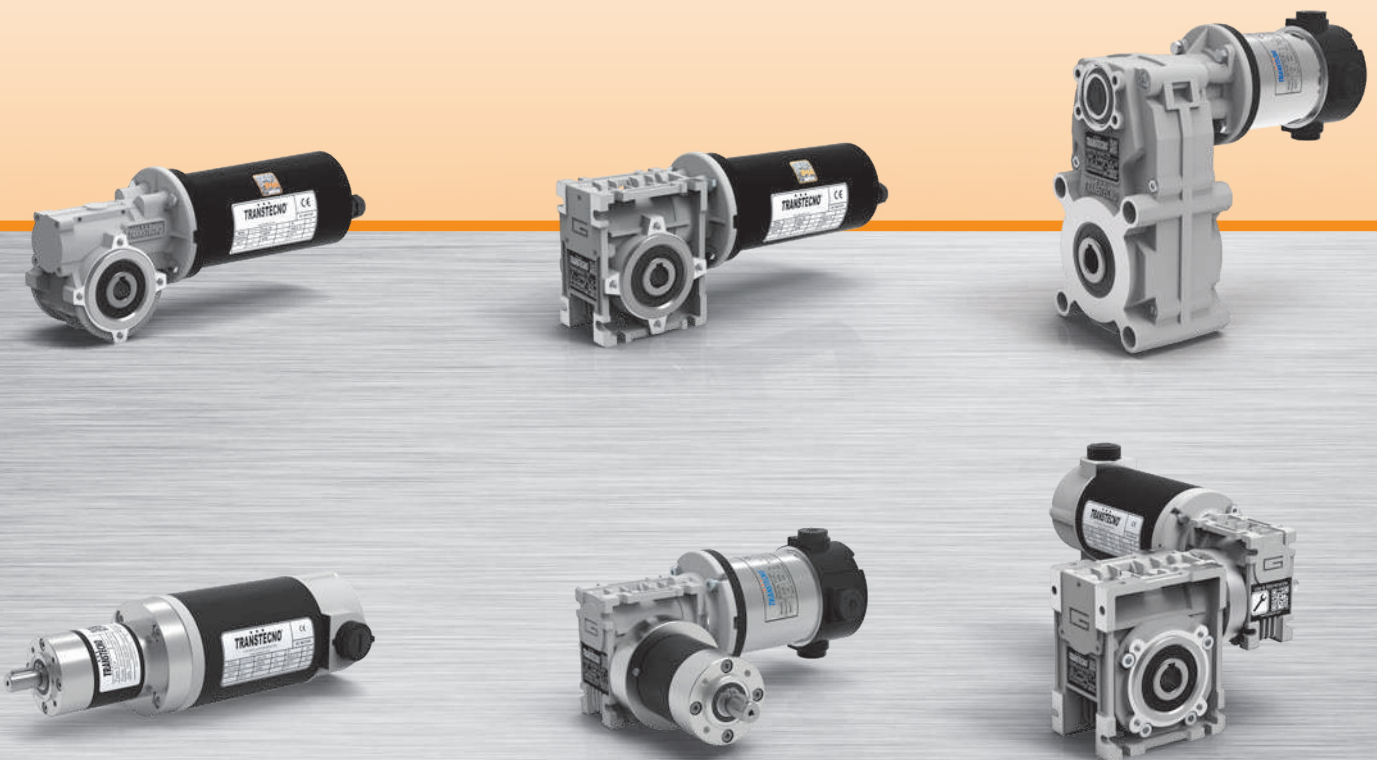


MINI  **TECNO**™
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Standardisierte Individualität


















DC - Getriebemotoren
DC - Motorsteuerungen



DC

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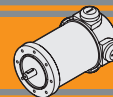
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Motori elettrici CC - Neodimio
DC electric motors - Neodymium

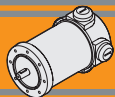




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Caratteristiche tecniche

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

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

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

Classe di isolamento termico

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

Servizio

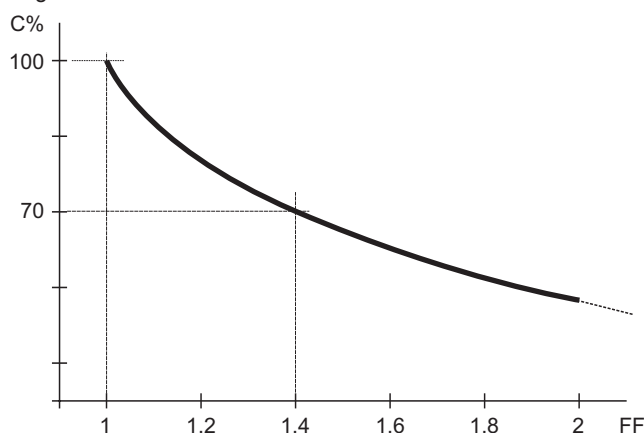
Rappresenta la relazione tra il tempo di lavoro ed il tempo di riposo del motore. Servizio continuo (S1) = funzionamento continuo del motore a pieno carico.

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

Fattore di forma

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

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



Technical features

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

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

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

Thermal insulation class

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

Duty cycle

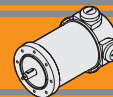
This represents the relationship between the time the motor operates and the time it remains stationary. Continuous operation (S1) = the motor operates non-stop under full load.

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

Form factor

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

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


Grado di protezione IP
IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

Indicates the degree of mechanical insulation of the motor body.

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

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

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

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

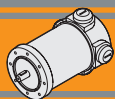
0	Non protetto / No protection	0	Non protetto / No protection
1	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (over Ø 50 mm)</i>	1	Protetto contro la caduta verticale di gocce d'acqua. <i>Protected against drops of water falling vertically</i>
2	Protetto da corpi solidi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

Classe di isolamento termico
Insulation class

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

Tipi di servizio IEC
IEC duty cycle ratings

S1	Servizio continuo. Funzionamento a carico costante per una durata sufficiente al raggiungimento dell'equilibrio termico.	Continuous duty. The motor works at a constant load for enough time to reach temperature equilibrium
S2	Servizio di durata limitata. Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell'equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	Short time duty. The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
S3	Servizio periodico intermittente. Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	Intermittent periodic duty. Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
S4	Servizio periodico intermittente con avviamento. Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	Intermittent periodic duty with starting. Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
S5	Servizio periodico intermittente con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	Intermittent periodic duty with electric braking. Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
S6	Servizio periodico ininterrotto con carico intermittente. Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	Continuous operation with intermittent load. Sequential, identical cycles of running with constant load and running with no load. No rest periods.
S7	Servizio periodico ininterrotto con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	Continuous operation with electric braking. Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
S8	Servizio periodico ininterrotto con variazioni di carico e di velocità. Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	Continuous operation with periodic changes in load and speed. Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.



ND120.120 - ND120.240

Caratteristiche

Features

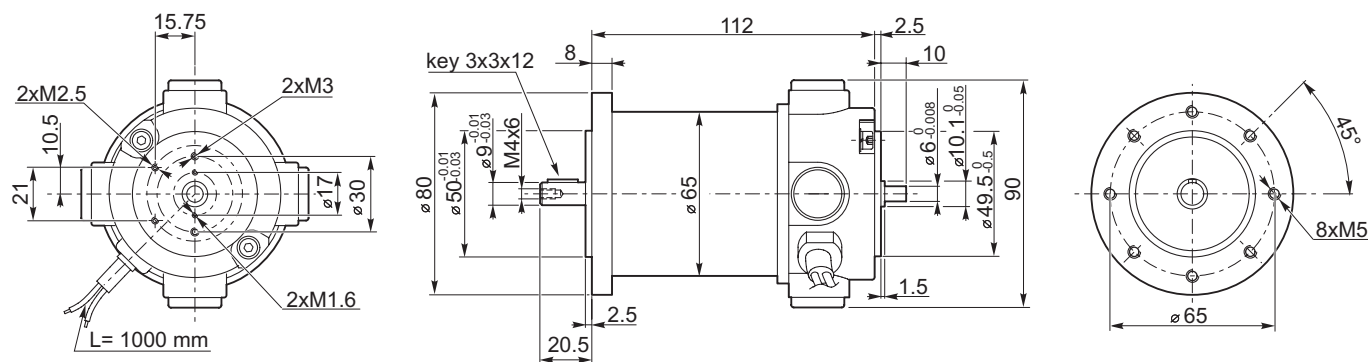
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	160 W S2 (120 W S1)
Magneti	4 magneti in terre rare
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza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

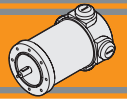
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
ND120.120	S1	120	12	13.9	F	1	0.38	3000	20	1.6
	S2 20'	160		19			0.51			
ND120.240	S1	120	24	6.9			0.38			
	S2 20'	160		9.0			0.51			

Dimensioni

Dimensions



- Freno / Brake → BA9
- Encoder → BA9

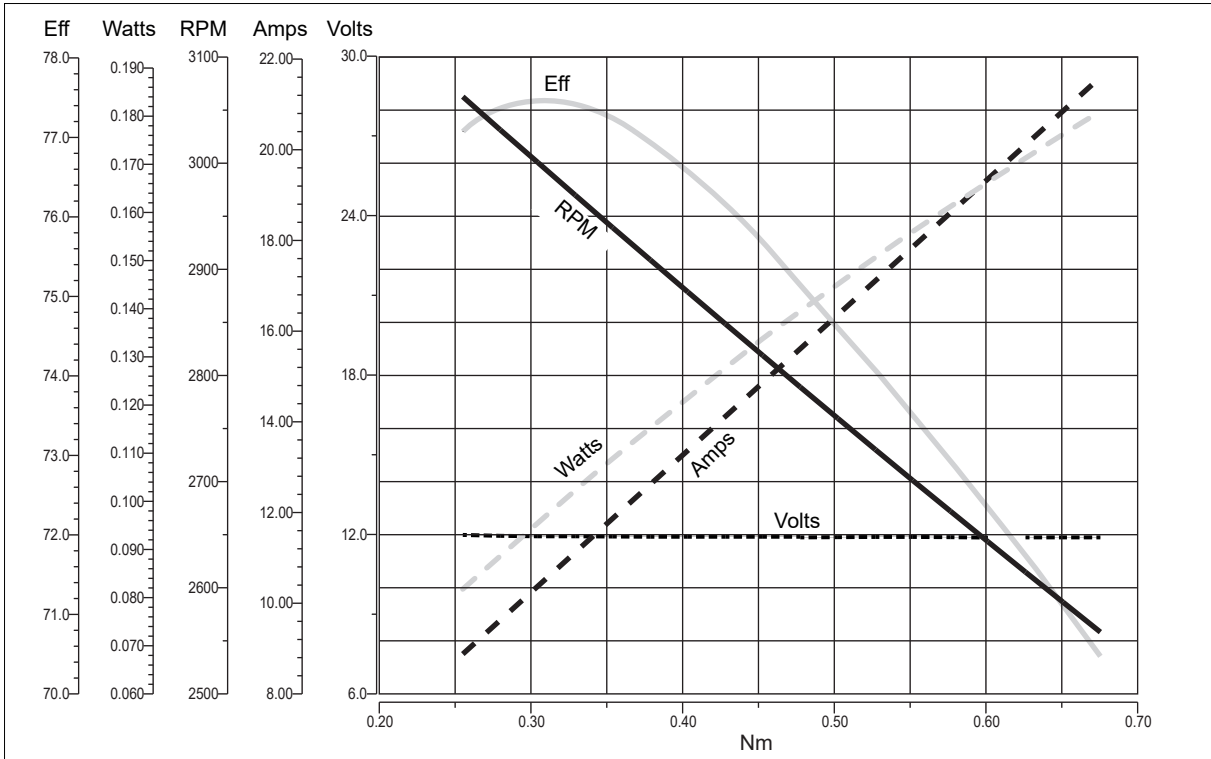


ND120.120 - ND120.240

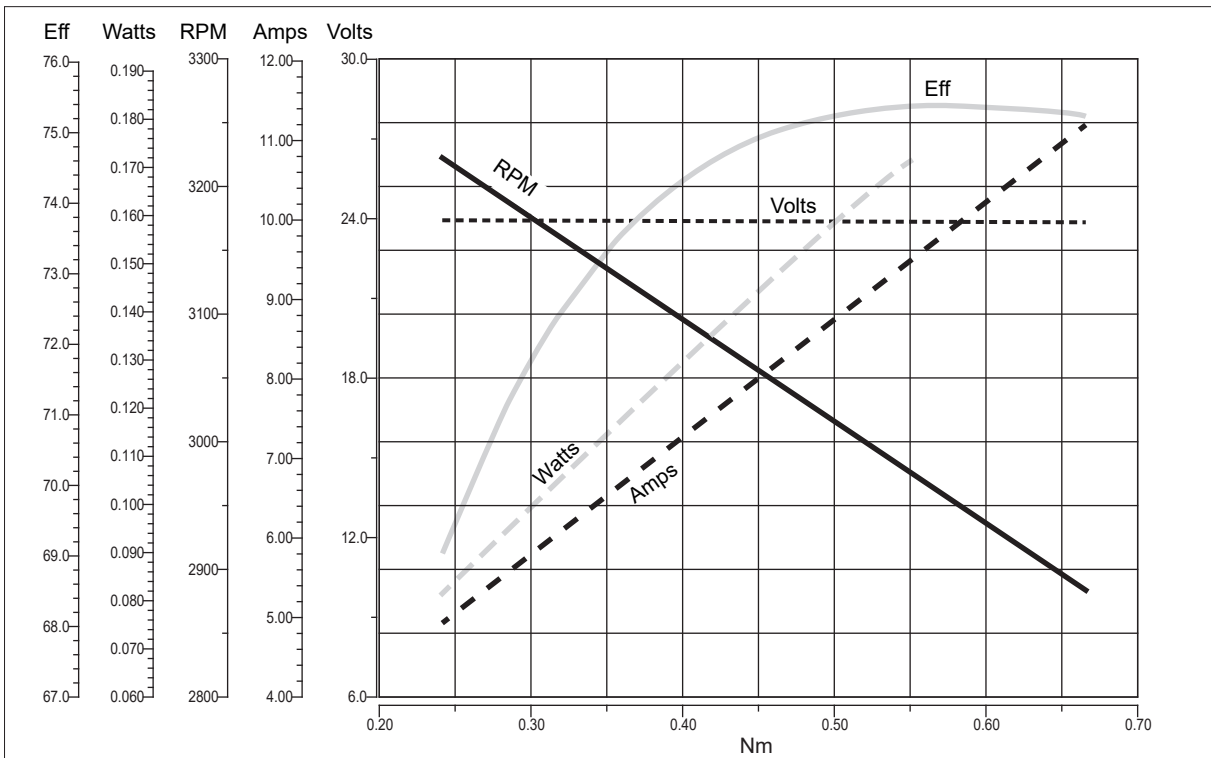
Prestazioni

Performances

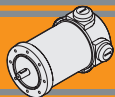
ND120.120



ND120.240



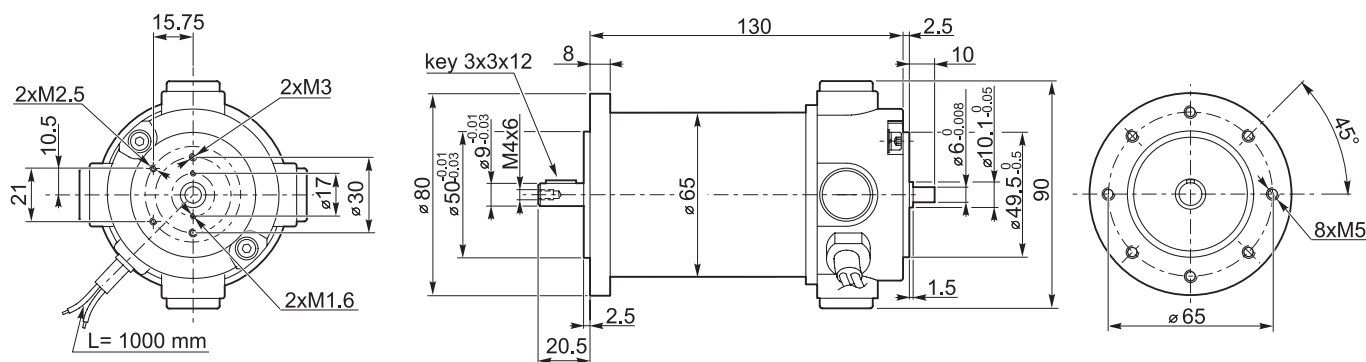
DC

**ND****Motori elettrici CC - Neodimio**
DC Electric motors - Neodymium**MINI**
TECNO**ND180.120 - ND180.240****Caratteristiche****Features**

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

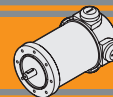
Construction	Tubular, without fan
Size	Ø 65 mm
Power	250 W S2 (180 W S1)
Magnets	4 rare earth magnets
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Electric cable	Length: 1000 mm
Rear Shaft	Standard

Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
ND180.120	S1	180	12	20	F	1	0.57	3000	20	1.95
	S2 20'	250		30			0.80			
ND180.240	S1	180	24	10						
	S2 20'	250		14			0.57			
							0.80			

Dimensioni**Dimensions**

Freno / Brake → BA9

Encoder → BA9

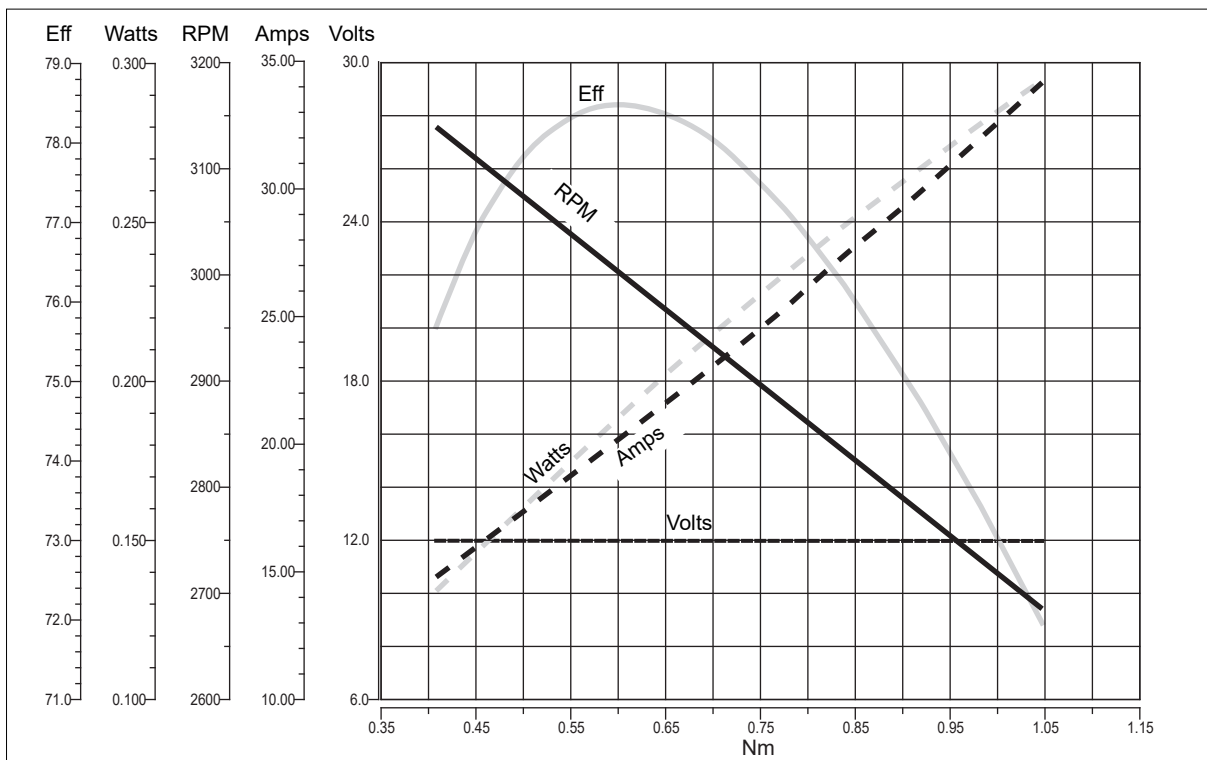


ND180.120 - ND180.240

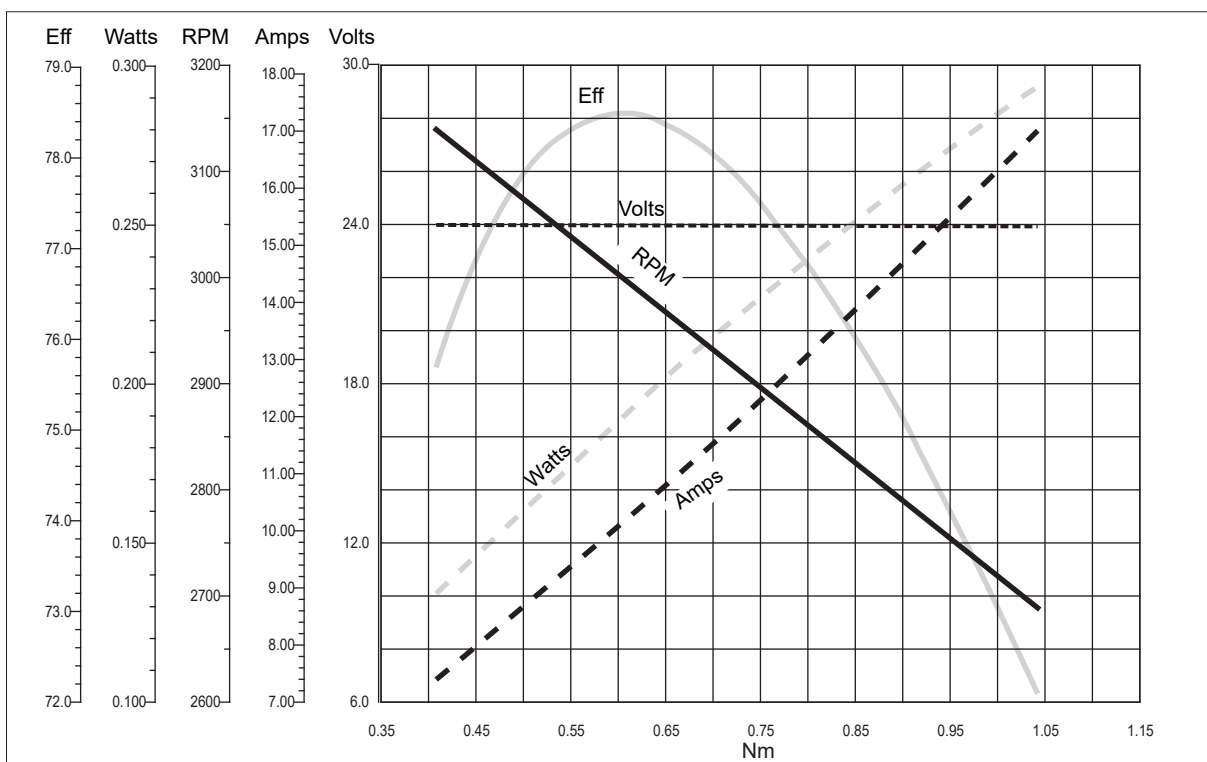
Prestazioni

Performances

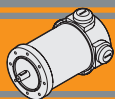
ND180.120



ND180.240



DC

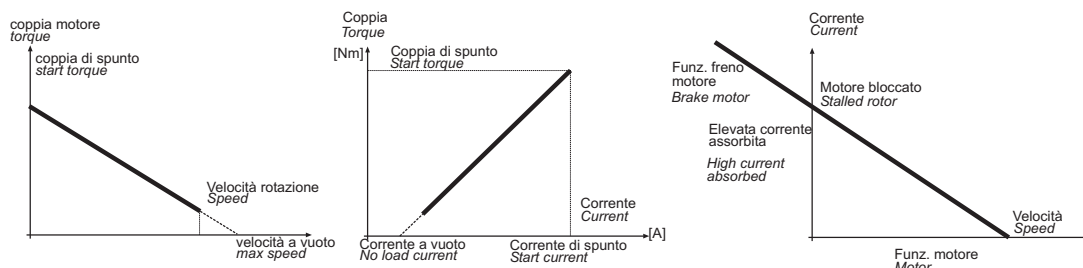


Legenda / Glossario dei grafici

Key / Diagram Glossary

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

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

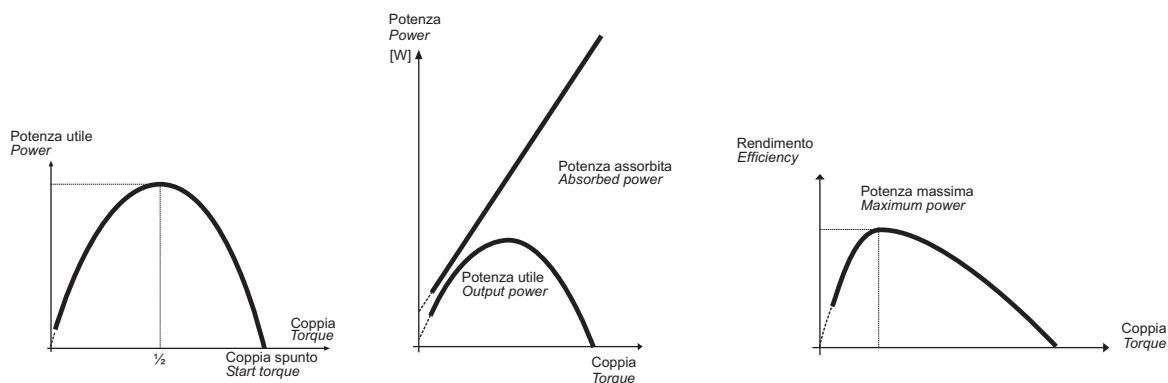


La potenza utile (potenza all'albero) si ricava dalla formula:

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

The output power is calculated using the formula:

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



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

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

Formule utili

Useful formulas

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

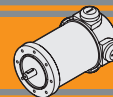
$$[HP] \cdot 746 = [W]$$

Esempio 2 HP = circa 1500 W.

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

Example 2 HP = approx. 1500 W.

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

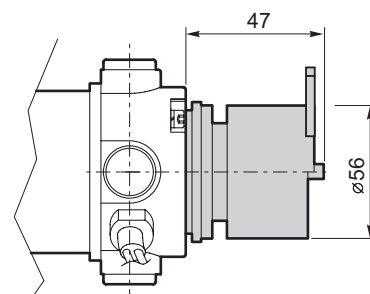
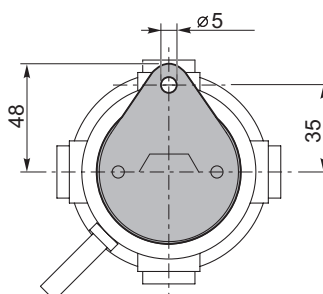
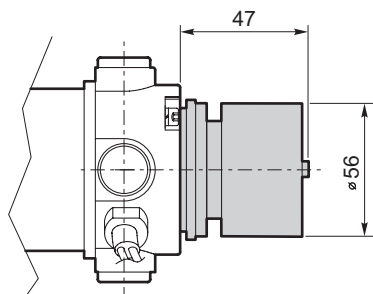


Freno

Brake

ND...BR Freno / Brake

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

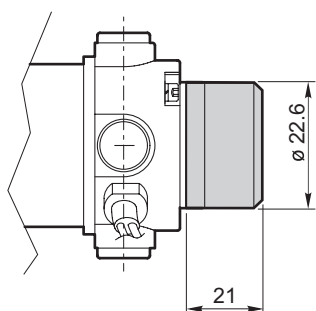


	Pn [W]	V [V]	Mn [Nm]	n ₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	2	3000
		24		

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.

MINI  **TECNO**™
small but strong

EC

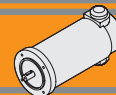
Motori elettrici CC - Ferrite
DC electric motors - Ferrite



MINI  **TECNO**™ brand of
TRANSTECNO®



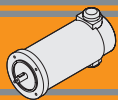
DC



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	Simbologia	<i>Symbols</i>	BB2
	Grado di protezione IP	<i>IP enclosures protection indexes</i>	BB3
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EC100.120	Caratteristiche	<i>Features</i>	BB12
EC100.240	Dimensioni	<i>Dimensions</i>	BB12
EC100.24E	Prestazioni	<i>Performances</i>	BB13
EC180.120	Caratteristiche	<i>Features</i>	BB14
EC180.240	Dimensioni	<i>Dimensions</i>	BB14
EC180.24E	Prestazioni	<i>Performances</i>	BB15
EC250.120	Caratteristiche	<i>Features</i>	BB16
EC250.240	Dimensioni	<i>Dimensions</i>	BB16
	Prestazioni	<i>Performances</i>	BB17
EC350.120	Caratteristiche	<i>Features</i>	BB18
EC350.240	Dimensioni	<i>Dimensions</i>	BB18
	Prestazioni	<i>Performances</i>	BB19
EC600.120	Caratteristiche	<i>Features</i>	BB20
EC600.240	Dimensioni	<i>Dimensions</i>	BB20
	Prestazioni	<i>Performances</i>	BB21
	Legenda / Glossario dei grafici	<i>Key / Diagram Glossary</i>	BB22
	Formule utili	<i>Useful formulas</i>	BB22
	Freni	<i>Brakes</i>	BB23
	Encoder	<i>Encoder</i>	BB24

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

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Caratteristiche tecniche

Technical features

Le caratteristiche principali dei motori elettrici CC a magneti permanenti in ferrite EC sono:

- Campo magnetico generato da magneti permanenti in ferrite
- Costruzione tubolare, senza ventilazione
- Disponibili in 6 grandezze: diametro 42, 52, 65, 81, 104, 110 mm
- Alimentazione a bassa tensione, 12 o 24 Vcc
- Potenze disponibili da 30 a 800 W S2
- Elevate coppie di spunto
- Elevate coppie e potenze in dimensioni compatte

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

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

Classe di isolamento termico

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

Thermal insulation class

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

Servizio

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

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

Duty cycle

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

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

Fattore di forma

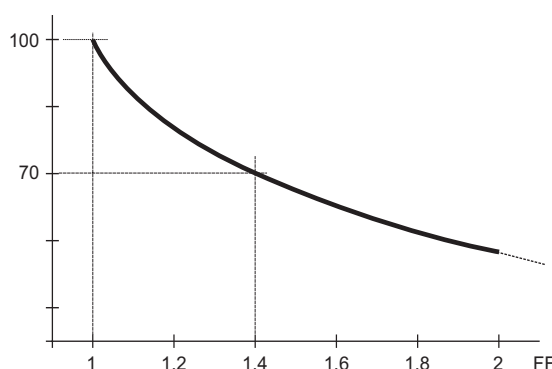
Indica quanta componente spuria alternata è presente nella alimentazione CC del motore. Più alto è il fattore ed inferiore è l'efficienza del motore. Alimentatori ad SCR = F.F 1.40. Alimentazione pura da batteria = FF 1. Alimentazione da transistori (modulazione PWM) = FF 1.05.

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

Form factor

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

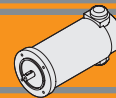
The graph below indicates the torque trend (percentage) in relation to the form factor.



Simbologia

Symbols

S	—	Servizio / Duty	M_{Br}	[Nm]	Coppia nominale del freno / Brake motor torque
P_n	[W]	Potenza in uscita / Rated power	n_{1 max}	[min ⁻¹]	Velocità massima / Max speed
P_a	[W]	Potenza assorbita / Absorbed power	T_r	[ms]	Tempo di inserzione / Engaging time
M_n	[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
S_v	[rad/s]	Velocità angolare / Angular speed	η	—	Rendimento / Efficiency
P_e	[W]	Potenza elettrica del freno / Brake electric power	K_g	—	Peso / Weight


Grado di protezione IP
IP enclosures protection indexes

Indica il grado di isolamento meccanico del corpo motore.

Indicates the degree of mechanical insulation of the motor body.
1st figure indicating level of protection against the penetration of solid bodies.

1^a cifra protezione alla penetrazione di corpi solidi.

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

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

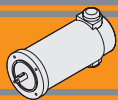
0	Non protetto / No protection	0	Non protetto / No protection
1	Protetto da corpi solidi superiori a Ø 50 mm. <i>Protected against solid matters (over Ø 50 mm)</i>	1	Protetto contro la caduta verticale di gocce d'acqua. <i>Protected against drops of water falling vertically</i>
2	Protetto da corpi solidi superiori a Ø 12 mm. <i>Protected against solid matters (over Ø 12 mm)</i>	2	Protetto contro la caduta verticale di gocce d'acqua con inclinazione max di 15° <i>Protected against drops of water falling up to 15°</i>
3	Protetto da corpi solidi superiori a Ø 2,5 mm. <i>Protected against solid matters (over Ø 2,5 mm)</i>	3	Protetto contro la pioggia. <i>Rain proof fixture</i>
4	Protetto da corpi solidi superiori a Ø1 mm. <i>Protected against solid matters (over Ø1 mm)</i>	4	Protetto contro gli spruzzi. <i>Splash proof fixture</i>
5	Protetto contro la polvere <i>Dust proof</i>	5	Protetto contro getti d'acqua <i>Water jet proof</i>
6	Totalmente protetto contro la polvere <i>Fully dust proof</i>	6	Protetto dalle ondate <i>Wave proof</i>
7	N.A.	7	Protetto contro immersione <i>Watertight immersion fixture.</i>
8	N.A.	8	Protetto contro immersione/sommersione prolungata <i>Watertight immersion fixture for a long time.</i>

Classe di isolamento termico
Insulation class

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

Tipi di servizio IEC
IEC duty cycle ratings

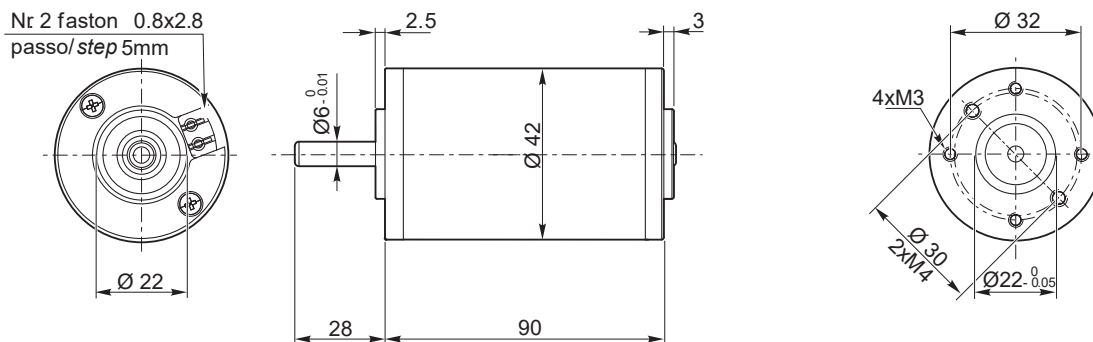
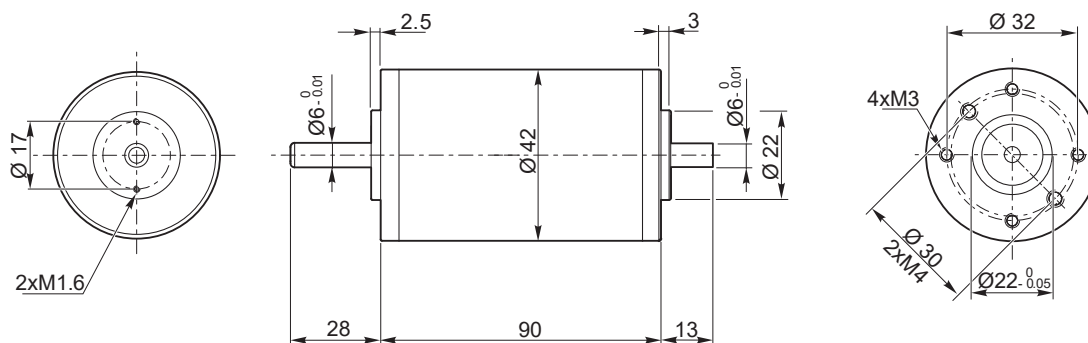
S1	Servizio continuo. Funzionamento a carico costante per una durata sufficiente al raggiungimento dell' equilibrio termico.	Continuous duty. The motor works at a constant load for enough time to reach temperature equilibrium
S2	Servizio di durata limitata. Funzionamento a carico costante per una durata inferiore a quella necessaria al raggiungimento dell' equilibrio termico, seguito da un periodo di riposo tale da riportare il motore alla temperatura ambiente.	Short time duty. The motor works at a constant load, but not long enough to reach temperature equilibrium, and the rest periods are long enough for the motor to reach ambient temperature.
S3	Servizio periodico intermittente. Sequenze di cicli identici di marcia e di riposo a carico costante, senza raggiungimento dell' equilibrio termico. La corrente di spunto ha effetti trascurabili sul surriscaldamento del motore.	Intermittent periodic duty. Sequential, identical run and rest cycles with constant load. Temperature equilibrium is never reached. Starting current has little effect on temperature rise.
S4	Servizio periodico intermittente con avviamento. Sequenza di cicli di funzionamento identici di avviamento, marcia e riposo a carico costante, senza raggiungimento dell'equilibrio termico. La corrente di spunto ha effetti sul riscaldamento del motore.	Intermittent periodic duty with starting. Sequential identical start, run and rest cycles with constant load. Temperature equilibrium is not reached, but starting current affects temperature rise.
S5	Servizio periodico intermittente con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante, frenatura elettrica e riposo, senza raggiungimento dell'equilibrio termico.	Intermittent periodic duty with electric braking. Sequential, identical cycles of starting, running at constant load, electric braking and rest. Temperature equilibrium is not reached.
S6	Servizio periodico ininterrotto con carico intermittente. Sequenza di cicli di lavoro identici con carico costante e senza carico. Non ci sono periodi di riposo.	Continuous operation with intermittent load. Sequential, identical cycles of running with constant load and running with no load. No rest periods.
S7	Servizio periodico ininterrotto con frenatura elettrica. Sequenza di cicli di funzionamento identici di avviamento, marcia a carico costante e frenatura elettrica, senza periodi di riposo.	Continuous operation with electric braking. Sequential, identical cycles of starting, running at constant load and electric braking. No rest periods.
S8	Servizio periodico ininterrotto con variazioni di carico e di velocità. Sequenza di cicli identici di avviamento, marcia a carico costante e velocità definita, seguiti da marcia a carico costante differente e velocità differente dalla precedente. Non ci sono periodi di riposo.	Continuous operation with periodic changes in load and speed. Sequential, identical, duty cycles of start, run at constant load and given speed, then run at other constant loads and speeds. No rest periods.

**EC****Motori elettrici CC - Ferrite**
DC Electric motors - Ferrite**MINI**
TECNO**EC020.120 - EC020.24E****Caratteristiche****Features**

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

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

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



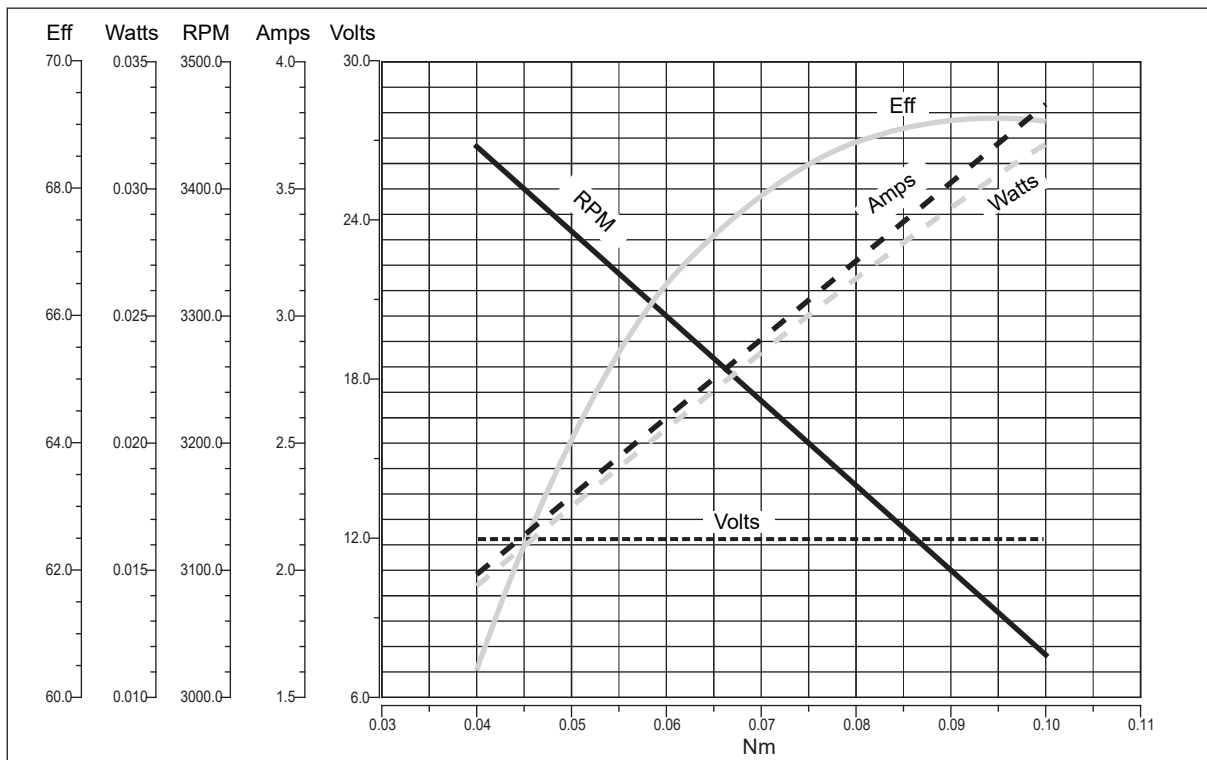


EC020.120 - EC020.24E

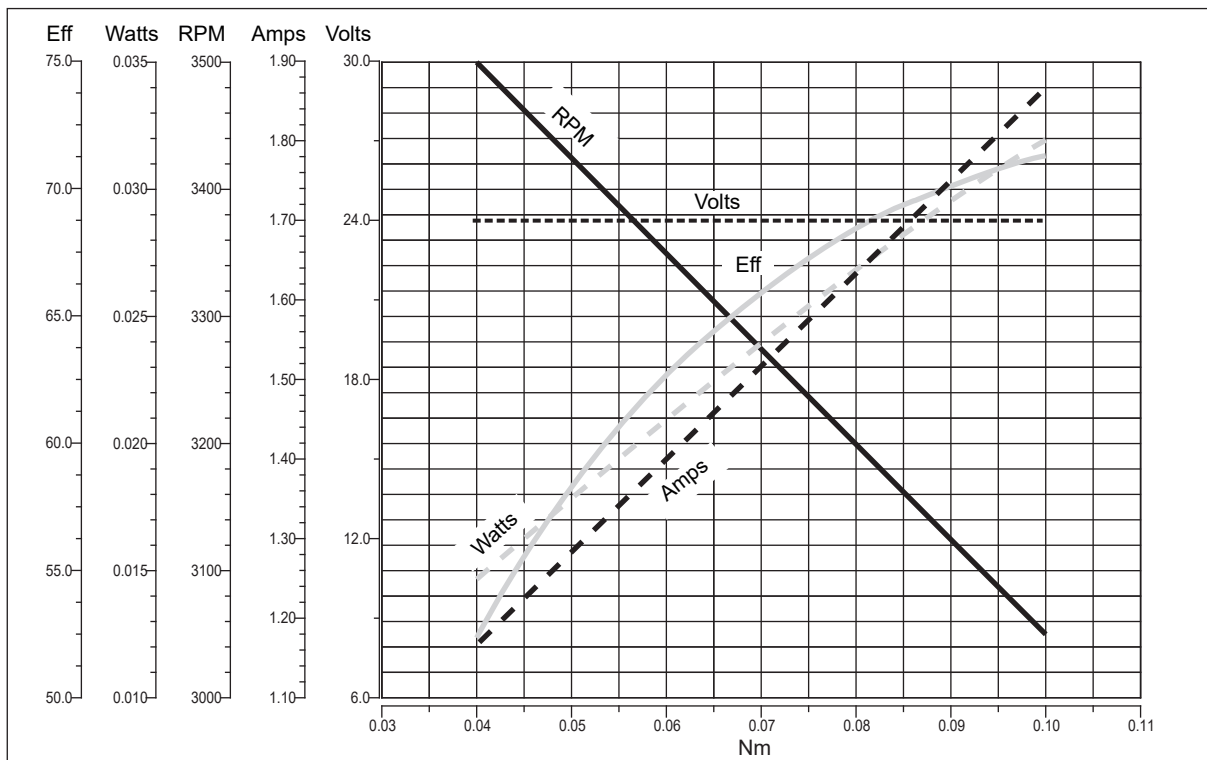
Prestazioni

Performances

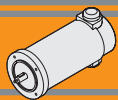
EC020.120



EC020.24E



DC



EC035.120 - EC035.240

Caratteristiche

Features

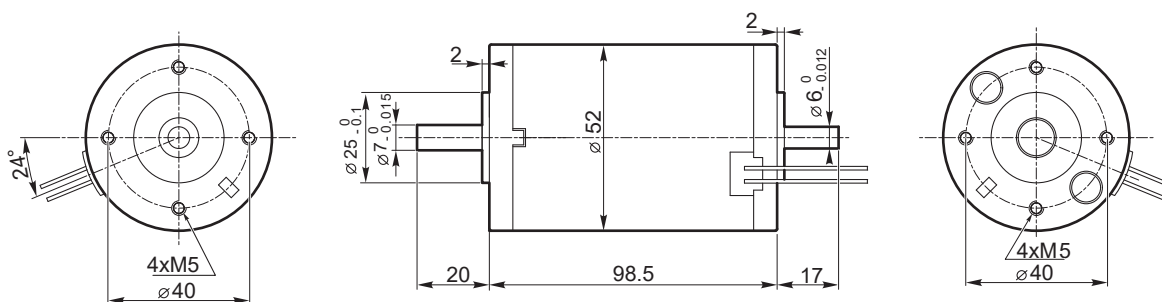
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 52 mm
Potenza	55 W S2 (35 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm

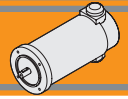
Construction	Tubular, without fan
Size	Ø 52 mm
Power	55 W S2 (35 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 200 mm

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



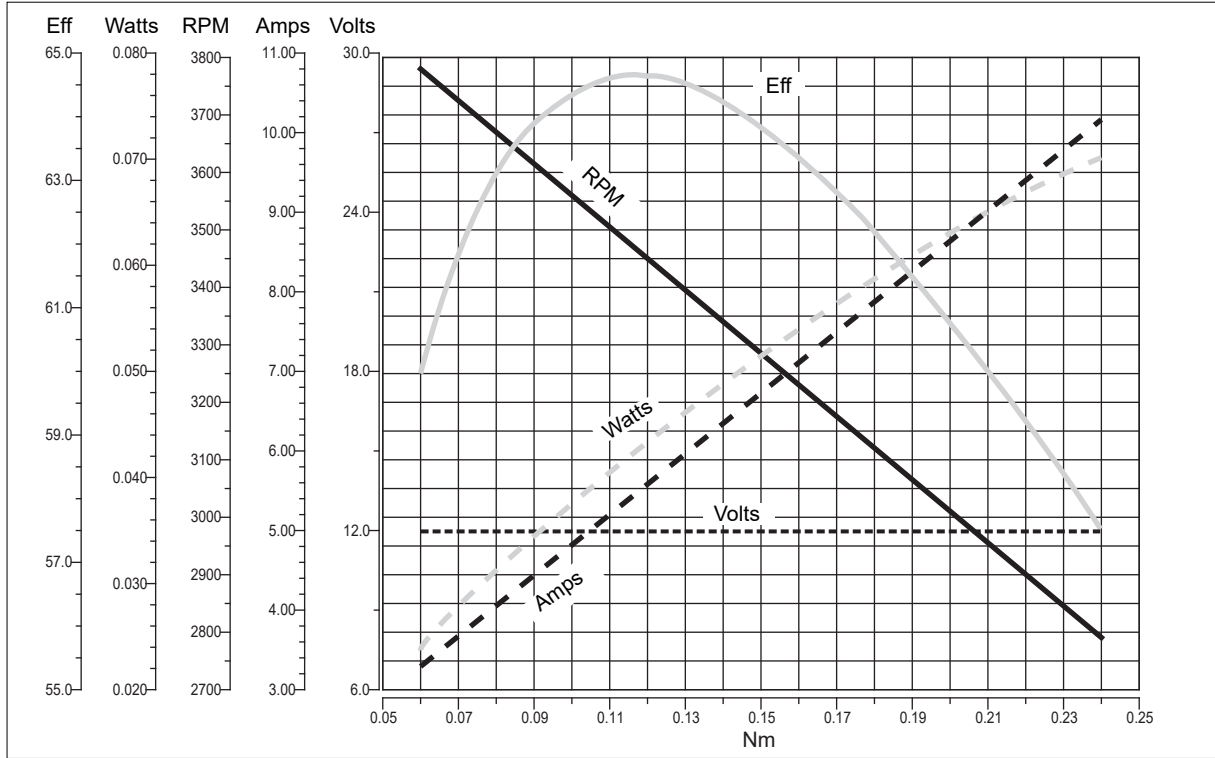


EC035.120 - EC035.240

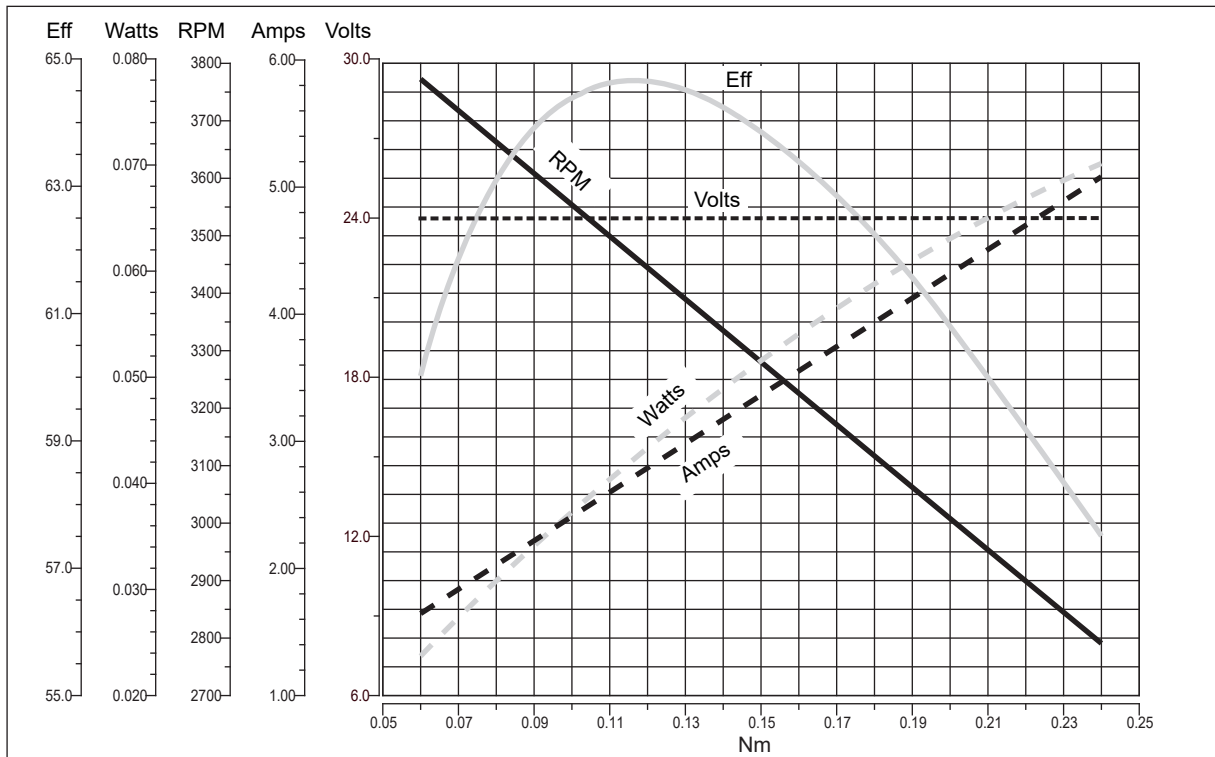
Prestazioni

Performances

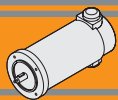
EC035.120



EC035.240



DC



EC050.12E - EC050.24E

Caratteristiche

Features

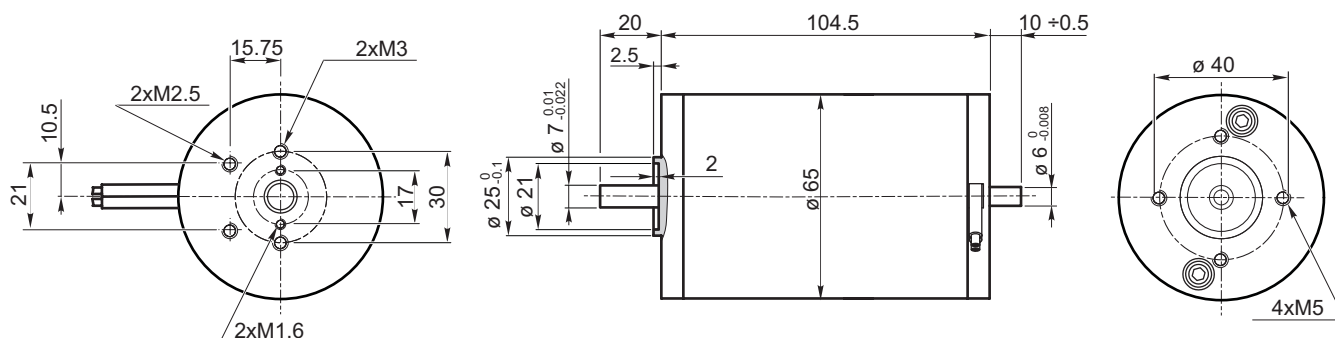
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	70 W S2 (50 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 200 mm
Bisporgenza	Standard

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

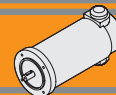
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg					
EC050.12E	S1	50	12	6.5	F	1	0.16	3000	20	1.2					
	S2 30'	70		9.0			0.22								
EC050.24E	S1	50	24	3.2								0.16			
	S2 30'	70		4.5								0.22			

Dimensioni

Dimensions



- Freno / Brake** → **BB23**
- Encoder** → **BB24**

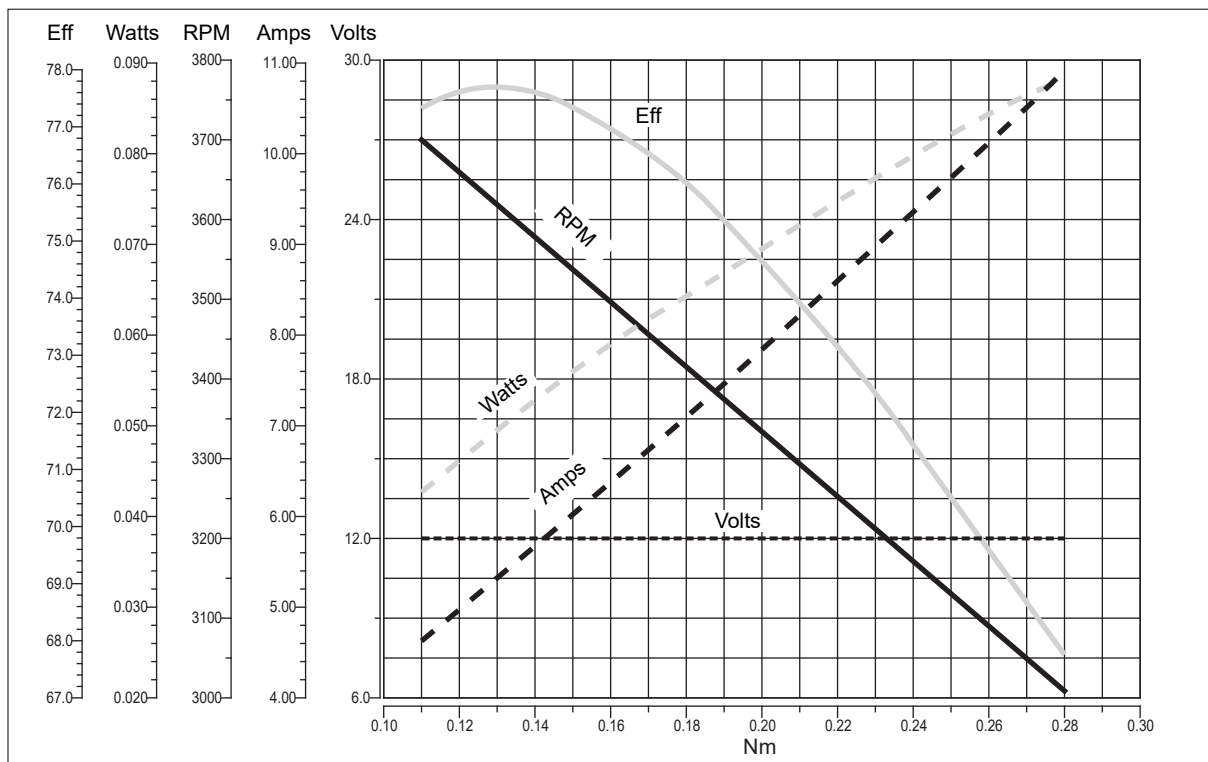


EC050.12E - EC050.24E

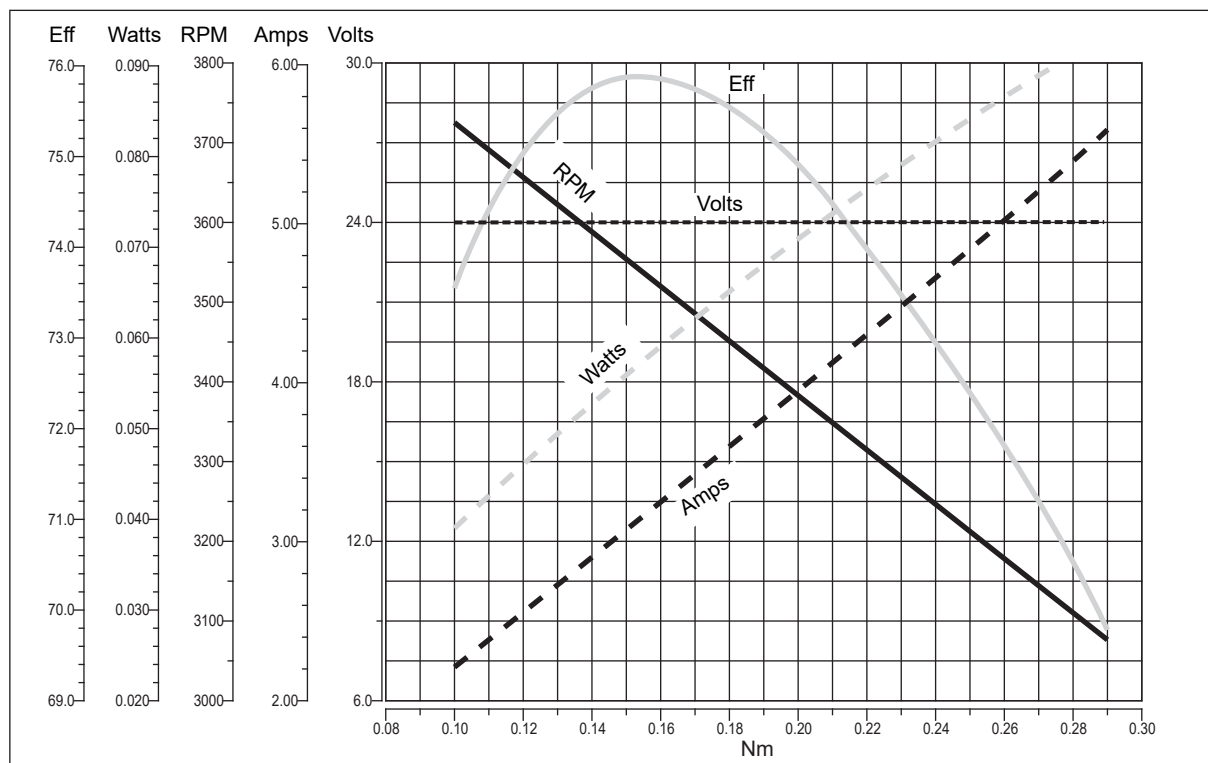
Prestazioni

Performances

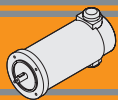
EC050.12E



EC050.24E



DC



EC070.12E - EC070.24E

Caratteristiche

Features

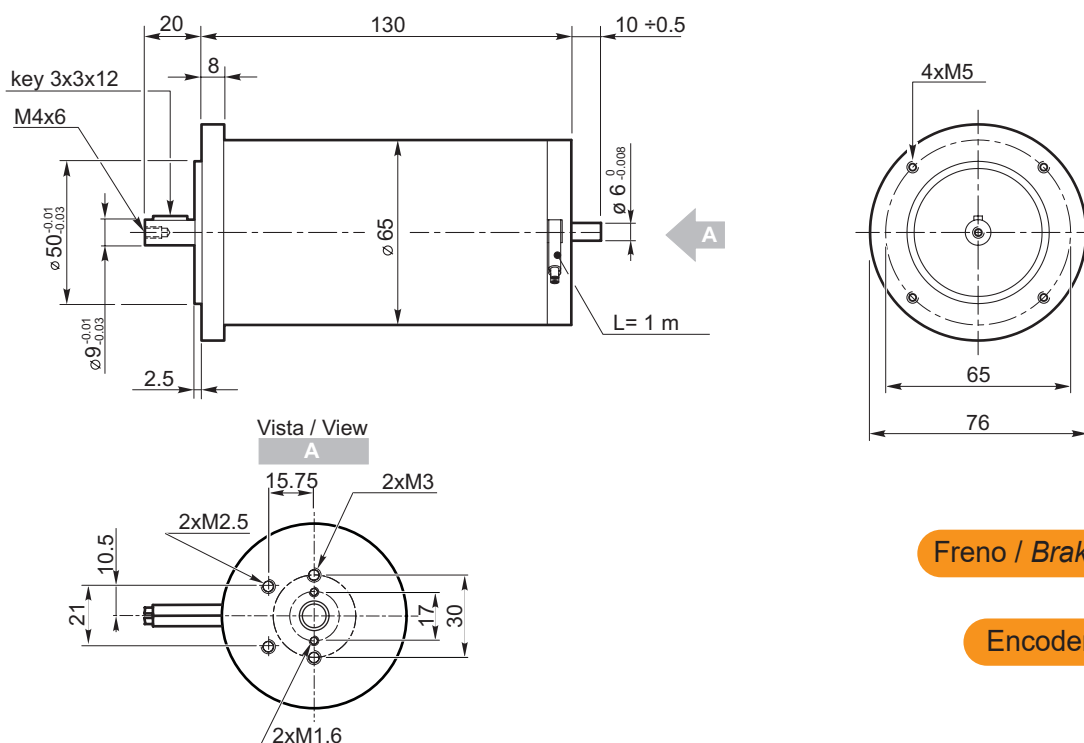
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 65 mm
Potenza	100 W S2
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 interne di composto grafite-rame
Cavo di alimentazione	Lunghezza: 1000 mm

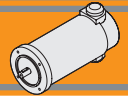
Construction	Tubular, without fan
Size	Ø 65 mm
Power	100 W S2
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 1000 mm

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						
	S2 30'	100		5.9			0.31			

Dimensioni

Dimensions



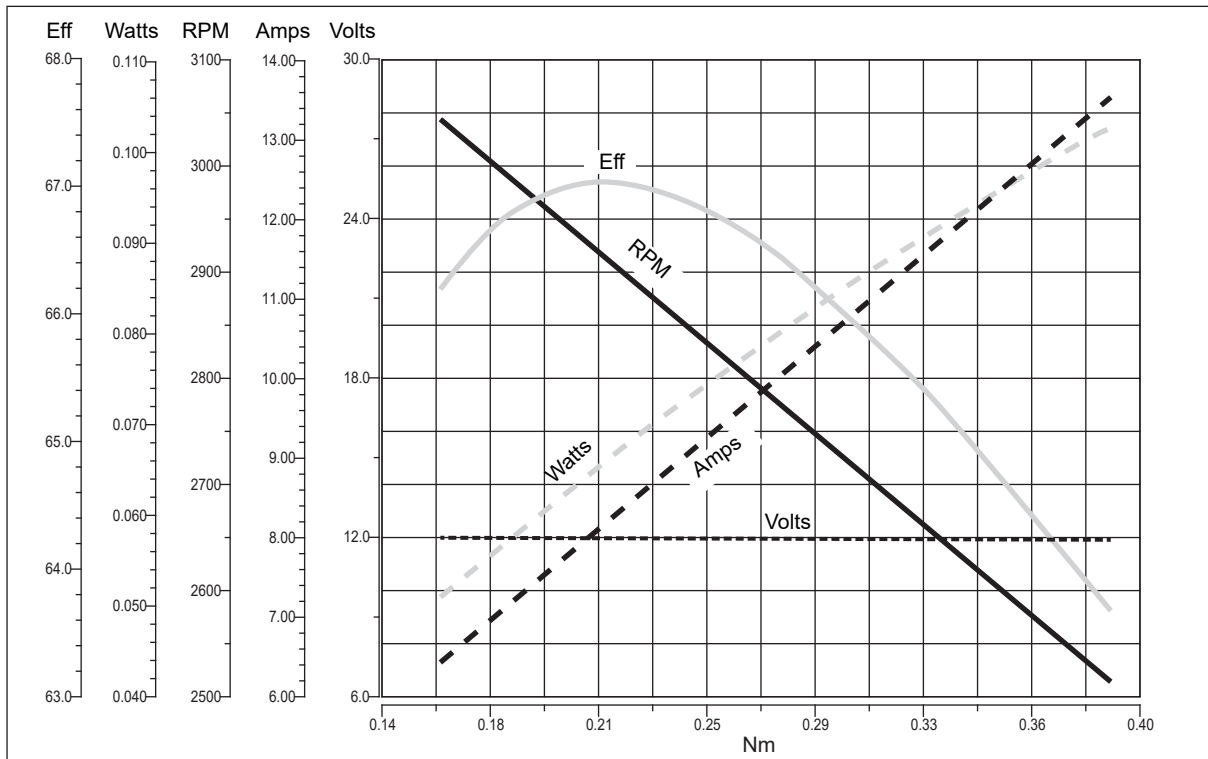


EC070.12E - EC070.24E

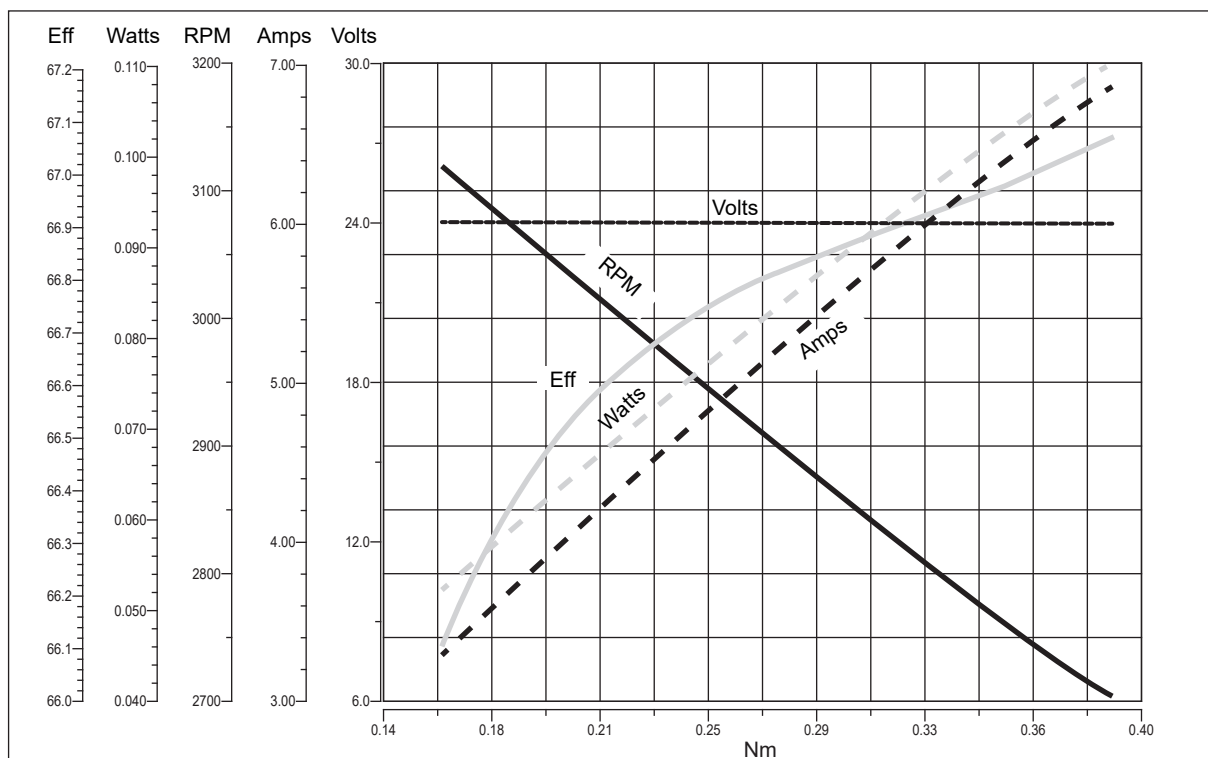
Prestazioni

Performances

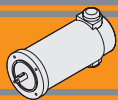
EC070.12E



EC070.24E



DC



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

Caratteristiche

Features

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

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

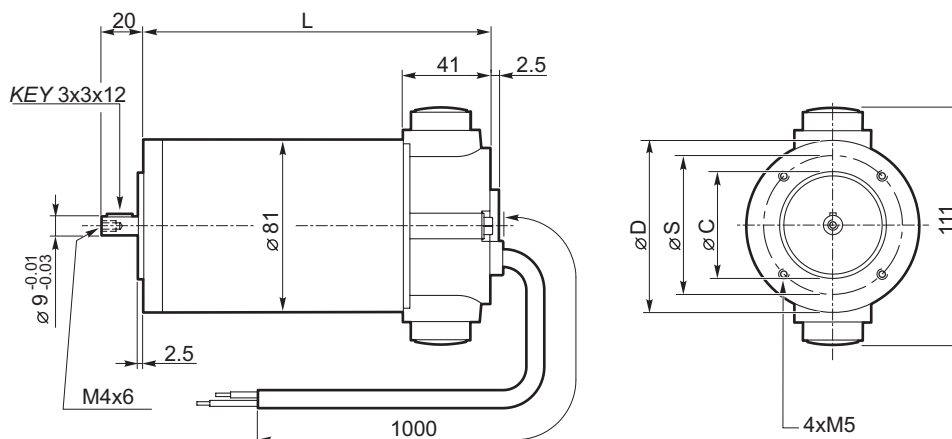
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	S1	100	24	6			0.31			
	S2 25'	140		8.4			0.43			
EC100.24E	S1	100	24	6			0.31		20	
	S2 25'	140		8.4			0.43			

Dimensioni

Dimensions

**EC100.120
EC100.240**

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

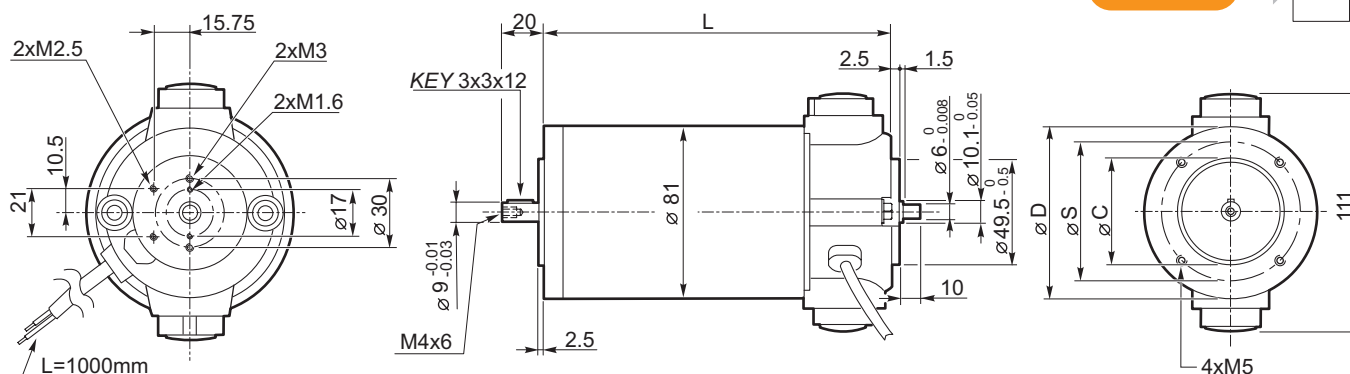


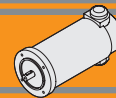
* Usare boccola 9/11
* Use sleeve 9/11

Freno / Brake → BB23

Encoder → BB24

EC100.24E



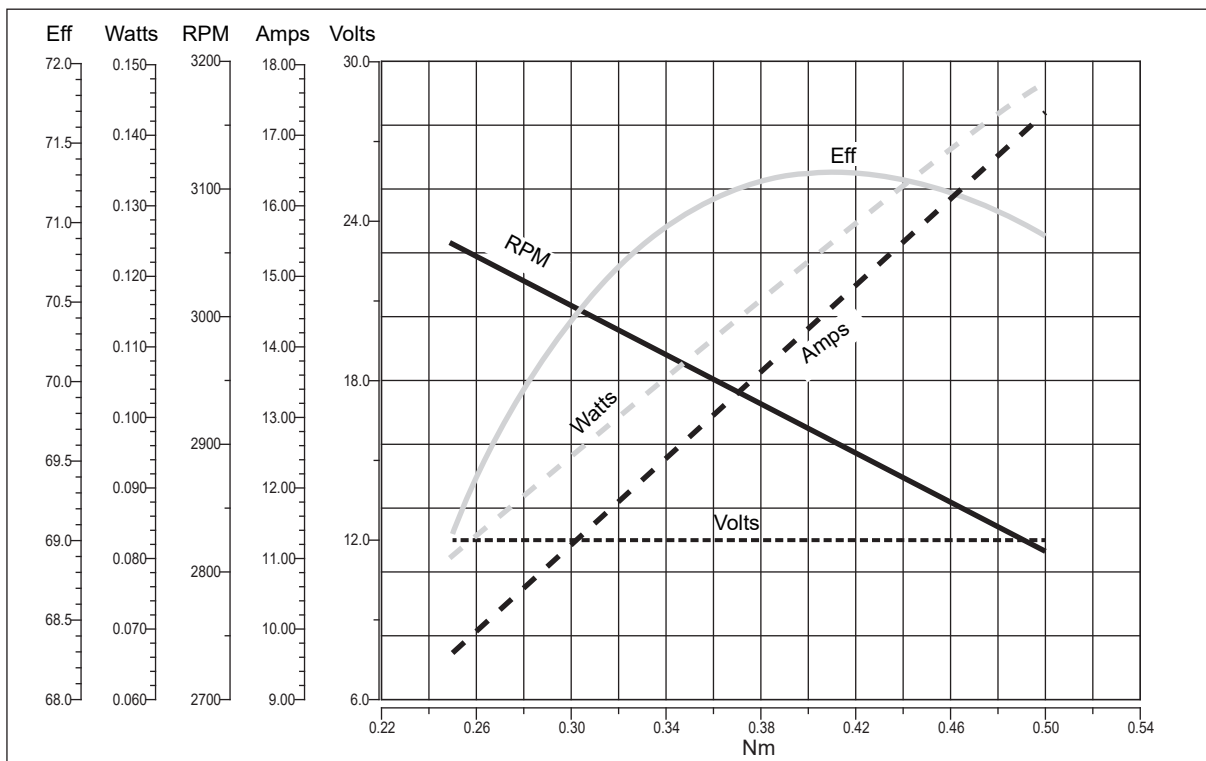


EC100.120 - EC100.240 - EC100.24E

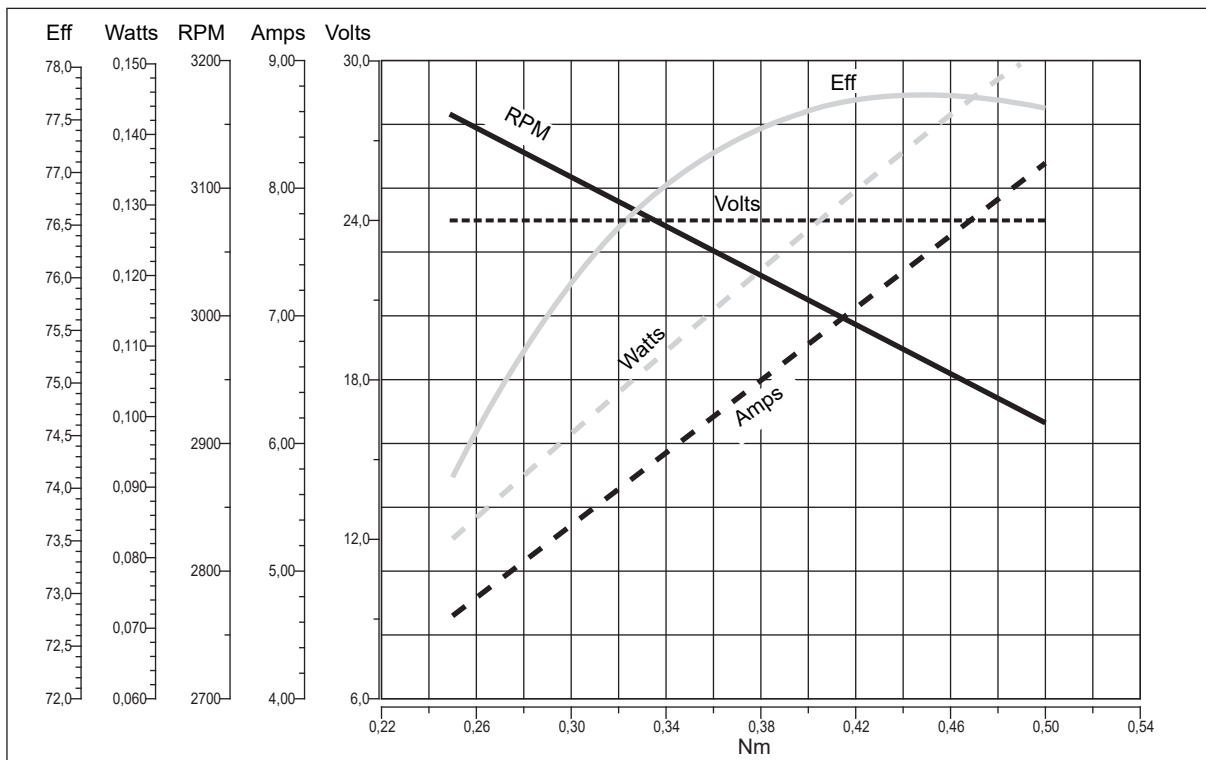
Prestazioni

Performances

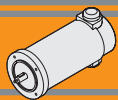
EC100.120



EC100.240 - EC100.24E



DC

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


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

Caratteristiche

Features

Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 80 mm
Potenza	250 W S2 (180 W S1)
Magneti	2
Supporti	Cuscinetti a sfera
Fori di montaggio	4
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 2 di composto grafite-rame
Dimensione spazzole	LxPxH = 17.1 x 6.5 x 16.7 mm
Cavo di alimentazione	Lunghezza: 1000 mm
Bisporgenza	Standard solo EC180.24E

Construction	Tubular, without fan
Size	Ø 80 mm
Power	250 W S2 (180 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Brushes size	LxPxH = 17.1 x 6.5 x 16.7 mm
Electric cable	Length: 1000 mm
Rear shaft	Standard only EC180.24E

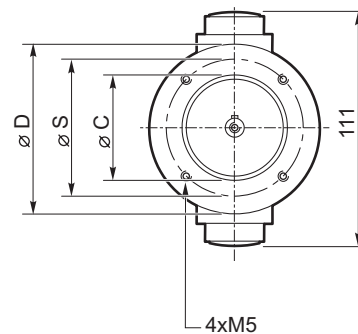
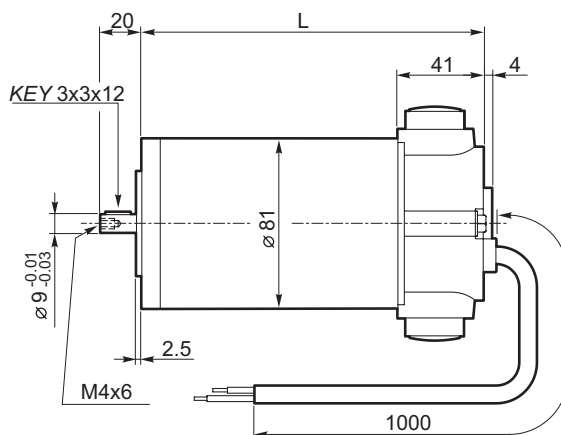
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC180.120	S1	180	12	21.5	F	1	0.57	3000	40	3.4
	S2 25'	250		30			0.8			
EC180.240	S1	180	24	10.8			0.57			
	S2 25'	250		15			0.8			
EC180.24E	S1	180	10.8	0.57			20			
	S2 25'	250	15	0.8						

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

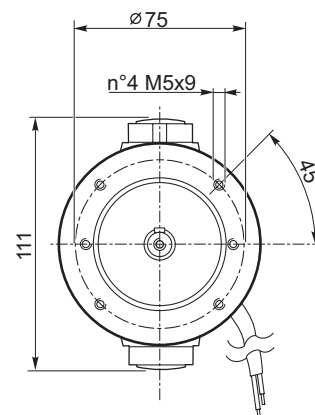
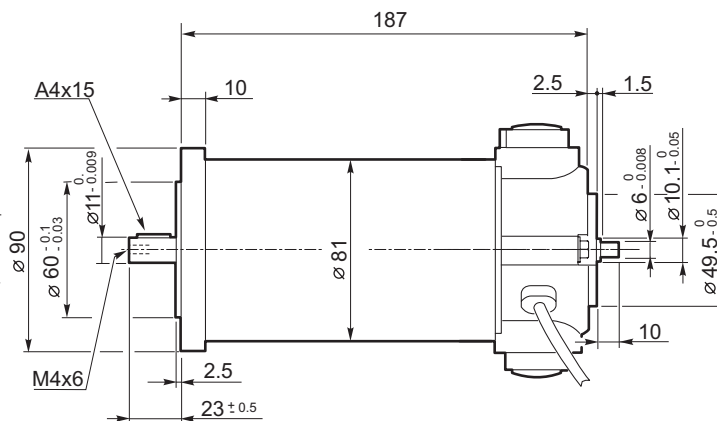
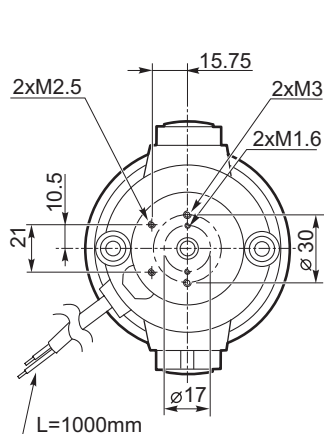


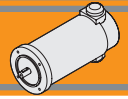
* Usare boccola 9/11
* Use sleeve 9/11

Freno / Brake →

Encoder →

EC180.24E



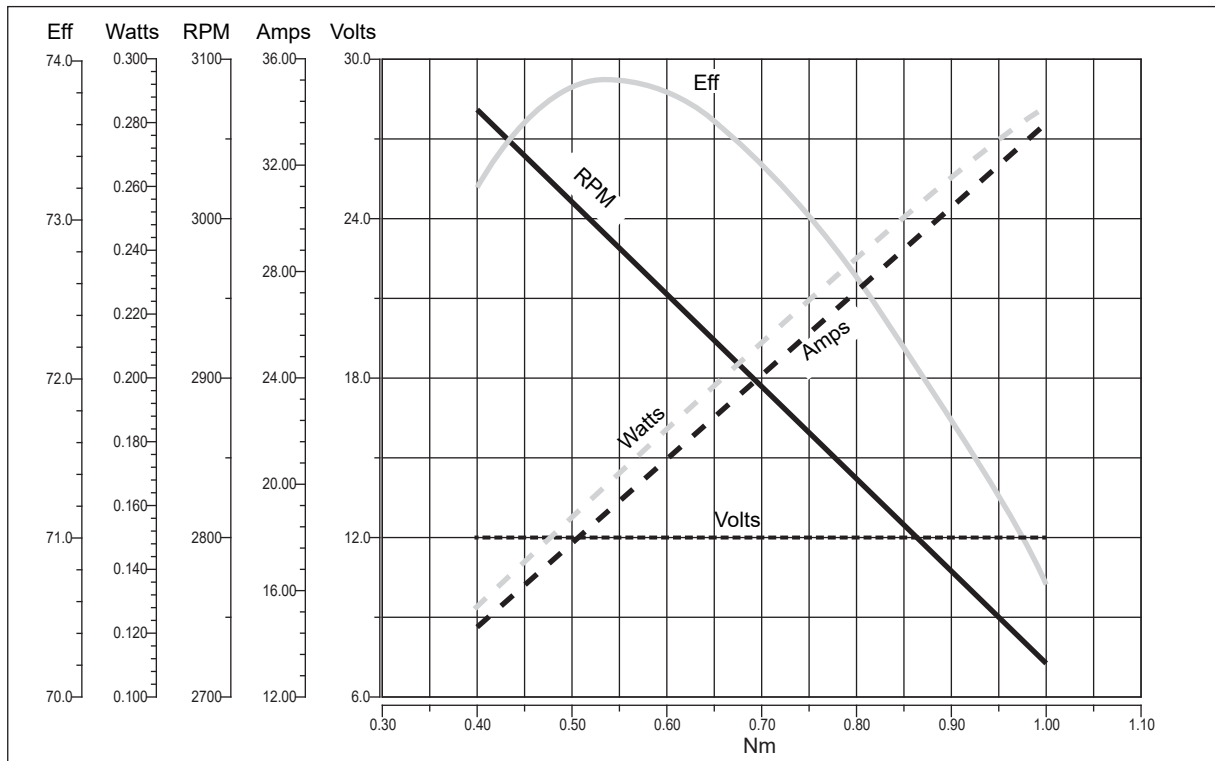


EC180.120 - EC180.240 - EC180.24E

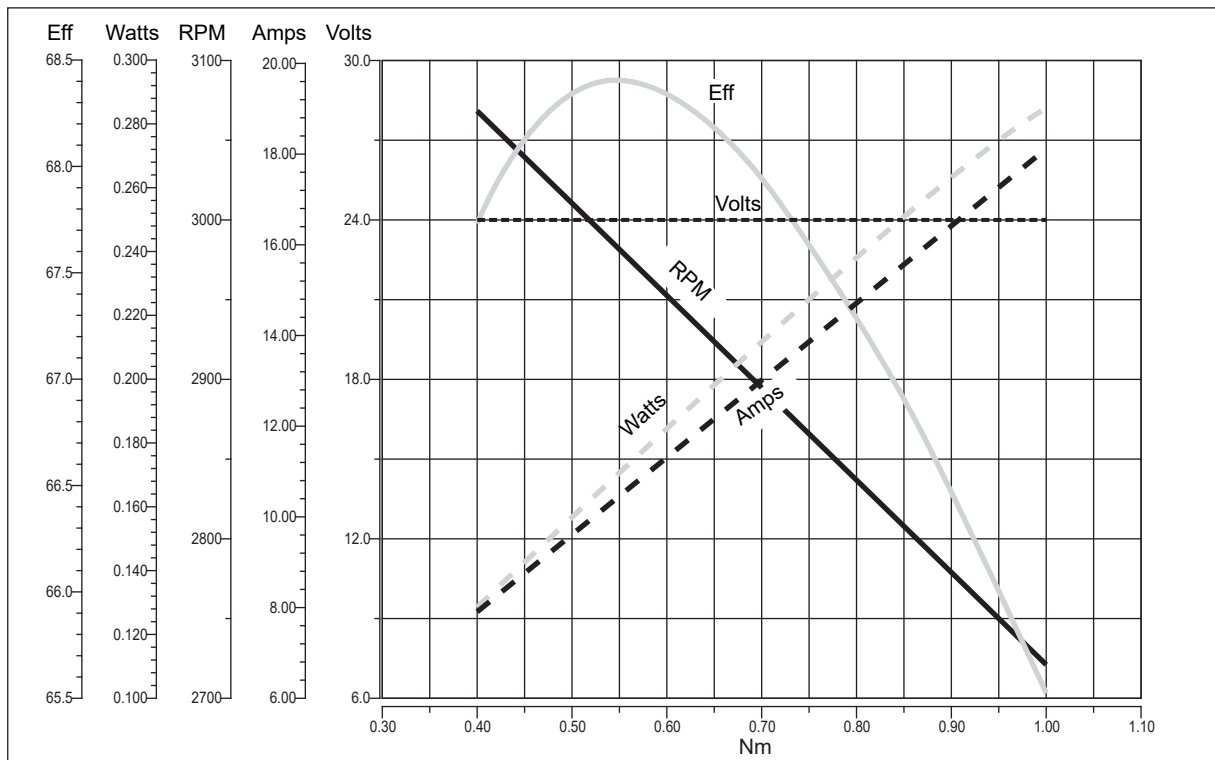
Prestazioni

Performances

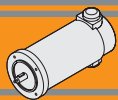
EC180.120



EC180.240 - EC180.24E



DC



EC250.120 - EC250.240

Caratteristiche

Features

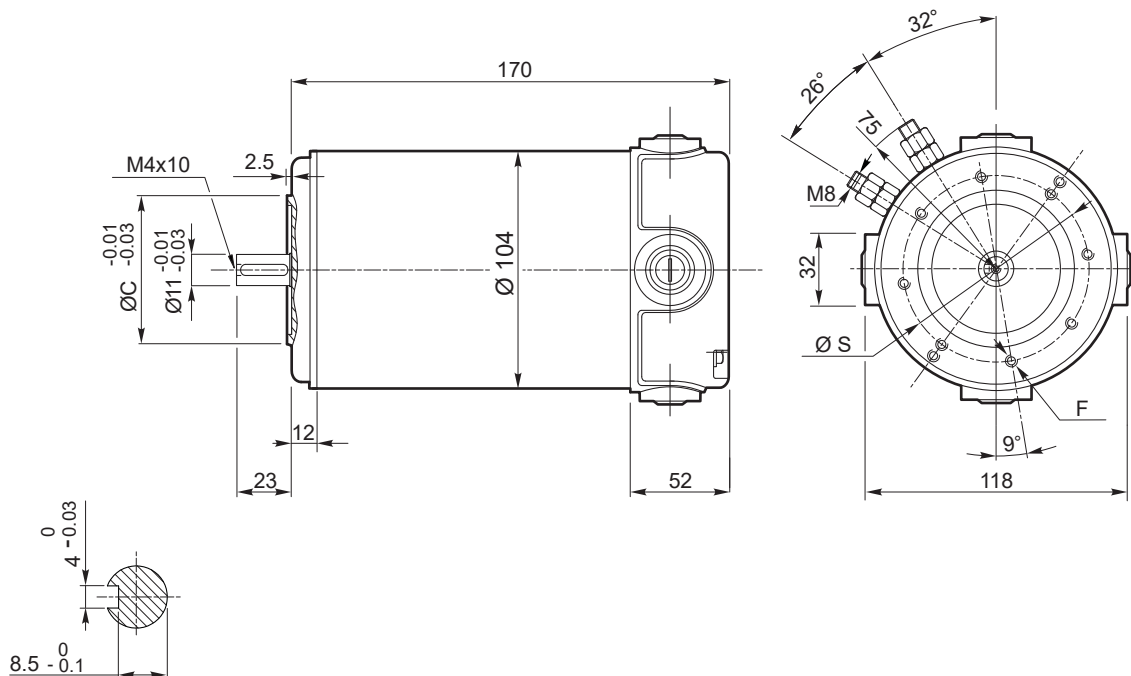
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 104 mm
Potenza	350 W S2 (250 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado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

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

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

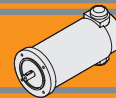
Dimensioni

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

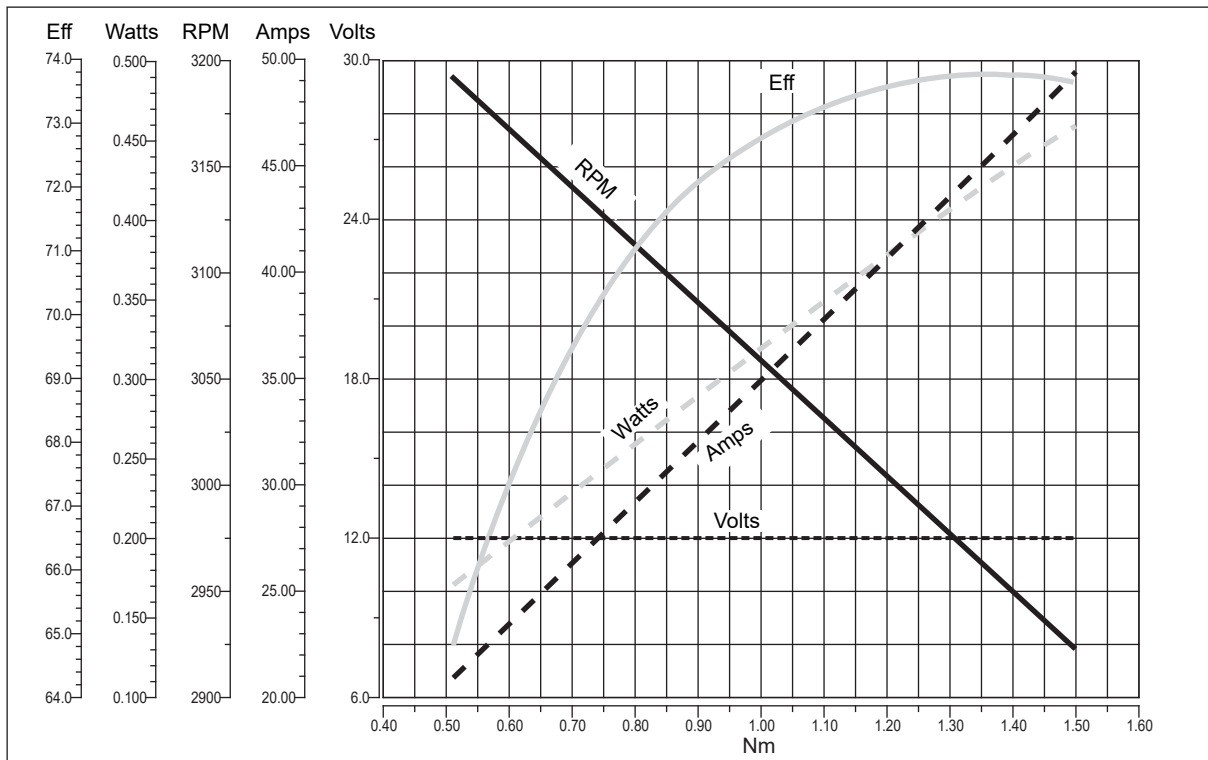


EC250.120 - EC250.240

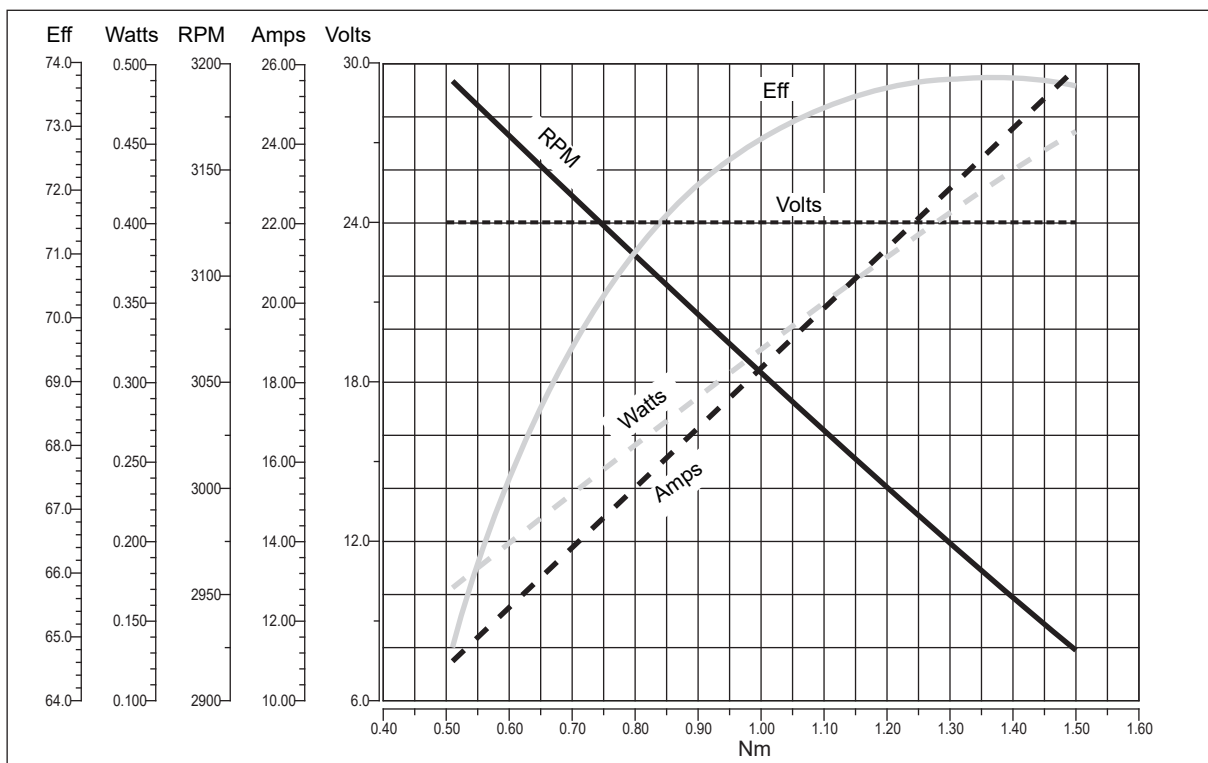
Prestazioni

Performances

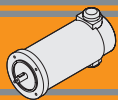
EC250.120



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

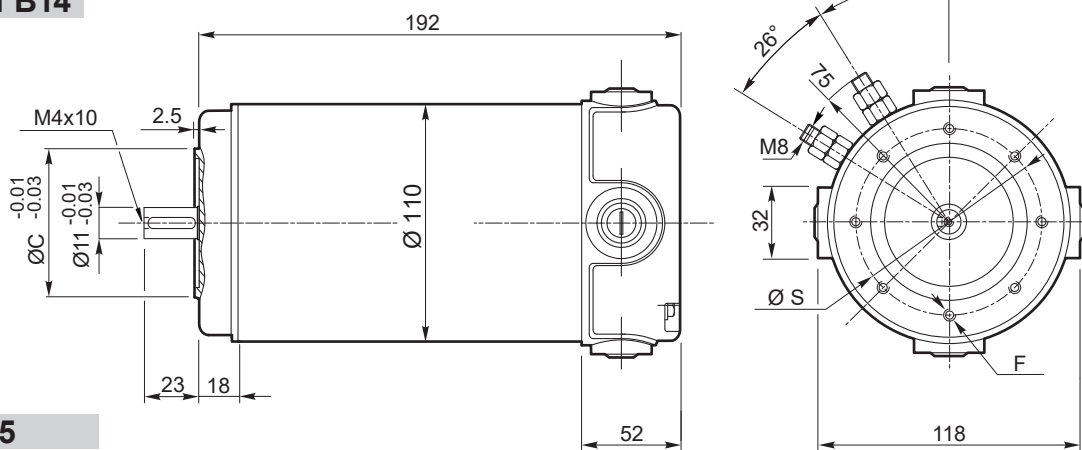
Construction	Tubular, without fan
Size	Ø 110 mm
Power	500 W S2 (350 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut

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			

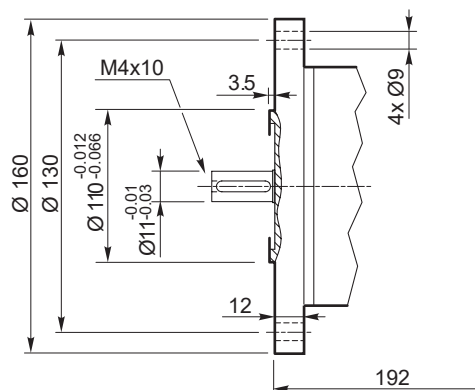
Dimensioni

Dimensions

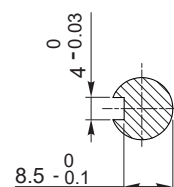
63 B14 - 71 B14



71 B5



Freno / Brake



	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

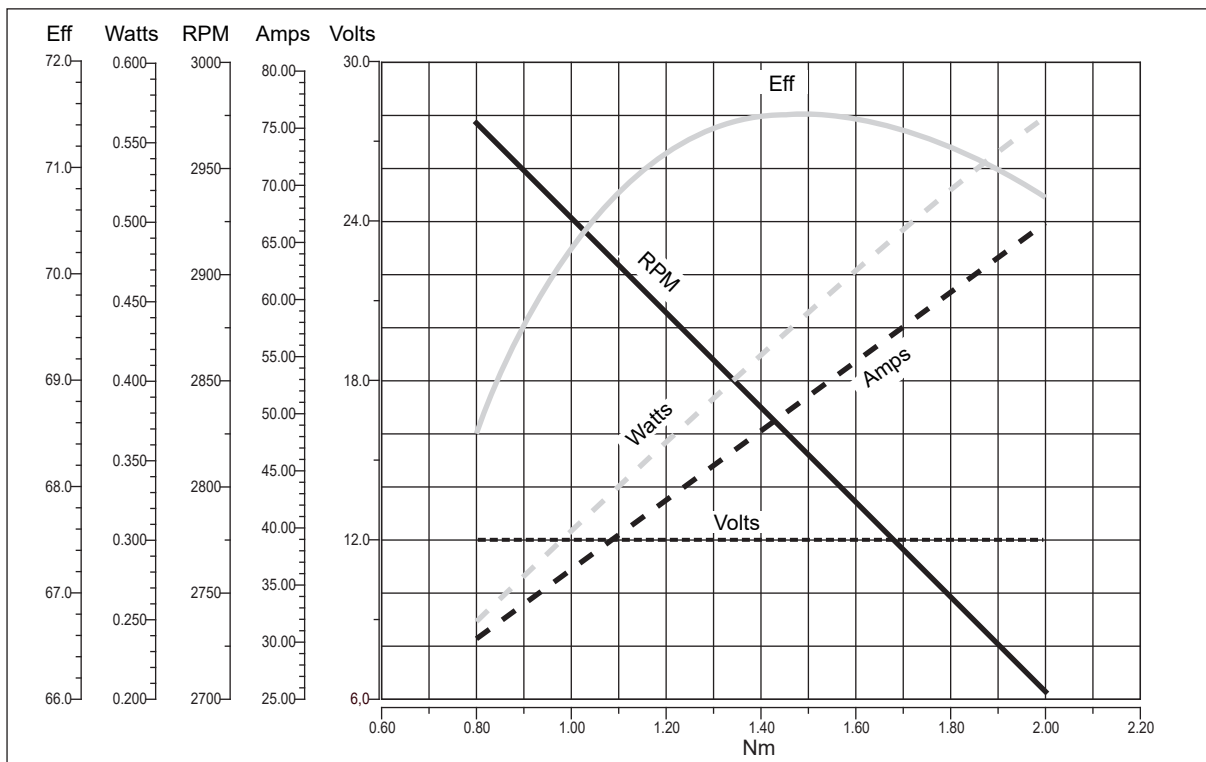


EC350.120 - EC350.240

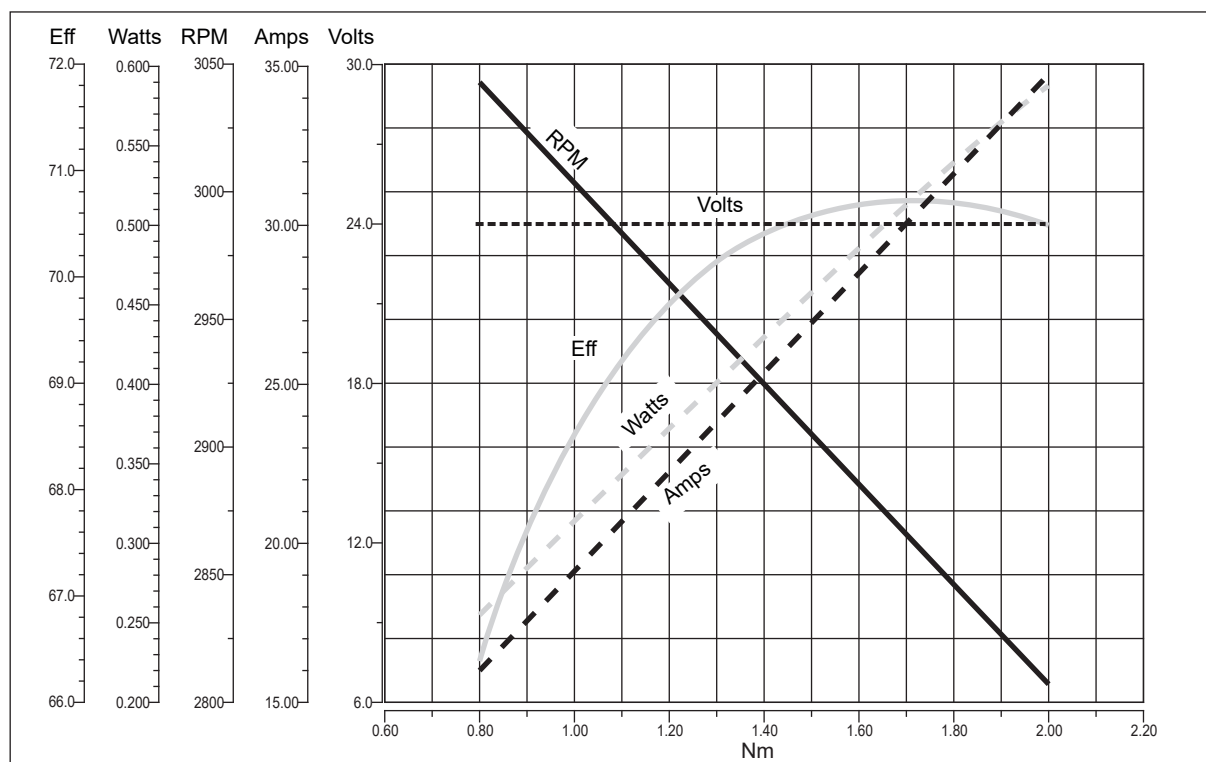
Prestazioni

Performances

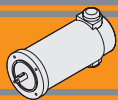
EC350.120



EC350.240



DC



EC600.120 - EC600.240

Caratteristiche

Features

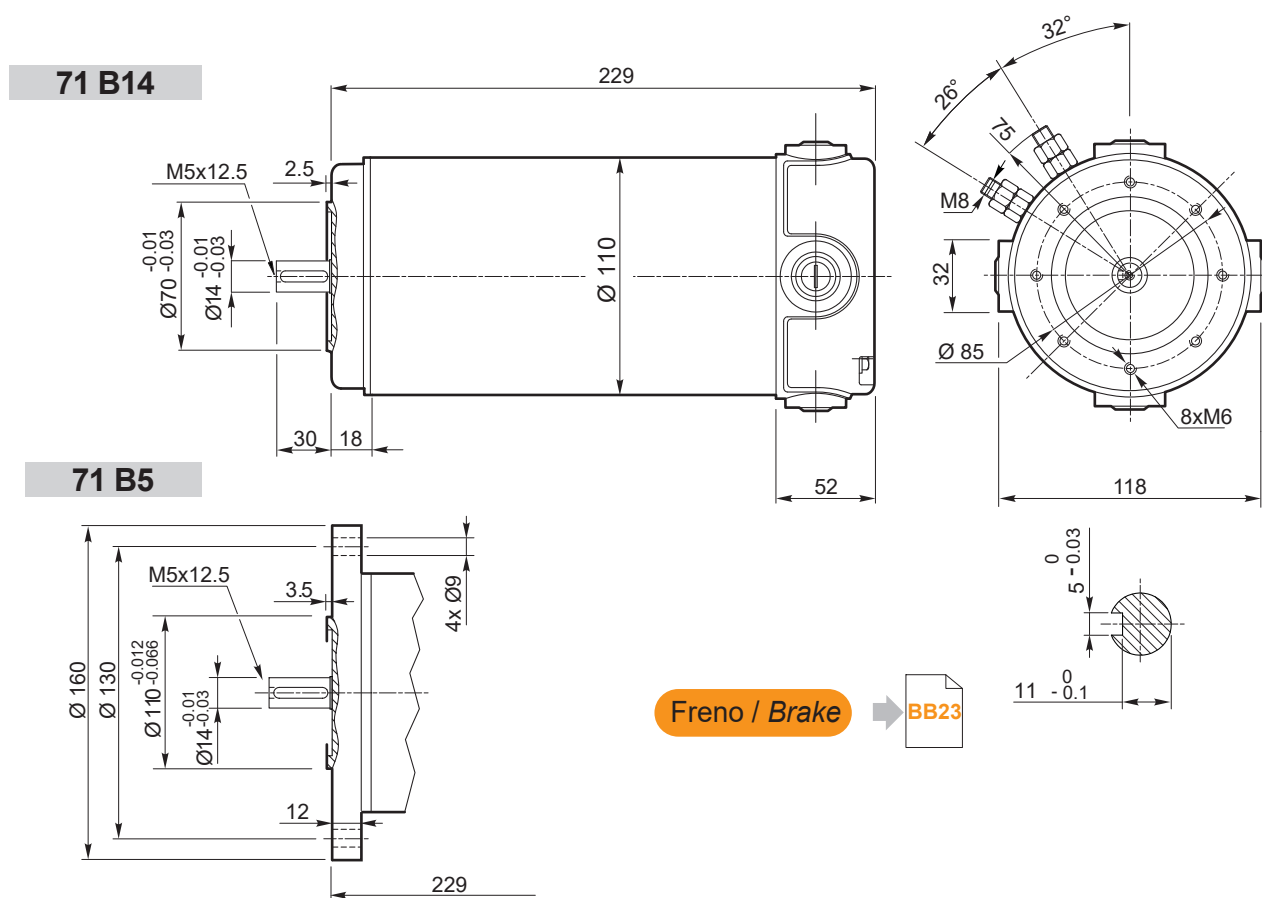
Costruzione	Tubolare, senza ventilazione
Grandezza	Ø 110 mm
Potenza	800 W S2 (600 W S1)
Magneti	4
Supporti	Cuscinetti a sfera
Fori di montaggio	8
Alimentazione	Bassa tensione, 12 o 24 Vcc
Spazzole	N° 4 di composto grafite-rame
Dimensione spazzole	LxPxH = 18.9 x 9.5 x 16.7 mm
Terminali	2 con doppio dado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

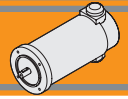
Construction	Tubular, without fan
Size	Ø 110 mm
Power	800 W S2 (600 W S1)
Magnets	4
Bearings	Ball bearings
Mounting holes	8
Power supply	Low voltage, 12 or 24 Vdc
Brushes	4 brushes made of graphite/copper composite
Brushes size	LxPxH = 18.9 x 9.5 x 16.7 mm
Leads terminals	2, with double nut

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



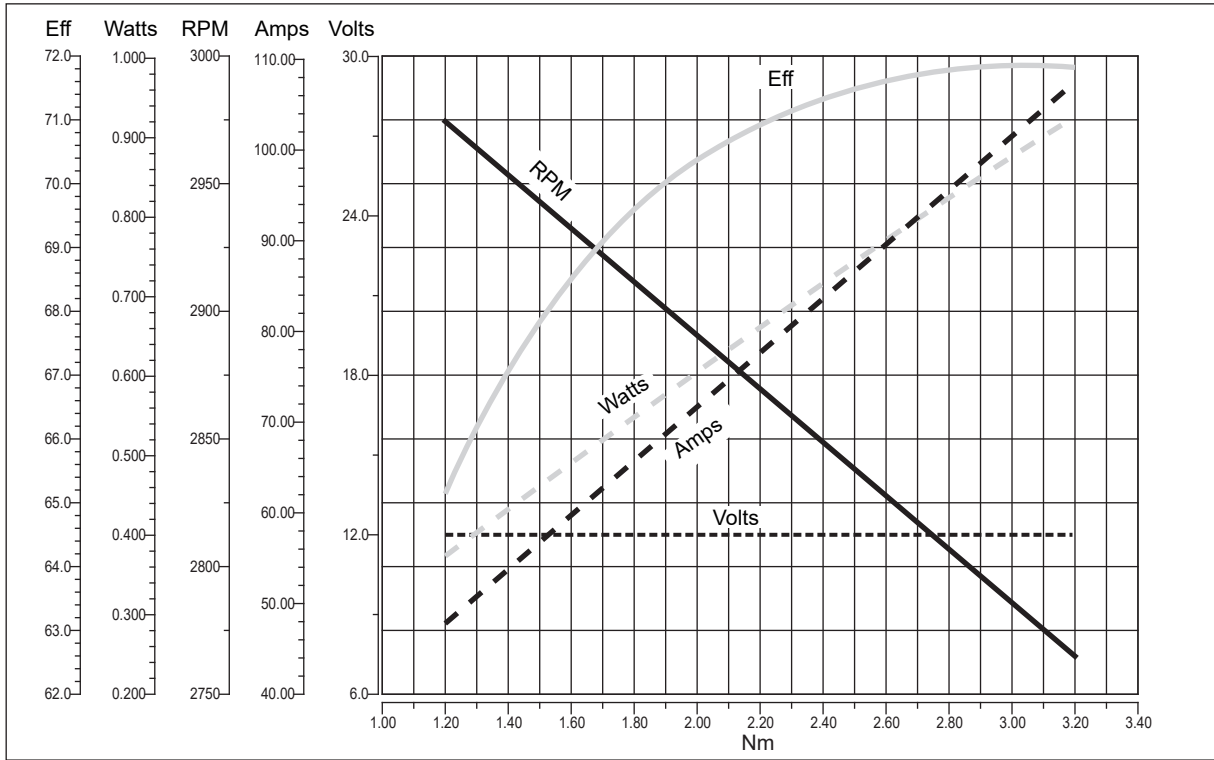


EC600.120 - EC600.240

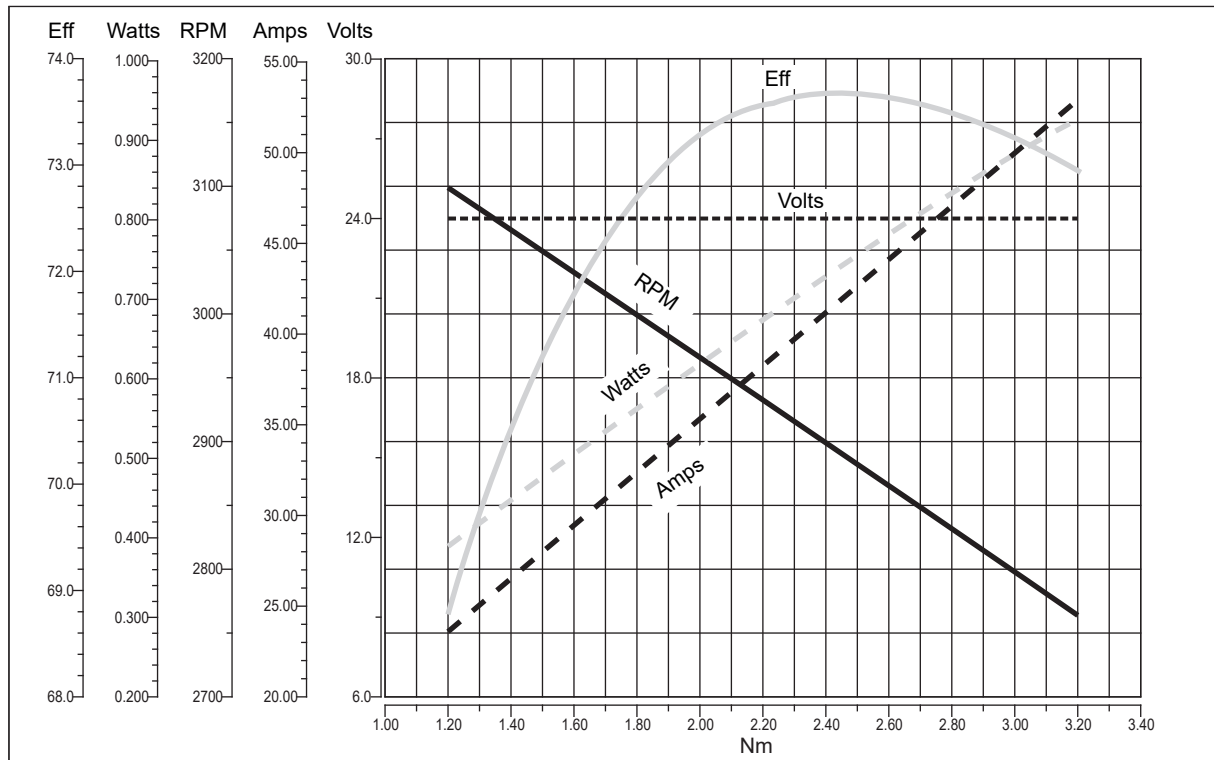
Prestazioni

Performances

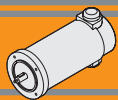
EC600.120



EC600.240



DC

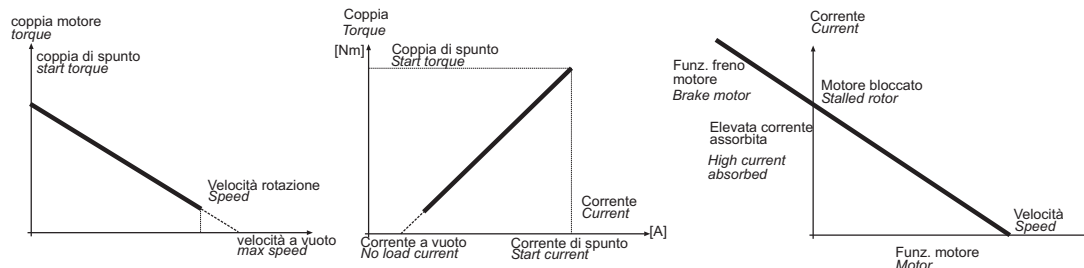


Legenda / Glossario dei grafici

Key / Diagram Glossary

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

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

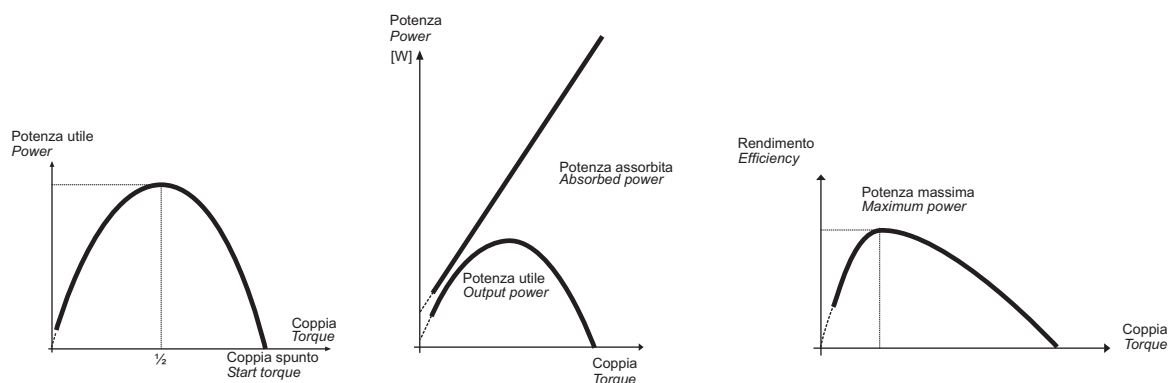


La potenza utile (potenza all' albero) si ricava dalla formula:

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

The output power is calculated using the formula:

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



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

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

Formule utili

Useful formulas

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

$$P_a = V \cdot I$$

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

$$P_n = M_n \cdot S_v$$

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

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

Esempio 2 HP = circa 1500 W.

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

$$P_a = V \cdot I$$

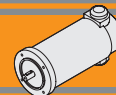
$$P_n = V \cdot I \cdot \eta$$

$$P_n = M_n \cdot S_v$$

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

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

Example 2 HP = approx. 1500 W.



Freno

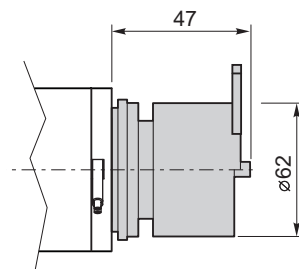
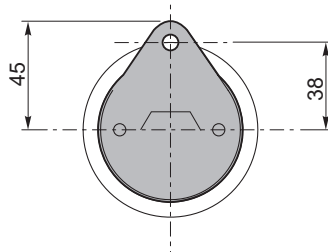
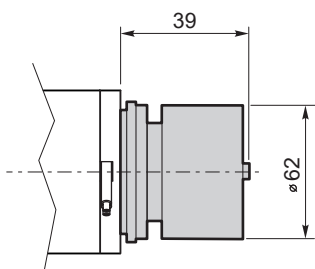
Brake

Freno / Brake

Freno con leva di sblocco/ Brake with hand release

EC050...BR
EC070...BR

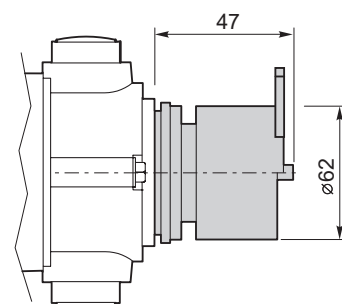
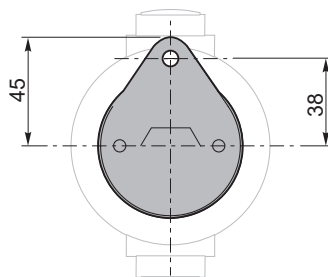
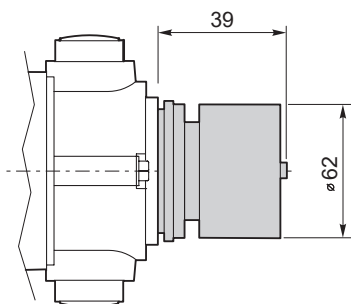
EC050...BRL
EC070...BRL



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

EC100.24E BR
EC180.24E BR

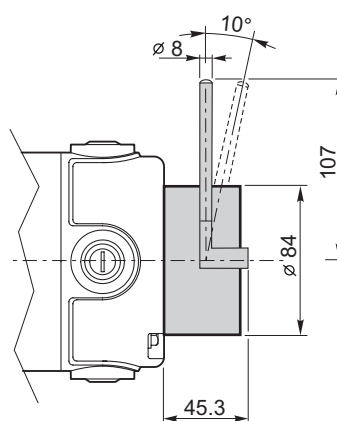
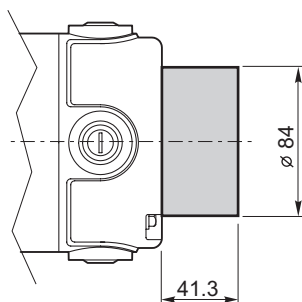
EC100.24E BRL
EC180.24E BRL



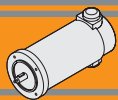
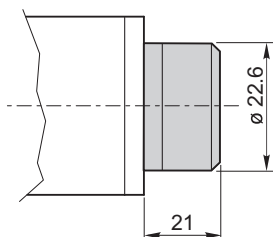
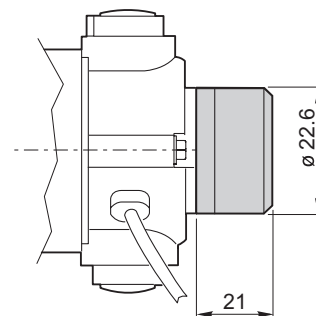
	Pn [W]	V [V]	Mn [Nm]	n ₁ [min ⁻¹]
Caratteristiche del freno / Break features	14	12	1.8	3000
		24		

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	5	3000
		24		

**Encoder****Encoder****EC020.24E ME22****EC050.12E ME22****EC050.24E ME22****EC070.12E ME22****EC070.24E ME22****EC100.24E ME22****EC180.24E ME22**

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

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

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

Nota: Fornito con cavo lungo 300 mm

Note: Supplie with cavle 300 mm long

MINI  **TECNO**™
small but strong

EC IP66



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



MINI  **TECNO**™ brand of
TRANSTECNO®



DC



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	Dimensioni	<i>Dimensions</i>	BC2
	Prestazioni	<i>Performances</i>	BC3
EC100.120.66 EC100.240.66	Caratteristiche	<i>Features</i>	BC4
	Dimensioni	<i>Dimensions</i>	BC4
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EC180.120.66 EC180.240.66	Caratteristiche	<i>Features</i>	BC6
	Dimensioni	<i>Dimensions</i>	BC6
	Prestazioni	<i>Performances</i>	BC6
EC250.120.66 EC250.240.66	Caratteristiche	<i>Features</i>	BC8
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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

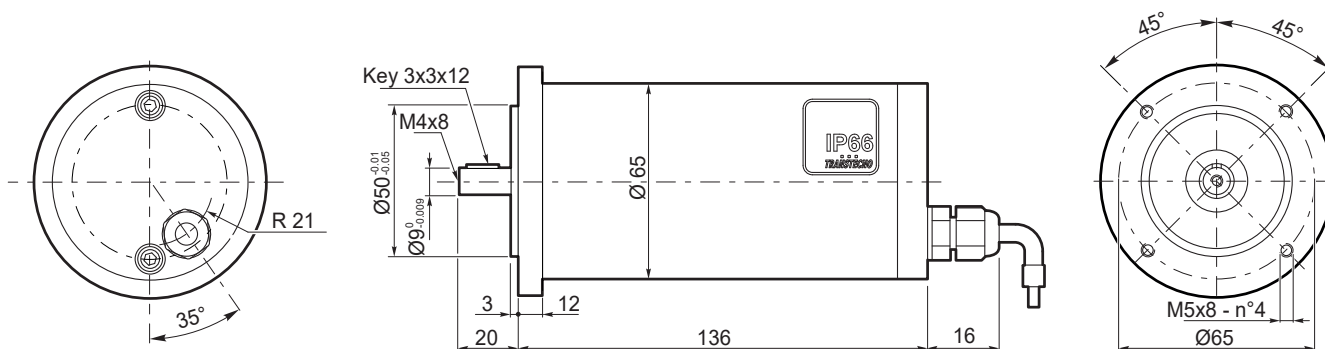
Construction	Tubular, without fan
Size	Ø 65 mm
Power	100 W S2 (70 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Brushes	2 inside brushes made of graphite/copper composite
Electric cable	Length: 1000 mm

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						
	S2 30'	100		5.9			0.31			

Dimensioni

Dimensions

EC070.120.66
EC070.240.66



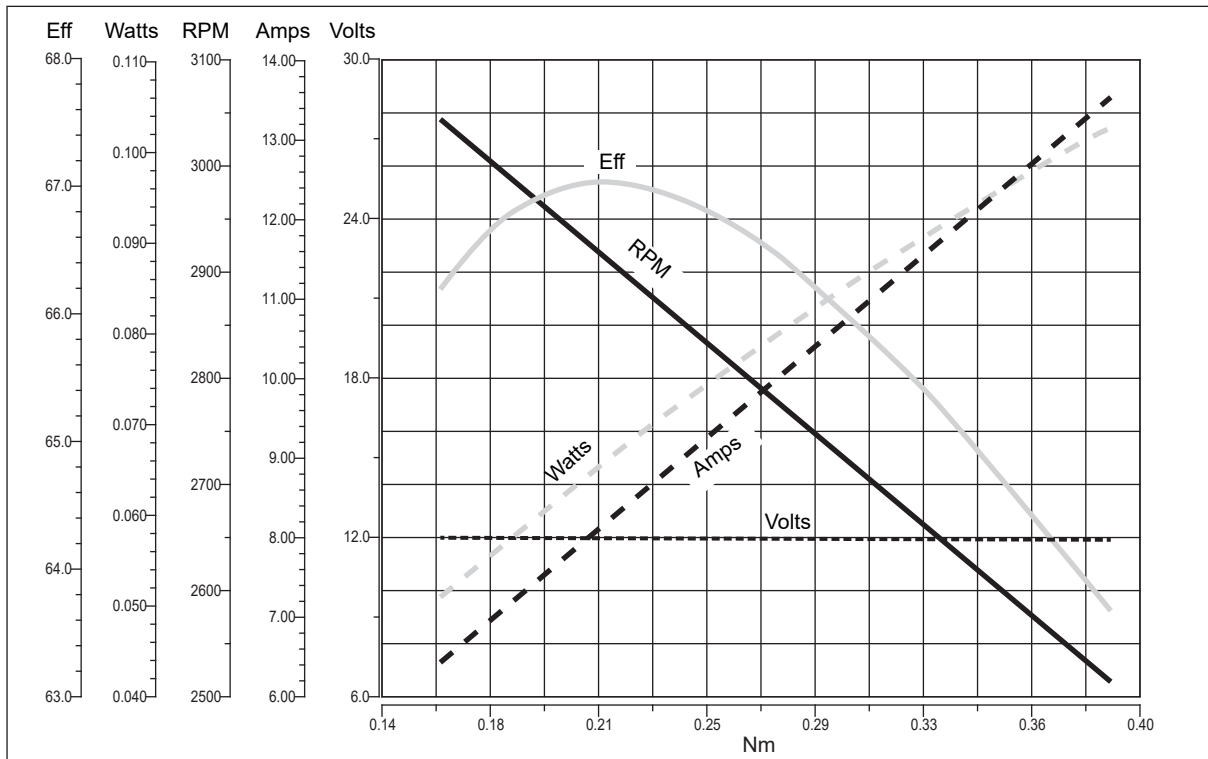


EC070.120.66 - EC070.240.66

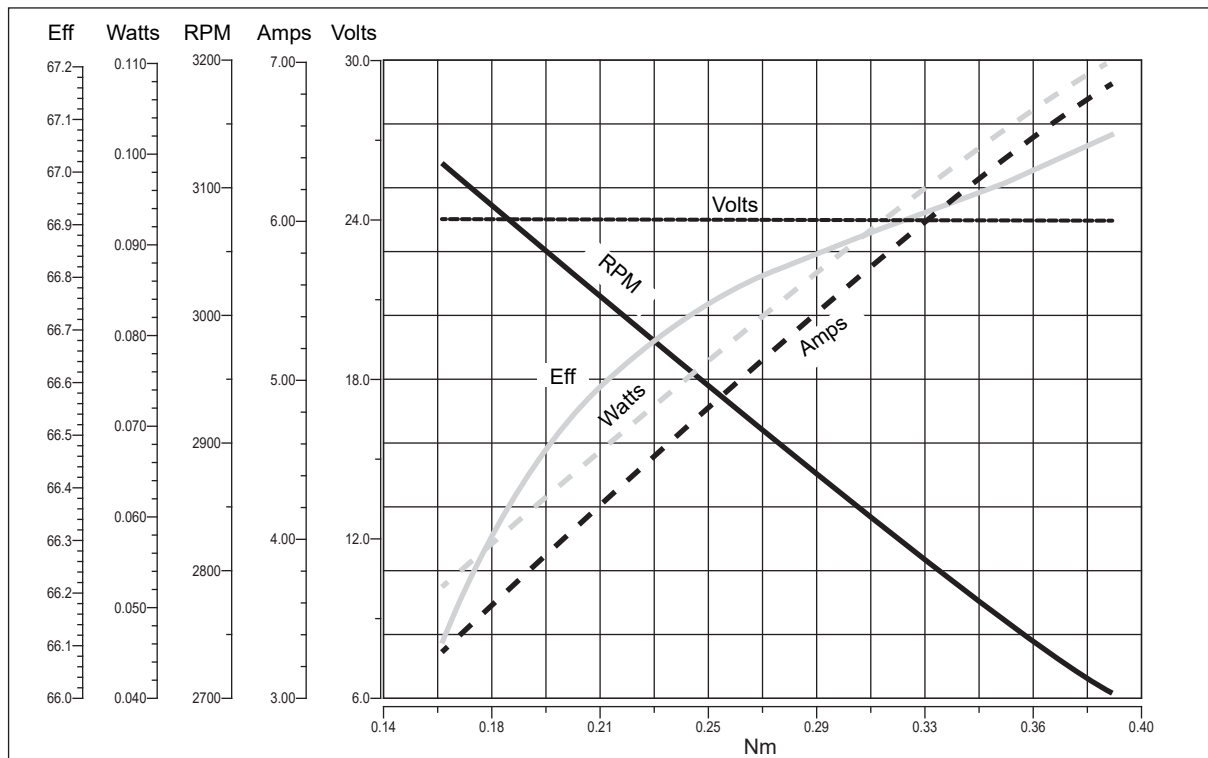
Prestazioni

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

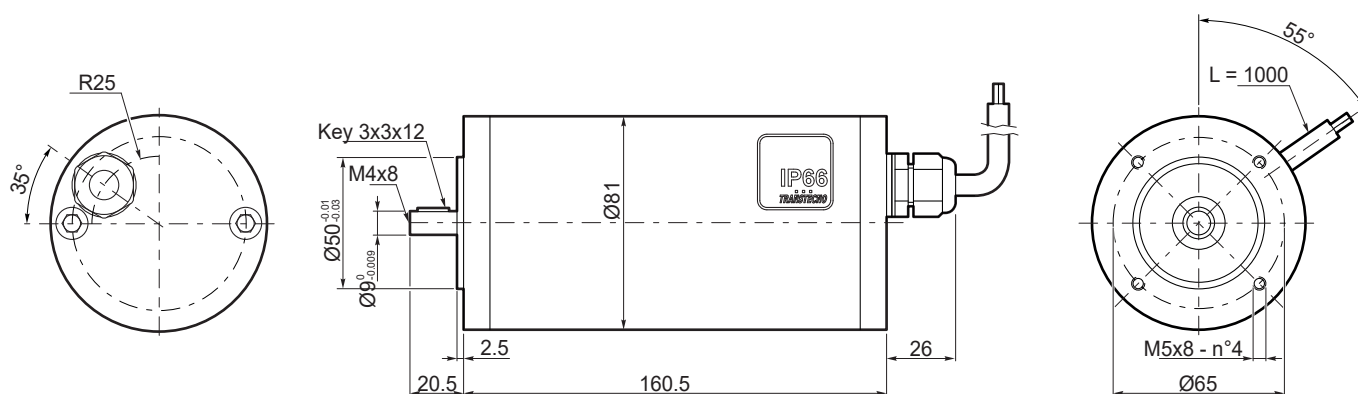
Construction	Tubular, without fan
Size	Ø 80 mm
Power	140 W S2 (100 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Electric cable	Length: 1000 mm

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						
	S2 25'	140		8.4			0.43			

Dimensioni

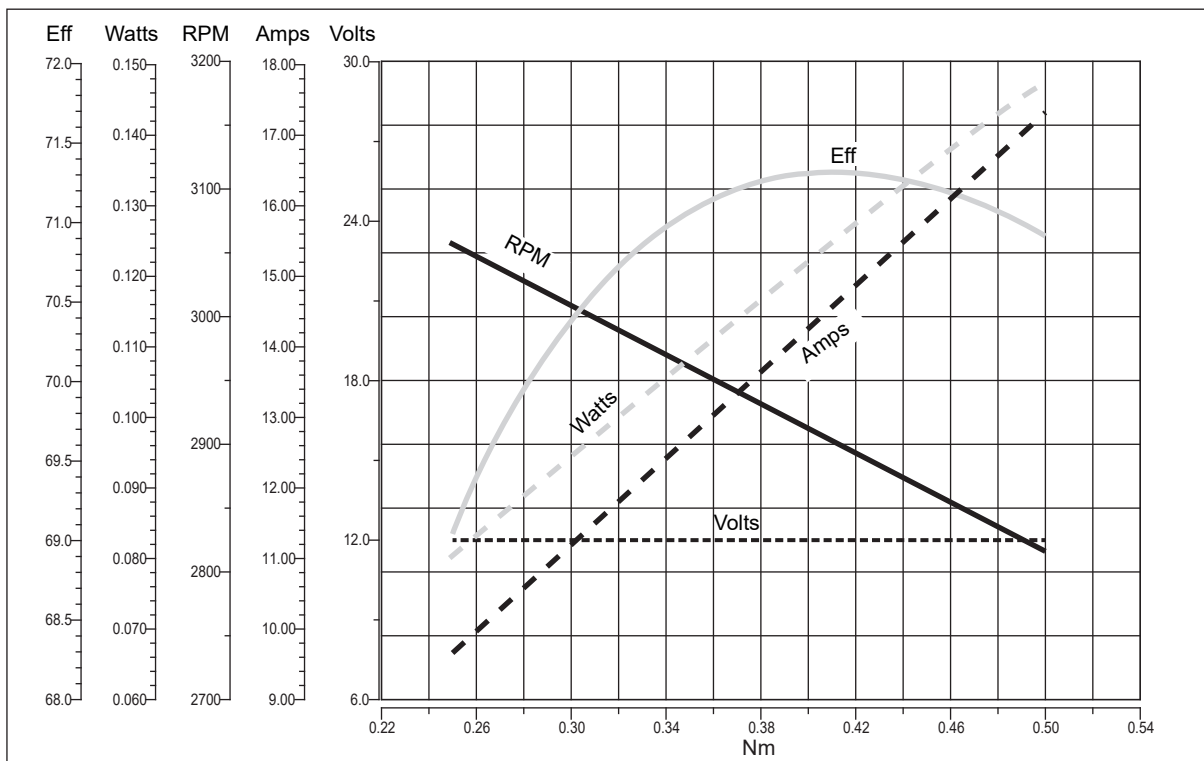
Dimensions

EC100.120.66
EC100.240.66

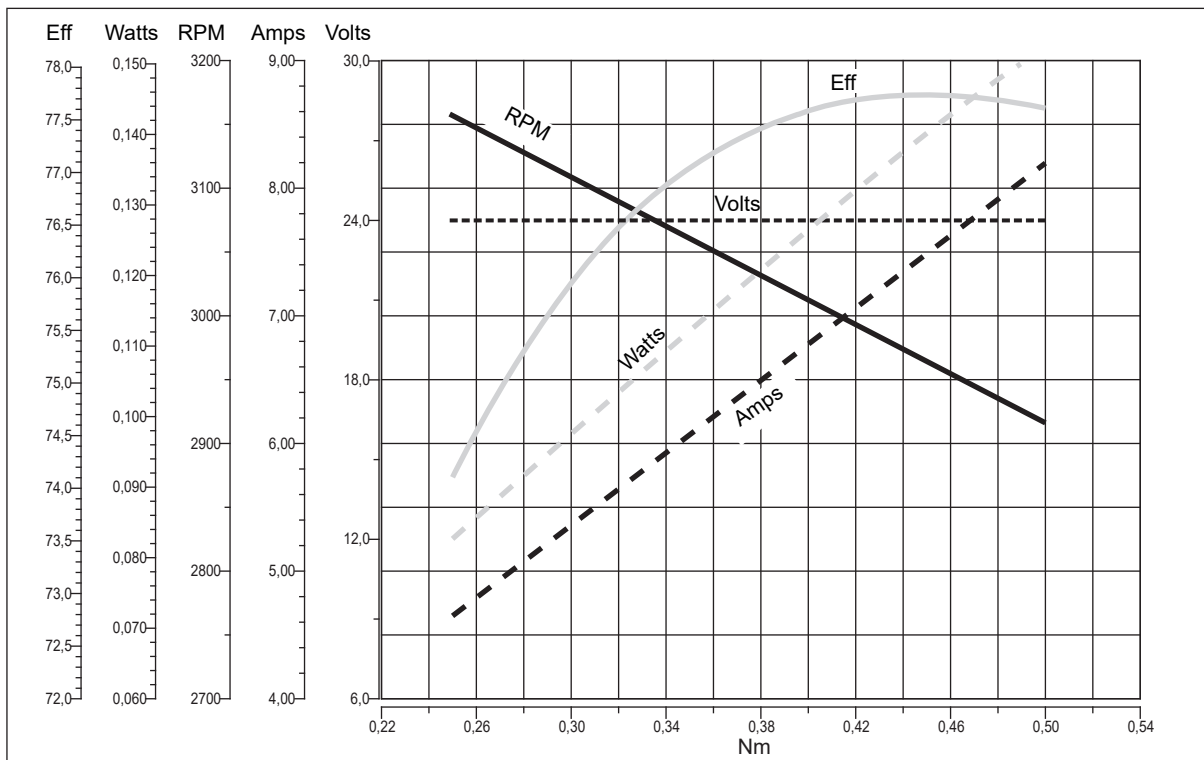




EC100.120.66



EC100.240.66



DC



EC180.120.66 - EC180.240.66

Caratteristiche

Features

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

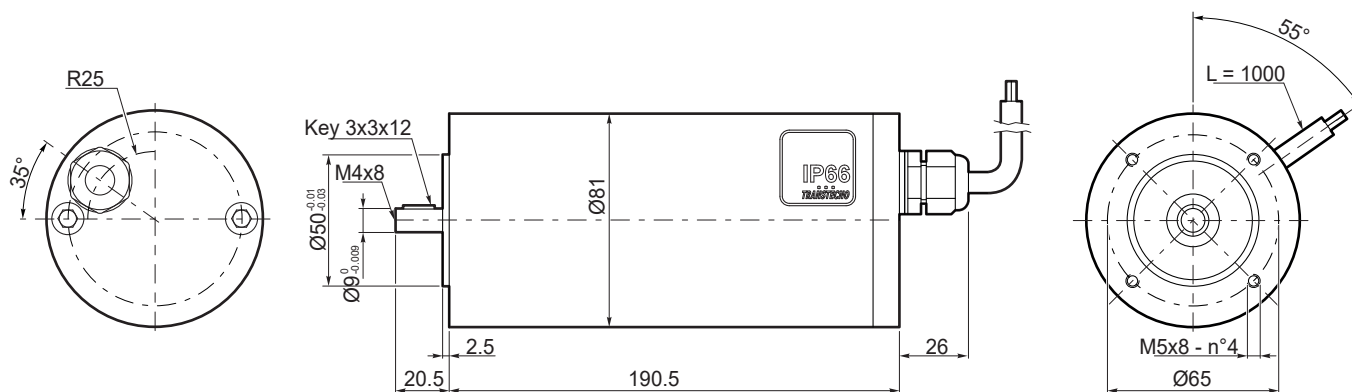
Construction	Tubular, without fan
Size	Ø 80 mm
Power	250 W S2 (180 W S1)
Magnets	2
Bearings	Ball bearings
Mounting holes	4
Power supply	Low voltage, 12 or 24 Vdc
Electric cable	Length: 1000 mm

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

Dimensioni

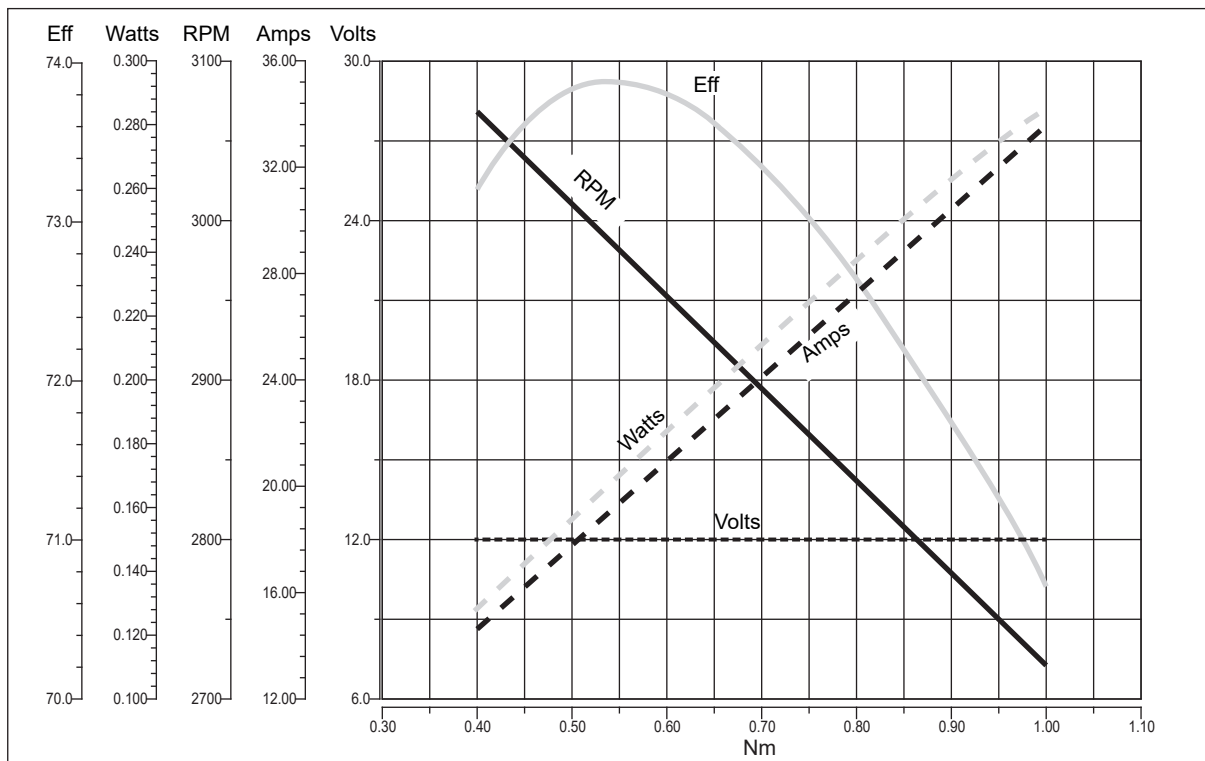
Dimensions

EC180.120.66
EC180.240.66

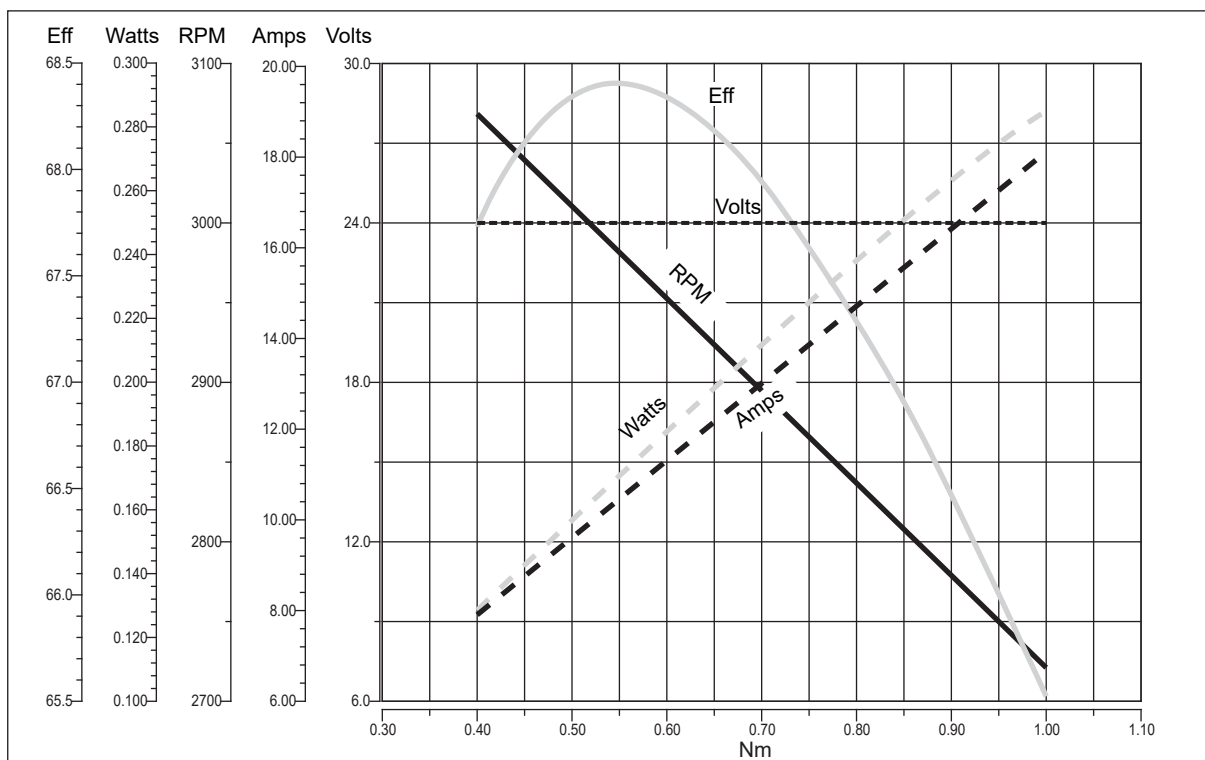




EC180.120.66



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

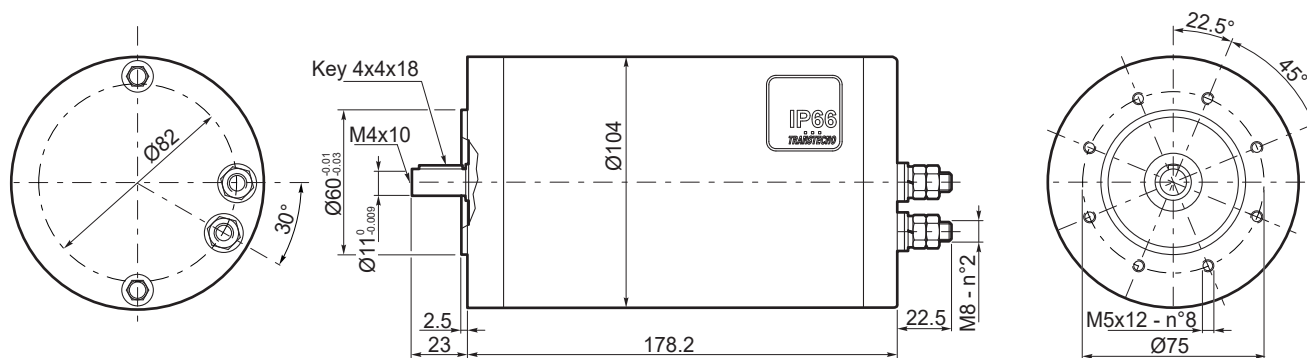
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC250.120.66	S1	250	12	30	F	1	0.8	3000	66	4.15
	S2 25'	350		38.5			1.12			
EC250.240.66	S1	250	24	15						
	S2 25'	350		20.5			1.12			

Dimensioni

Dimensions

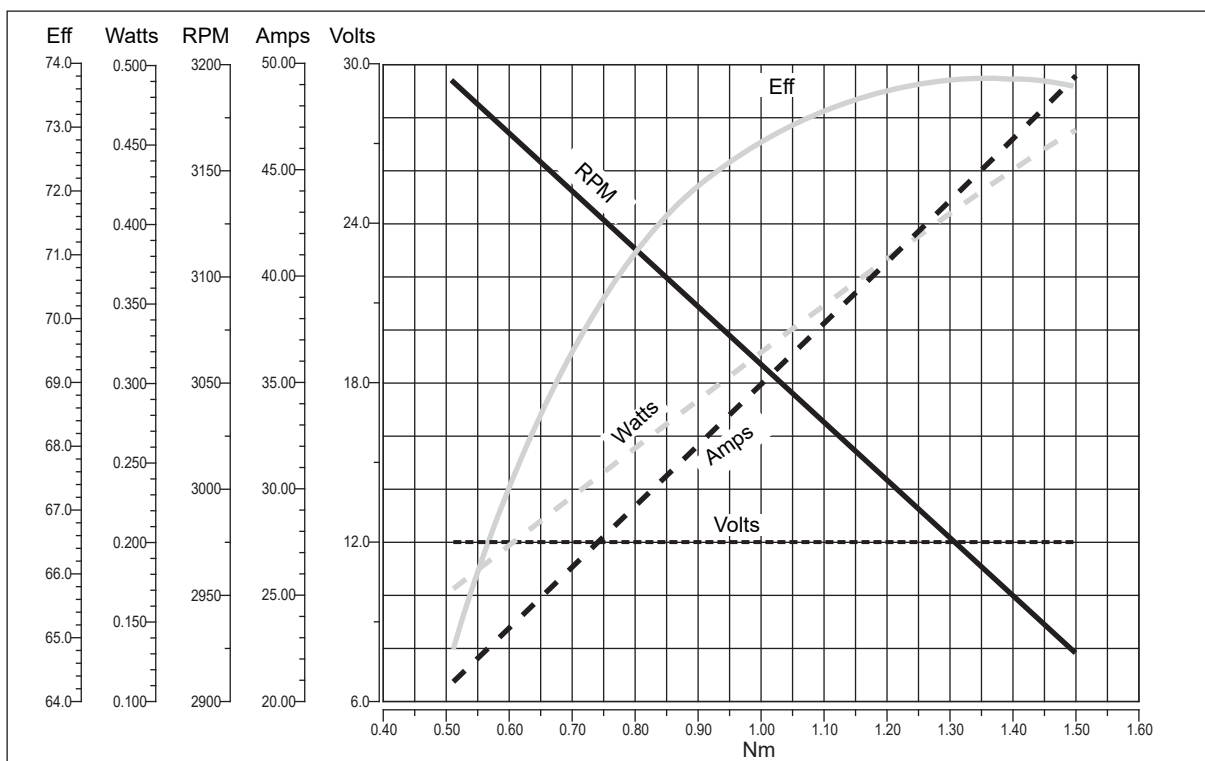
EC250.120.66

EC250.240.66

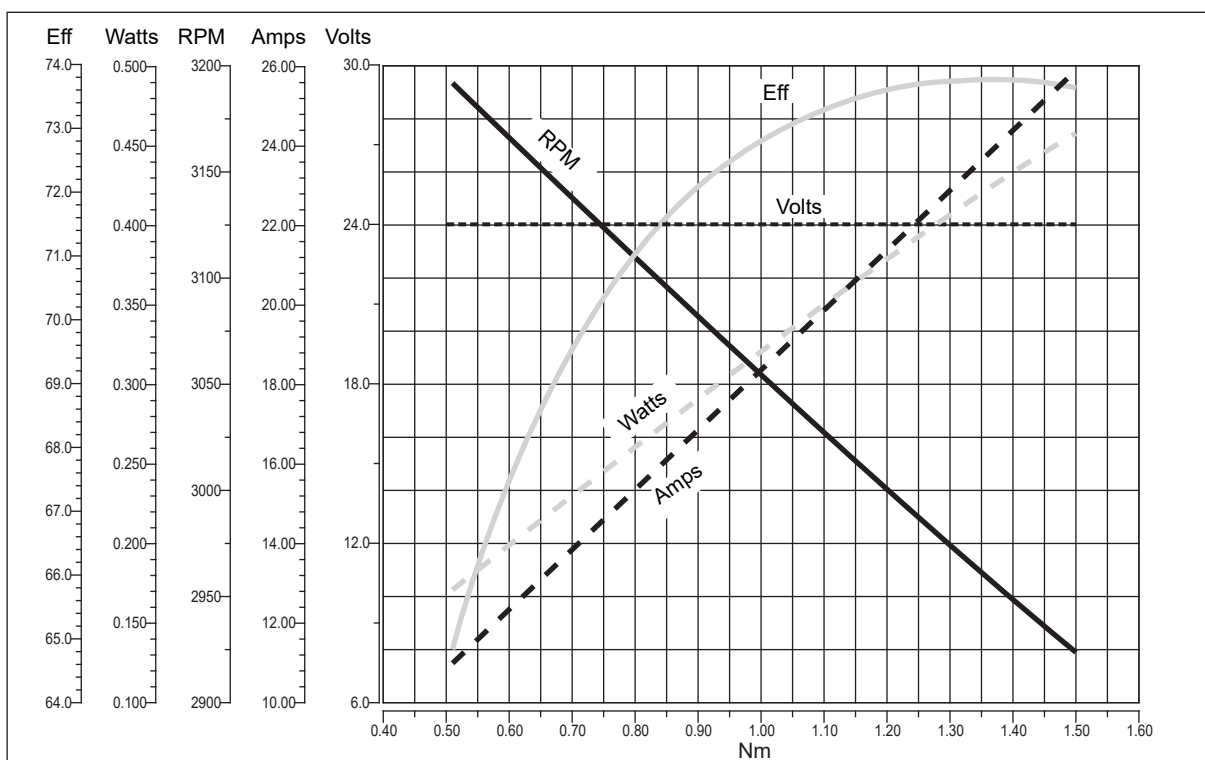




EC250.120.66



EC250.240.66



DC



EC350.120.66 - EC350.240.66

Caratteristiche

Features

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

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

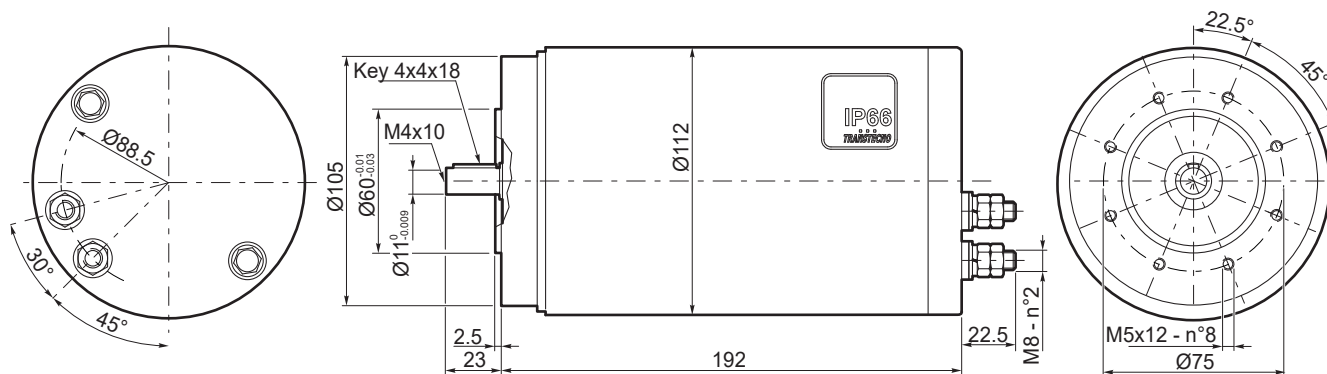
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC350.120.66	S1	350	12	42	F	1	1.12	3000	66	5.1
	S2 30'	500		58.8			1.57			
EC350.240.66	S1	350	24	21			1.12			5.3
	S2 30'	500		29.4			1.57			

Dimensioni

Dimensions

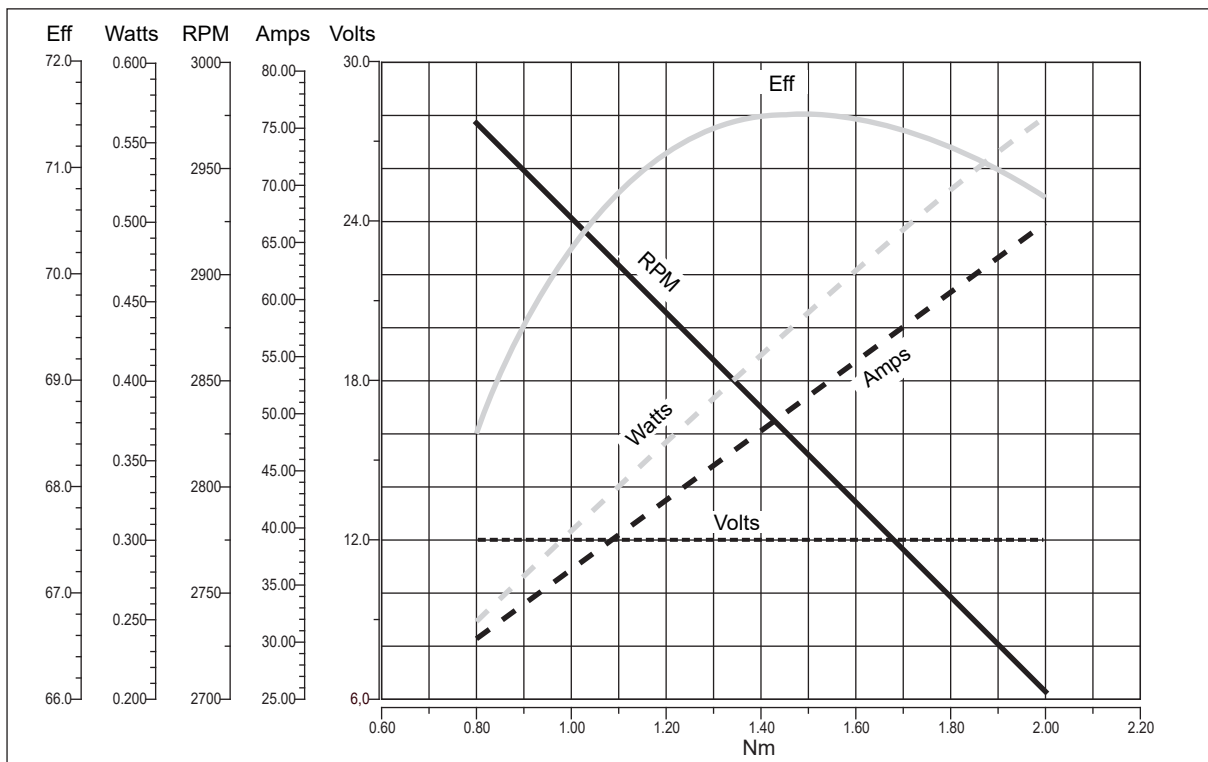
EC350.120.66

EC350.240.66

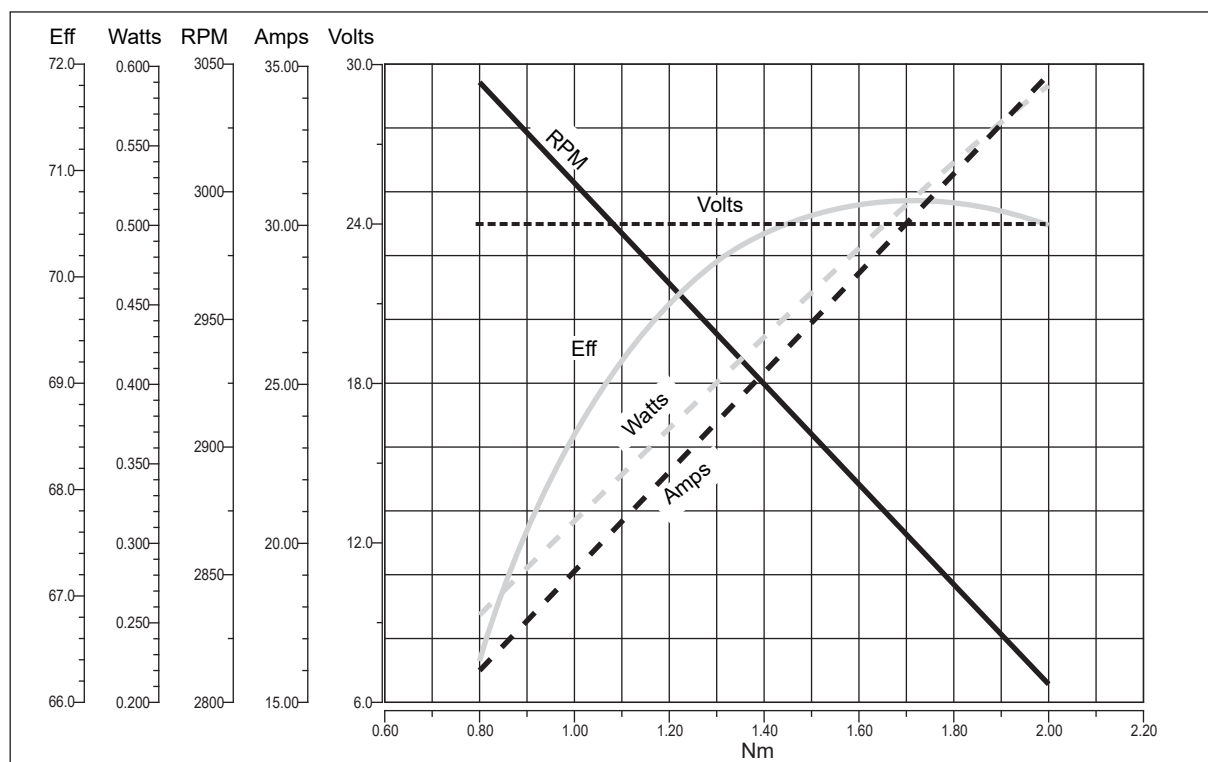




EC350.120.66



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

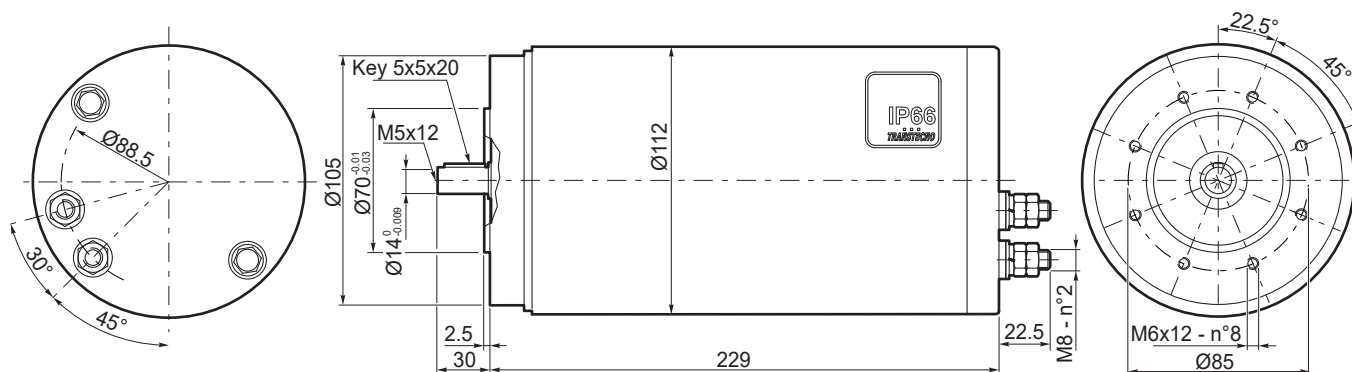
Tipo Type	S	Pn [W]	V [V]	I [A]	IC	FF	Mn [Nm]	n ₁ [min ⁻¹]	IP	Kg
EC600.120.66	S1	600	12	71	F	1	1.91	3000	66	6.6
	S2 30'	800		94.4			2.54			
EC600.240.66	S1	600	24	35.5			1.91			7.1
	S2 30'	800		47.2			2.54			

Dimensioni

Dimensions

EC600.120.66

EC600.240.66

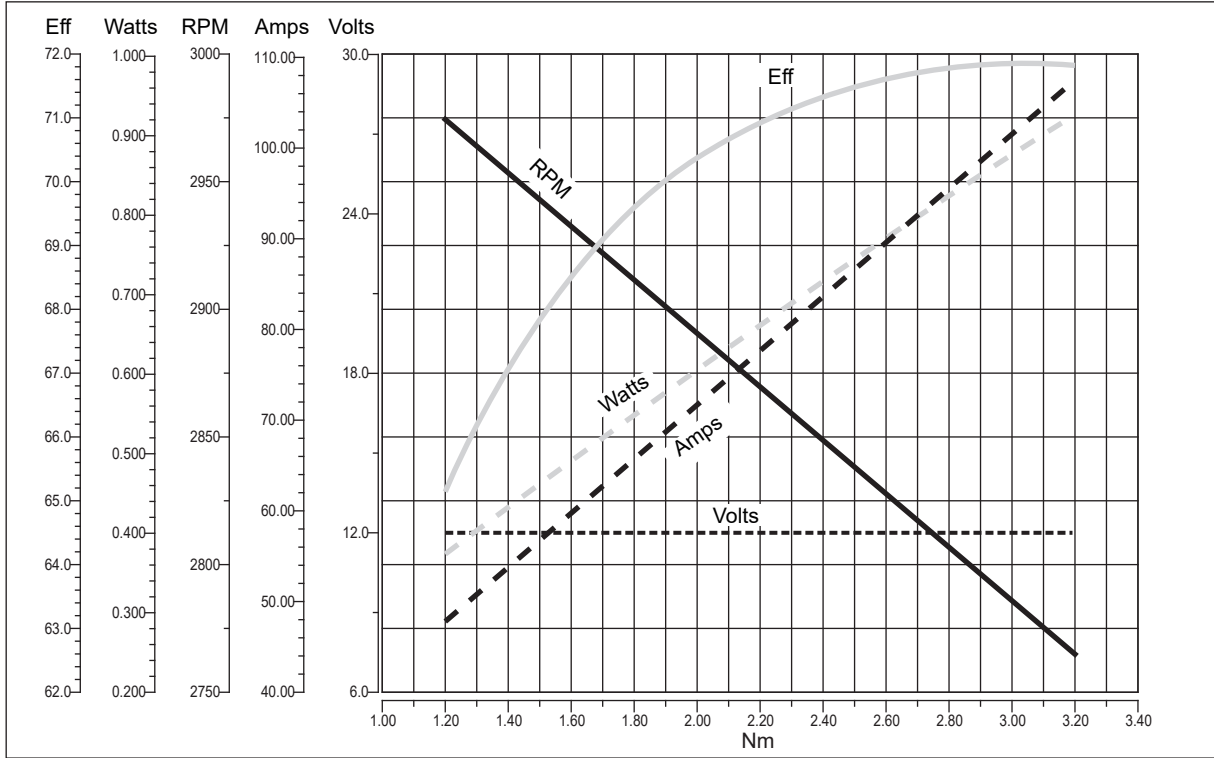




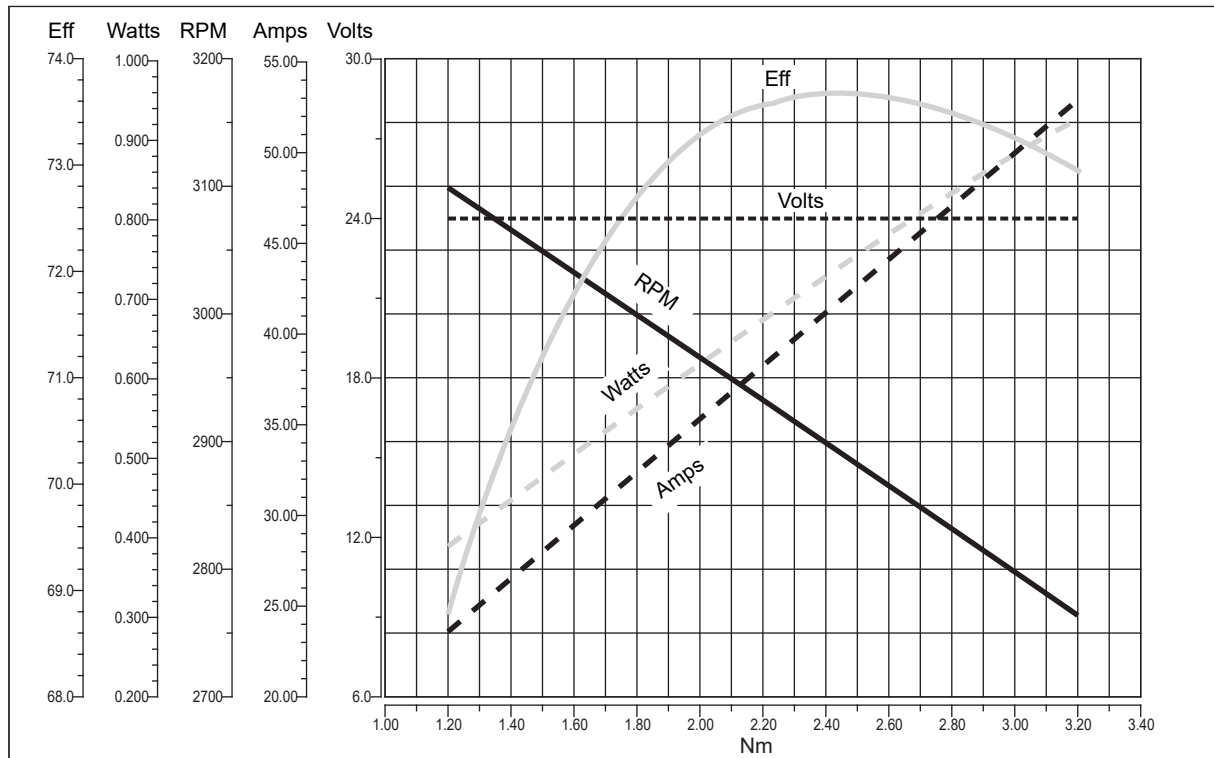
Prestazioni

Performances

EC600.120.66

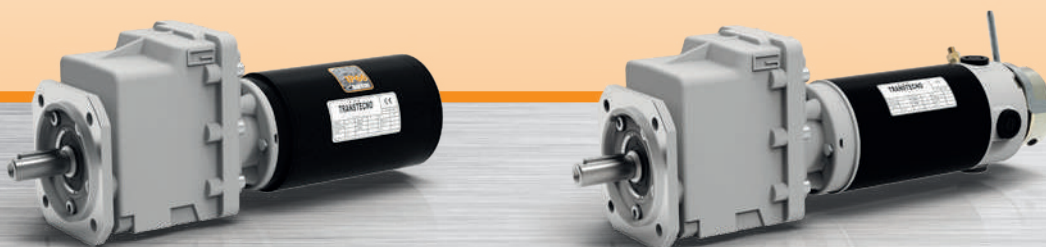


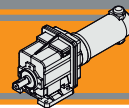
EC600.240.66



DC

Motoriduttori CC ad ingranaggi cilindrici
DC helical in-line gearmotors

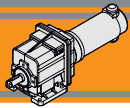




Indice	Index	Pag. Page
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Designazione	<i>Classification</i>	BD3
Sensi di rotazione	<i>Direction of rotation</i>	BD3
Lubrificazione	<i>Lubrication</i>	BD3
Simbologia	<i>Symbols</i>	BD3
Carichi radiali	<i>Radial loads</i>	BD4
Motori applicabili	<i>IEC Motor adapters</i>	BD4
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	BD5
Dimensioni	<i>Dimensions</i>	BD7

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Caratteristiche tecniche

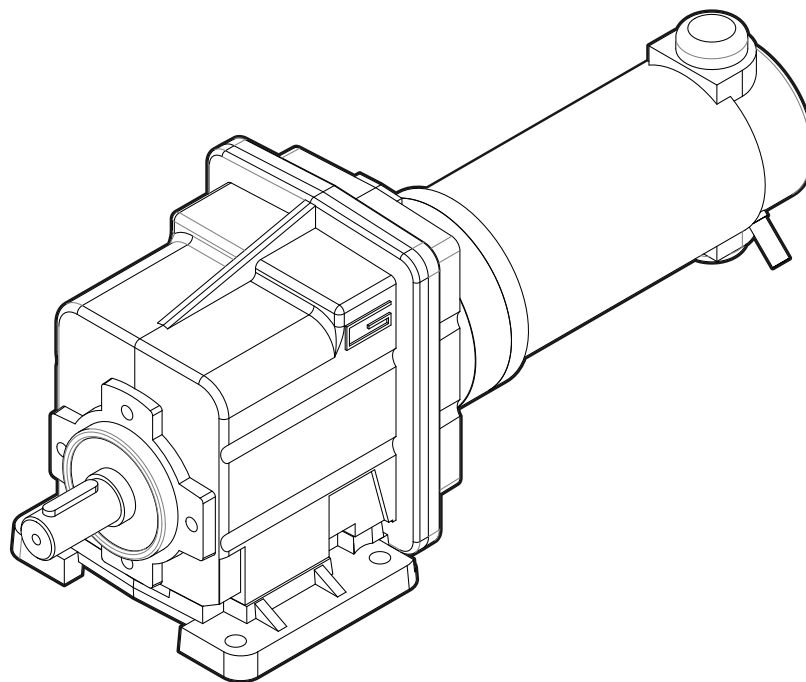
I motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio **NDCMG** e in ferrite **ECMG** hanno le seguenti caratteristiche principali:

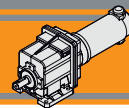
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati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

Technical features

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

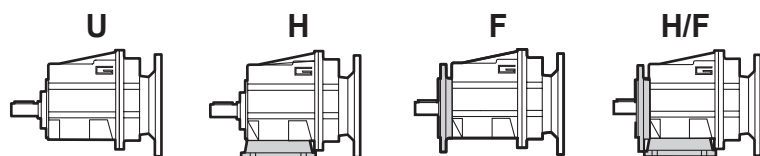
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Available with input flexible couplin

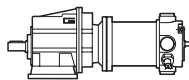


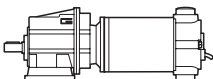



Designazione

Classification

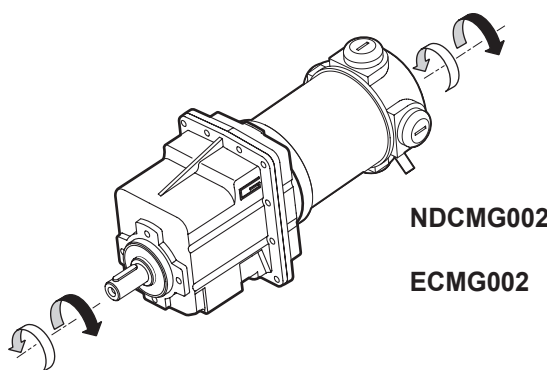


MOTORIDUTTORE / GEARMOTOR						
NDCMG	120/002	U	8.99	D20	240	
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Versione motore Motor version	
NDCMG 	120/002 180/002	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	120 240	

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

Sensi di rotazione

Direction of rotation



NDCMG002

ECMG002

Lubrificazione

Lubrication

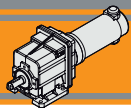
Tutti i riduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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

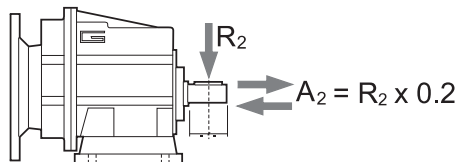
Symbols

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



Carichi radiali

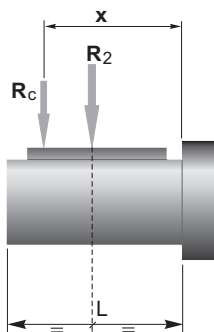
Radial loads



n ₂ [min ⁻¹]	R ₂ [N]
	CMG 002
700	416
600	437
500	465
400	501
250	586
180	653
150	748
120	806
100	958
80	1032
60	1136
40	1300
10	1300

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

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



	CMG 002
a	73
b	53
R _{2MAX}	1300

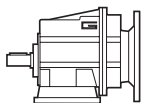
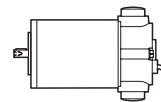
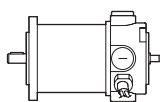
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

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

$$R \leq R_c$$

Motori applicabili

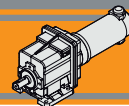
IEC Motor adapters

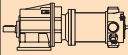
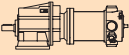


		ND		EC						
CMG	002	120.120	180.120	070.12E	100.120	180.120	180.24E	250.120	350.120	600.120
		120.240	180.240	070.24E	100.240	180.240		250.240	350.240	600.240
		5.03 - 55.10								

5.03 - 55.10

Rapporti di riduzione i
Ratio i


Dati tecnici per servizio S2
NDCMG
Technical data for S2 duty

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	596	2.5	12.6	5.03	120/002	120/240	(3000 min ⁻¹)	596	3.8	8.1	5.03	180/002	120/240
	492	3.0	10.4	6.10				492	4.7	6.7	6.10		
	401	3.7	8.5	7.49				401	5.7	5.4	7.49		
	334	4.4	8.9	8.99				334	6.9	5.7	8.99		
	295	5.0	7.9	10.16				295	7.8	5.0	10.16		
	249	5.9	6.6	12.07				249	9.2	4.2	12.07		
	224	6.6	8.4	13.40				224	10	5.4	13.40		
	198	7.4	7.4	15.14				198	12	4.8	15.14		
	165	8.9	6.2	18.17				165	14	4.0	18.17		
	139	11	5.2	21.58				139	17	3.3	21.58		
	128	12	4.8	23.51				128	18	3.1	23.51		
	120	12	4.5	25.10				120	19	2.9	25.10		
	111	13	4.2	27.08				111	21	2.7	27.08		
	92	16	3.5	32.49				92	25	2.2	32.49		
	71	21	2.7	42.04				71	32	1.7	42.04		
	67	22	2.5	44.89				67	34	1.6	44.89		
	61	24	2.3	48.86				61	37	1.5	48.86		
	54	27	2.0	55.10				54	42	1.3	55.10		

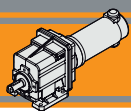
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici
Electrical technical data

ND 120 → 

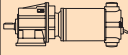
ND 180 → 

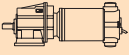


Dati tecnici per servizio S2

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		

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		

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		

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		

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		

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

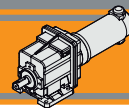
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici

Electrical technical data

EC070 → 	EC100 → 	EC180 → 	EC250 → 	EC350 → 	EC600 → 
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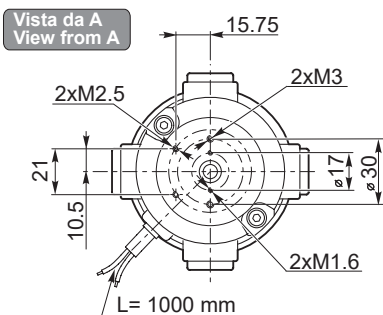
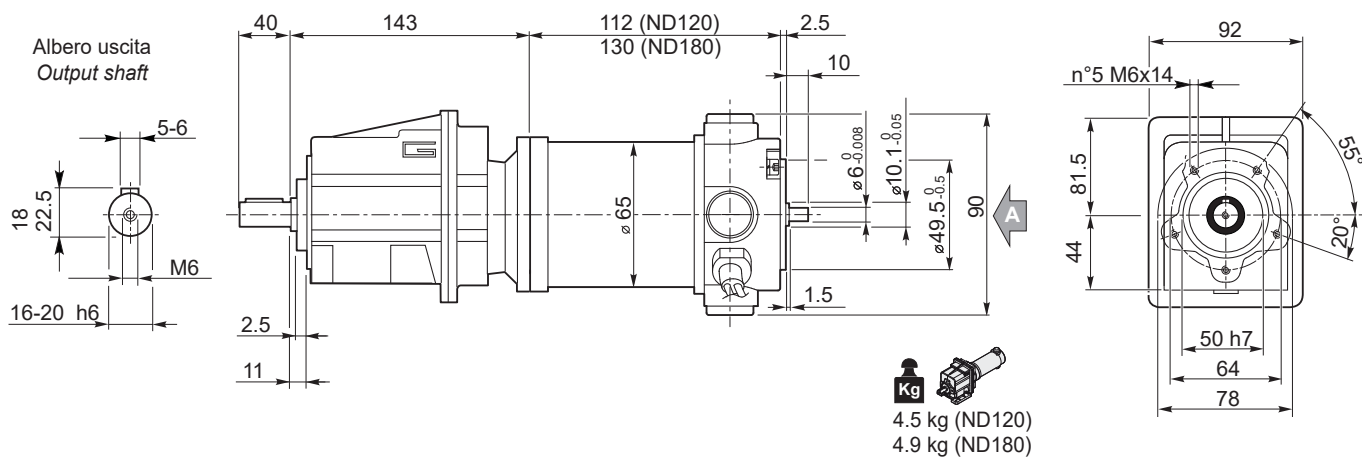


Dimensioni

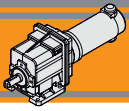
Dimensions

NDCMG..U

NDCMG120/002 U
NDCMG180/002 U



- NDCMG...H → [BD12](#)
- Freno / Brake → [BA9](#)
- NDCMG...F → [BD12](#)
- Encoder → [BA9](#)
- NDCMG...H/F → [BD13](#)

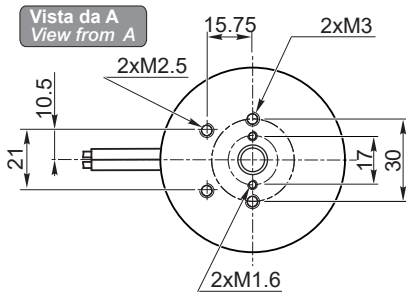
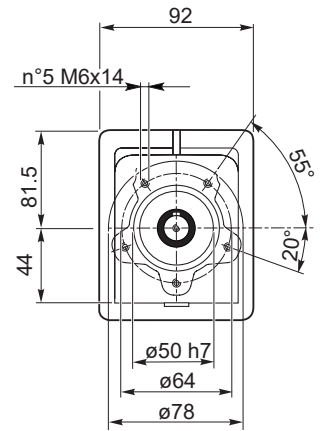
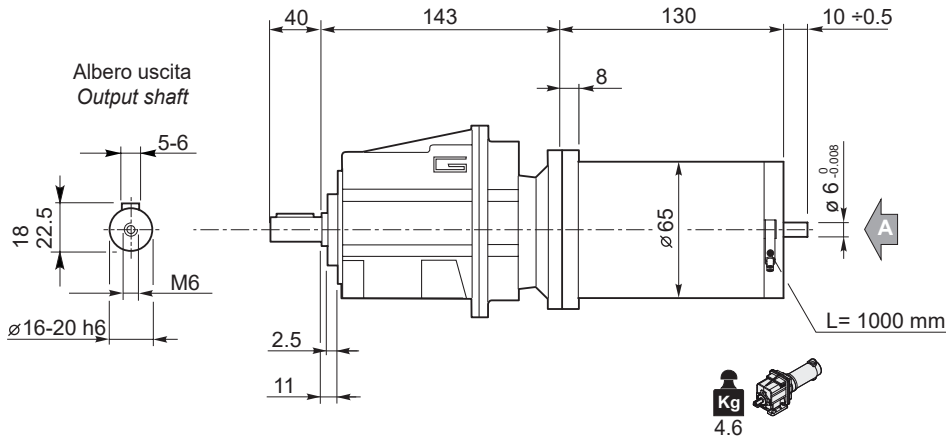


Dimensioni

Dimensions

ECMG..U

ECMG070/002 U



Freno / Brake



BB23

Encoder



BB24

Motori / Motors IP66



BC2

ECMG...H



BD12

ECMG...F

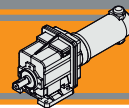


BD12

ECMG...H/F



BD13

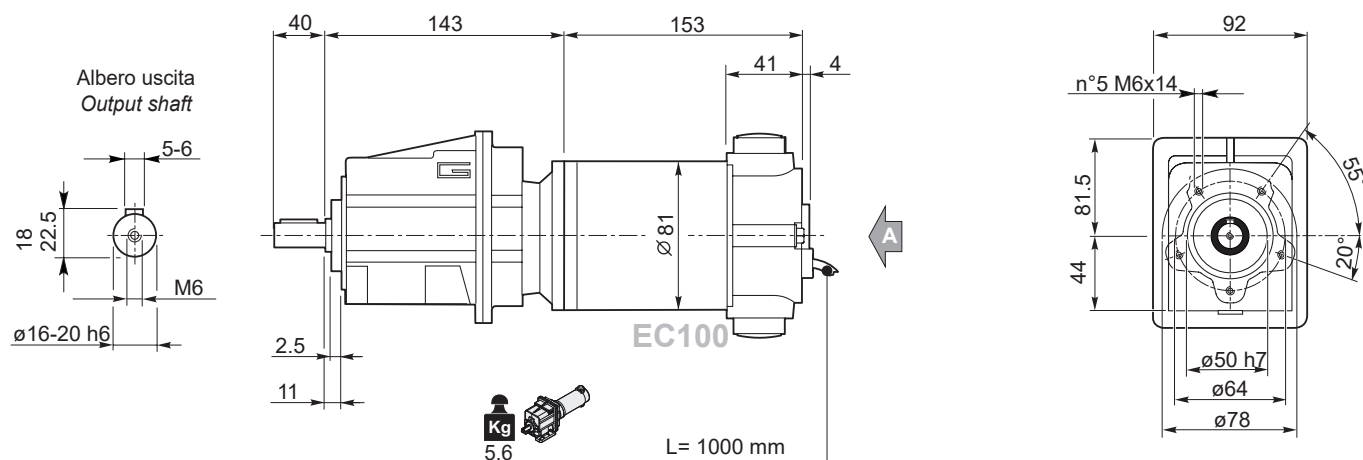


Dimensioni

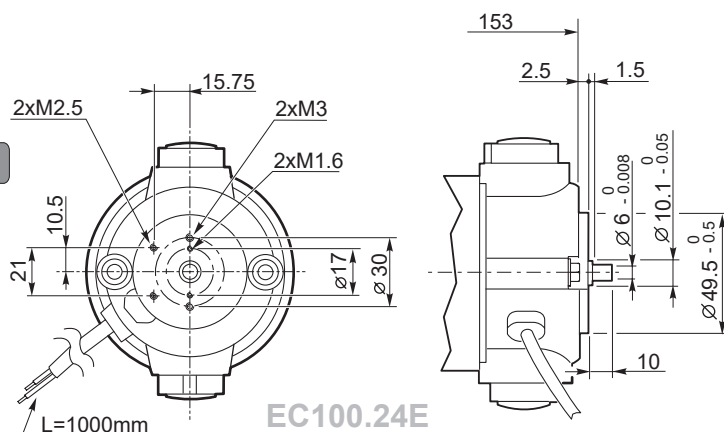
Dimensions

ECMG..U

ECMG100/002 U



Vista da A
View from A



Freno / Brake → BB23

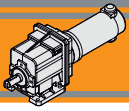
Encoder → BB24

Motori / Motors IP66 → BC4

ECMG...H → BD12

ECMG...F → BD12

ECMG...H/F → BD13

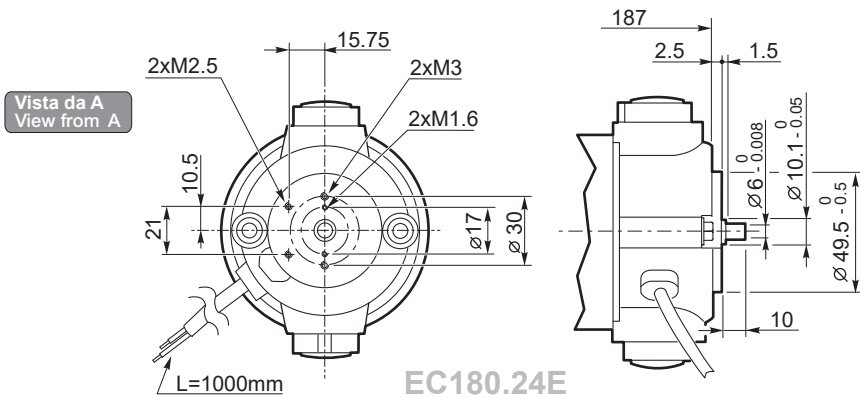
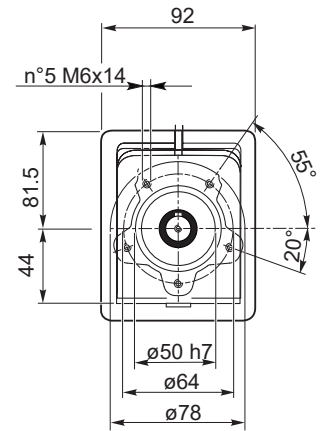
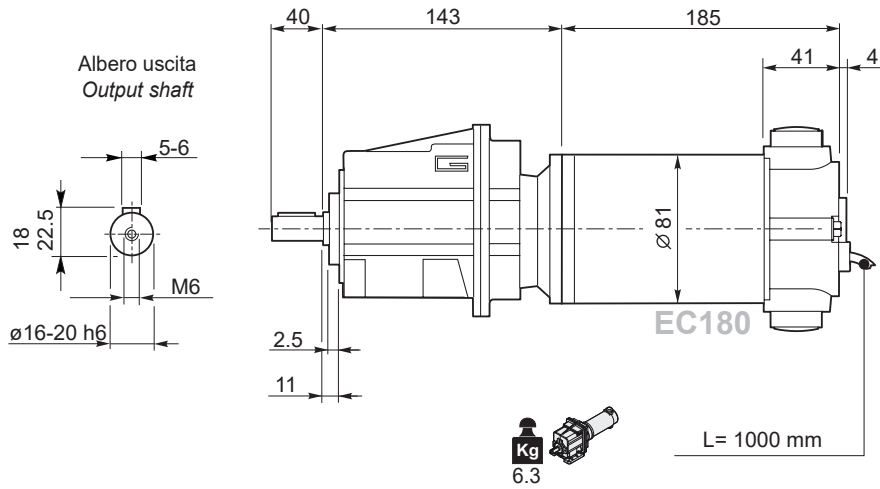


Dimensioni

Dimensions

ECMG..U

ECMG180/002 U



Freno / Brake → [BB23](#)

Encoder → [BB24](#)

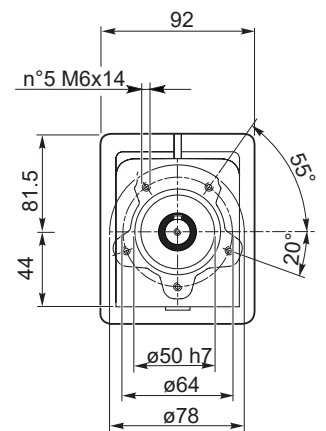
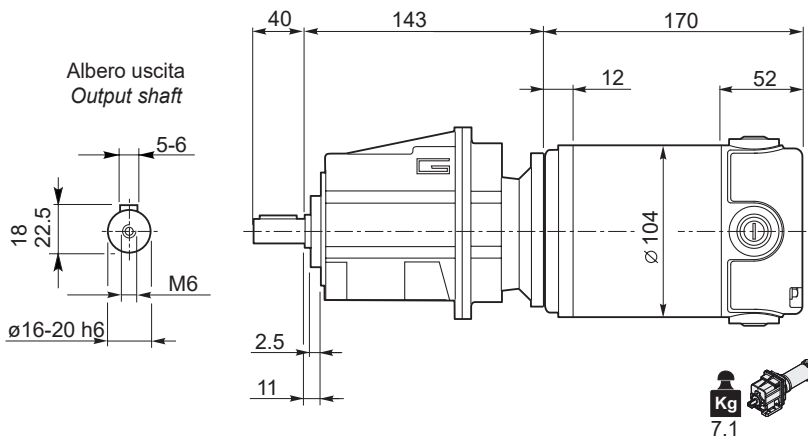
Motori / Motors IP66 → [BC6](#)

ECMG...H → [BD12](#)

ECMG...F → [BD12](#)

ECMG...H/F → [BD13](#)

ECMG250/002 U

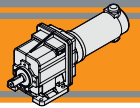


Motori / Motors IP66 → [BC8](#)

ECMG...H → [BD12](#)

ECMG...F → [BD12](#)

ECMG...H/F → [BD13](#)

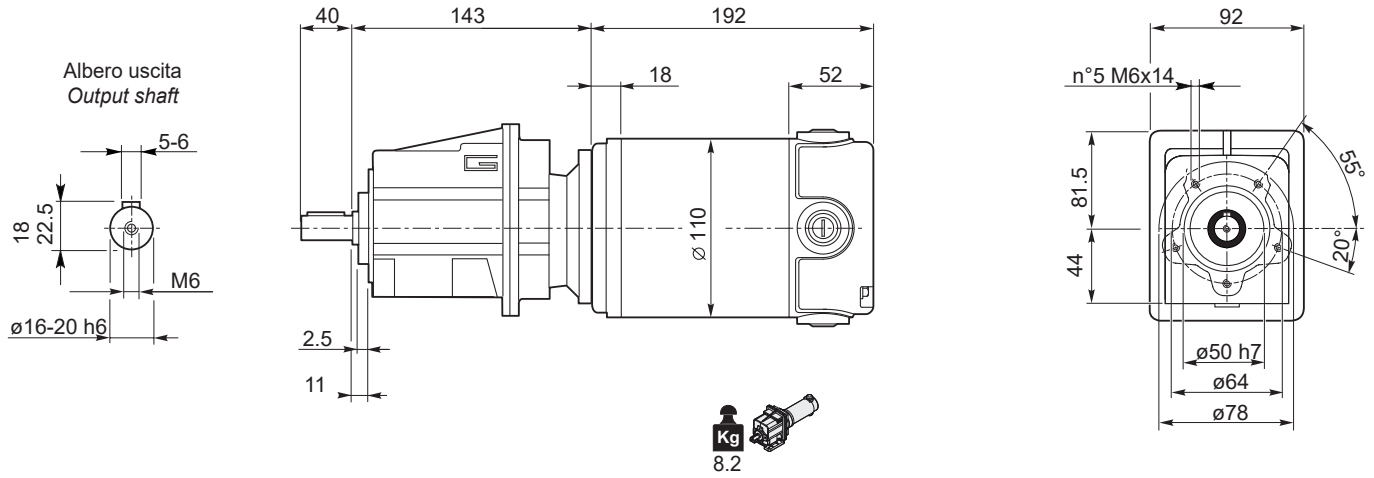


Dimensioni

Dimensions

ECMG..U

ECMG350/002 U



Freno / Brake



Motori / Motors IP66



ECMG...H



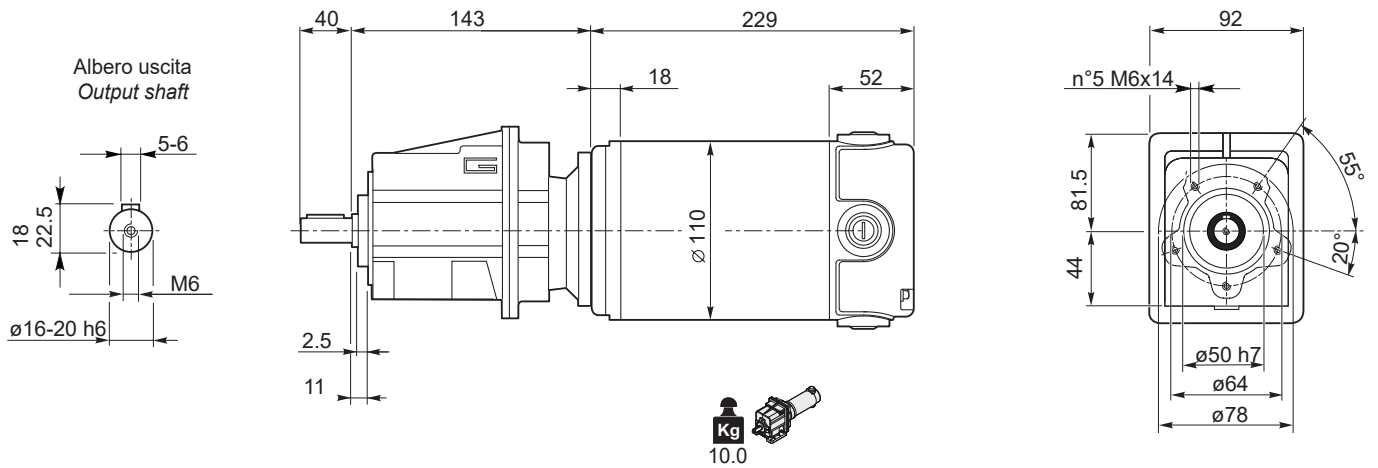
ECMG...F



ECMG...H/F



ECMG600/002 U



Freno / Brake



Motori / Motors IP66



ECMG...H



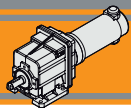
ECMG...F



ECMG...H/F



DC

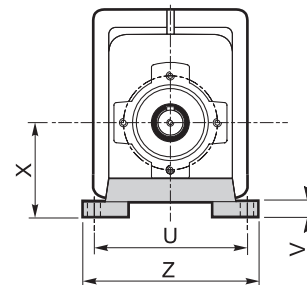
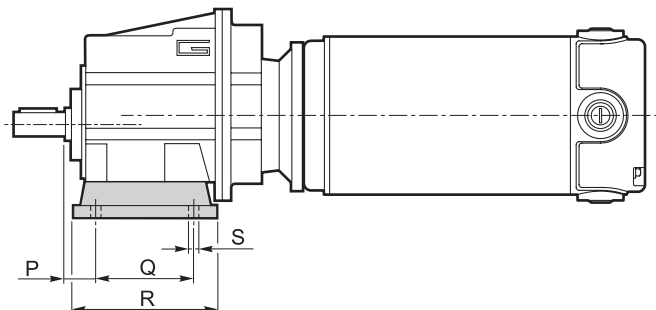


Dimensioni

Dimensions

NDCMG..H - ECMG..H

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

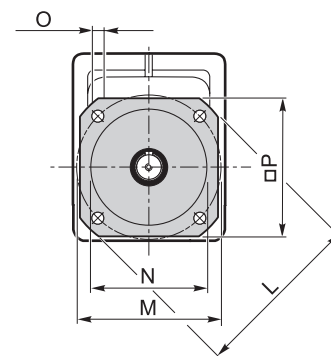
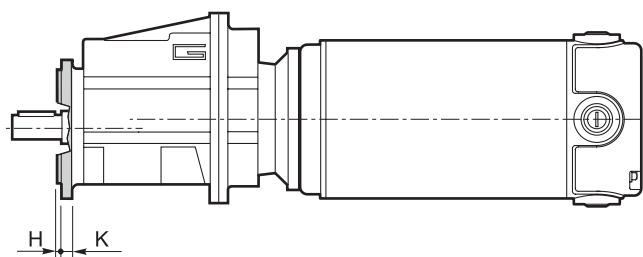


Versione H / H Version										
CMG	P	Q	R	S	U	V	X	Z	Piede / Foot	
									Tipo / Type	Kg
002	18	60	80	9	100	10	60	120	H60	0.2
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10	85	135	H85	0.4

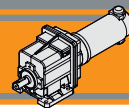
■ Preferenziale / Preferred

NDCMG..F - ECMG..F

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



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

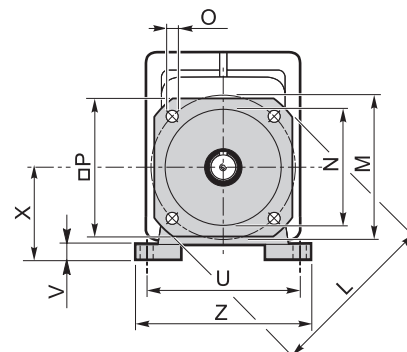
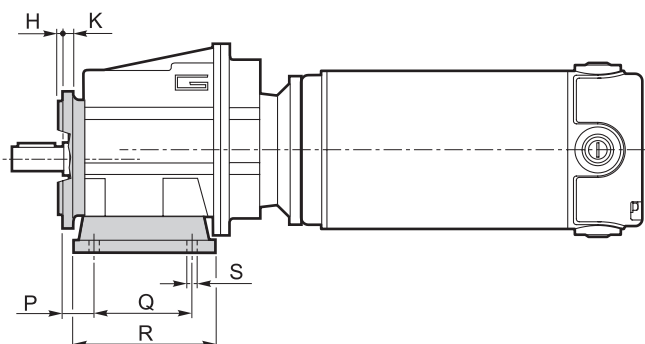


Dimensioni

Dimensions

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

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



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

Preferenziale / Preferred

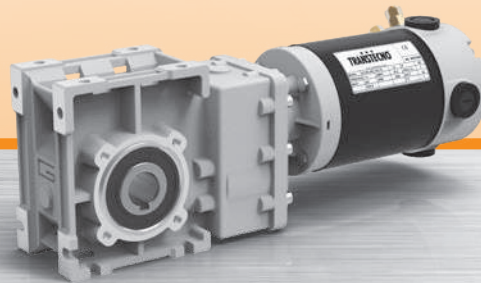
• Combinazioni possibili H/F / Possible combinations H/F

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

MINI  **TECNO**™
small but strong

NDCMB
ECMB

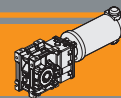
Motoriduttori CC ad assi ortogonali
DC helical bevel gearmotors



MINI  **TECNO**™ brand of
TRANSTECNO®



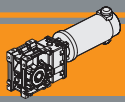
DC



Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	BE2
Designazione	<i>Classification</i>	BE2
Sensi di rotazione	<i>Direction of rotation</i>	BE3
Simbologia	<i>Symbols</i>	BE3
Lubrificazione	<i>Lubrication</i>	BE3
Carichi radiali	<i>Radial loads</i>	BE3
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	BE4
Motori applicabili	<i>Motor adapters</i>	BE6
Dimensioni	<i>Dimensions</i>	BE6
Accessori	<i>Accessories</i>	BE12

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Caratteristiche tecniche

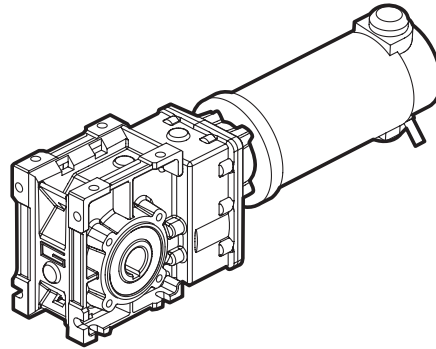
Technical features

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

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

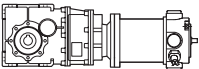
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati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

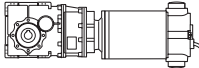

- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 to 800W S2
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication
- Ground-hardened helical gears
- Available with input flexible couplin

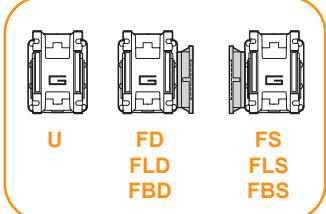
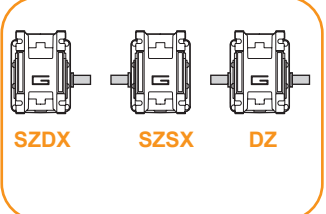
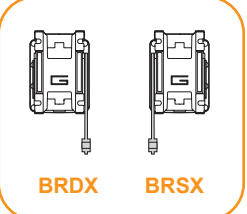
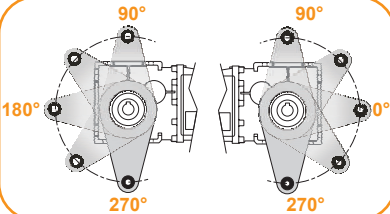


Designazione

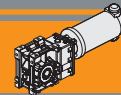
Classification

MOTORIDUTTORE / GEARMOTOR								
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 <i>See tables</i>	Vedere tabella <i>See tables</i>	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 <i>See tables</i>	Vedere tabella <i>See tables</i>	SZDX SZSX DZ	BRDX BRSX *	0° 90° 180° 270°	120 240 24E	FX 

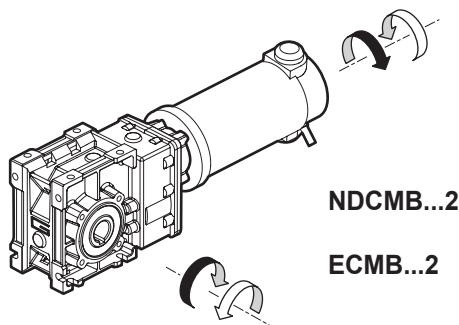
<p>Versione Riduttore Gearbox Version</p> 	<p>Albero di uscita Output shaft</p> 	<p>Braccio di reazione Torque arm *</p> 	<p>Angolo Angle</p> 
---	--	--	---

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



Sensi di rotazione

Direction of rotation



Simbologia

Symbols

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

Lubrificazione

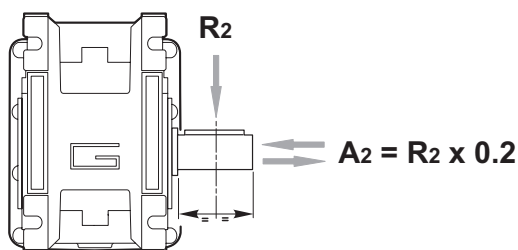
Lubrication

Tutti i riduttori nelle taglie 402 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

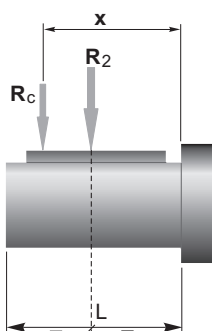
Radial loads



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 mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

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

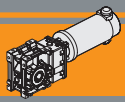


	CMB 402
a	86
b	66
R_{2MAX}	3500

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

$$R \leq R_c$$

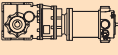
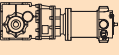
*a, b = valori riportati nella tabella
a, b = values given in the table*



Dati tecnici per servizio S2

NDCMB

Technical data for S2 duty

P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	485	3.0	10.5	6.18	120/402	120/240	(3000 min ⁻¹)	485	4.6	6.7	6.18	180/402	120/240
	401	3.6	8.6	7.49									
	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									

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

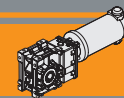
NOTE: for continuous or highly intermittent duty, please contact our technical service

Dati tecnici elettrici

Electrical technical data

ND 120 → 

ND 180 → 



Dati tecnici per servizio S2

ECMB

Technical data for S2 duty

P 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		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		

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
	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		

140						
(3000 min ⁻¹)	485	2.6	12.0	6.18		100/402
	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		

500						
(3000 min ⁻¹)	485	9	3.4	6.18		350/402
	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		

250						
(3000 min ⁻¹)	485	4.6	6.7	6.18		180/402
	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		

800						
(3000 min ⁻¹)	485	15	2.1	6.18		600/402
	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

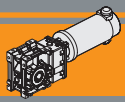
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici

Electrical technical data

EC070 →	EC100 →	EC180 →	EC250 →	EC350 →	EC600 →
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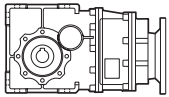
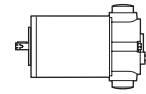
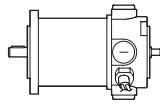
NDCMB
ECMB

Motoriduttori CC ad assi ortogonali
DC Helical bevel gearmotors



Motori applicabili

Motor adapters



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

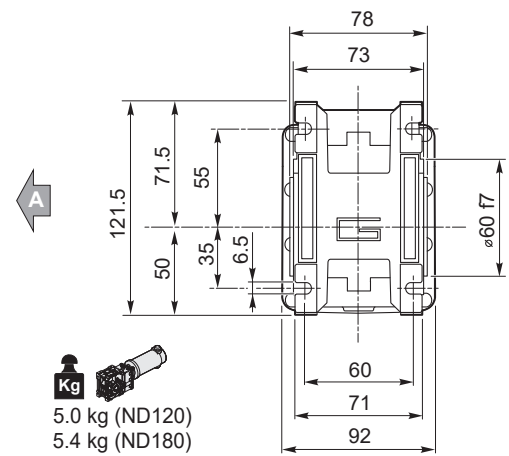
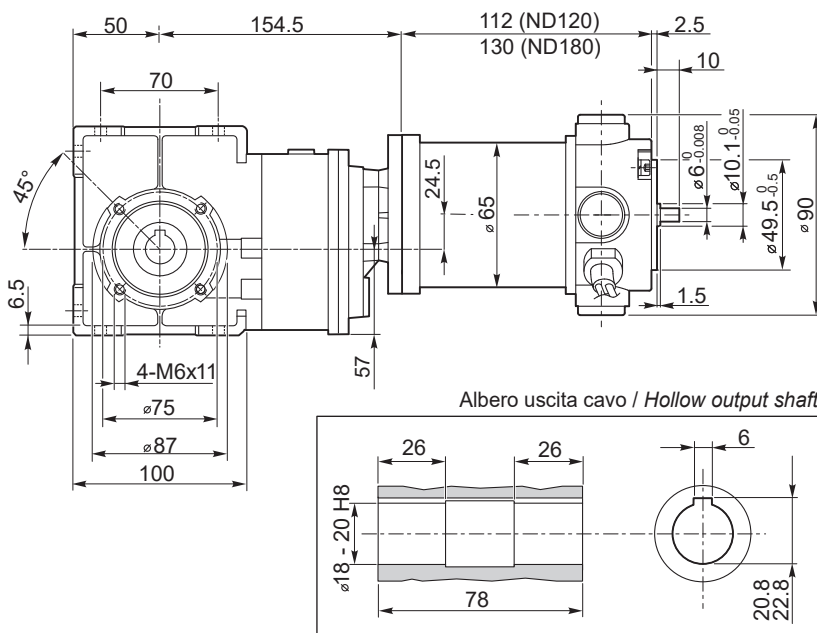
6.18 - 72.50

Rapporti di riduzione *i*
Ratio *i*

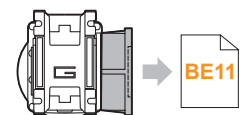
Dimensioni

Dimensions

NDCMB120/402 U
NDCMB180/402 U

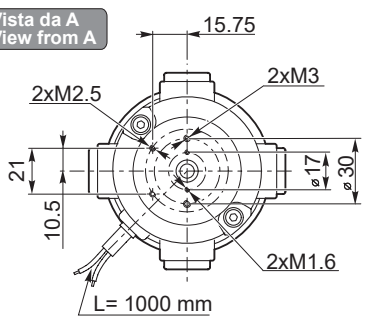


Kg
5.0 kg (ND120)
5.4 kg (ND180)



BE11

Vista da A
View from A



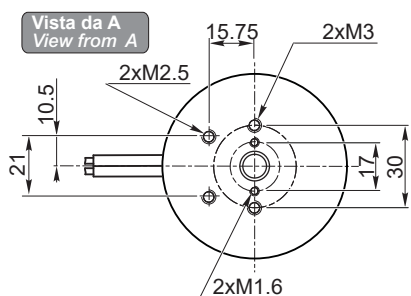
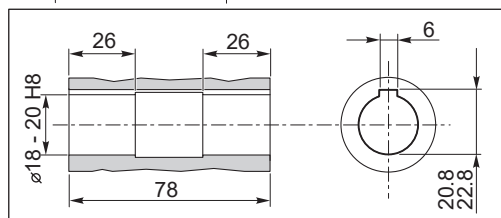
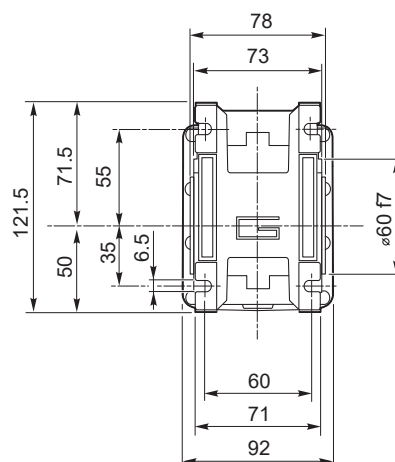
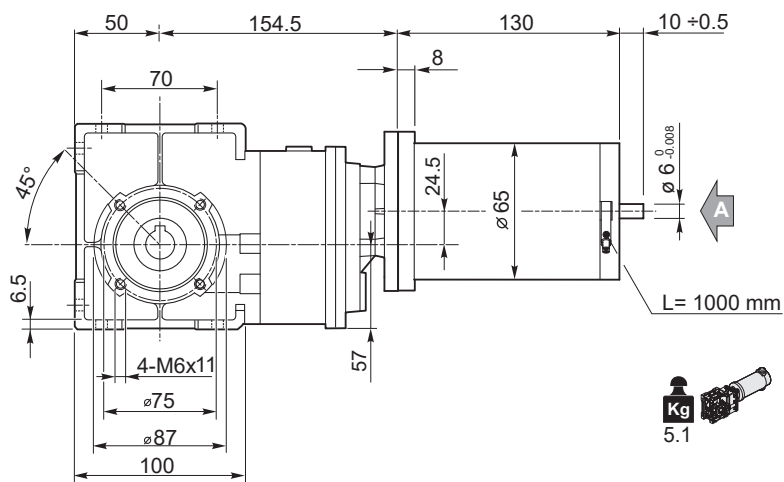
Freno / Brake → BA9

Encoder → BA9

Dimensioni

Dimensions

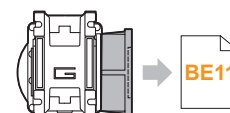
ECMB070/402 U

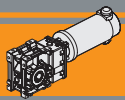


Freno / Brake → **BB23**

Encoder → **BB24**

Motori / Motors IP66 → **BC2**

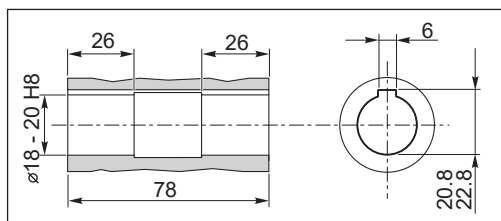
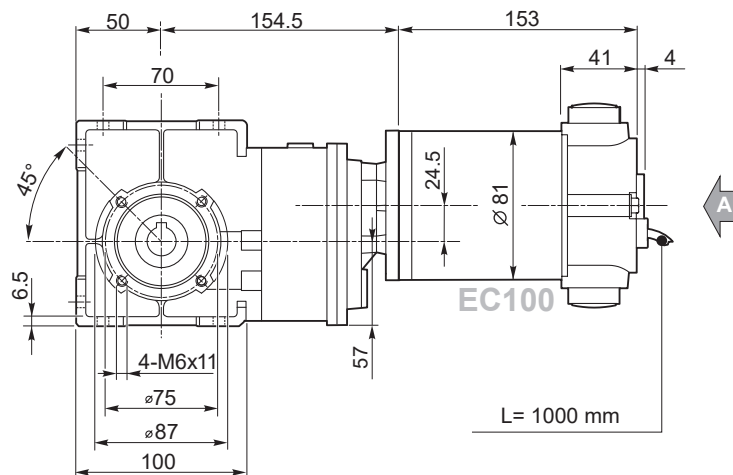




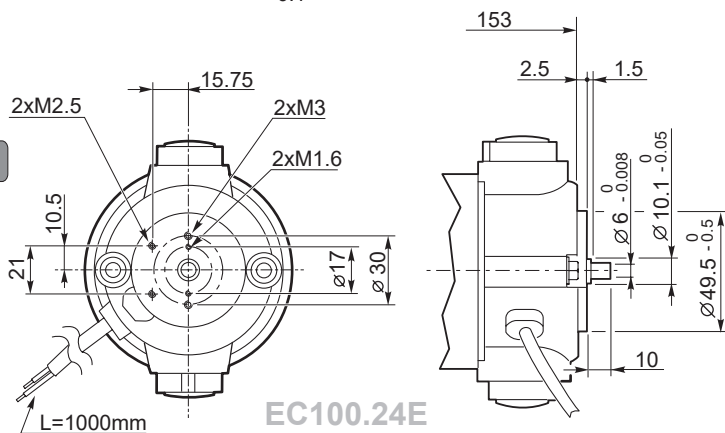
Dimensioni

Dimensions

ECMB100/402 U



Vista da A
View from A



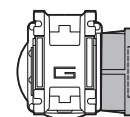
Motori / Motors IP66

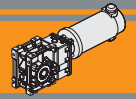


Encoder



Freno / Brake

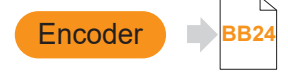
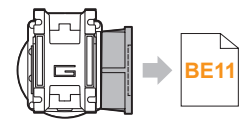
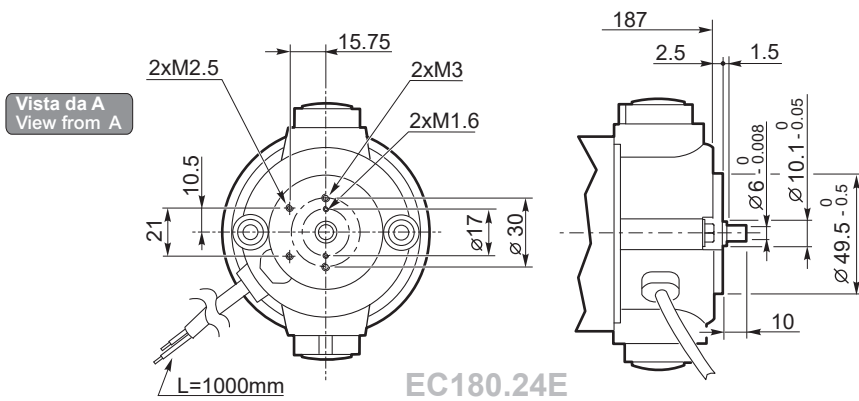
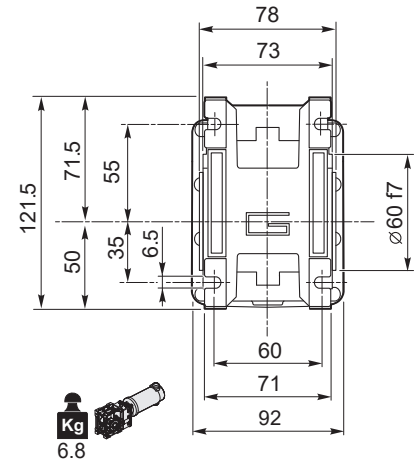
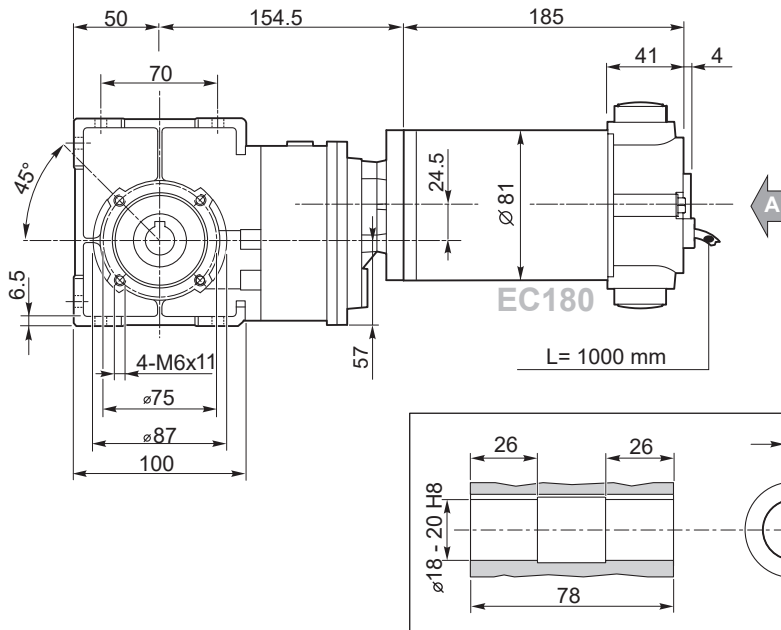


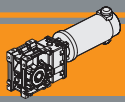


Dimensioni

Dimensions

ECMB180/402 U

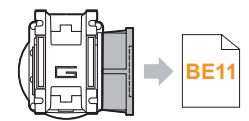
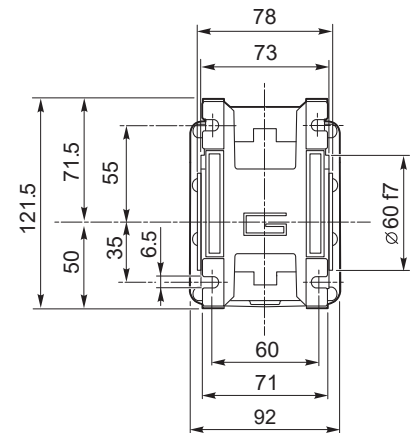
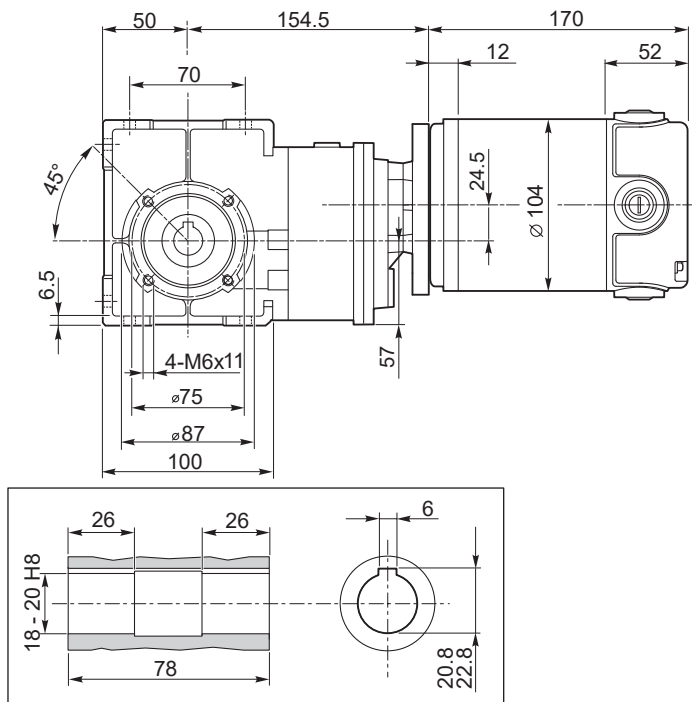




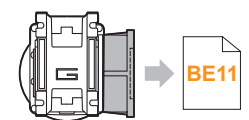
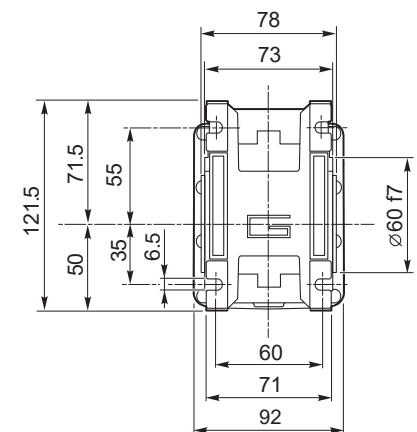
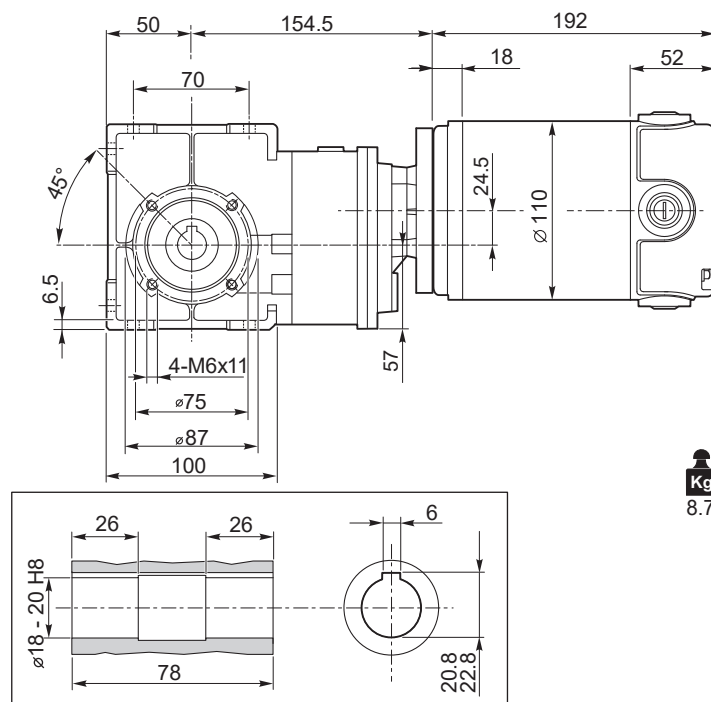
Dimensioni

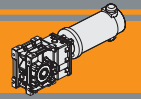
Dimensions

ECMB250/402 U



ECMB350/402 U

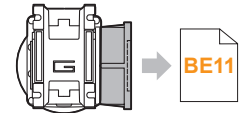
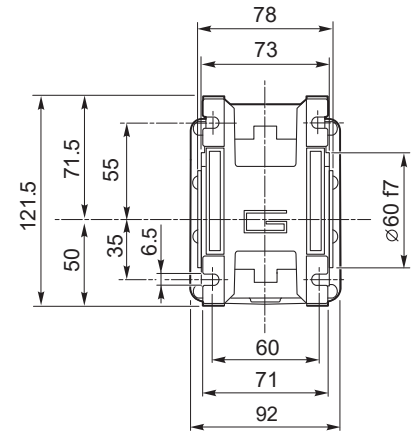
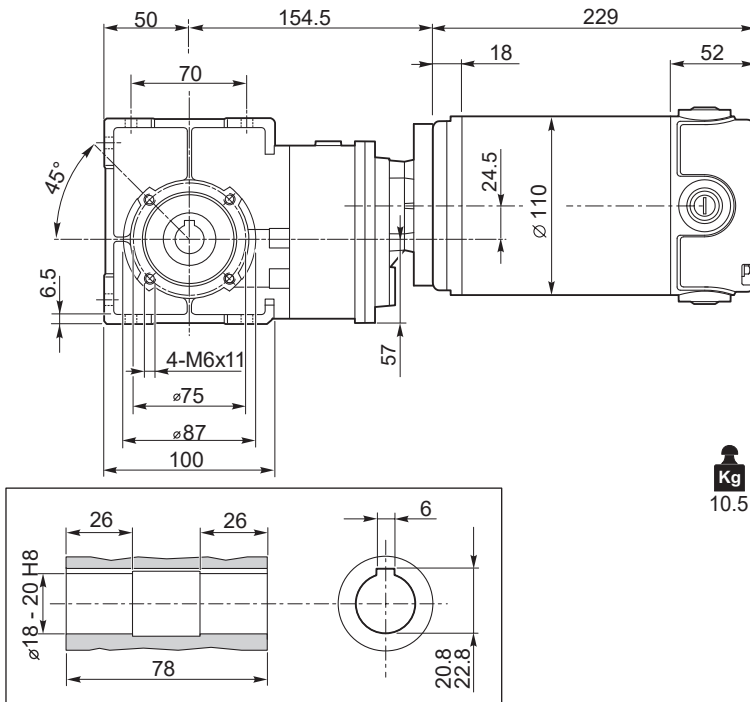




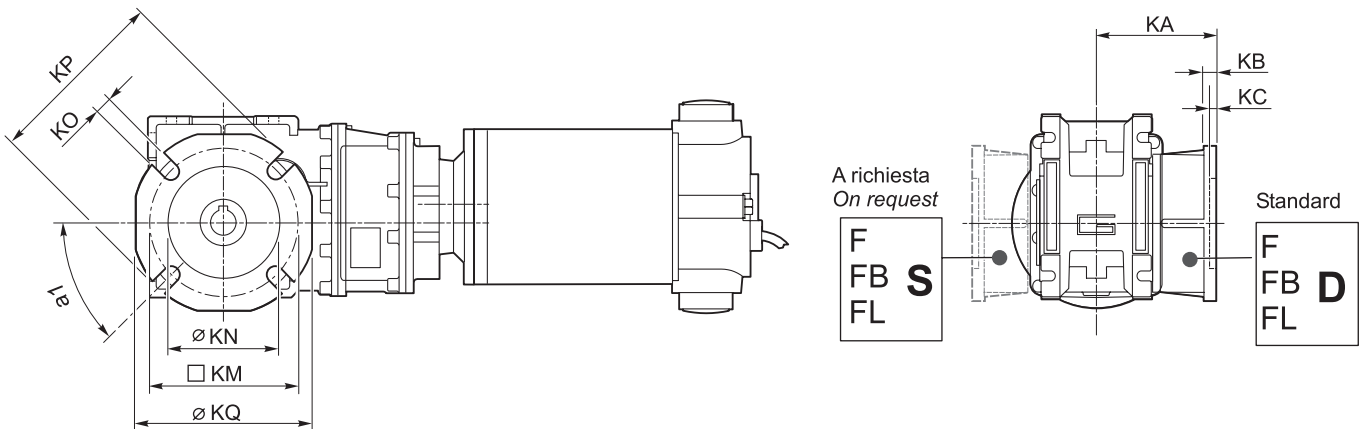
Dimensioni

Dimensions

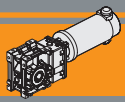
ECMB600/402 U



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

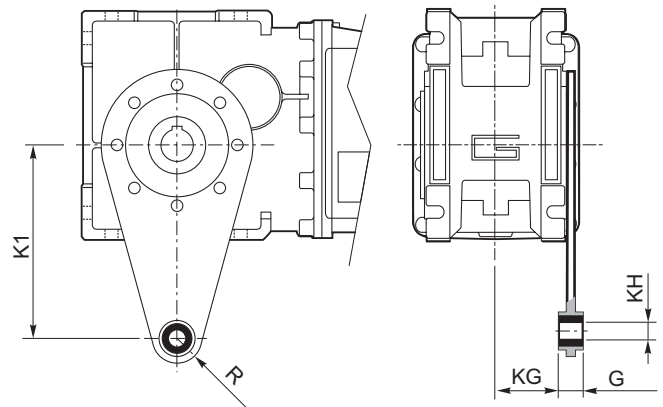
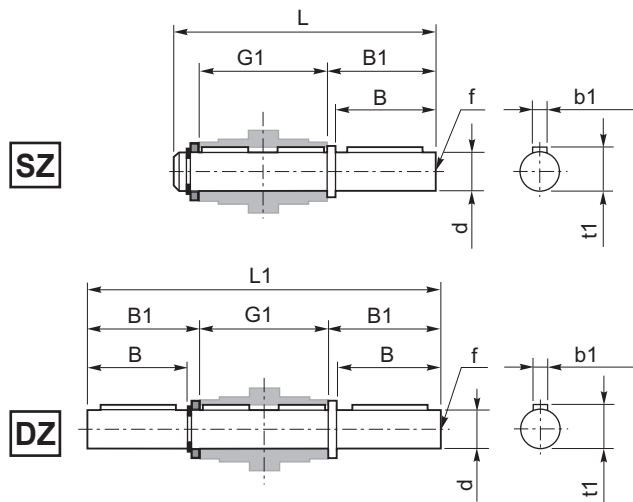


CMB	Flange uscita / Output flanges																										
	F					FL					FB																
	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ	a ₁	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112



Accessori

Accessories



Albero lento / Output shaft

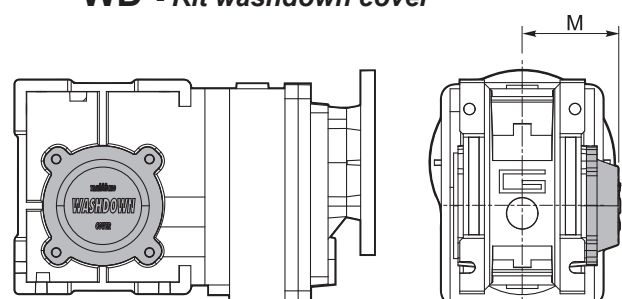
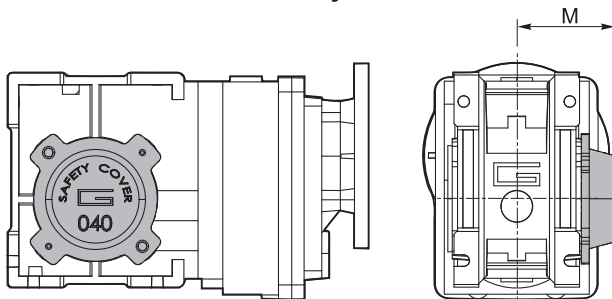
Braccio di reazione / Torque arm

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

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

SC - Safety cover

WD - Kit washdown cover



CMB	M
402	54.5

CMB	M
402	55.5

MINI  **TECNO**™
small but strong

NDFT
ECFT

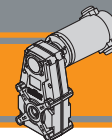
Motoriduttori CC pendolari
DC Helical parallel gearmotors



MINI  **TECNO**™ brand of
TRANSTECNO®



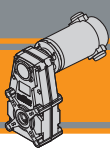
DC



Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	BF2
Designazione	<i>Classification</i>	BF2
Sensi di rotazione	<i>Direction of rotation</i>	BF3
Simbologia	<i>Symbols</i>	BF3
Lubrificazione	<i>Lubrication</i>	BF3
Carichi radiali	<i>Radial loads</i>	BF4
Dati tecnici	<i>Technical data</i>	BF5
Motori applicabili	<i>Motor adapters</i>	BF6
Dimensioni	<i>Dimensions</i>	BF7

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

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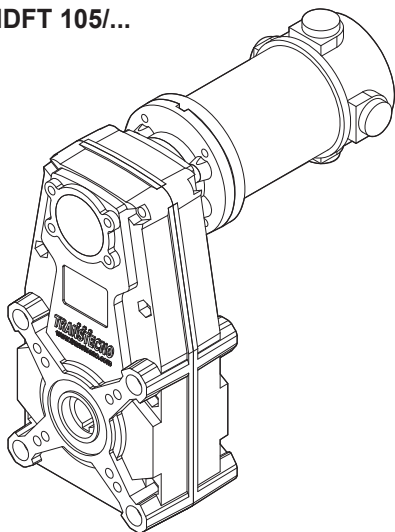
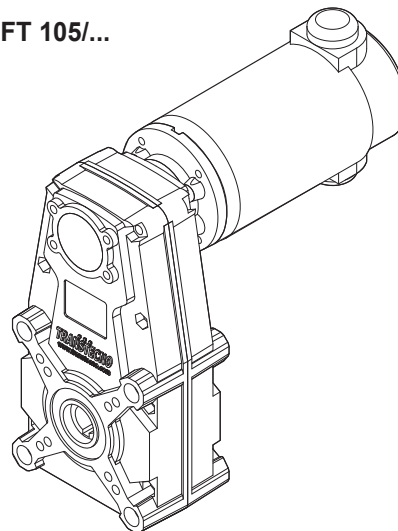
**NDFT
ECFT****Motoriduttori CC pendolari
DC Helical parallel gearmotors****Caratteristiche tecniche****Technical features**

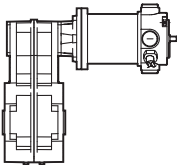
I motoriduttori CC pendolari a magneti permanenti in neodimio **NDFT** e in ferrite **ECFT** hanno le seguenti caratteristiche principali:

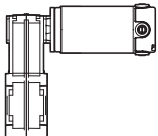
NDFT neodymium permanent magnets and **ECFT** ferrite permanent magnets DC helical parallel gearmotors range has the following main features:

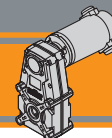
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi cilindrici a denti elicoidali.

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

NDFT 105/...**ECFT 105/...****Designazione****Classification**

MOTORIDUTTORE / GEARMOTOR					
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

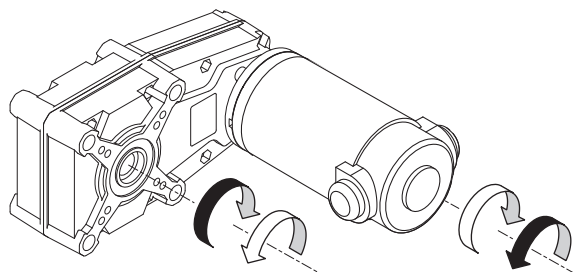
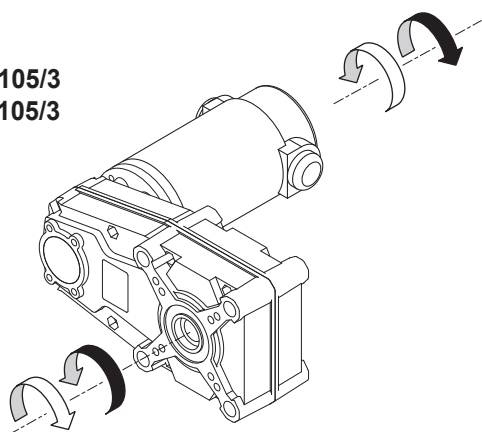
MOTORIDUTTORE / GEARMOTORS					
ECFT	180/105	U	60.63	O20	240
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero cavo uscita Hollow output shaft	Versione motore Motor version
ECFT 	070/105... 100/105... 180/105...	U...	vedi tabelle see tables	vedi tabelle see tables	120 240 12E 24E



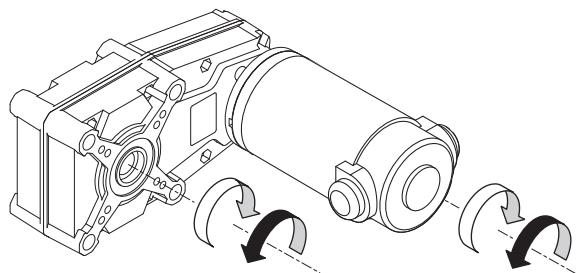
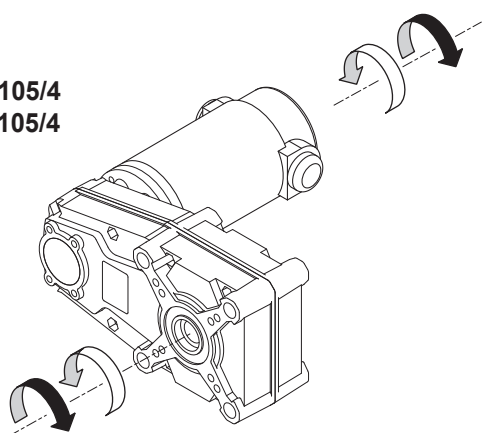
Sensi di rotazione

Direction of rotation

NDFT 105/3
ECFT 105/3



NDFT 105/4
ECFT 105/4



Simbologia

Symbols

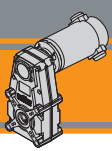
n_1	[min^{-1}]	Velocità in ingresso / <i>Input speed</i>
n_2	[min^{-1}]	Velocità in uscita / <i>Output speed</i>
i		Rapporto di riduzione / <i>Ratio</i>
P_1	[kW]	Potenza in entrata / <i>Input power</i>
M_2	[Nm]	Coppia nominale in uscita in funzione di P_1 / <i>Output torque referred to P_1</i>
P_{n1}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

Lubrificazione

Lubrication

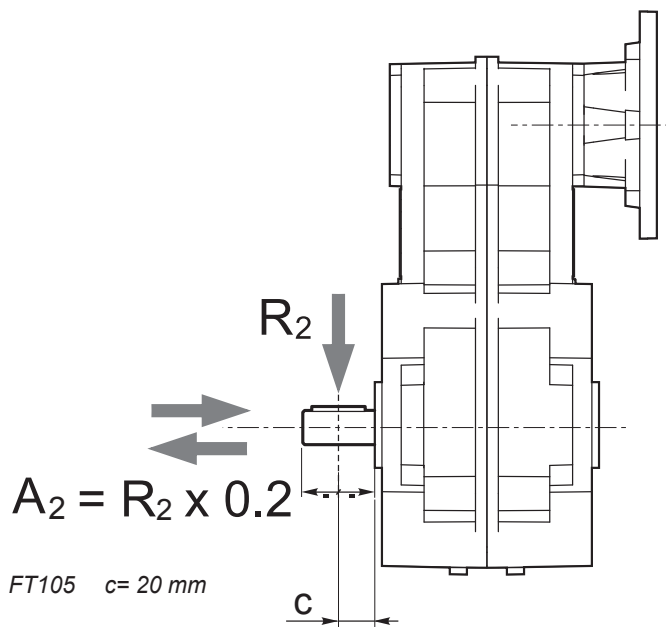
Tutti i motoriduttori sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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



Carichi radiali

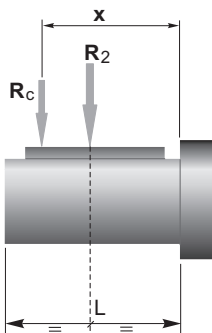
Radial loads



n_2 [min ⁻¹]	R_2 [N]
	FT105
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:

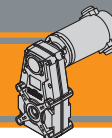




	FT105
a	82
b	62
R_{2MAX}	2000

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

$$R \leq R_c$$

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	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	146	10	3.2	20.57	120/105/3	120/240	(3000 min ⁻¹)	146	15	2.0	20.57	180/105/3	120/240
	90	16	2.4	33.32									
	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									

NOTA

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

NOTE

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

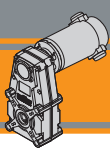
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici
Electrical technical data

ND 120 → 




ND 180 → 






Dati tecnici

ECFT

Technical data

P 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		

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		

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		

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

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

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

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

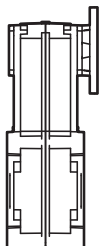
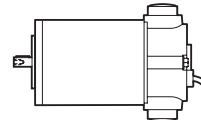
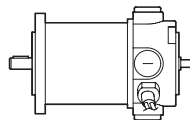
Dati tecnici elettrici

Electrical technical data



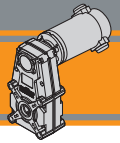
Motori applicabili

Motor adapters



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

20.57 - 315.05 Rapporti di riduzione i
Ratio i

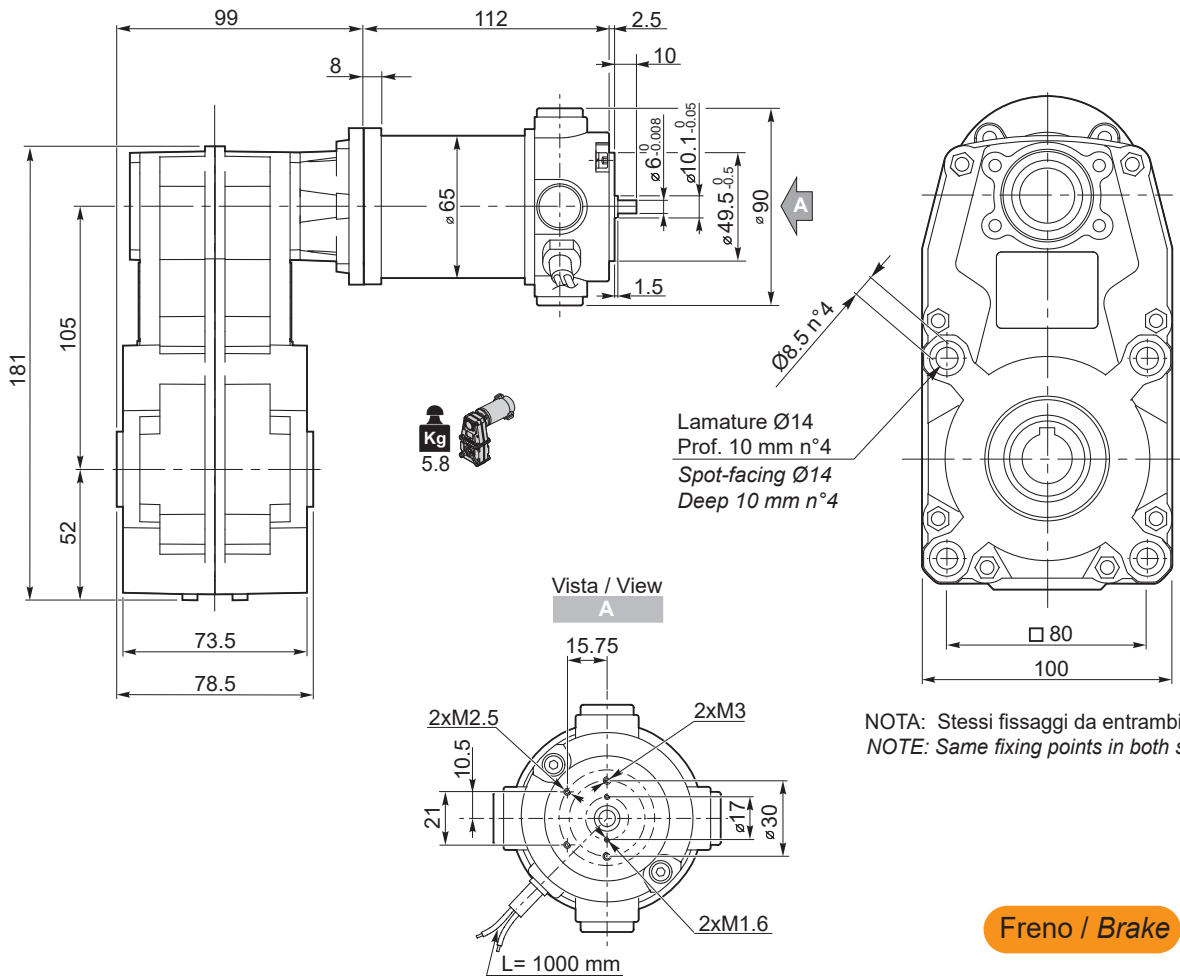


Dimensioni

Dimensions

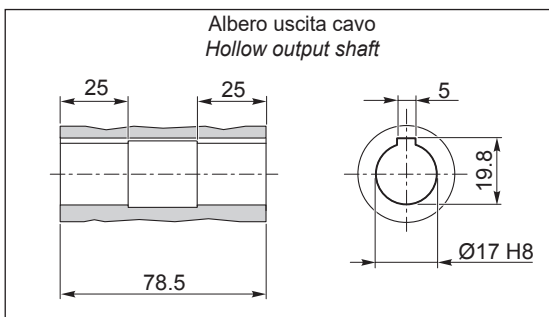
NDFT 120/105

NDFT 120/105...U

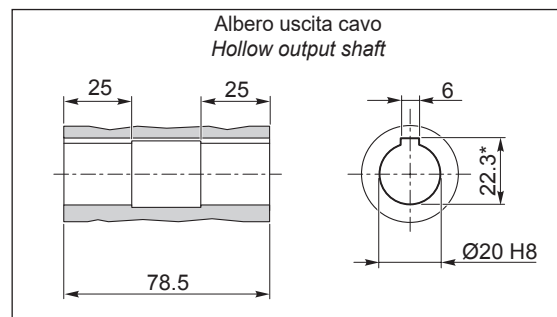


- Freno / Brake → BA9
- Encoder → BA9

O17

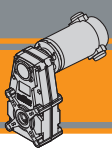


O20



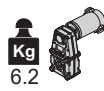
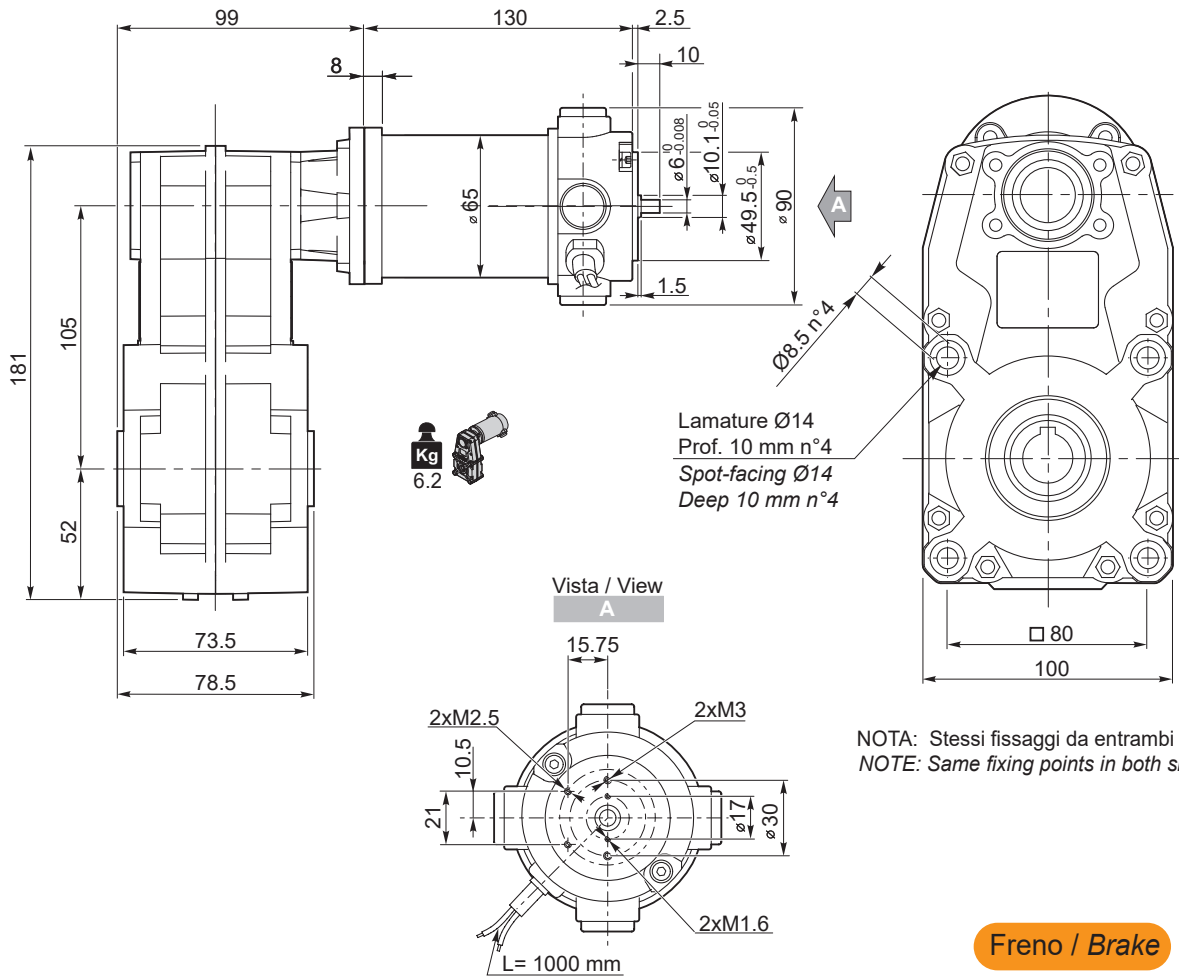
*: Sede linguetta ribassata / Special keyway

DC



NDFT 180/105

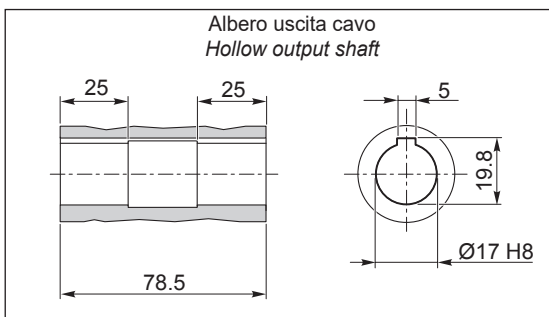
NDFT 180/105...U



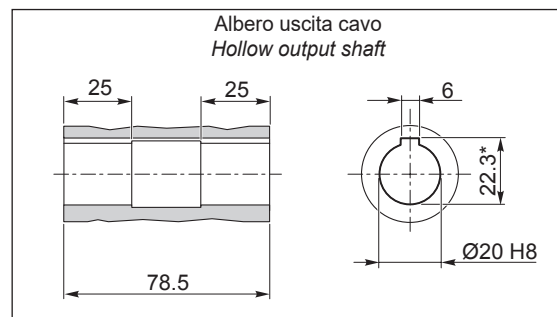
Kg
6.2

- Freno / Brake → BA9
- Encoder → BA9

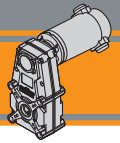
O17



O20



*: Sede linguetta ribassata / Special keyway

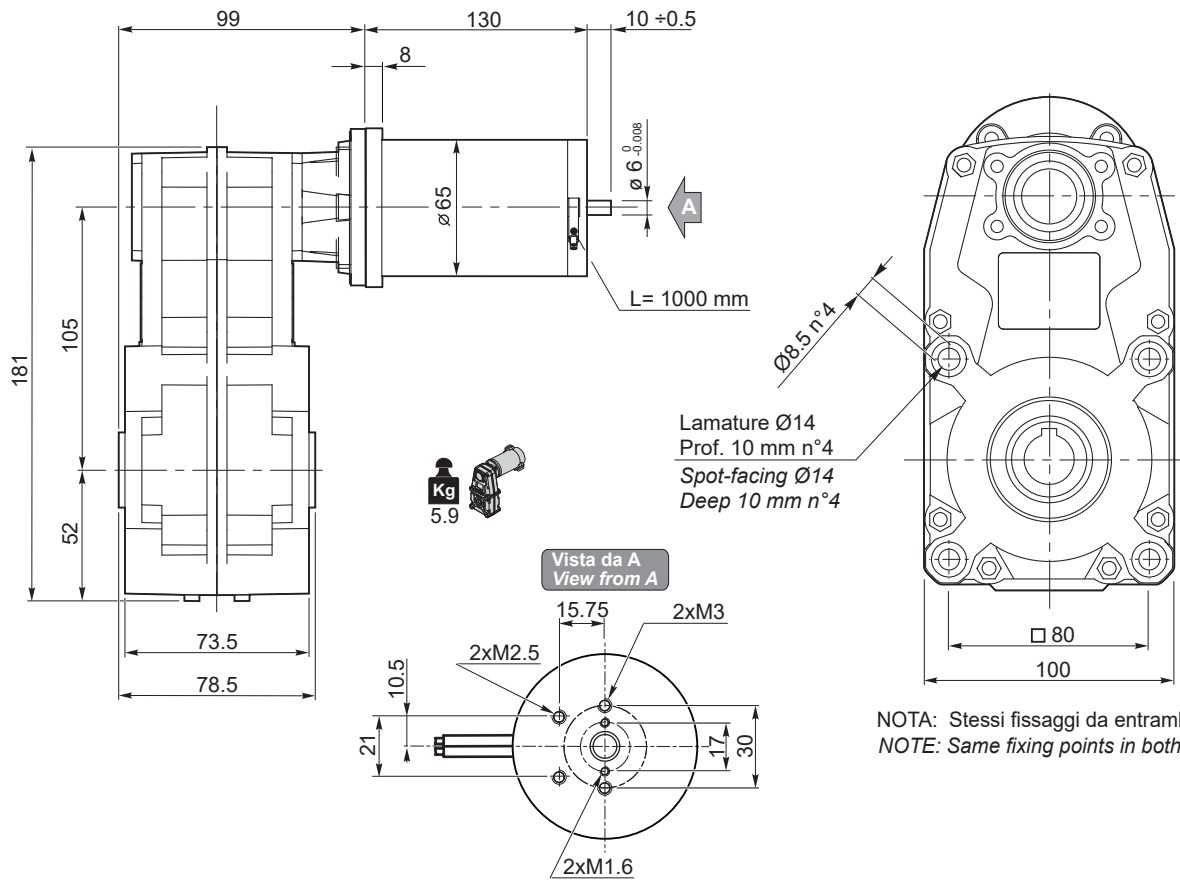


Dimensioni

Dimensions

ECFT 070/105

ECFT 070/105...U

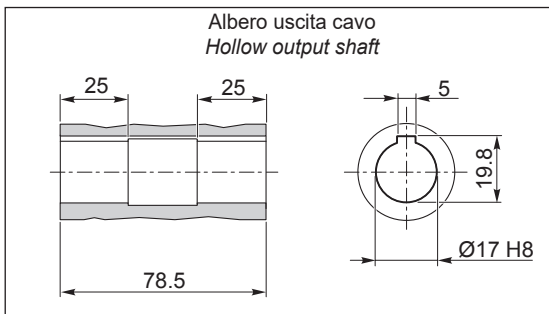


Freno / Brake → BB23

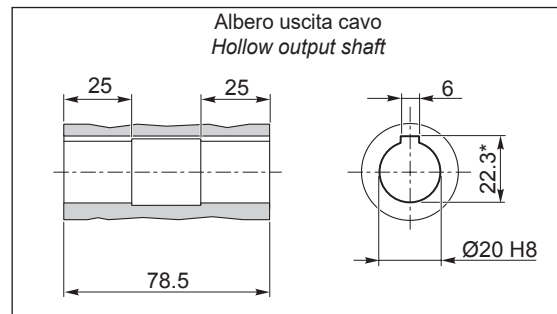
Encoder → BB24

Motori / Motors IP66 → BC2

O17

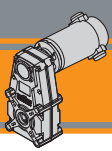


O20



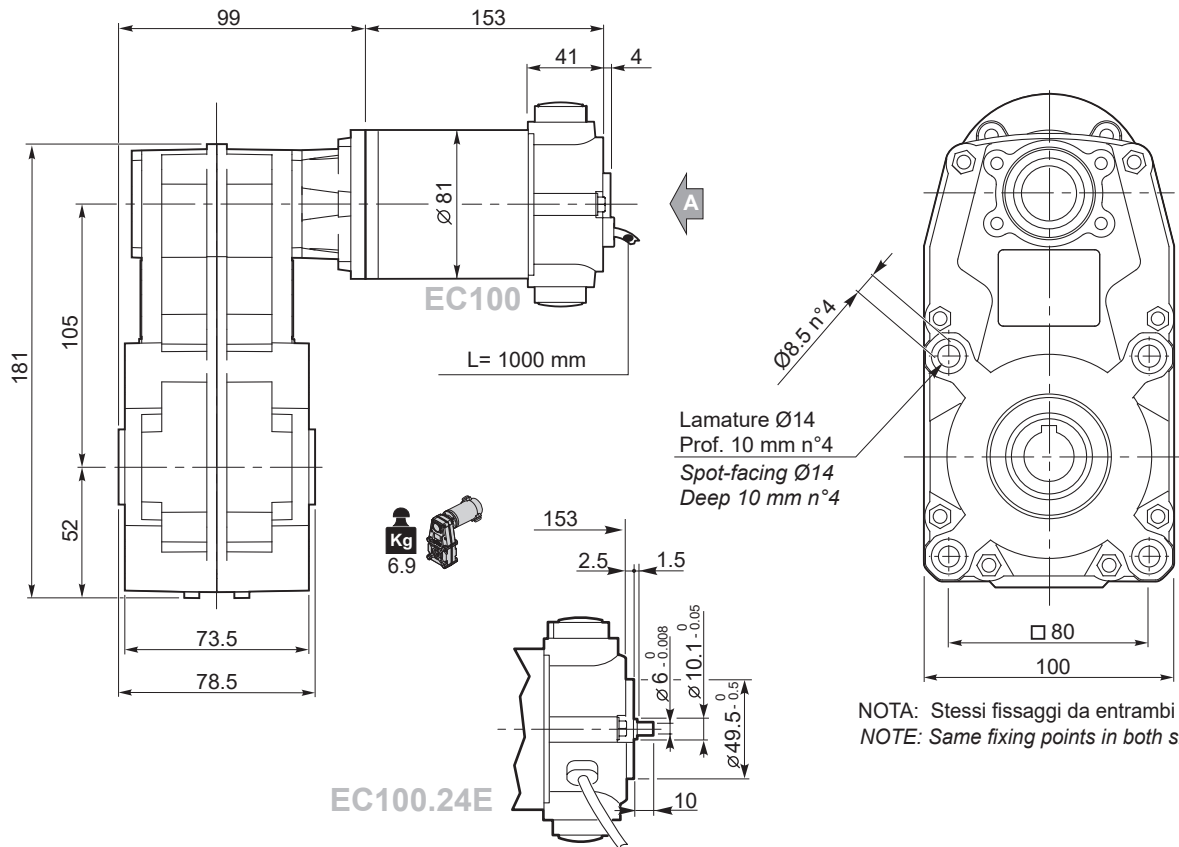
*: Sede linguetta ribassata / Special keyway

DC



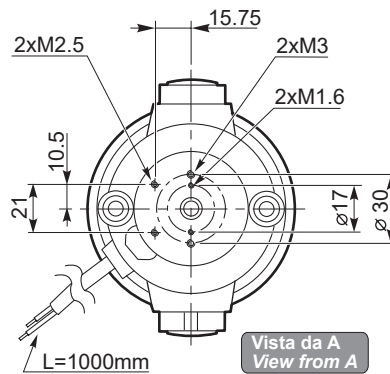
ECFT 100/105

ECFT 100/105...U



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

EC100.24E

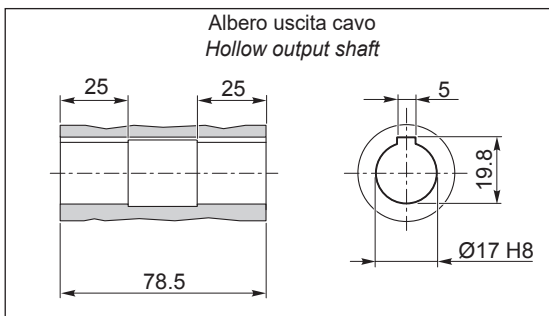


Freno / Brake → BB23

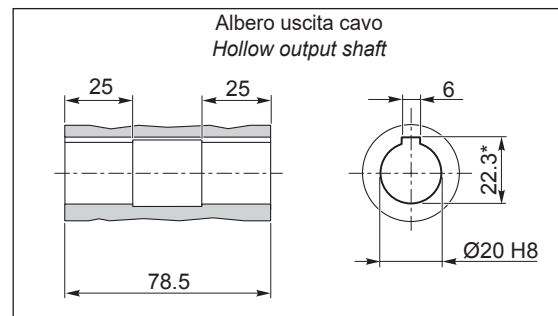
Encoder → BB24

Motori / Motors IP66 → BC4

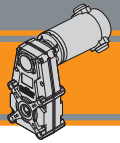
O17



O20



*: Sede linguetta ribassata / Special keyway

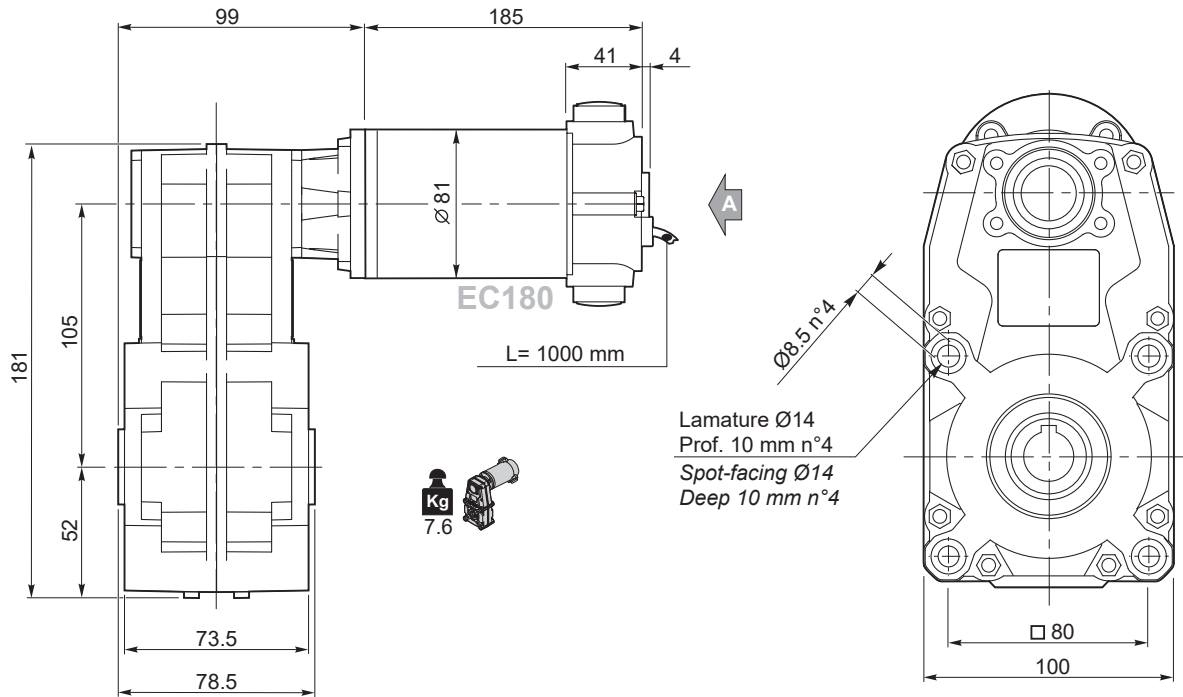


Dimensioni

Dimensions

ECFT 180/105

ECFT 180/105...U

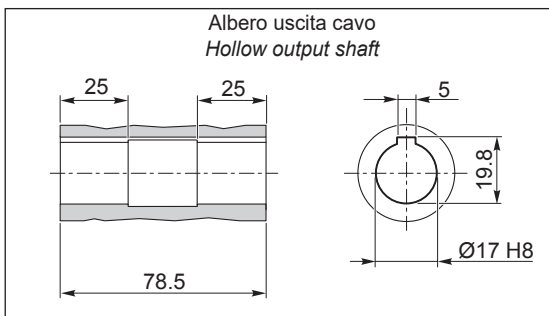


Lamature $\varnothing 14$
Prof. 10 mm n°4
Spot-facing $\varnothing 14$
Deep 10 mm n°4

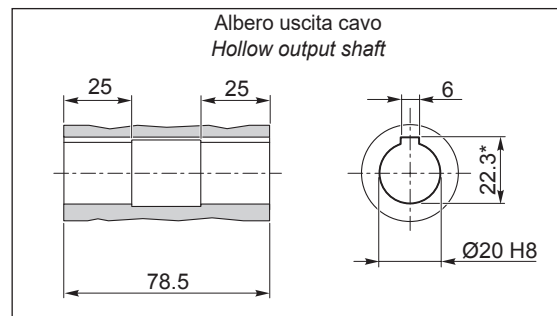
NOTA: Stessi fissaggi da entrambi i lati
NOTE: Same fixing points in both sides

- Freno / Brake → [BB23](#)
- Encoder → [BB24](#)
- Motori / Motors IP66 → [BC6](#)

O17



O20



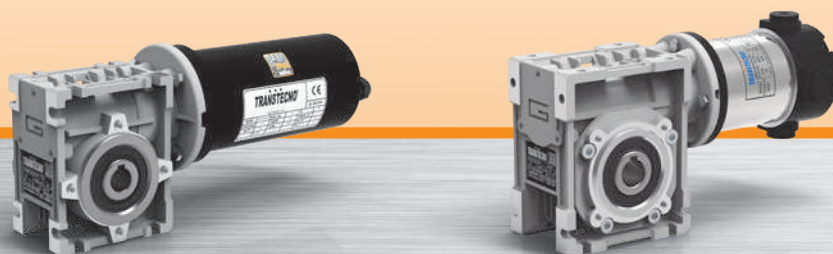
*: Sede linguetta ribassata / Special keyway

DC

MINI  **TECNO**™
small but strong

NDCM
ECM

Motoriduttori CC a vite senza fine
DC wormgearmotors



MINI  **TECNO**™ brand of
TRANSTECNO®



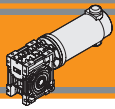
DC



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Caratteristiche tecniche

Technical features

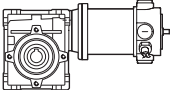
I motoriduttori CC a vite senza fine a magneti permanenti in neodimio **NDCM** e in ferrite **ECM** hanno le seguenti caratteristiche principali:

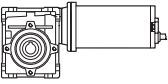
NDCM neodymium permanent magnets and **ECM** ferrite permanent magnets DC wormgearmotors range has the following main features:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 800 W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 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
	120/026	180/026	U F...	Vedere tabella See tables	SZDX SZSX DZ	BRDX BRSX	0° 90° 180° 270°	120 — 240	VS
	120/026 (D11)	180/026 (D11)							
	120/026 (D14)	180/026 (D14)							
	120/030	180/030							
	120/040	180/040				*			

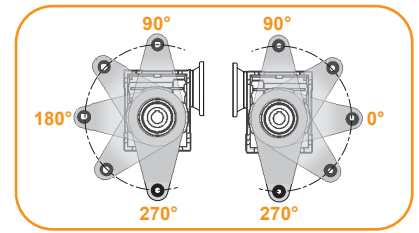
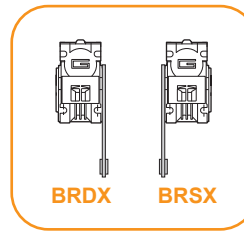
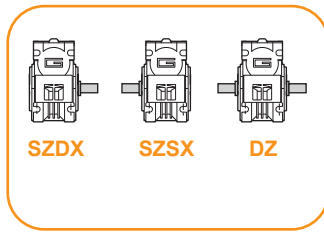
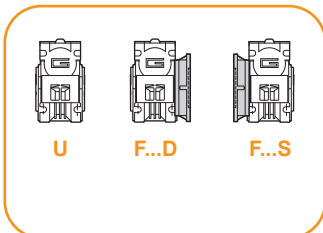
MOTORIDUTTORE / GEARMOTOR											
ECM	070/026				U	10	SZDX	BRSX	90	240	VS
Tipo Type	Grandezza Size				Versione Riduttore Gearbox Version	Rapporto Ratio	Albero di uscita Output shaft	Braccio di reazione Torque arm	Angolo Angle	Versione Motore Motor Version	Opzioni Options
	035/026	070/026	100/026	180/026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

Versione Riduttore
Gearbox Version

Albero di uscita
Output shaft

Braccio di reazione
Torque arm *

Angolo
Angle



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



Simbologia

Symbols

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

Lubrificazione

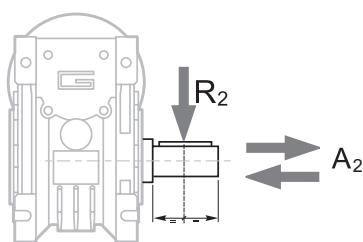
Lubrication

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

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

Carichi radiali

Radial loads

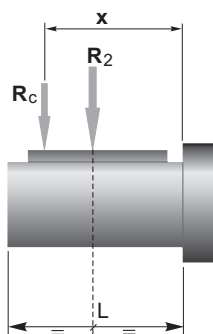


$$A_2 = R_2 \times 0.2$$

n_2 [min ⁻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 mezza-ria dell'albero occorre calcolare quello effettivo con la seguente formula:

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

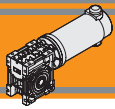


$$R_c = \frac{R_2 \cdot a}{(b + x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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

	CM		
	026	030	040
a	56	65	84
b	43	50	64
R_{2MAX}	610	1600	3000



Dati di dentatura

Toothing data

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

Rendimento

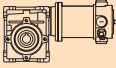
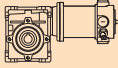
Efficiency

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



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


Dati tecnici per servizio S2
NDCM
Technical data for S2 duty

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	600	2	4.4	5	120/026	120/240	(3000 min ⁻¹)	600	4	2.8	5	180/026	120/240
	400	3	3.3	7.5	120/026			400	5	2.1	7.5	180/026	
	300	4	2.5	10	120/026			300	7	1.6	10	180/026	
	200	6	1.7	15	120/026			200	10	1.1	15	180/026	
	150	8	1.3	20	120/026			150	13	0.9	20	180/026	
	100	11	1.1	30	120/026			100	17	0.7	30	180/026	
	75	14	0.8	40	120/026			75	16	0.7	40	180/026	
	60	14	0.7	50	120/026			60	14	0.7	50	180/026	
	50	13	0.7	60	120/026			50	13	0.7	60	180/026	
	600	2	5.7	5	120/030	120/240		600	4	3.7	5	180/030	120/240
	400	3	4.5	7.5	120/030			400	5	2.9	7.5	180/030	
	300	4	3.7	10	120/030			300	7	2.3	10	180/030	
	200	6	2.5	15	120/030			200	10	1.6	15	180/030	
	150	8	1.7	20	120/030			150	13	1.1	20	180/030	
	120	10	1.5	25	120/030			120	16	1.0	25	180/030	
	100	11	1.6	30	120/030			100	18	1.0	30	180/030	
	75	14	1.1	40	120/030			75	22	0.7	40	180/030	
	60	17	0.9	50	120/030			60	21	0.7	50	180/030	
	50	20	0.7	60	120/030			50	20	0.7	60	180/030	
	38	17	0.7	80	120/030			38	17	0.7	80	180/030	
	30	16	0.7	100	120/030			30	16	0.7	100	180/030	
	150	8	3.7	20	120/040	120/240		600	4	8.1	5	180/040	120/240
	120	10	2.7	25	120/040			400	5	5.8	7.5	180/040	
	100	12	3.2	30	120/040			300	7	4.8	10	180/040	
	75	15	2.3	40	120/040			200	10	3.5	15	180/040	
	60	18	1.8	50	120/040			150	13	2.3	20	180/040	
	50	20	1.4	60	120/040			120	16	1.8	25	180/040	
	38	24	1.1	80	120/040			100	18	2.1	30	180/040	
	30	29	0.8	100	120/040			75	23	1.5	40	180/040	
								60	27	1.2	50	180/040	
								50	32	0.9	60	180/040	
								38	38	0.7	80	180/040	
								30	34	0.7	100	180/040	

N.B.

 Verificare sempre che la coppia M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio

N.B.

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

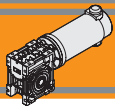
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici
Electrical technical data

 ND 120 → 




 ND 180 → 








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		
	400	1.2	13.0	7.5		ECM035/030 120/240
	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		

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		
	400	2.1	7.1	7.5		ECM070/030 12E/24E
	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		

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		
	400	1.5	10.2	7.5		ECM050/030 120/240
	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		

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		
	150	7.2	1.9	20		ECM100/030 120/240/24E
	120	8.7	1.7	25		
	100	10	1.8	30		
	75	12	1.3	40		
	60	14	1.0	50		
	50	17	0.8	60		
	38	17	0.7	80		
	30	16	0.7	100		
	100	10	3.7	30		
	75	13	2.6	40		
	60	15	2.1	50		
	50	18	1.6	60		
	38	21	1.3	80		
	30	25	1.0	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		

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

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

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

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

Dati tecnici elettrici

Electrical technical data





Dati tecnici per servizio S2

ECM

Technical data for S2 duty

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

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		

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				

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

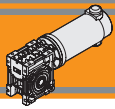
NOTA: per servizio continuo o altamente intermittente, contattare il servizio tecnico

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

Dati tecnici elettrici

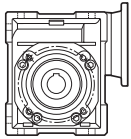
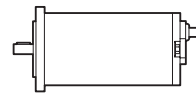
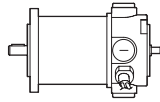
Electrical technical data





Motori applicabili

Motor adapters



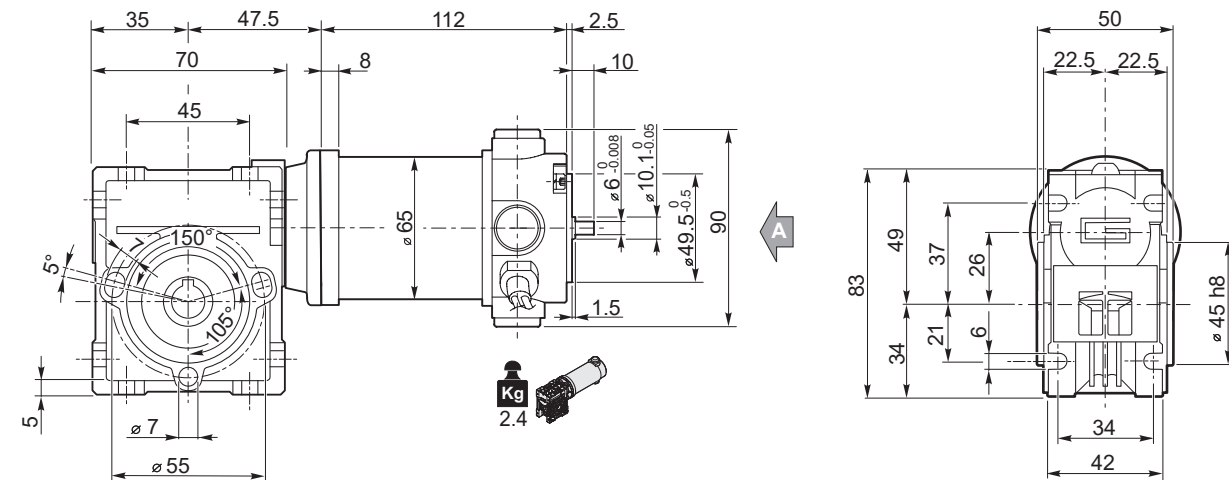
		ND		EC								
		120.120 120.240	180.120 180.240	035.12E 035.24E	050.12E 050.24E	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CM	026	5-60	5-60	5-60	5-60	5-60	5-60	5-60				
	030	5-100	5-100	5-100	5-100	5-100	5-100	5-100	5-50	5-50	5-50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

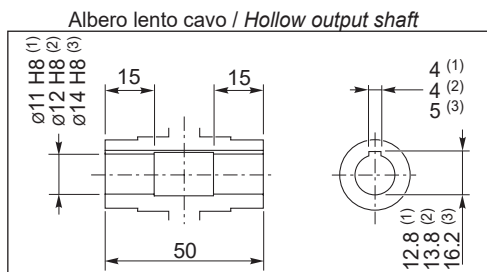
Dimensioni

Dimensions

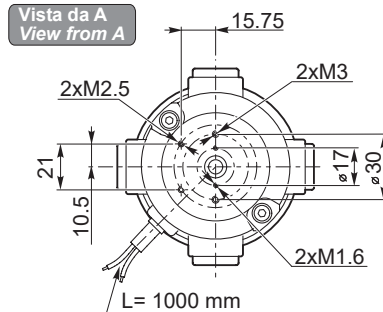
NDCM120/026 U



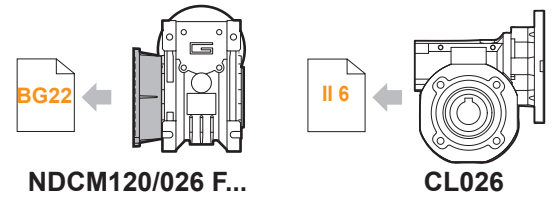
Vista da A
View from A



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



- Freno / Brake → BA9
- Encoder → BA9

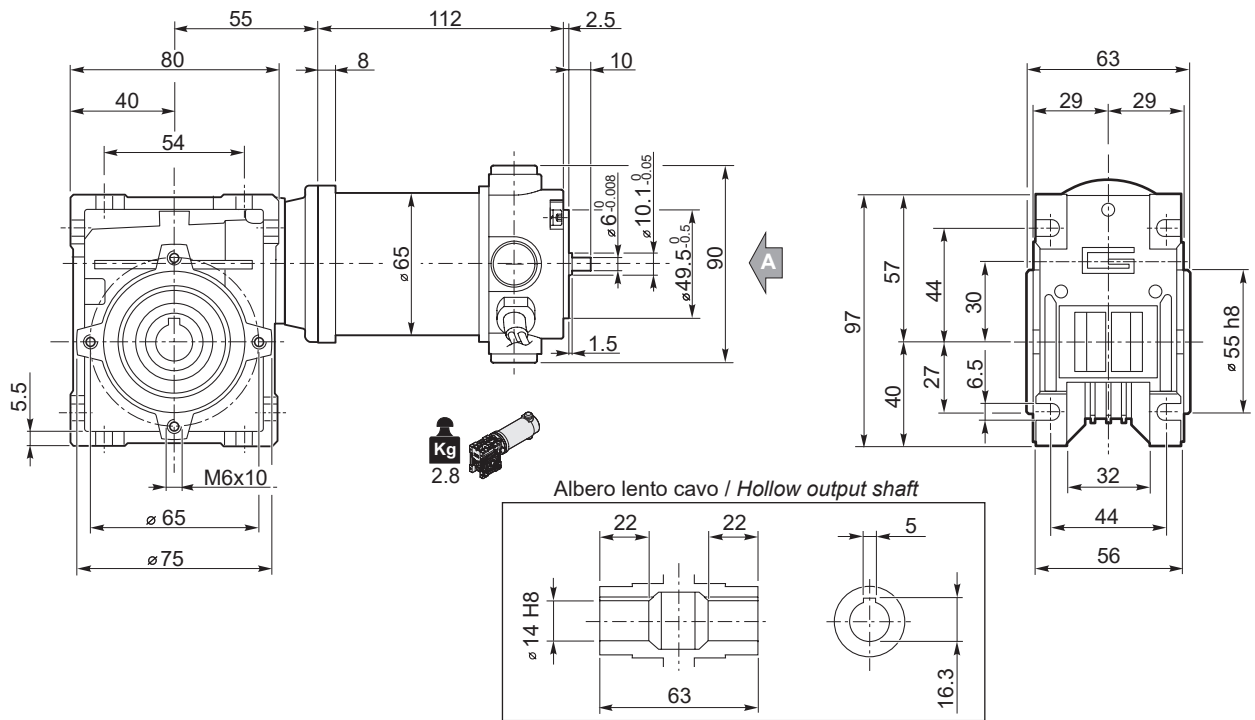




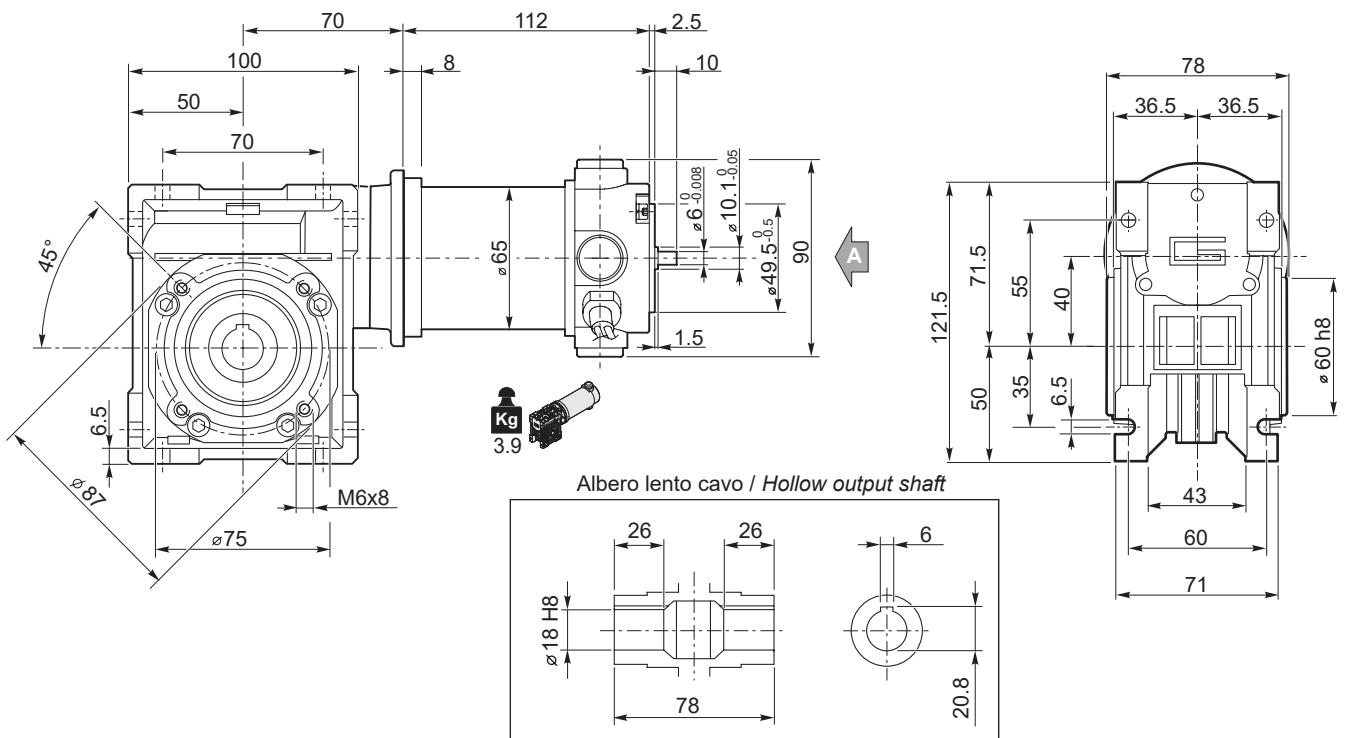
Dimensioni

Dimensions

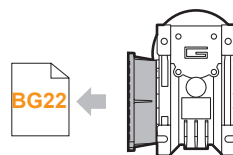
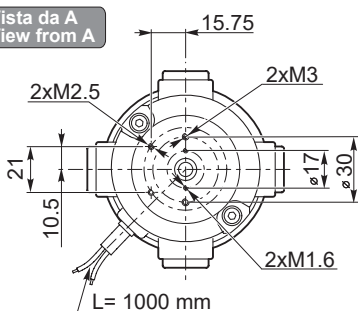
NDCM120/030 U



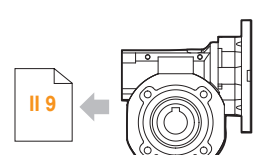
NDCM120/040 U



Vista da A
View from A



NDCM120/030 F
NDCM120/040 F...



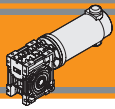
CL030
CL040

Freno / Brake



Encoder

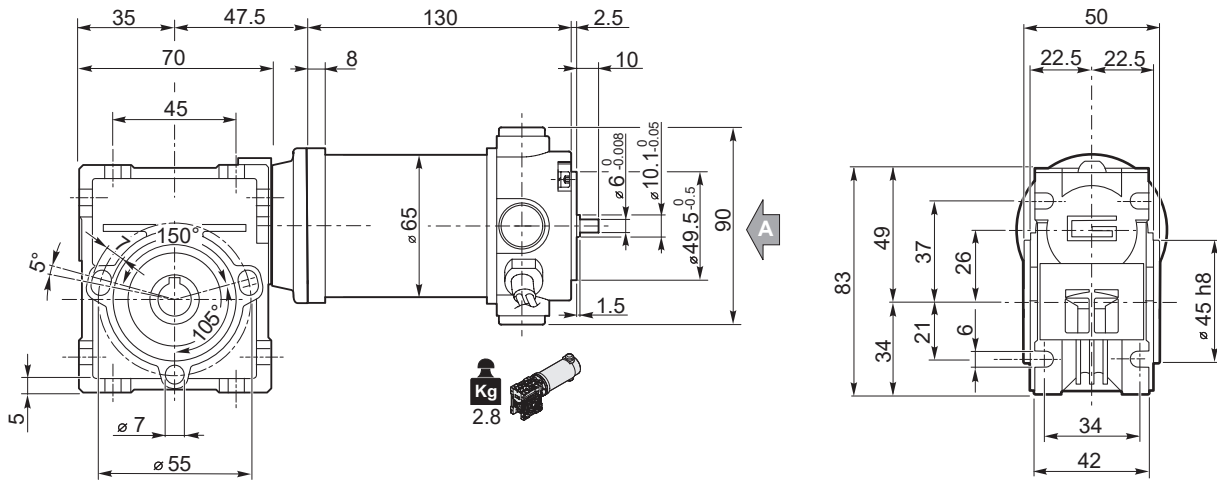




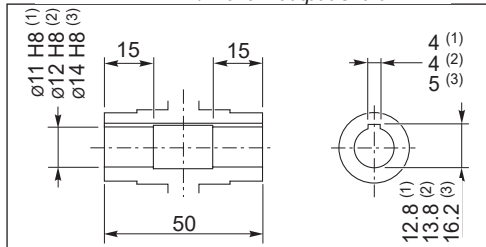
Dimensioni

Dimensions

NDCM180/026 U

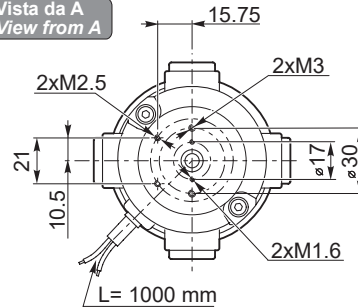


Albero lento cavo / Hollow output shaft



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

Vista da A View from A

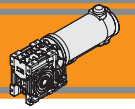


Freno / Brake → **BA9**

Encoder → **BA9**

BG22 → **NDCM180/026 F...**

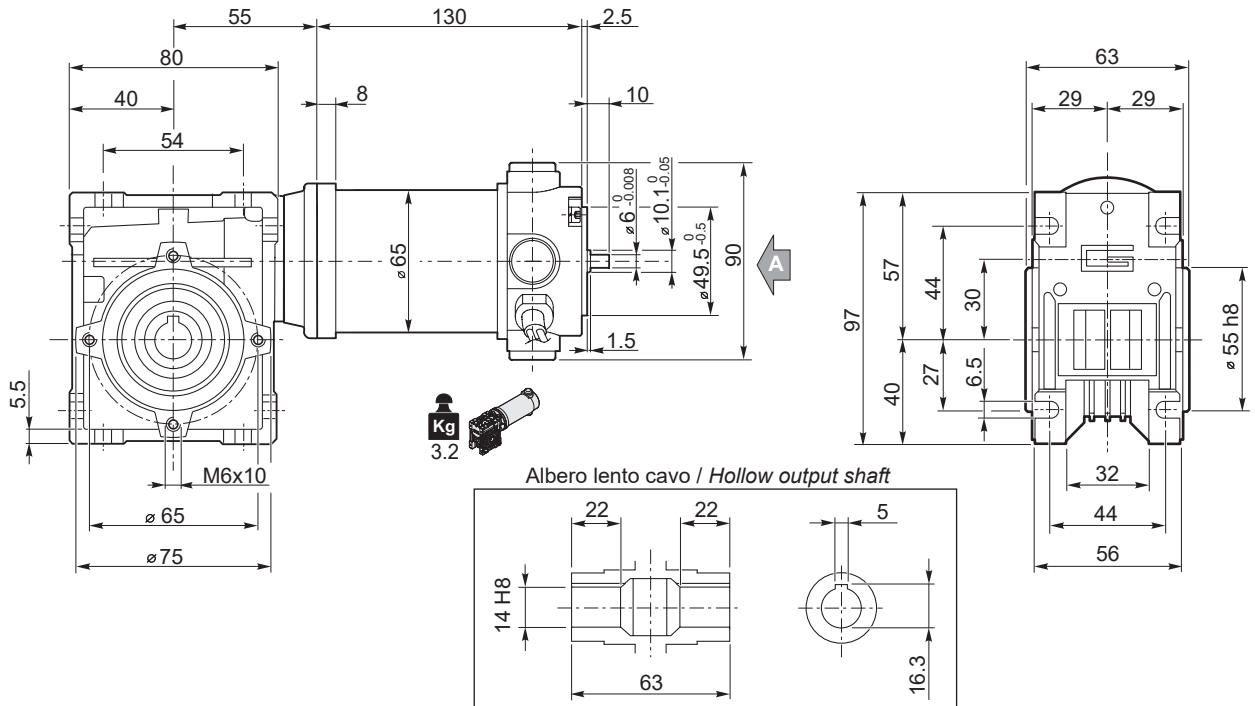
II 6 → **CL026**



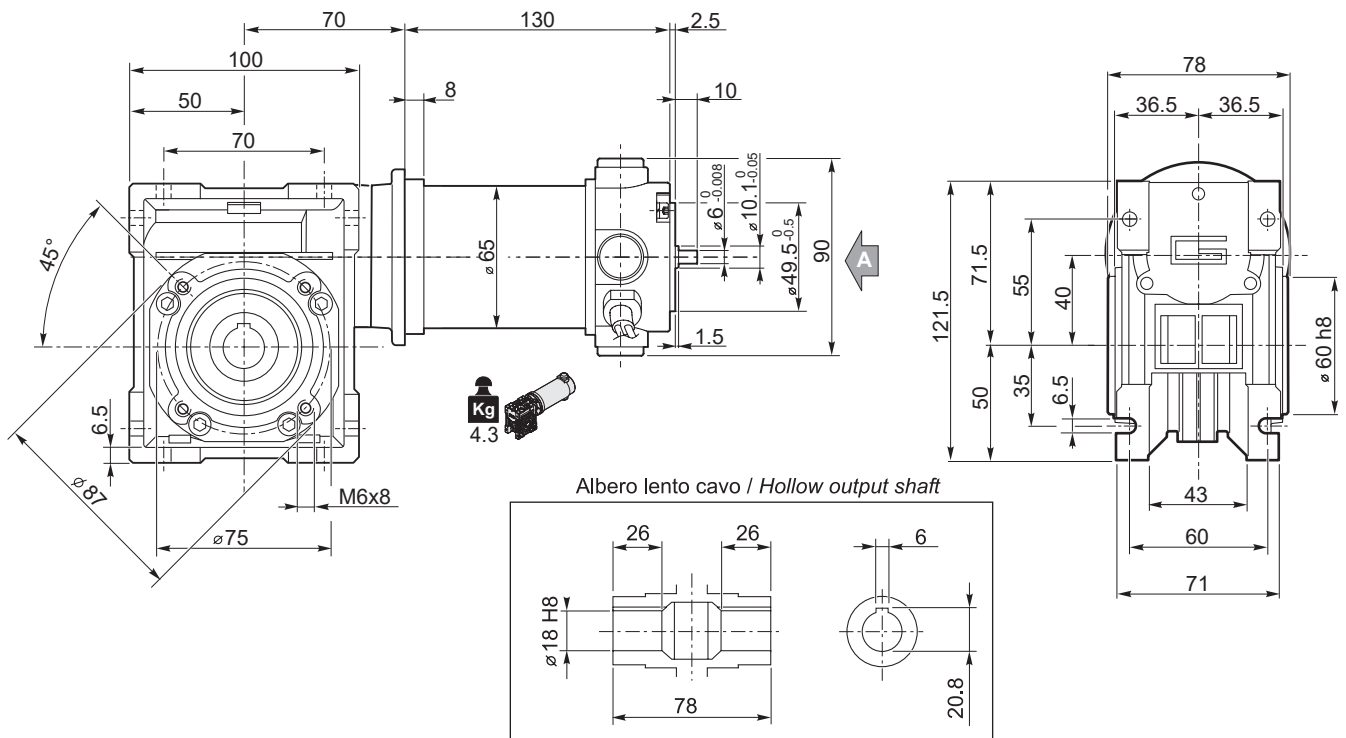
Dimensioni

Dimensions

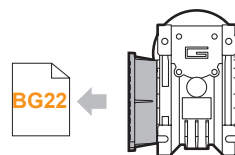
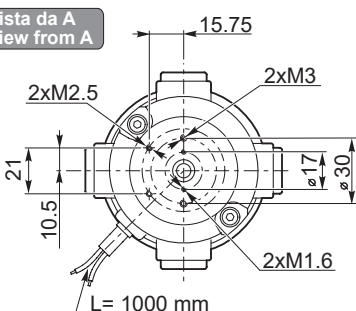
NDCM180/030 U



NDCM180/040 U

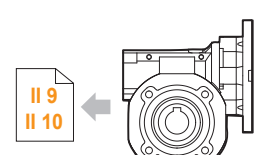


Vista da A
View from A



BG22

NDCM180/030 F
NDCM180/040 F...



II 9
II 10

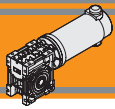
CL030
CL040

Freno / Brake



Encoder

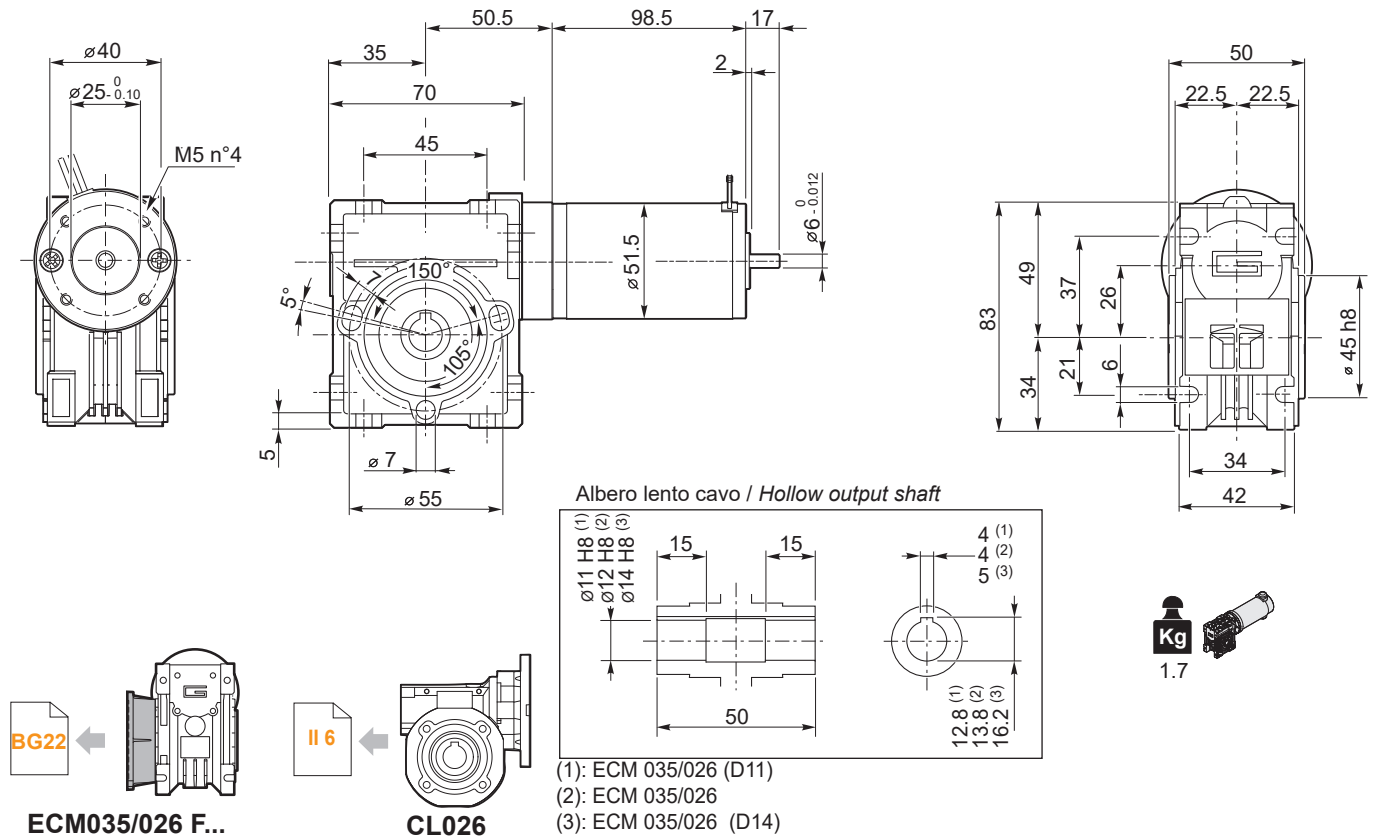




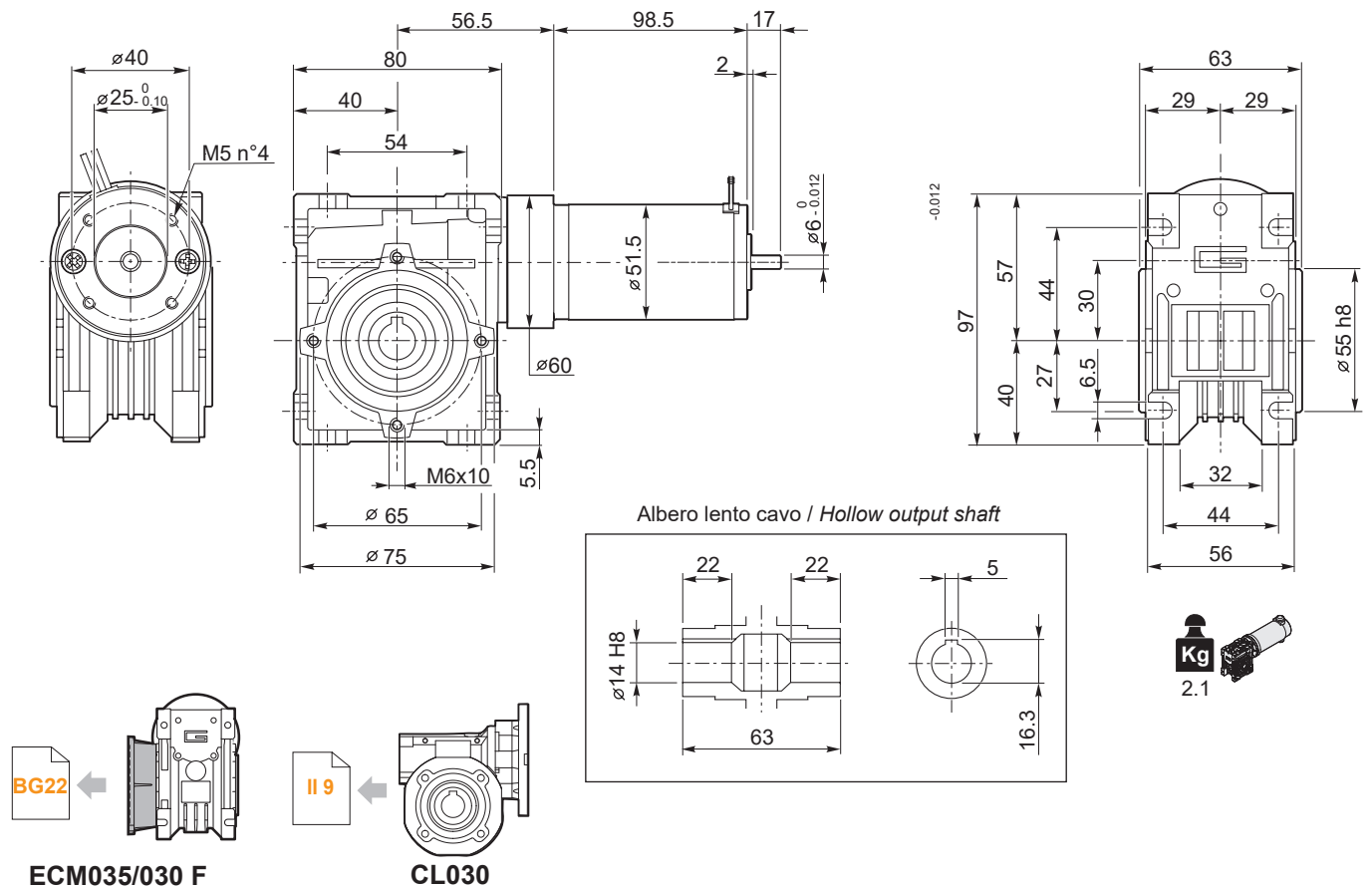
Dimensioni

Dimensions

ECM035/026 U



ECM035/030 U

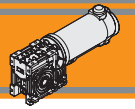


BG22

II 6

ECM035/026 F...

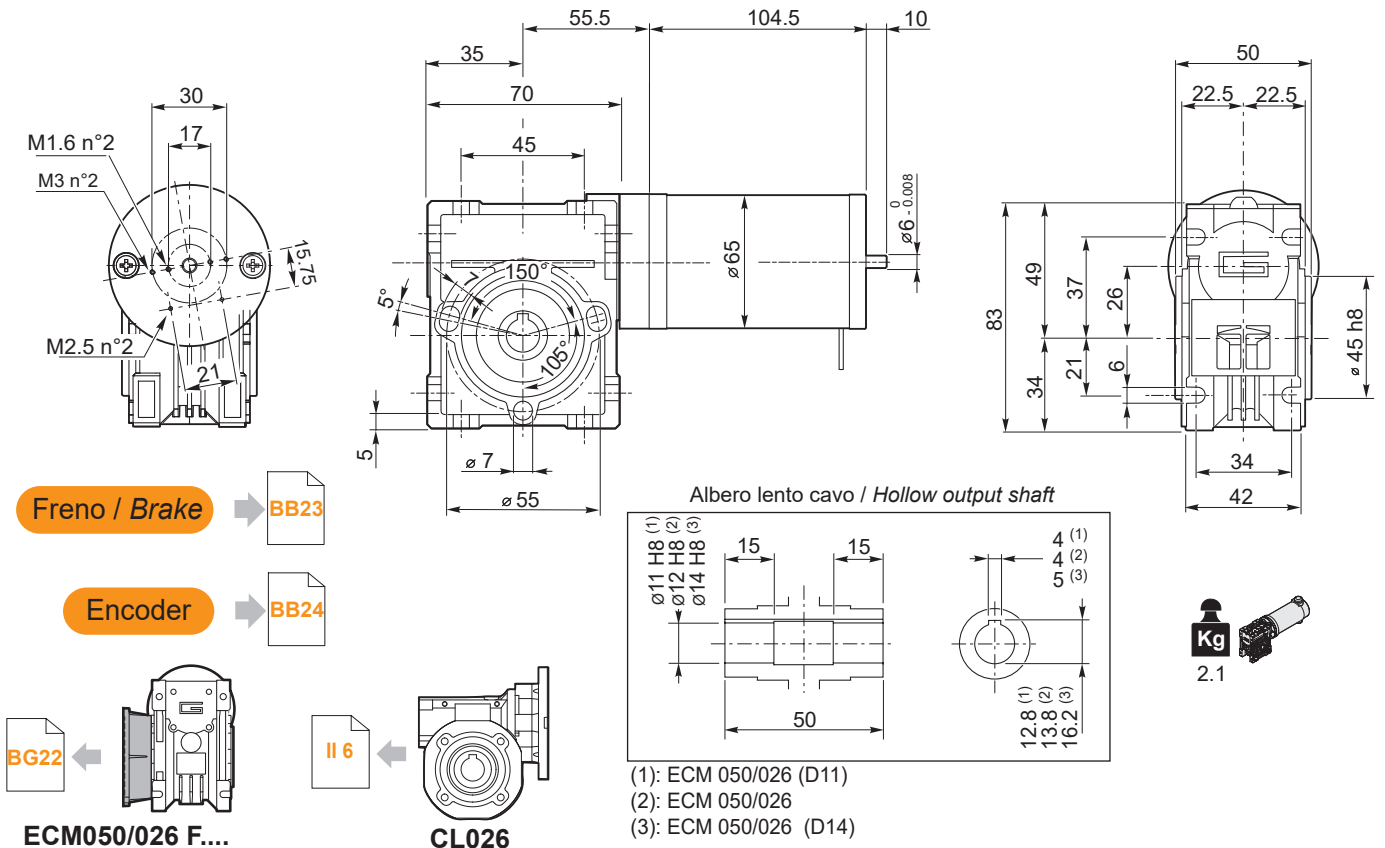
CL026



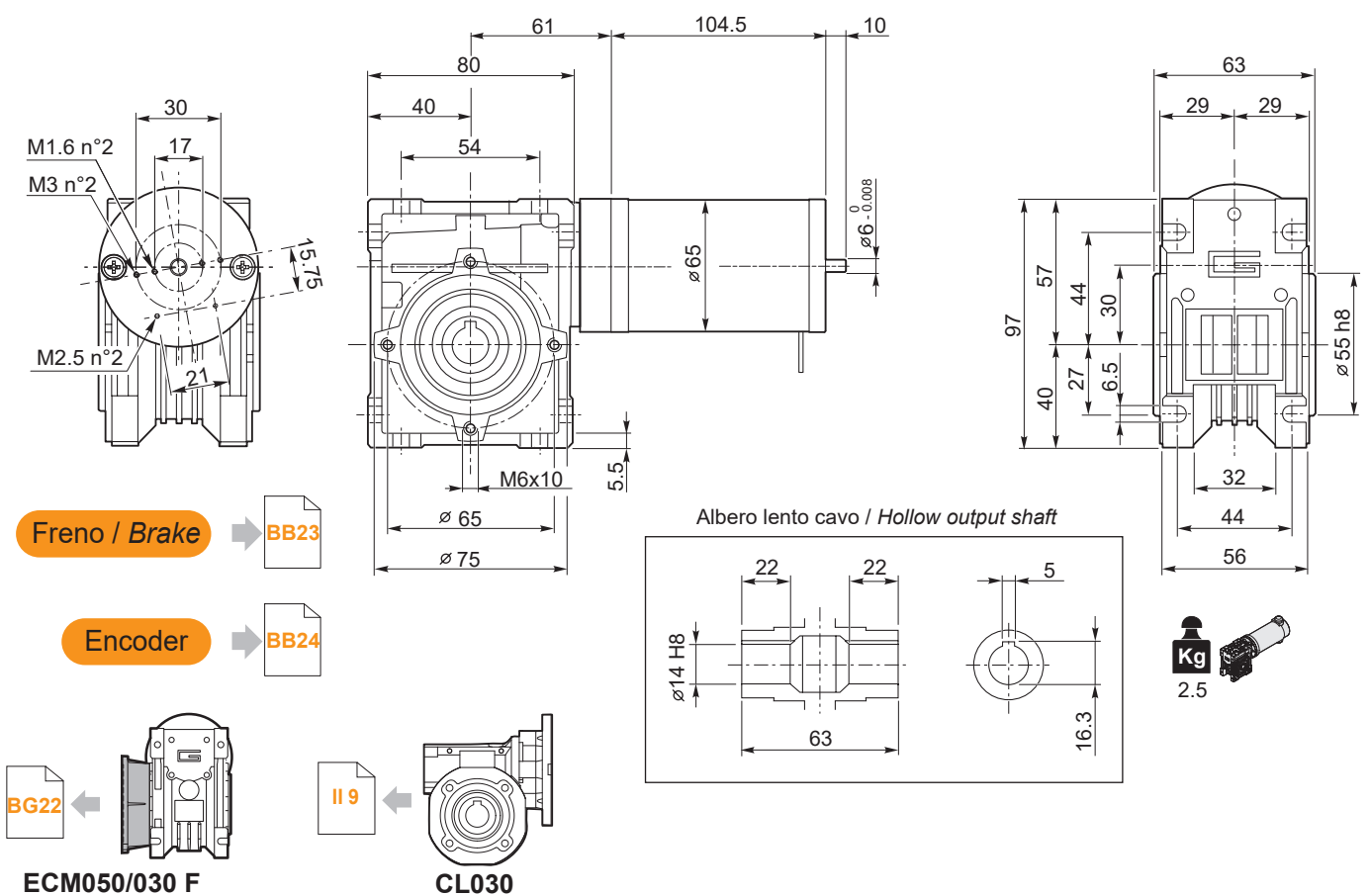
Dimensioni

Dimensions

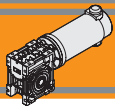
ECM050/026 U



ECM050/030 U



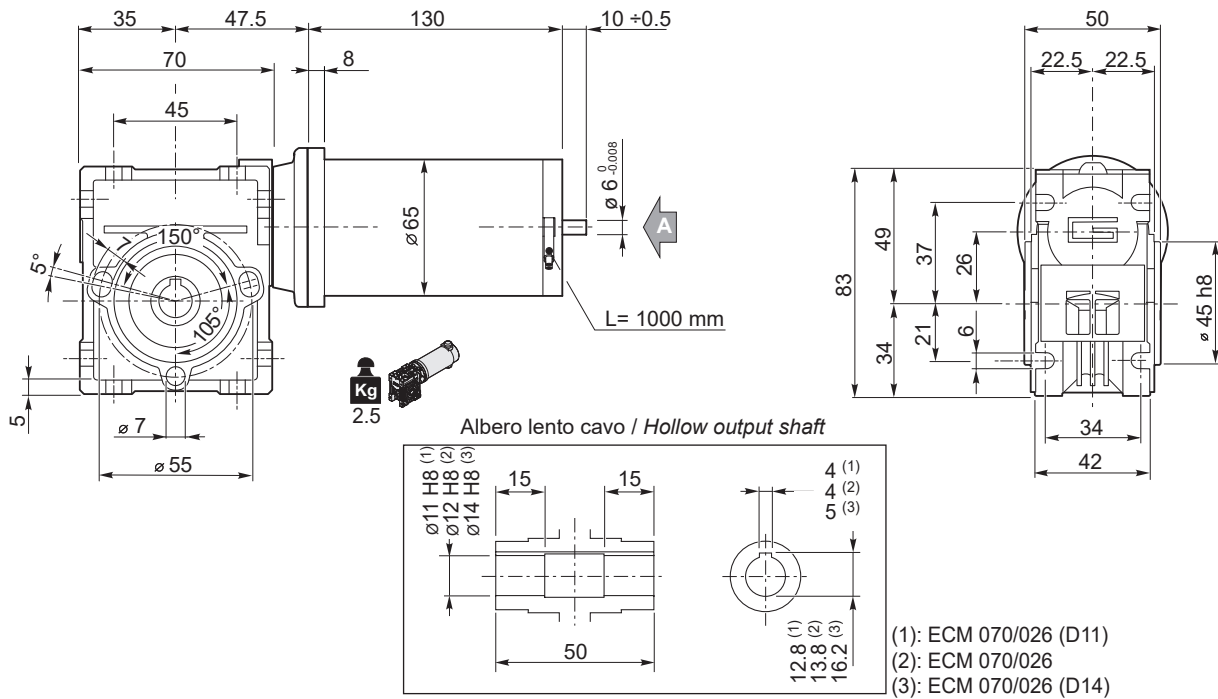
DC



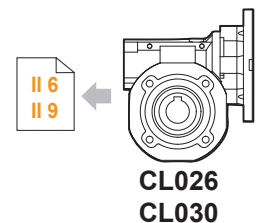
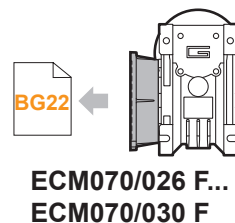
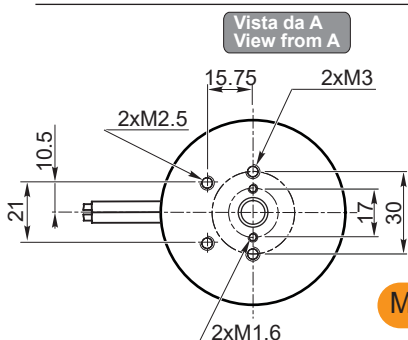
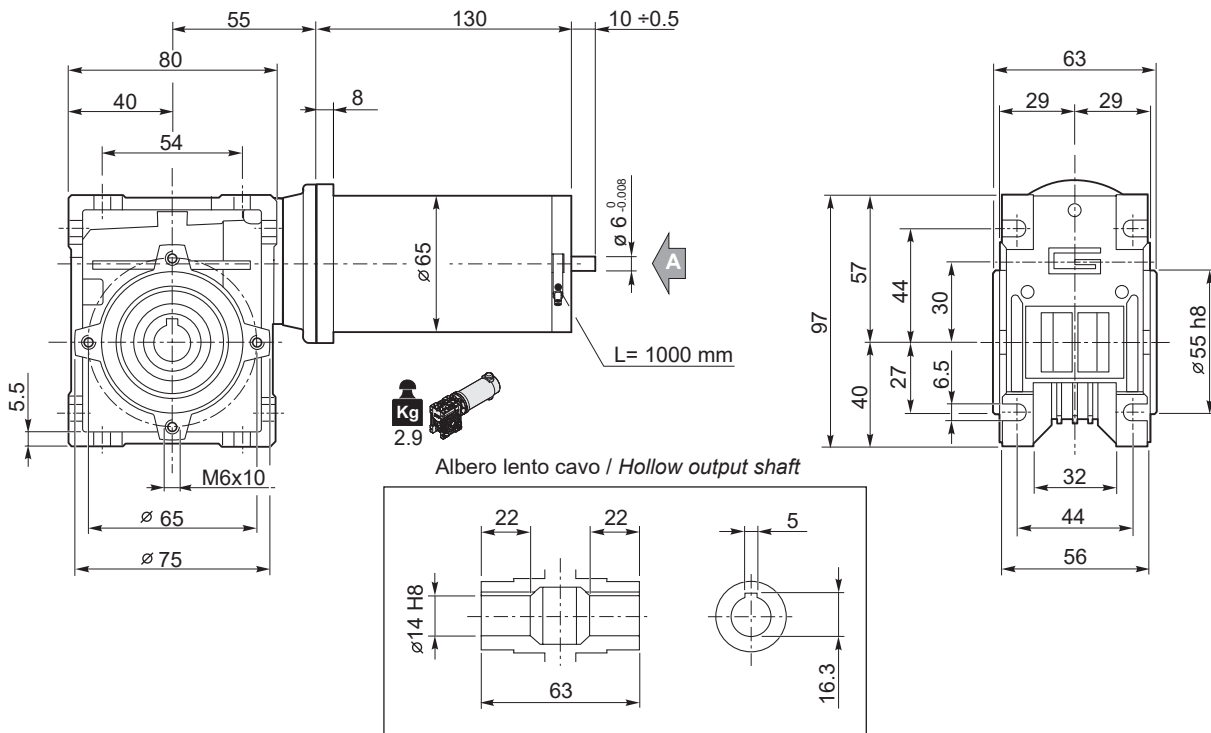
Dimensioni

Dimensions

ECM070/026 U



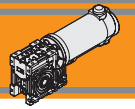
ECM070/030 U



Motori / Motors IP66 → BC2

Freno / Brake → BB23

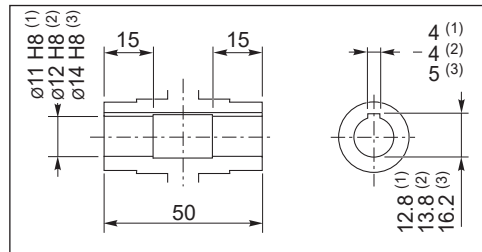
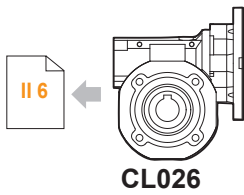
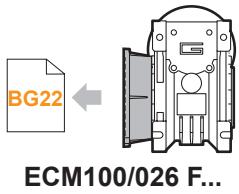
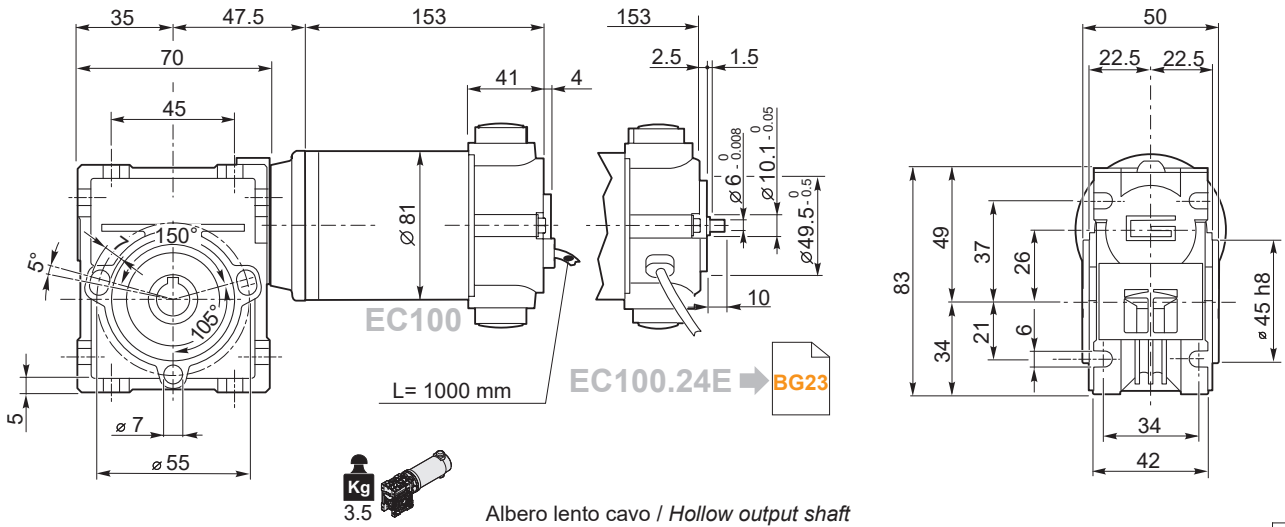
Encoder → BB24



Dimensioni

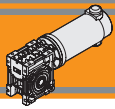
Dimensions

ECM100/026 U



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

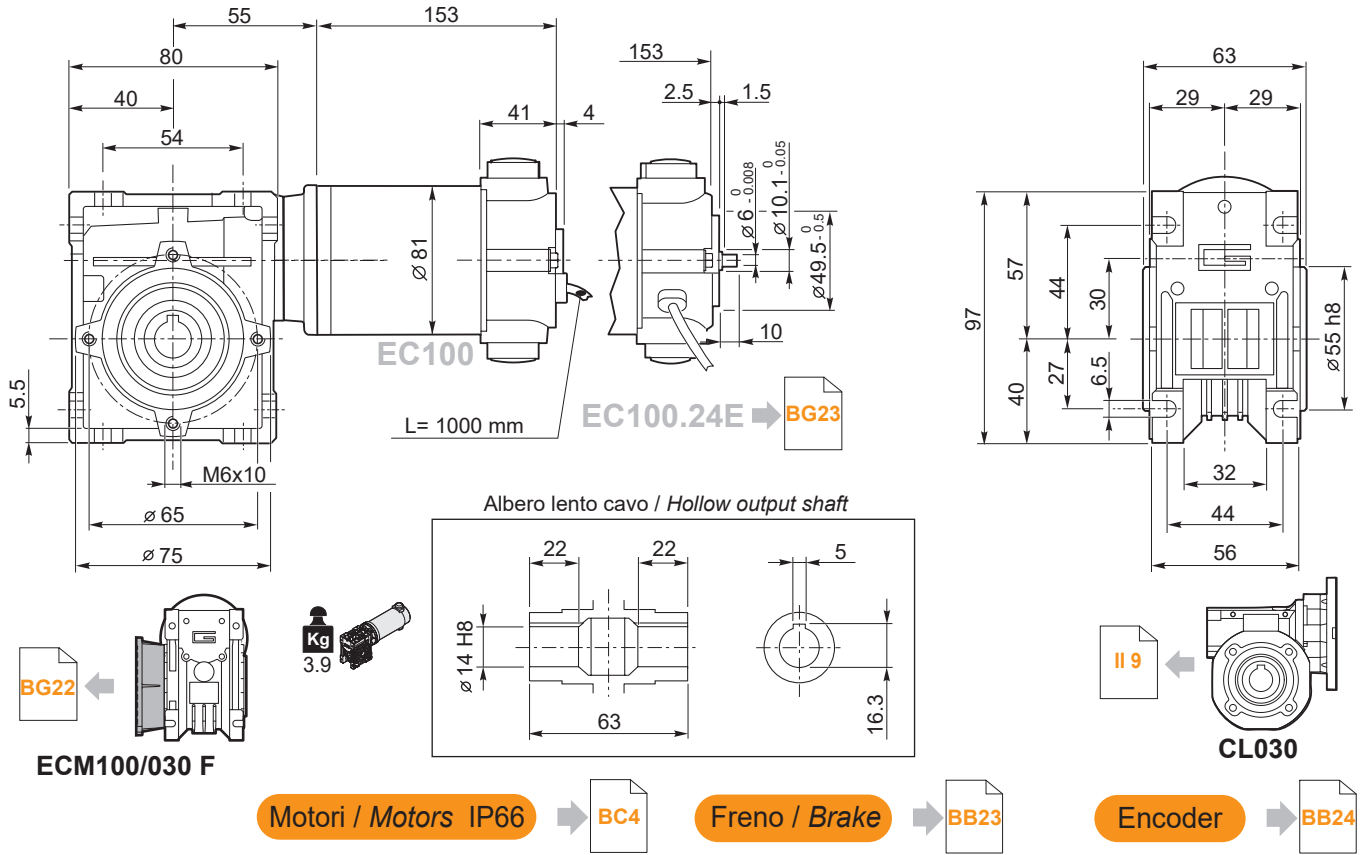
- Motors / Motors IP66 → BC4
- Freno / Brake → BB23
- Encoder → BB24



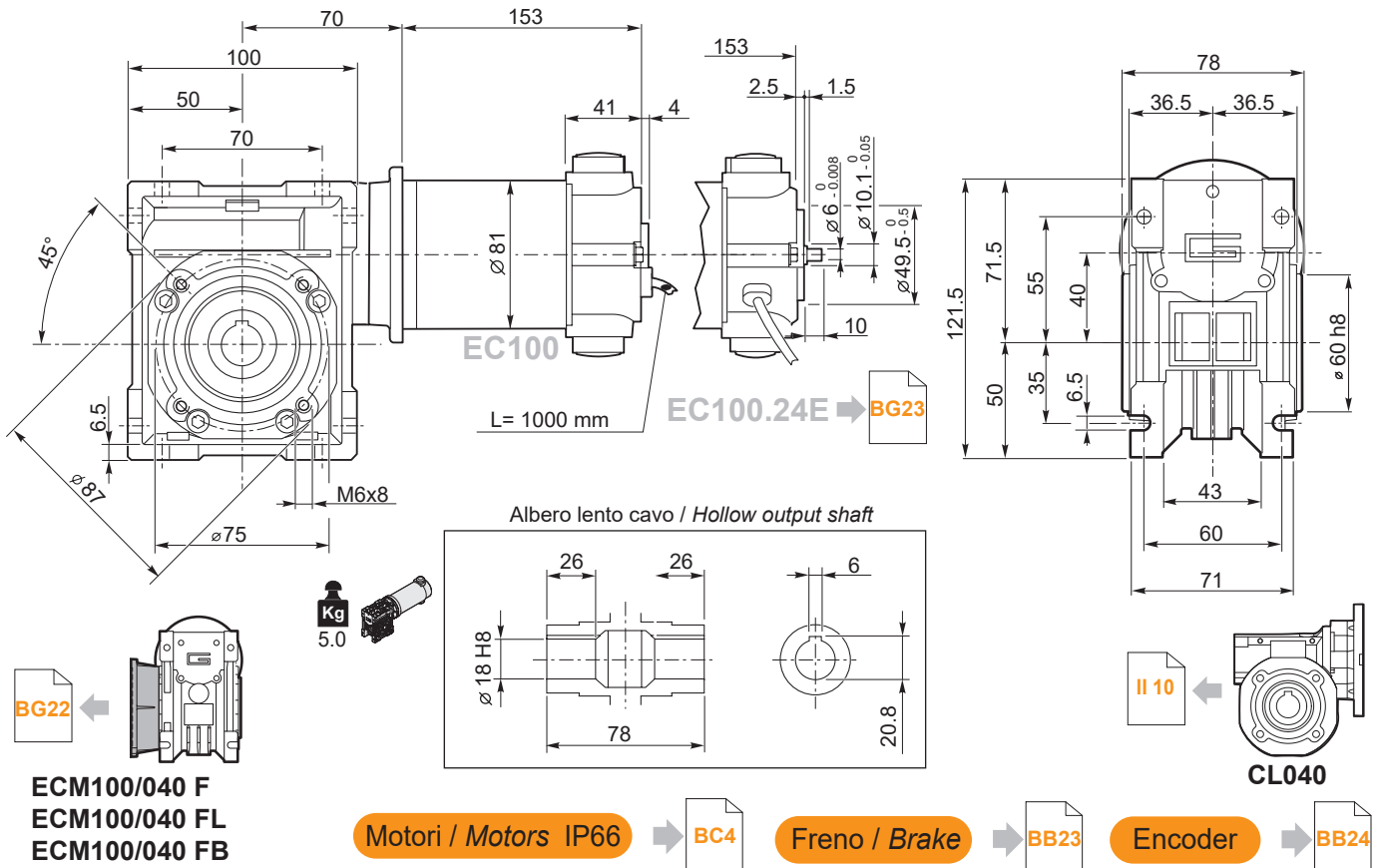
Dimensioni

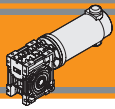
Dimensions

ECM100/030 U



ECM100/040 U

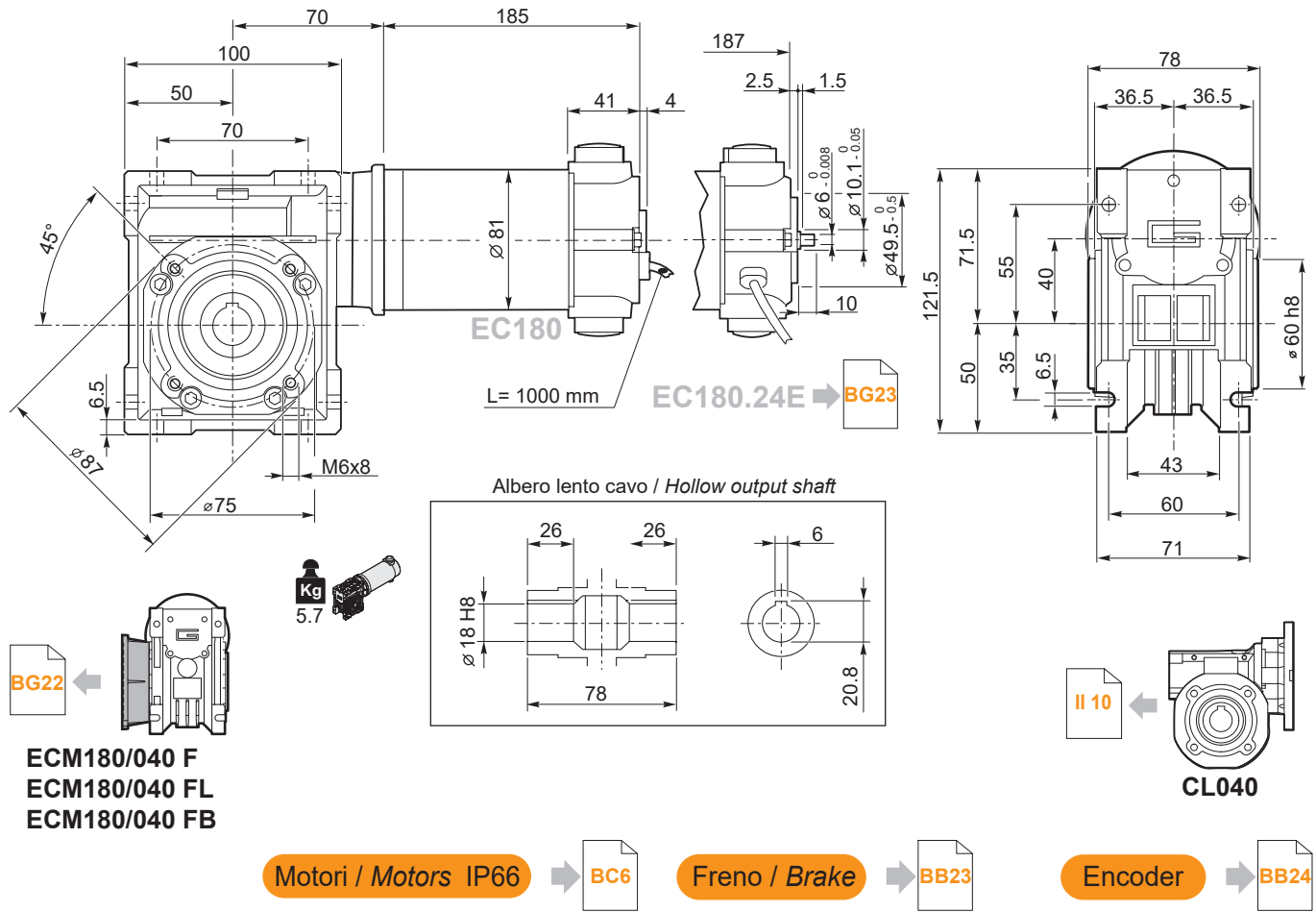


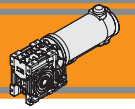


Dimensioni

Dimensions

ECM180/040 U

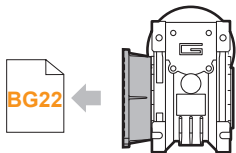
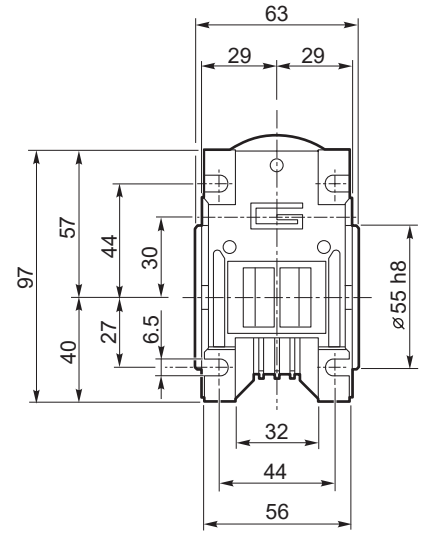
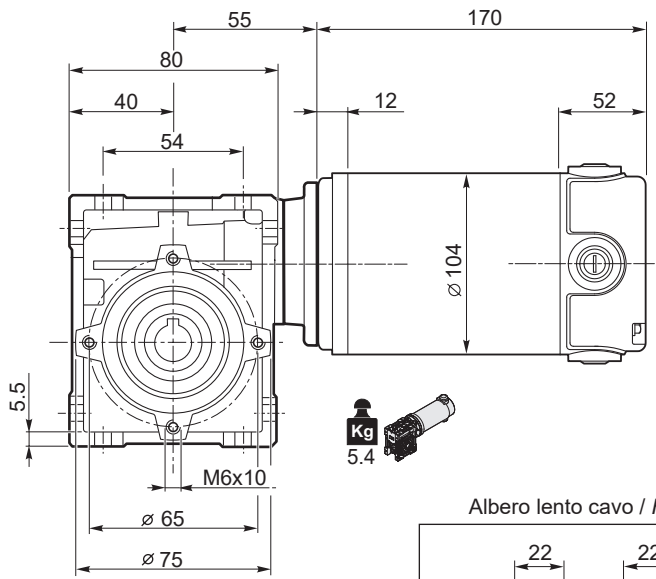




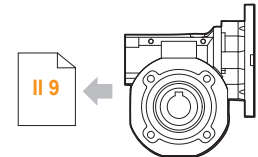
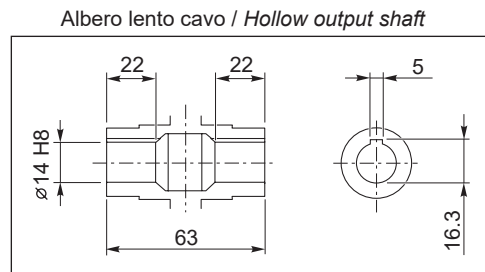
Dimensioni

Dimensions

ECM250/030 U



ECM250/030 F

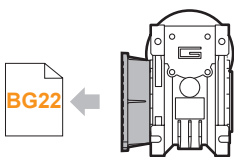
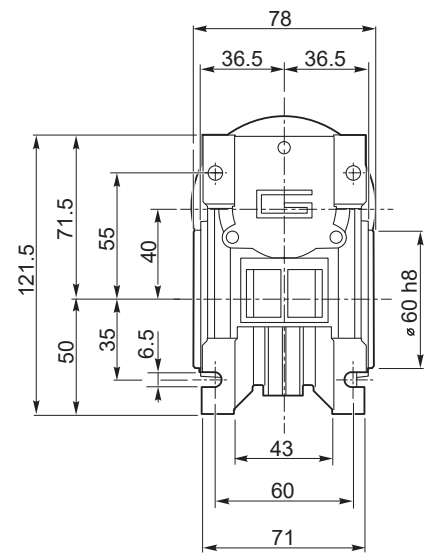
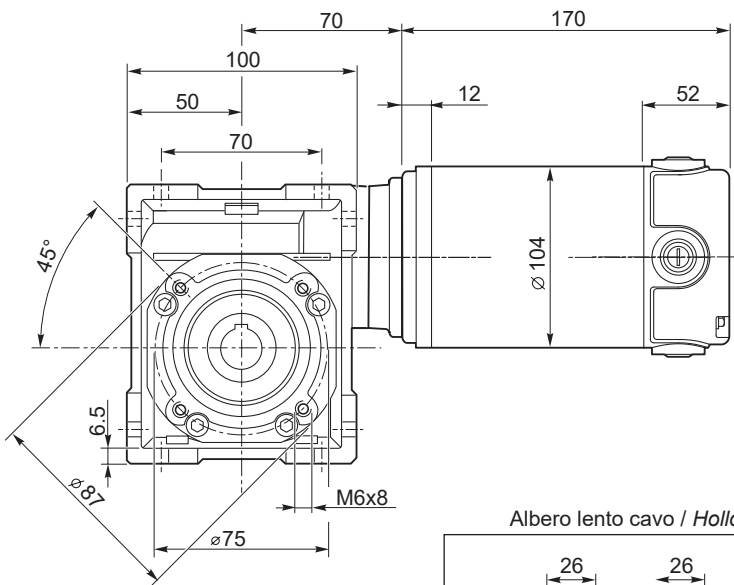


CL030

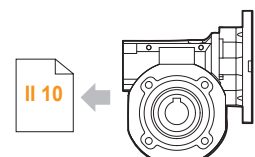
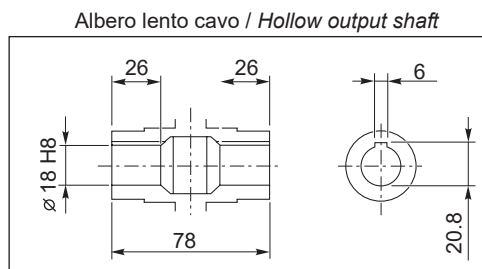
Motori / Motors IP66

BC8

ECM250/040 U



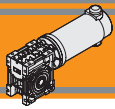
ECM250/040 F
ECM250/040 FL
ECM250/040 FB



CL040

Motori / Motors IP66

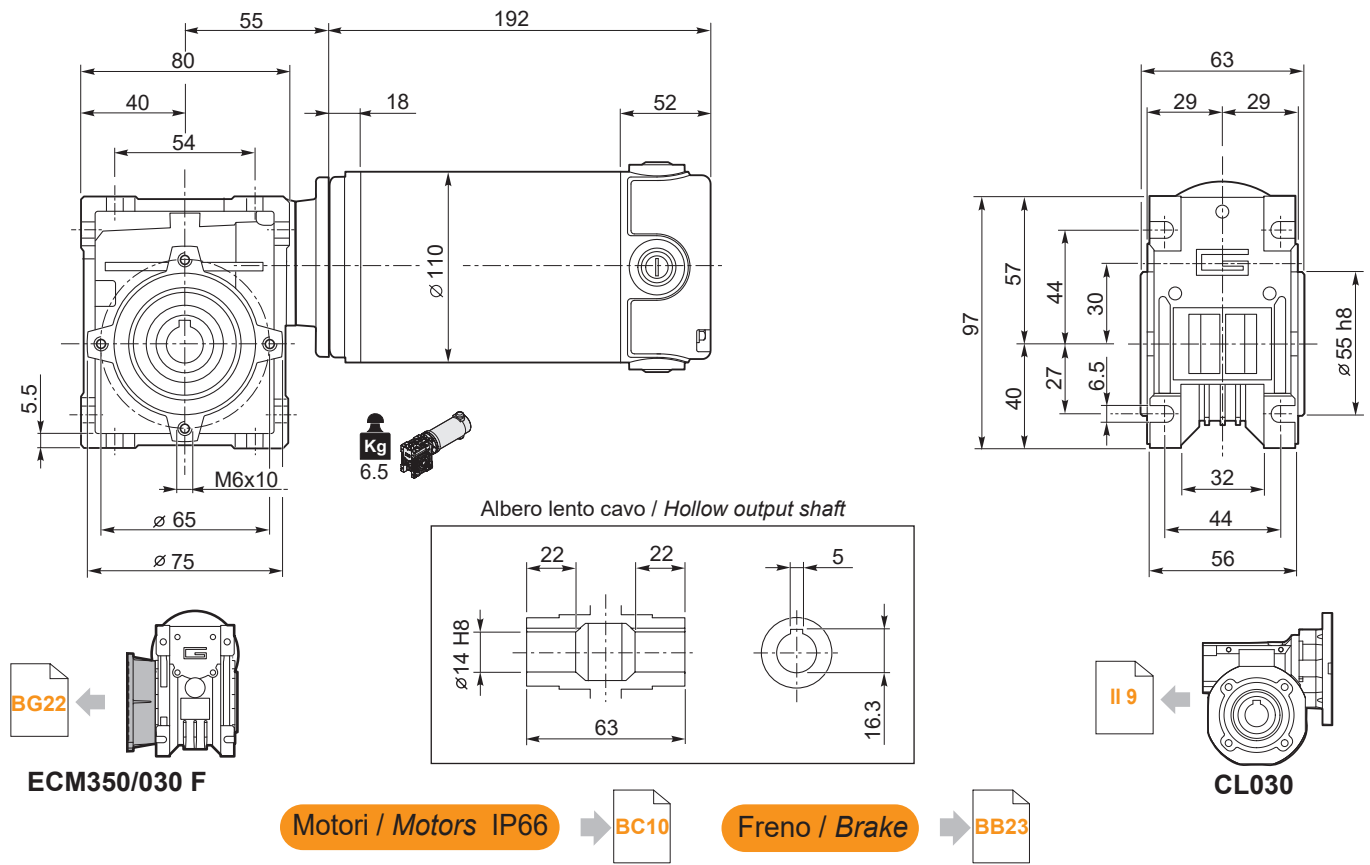
BC8



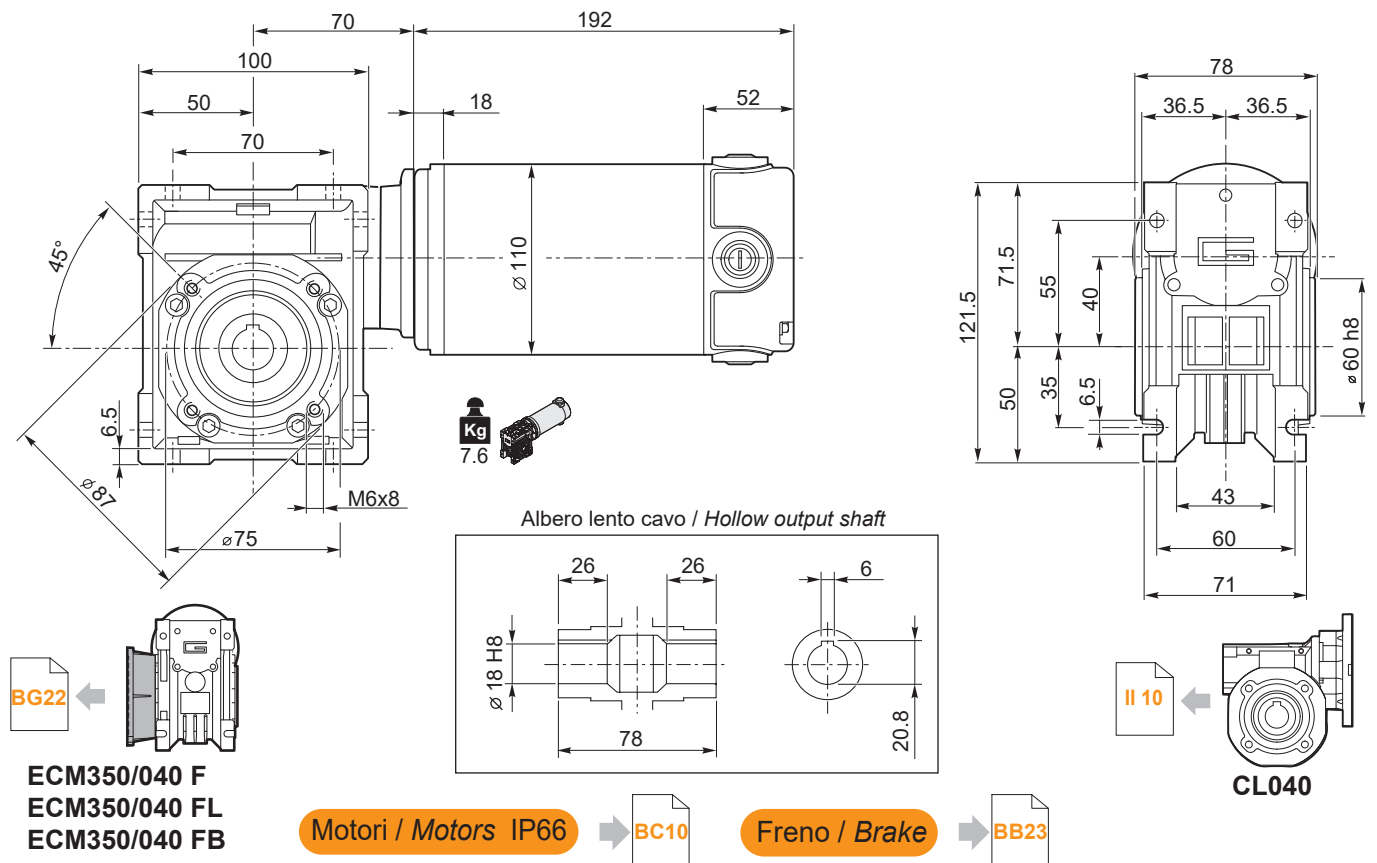
Dimensioni

Dimensions

ECM350/030 U



ECM350/040 U

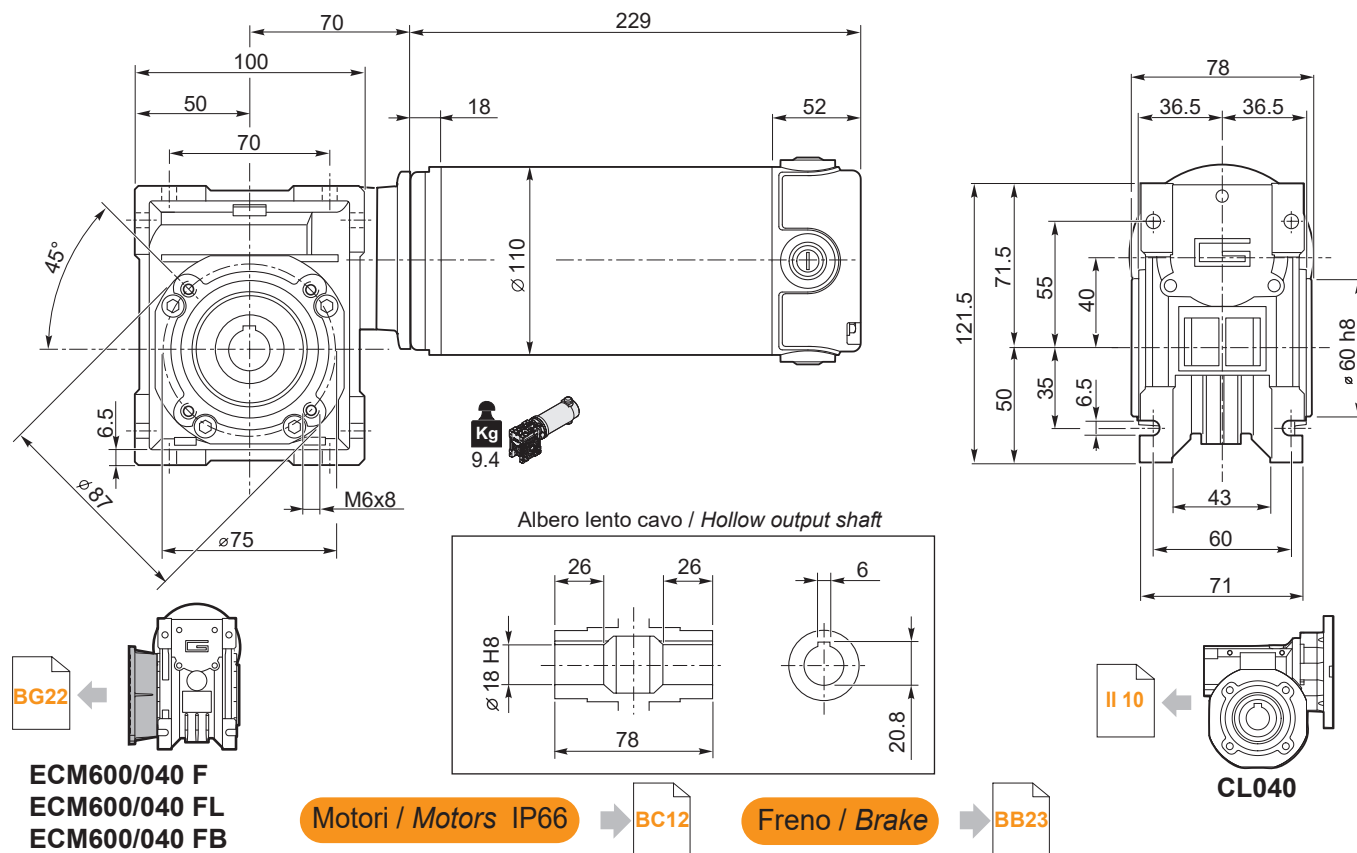


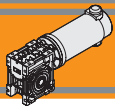


Dimensioni

Dimensions

ECM600/040 U

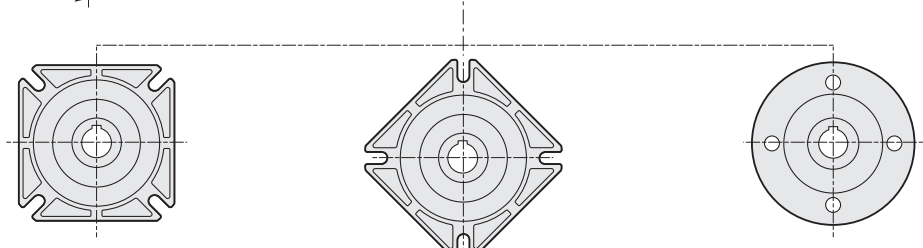
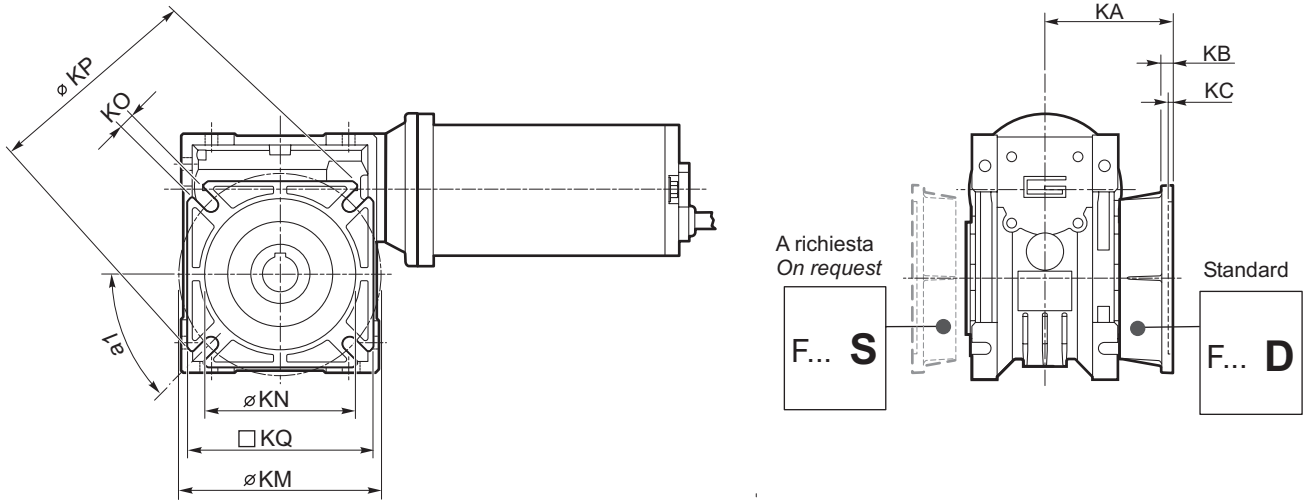




Dimensioni

Dimensions

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



- ..CM026 ../. F
- ..CM026 ../. F28
- ..CM026 ../. F30
- ..CM026 ../. F30S
- ..CM030 ../. F..
- ..CM040 ../. F..
- ..CM026 ../. F30C
- ..CM026 ../. F30SC
- ..CM026 ../. F100

	CM..F						CM..F28						CM..F30						CM..F30S ⁽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)	45°	45	6	4.5	55-69	40	6.5	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
026 (D14)							(n.4)																										

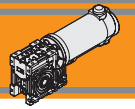
(1): F30S eseguita con F30 e distanziale di spessore 2 mm / F30S made with F30 and spacer with 2mm thickness

	CM..F30C						CM..F30SC ⁽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)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-
026 (D14)																									

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

*: Centraggio maschio / Male centering diameter

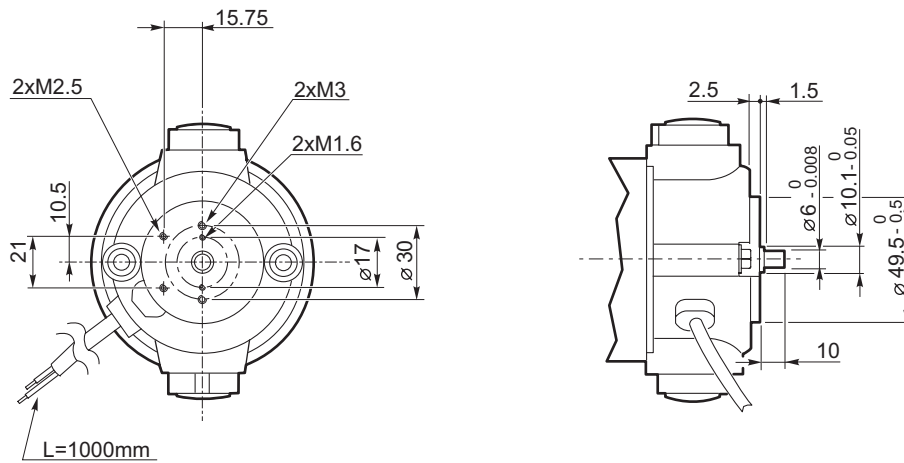
CM	CM..F						CM..FB						CM..FL												
	a1	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95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



Dimensioni

Dimensions

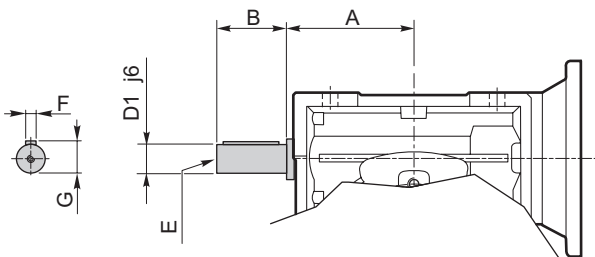
EC100.24E
EC180.24E



Opzioni

Options

VS - Vite sporgente / Extended input shaft



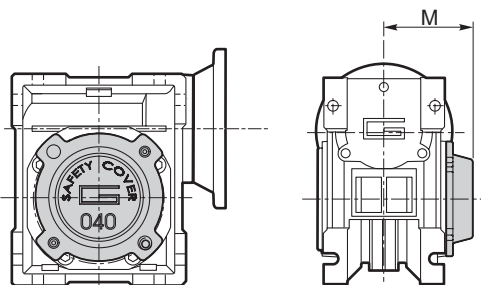
	A	B	D ₁ j6	E	F	G
CM 030	45	20	9	M4	3	10.2
CM 040	53	23	11	M5	4	12.5

Costruito su richiesta
Built on request

Accessori

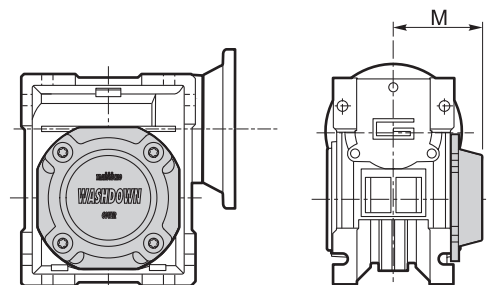
Accessories

SC - Safety cover

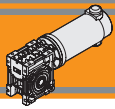


	M
CM 030	47
CM 040	54.5

WD - Kit washdown cover



	M
CM 030	48
CM 040	55.5

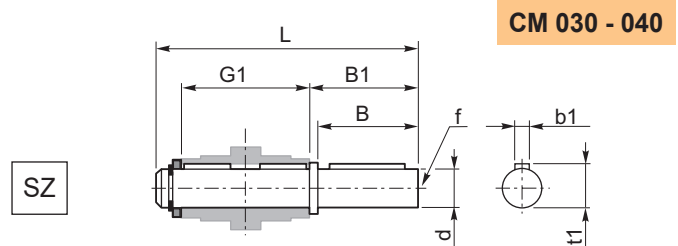
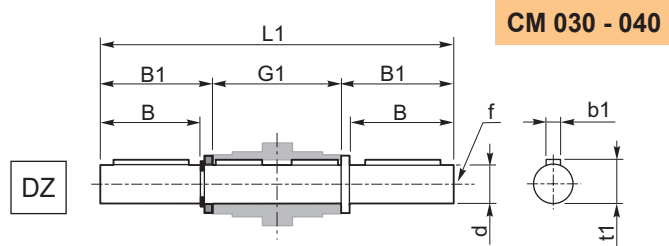


Accessori

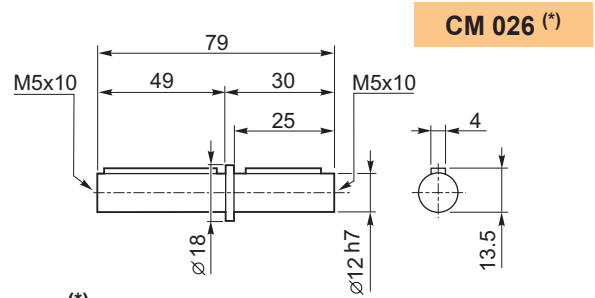
Accessories

Albero lento

Output shaft



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

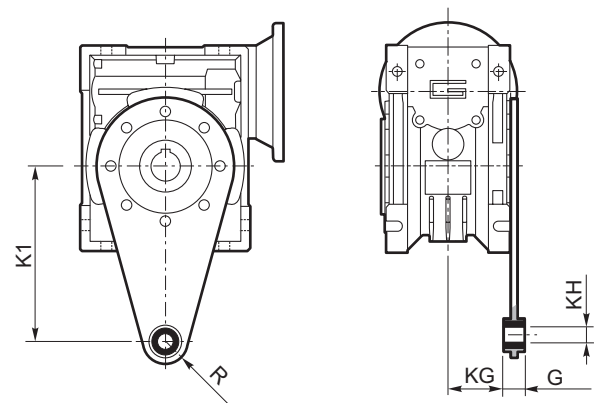


(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only

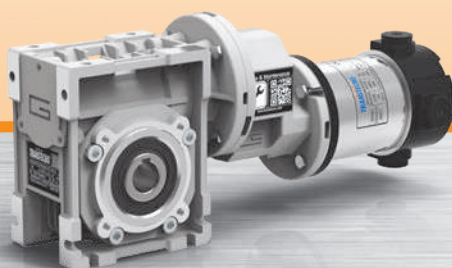
Braccio di reazione

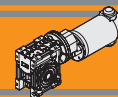
Torque arm

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



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

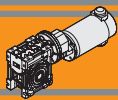




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Simbologia	<i>Symbols</i>	BH3
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Carichi radiali	<i>Radial loads</i>	BH3
Dati tecnici per servizio S2	<i>Technical data for S2 duty</i>	BH4
Motori applicabili	<i>Motor adapters</i>	BH5
Dimensioni	<i>Dimensions</i>	BH6
Opzioni	<i>Options</i>	BH13
Accessori	<i>Accessories</i>	BH13

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Caratteristiche tecniche

Technical features

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

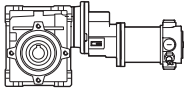
NDCMP neodymium permanent magnets and **ECMP** ferrite permanent magnets DC pre stage wormgearmotors range has the following main features:

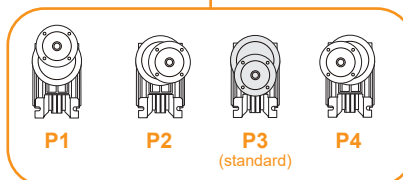
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 350W S2
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico

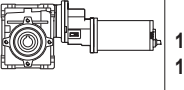
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 350W S2
- Die-cast aluminum housings
- Permanent synthetic oil long-life lubrication.

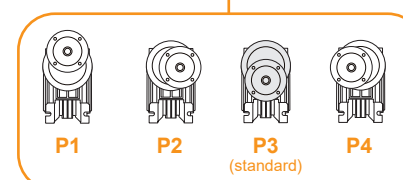
Designazione

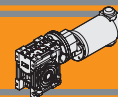
Classification

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



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





Designazione

Classification

Versione Riduttore Gearbox Version U FD FS FLD FLS FBD FBS	Albero di uscita Output shaft SZDX SZSX DZ	Braccio di reazione * Torque arm BRDX BRSX	Angolo Angle 90° 90° 180° 0° 270° 270°
---	---	--	---

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

Simbologia

Symbols

n_1 [min ⁻¹]	Velocità in ingresso / Input speed	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

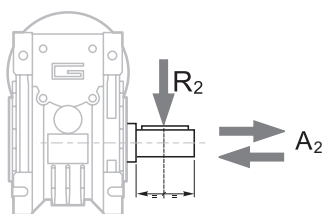
Lubrication

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

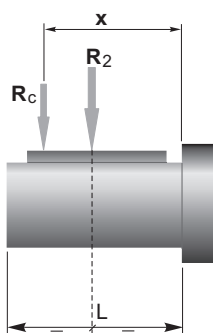
Radial loads



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:

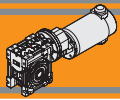


$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

$$R \leq R_c$$

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






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
	40	25	0.9	75		
	33	28	1.0	90		
	25	35	0.7	120		
	20	31	0.7	150		
	50	22	2.0	60		120/056/040
	40	26	1.7	75		
	33	30	1.9	90		
	25	36	1.3	120		
	20	43	1.1	150		
	17	48	0.9	180		
	13	55	0.7	240		
	10	51	0.7	300		

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

NOTA
Verificare sempre che la coppia M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio

NOTE
Please check that the output torque M_2 does not exceed the value in the grey areas

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

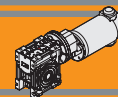
NOTE: for continuous or highly intermittent duty, please contact our technical service

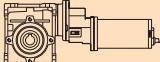
Dati tecnici elettrici

Electrical technical data

ND 120 → 

ND 180 → 


Dati tecnici per servizio S2
ECMP
Technical data for S2 duty

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
--------------	-------------------------------	---------------	----	---	---	----------------------------------

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version
--------------	-------------------------------	---------------	----	---	---	----------------------------------

100

(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					

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					

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					

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 M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio

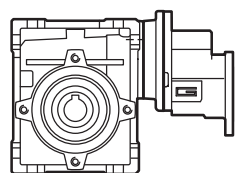
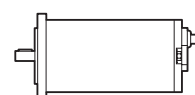
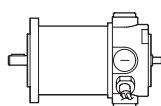
NOTE

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

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

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

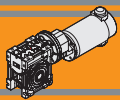
Dati tecnici elettrici
Electrical technical data

Motori applicabili
Motor adapters


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

150

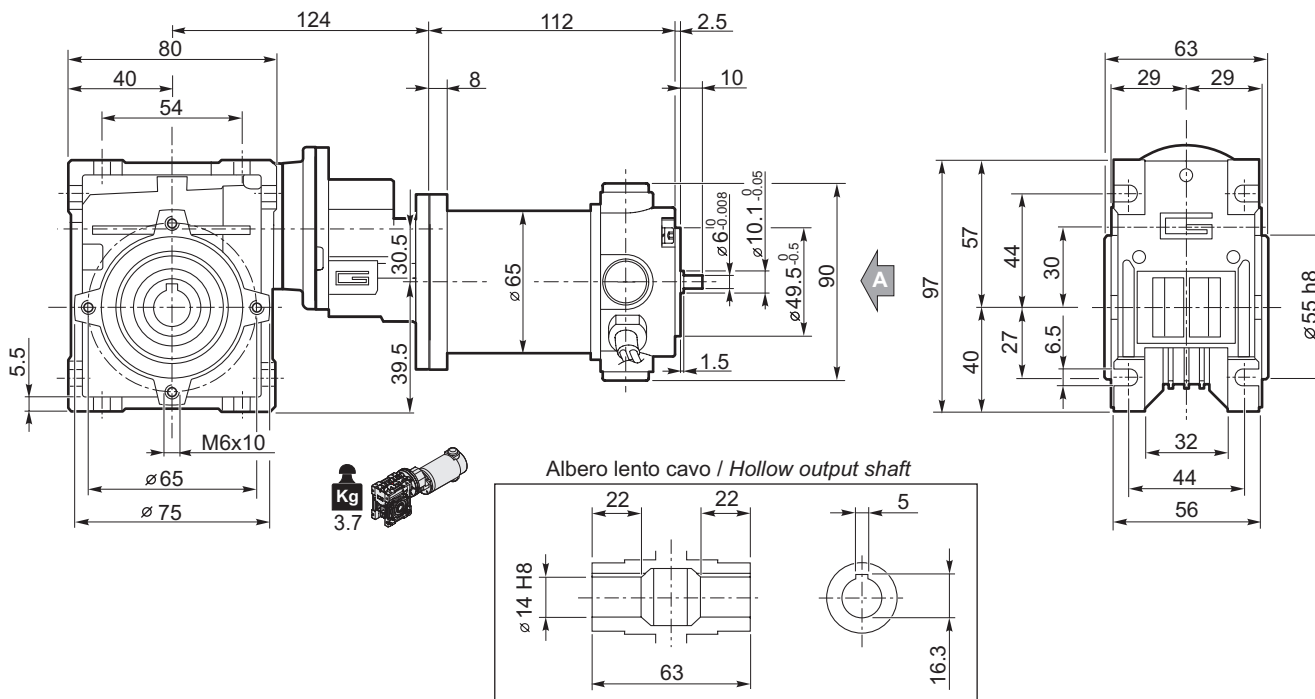
Rapporto di riduzione massimo i_{max}
Maximum ratio i_{max}



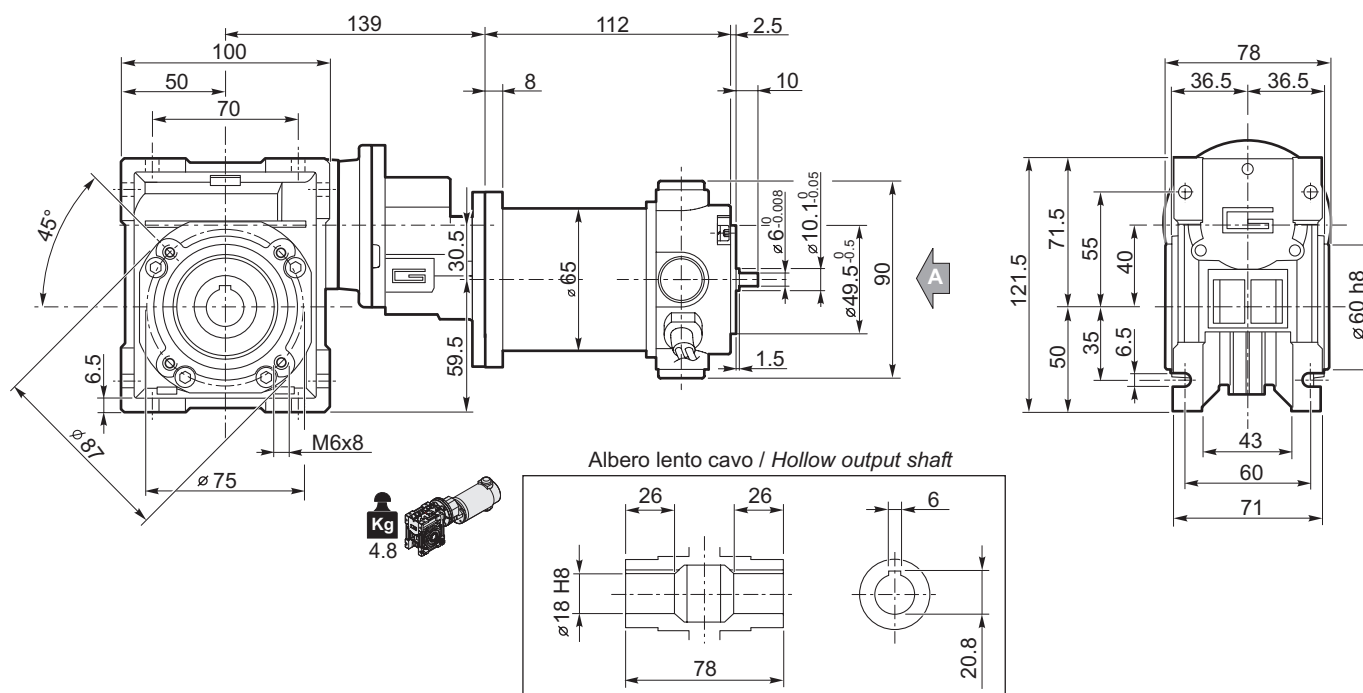
Dimensioni

Dimensions

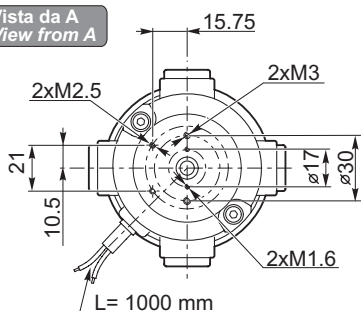
NDCMP120/056/030 U



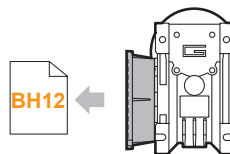
NDCMP120/056/040 U



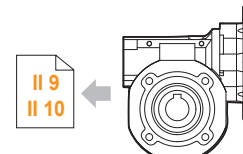
Vista da A
View from A



L= 1000 mm



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



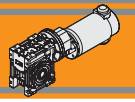
CL030
CL040

Freno / Brake

BA9

Encoder

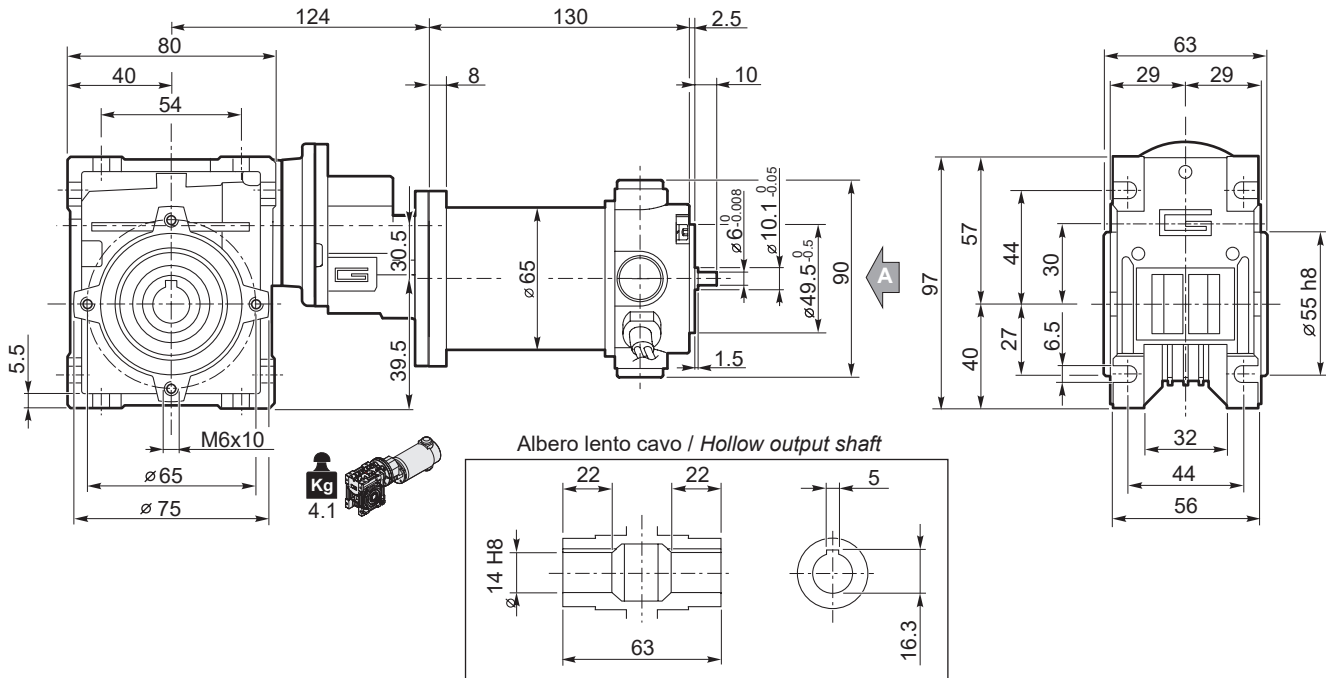
BA9



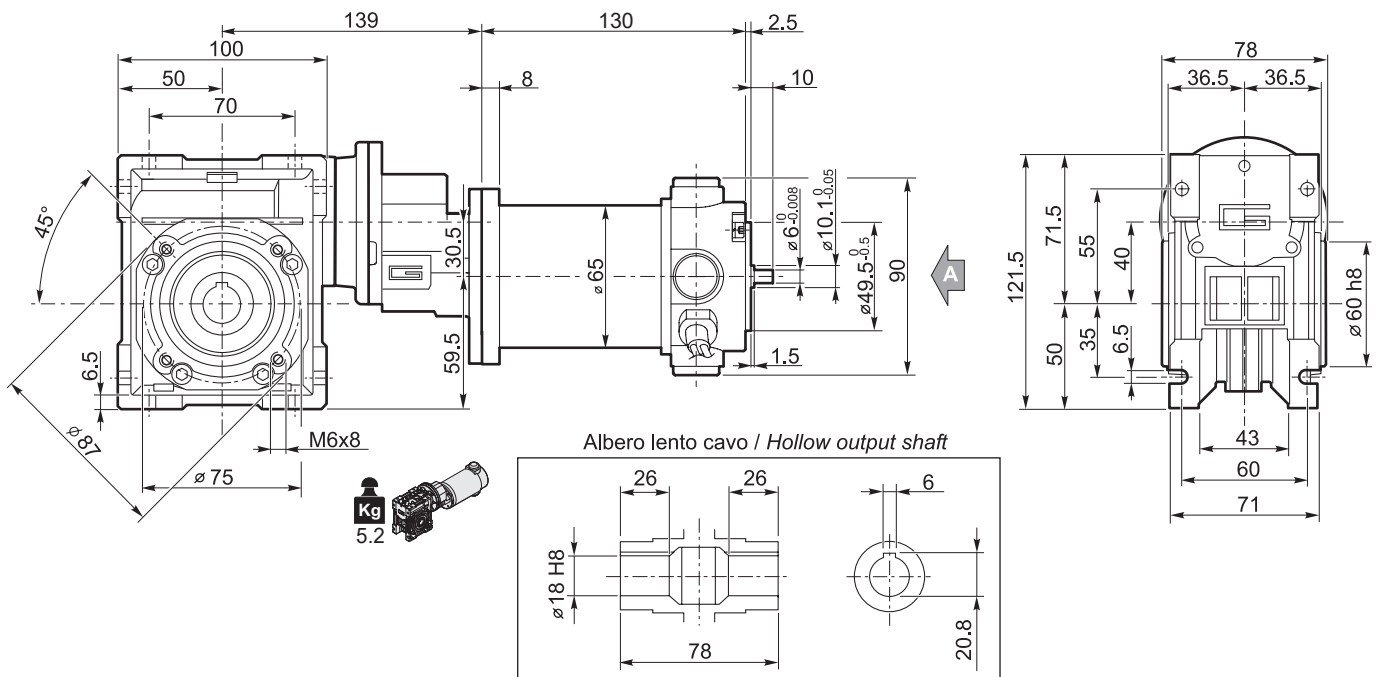
Dimensioni

Dimensions

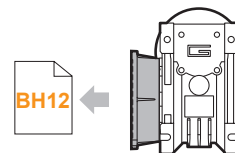
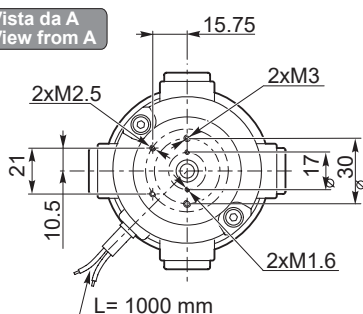
NDCMP180/056/030 U



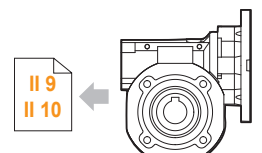
NDCMP180/056/040 U



Vista da A
View from A



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



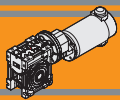
CL030
CL040

Freno / Brake



Encoder

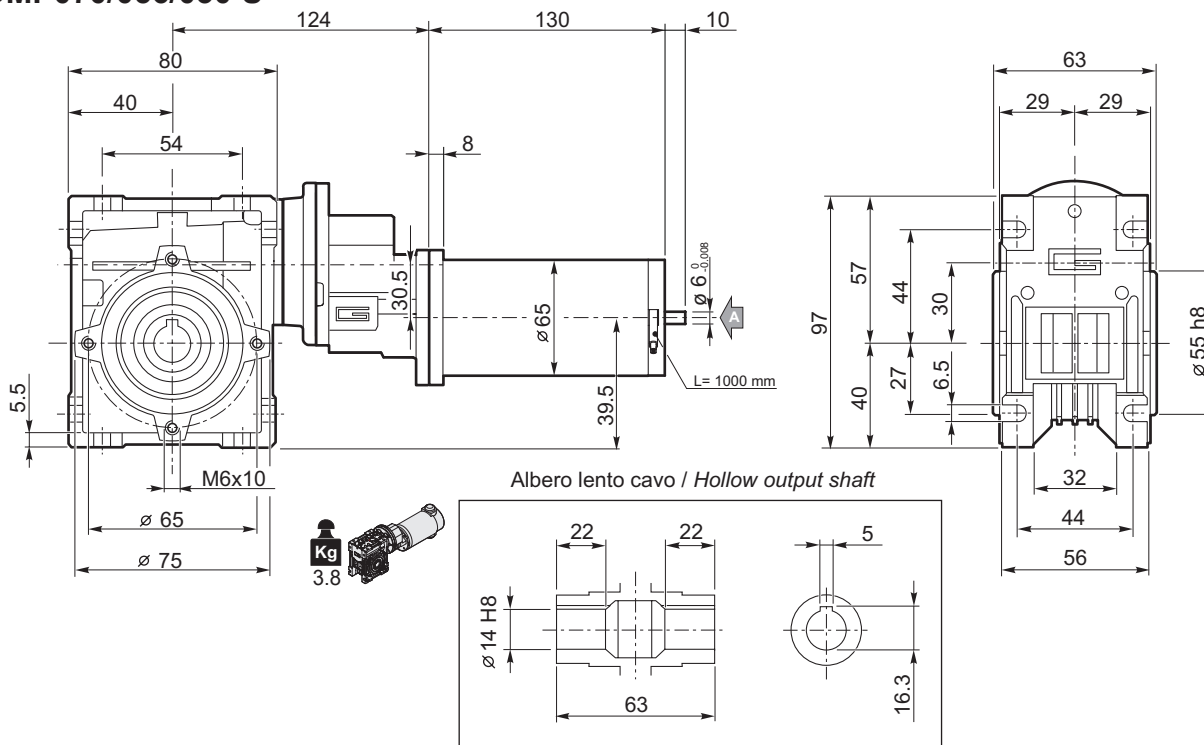




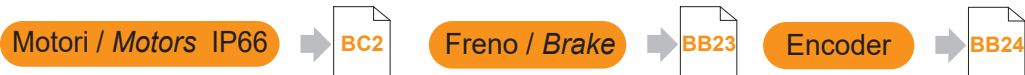
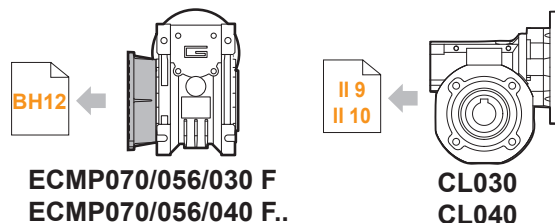
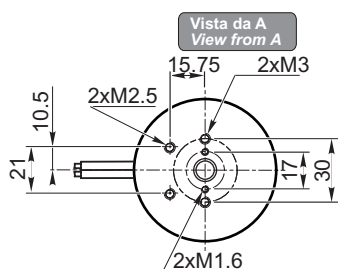
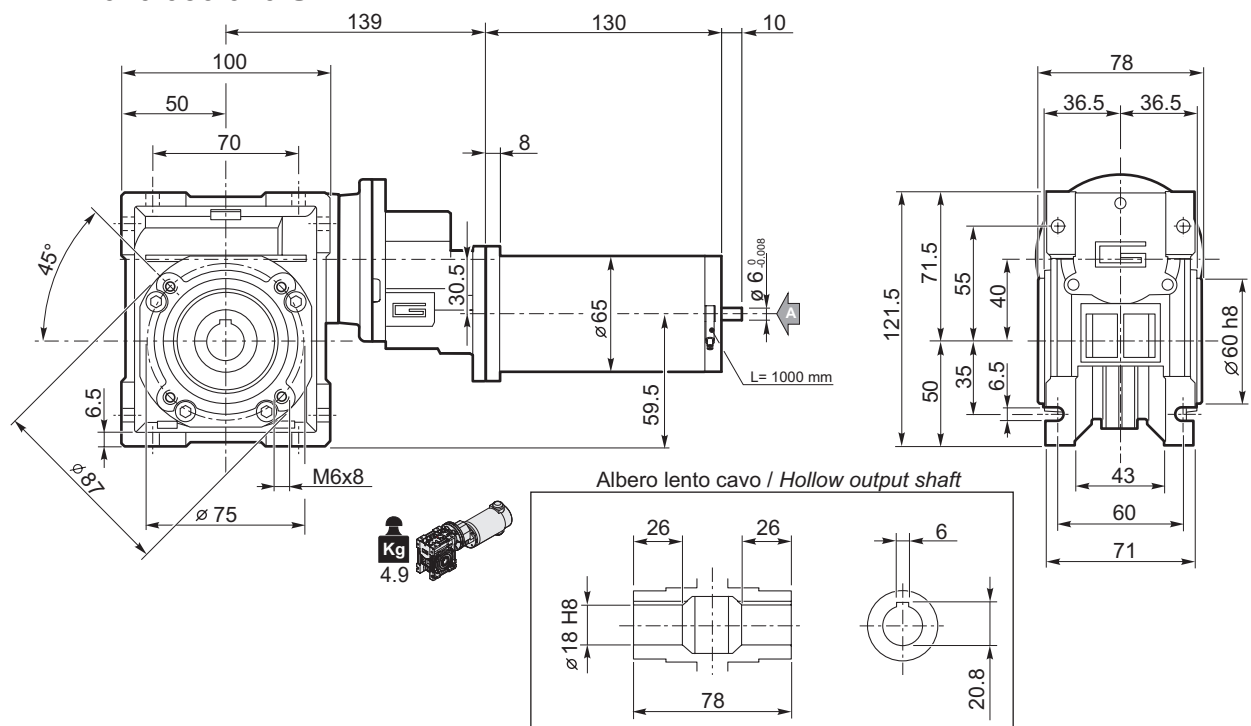
Dimensioni

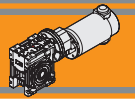
Dimensions

ECMP070/056/030 U



ECMP070/056/040 U

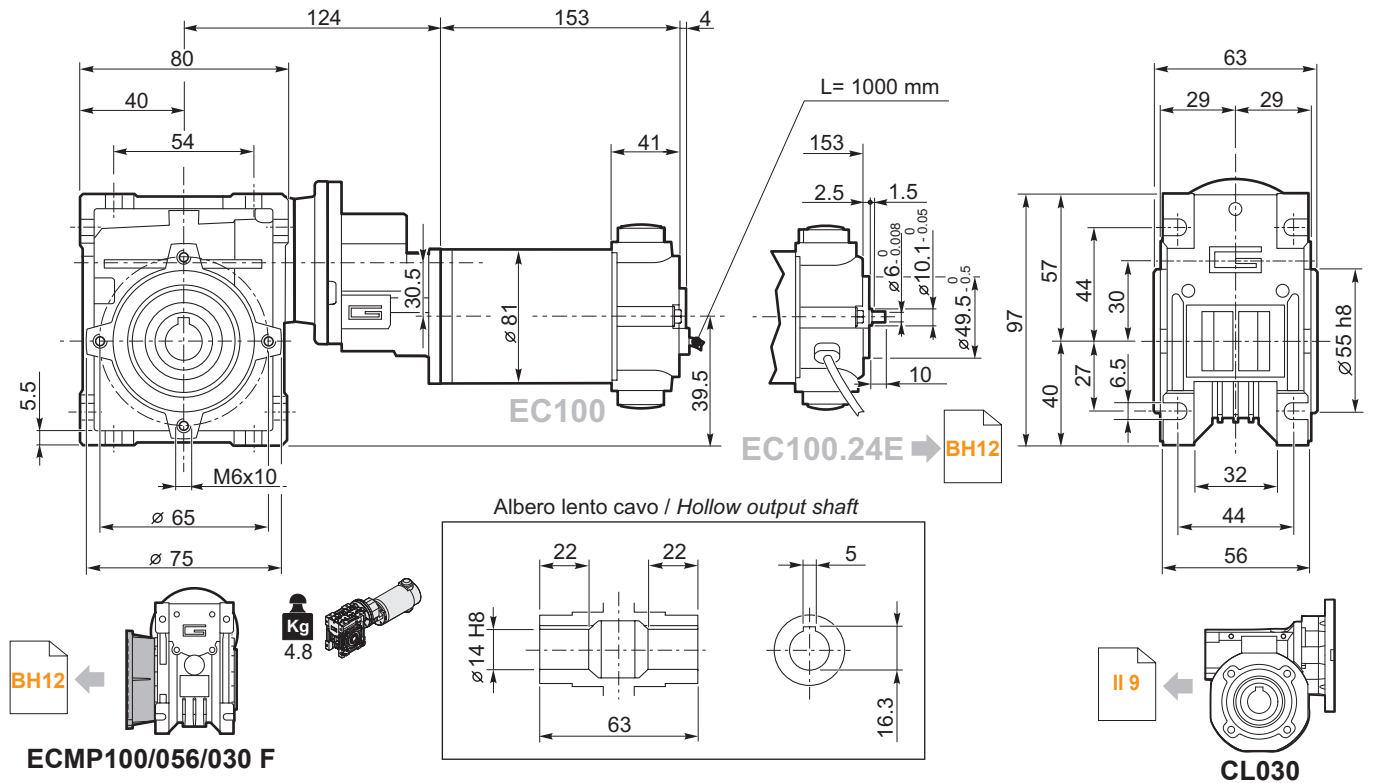




Dimensioni

Dimensions

ECMP100/056/030 U



Motori / Motors IP66

BC4

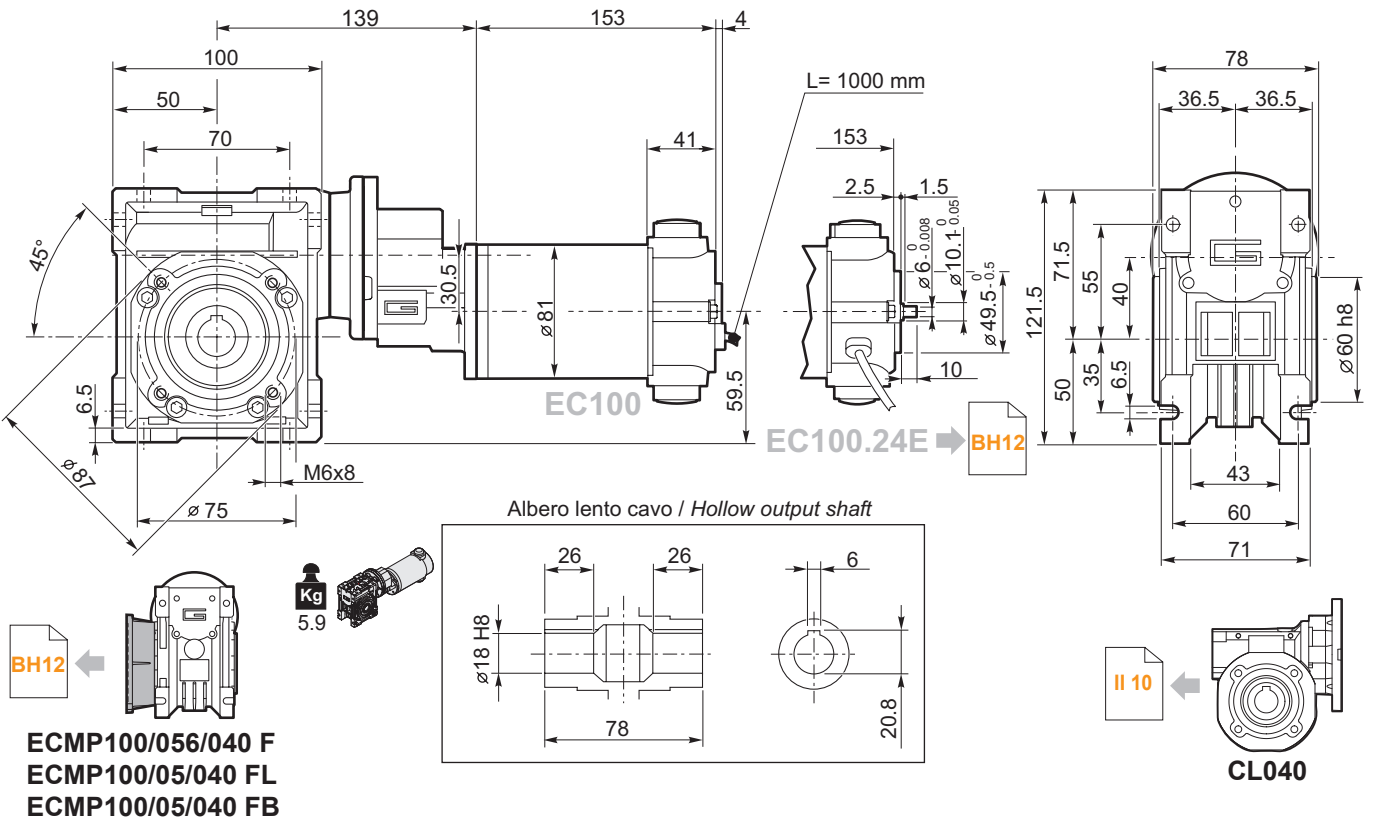
Freno / Brake

BB23

Encoder

BB24

ECMP100/056/040 U



Motori / Motors IP66

BC4

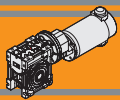
Freno / Brake

BB23

Encoder

BB24

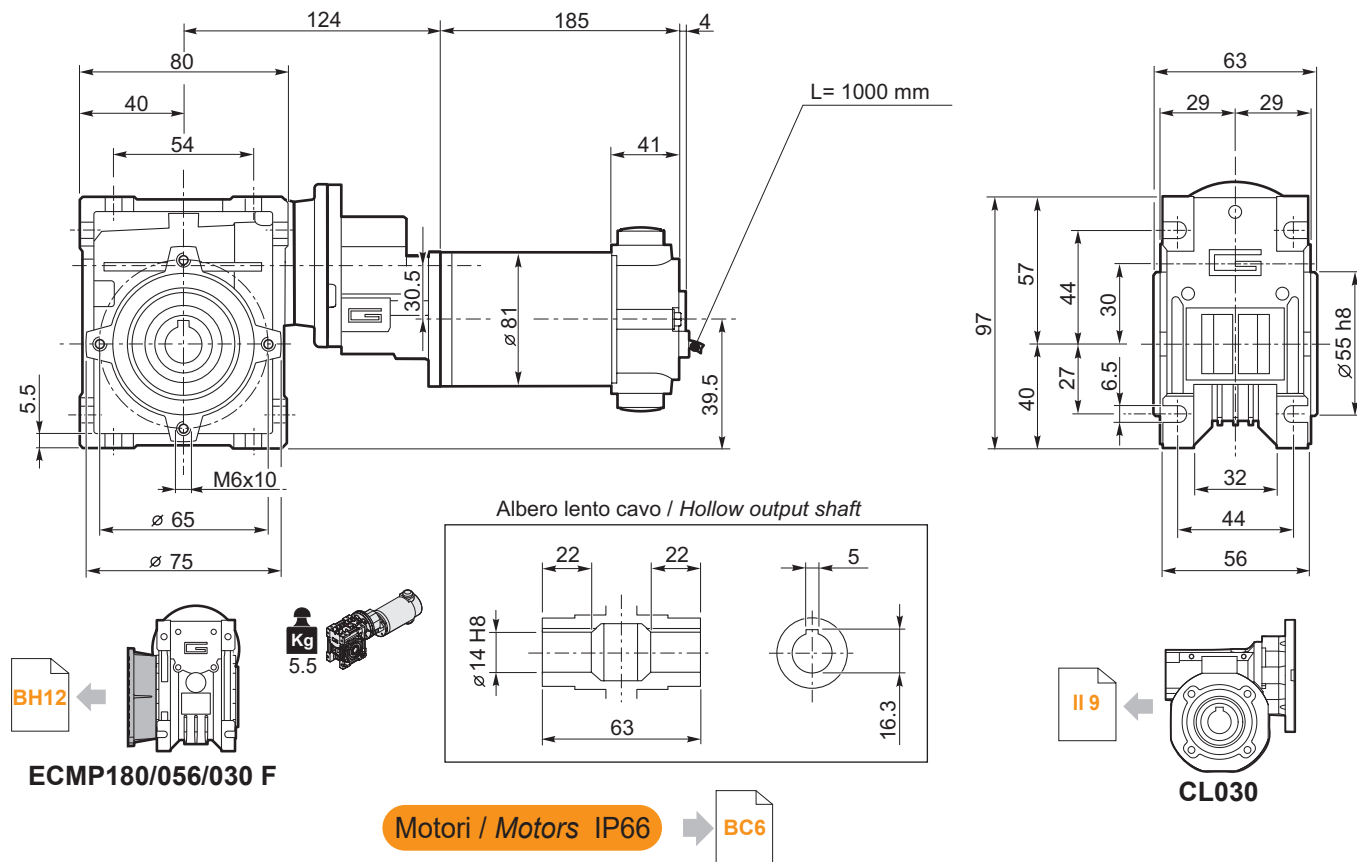
DC



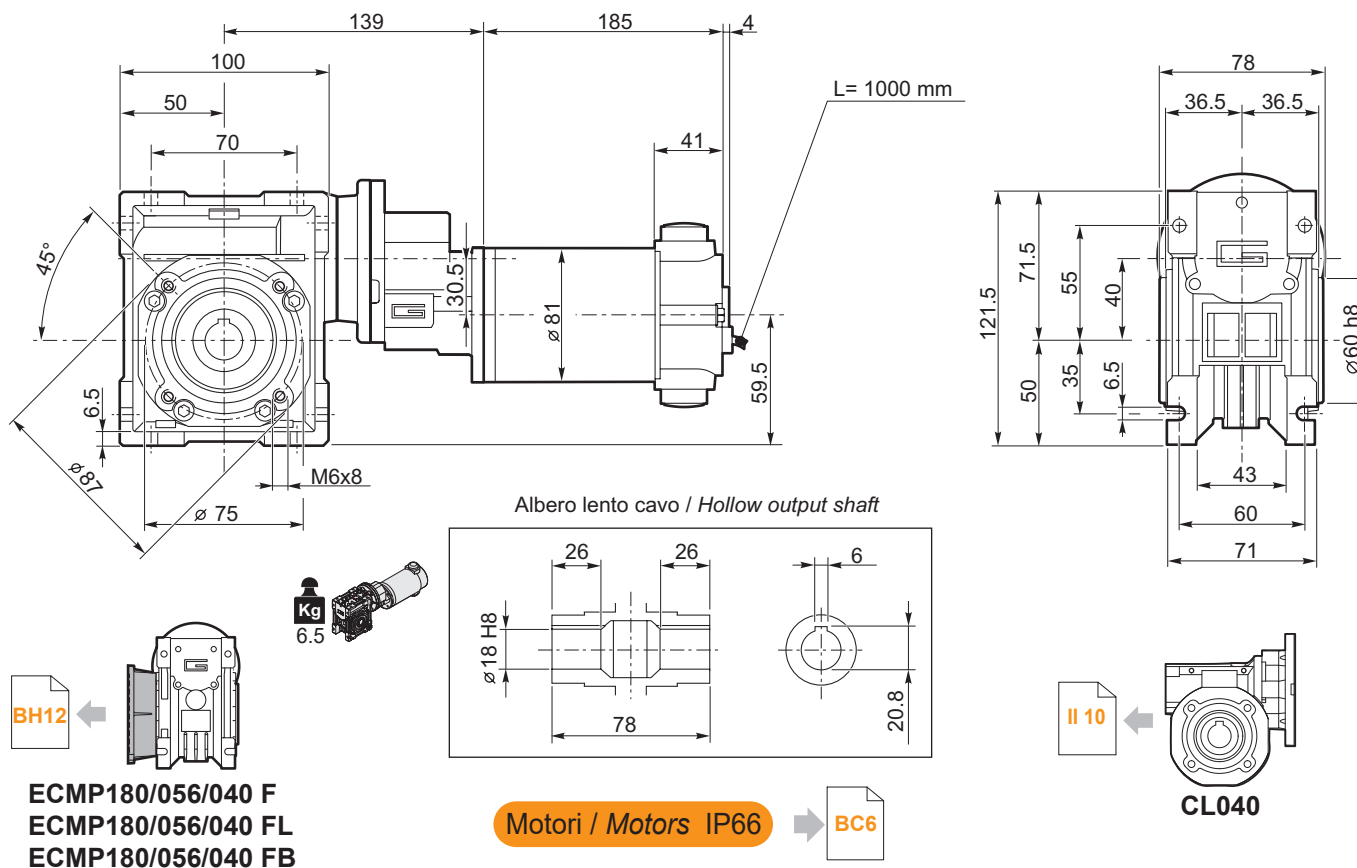
Dimensioni

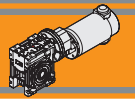
Dimensions

ECMP180/056/030 U



ECMP180/056/040 U

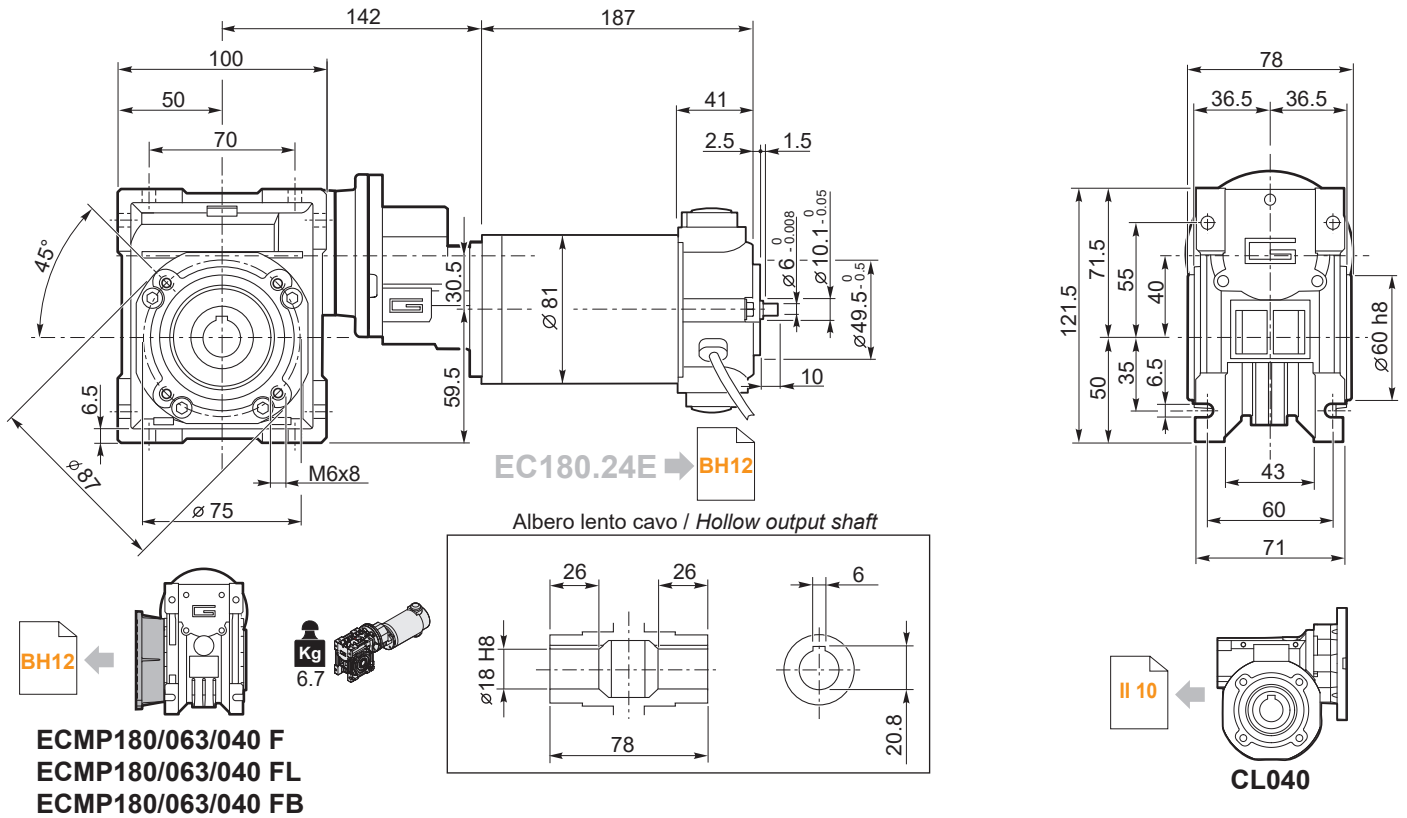




Dimensioni

Dimensions

ECMP180/063/040 U

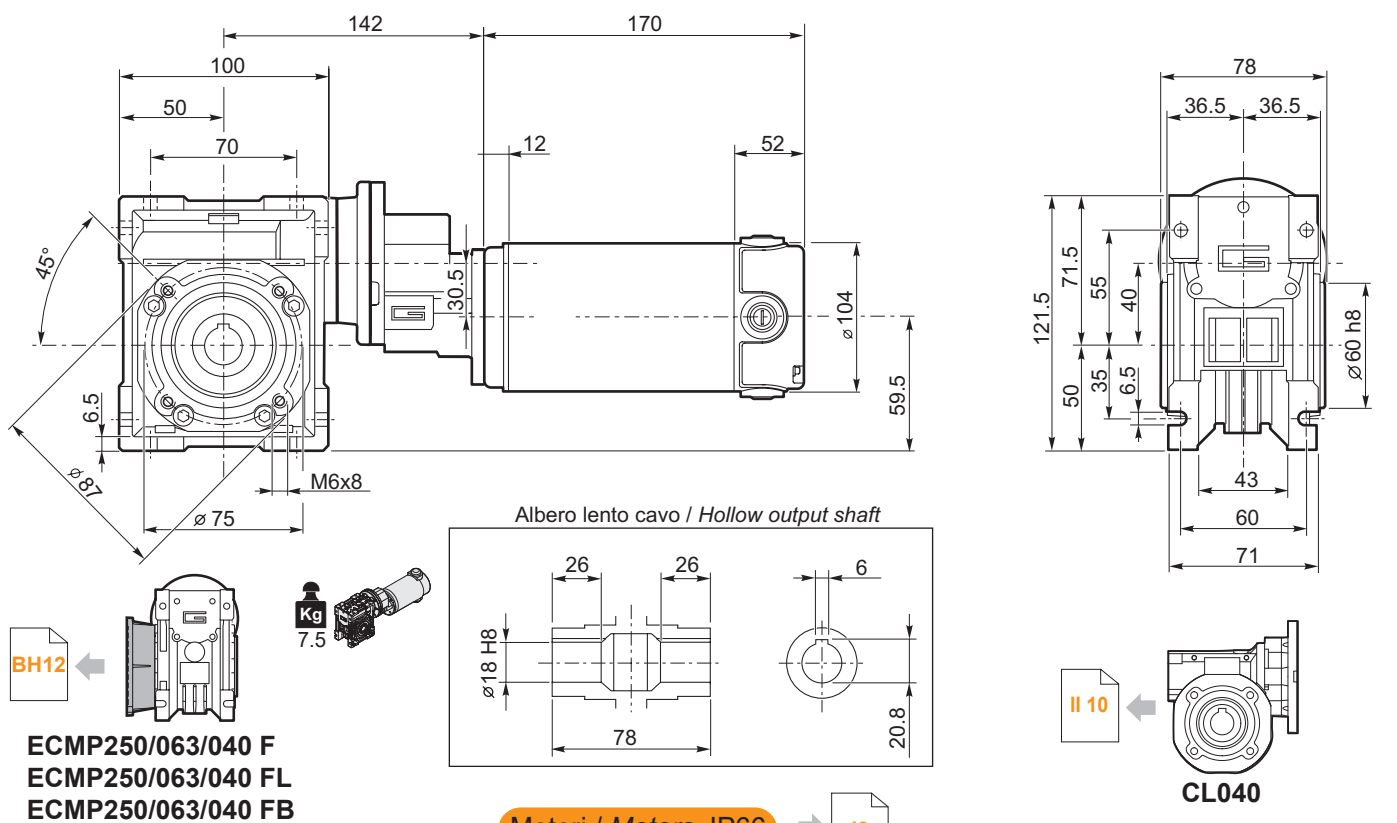


Motori / Motors IP66 → BC6

Freno / Brake → BB23

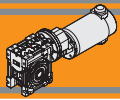
Encoder → BB24

ECMP250/063/040 U



Motori / Motors IP66 → I8

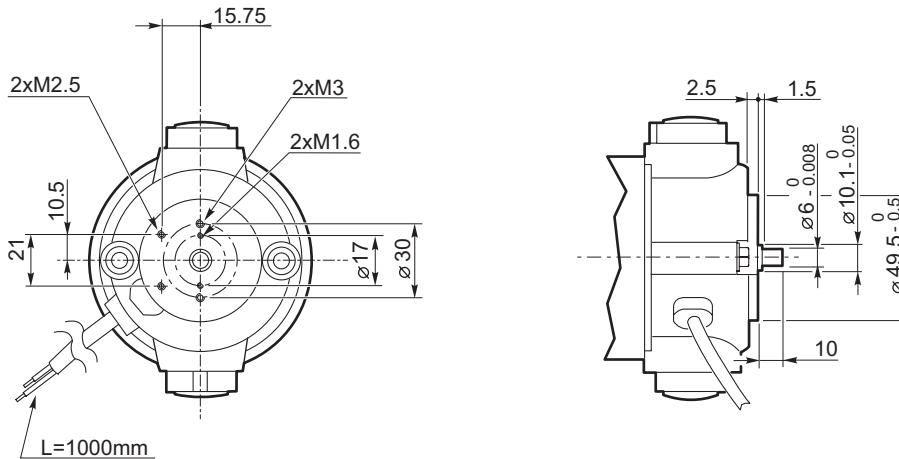
DC



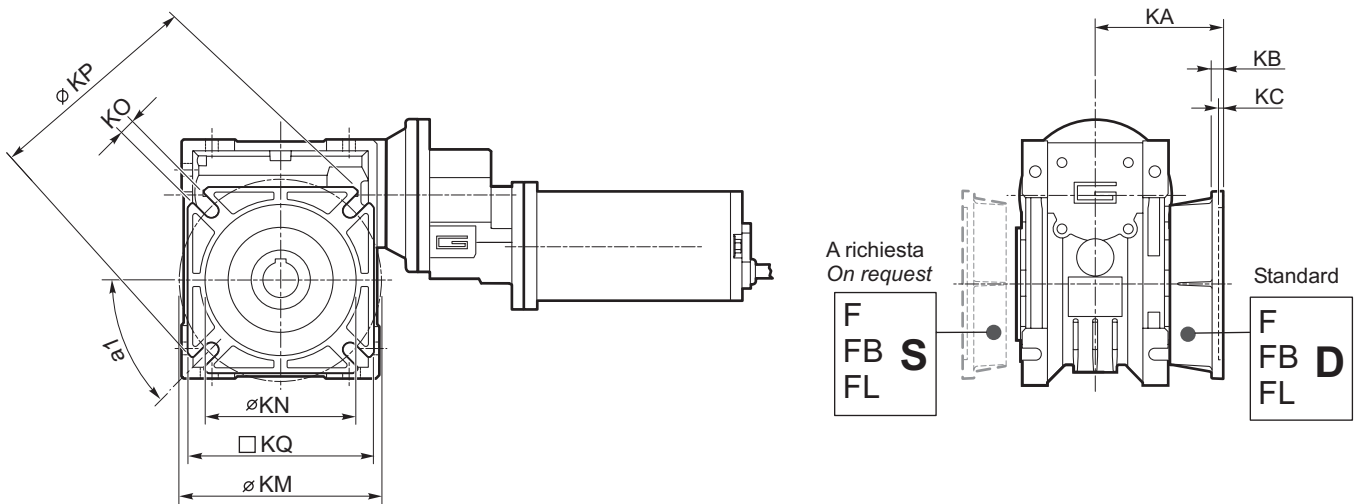
Dimensioni

Dimensions

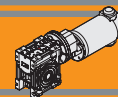
EC100.24E
EC180.24E



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



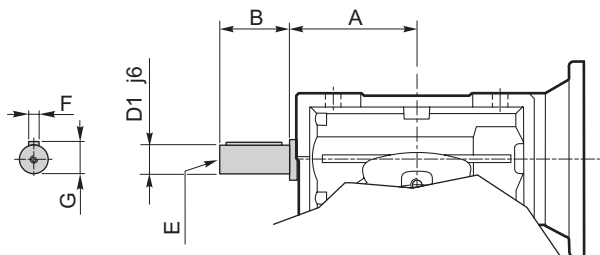
CMP	CMP..F								CMP..FB							CMP..FL									
	a1	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ
056/030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
056/040 063/040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	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

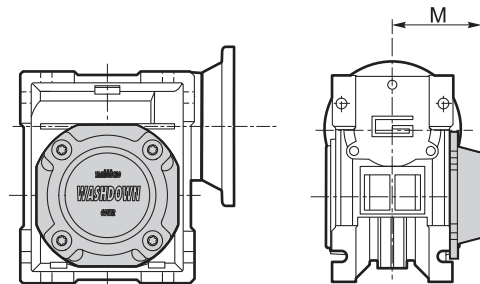
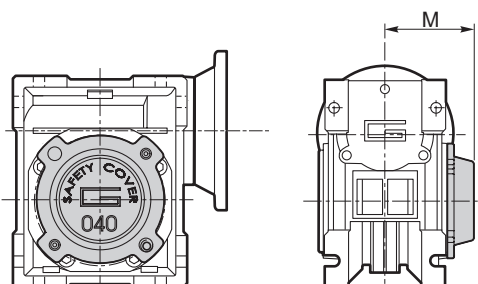
Costruito su richiesta
Built on request

Accessori

Accessories

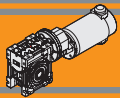
SC - Safety cover

WD - Kit washdown cover



	M
CM 030	47
CM 040	54.5

	M
CM 030	48
CM 040	55.5



Accessori

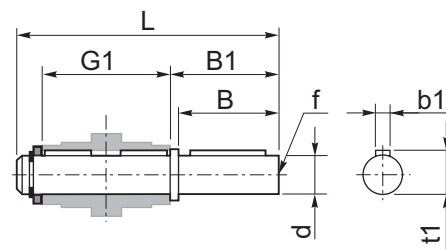
Accessories

Albero lento semplice e doppio

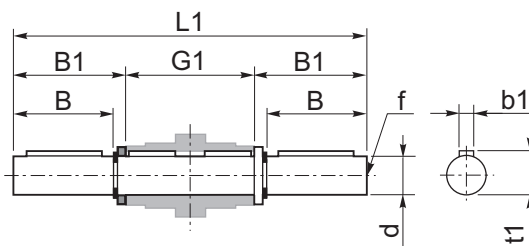
Single and double output shaft

CMP	d _{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



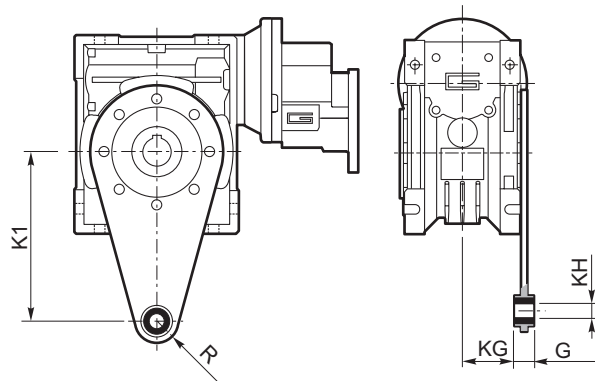
DZ



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



MINI  **TECNO**™ brand of
TRANSTECNO®



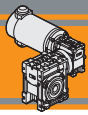
DC



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Simbologia	<i>Symbols</i>	B12
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Caratteristiche tecniche

Technical features

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

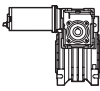
ECMM ferrite permanent magnets DC double reduction wormgearmotors range has the following main features:

- 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

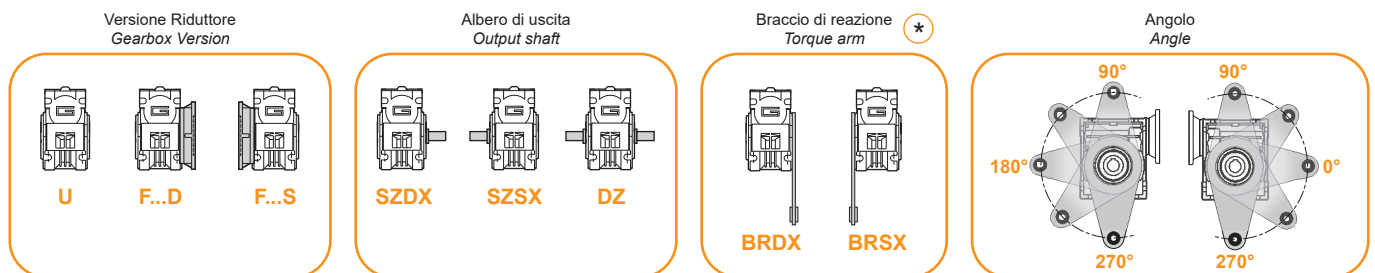
- Low voltage power supply 12/24Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 800W S2
- Die cast aluminium housing
- Permanent synthetic oil long life lubrication

Designazione

Classification

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



Simbologia

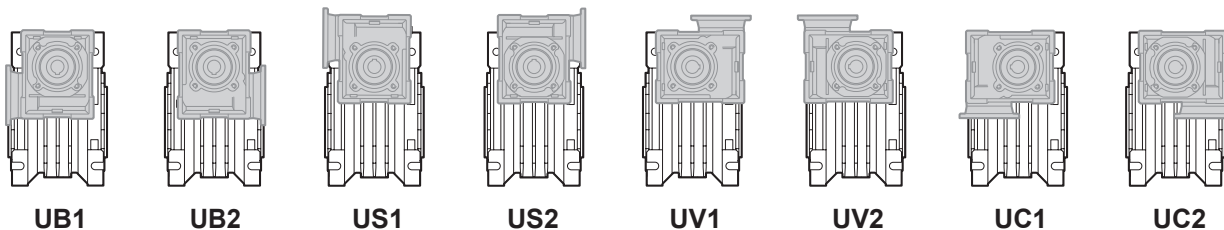
Symbols

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



Esecuzioni di montaggio

Mounting executions



Combinazioni rapporti

Combination ratio

CMM 026/026 - CMM 026/030 - CMM 026/040												
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 montaggio e non necessitano di manutenzione.

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

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

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version			
100							140									
(3000 min ⁻¹)	20.0	26	1.0	150	ECMM 070/026/026	12E/24E	(3000 min ⁻¹)	20.0	26	1.0	150	ECMM 100/026/026	120/240/24E			
	13.3	26	1.0	225					13.3	26	1.0			225		
	10.0	27	1.0	300					10.0	27	1.0			300		
	6.7	27	1.0	450					6.7	27	1.0			450		
	5.0	27	1.0	600					5.0	27	1.0			600		
	3.3	27	1.0	900					3.3	27	1.0			900		
	2.5	27	1.0	1200					2.5	27	1.0			1200		
	2.0	27	1.0	1500					2.0	27	1.0			1500		
	1.7	27	1.0	1800					1.7	27	1.0			1800		
	1.3	22	1.0	2400					1.3	22	1.0			2400		
	1.0	20	1.0	3000					1.0	20	1.0			3000		
	0.8	18	1.0	3600					0.8	18	1.0			3600		
	20.0	26	1.5	150			ECMM 070/026/030	12E/24E		20.0	37			1.1	150	ECMM 100/026/030
	13.3	39	1.0	225					13.3	39	1.0	225				
	10.0	40	1.0	300					10.0	40	1.0	300				
	6.7	40	1.0	450					6.7	40	1.0	450				
	5.0	40	1.0	600					5.0	40	1.0	600				
	3.3	40	1.0	900					3.3	40	1.0	900				
	2.5	40	1.0	1200					2.5	40	1.0	1200				
	2.0	40	1.0	1500					2.0	40	1.0	1500				
	1.7	40	1.0	1800					1.7	40	1.0	1800				
	1.3	34	1.0	2400					1.3	34	1.0	2400				
	1.0	30	1.0	3000					1.0	30	1.0	3000				
	0.8	27	1.0	3600					0.8	27	1.0	3600				
	20.0	27	3.2	150	ECMM 070/026/040	12E/24E				20.0	38	2.3	150	ECMM 100/026/040	120/240/24E	
	13.3	40	2.2	225					13.3	55	1.6	225				
	10.0	45	2.0	300					10.0	63	1.4	300				
	6.7	66	1.4	450					6.7	92	1.0	450				
	5.0	85	1.1	600					5.0	90	1.0	600				
	3.3	90	1.0	900					3.3	90	1.0	900				
	2.5	90	1.0	1200					2.5	90	1.0	1200				
	2.0	90	1.0	1500					2.0	90	1.0	1500				
	1.7	90	1.0	1800					1.7	90	1.0	1800				
	1.3	74	1.0	2400					1.3	74	1.0	2400				
	1.0	68	1.0	3000					1.0	68	1.0	3000				
	0.8	62	1.0	3600					0.8	62	1.0	3600				
	40.0	15	5.5	75			ECMM 070/030/040	12E/24E		40.0	21	3.9	75			ECMM 100/030/040
	30.0	20	4.2	100					30.0	28	3.0	100				
	20.0	28	3.2	150					20.0	38	2.3	150				
	15.0	36	2.1	200					15.0	50	1.5	200				
	12.0	43	1.6	250					12.0	59	1.1	250				
	10.0	46	2.0	300					10.0	63	1.4	300				
	7.5	55	1.3	400					7.5	77	1.0	400				
	6.0	63	1.1	500					6.0	87	0.8	500				
	5.0	86	1.0	600					5.0	119	0.8	600				
	4.0	103	0.9	750					4.0	90	1.0	750				
	3.3	118	0.8	900					3.3	90	1.0	900				
	2.5	74	1.0	1200					2.5	74	1.0	1200				
	2.0	90	1.0	1500					2.0	90	1.0	1500				
	1.7	90	1.0	1800			1.7	90	1.0	1800						
	1.3	74	1.0	2400			1.3	74	1.0	2400						
	1.0	68	1.0	3000			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 M_2 utilizzata non ecceda il valore indicato nelle caselle in grigio




NOTE:




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



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

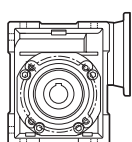
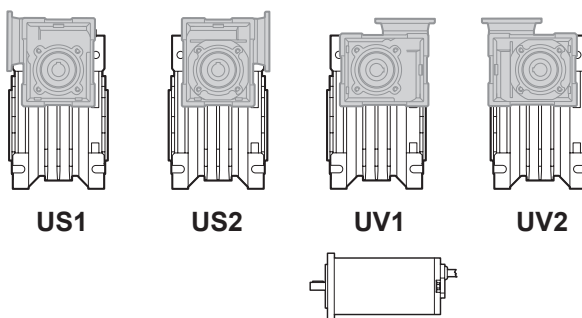
Dati tecnici elettrici

Electrical technical data



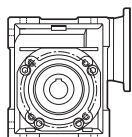
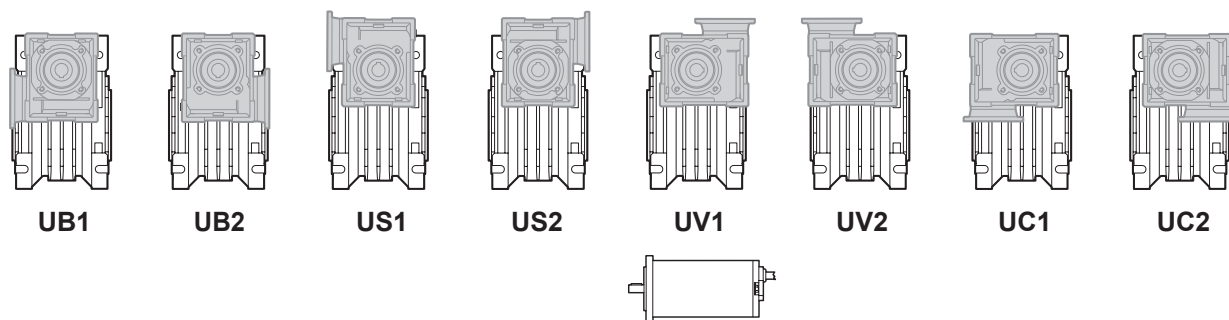
Motori applicabili

Motor adapters



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

150 - 3600 Rapporti di riduzione i / Ratio i



		EC						
		070.12E 070.24E	100.120 100.240	100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240
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

**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	(*)	
026/026 (D11)	6	—	37	49	49	5	15	21	76	7	—	4	12.8	3.3	
026/026												4	13.8		
026/026 (D14)												5	16.2		
026/030	6.5	75	44	57	49	5.5	22	27	81	M6x10(n.4)	90°	5	16.3	4.1	
026/040	6.5	87	55	71.5	49	6.5	26	35	91.5	M6x8(n.4)	45°	6	20.8	5.2	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	5.6	

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

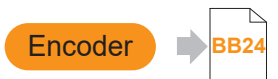
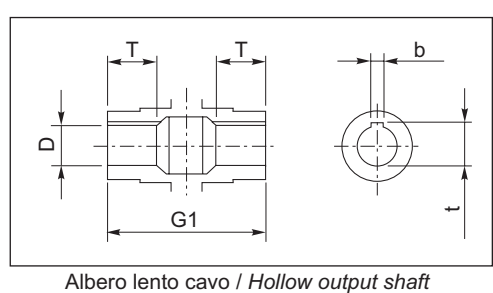
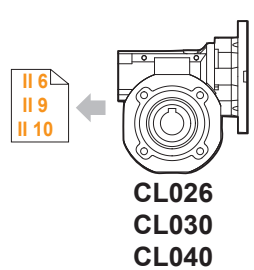
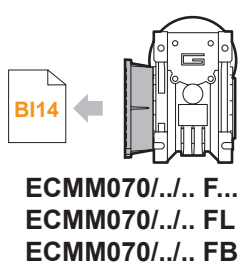
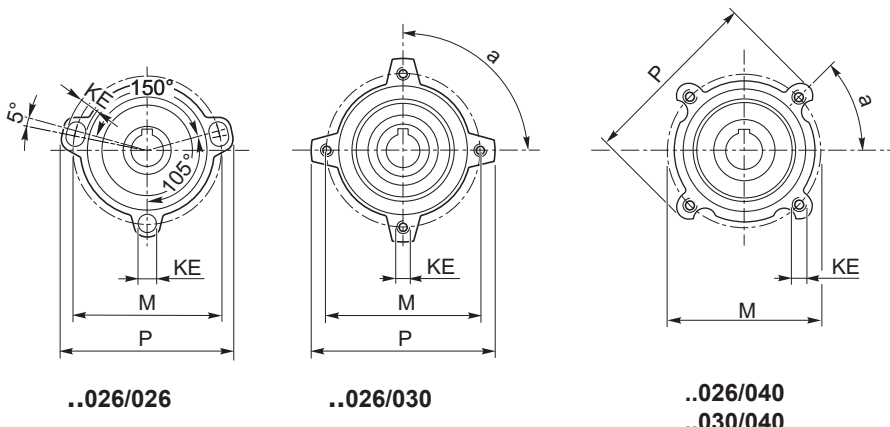
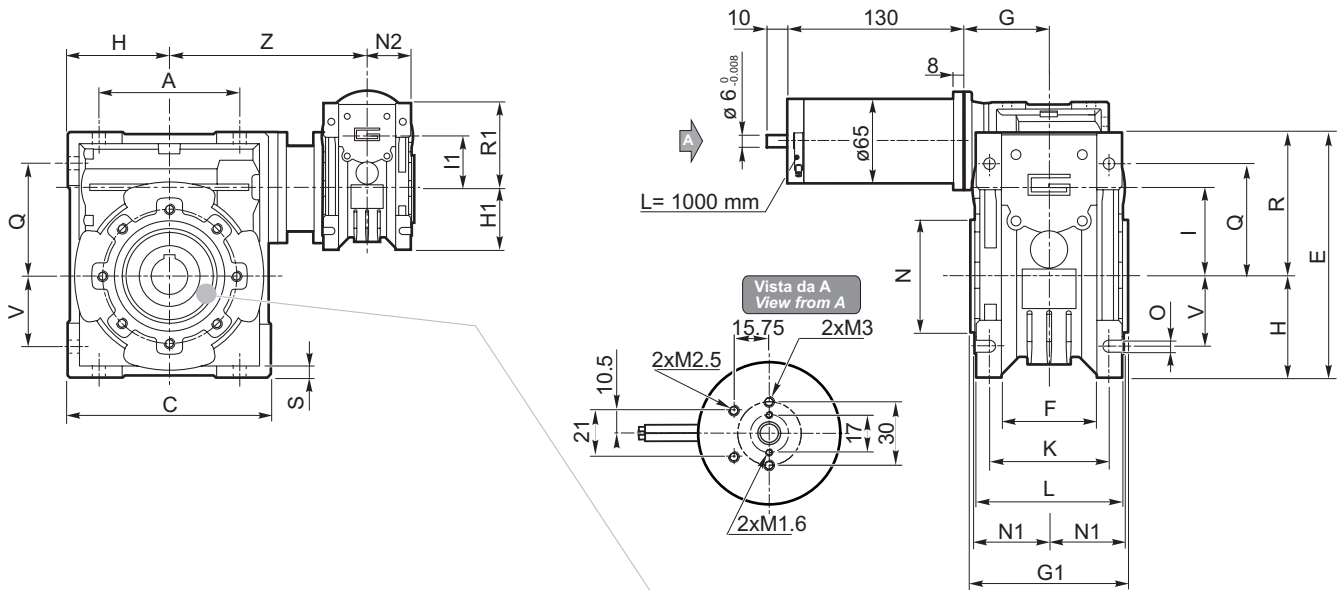
Note: The weight in kg is referred to the gearmotor ECMM 070 /...



Dimensioni

Dimensions

ECMM070/.../..U



DC

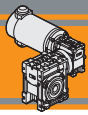
**Dimensioni****Dimensions**

CMM..U - CMM..F...																	
	A	C	D _{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

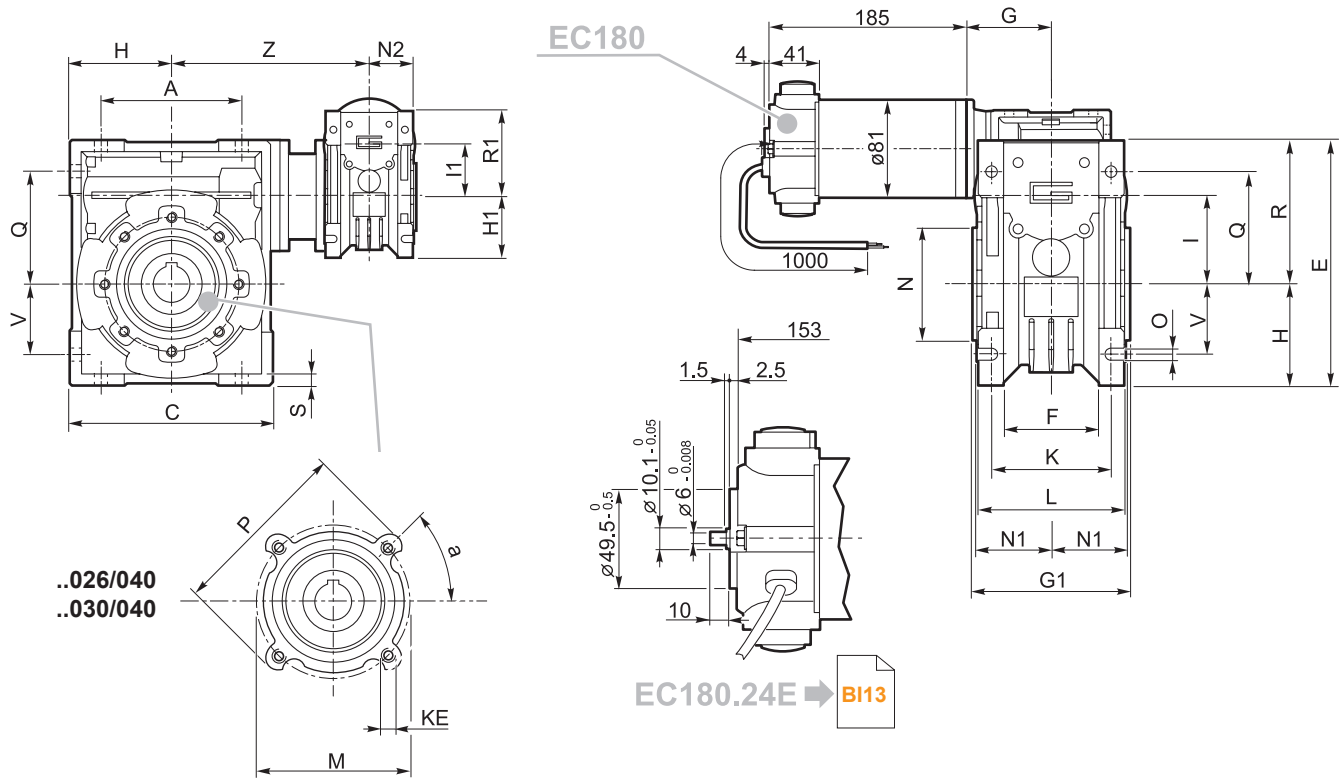
Dimensions

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

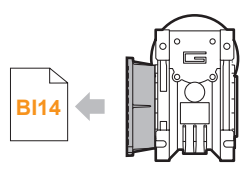
(*) **Nota:** Il peso in kg si riferisce al motoriduttore ECMM 180 /...
Note: The weight in kg is referred to the gearmotor ECMM 180 /...

ECMM180/...U

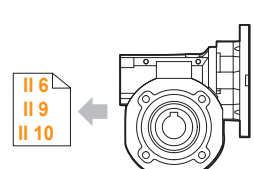


..026/040
..030/040

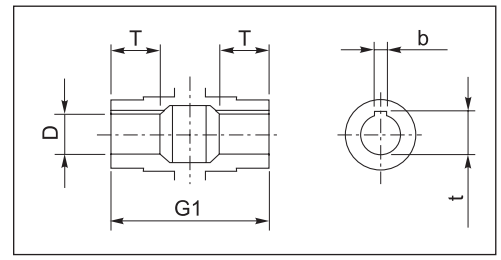
EC180.24E → BI13



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



CL026
CL030
CL040



Albero lento cavo / Hollow output shaft

Motori / Motors IP66 → BC6

Freno / Brake → BB23

Encoder → BB24



Dimensioni

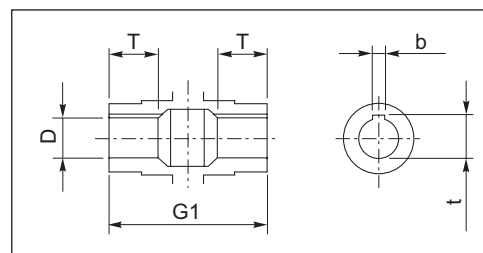
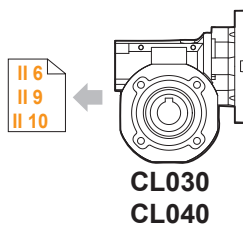
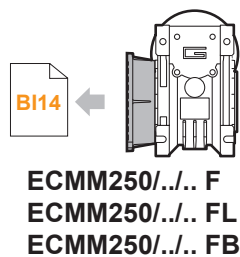
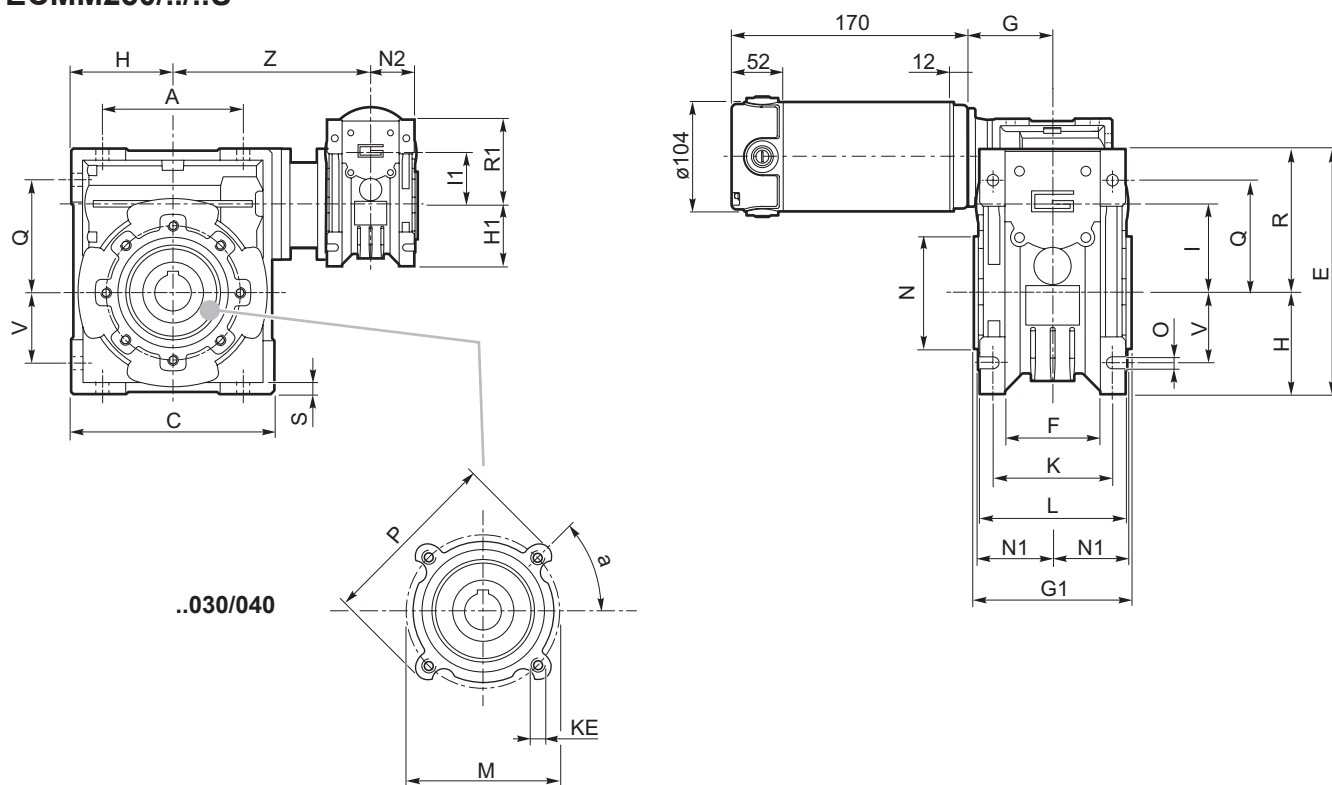
Dimensions

CMM..U - CMM..F - CMM..FB - CMM..FL																	
	A	C	D _{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



Albero lento cavo / Hollow output shaft

Motori / Motors IP66






Dimensioni

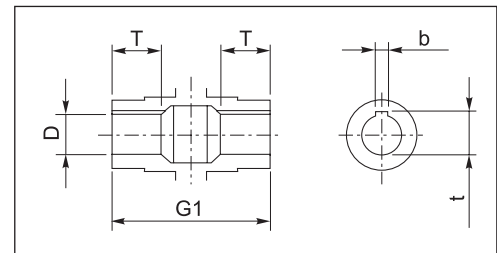
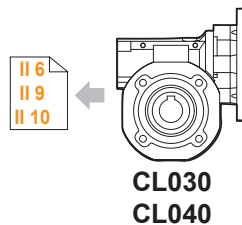
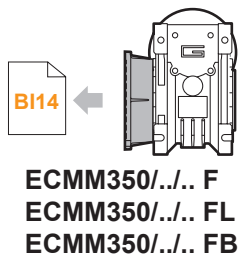
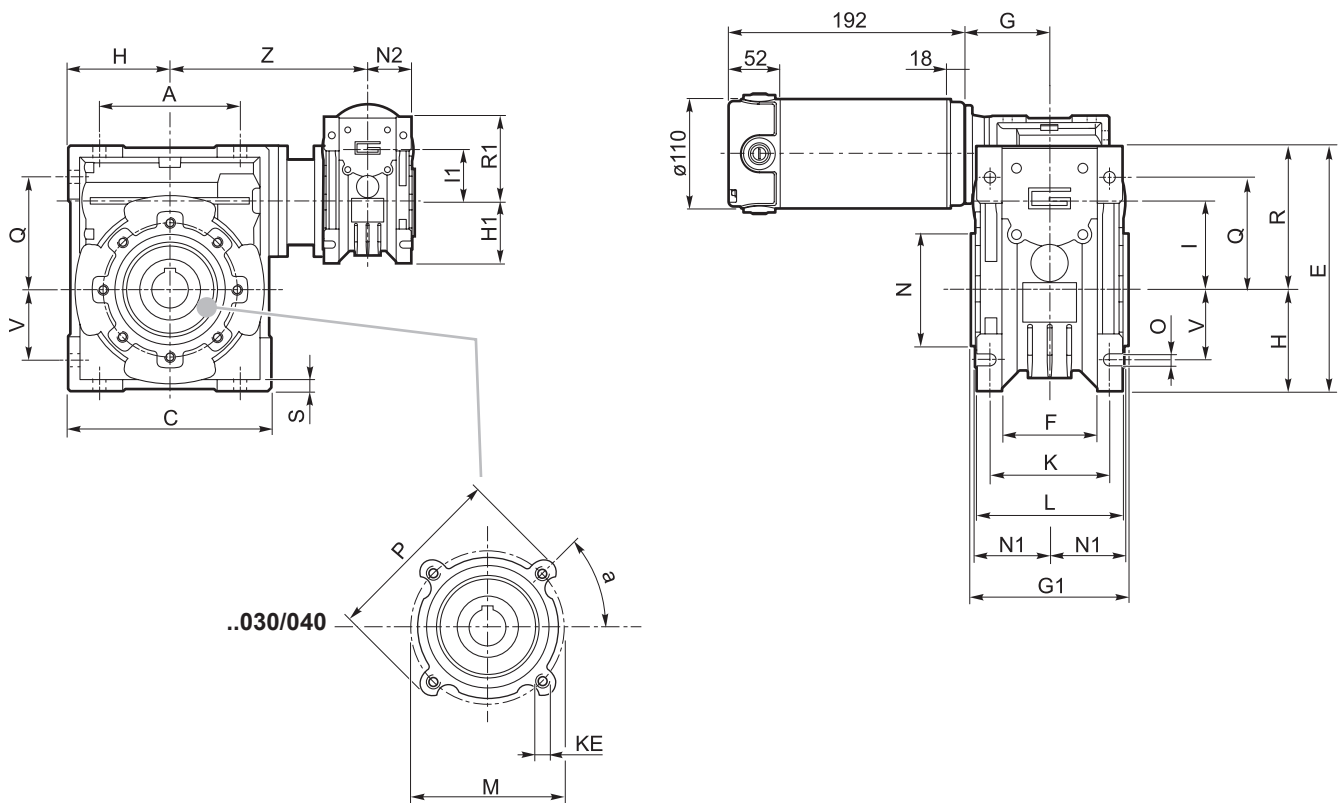
Dimensions

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

CMM..U - CMM..F - CMM..FB - CMM..FL															
	O	P	Q	R	R1	S	T	V	Z	KE	a	b	t	 (*)	
030/040	6.5	87	55	71.5	57	6.5	26	35	122	M6x8(n.4)	45°	6	20.8	9.2	

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

ECMM350/...U

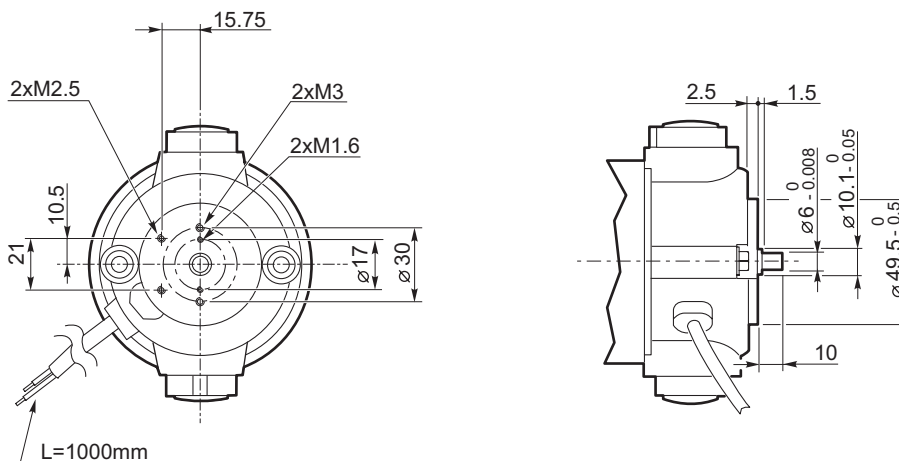




Dimensioni

Dimensions

EC100.24E
EC180.24E

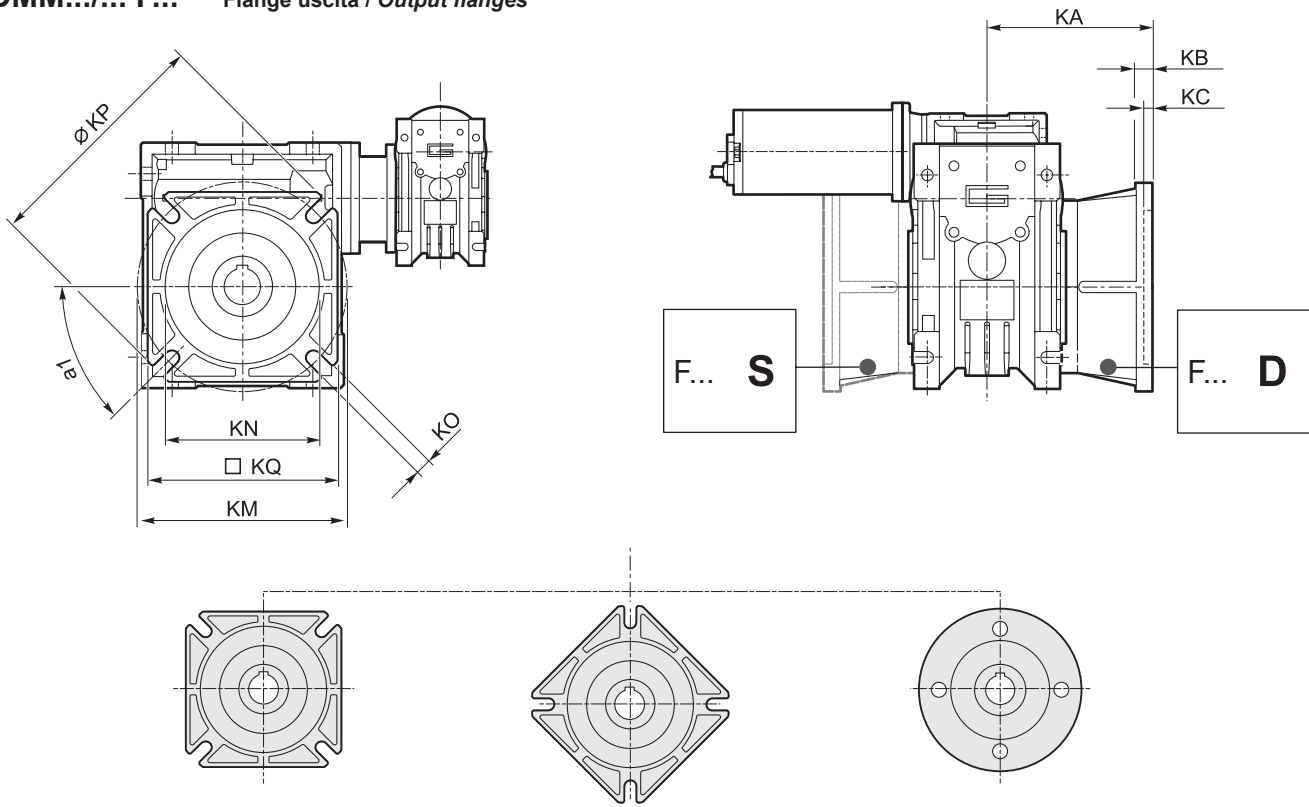




Dimensioni

Dimensions

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



- ..ECMM.../.../026.. F
..ECMM.../.../026.. F28
..ECMM.../.../026.. F30
..ECMM.../.../026.. F30S
...ECMM.../.../030.. F..
..ECMM.../.../040.. F..
- ..ECMM.../.../026.. F30C
..ECMM.../.../026.. F30SC
- ..ECMM.../.../026.. F100

	CM..F						CM..F28						CM..F30						CM..F30S ⁽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)	45°	45	6	4.5	55-69	40	6.5 (n.4)	75	70	44	6.5	5	56-64	40	6.5	70	60	48	6.5	5	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70
026 (D14)																																	

(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)	-	48	6.5	7	68	50	6.5	80	70	50	8.5	7	68	50	6.5	80	70	51.5	8	2 *	86	45	6.5	100	-
026 (D14)																									

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

*: Centraggio maschio / Male centering diameter

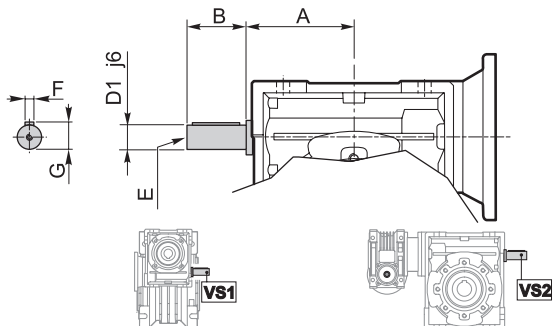
CM	CM..F						CM..FB						CM..FL												
	a1	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ	KA	KB	KC	KM	KN _{H8}	KO	KP	KQ
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
040	45°	67	7.5	4	80-95	60	9(n.4)	110	95	80	8.5	5	115-125	95	9.5(n.4)	140	112	97	7.5	4.5	80-95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

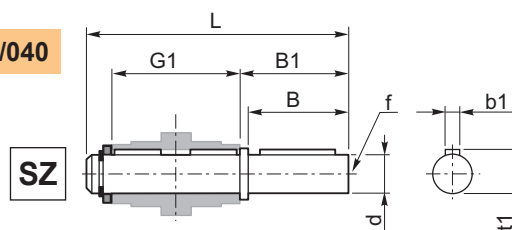
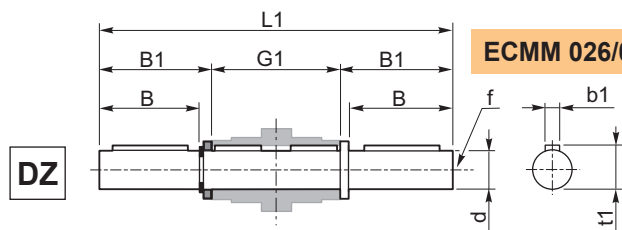
Costruito su richiesta
Built on request

Accessori

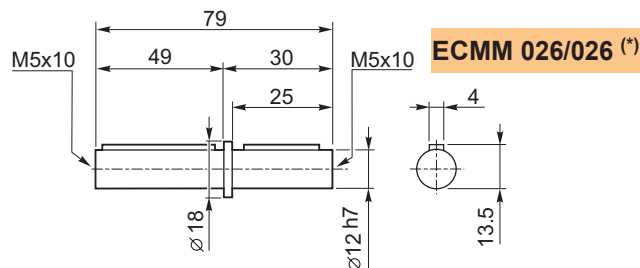
Accessories

Albero lento semplice e doppio

Single and double output shaft



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



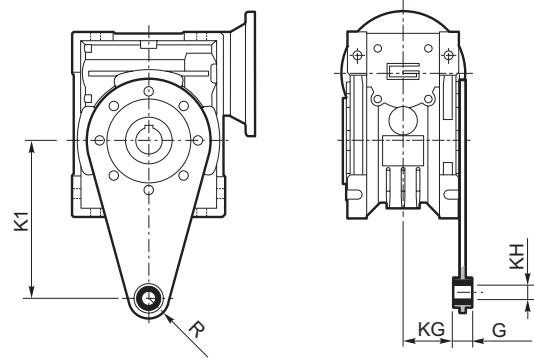
(*)
Nota: disponibile solo per cavo uscita Ø12
Note: available for output hollow shaft Ø12 only



Braccio di reazione

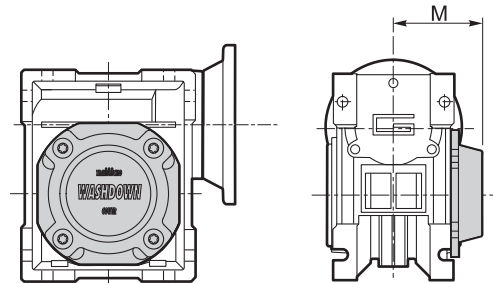
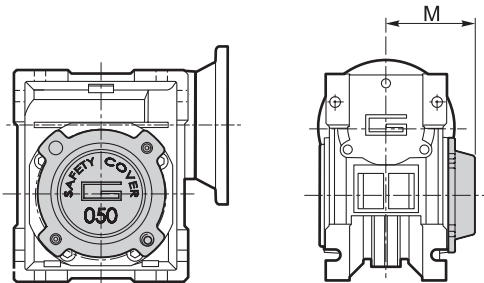
Torque arm

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



SC - Safety cover

WD - Kit washdown cover



	M
CM 030	47
CM 040	54.5

	M
CM 030	48
CM 040	55.5

MINI  **TECNO**™
small but strong

NDP
ECP

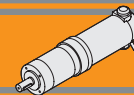
Motoriduttori CC epicicloidali
DC planetary gearmotors



MINI  **TECNO**™ brand of
TRANSTECNO®



DC



Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	BL2
Designazione	<i>Classification</i>	BL2
Versioni	<i>Versions</i>	BL2
Simbologia	<i>Symbols</i>	BL2
Lubrificazione	<i>Lubrication</i>	BL3
Carichi radiali	<i>Radial loads</i>	BL3
Rapporti	<i>Ratios</i>	BL3
Dati tecnici	<i>Technical data</i>	BL4
Motori applicabili	<i>IEC Motor adapters</i>	BL10
Dimensioni	<i>Dimensions</i>	BL11

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Caratteristiche tecniche

Technical features

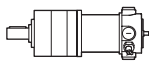
I motoriduttori CC epicicloidali a magneti permanenti in neodimio **NDP** e in ferrite **ECP** hanno le seguenti caratteristiche principali:


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

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder e freno
- Potenze motore disponibili da 100 a 500W S2
- Entrata ed uscita coassiali
- Design compatto
- Lubrificazione permanente a grasso
- Possono essere installati in qualunque posizione di montaggio.
- Low voltage power supply 12/24 Vdc
- Suitable for encoder and brake assembly
- Motor power ratings available from 100 up to 500W S2
- In-line input and output
- Compact design
- Permanent grease oil long-life lubrication
- Can be intalled in all mounting position.

Designazione

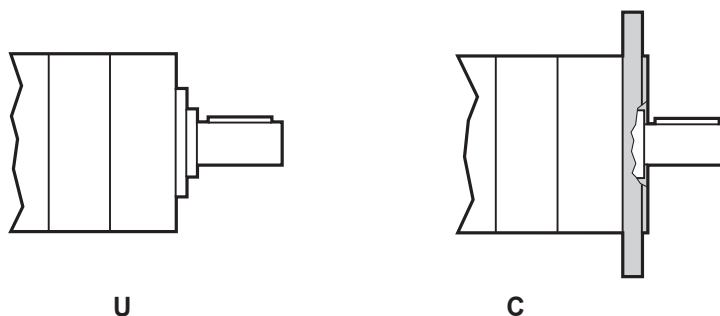
Classification

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

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

Versioni

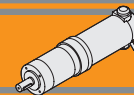
Versions



Simbologia

Symbols

n_1 [min ⁻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

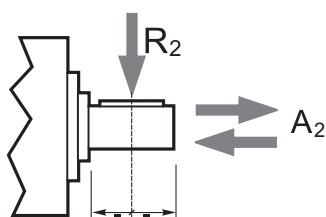
Lubrication

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

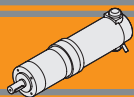
Rapporti

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
2	6.75
	13.73
	15.88
	18.36
	19.20
	22.20
	25.01
	26.85
	28.93
34.97	
3	45.56
	50.89
	58.85
	68.06
	71.16
	78.71
	92.70
	95.17
	99.50
	107.20
	115.07
	123.97
	129.62
	139.13
	149.90
168.84	
181.24	
195.26	
236.09	
307.54	

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

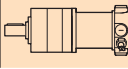
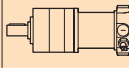
Disponibile a 4 stadi con rapporti fino a 2076
Available 4 stages with ratio up to 2076



Dati tecnici per servizio S2

NDP

Technical data for S2 duty

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	
160							160							
(3000 min ⁻¹)	811	2	2.6	3.70	NDP120/521	120/240	(3000 min ⁻¹)	59	18	2.8	50.89	NDP120/623	120/240	
	701	2	2.3	4.28			51	21	2.4	58.85				
	579	2	1.9	5.18			44	24	2.1	68.06				
	444	3	1.5	6.75			42	25	2.0	71.16				
	218	5	2.3	13.73			NDP120/522	120/240	38	28	1.8			78.71
	189	6	2.0	15.88					32	33	1.5			92.70
	163	7	1.7	18.36					32	34	1.5			95.17
	156	7	1.6	19.20					30	36	1.4			99.50
	135	8	1.4	22.20					28	38	1.3			107.20
	120	10	1.3	25.01					26	41	1.2			115.07
	112	10	1.2	26.85	24	44			1.1	123.97				
	104	11	1.1	28.93	23	46			1.1	129.62				
	86	13	0.9	34.97	22	50			1.0	139.13				
	66	17	0.7	45.56	20	54			0.9	149.90				
	59	18	1.4	50.89	NDP120/523	120/240	18	60	0.8	168.84				
	51	21	1.2	58.85			17	65	0.8	181.24				
	44	24	1.0	68.06			15	70	0.7	195.26				
	42	25	1.0	71.16			13	71	0.7	236.09				
	38	28	0.9	78.71			9.8	71	0.7	307.54				
	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										

250													
(3000 min ⁻¹)	811	2	1.7	3.70	NDP180/521	120/240	(3000 min ⁻¹)	811	2	1.7	3.70	NDP180/521	120/240
	701	3	1.5	4.28			701	3	1.5	4.28			
	579	3	1.2	5.18			579	3	1.2	5.18			
	444	4	0.9	6.75			444	4	0.9	6.75			
	218	8	1.5	13.73	NDP180/522	120/240	218	8	1.5	13.73	NDP180/522	120/240	
	189	10	1.3	15.88			189	10	1.3	15.88			
	163	11	1.1	18.36			163	11	1.1	18.36			
	156	12	1.0	19.20			156	12	1.0	19.20			
	135	13	0.9	22.20			135	13	0.9	22.20			
	120	15	0.8	25.01			120	15	0.8	25.01			
	112	16	0.7	26.85			112	16	0.7	26.85			
	104	17	0.7	28.93			104	17	0.7	28.93			
	86	17	0.7	34.97			86	17	0.7	34.97			
	66	17	0.7	45.56			66	17	0.7	45.56			

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

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

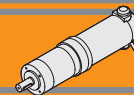
NOTA

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

NOTE

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

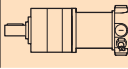
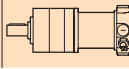
Motoriduttori preferenziali / Preferred gearmotors



Dati tecnici per servizio S2

NDP

Technical data for S2 duty

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version	
250							250							
(3000 min ⁻¹)	59	28	0.9	50.89	NDP180/523	120/240	(3000 min ⁻¹)	59	28	1.8	50.89	NDP180/623	120/240	
	51	33	0.8	58.85				51	33	1.5	58.85			
	44	36	0.7	68.06				44	38	1.3	68.06			
	42	36	0.7	71.16				42	40	1.3	71.16			
	38	36	0.7	78.71				38	44	1.1	78.71			
	32	36	0.7	92.70				32	52	1.0	92.70			
	32	36	0.7	95.17				32	53	0.9	95.17			
	30	36	0.7	99.50				30	56	0.9	99.50			
	28	36	0.7	107.20				28	60	0.8	107.20			
	26	36	0.7	115.07				26	64	0.8	115.07			
	24	36	0.7	123.97				24	69	0.7	123.97			
	23	36	0.7	129.62				23	71	0.7	129.62			
	22	36	0.7	139.13				22	71	0.7	139.13			
	20	36	0.7	149.90				20	71	0.7	149.90			
	18	36	0.7	168.84				18	71	0.7	168.84			
	17	36	0.7	181.24				17	71	0.7	181.24			
	15	36	0.7	195.26				15	71	0.7	195.26			
	13	36	0.7	236.09				13	71	0.7	236.09			
	9.8	36	0.7	307.54				9.8	71	0.7	307.54			
	811	2	3.4	3.70			NDP180/621	120/240						
	701	3	2.9	4.28										
	579	3	2.4	5.18										
	444	4	1.9	6.75										
	218	8	3.0	13.73	NDP180/622	120/240								
	189	10	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										

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

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

NOTA

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

NOTE

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

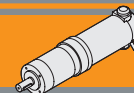
 Motoriduttori preferenziali / Preferred gearmotors

Dati tecnici elettrici

Electrical technical data

ND 120 → 

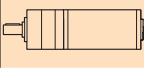
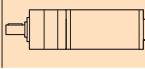
ND 180 → 



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	P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version					
70							100											
(2850 min ⁻¹)	59	7.8	1.9	50.89	ECP050/423	12E/24E	(3000 min ⁻¹)	811	0.92	4.4	3.70	ECP070/521	120/240					
	51	9.1	1.7	58.85					701	1.1	3.8			4.28				
	44	10	1.4	68.06					579	1.3	3.1			5.18				
	42	11	1.4	71.16					444	1.7	2.4			6.75				
	38	12	1.2	78.71														
	32	14	1.1	92.70					218	3.2	3.8			13.73	ECP070/522	120/240		
	31	15	1.0	95.17					189	3.7	3.3			15.88				
	30	15	1.0	99.50					163	4.3	2.8			18.36				
	28	17	0.9	107.20					156	4.5	2.7			19.20				
	26	18	0.8	115.07					135	5.2	2.3			22.20				
	24	19	0.8	123.97					120	5.8	2.1			25.01				
	23	20	0.8	129.62					112	6.2	1.9			26.85				
	22	21	0.7	139.13					104	6.7	1.8			28.93				
	20	21	0.7	149.90					86	8.1	1.5			34.97				
	18	21	0.7	168.84					66	11	1.1			45.56				
	17	21	0.7	181.24														
	15	21	0.7	195.26					59	11	2.3			50.89	ECP070/523	120/240		
	13	21	0.7	236.09					51	13	2.0			58.85				
	9.8	21	0.7	307.54			44	15	1.7	68.06								
							42	15	1.6	71.16								
	163	3.0	4.0	18.36	ECP050/522	12E/24E	38	17	1.5	78.71								
	156	3.2	3.8	19.20					32	20	1.2	92.70						
	135	3.7	3.3	22.20					31	21	1.2	95.17						
	120	4.1	2.9	25.01					30	22	1.2	99.50						
	112	4.4	2.7	26.85					28	23	1.1	107.20						
	104	4.8	2.5	28.93					26	25	1.0	115.07						
	86	5.8	2.1	34.97					24	27	0.9	123.97						
	66	7.5	1.6	45.56					23	28	0.9	129.62						
									22	30	0.8	139.13						
	59	7.8	3.2	50.89			ECP050/523	12E/24E	20	33	0.8	149.90						
	51	9.1	2.8	58.85					18	36	0.7	168.84						
	44	10	2.4	68.06					17	36	0.7	181.24						
	42	11	2.3	71.16					15	36	0.7	195.26						
	38	12	2.1	78.71					13	36	0.7	236.09						
	32	14	1.8	92.70					9.8	36	0.7	307.54						
	31	15	1.7	95.17														
	30	15	1.6	99.50					120.0	5.8	4.3	25.01	ECP070/622	120/240				
	28	17	1.5	107.20					112	6.2	4.0	26.85						
	26	18	1.4	115.07					104	6.7	3.7	28.93						
	24	19	1.3	123.97			86	8.1	3.1	34.97								
	23	20	1.3	129.62			66	11	2.4	45.56								
	22	21	1.2	139.13														
	20	23	1.1	149.90			59	11	4.5	50.89	ECP070/623	120/240						
	18	26	1.0	168.84			51	13	3.9	58.85								
	17	28	0.9	181.24			44	15	3.4	68.06								
	15	30	0.8	195.26			42	15	3.2	71.16								
	13	36	0.7	236.09			38	17	2.9	78.71								
	9.8	36	0.7	307.54			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.

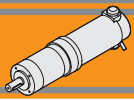
NOTE

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

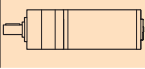
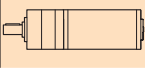
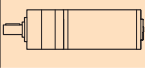
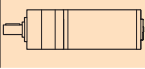
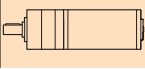
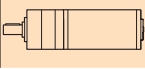
NOTE: for continuous or highly intermittent duty, please contact our technical service

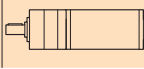
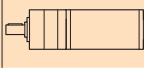


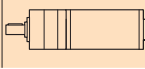
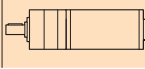
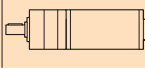
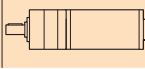
Dati tecnici per servizio S2

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		

P_1 [W]	n_2 [min ⁻¹]	M_2 [Nm]	sf	i		Versione motore Motor version		
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				

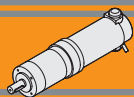
NOTA
Per sf=0.7 verificare che la coppia utilizzata non ecceda il valore M2 indicato.

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



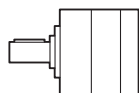
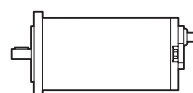
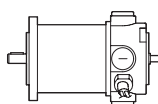
NDP
ECP

Motoriduttori CC epicicloidali
DC planetary gearmotors



Motori applicabili

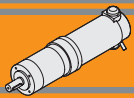
Motor adapters



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

 Combinazioni preferenziali / Preferred combinations

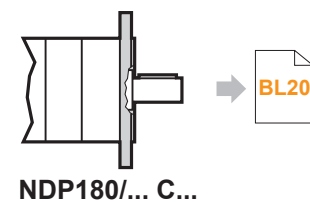
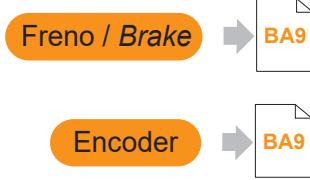
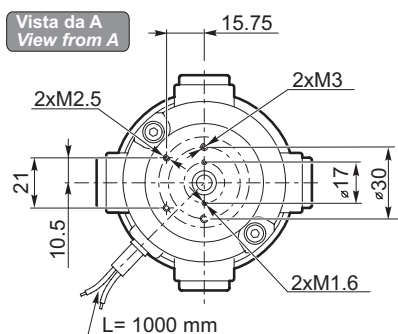
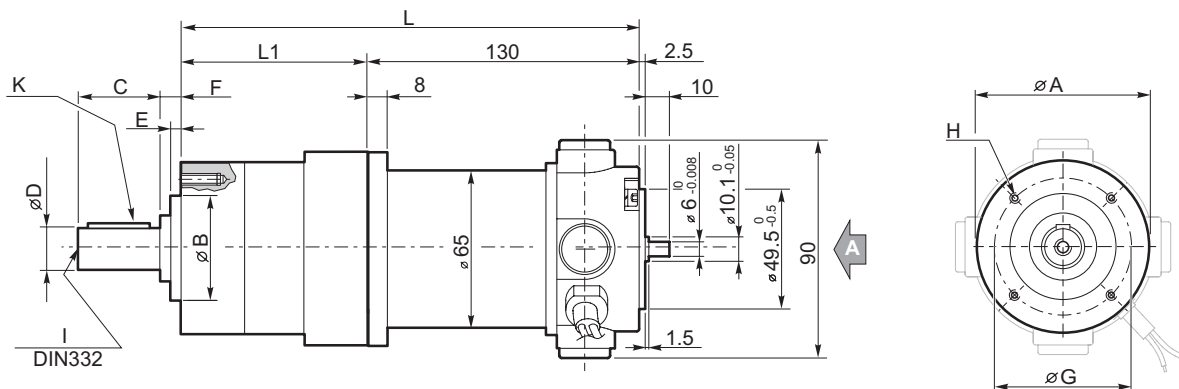
 Contattare il nostro servizio tecnico / Please contact our technical department



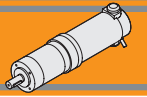
Dimensioni

Dimensions

NDP180/... U



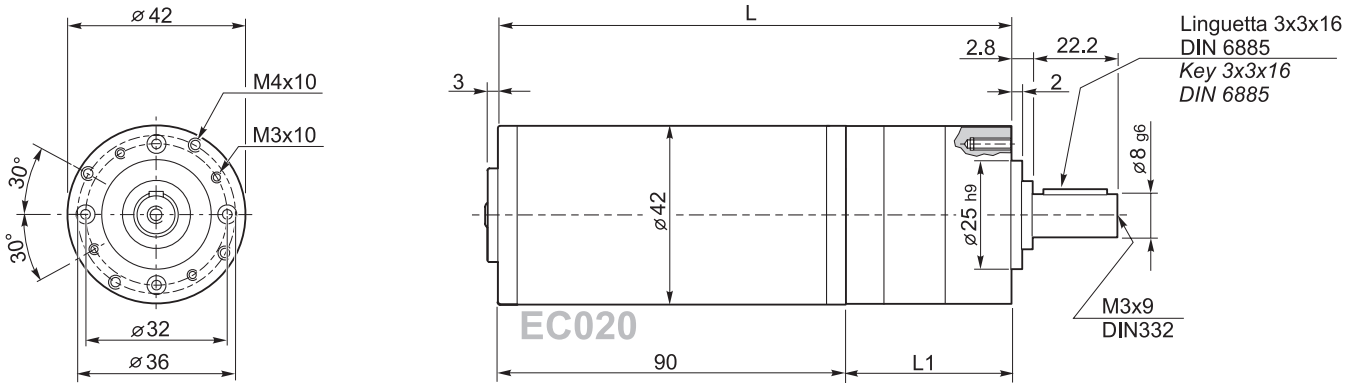
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
NDP180/52	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
NDP180/62	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7		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



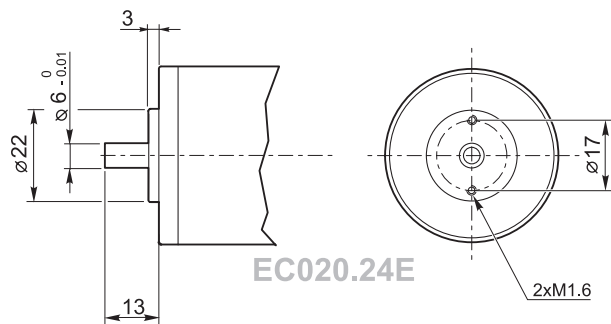
Dimensioni

Dimensions

ECP020/42... U

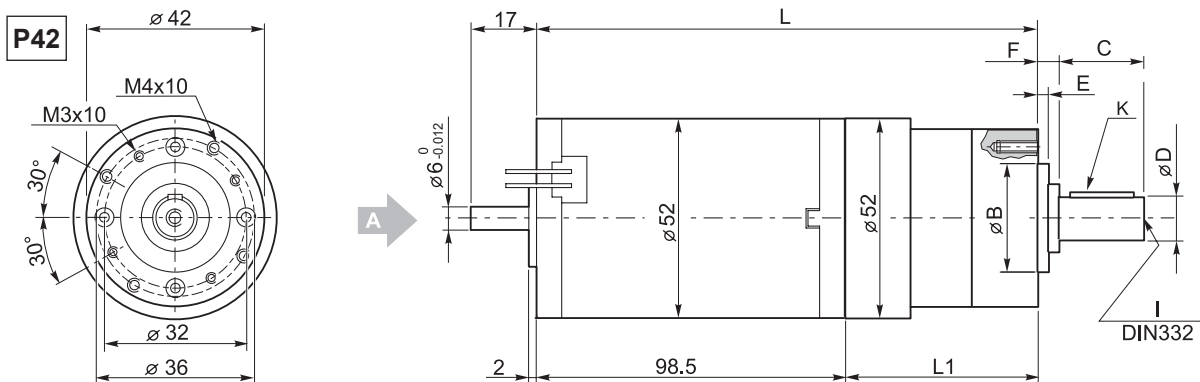


Encoder BB24

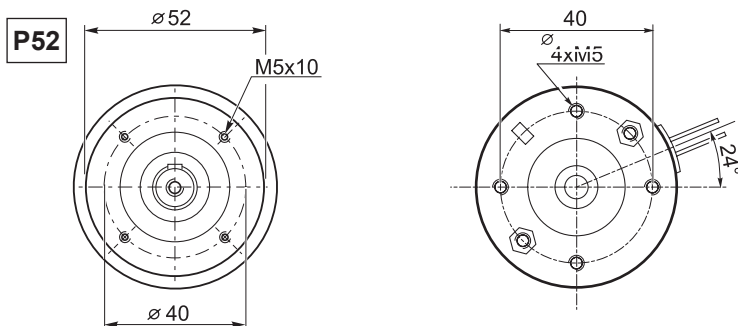


	Numero di stadi / Stages number		
ECP020/42...	1	2	3
L1	60.5	73.6	86.6
L	150.5	163.6	176.6

ECP035/... U

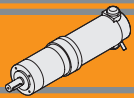


Vista / View
A



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

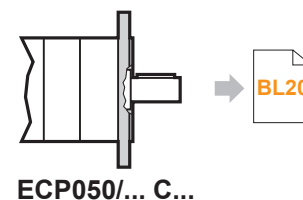
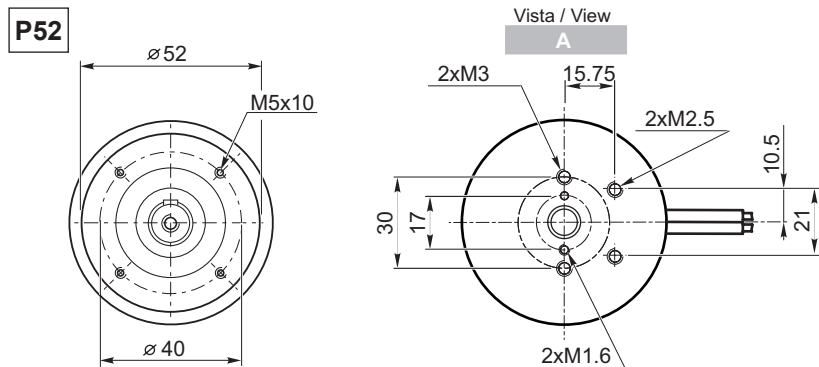
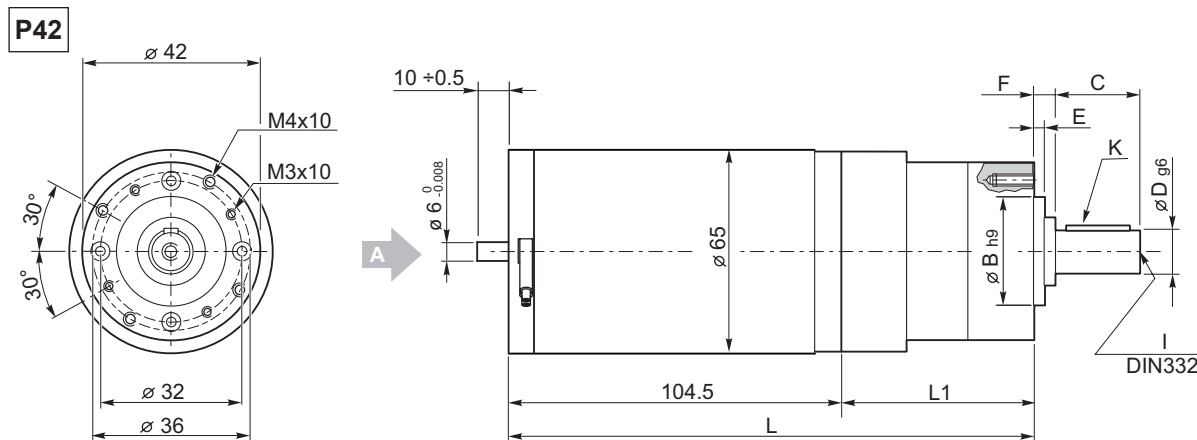
DC



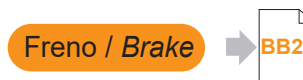
Dimensioni

Dimensions

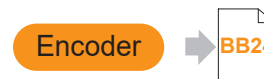
ECP050/... U



ECP050/... C...

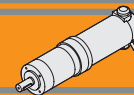


Freno / Brake



Encoder

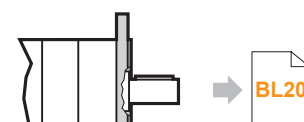
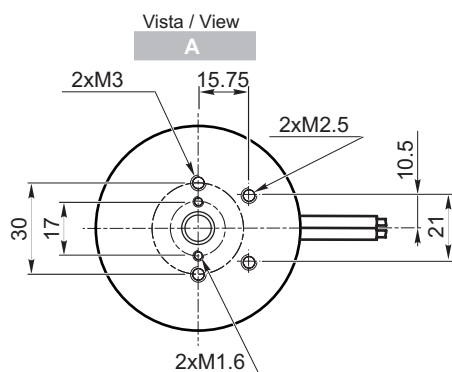
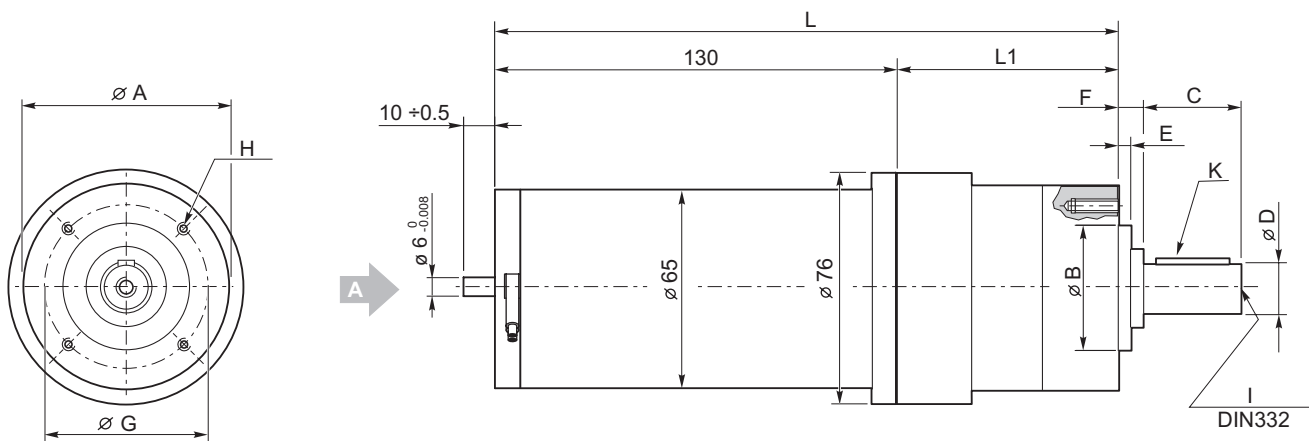
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions								
		L1	L	B	C	D	E	F	I	K
ECP050/42...	1	60.5	165	25 h9	22.2	8 g6	2	2.8	M3x9	3x3x16
	2	73.6	178.1							
	3	86.6	191.1							
ECP050/52...	1	73.1	177.6	32 h8	20.8	12 h7	3	4.2	M4x10	4x4x16
	2	87.2	191.7							
	3	101.5	206							



Dimensioni

Dimensions

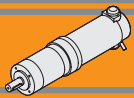
ECP070/... U



ECP070/... C...

- Motori / Motors IP66 → [BC2](#)
- Freno / Brake → [BB23](#)
- Encoder → [BB24](#)

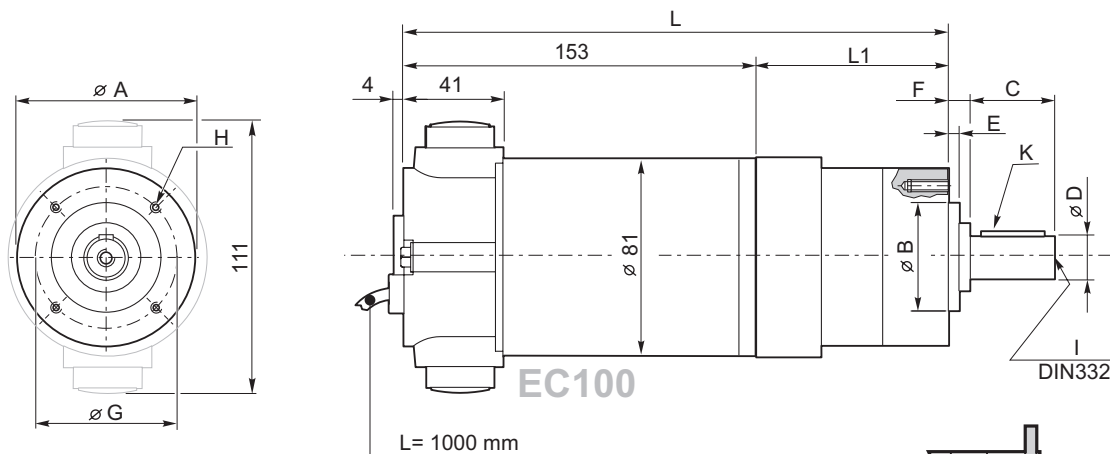
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP070/52...	1	73	203	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	217.1										
	3	101.4	231.4										
ECP070/62...	1	72.8	202.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	219.7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



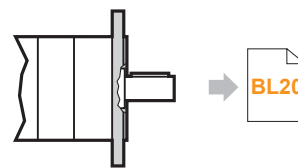
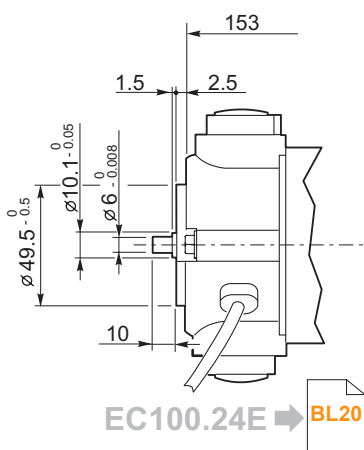
Dimensioni

Dimensions

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



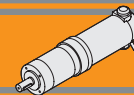
ECP100/... U... 24E



ECP100/... C...



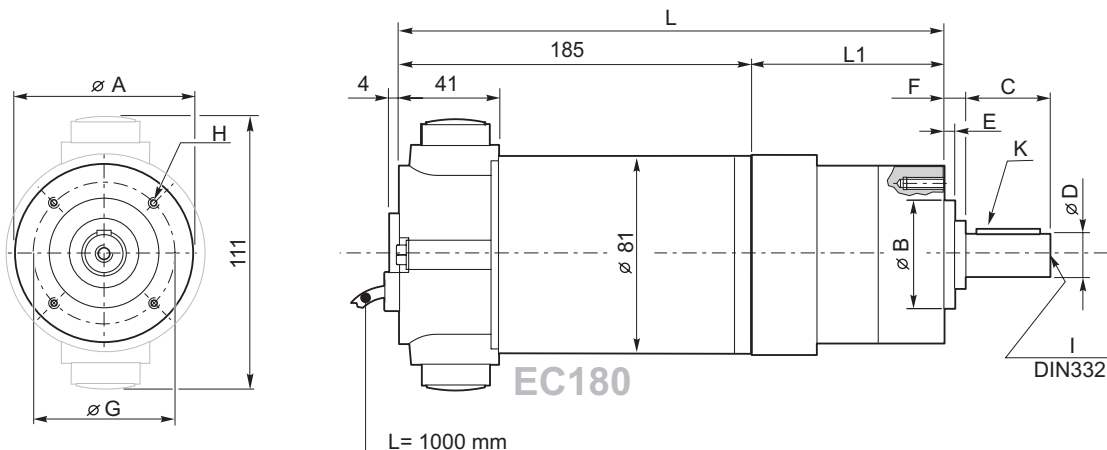
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP100/52...	1	73	226	52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	240.1										
	3	101.4	254.4										
ECP100/62...	1	72.8	225.8	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	89.7	242.7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



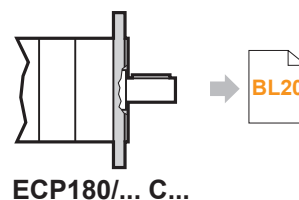
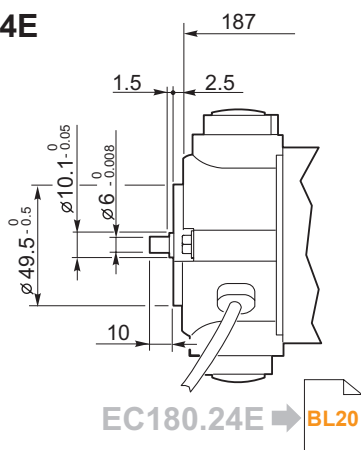
Dimensioni

Dimensions

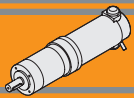
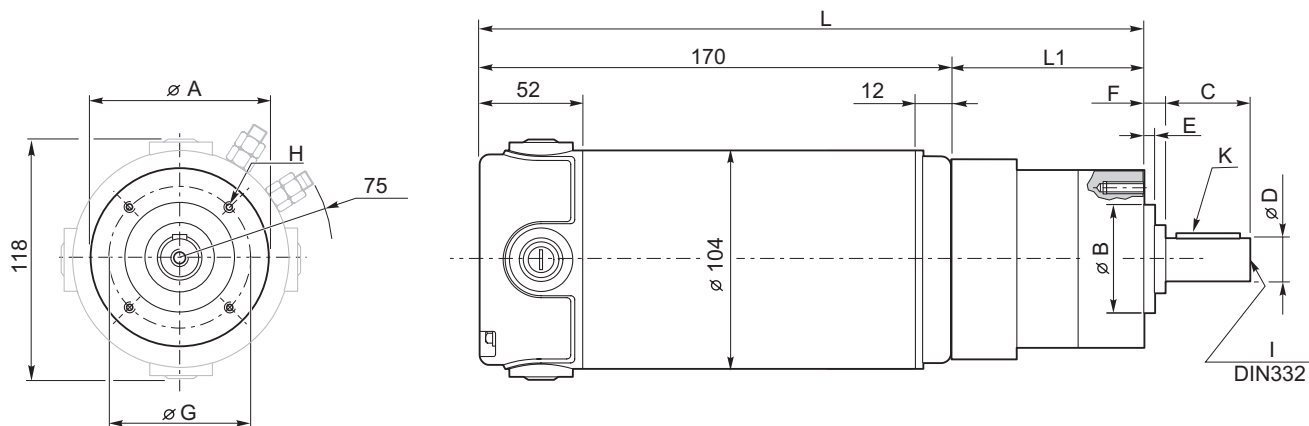
ECP180/... U... 120/240



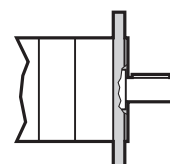
ECP180/62.. U... 24E



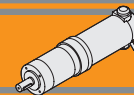
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions													
		EC180		EC180.24E		EC180 - EC180.24E									
		L1	L	L1	L	A	B	C	D	E	F	G	H	I	K
ECP180/52...	1	73	258			52	32 h8	20.8	12 h7	3	4.2	40	M5x10	M4x10	4x4x16
	2	87.1	272.1												
	3	101.4	286.4												
ECP180/62...	1	72.8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

**ECP****Motoriduttori CC epicicloidali**
DC planetary gearmotors**MINI**
TECNO**Dimensioni****Dimensions****ECP250/... U**

Motori / Motors IP66

**ECP250/... C...**

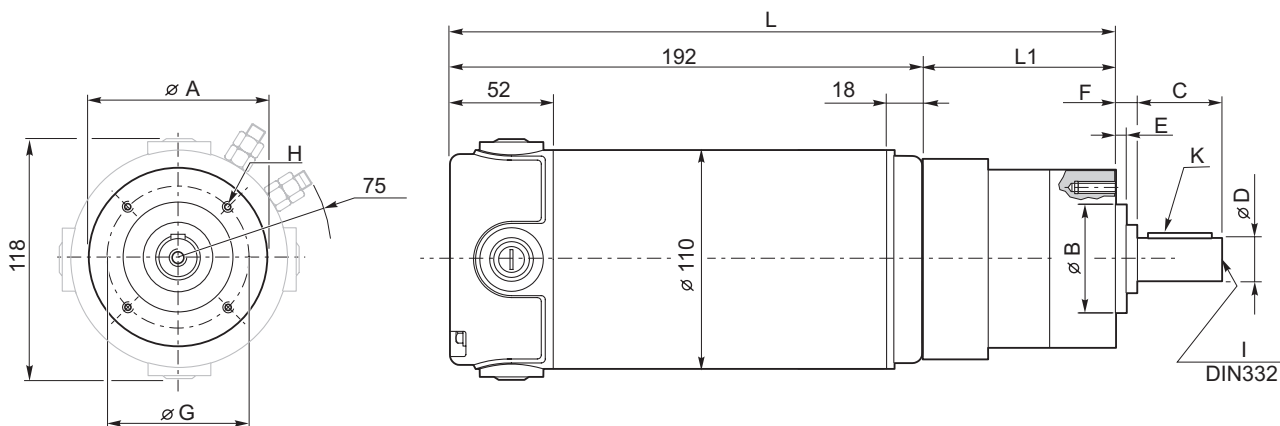
Tipo Type	Numero di stadi Stages number	Dimensioni / Dimensions											
		L1	L	A	B	C	D	E	F	G	H	I	K
ECP250/62...	1	74.5	244.5	62	40 j7	30	14 h7	5	9	52	M5x10	M5x12	5x5x18
	2	91.5	261.5										
	3	108.5	278.5										



Dimensioni

Dimensions

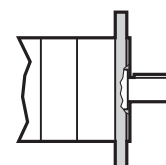
ECP350/... U



Motori / Motors IP66

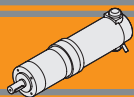


Freno / Brake



ECP350/... C...

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



**NDP
ECP**

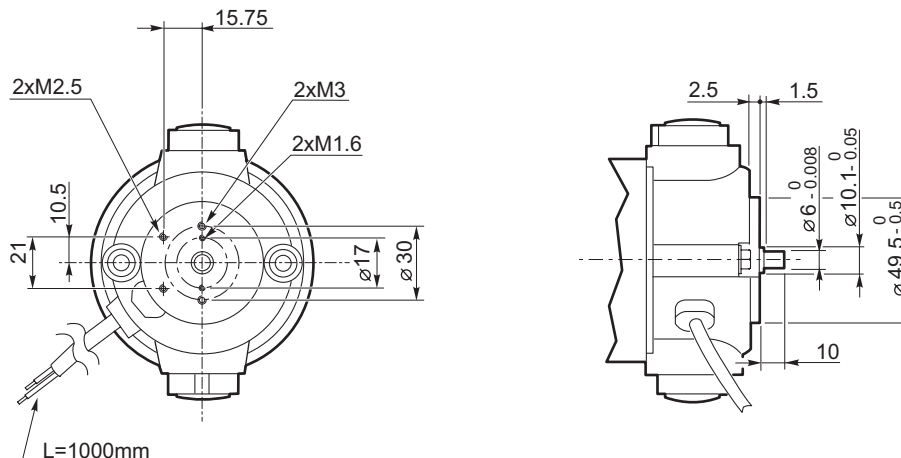
**Motoriduttori CC epicicloidali
DC planetary gearmotors**

**MINI
TECNO**

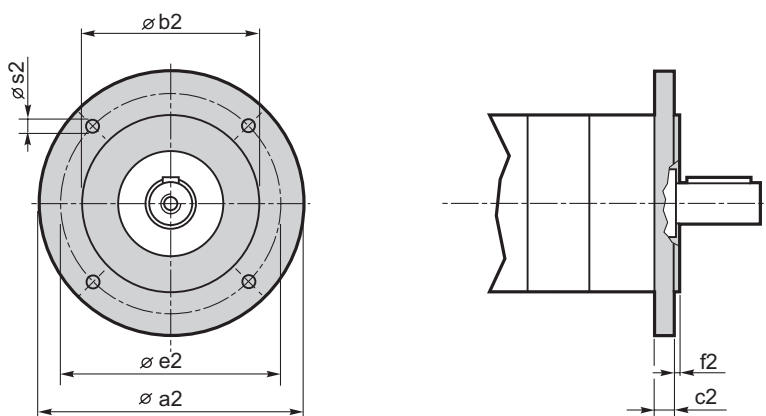
Dimensioni

Dimensions

**ECP100.24E
ECP180.24E**



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



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

MINI  **TECNO**™
small but strong

NDWMP
ECWMP

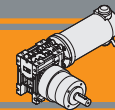
Motoriduttori CC combinati
DC double reduction gearmotors



MINI  **TECNO**™ brand of
TRANSTECNO®



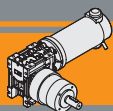
DC



Indice	Index	Pag. Page
Caratteristiche tecniche	<i>Technical features</i>	BM2
Designazione	<i>Classification</i>	BM2
Versioni	<i>Versions</i>	BM2
Simbologia	<i>Symbols</i>	BM2
Lubrificazione	<i>Lubrication</i>	BM3
Carichi radiali	<i>Radial loads</i>	BM3
Rapporti	<i>Ratios</i>	BM3
Dati tecnici	<i>Technical data</i>	BM4
Dimensioni	<i>Dimensions</i>	BM6

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Caratteristiche tecniche

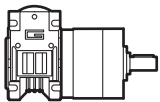
Technical features

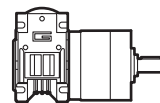
L'accoppiamento di un riduttore a vite senza fine con un riduttore epicicloidale consente di ottenere elevati rapporti di riduzione ($i_{max} = 1/18452$) e di disporre di un gruppo autolubrificato compatto, silenzioso e con un'elevata affidabilità.

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

Designazione

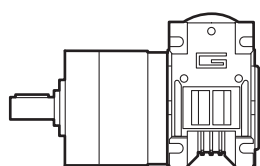
Classification

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

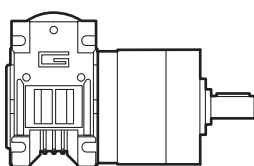
MOTORIDUTTORE / GEARMOTOR									
ECWMP	070/026/52			2	CD	90	405	240	BR
Tipo Type	Grandezza Size			Numero stadi epicicloidale Planetary stages number	Versione Riduttore Gearbox Version	Flangia Uscita Output flange	Rapporto Ratio	Versione Motore Motor Version	Opzioni Options
	070/026/52 070/026/62	100/026/52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

Versioni

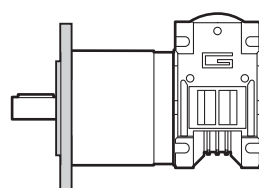
Versions



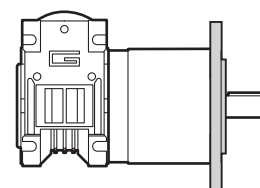
US



UD



CS

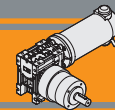


CD

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.

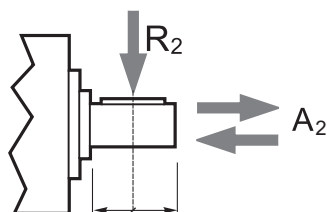
Permanent synthetic oil long-life lubrication allow to use CM wormgearbox range in all mounting position.

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 maintenance free. They can be installed in any location.

Carichi radiali

Radial loads



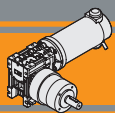
Numero di stadi Stages number	Carichi Radiali R_2 [N] Radial Load R_2 [N]		
	P52	P62	P81
1	200	240	400
2	320	360	600
3	450	520	1000

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

Rapporti

Ratios

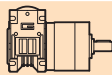
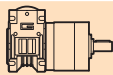
Motoriduttore Gearmotor	Numero stadi epicicloidale Planetary stages number	Rapporto epicicloidale Planetary ratio	Rapporto vite senza fine Wormgearbox ratio	Rapporto finale Total ratio
.../026/052 .../026/062	1	6.75	10	67.5
			15	101.3
			20	135
			30	202.5
			40	270
			50	337.5
	2	25.01	10	250.1
		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



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	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version
160							250						
(3000 min ⁻¹)	44.4	22.8	1.1	67.5	120/026/521	120/240	(3000 min ⁻¹)	44.4	25.0	1.0	67.5	180/026/521	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									

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

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

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

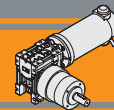
NOTE: for continuous or highly intermittent duty, please contact our technical service

Dati tecnici elettrici

Electrical technical data

ND 120 → 

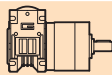
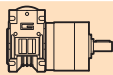
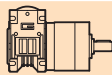
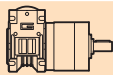
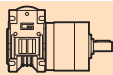
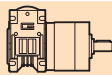
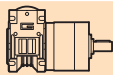
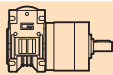
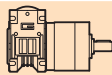
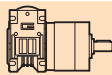
ND 180 → 



Dati tecnici 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	P ₁ [W]	n ₂ [min ⁻¹]	M ₂ [Nm]	sf	i		Versione motore Motor version		
100							140								
(3000 min ⁻¹)	44.4	14	1.8	67.5		070/026/521	120/240	(3000 min ⁻¹)	44.4	20	1.3	67.5		100/026/521	120/240/24E
	29.6	21	1.2	101.3				29.6	25	1.0	101.3				
	22.2	25	1.0	135.0				44.4	20	2.0	67.5		100/026/621	120/240/24E	
	14.8	25	1.0	202.5				29.6	29	1.4	101.3				
	11.1	25	1.0	270.0				22.2	37	1.1	135.0				
	8.9	25	1.0	337.5				14.8	40	1.0	202.5				
	7.4	25	1.0	405											
	12.0	25.0	1.0	250.1				070/026/522	120/240	250					
	8.0	25.0	1.0	375.15	(3000 min ⁻¹)	44.4			25.0	1.0	67.5		180/026/521	120/240	
	6.0	25.0	1.0	500.2		44.4			37	1.1	67.5				
	4.0	25.0	1.0	750.3		29.6			40	1.0	101.3				
	3.0	25.0	1.0	1000.4		22.2			40	1.0	135.0				
	2.4	25.0	1.0	1250.5											
	2.0	25.0	1.0	1500.6											
	1.1	25.0	1.0	2734											
	44.4	14.3	2.8	67.5		070/026/621	120/240								
	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											

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

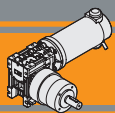
NOTE: for continuous or highly intermittent duty, please contact our technical service

DC

Dati tecnici elettrici

Electrical technical data

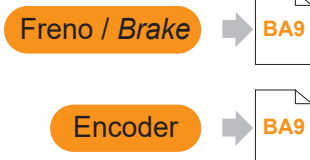
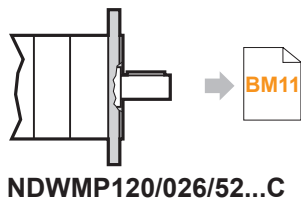
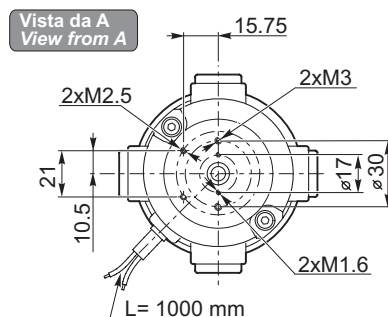
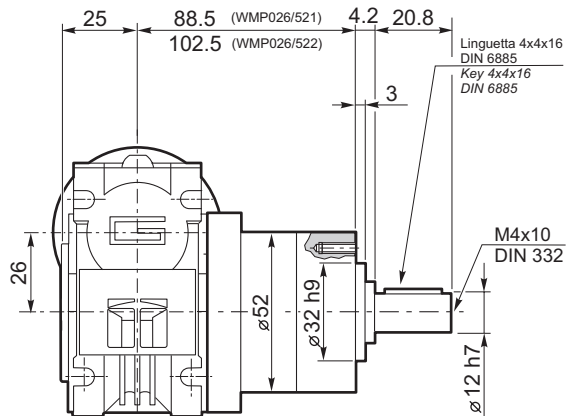
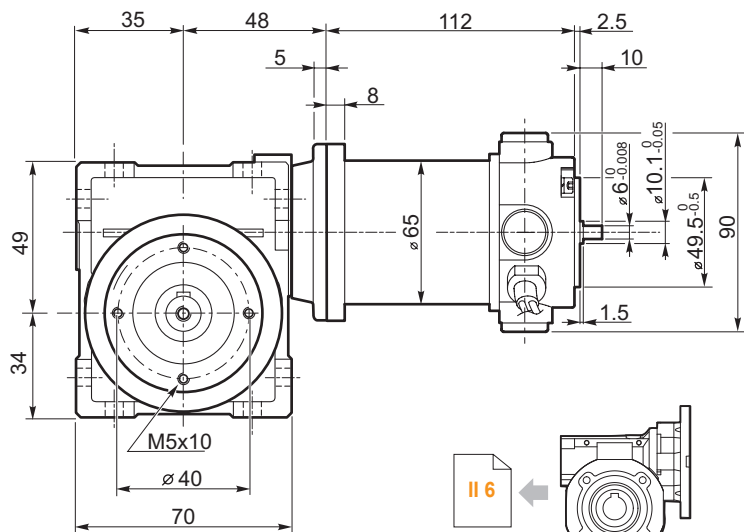




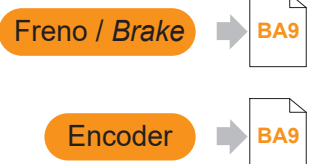
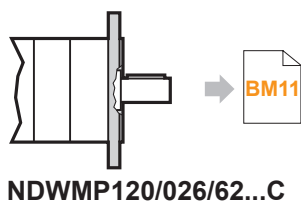
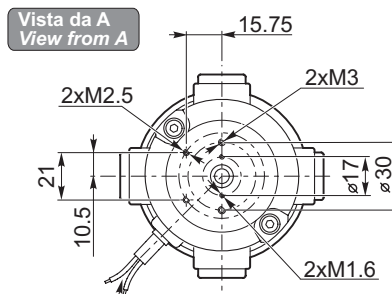
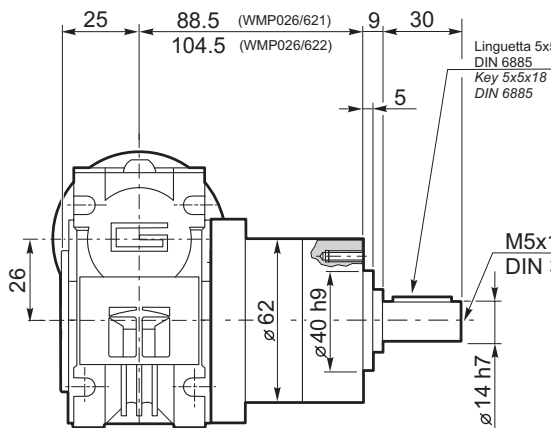
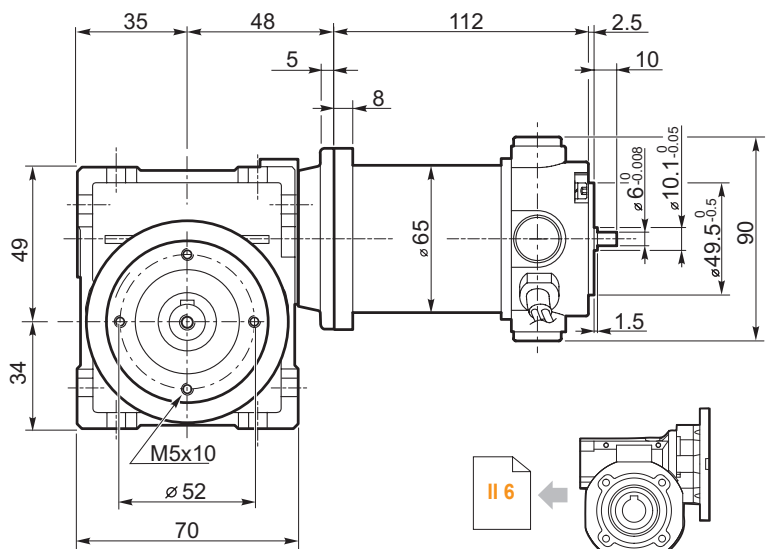
Dimensioni

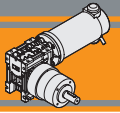
Dimensions

NDWMP120/026/52...U



NDWMP120/026/62...U

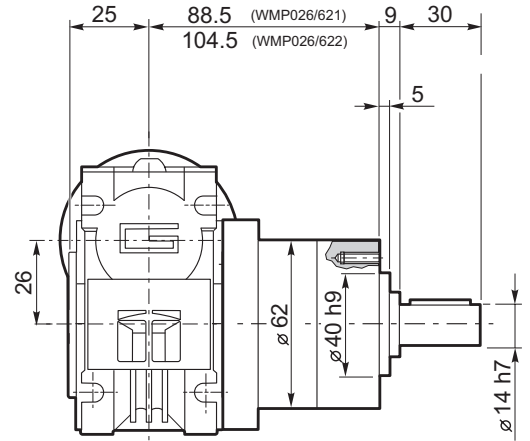
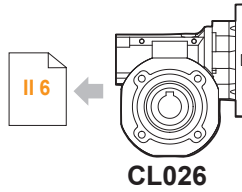
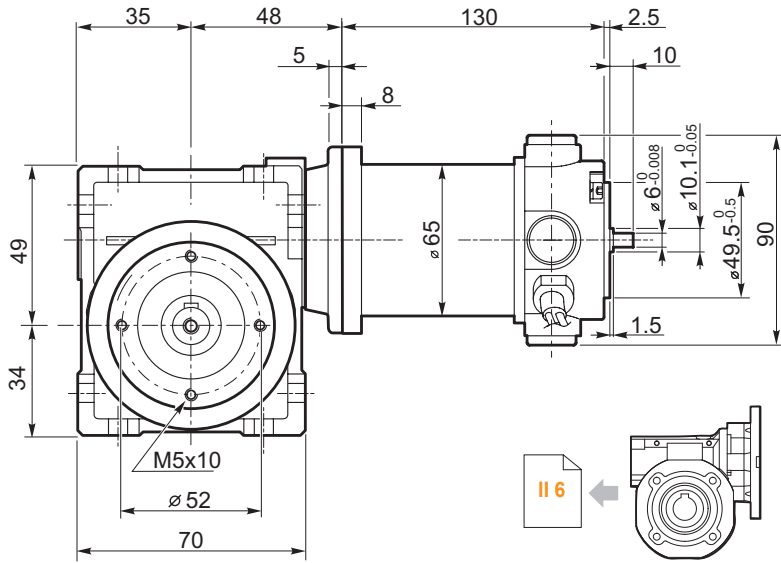




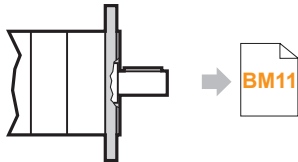
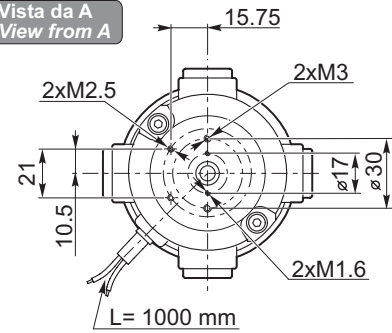
Dimensioni

Dimensions

NDWMP180/026/62...U



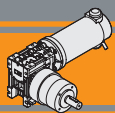
Vista da A
View from A



NDWMP180/026/62...C

Freno / Brake → **BA9**

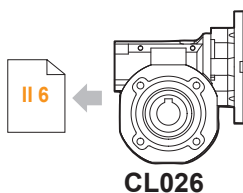
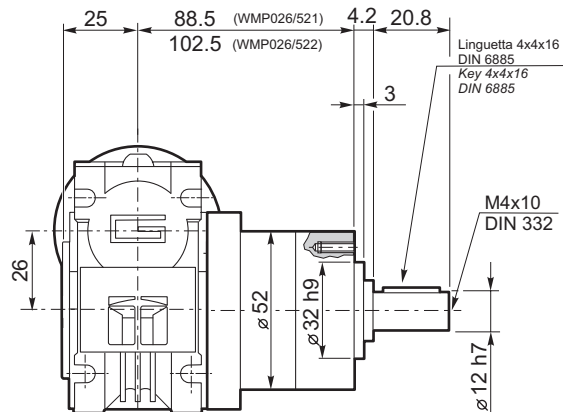
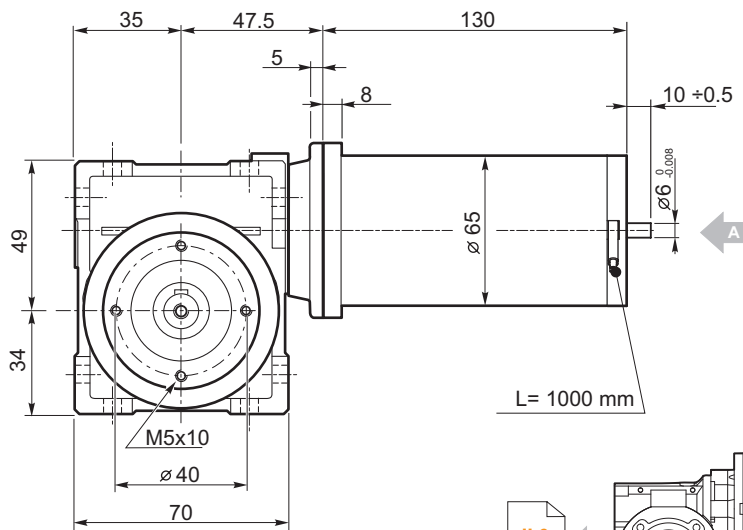
Encoder → **BA9**



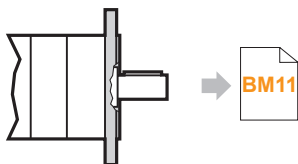
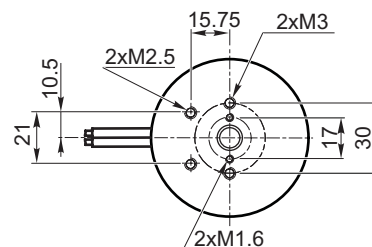
Dimensioni

Dimensions

ECWMP070/026/52...U



Vista / View A



ECWMP070/026/52...C

Motori / Motors IP66



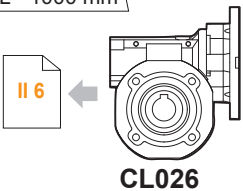
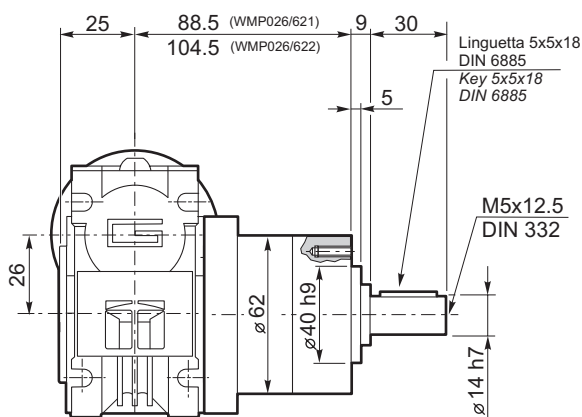
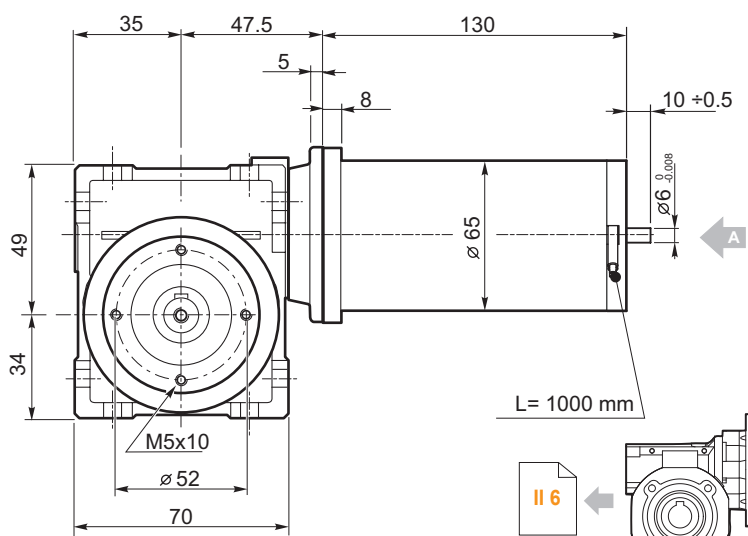
Freno / Brake



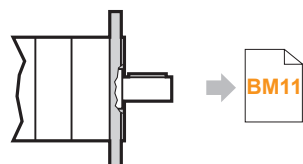
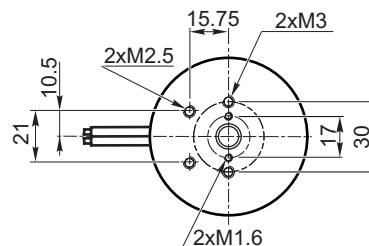
Encoder



ECWMP070/026/62...U



Vista / View A



ECWMP070/026/62...C

Motori / Motors IP66

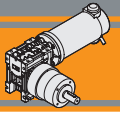


Freno / Brake



Encoder

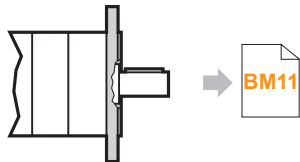
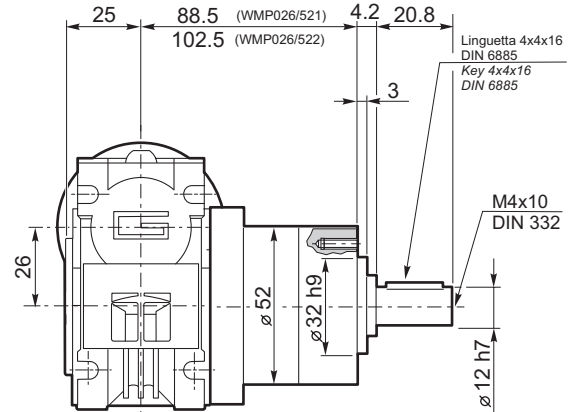
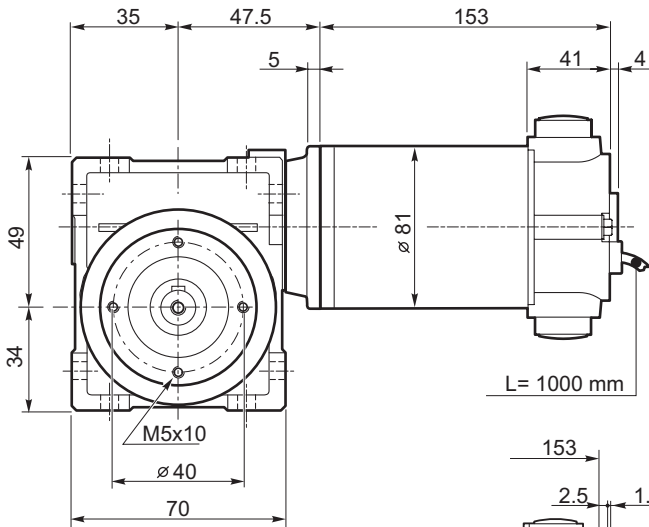




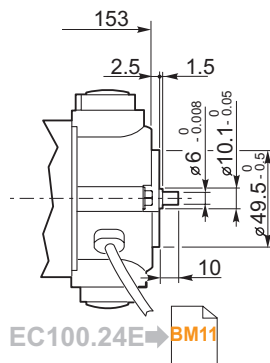
Dimensioni

Dimensions

ECWMP100/026/52...U



ECWMP100/026/52...C



Motori / Motors IP66 →



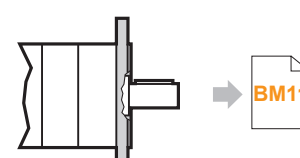
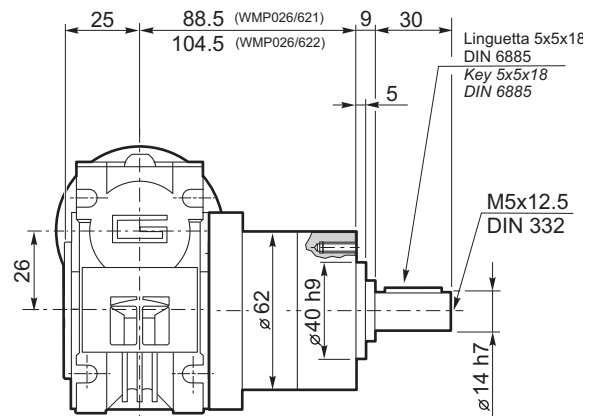
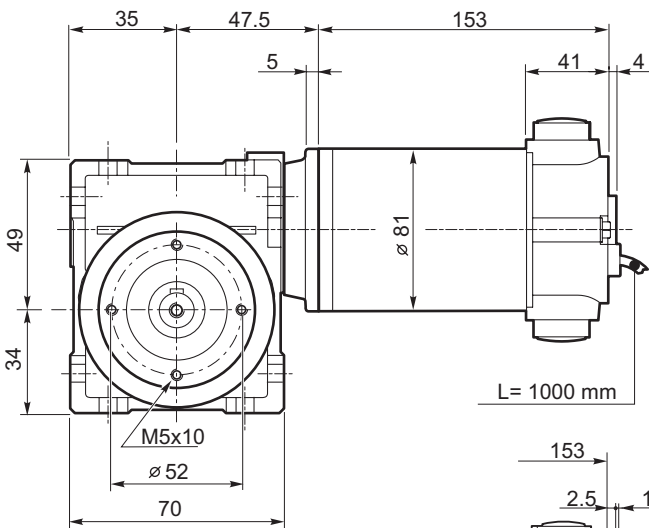
Freno / Brake →

Encoder →

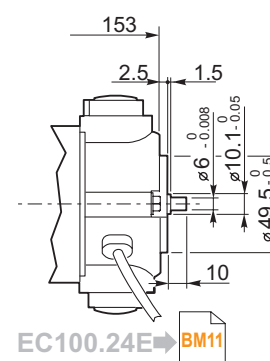


CL026

ECWMP100/026/62...U



ECWMP100/026/62...C



Motori / Motors IP66 →



Freno / Brake →

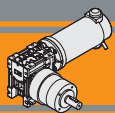


Encoder →



CL026

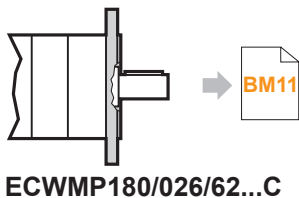
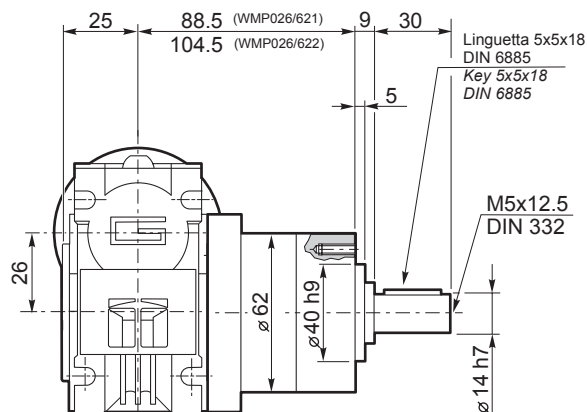
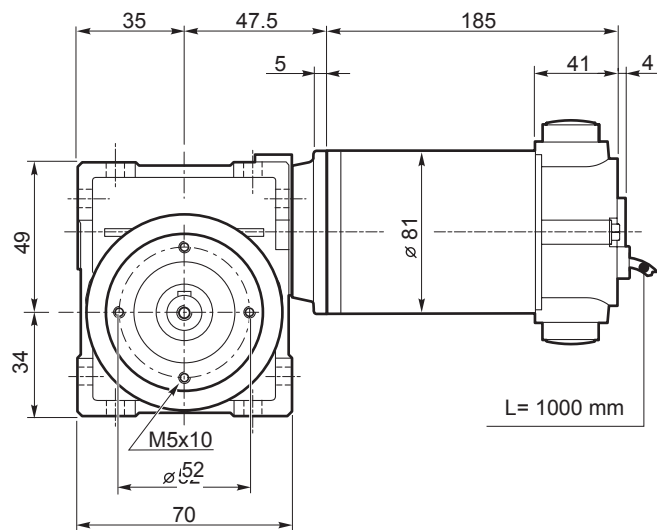
DC



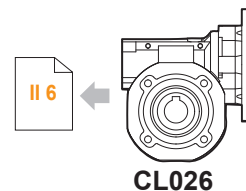
Dimensioni

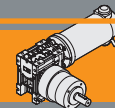
Dimensions

ECWMP180/026/62...U



- Motori / Motors IP66 → BC6
- Freno / Brake → BB23
- Encoder → BB24

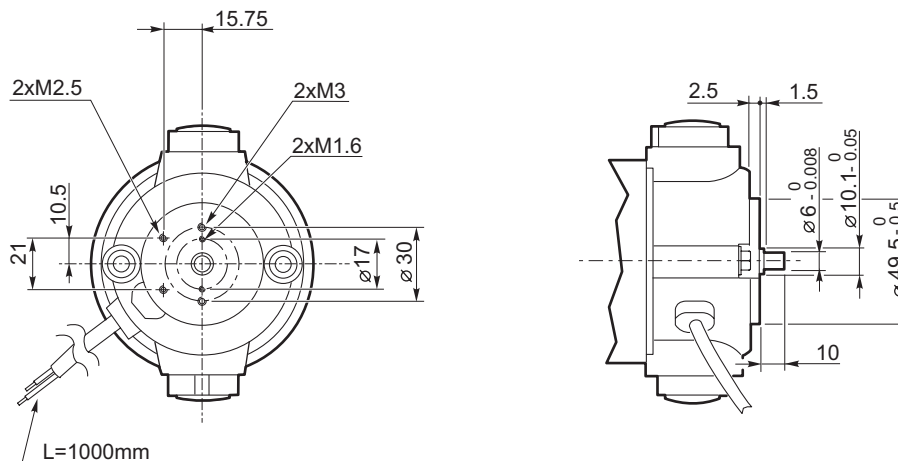




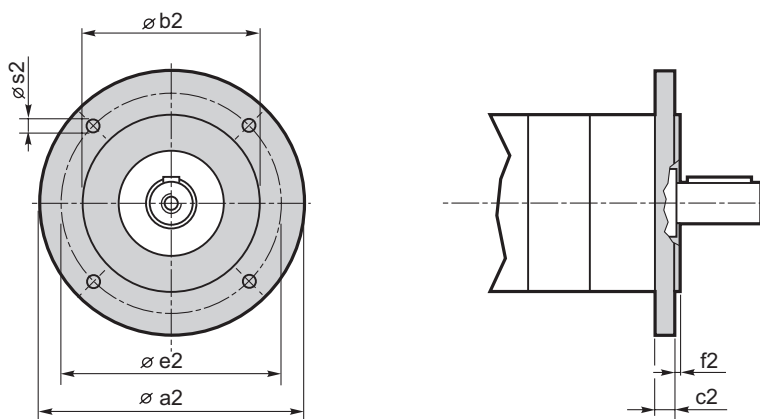
Dimensioni

Dimensions

ECWMP100.24E
ECWMP180.24E



NDWMP.../.../... C... - ECWMP.../.../... C... Flange uscita / Output flanges



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

MINI  **TECNO**™
small but strong

PLN

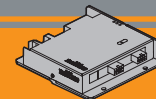
Azionamenti per motori CC
DC motor controls



MINI  **TECNO**™ brand of
TRANSTECNO®



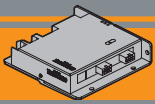
DC



	Indice	Index	Pag. Page
PLN19-8	Schema dei collegamenti	<i>Main connection diagram</i>	BN2
	Caratteristiche tecniche	<i>Technical features</i>	BN2
	Dimensioni	<i>Dimensions</i>	BN3
	Opzioni	<i>Options</i>	BN3
PLN20 PLN40	Schema dei collegamenti	<i>Main connection diagram</i>	BN4
	Caratteristiche tecniche	<i>Technical features</i>	BN5
	Dotazioni	<i>Equipment</i>	BN5
	Manuale	<i>User manual</i>	BN5
	Dimensioni	<i>Dimensions</i>	BN6
	GUIDA alla selezione dell'azionamento	<i>Drive selection GUIDE</i>	BN7
	Note	<i>Note</i>	BN8

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

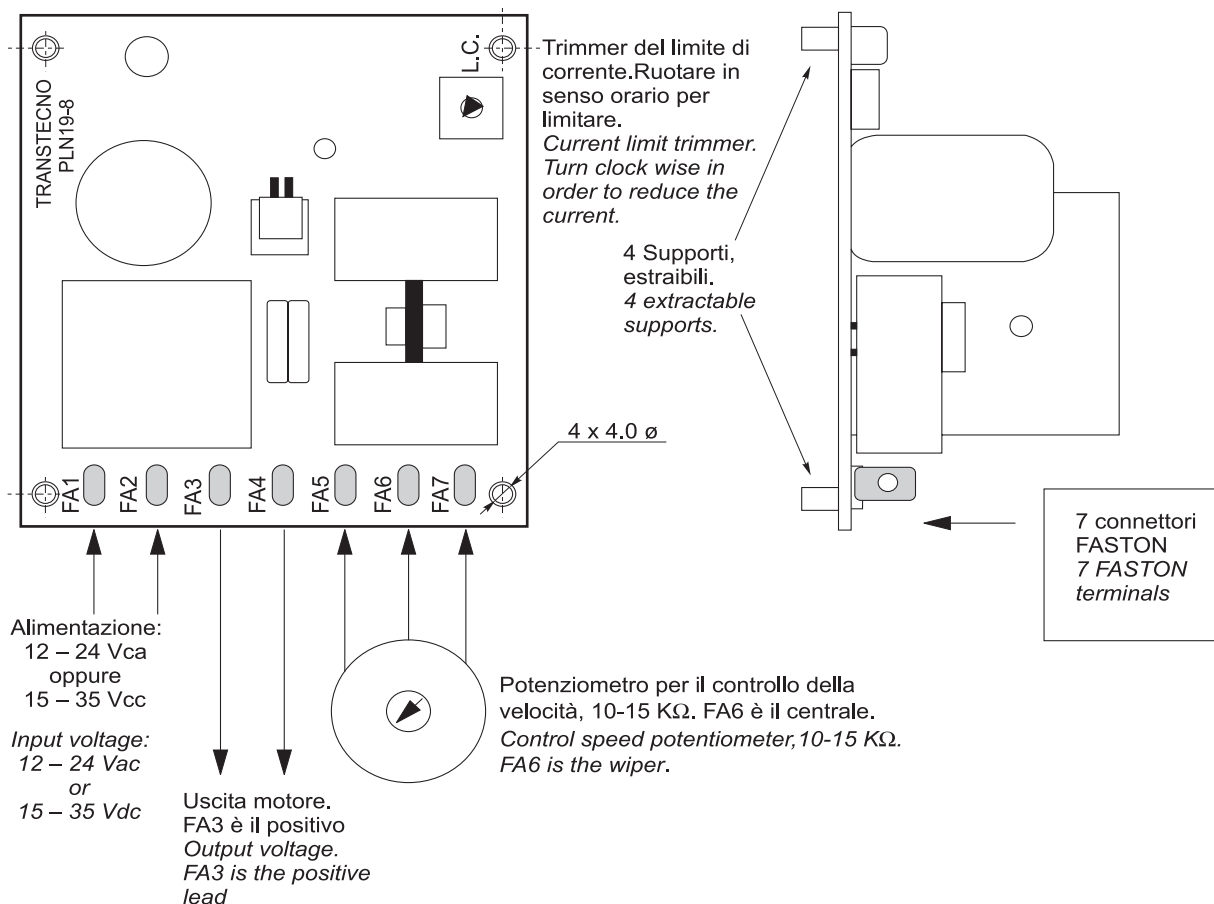
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AZIONAMENTO UNIDIREZIONALE PWM PER LA REGOLAZIONE DI VELOCITA' DEI MOTORI A CORRENTE CONTINUA A BASSA TENSIONE

LOW VOLTAGE SINGLE DIRECTION PWM DC MOTORS CONTROL

SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



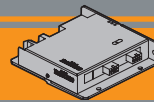
Attenzione: se si scollega il potenziometro con la scheda alimentata, il motore ruota alla velocità nominale.

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

Caratteristiche tecniche

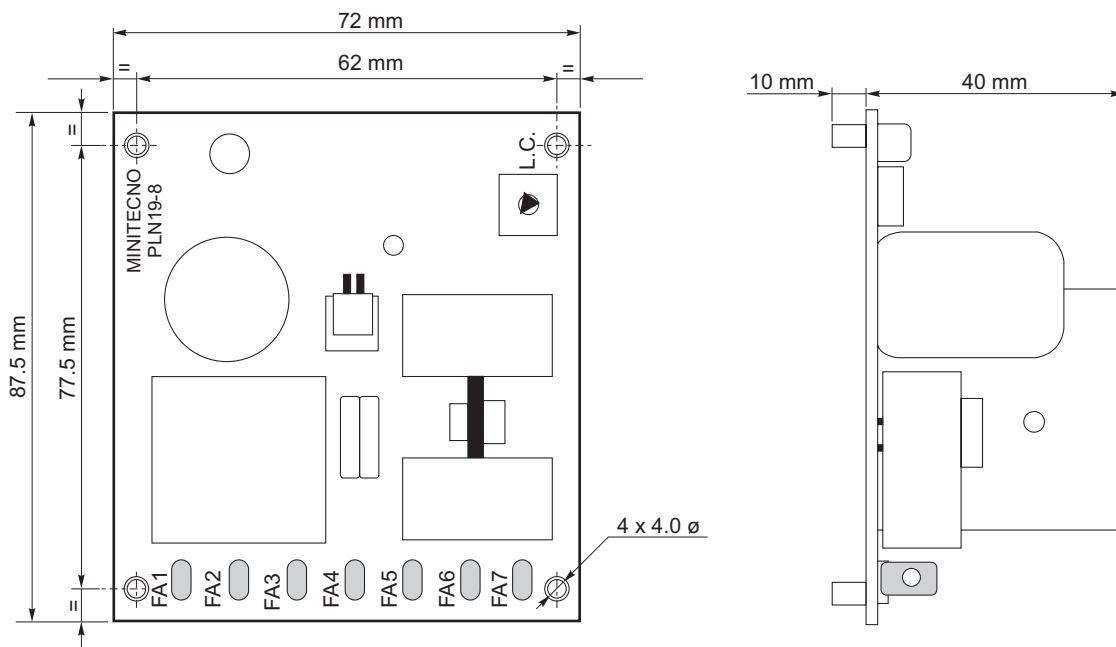
Technical features

- Alimentazione ai terminali FA1 e FA2:
12 - 24 Vca oppure 15 - 35 Vcc.
- Regolazione della velocità mediante potenziometro 10-15 KΩ.
- Trimmer di Limitazione della corrente, per adattare la scheda anche a motori di piccole potenze. Per limitare l'erogazione di corrente, ruotare in senso orario il trimmer.
- Uscita motore ai terminali FA3 e FA4, regolabile da 0 a Vcc MAX che è proporzionale alla tensione di ingresso. Con 35 Vcc di alimentazione, l'uscita MAX è circa 30 Vcc.
- Corrente di uscita (*): Massima corrente ammessa: 8 A in ambiente ventilato, servizio continuo.
- Peso: 0.120 Kg.
- Line voltage at terminals FA1 and FA2:
12 - 24 Vac or 15 - 35 Vdc.
- The speed of the drive is to be controlled by potentiometer, 10-15 KΩ.
- Current Limit trimmer, in order to suit the board for small motors. In order to limit the current, turn clock wise the trimmer.
- Output voltage from terminals FA3 and FA4, from 0 up to Vdc MAX which is proportional to the input voltage. With 35 Vdc input voltage, the max output voltage is about 30 Vdc.
- Output current (*): Maximum output current allowed: 8 A in a ventilated environment, continuous duty.
- Weight: 0.120 Kg.



Dimensioni

Dimensions



Opzioni

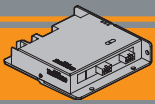
Options

1. Potenziometro 10 kΩ
2. Supporto per montaggio su guida DIN

1. Speed potentiometer 10 kΩ
2. DIN mounting support

(*) il valore massimo di corrente motore deve essere utilizzato in **ambiente ventilato**. In ambienti non ventilati e per temperatura ambiente di 45 °C, ridurre la corrente motore massima a 4 A; servizio continuo.

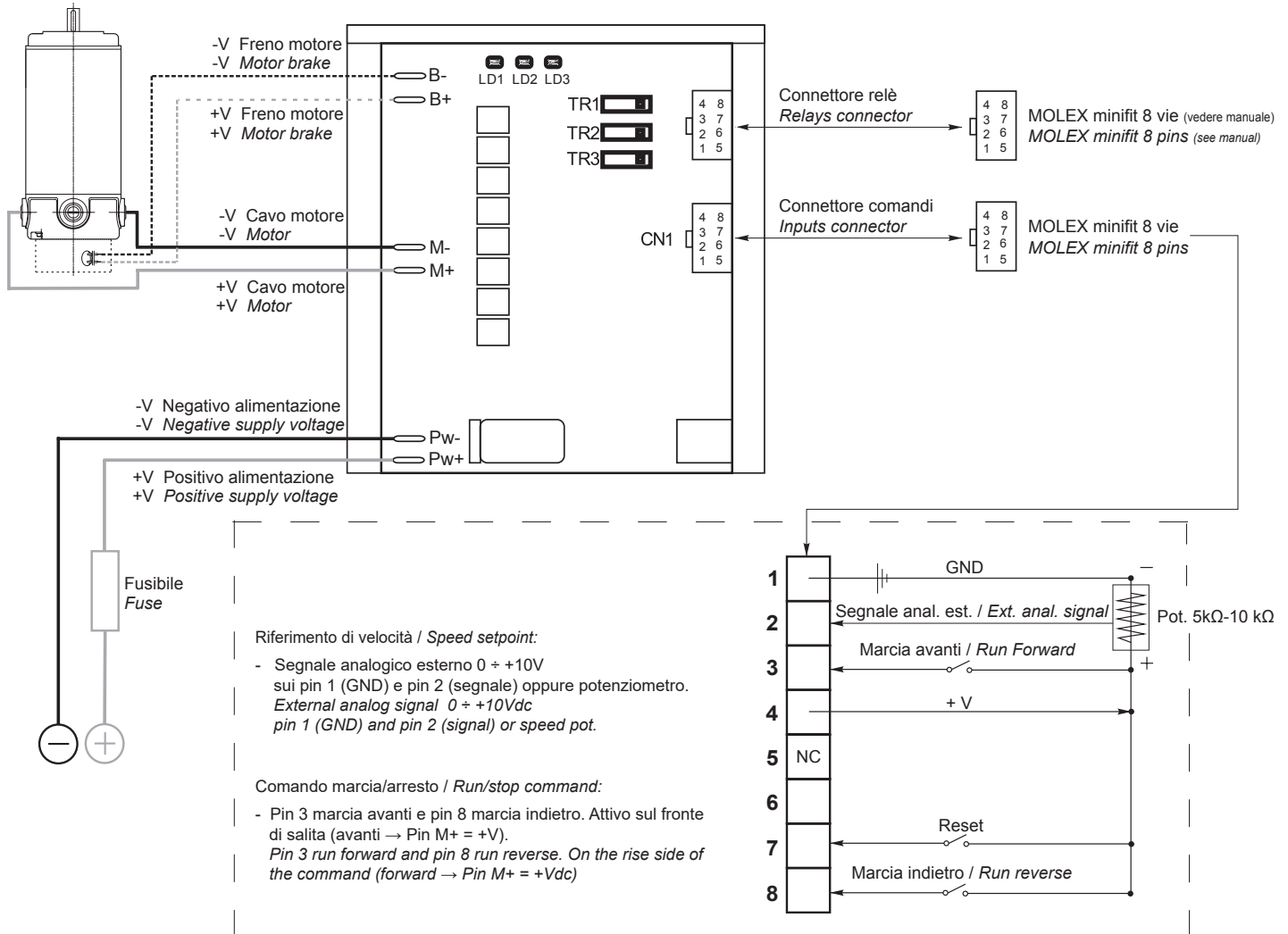
(*) *the maximum output current value must be used in a ventilated environment. Derate the maximum output current down to 4 A if the environment is not ventilated and the temperature is about 45 °C; continuous duty.*



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

LOW VOLTAGE BIDIRECTIONAL PWM DC MOTORS CONTROL

SCHEMA DEI COLLEGAMENTI - MAIN CONNECTION DIAGRAM



Fusibile:

150-200% della corrente motore. Max 3 volte la corrente nominale della scheda, con intervento entro pochi secondi.

Fuse:

150-200 % rated motor current. Max 3 times rated current of the drive (trip time in few seconds).

Trimmer multigiro:

TR1: Accelerazione: selezione da 0.5 a 10 sec.
 TR2: Limite di corrente: riduce il limite di corrente nominale da 100% a circa 30% (corrente di picco 3 volte la corrente selezionata).
 TR3: Decelerazione: selezione da 0.5 a 10 sec.

Multiturn trimmers:

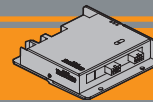
TR1: Acceleration time: from 0.5 to 10 sec.
 TR2: Current limitation: rated current limited from 100% to about 30% (peak current 3 times the selected limited current).
 TR3: Deceleration time: from 0.5 to 10 sec.

LED:

LD1: Visualizza lo stato di funzionamento con limite di corrente attivo (il motore assorbe più della corrente selezionata e l'azionamento opera in limitazione).
 LD2: Stato dell'azionamento: lampeggio veloce e continuo = funzionamento normale, lampeggio lento e codificato = presenza di un allarme
 LD3: Segnalazione presenza alimentazione.

LED:

LD1: ON when the drive runs under current limitation (motor requires more than the rated current and drive supplies only limited current).
 LD2: Status: quick continuous flash = drive ok, slow coded flash = fault).
 LD3: Power ON



Caratteristiche tecniche

Technical features

- Scheda bidirezionale a transistor a ricircolo di corrente.
 - Selezionabili i seguenti parametri (mediante trimmer):
 - rampa di accelerazione: 0.5 - 10 sec
 - rampa di decelerazione: 0.5 - 10 sec
 - limite corrente 100%-30% circa
 - Temperatura di lavoro: 0°C / +40°C (allarme sotto zero)
 - Diagnostica tramite LED
 - Frequenza di commutazione: 16kHz
 - Dotata di coperchio
 - Velocità regolabile con potenziometro 5-10 kΩ o con segnale 0-10 Vcc
 - Limitazione della corrente regolabile
 - Sensore termico di protezione
- *Transistor bidirectional drive with regenerative current system.*
 - *Following settings can be adjusted (by built in trimmers):*
 - *acceleration ramp: 0.5 - 10 sec*
 - *deceleration ramp: 0.5 - 10 sec*
 - *current limit 100% - about 30%*
 - *Room temperature: 0°C / +40°C (alarm below zero)*
 - *LED for system diagnosis*
 - *Switching frequency: 16kHz*
 - *Covered*
 - *5-10 kΩ Speed pot. or 0-10 Vdc external signal for speed re-
gulation*
 - *Variable current limit*
 - *Thermal sensor for protection*

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

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

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

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

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

Dotazioni

Equipment

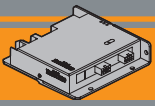
	PLN20 PLN40
Trimmer di selezione ACCEL, DECEL e LIMITE di CORRENTE / <i>Selection Trimmer ACCEL, DECEL, CURRENT LIMIT</i>	■
2 contatti: marcia avanti e marcia indietro / <i>2 contacts : forward and reverse</i>	■
Riferimento di velocità / <i>Speed setpoint reference</i>	■
3 LEDs di segnalazione / <i>3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

uno impegnato dal reset / *one comitted by reset*



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

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



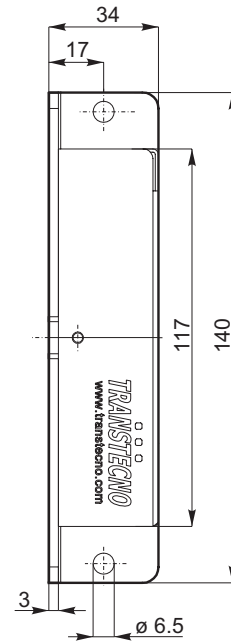
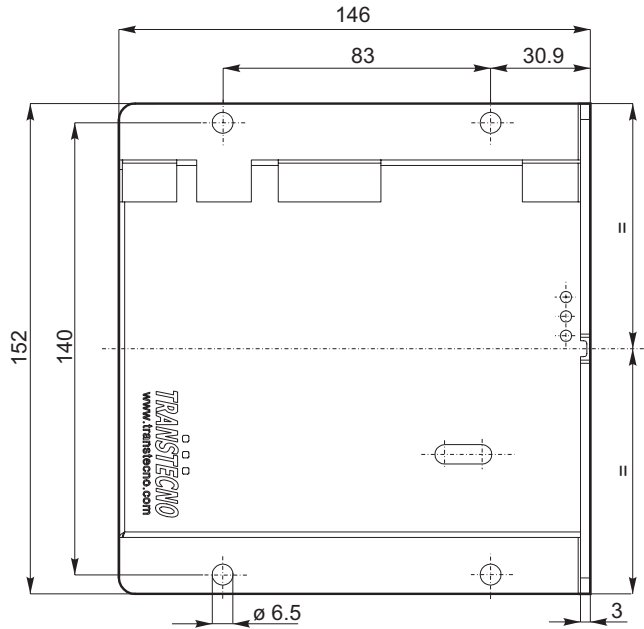
**AZIONAMENTO BIDIREZIONALE PWM PER LA
REGOLAZIONE DI VELOCITA' DEI MOTORI A
CORRENTE CONTINUA A BASSA TENSIONE**

**LOW VOLTAGE BIDIRECTIONAL
PWM DC MOTORS CONTROL**

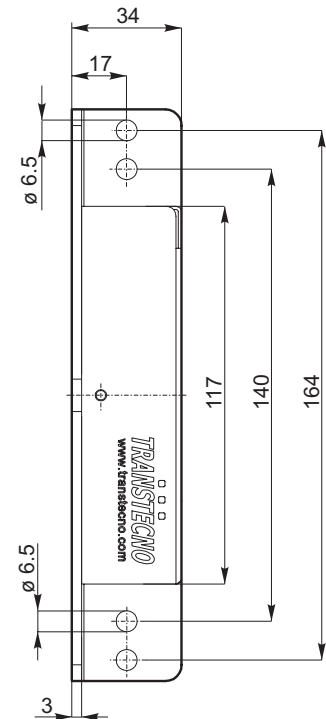
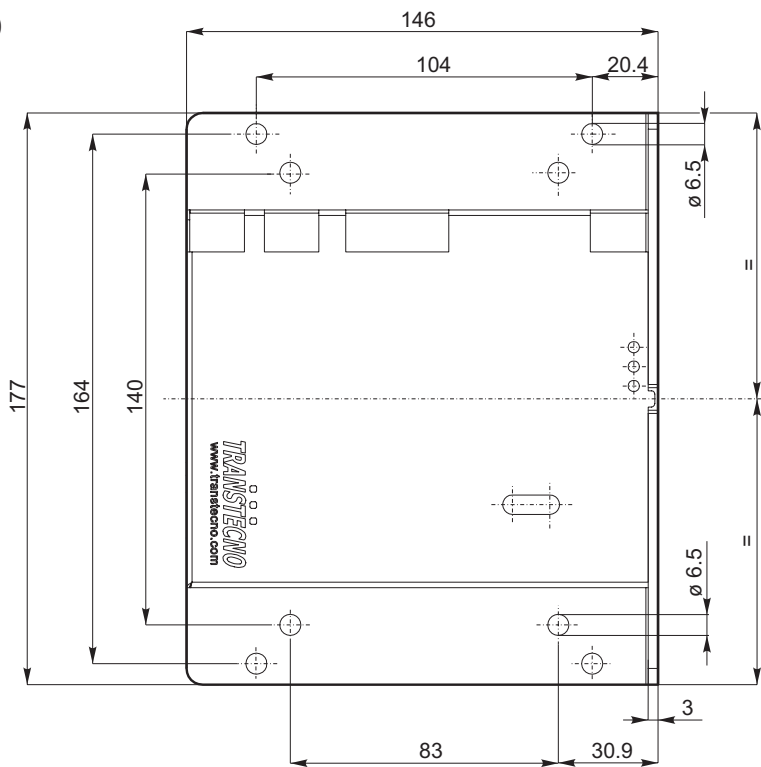
Dimensioni

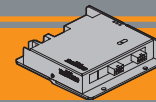
Dimensions

PLN20



PLN40





GUIDA alla selezione dell'azionamento

Drive selection GUIDE

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

$$\text{Real motor current} \leq \text{Rated current of the drive}$$

Attenzione: la reale corrente assorbita dal motore può essere diversa da quella indicata in targhetta.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

Vedere sotto la tabella per esemplificazioni

Warning: the real absorbed current by the motor can be different from the one written on the nameplate.

PLN19-8 = max 6 A

PLN20 = max 22 A

PLN40 = max 44 A

See the table below for quick reference

Codice motore <i>Motor code</i>	Corrente motore <i>Motor current</i> S1	Scheda-Drive (servizio motore-motor duty) S1	Corrente motore <i>Motor current</i> 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				

DC

