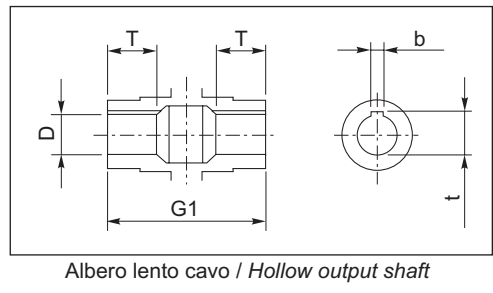
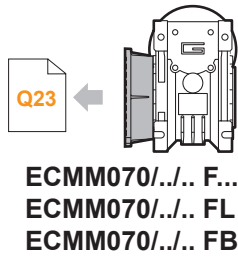
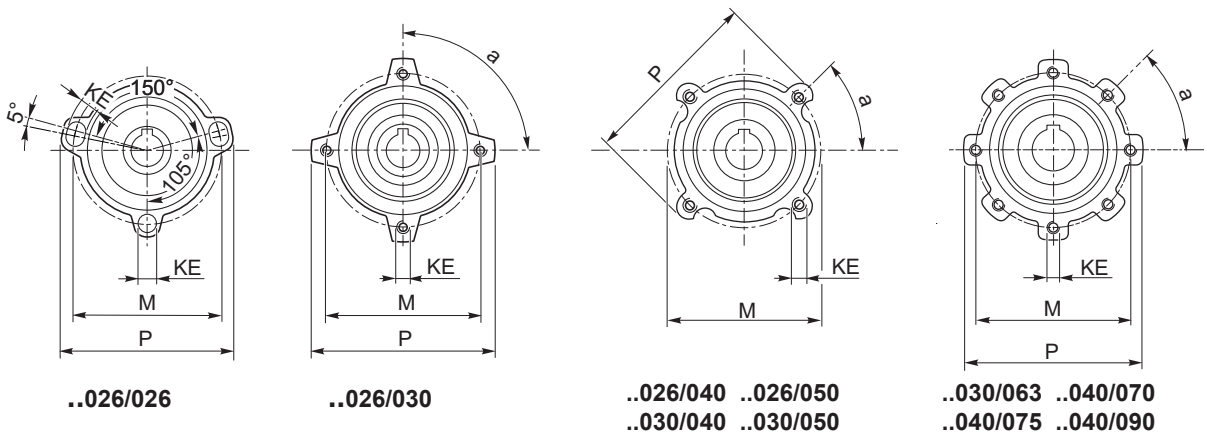
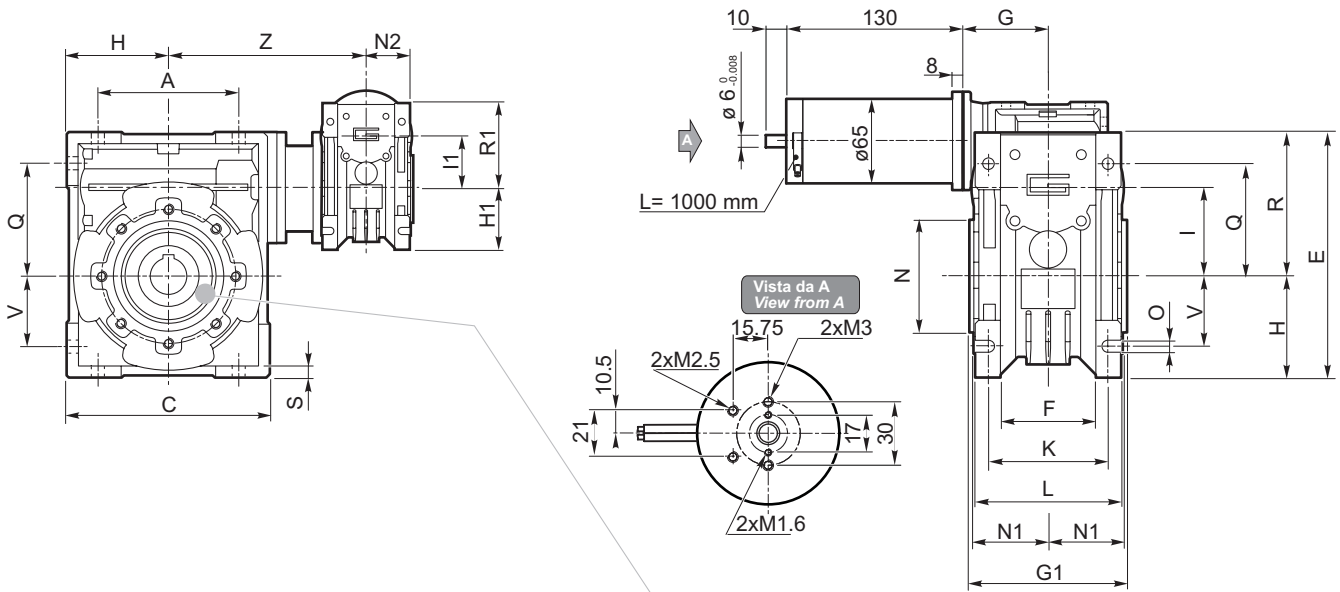
(!) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 070 /...
Note: The weight in kg is referred to the gearmotor ECMM 070 /...



Dimensioni

Dimensions

ECMM070/...U



Motori / Motors IP66 → **I2**

Freno / Brake → **H23**

Encoder → **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 |

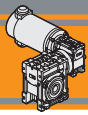
| CMM..U - CMM..F... | | | | | | | | | | | | | | | |
|--------------------|-----|-----|-----|------|------|-----|----|----|-------|-------------|-----|----|------|--------|--|
| | O | P | Q | R | R1 | S | T | V | Z | KE | a | b | t | Kg (!) | |
| 026/026 (D11) | 6 | — | 37 | 49 | 49 | 5 | 15 | 21 | 76 | 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°



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

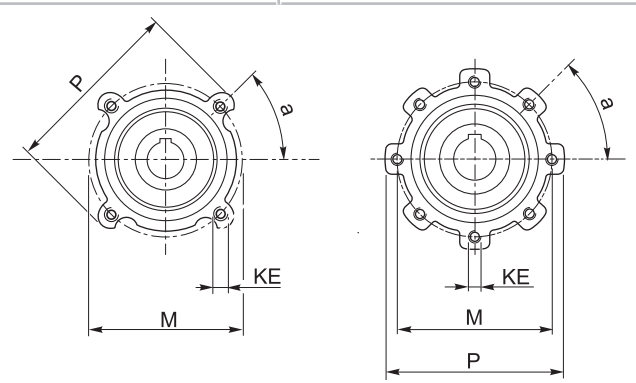
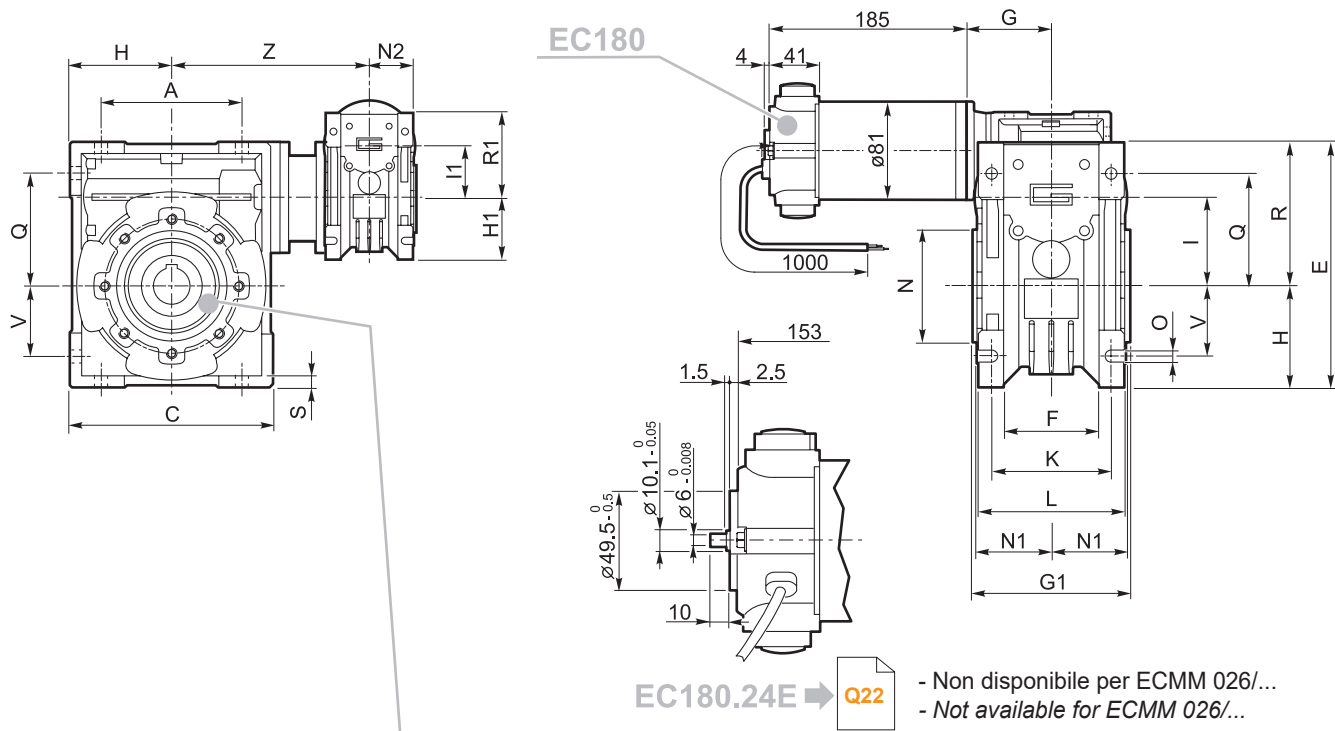
(2): Solo IEC 63 B14. Versione IP66 non disponibile
IEC 63 B14 only. IP66 version not available



Dimensioni

Dimensions

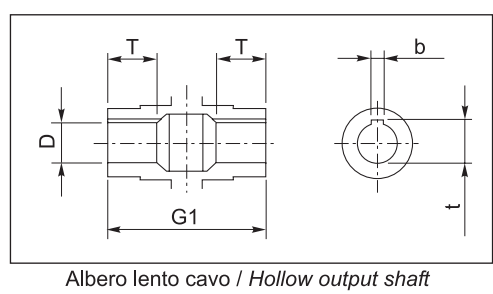
ECMM180/.../..U



- | | | | |
|-----------|-----------|-----------|-----------|
| ..026/040 | ..026/050 | ..030/063 | ..040/070 |
| ..030/040 | ..030/050 | ..040/075 | ..040/090 |
| | | ..050/110 | |

Q23 →

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



Motori / Motors IP66 → **I6**
- Non disponibile per ECMM 180/050/110
- Not available for ECMM 180/050/110

Freno / Brake → **H23**

Encoder → **H24**

ECMM



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 /...

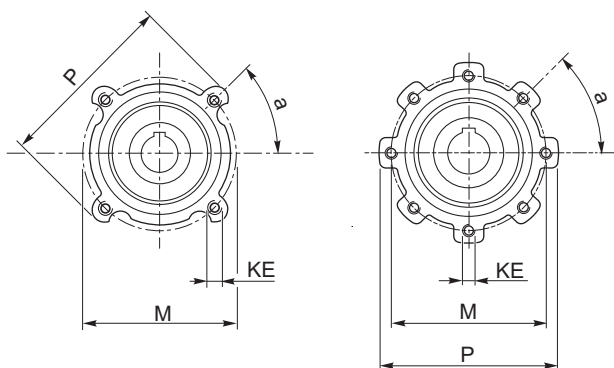
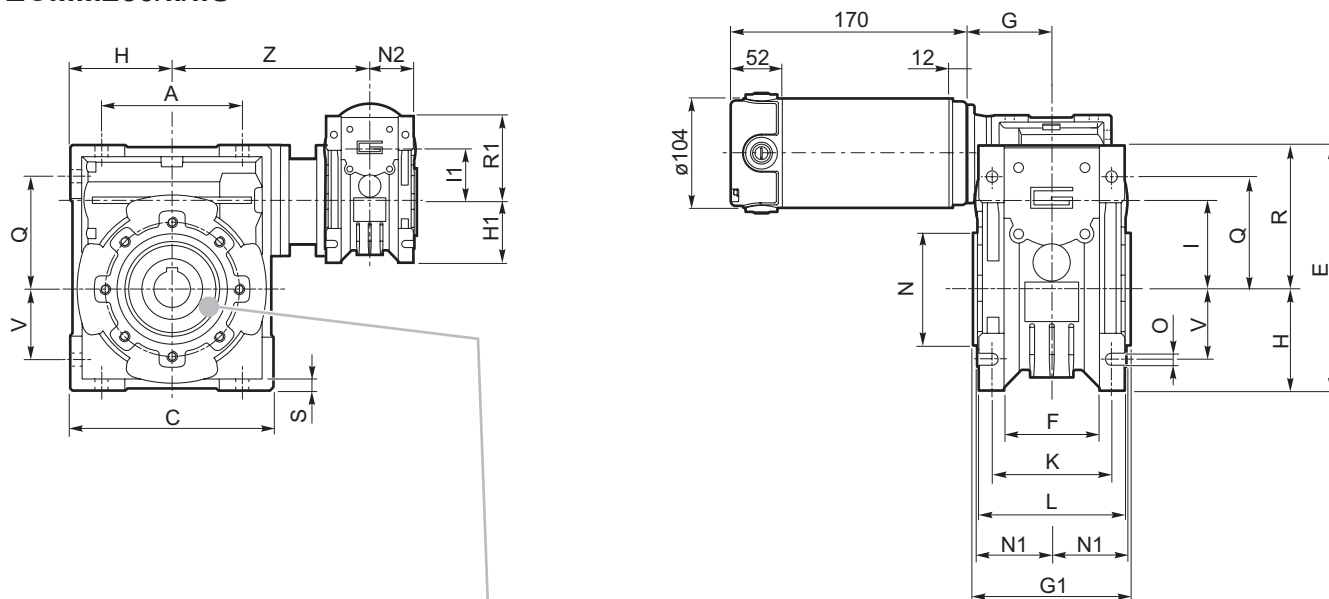
Note: The weight in kg is referred to the gearmotor ECMM 250 /...



Dimensioni

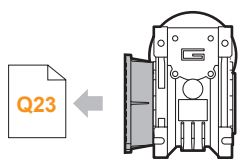
Dimensions

ECMM250/...U

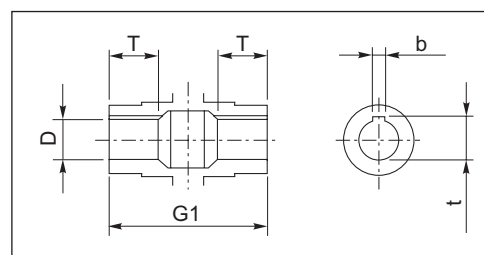


..030/040 ..030/050

..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

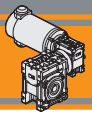
Dimensions

| 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 /...

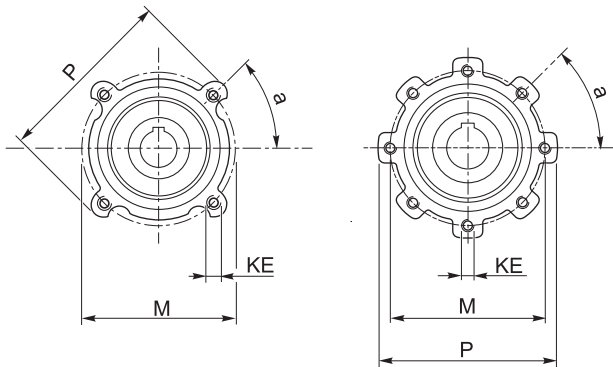
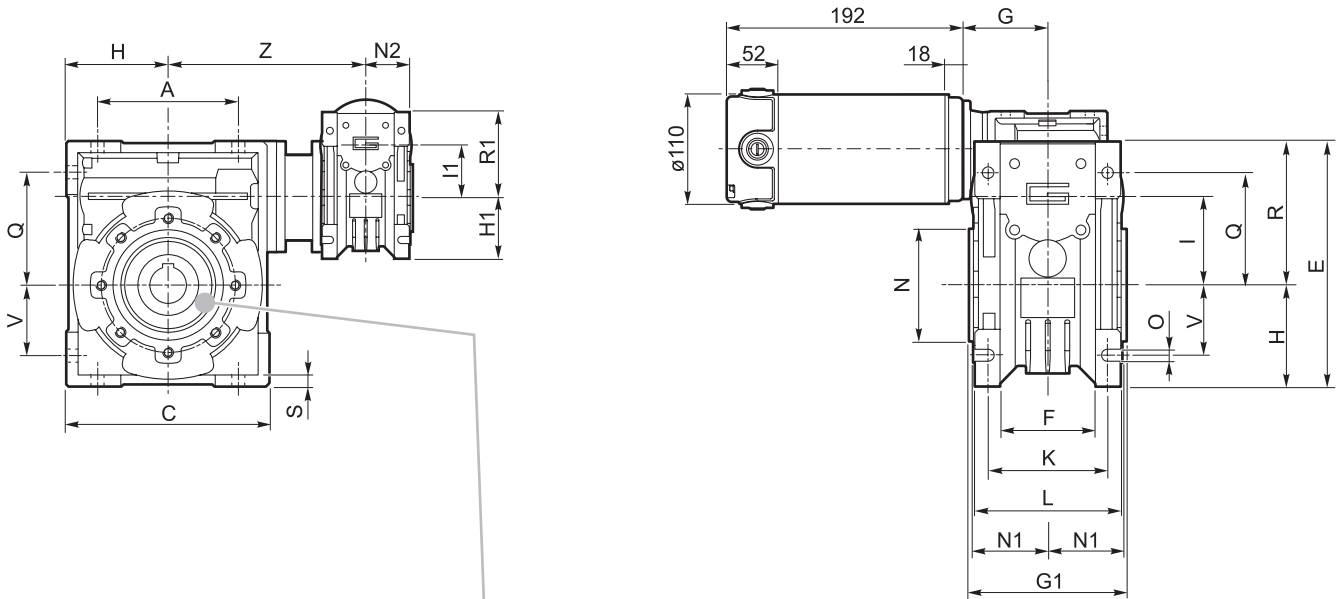
(1): Solo IEC 71 B14. Versione IP66 non disponibile
IEC 71 B14 only. IP66 version not available



Dimensioni

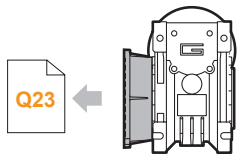
Dimensions

ECMM350/...U

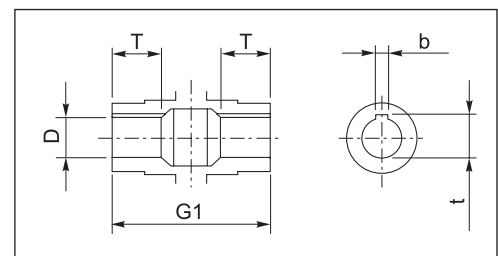


..030/040 ..030/050

..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



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

Freno / Brake



**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 /...

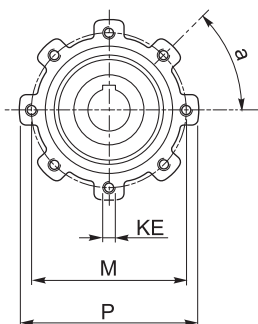
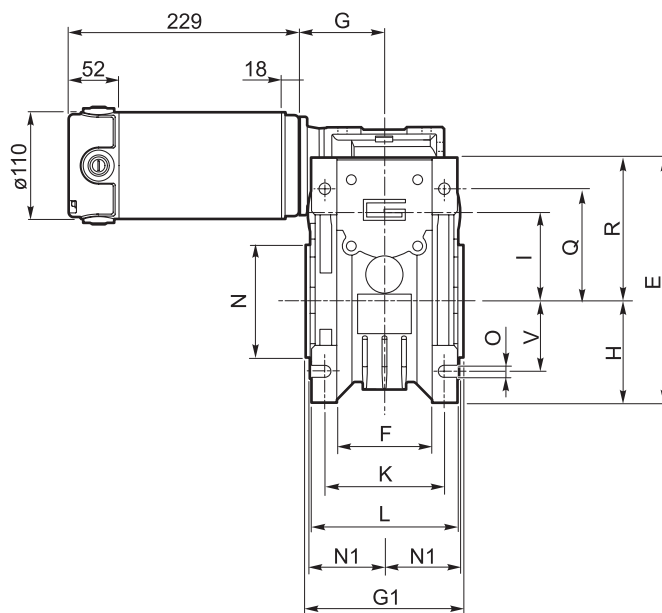
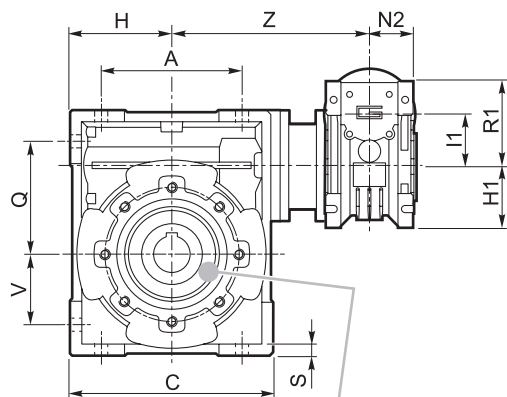
Note: The weight in kg is referred to the gearmotor ECMM 600 /...



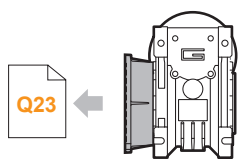
Dimensioni

Dimensions

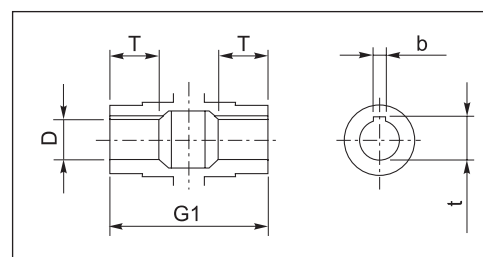
ECMM600/...U



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



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



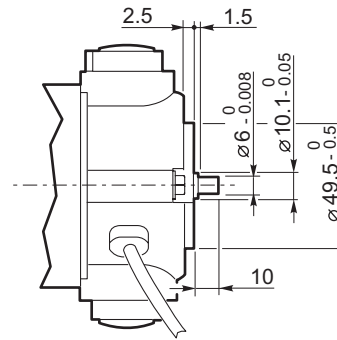
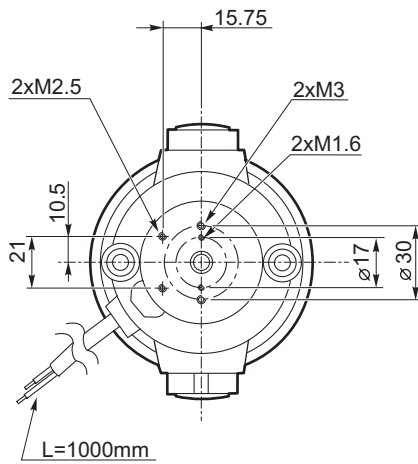
Albero lento cavo / Hollow output shaft

Motori / Motors IP66

I12

Freno / Brake

H23

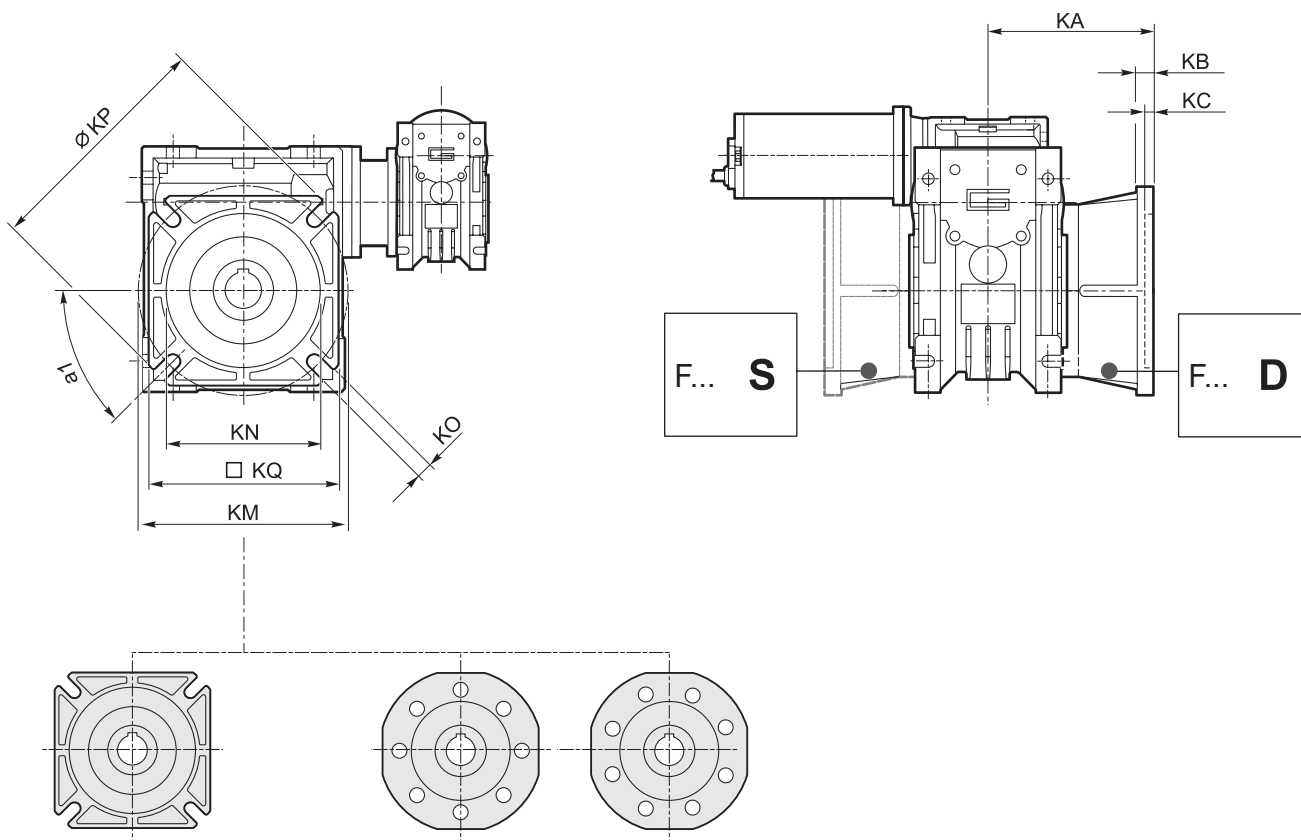
**Dimensioni****Dimensions****EC100.24E**
EC180.24E



Dimensioni

Dimensions

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



CMM..F...

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

CMM..F

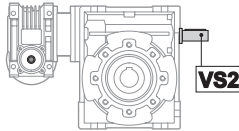
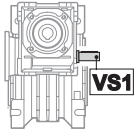
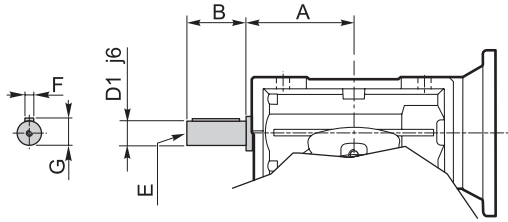
(../110) (../130)

| | 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) | 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 |
| 026/026 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 026/026 (D14) | | | | | | | | | | | | | | | | | | | | | | | | | |

| | 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 | 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 |
| 030/040 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 026/050 | 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 |
| 030/050 | | | | | | | | | | | | | | | | | | | | | | | | | |
| 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 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |



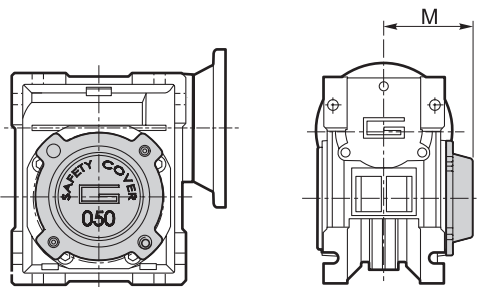
VS1 - VS2 - Vite sporgente / Extended input shaft



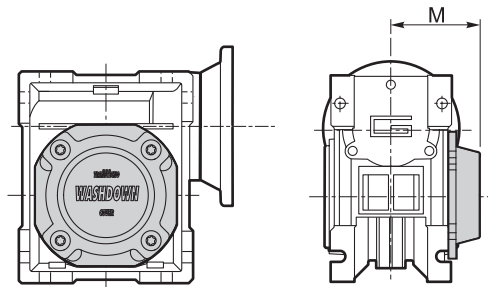
| CMM | VS1 | | | | | | VS2 | | | | | |
|---------|-----|----|----------------------|----|---|------|-----|----|----------------------|-----|---|------|
| | A | B | D ₁ j6 | E | F | G | A | B | D ₁ j6 | E | F | G |
| 026/030 | — | — | — | — | — | — | 45 | 20 | 9 | M4 | 3 | 10.2 |
| 026/040 | — | — | — | — | — | — | 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

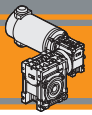


WD - Washdown cover

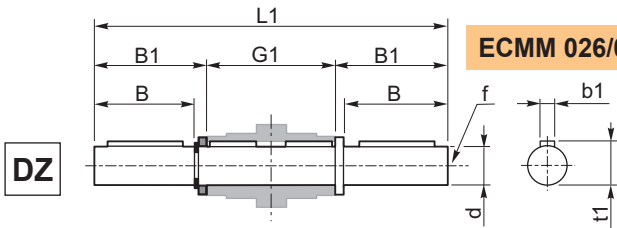


| M | CM | | | | | | | | |
|---|----|------|------|----|----|----|----|-----|-----|
| | 30 | 40 | 50 | 63 | 70 | 75 | 90 | 110 | 130 |
| M | 47 | 54.5 | 62.5 | 73 | 79 | 79 | 94 | 102 | 117 |

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

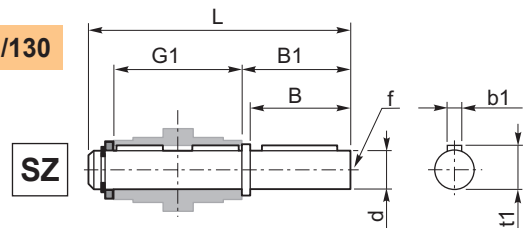


Albero lento semplice e doppio

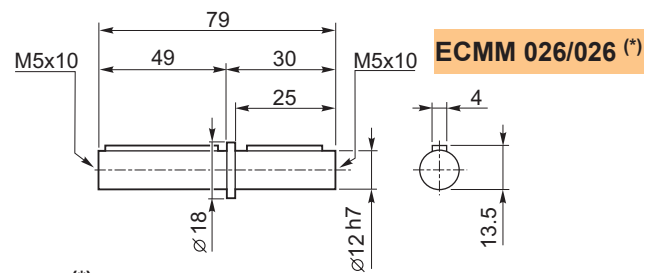


ECMM 026/030 - ECMM 063/130

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 |



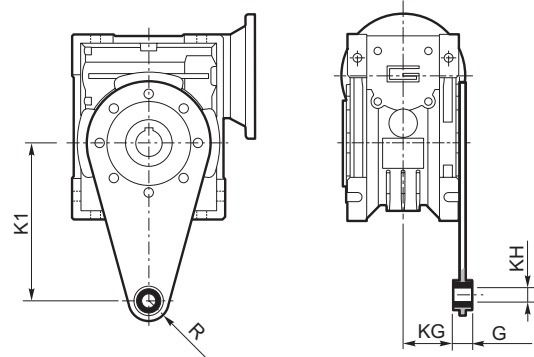
ECMM 026/026 (*)

(*)
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 |

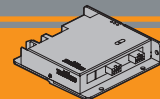
Torque arm





Azionamenti per motori CC DC motor controls

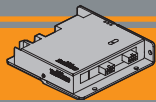




| | Indice | Index | Pag. Page |
|------------------------|---------------------------------------|--------------------------------|--------------|
| PLN19-8 | Schema dei collegamenti | <i>Main connection diagram</i> | R2 |
| | Caratteristiche tecniche | <i>Technical features</i> | R2 |
| | Dimensioni | <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 |
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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**

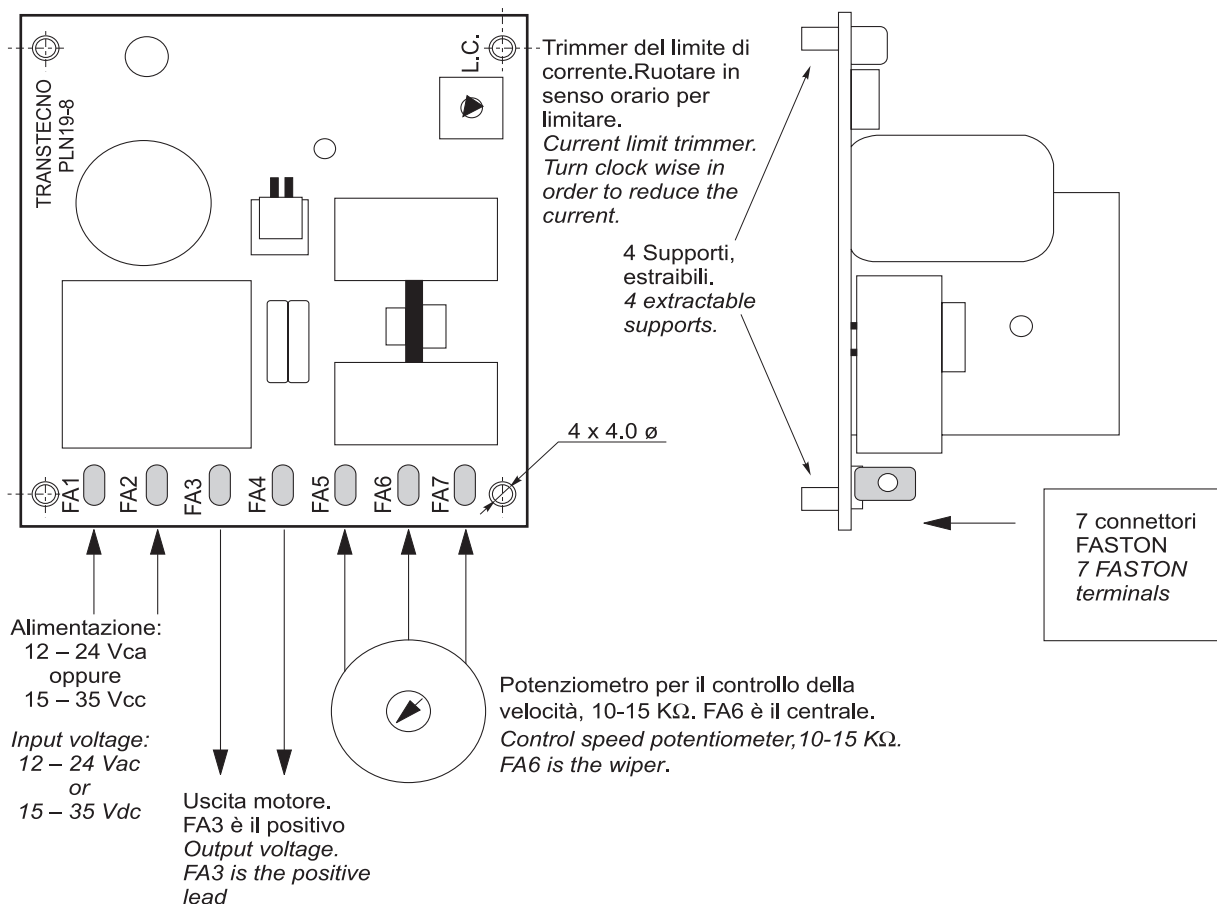
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**AZIONAMENTO UNIDIREZIONALE PWM PER LA
REGOLAZIONE DI VELOCITA' DEI MOTORI A
CORRENTE CONTINUA A BASSA TENSIONE**

**LOW VOLTAGE SINGLE DIRECTION
PWM DC MOTORS CONTROL**

SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



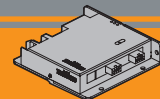
Attenzione: se si scollega il potenziometro con la scheda alimentata, il motore ruota alla velocità nominale.

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

Caratteristiche tecniche

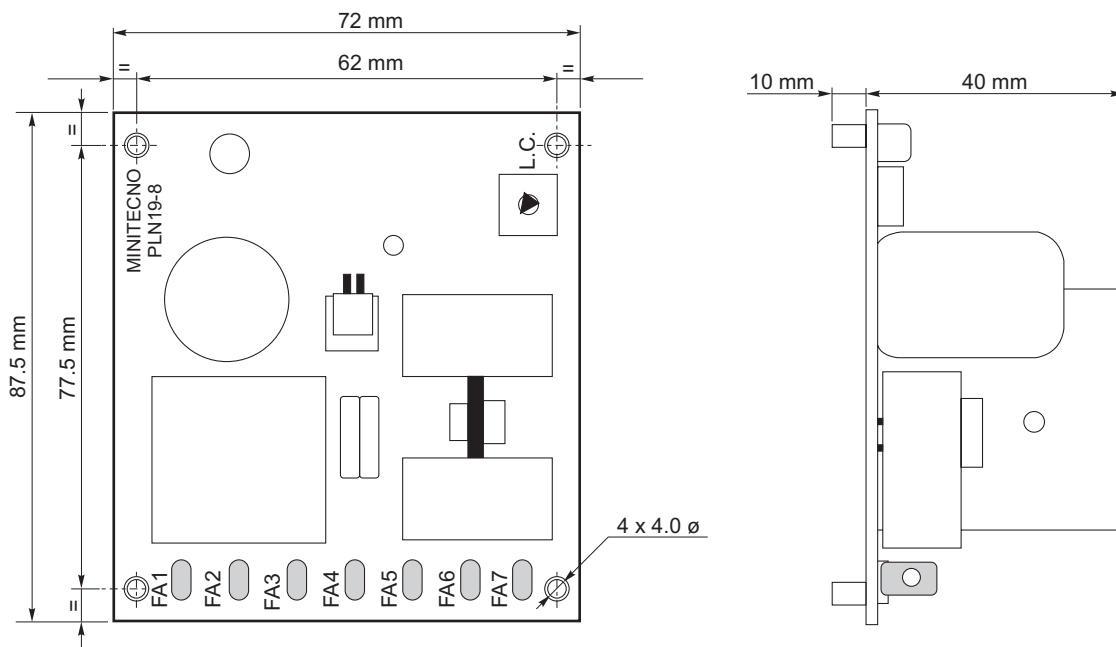
Technical features

- 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

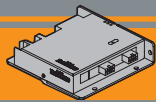
Options

1. Potenziometro 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.

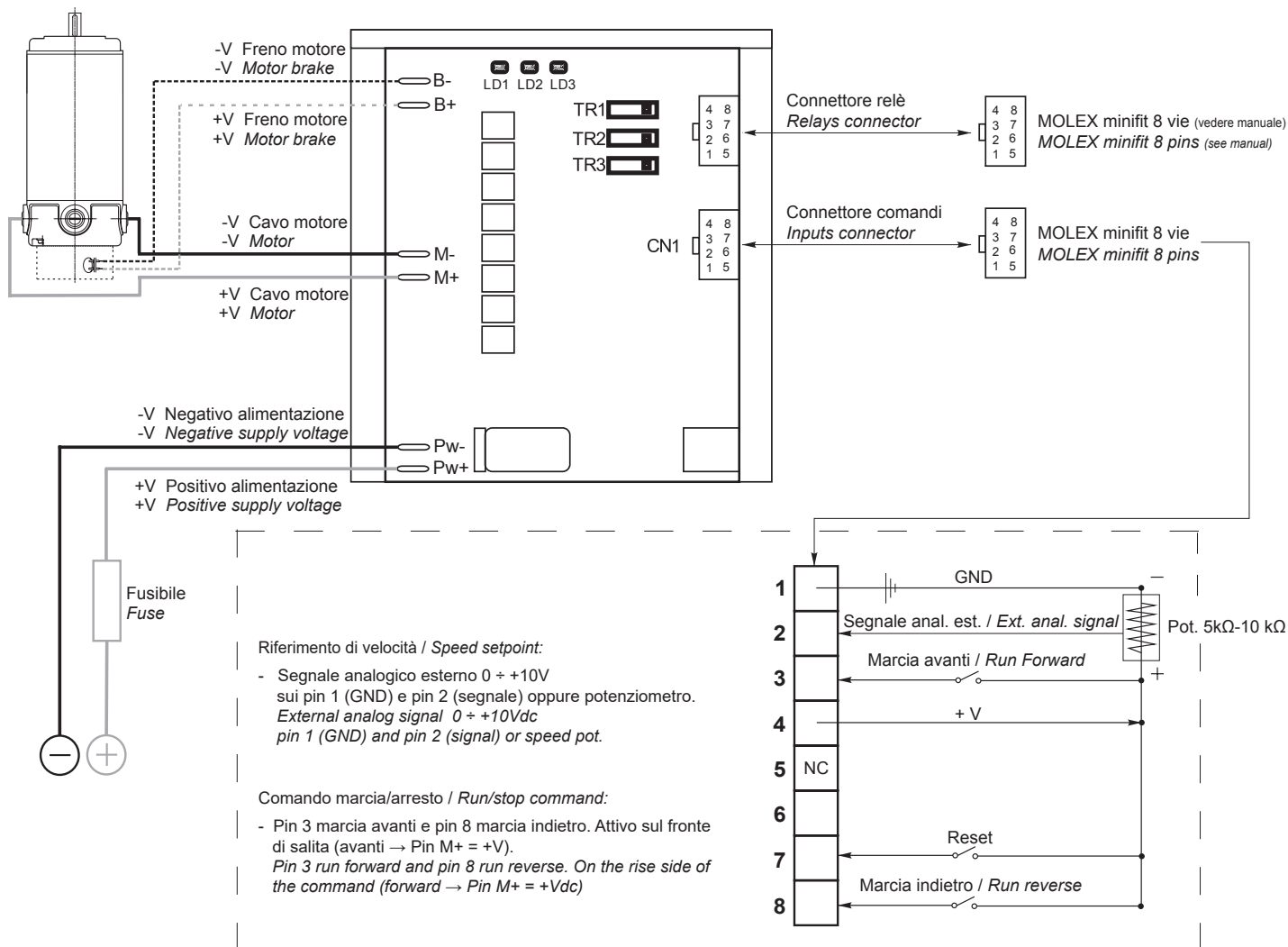
(*) *the maximum output current value must be used in a ventilated environment. Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.*



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

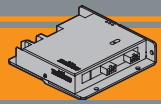
LD3: Segnalazione presenza alimentazione.

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 / <i>Selection Trimmer ACCEL, DECEL, CURRENT LIMIT</i> | ■ | ■ |
| 2 contatti: marcia avanti e marcia indietro / <i>2 contacts : forward and reverse</i> | ■ | ■ |
| Riferimento di velocità / <i>Speed setpoint reference</i> | ■ | ■ |
| 3 LEDs di segnalazione / <i>3 LEDs signals</i> | ■ | ■ |
| Segnale di comando di eventuale freno negativo di stazionamento / <i>Command signal for possible negative electromagnetic brake</i> | ■ | ■ |
| Predisposizione per montaggio a libro e a zoccolo / <i>Arranged for 2 different ways of mounting</i> | ■ | ■ |
| Memorizzazione e segnalazione degli allarmi / <i>Memory storage and report of alarm</i> | ■ | ■ |
| 2 ingressi digitali ausiliari / <i>2 auxiliary digital inputs</i> | ■ | # |
| 1 relè segnalazione allarmi / <i>Alarm output relays</i> | ■ | ■ |

uno impegnato dal reset / *one comitted by reset*



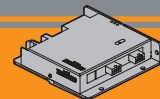
Manuale



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.



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

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