

INTECNO

DC

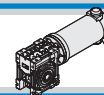
CM

MICRO Motoriduttori C.C. a Vite senza Fine
D.C. MICRO Wormgearmotors



member of
TRANSTECNO
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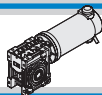




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Caratteristiche tecniche

Technical features



Le caratteristiche principali dei motoriduttori a corrente continua della serie CM sono:

The main features of CM D.C. gearmotor range are:

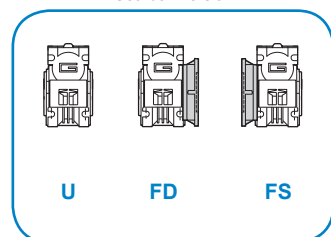
- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 55 a 250W S2
- Magneti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico.
- Low voltage power supply 12/24 Vdc
- Suitable for encoder assembly
- Motor power ratings available from 55 to 250W S2
- Ferrite 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
CM 	026 030	Vedere tabelle See tables	U F	EC035 EC050 EC070 EC100 EC180	12V 24V	Encoder 

Versione Riduttore
Gearbox Version



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 ₂	[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 ₂	[N] massimo carico radiale al centro dell'albero uscita max. radial load at output shaft centre	Mn	[Nm]	Coppia / Torque
A ₂	[N] massimo carico assiale / max. axial load	n ₁	[Rpm]	Giri / Speed
		IP		Grado di protezione / Enclosure protection
		Kg		Peso / Weight

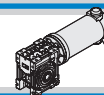
Lubrificazione

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.

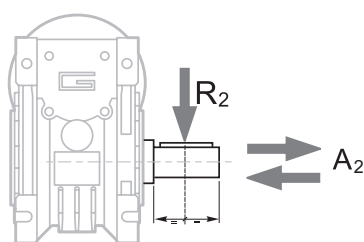
Permanent synthetic oil long-life lubrication allow to use CM026 and CM030 wormgearbox range in all mounting position.

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



Carichi radiali

Radial loads

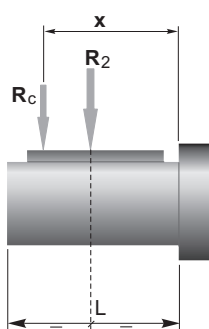


$A_2 = R_2 \times 0.2$

n ₂ [min ⁻¹]	R ₂ [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 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
a	56	65
b	43	50
R _{2MAX}	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 ₁ [min ⁻¹]	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

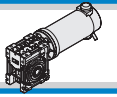
Reversibilità e irreversibilità

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 con motore C.C.

CM026 with DC motor

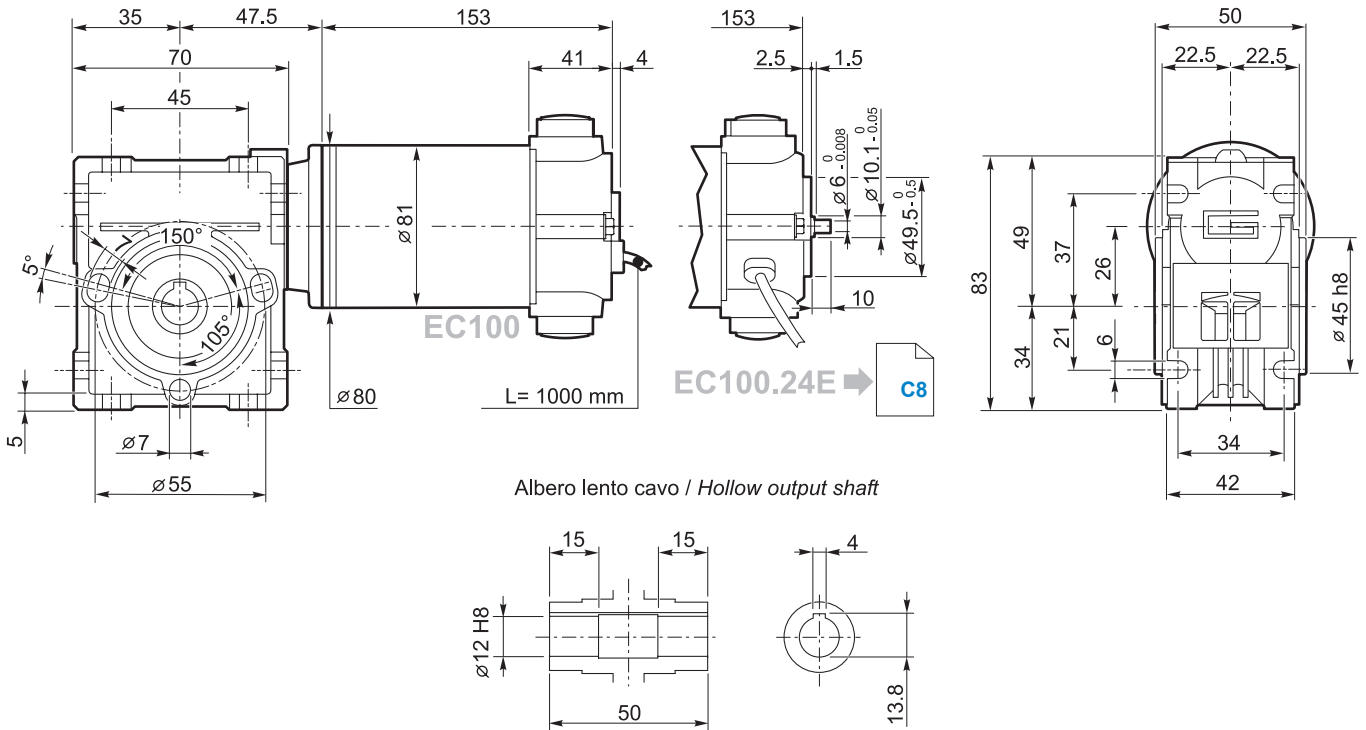


CM026 n ₁ =2800 rpm			EC100			
ir	M ₂ [Nm]	Kg	S1 12/24 V [Nm]	S1 12/24 V [rpm]	S2 12/24 V [Nm]	S2 12/24 V [rpm]
5	10	0.8	1.38	600	1.92	600
7.5	11		2.03	400	2.81	400
10	11		2.63	300	3.65	300
15	11		3.86	200	5.36	200
20	11		4.96	150	6.88	150
30	12		6.79	100	9.42	100
40	11		8.43	75	11.69	75
50	10		9.92	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 _n [W]	V [V]	I [A]	IC	FF	M _n [Nm]	n ₁ [rpm ¹]	IP	Kg
EC100.120	S1	100	12	12	F	1	0.31	3000	44	2.7
	S2 25'	140		16.8			0.43			
EC100.240	S1	100	24	6			0.31			
	S2 25'	140		8.4			0.43			

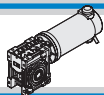
Azionamenti
Drives



Albero lento cavo / Hollow output shaft

Encoder





MICRO MOTORIDUTTORI C.C. A VITE SENZA FINE D.C. MICRO WORMGEARMOTORS

CM030 con motore C.C.

CM030 with DC motor

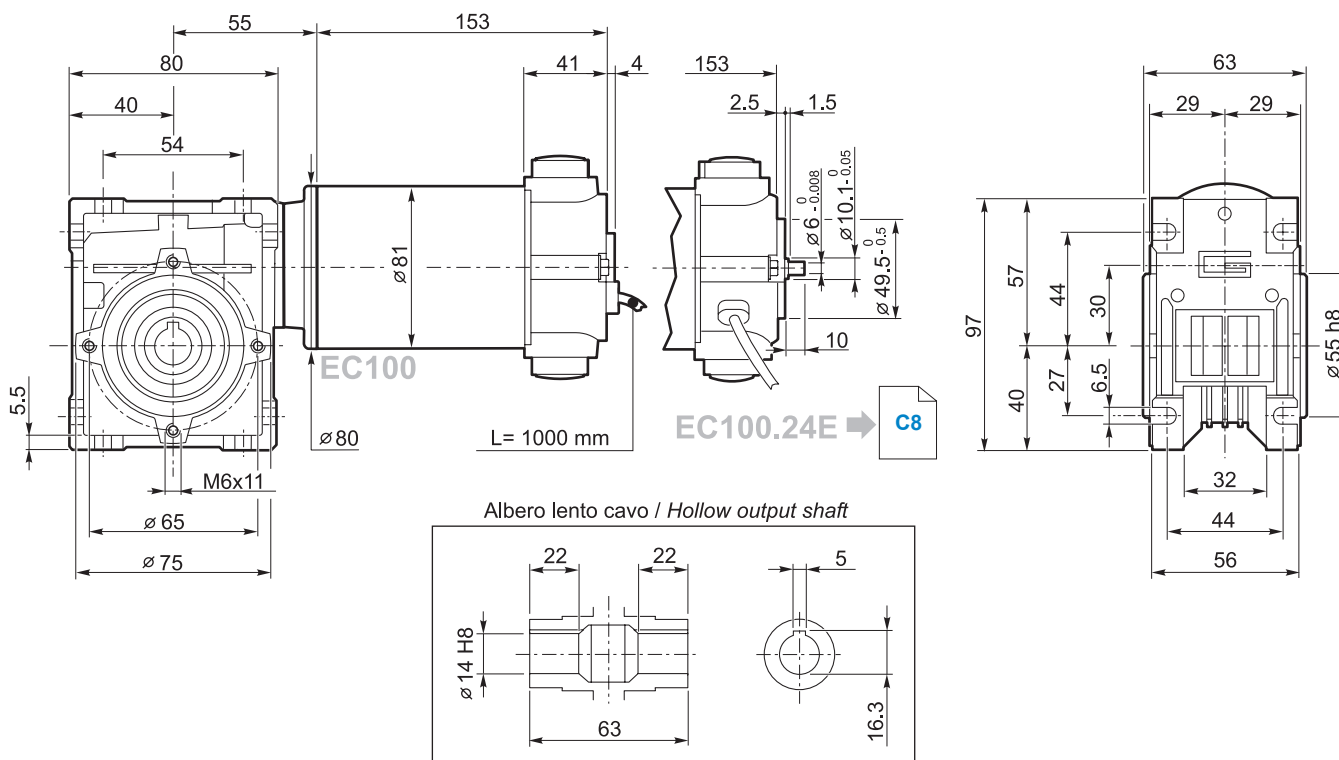


CM030 n ₁ =3000 rpm			EC100			
ir	M ₂ [Nm]	Kg	S1 12/24 V		S2 12/24 V	
			[Nm]	[rpm]	[Nm]	[rpm]
5	13	1.2	1.4	600	1.9	600
7.5	15		2	400	2.8	400
10	16		2.7	300	3.7	300
15	16		3.9	200	5.4	200
20	14		5	150	6.9	150
25	15		6	120	8.3	120
30	18		6.9	100	9.6	100
40	16		8.7	75	12.1	75
50	15		10	60	13.9	60
60	14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

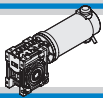
Nota: le caselle in colore grigio indicano il superamento della coppia massima sopportata dal riduttore per il servizio in S1.
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	S2 25'	140		16.8			0.43			
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	S2 25'	140		8.4			0.43			

Azionamenti
Drives



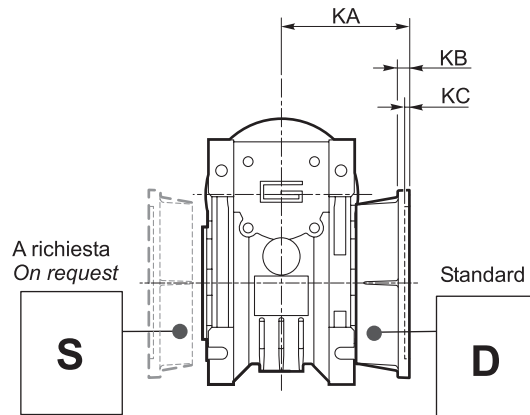
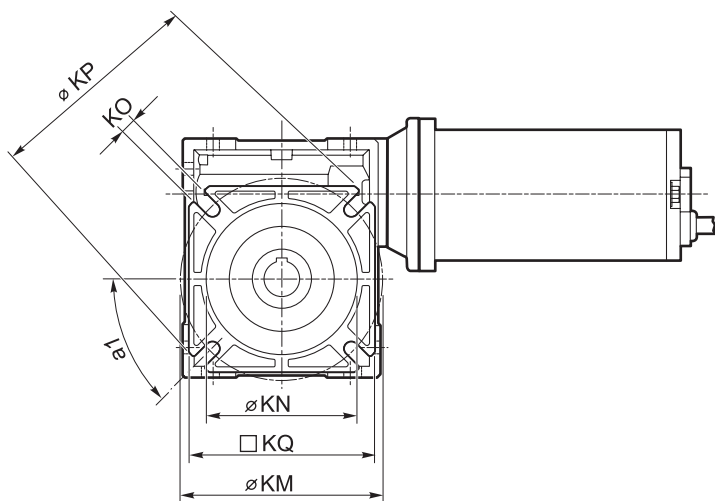
Encoder



Dimensioni

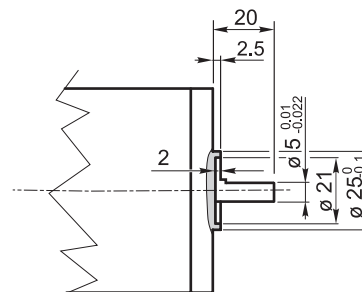
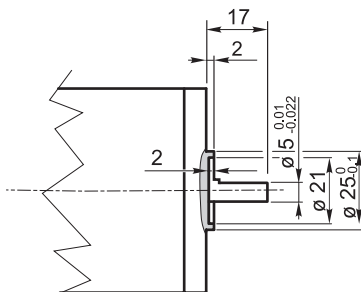
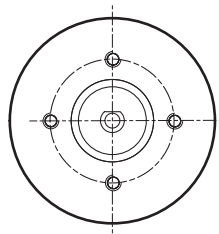
Dimensions

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

EC035
EC050

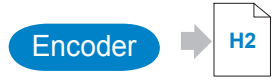
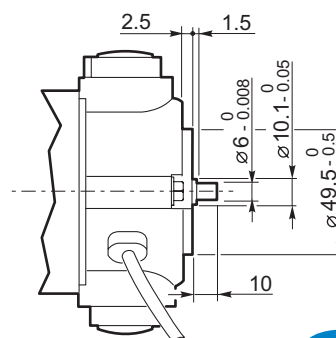
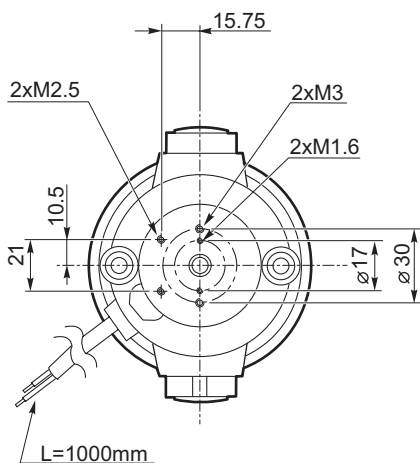


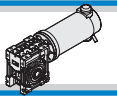
EC035.120
EC035.240

EC050.120
EC050.240

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

EC100.24E
EC180.24E



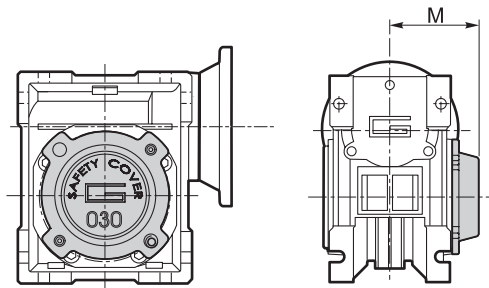
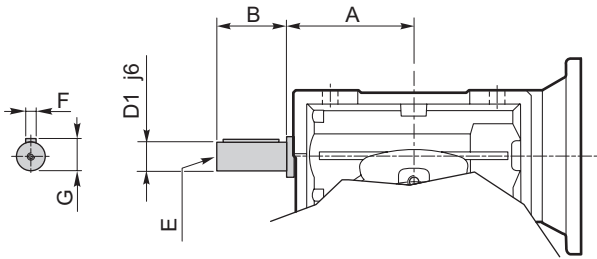


Opzioni

Options

VS - Vite sporgente / Extended input shaft

SC - Safety cover



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

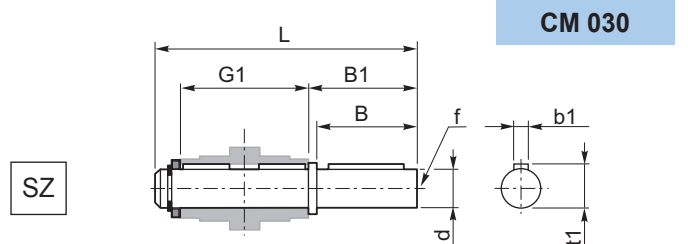
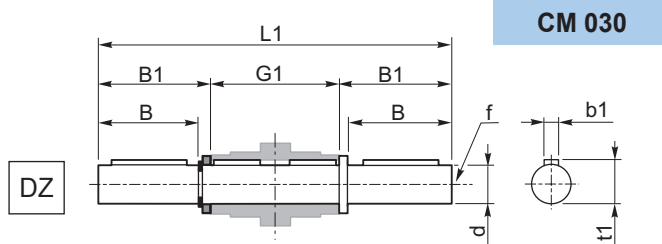
	M
CM 030	47

Accessori

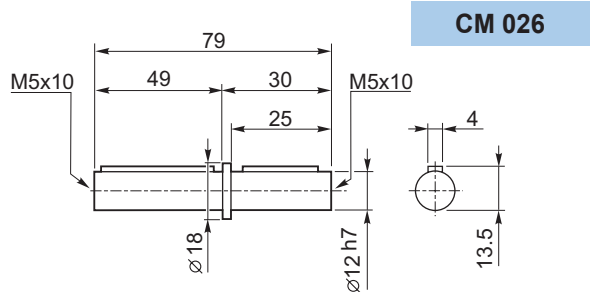
Accessories

Albero lento

Output shaft



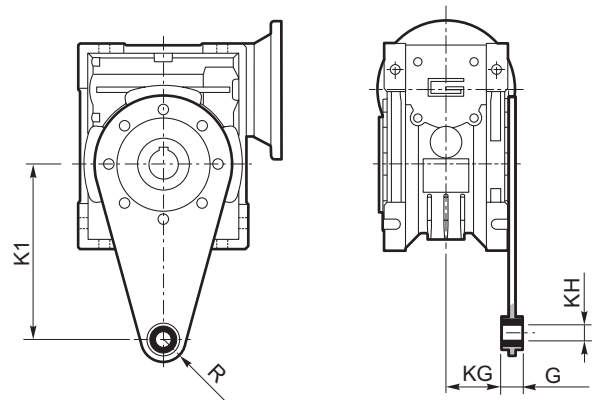
	d h7	B	B1	G1	L	L1	f	b1	t1
CM 030	14	30	32.5	63	102	128	M6	5	16



Braccio di reazione

Torque arm

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



INTECNO

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