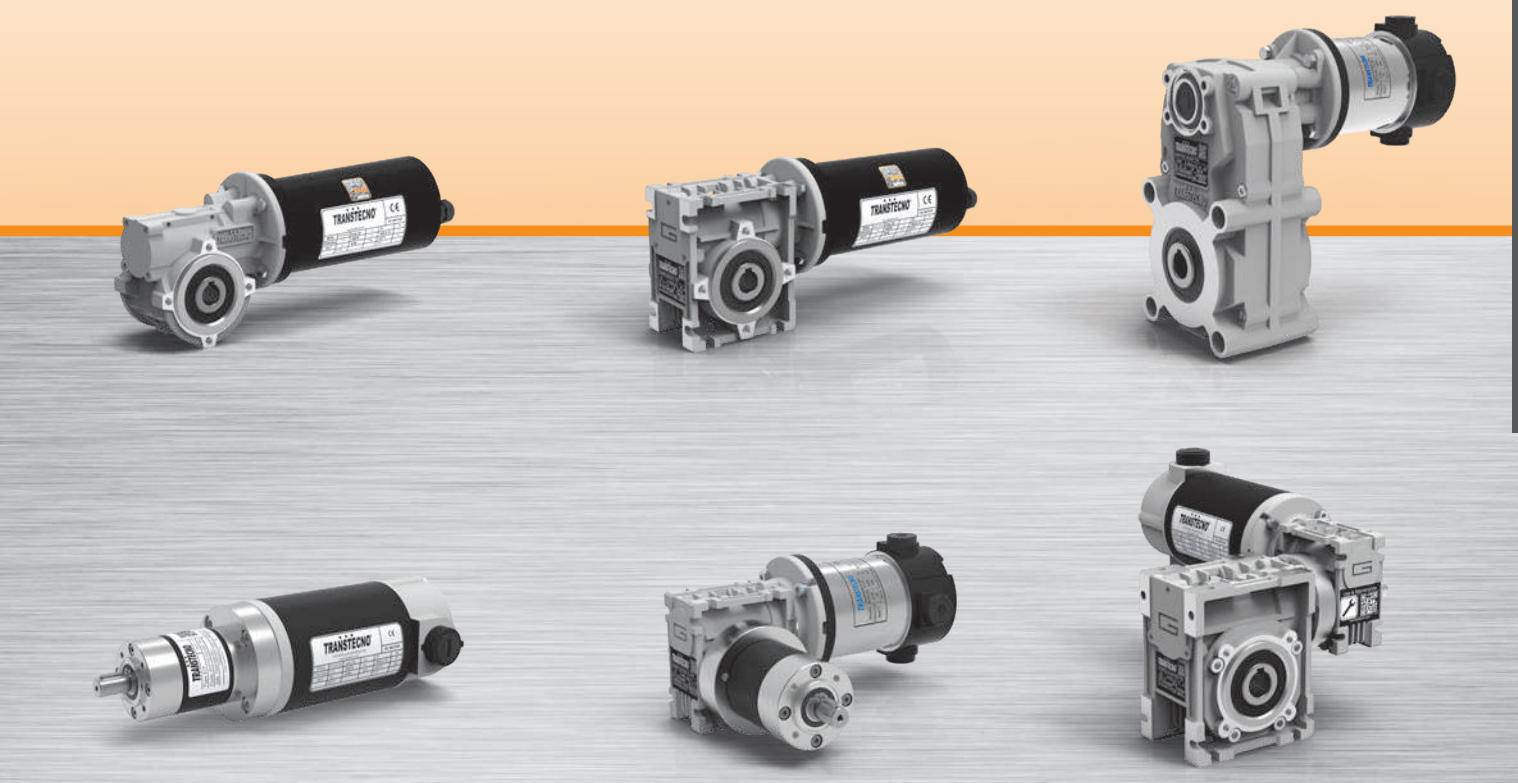
MINI TECNO™
small but strong

Ott Antriebstechnik
Standardisierte Individualität

DC - Getriebemotoren
DC - Motorsteuerungen



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DC

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DC

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ND

Motori elettrici CC - Neodimio
DC electric motors - Neodymium

DC

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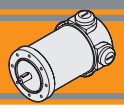


Caratteristiche tecniche

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

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*

Classe di isolamento termico

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

Thermal insulation class

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

Servizio

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

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

Duty cycle

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

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

Fattore di forma

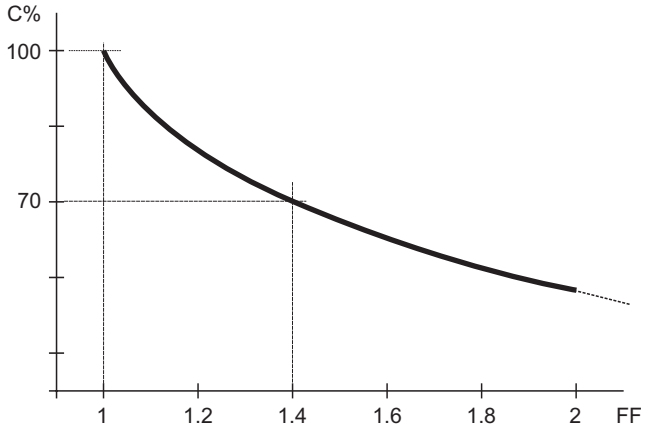
Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1 Alimentazione da transistori (modulazione PWM) = FF 1.05.

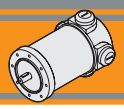
Qualitativamente l' andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:

Form factor

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

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





Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.
1ª cifra: protezione alla penetrazione di corpi solidi.
2ª cifra: protezione contro la penetrazione d'acqua.

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. *Protected against solid matters (over Ø 50 mm)*	**1**	Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically*
2	Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matters (over Ø 12 mm)*	**2**	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° *Protected against drops of water falling up to 15°*
3	Protetto da corpi solidi superiori a Ø 2.5 mm. *Protected against solid matters (over Ø 2.5 mm)*	**3**	Protetto contro la pioggia. *Rain proof fixture*
4	Protetto da corpi solidi superiori a Ø 1 mm. *Protected against solid matters (over Ø 1 mm)*	**4**	Protetto contro gli spruzzi. *Splash proof fixture*
5	Protetto contro la polvere *Dust proof*	**5**	Protetto contro getti d'acqua *Water jet proof*
6	Totalmente protetto contro la polvere *Fully dust proof*	**6**	Protetto dalle ondate *Wave proof*
7	N.A.	**7**	Protetto contro immersione *Watertight immersion fixture.*
8	N.A.	**8**	Protetto contro immersione/sommersione prolungata *Watertight immersion fixture for a long time.*

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

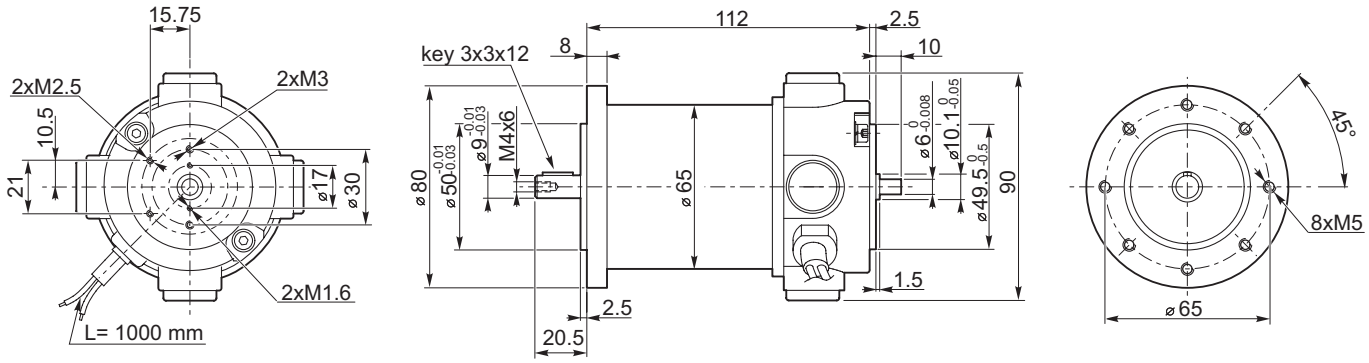
Caratteristiche / *Features*

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*



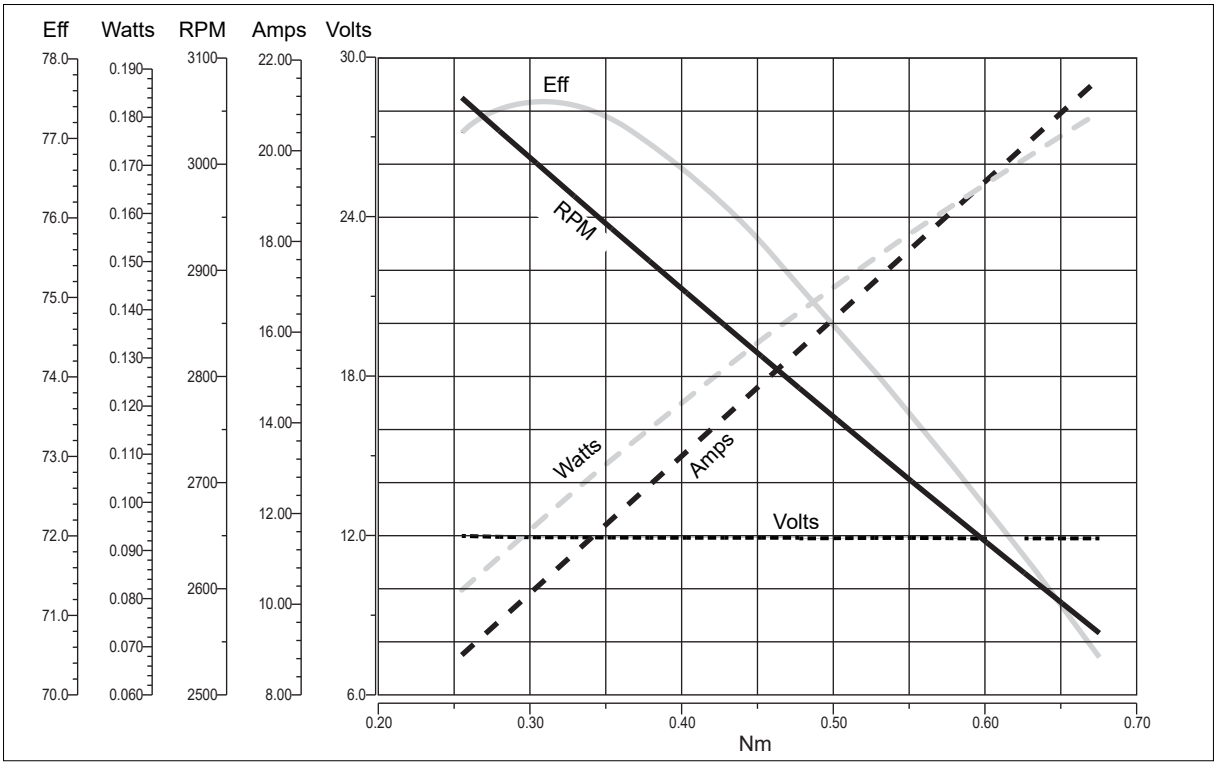
Freno / *Brake* → BA9

Encoder → BA9

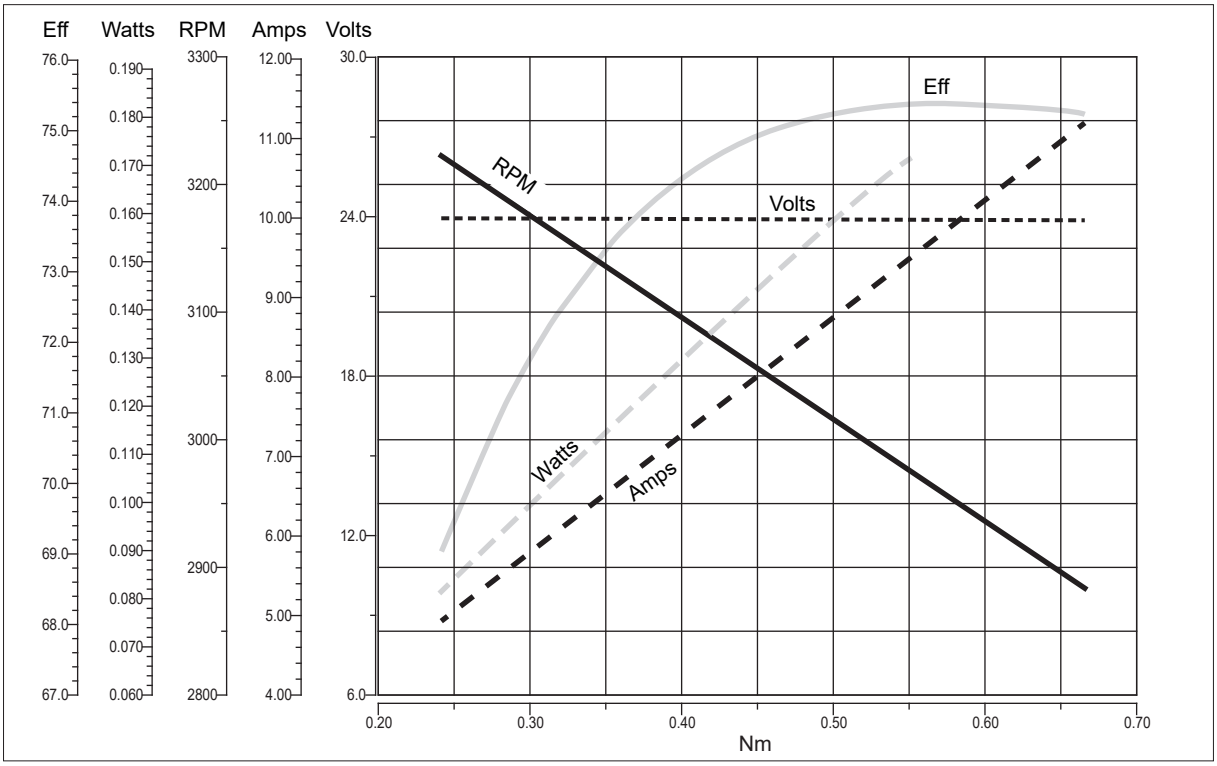
ND120.120 - ND120.240

Prestazioni *Performances*

ND120.120



ND120.240



DC

ND180.120 - ND180.240

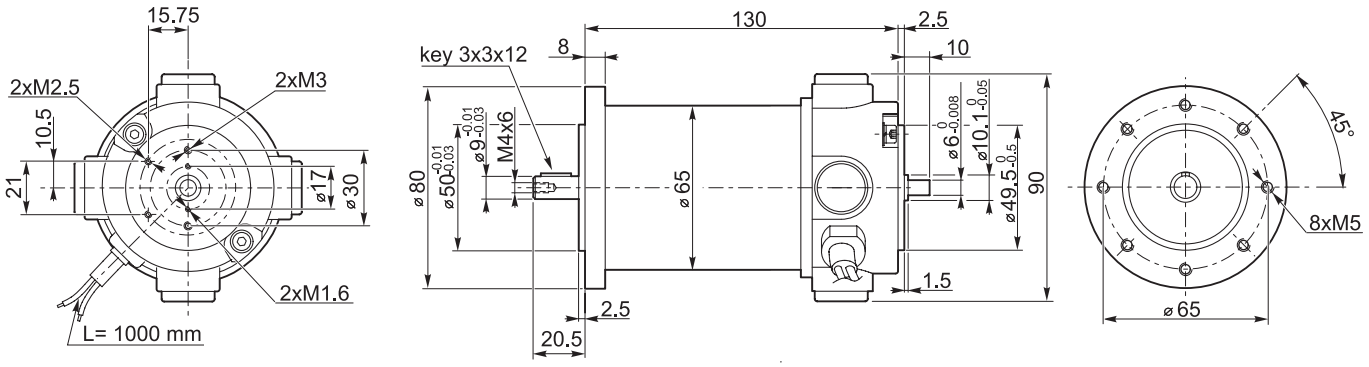
Caratteristiche / *Features*

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			0.57			
	S2 20'	250		14			0.80			

Dimensioni / *Dimensions*



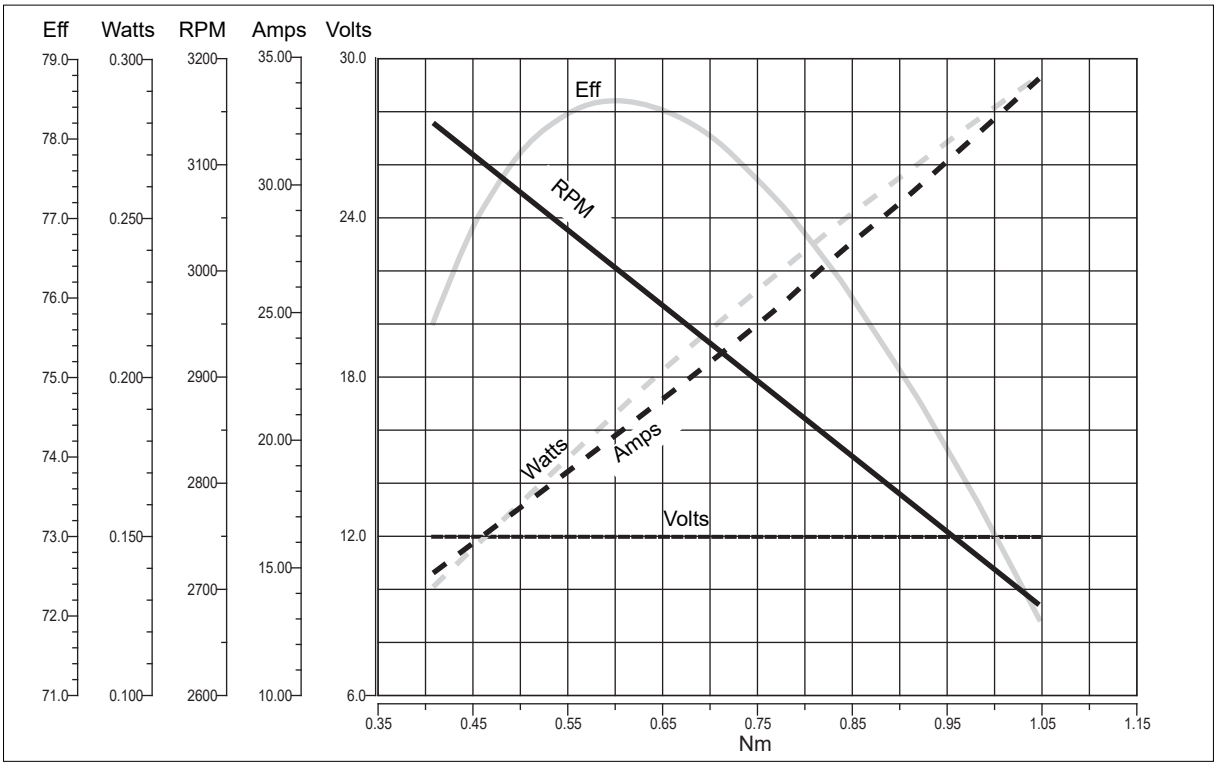
Freno / *Brake* → BA9

Encoder → BA9

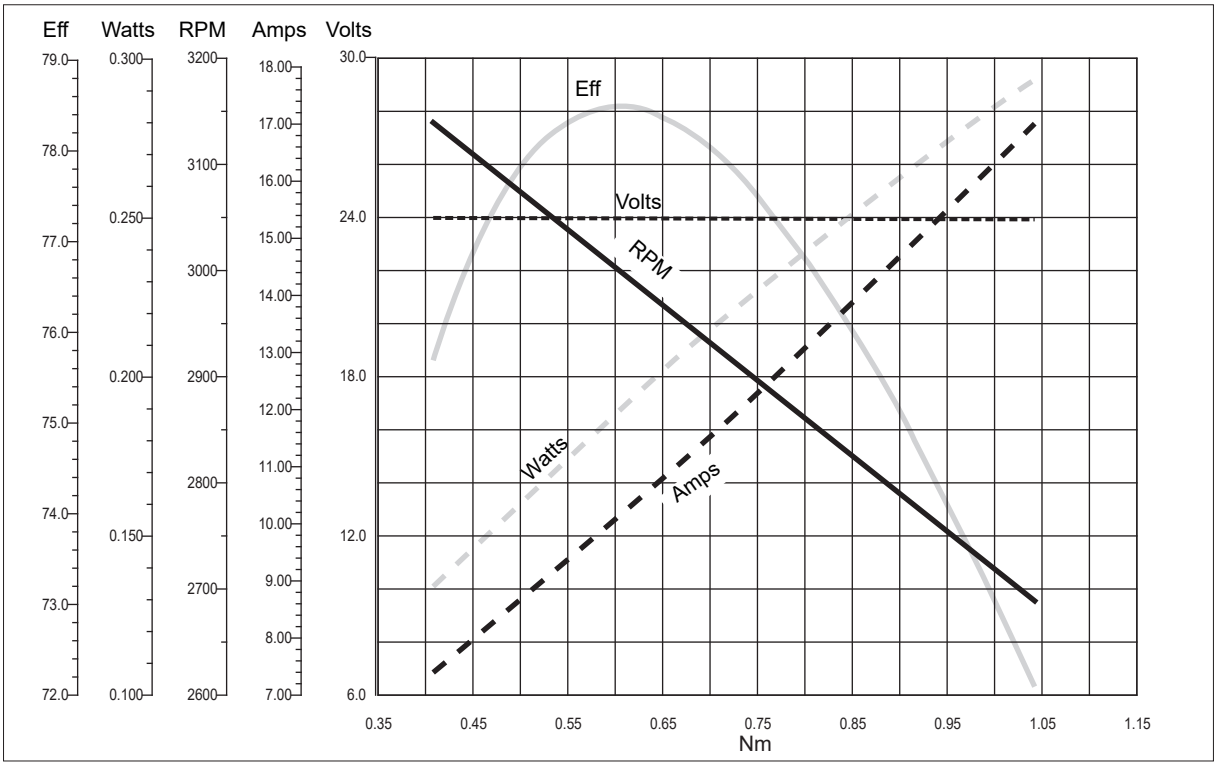
ND180.120 - ND180.240

Prestazioni *Performances*

ND180.120



ND180.240



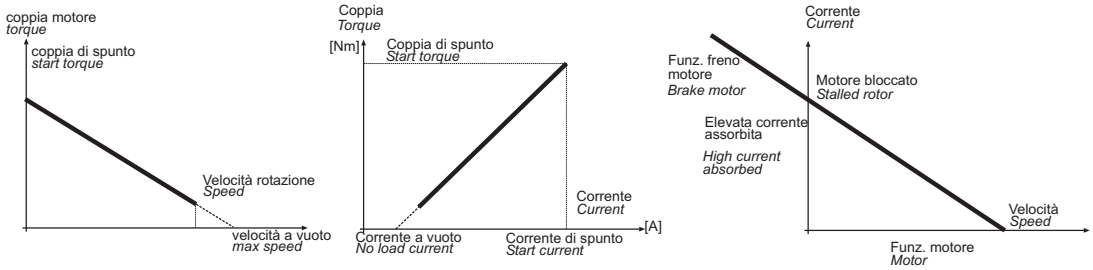
DC

Legenda / Glossario dei grafici

Key / Diagram Glossary

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

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

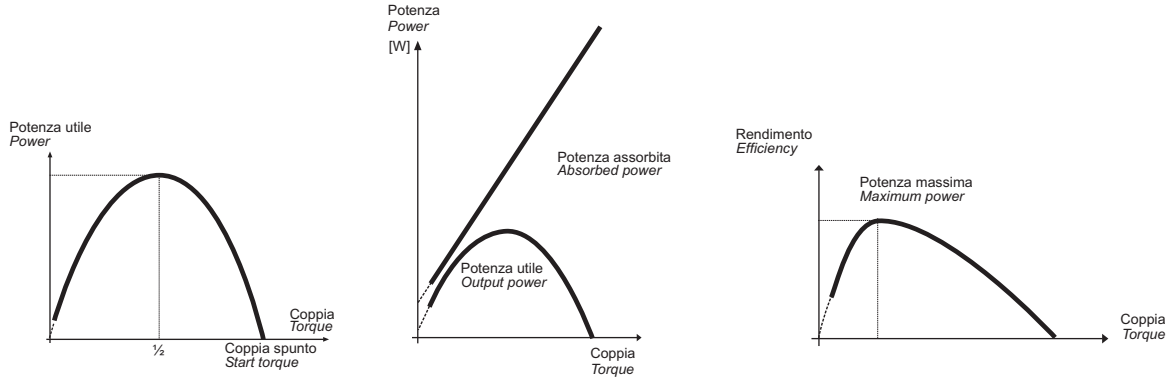


La potenza utile (potenza all'albero) si ricava dalla formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$

The output power is calculated using the formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$



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

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

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

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

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

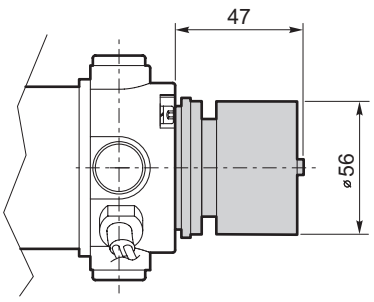
$$Sv = \frac{n_1}{9.55}$$

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

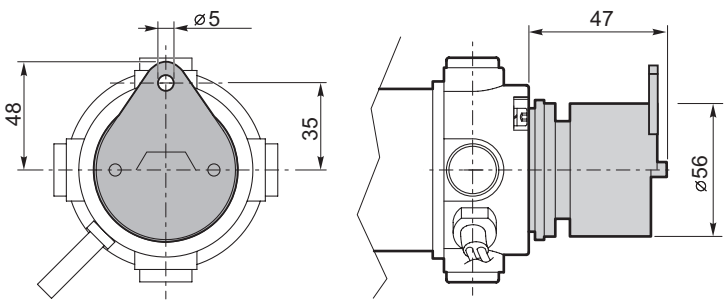
S	—	Servizio	*Duty*
Pn	[W]	Potenza in uscita	*Rated power*
Pa	[W]	Potenza assorbita	*Absorbed power*
Mn	[Nm]	Coppia nominale	*Rated torque*
V	[V]	Tensione	*Voltage*
I	[A]	Corrente assorbita	*Absorbed current*
n_1	[min^{-1}]	Numero giri motore	*Motor speed*
Sv	[rad/s]	Velocità angolare	*Angular speed*
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*



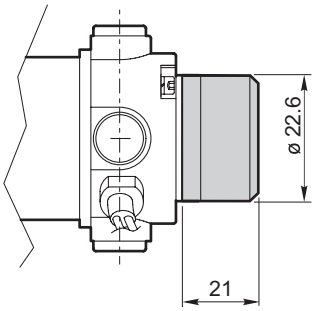
ND...BRL Freno con leva di sblocco/ *Brake with hand release*



	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12	2	3000
		24		

Encoder / *Encoder*

ND...ME22



Nota: Fornito con cavo lungo 300 mm
Note: Supplie with cavle 300 mm long

Risoluzione Encoder (CPR) / *Encoder Resolution (CPR)*	Numero di canali / *Number of channels*	Tensione d'alimentazione / *Power supply*
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.
For non-standard encoder resolution, please contact our Technical Department.

Note/*Notes*

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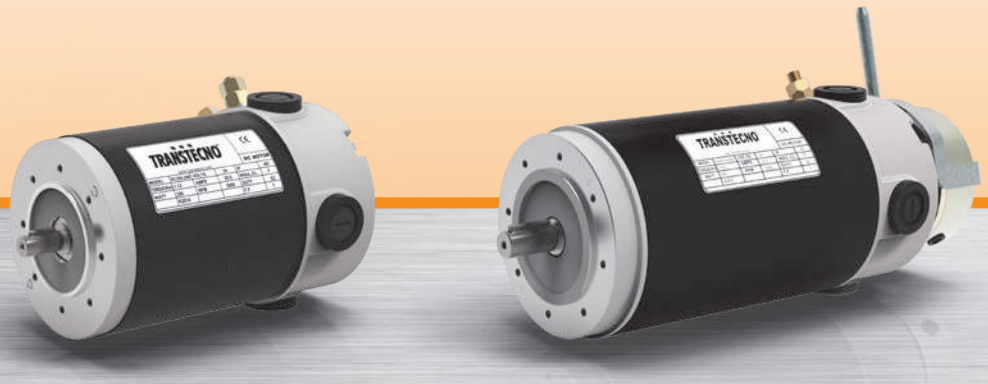
EC

Motori elettrici CC - Ferrite
DC electric motors - Ferrite



DC

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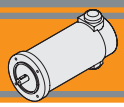

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Caratteristiche tecniche

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

Technical features

The main features of EC ferrite permanent magnets DC electric motors range are:

- *Magnetic field generated by permanent ferrite magnets*
- *Tubular construction, without fan*
- *Available in 6 sizes: diameter 42, 52, 65, 81, 104, 110 mm*
- *Low voltage power supply, 12 or 24 Vdc*
- *Power ratings available from 30 to 800 W S2*
- *High starting torque*
- *High torque and output power with compact package*

Classe di isolamento termico

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

Thermal insulation class

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

Servizio

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

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

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

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

Fattore di forma

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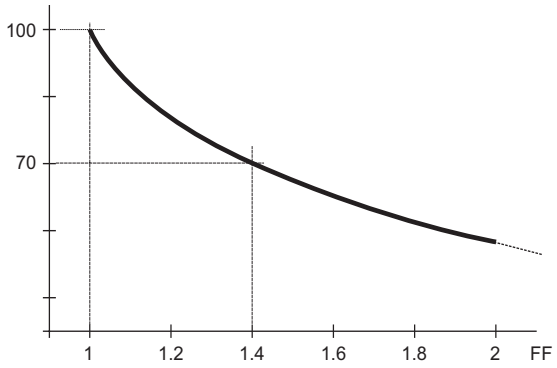
Qualitativamente l' andamento della coppia (percentuale) rispetto al fattore di forma è indicato nel grafico seguente:

Form factor

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

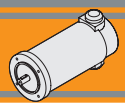
The graph below indicates the torque trend (percentage) in relation to the form factor.



Simbologia

Symbols

S	—	Servizio / *Duty*	**M_{Br}**	[Nm]	Coppia nominale del freno / *Brake motor torque*
Pn	[W]	Potenza in uscita / *Rated power*	**n_1 max**	[min^{-1}]	Velocità massima / *Max speed*
Pa	[W]	Potenza assorbita / *Absorbed power*	**T_r**	[ms]	Tempo di inserzione / *Engaging time*
Mn	[Nm]	Coppia nominale / *Rated torque*	**T_f**	[ms]	Tempo di disimpegno / *Disengaging time*
V	[V]	Tensione / *Voltage*	**IC**	—	Classe d'isolamento termico / *Thermal insulation class*
I	[A]	Corrente assorbita / *Absorbed current*	**FF**	—	Fattore di forma / *Form factor*
n1	[min-1]	Numero giri motore / *Motor speed*	**IP**	—	Classe di protezione / *Protection class*
Sv	[rad/s]	Velocità angolare / *Angular speed*	**η**	—	Rendimento / *Efficiency*
Pe	[W]	Potenza elettrica del freno / *Brake electric power*	**Kg**	—	Peso / *Weight*



Grado di protezione IP

IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.
1ª cifra protezione alla penetrazione di corpi solidi.

2ª cifra protezione contro la penetrazione d'acqua.

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. *Protected against solid matters (over Ø 50 mm)*	**1**	Protetto contro la caduta verticale di gocce d'acqua. *Protected against drops of water falling vertically*
2	Protetto da corpi solidi superiori a Ø 12 mm. *Protected against solid matters (over Ø 12 mm)*	**2**	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° *Protected against drops of water falling up to 15°*
3	Protetto da corpi solidi superiori a Ø 2,5 mm. *Protected against solid matters (over Ø 2,5 mm)*	**3**	Protetto contro la pioggia. *Rain proof fixture*
4	Protetto da corpi solidi superiori a Ø1 mm. *Protected against solid matters (over Ø1 mm)*	**4**	Protetto contro gli spruzzi. *Splash proof fixture*
5	Protetto contro la polvere *Dust proof*	**5**	Protetto contro getti d'acqua *Water jet proof*
6	Totalmente protetto contro la polvere *Fully dust proof*	**6**	Protetto dalle ondate *Wave proof*
7	N.A.	**7**	Protetto contro immersione *Watertight immersion fixture.*
8	N.A.	**8**	Protetto contro immersione/sommersione prolungata *Watertight immersion fixture for a long time.*

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.*

EC020.120 - EC020.24E

Caratteristiche / *Features*

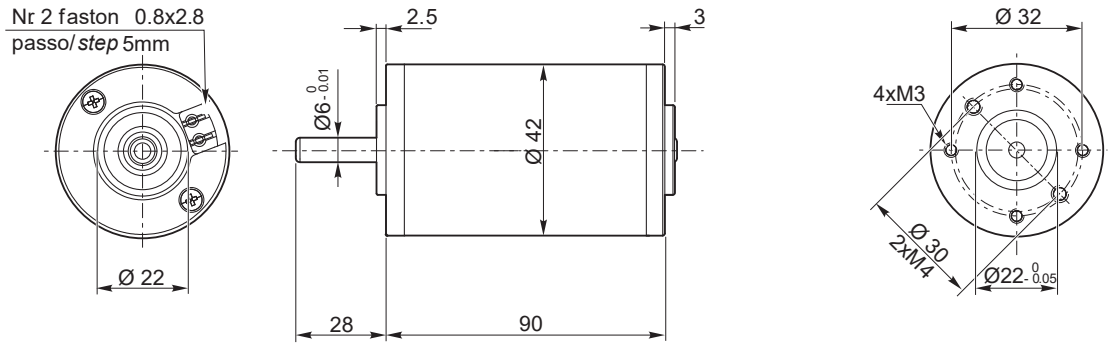
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 42 mm
Potenza	30 W S2 (20 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Cavo di alimentazione	Connettori faston (0.8 x 2.8 mm)

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

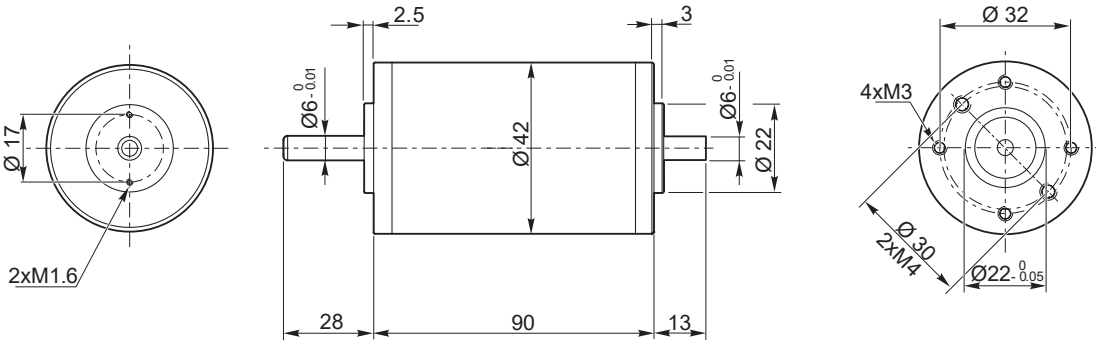
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC020.120	**S1**	20	12	2.6	B	1	0.06	2850	20	0.4
	S2 6'	30		3.5			0.08			
EC020.24E	**S1**	20	24	1.4			0.06			
	S2 6'	30		1.9			0.08			

Dimensioni / *Dimensions*

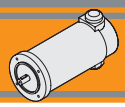
EC020.120



EC020.24E



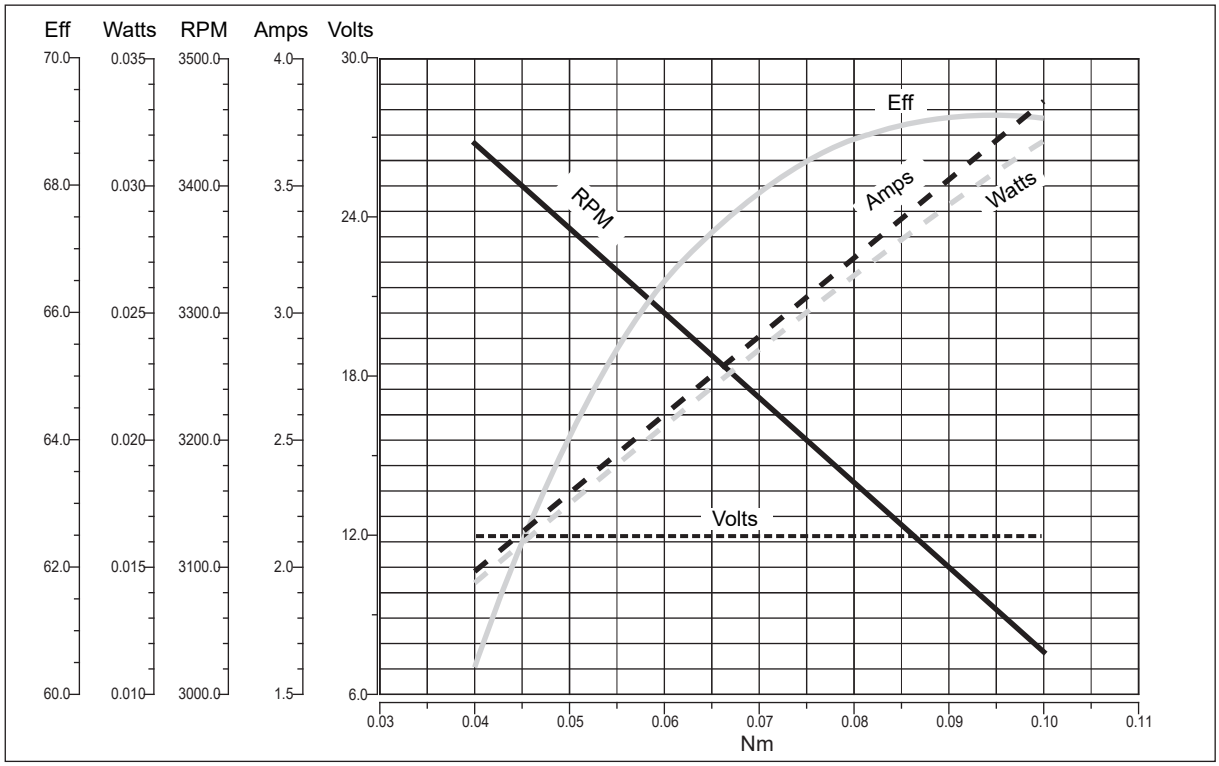
Encoder BB24



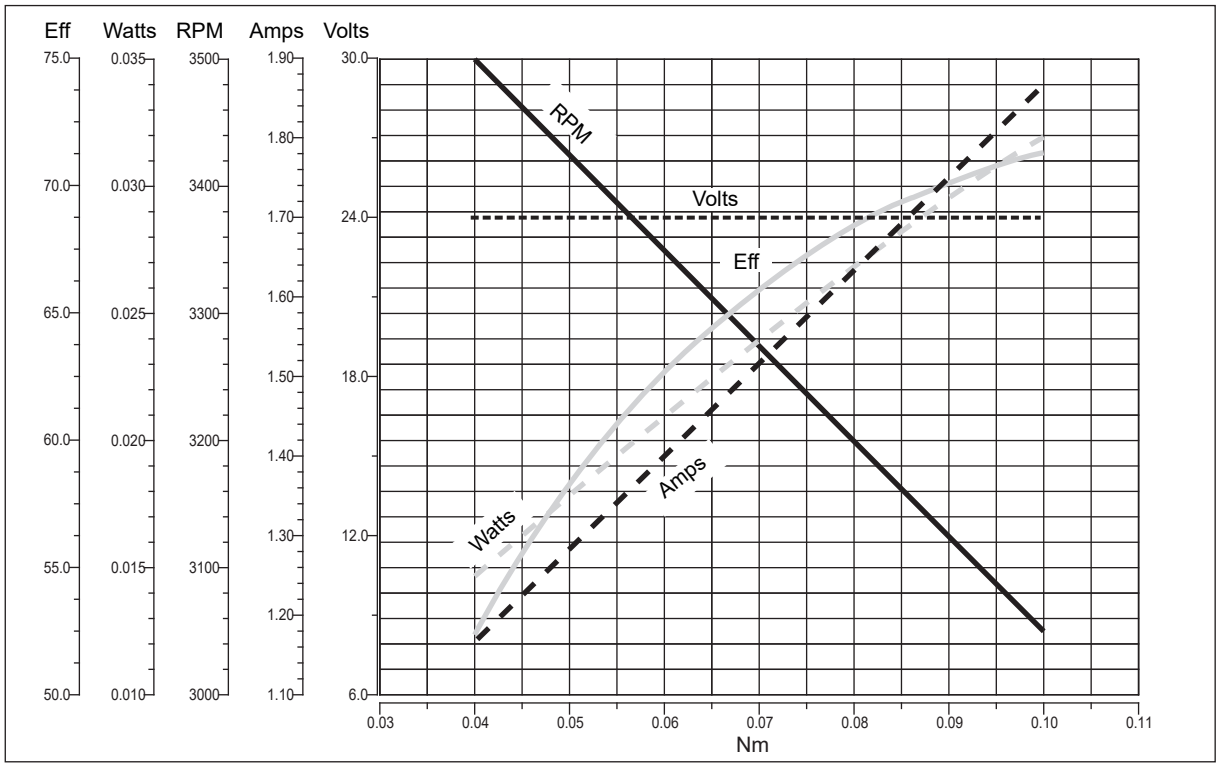
EC020.120 - EC020.24E

Prestazioni ***Performances***

EC020.120



EC020.24E



DC

EC035.120 - EC035.240

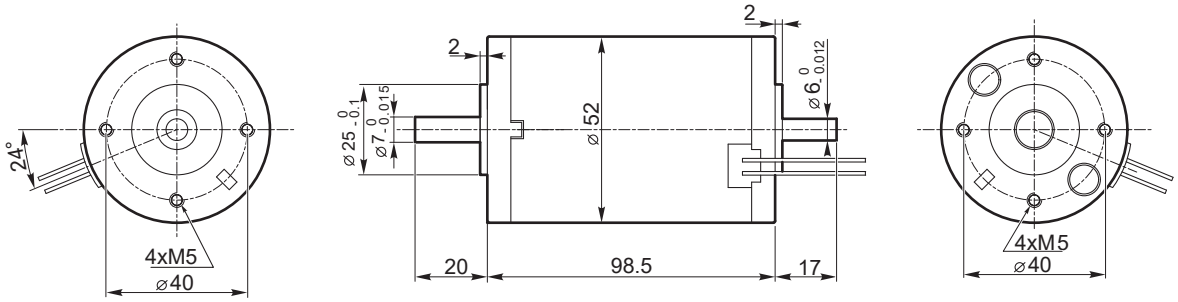
Caratteristiche / *Features*

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

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_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			

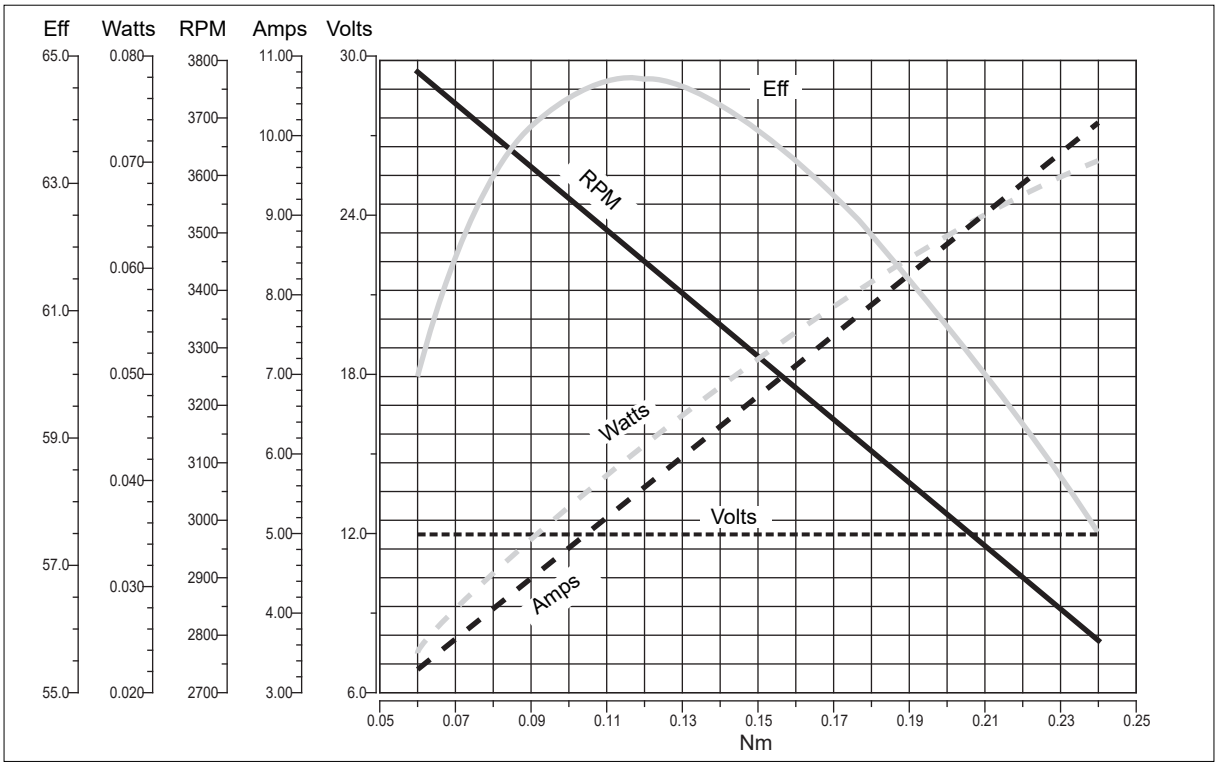
Dimensioni / *Dimensions*



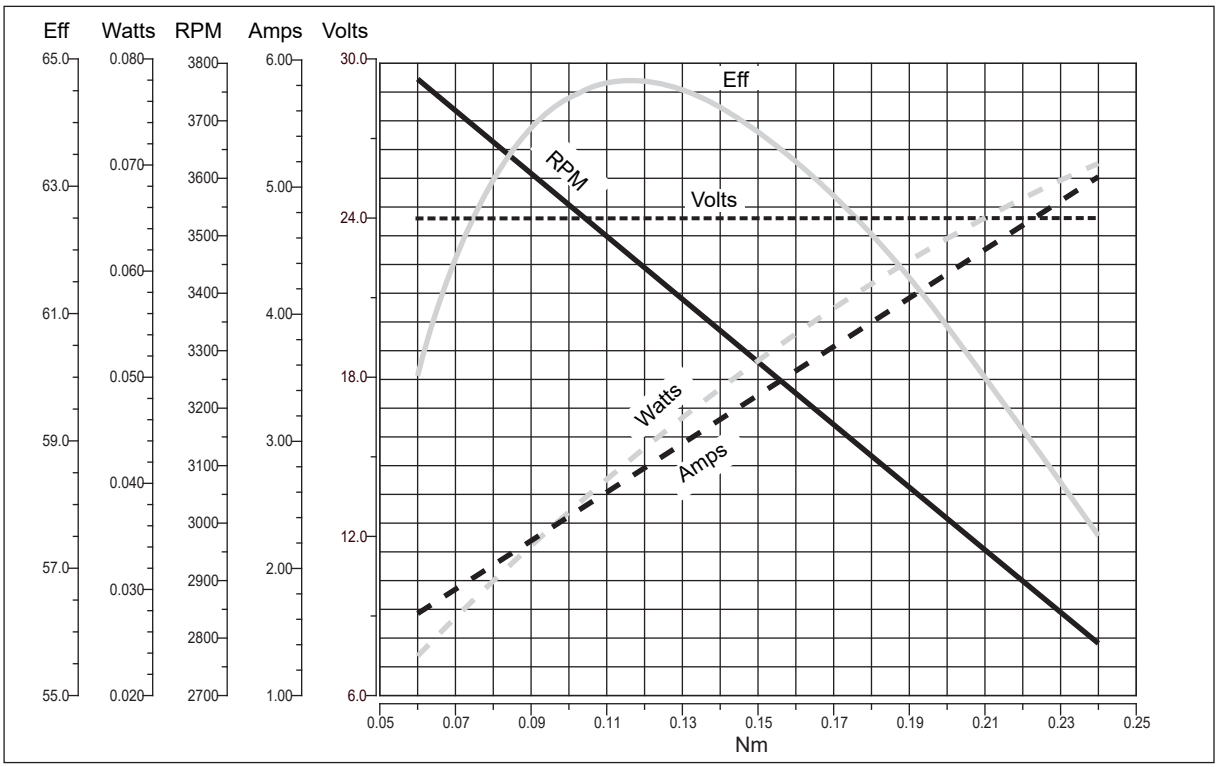
EC035.120 - EC035.240

Prestazioni *Performances*

EC035.120



EC035.240



DC

EC050.12E - EC050.24E

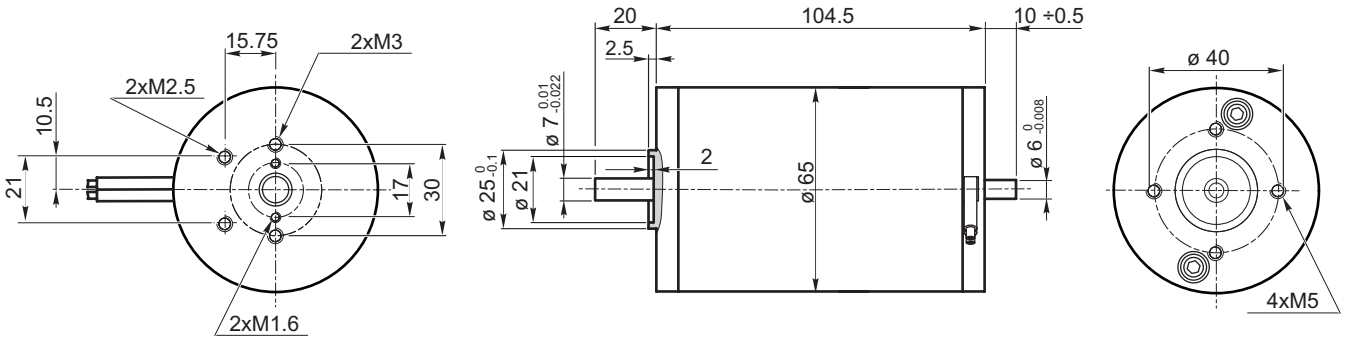
Caratteristiche / *Features*

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

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_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*



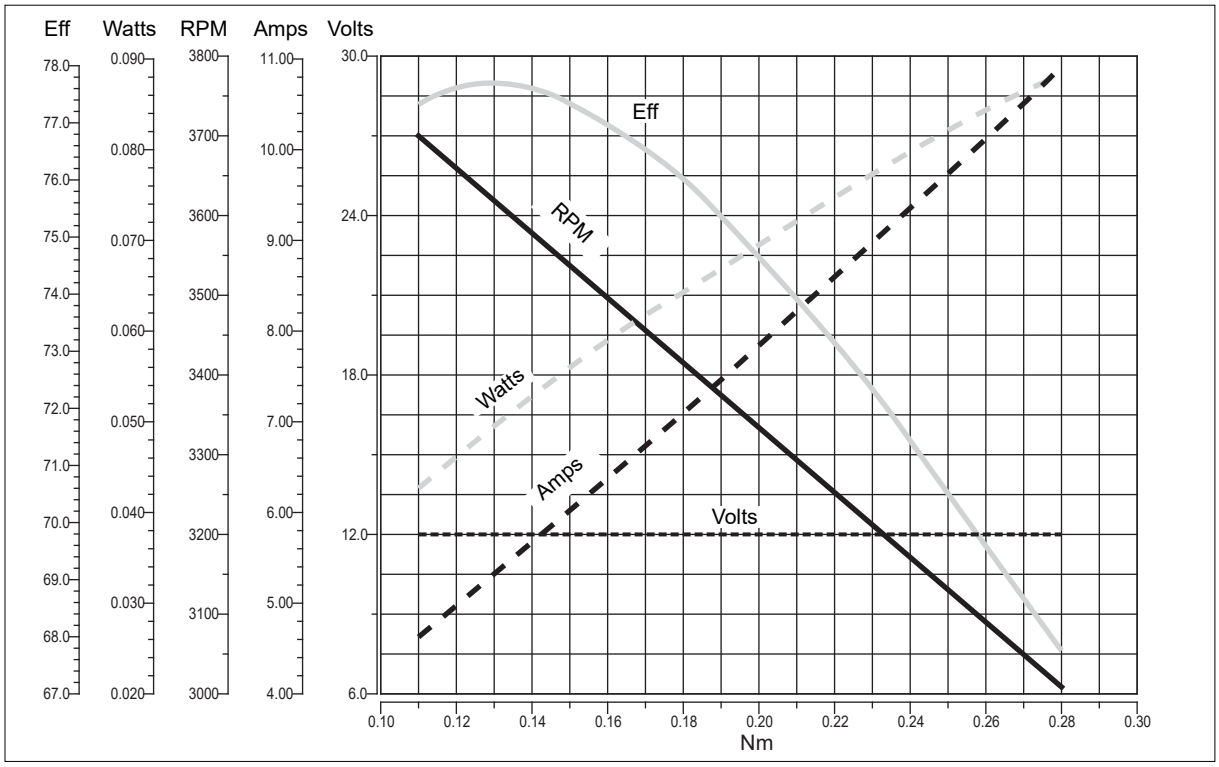
Freno / *Brake* → BB23

Encoder → BB24

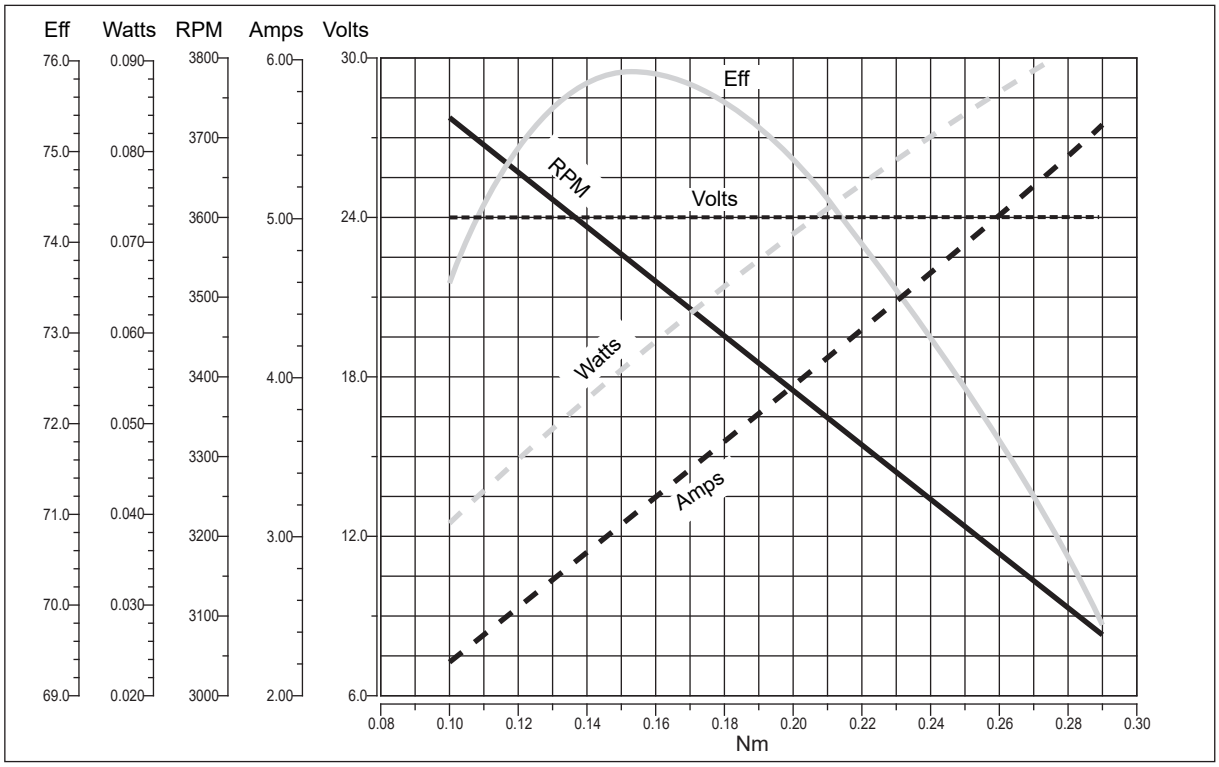
EC050.12E - EC050.24E

Prestazioni *Performances*

EC050.12E



EC050.24E



DC

EC070.12E - EC070.24E

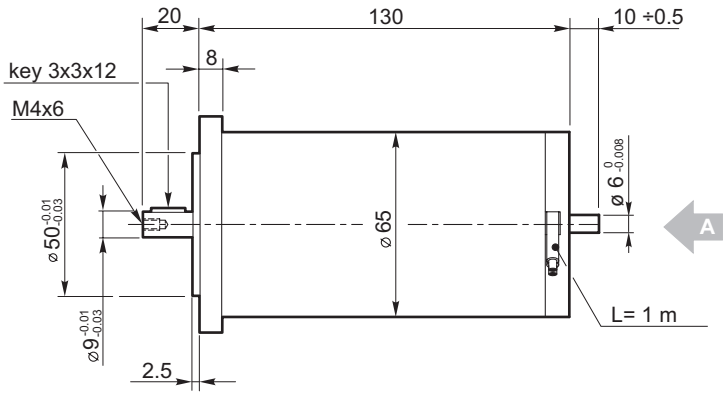
Caratteristiche / *Features*

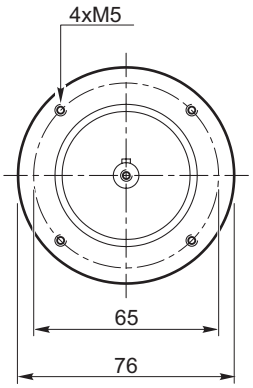
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

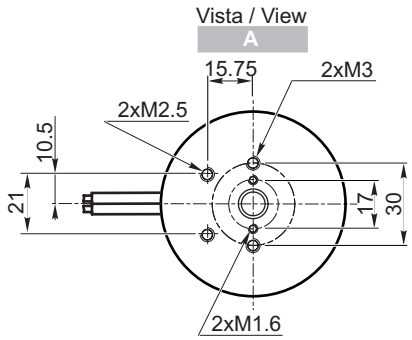
Construction	*Tubular, without fan*
Size	*Ø 65 mm*
Power	*100 W S2*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Electric cable	*Length: 1000 mm*

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC070.12E	**S1**	70	12	8.4	F	1	0.22	3000	20	1.7
	S2 30'	100		11.8			0.31			
EC070.24E	**S1**	70	24	4.2			0.22			
	S2 30'	100		5.9			0.31			

Dimensioni / *Dimensions*







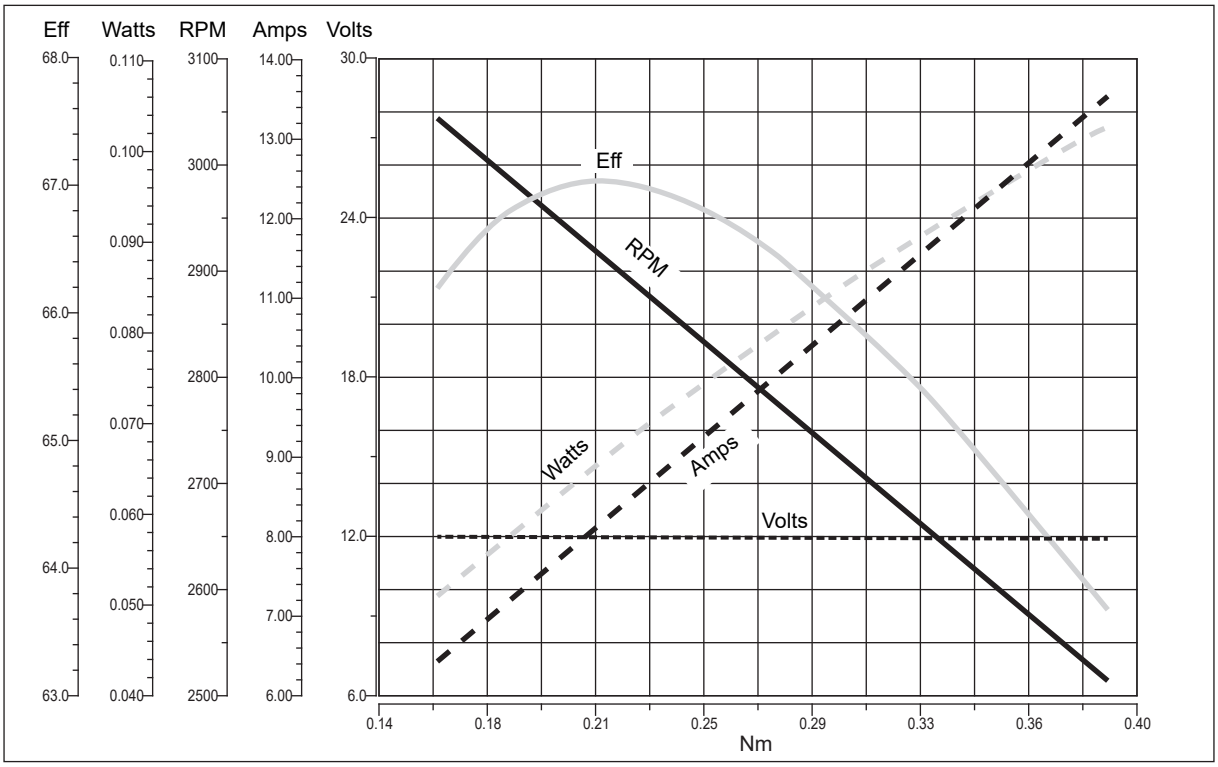
Freno / *Brake* → BB23

Encoder → BB24

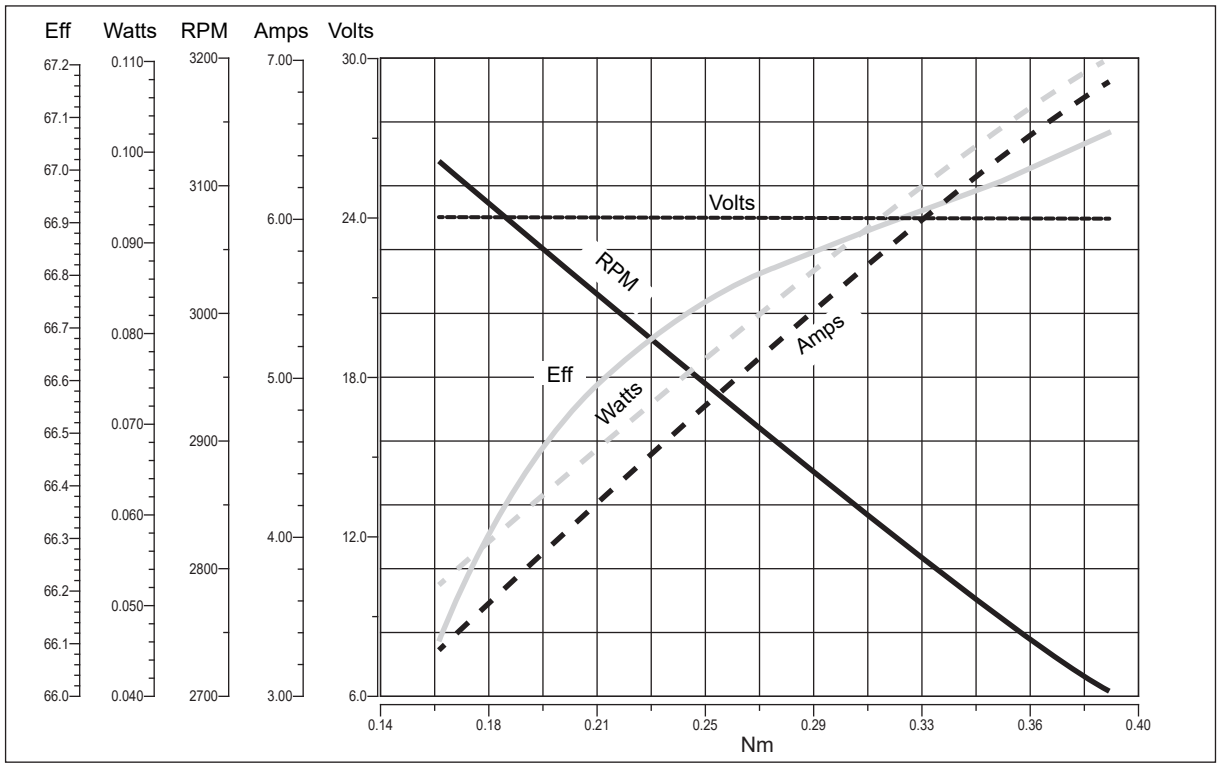
EC070.12E - EC070.24E

Prestazioni ***Performances***

EC070.12E



EC070.24E



DC

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

Caratteristiche / *Features*

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard solo EC100.24E

Construction	*Tubular, without fan*
Size	*Ø 80 mm*
Power	*140 W S2 (100 W S1)*
Magnets	*2*
Bearings	*Ball bearings*
Mounting holes	*4*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*2 inside brushes made of graphite/copper composite*
Brushes size	*LxWxH = 17.1 x 6.5 x 16.7 mm*
Electric cable	*Length: 1000 mm*
Rear shaft	*Standard only EC100.24E*

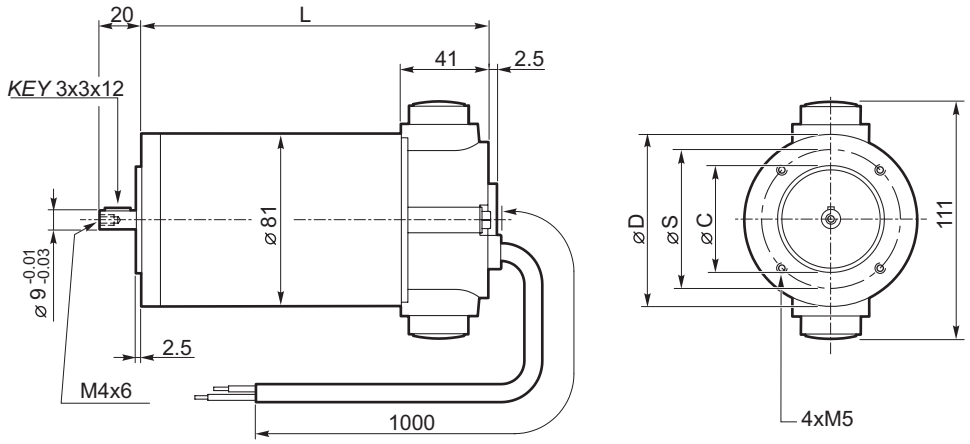
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC100.120	**S1**	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	**S1**	100	24	6			0.31			
	S2 25'	140		8.4			0.43			
EC100.24E	**S1**	100		6			0.31		20	
	S2 25'	140		8.4			0.43			

Dimensioni / *Dimensions*

EC100.120
EC100.240

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

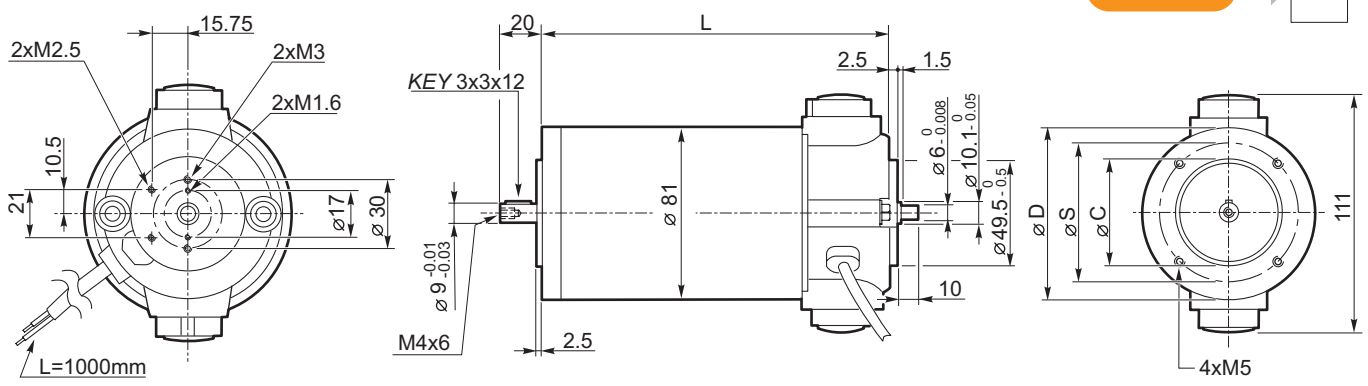
* Usare boccola 9/11
** Use sleeve 9/11*

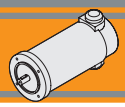


Freno / *Brake* → BB23

Encoder → BB24

EC100.24E

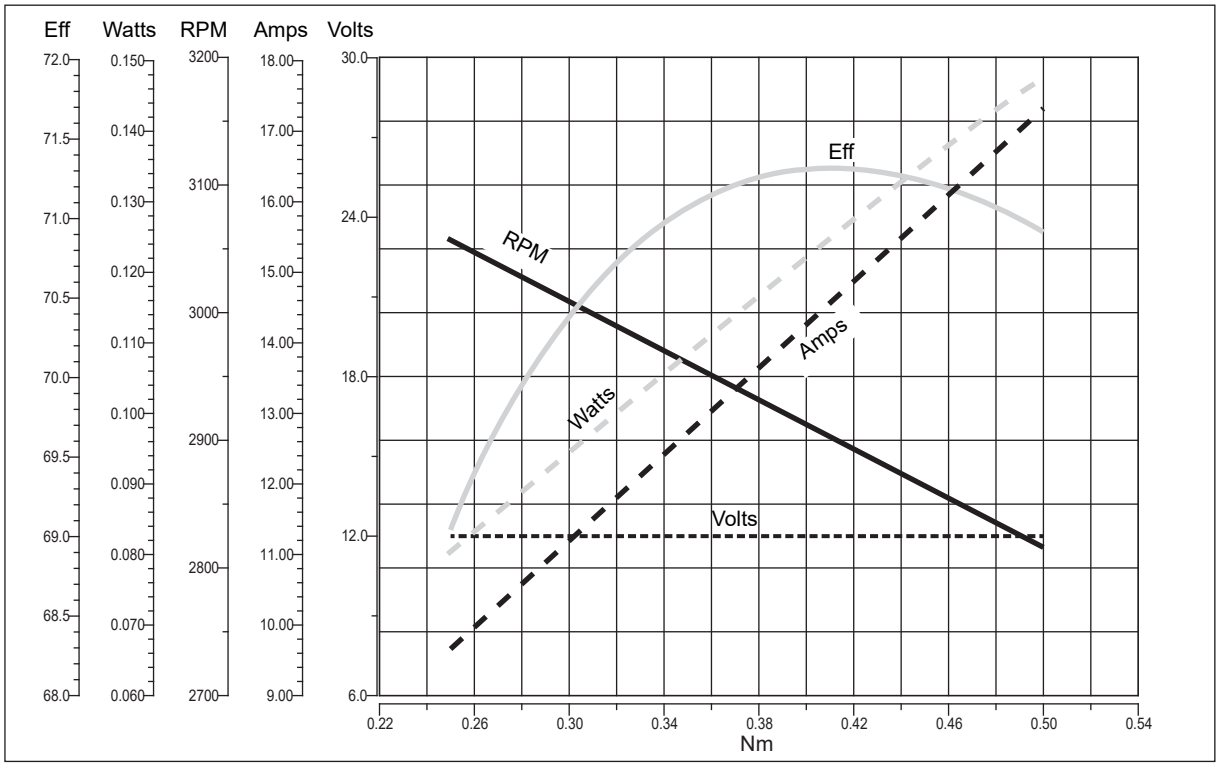




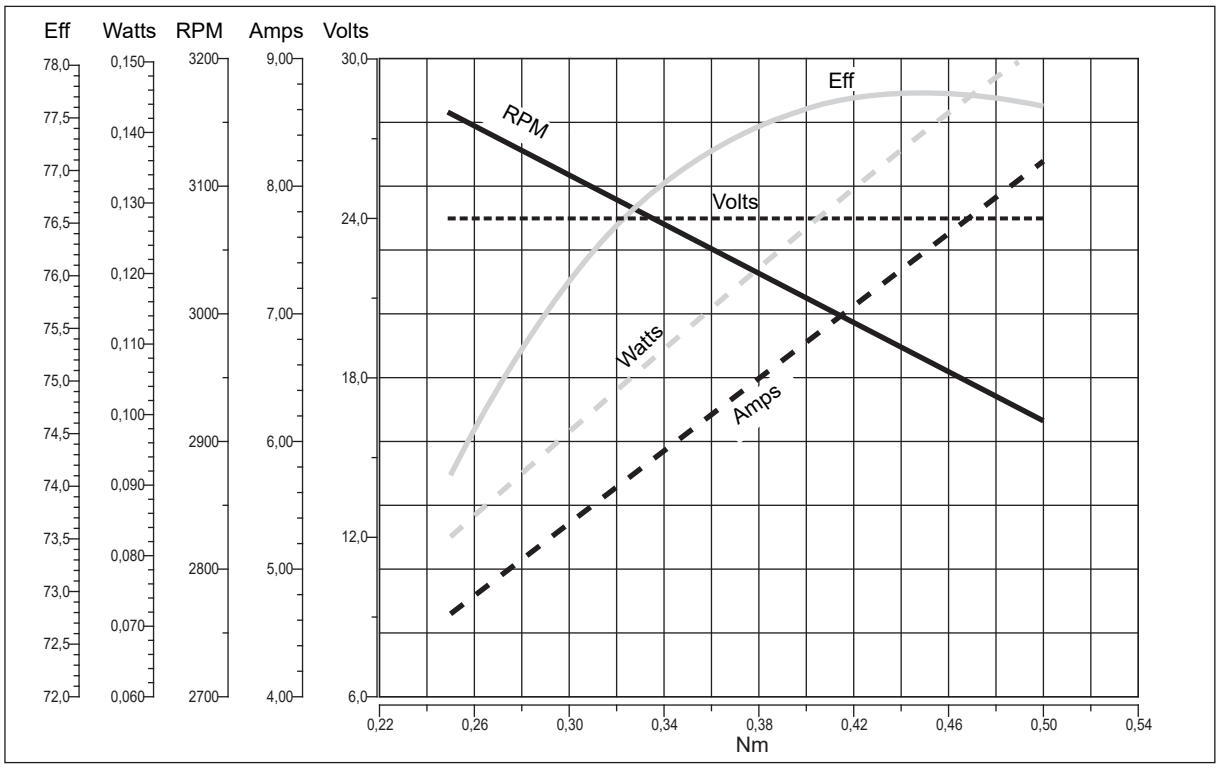
EC100.120 - EC100.240 - EC100.24E

Prestazioni — *Performances*

EC100.120



EC100.240 - EC100.24E



DC

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*

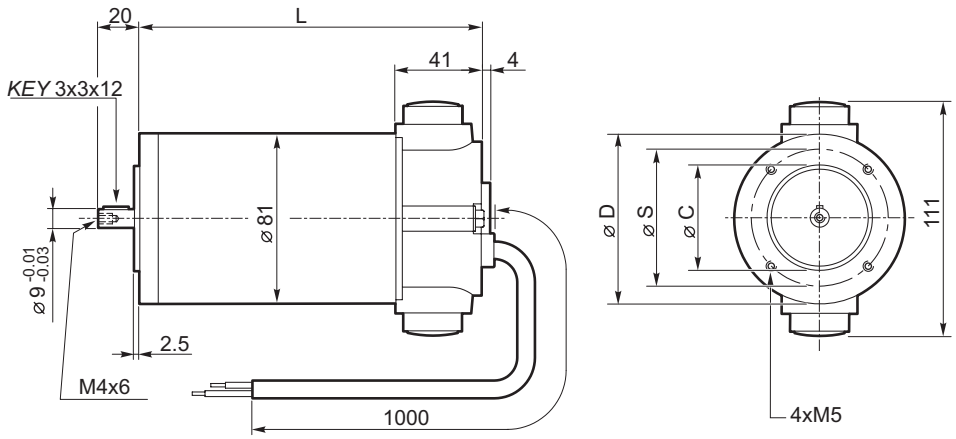
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC180.120	**S1**	180	12	21.5	F	1	0.57	3000	40	3.4
	S2 25'	250		30			0.8			
EC180.240	**S1**	180	24	10.8			0.57			
	S2 25'	250		15			0.8			
EC180.24E	**S1**	180		10.8			0.57		20	
	S2 25'	250		15			0.8			

Dimensioni / *Dimensions*

EC180.120
EC180.240

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

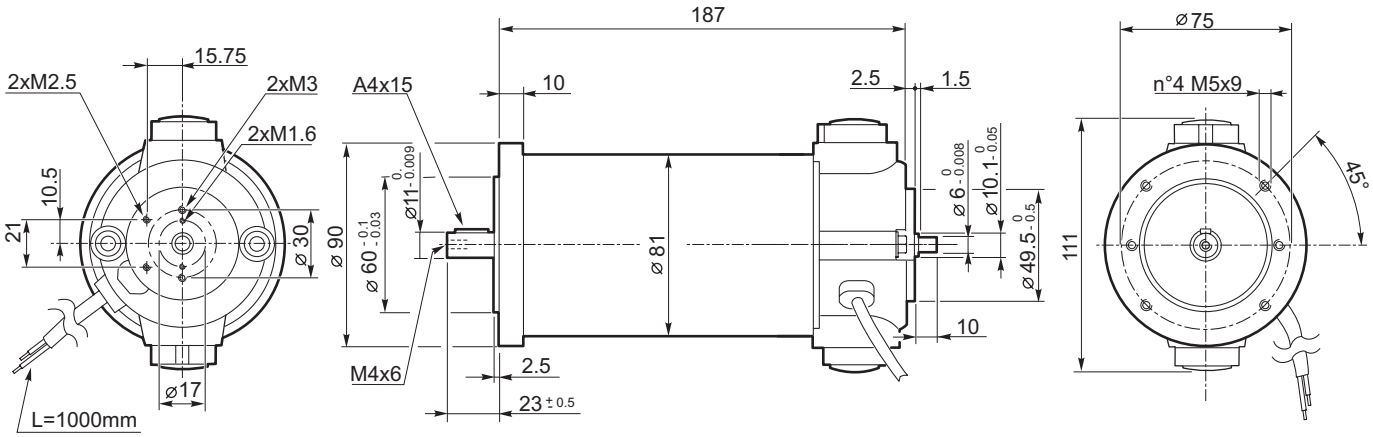
* Usare boccola 9/11
** Use sleeve 9/11*



Freno / *Brake* → BB23

Encoder → BB24

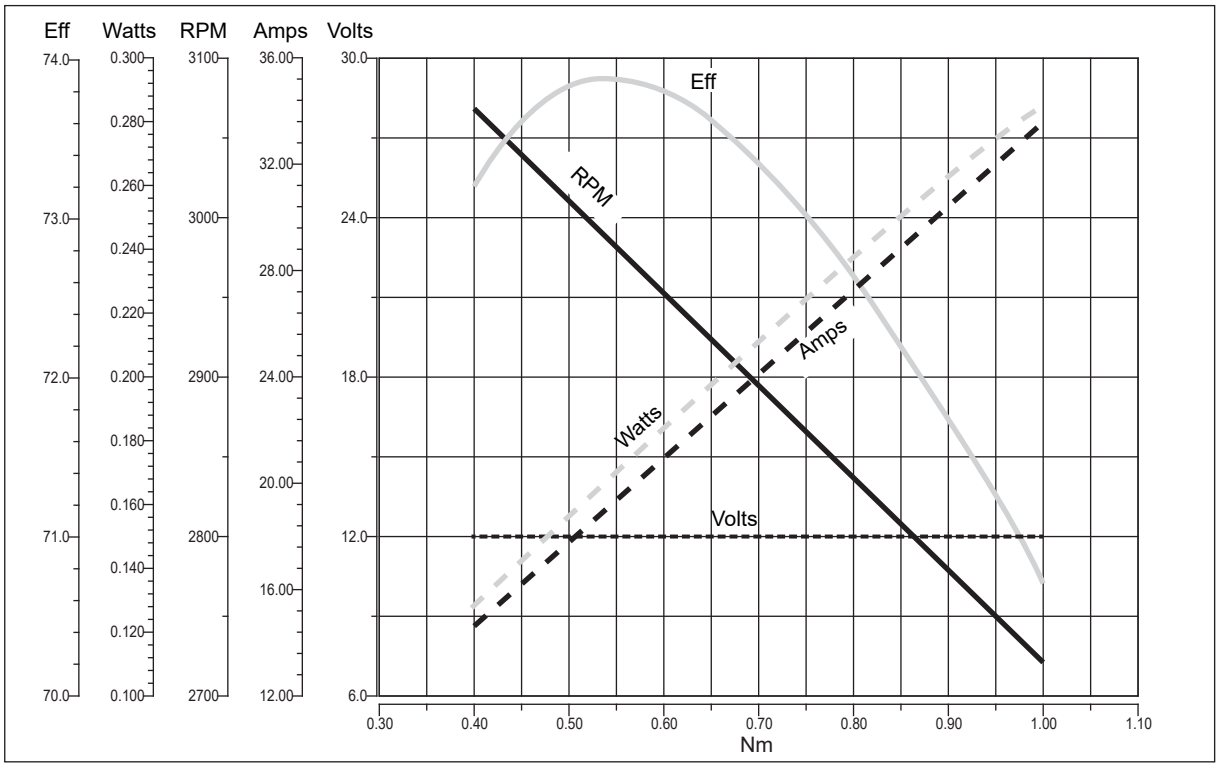
EC180.24E



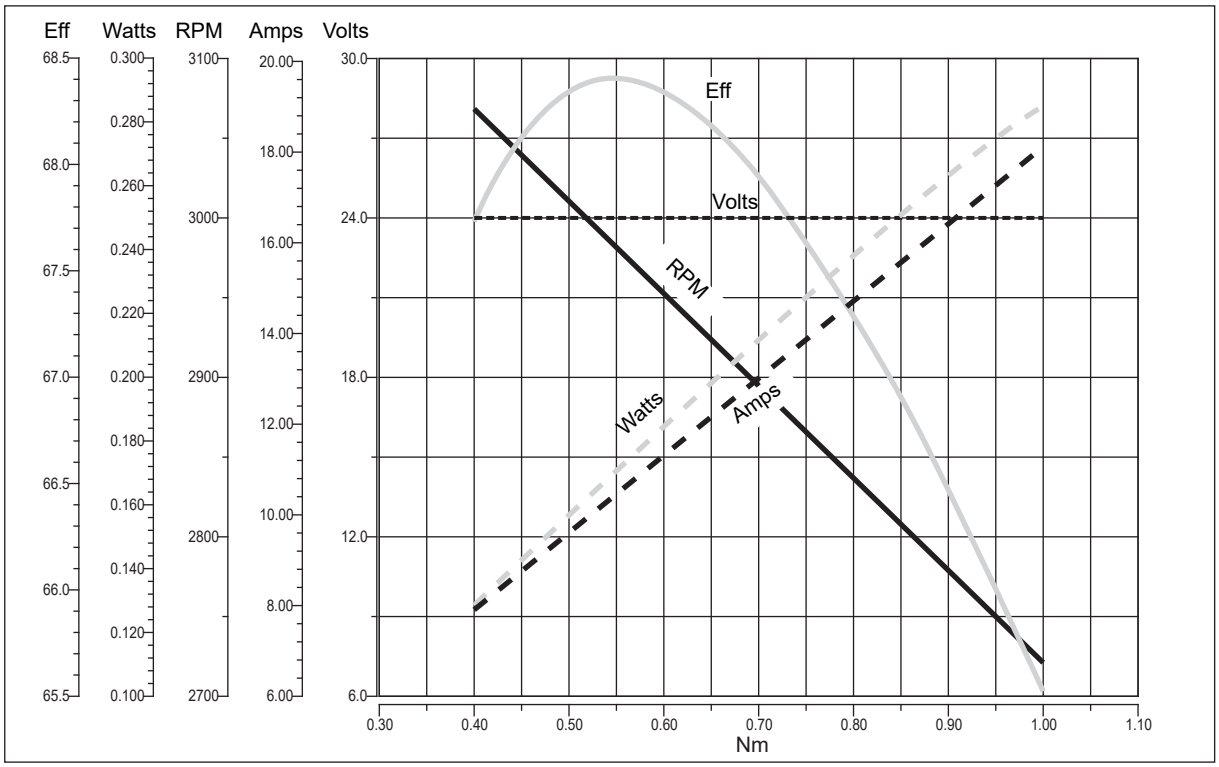
EC180.120 - EC180.240 - EC180.24E

Prestazioni ***Performances***

EC180.120



EC180.240 - EC180.24E



DC

EC250.120 - EC250.240

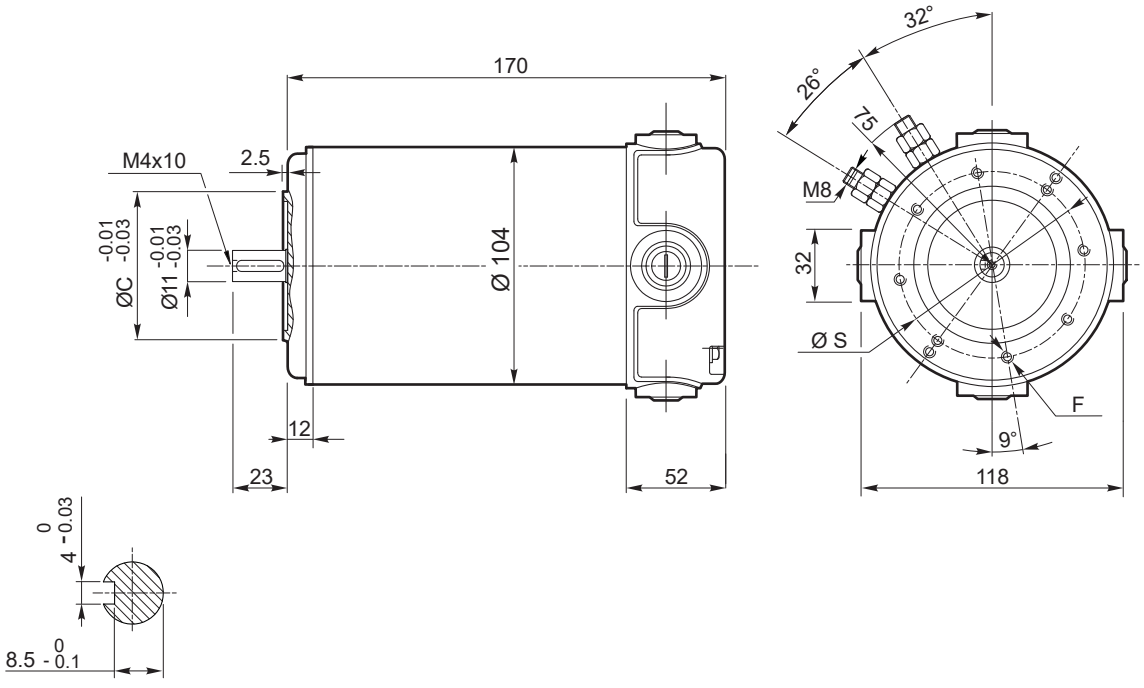
Caratteristiche / *Features*

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

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

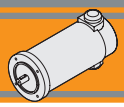
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC250.120	**S1**	250	12	30	F	1	0.8	3000	40	4.15
	S2 25'	350		38.5			1.12			
EC250.240	**S1**	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

Dimensioni / *Dimensions*



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

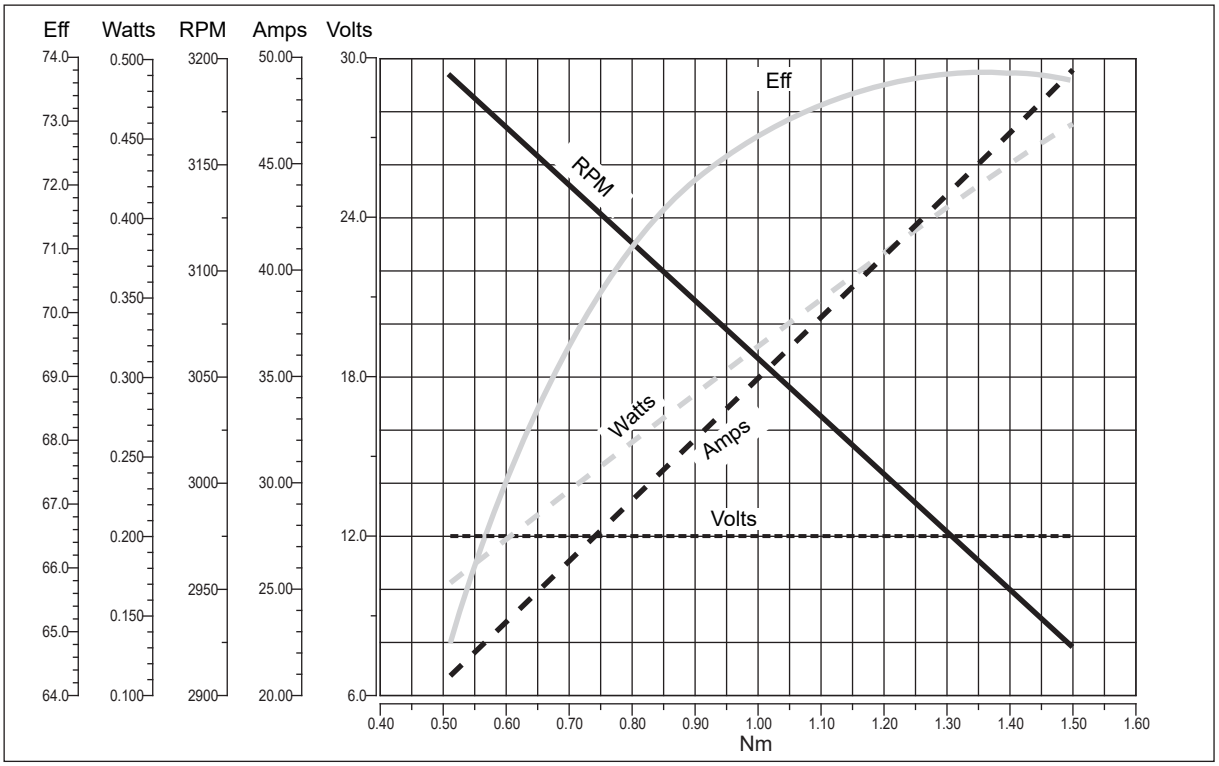
* Usare boccola 11/14
** Use sleeve 11/14*



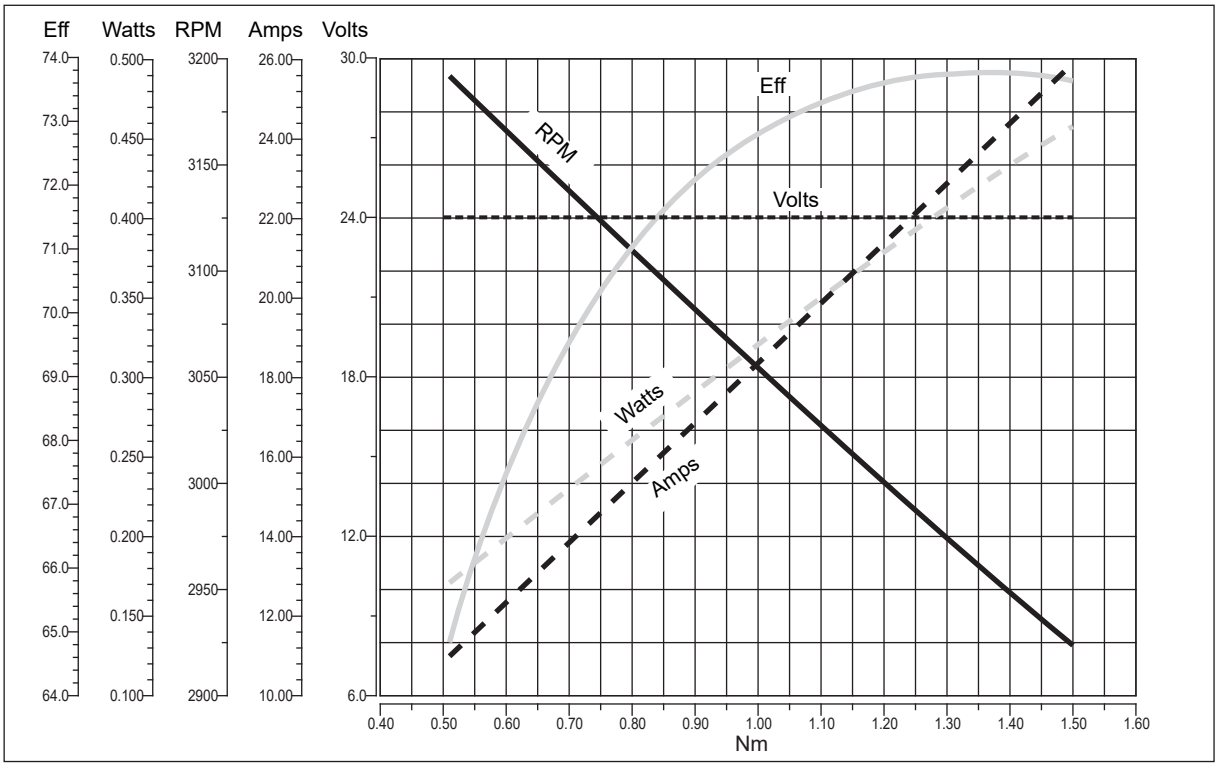
EC250.120 - EC250.240

Prestazioni ***Performances***

EC250.120



EC250.240



DC

EC350.120 - EC350.240

Caratteristiche / *Features*

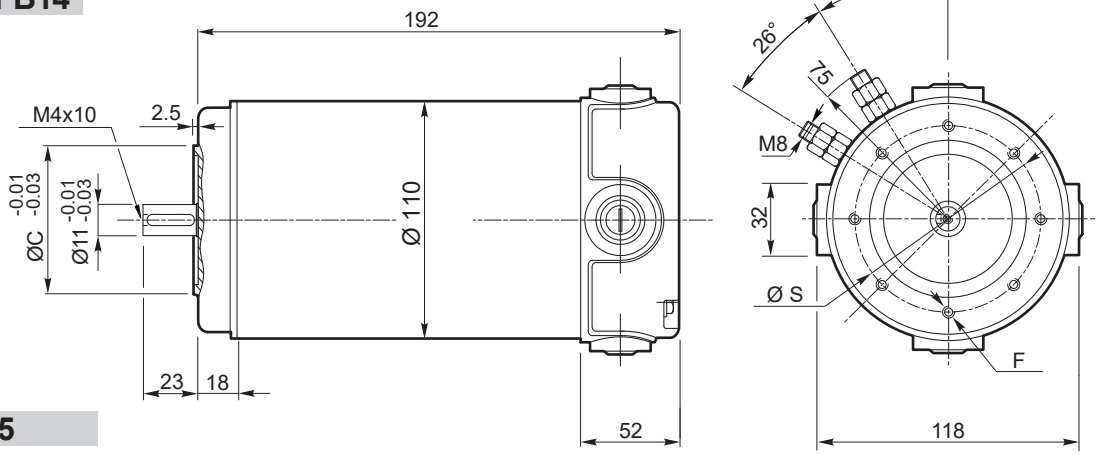
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con dadi di fissaggio

Construction	*Tubular, without fan*
Size	*Ø 110 mm*
Power	*500 W S2 (350 W S1)*
Magnets	*4*
Bearings	*Ball bearings*
Mounting holes	*8*
Power supply	*Low voltage, 12 or 24 Vdc*
Brushes	*4 brushes made of graphite/copper composite*
Brushes size	*LxPxH = 18.9 x 9.5 x 16.7 mm*
Leads terminals	*2, with double nut*

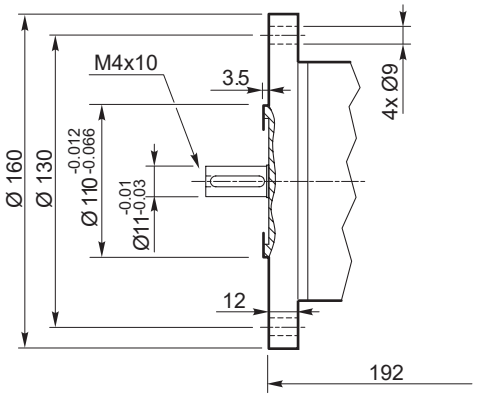
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC350.120	**S1**	350	12	42	F	1	1.12	3000	40	5.1
	S2 30'	500		58.8			1.57			
EC350.240	**S1**	350	24	21			1.12		40	5.3
	S2 30'	500		29.4			1.57			

Dimensioni / *Dimensions*

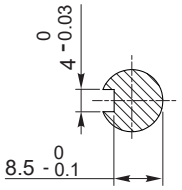
63 B14 - 71 B14



71 B5



Freno / *Brake* → BB23



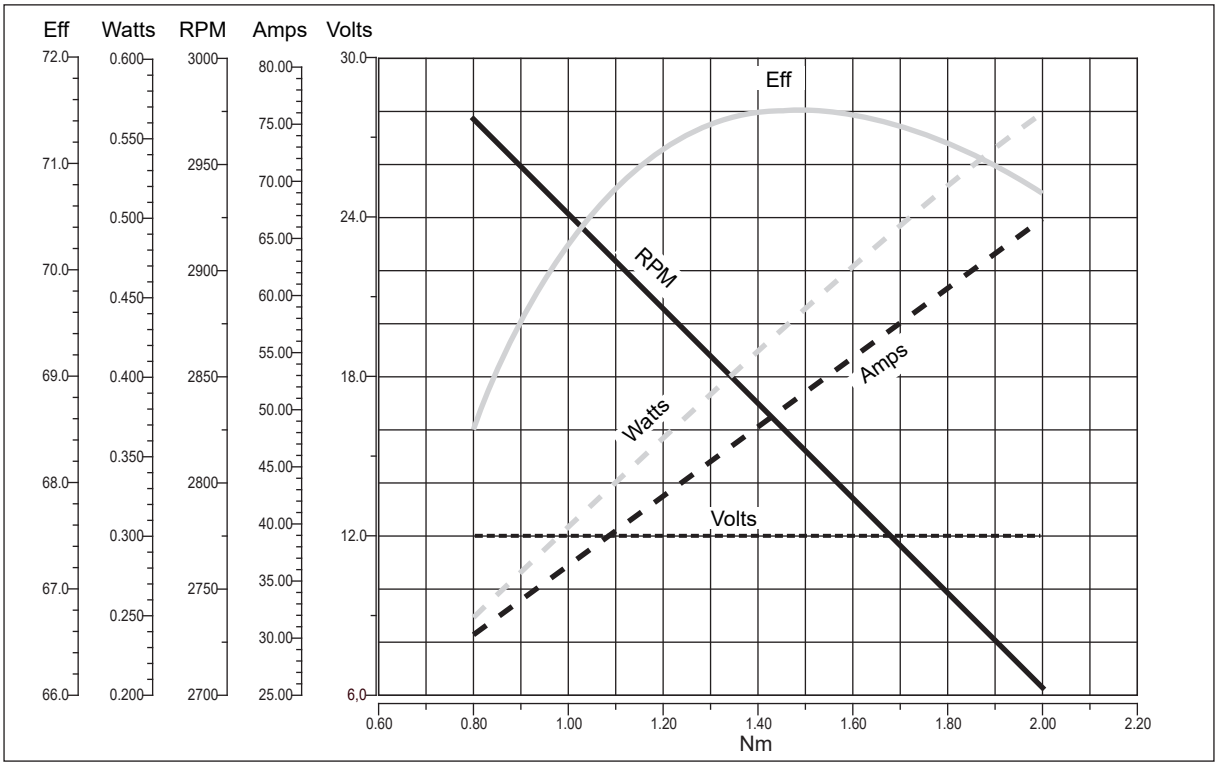
	63 B14	71 B14*
S	75	85
C (-0.03 / -0.01)	60	70
F	8 - M5	8 - M6

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

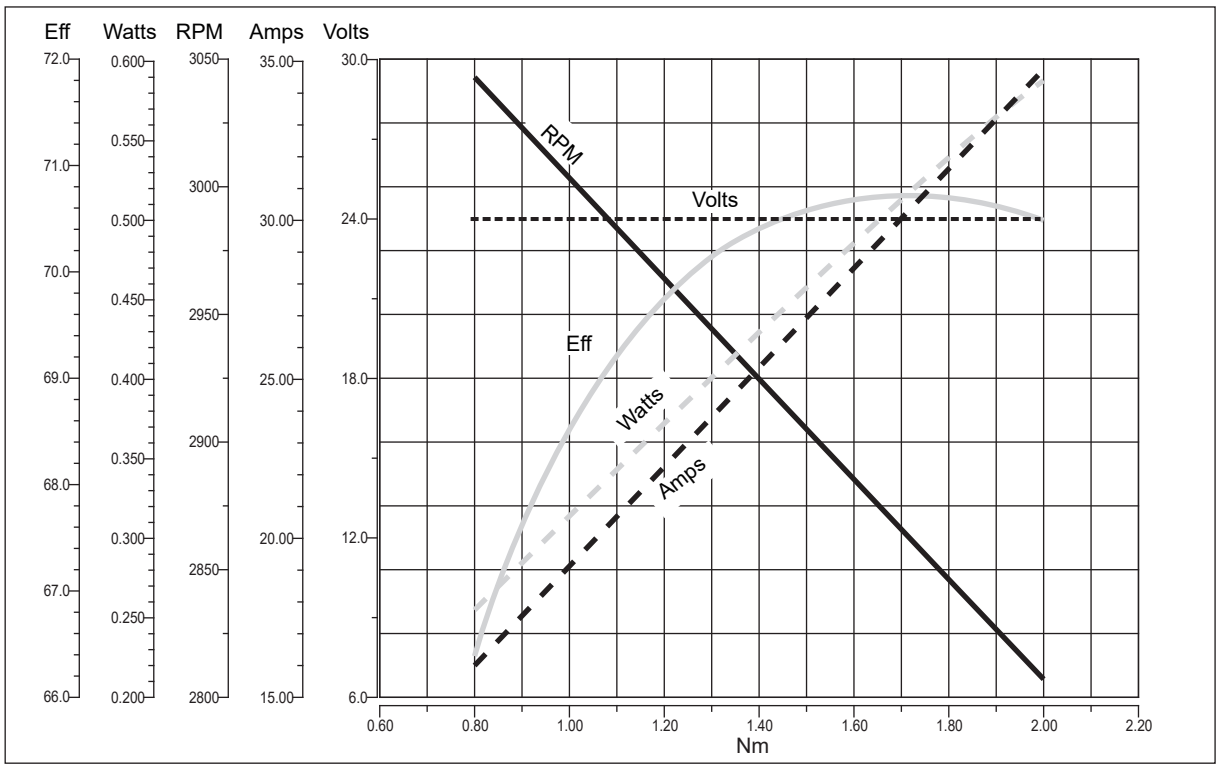
EC350.120 - EC350.240

Prestazioni *Performances*

EC350.120



EC350.240



DC

EC600.120 - EC600.240

Caratteristiche / *Features*

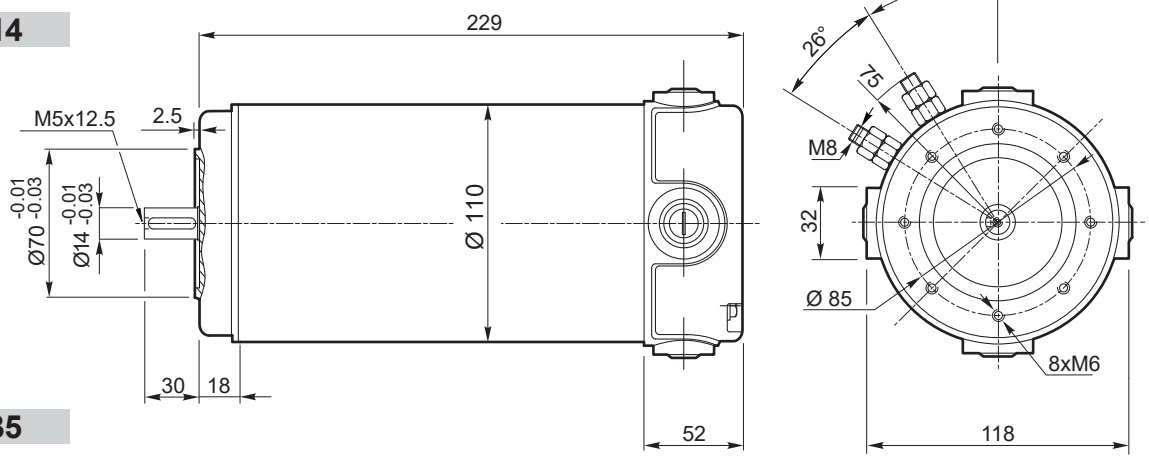
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	800 W S2 (600 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado di fissaggio

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

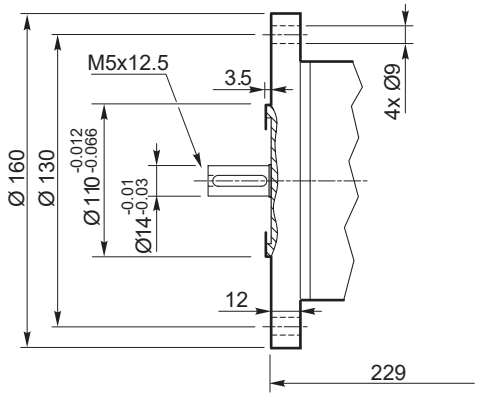
Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC600.120	**S1**	600	12	71	F	1	1.91	3000	40	6.6
	S2 30'	800		94.4			2.54			
EC600.240	**S1**	600	24	35.5			1.91		40	7.1
	S2 30'	800		47.2			2.54			

Dimensioni / *Dimensions*

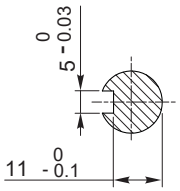
71 B14

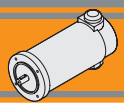


71 B5



Freno / *Brake* → BB23

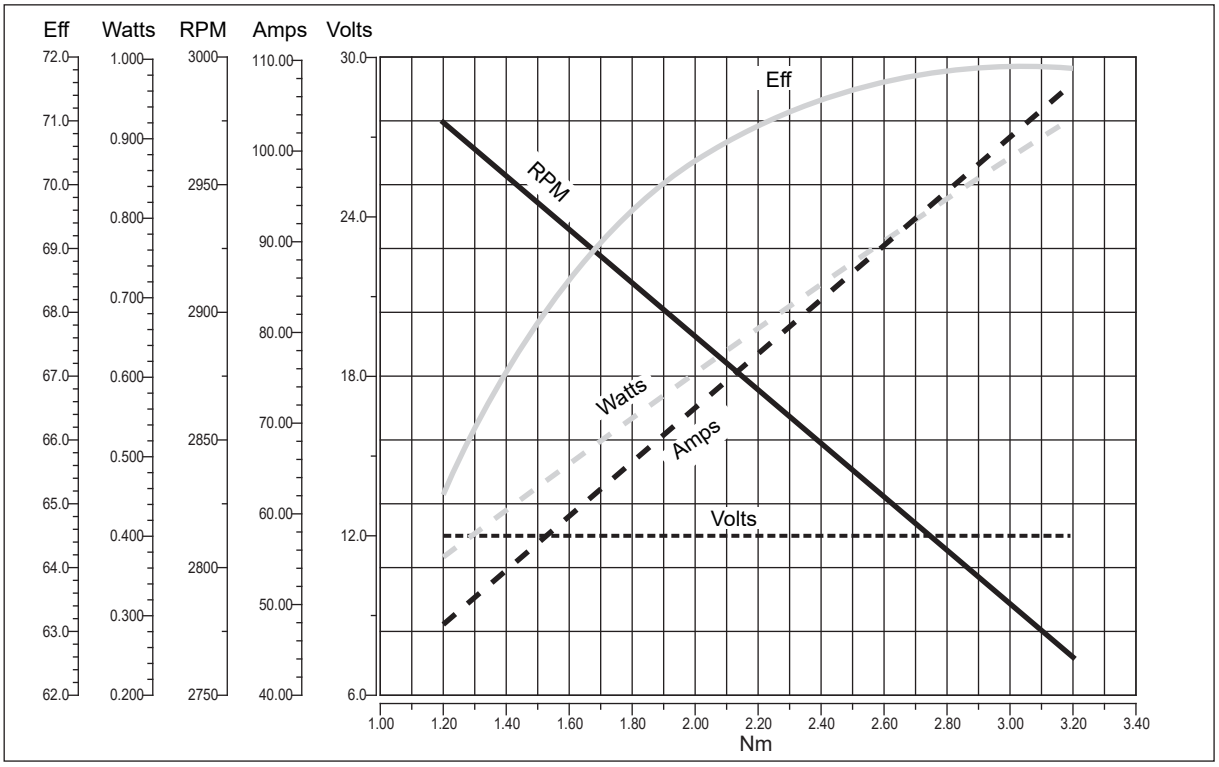




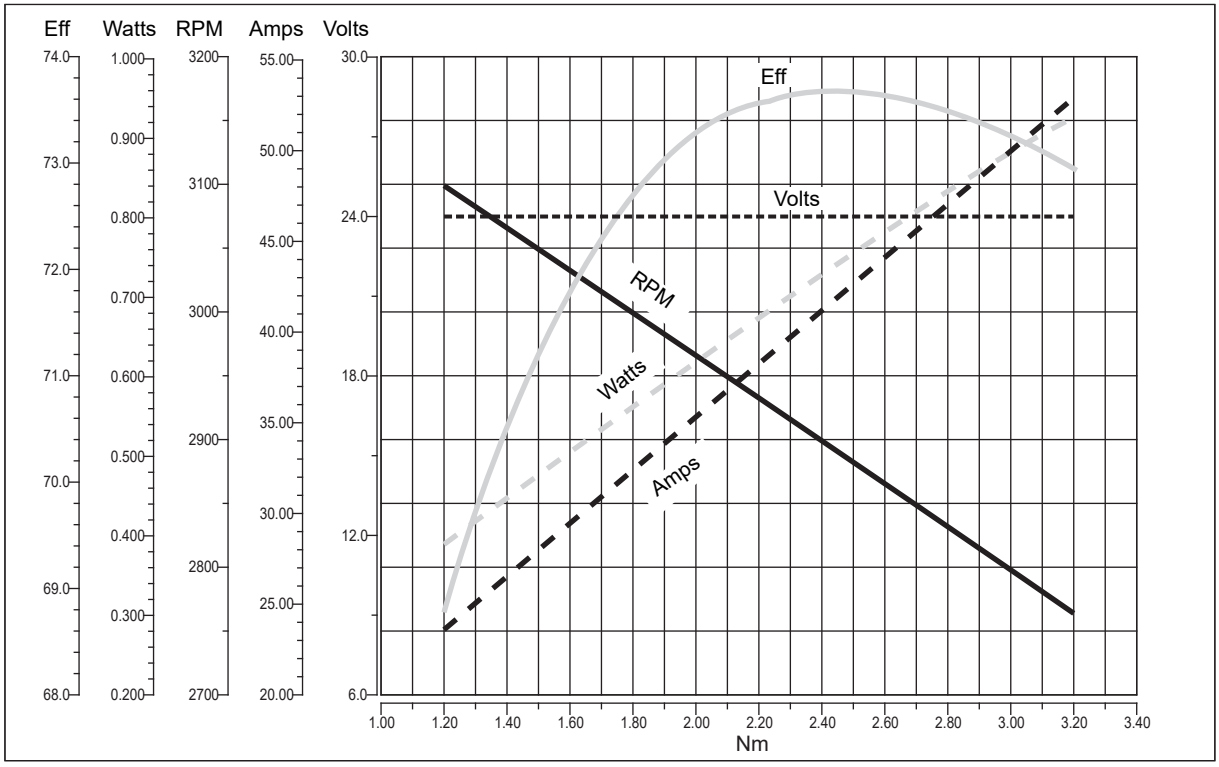
EC600.120 - EC600.240

Prestazioni ***Performances***

EC600.120



EC600.240



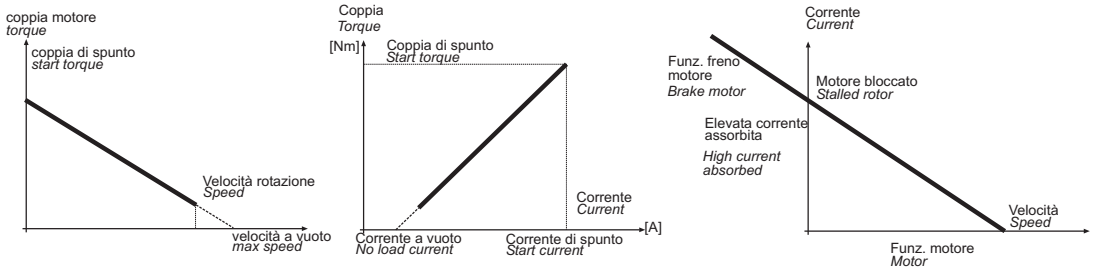
DC

Legenda / Glossario dei grafici

Key / Diagram Glossary

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

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

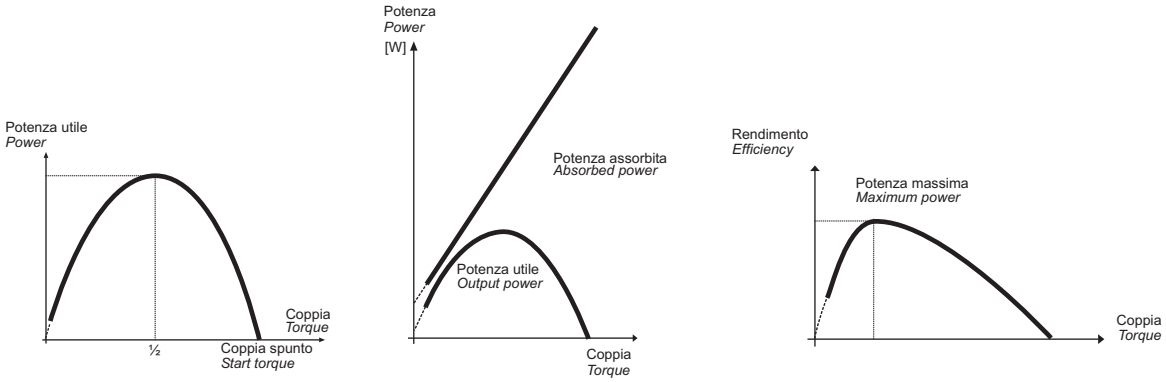


La potenza utile (potenza all' albero) si ricava dalla formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$

The output power is calculated using the formula:

$$Pn\ [W] = Mn \cdot S = \frac{2\pi}{60} \cdot n_1 \cdot Mn$$



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

$$\eta = \frac{Pn}{Pa}$$

$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

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

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

$$\eta = \frac{Pn}{Pa}$$

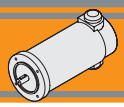
$$Pa = V \cdot I$$

$$Pn = V \cdot I \cdot \eta$$

$$Pn = Mn \cdot Sv$$

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

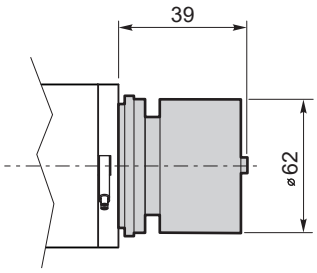
[HP] · 746 = [W].
Example 2 HP = approx. 1500 W.



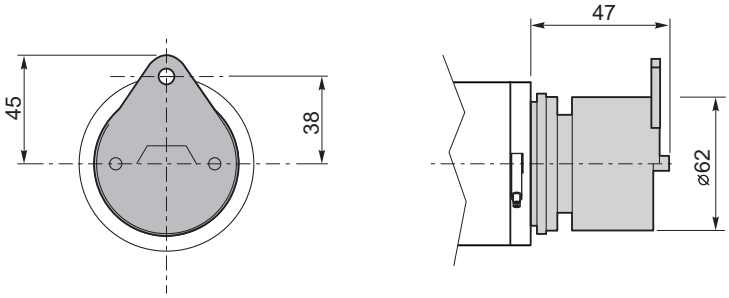
Freno / *Brake*

Freno con leva di sblocco/ *Brake with hand release*

EC050...BR
EC070...BR

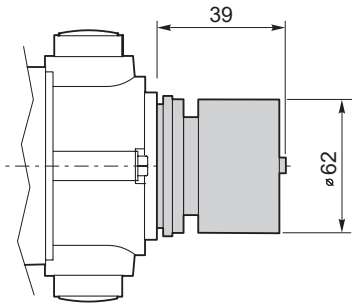


EC050...BRL
EC070...BRL

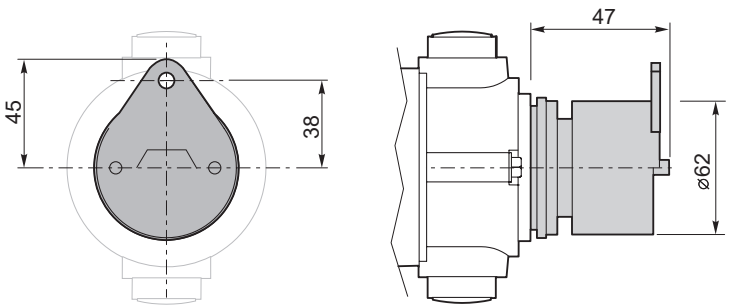


	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12 24	1.8	3000

EC100.24E BR
EC180.24E BR

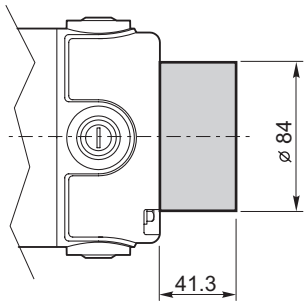


EC100.24E BRL
EC180.24E BRL

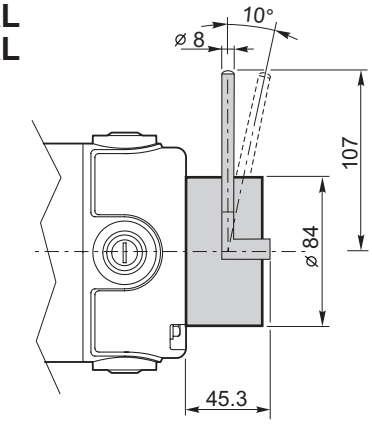


	Pn [W]	V [V]	Mn [Nm]	n_1 [min^{-1}]
Caratteristiche del freno / *Break features*	14	12 24	1.8	3000

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

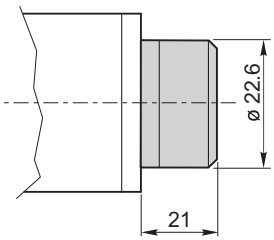
Encoder

Encoder

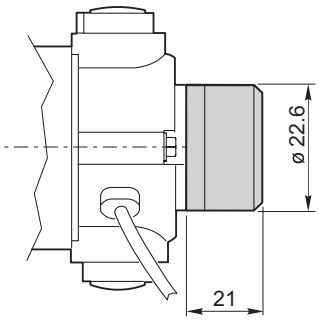
EC020.24E ME22

EC050.12E ME22
EC050.24E ME22

EC070.12E ME22
EC070.24E ME22



EC100.24E ME22
EC180.24E ME22



Risoluzione Encoder (CPR) / *Encoder Resolution (CPR)*	Numero di canali / *Number of channels*	Tensione d'alimentazione / *Power supply*
001	2	5 VdC - TTL
100		
300		

Per risoluzioni encoder non standard, si prega di contattare il nostro Servizio Tecnico.

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

Nota: Fornito con cavo lungo 300 mm

Note: Supplie with cavle 300 mm long

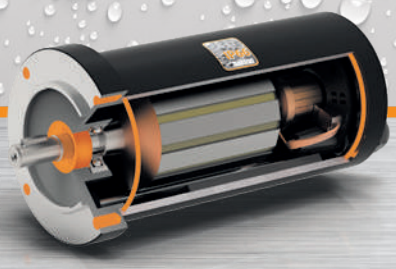
MINI TECNO™

small but strong

EC IP66

IP66 TRANSTECNO

Motori elettrici CC IP66 - Ferrite
IP66 DC electric motors - Ferrite



DC

MINI TECNO™ brand of TRANSTECNO®

DC

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EC070.120.66 - EC070.240.66

Caratteristiche / *Features*

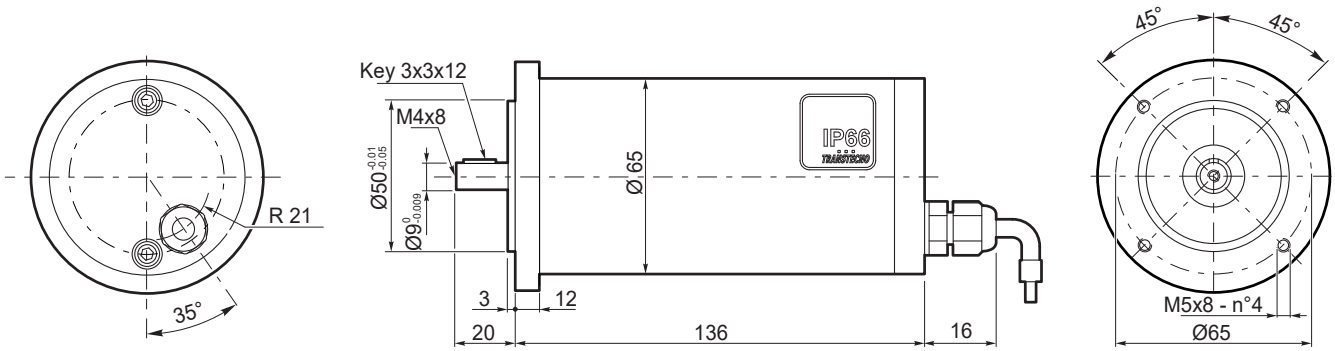
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2 (70 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_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*

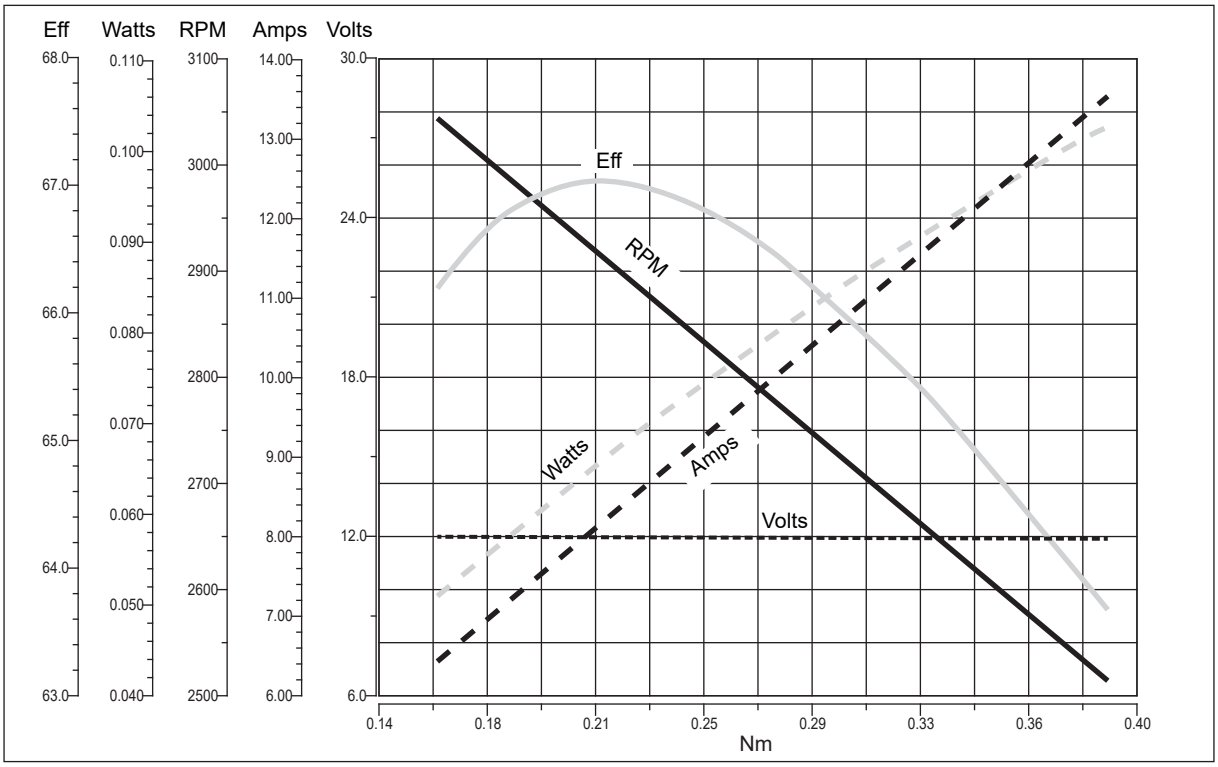
EC070.120.66
EC070.240.66



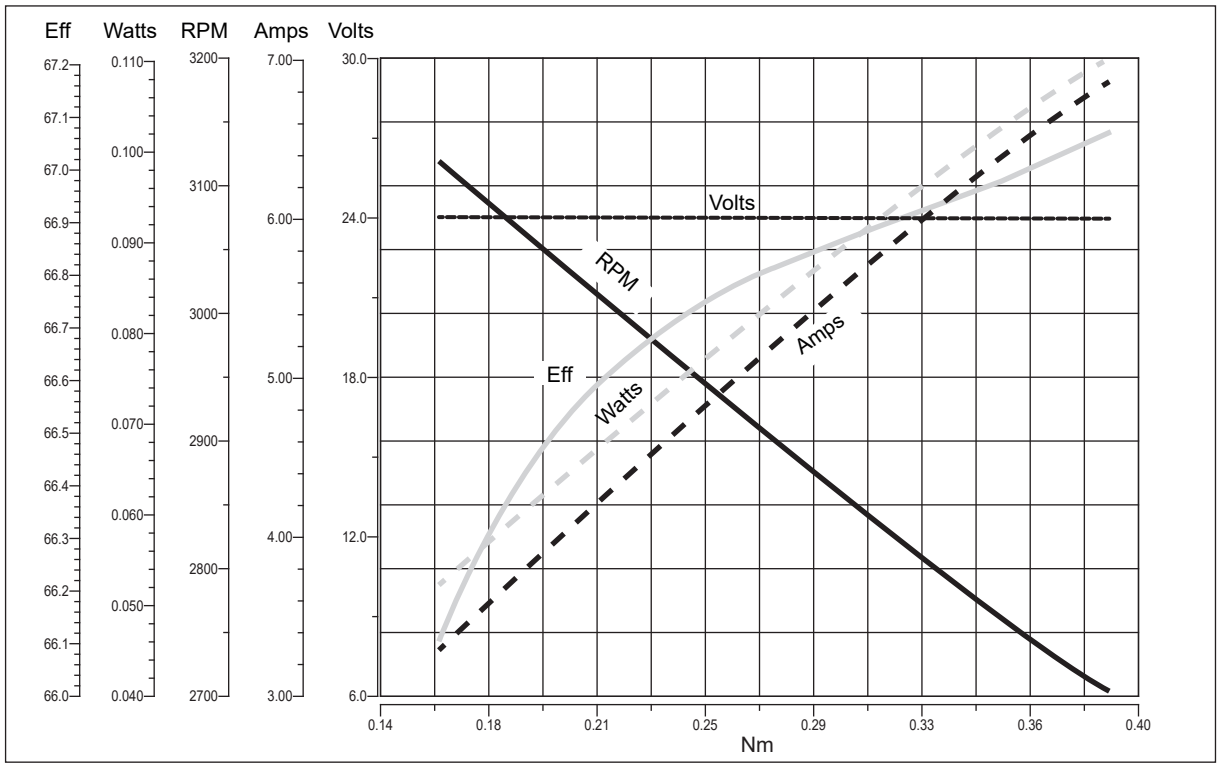
EC070.120.66 - EC070.240.66

Prestazioni *Performances*

EC070.120.66



EC070.240.66



DC

EC100.120.66 - EC100.240.66

Caratteristiche / *Features*

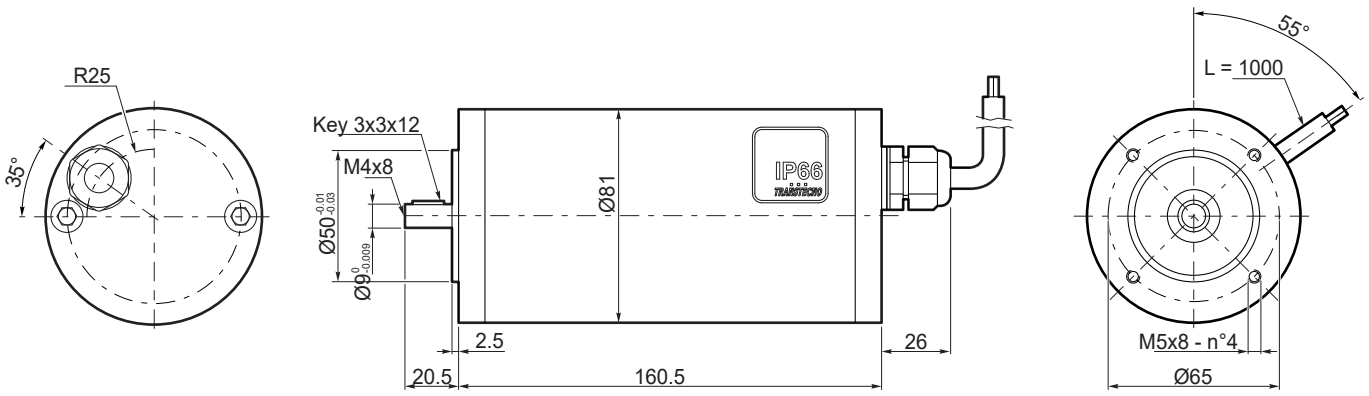
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	140 W S2 (100 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza: 1000 mm

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC100.120.66	**S1**	100	12	12	F	1	0.31	3000	66	2.7
	S2 25'	140		16.8			0.43			
EC100.240.66	**S1**	100	24	6			0.31			
	S2 25'	140		8.4			0.43			

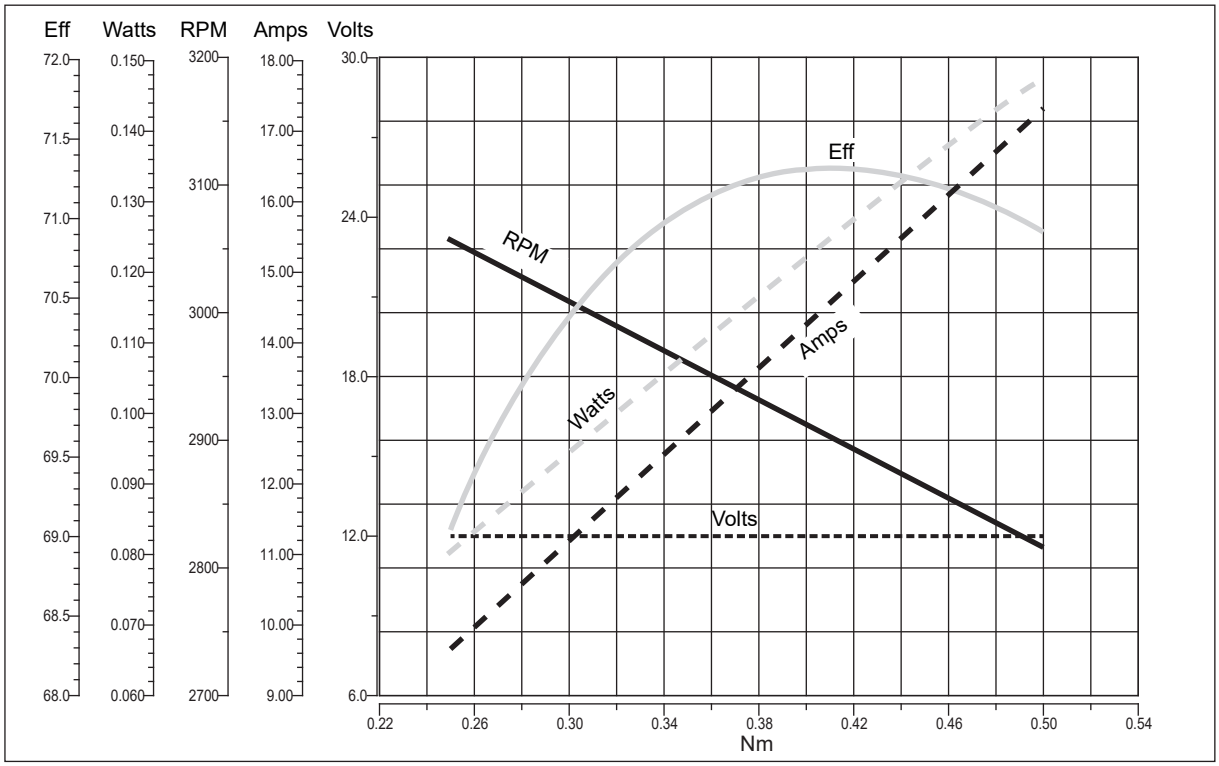
Dimensioni / *Dimensions*

EC100.120.66
EC100.240.66

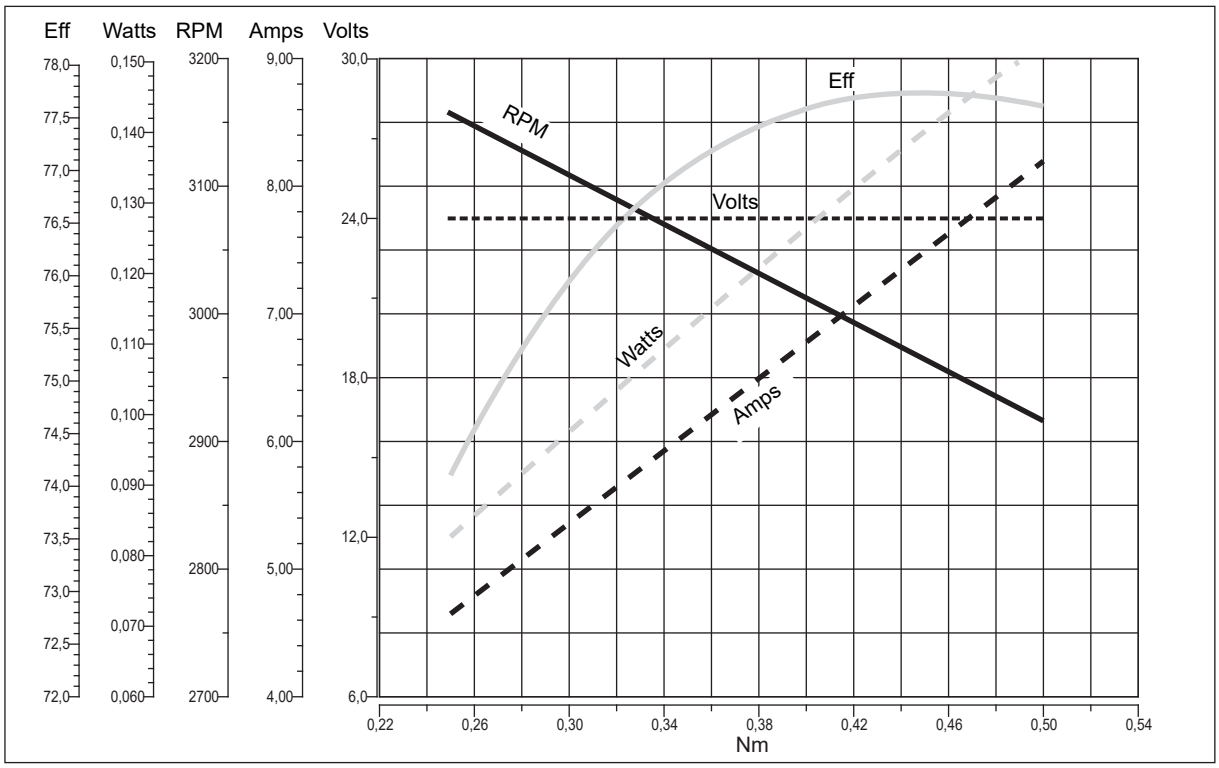


Prestazioni ***Performances***

EC100.120.66



EC100.240.66



DC

EC180.120.66 - EC180.240.66

Caratteristiche / *Features*

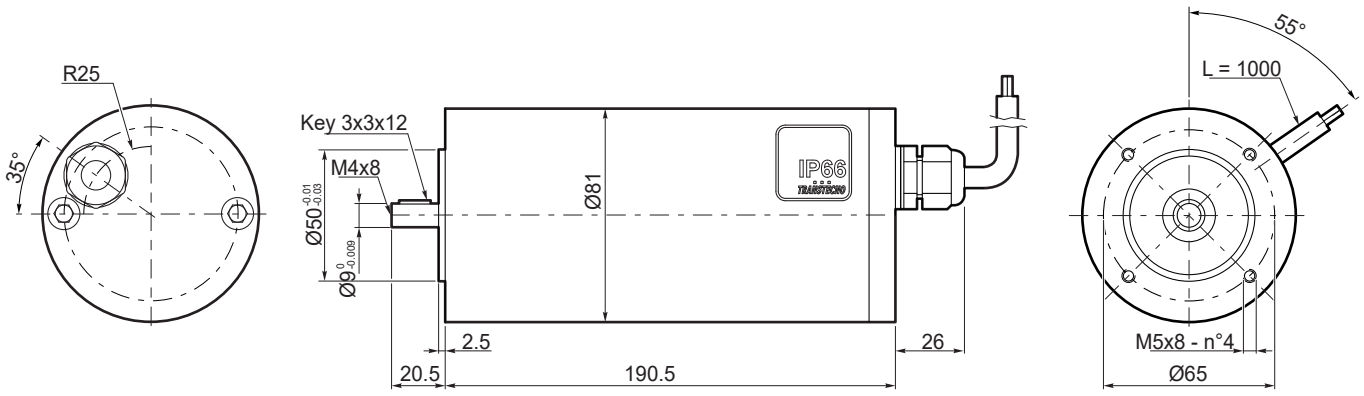
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Cavo di alimentazione	Lunghezza:1000 mm

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC180.120.66	**S1**	180	12	21.5	F	1	0.57	3000	66	3.4
	S2 25'	250		30			0.8			
EC180.240.66	**S1**	180	24	10.8			0.57			
	S2 25'	250		15			0.8			

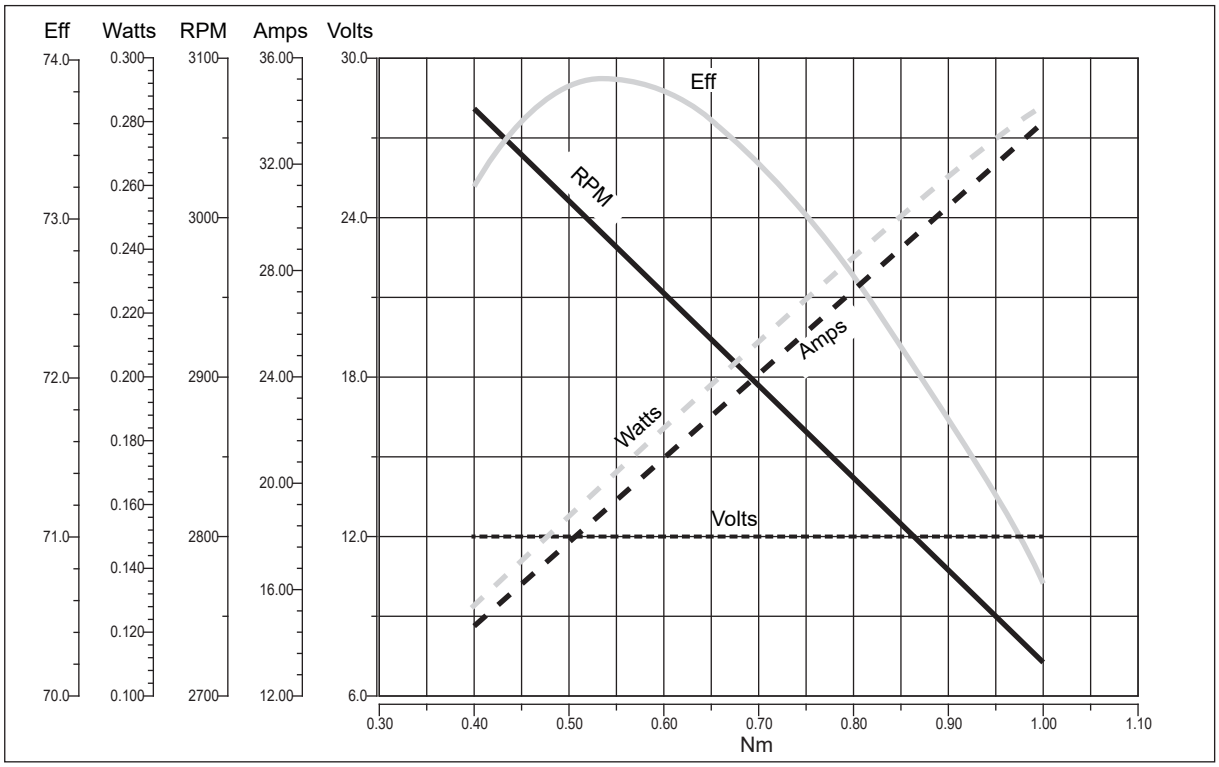
Dimensioni / *Dimensions*

EC180.120.66
EC180.240.66

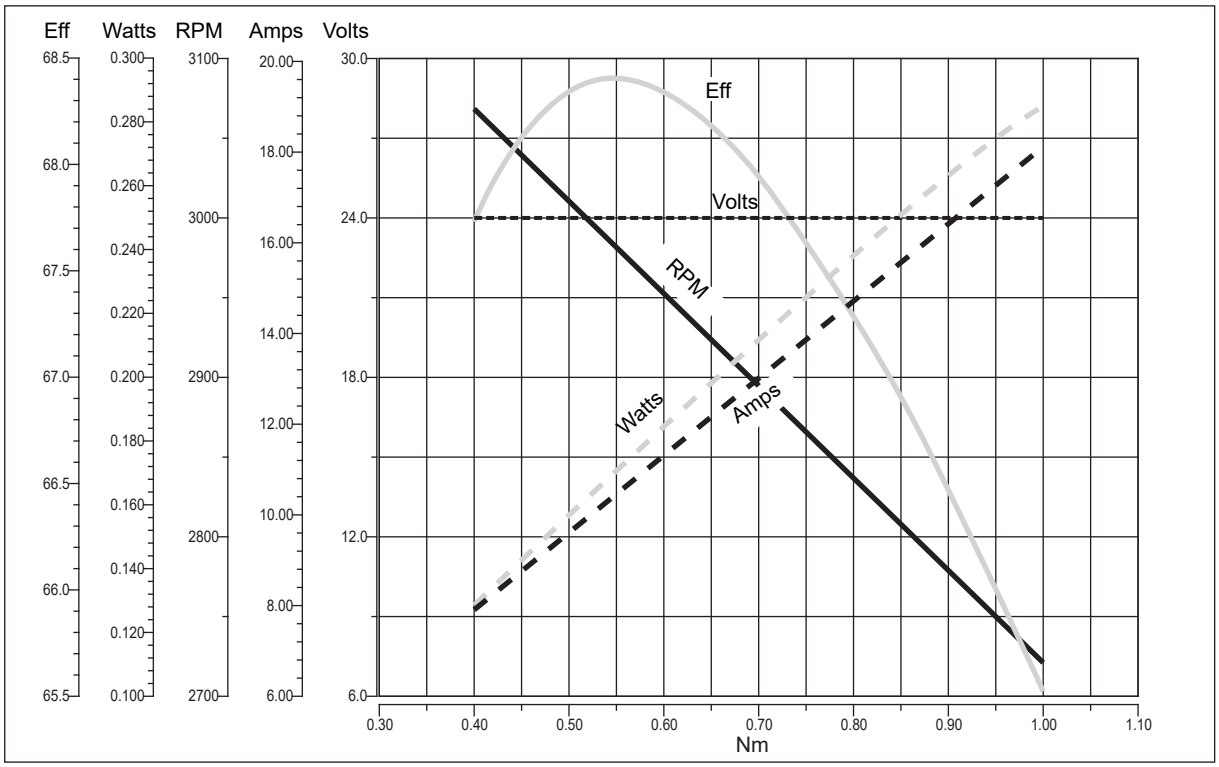


Prestazioni ***Performances***

EC180.120.66



EC180.240.66



DC

EC250.120.66 - EC250.240.66

Caratteristiche / *Features*

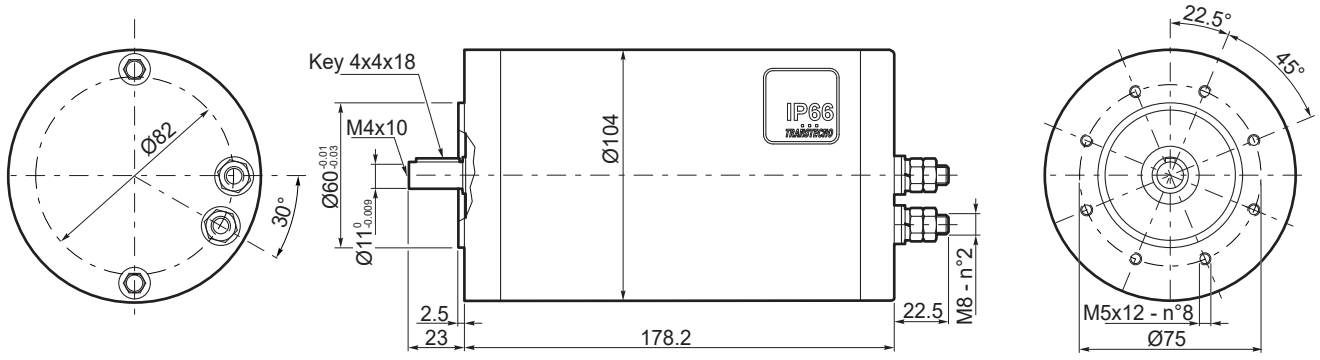
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con doppio dado di fissaggio

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC250.120.66	**S1**	250	12	30	F	1	0.8	3000	66	4.15
	S2 25'	350		38.5			1.12			
EC250.240.66	**S1**	250	24	15			0.8			
	S2 25'	350		20.5			1.12			

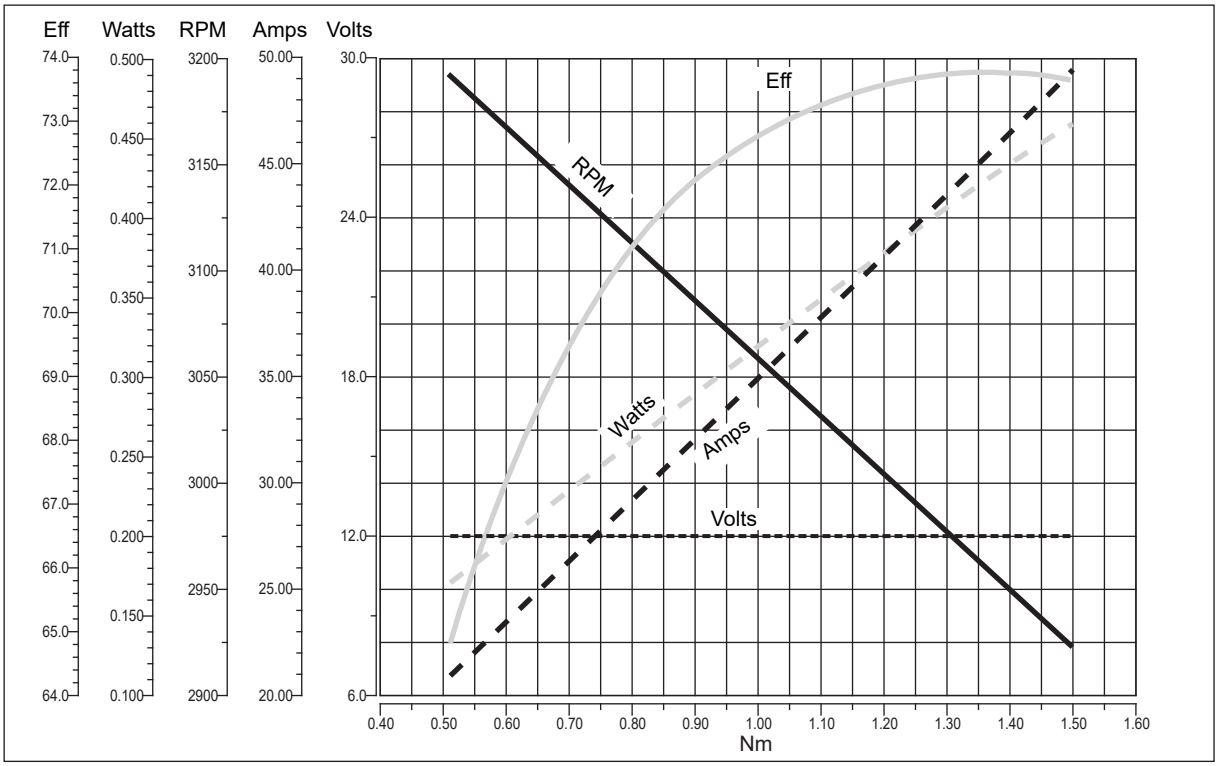
Dimensioni / *Dimensions*

EC250.120.66
EC250.240.66

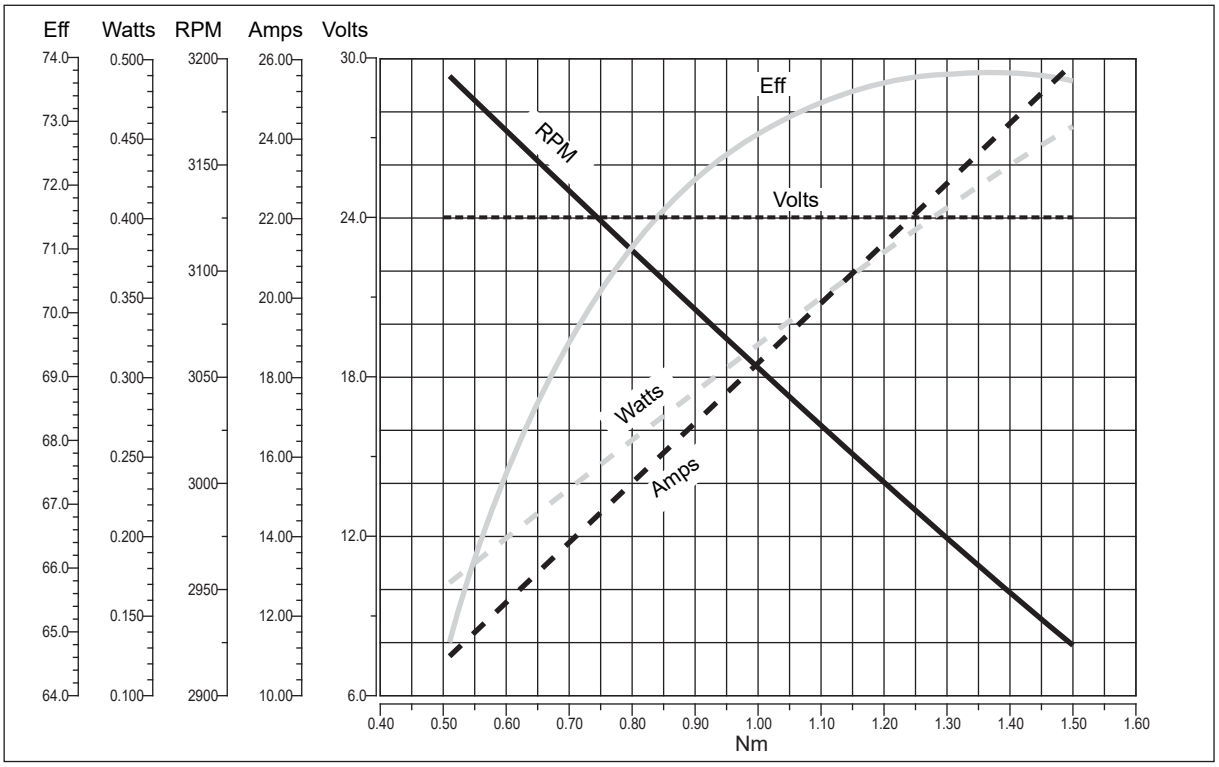


Prestazioni ***Performances***

EC250.120.66



EC250.240.66



DC

EC350.120.66 - EC350.240.66

Caratteristiche / *Features*

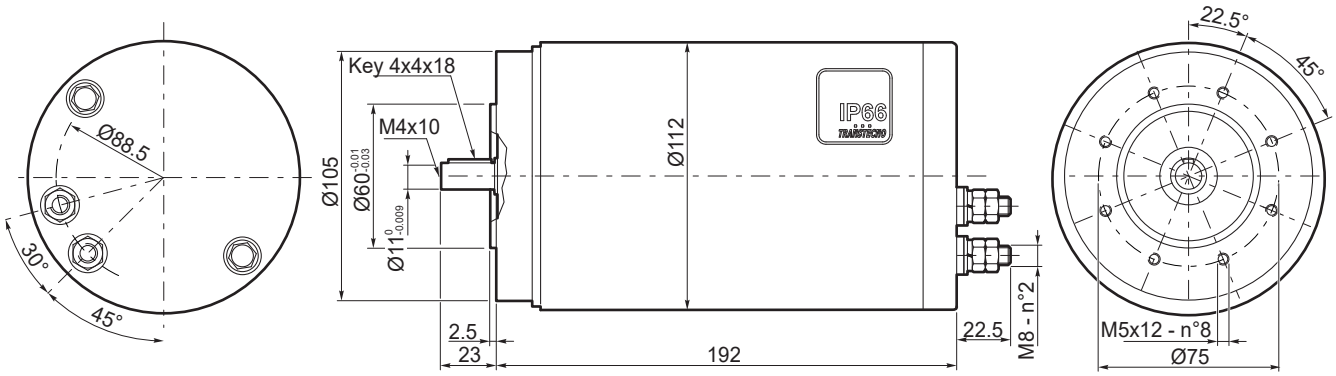
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	500 W S2 (350 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con dadi di fissaggio

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC350.120.66	**S1**	350	12	42	F	1	1.12	3000	66	5.1
	S2 30'	500		58.8			1.57			
EC350.240.66	**S1**	350	24	21			1.12			5.3
	S2 30'	500		29.4			1.57			

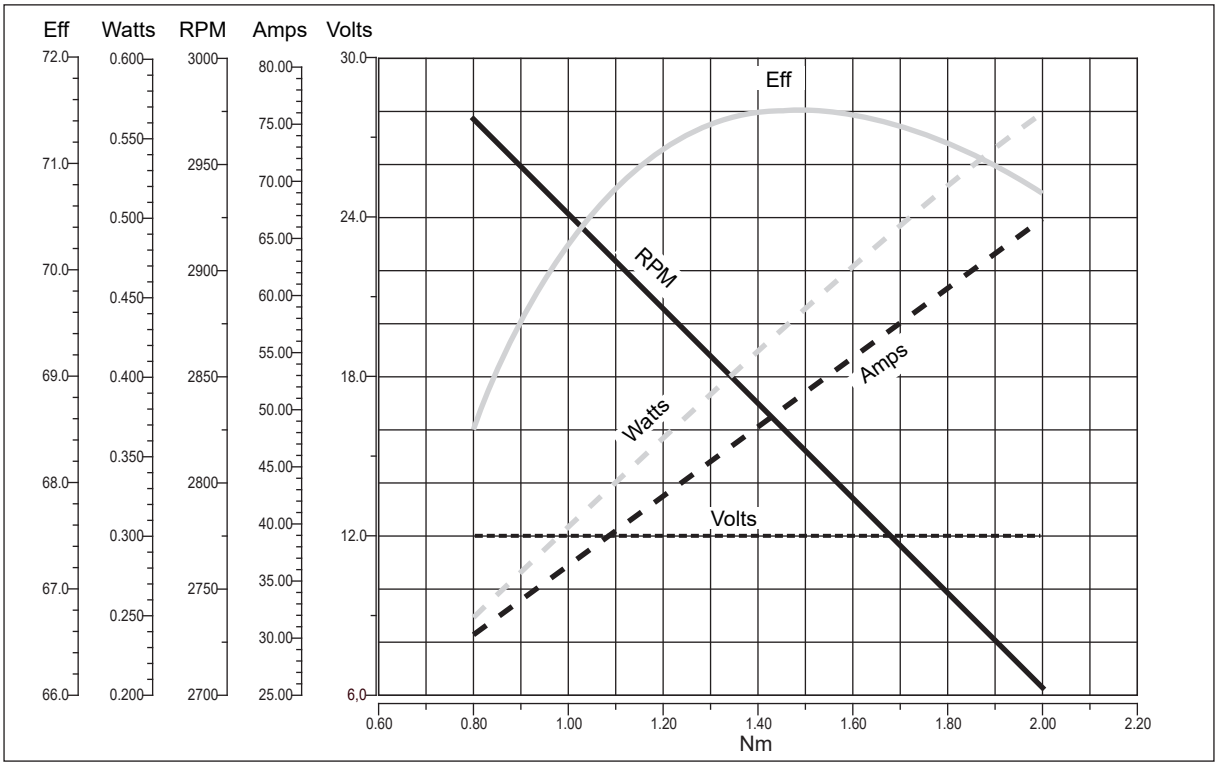
Dimensioni / *Dimensions*

EC350.120.66
EC350.240.66

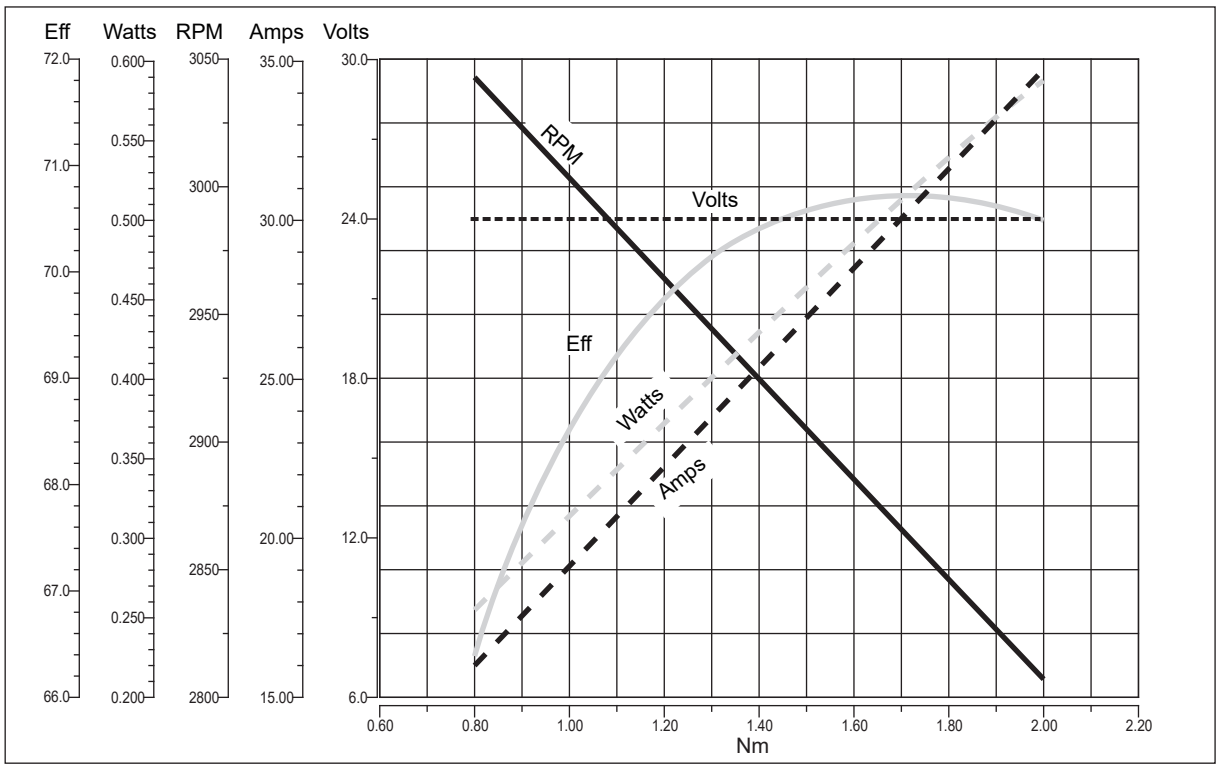


Prestazioni ***Performances***

EC350.120.66



EC350.240.66



DC

EC600.120.66 - EC600.240.66

Caratteristiche / *Features*

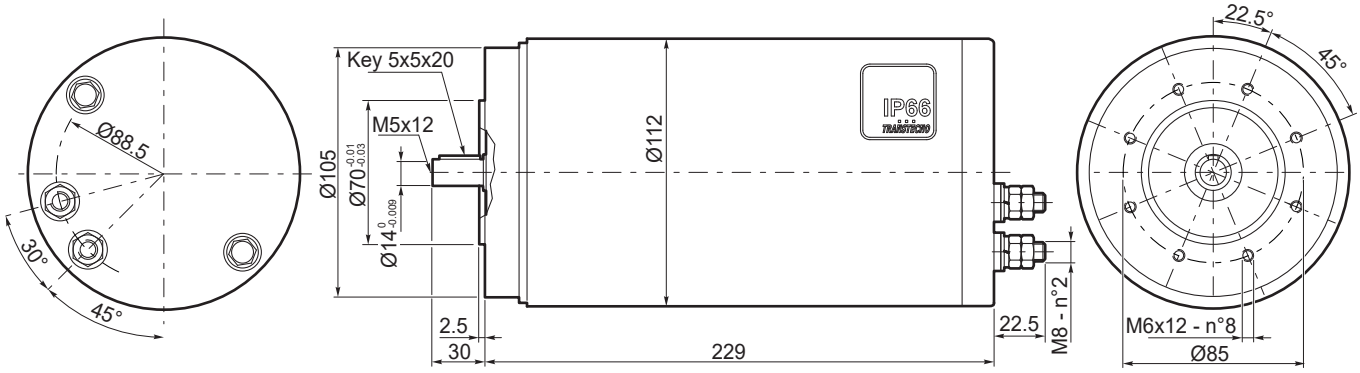
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	800 W S2 (600 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Terminali	2 con doppio dado di fissaggio

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

Tipo *Type*	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n_1 [min^{-1}]	IP	Kg
EC600.120.66	**S1**	600	12	71	F	1	1.91	3000	66	6.6
	S2 30'	800		94.4			2.54			
EC600.240.66	**S1**	600	24	35.5			1.91			7.1
	S2 30'	800		47.2			2.54			

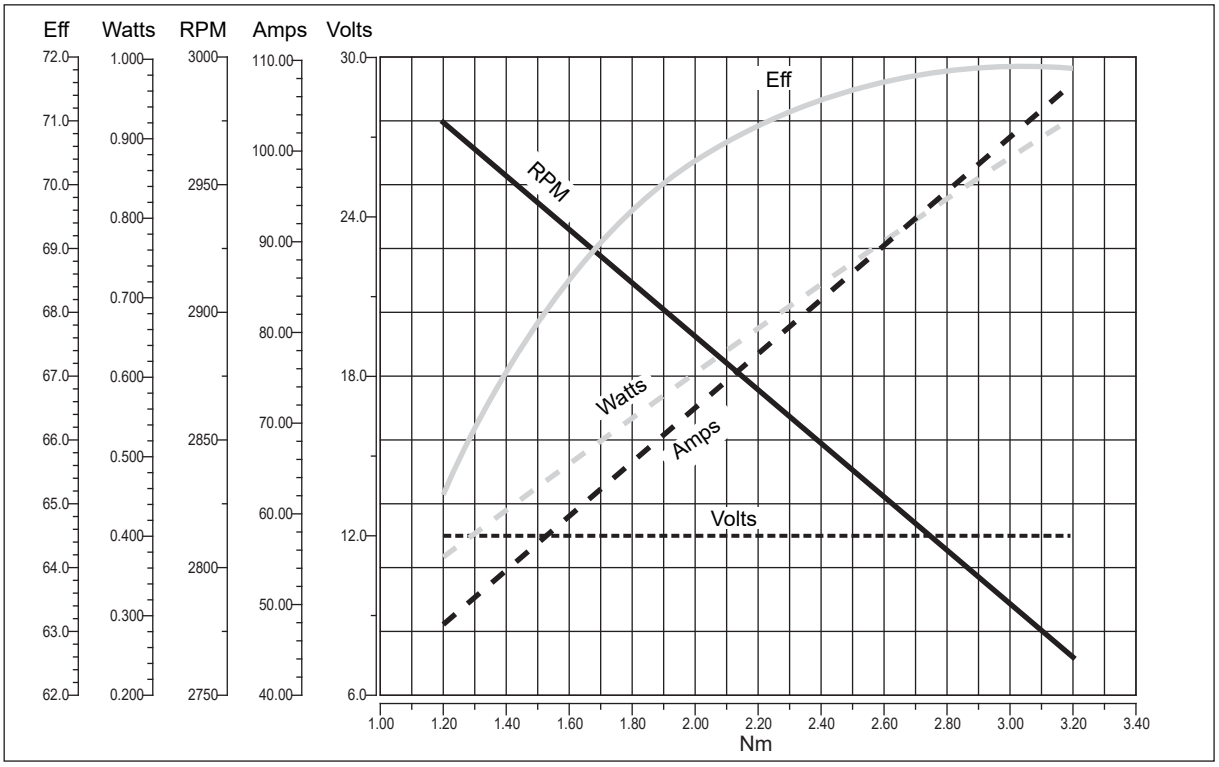
Dimensioni / *Dimensions*

EC600.120.66
EC600.240.66

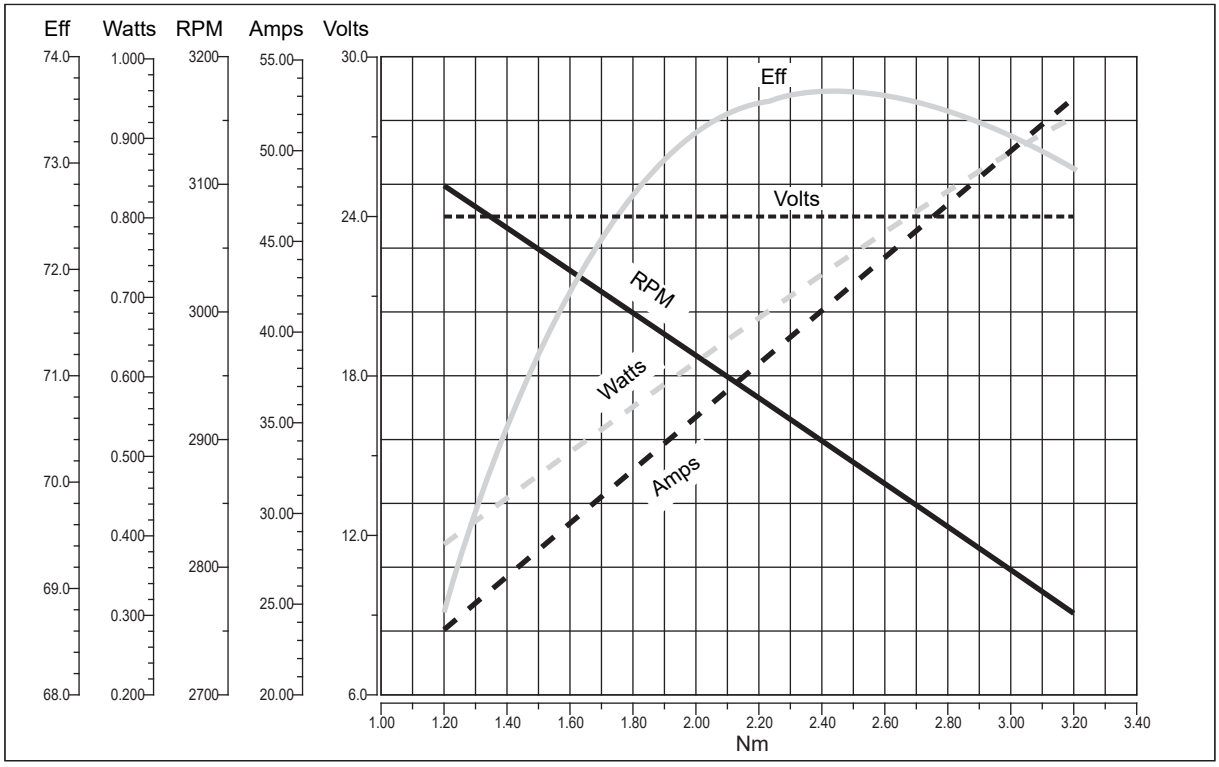


Prestazioni ***Performances***

EC600.120.66



EC600.240.66



DC

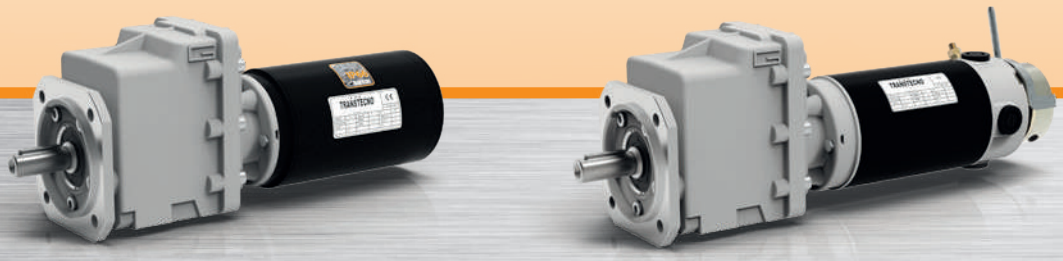
Note/*Notes*

MINI TECNO™

small but strong

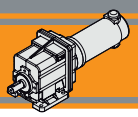
NDCMG
ECMG

Motoriduttori CC ad ingranaggi cilindrici
DC helical in-line gearmotors



DC

MINI TECNO™ brand of TRANSTECNO®



ENERGY SAVING

Caratteristiche tecniche

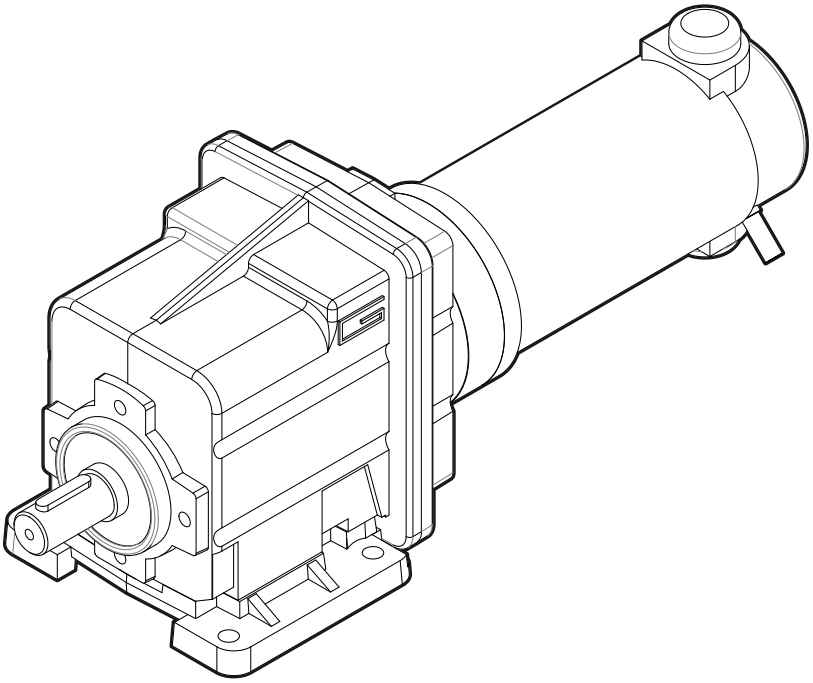
I motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio **NDCMG** e in ferrite **ECMG** hanno le seguenti caratteristiche principali:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili con giunto elastico in entrata

Technical features

NDCMG *neodymium permanent magnets and* ***ECMG*** *ferrite permanent magnets DC helical in-line gearmotors range has the following main features:*

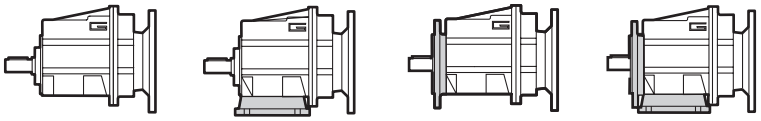
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder and brake assembly*
- *Motor power ratings available from 100 to 800W S2*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground-hardened helical gears*
- *Available with input flexible couplin*



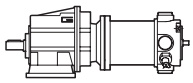
ENERGY SAVING

Designazione — *Classification*

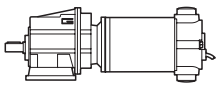
U H F H/F



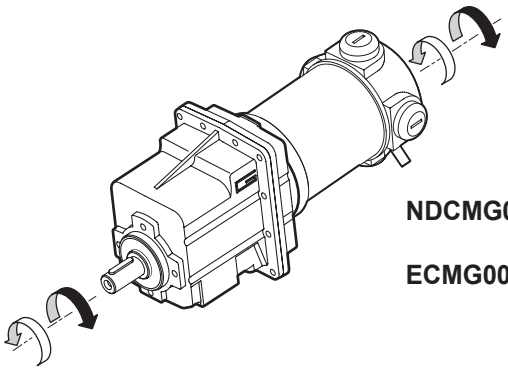
MOTORIDUTTORE / *GEARMOTOR*

NDCMG	120/002	U	8.99	D20	240
Tipo *Type*	Grandezza *Size*	Versione *Version*	Rapporto *Ratio*	Albero uscita *Output shaft*	Versione motore *Motor version*
NDCMG 	**120/002** **180/002**	**U...** **H...** **F...** **H.../F...**	vedi tabelle *see tables*	vedi tabelle *see tables*	**120** **240**

MOTORIDUTTORE / *GEARMOTOR*

ECMG	100/002	U	8.99	D20	240	FX
Tipo *Type*	Grandezza *Size*	Versione *Version*	Rapporto *Ratio*	Albero uscita *Output shaft*	Versione motore *Motor version*	Giunto elastico *Flexible coupling*
ECMG 	**070/002** **100/002** **180/002** **250/002** **350/002** **600/002**	**U...** **H...** **F...** **H.../F...**	vedi tabelle *see tables*	vedi tabelle *see tables*	**120** **240** **24E**	**FX** I7

Sensi di rotazione — *Direction of rotation*



NDCMG002

ECMG002

Lubrificazione — *Lubrication*

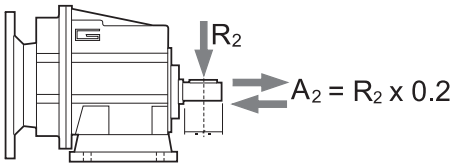
Tutti i riduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

Simbologia — *Symbols*

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

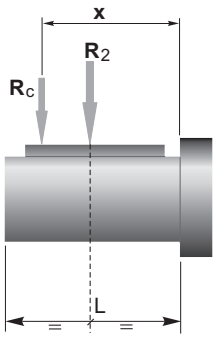
Carichi radiali — *Radial loads*



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

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

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



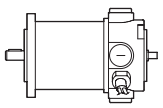
	CMG 002
a	73
b	53
R_{2MAX}	1300

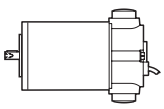
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

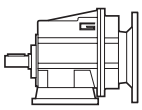
$$R \leq R_c$$

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

Motori applicabili — *IEC Motor adapters*

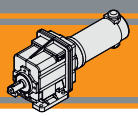




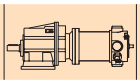


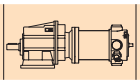
		ND		EC						
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CMG	002	5.03 - 55.10								

5.03 - 55.10 — Rapporti di riduzione i
Ratio i



Dati tecnici per servizio S2 — NDCMG — *Technical data for S2 duty*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**596**	2.5	12.6	5.03	**120/002**	120/240
	492	3.0	10.4	6.10		
	401	3.7	8.5	7.49		
	334	4.4	8.9	8.99		
	295	5.0	7.9	10.16		
	249	5.9	6.6	12.07		
	224	6.6	8.4	13.40		
	198	7.4	7.4	15.14		
	165	8.9	6.2	18.17		
	139	11	5.2	21.58		
	128	12	4.8	23.51		
	120	12	4.5	25.10		
	111	13	4.2	27.08		
	92	16	3.5	32.49		
	71	21	2.7	42.04		
	67	22	2.5	44.89		
	61	24	2.3	48.86		
	54	27	2.0	55.10		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**596**	3.8	8.1	5.03	**180/002**	120/240
	492	4.7	6.7	6.10		
	401	5.7	5.4	7.49		
	334	6.9	5.7	8.99		
	295	7.8	5.0	10.16		
	249	9.2	4.2	12.07		
	224	10	5.4	13.40		
	198	12	4.8	15.14		
	165	14	4.0	18.17		
	139	17	3.3	21.58		
	128	18	3.1	23.51		
	120	19	2.9	25.10		
	111	21	2.7	27.08		
	92	25	2.2	32.49		
	71	32	1.7	42.04		
	67	34	1.6	44.89		
	61	37	1.5	48.86		
	54	42	1.3	55.10		

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

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

Dati tecnici elettrici — *Electrical technical data*

ND 120 → BA4

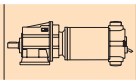
ND 180 → BA6

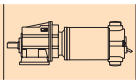
DC

Dati tecnici per servizio S2

ECMG

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})	**596**	1.5	20.2	5.03	**070/002**	12E/24E
	492	1.9	16.6	6.10		
	401	2.3	13.5	7.49		
	334	2.7	14.2	8.99		
	295	3.1	12.6	10.16		
	249	3.7	10.6	12.07		
	224	4.1	13.4	13.40		
	198	4.6	11.9	15.14		
	165	5.5	9.9	18.17		
	139	6.6	8.3	21.58		
	128	7.2	7.7	23.51		
	120	7.7	7.2	25.10		
	111	8.3	6.6	27.08		
	92	9.9	5.5	32.49		
	71	13	4.3	42.04		
	67	14	4.0	44.89		
	61	15	3.7	48.86		
	54	17	3.3	55.10		
140						
(3000 min^{-1})	**596**	2.2	14.4	5.03	**100/002**	120/240/24E
	492	2.6	11.9	6.10		
	401	3.2	9.7	7.49		
	334	3.8	10.1	8.99		
	295	4.3	9.0	10.16		
	249	5.2	7.6	12.07		
	224	5.7	9.6	13.40		
	198	6.5	8.5	15.14		
	165	7.8	7.1	18.17		
	139	9.2	6.0	21.58		
	128	10	5.5	23.51		
	120	11	5.1	25.10		
	111	12	4.7	27.08		
	92	14	4.0	32.49		
	71	18	3.1	42.04		
	67	19	2.9	44.89		
	61	21	2.6	48.86		
	54	24	2.3	55.10		
250						
(3000 min^{-1})	**596**	3.8	8.1	5.03	**180/002**	120/240/24E
	492	4.7	6.7	6.10		
	401	5.7	5.4	7.49		
	334	6.9	5.7	8.99		
	295	7.8	5.0	10.16		
	249	9.2	4.2	12.07		
	224	10	5.4	13.40		
	198	12	4.8	15.14		
	165	14	4.0	18.17		
	139	17	3.3	21.58		
	128	18	3.1	23.51		
	120	19	2.9	25.10		
	111	21	2.7	27.08		
	92	25	2.2	32.49		
	71	32	1.7	42.04		
	67	34	1.6	44.89		
	61	37	1.5	48.86		
	54	42	1.3	55.10		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
350						
(3000 min^{-1})	**596**	5.4	5.8	5.03	**250/002**	120/240
	492	6.5	4.8	6.10		
	401	8.0	3.9	7.49		
	334	10	4.1	8.99		
	295	11	3.6	10.16		
	249	13	3.0	12.07		
	224	14	3.8	13.40		
	198	16	3.4	15.14		
	165	19	2.8	18.17		
	139	23	2.4	21.58		
	128	25	2.2	23.51		
	120	27	2.0	25.10		
	111	29	1.9	27.08		
	92	35	1.6	32.49		
	71	45	1.2	42.04		
	67	48	1.1	44.89		
	61	52	1.1	48.86		
	54	59	0.9	55.10		
500						
(3000 min^{-1})	**596**	7.7	4.0	5.03	**350/002**	120/240
	492	9.3	3.3	6.10		
	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		
800						
(3000 min^{-1})	**596**	12	2.5	5.03	**600/002**	120/240
	492	15	2.1	6.10		
	401	18	1.7	7.49		
	334	22	1.8	8.99		
	295	25	1.6	10.16		
	249	30	1.3	12.07		
	224	33	1.7	13.40		
	198	37	1.5	15.14		
	165	44	1.2	18.17		
	139	53	1.0	21.58		
	128	57	1.0	23.51		
	120	61	0.9	25.10		
	111	66	0.8	27.08		
	92	79	0.7	32.49		
	71	79	0.7	42.04		
	67	79	0.7	44.89		

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

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

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

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

Dati tecnici elettrici

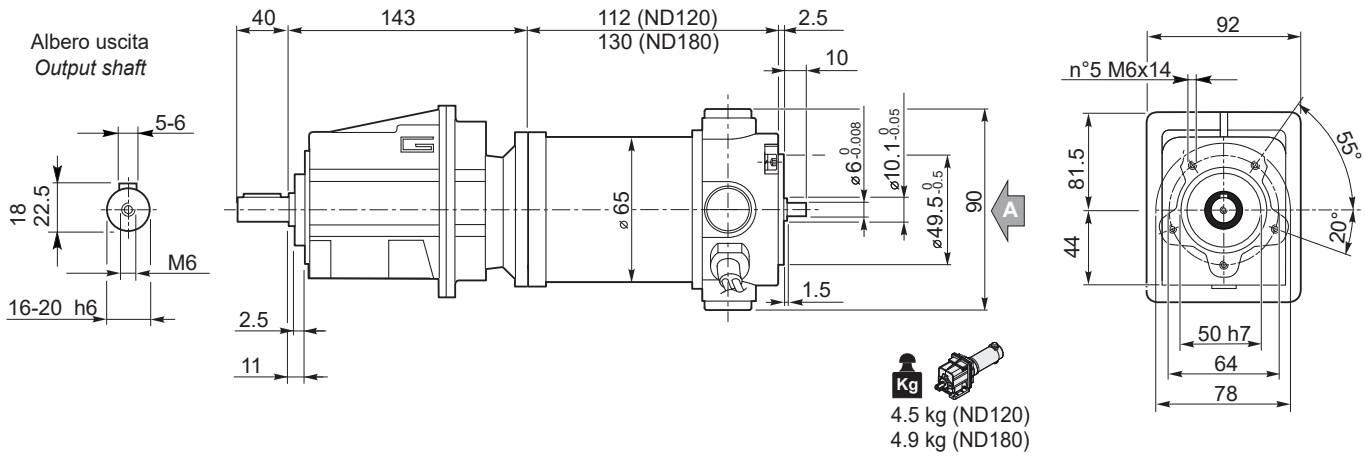
Electrical technical data

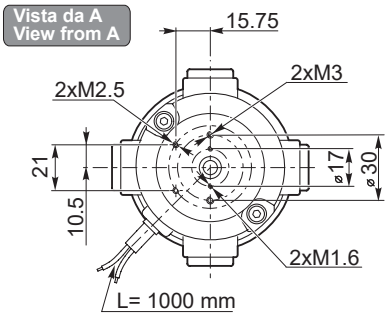
EC070 BB10 EC100 BB12 EC180 BB14 EC250 BB16 EC350 BB18 EC600 BB20

Dimensioni ***Dimensions***

NDCMG..U

NDCMG120/002 U
NDCMG180/002 U





NDCMG...H → BD12

Freno / *Brake* → BA9 NDCMG...F → BD12

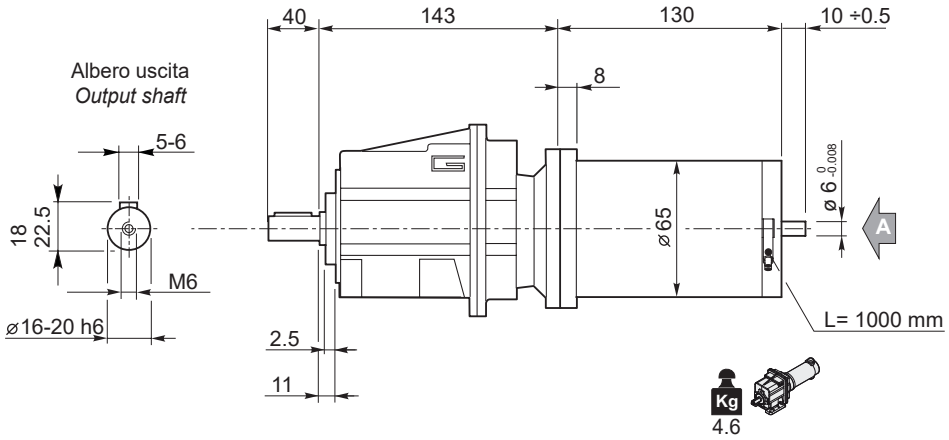
Encoder → BA9 NDCMG...H/F → BD13

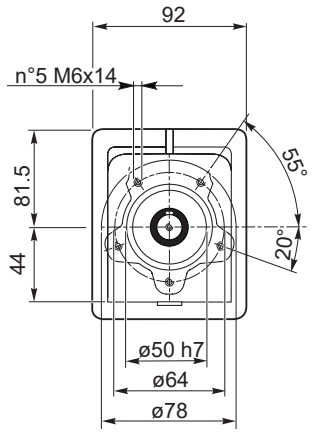
DC

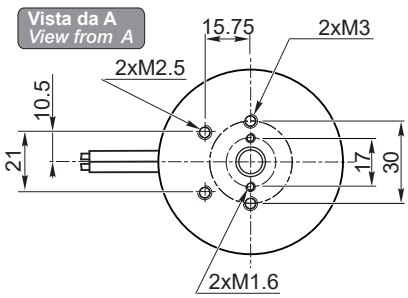
Dimensioni ***Dimensions***

ECMG..U

ECMG070/002 U







Freno / *Brake* → BB23

Encoder → BB24

Motori / *Motors* IP66 → BC2

ECMG...H → BD12

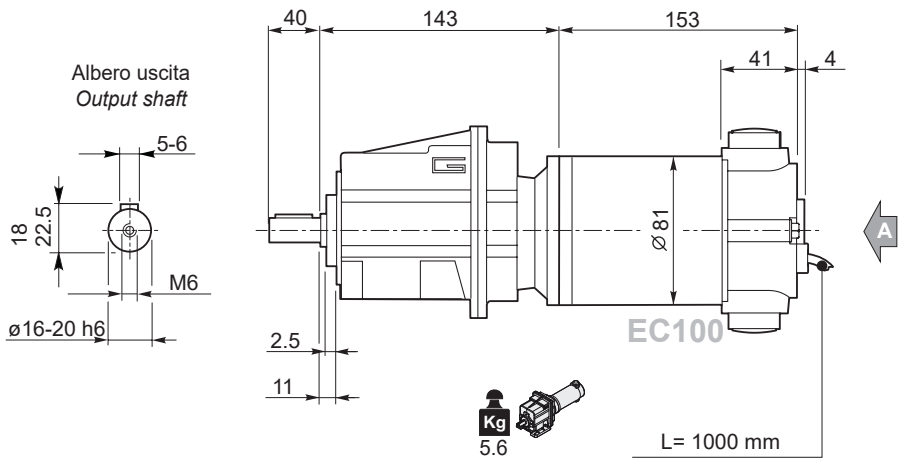
ECMG...F → BD12

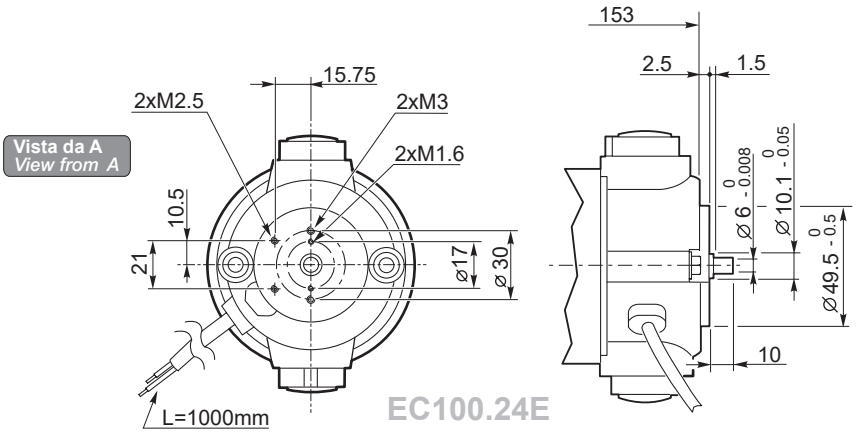
ECMG...H/F → BD13

Dimensioni *Dimensions*

ECMG..U

ECMG100/002 U





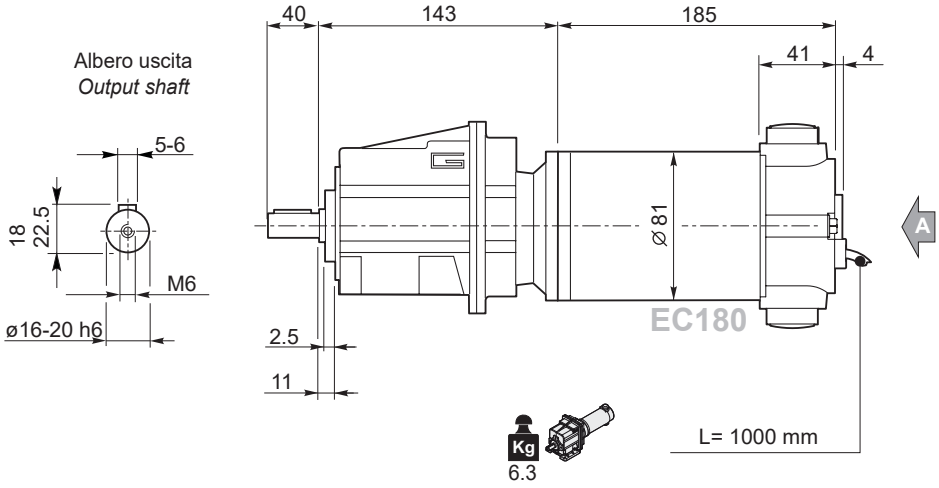
Freno / *Brake* → BB23
Encoder → BB24
Motori / *Motors* IP66 → BC4
ECMG...H → BD12
ECMG...F → BD12
ECMG...H/F → BD13

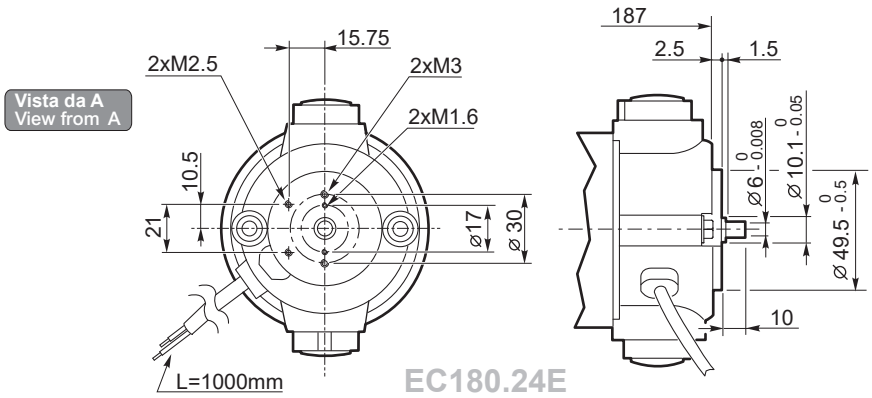
DC

Dimensioni *Dimensions*

ECMG..U

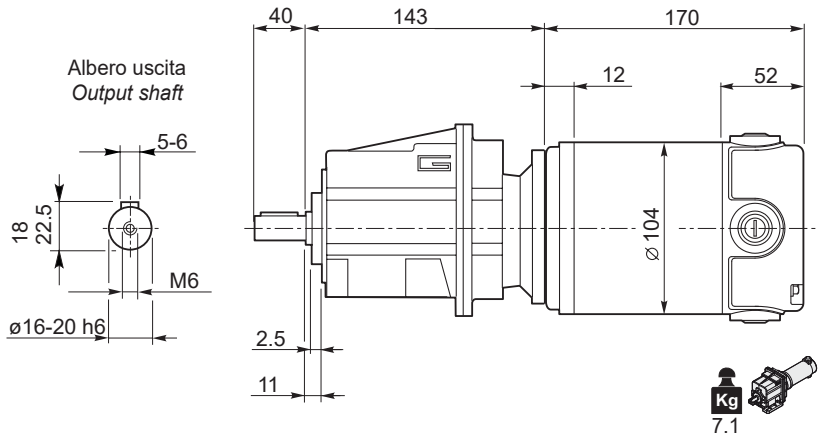
ECMG180/002 U





Freno / *Brake* → BB23
Encoder → BB24
Motori / *Motors* IP66 → BC6
ECMG...H → BD12
ECMG...F → BD12
ECMG...H/F → BD13

ECMG250/002 U

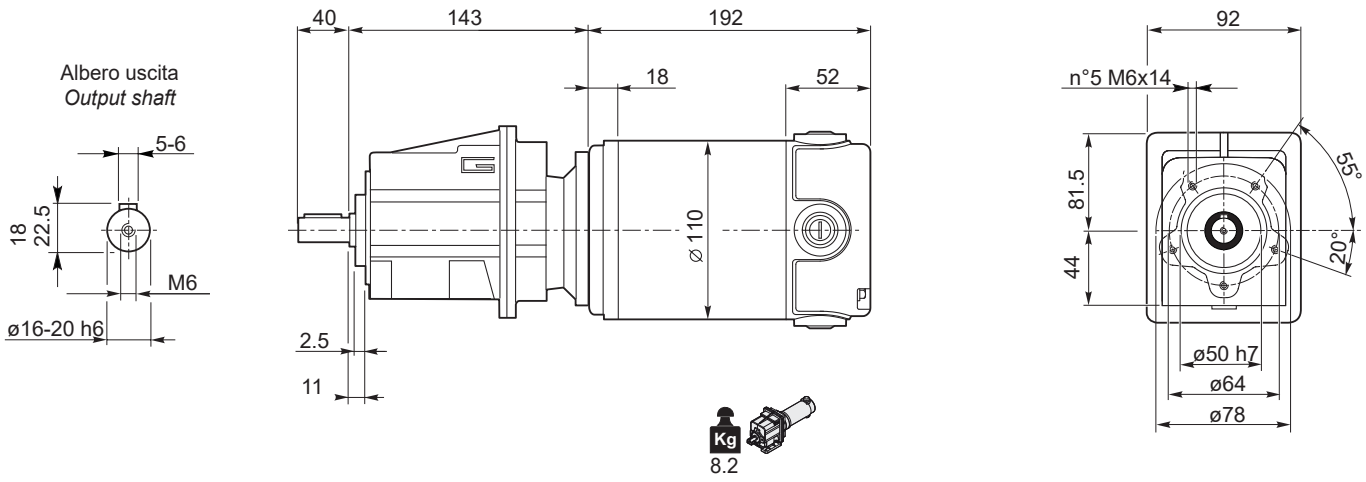


Motori / *Motors* IP66 → BC8
ECMG...H → BD12
ECMG...F → BD12
ECMG...H/F → BD13

Dimensioni ***Dimensions***

ECMG..U

ECMG350/002 U

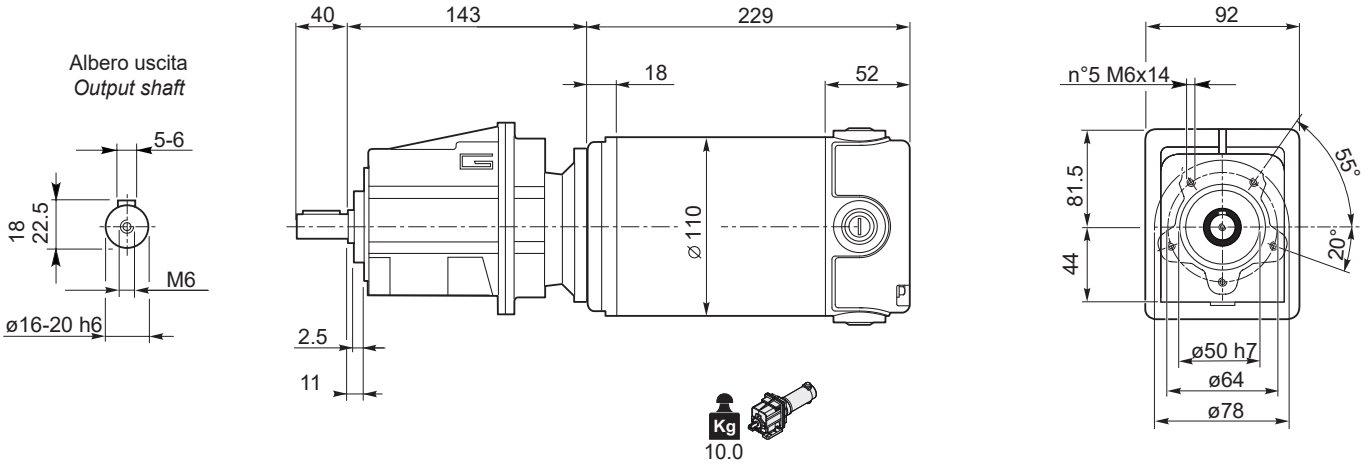


Freno / *Brake* → BB23

Motori / *Motors* IP66 → BC10

ECMG...H → BD12 **ECMG...F** → BD12 **ECMG...H/F** → BD13

ECMG600/002 U



Freno / *Brake* → BB23

Motori / *Motors* IP66 → BC12

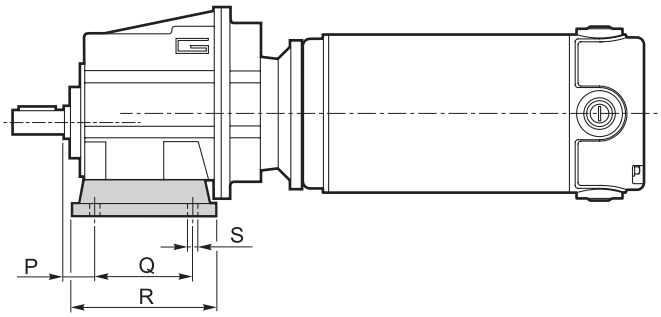
ECMG...H → BD12 **ECMG...F** → BD12 **ECMG...H/F** → BD13

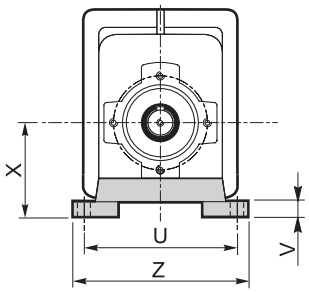
DC

Dimensioni ***Dimensions***

NDCMG..H - ECMG..H

NDCMG..2 H..
ECMG..2 H..



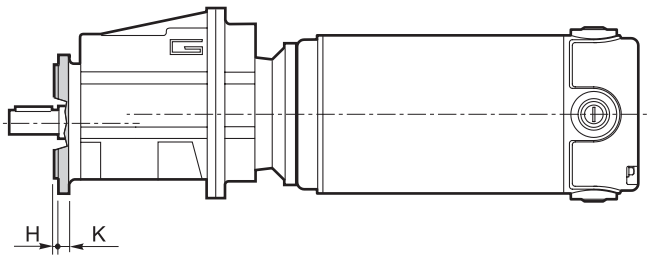


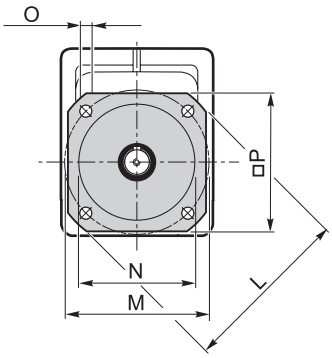
Versione **H** / ***H** Version*										
CMG	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Piede / *Foot***	
									Tipo / *Type*	Kg
002	**18**	**60**	**80**	**9**	**100**	**10**	**60**	**120**	**H60**	**0.2**
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4

Preferenziale / *Preferred*

NDCMG..F - ECMG..F

NDCMG..2 F..
ECMG..2 F..



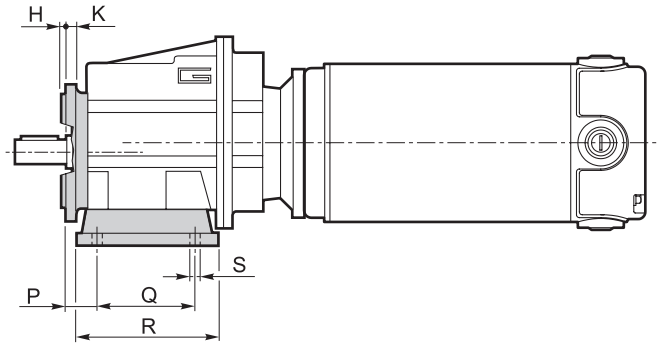


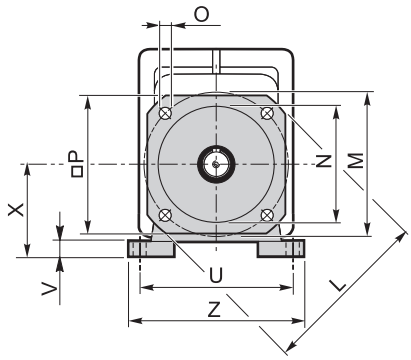
Versione **F** / ***F** Version*									
CMG	**H**	**K**	**L**	**M**	**N** f7	**O**	**P**	**Flangia / *Flange***	
								Tipo / *Type*	Kg
002	3.5	7	105	85	70	6.5	90	**F105**	0.1
	3.5	8	120	100	80	7	100	**F120**	0.2
	3.5	8	140	115	95	9	115	**F140**	0.2

Dimensioni ***Dimensions***

NDCMG..H../F.. - ECMG..H../F..

NDCMG..2 H../F..
ECMG..2 H../F..





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

Preferenziale / *Preferred*

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

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

DC

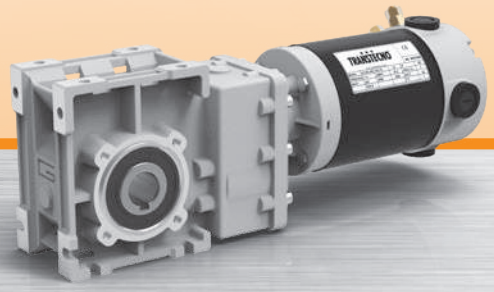
Note/*Notes*

MINI TECNO™

small but strong

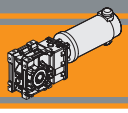
NDCMB
ECMB

Motoriduttori CC ad assi ortogonali
DC helical bevel gearmotors



DC

MINI TECNO™ brand of TRANSTECNO®



ENERGY SAVING

Caratteristiche tecniche

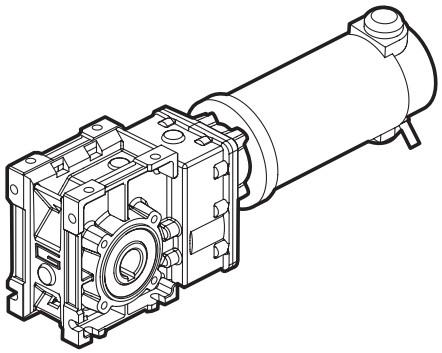
I motoriduttori CC ortogonali a magneti permanenti in neodimio **NDCMB** e in ferrite **ECMB** hanno le seguenti caratteristiche principali:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati
- Disponibili con giunto elastico in entrata

Technical features

***NDCMB** neodymium permanent magnets and **ECMB** ferrite permanent magnets DC helical bevel gearmotors range has the following main features:*

- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder and brake assembly*
- *Motor power ratings available from 100 to 800W S2*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground-hardened helical gears*
- *Available with input flexible couplin*



Designazione

Classification

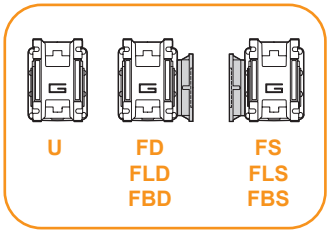
MOTORIDUTTORE / *GEARMOTOR*

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*
NDCMB	**120/402** **180/402**	**U** **FD** **FS** **FLD** **FLS** **FBD** **FBS**	Vedere tabella *See tables*	Vedere tabella *See tables*	**SZDX** **SZSX** **DZ**	**BRDX** **BRSX** (*)	**0°** **90°** **180°** **270°**	**120** **240**

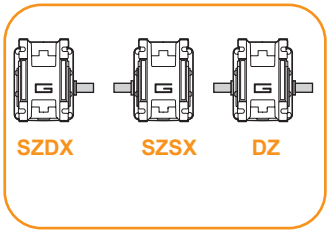
MOTORIDUTTORE / *GEARMOTOR*

ECMB	100/402	U	9.2	D20	SZDX	BRSX	90	240	FX
Tipo *Type*	Grandezza *Size*	Versione Riduttore *Gearbox Version*	Rapporto *Ratio*	Albero di uscita *Output shaft*	Albero di uscita *Output shaft*	Braccio di reazione *Torque arm*	Angolo *Angle*	Versione Motore *Motor Version*	Giunto elastico *Flexible coupling*
ECMB	**070/402** **100/402** **180/402** **250/402** **350/402** **600/402**	**U** **FD** **FS** **FLD** **FLS** **FBD** **FBS**	Vedere tabella *See tables*	Vedere tabella *See tables*	**SZDX** **SZSX** **DZ**	**BRDX** **BRSX** (*)	**0°** **90°** **180°** **270°**	**120** **240** **24E**	**FX** I7

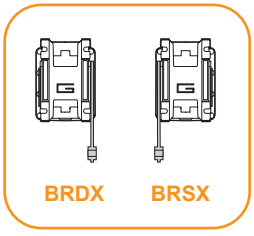
Versione Riduttore *Gearbox Version*



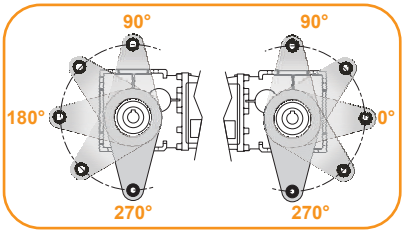
Albero di uscita *Output shaft*



Braccio di reazione (*) *Torque arm*

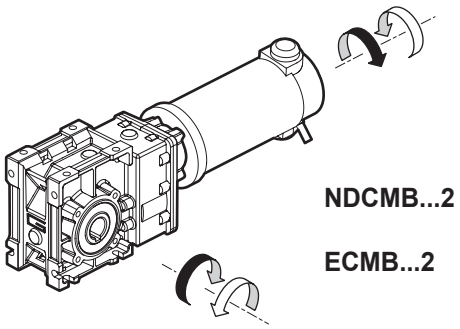


Angolo *Angle*



(*) 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*

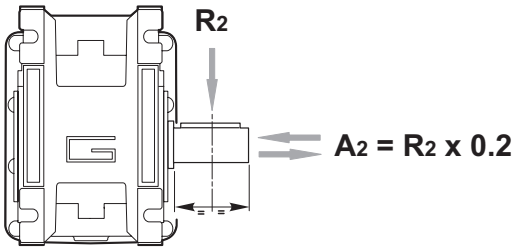
n_1	[min^{-1}]	Velocità in ingresso / *Input speed*	M_2	[Nm]	Coppia in uscita in funzione di P_1 / *Output torque referred to P_1*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*	sf		Fattore di servizio / *Service factor*
i		Rapporto di riduzione / *Ratio*	A_2	N]	Carico assiale ammissibile in uscita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

Lubrificazione / *Lubrication*

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

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

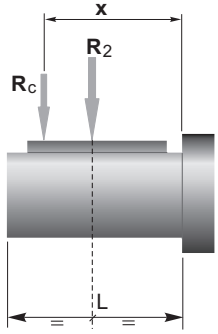
Carichi radiali / *Radial loads*



n_2 [min^{-1}]	R_2 [N]
	CMB 402
400	905
300	996
200	1141
170	1204
140	1414
100	1582
90	1638
60	2047
40	2524
30	2778
20	3180
15	3500
10	3500

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

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



	CMB 402
a	86
b	66
R_{2MAX}	3500

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

$$R \leq R_c$$

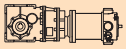
a, b = valori riportati nella tabella
a, b = values given in the table

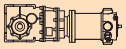
DC

Dati tecnici per servizio S2

NDCMB

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**485**	3.0	10.5	6.18	**120/402**	120/240
	401	3.6	8.6	7.49		
	326	4.4	7.0	9.20		
	254	5.7	6.2	11.83		
	240	6.0	5.9	12.48		
	202	7.1	4.9	14.83		
	170	8.4	4.1	17.63		
	161	8.9	4.8	18.60		
	134	10	4.0	22.33		
	125	11	3.8	23.91		
	104	14	3.7	28.89		
	97	15	3.5	30.84		
	89	16	3.2	33.57		
	84	17	3.0	35.63		
	70	21	2.5	42.75		
	54	27	1.9	55.31		
	51	29	1.8	59.06		
	47	31	1.7	64.29		
	41	35	1.5	72.50		

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		
	326	6.9	4.5	9.20		
	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		

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

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

Dati tecnici elettrici

Electrical technical data

ND 120 → BA4

ND 180 → BA6

Dati tecnici per servizio S2

ECMB

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		
	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		
140						
(3000 min^{-1})	**485**	2.6	12.0	6.18	**100/402**	120/240/24E
	401	3.1	9.9	7.49		
	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		
250						
(3000 min^{-1})	**485**	4.6	6.7	6.18	**180/402**	120/240/24E
	401	5.6	5.5	7.49		
	326	6.9	4.5	9.20		
	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		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
350						
(3000 min^{-1})	**485**	6.5	4.8	6.18	**250/402**	120/240
	401	7.8	4	7.49		
	326	9.6	3.2	9.20		
	254	12	2.8	11.83		
	240	13	2.7	12.48		
	202	16	2.3	14.83		
	170	19	1.9	17.63		
	161	20	2.2	18.60		
	134	23	1.8	22.33		
	125	25	1.7	23.91		
	104	30	1.7	28.89		
	97	32	1.6	30.84		
	89	35	1.5	33.57		
	84	37	1.4	35.63		
	70	45	1.1	42.75		
	54	58	0.9	55.31		
	51	62	0.8	59.06		
	47	67	0.8	64.29		
	41	72	0.7	72.50		
500						
(3000 min^{-1})	**485**	9	3.4	6.18	**350/402**	120/240
	401	11	2.8	7.49		
	326	14	2.3	9.2		
	254	18	2.0	11.83		
	240	19	1.9	12.48		
	202	22	1.6	14.83		
	170	26	1.3	17.63		
	161	28	1.5	18.6		
	134	33	1.3	22.33		
	125	36	1.2	23.91		
	104	43	1.2	28.89		
	97	46	1.1	30.84		
	89	50	1.0	33.57		
	84	53	1.0	35.63		
	70	64	0.8	42.75		
	54	73	0.7	55.31		
	51	73	0.7	59.06		
	47	73	0.7	64.29		
800						
(3000 min^{-1})	**485**	15	2.1	6.18	**600/402**	120/240
	401	18	1.7	7.49		
	326	22	1.4	9.20		
	254	28	1.2	11.83		
	240	30	1.2	12.48		
	202	36	1.0	14.83		
	170	42	0.8	17.63		
	161	45	1.0	18.60		
	134	53	0.8	22.33		
	125	57	0.8	23.91		
	104	69	0.7	28.89		
	97	73	0.7	30.84		
	89	73	0.7	33.57		
	84	73	0.7	35.63		
	70	73	0.7	42.75		

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

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

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

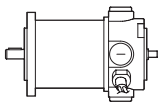
Dati tecnici elettrici

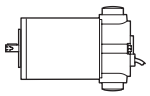
Electrical technical data

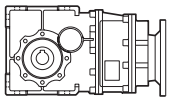
EC070 → BB10 EC100 → BB12 EC180 → BB14 EC250 → BB16 EC350 → BB18 EC600 → BB20

Motori applicabili

Motor adapters







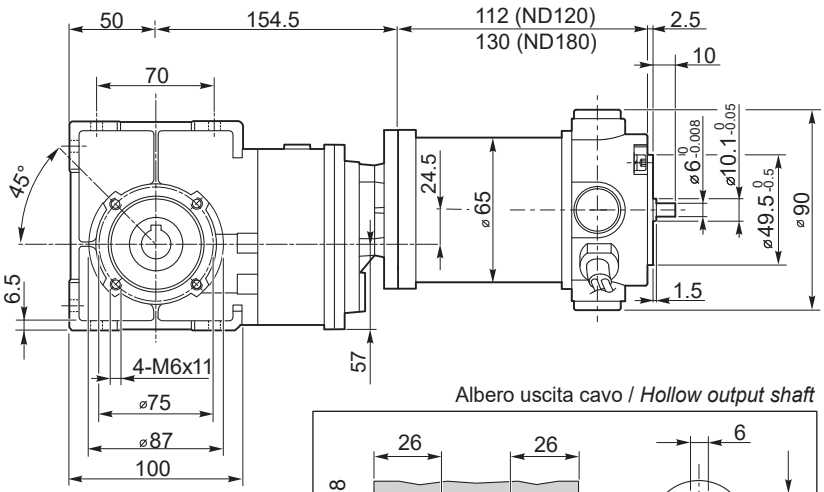
		ND		EC					
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240 180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CMB	402	6.18 - 72.50							

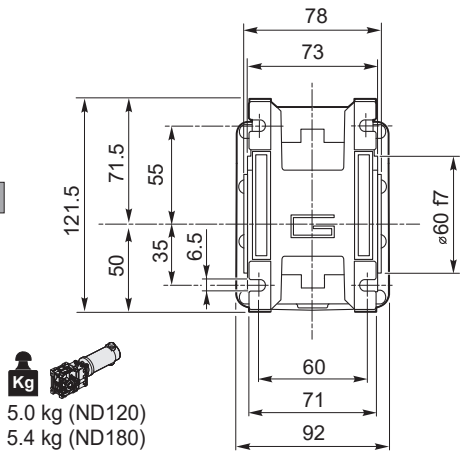
6.18 - 72.50 Rapporti di riduzione i
Ratio i

Dimensioni

Dimensions

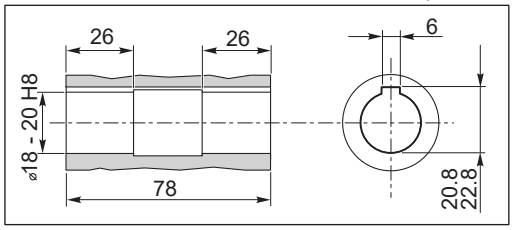
NDCMB120/402 U
NDCMB180/402 U

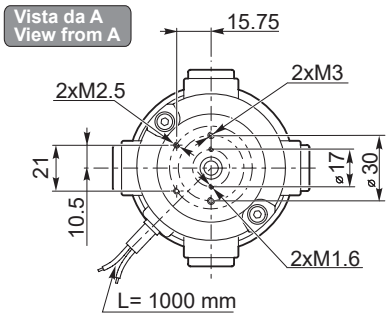


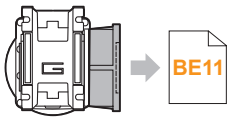


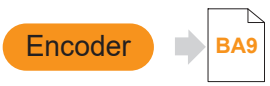
5.0 kg (ND120)
5.4 kg (ND180)

Albero uscita cavo / *Hollow output shaft*



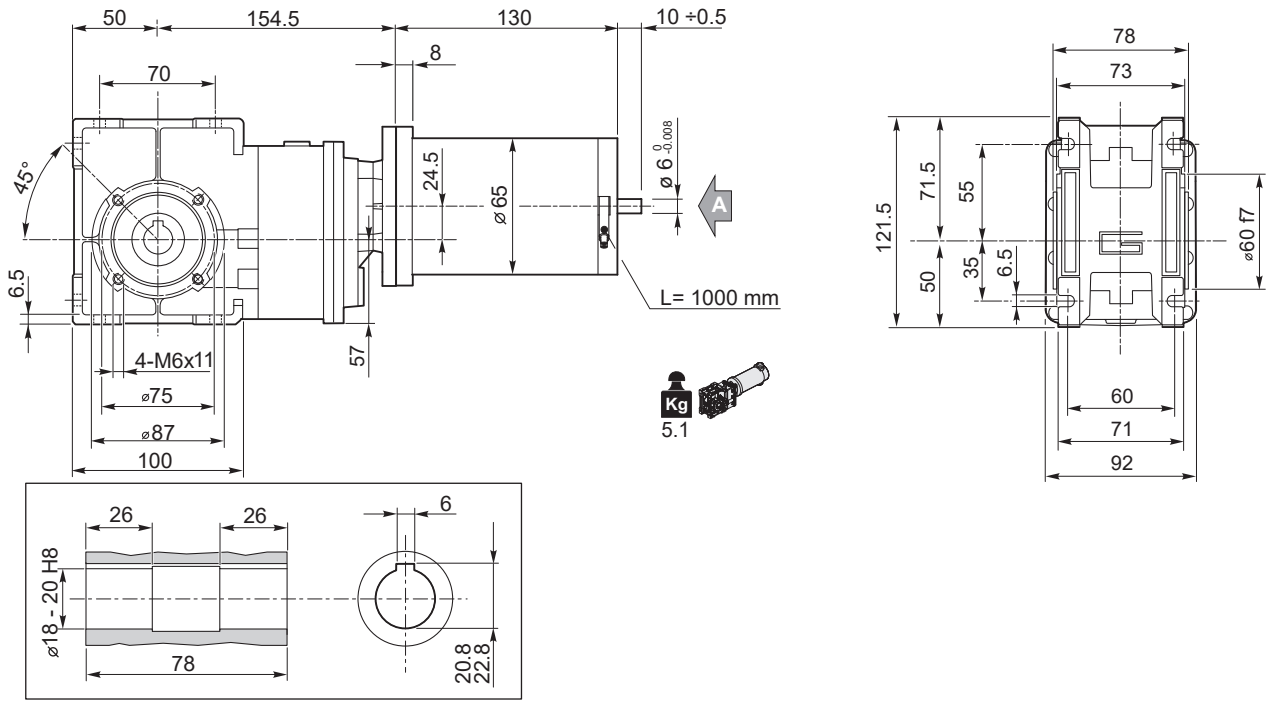


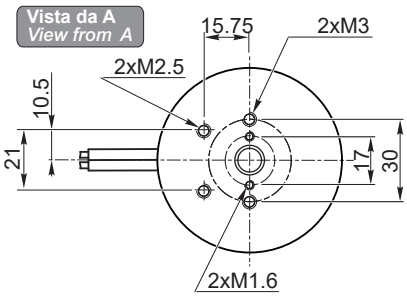




Dimensioni ***Dimensions***

ECMB070/402 U

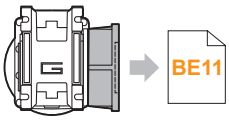




Freno / *Brake* → BB23

Encoder → BB24

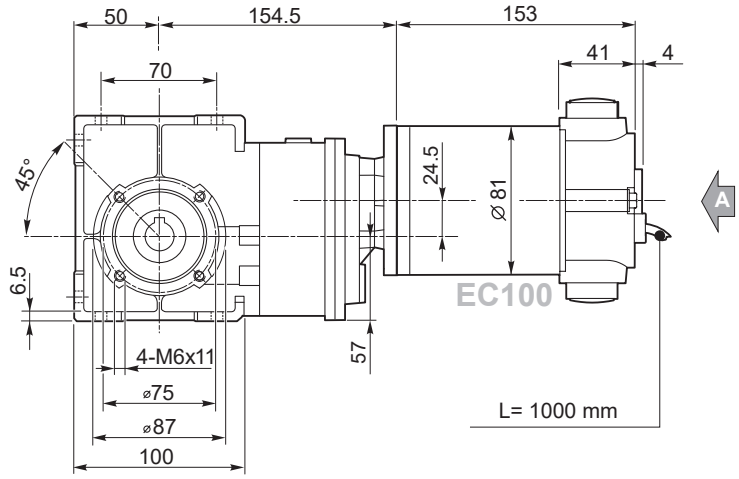
Motori / *Motors* IP66 → BC2

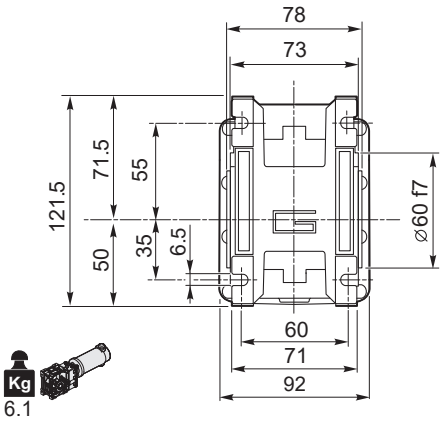


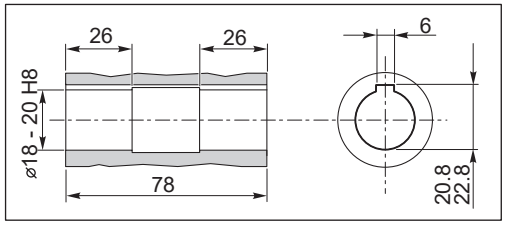
DC

Dimensioni ***Dimensions***

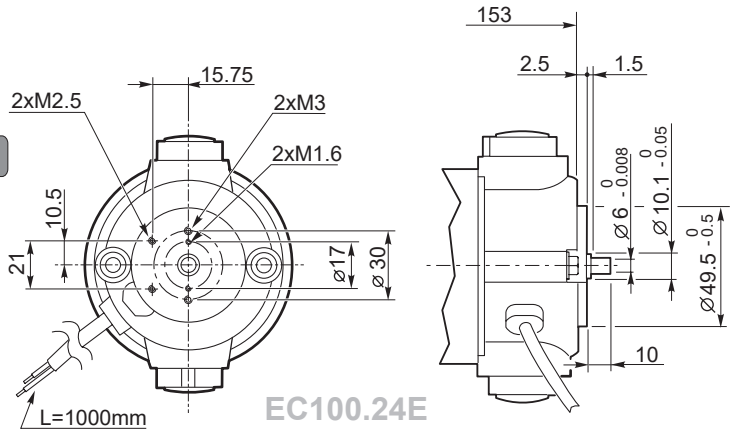
ECMB100/402 U







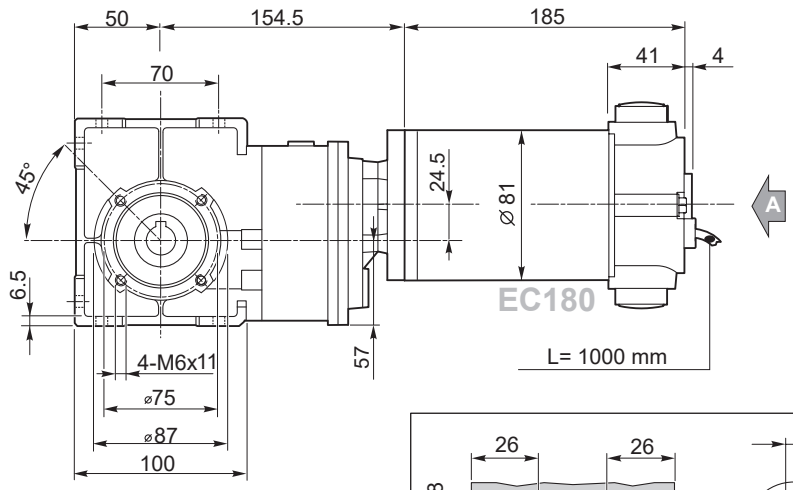
Vista da A
View from A

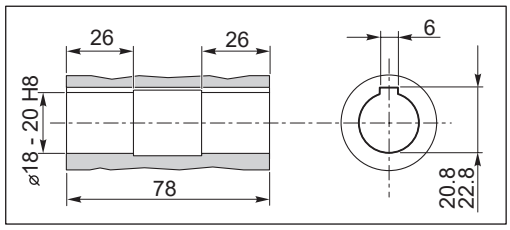


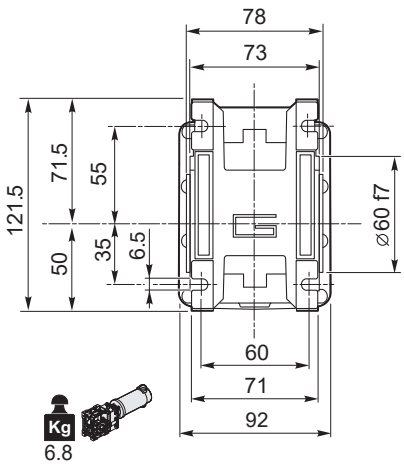
Motori / *Motors* IP66 → BC4 | Encoder → BB24 | Freno / *Brake* → BB23 → BE11

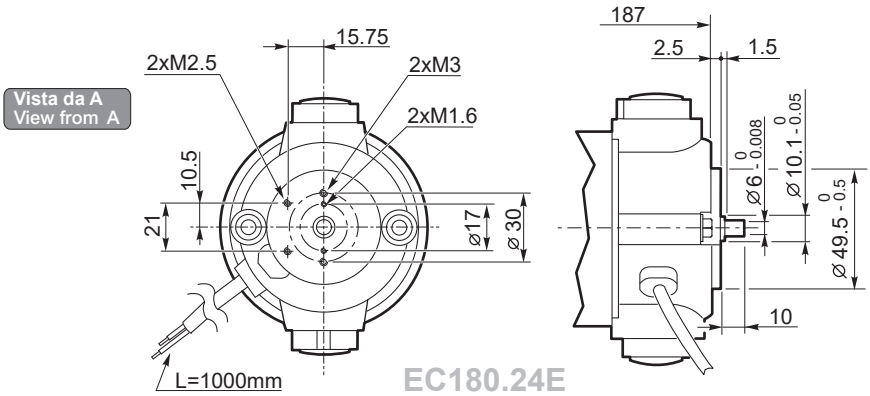
Dimensioni ***Dimensions***

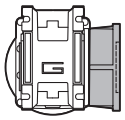
ECMB180/402 U











BE11

Freno / *Brake* BB23

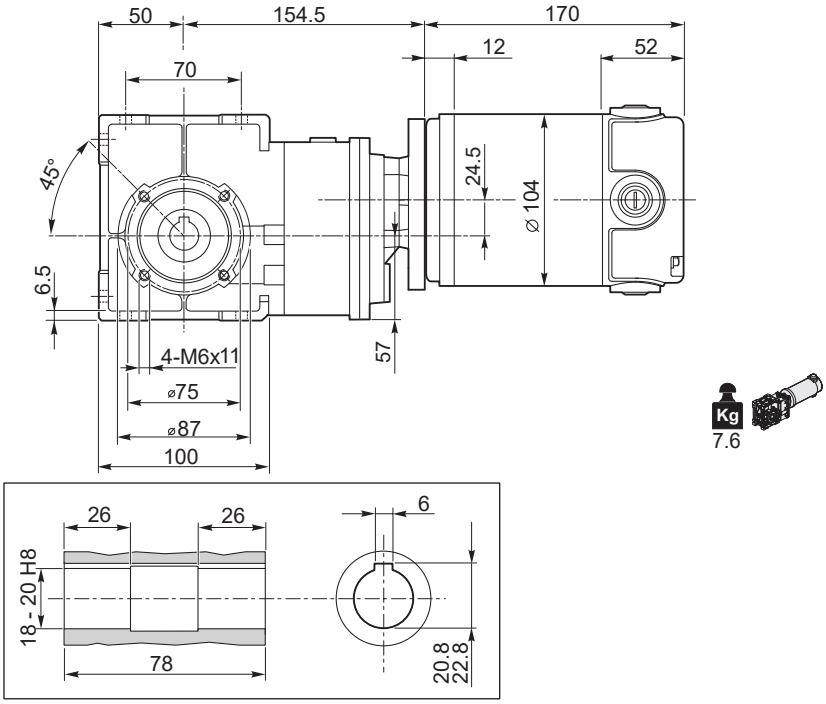
Encoder BB24

Motori / *Motors* IP66 BC6

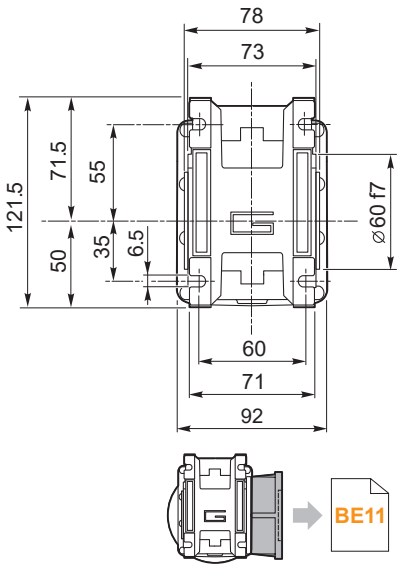
DC

Dimensioni ***Dimensions***

ECMB250/402 U



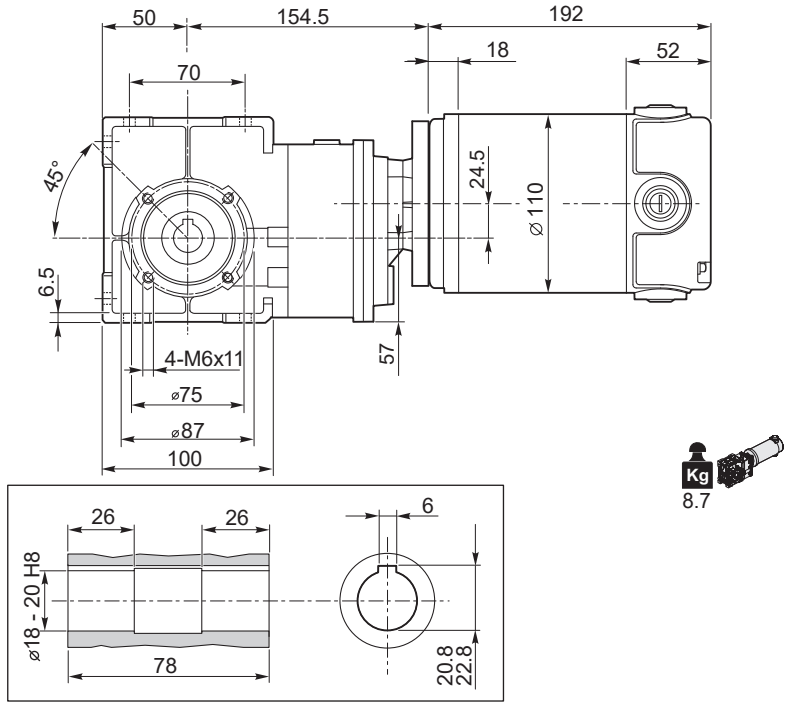
Kg 7.6



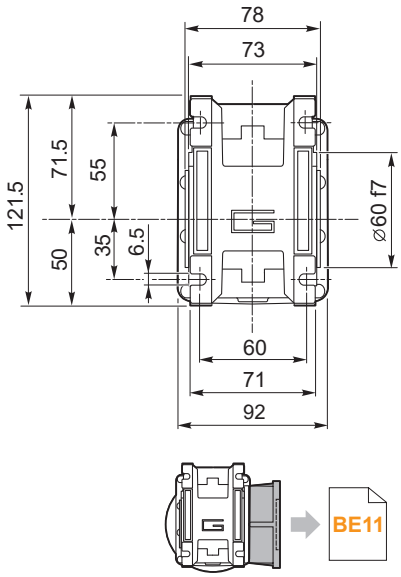
BE11

Motori / *Motors* IP66 BC8

ECMB350/402 U



Kg 8.7



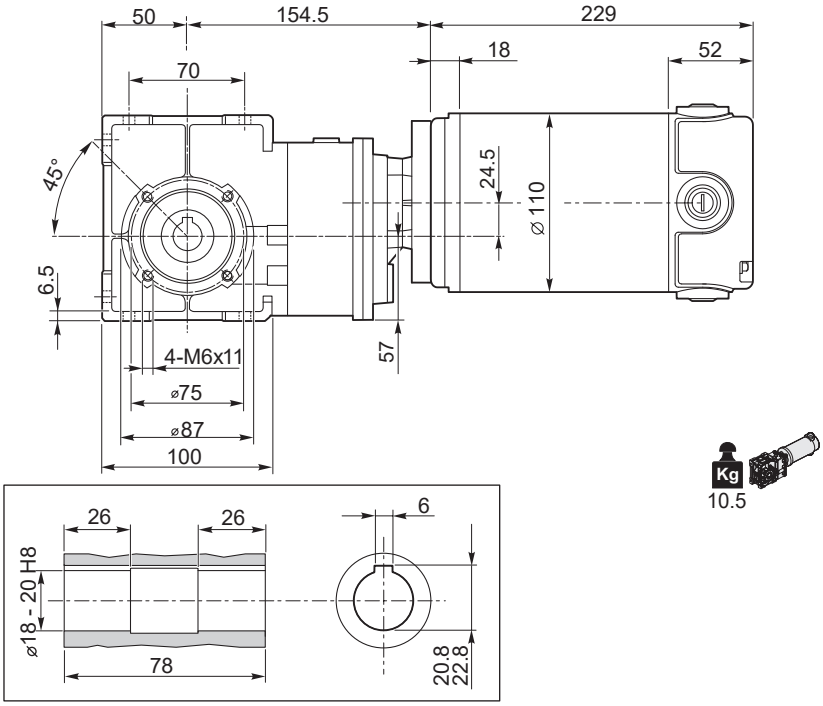
BE11

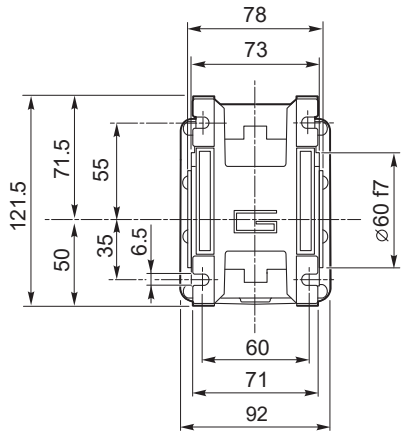
Freno / *Brake* BB24

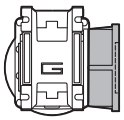
Motori / *Motors* IP66 BC10

Dimensioni *Dimensions*

ECMB600/402 U





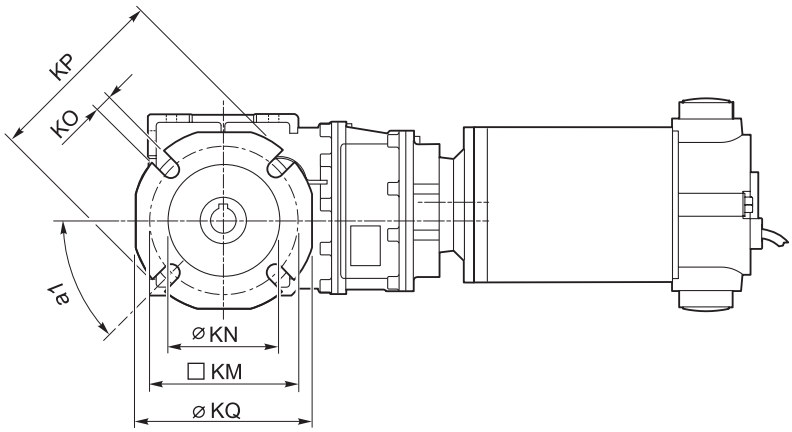


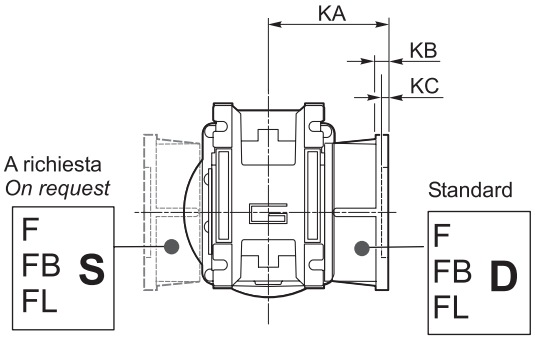
BE11

Freno / *Brake* BB23

Motori / *Motors* IP66 BC12

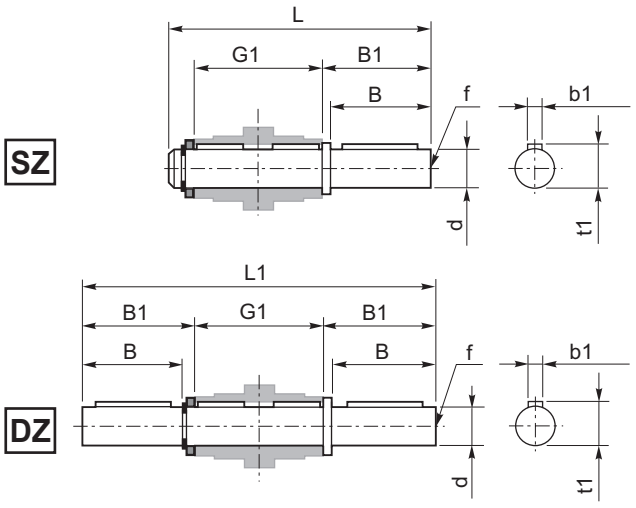
NDCMB.../ F... - ECMB.../... F... Flange uscita / *Output flanges*

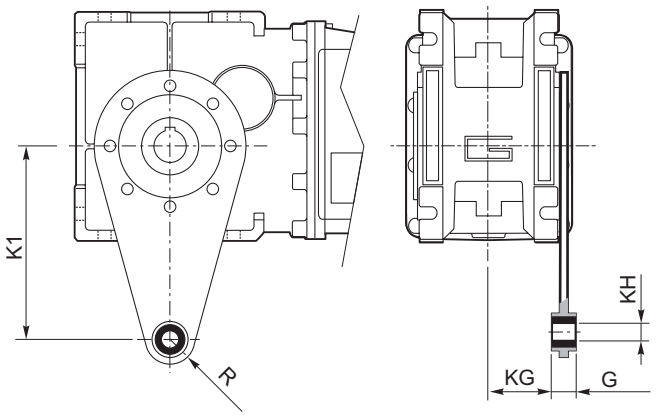




	Flange uscita / *Output flanges*																										
	F									FL									FB								
CMB	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112

Accessori — *Accessories*





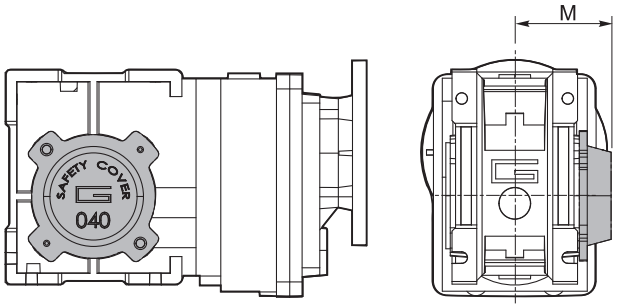
Albero lento / *Output shaft*

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

Braccio di reazione / *Torque arm*

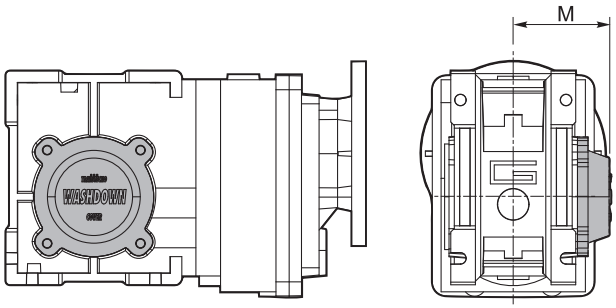
CMB	K1	G	KG	KH	R
402	100	14	31	10	18

SC - *Safety cover*



CMB	M
402	54.5

WD - *Kit washdown cover*



CMB	M
402	55.5

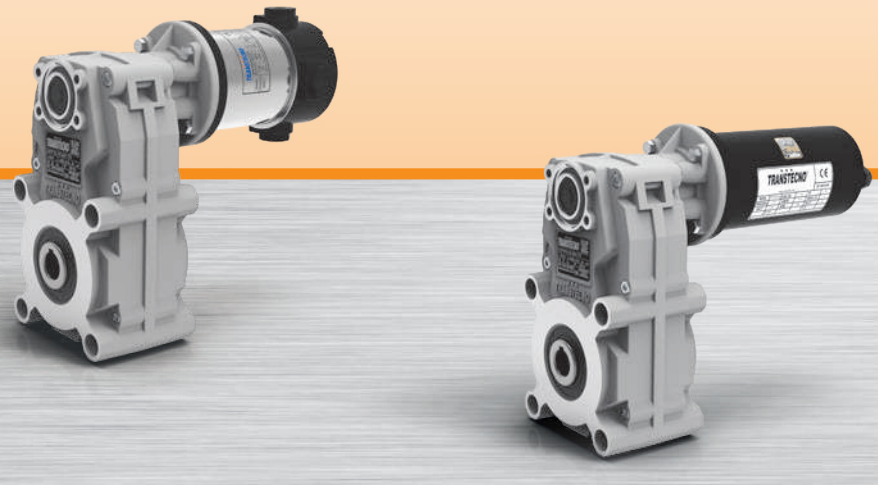
MINI TECNO™

small but strong

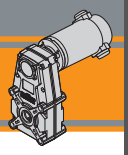
NDFT
ECFT

DC

Motoriduttori CC pendolari
DC Helical parallel gearmotors



MINI TECNO™ brand of TRANSTECNO®



ENERGY SAVING

DC

Caratteristiche tecniche

Technical features

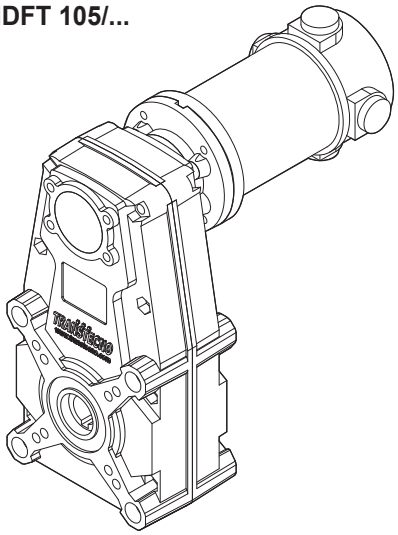
I motoriduttori CC pendolari a magneti permanenti in neodimio **NDFT** e in ferrite **ECFT** hanno le seguenti caratteristiche principali:

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

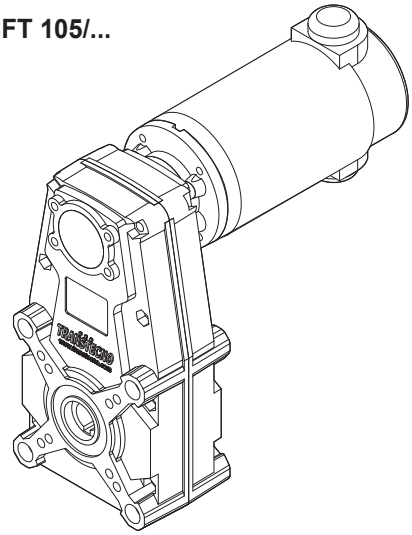
NDFT *neodymium permanent magnets and* ***ECFT*** *ferrite permanent magnets DC helical parallel gearmotors range has the following main features:*

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

NDFT 105/...



ECFT 105/...

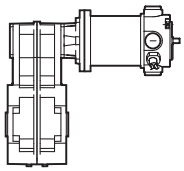


Designazione

Classification

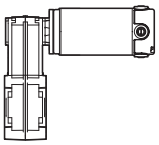
MOTORIDUTTORE / *GEARMOTOR*

NDFT	120/105	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...** **180/105...**	**U...**	Vedere tabella *See tables*	Vedere tabella *See tables*	**120** **240**



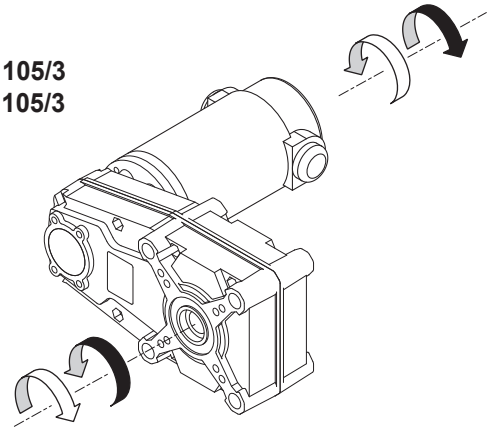
MOTORIDUTTORE / *GEARMOTORS*

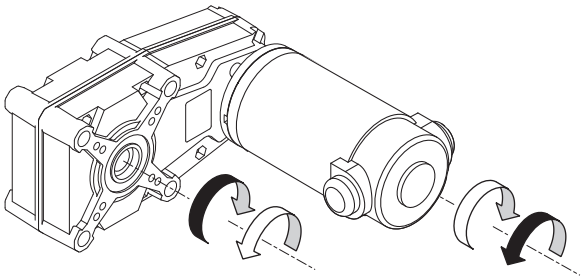
ECFT	180/105	U	60.63	O20	240
Tipo *Type*	Grandezza *Size*	Versione *Version*	Rapporto *Ratio*	Albero cavo uscita *Hollow output shaft*	Versione motore *Motor version*
ECFT	**070/105...** **100/105...** **180/105...**	**U...**	vedi tabelle *see tables*	vedi tabelle *see tables*	**120** **240** **12E** **24E**



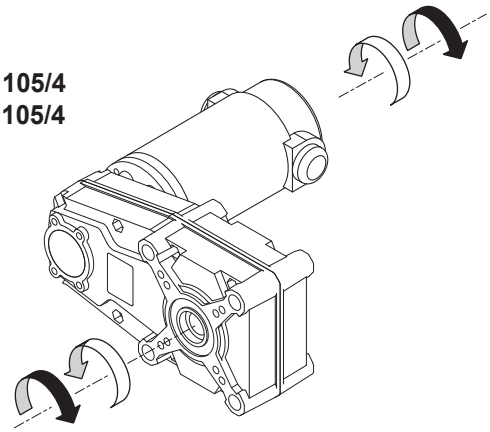
Sensi di rotazione — *Direction of rotation*

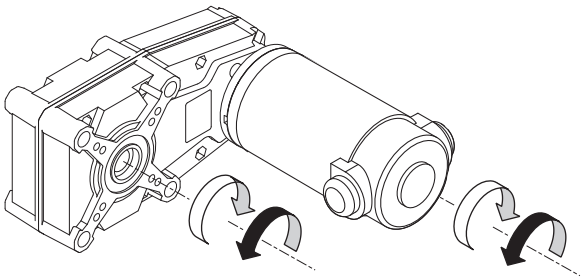
NDFT 105/3
ECFT 105/3





NDFT 105/4
ECFT 105/4





Simbologia — *Symbols*

n_1	[min^{-1}]	Velocità in ingresso / *Input speed*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*
i		Rapporto di riduzione / *Ratio*
P_1	[kW]	Potenza in entrata / *Input power*
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / *Output torque referred to P_1*
Pn_1	[kW]	Potenza nominale in entrata / *Nominal input power*
Mn_2	[Nm]	Coppia nominale in uscita in funzione di Pn_1 / *Nominal output torque referred to Pn_1*
sf		Fattore di servizio / *Service factor*
R_2	[N]	Carico radiale ammissibile in uscita / *Permitted output radial load*
A_2	[N]	Carico assiale ammissibile in uscita / *Permitted output axial load*

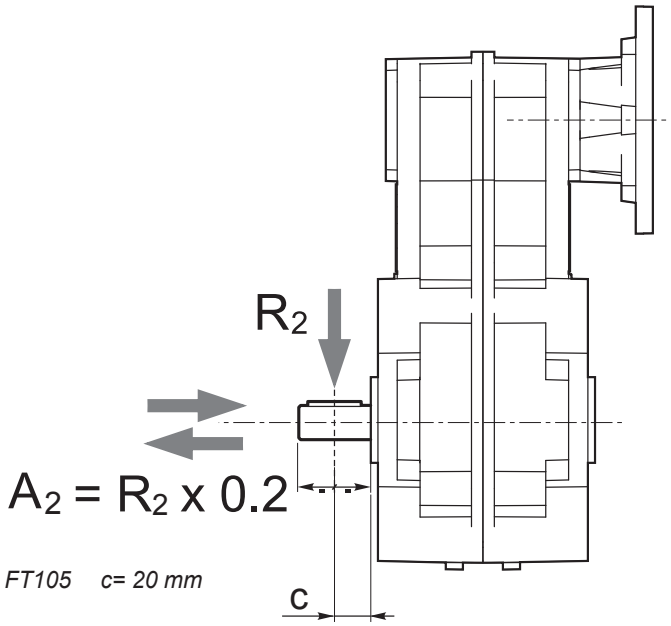
Lubrificazione — *Lubrication*

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

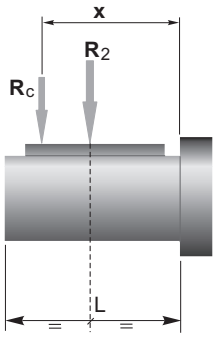
Radial loads



n_2 [min^{-1}]	R_2 [N]
	FT105
70	1500
40	1700
30	1850
20	2000
10	2000
5	2000

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

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

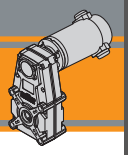


	FT105
a	82
b	62
R_{2MAX}	2000

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

$$R \leq R_c$$

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



Dati tecnici — NDFT — *Technical data*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**146**	10	3.2	20.57	**120/105/3**	120/240
	90	16	2.4	33.32		
	68	21	2.4	44.36		
	55	26	1.9	54.87		
	42	34	1.5	71.84		
	39	37	1.4	77.07		
	34	43	1.2	88.87		
	24	60	0.8	124.81		
	17	86	0.6	181.35		
	13	86	0.6	224.32		
	9.5	86	0.6	315.05		
	8.1	86	0.6	368.19	**120/105/4**	120/240
	5.6	86	0.6	534.98		
	4.5	86	0.6	661.76		
	3.2	86	0.6	929.40		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**146**	15	2.0	20.57	**180/105/3**	120/240
	90	25	1.6	33.32		
	68	33	1.5	44.36		
	55	41	1.2	54.87		
	42	54	0.9	71.84		
	39	58	0.9	77.07		
	34	66	0.8	88.87		

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

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

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

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

Dati tecnici elettrici — *Electrical technical data*

ND 120 → BA4

ND 180 → BA6

DC

Dati tecnici — ECFT — *Technical data*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
100						
(3000 min^{-1})	**146**	6	5.1	20.57	**070/105/3**	**12E/24E**
	90	10	3.9	33.32		
	68	13	3.8	44.36		
	55	16	3.1	54.87		
	42	21	2.4	71.84		
	39	23	2.2	77.07		
	34	27	1.9	88.87		
	24	37	1.4	124.81		
	17	54	0.9	181.35		
	13	67	0.8	224.32		
	9.5	86	0.6	315.05		
	8.1	86	0.6	368.19	**070/105/4**	**12E/24E**
	5.6	86	0.6	534.98		
	4.5	86	0.6	661.76		
	3.2	86	0.6	929.40		
140						
(3000 min^{-1})	**146**	9	3.6	20.57	**100/105/3**	**120/240/24E**
	90	14	2.8	33.32		
	68	19	2.7	44.36		
	55	23	2.2	54.87		
	42	30	1.7	71.84		
	39	32	1.6	77.07		
	34	37	1.4	88.87		
	24	52	1.0	124.81		
	16.5	76	0.7	181.35		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**146**	15	2.0	20.57	**180/105/3**	**120/240**
	90	25	1.6	33.32		
	68	33	1.5	44.36		
	55	41	1.2	54.87		
	42	54	0.9	71.84		
	39	58	0.9	77.07		
	34	66	0.8	88.87		

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

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

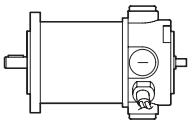
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

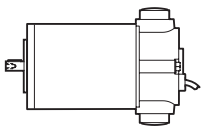
***NOTE:** for continuous or highly intermittent duty, please contact our technical service*

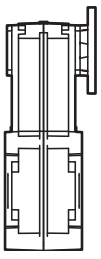
Dati tecnici elettrici — *Electrical technical data*

EC070 → BB10 **EC100** → BB12 **EC180** → BB14

Motori applicabili — *Motor adapters*







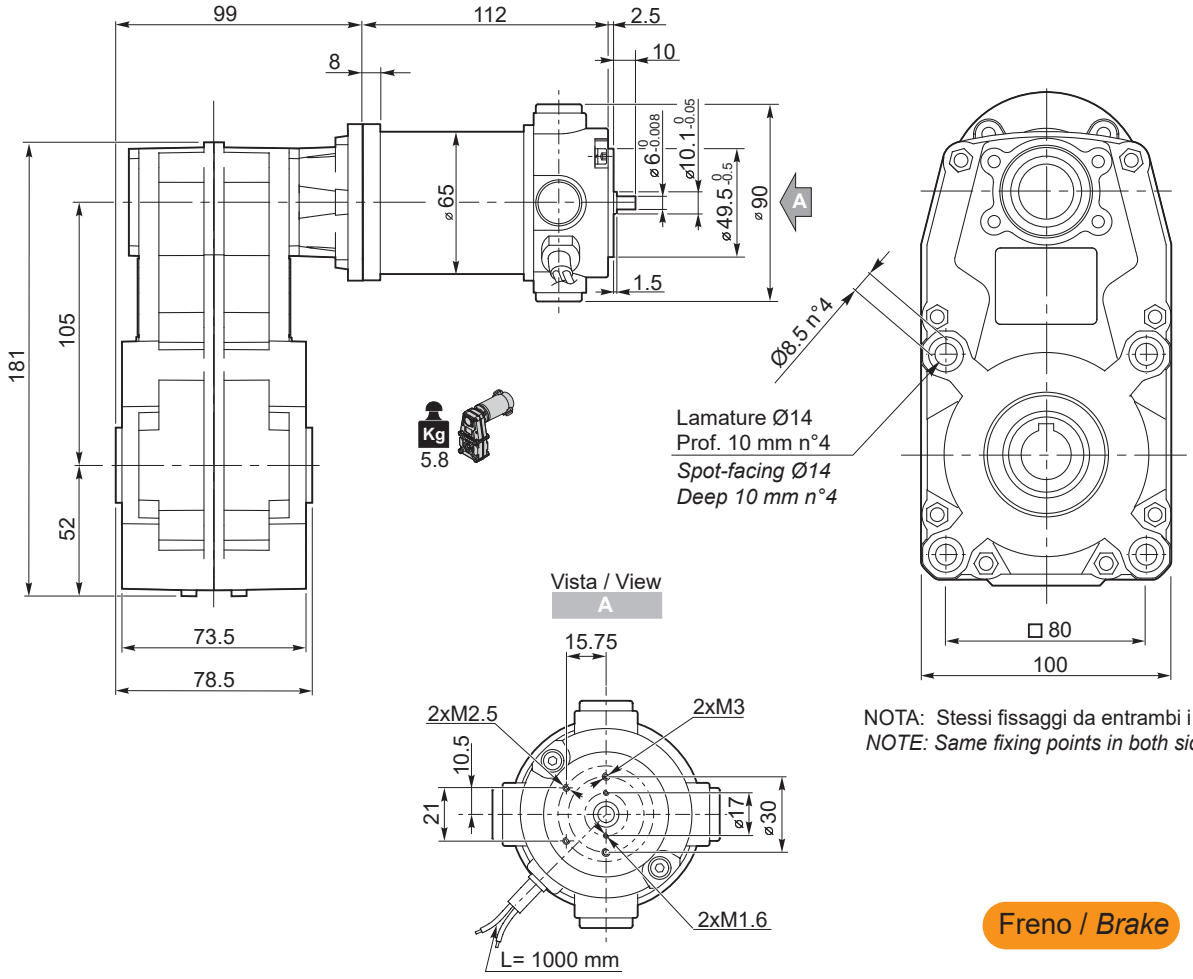
		ND		EC		
		120.120 120.240	**180.120 180.240**	**070.12E 070.24E**	**100.120 100.240 100.24E**	**180.120 180.240**
FT	**105/3**	20.57 - 315.05				
	105/4	368.19 - 929.4				

20.57 - 315.05 Rapporti di riduzione i
Ratio i

Dimensioni | *Dimensions*

NDFT 120/105

NDFT 120/105...U



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

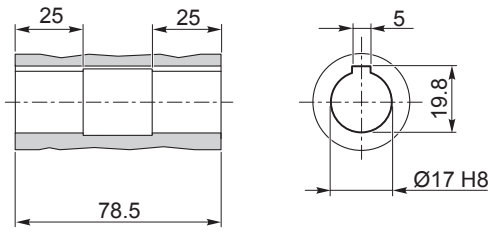
Freno / *Brake* → BA9

Encoder → BA9

DC

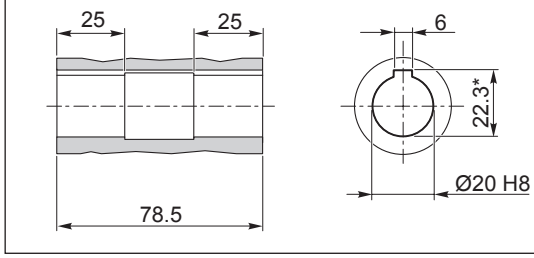
Ø17

Albero uscita cavo
Hollow output shaft



Ø20

Albero uscita cavo
Hollow output shaft

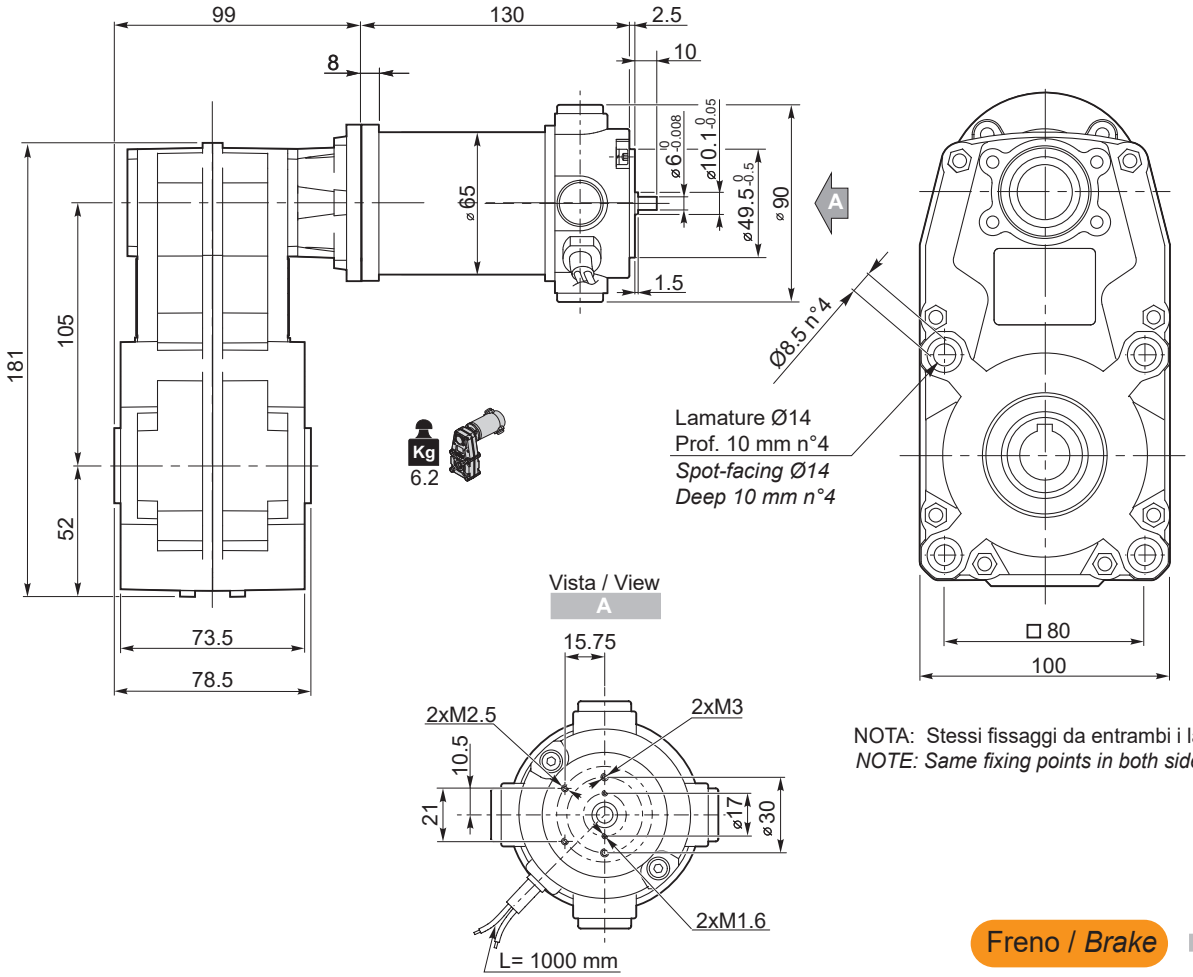


*: Sede linguetta ribassata / *Special keyway*

Dimensioni | ***Dimensions***

NDFT 180/105

NDFT 180/105...U

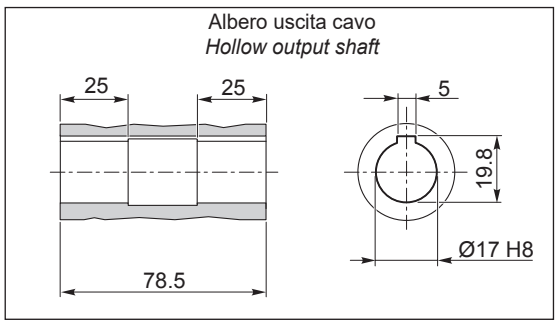


NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

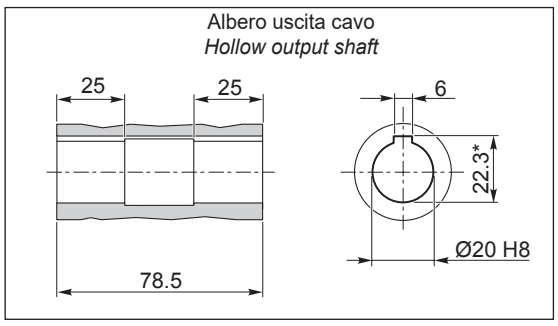
Freno / *Brake* → BA9

Encoder → BA9

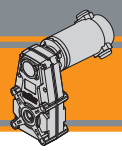
O17



O20



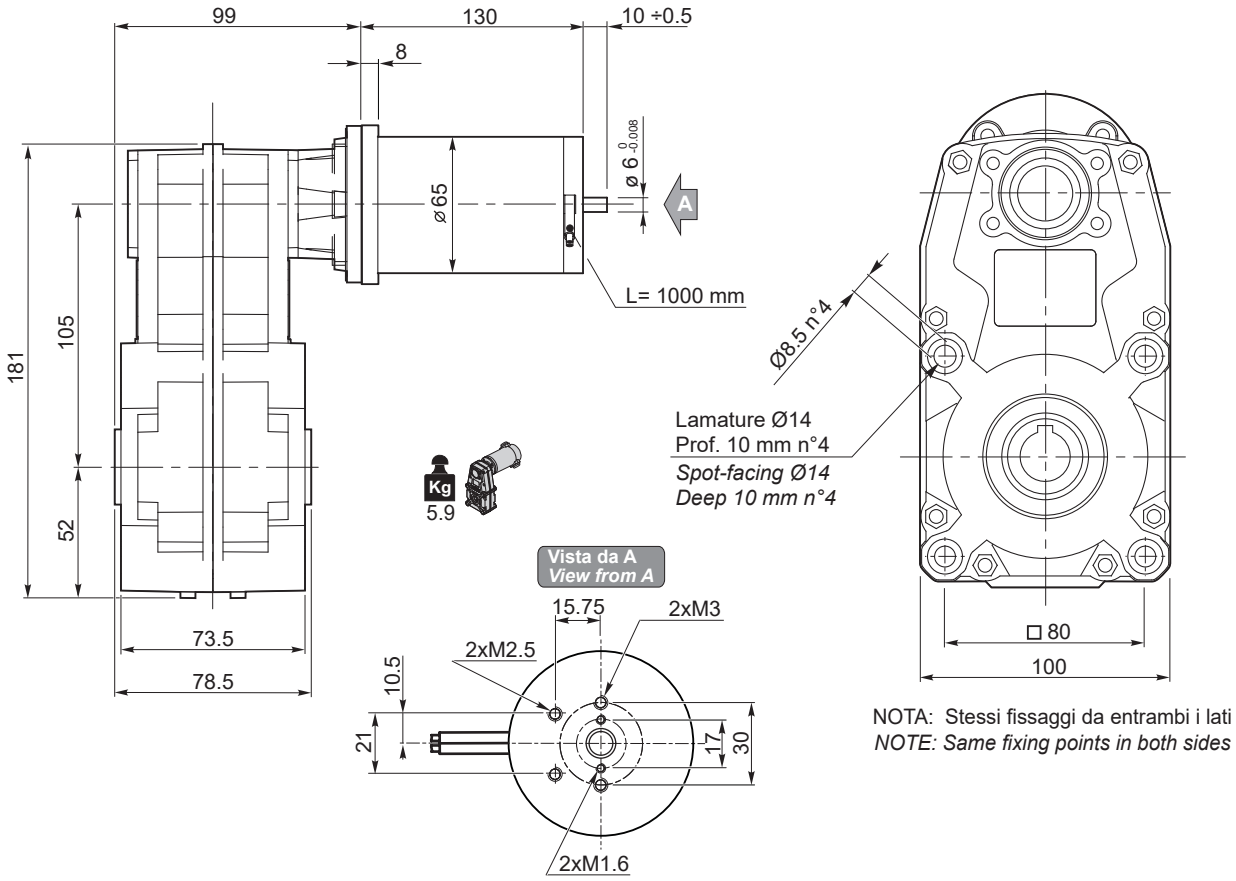
*: Sede linguetta ribassata / *Special keyway*



Dimensioni ***Dimensions***

ECFT 070/105

ECFT 070/105...U



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

Freno / *Brake* → BB23

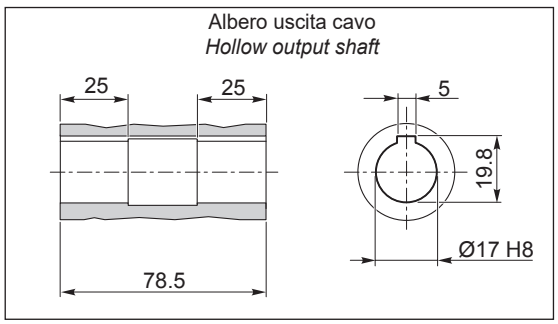
Encoder → BB24

Motori / *Motors* IP66 → BC2

DC

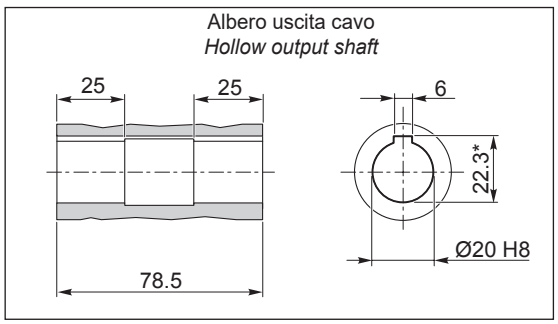
Ø17

Albero uscita cavo
Hollow output shaft



Ø20

Albero uscita cavo
Hollow output shaft

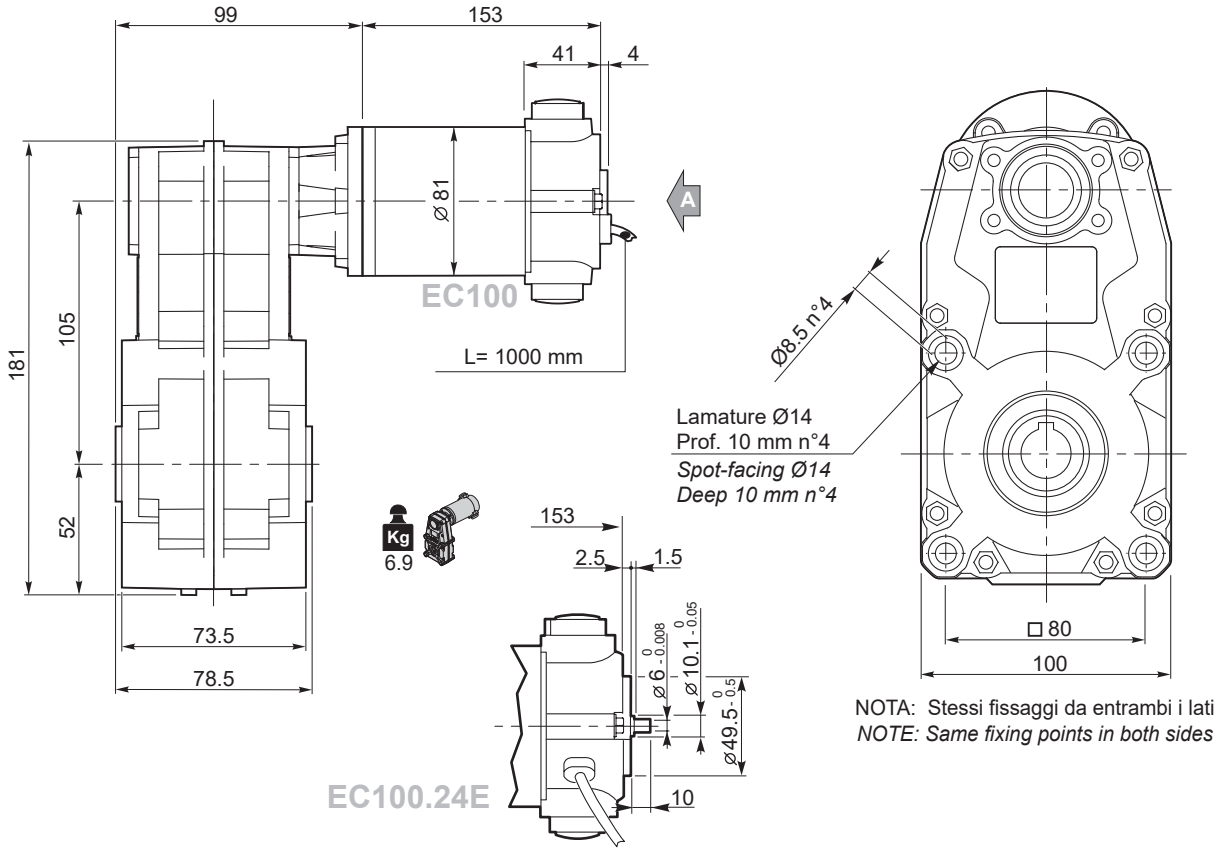


*: Sede linguetta ribassata / *Special keyway*

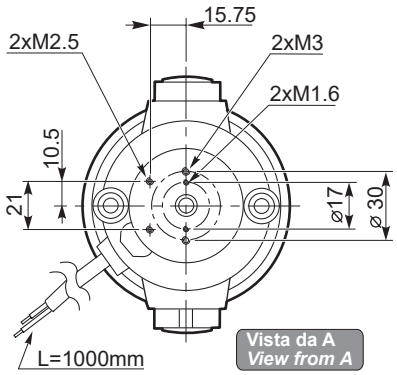
Dimensioni ***Dimensions***

ECFT 100/105

ECFT 100/105...U



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



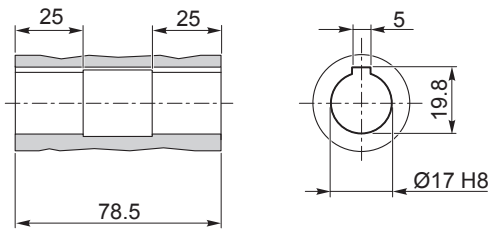
Freno / *Brake* → BB23

Encoder → BB24

Motori / *Motors* IP66 → BC4

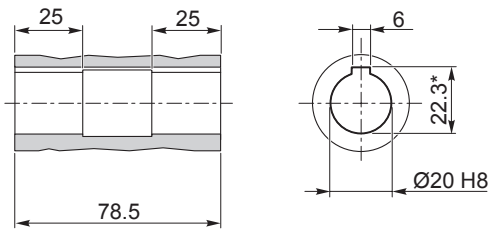
O17

Albero uscita cavo
Hollow output shaft

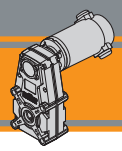


O20

Albero uscita cavo
Hollow output shaft



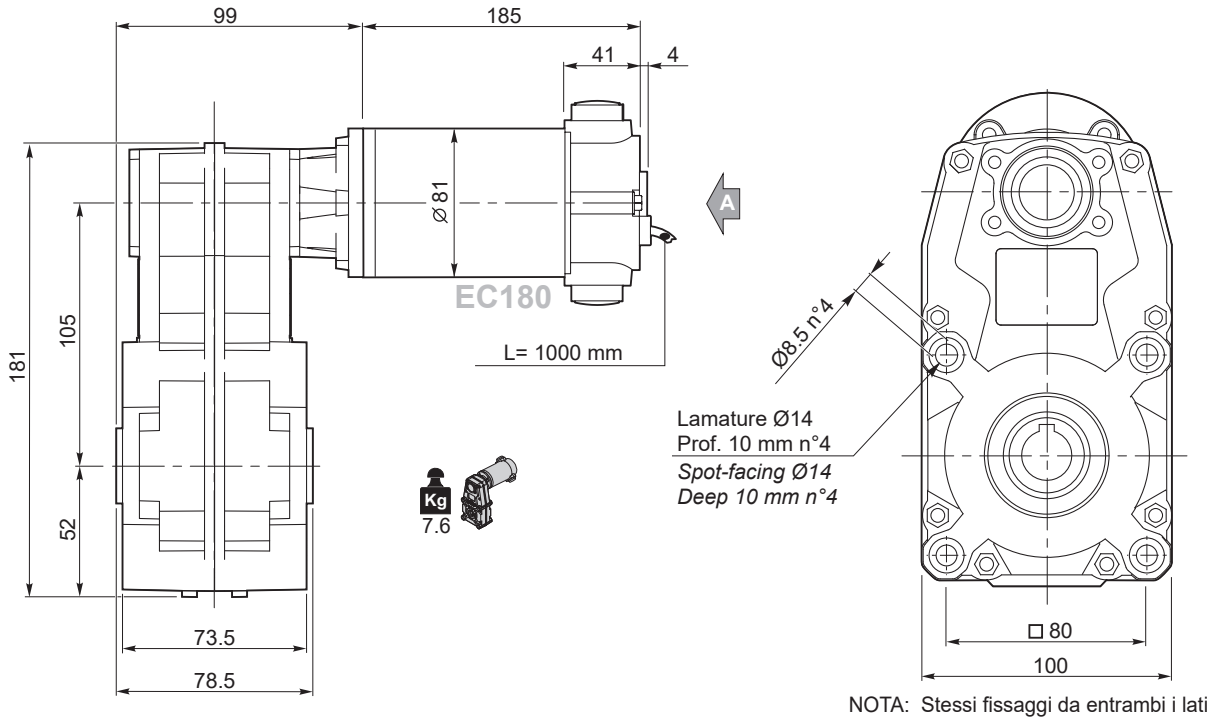
*: Sede linguetta ribassata / *Special keyway*



Dimensioni ***Dimensions***

ECFT 180/105

ECFT 180/105...U

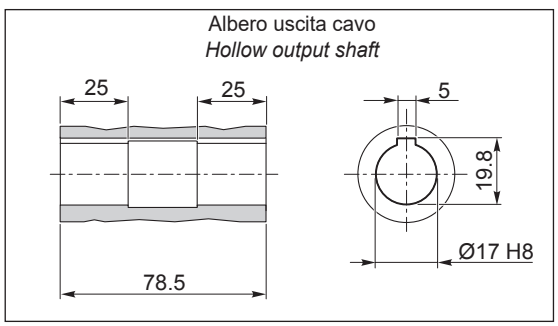


NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

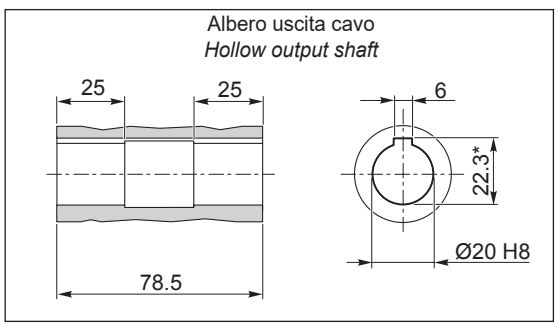
Freno / *Brake* BB23
Encoder BB24
Motori / *Motors* IP66 BC6

DC

Ø17



Ø20



*: Sede linguetta ribassata / *Special keyway*

Note/*Notes*

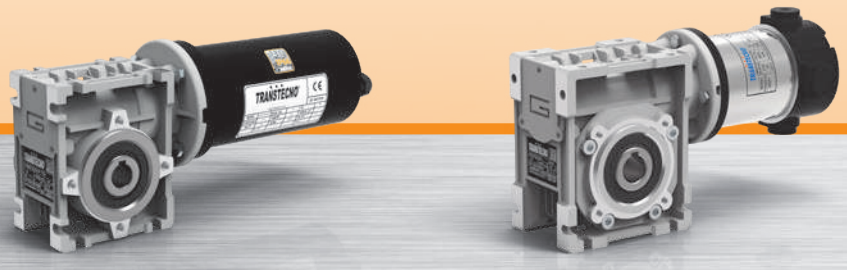
MINI TECNO™

small but strong

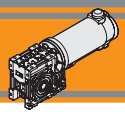
NDCM
ECM

DC

Motoriduttori CC a vite senza fine
DC wormgearmotors



MINI TECNO™ brand of TRANSTECNO®



DC

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Caratteristiche tecniche

I motoriduttori CC a vite senza fine a magneti permanenti in neodimio **NDCM** e in ferrite **ECM** hanno le seguenti caratteristiche principali:

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

Technical features

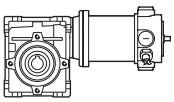
***NDCM** neodymium permanent magnets and **ECM** ferrite permanent magnets DC wormgearmotors range has the following main features:*

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

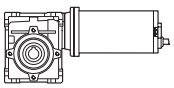
Designazione

Classification

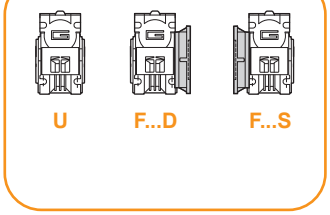
MOTORIDUTTORE / *GEARMOTOR*

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

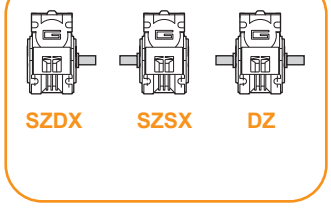
MOTORIDUTTORE / *GEARMOTOR*

ECM	070/026	U	10	SZDX	BRSX	90	240	VS
Tipo *Type*	Grandezza *Size*	Versione Riduttore *Gearbox Version*	Rapporto *Ratio*	Albero di uscita *Output shaft*	Braccio di reazione *Torque arm*	Angolo *Angle*	Versione Motore *Motor Version*	Opzioni *Options*
ECM 	**035/026** **035/026 (D11)** **035/026 (D14)** **035/030** **050/026** **050/026 (D11)** **050/026 (D14)** **050/030**	**U** **F...**	Vedere tabella *See tables*	**SZDX** **SZSX** **DZ**	**BRDX** **BRSX** (*)	**0°** **90°** **180°** **270°**	**120** **240** **24E**	**VS**
	070/026 **070/026 (D11)** **070/026 (D14)** **070/030**							
	100/026 **100/026 (D11)** **100/026 (D14)** **100/030** **100/040**							
	180/026 **180/026 (D11)** **180/026 (D14)** **180/030** **180/040**							
	250/030 **250/040** **350/030** **350/040** **600/040**							

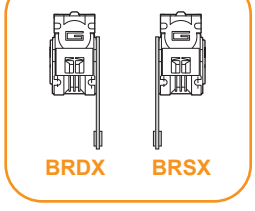
Versione Riduttore *Gearbox Version*



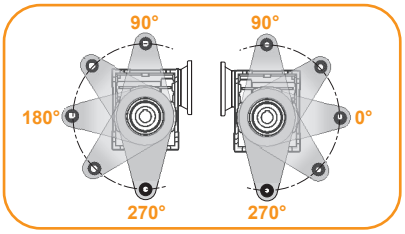
Albero di uscita *Output shaft*



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*

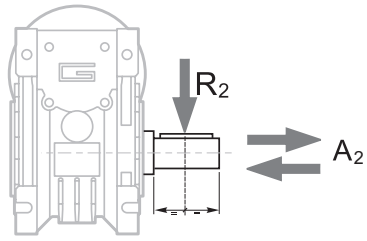
n_1	[min^{-1}]	Velocità in ingresso / *Input speed*	Rd	%	Rendimento dinamico / *Dynamic efficiency*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*	A_2	N]	Carico assiale ammissibile in uscita / *Permitted output axial load*
i		Rapporto di riduzione / *Ratio*	Rs	%	Rendimento statico / *Static efficiency*
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*

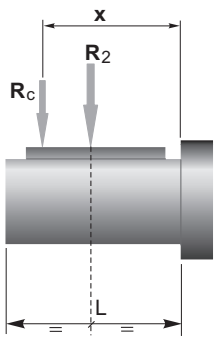


$A_2 = R_2 \times 0.2$

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

DC

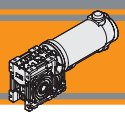
Dati di dentatura — *Toothing data*

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

Rendimento — *Efficiency*

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

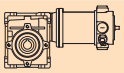
Rendimento teorico del riduttore dopo il rodaggio
Theoretical efficiency of the gearbox after the first running period

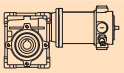


Dati tecnici per servizio S2

NDCM

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**600**	2	4.4	5	**120/026**	**120/240**
	400	3	3.3	7.5	**120/026**	
	300	4	2.5	10	**120/026**	
	200	6	1.7	15	**120/026**	
	150	8	1.3	20	**120/026**	
	100	11	1.1	30	**120/026**	
	75	14	0.8	40	**120/026**	
	60	14	0.7	50	**120/026**	
	50	13	0.7	60	**120/026**	
	600	2	5.7	5	**120/030**	**120/240**
	400	3	4.5	7.5	**120/030**	
	300	4	3.7	10	**120/030**	
	200	6	2.5	15	**120/030**	
	150	8	1.7	20	**120/030**	
	120	10	1.5	25	**120/030**	
	100	11	1.6	30	**120/030**	
	75	14	1.1	40	**120/030**	
	60	17	0.9	50	**120/030**	
	50	20	0.7	60	**120/030**	
	38	17	0.7	80	**120/030**	
	30	16	0.7	100	**120/030**	
	150	8	3.7	20	**120/040**	**120/240**
	120	10	2.7	25	**120/040**	
	100	12	3.2	30	**120/040**	
	75	15	2.3	40	**120/040**	
	60	18	1.8	50	**120/040**	
	50	20	1.4	60	**120/040**	
	38	24	1.1	80	**120/040**	
	30	29	0.8	100	**120/040**	

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**600**	4	2.8	5	**180/026**	**120/240**
	400	5	2.1	7.5	**180/026**	
	300	7	1.6	10	**180/026**	
	200	10	1.1	15	**180/026**	
	150	13	0.9	20	**180/026**	
	100	17	0.7	30	**180/026**	
	75	16	0.7	40	**180/026**	
	60	14	0.7	50	**180/026**	
	50	13	0.7	60	**180/026**	
	600	4	3.7	5	**180/030**	**120/240**
	400	5	2.9	7.5	**180/030**	
	300	7	2.3	10	**180/030**	
	200	10	1.6	15	**180/030**	
	150	13	1.1	20	**180/030**	
	120	16	1.0	25	**180/030**	
	100	18	1.0	30	**180/030**	
	75	22	0.7	40	**180/030**	
	60	21	0.7	50	**180/030**	
	50	20	0.7	60	**180/030**	
	38	17	0.7	80	**180/030**	
	30	16	0.7	100	**180/030**	
	600	4	8.1	5	**180/040**	**120/240**
	400	5	5.8	7.5	**180/040**	
	300	7	4.8	10	**180/040**	
	200	10	3.5	15	**180/040**	
	150	13	2.3	20	**180/040**	
	120	16	1.8	25	**180/040**	
	100	18	2.1	30	**180/040**	
	75	23	1.5	40	**180/040**	
	60	27	1.2	50	**180/040**	
	50	32	0.9	60	**180/040**	
	38	38	0.7	80	**180/040**	
	30	34	0.7	100	**180/040**	

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

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

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

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

Dati tecnici elettrici

Electrical technical data

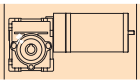
ND 120 → BA4

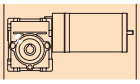
ND 180 → BA6

Dati tecnici per servizio S2

ECM

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
55						
(3000 min^{-1})	**600**	0.8	12.8	5	**ECM035/026**	120/240
	400	1.1	9.6	7.5		
	300	1.5	7.4	10		
	200	2.2	5.0	15		
	150	2.8	3.9	20		
	100	3.8	3.1	30		
	75	4.8	2.3	40		
	60	5.6	1.8	50		
	50	6.3	1.4	60		
	600	0.8	16.7	5	**ECM035/030**	120/240
	400	1.2	13.0	7.5		
	300	1.5	10.6	10		
	200	2.2	7.3	15		
	150	2.8	4.9	20		
	120	3.4	4.4	25		
	100	3.9	4.6	30		
	75	4.9	3.3	40		
	60	5.7	2.6	50		
	50	6.5	2.1	60		
	38	8.0	1.5	80		
	30	9.1	1.2	100		
70						
(3000 min^{-1})	**600**	1.0	10.1	5	**ECM050/026**	120/240
	400	1.5	7.6	7.5		
	300	1.9	5.8	10		
	200	2.8	4.0	15		
	150	3.6	3.1	20		
	100	4.9	2.5	30		
	75	6.1	1.8	40		
	60	7.1	1.4	50		
	50	8.0	1.1	60		
	600	1.0	13.1	5	**ECM050/030**	120/240
	400	1.5	10.2	7.5		
	300	1.9	8.3	10		
	200	2.8	5.7	15		
	150	3.6	3.9	20		
	120	4.3	3.5	25		
	100	4.9	3.6	30		
	75	6.2	2.6	40		
	60	7.2	2.1	50		
	50	8.3	1.7	60		
	38	10.2	1.2	80		
	30	11.6	0.9	100		

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		
	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		
	600	1.4	9.2	5	**ECM070/030**	12E/24E
	400	2.1	7.1	7.5		
	300	2.7	5.8	10		
	200	4.0	4.0	15		
	150	5.2	2.7	20		
	120	6.2	2.4	25		
	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		
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		
	200	5.6	2.8	15	**ECM100/030**	120/240/24E
	150	7.2	1.9	20		
	120	8.7	1.7	25		
	100	10	1.8	30		
	75	12	1.3	40		
	60	14	1.0	50		
	50	17	0.8	60		
	38	17	0.7	80		
	30	16	0.7	100		
	100	10	3.7	30	**ECM100/040**	120/240/24E
	75	13	2.6	40		
	60	15	2.1	50		
	50	18	1.6	60		
	38	21	1.3	80		
	30	25	1.0	100		

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

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

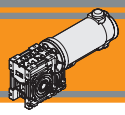
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici

Electrical technical data

EC035 → BB6 EC050 → BB8 EC070 → BB10 EC100 → BB12



Dati tecnici per servizio S2

ECM

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})	**600**	3.5	2.8	5	**ECM180/026**	120/240
	400	5.2	2.1	7.5		
	300	6.8	1.6	10		
	200	10	1.1	15		
	150	13	0.9	20		
	100	17	0.7	30		
	75	16	0.7	40		
	60	14	0.7	50		
	50	13	0.7	60		
	600	3.5	3.7	5	**ECM180/030**	120/240/24E
	400	5.3	2.9	7.5		
	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		120/240
	38	17	0.7	80		
	30	16	0.7	100		
	200	10	3.5	15	**ECM180/040**	120/240/24E
	150	13	2.3	20		
	120	16	1.8	25		
	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		
350						
(3000 min^{-1})	**600**	5.0	2.6	5	**ECM250/030**	120/240
	400	7.4	2.0	7.5		
	300	10	1.7	10		
	200	14	1.1	15		
	150	18	0.8	20		
	120	22	0.7	25		
	100	25	0.7	30		
	75	22	0.7	40		
	60	21	0.7	50		
	200	14	2.5	15	**ECM250/040**	120/240
	150	18	1.7	20		
	120	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		

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		
	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		
	600	7.2	4.0	5	**ECM350/040**	120/240
	400	11	2.9	7.5		
	300	14	2.4	10		
	200	20	1.7	15		
	150	26	1.2	20		
	120	32	0.9	25		
	100	37	1.0	30		
	75	46	0.7	40		
	60	46	0.7	50		
	50	41	0.7	60		
	38	39	0.7	80		
	30	34	0.7	100		
800						
(3000 min^{-1})	**600**	11	2.5	5	**ECM600/040**	120/240
	400	17	1.8	7.5		
	300	22	1.5	10		
	200	32	1.1	15		
	150	42	0.7	20		
	120	40	0.7	25		
	100	54	0.7	30		
	75	49	0.7	40		

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

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

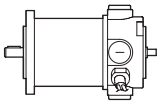
***NOTE:** for continuous or highly intermittent duty, please contact our technical service*

Dati tecnici elettrici

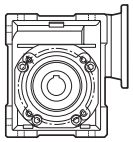
Electrical technical data

EC180 → BB14 EC250 → BB16 EC350 → BB18 EC600 → BB20

Motori applicabili — *Motor adapters*



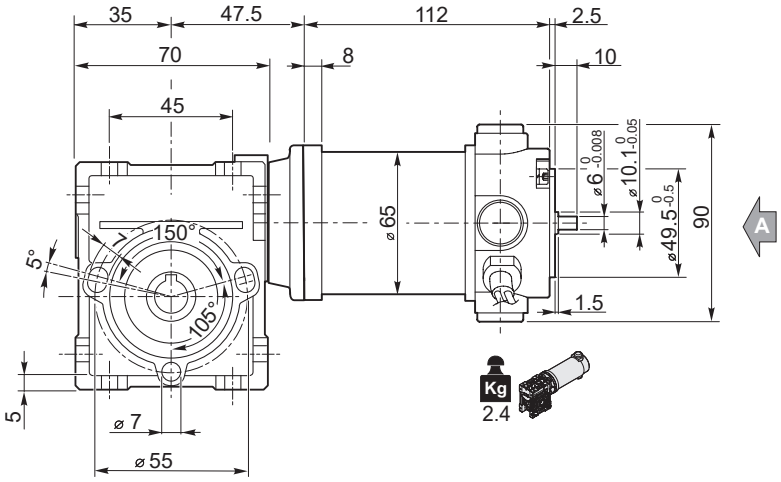
		ND		EC								
		120.120 120.240	180.120 180.240	035.12E 035.24E	050.12E 050.24E	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CM	026	5-60	5-60	5-60	5-60	5-60	5-60	5-60				
	030	5-100	5-100	5-100	5-100	5-100	5-100	5-100	5-50	5-50	5-50	
	040	5-100	5-100			5-100	5-100	5-100	5-100	5-100	5-100	5-40

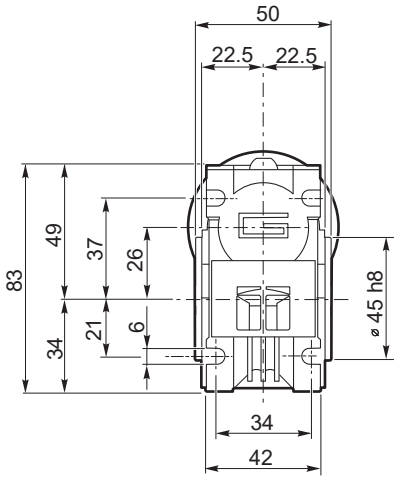


5-100 — Rapporti di riduzione i
Ratio i

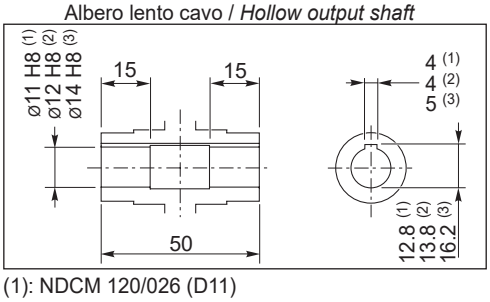
Dimensioni — *Dimensions*

NDCM120/026 U



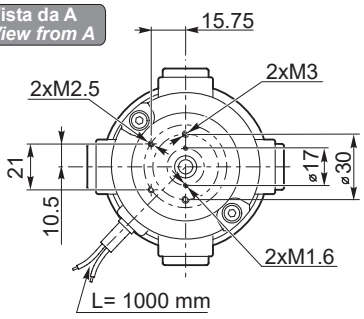


Albero lento cavo / *Hollow output shaft*



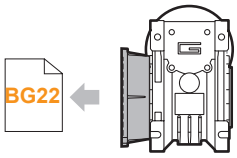
(1): NDCM 120/026 (D11)
(2): NDCM 120/026
(3): NDCM 120/026 (D14)

Vista da A / *View from A*

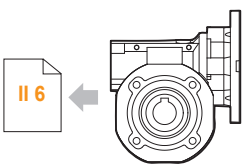


Freno / *Brake* → BA9

Encoder → BA9



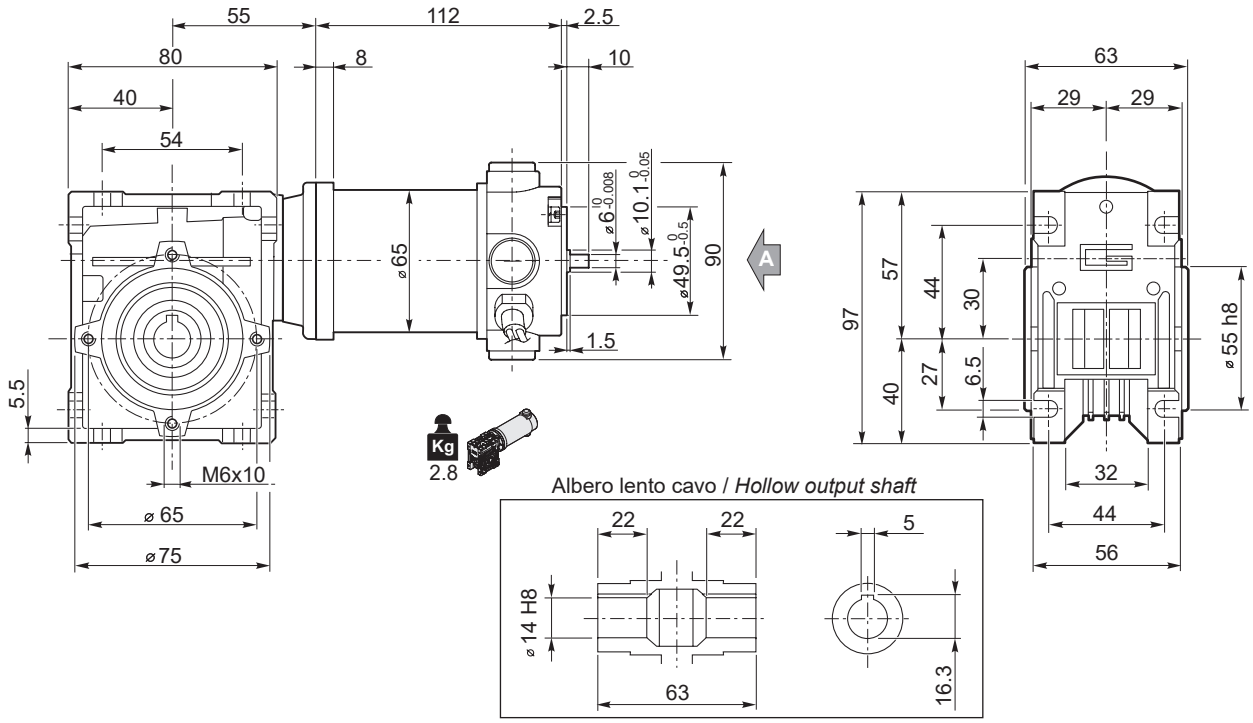
NDCM120/026 F...



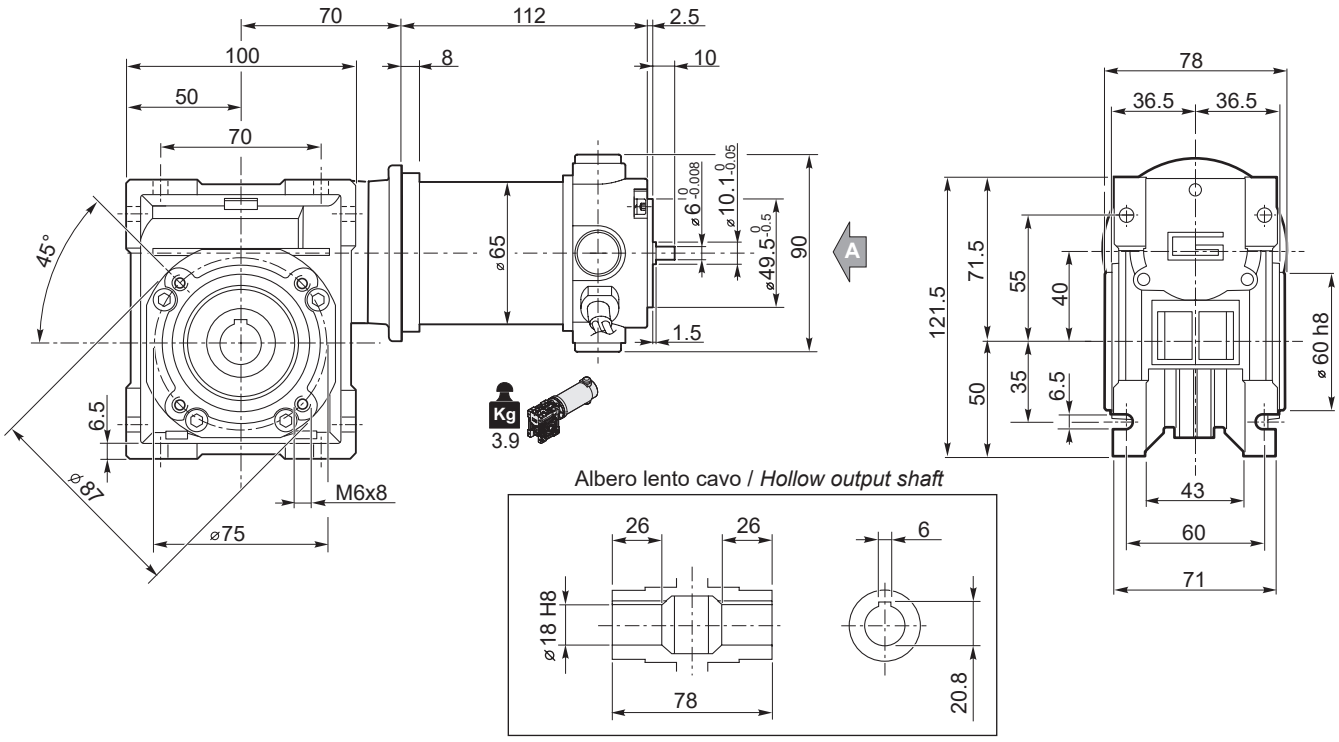
CL026

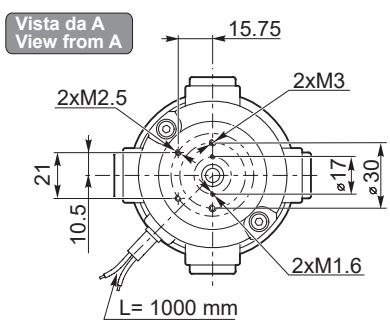
Dimensioni — *Dimensions*

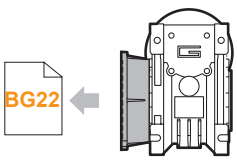
NDCM120/030 U



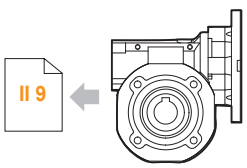
NDCM120/040 U







NDCM120/030 F
NDCM120/040 F...



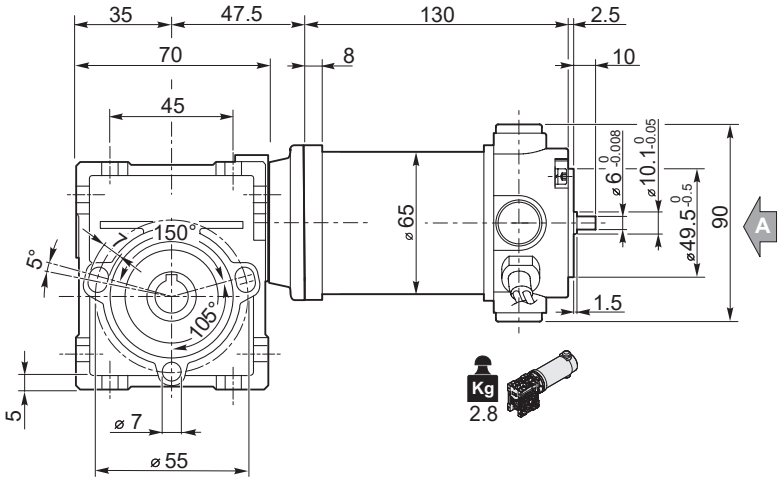
CL030
CL040

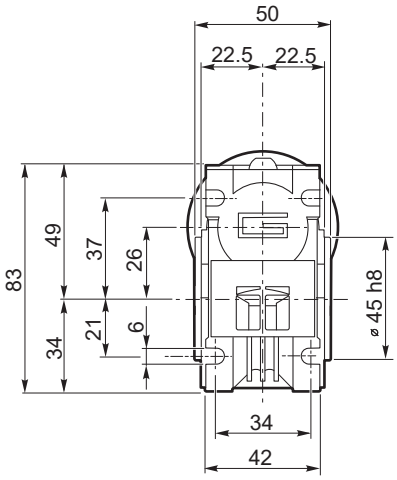
Freno / *Brake* → BA9

Encoder → BA9

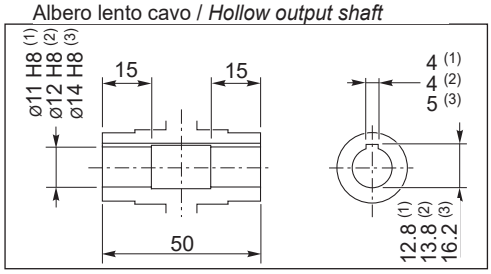
Dimensioni — *Dimensions*

NDCM180/026 U



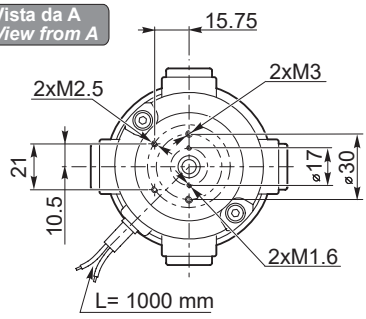


Albero lento cavo / *Hollow output shaft*



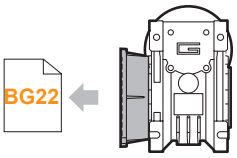
(1): NDCM 180/026 (D11)
(2): NDCM 180/026
(3): NDCM 180/026 (D14)

Vista da A / *View from A*

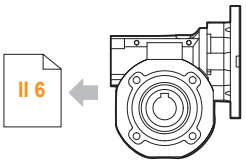


Freno / *Brake* → BA9

Encoder → BA9



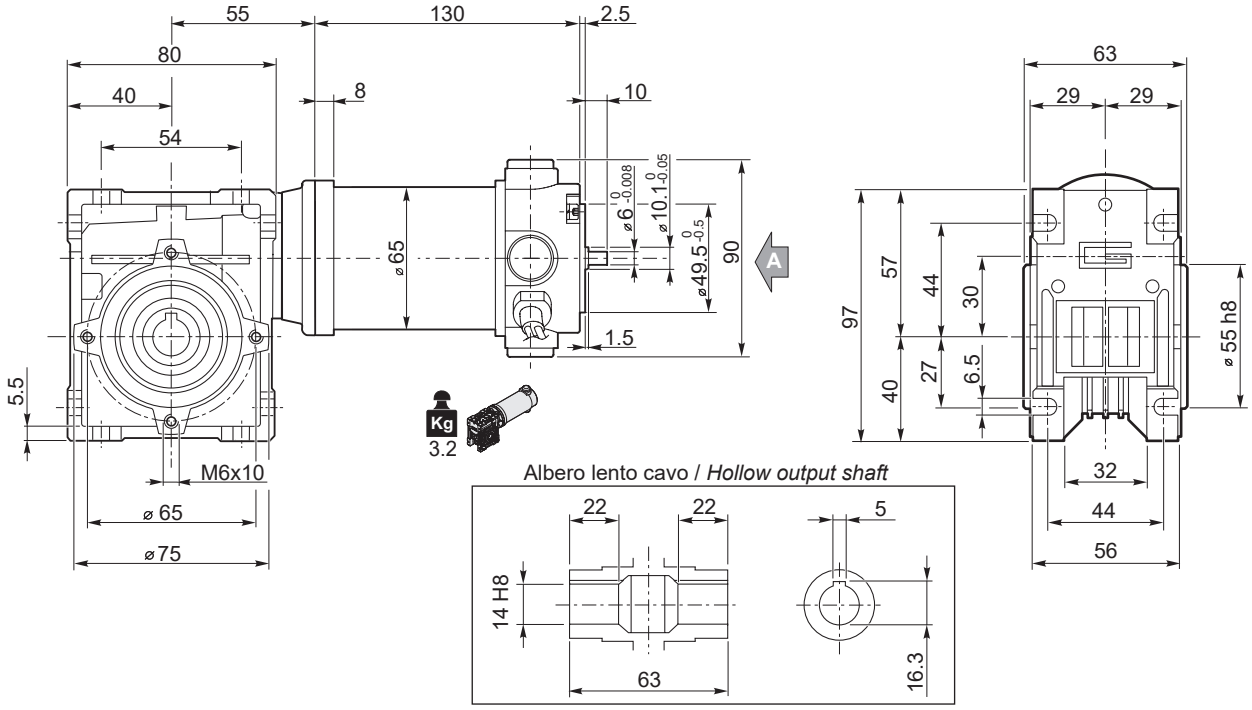
NDCM180/026 F...



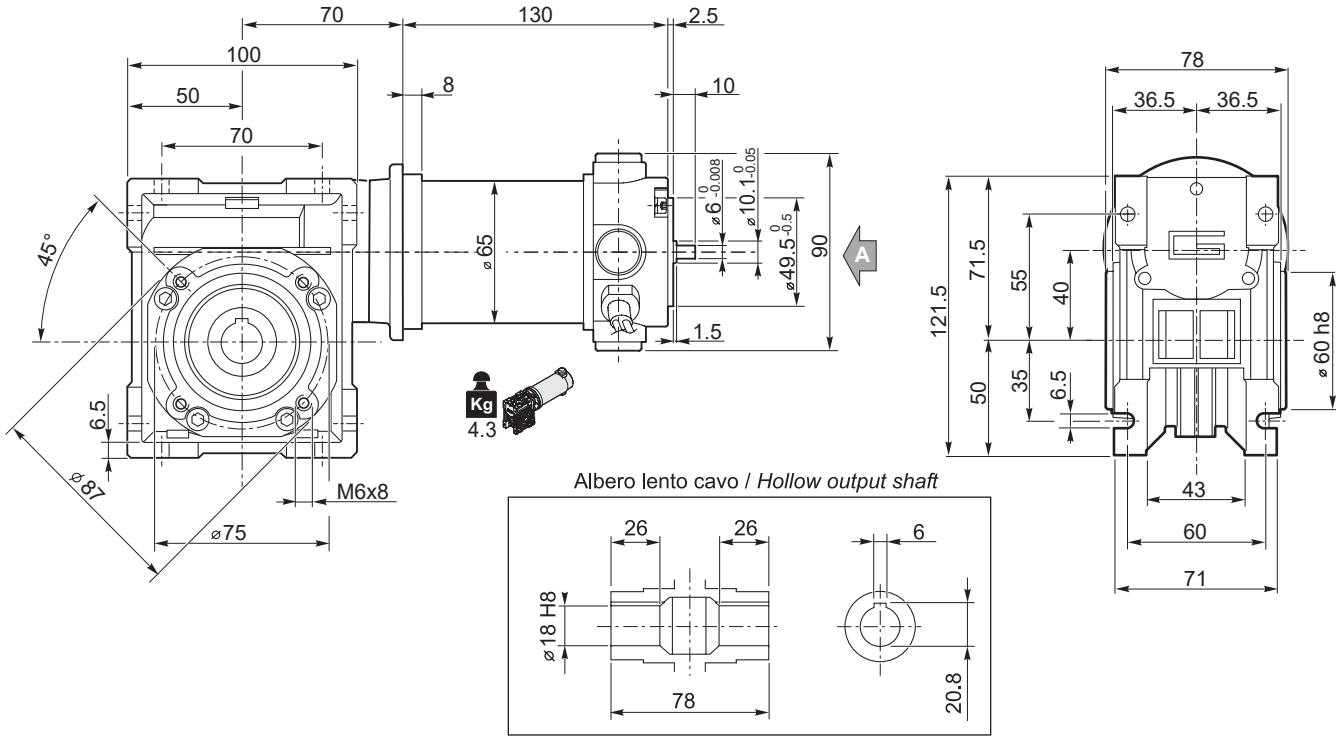
CL026

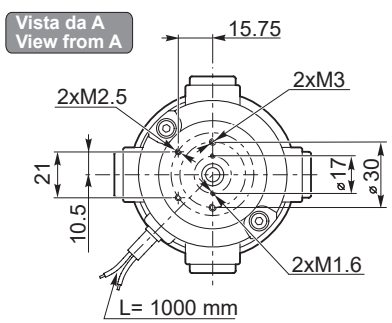
Dimensioni — *Dimensions*

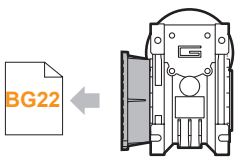
NDCM180/030 U



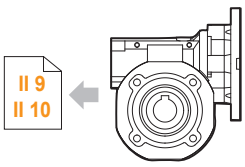
NDCM180/040 U







NDCM180/030 F
NDCM180/040 F...



CL030
CL040

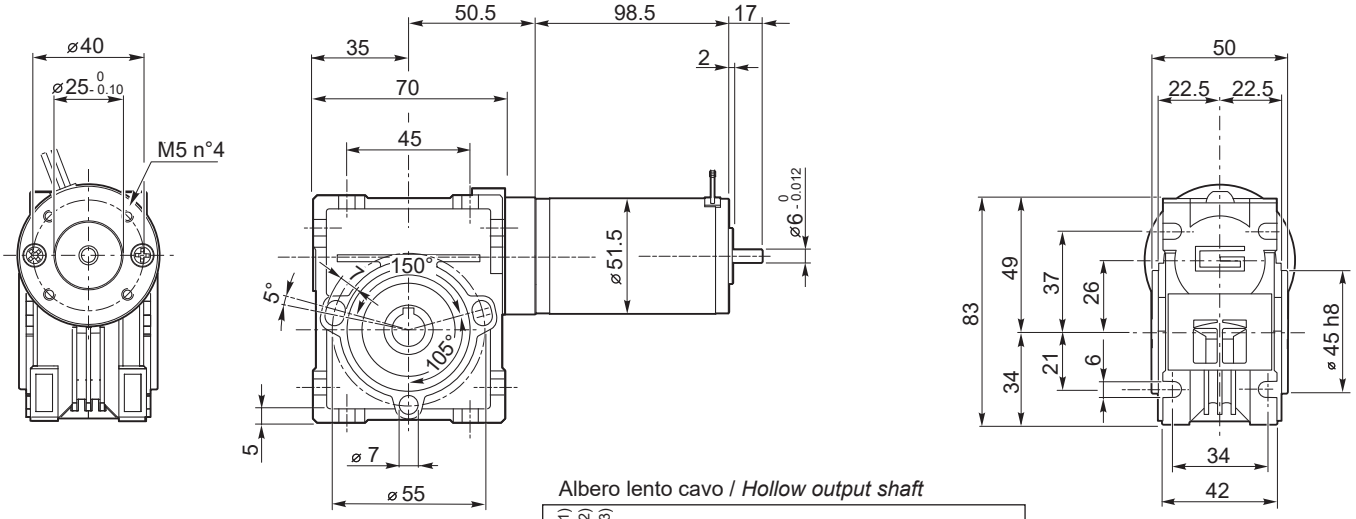
Freno / *Brake* → BA9

Encoder → BA9

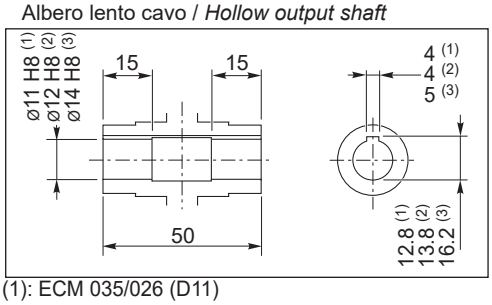
DC

Dimensioni | ***Dimensions***

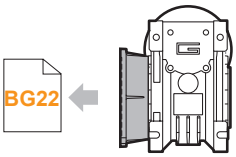
ECM035/026 U



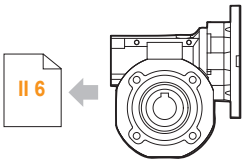
Albero lento cavo / *Hollow output shaft*



(1): ECM 035/026 (D11)
(2): ECM 035/026
(3): ECM 035/026 (D14)

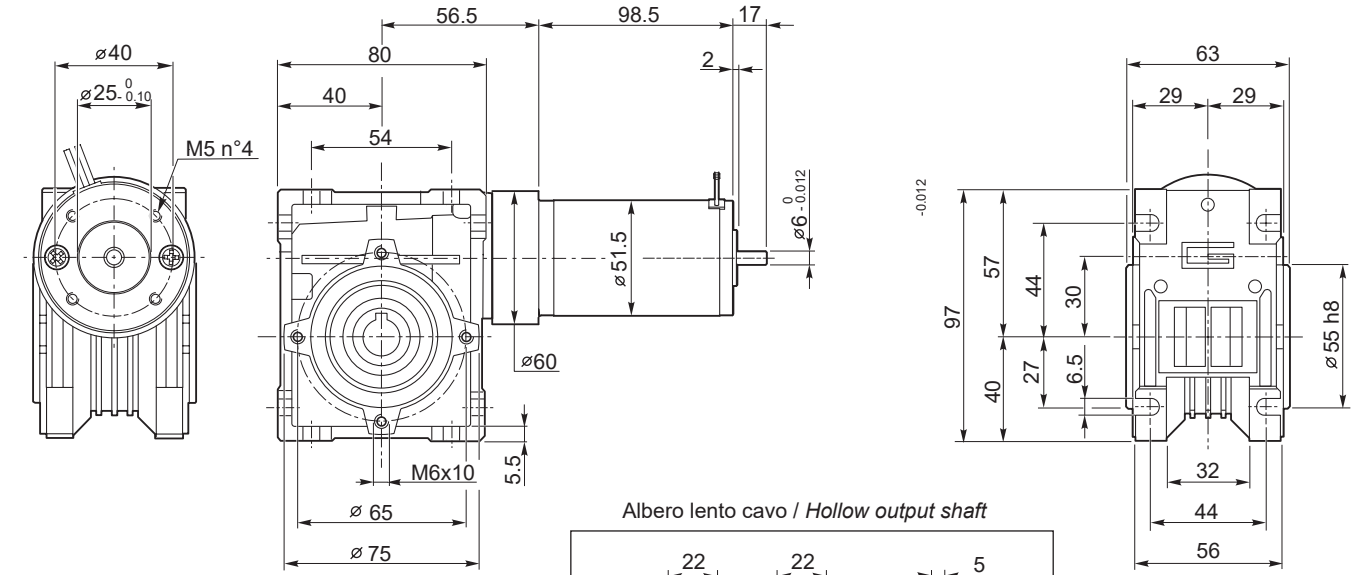


ECM035/026 F...

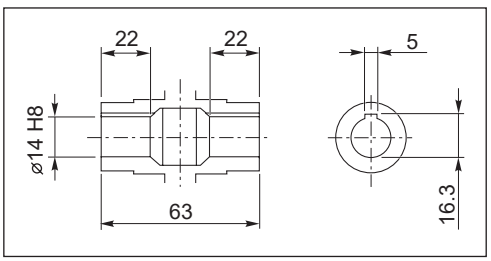


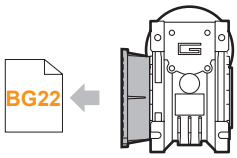
CL026

ECM035/030 U

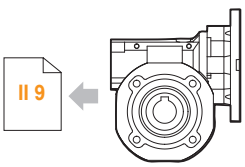


Albero lento cavo / *Hollow output shaft*





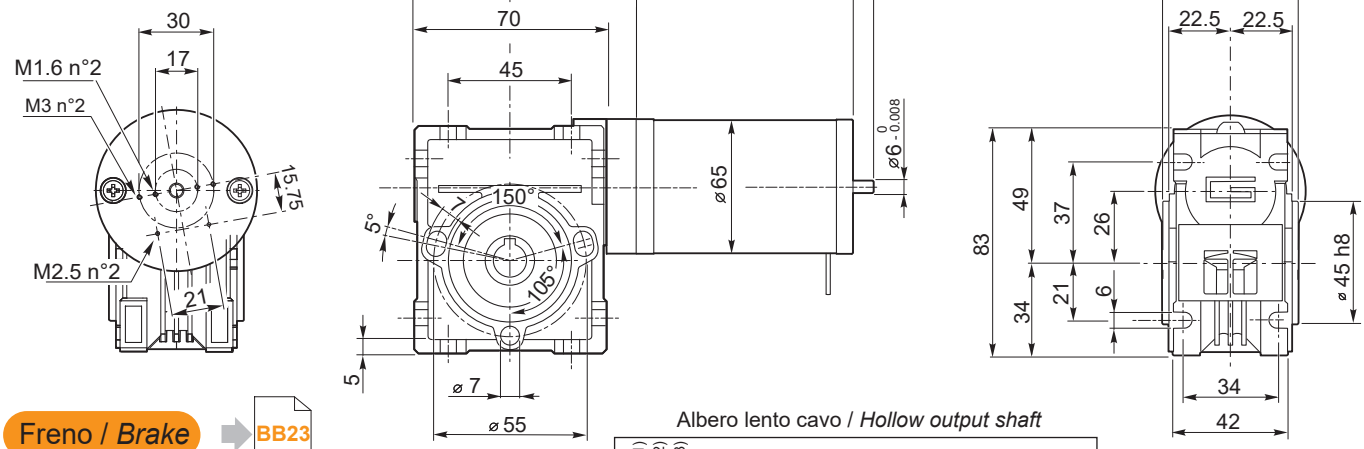
ECM035/030 F



CL030

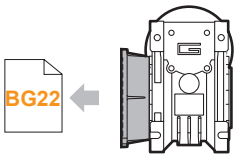
Dimensioni | ***Dimensions***

ECM050/026 U

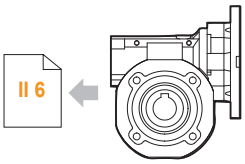


Freno / *Brake* → BB23

Encoder → BB24

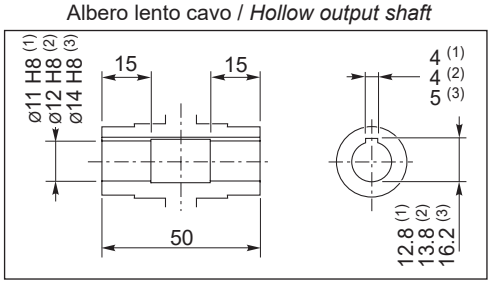


ECM050/026 F....



CL026

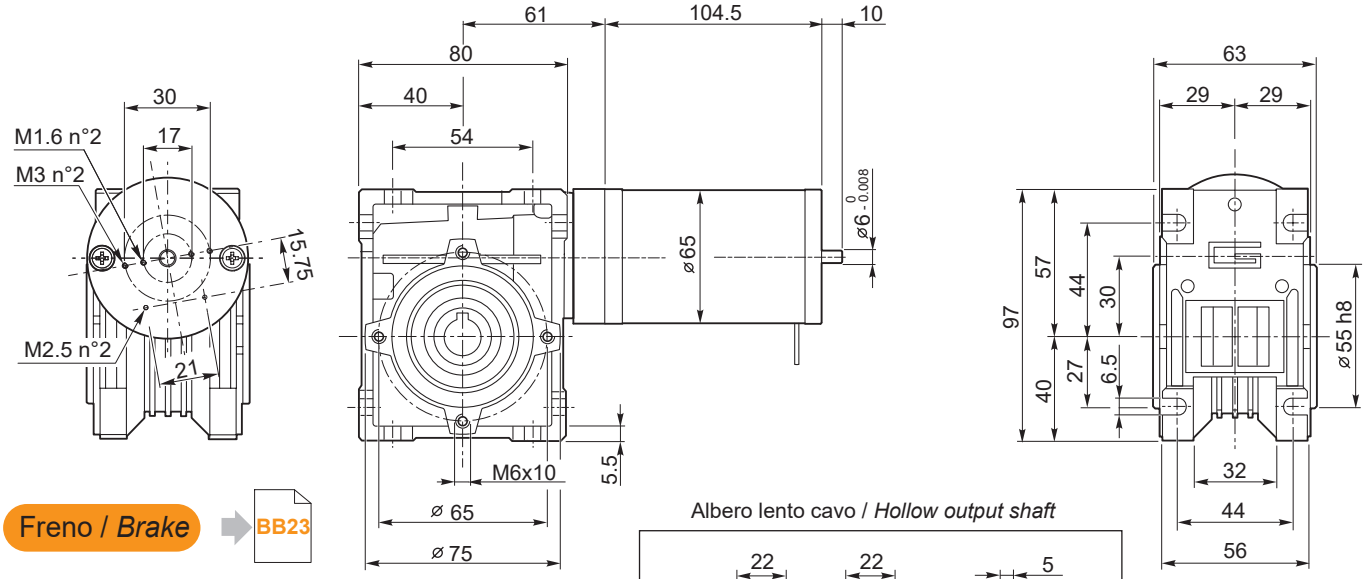
Albero lento cavo / *Hollow output shaft*



(1): ECM 050/026 (D11)
(2): ECM 050/026
(3): ECM 050/026 (D14)

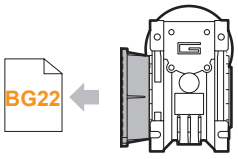
Kg 2.1

ECM050/030 U

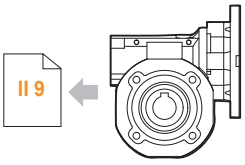


Freno / *Brake* → BB23

Encoder → BB24

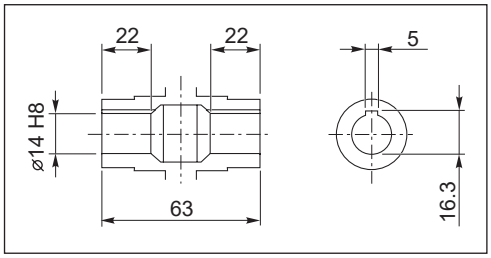


ECM050/030 F



CL030

Albero lento cavo / *Hollow output shaft*

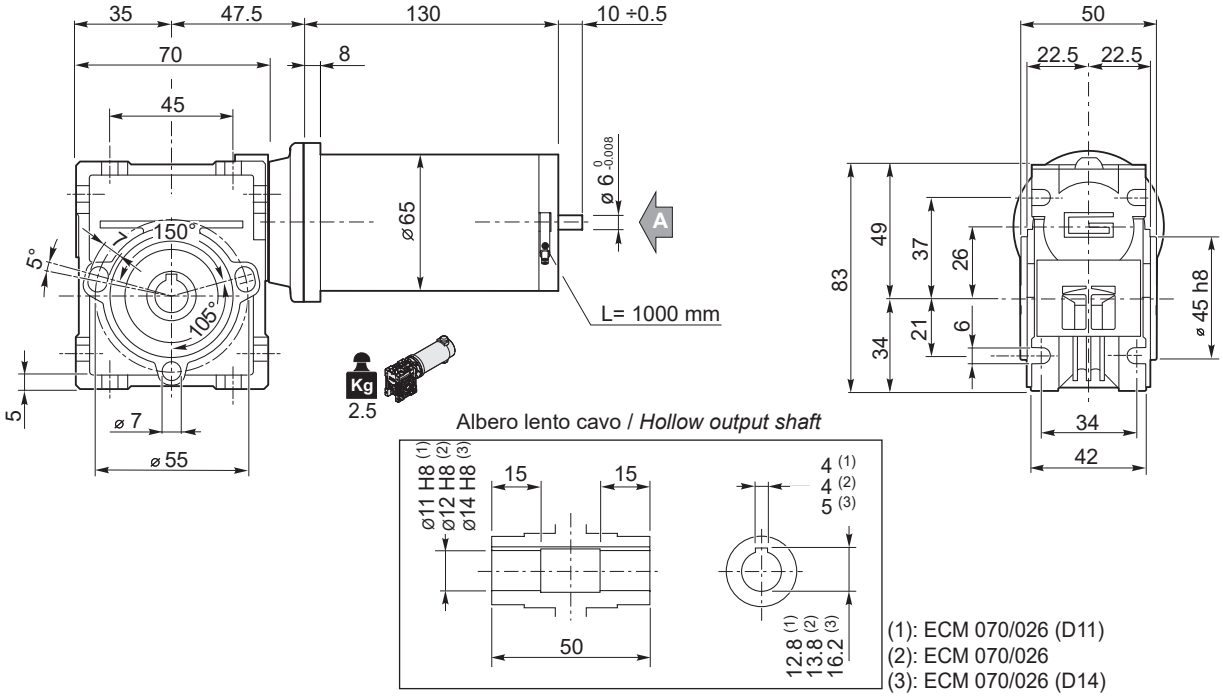


Kg 2.5

DC

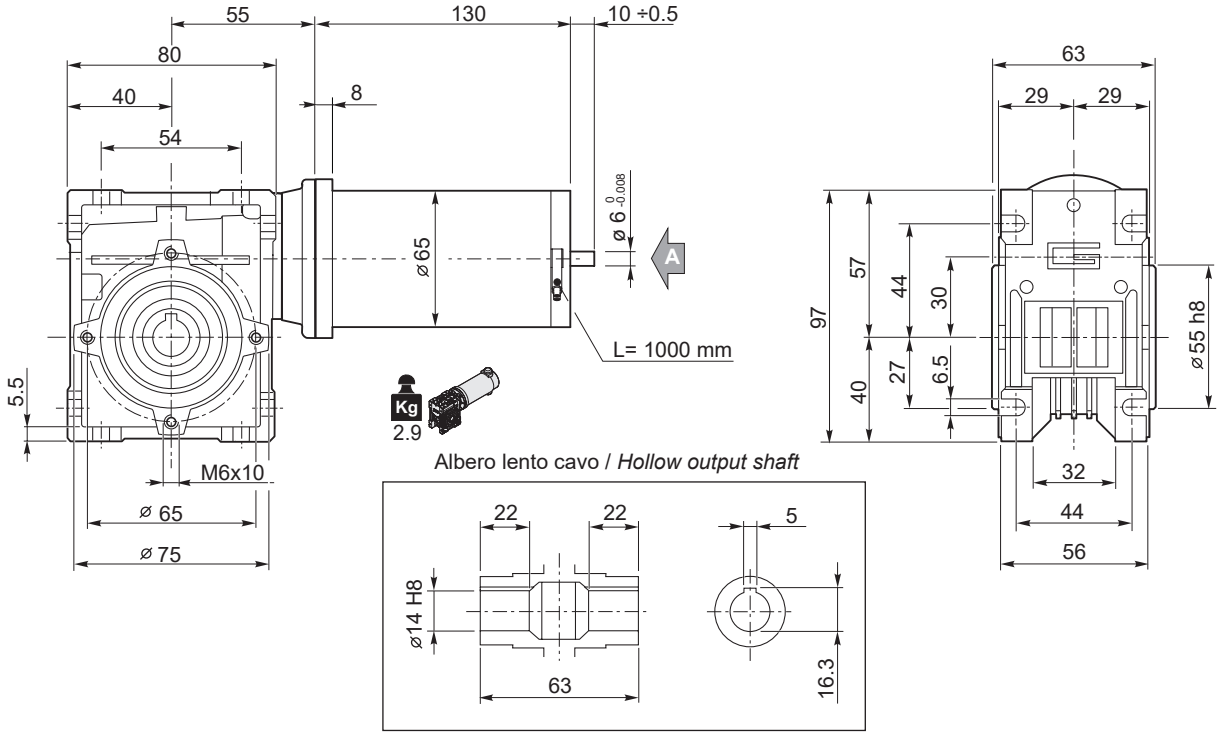
Dimensioni *Dimensions*

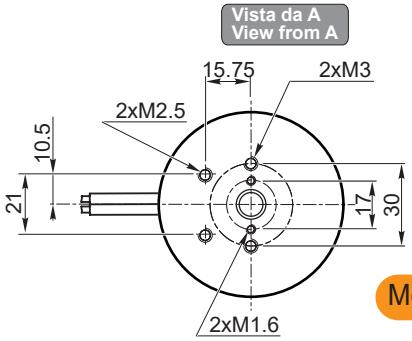
ECM070/026 U

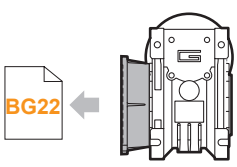


(1): ECM 070/026 (D11)
(2): ECM 070/026
(3): ECM 070/026 (D14)

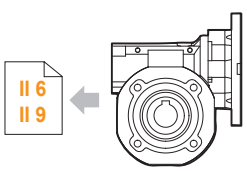
ECM070/030 U







ECM070/026 F...
ECM070/030 F

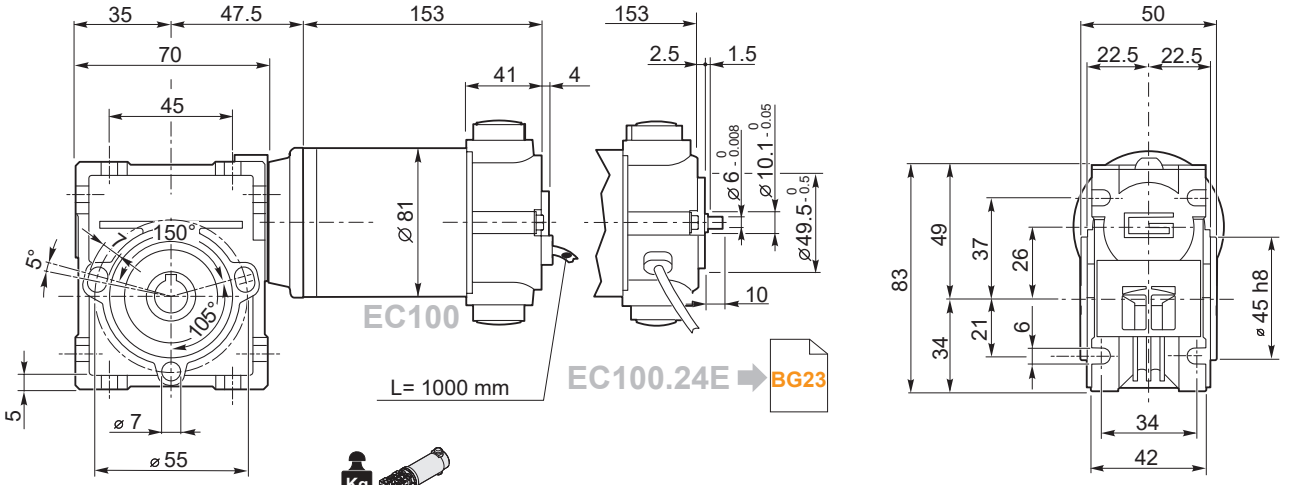


CL026
CL030

Motori / *Motors* IP66 → BC2 | Freno / *Brake* → BB23 | Encoder → BB24

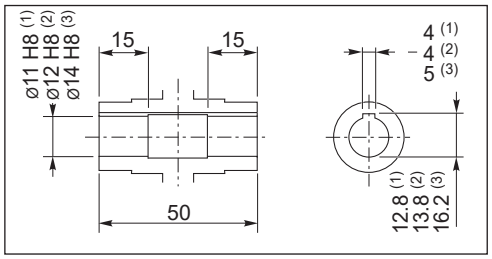
Dimensioni | ***Dimensions***

ECM100/026 U

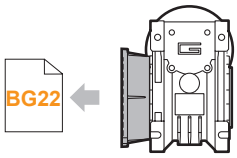


Kg 3.5

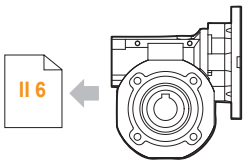
Albero lento cavo / *Hollow output shaft*



(1): ECM 100/026 (D11)
(2): ECM 100/026
(3): ECM 100/026 (D14)



ECM100/026 F...



CL026

Motori / *Motors* IP66 → BC4

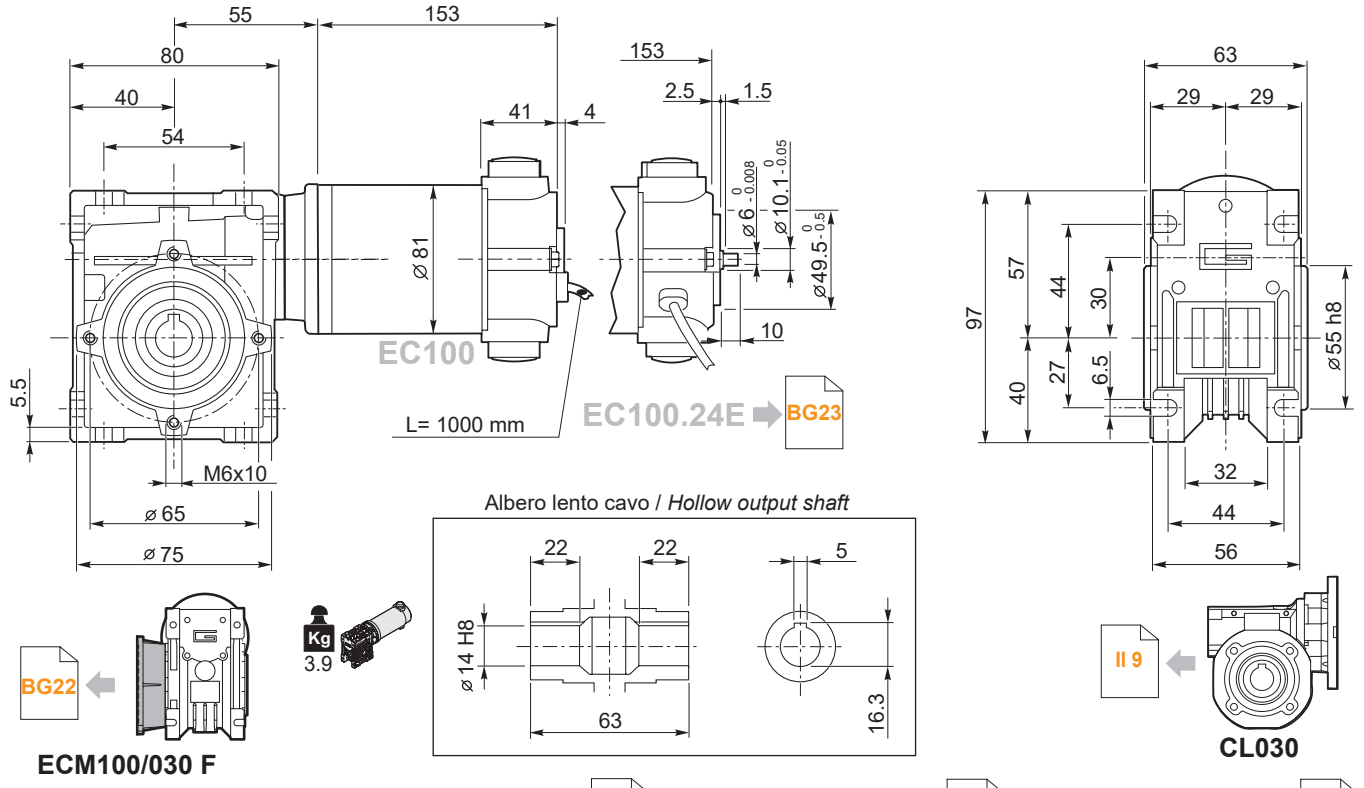
Freno / *Brake* → BB23

Encoder → BB24

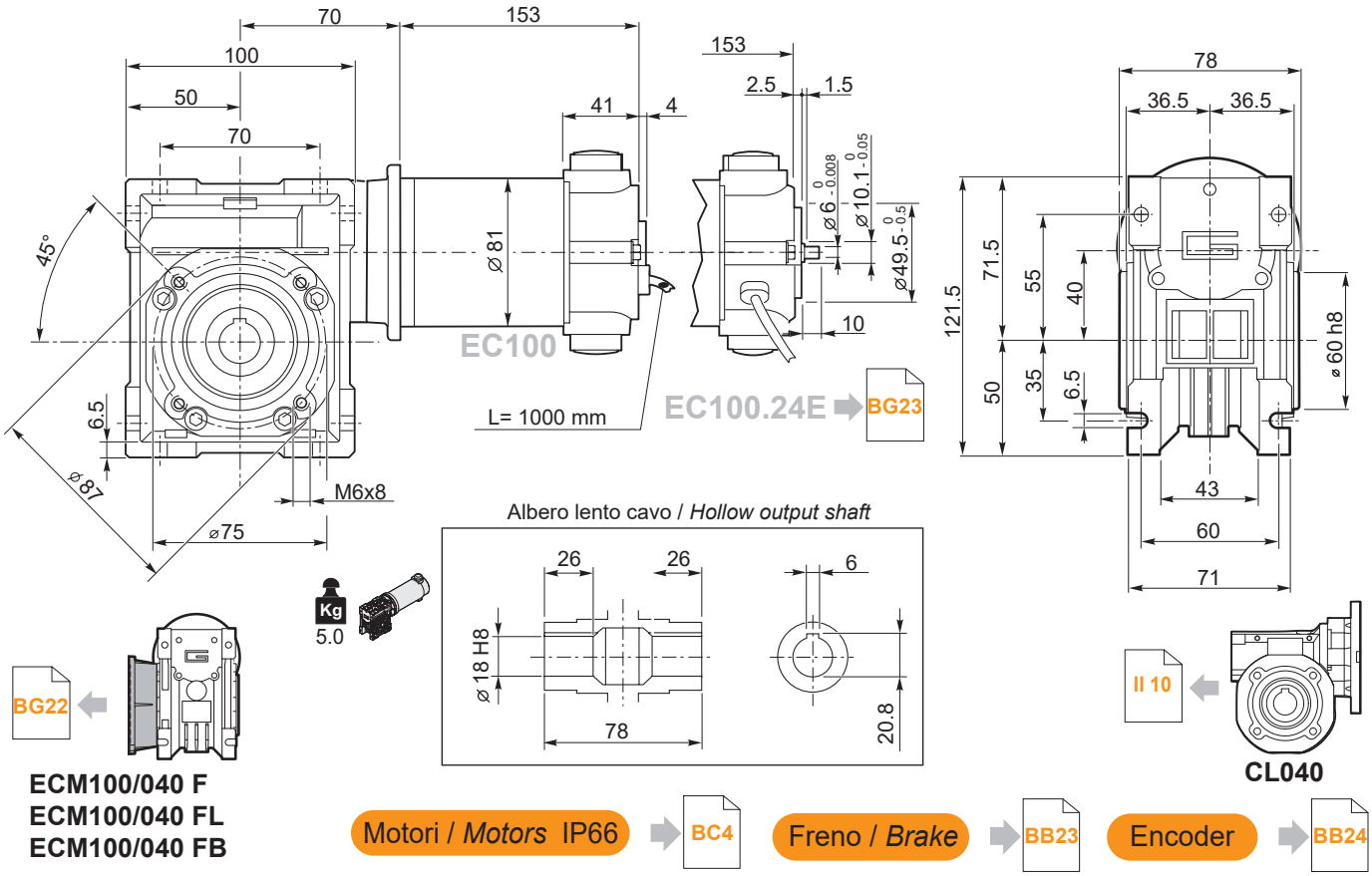
DC

Dimensioni *Dimensions*

ECM100/030 U

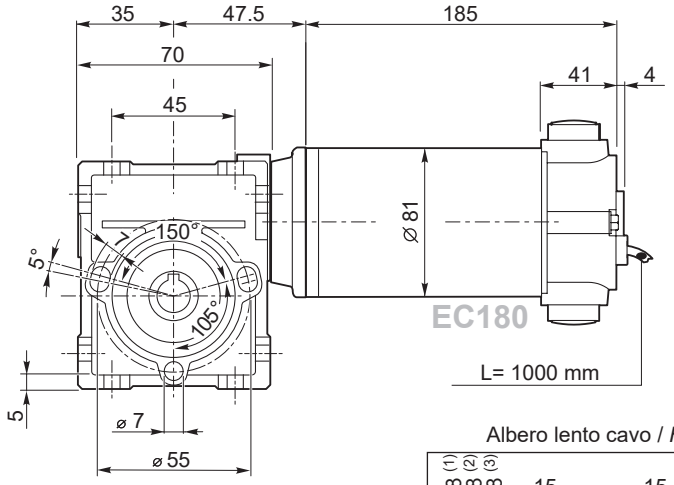


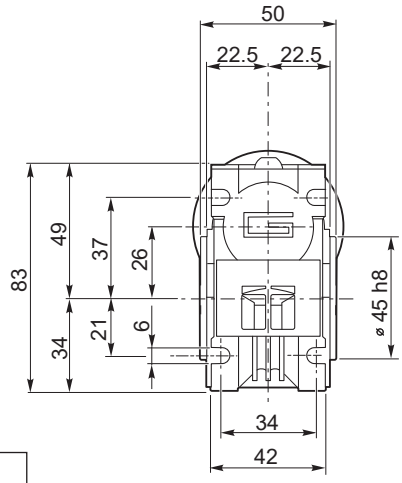
ECM100/040 U



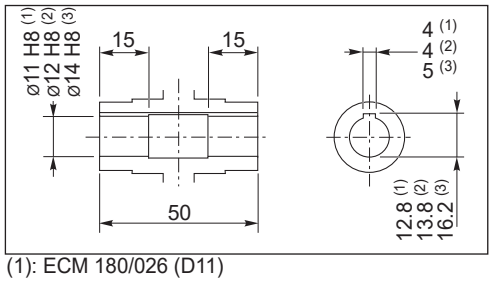
Dimensioni | ***Dimensions***

ECM180/026 U



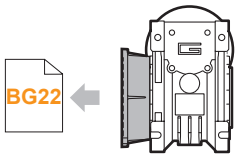


Albero lento cavo / *Hollow output shaft*



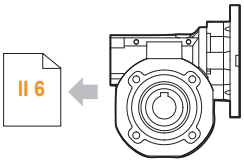
(1): ECM 180/026 (D11)
(2): ECM 180/026
(3): ECM 180/026 (D14)

Kg 4.2



BG22

ECM180/026 F...

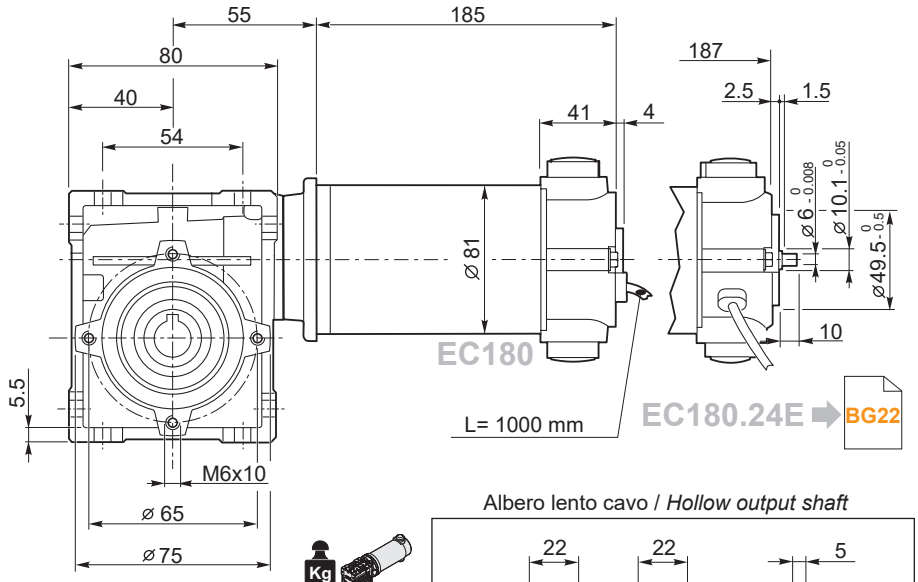


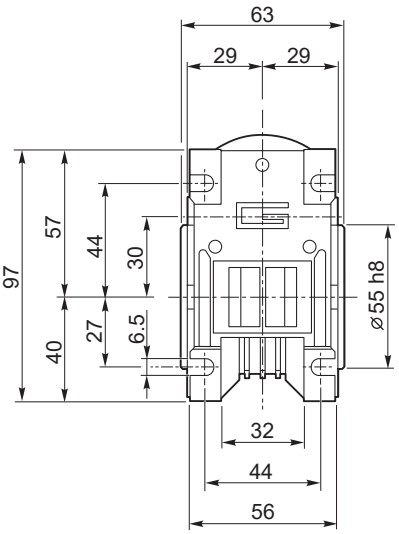
II 6

CL026

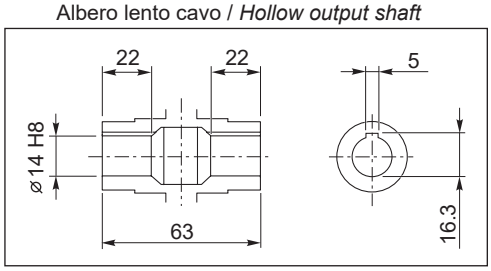
Motori / *Motors* IP66 → BC6 | Freno / *Brake* → BB23 | Encoder → BB24

ECM180/030 U

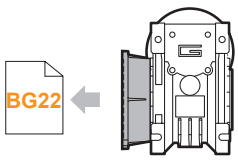




Albero lento cavo / *Hollow output shaft*

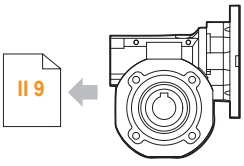


Kg 4.6



BG22

ECM180/030 F



II 9

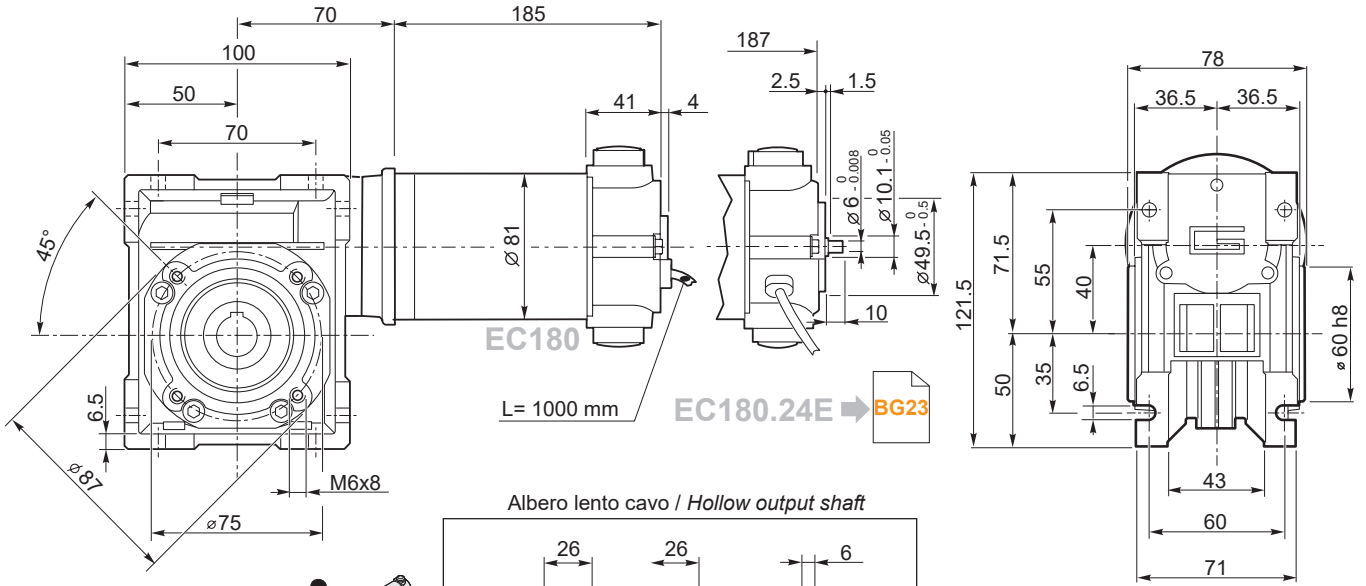
CL030

Motori / *Motors* IP66 → BC6 | Freno / *Brake* → BB23 | Encoder → BB24

DC

Dimensioni ***Dimensions***

ECM180/040 U

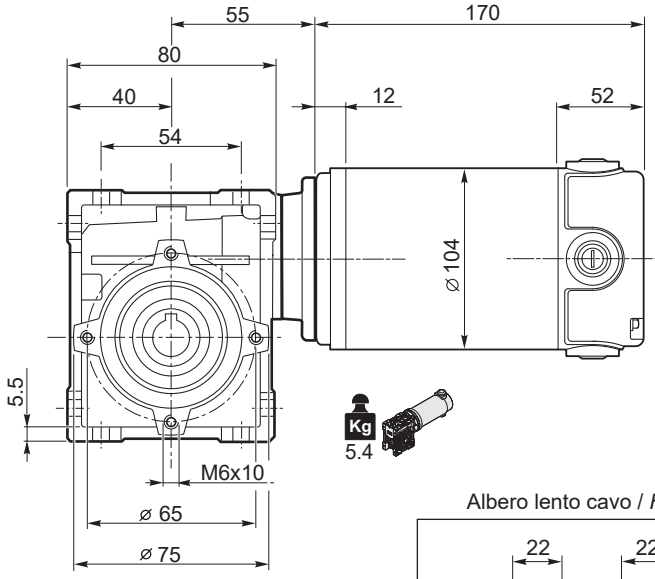


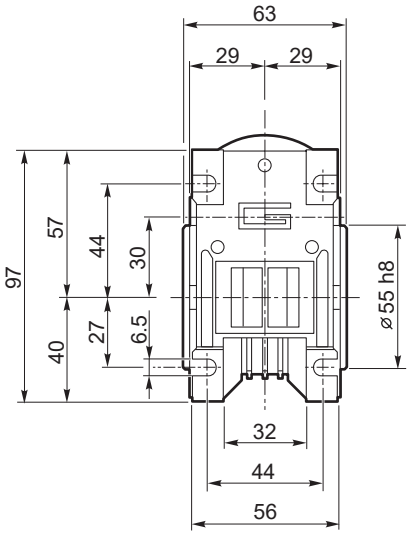
ECM180/040 F
ECM180/040 FL
ECM180/040 FB

Motori / *Motors* IP66 BC6 | Freno / *Brake* BB23 | Encoder BB24

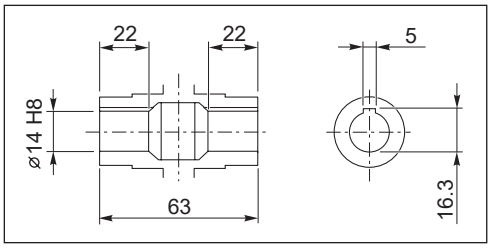
Dimensioni | ***Dimensions***

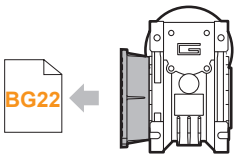
ECM250/030 U



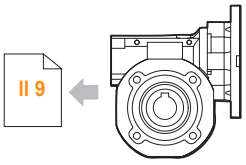


Albero lento cavo / *Hollow output shaft*





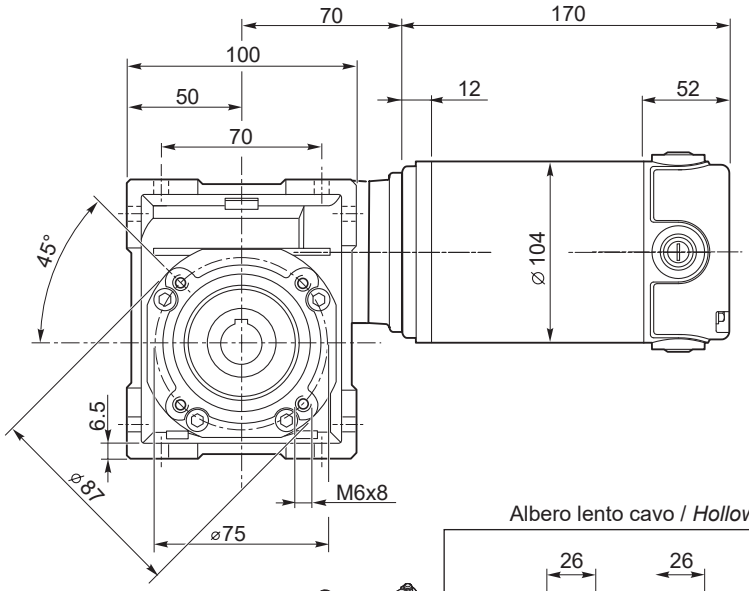
ECM250/030 F

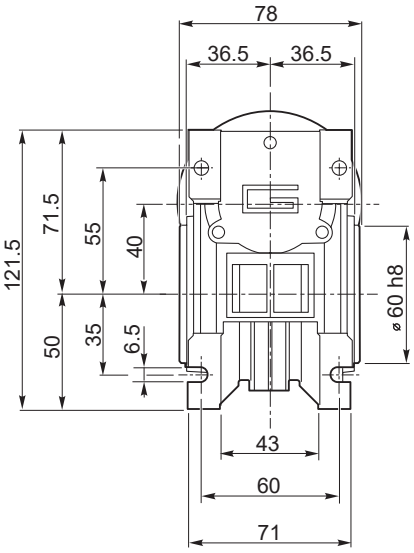


CL030

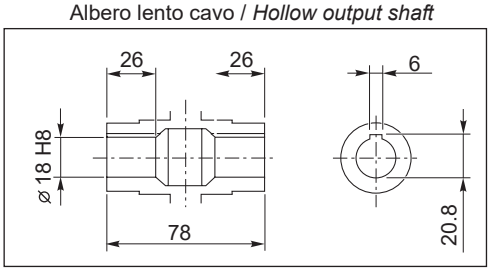
Motori / *Motors* IP66 → BC8

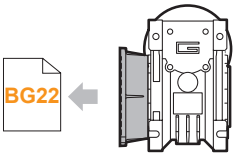
ECM250/040 U



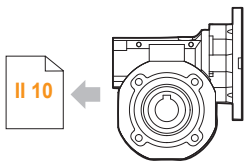


Albero lento cavo / *Hollow output shaft*





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



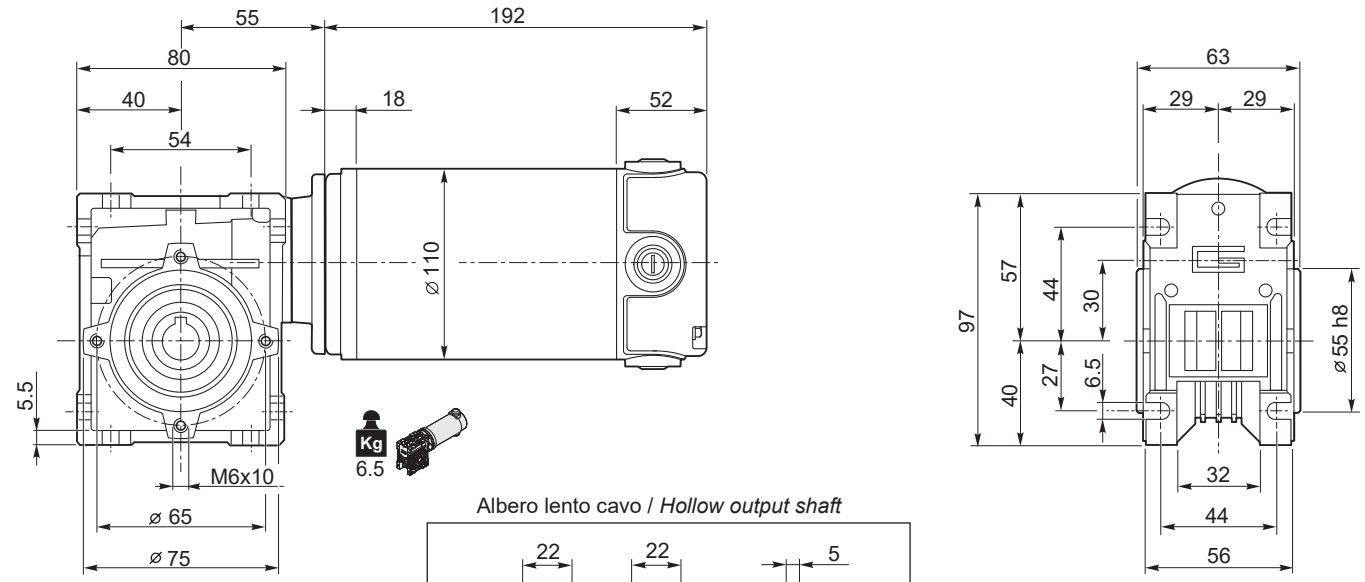
CL040

Motori / *Motors* IP66 → BC8

DC

Dimensioni | ***Dimensions***

ECM350/030 U



BG22

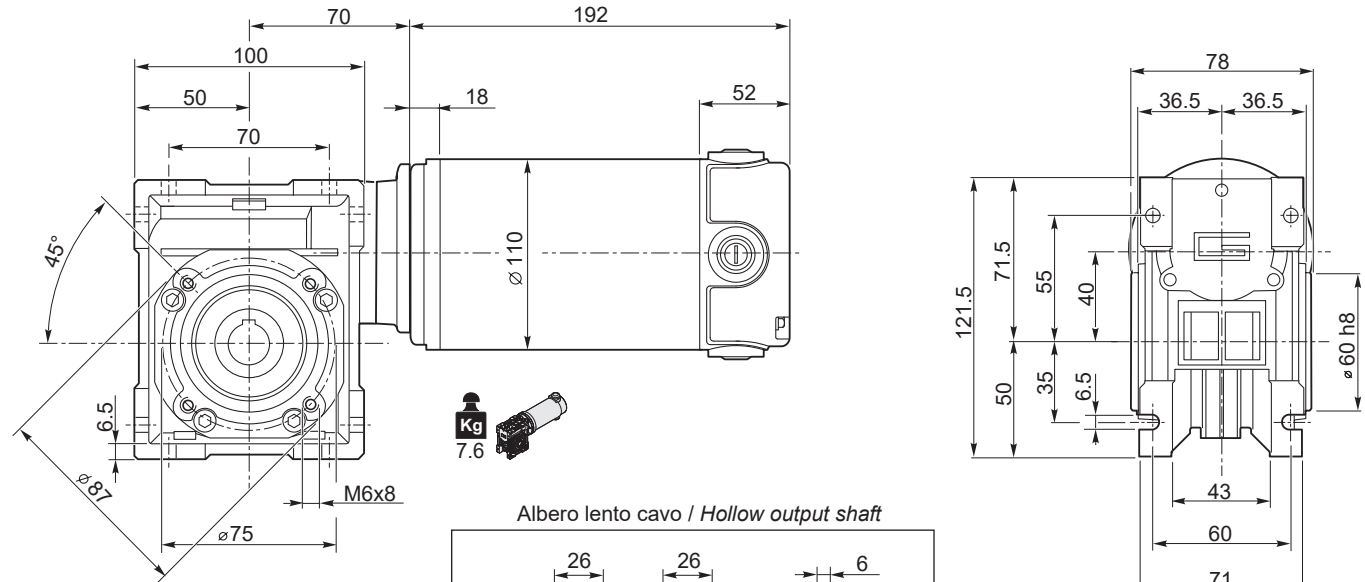
ECM350/030 F

II 9

CL030

Motori / *Motors* IP66 → BC10 | Freno / *Brake* → BB23

ECM350/040 U



BG22

ECM350/040 F
ECM350/040 FL
ECM350/040 FB

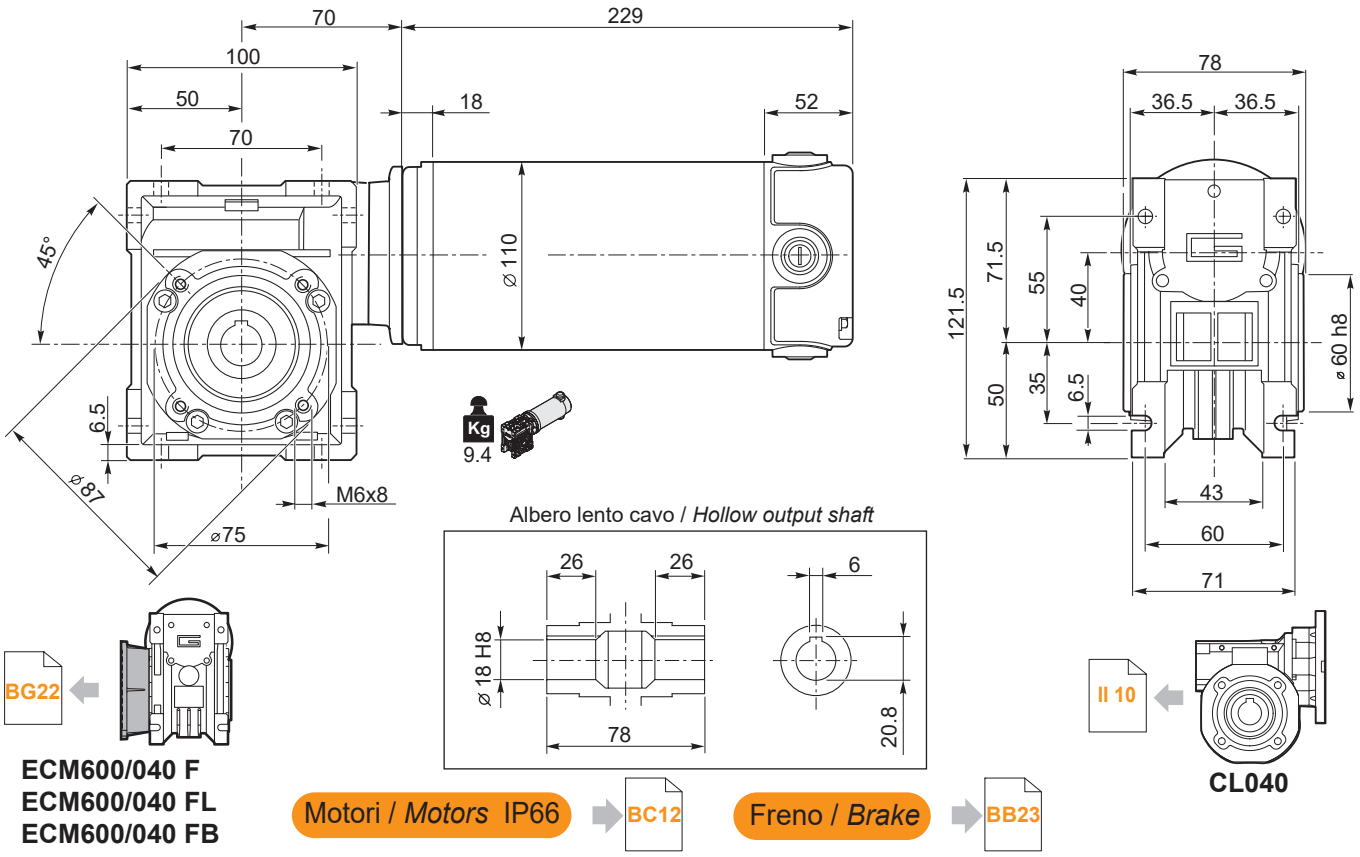
II 10

CL040

Motori / *Motors* IP66 → BC10 | Freno / *Brake* → BB23

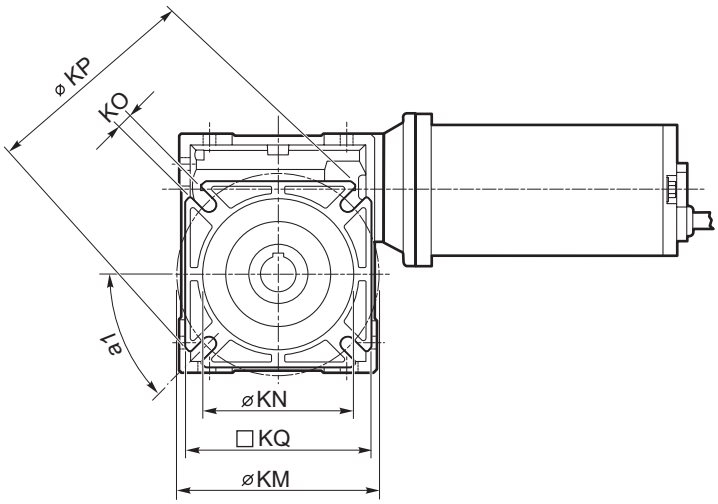
Dimensioni | ***Dimensions***

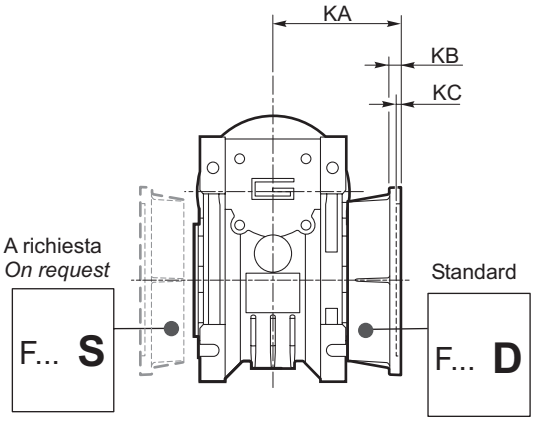
ECM600/040 U

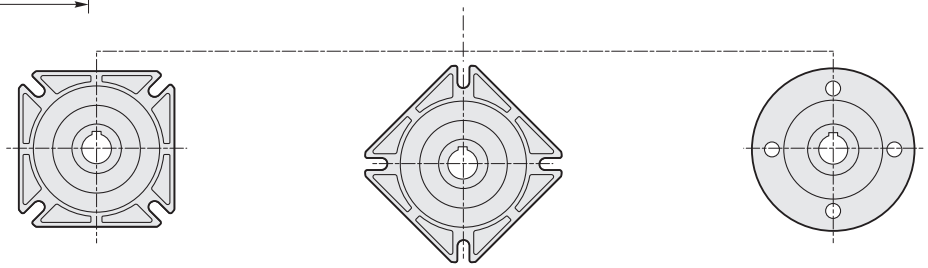


Dimensioni — *Dimensions*

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







..CM026 ../.. F
..CM026 ../.. F28
..CM026 ../.. F30
..CM026 ../.. F30S
..CM030 ../.. F..
..CM040 ../.. F..

..CM026 ../.. F30C
..CM026 ../.. F30SC

..CM026 ../.. F100

	CM..F									CM..F28								CM..F30								CM..F30S (1)							
	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	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	50	8.5	7	68	50	6.5	80	70

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

	CM..F30C									CM..F30SC (2)								CM..F100							
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC *	KM	KN h7	KO	KP	KQ
026 (D11) 026 026 (D14)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-

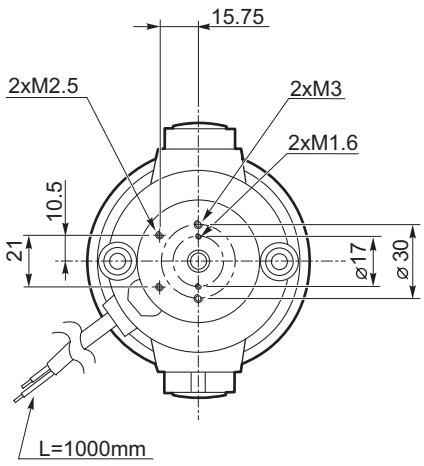
(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / *F30SC made with F30C and spacer with 2mm thickness*

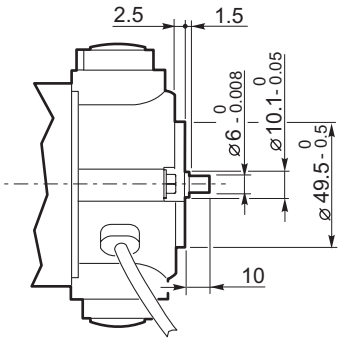
*: Centraggio maschio / *Male centering diameter*

CM	CM..F									CM..FB								CM..FL							
	a1	KA	KB	KC	KM	KN 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

Dimensioni — *Dimensions*

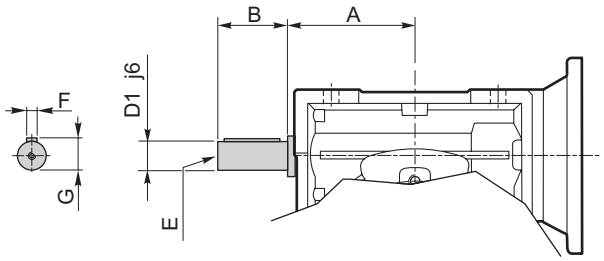
EC100.24E
EC180.24E





Opzioni — *Options*

VS - Vite sporgente / *Extended input shaft*

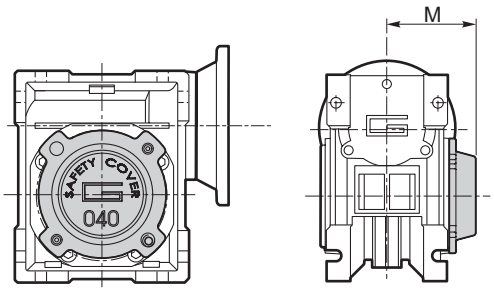


	A	B	D_1 j6	E	F	G
CM 030	45	20	9	M4	3	10.2
CM 040	53	23	11	M5	4	12.5

Costruito su richiesta
Built on request

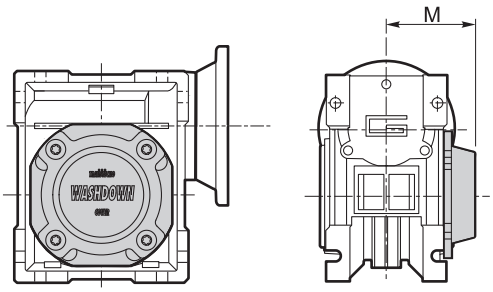
Accessori — *Accessories*

SC - *Safety cover*



	M
CM 030	47
CM 040	54.5

WD - *Kit washdown cover*

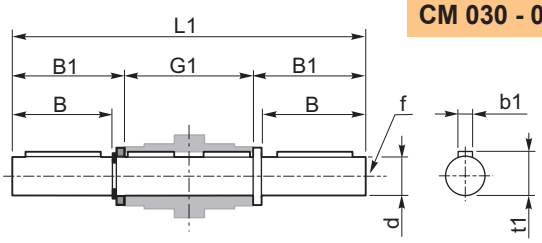


	M
CM 030	48
CM 040	55.5

Accessori / *Accessories*

Albero lento / *Output shaft*

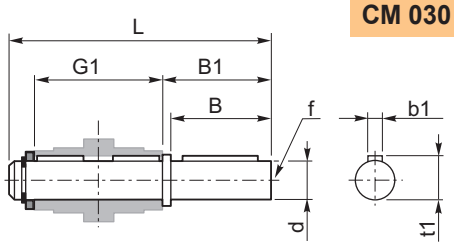
DZ



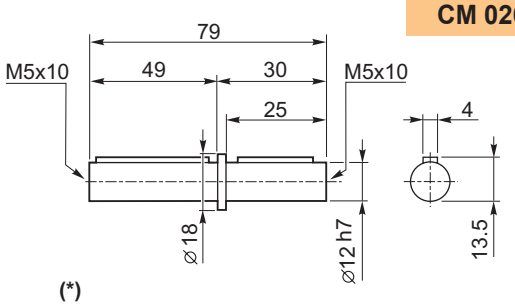
CM 030 - 040

	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

SZ



CM 030 - 040

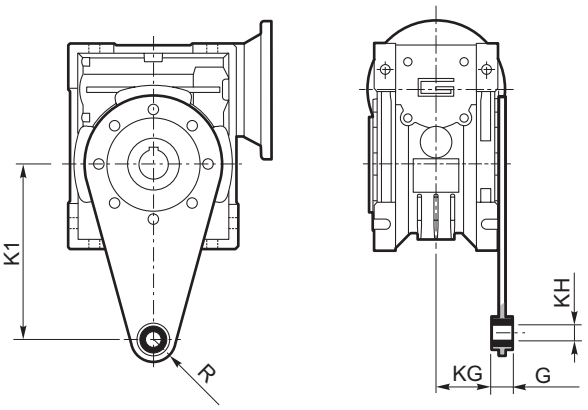


CM 026 (*)

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

Braccio di reazione / *Torque arm*

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

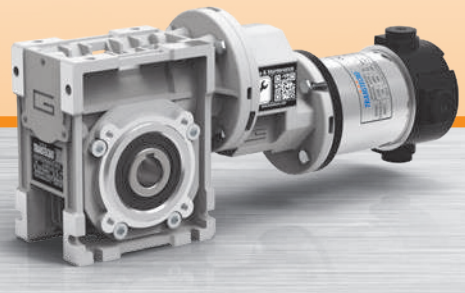


MINI TECNO™

small but strong

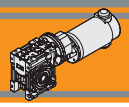
NDCMP
ECMP

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



DC

MINI TECNO™ brand of TRANSTECNO®



ENERGY SAVING

Caratteristiche tecniche

Technical features

I motoriduttori CC a vite senza fine con precoppia a magneti permanenti in neodimio **NDCMP** e in ferrite **ECMP** hanno le seguenti caratteristiche principali:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 350W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

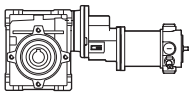
NDCMP *neodymium permanent magnets and* ***ECMP*** *ferrite permanent magnets DC pre stage wormgearmotors range has the following main features:*

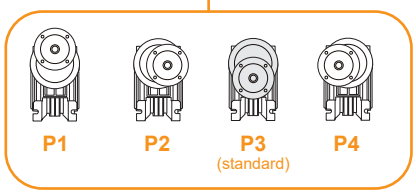
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder and brake assembly*
- *Motor power ratings available from 100 up to 350W S2*
- *Die-cast aluminum hosuings*
- *Permanent synthetic oil long-life lubrication.*

Designazione

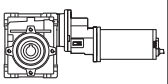
Classification

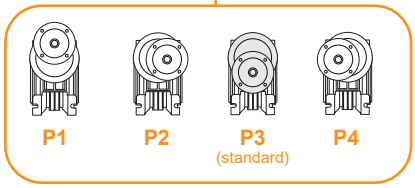
MOTORIDUTTORE / *GEARMOTOR*

NDCMP	120/056/030		U	90	SZDX	BRSX	90	P4	240	VS
Tipo *Type*	Grandezza *Size*		Versione Riduttore *Gearbox Version*	Rapporto *Ratio*	Albero di uscita *Output shaft*	Braccio di reazione *Torque arm*	Angolo *Angle*	Pos. di montaggio precoppia *Pre stage mounting position*	Versione Motore *Motor Version*	Opzioni *Options*
NDCMP 	**120/056/030** **120/056/040**	**180/056/030** **180/056/040**	**U** **FD** **FS** **FLD** **FLS** **FBD** **FBS**	Vedere tabella *See tables*	**SZDX** **SZSX** **DZ**	**BRDX** **BRSX** (*)	**0°** **90°** **180°** **270°**	**P1** **P2** **P3** (standard) **P4**	**120 — 240**	**VS**

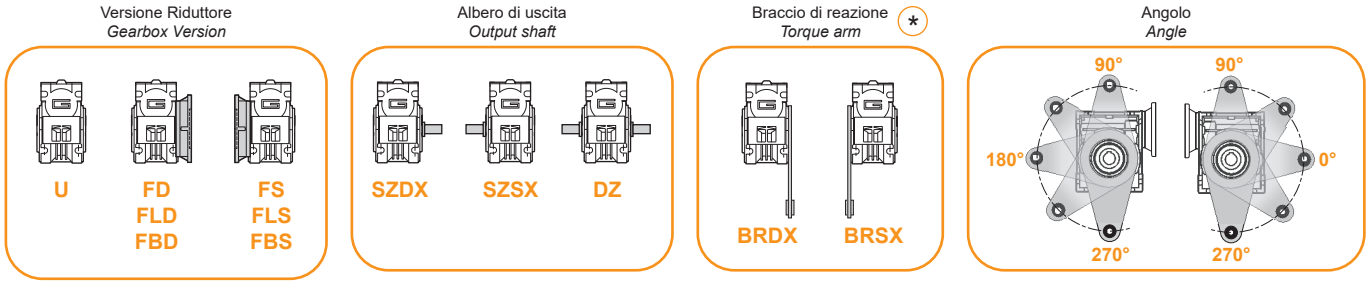


MOTORIDUTTORE / *GEARMOTOR*

ECMP	070/056/030		U	90	SZDX	BRSX	90	P4	240	VS
Tipo *Type*	Grandezza *Size*		Versione Riduttore *Gearbox Version*	Rapporto *Ratio*	Albero di uscita *Output shaft*	Braccio di reazione *Torque arm*	Angolo *Angle*	Pos. di montaggio precoppia *Pre stage mounting position*	Versione Motore *Motor Version*	Opzioni *Options*
ECMP 	**070/056/030** **070/056/040** **100/056/030** **100/056/040**	**180/056/030** **180/056/040** **180/063/040** **250/063/040**	**U** **FD** **FS** **FLD** **FLS** **FBD** **FBS**	Vedere tabella *See tables*	**SZDX** **SZSX** **DZ**	**BRDX** **BRSX** (*)	**0°** **90°** **180°** **270°**	**P1** **P2** **P3** (standard) **P4**	**120** **240** **24E**	**VS**



Designazione — *Classification*



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

Simbologia — *Symbols*

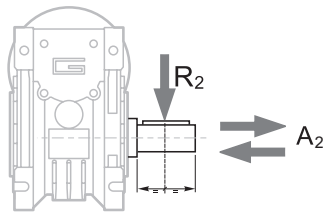
n_1	[min^{-1}]	Velocità in ingresso / *Input speed*	M_2	[Nm]	Coppia in uscita in funzione di P_1 / *Output torque referred to P_1*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*	sf		Fattore di servizio / *Service factor*
i		Rapporto di riduzione / *Ratio*	R_2	[N]	Carico radiale ammissibile in uscita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

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.

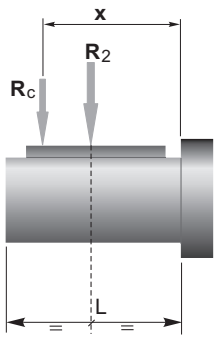
Carichi radiali — *Radial loads*



n_2 [min^{-1}]	R_2 [N]	
	CM030	CM040
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

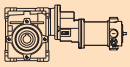
	CM	
	030	040
a	65	84
b	50	64
R_{2MAX}	1600	3000

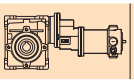
DC

Dati tecnici per servizio S2

NDCMP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**50**	21	1.0	60	**120/056/030**	120/240
	40	25	0.9	75		
	33	28	1.0	90		
	25	35	0.7	120		
	20	31	0.7	150		
	50	22	2.0	60	**120/056/040**	120/240
	40	26	1.7	75		
	33	30	1.9	90		
	25	36	1.3	120		
	20	43	1.1	150		
	17	48	0.9	180		
	13	55	0.7	240		
	10	51	0.7	300		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	50	31	0.7	60	**180/056/030**	180/240
	40	31	0.7	75		
	33	39	0.7	90		
	25	33	0.7	120		
	20	31	0.7	150		
	50	35	1.3	60	**180/056/040**	180/240
	40	41	1.1	75		
	33	46	1.2	90		
	25	56	0.9	120		
	20	66	0.7	150		
	17	61	0.7	180		
	13	57	0.7	240		
	10	51	0.7	300		

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

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

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

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

Dati tecnici elettrici

Electrical technical data

ND 120 → BA4

ND 180 → BA6

Dati tecnici per servizio S2

ECMP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i	Versione motore *Motor version*
100					
(3000 min^{-1})	**50**	13	1.7	60	**ECMP070/056/030** 12E/24E
	40	16	1.4	75	
	33	17	1.6	90	
	25	22	1.1	120	
	20	25	0.9	150	
	50	14	3.2	60	**ECMP070/056/040** 12E/24E
	40	16	2.7	75	
	33	19	3.0	90	
	25	22	2.1	120	
	20	27	1.7	150	
	17	30	1.4	180	
	13	34	1.2	240	
	10	38	0.9	300	
140					
(3000 min^{-1})	**50**	19	1.2	60	**ECMP100/056/030** 120/240/24E
	40	22	1.0	75	
	33	24	1.1	90	
	25	30	0.8	120	
	20	31	0.7	150	
	50	19	2.3	60	**ECMP100/056/040** 120/240/24E
	40	23	1.9	75	
	33	26	2.2	90	
	25	31	1.5	120	
	20	37	1.2	150	
	17	42	1.0	180	
	13	48	0.8	240	
	10	54	0.7	300	

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i	Versione motore *Motor version*
250					
(3000 min^{-1})	**50**	33	0.7	60	**ECMP180/056/030** 120/240
	40	31	0.7	75	
	33	39	0.7	90	
	25	33	0.7	120	
	20	31	0.7	150	
	50	35	1.3	60	**ECMP180/056/040** 120/240
	40	41	1.1	75	
	33	46	1.2	90	
	25	56	0.9	120	
	20	67	0.7	150	
	17	61	0.7	180	
	13	57	0.7	240	
	10	51	0.7	300	
	50	35	1.3	60	**ECMP180/063/040** 24E
	40	41	1.1	75	
	33	46	1.2	90	
	25	56	0.9	120	
350					
(3000 min^{-1})	**50**	48	0.9	60	**ECMP250/063/040** 120/240
	40	57	0.8	75	
	33	65	0.9	90	
	25	69	0.7	120	

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

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

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

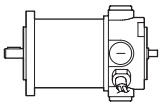
Dati tecnici elettrici

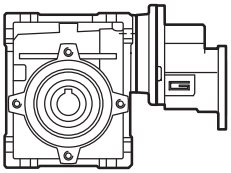
Electrical technical data

EC070 → BB10 **EC100** → BB12 **EC180** → BB14 **EC250** → BB16

Motori applicabili

Motor adapters



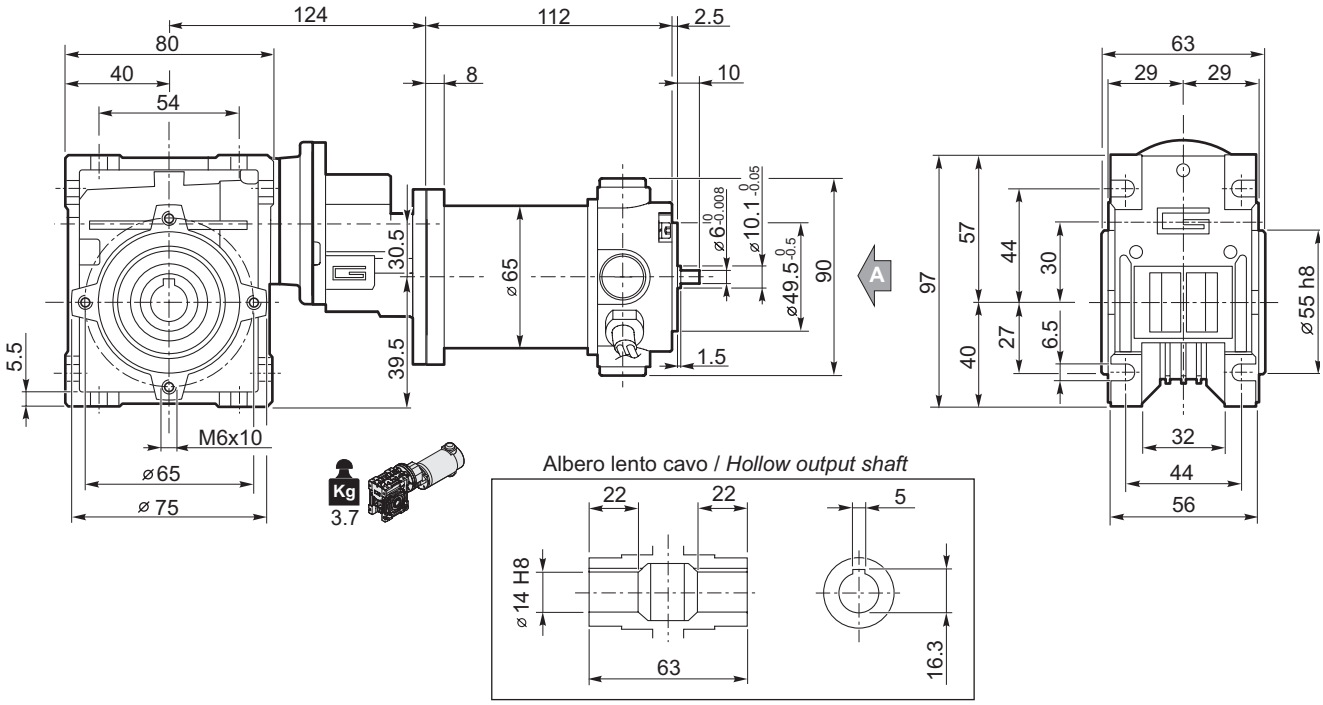


		ND		EC					
		120.120 120.240	**180.120 180.240**	**070.12E 070.24E**	**100.120 100.240 100.24E**	**180.120 180.240**	**180.24E**	**250.120 250.240**	**350.120 350.240**
CMP	**056/030**	150	150	150	150	150			
	056/040	300	300	300	300	300			
	063/040						120	120	120

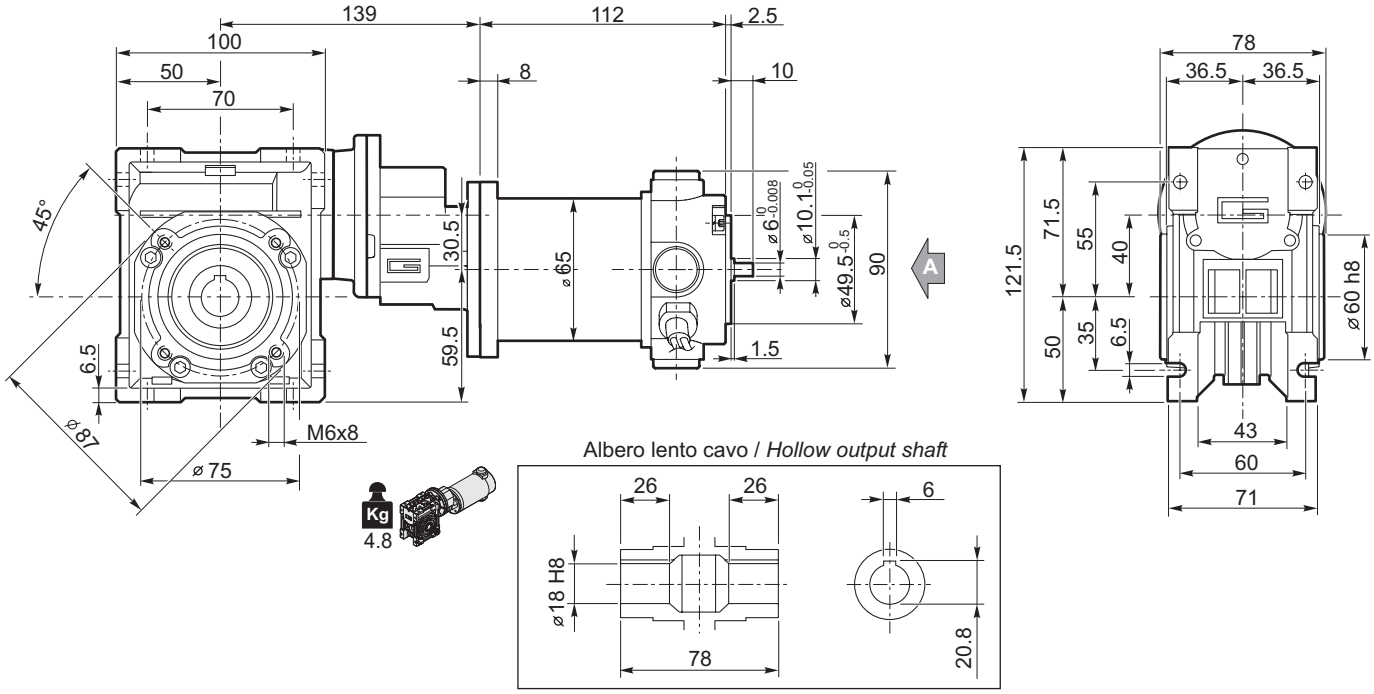
150 Rapporto di riduzione massimo i_{max}
Maximum ratio i_{max}

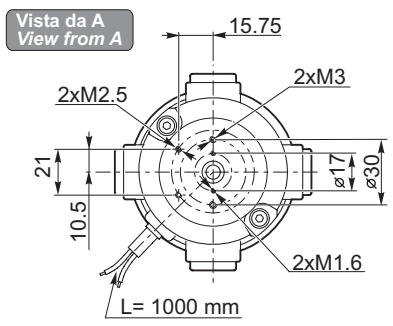
Dimensioni *Dimensions*

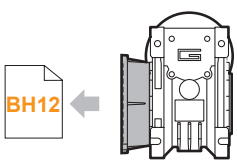
NDCMP120/056/030 U



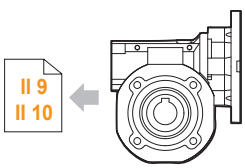
NDCMP120/056/040 U







NDCMP120/056/030 F
NDCMP120/056/040 F...

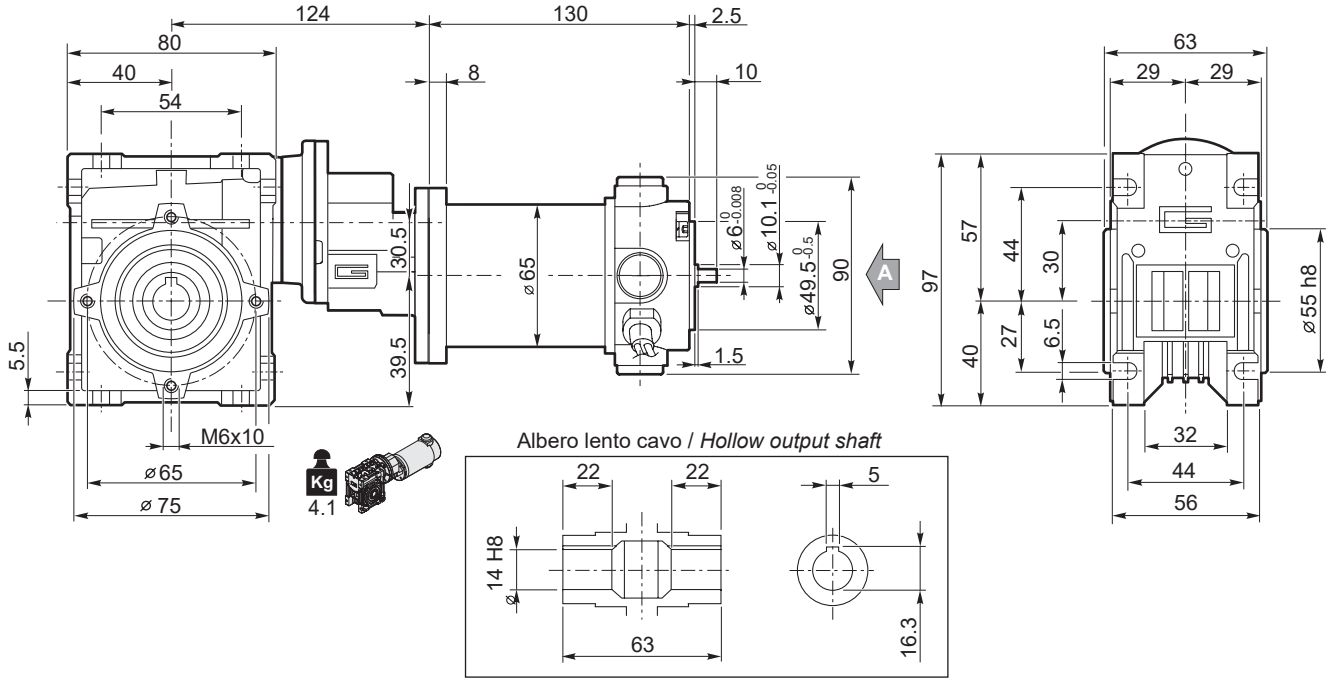


CL030
CL040

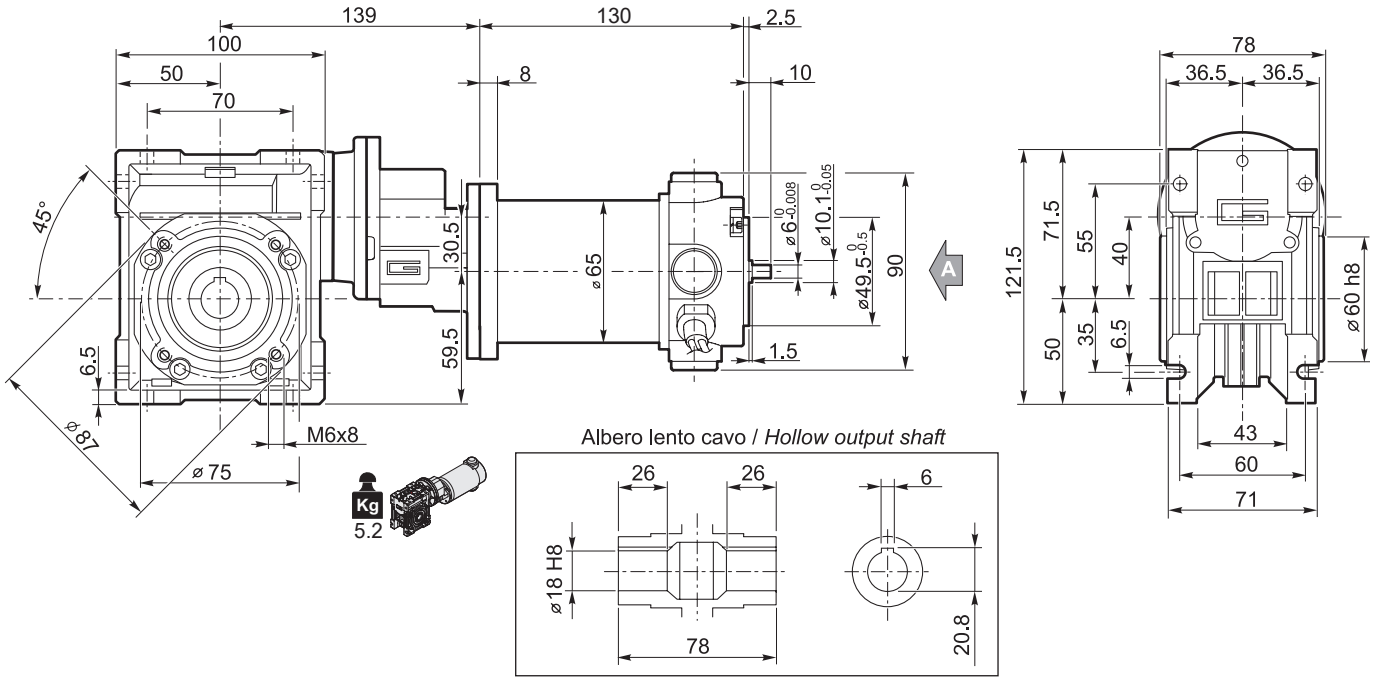
Freno / *Brake* → BA9 Encoder → BA9

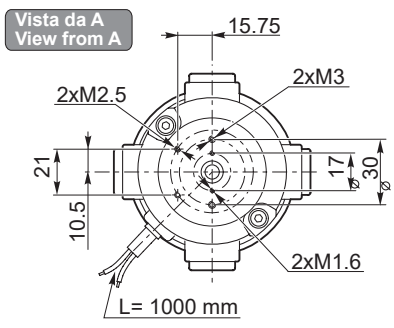
Dimensioni — *Dimensions*

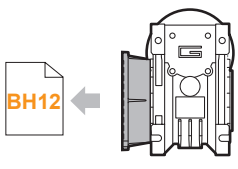
NDCMP180/056/030 U



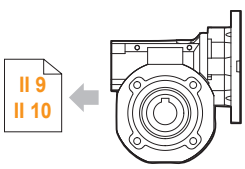
NDCMP180/056/040 U







NDCMP180/056/030 F
NDCMP180/056/040 F..



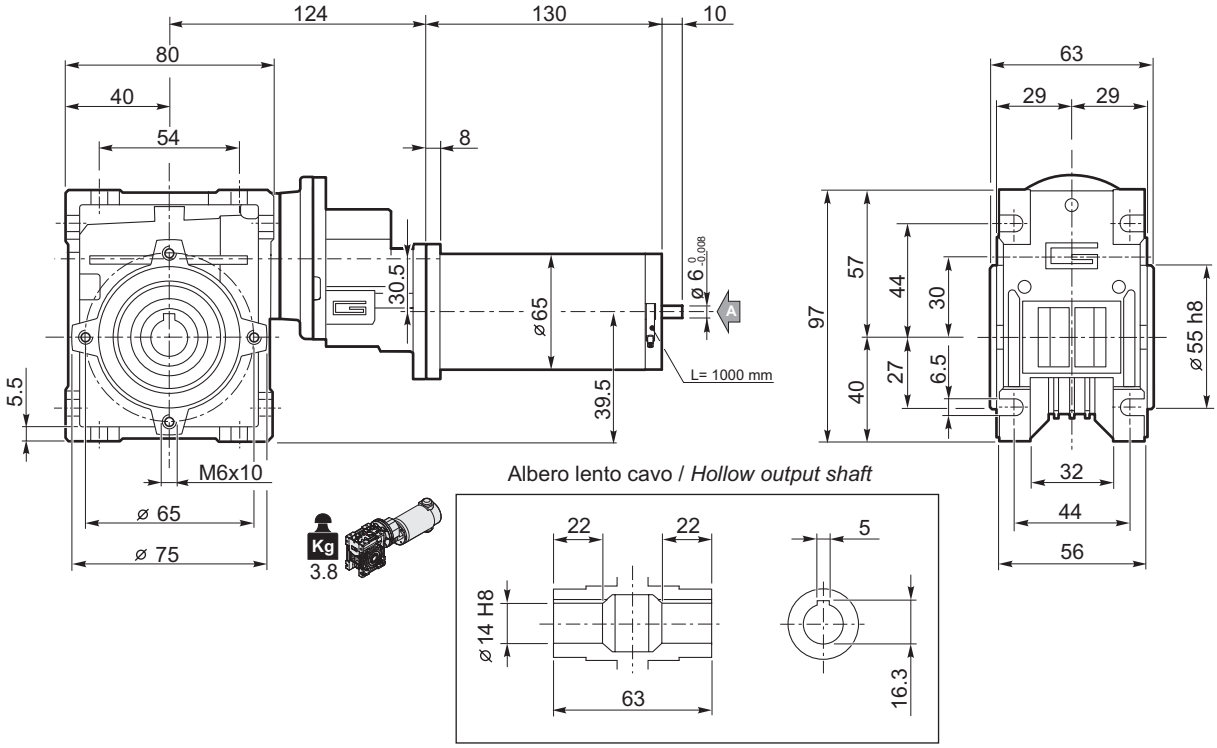
CL030
CL040

Freno / *Brake* → BA9 Encoder → BA9

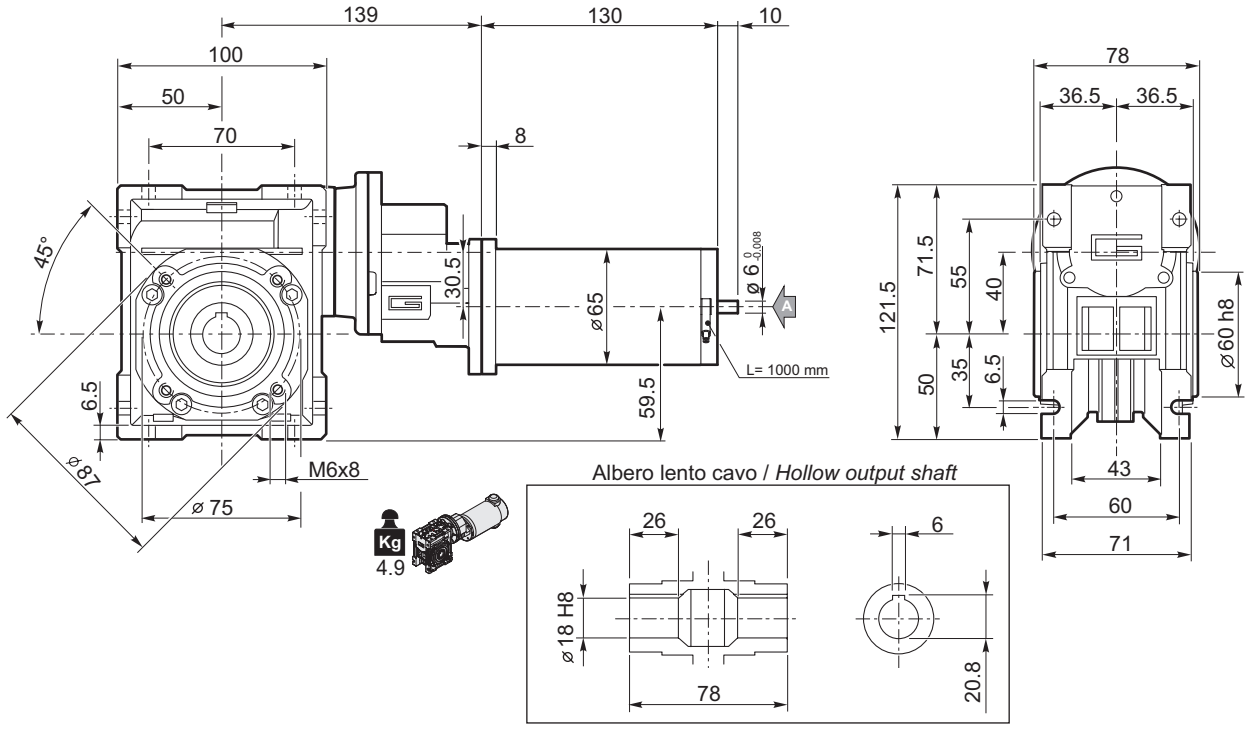
DC

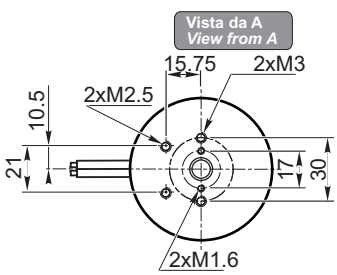
Dimensioni — *Dimensions*

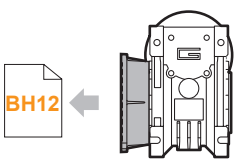
ECMP070/056/030 U



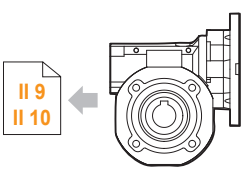
ECMP070/056/040 U







ECMP070/056/030 F
ECMP070/056/040 F..

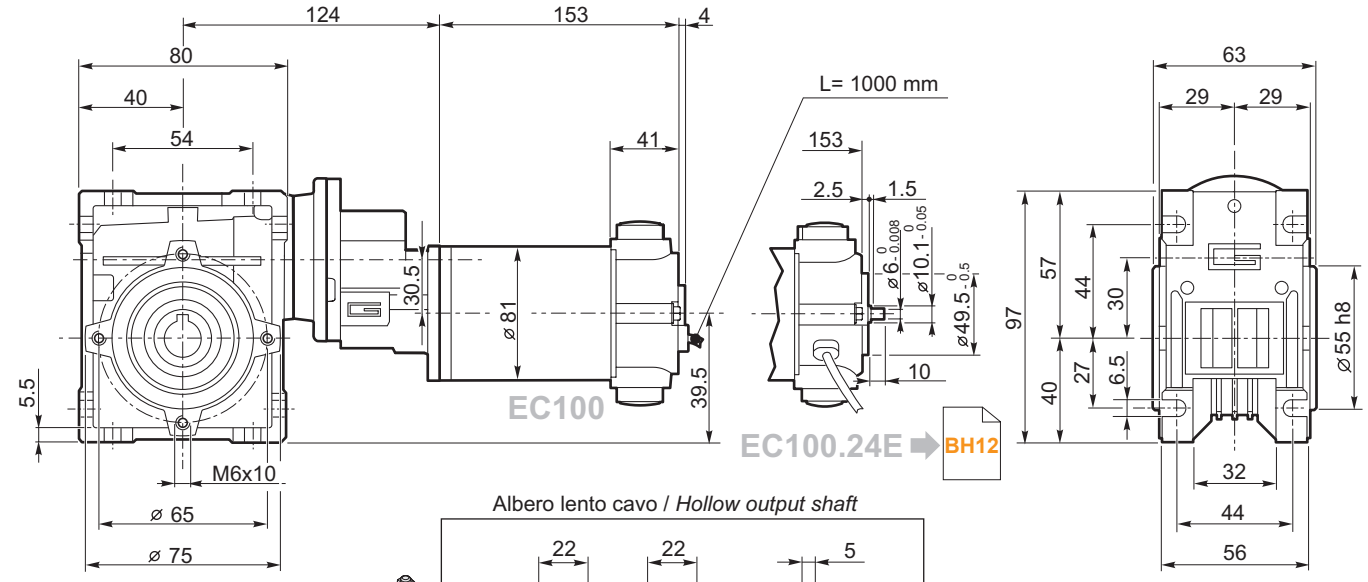


CL030
CL040

Motori / *Motors* IP66 → BC2 | Freno / *Brake* → BB23 | Encoder → BB24

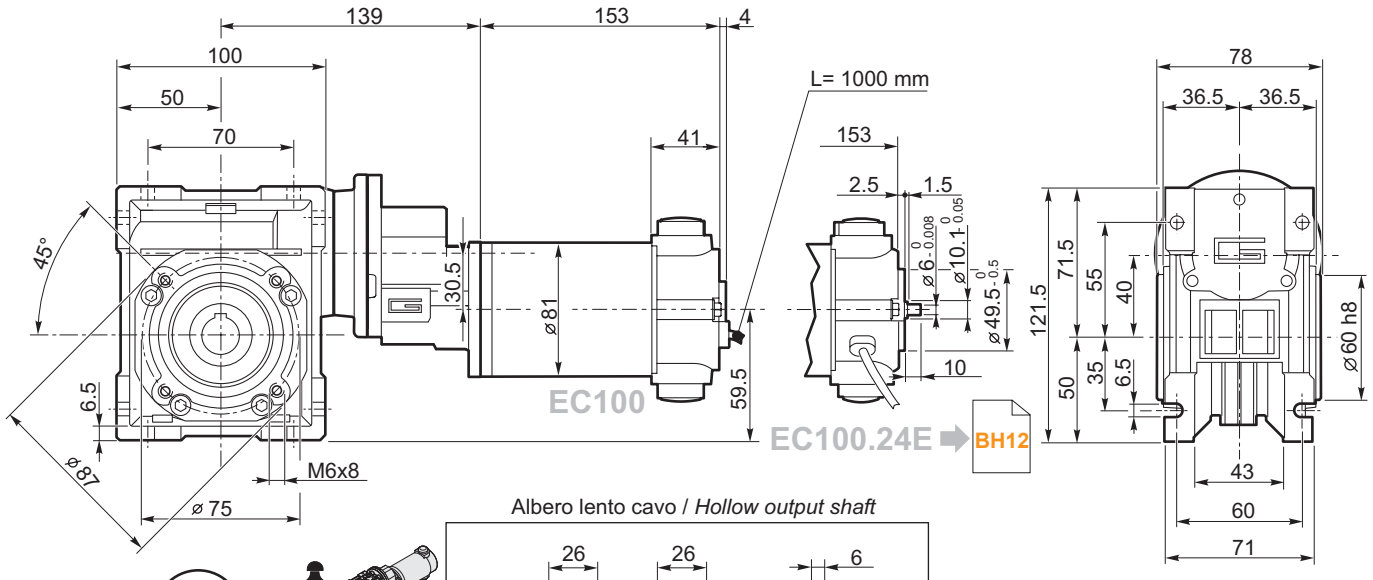
Dimensioni | ***Dimensions***

ECMP100/056/030 U



Motori / *Motors* IP66 → BC4 | Freno / *Brake* → BB23 | Encoder → BB24

ECMP100/056/040 U

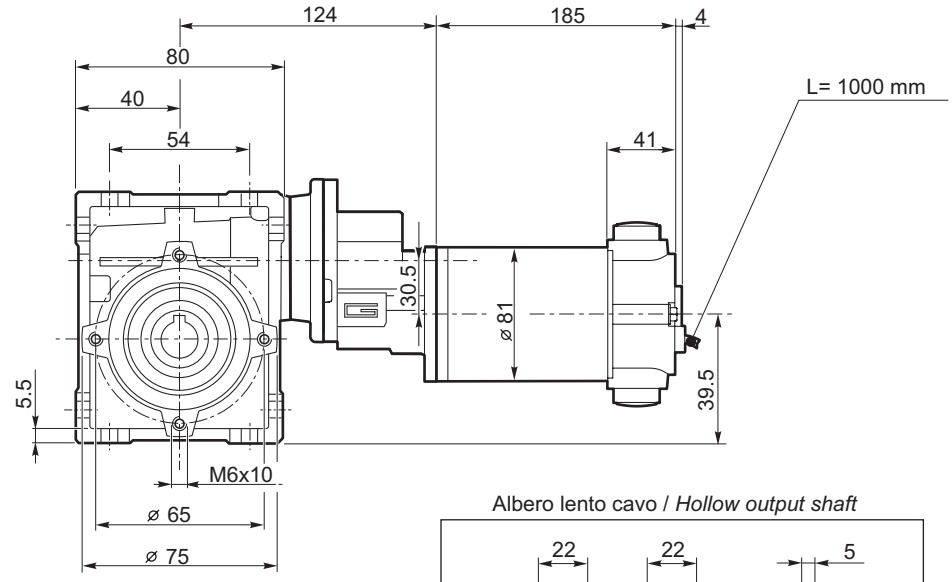


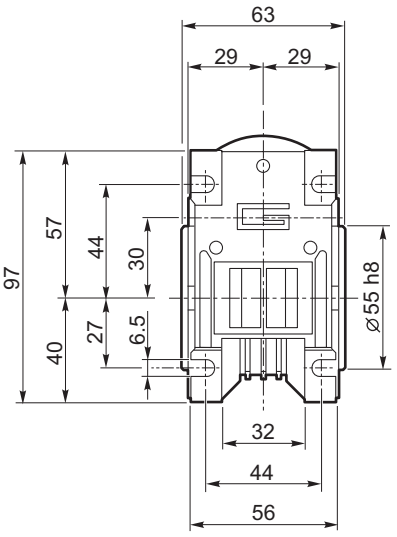
Motori / *Motors* IP66 → BC4 | Freno / *Brake* → BB23 | Encoder → BB24

DC

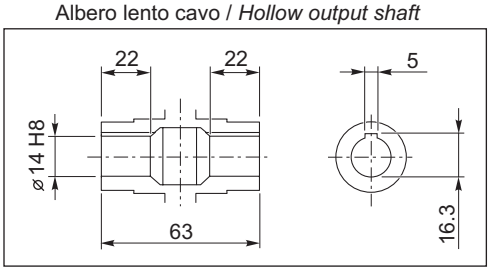
Dimensioni ***Dimensions***

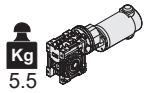
ECMP180/056/030 U



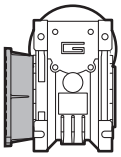


Albero lento cavo / *Hollow output shaft*



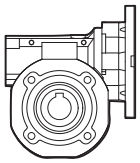


BH12



ECMP180/056/030 F

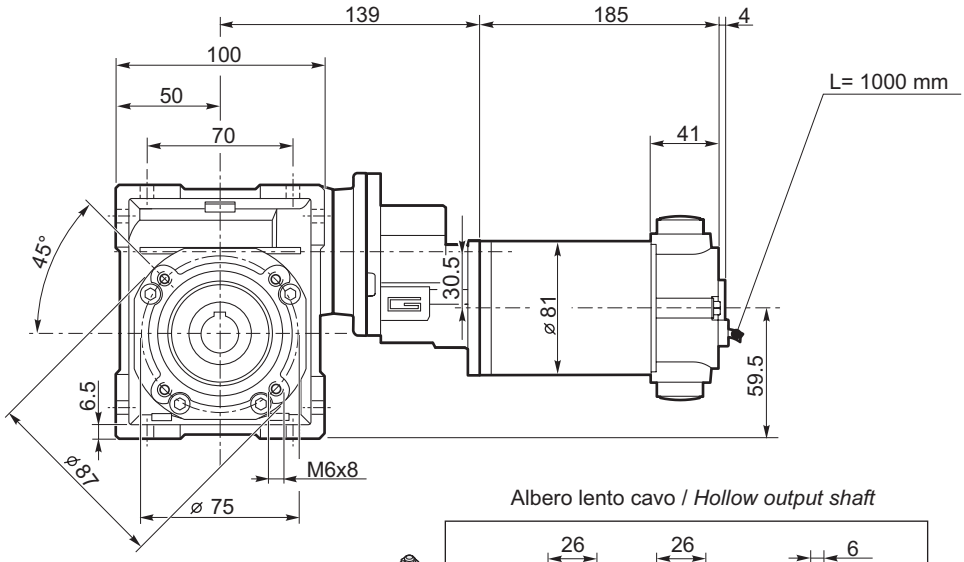
II 9

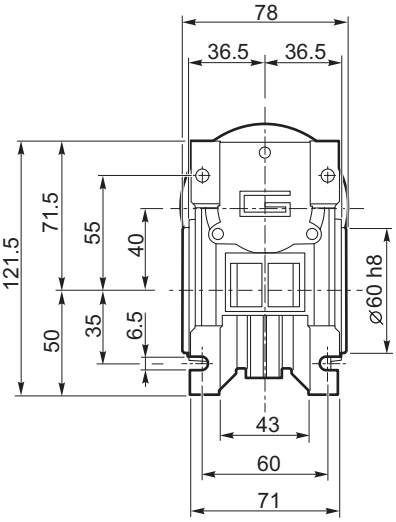


CL030

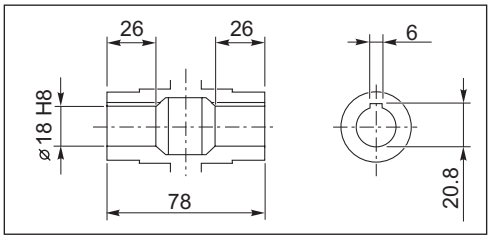
Motori / *Motors* IP66 BC6

ECMP180/056/040 U

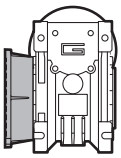




Albero lento cavo / *Hollow output shaft*

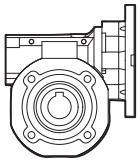


BH12



ECMP180/056/040 F
ECMP180/056/040 FL
ECMP180/056/040 FB

II 10

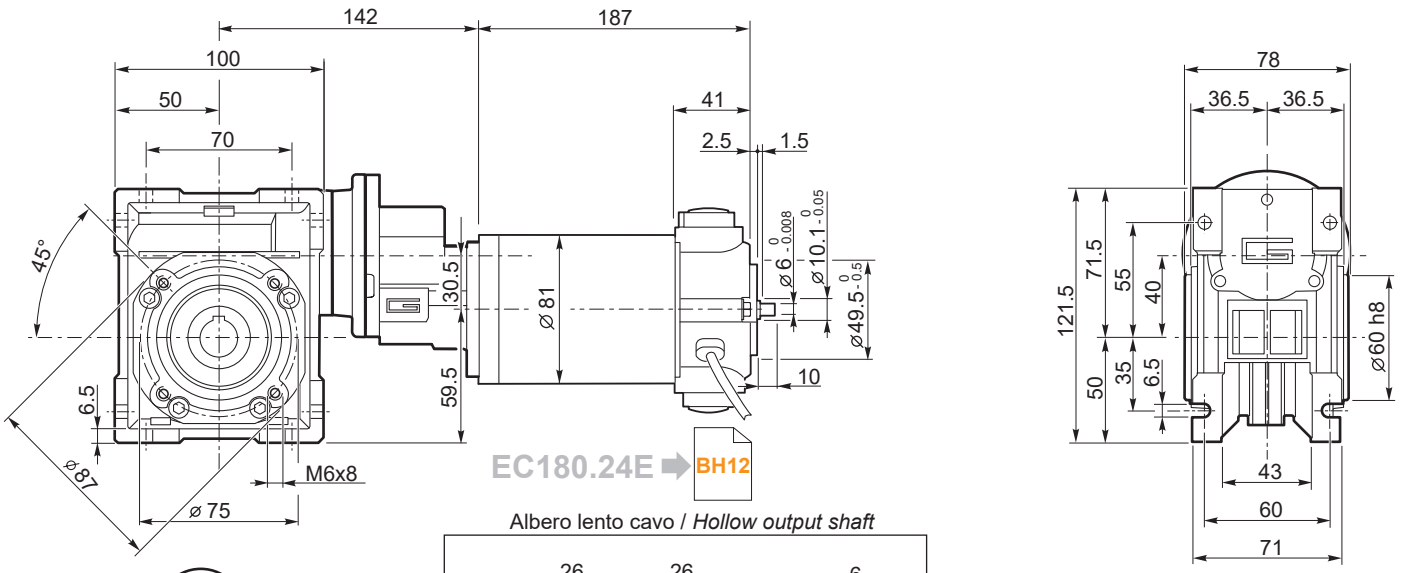


CL040

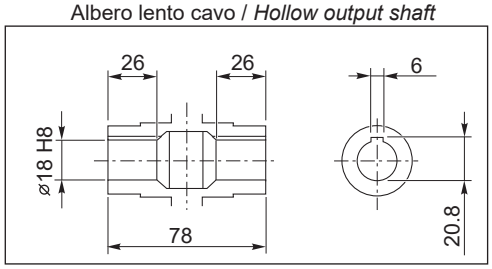
Motori / *Motors* IP66 BC6

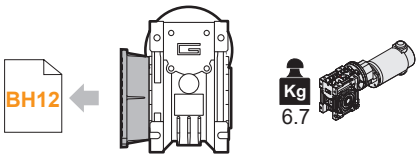
Dimensioni | ***Dimensions***

ECMP180/063/040 U

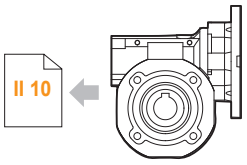


Albero lento cavo / *Hollow output shaft*





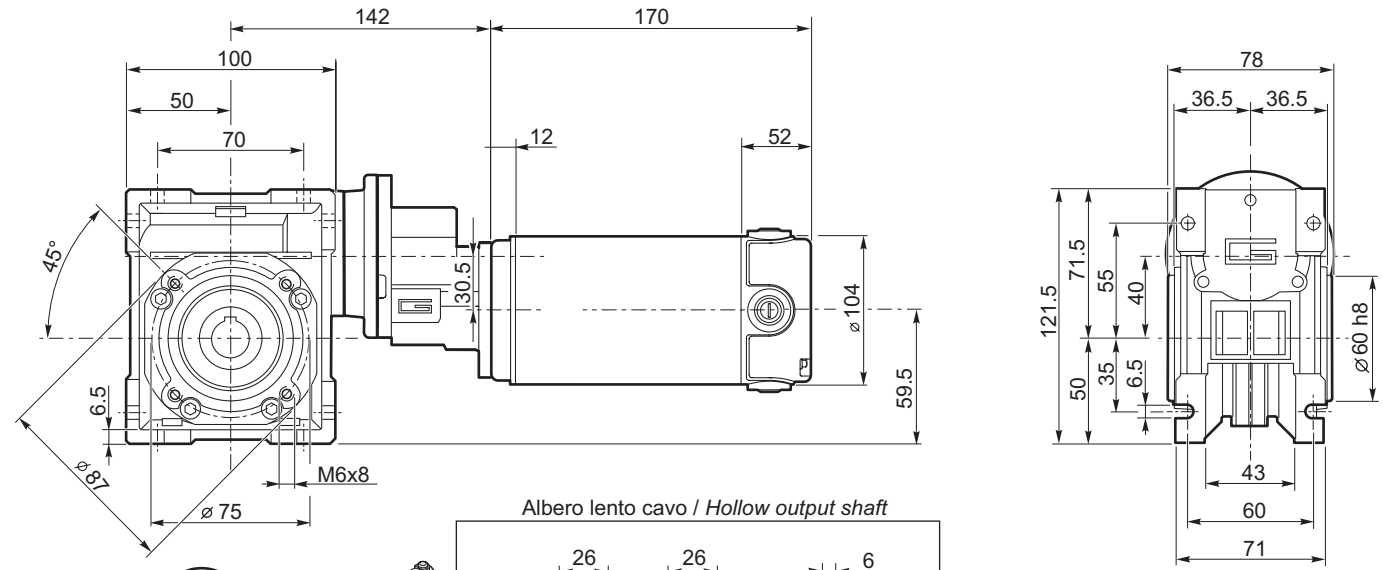
ECMP180/063/040 F
ECMP180/063/040 FL
ECMP180/063/040 FB



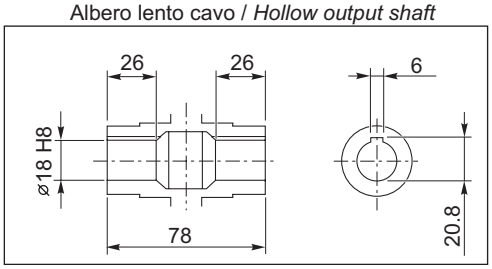
CL040

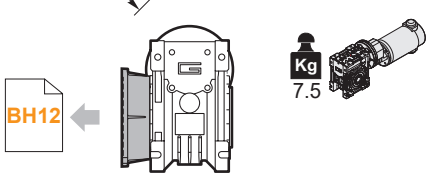
Motori / *Motors* IP66 → BC6 | Freno / *Brake* → BB23 | Encoder → BB24

ECMP250/063/040 U

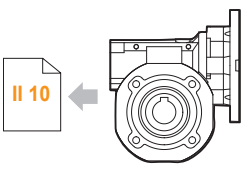


Albero lento cavo / *Hollow output shaft*





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



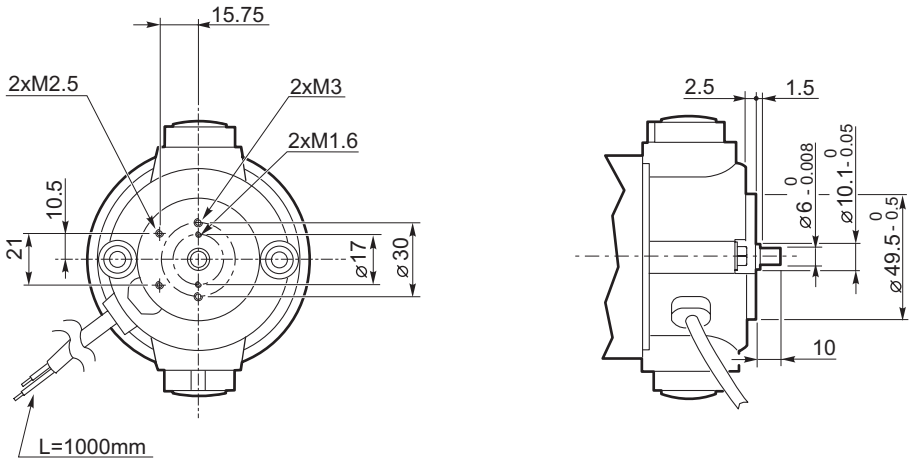
CL040

Motori / *Motors* IP66 → I8

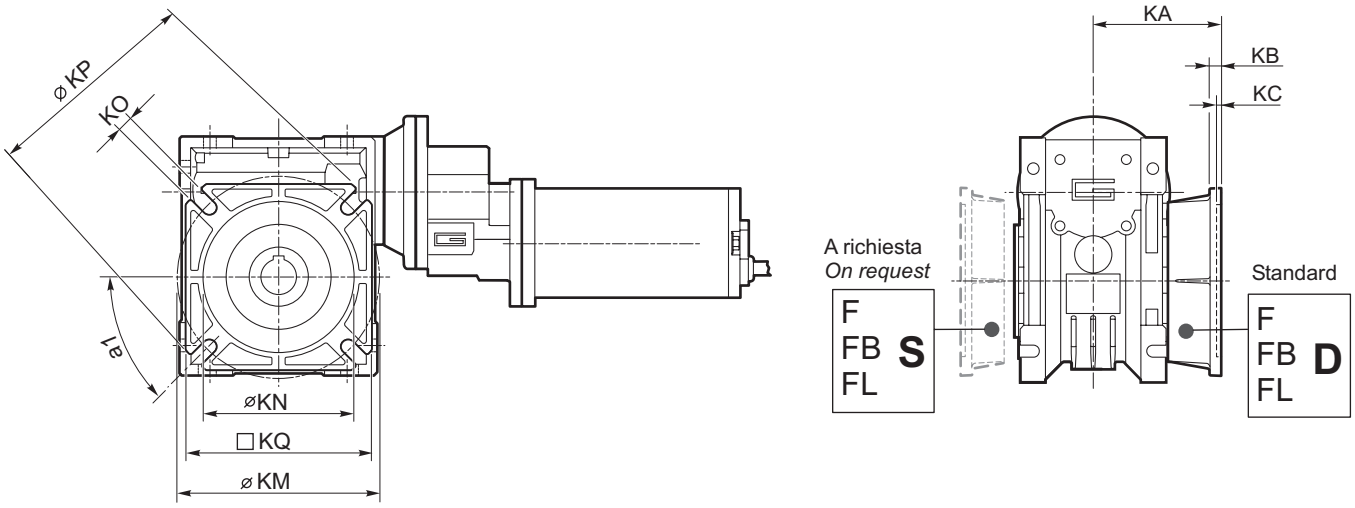
DC

Dimensioni *Dimensions*

EC100.24E
EC180.24E



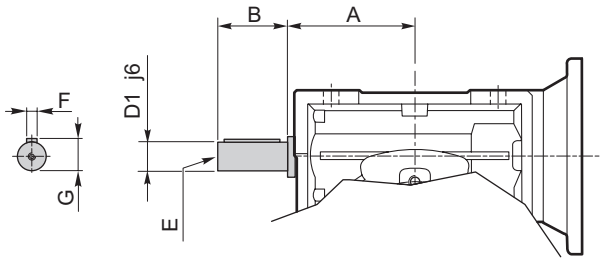
ECMP.../... F... Flange uscita / *Output flanges*



CMP	a1	CMP..F								CMP..FB								CMP..FL							
		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

Opzioni / *Options*

VS - Vite sporgente / *Extended input shaft*

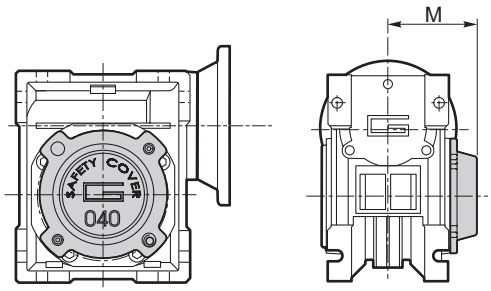


CMP	A	B	D_1 j6	E	F	G
056/030	45	20	9	M4	3	10.2
056/040 **063/040**	53	23	11	M5	4	12.5

Costruito su richiesta
Built on request

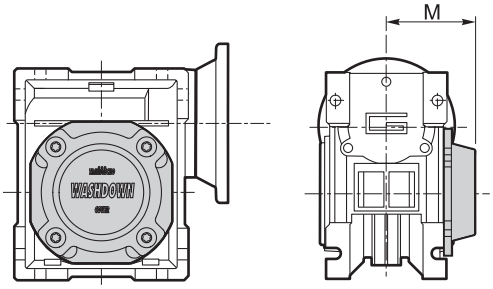
Accessori / *Accessories*

SC - *Safety cover*



	M
CM 030	47
CM 040	54.5

WD - *Kit washdown cover*



	M
CM 030	48
CM 040	55.5

DC

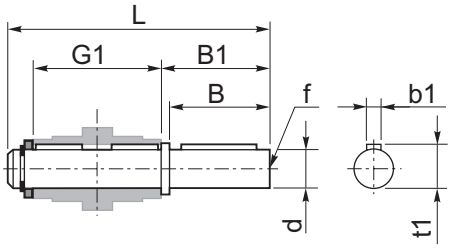
Accessori — *Accessories*

Albero lento semplice e doppio

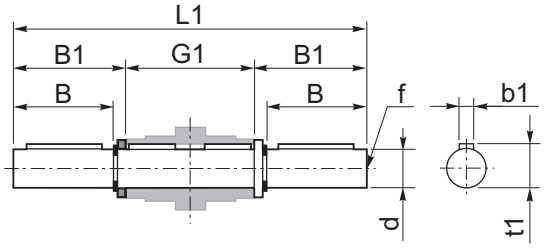
Single and double output shaft

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

SZ



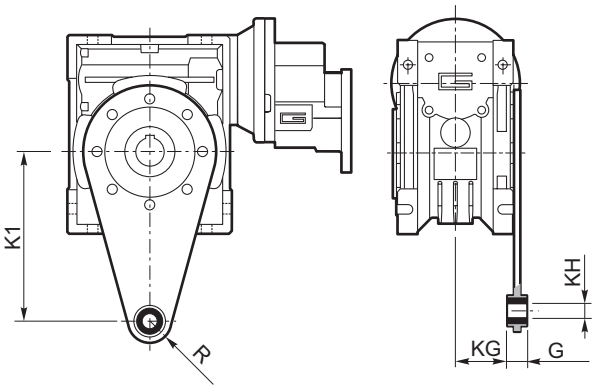
DZ



Braccio di reazione

Torque arm

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

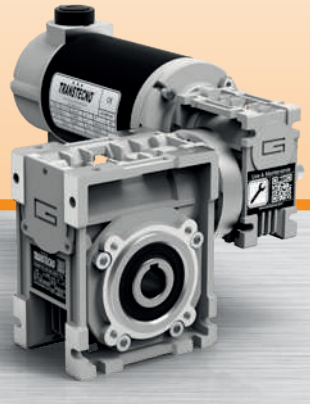


MINI TECNO™

small but strong

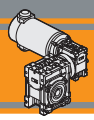
ECMM

Motoriduttori CC a vite senza fine combinati
DC double reduction wormgearmotors



DC

MINI TECNO™ brand of TRANSTECNO®



Caratteristiche tecniche

I motoriduttori CC a vite senza fine combinati a magneti permanenti in ferrite **ECMM** hanno le seguenti caratteristiche principali:

- Alimentazione in bassa tensione 12/24Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 500W S2
- Carcassa dei riduttori in pressofusione di alluminio.
- Lubrificazione permanente con olio sintetico

Technical features

***ECMM** ferrite permanent magnets DC double reduction wormgearmotors range has the following main features:*

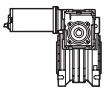
- Low voltage power supply 12/24Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 800W S2
- Die cast aluminium housing
- Permanent synthetic oil long life lubrication

Designazione

Classification

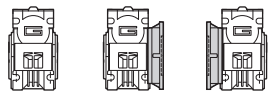
MOTORIDUTTORE / *GEARMOTOR*

ECMM	100/026/026	U	150	SZDX	BRSX	90	B3	UB1	120	VS1
Tipo *Type*	Grandezza *Size*	Versione *Version*	Rapporto *Ratio*	Albero di uscita *Output shaft*	Braccio di reazione *Torque arm*	Angolo *Angle*	Pos. di montaggio Mounting position	*Esecuzione di montaggio Mounting execution*	Versione motore *Motor version*	Opzioni *Options*
ECMM	**070/026/026** **070/026/026 (D11)** **070/026/026 (D14)** **070/026/030** **070/026/040** **100/026/026** **100/026/026 (D11)** **100/026/026 (D14)** **100/026/030** **100/026/040** **180/026/040** **180/030/040** **250/030/040** **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**

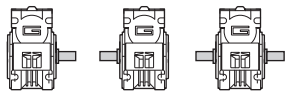


(*) NOTA: il braccio di reazione viene fornito smontato.
NOTE: the torque arm will be supplied not assembled.

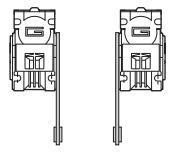
Versione Riduttore *Gearbox Version*



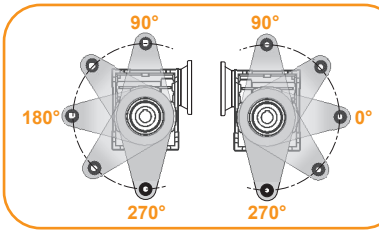
Albero di uscita *Output shaft*



Braccio di reazione (*) *Torque arm*



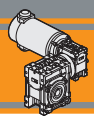
Angolo *Angle*



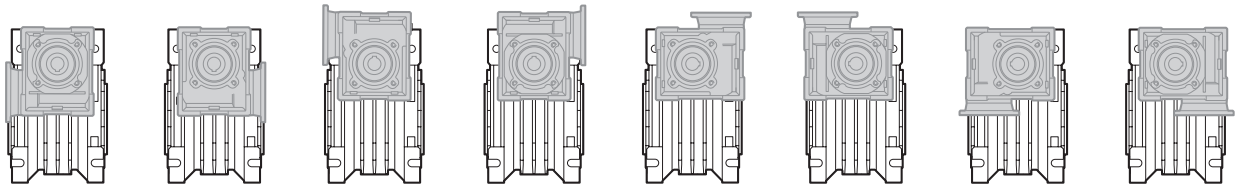
Simbologia

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*



UB1 **UB2** **US1** **US2** **UV1** **UV2** **UC1** **UC2**

Combinazioni rapporti — *Combination ratio*

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

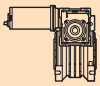
Lubrificazione — *Lubrication*

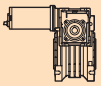
Tutti i motoriduttori nelle taglie 26, 30, 40 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di monatggio e non necessitano di manutenzione.

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

Dati tecnici per servizio S2

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
100						
(3000 min^{-1})	**20.0**	26	1.0	150	**ECMM 070/026/026**	**12E/24E**
	13.3	26	1.0	225		
	10.0	27	1.0	300		
	6.7	27	1.0	450		
	5.0	27	1.0	600		
	3.3	27	1.0	900		
	2.5	27	1.0	1200		
	2.0	27	1.0	1500		
	1.7	27	1.0	1800		
	1.3	22	1.0	2400		
	1.0	20	1.0	3000		
	0.8	18	1.0	3600		
	20.0	26	1.5	150	**ECMM 070/026/030**	**12E/24E**
	13.3	39	1.0	225		
	10.0	40	1.0	300		
	6.7	40	1.0	450		
	5.0	40	1.0	600		
	3.3	40	1.0	900		
	2.5	40	1.0	1200		
	2.0	40	1.0	1500		
	1.7	40	1.0	1800		
	1.3	34	1.0	2400		
	1.0	30	1.0	3000		
	0.8	27	1.0	3600		
	20.0	27	3.2	150	**ECMM 070/026/040**	**12E/24E**
	13.3	40	2.2	225		
	10.0	45	2.0	300		
	6.7	66	1.4	450		
	5.0	85	1.1	600		
	3.3	90	1.0	900		
	2.5	90	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		
	0.8	62	1.0	3600		
	40.0	15	5.5	75	**ECMM 070/030/040**	**12E/24E**
	30.0	20	4.2	100		
	20.0	28	3.2	150		
	15.0	36	2.1	200		
	12.0	43	1.6	250		
	10.0	46	2.0	300		
	7.5	55	1.3	400		
	6.0	63	1.1	500		
	5.0	86	1.0	600		
	4.0	103	0.9	750		
	3.3	118	0.8	900		
	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		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
140						
(3000 min^{-1})	**20.0**	26	1.0	150	**ECMM 100/026/026**	**120/240/24E**
	13.3	26	1.0	225		
	10.0	27	1.0	300		
	6.7	27	1.0	450		
	5.0	27	1.0	600		
	3.3	27	1.0	900		
	2.5	27	1.0	1200		
	2.0	27	1.0	1500		
	1.7	27	1.0	1800		
	1.3	22	1.0	2400		
	1.0	20	1.0	3000		
	0.8	18	1.0	3600		
	20.0	37	1.1	150	**ECMM 100/026/030**	**120/240/24E**
	13.3	39	1.0	225		
	10.0	40	1.0	300		
	6.7	40	1.0	450		
	5.0	40	1.0	600		
	3.3	40	1.0	900		
	2.5	40	1.0	1200		
	2.0	40	1.0	1500		
	1.7	40	1.0	1800		
	1.3	34	1.0	2400		
	1.0	30	1.0	3000		
	0.8	27	1.0	3600		
	20.0	38	2.3	150	**ECMM 100/026/040**	**120/240/24E**
	13.3	55	1.6	225		
	10.0	63	1.4	300		
	6.7	92	1.0	450		
	5.0	90	1.0	600		
	3.3	90	1.0	900		
	2.5	90	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		
	0.8	62	1.0	3600		
	40.0	21	3.9	75	**ECMM 100/030/040**	**120/240/24E**
	30.0	28	3.0	100		
	20.0	38	2.3	150		
	15.0	50	1.5	200		
	12.0	59	1.1	250		
	10.0	63	1.4	300		
	7.5	77	1.0	400		
	6.0	87	0.8	500		
	5.0	119	0.8	600		
	4.0	90	1.0	750		
	3.3	90	1.0	900		
	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		

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*
250						
(3000 min^{-1})	**20.0**	70	1.2	150	**ECMM 180/026/040**	**120/240**
	13.3	103	0.8	225		
	10.0	116	0.8	300		
	40.0	40	2.1	75	**ECMM 180/030/040**	**120/240/24E**
	30.0	52	1.6	100		
	20.0	71	1.2	150		
	15.0	92	0.8	200		
	12.0	67	1.0	250		
	10.0	90	1.0	300		
	7.5	74	1.0	400		
	6.0	68	1.0	500		
	5.0	90	1.0	600		
	4.0	90	1.0	750		
	3.3	90	1.0	900		

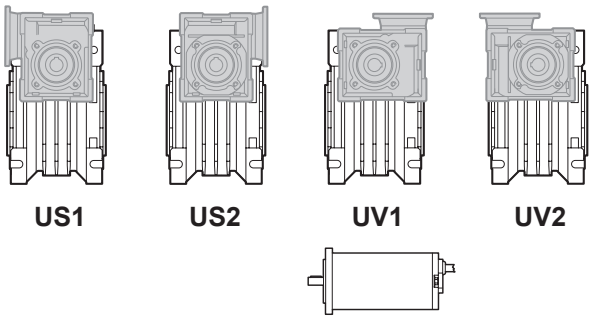
P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
350						
(3000 min^{-1})	40.0	55	1.5	75	**ECMM 250/030/040**	**120/240**
	30.0	72	1.2	100		
	20.0	100	0.9	150		
	15.0	74	1.0	200		
500						
(3000 min^{-1})	**40.0**	78	1.1	75	**ECMM 350/030/040**	**120/240**
	30.0	101	0.8	100		
	20.0	87	1.0	150		

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

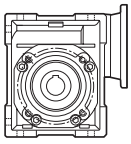
Dati tecnici elettrici — *Electrical technical data*

EC070 → BB10 **EC100** → BB12 **EC180** → BB14 **EC250** → BB16 **EC350** → BB18

Motori applicabili — *Motor adapters*

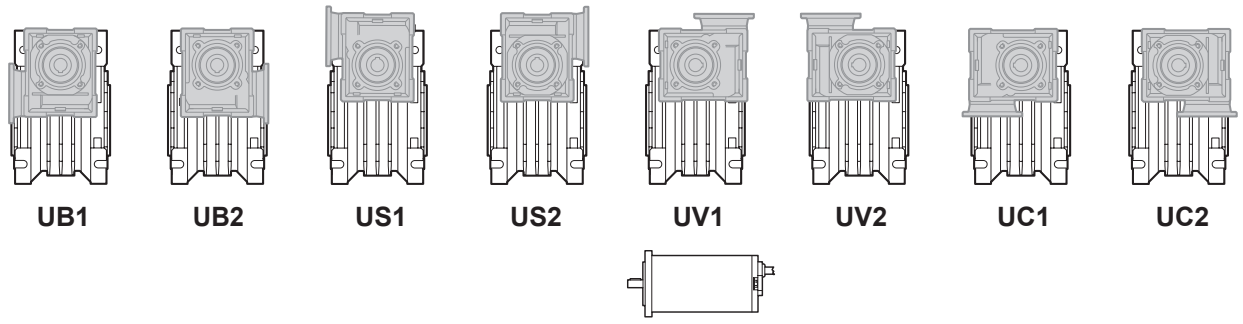


US1 **US2** **UV1** **UV2**

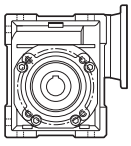


		EC			
		070.12E 070.24E	**100.120 100.240**	**100.24E**	**180.120 180.240**
CMM	**026/026**	150 - 3600	150 - 3600	150 - 3600	150 - 3600

150 - 3600 Rapporti di riduzione i / *Ratio i*



UB1 **UB2** **US1** **US2** **UV1** **UV2** **UC1** **UC2**



		EC						
		070.12E 070.24E	**100.120 100.240**	**100.24E**	**180.120 180.240**	**180.24E**	**250.120 250.240**	**350.120 350.240**
CMM	**026/030**	150 - 3600	150 - 3600	150 - 3600	150 - 3600			
	026/040	150 - 3600	150 - 3600	150 - 3600	150 - 3600			
	030/040	75 - 3000	75 - 3000	75 - 3000	75 - 3000	75 - 1500	75 - 1500	75 - 1500

75 - 1500 Rapporti di riduzione i / *Ratio i*

DC

Dimensioni — *Dimensions*

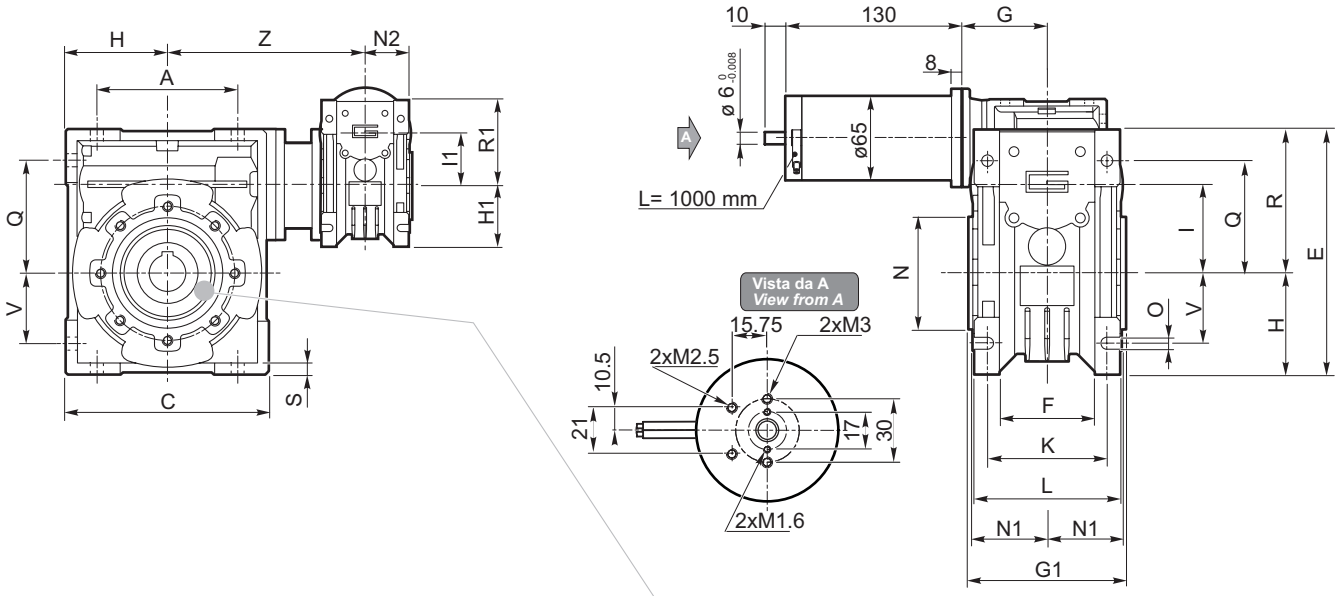
	CMM..U - CMM..F...															
	A	C	D H8	E	F	G	G1	H	H1	I	I1	K	L	M	N h8	N1	N2
026/026 (D11)	45	70	11	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026			12														
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5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

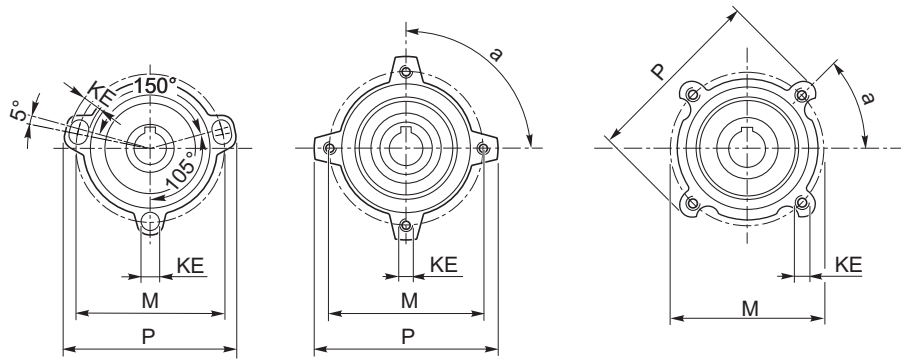
	CMM..U - CMM..F...													
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3
026/026												4	13.8	
026/026 (D14)												5	16.2	
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	4.1
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	5.2
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	5.6

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

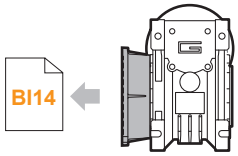
Dimensioni — *Dimensions*

ECMM070/../..U

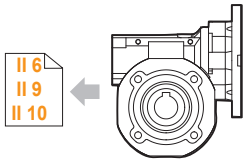




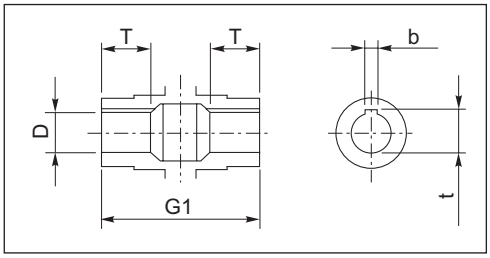
..026/026 **..026/030** **..026/040**
..030/040



ECMM070/../.. F...
ECMM070/../.. FL
ECMM070/../.. FB



CL026
CL030
CL040



Albero lento cavo / *Hollow output shaft*

Motori / *Motors* IP66 → BC2

Freno / *Brake* → BB23

Encoder → BB24

Dimensioni — *Dimensions*

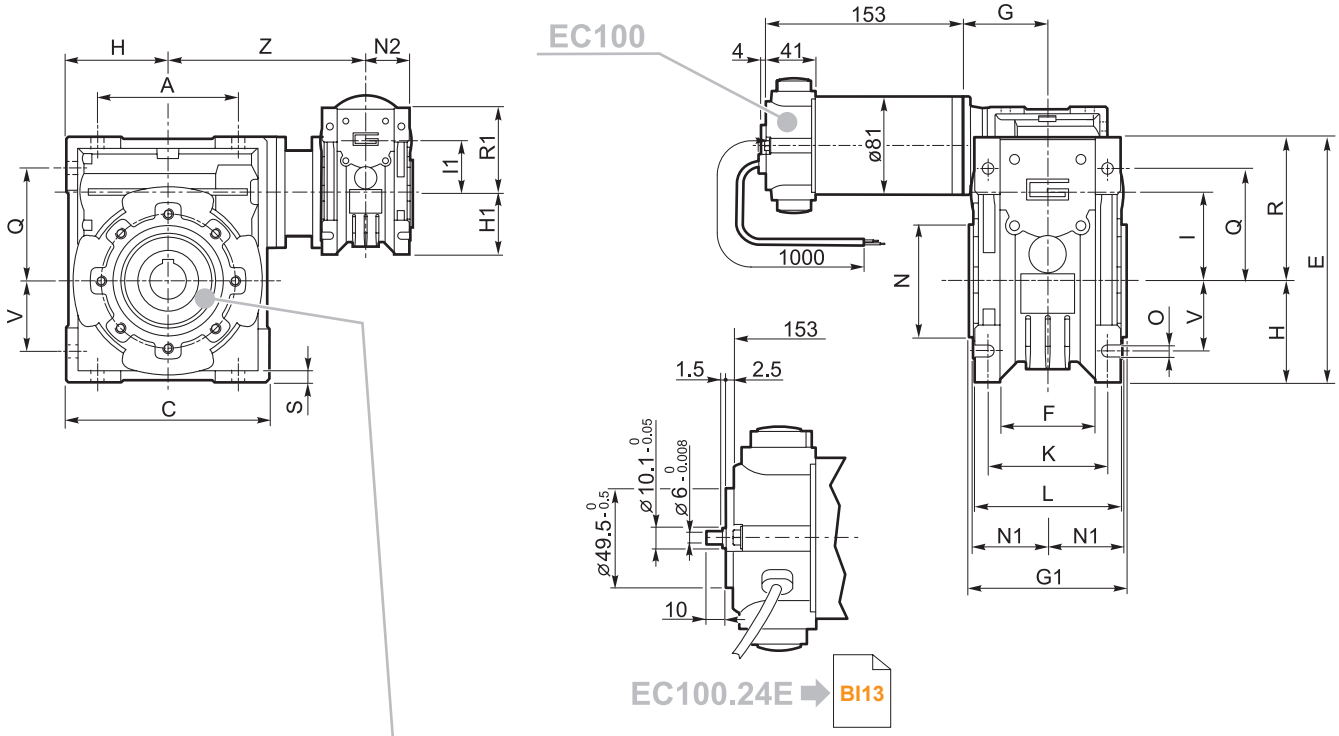
	CMM..U - CMM..F...																
	A	C	D H8	E	F	G	G1	H	H1	I	I1	K	L	M	N h8	N1	N2
026/026 (D11)	45	70	11	83	22	47.5	50	35	34	26	26	34	42	55	45	22.5	21
026/026			12														
026/026 (D14)			14														
026/030	54	80	14	97	32	47.5	63	40	34	30	26	44	56	65	55	29	21
026/040	70	100	18	121.5	43	47.5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

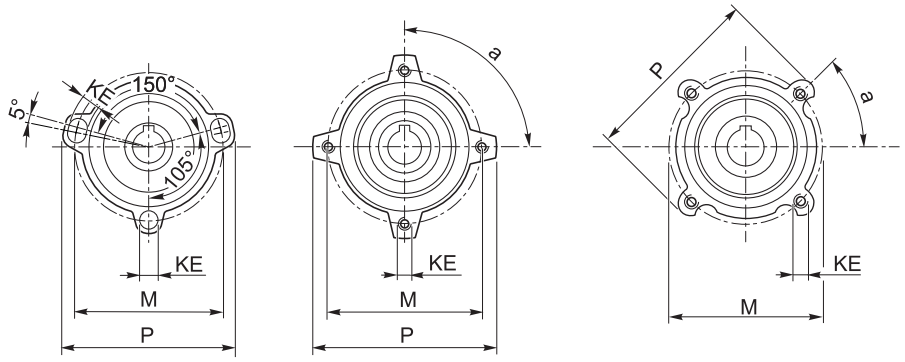
	CMM..U - CMM..F...													
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3
026/026												4	13.8	
026/026 (D14)												5	16.2	
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	5.1
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	6.2
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	6.6

(*) Nota: Il peso in kg si riferisce al motoriduttore ECMM 100 /...
Note: *The weight in kg is referred to the gearmotor ECMM 100 /...*

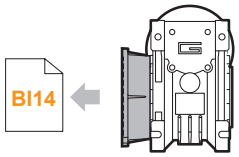
Dimensioni — *Dimensions*

ECMM100/../..U

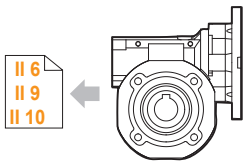




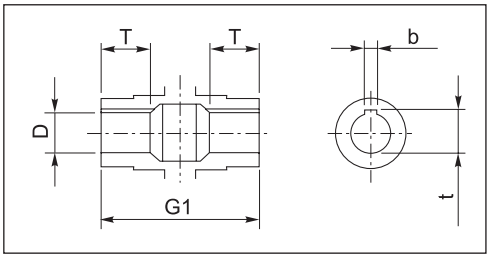
..026/026 **..026/030** **..026/040**
..030/040



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



CL026
CL030
CL040



Albero lento cavo / *Hollow output shaft*

Motori / *Motors* IP66 → BC4 | Freno / *Brake* → BB23 | Encoder → BB24

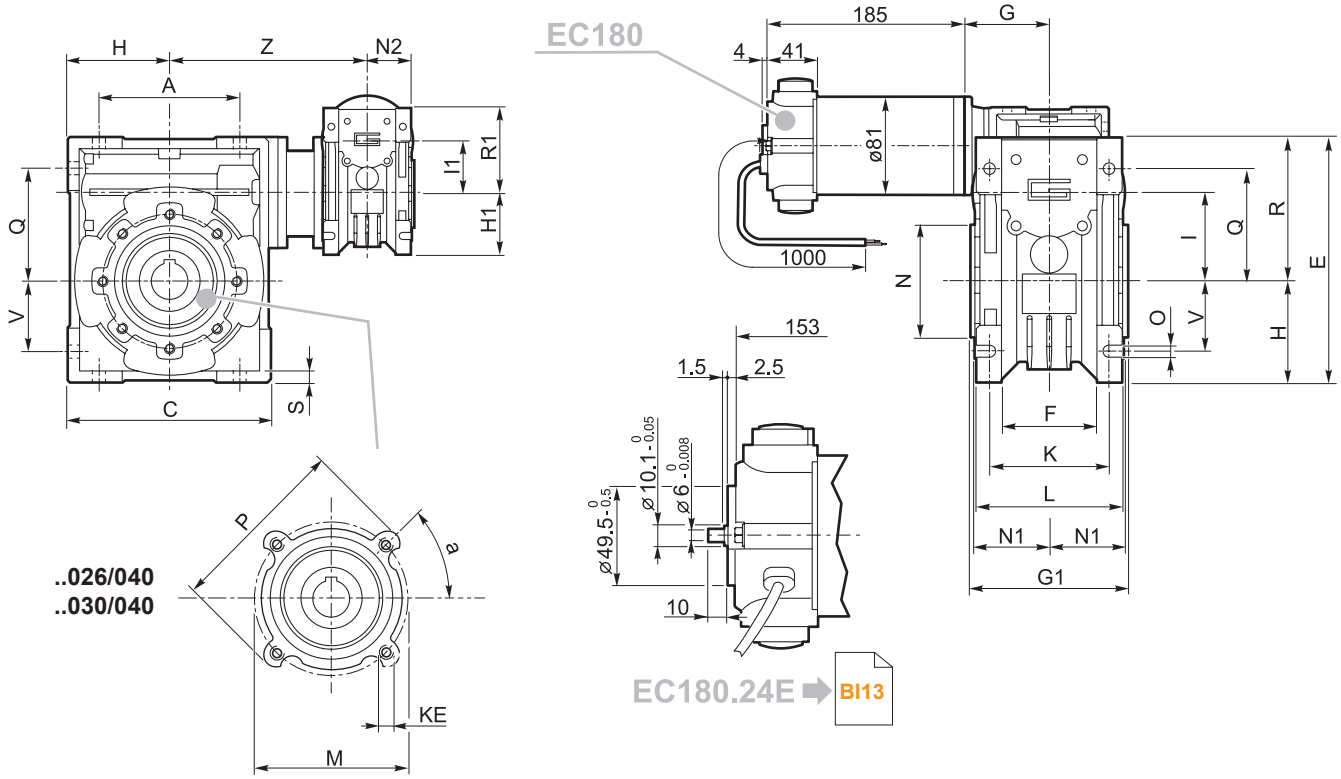
Dimensioni — *Dimensions*

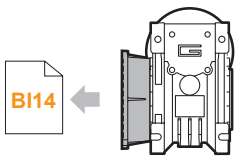
	CMM..U - CMM..F - CMM..FB - CMM..FL															
	A	C	D H8	E	F	G	G1	H	H1	I	I1	K	L	M	N h8	N1	N2
026/040	70	100	18	121.5	43	47.5	78	50	34	40	26	60	71	75	60	36.5	21
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

	CMM..U - CMM..F - CMM..FB - CMM..FL													
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	6.9
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	7.3

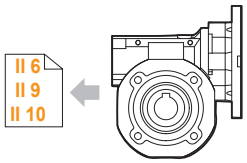
(*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 180 /...
Note: *The weight in kg is referred to the gearmotor ECMM 180 /...*

ECMM180/../..U

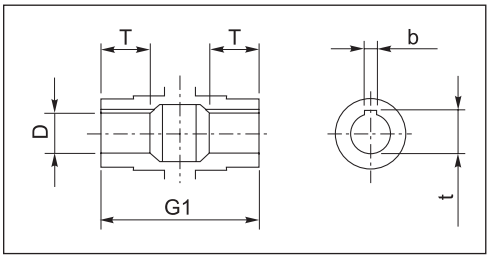




ECMM180/../.. F
ECMM180/../.. FL
ECMM180/../.. FB



CL026
CL030
CL040



Albero lento cavo / *Hollow output shaft*

Motori / *Motors* IP66 → BC6 | Freno / *Brake* → BB23 | Encoder → BB24

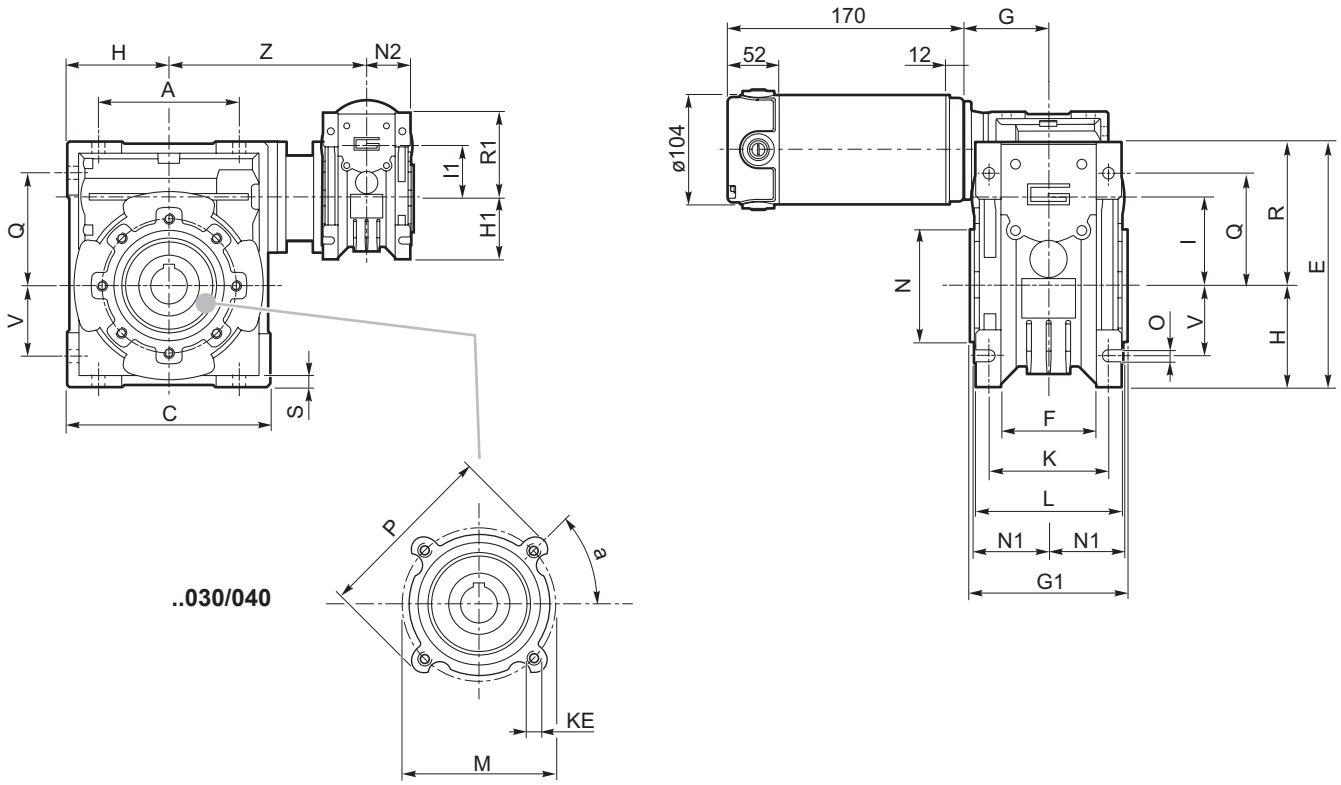
Dimensioni — *Dimensions*

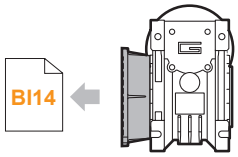
	CMM..U - CMM..F - CMM..FB - CMM..FL															
	A	C	D H8	E	F	G	G1	H	H1	I	I1	K	L	M	N h8	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

	CMM..U - CMM..F - CMM..FB - CMM..FL													
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	Kg (*)
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	8.2

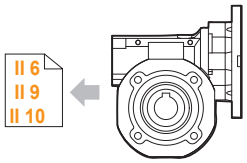
(*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 250 /...
Note: *The weight in kg is referred to the gearmotor ECMM 250 /...*

ECMM250/../..U

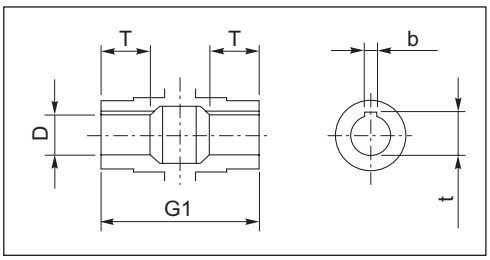




ECMM250/../.. F
ECMM250/../.. FL
ECMM250/../.. FB



CL030
CL040



Albero lento cavo / *Hollow output shaft*

Motori / *Motors* IP66 → BC8

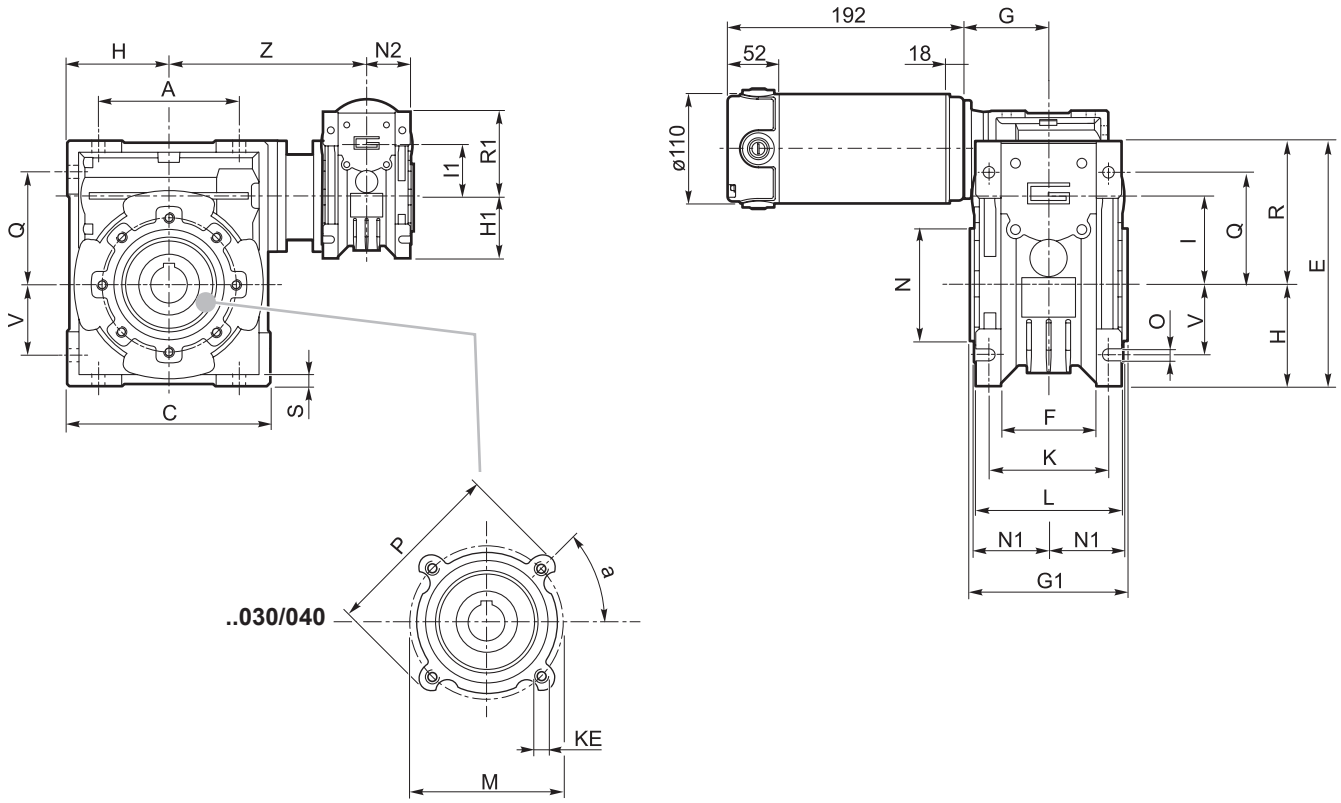
Dimensioni — *Dimensions*

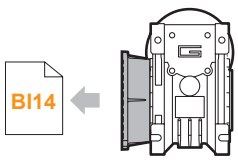
	CMM..U - CMM..F - CMM..FB - CMM..FL															
	A	C	D H8	E	F	G	G1	H	H1	I	I1	K	L	M	N h8	N1	N2
030/040	70	100	18	121.5	43	55	78	50	40	40	30	60	71	75	60	36.5	29

	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

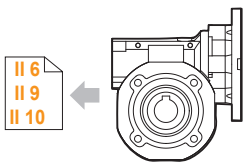
(*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 350 /...
Note: *The weight in kg is referred to the gearmotor ECMM 350 /...*

ECMM350/../..U

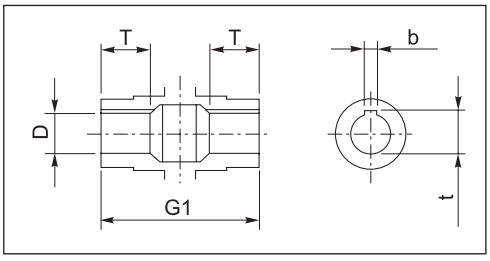




ECMM350/../.. F
ECMM350/../.. FL
ECMM350/../.. FB



CL030
CL040



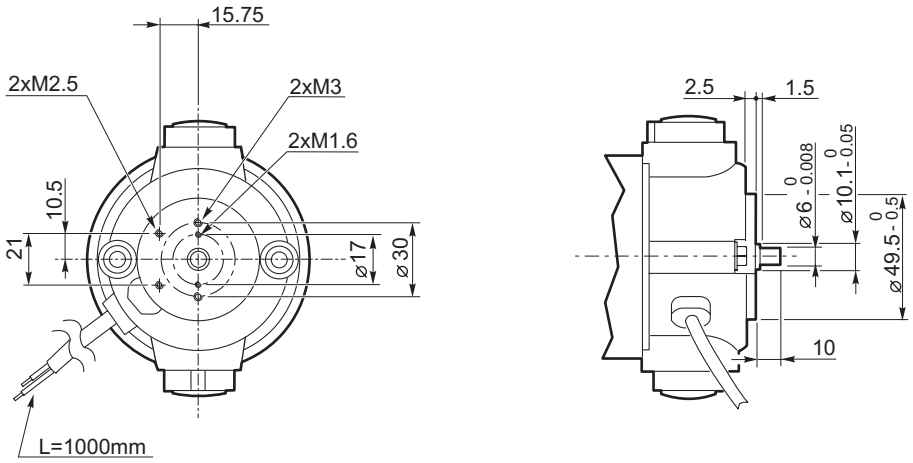
Albero lento cavo / *Hollow output shaft*

Motori / *Motors* IP66 → BC10

Freno / *Brake* → BB23

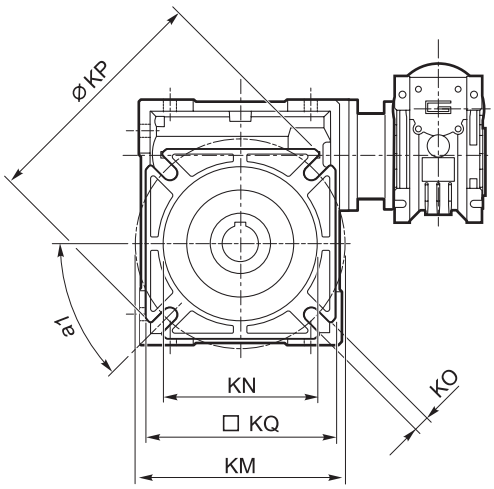
Dimensioni — *Dimensions*

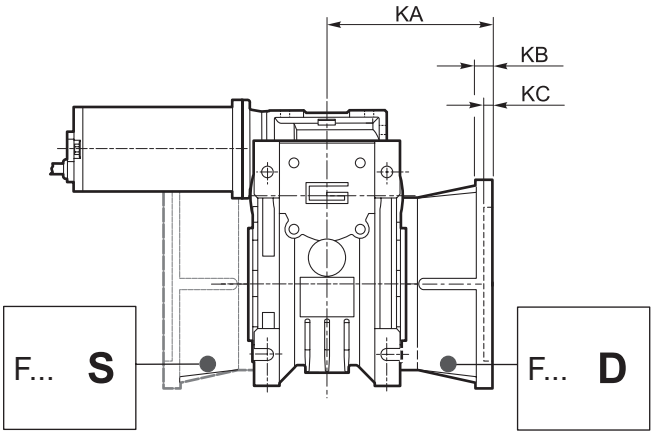
EC100.24E
EC180.24E

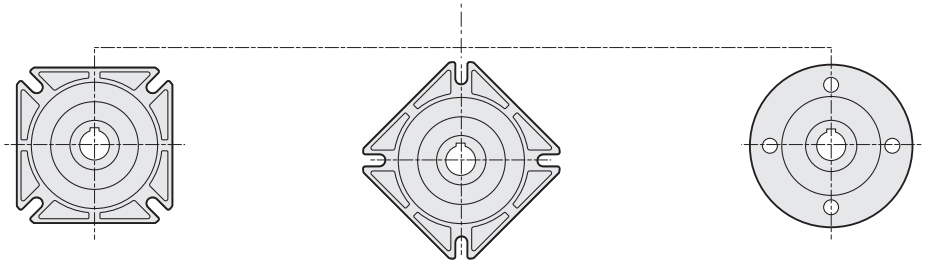


Dimensioni — *Dimensions*

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







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

..ECMM.../../026.. F30C
..ECMM.../../026.. F30SC

..ECMM.../../026.. F100

		CM..F								CM..F28								CM..F30								CM..F30S (1)							
	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	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	50	8.5	7	68	50	6.5	80	70

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

		CM..F30C								CM..F30SC (2)								CM..F100							
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC	KM	KN H8	KO	KP	KQ	KA	KB	KC *	KM	KN h7	KO	KP	KQ
026 (D11) 026 026 (D14)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-

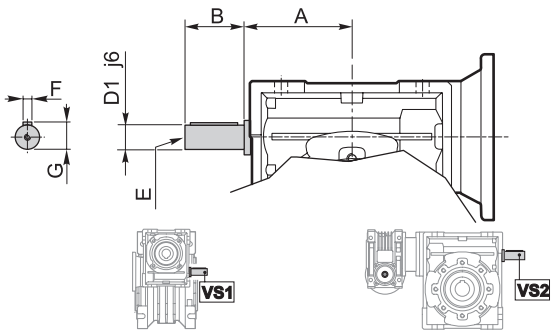
(2): F30SC eseguita con F30C e distanziale di spessore 2 mm / *F30SC made with F30C and spacer with 2mm thickness*

*: Centraggio maschio / *Male centering diameter*

CM		CM..F								CM..FB								CM..FL							
	a1	KA	KB	KC	KM	KN 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

Opzioni — *Options*

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



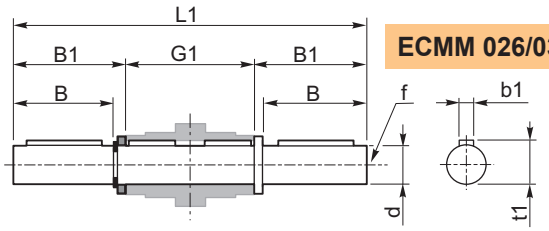
CMM	VS1						VS2					
	A	B	D_1 j6	E	F	G	A	B	D_1 j6	E	F	G
026/030	—	—	—	—	—	—	45	20	9	M4	3	10.2
026/040	—	—	—	—	—	—	53	23	11	M5	4	12.5
030/040	45	20	9	M4	3	10.2	53	23	11	M5	4	12.5

Costruito su richiesta
Built on request

Accessori — *Accessories*

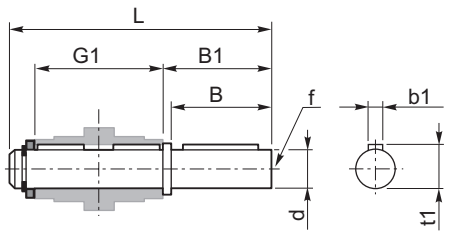
Albero lento semplice e doppio — *Single and double output shaft*

DZ

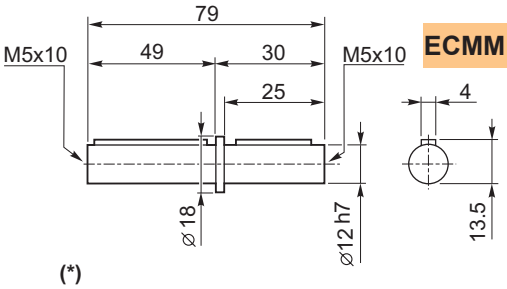


ECMM 026/030 - ECMM 030/040

SZ



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



ECMM 026/026 (*)

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

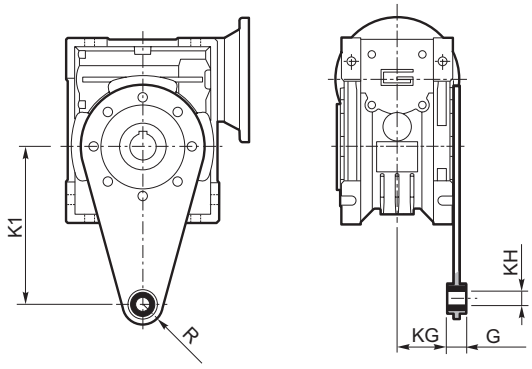
DC

Accessori — *Accessories*

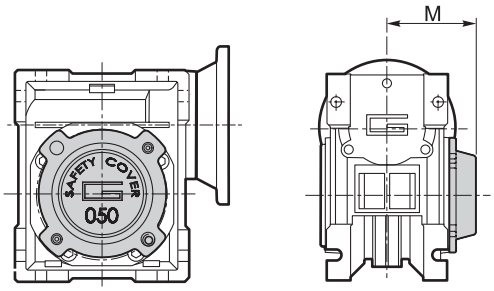
Braccio di reazione

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

Torque arm

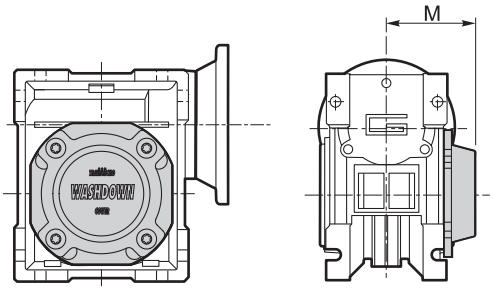


SC - *Safety cover*



	M
CM 030	47
CM 040	54.5

WD - *Kit washdown cover*



	M
CM 030	48
CM 040	55.5

MINI TECNO™

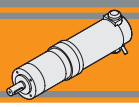
small but strong

NDP
ECP

DC

Motoriduttori CC epicicloidali
DC planetary gearmotors

MINI TECNO™ brand of TRANSTECNO®



ENERGY SAVING

DC

Caratteristiche tecniche / *Technical features*

I motoriduttori CC epicicloidali a magneti permanenti in neodimio **NDP** e in ferrite **ECP** hanno le seguenti caratteristiche principali:

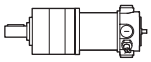
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 500W S2
- Entrata ed uscita coassiali
- Design compatto
- Lubrificazione permanente a grasso
- Possono essere installati in qualunque posizione di montaggio.

NDP *neodymium permanent magnets and* ***ECP*** *ferrite permanent magnets DC planetary gearmotors range has the following main features:*

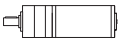
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder and brake assembly*
- *Motor power ratings available from 100 up to 500W S2*
- *In-line input and output*
- *Compact design*
- *Permanent grease oil long-life lubrication*
- *Can be intalled in all mounting position.*

Designazione / *Classification*

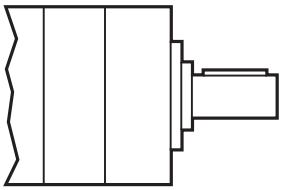
MOTORIDUTTORE / *GEARMOTOR*

NDP	120/62	2	C	90	34.97	120	BR
Tipo *Type*	Grandezza *Size*	Stadi riduttore *Gearbox stages*	Versione riduttore *Gearbox Version*	Flangia uscita *Output flange*	Rapporto *Ratio*	Versione Motore *Motor Version*	Opzioni *Options*
NDP 	**120/52** **120/62** **180/52** **180/62**	**1** **2** **3**	**U** **C**	**80** **90** **105** **120**	Vedere tabella *See tables*	**120** **240**	**BR** **BRL**

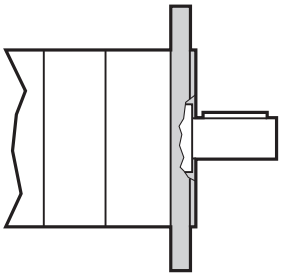
MOTORIDUTTORE / *GEARMOTOR*

ECP	070/62								2	C	90	34.97	120	BR
Tipo *Type*	Grandezza *Size*								Stadi riduttore *Gearbox stages*	Versione riduttore *Gearbox Version*	Flangia Uscita *Output flange*	Rapporto *Ratio*	Versione Motore *Motor Version*	Opzioni *Options*
ECP 	**020/42**	**035/42** **035/52**	**050/42** **050/52**	**070/52** **070/62**	**100/52** **100/62**	**180/52** **180/62**	**250/62**	**350/62**	**1** **2** **3**	**U** **C**	**80** **90** **105** **120**	Vedere tabella *See tables*	**120** **240** **24E**	**BR** **BRL**

Versioni / *Versions*



U



C

Simbologia / *Symbols*

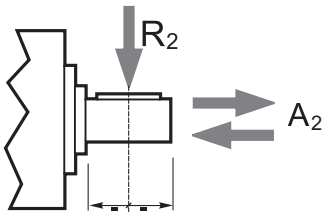
n_1	[min^{-1}]	Velocità in ingresso / *Input speed*	sf		Fattore di servizio / *Service factor*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*	Rd	%	Rendimento dinamico / *Dynamic efficiency*
i		Rapporto di riduzione / *Ratio*	A_2	[N]	Carico assiale ammissibile in uscita / *Permitted output axial load*
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			

Lubrificazione — *Lubrication*

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

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

Carichi radiali — *Radial loads*



Numero di stadi *Stages number*	Carichi Radiali R_2 [N] / *Radial Load R_2 [N]*		
	PM42	PM52	PM62
1	160	200	240
2	230	320	360
3	300	450	520

Numero di stadi *Stages number*	Carichi Assiali A_2 [N] / *Axial Load A_2 [N]*		
	PM42	PM52	PM62
1	50	60	70
2	80	100	100
3	110	150	150

Rapporti — *Ratios*

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

Rapporti preferenziali per le taglie PM42, PM52, PM62.
Preferred ratios for PM42, PM52, PM62.

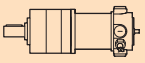
Disponibile a 4 stadi con rapporti fino a 2076
Available 4 stages with ratio up to 2076

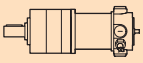
DC

Dati tecnici per servizio S2

NDP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**811**	2	2.6	3.70	**NDP120/521**	**120/240**
	701	2	2.3	4.28		
	579	2	1.9	5.18		
	444	3	1.5	6.75		
	218	5	2.3	13.73	**NDP120/522**	**120/240**
	189	6	2.0	15.88		
	163	7	1.7	18.36		
	156	7	1.6	19.20		
	135	8	1.4	22.20		
	120	10	1.3	25.01		
	112	10	1.2	26.85		
	104	11	1.1	28.93		
	86	13	0.9	34.97		
	66	17	0.7	45.56		
	59	18	1.4	50.89	**NDP120/523**	**120/240**
	51	21	1.2	58.85		
	44	24	1.0	68.06		
	42	25	1.0	71.16		
	38	28	0.9	78.71		
	32	33	0.8	92.70		
	32	34	0.7	95.17		
	30	36	0.7	99.50		
	28	36	0.7	107.20		
	26	36	0.7	115.07		
	24	36	0.7	123.97		
	23	36	0.7	129.62		
	22	36	0.7	139.13		
	20	36	0.7	149.90		
	18	36	0.7	168.84		
	17	36	0.7	181.24		
	15	36	0.7	195.26		
	13	36	0.7	236.09		
	9.8	36	0.7	307.54		
	579	2	3.8	5.18	**NDP120/621**	**120/240**
	444	3	2.9	6.75		
	218	5	4.8	13.73	**NDP120/622**	**120/240**
	189	6	4.1	15.88		
	163	7	3.6	18.36		
	156	7	3.4	19.20		
	135	8	2.9	22.20		
	120	10	2.6	25.01		
	112	10	2.4	26.85		
	104	11	2.3	28.93		
	86	13	1.9	34.97		
	66	17	1.4	45.56		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**59**	18	2.8	50.89	**NDP120/623**	**120/240**
	51	21	2.4	58.85		
	44	24	2.1	68.06		
	42	25	2.0	71.16		
	38	28	1.8	78.71		
	32	33	1.5	92.70		
	32	34	1.5	95.17		
	30	36	1.4	99.50		
	28	38	1.3	107.20		
	26	41	1.2	115.07		
	24	44	1.1	123.97		
	23	46	1.1	129.62		
	22	50	1.0	139.13		
	20	54	0.9	149.90		
	18	60	0.8	168.84		
	17	65	0.8	181.24		
	15	70	0.7	195.26		
	13	71	0.7	236.09		
	9.8	71	0.7	307.54		
250						
(3000 min^{-1})	**811**	2	1.7	3.70	**NDP180/521**	**120/240**
	701	3	1.5	4.28		**120/240**
	579	3	1.2	5.18		**120/240**
	444	4	0.9	6.75		**120/240**
	218	8	1.5	13.73	**NDP180/522**	**120/240**
	189	10	1.3	15.88		**120/240**
	163	11	1.1	18.36		**120/240**
	156	12	1.0	19.20		**120/240**
	135	13	0.9	22.20		**120/240**
	120	15	0.8	25.01		**120/240**
	112	16	0.7	26.85		**120/240**
	104	17	0.7	28.93		**120/240**
	86	17	0.7	34.97		**120/240**
	66	17	0.7	45.56		**120/240**

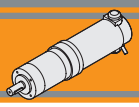
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

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

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

Motoriduttori preferenziali / *Preferred gearmotors*



Dati tecnici per servizio S2

NDP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**59**	28	0.9	50.89	**NDP180/523**	**120/240**
	51	33	0.8	58.85		**120/240**
	44	36	0.7	68.06		**120/240**
	42	36	0.7	71.16		**120/240**
	38	36	0.7	78.71		**120/240**
	32	36	0.7	92.70		**120/240**
	32	36	0.7	95.17		**120/240**
	30	36	0.7	99.50		**120/240**
	28	36	0.7	107.20		**120/240**
	26	36	0.7	115.07		**120/240**
	24	36	0.7	123.97		**120/240**
	23	36	0.7	129.62		**120/240**
	22	36	0.7	139.13		**120/240**
	20	36	0.7	149.90		**120/240**
	18	36	0.7	168.84		**120/240**
	17	36	0.7	181.24		**120/240**
	15	36	0.7	195.26		**120/240**
	13	36	0.7	236.09		**120/240**
	9.8	36	0.7	307.54		**120/240**
	811	2	3.4	3.70	**NDP180/621**	**120/240**
	701	3	2.9	4.28		**120/240**
	579	3	2.4	5.18		**120/240**
	444	4	1.9	6.75		**120/240**
	218	8	3.0	13.73	**NDP180/622**	**120/240**
	189	10	2.6	15.88		**120/240**
	163	11	2.3	18.36		**120/240**
	156	12	2.2	19.20		**120/240**
	135	13	1.9	22.20		**120/240**
	120	15	1.7	25.01		**120/240**
	112	16	1.6	26.85		**120/240**
	104	17	1.4	28.93		**120/240**
	86	21	1.2	34.97		**120/240**
	66	27	0.9	45.56		**120/240**

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**59**	28	1.8	50.89	**NDP180/623**	**120/240**
	51	33	1.5	58.85		**120/240**
	44	38	1.3	68.06		**120/240**
	42	40	1.3	71.16		**120/240**
	38	44	1.1	78.71		**120/240**
	32	52	1.0	92.70		**120/240**
	32	53	0.9	95.17		**120/240**
	30	56	0.9	99.50		**120/240**
	28	60	0.8	107.20		**120/240**
	26	64	0.8	115.07		**120/240**
	24	69	0.7	123.97		**120/240**
	23	71	0.7	129.62		**120/240**
	22	71	0.7	139.13		**120/240**
	20	71	0.7	149.90		**120/240**
	18	71	0.7	168.84		**120/240**
	17	71	0.7	181.24		**120/240**
	15	71	0.7	195.26		**120/240**
	13	71	0.7	236.09		**120/240**
	9.8	71	0.7	307.54		**120/240**

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

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

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

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

Motoriduttori preferenziali / *Preferred gearmotors*

Dati tecnici elettrici

Electrical technical data

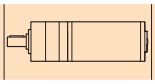
ND 120 BA4

ND 180 BA6

Dati tecnici per servizio S2

ECP

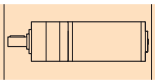
Technical data for S2 duty

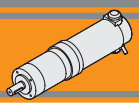
P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
30						
(2850 min^{-1})	**770**	0.24	12.7	3.70	**ECP020/421**	**120/24E**
	666	0.27	11.0	4.28		
	550	0.33	9.0	5.18		
	422	0.43	6.9	6.75		
	208	0.82	9.1	13.73	**ECP020/422**	**120/24E**
	179	0.95	7.9	15.88		
	155	1.1	6.8	18.36		
	148	1.2	6.5	19.20		
	128	1.3	5.6	22.20		
	114	1.5	5.0	25.01		
	106	1.6	4.7	26.85		
	99	1.7	4.3	28.93		
	81	2.1	3.6	34.97		
	63	2.7	2.7	45.56		
	56	2.8	5.3	50.89	**ECP020/423**	**120/24E**
	48	3.3	4.6	58.85		
	42	3.8	3.9	68.06		
	40	4.0	3.8	71.16		
	36	4.4	3.4	78.71		
	31	5.2	2.9	92.70		
	30	5.3	2.8	95.17		
	29	5.6	2.7	99.50		
	27	6.0	2.5	107.20		
	25	6.4	2.3	115.07		
	23	6.9	2.2	123.97		
	22	7.3	2.1	129.62		
	20	7.8	1.9	139.13		
	19	8.4	1.8	149.90		
	17	9.5	1.6	168.84		
	16	10	1.5	181.24		
	15	11	1.4	195.26		
	12	13	1.1	236.09		
	9.3	17	0.9	307.54		
55						
(3000 min^{-1})	**811**	0.53	5.6	3.70	**ECP035/421**	**120/240**
	701	0.62	4.9	4.28		
	579	0.75	4.0	5.18		
	444	0.97	3.1	6.75		
	218	1.9	4.0	13.73	**ECP035/422**	**120/240**
	189	2.1	3.5	15.88		
	163	2.5	3.0	18.36		
	156	2.6	2.9	19.20		
	135	3.0	2.5	22.20		
	120	3.4	2.2	25.01		
	112	3.6	2.1	26.85		
	104	3.9	1.9	28.93		
	86	4.7	1.6	34.97		
	65.8	6.2	1.2	45.56		
	59	6.4	2.3	50.89	**ECP035/423**	**120/240**
	51	7.4	2.0	58.85		
	44	8.6	1.7	68.06		
	42	9.0	1.7	71.16		
	38	9.9	1.5	78.71		
	32	12	1.3	92.70		

NOTA
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.
NOTE
For sf=0.7 check that the duty torque does not exceed the value M2

Motoriduttori preferenziali / *Preferred gearmotors*

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

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
55						
(2850 min^{-1})	**31**	12	1.3	95.17	**ECP035/423**	**120/240**
	30	13	1.2	99.50		
	28	14	1.1	107.20		
	26	14	1.0	115.07		
	24	16	1.0	123.97		
	23	16	0.9	129.62		
	22	18	0.9	139.13		
	20	19	0.8	149.90		
	18	21	0.7	168.84		
	17	21	0.7	181.24		
	15	21	0.7	195.26		
	13	21	0.7	236.09		
	10	21	0.7	307.54		
	811	0.53	7.5	3.70	**ECP035/521**	**120/240**
	701	0.62	6.5	4.28		
	579	0.75	5.4	5.18		
	444	0.97	4.1	6.75		
	218	1.9	6.5	13.73	**ECP035/522**	**120/240**
	189	2.1	5.6	15.88		
	163	2.5	4.8	18.36		
	156	2.6	4.6	19.20		
	135	3.0	4.0	22.20		
	120	3.4	3.6	25.01		
	112	3.6	3.3	26.85		
	104	3.9	3.1	28.93		
	86	4.7	2.5	34.97		
	66	6.2	2.0	45.56		
	59	6.4	3.9	50.89	**ECP035/523**	**120/240**
	51	7.4	3.4	58.85		
	44	8.6	2.9	68.06		
	42	9.0	2.8	71.16		
	38	9.9	2.5	78.71		
	32	11.7	2.1	92.70		
	31	12.0	2.1	95.17		
	30	12.5	2.0	99.50		
	28	13.5	1.9	107.20		
	26	14.5	1.7	115.07		
	24	15.6	1.6	123.97		
	23	16.3	1.5	129.62		
	22	17.5	1.4	139.13		
	20	18.9	1.3	149.90		
	18	21.3	1.2	168.84		
	17	22.8	1.1	181.24		
	15	24.6	1.0	195.26		
	13	29.7	0.8	236.09		
	10	35.7	0.7	307.54		
70						
(3000 min^{-1})	**811**	0.65	4.6	3.70	**ECP050/421**	**12E/24E**
	701	0.75	4.0	4.28		
	579	0.91	3.3	5.18		
	444	1.2	2.5	6.75		
	218	2.3	3.3	13.73	**ECP050/422**	**12E/24E**
	189	2.6	2.9	15.88		
	163	3.0	2.5	18.36		
	156	3.2	2.4	19.20		
	135	3.7	2.0	22.20		
	120	4.1	1.8	25.01		
	112	4.4	1.7	26.85		
	104	4.8	1.6	28.93		
	86	5.8	1.3	34.97		
	66	7.5	1.0	45.56		



Dati tecnici per servizio S2 — ECP — *Technical data for S2 duty*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i	Versione motore *Motor version*	
70						
(2850 min^{-1})	**59**	7.8	1.9	50.89	**ECP050/423**	**12E/24E**
	51	9.1	1.7	58.85		
	44	10	1.4	68.06		
	42	11	1.4	71.16		
	38	12	1.2	78.71		
	32	14	1.1	92.70		
	31	15	1.0	95.17		
	30	15	1.0	99.50		
	28	17	0.9	107.20		
	26	18	0.8	115.07		
	24	19	0.8	123.97		
	23	20	0.8	129.62		
	22	21	0.7	139.13		
	20	21	0.7	149.90		
	18	21	0.7	168.84		
	17	21	0.7	181.24		
	15	21	0.7	195.26		
	13	21	0.7	236.09		
	9.8	21	0.7	307.54		
	163	3.0	4.0	18.36	**ECP050/522**	**12E/24E**
	156	3.2	3.8	19.20		
	135	3.7	3.3	22.20		
	120	4.1	2.9	25.01		
	112	4.4	2.7	26.85		
	104	4.8	2.5	28.93		
	86	5.8	2.1	34.97		
	66	7.5	1.6	45.56		
	59	7.8	3.2	50.89	**ECP050/523**	**12E/24E**
	51	9.1	2.8	58.85		
	44	10	2.4	68.06		
	42	11	2.3	71.16		
	38	12	2.1	78.71		
	32	14	1.8	92.70		
	31	15	1.7	95.17		
	30	15	1.6	99.50		
	28	17	1.5	107.20		
	26	18	1.4	115.07		
	24	19	1.3	123.97		
	23	20	1.3	129.62		
	22	21	1.2	139.13		
	20	23	1.1	149.90		
	18	26	1.0	168.84		
	17	28	0.9	181.24		
	15	30	0.8	195.26		
	13	36	0.7	236.09		
	9.8	36	0.7	307.54		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i	Versione motore *Motor version*	
100						
(3000 min^{-1})	**811**	0.92	4.4	3.70	**ECP070/521**	**120/240**
	701	1.1	3.8	4.28		
	579	1.3	3.1	5.18		
	444	1.7	2.4	6.75		
	218	3.2	3.8	13.73	**ECP070/522**	**120/240**
	189	3.7	3.3	15.88		
	163	4.3	2.8	18.36		
	156	4.5	2.7	19.20		
	135	5.2	2.3	22.20		
	120	5.8	2.1	25.01		
	112	6.2	1.9	26.85		
	104	6.7	1.8	28.93		
	86	8.1	1.5	34.97		
	66	11	1.1	45.56		
	59	11	2.3	50.89	**ECP070/523**	**120/240**
	51	13	2.0	58.85		
	44	15	1.7	68.06		
	42	15	1.6	71.16		
	38	17	1.5	78.71		
	32	20	1.2	92.70		
	31	21	1.2	95.17		
	30	22	1.2	99.50		
	28	23	1.1	107.20		
	26	25	1.0	115.07		
	24	27	0.9	123.97		
	23	28	0.9	129.62		
	22	30	0.8	139.13		
	20	33	0.8	149.90		
	18	36	0.7	168.84		
	17	36	0.7	181.24		
	15	36	0.7	195.26		
	13	36	0.7	236.09		
	9.8	36	0.7	307.54		
	120.0	5.8	4.3	25.01	**ECP070/622**	**120/240**
	112	6.2	4.0	26.85		
	104	6.7	3.7	28.93		
	86	8.1	3.1	34.97		
	66	11	2.4	45.56		
	59	11	4.5	50.89	**ECP070/623**	**120/240**
	51	13	3.9	58.85		
	44	15	3.4	68.06		
	42	15	3.2	71.16		
	38	17	2.9	78.71		
	32	20	2.5	92.70		
	31	21	2.4	95.17		
	30	22	2.3	99.50		
	28	23	2.1	107.20		
	26	25	2.0	115.07		
	24	27	1.9	123.97		
	23	28	1.8	129.62		
	22	30	1.7	139.13		
	20	33	1.5	149.90		
	18	37	1.4	168.84		
	17	39	1.3	181.24		
	15	42	1.2	195.26		
	13	51	1.0	236.09		
	9.8	67	0.7	307.54		

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

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

Motoriduttori preferenziali / *Preferred gearmotors*

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

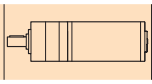
NOTE: *for continuous or highly intermittent duty, please contact our technical service*

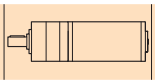
DC

Dati tecnici per servizio S2

ECP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
140						
(3000 min^{-1})	**811**	1.3	3.1	3.70	**ECP100/521**	**120/240/24E**
	701	1.5	2.7	4.28		
	579	1.8	2.2	5.18		
	444	2.3	1.7	6.75		
	218	4.4	2.7	13.73	**ECP100/522**	**120/240/24E**
	189	5.1	2.3	15.88		
	163	5.9	2.0	18.36		
	156	6.2	1.9	19.20		
	135	7.2	1.7	22.20		
	120	8.1	1.5	25.01		
	112	8.7	1.4	26.85		
	104	9.3	1.3	28.93		
	86	11	1.1	34.97		
	66	15	0.8	45.56		
	59	15	1.6	50.89	**ECP100/523**	**120/240/24E**
	51	18	1.4	58.85		
	44	20	1.2	68.06		
	42	21	1.2	71.16		
	38	24	1.1	78.71		
	32	28	0.9	92.70		
	31	29	0.9	95.17		
	30	30	0.8	99.50		
	28	32	0.8	107.20		
	26	35	0.7	115.07		
	24	36	0.7	123.97		
	23	36	0.7	129.62		
	22	36	0.7	139.13		
	20	36	0.7	149.90		
	18	36	0.7	168.84		
	17	36	0.7	181.24		
	15	36	0.7	195.26		
	13	36	0.7	236.09		
	9.8	36	0.7	307.54		
	444	2.3	3.4	6.75	**ECP100/621**	**120/240/24E**
	156	6.2	4.0	19.20	**ECP100/622**	**120/240/24E**
	135	7.2	3.5	22.20		
	120	8.1	3.1	25.01		
	112	8.7	2.9	26.85		
	104	9.3	2.7	28.93		
	86	11	2.2	34.97		
	66	15	1.7	45.56		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
140						
(3000 min^{-1})	**59**	15	3.3	50.89	**ECP100/623**	**120/240/24E**
	51	18	2.8	58.85		
	44	20	2.4	68.06		
	42	21	2.3	71.16		
	38	24	2.1	78.71		
	32	28	1.8	92.70		
	31	29	1.7	95.17		
	30	30	1.7	99.50		
	28	32	1.5	107.20		
	26	35	1.4	115.07		
	24	37	1.3	123.97		
	23	39	1.3	129.62		
	22	42	1.2	139.13		
	20	45	1.1	149.90		
	18	51	1.0	168.84		
	17	55	0.9	181.24		
	15	59	0.9	195.26		
	13	71	0.7	236.09		
	9.8	71	0.7	307.54		
250						
(3000 min^{-1})	**811**	2.4	1.7	3.70	**ECP180/521**	**120/240**
	701	2.7	1.5	4.28		
	579	3.3	1.2	5.18		
	444	4.3	0.9	6.75		
	218	8.2	1.5	13.73	**ECP180/522**	**120/240**
	189	9.5	1.3	15.88		
	163	11	1.1	18.36		
	156	12	1.0	19.20		
	135	13	0.9	22.20		
	120	15	0.8	25.01		
	112	16	0.7	26.85		
	104	17	0.7	28.93		
	86	17	0.7	34.97		
	66	17	0.7	45.56		
	59	28	0.9	50.89	**ECP180/523**	**120/240**
	51	33	0.8	58.85		
	44	36	0.7	68.06		
	42	36	0.7	71.16		
	38	36	0.7	78.71		
	32	36	0.7	92.70		
	31	36	0.7	95.17		
	30	36	0.7	99.50		
	28	36	0.7	107.20		
	26	36	0.7	115.07		
	24	36	0.7	123.97		
	23	36	0.7	129.62		
	22	36	0.7	139.13		
	20	36	0.7	149.90		
	18	36	0.7	168.84		
	17	36	0.7	181.24		
	15	36	0.7	195.26		
	13	36	0.7	236.09		
	9.8	36	0.7	307.54		

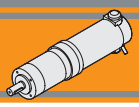
NOTA
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

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

Motoriduttori preferenziali / *Preferred gearmotors*

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

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



Dati tecnici per servizio S2

ECP

Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**811**	2.4	3.4	3.70	**ECP180/621**	**120/240/24E**
	701	2.7	2.9	4.28		
	579	3.3	2.4	5.18		
	444	4.3	1.9	6.75		
	218	8.2	3.0	13.73	**ECP180/622**	**120/240/24E**
	189	9.5	2.6	15.88		
	163	11	2.3	18.36		
	156	12	2.2	19.20		
	135	13	1.9	22.20		
	120	15	1.7	25.01		
	112	16	1.6	26.85		
	104	17	1.4	28.93		
	86	21	1.2	34.97		
	66	27	0.9	45.56		
	59	28	1.8	50.89	**ECP180/623**	**120/240/24E**
	51	33	1.5	58.85		
	44	38	1.3	68.06		
	42	40	1.3	71.16		
	38	44	1.1	78.71		
	32	52	1.0	92.70		
	31	53	0.9	95.17		
	30	56	0.9	99.50		
	28	60	0.8	107.20		
	26	64	0.8	115.07		
	24	69	0.7	123.97		
	23	71	0.7	129.62		
	22	71	0.7	139.13		
	20	71	0.7	149.90		
	18	71	0.7	168.84		
	17	71	0.7	181.24		
	15	71	0.7	195.26		
	13	71	0.7	236.09		
	9.8	71	0.7	307.54		
350						
(3000 min^{-1})	**811**	3.3	2.4	3.70	**ECP250/621**	**120/240**
	701	3.8	2.1	4.28		
	579	4.6	1.7	5.18		
	444	6.0	1.3	6.75		
	218	11.5	2.2	13.73	**ECP250/622**	**120/240**
	189	13.3	1.9	15.88		
	163	15.4	1.6	18.36		
	156	16.1	1.6	19.20		
	135	18.6	1.3	22.20		
	120	21.0	1.2	25.01		
	112	22.6	1.1	26.85		
	104	24.3	1.0	28.93		
	86	29.4	0.9	34.97		
	66	38.3	0.7	45.56		

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

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

Motoriduttori preferenziali / *Preferred gearmotors*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
350						
(3000 min^{-1})	**59**	39.9	1.3	50.89	**ECP250/623**	**120/240**
	51	46.1	1.1	58.85		
	44	53.4	0.9	68.06		
	42	55.8	0.9	71.16		
	38	61.7	0.8	78.71		
	32	72.7	0.7	92.70		
	32	74.6	0.7	95.17		
	30	71.0	0.7	99.50		
	28	71.0	0.7	107.20		
	26	71.0	0.7	115.07		
	24	71.0	0.7	123.97		
	23	71.0	0.7	129.62		
	22	71.0	0.7	139.13		
	20	71.0	0.7	149.90		
	18	71.0	0.7	168.84		
	17	71.0	0.7	181.24		
	15	71.0	0.7	195.26		
	13	71.0	0.7	236.09		
	9.8	71.0	0.7	307.54		
500						
(3000 min^{-1})	**811**	4.6	1.7	3.70	**ECP350/621**	**120/240**
	701	5.4	1.5	4.28		
	579	6.5	1.2	5.18		
	444	8.5	0.9	6.75		
	218	16	1.5	13.73	**ECP350/622**	**120/240**
	189	19	1.3	15.88		
	163	22	1.2	18.36		
	156	23	1.1	19.20		
	135	26	1.0	22.20		
	120	29	0.8	25.01		
	112	32	0.8	26.85		
	104	34	0.7	28.93		
	86	36	0.7	34.97		
	66	36	0.7	45.56		
	59	56	0.9	50.89	**ECP350/623**	**120/240**
	51	65	0.8	58.85		
	44	71	0.7	68.06		
	42	71	0.7	71.16		
	38	71	0.7	78.71		
	32	71	0.7	92.70		
	31	71	0.7	95.17		
	30	71	0.7	99.50		
	28	71	0.7	107.20		
	26	71	0.7	115.07		
	24	71	0.7	123.97		
	23	71	0.7	129.62		
	22	71	0.7	139.13		
	20	71	0.7	149.90		
	18	71	0.7	168.84		
	17	71	0.7	181.24		
	15	71	0.7	195.26		
	13	71	0.7	236.09		
	9.8	71	0.7	307.54		

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

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

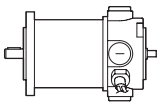
Dati tecnici elettrici

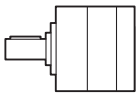
Electrical technical data

EC020 → BB4 | EC035 → BB6 | EC050 → BB8 | EC070 → BB10
EC100 → BB12 | EC180 → BB14 | EC250 → BB16 | EC350 → BB18

Motori applicabili

Motor adapters





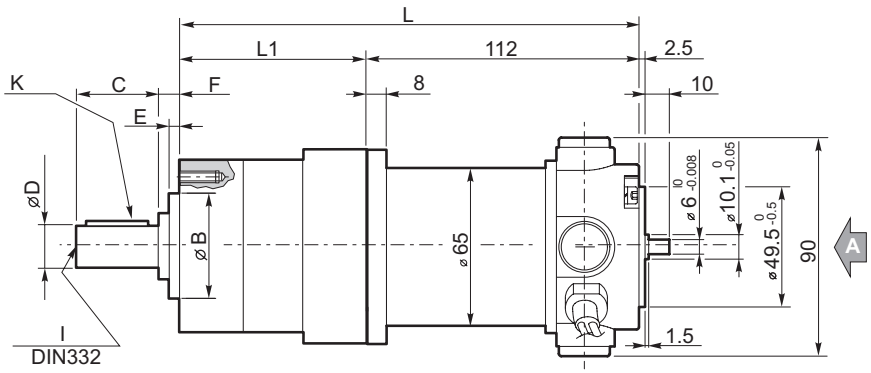
		ND		EC								
		120.120 120.240	180.120 180.240	020.120 020.24E	035.120 035.240	050.12E 050.24E	070.120 070.240	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
PM	42						*	*	*			
	52											
	62											

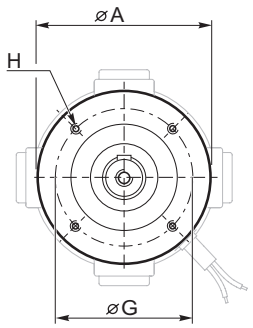
Combinazioni preferenziali / *Preferred combinations*

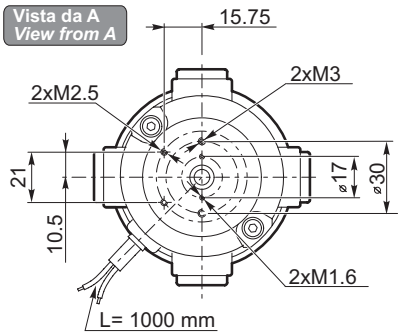
* Contattare il nostro servizio tecnico / *Please contact our technical department*

Dimensioni — *Dimensions*

NDP120/... U

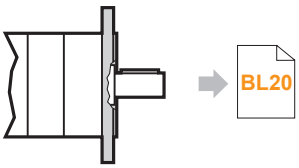






Freno / *Brake* → BA9

Encoder → BA9



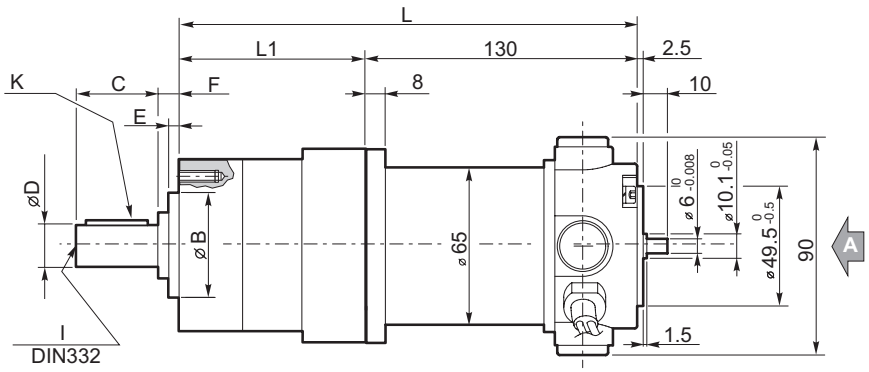
NDP120/... C...

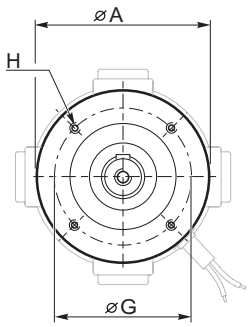
Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
NDP120/52...	1	73	185	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	199.1										
	3	101.4	213.4										
NDP120/62...	1	72.8	184.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	201.7										
	3	106.7	218.7										

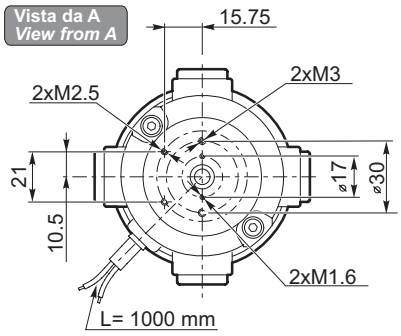
DC

Dimensioni *Dimensions*

NDP180/... U

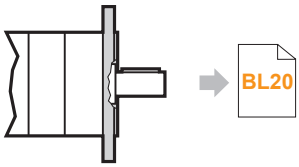






Freno / *Brake* → BA9

Encoder → BA9

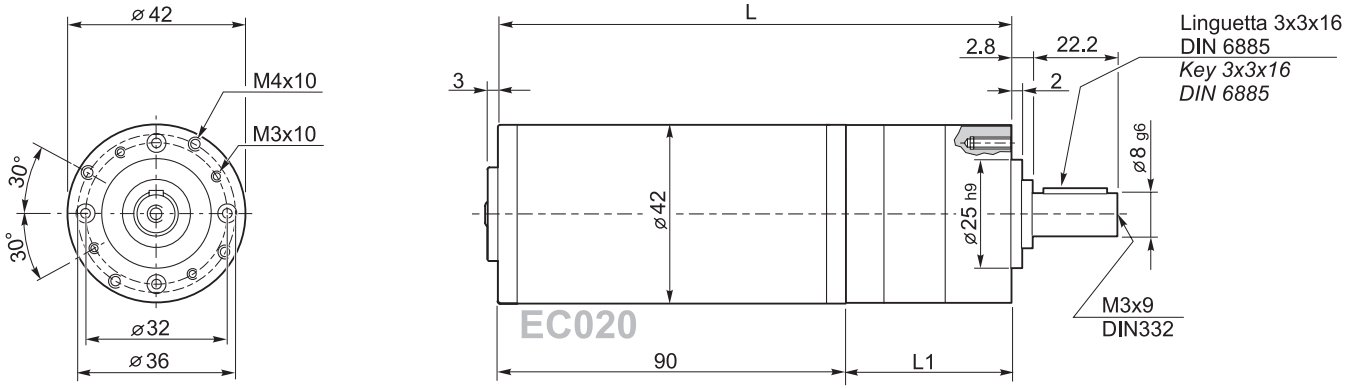


NDP180/... C...

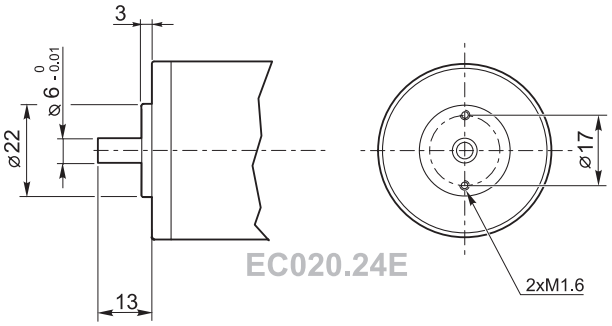
Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
NDP180/52	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
NDP180/62	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7										
	3	106.7	236.7										

Dimensioni — *Dimensions*

ECP020/42... U

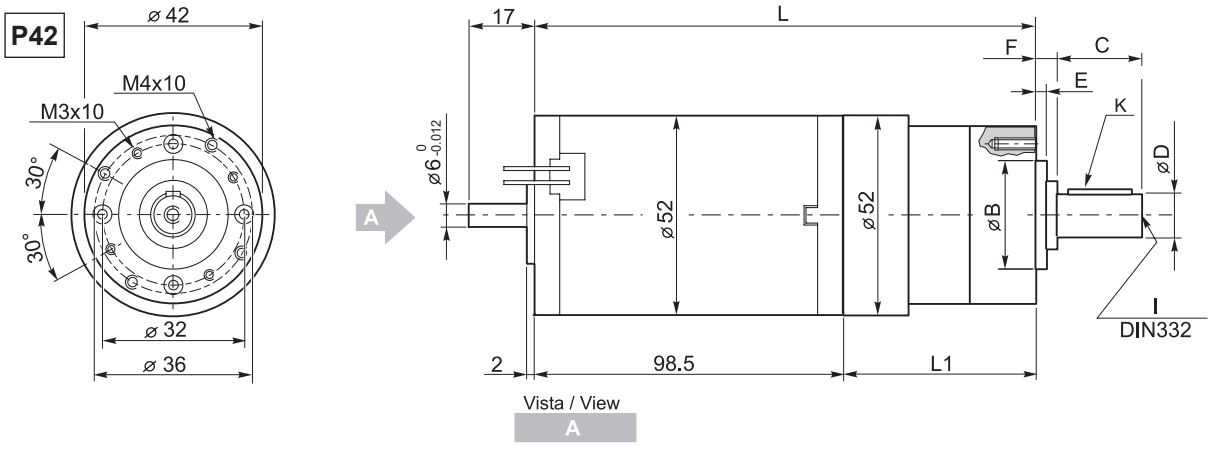


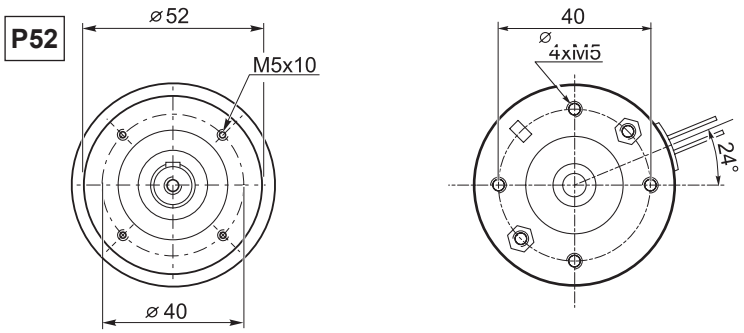
Encoder → BB24



	Numero di stadi / *Stages number*		
ECP020/42...	**1**	**2**	**3**
L1	60.5	73.6	86.6
L	150.5	163.6	176.6

ECP035/... U



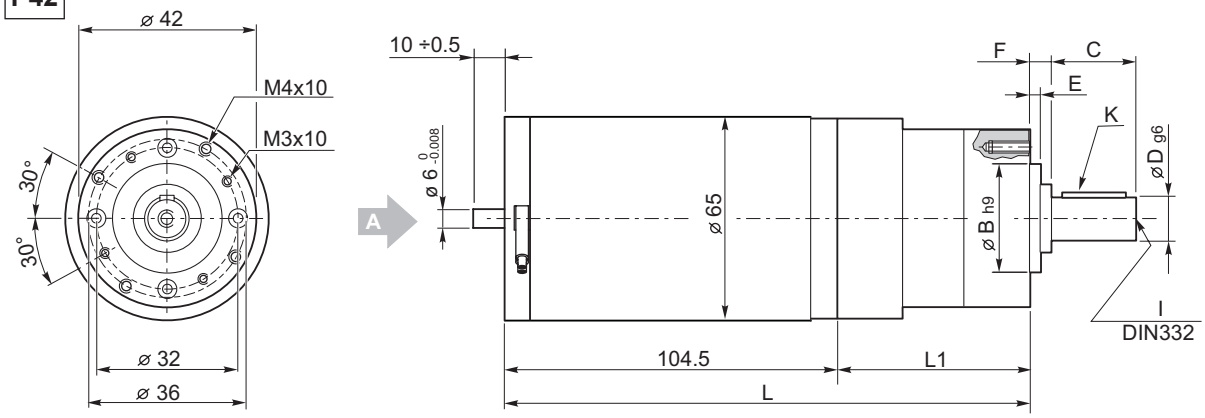


Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*								
		L1	**L**	**B**	**C**	**D**	**E**	**F**	**I**	**K**
ECP035/42...	**1**	60.5	159	25 h9	22.2	8 g6	2	2.8	M3x9	3x3x16
	2	73.6	172.1							
	3	86.6	185.1							
ECP035/52...	**1**	73.1	171.6	32 h8	20.8	12 h7	3	4.2	M4x10	4x4x16
	2	87.2	185.7							
	3	101.5	200							

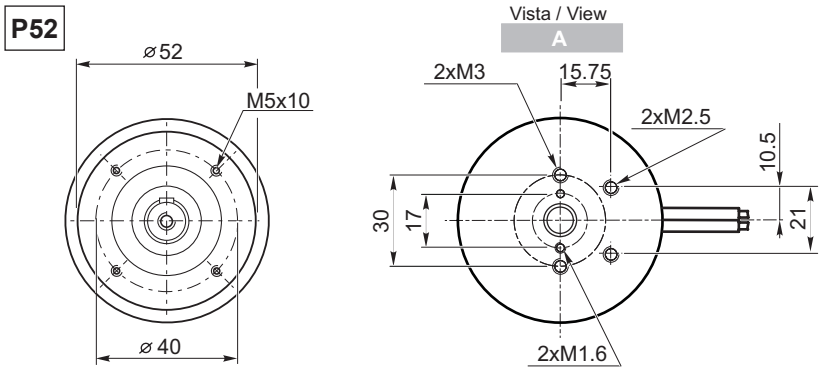
Dimensioni — *Dimensions*

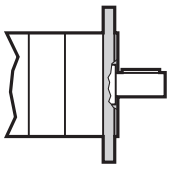
ECP050/... U

P42



P52





ECP050/... C...

BL20

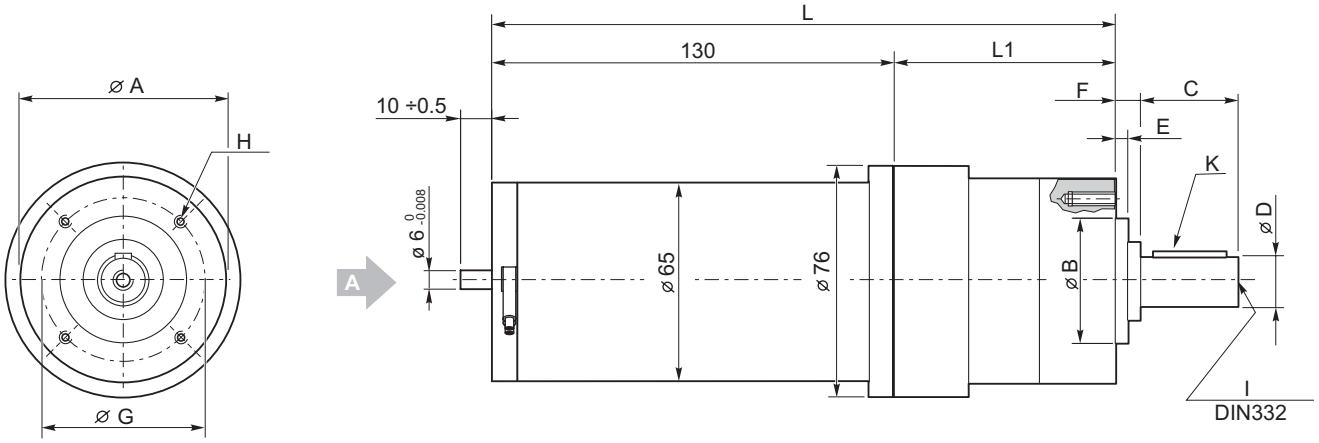
Freno / *Brake* BB23

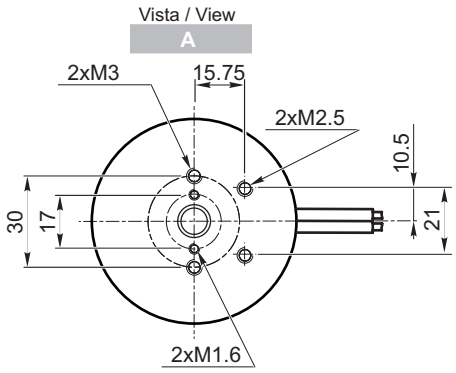
Encoder BB24

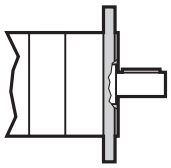
Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*								
		L1	L	B	C	D	E	F	I	K
ECP050/42...	1	60.5	165	25 h9	22.2	8 g6	2	2.8	M3x9	3x3x16
	2	73.6	178.1							
	3	86.6	191.1							
ECP050/52...	1	73.1	177.6	32 h8	20.8	12 h7	3	4.2	M4x10	4x4x16
	2	87.2	191.7							
	3	101.5	206							

Dimensioni — *Dimensions*

ECP070/... U







ECP070/... C...

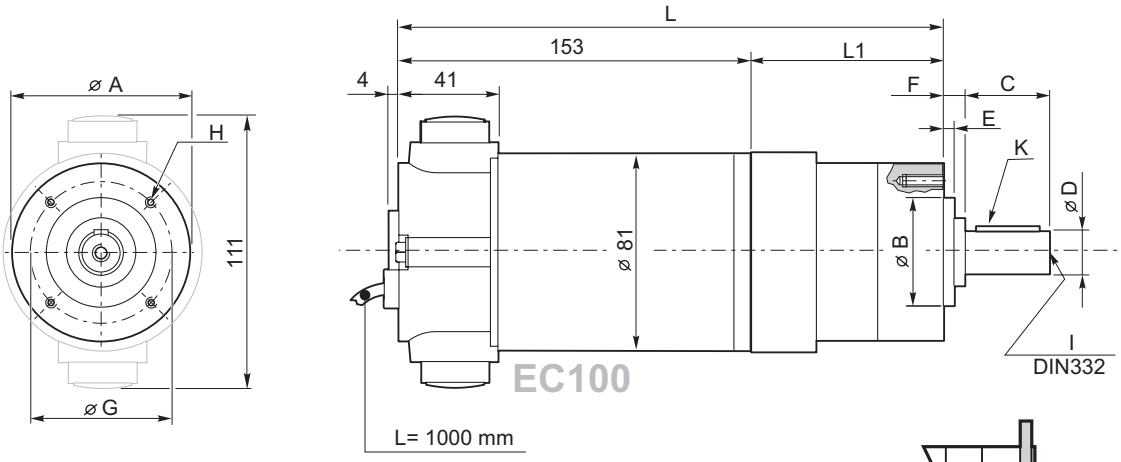
BL20

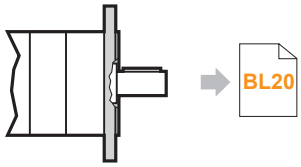
Motori / *Motors* IP66 BC2
Freno / *Brake* BB23
Encoder BB24

Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP070/52...	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
ECP070/62...	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7										
	3	106.7	236.7										

Dimensioni ***Dimensions***

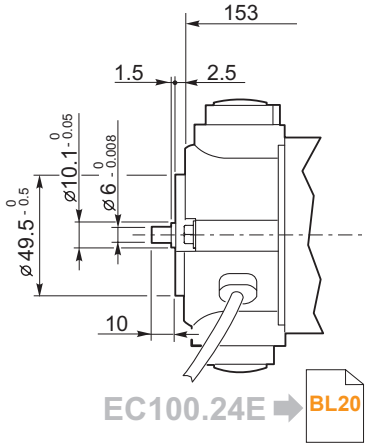
ECP100/... U... 120/140





ECP100/... C...

ECP100/... U... 24E



Motori / *Motors* IP66 → BC4

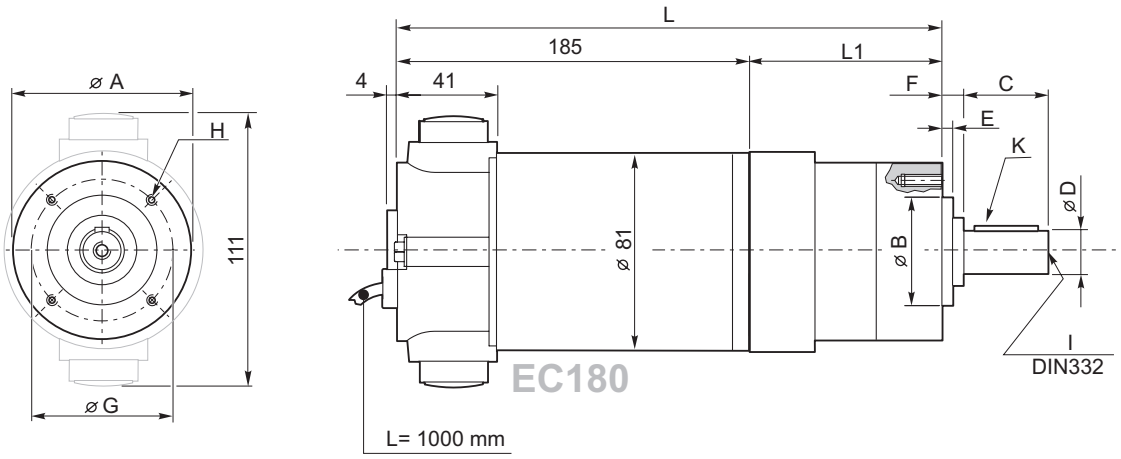
Freno / *Brake* → BB23

Encoder → BB24

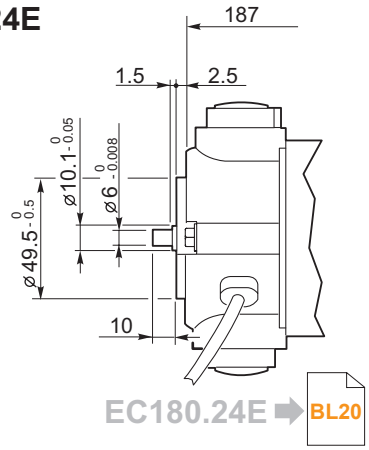
Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP100/52...	1	73	226	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	240.1										
	3	101.4	254.4										
ECP100/62...	1	72.8	225.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	242.7										
	3	106.7	259.7										

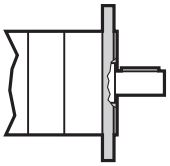
Dimensioni *Dimensions*

ECP180/... U... 120/240



ECP180/62.. U... 24E





BL20

ECP180/... C...

Motori / *Motors* IP66 → BC6

Freno / *Brake* → BB23

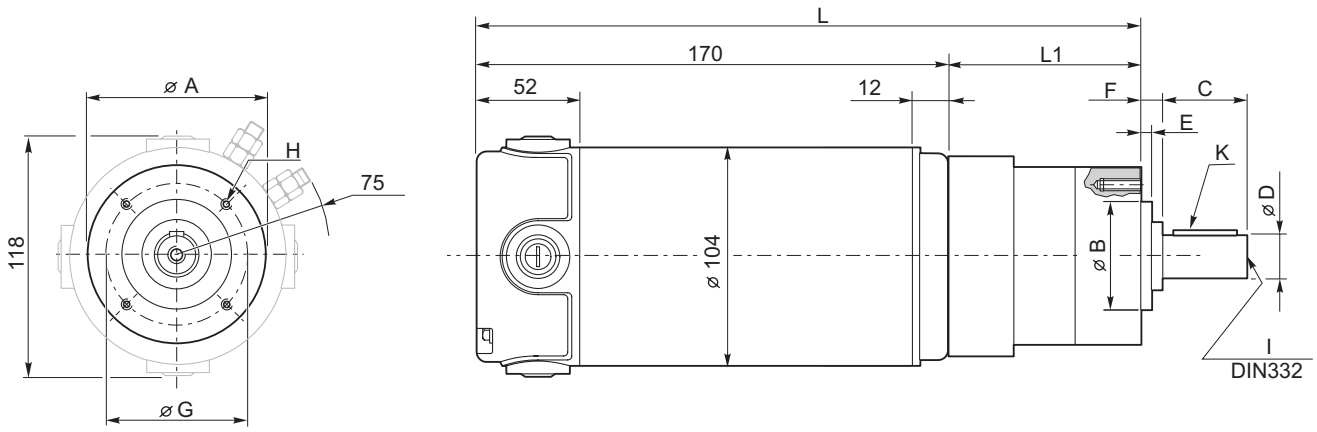
Encoder → BB24

Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*													
		EC180		EC180.24E		EC180 - EC180.24E									
		L1	L	L1	L	A	B	C	D	E	F	G	H	I	K
ECP180/52...	1	73	258			52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	272.1												
	3	101.4	286.4												
ECP180/62...	1	72.8	257.8	76	263	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	274.7	92	279										
	3	106.7	291.7	108	295										

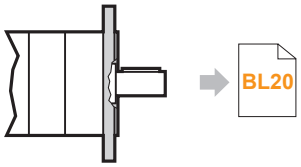
DC

Dimensioni — *Dimensions*

ECP250/... U



Motori / *Motors* IP66 → BC8

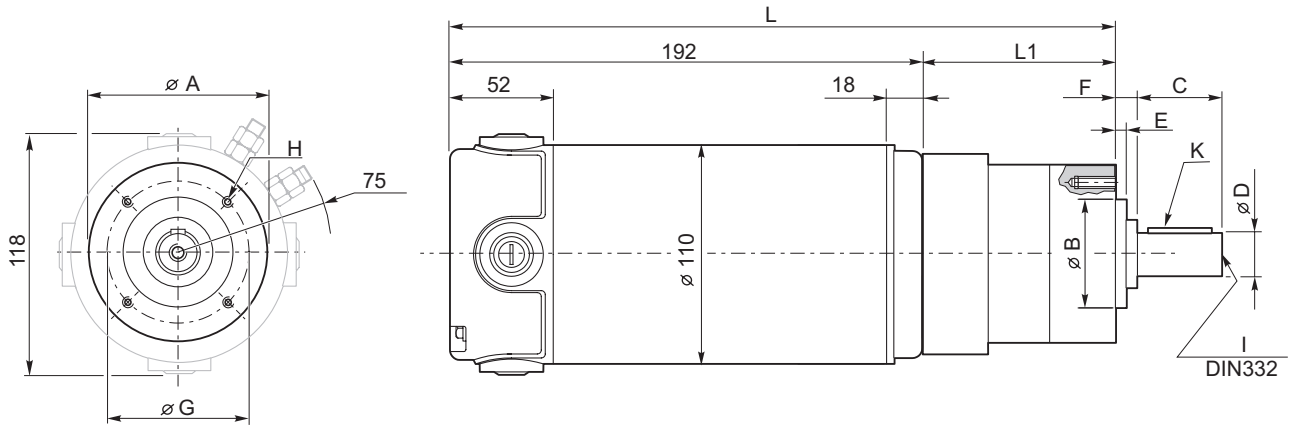


ECP250/... C... → BL20

Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP250/62...	1	74.5	244.5	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	91.5	261.5										
	3	108.5	278.5										

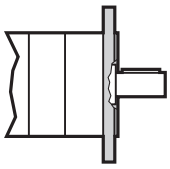
Dimensioni — *Dimensions*

ECP350/... U



Motori / *Motors* IP66 → BC10

Freno / *Brake* → BB23



→ BL20

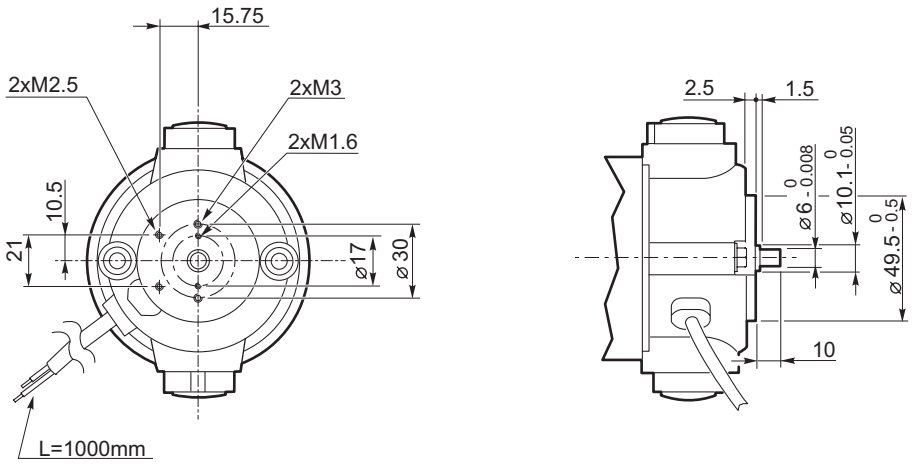
ECP350/... C...

Tipo *Type*	Numero di stadi *Stages number*	Dimensioni / *Dimensions*											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP350/62...	1	74.5	266.5	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	91.5	283.5										
	3	108.5	300.5										

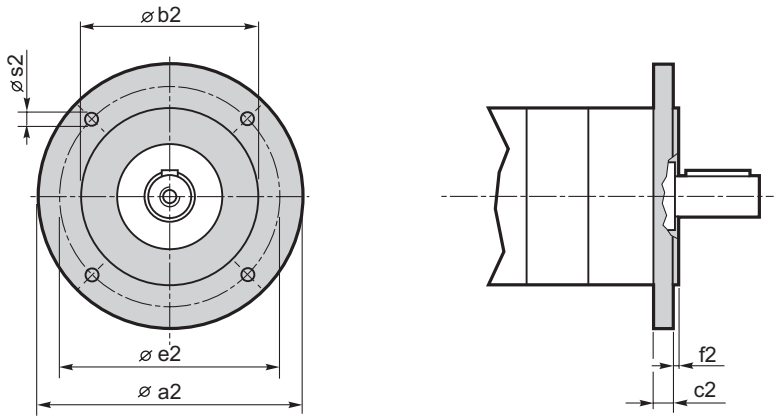
DC

Dimensioni — *Dimensions*

ECP100.24E
ECP180.24E



NDP.../... C... - ECP.../... C... Flange uscita / *Output flanges*



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

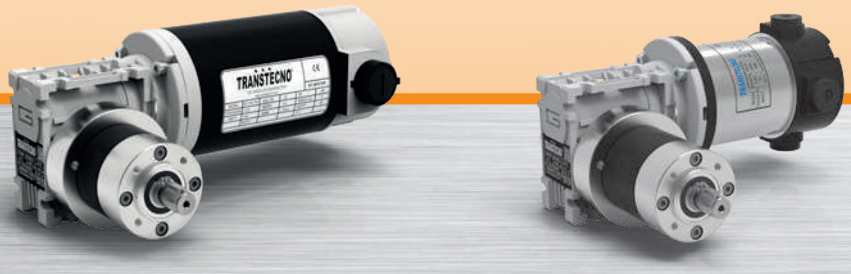
MINI TECNO™

small but strong

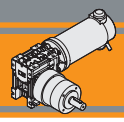
NDWMP
ECWMP

DC

Motoriduttori CC combinati
DC double reduction gearmotors



MINI TECNO™ brand of TRANSTECNO®



Caratteristiche tecniche — *Technical features*

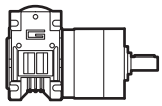
L'accoppiamento di un riduttore a vite senza fine con un riduttore epicicloidale consente di ottenere elevati rapporti di riduzione (i_{max} = 1/18452) e di disporre di un gruppo autolubrificato compatto, silenzioso e con un'elevata affidabilità.

The coupling of a wormgearbox to a planetary gearbox allows to obtain high reduction ratios (i_{max} = 1/18452) and to get a compact, silent, self lubricated with high reliability group.

Designazione — *Classification*

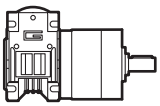
MOTORIDUTTORE / *GEARMOTOR*

NDWMP	120/026/52	2	CD	90	405	240	BR
Tipo *Type*	Grandezza *Size*	Numero stadi epicicloidale *Planetary stages number*	Versione Riduttore *Gearbox Version*	Flangia Uscita *Output flange*	Rapporto *Ratio*	Versione Motore *Motor Version*	Opzioni *Options*
NDWMP	120/026/52 120/026/62 180/026/62	1 2 3	US UD CS CD	80 90 105 120	Vedere tabella *See tables*	120 240	BR BRL

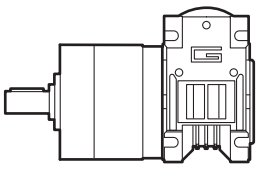


MOTORIDUTTORE / *GEARMOTOR*

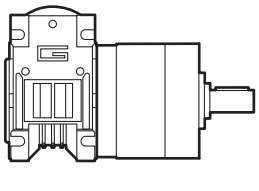
ECWMP	070/026/52	2	CD	90	405	240	BR
Tipo *Type*	Grandezza *Size*	Numero stadi epicicloidale *Planetary stages number*	Versione Riduttore *Gearbox Version*	Flangia Uscita *Output flange*	Rapporto *Ratio*	Versione Motore *Motor Version*	Opzioni *Options*
ECWMP	070/026/52 070/026/62 100/026/52 100/026/62 180/026/62	1 2 3	US UD CS CD	80 90 105 120	Vedere tabella *See tables*	120 240 24E	BR BRL



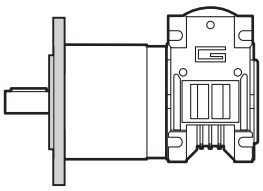
Versioni — *Versions*



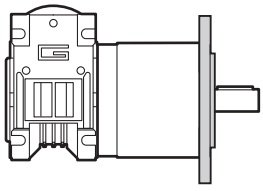
US



UD



CS



CD

Simbologia — *Symbols*

n_1	[min^{-1}]	Velocità in ingresso / *Input speed*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*
i		Rapporto di riduzione / *Ratio*
P_1	[kW]	Potenza in entrata / *Input power*
M_n	[Nm]	Coppia nominale in uscita del riduttore / *Maximum output torque of the gearbox*
M_2	[Nm]	Coppia in uscita in funzione di P_1 / *Output torque referred to P_1*
sf		Fattore di servizio / *Service factor*
Rd	%	Rendimento dinamico / *Dynamic efficiency*
A_2	N]	Carico assiale ammissibile in uscita / *Permitted output axial load*
R_2	[N]	Carico radiale ammissibile in uscita / *Permitted output radial load*

Lubrificazione — *Lubrication*

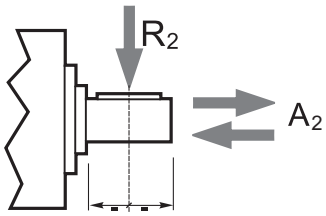
I riduttori a vite senza fine della serie CM sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.

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

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

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

Carichi radiali — *Radial loads*



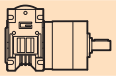
Numero di stadi *Stages number*	Carichi Radiali R_2 [N] *Radial Load R_2 [N]*		
	P52	P62	P81
1	200	240	400
2	320	360	600
3	450	520	1000

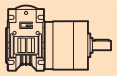
Numero di stadi *Stages number*	Carichi Assiali A_2 [N] *Axial Load A_2 [N]*		
	P52	P62	P81
1	60	70	80
2	100	100	120
3	150	150	200

Rapporti — *Ratios*

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

Dati tecnici per servizio S2 — NDWMP — *Technical data for S2 duty*

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
160						
(3000 min^{-1})	**44.4**	22.8	1.1	67.5	**120/026/521**	120/240
	29.6	25.0	1.0	101.3		
	22.2	25.0	1.0	135		
	14.8	25.0	1.0	202.5		
	11.1	25.0	1.0	270		
	8.9	25.0	1.0	337.5		
	7.4	25.0	1.0	405		
	12.0	25.0	1.0	250.1	**120/026/522**	120/240
	8.0	25.0	1.0	375.15		
	6.0	25.0	1.0	500.2		
	4.0	25.0	1.0	750.3		
	3.0	25.0	1.0	1000.4		
	2.4	25.0	1.0	1250.5		
	2.0	25.0	1.0	1500.6		
	1.1	25.0	1.0	2734		
	44.4	23	1.7	67.5	**120/026/621**	120/240
	29.6	34	1.2	101.3		
	22.2	40	1.0	135.0		
	14.8	40	1.0	202.5		
	11.1	40	1.0	270.0		
	8.9	40	1.0	337.5		
	7.4	40	1.0	405.0		
	12.0	50.0	1.0	250.1	**120/026/622**	120/240
	8.0	50.0	1.0	375.15		
	6.0	50.0	1.0	500.2		
	4.0	50.0	1.0	750.3		
	3.0	50.0	1.0	1000.4		
	2.4	50.0	1.0	1250.5		
	2.0	50.0	1.0	1500.6		
	1.1	50.0	1.0	2734		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**44.4**	25.0	1.0	67.5	**180/026/521**	120/240
	44.4	35.7	1.1	67.5	**180/026/621**	120/240
	29.6	40.0	1.0	101.3		

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

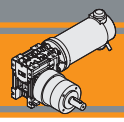
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici — *Electrical technical data*

ND 120 → BA4

ND 180 → BA6



Dati tecnici per servizio S2

ECWMP

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})	**44.4**	14	1.8	67.5	**070/026/521**	120/240
	29.6	21	1.2	101.3		
	22.2	25	1.0	135.0		
	14.8	25	1.0	202.5		
	11.1	25	1.0	270.0		
	8.9	25	1.0	337.5		
	7.4	25	1.0	405		
	12.0	25.0	1.0	250.1	**070/026/522**	120/240
	8.0	25.0	1.0	375.15		
	6.0	25.0	1.0	500.2		
	4.0	25.0	1.0	750.3		
	3.0	25.0	1.0	1000.4		
	2.4	25.0	1.0	1250.5		
	2.0	25.0	1.0	1500.6		
	1.1	25.0	1.0	2734		
	44.4	14.3	2.8	67.5	**070/026/621**	120/240
	29.6	20.1	2.0	101.3		
	22.2	25.4	1.6	135		
	14.8	34.0	1.2	202.5		
	11.1	40.0	1.0	270		
	8.9	40.0	1.0	337.5		
	7.4	40.0	1.0	405		
	12.0	50.0	1.0	250.1	**070/026/622**	120/240
	8.0	50.0	1.0	375.15		
	6.0	50.0	1.0	500.2		
	4.0	50.0	1.0	750.3		
	3.0	50.0	1.0	1000.4		
	2.4	50.0	1.0	1250.5		
	2.0	50.0	1.0	1500.6		
	1.1	50.0	1.0	2734		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
140						
(3000 min^{-1})	**44.4**	20	1.3	67.5	**100/026/521**	120/240/24E
	29.6	25	1.0	101.3		
	44.4	20	2.0	67.5	**100/026/621**	120/240/24E
	29.6	29	1.4	101.3		
	22.2	37	1.1	135.0		
	14.8	40	1.0	202.5		
250						
(3000 min^{-1})	**44.4**	25.0	1.0	67.5	**180/026/521**	120/240
	44.4	37	1.1	67.5	**180/026/621**	120/240
	29.6	40	1.0	101.3		
	22.2	40	1.0	135.0		

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*

DC

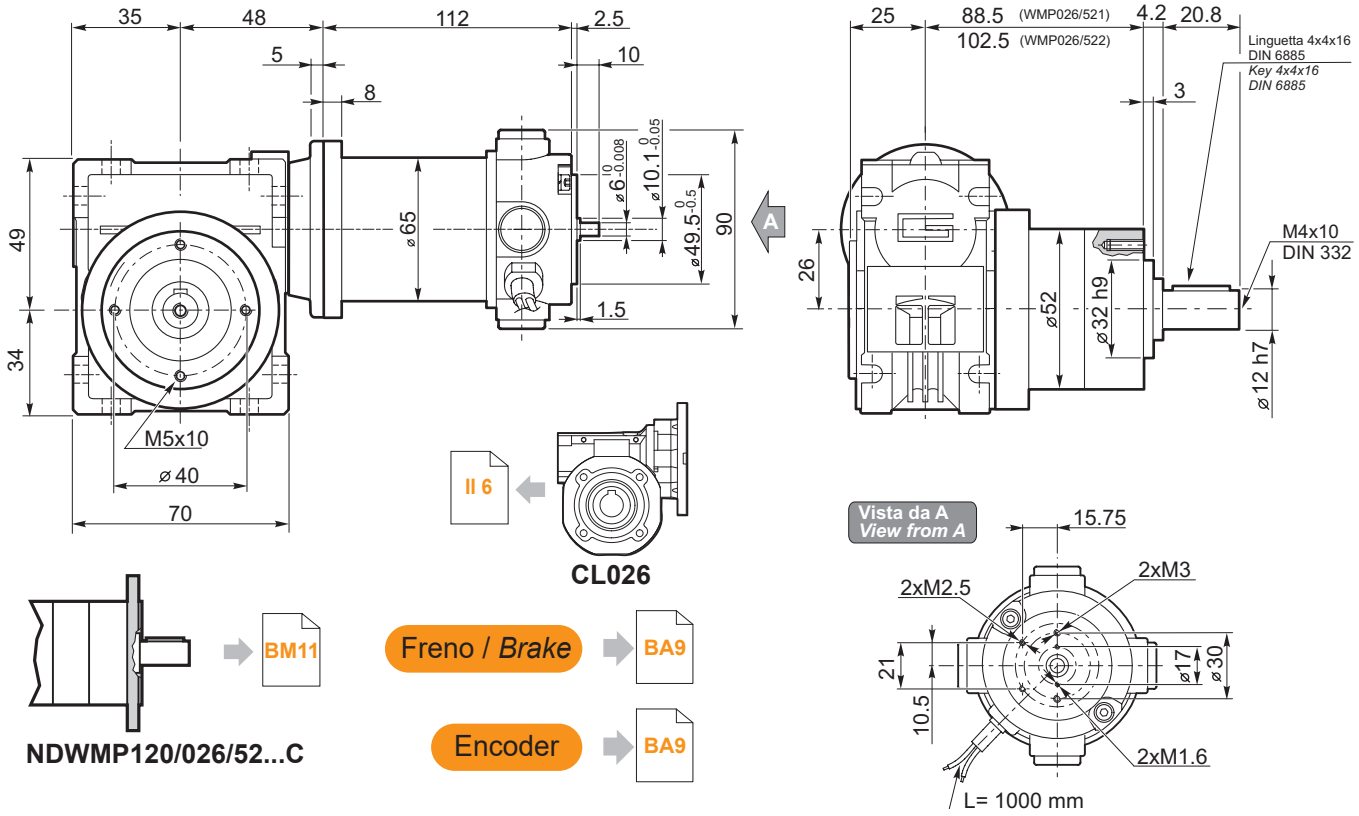
Dati tecnici elettrici

Electrical technical data

EC070 BB10 EC100 BB12 EC180 BB14

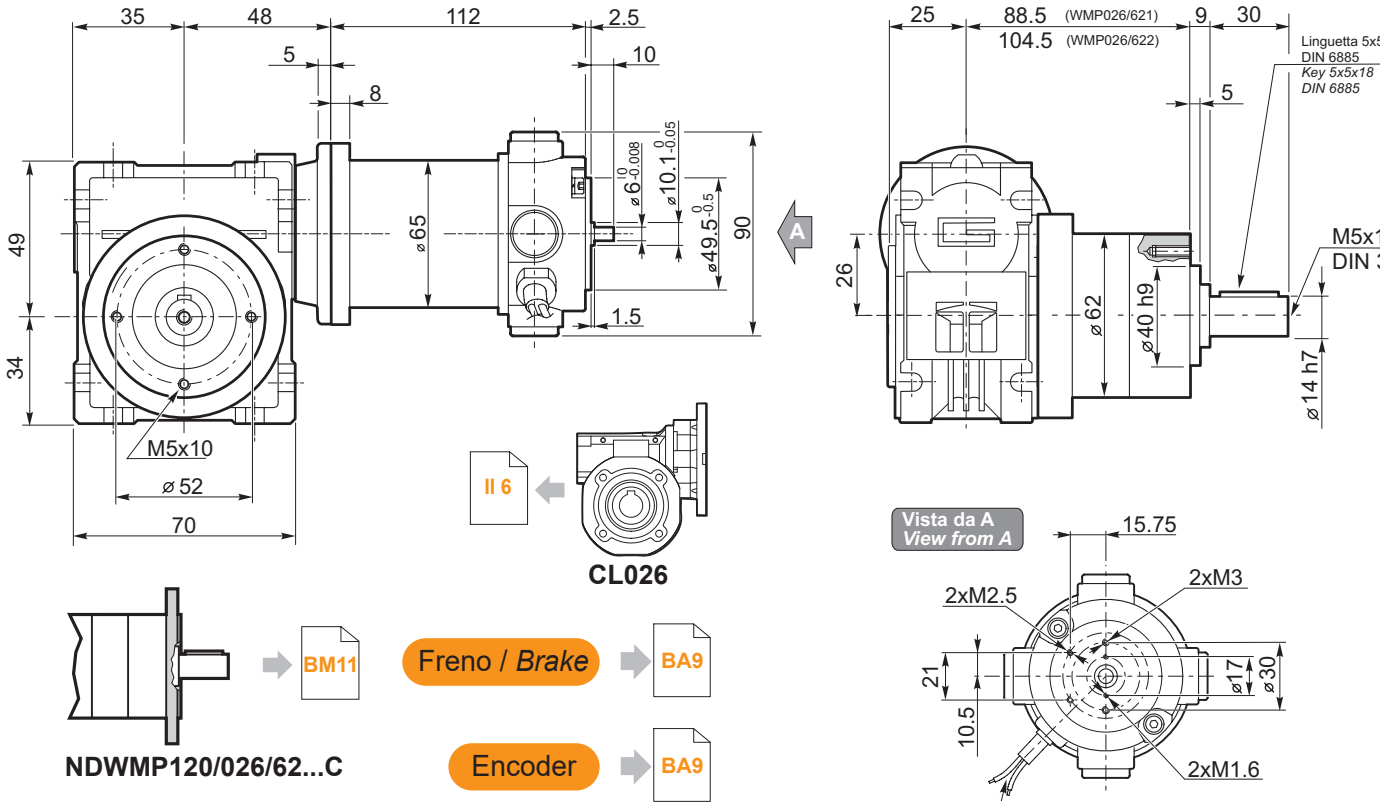
Dimensioni *Dimensions*

NDWMP120/026/52...U



NDWMP120/026/52...C

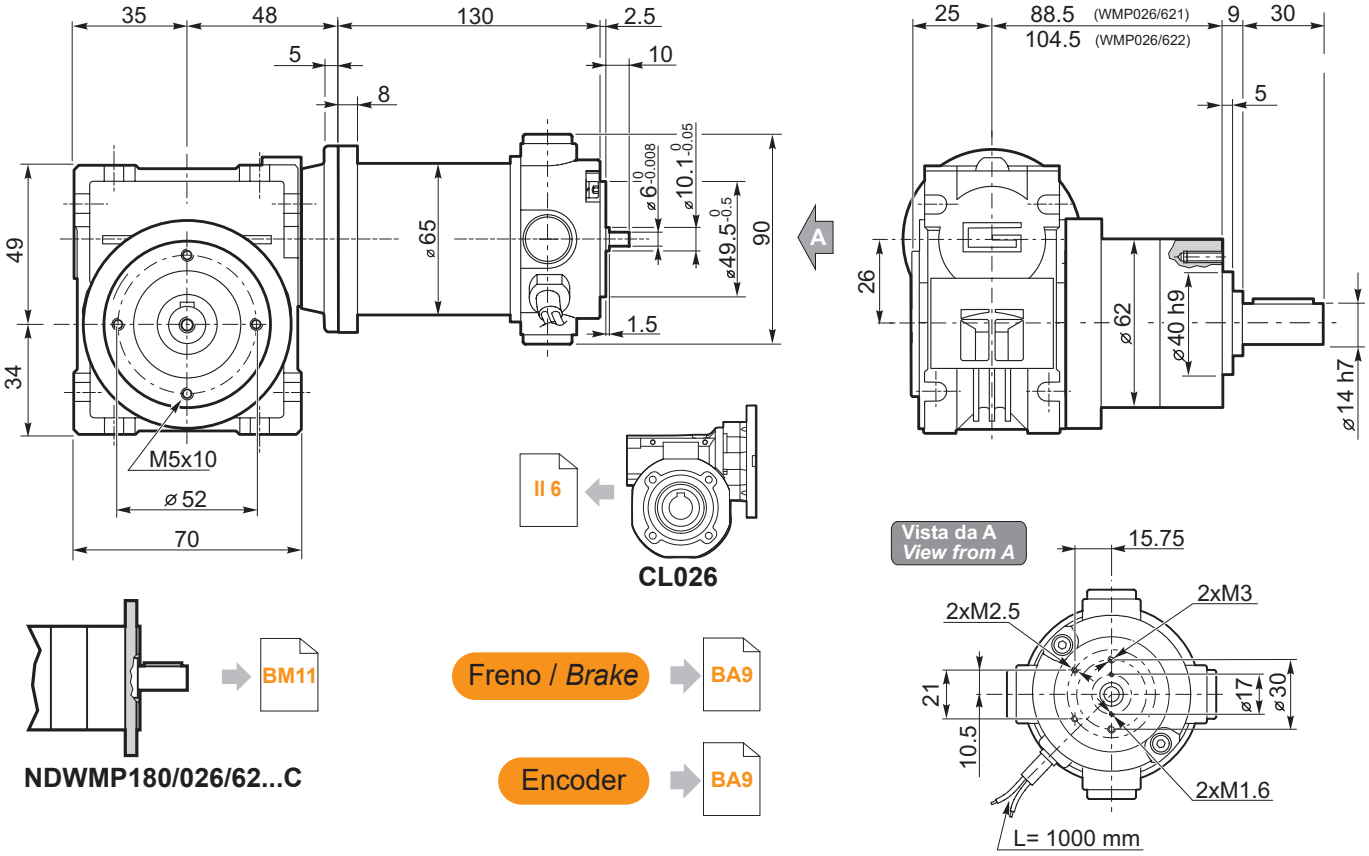
NDWMP120/026/62...U



NDWMP120/026/62...C

Dimensioni — *Dimensions*

NDWMP180/026/62...U



NDWMP180/026/62...C

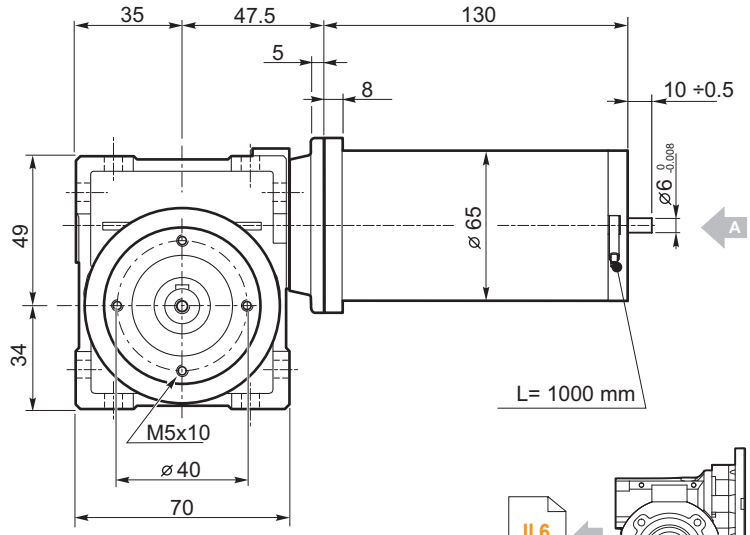
Freno / *Brake* → BA9

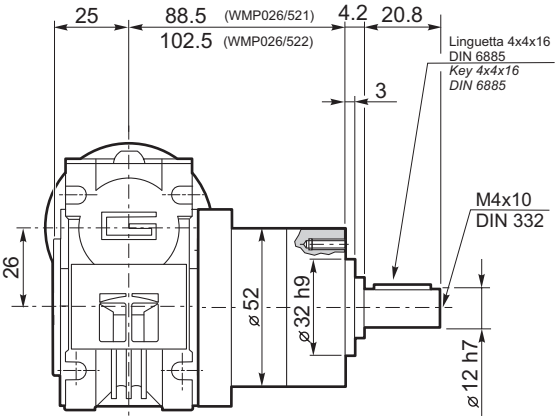
Encoder → BA9

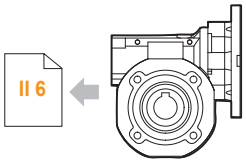
DC

Dimensioni ***Dimensions***

ECWMP070/026/52...U

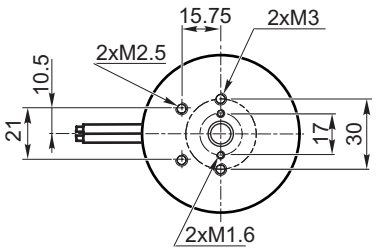


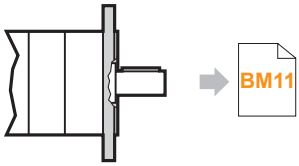




CL026

Vista / View A





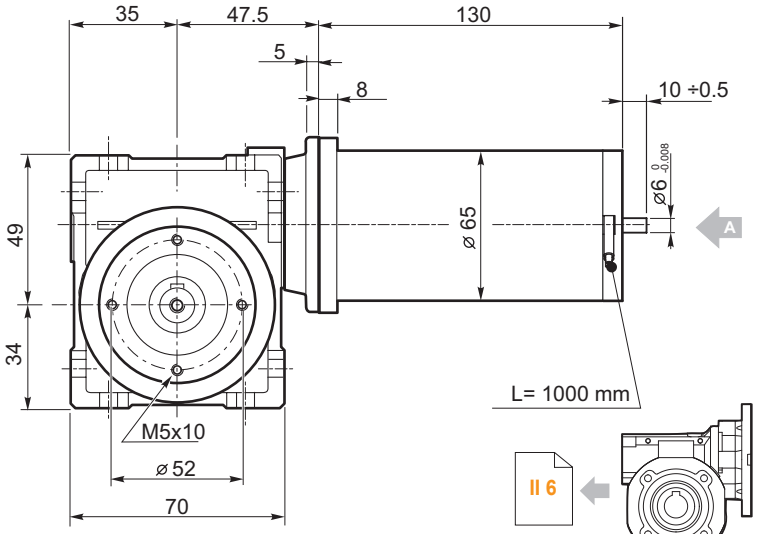
ECWMP070/026/52...C

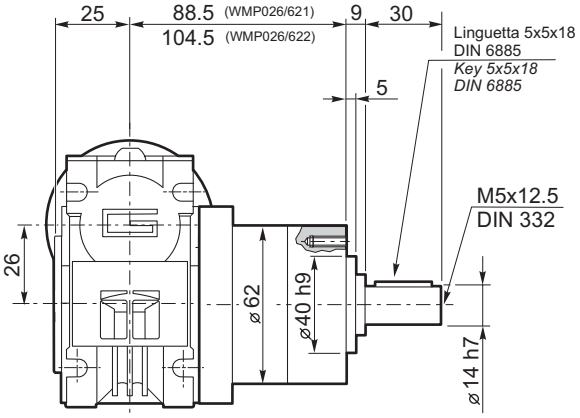
Motori / *Motors* IP66 → BC2

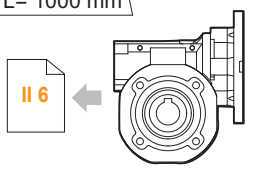
Freno / *Brake* → BB23

Encoder → BB24

ECWMP070/026/62...U

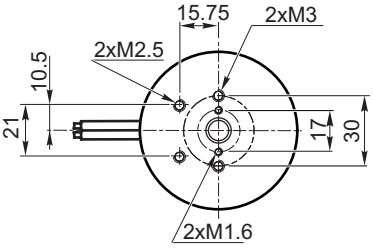


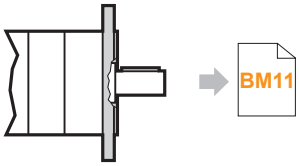




CL026

Vista / View A





ECWMP070/026/62...C

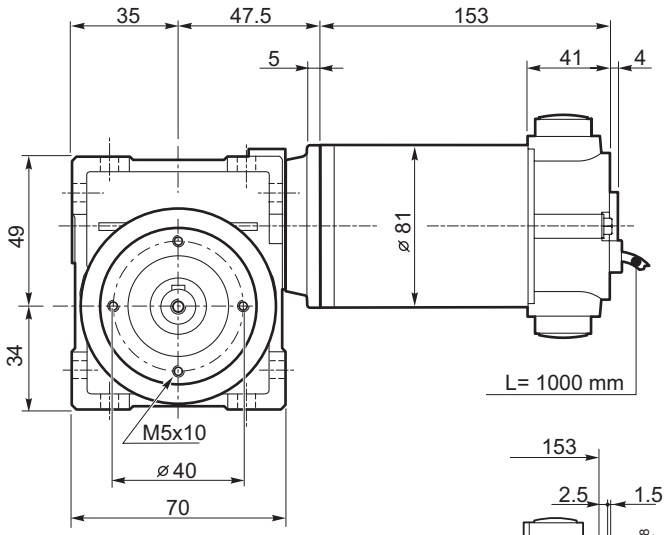
Motori / *Motors* IP66 → BC2

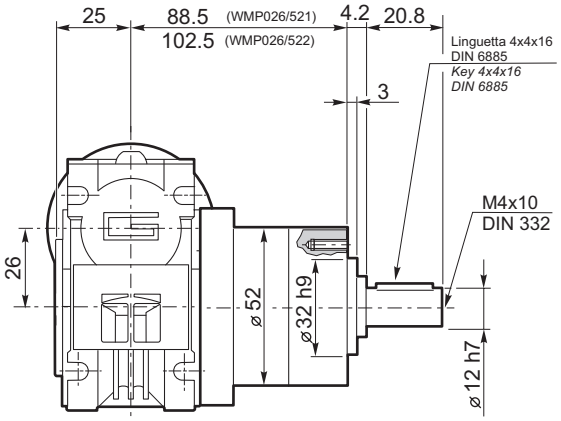
Freno / *Brake* → BB23

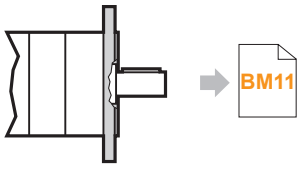
Encoder → BB24

Dimensioni — *Dimensions*

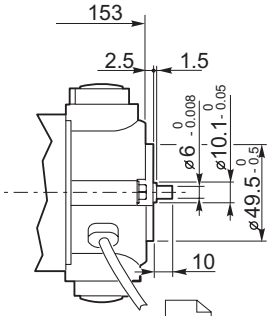
ECWMP100/026/52...U

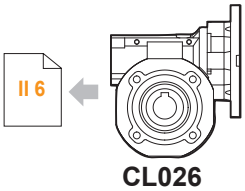






ECWMP100/026/52...C





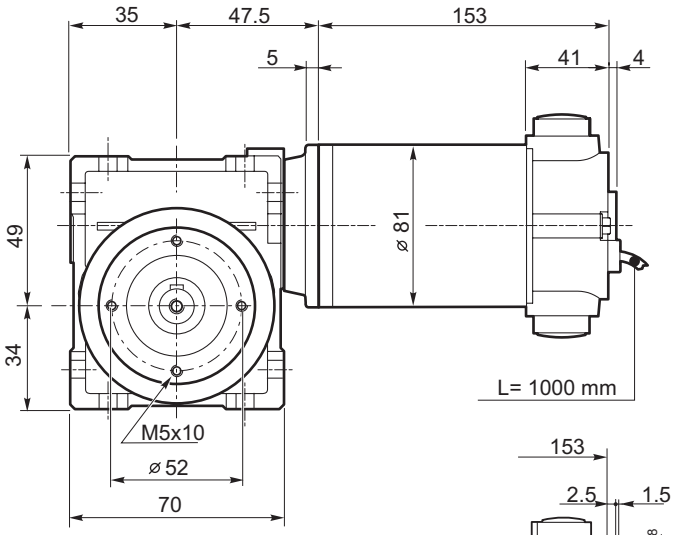
CL026

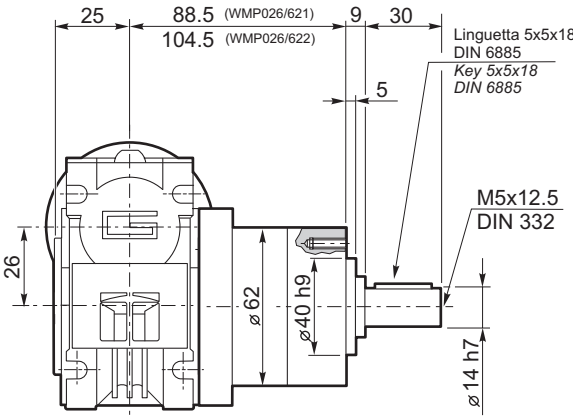
Motori / *Motors* IP66 → BC4

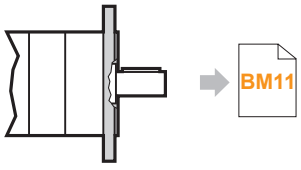
Freno / *Brake* → BB23

Encoder → BB24

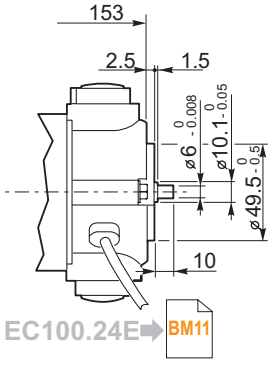
ECWMP100/026/62...U

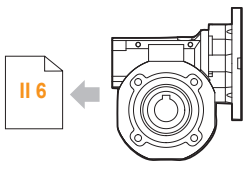






ECWMP100/026/62...C





CL026

Motori / *Motors* IP66 → BC4

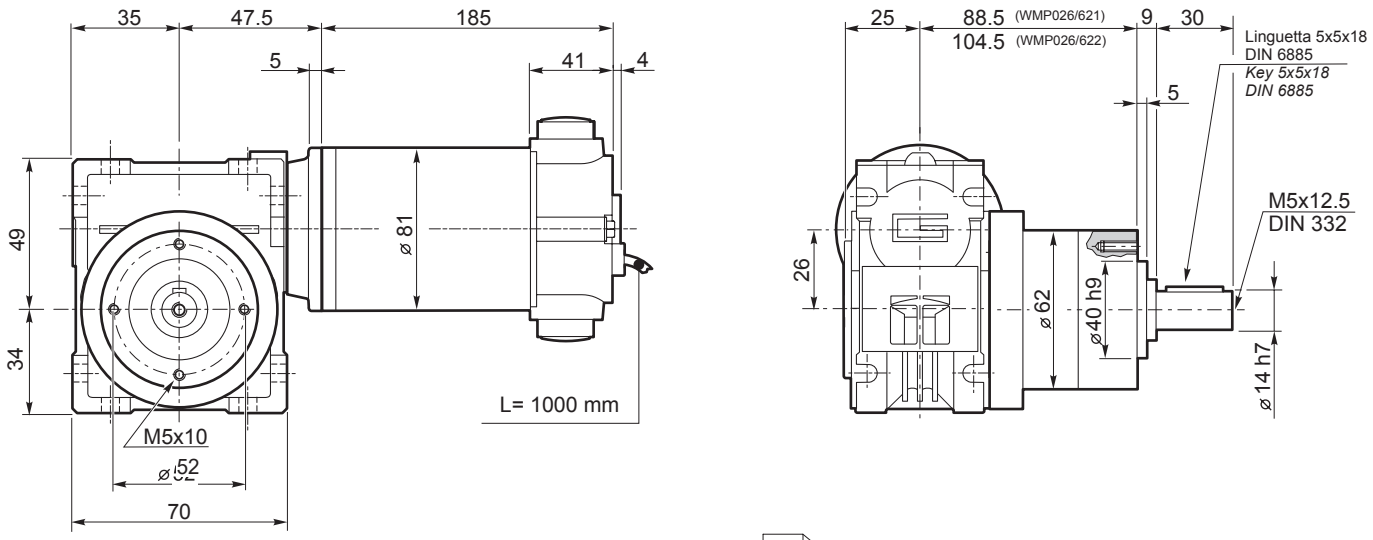
Freno / *Brake* → BB23

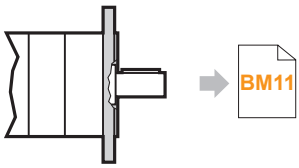
Encoder → BB24

DC

Dimensioni ***Dimensions***

ECWMP180/026/62...U





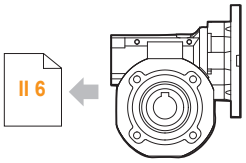
BM11

ECWMP180/026/62...C

Motori / *Motors* IP66 → BC6

Freno / *Brake* → BB23

Encoder → BB24

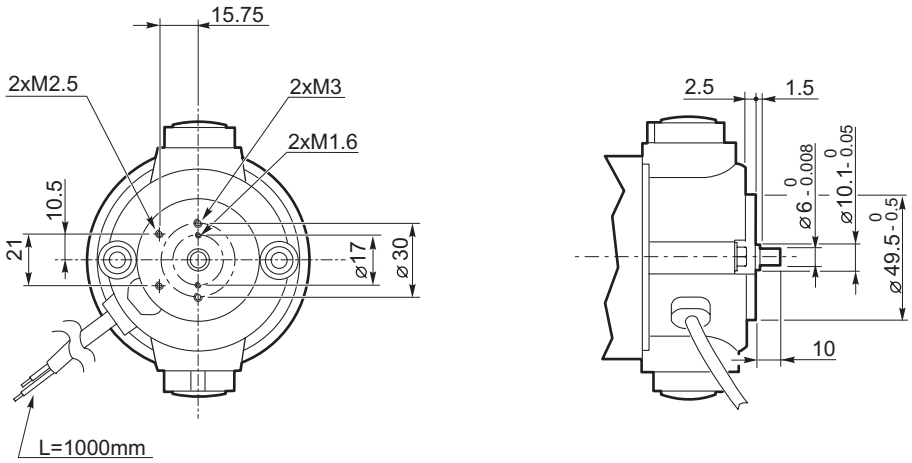


II 6

CL026

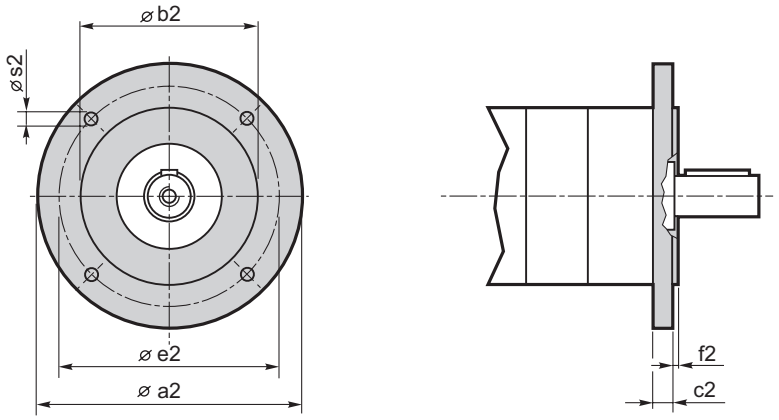
Dimensioni — *Dimensions*

ECWMP100.24E
ECWMP180.24E



NDWMP.../.../... C... - ECWMP.../.../... C...

Flange uscita / *Output flanges*



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

Note/*Notes*

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PLN

Azionamenti per motori CC
DC motor controls

DC

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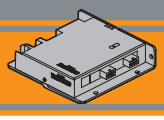
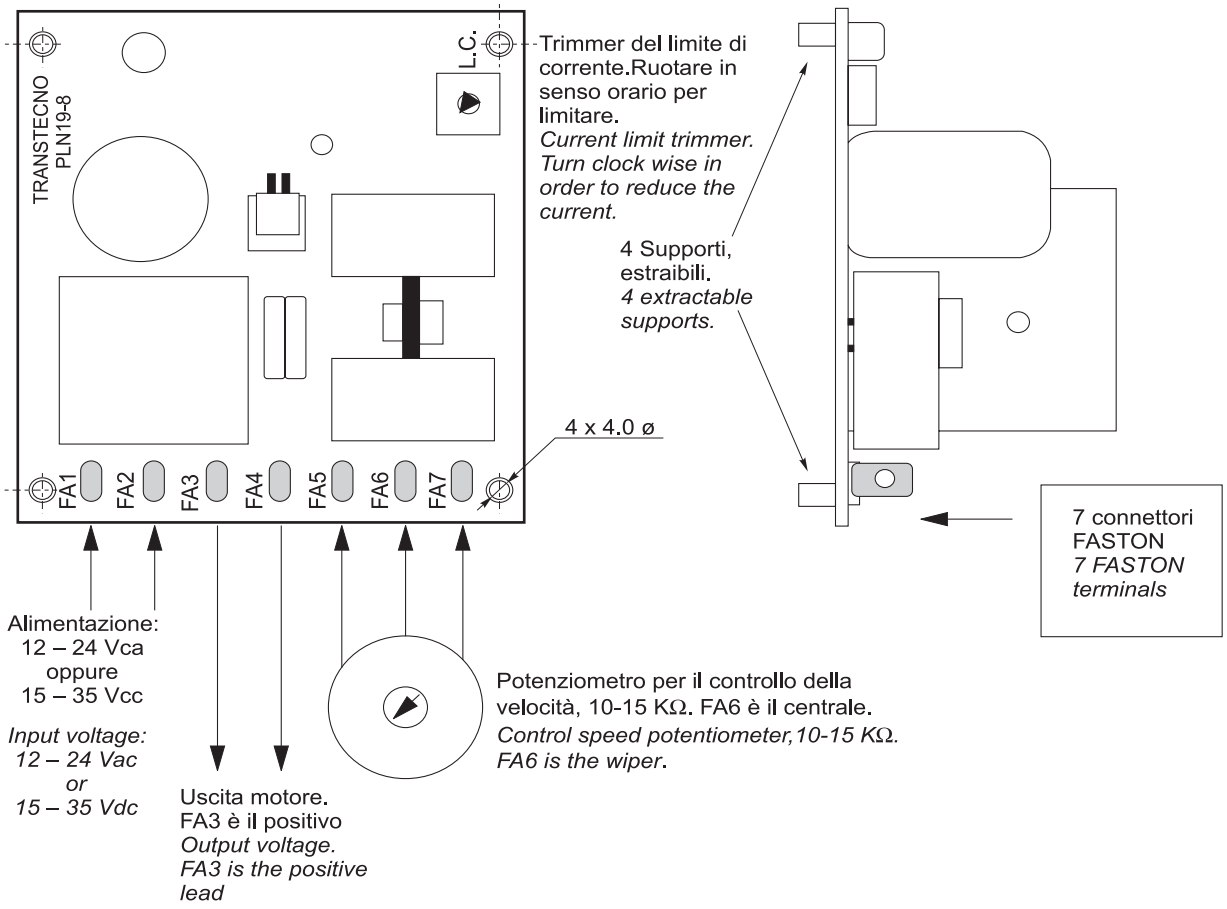


AZIONAMENTO UNIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

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

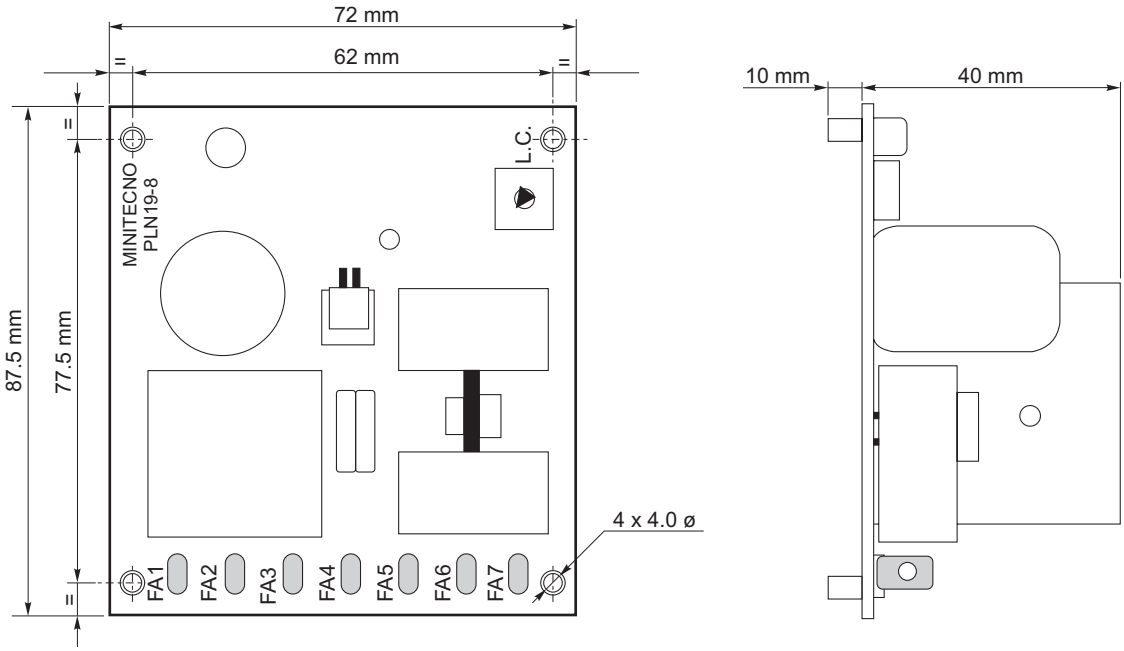
Technical features

- 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.

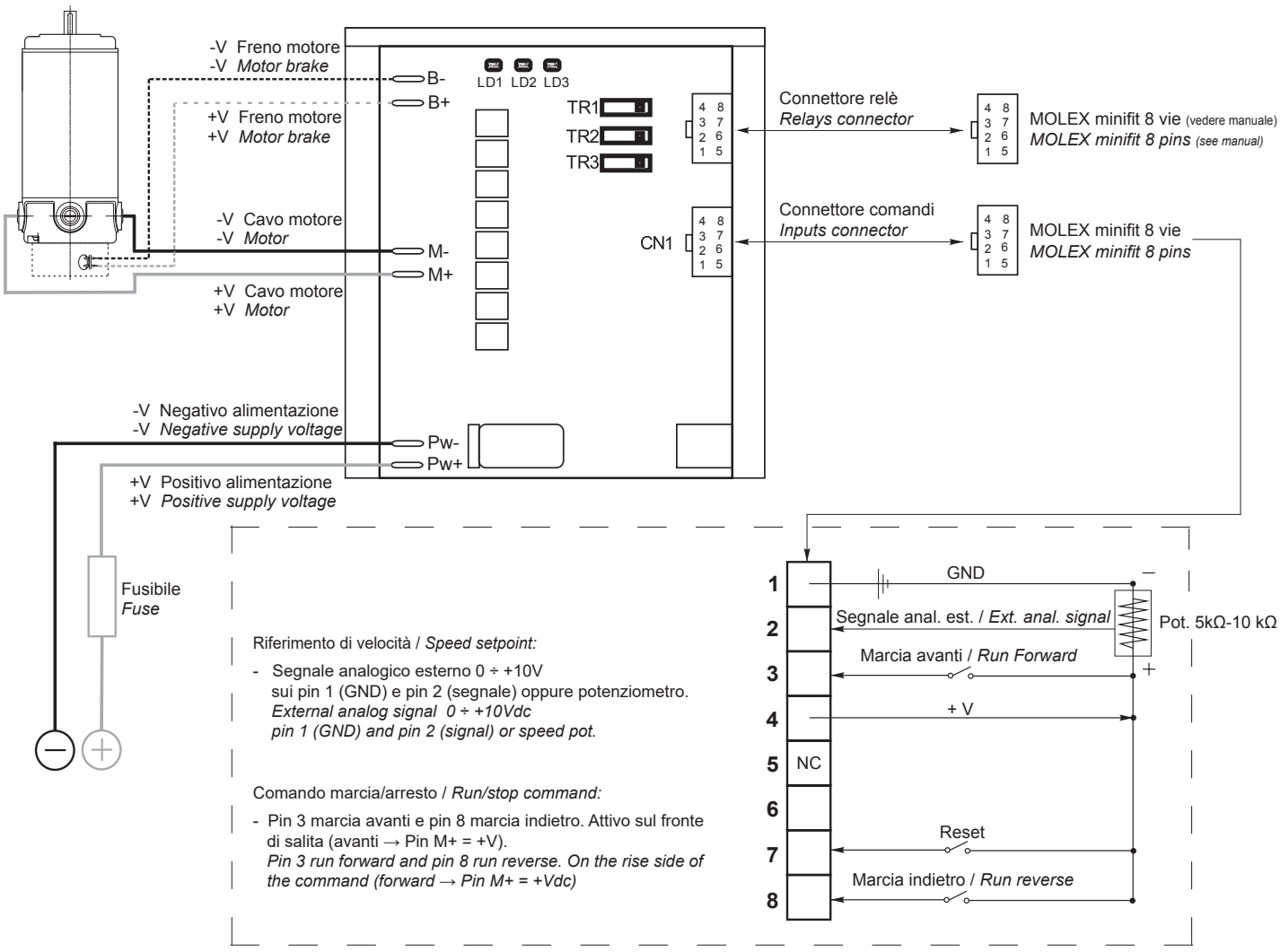
(*) *the maximum output current value must be used **in a ventilated environment.** Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.*

DC

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

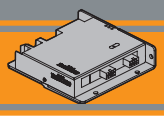
LD3: Segnalazione presenza alimentazione.

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 regulation*
- *Variable current limit*
- *Thermal sensor for protection*

Modello *Model number*	Tensione di alimentazione *DC input voltage* [Vdc]	Tensione di uscita *Motor voltage* [Vdc]*	Corrente di uscita nominale *DC load current* [A]	Corrente di picco motore *Maximum load current* [A]**	Campo di alimentazione *Power supply range* [Vdc]
PLN20	12 ÷ 24	0 ÷ Vin	20	60 (4 sec)	10 ÷ 30
PLN40	12 ÷24	0 ÷ Vin	40	120 (1 sec)	10 ÷ 30

* L'azionamento riduce la tensione nominale di 1-2 Vcc. Il fenomeno è normale e fisiologico. Se serve ottenere 24 ÷ 12 Vcc in uscita sotto ogni condizione di carico, si suggerisce di sovralimentare di un paio di volt.

** Un timer impone il limite con un andamento temporale iperbolico, cioè quanta più corrente eroga e tanto meno è il tempo per il quale ciò è ammesso, prima che appunto la scheda vada in limitazione. Alla corrente di picco (x 3 volte quella nominale) la scheda funziona per pochi secondi.

** The drive reduces the rated voltage of 1-2 Vdc. This is normal and physiological. If 24 ÷12 VDC output is required under all load conditions, it is advisable to supercharge a couple of volts.*

*** A timer imposes a limit with a temporary hyperbolic performance, which means the more current is requested, the less time is permitted with this current before the drive is limited. When the current reaches its peak (3 times the rated value) the drive will work for a few seconds.*

Dotazioni

Equipment

	PLN20 PLN40
Trimmer di selezione ACCEL, DECEL e LIMITE di CORRENTE / *Selection Trimmer ACCEL, DECEL, CURRENT LIMIT*	■
2 contatti: marcia avanti e marcia indietro / *2 contacts : forward and reverse*	■
Riferimento di velocità / *Speed setpoint reference*	■
3 LEDs di segnalazione / *3 LEDs signals*	■
Segnale di comando di eventuale freno negativo di stazionamento / *Command signal for possible negative electromagnetic brake*	■
Predisposizione per montaggio a libro e a zoccolo / *Arranged for 2 different ways of mounting*	■
Memorizzazione e segnalazione degli allarmi / *Memory storage and report of allarm*	■
2 ingressi digitali ausiliari / *2 auxiliary digital inputs*	■#
1 relè segnalazione allarmi / *Alarm output relays*	■

uno impegnato dal reset / *one comitted by reset*

Manuale

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

User manual

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

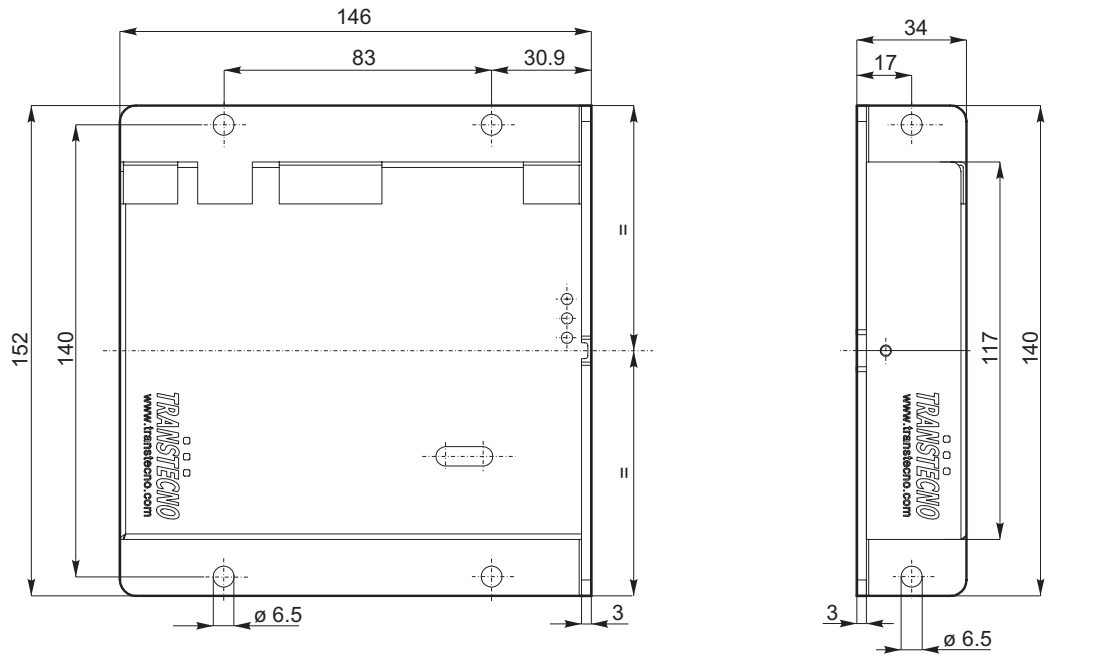
DC

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

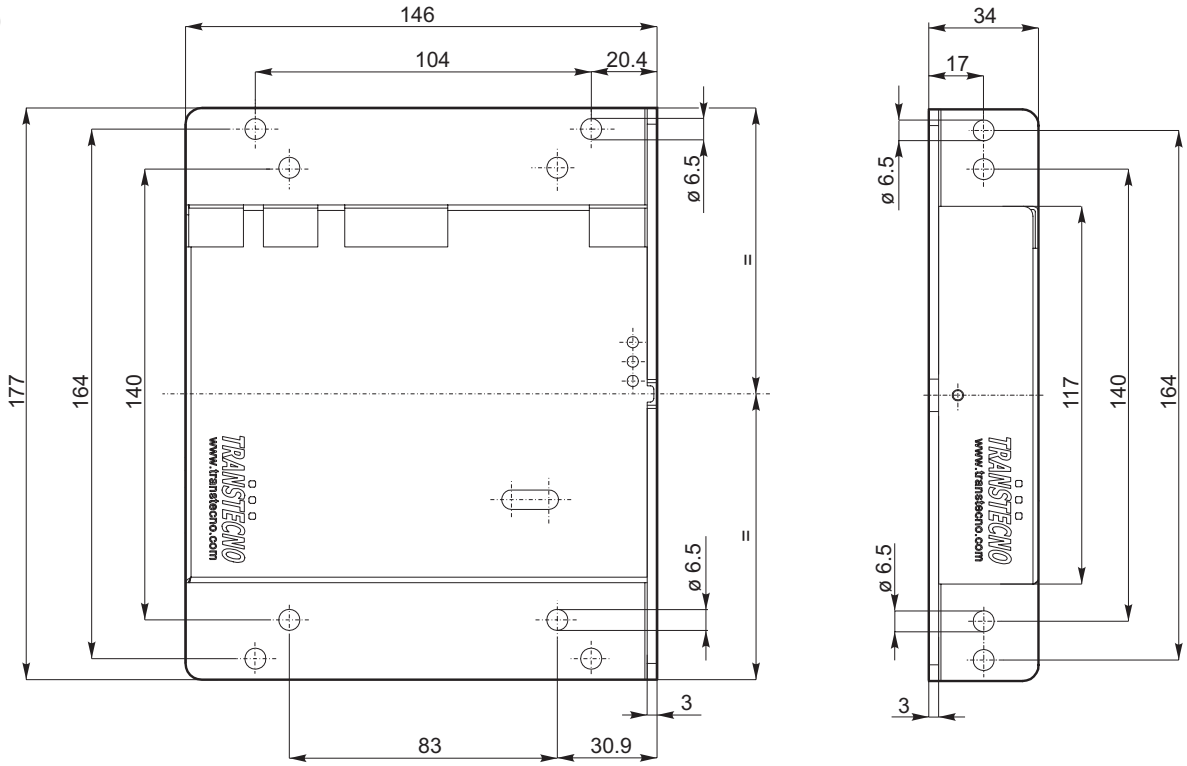
LOW VOLTAGE BIDIRECTIONAL PWM DC MOTORS CONTROL

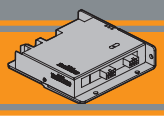
Dimensioni — *Dimensions*

PLN20



PLN40





GUIDA alla selezione dell'azionamento

Drive selection GUIDE

Corrente di uso del motore	≤	Corrente nominale dell'azionamento

Real motor current	≤	*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				

Note/*Notes*

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