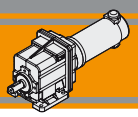
MINI TECNO
small but strong

NDCMG
ECMG

Motoriduttori CC ad ingranaggi cilindrici
DC helical in-line gearmotors

DC

MINI TECNO brand of TRANSTECNO®



ENERGY SAVING

Caratteristiche tecniche

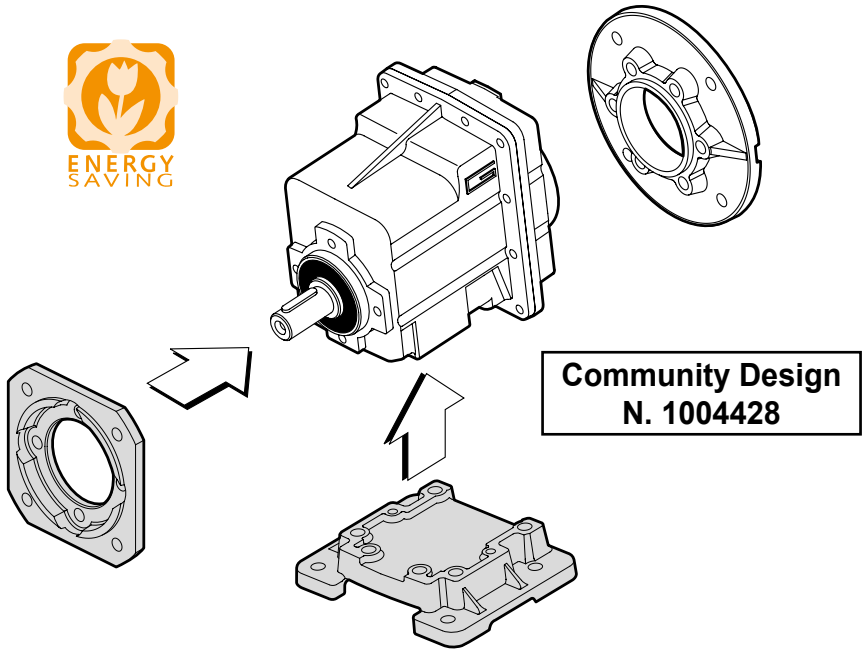
I motoriduttori CC ad ingranaggi cilindrici a magneti permanenti in neodimio **NDCMG** e in ferrite **ECMG** hanno le seguenti caratteristiche principali:

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

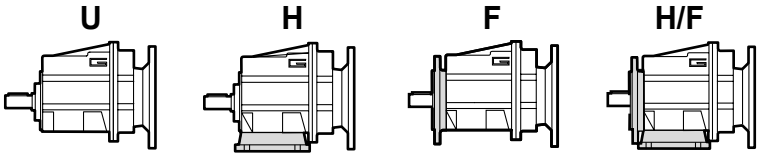
Technical features

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

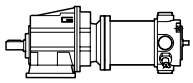
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder and brake assembly*
- *Motor power ratings available from 100 to 800W S2*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground-hardened helical gears*



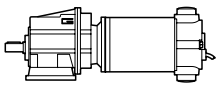
Designazione — *Classification*



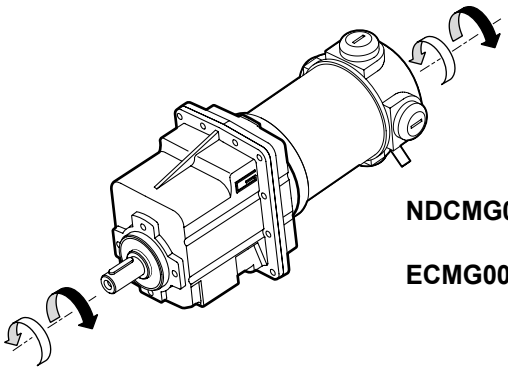
MOTORIDUTTORE / *GEARMOTOR*

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
Tipo *Type*	Grandezza *Size*	Versione *Version*	Rapporto *Ratio*	Albero uscita *Output shaft*	Versione motore *Motor version*
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**

Sensi di rotazione — *Direction of rotation*



NDCMG002

ECMG002

Lubrificazione — *Lubrication*

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

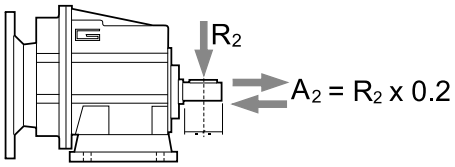
Permanent synthetic oil long-life lubrication (viscosity grade 320) makes it possible to use in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Simbologia — *Symbols*

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

Carichi radiali

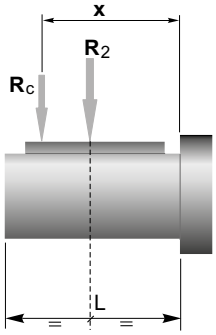
Radial loads



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

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

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



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

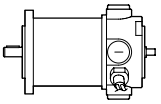
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

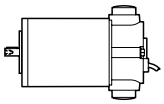
$$R \leq R_c$$

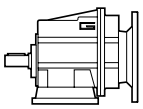
a, b = valori riportati nella tabella
a, b = values given in the table

Motori applicabili

IEC Motor adapters

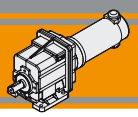






		ND		EC						
		120.120 120.240	180.120 180.240	070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240	180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CMG	002	5.03 - 55.10								

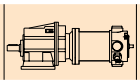
5.03 - 55.10 Rapporti di riduzione i
Ratio i

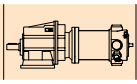


Dati tecnici per servizio S2

ND CMG

Technical data for S2 duty

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

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

Dati tecnici per servizio S2

EC CMG

Technical data for S2 duty

100

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(3000 min^{-1})	**596**	1.5	20.2	5.03	**070/002**	12E/24E
	492	1.9	16.6	6.10		
	401	2.3	13.5	7.49		
	334	2.7	14.2	8.99		
	295	3.1	12.6	10.16		
	249	3.7	10.6	12.07		
	224	4.1	13.4	13.40		
	198	4.6	11.9	15.14		
	165	5.5	9.9	18.17		
	139	6.6	8.3	21.58		
	128	7.2	7.7	23.51		
	120	7.7	7.2	25.10		
	111	8.3	6.6	27.08		
	92	9.9	5.5	32.49		
	71	13	4.3	42.04		
	67	14	4.0	44.89		
	61	15	3.7	48.86		
	54	17	3.3	55.10		

140

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(3000 min^{-1})	**596**	2.2	14.4	5.03	**100/002**	120/240/24E
	492	2.6	11.9	6.10		
	401	3.2	9.7	7.49		
	334	3.8	10.1	8.99		
	295	4.3	9.0	10.16		
	249	5.2	7.6	12.07		
	224	5.7	9.6	13.40		
	198	6.5	8.5	15.14		
	165	7.8	7.1	18.17		
	139	9.2	6.0	21.58		
	128	10	5.5	23.51		
	120	11	5.1	25.10		
	111	12	4.7	27.08		
	92	14	4.0	32.49		
	71	18	3.1	42.04		
	67	19	2.9	44.89		
	61	21	2.6	48.86		
	54	24	2.3	55.10		

250

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(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		

350

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(3000 min^{-1})	**596**	5.4	5.8	5.03	**250/002**	120/240
	492	6.5	4.8	6.10		
	401	8.0	3.9	7.49		
	334	10	4.1	8.99		
	295	11	3.6	10.16		
	249	13	3.0	12.07		
	224	14	3.8	13.40		
	198	16	3.4	15.14		
	165	19	2.8	18.17		
	139	23	2.4	21.58		
	128	25	2.2	23.51		
	120	27	2.0	25.10		
	111	29	1.9	27.08		
	92	35	1.6	32.49		
	71	45	1.2	42.04		
	67	48	1.1	44.89		
	61	52	1.1	48.86		
	54	59	0.9	55.10		

500

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(3000 min^{-1})	**596**	7.7	4.0	5.03	**350/002**	120/240
	492	9.3	3.3	6.10		
	401	11	2.7	7.49		
	334	14	2.8	8.99		
	295	16	2.5	10.16		
	249	18	2.1	12.07		
	224	20	2.7	13.40		
	198	23	2.4	15.14		
	165	28	2.0	18.17		
	139	33	1.7	21.58		
	128	36	1.5	23.51		
	120	38	1.4	25.1		
	111	41	1.3	27.08		
	92	50	1.1	32.49		
	71	64	0.9	42.04		
	67	69	0.8	44.89		
	61	75	0.7	48.86		

800

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
(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		

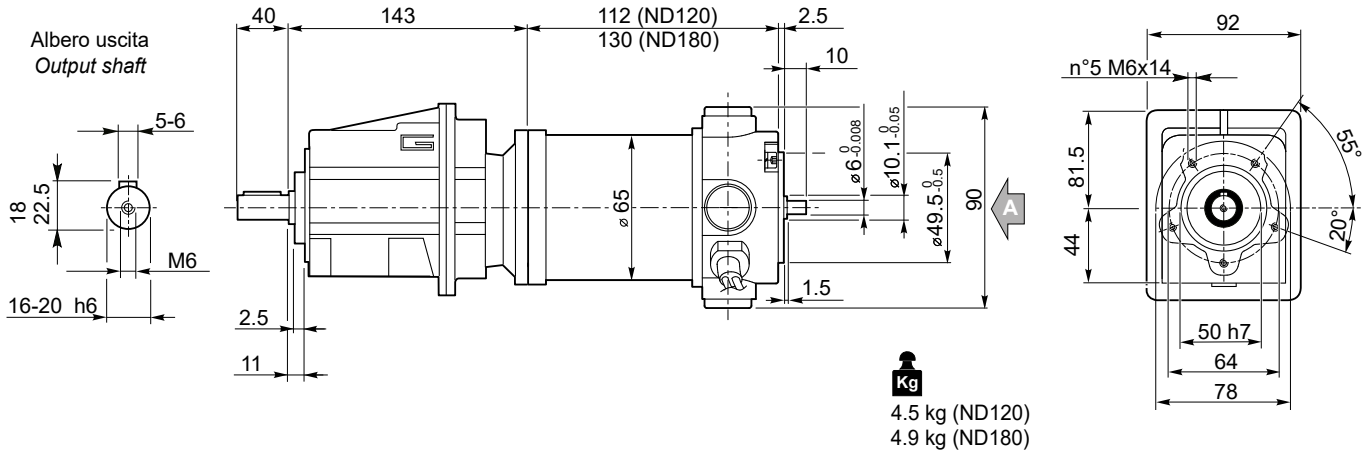
NOTA
Verificare sempre che la coppia M2 utilizzata non ecceda il valore indicato nelle caselle in grigio

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

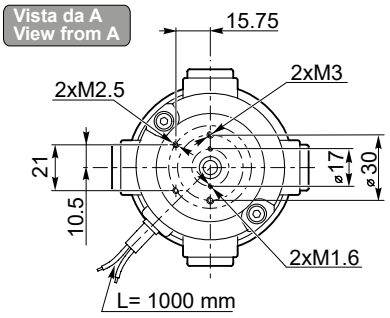
Dimensioni ***Dimensions***

NDCMG..U

NDCMG120/002 U
NDCMG180/002 U



Kg
4.5 kg (ND120)
4.9 kg (ND180)



NDCMG...H → BD12

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

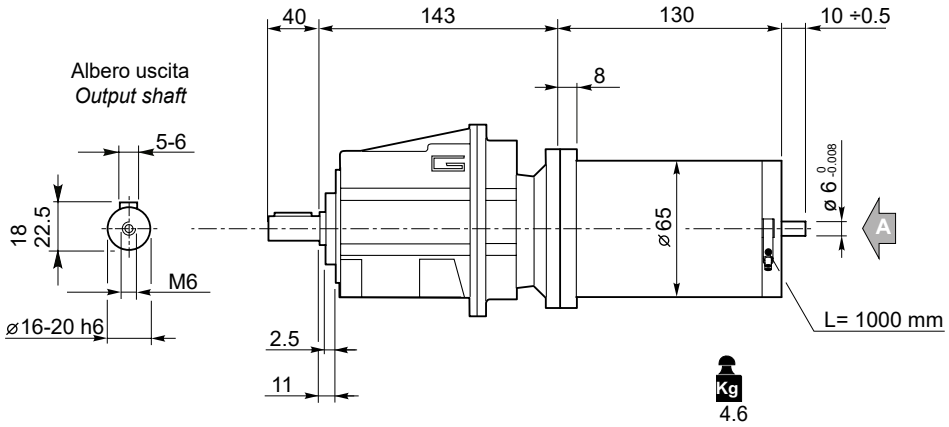
Encoder → BA9 NDCMG...H/F → BD13

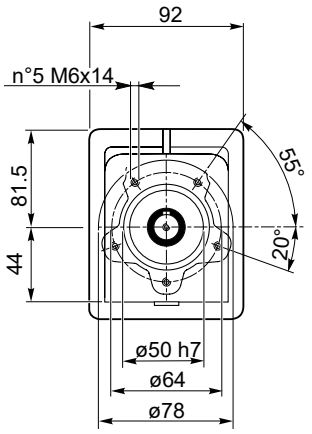
DC

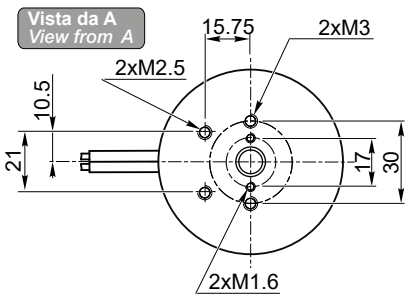
Dimensioni ***Dimensions***

ECMG..U

ECMG070/002 U







Freno / *Brake* → BB23

Encoder → BB24

Motori / *Motors* IP66 → BC2

ECMG...H → BD12

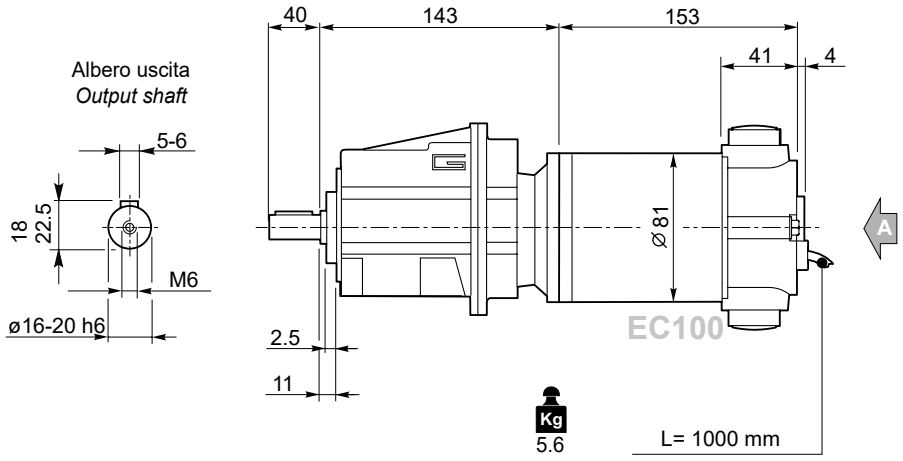
ECMG...F → BD12

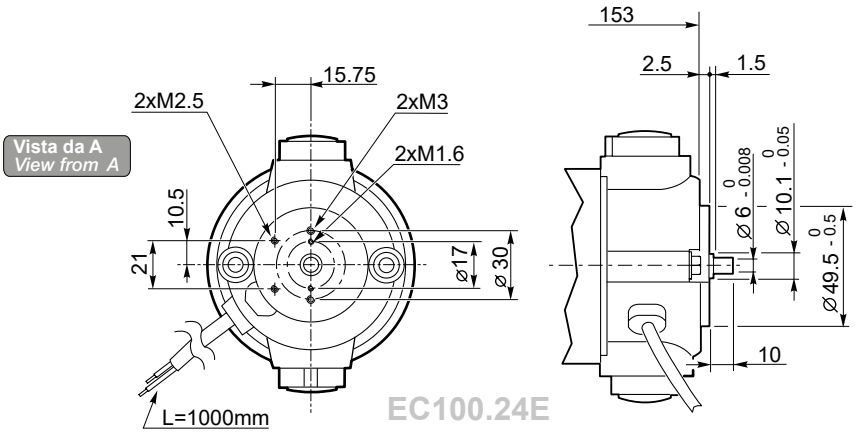
ECMG...H/F → BD13

Dimensioni ***Dimensions***

ECMG..U

ECMG100/002 U



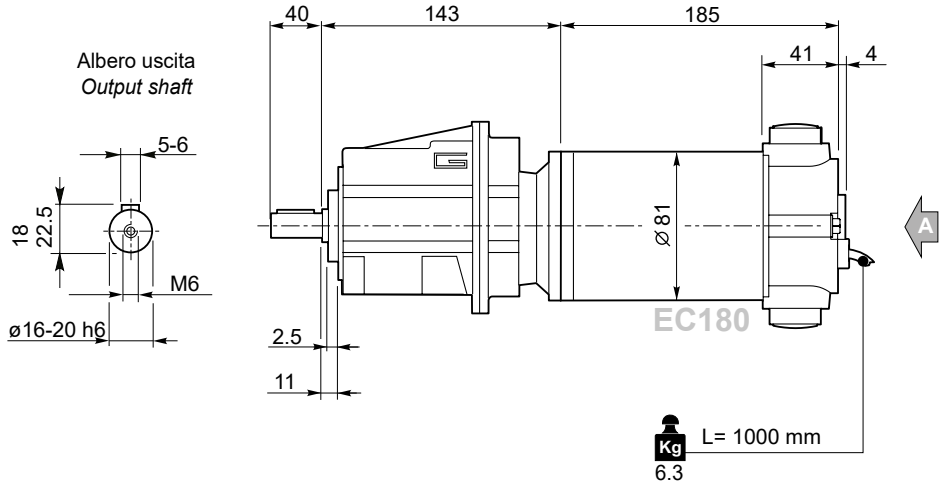


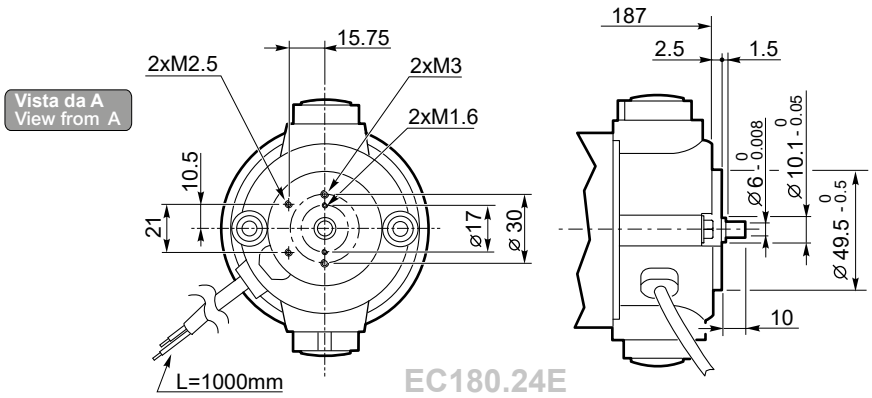
Freno / *Brake* BB23
Encoder BB24
Motori / *Motors* IP66 BC4
ECMG...H BD12
ECMG...F BD12
ECMG...H/F BD13

Dimensioni *Dimensions*

ECMG..U

ECMG180/002 U





Freno / *Brake* → BB23

Encoder → BB24

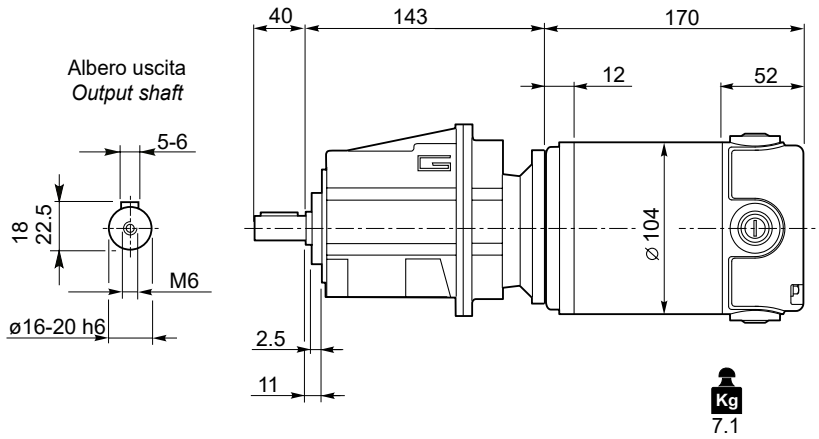
Motori / *Motors* IP66 → BC6

ECMG...H → BD12

ECMG...F → BD12

ECMG...H/F → BD13

ECMG250/002 U



Motori / *Motors* IP66 → BC8

ECMG...H → BD12

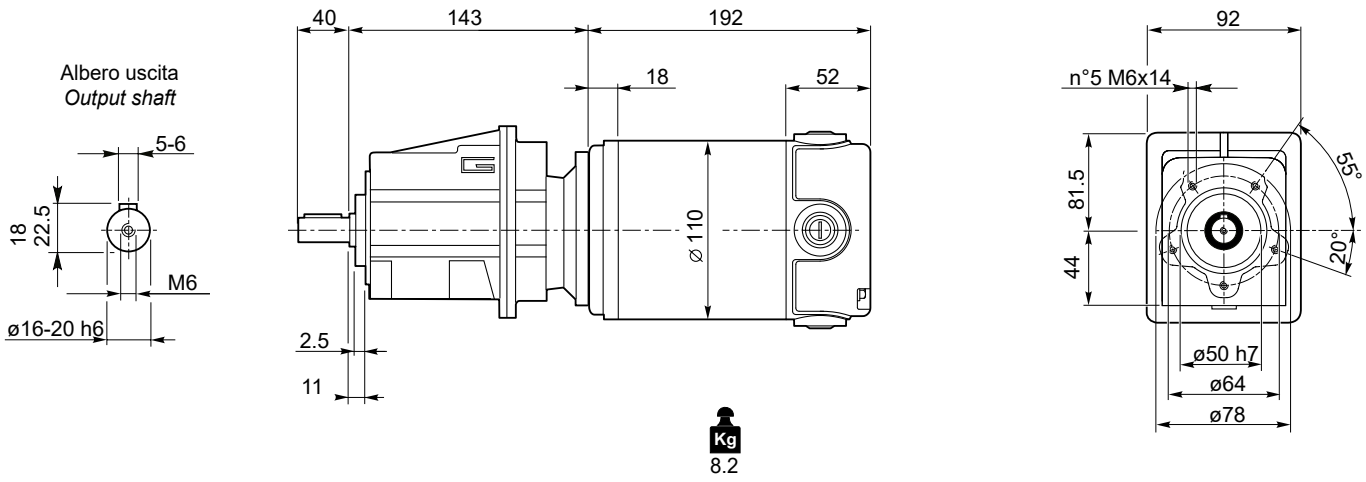
ECMG...F → BD12

ECMG...H/F → BD13

Dimensioni *Dimensions*

ECMG..U

ECMG350/002 U

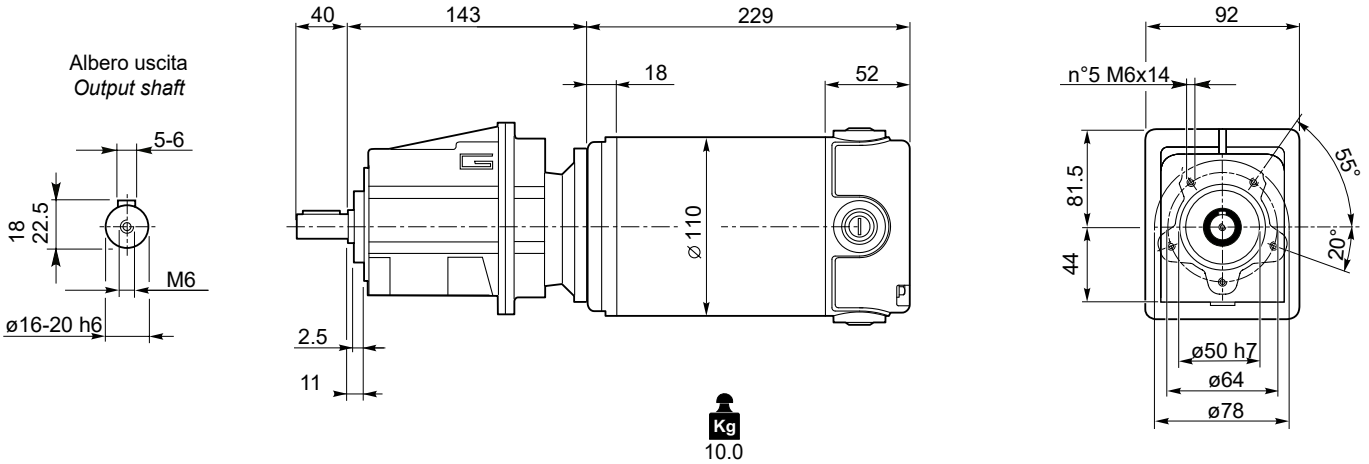


Freno / *Brake* → BB23

Motori / *Motors* IP66 → BC10

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

ECMG600/002 U



Freno / *Brake* → BB23

Motori / *Motors* IP66 → BC12

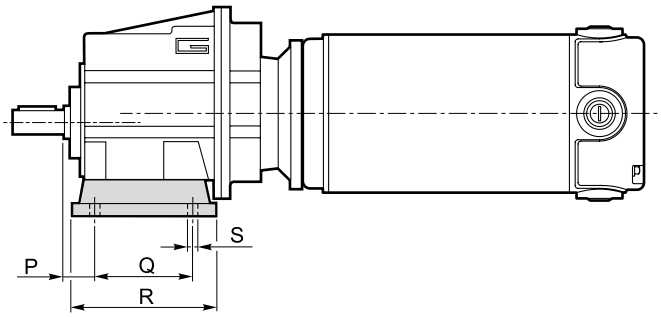
ECMG...H → BD12 **ECMG...F** → BD12 **ECMG...H/F** → BD13

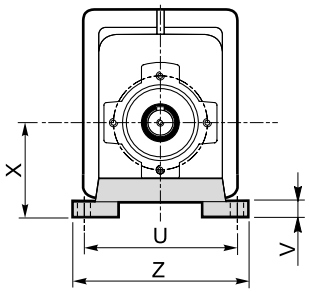
DC

Dimensioni ***Dimensions***

NDCMG..H - ECMG..H

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



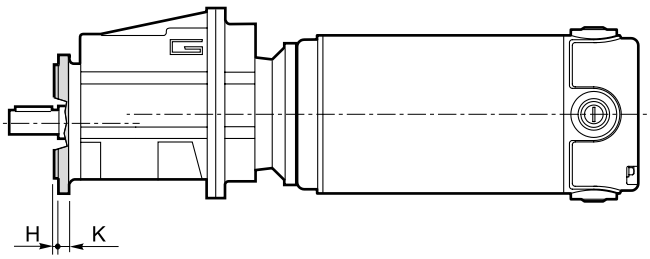


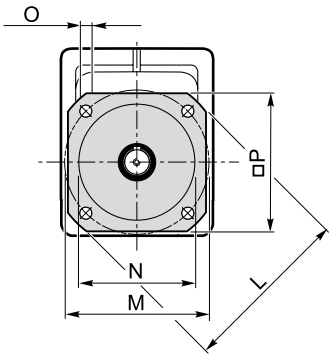
Versione **H** / ***H** Version*										
CMG	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Piede / *Foot***	
									Tipo / *Type*	Peso / *Weight* [kg]
002	**18**	**60**	**80**	**9**	**100**	**10**	**60**	**120**	**H60**	**0.2**
	18	80	104	9	110 - 120	10	75	145	H75	0.3
	18	50 - 87	110	9	110	10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

Preferenziale / *Preferred*

NDCMG..F - ECMG..F

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



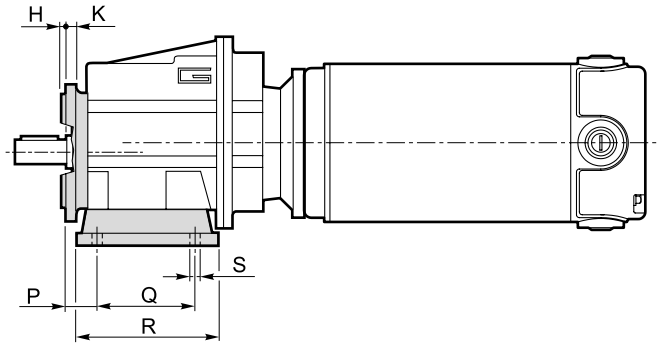


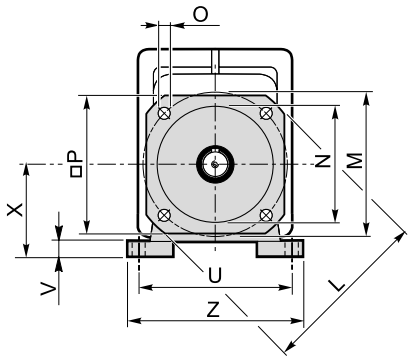
Versione **F** / ***F** Version*									
CMG	**H**	**K**	**L**	**M**	**N** f7	**O**	**P**	**Flangia / *Flange***	
								Tipo / *Type*	Peso / *Weight* [kg]
002	3.5	7	105	85	70	6.5	90	**F105**	0.1
	3.5	8	120	100	80	7	100	**F120**	0.2
	3.5	8	140	115	95	9	115	**F140**	0.2

Dimensioni ***Dimensions***

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

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





Versione **H** / ***H*** Version											Combinazioni possibili H/F *Possible combinations H/F*						
CMG	**P**	**Q**	**R**	**S**	**U**	**V**	**X**	**Z**	**Piede** / ***Foot*** Tipo *Type*	Peso / *Weight* [kg]	**F105**	**F120**	**F140**	**F160**	**F200**	**F250**	**F300**
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*	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

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