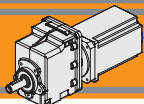


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CMG002 con motore brushless BL 070.480	<i>CMG002 with brushless motor BL 070.480</i>	E5
CMG002 con motore brushless BL 140.480	<i>CMG002 with brushless motor BL 140.480</i>	E5
CMG002 con motore brushless BL 210.480	<i>CMG002 with brushless motor BL 210.480</i>	E5

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Motoriduttori brushless CC ad ingranaggi cilindrici Brushless DC helical in-line gearmotors

Caratteristiche tecniche

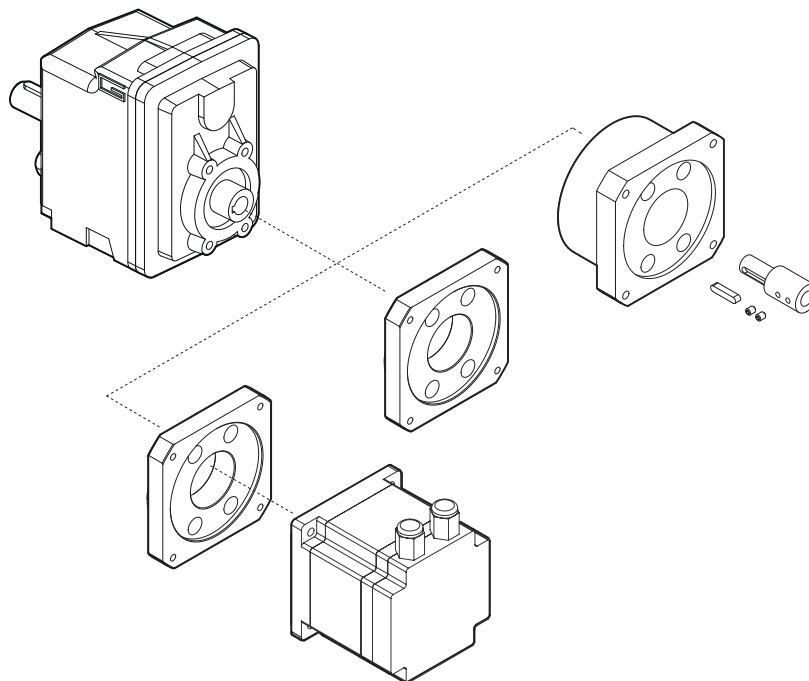
Technical features

Le caratteristiche principali dei motoriduttori brushless CC ad ingranaggi cilindrici della serie CMG sono:

The main features of brushless DC helical gearmotors range CMG series are:

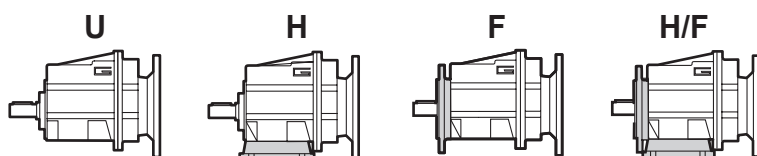
- Alimentazione in bassa tensione 24/36/48 Vcc
- Motore protezione IP55
- Coppie motori disponibili da 0.43 Nm a 2.1 Nm
- Lubrificazione permanente con olio sintetico
- Carcasse dei riduttori in pressofusione di alluminio
- Ingranaggi cilindrici a denti elicoidali, induriti e rettificati


- Low voltage power supply 24/36/48 Vdc
- Motor protection IP55
- Motor torque ratings available from 0.43 Nm up to 2.1 Nm
- Permanent synthetic oil long life lubrication
- Die cast aluminum housing
- Ground-hardened helical gears



Designazione

Classification

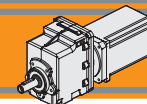


MOTORIDUTTORE / GEARBOX					MOTORE / MOTOR		
CMG	002	U	8.99	D20	BL070.480	48V	BR
Tipo Type	Grandezza Size	Versione Version	Rapporto Ratio	Albero uscita Output shaft	Tipo Type	Tensione Voltage	Freno Brake
CMG	002	U... H... F... H.../F...	vedi tabelle see tables	vedi tabelle see tables	BLS043.240 BL070.240 BL070.48B BL070.480 BL140.480 BL210.480 BL210.48E	24V-36V 24V 48V 48V 48V 48V 48V	24V 48V 

Simbologia

Symbols

i	Rapporto di riduzione / ratio	V	[V]	Tensione / Voltage
M ₂	[Nm] Coppia in uscita in funzionamento continuativo S1 Output torque for continuous operation S1	I	[A]	Assorbimento / Current
Rd	Rendimento dinamico / efficiency	M ₂	[Nm]	Coppia / Torque
R ₂	[N] Massimo carico radiale al centro dell'albero uscita Max. radial load at output shaft centre	n _{1MAX}	[Rpm]	Giri max entrata / Max Input Speed
A ₂	[N] Massimo carico assiale / max. axial load	IP		Grado di protezione / Enclosure protection
sf	Fattore di servizio / Service factor	Kg		Peso / Weight
		n ₂	[Rpm]	Giri in uscita / Output Speed



Lubrificazione e temperatura

Tutti i riduttori nelle taglie 002 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

Temperatura ambiente $0 \div 40 \text{ }^\circ\text{C}$ (in assenza di congelamento ed in assenza di condensa).

Per temperature diverse, contattare nostro UT.

Lubrication and temperature

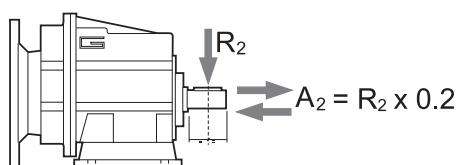
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use sizes 002 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Ambient temperature $0 \div 40 \text{ }^\circ\text{C}$ (in the absence of freezing and condensation).

For temperature outside this range please contact our technical dept.

Carichi radiali

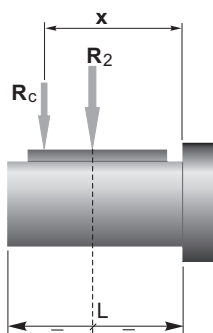
Radial loads



n_2 [min ⁻¹]	R_2 [N]
	CMG 02
700	1529
600	1609
500	1710
400	1842
250	2154
180	2554
150	2714
120	3467
100	3684
80	3969
60	4368
40	5000
10	5000

Quando il carico radiale risultante non è applicato sulla mezzesfera 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:

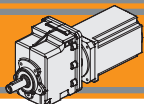


	CMG 02
a	117
b	92
R_{2MAX}	5000

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

$$R \leq R_c$$

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



Motoriduttori brushless CC ad ingranaggi cilindrici Brushless DC helical in-line gearmotors

CMG002 con motore brushless CC

CMG002 with brushless DC motor

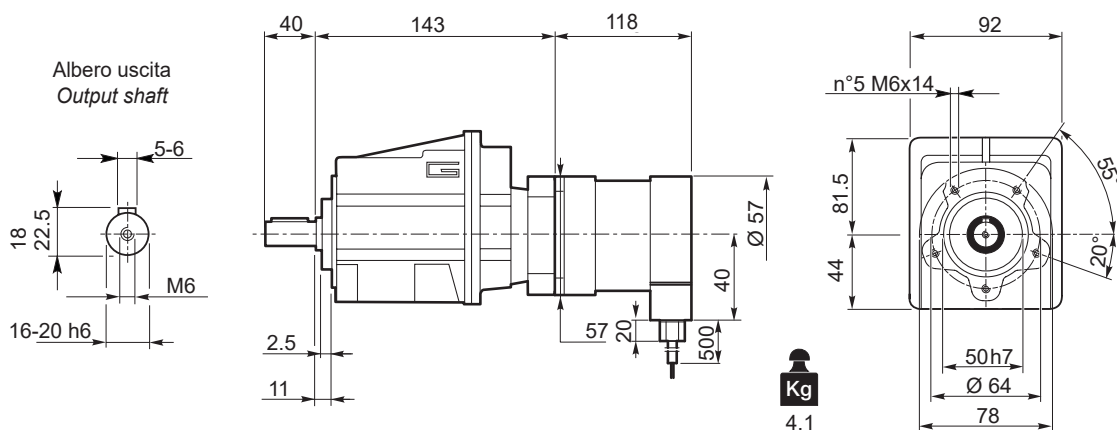
CMG 002	BLS043.240													
	24V						36V							
	n_{2MIN} [rpm]			n_{2MAX} [rpm]			n_{1MAX} [rpm]	n_{2MIN} [rpm]			n_{2MAX} [rpm]		n_{1MAX} [rpm]	
M_2 [Nm]	sf		M_2 [Nm]	sf		M_2 [Nm]		sf		M_2 [Nm]	sf			
5.0	60	2.1	22.2	596	2.1	15.0	3000	80	2.1	22.2	795	2.1	13.3	4000
6.1	49	2.5	18.3	492	2.5	12.4		66	2.5	18.3	656	2.5	11.0	
7.5	40	3.1	14.9	401	3.1	10.1		53	3.1	14.9	534	3.1	8.9	
9.0	33	3.7	15.5	334	3.7	10.5		44	3.7	15.5	445	3.7	9.3	
10.2	30	4.2	13.7	295	4.2	9.3		39	4.2	13.7	394	4.2	8.2	
12.1	25	5.0	11.5	249	5.0	7.8		33	5.0	11.5	331	5.0	6.9	
13.4	22	5.5	14.6	224	5.5	9.9		30	5.5	14.6	299	5.5	8.7	
15.1	20	6.2	12.9	198	6.2	8.7		26	6.2	12.9	264	6.2	7.7	
18.2	17	7.5	10.7	165	7.5	7.3		22	7.5	10.7	220	7.5	6.4	
21.6	14	8.9	9.0	139	8.9	6.1		19	8.9	9.0	185	8.9	5.4	
23.5	13	9.7	8.3	128	10	5.6		17	9.7	8.3	170	9.7	5.0	
25.1	12	10	7.8	120	10	5.3		16	10	7.8	159	10	4.7	
27.1	11	11	7.2	111	11	4.9		15	11	7.2	148	11	4.3	
32.5	9.2	13	6.0	92	13	4.1		12	13	6.0	123	13	3.6	
42.0	7.1	17	4.6	71	17	3.1		9.5	17	4.6	95	17	2.8	
44.9	6.7	19	4.3	67	19	2.9		8.9	19	4.3	89	19	2.6	
48.9	6.1	20	4.0	61	20	2.7		8.2	20	4.0	82	20	2.4	
55.1	5.4	23	3.5	54	23	2.4		7.3	23	3.5	73	23	2.1	

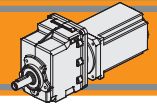
Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BLS043.240	4	3	36	4000	0.43	180
			24	3000		130
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BLS043.240	0.86	6	0.35	1	12.0	1.25

Azionamenti
Drives



CMG002U..
+
BLS043.240





CMG002 con motore brushless CC

CMG002 with brushless DC motor

CMG 002	BL070.240 BL070.480 / BL070.48B							BL140.480						BL210.480 / BL210.48E						
	24V / 48V							48V						48V						
	ir	n ₂ MIN [rpm]		n ₂ MAX [rpm]		n ₁ MAX [rpm]		n ₂ MIN [rpm]		n ₂ MAX [rpm]		n ₁ MAX [rpm]		n ₂ MIN [rpm]		n ₂ MAX [rpm]		n ₁ MAX [rpm]		
M ₂ [Nm]		sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf	M ₂ [Nm]	sf		
5.0	60	3.4	13.6	596	3.4	9.2	3000	60	6.8	6.8	596	6.8	4.6	3000	60	10	4.5	596	10	3.1
6.1	49	4.1	11.2	492	4.1	7.6		49	8.2	5.6	492	8.2	3.8		49	12	3.7	492	12	2.5
7.5	40	5.0	9.1	401	5.0	6.2		40	10	4.6	401	10	3.1		40	15	3.0	401	15	2.1
9.0	33	6.0	9.5	334	6.0	6.5		33	12	4.8	334	12	3.2		33	18	3.2	334	18	2.2
10.2	30	6.8	8.4	295	6.8	5.7		30	14	4.2	295	14	2.9		30	20	2.8	295	20	1.9
12.1	25	8.1	7.1	249	8.1	4.8		25	16	3.5	249	16	2.4		25	24	2.4	249	24	1.6
13.4	22	9.0	8.9	224	9.0	6.1		22	18	4.5	224	18	3.0		22	27	3.0	224	27	2.0
15.1	20	10	7.9	198	10	5.4		20	20	4.0	198	20	2.7		20	30	2.6	198	30	1.8
18.2	17	12	6.6	165	12	4.5		17	24	3.3	165	24	2.2		17	36	2.2	165	36	1.5
21.6	14	15	5.6	139	15	3.8		14	29	2.8	139	29	1.9		14	43	1.9	139	43	1.3
23.5	13	16	5.1	128	16	3.5		13	32	2.5	128	32	1.7		13	47	1.7	128	47	1.2
25.1	12	17	4.8	120	17	3.2		12	34	2.4	120	34	1.6		12	51	1.6	120	51	1.1
27.1	11	18	4.4	111	18	3.0		11	36	2.2	111	36	1.5		11	55	1.5	111	55	1.0
32.5	9.2	22	3.7	92	22	2.5		9.2	44	1.8	92	44	1.3		9.2	65	1.2	92	65	0.8
42.0	7.1	28	2.8	71	28	1.9		7.1	57	1.4	71	57	1.0		7.1	85	0.9	71	78	0.7
44.9	6.7	30	2.7	67	30	1.8		6.7	60	1.3	67	60	0.9		6.7	90	0.9	67	78	0.7
48.9	6.1	33	2.5	61	33	1.7		6.1	66	1.2	61	66	0.8		6.1	99	0.8	61	78	0.7
55.1	5.4	37	2.2	54	37	1.5		5.4	74	1.1	54	74	0.7		5.4	110	0.7	54	78	0.7

Attenzione: superamento della coppia nominale supportata dal riduttore per servizio S1.

Contattare il ns. servizio tecnico

Attention: rated torque withstood by gear reducer for service in S1 is exceeded.

Please. contact our technical office.

Tipo Type	Numero di poli Number of poles	Numero di fasi Number of phase	Tensione Rated voltage [V]	Numero di giri Rated speed [rpm]	Coppia nominale Rated torque [Nm]	Potenza nominale Rated power [W]
BL070.240	8	3	24	3000	0.7	220
BL070.480 BL070.48B	8	3	48	3000	0.7	220
BL140.480	8	3	48	3000	1.4	440
BL210.480 BL210.48E	8	3	48	3000	2.1	660
Tipo Type	Coppia massima Peak torque [Nm]	Corrente nominale Rated current [A]	Resistenza Resistance [ohm]	Induttanza Inductance [mH]	Corrente massima Peak current [A]	Peso Weight [kg]
BL070.240	2.1	13	0.091	0.23	26	2.1
BL070.480 BL070.48B	1.4	6.5	0.34	1.0	13	2.1
BL140.480	2.8	13	0.16	0.5	26	3.15
BL210.480 BL210.48E	4.2	18.7	0.115	0.31	37	4.2

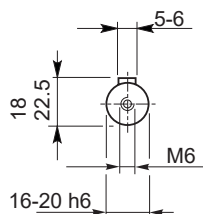
Azionamenti
Drives



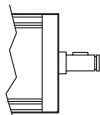
Albero uscita
Output shaft

CMG002U..

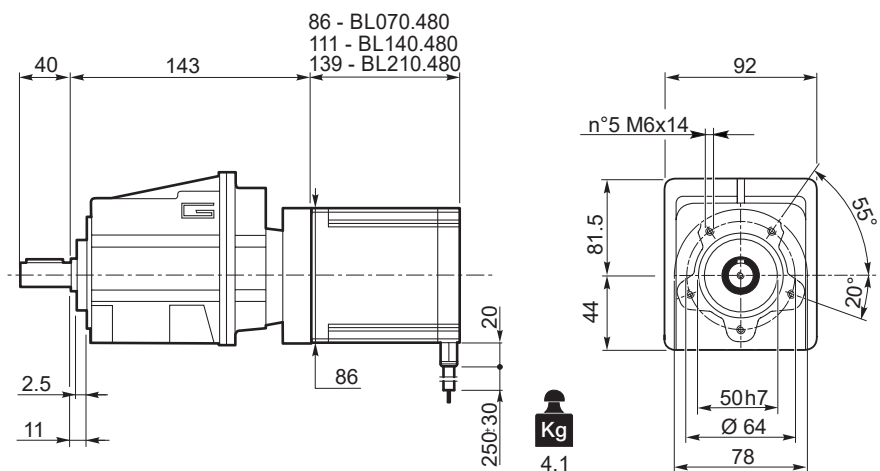
+
BL070.240
BL070.480
BL140.480
BL210.480

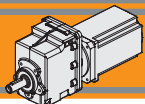


Freno
Break



BL070.48B
BL210.480E



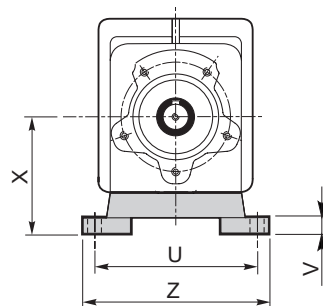
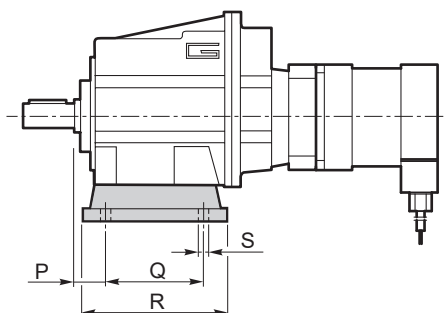


Motoriduttori brushless CC ad ingranaggi cilindrici Brushless DC helical in-line gearmotors

CMG002 con motore brushless CC

CMG002 with brushless DC motor

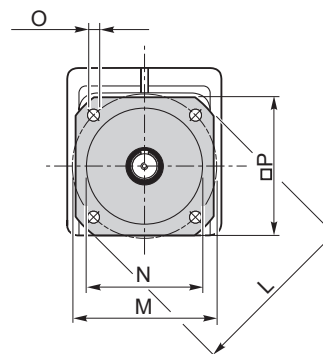
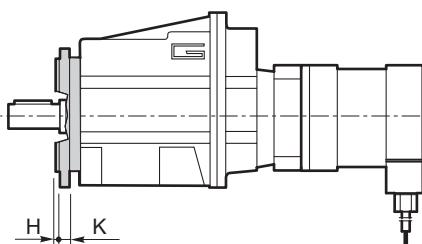
CMG002..H
+
BLS043.240



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

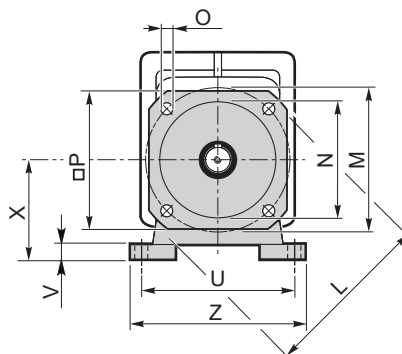
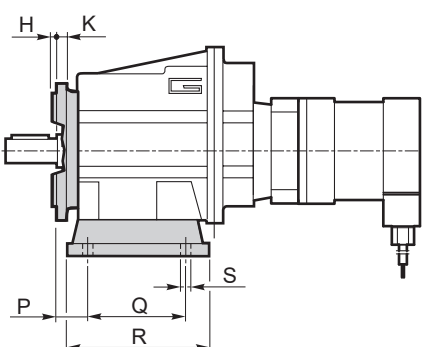
Preferenziale / Preferred

CMG002..F
+
BLS043.240

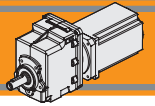


Versione F / F Version									
CMG	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	Peso / Weight [kg]
002	3.5	7	105	85	70	6.5	90	F105	0.1
	3.5	8	120	100	80	7	100	F120	0.2
	3.5	8	140	115	95	9	115	F140	0.2

CMG002..H../F
+
BLS043.240



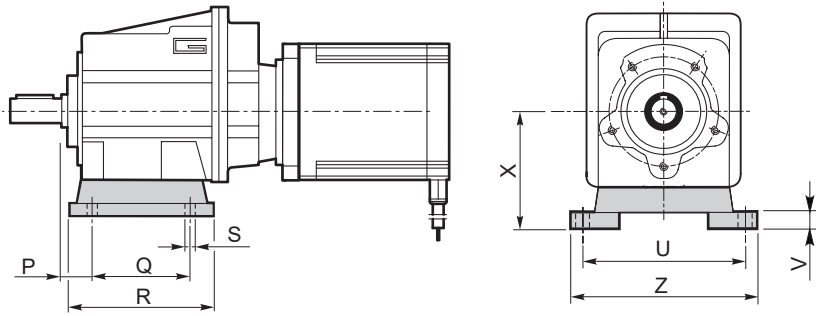
Versione H / H Version			Combinazioni possibili H/F Possible combinations H/F		
CMG	Piede / Foot		F105	F120	F140
	Tipo / Type	Peso / Weight [kg]			
002	H60	0.2	•	•	•
	H75	0.3	•	•	•
	H85	0.4	•	•	•



CMG002 con motore brushless CC

CMG002 with brushless DC motor

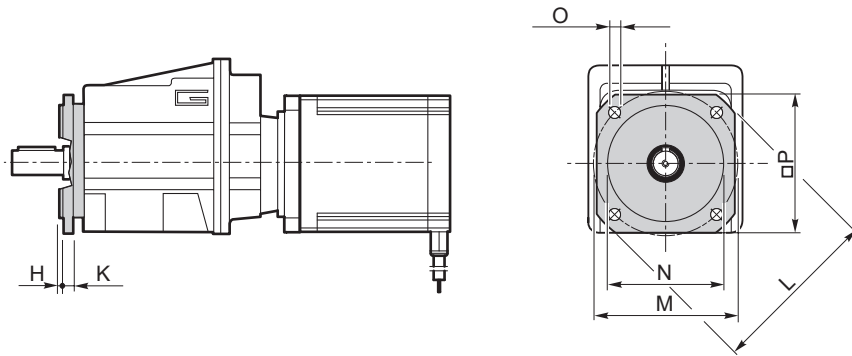
CMG002..H
+
BL070.240
BL070.480
BL140.480
BL210.480



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

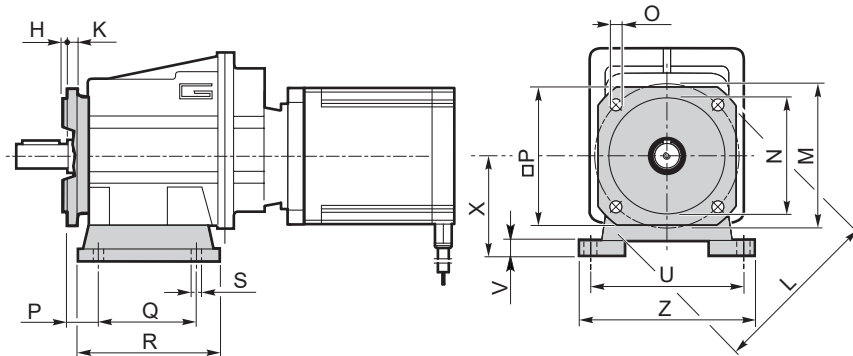
Preferenziale / Preferred

CMG002..F
+
BL070.240
BL070.480
BL140.480
BL210.480

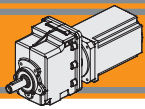


Versione F / F Version										
CMG	H	K	L	M	N f7	O	P	Flangia / Flange		
								Tipo / Type	Peso / Weight [kg]	
002	3.5	7	105	85	70	6.5	90	F105	0.1	
	3.5	8	120	100	80	7	100	F120	0.2	
	3.5	8	140	115	95	9	115	F140	0.2	

CMG002..H../F
+
BL070.240
BL070.480
BL140.480
BL210.480



Versione H / H Version			Combinazioni possibili H/F Possible combinations H/F		
CMG	Piede / Foot		F105	F120	F140
	Tipo / Type	Peso / Weight [kg]			
002	H60	0.2	•	•	•
	H75	0.3	•	•	•
	H85	0.4	•	•	•



Motoriduttori brushless CC ad ingranaggi cilindrici

Brushless DC helical in-line gearmotors

Dati tecnici

Technical data

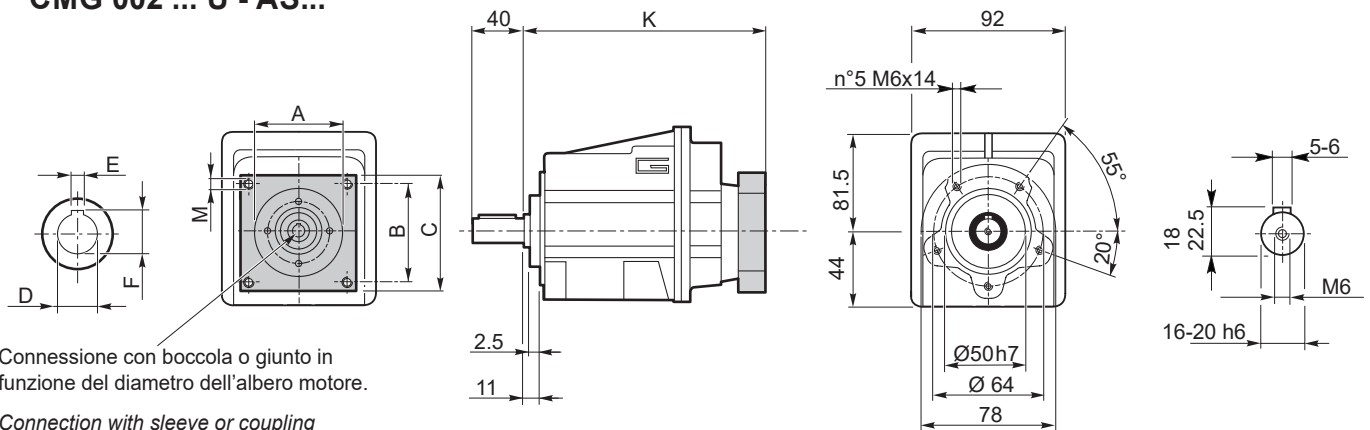
	n_2 [min ⁻¹]	Mn_2 [Nm]	Pn_1 [kW]	i
CMG 002				
$n_1 = 1400$ rpm	279	40	1.2	5.03
	230	40	1.0	6.10
	187	40	0.82	7.49
	156	50	0.85	8.99
	138	50	0.75	10.16
	116	50	0.63	12.07
	105	70	0.80	13.40
	92	70	0.71	15.14
	77	70	0.59	18.17
	65	70	0.50	21.58
	60	70	0.45	23.51
	56	70	0.43	25.10
	52	70	0.39	27.08
	43	70	0.33	32.49
	33	70	0.25	42.04
	31	70	0.24	44.89
	29	70	0.22	48.86
	25	70	0.19	55.10

	n_2 [min ⁻¹]	Mn_2 [Nm]	Pn_1 [kW]	i
CMG 002				
$n_1 = 3000$ rpm	597	31	2.0	5.03
	492	31	1.7	6.10
	401	31	1.4	7.49
	334	39	1.4	8.99
	295	39	1.3	10.16
	249	39	1.1	12.07
	224	55	1.3	13.40
	198	55	1.2	15.14
	165	55	0.98	18.17
	139	55	0.83	21.58
	128	55	0.76	23.51
	120	55	0.71	25.10
	111	55	0.66	27.08
	92	55	0.55	32.49
	71	55	0.43	42.04
	67	55	0.40	44.89
	61	55	0.37	48.86
	54	55	0.32	55.10

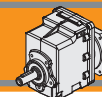
Dimensioni CMG con flange motore AS

CMG dimensions with motor flanges AS

CMG 002 ... U - AS...



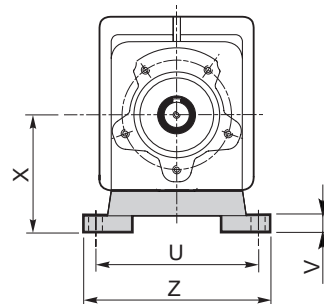
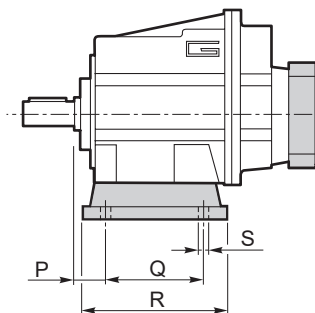
Dimensioni / Dimensions								
AS	A	B	C	M	K	D	E	F
AS392	38.1	47.1	64	M5	143	9	3	10.5
						11	4	12.8
						14	5	16.3
AS384	73	69.6	86	M5	143	9	3	10.5
						11	4	12.8
						14	5	16.3
...



Dimensioni CMG con flange motore AS

CMG dimensions with motor flanges AS

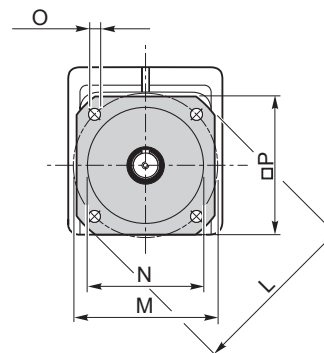
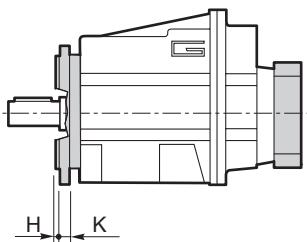
CMG002..H - AS



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

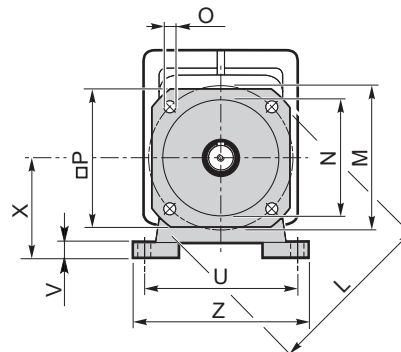
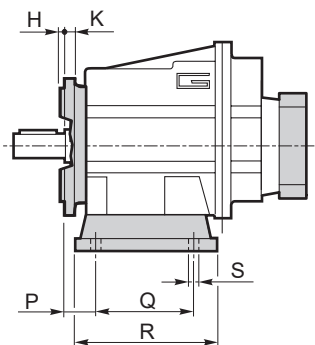
Preferenziale / Preferred

CMG002..F - AS

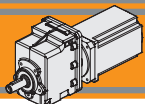


Versione F / F Version									
CMG	H	K	L	M	N f7	O	P	Flangia / Flange	
								Tipo / Type	Peso / Weight [kg]
002	3.5	7	105	85	70	6.5	90	F105	0.1
	3.5	8	120	100	80	7	100	F120	0.2
	3.5	8	140	115	95	9	115	F140	0.2

CMG002..H../F - AS



Versione H / H Version			Combinazioni possibili H/F Possible combinations H/F		
CMG	Piede / Foot		F105	F120	F140
	Tipo / Type	Peso / Weight [kg]			
002	H60	0.2	•	•	•
	H75	0.3	•	•	•
	H85	0.4	•	•	•



Note/Notes
