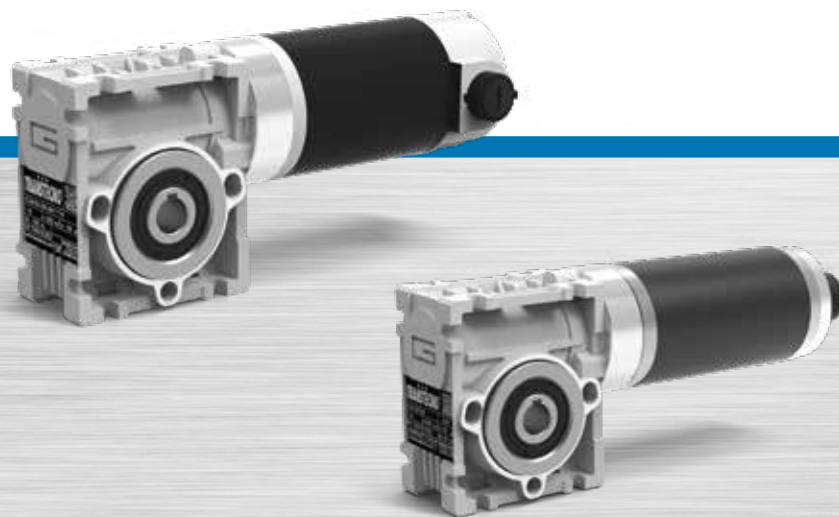
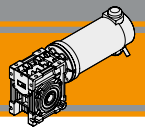


## Micro motoriduttori CC a vite senza fine DC Micro wormgearmotors



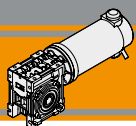




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# Micro motoriduttori CC a vite senza fine DC Micro wormgearmotors

## Caratteristiche tecniche

## Technical features






Le caratteristiche principali dei motoriduttori in CC a vite senza fine della serie CM sono:

The main features of DC wormgearmotors range CM are:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 55 a 250W S2
- Magneti permanenti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 55 to 250W S2
- Ferrite permanent magnets
- Die-cast aluminum housing
- Permanent synthetic oil long-life lubrication.

## Designazione

## Classification

RIDUTTORE / GEARBOX				MOTORE / MOTOR		
CM	026	20	U	EC035	24V	—
Tipo Type	Grandezza Size	Rapporto in Ratio in	Versione Version	Tipo Type	Tensione Voltage	Opzioni Options
<b>CM</b>	<b>026</b> <b>030</b>	Vedere tabelle See tables	<b>U</b> <b>F</b>	<b>EC035</b> <b>EC050</b> <b>EC070</b> <b>EC100</b> <b>EC180</b>	<b>12V</b> <b>24V</b>	<b>Encoder</b>  <b>Freno / Brake</b> 
Versione Riduttore Gearbox Version <div style="display: flex; justify-content: space-around; align-items: center;">    </div>						
<b>U</b>	<b>FD</b>	<b>FS</b>				

## Simbologia

## Symbols

Ns	n° stadi / No. stages	Pn	[W]	Potenza nominale / Nominal power
in	rapporto nominale / nominal ratio	V	[V]	Tensione / Voltage
ir	rapporto reale / real ratio	I	[A]	Assorbimento / Current
M <sub>n</sub>	[Nm] coppia in uscita in funzionamento continuativo S1 output torque for continuous operation S1	IC		Classe di isolamento termico / Thermal insulation class
Rd	rendimento dinamico / efficiency	FF		Fattore di forma / Form factor
R <sub>2</sub>	[N] massimo carico radiale al centro dell'albero uscita max. radial load at output shaft centre	n <sub>1</sub>	[Rpm]	Giri / Speed
A <sub>2</sub>	[N] massimo carico assiale / max. axial load	IP		Grado di protezione / Enclosure protection
		Kg		Peso / Weight

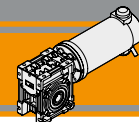
## Lubrificazione

## Lubrication

I riduttori a vite senza fine della serie CM026 e CM030 sono lubrificati a vita con olio sintetico di viscosità 320 e possono essere installati in qualunque posizione di montaggio.  
Temperatura ambiente 0 ÷ 40 °C (in assenza di congelamento ed in assenza di condensa).  
Per temperature diverse, contattare nostro UT.

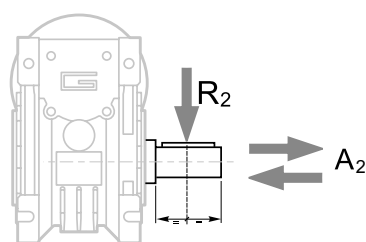
Permanent synthetic oil long-life lubrication allow to use CM026 and CM030 wormgearbox range in all mounting position.  
Ambient temperature 0 ÷ 40 °C (in the absence of freezing and condensation).  
For temperature outside this range please contact our technical dept.

Quantità di olio (litri) / Oil quantity (litres)						
	B3	B8	B6	B7	V5	V6
<b>CM026</b>				0.015		
<b>CM030</b>				0.03		



Carichi radiali

Radial loads

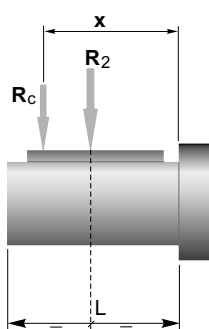


$$A_2 = R_2 \times 0.2$$

n <sub>2</sub> [min <sup>-1</sup> ]	R <sub>2</sub> [N]	
	CM026	CM030
187	400	674
140	490	743
93	580	851
70	610	936
56	610	1008
47	610	1069
35	610	1179
28	610	1270
23	610	1356
18	610	1471
14	610	1600

Quando il carico radiale risultante non è applicato sulla mezzes-  
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
a	56	65
b	43	50
R <sub>2MAX</sub>	610	1600

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'

Rendimento

Efficiency

	n <sub>1</sub> [min <sup>-1</sup> ]	Rendimento Efficiency	Rapporto / Ratio											
			5	7.5	10	15	20	25	30	40	50	60	80	100
CM026	2800	Rd	0.89	0.87	0.85	0.83	0.80		0.73	0.68	0.64	0.60		
		Rs	0.72	0.71	0.68	0.61	0.56		0.46	0.41	0.36	0.34		
CM030	2800	Rd	0.89	0.88	0.86	0.84	0.81	0.78	0.74	0.70	0.65	0.62	0.57	0.52
		Rs	0.72	0.67	0.63	0.55	0.50	0.43	0.39	0.35	0.31	0.27	0.23	0.21

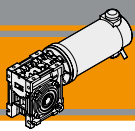
Reversibilità e irreversibilità

Reversibility and irreversibility

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

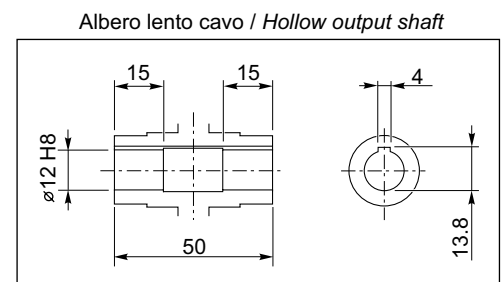
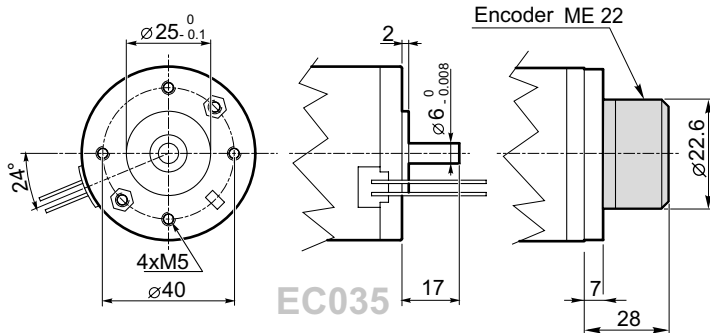
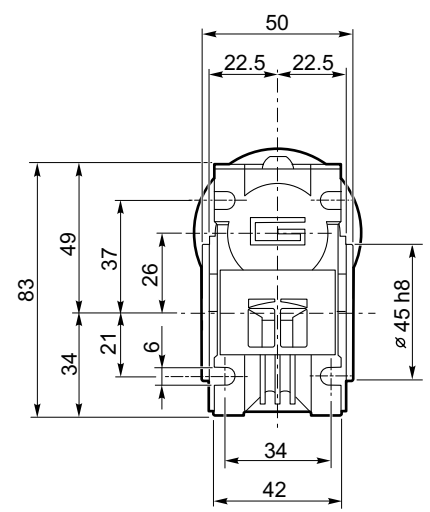
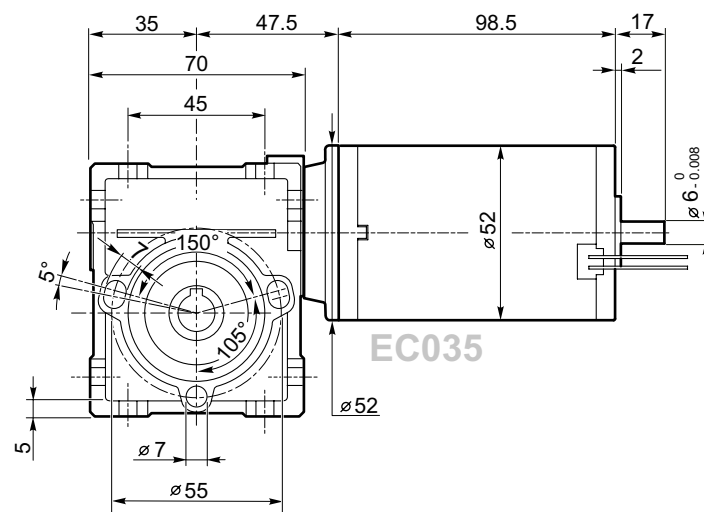
The table below is provided for reference purposes  
only. It contains the various degrees of reversibi-  
lity/irreversibility of wormgearboxes in relation to  
dynamic Rd and static Rs efficiency.

Rd	Reversibilità e irreversibilità dinamica	Dynamic reversibility and irreversibility
> 0.60	Reversibilità dinamica	Dynamic reversibility
0.50 - 0.60	Reversibilità dinamica incerta	Uncertain dynamic reversibility
0.40 - 0.50	Buona irreversibilità dinamica	Good dynamic irreversibility
<0.40	Irreversibilità dinamica	Dynamic irreversibility
Rs	Reversibilità e irreversibilità statica	Static reversibility and irreversibility
> 0.55	Reversibilità statica	Static reversibility
0.50 - 0.55	Reversibilità statica incerta	Uncertain static reversibility
<0.50	Irreversibilità statica	Static irreversibility

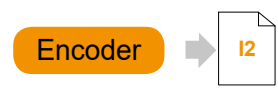


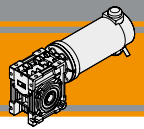
CM026 n <sub>1</sub> =3000 rpm			EC035 S2 12/24V		
ir	M <sub>n</sub> [Nm]	Kg	[Nm]	[rpm]	
5	10		0.8	0.8	600
7.5	11			1.2	400
10	11			1.5	300
15	11			2.2	200
20	11			2.9	150
30	12			3.9	100
40	11			4.9	75
50	10			5.8	60
60	9	6.5		50	

Tipo Type	Servizio Duty	P <sub>n</sub> [W]	V [V]	I [A]	IC	FF	M <sub>n</sub> [Nm]	n <sub>1</sub> [rpm]	IP	Kg
EC035.120	S2 9'	55	12	8.0	F	1	0.18	3000	20	0.8
EC035.240	S2 9'	55	24	4.0			0.18	3000		



EC035: per montaggio encoder  
serve flangia AS204  
EC035: encoder assembling  
needs flange AS204





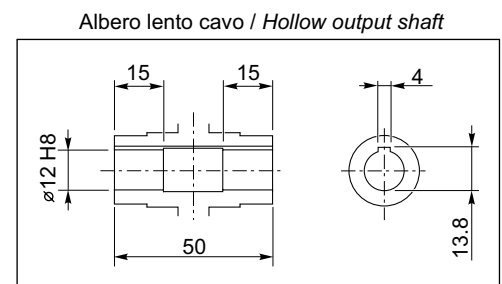
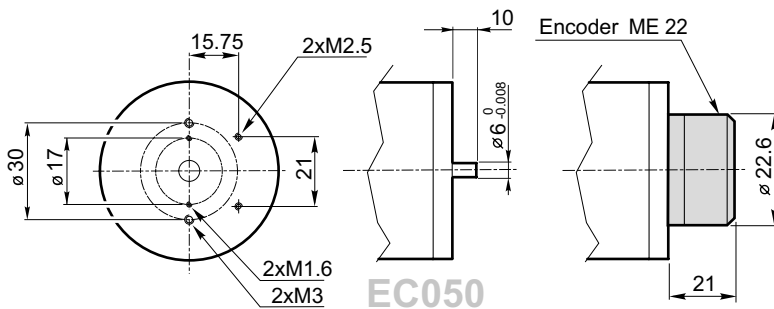
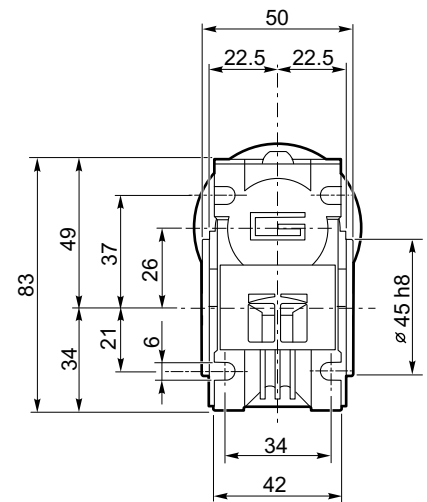
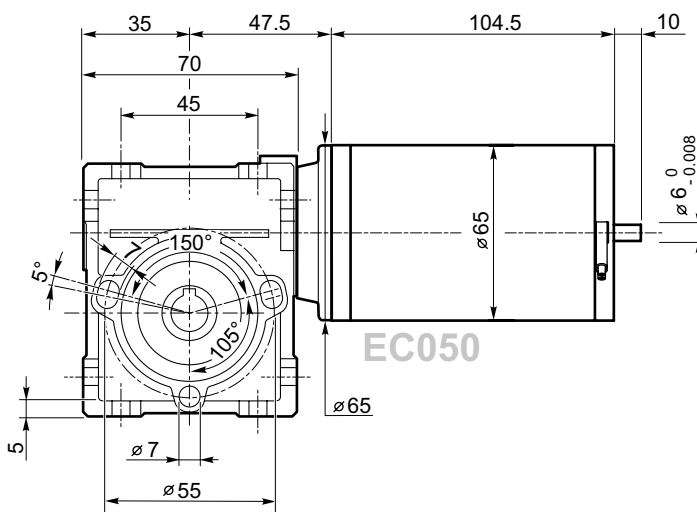
CM026 con motore CC

CM026 with DC motor

CM026 n <sub>1</sub> =3000 rpm			EC050 S2 12/24V		
ir	M <sub>n</sub> [Nm]	Kg	[Nm]	[rpm]	
5	10		0.8	1	600
7.5	11			1.5	400
10	11			2	300
15	11			2.8	200
20	11			3.6	150
30	12			4.8	100
40	11			6	75
50	10			7	60
60	9	8		50	

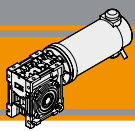
Tipo Type	Servizio Duty	P <sub>n</sub> [W]	V [V]	I [A]	IC	FF	M <sub>n</sub> [Nm]	n <sub>1</sub> [rpm]	IP	Kg
EC050.12E	S2 9'	70	12	9.4	F	1	0.22	3000	20	1.2
EC050.24E	S2 9'	70	24	4.7			0.22			

Azionamenti Drives



Encoder → I2

Freno / Brake → C12



# Micro motoriduttori CC a vite senza fine DC Micro wormgearmotors

CM026 con motore CC

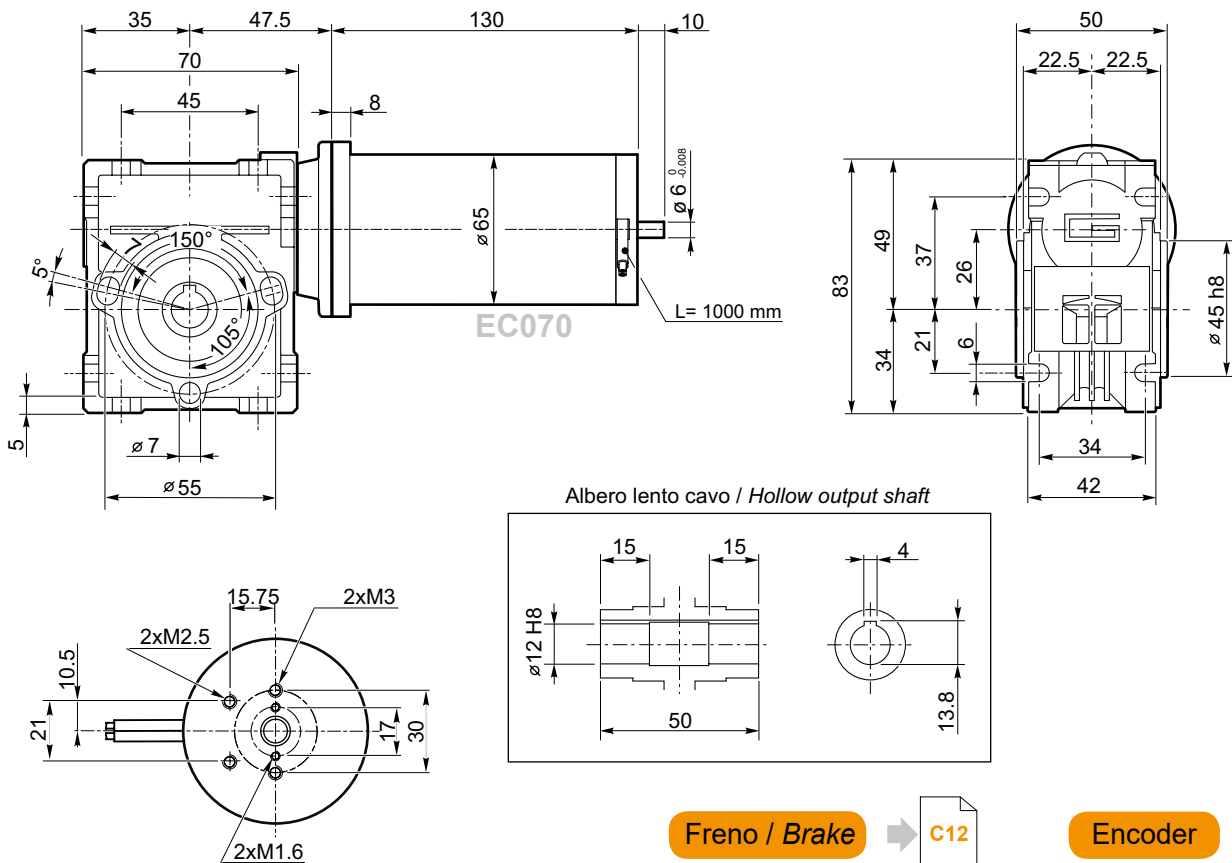
CM026 with DC motor

CM026 n <sub>1</sub> =3000 rpm			EC070			
ir	M <sub>n</sub> [Nm]	Kg	S1 12/24 V		S2 12/24 V	
			[ Nm ]	[ rpm ]	[ Nm ]	[ rpm ]
5	10	0.8	0.98	600	1.38	600
7.5	11		1.44	400	2.03	400
10	11		1.87	300	2.63	300
15	11		2.74	200	3.86	200
20	11		3.52	150	4.96	150
30	12		4.82	100	6.79	100
40	11		5.98	75	8.43	75
50	10		7.04	60	9.92	60
60	9		7.92	50	11.16	50

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.  
N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Tipo Type	Servizio Duty	P <sub>n</sub> [ W ]	V [ V ]	I [ A ]	IC	FF	M <sub>n</sub> [ Nm ]	n <sub>1</sub> [ rpm ]	IP	Kg
EC070.12E	S1	70	12	8.4	F	1	0.22	3000	20	1.7
	S2 20'	100		11.8			0.31			
EC070.24E	S1	70	24	4.2						
	S2 20'	100		5.9			0.31			

Azionamenti  
Drives



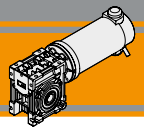
Freno / Brake

C12

Encoder

I2





CM026 con motore CC

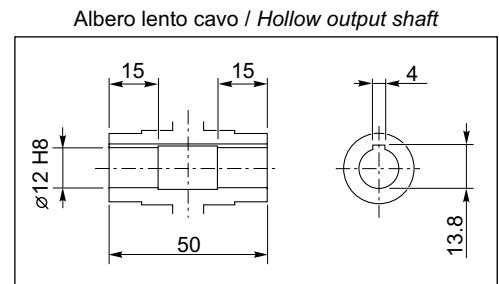
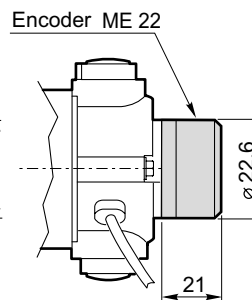
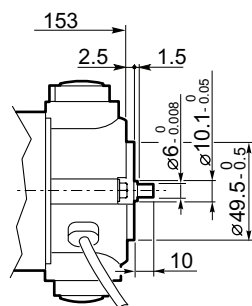
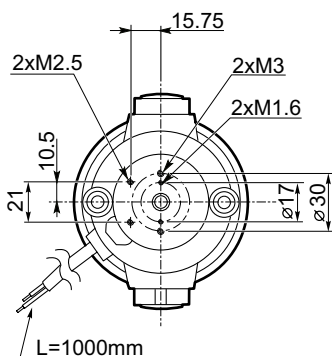
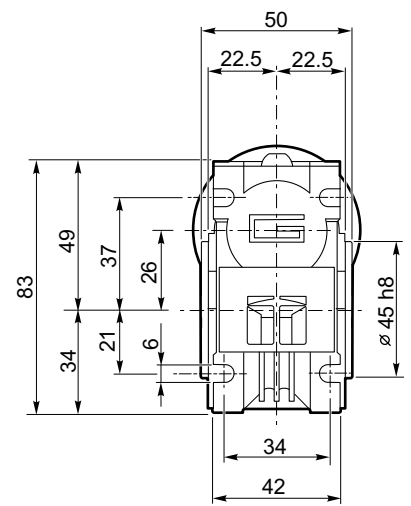
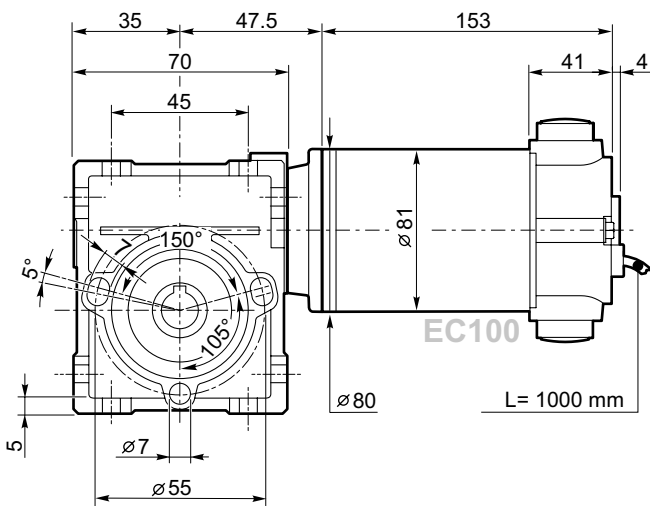
CM026 with DC motor

CM026 n <sub>1</sub> =2800 rpm			EC100			
ir	M <sub>n</sub> [Nm]	Kg	S1 12/24 V		S2 12/24 V	
			[ Nm ]	[ rpm ]	[ Nm ]	[ rpm ]
5	10	0.8	1.38	600	1.92	600
7.5	11		2.03	400	2.81	400
10	11		2.63	300	3.65	300
15	11		3.86	200	5.36	200
20	11		4.96	150	6.88	150
30	12		6.79	100	9.42	100
40	11		8.43	75	11.69	75
50	10		9.92	60	13.76	60
60	9		11.16	50	15.48	50

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.  
N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Tipo Type	Servizio Duty	P <sub>n</sub> [ W ]	V [ V ]	I [ A ]	IC	FF	M <sub>n</sub> [ Nm ]	n <sub>1</sub> [ rpm <sup>1</sup> ]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240 EC100.24E	S1	100	24	6			0.31		20	
	S2 25'	140		8.4			0.43			

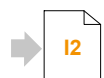
Azionamenti  
Drives

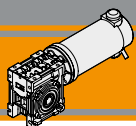


Freno / Brake



Encoder





# Micro motoriduttori CC a vite senza fine DC Micro wormgearmotors

CM030 con motore CC

CM030 with DC motor

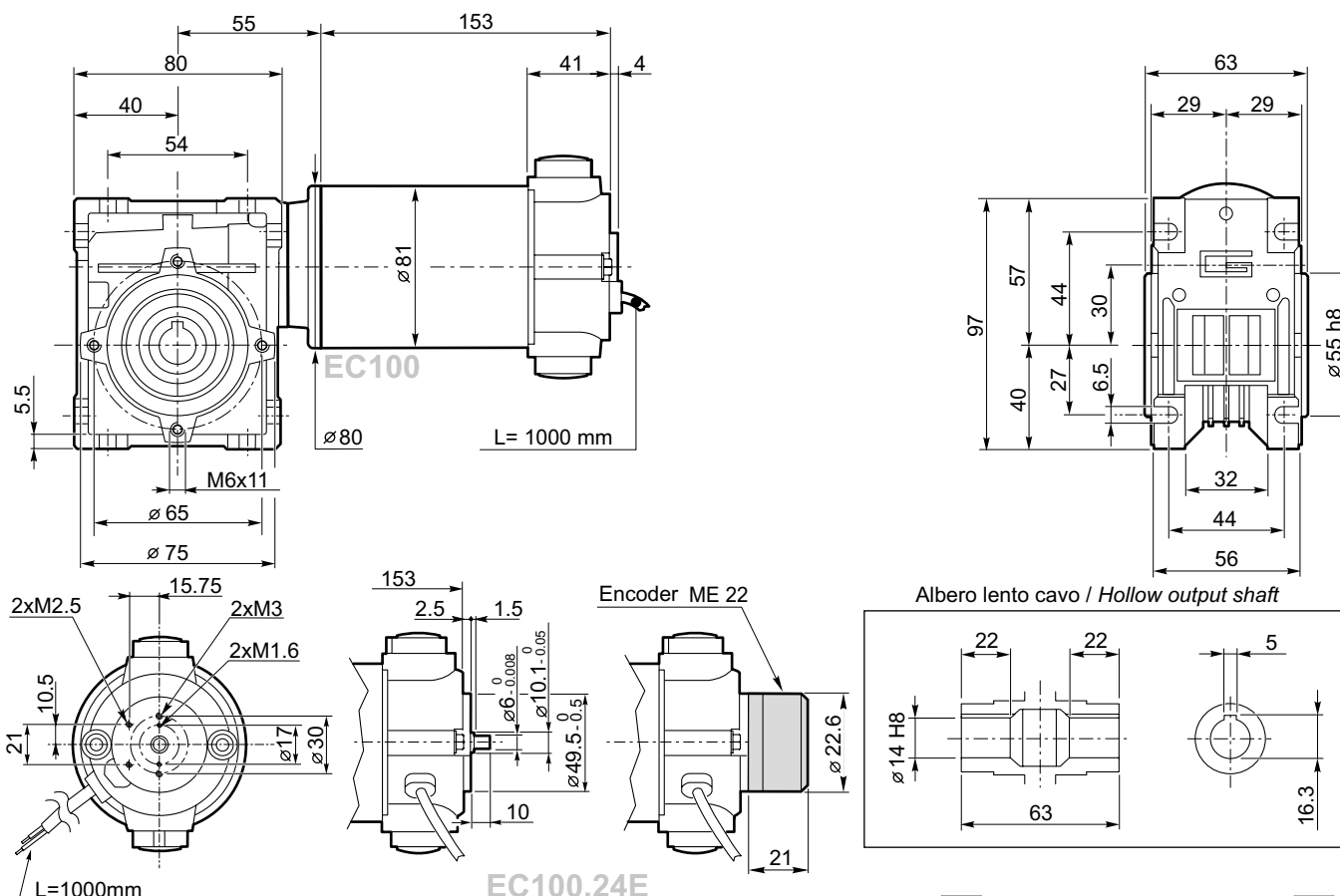
CM030 n <sub>1</sub> =3000 rpm			EC100			
i <sub>r</sub>	M <sub>n</sub> [Nm]	Kg	S1 12/24 V		S2 12/24 V	
			[ Nm ]	[ rpm ]	[ Nm ]	[ rpm ]
5	13	1.2	1.4	600	1.9	600
7.5	15		2	400	2.8	400
10	16		2.7	300	3.7	300
15	16		3.9	200	5.4	200
20	14		5	150	6.9	150
25	15		6	120	8.3	120
30	18		6.9	100	9.6	100
40	16		8.7	75	12.1	75
50	15		10	60	13.9	60
60	14		11.5	50	16.0	50
80	12	14.1	37.5	19.6	37.5	
100	11	16.1	30	22.3	30	

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.  
N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Tipo Type	Servizio Duty	P <sub>n</sub> [ W ]	V [ V ]	I [ A ]	IC	FF	M <sub>n</sub> [ Nm ]	n <sub>1</sub> [ rpm <sup>1</sup> ]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	40	2.7
	S2 25'	140		16.8			0.43			
EC100.240	S1	100	24	6			0.31		20	
EC100.24E	S2 25'	140		8.4			0.43			

Azionamenti  
Drives

H2

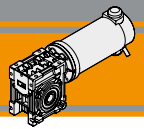


Freno / Brake

C12

Encoder

I2



CM030 con motore CC

CM030 with DC motor

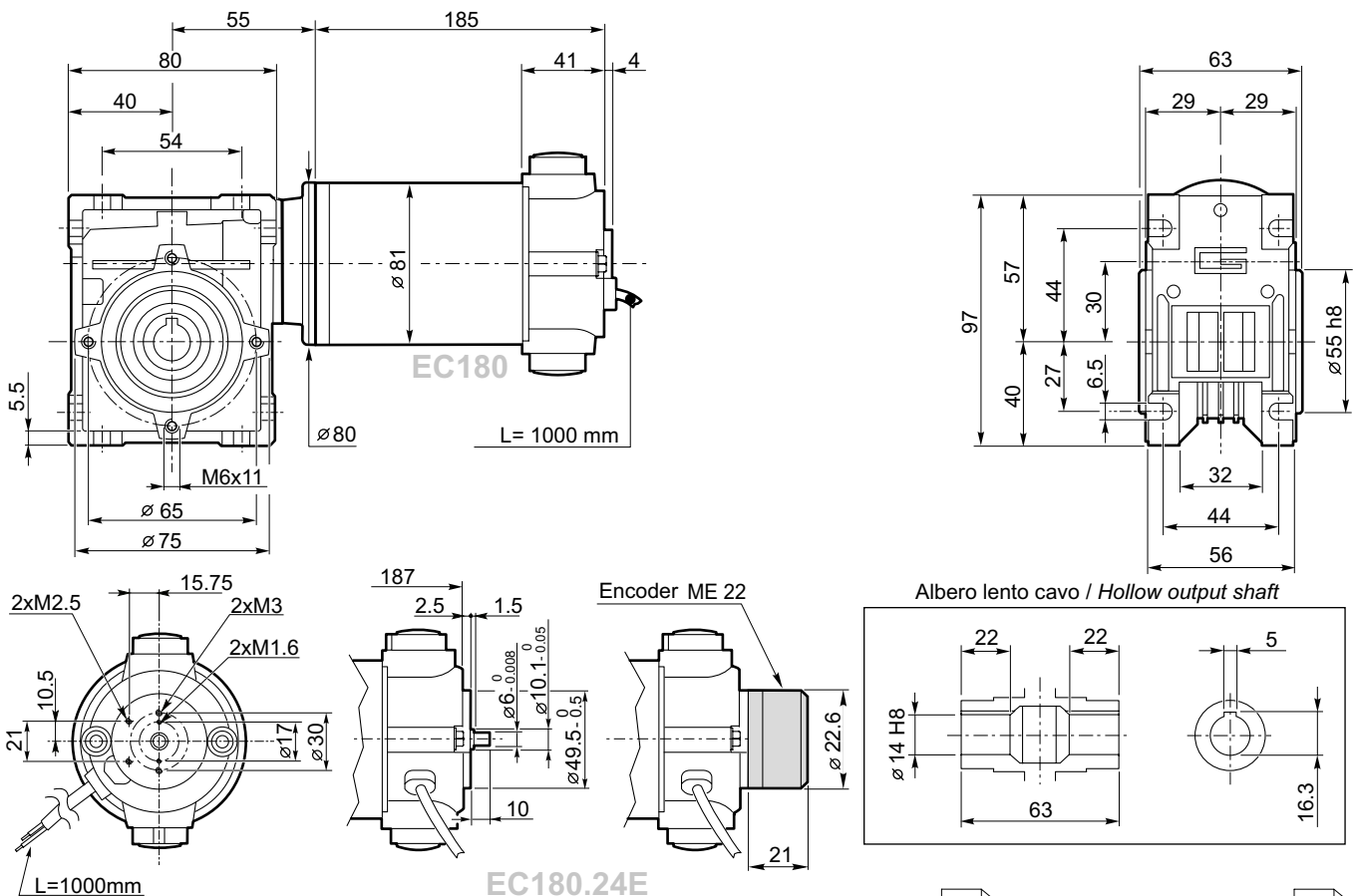
CM030 n <sub>1</sub> =3000 rpm			EC180			
ir	M <sub>n</sub> [Nm]	Kg	S1 12/24 V		S2 12/24 V	
			[ Nm ]	[ rpm ]	[ Nm ]	[ rpm ]
5	13	1.2	2.6	600	3.6	600
7.5	15		3.7	400	5.2	400
10	16		5.0	300	7.0	300
15	16		7.2	200	10.1	200
20	14		9.2	150	12.9	150
25	15		11.0	120	15.5	120
30	18		12.7	100	17.8	100
40	16		16.0	75	22.5	75
50	15		18.4	60	25.8	60
60	14		21.1	50	29.7	50
80	12		25.9	37.5	36.4	37.5
100	11		29.6	30	41.5	30

Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.  
N.B.: boxes in grey indicate that maximum torque withstood by gear reducer for service in S1 is exceeded.

Nota: su rapporti 60, 80 e 100 non è possibile montare motore EC180.24E  
Note: on ratio 60, 80 and 100 is not possible to assembly motor EC180.24E

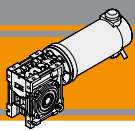
Tipo Type	Servizio Duty	Pn [ W ]	V [ V ]	I [ A ]	IC	FF	Mn [ Nm ]	n1 [ rpm <sup>1</sup> ]	IP	Kg
EC180.120	S1	180	12	21.5	F	1	0.57	3000	40	3.4
	S2 25'	250		30			0.8			
EC180.240	S1	180	24	10.8			0.57			
EC180.24E	S2 25'	250		15			0.8		20	

Azionamenti Drives → H2



Freno / Brake → C12

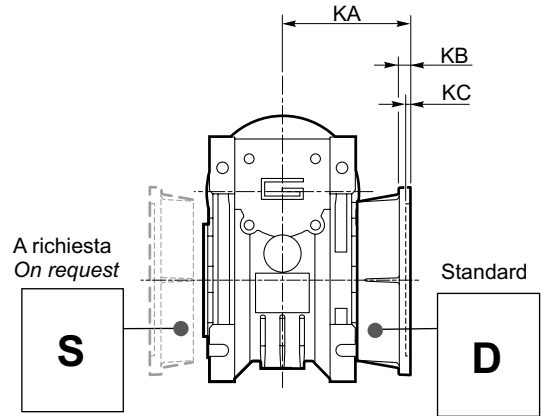
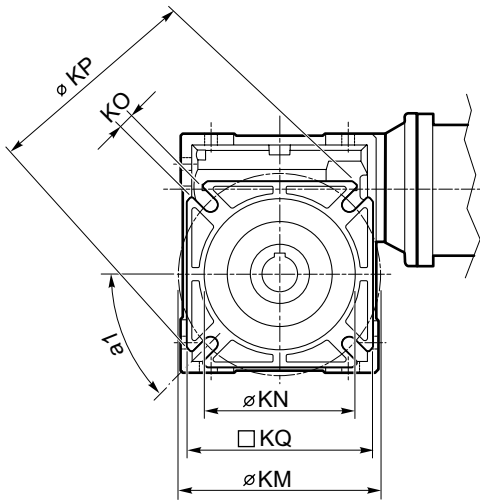
Encoder → I2



Dimensioni

Dimensions

CM.../... F... Flange uscita / Output flanges



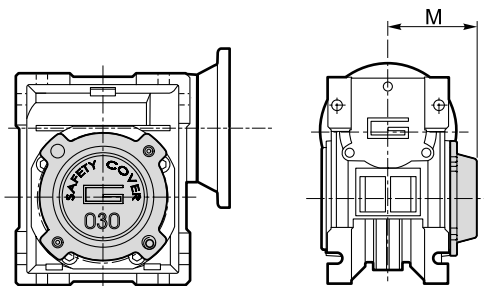
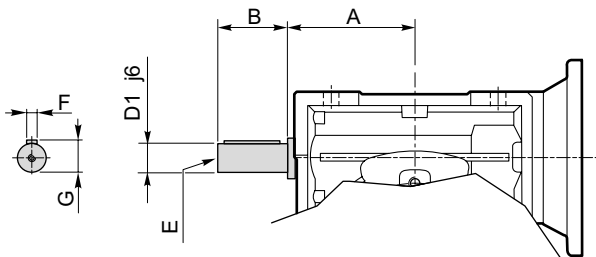
CM	CM..F								
	a1	KA	KB	KC	KM	KN H8	KO	KP	KQ
026	45°	45	6	4.5	55-69	40	6.5(n.4)	75	70
030	45°	54.5	6	4	68	50	6.5(n.4)	80	70

Opzioni

Options

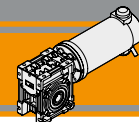
VS - Vite sporgente / Extended input shaft

SC - Safety cover



	A	B	D <sub>1</sub> j6	E	F	G
CM 030	45	20	9	M4	3	10.2

	M
CM 030	47

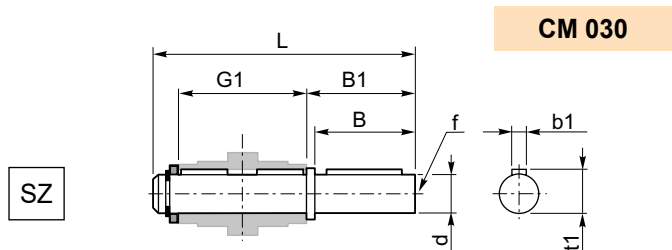
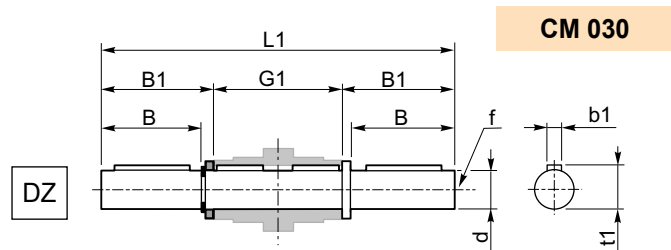


Accessori

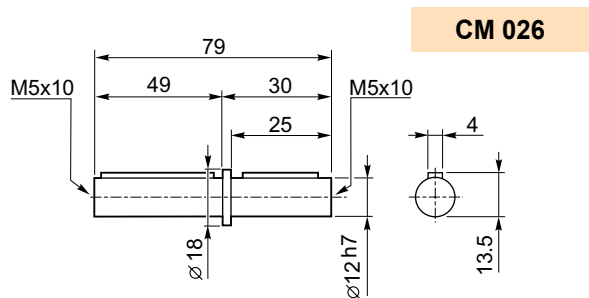
Accessories

Albero lento

Output shaft



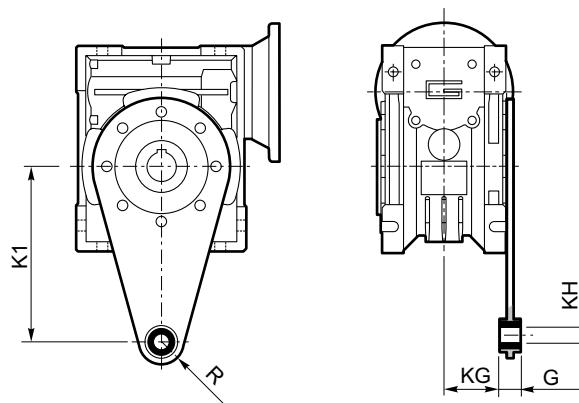
	d h7	B	B1	G1	L	L1	f	b1	t1
CM 030	14	30	32.5	63	102	128	M6	5	16



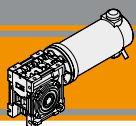
Braccio di reazione

Torque arm

	K1	G	KG	KH	R
CM 030	85	14	23	8	15



DC  
CM



Freno

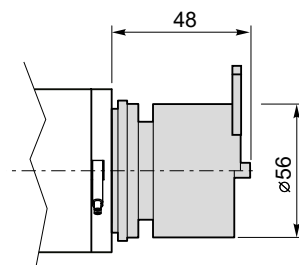
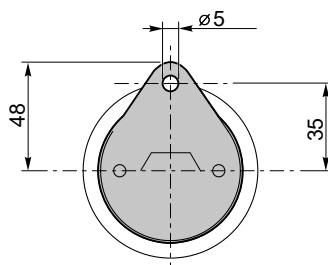
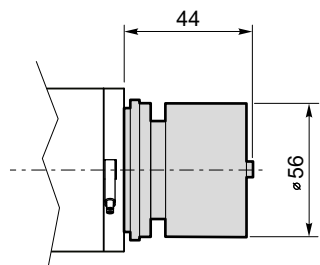
Brake

Freno / Brake

Freno con leva di sblocco/ Brake with hand release

EC050...BR  
EC070...BR

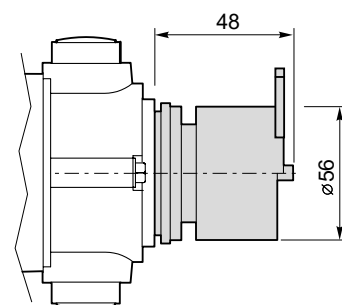
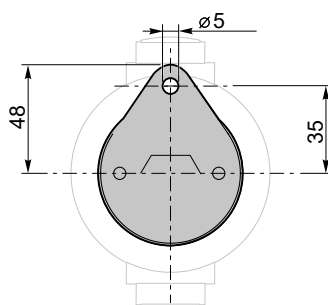
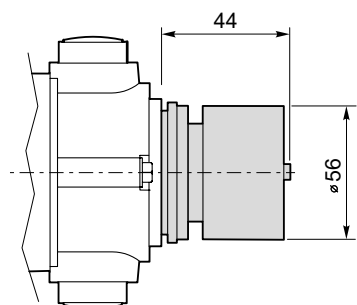
EC050...BRL  
EC070...BRL



	<b>P<sub>n</sub></b> [W]	<b>V</b> [V]	<b>M<sub>n</sub></b> [Nm]	<b>n<sub>1</sub></b> [min <sup>-1</sup> ]
<b>Caratteristiche del freno / Break features</b>	14	12	2	3000
		24		

EC100.24E BR  
EC180.24E BR

EC100.24E BRL  
EC180.24E BRL





	<b>P<sub>n</sub></b> [W]	<b>V</b> [V]	<b>M<sub>n</sub></b> [Nm]	<b>n<sub>1</sub></b> [min <sup>-1</sup> ]
<b>Caratteristiche del freno / Break features</b>	14	12	2	3000
		24		

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