TRANSTECNO®

the modular gearmotor

ECMB

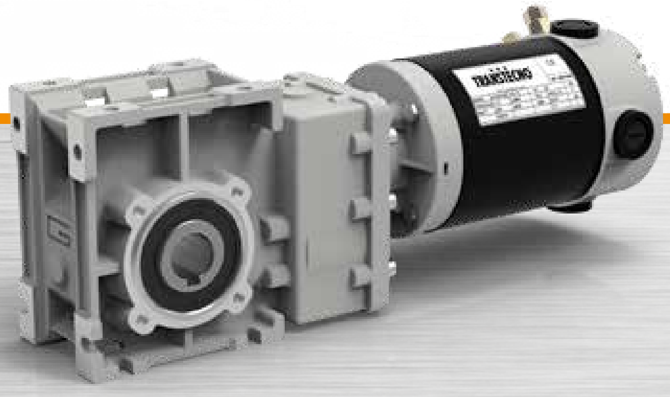
ECMB

ECMB Alu

Ferrite

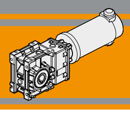
Motoriduttori CC ad assi ortogonali

DC helical bevel gearmotors



TRANSTECNO · GENUINE · PRODUCTS

ENERGY SAVING



ECMB

Motoriduttori CC ad assi ortogonali
DC Helical bevel gearmotors

Caratteristiche tecniche — *Technical features*

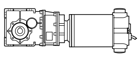
Le caratteristiche principali dei motoriduttori CC ad assi ortogonali a magneti permanenti in ferrite serie ECMB sono:

- Alimentazione in bassa tensione 12/24 Vcc
- Possibilità di montaggio encoder
- Potenze motore disponibili da 100 a 800W S2
- Magneti in ferrite
- Carcasse dei riduttori in pressofusione di alluminio
- Lubrificazione permanente con olio sintetico
- Ingranaggi sempre rettificati

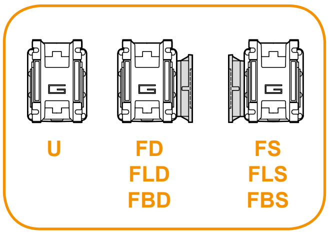
The main features of ECMB ferrite pemanent magnets DC helical bevel gearmotors range are:

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

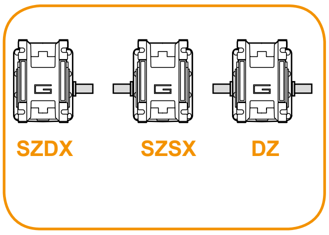
Designazione — *Classification*

MOTORIDUTTORE / *GEARMOTOR*														
ECMB	**100/402**						**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*
ECMB	**070/402**	**100/402**	**180/402**	**250/402**	**350/402**	**600/402**	**U**	Vedere tabella	Vedere tabella	**SZDX**	**BRDX**	**0°**	**120**
	**070/502**	**100/502**	**180/502**	**250/502**	**350/502**	**600/502**	**FD**			**SZSX**	**BRSX**	**90°**	**240**
	070/633	**100/633**	**180/633**	**250/633**	**350/633**	**600/633**	**FS**	*See tables*	*See tables*	**DZ**		**180°**	**24E**
					350/903	**600/903**	**FLD**				*	**270°**	
							FLS						
							FBD						
							FBS						

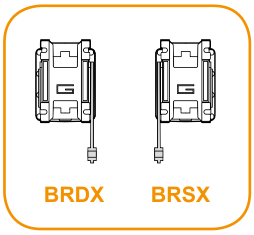
Versione Riduttore
Gearbox Version



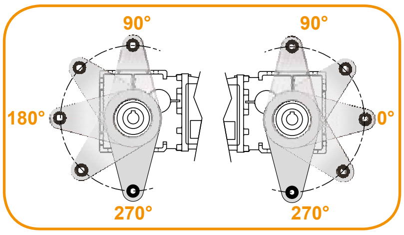
Albero di uscita
Output shaft



Braccio di reazione *
Torque arm

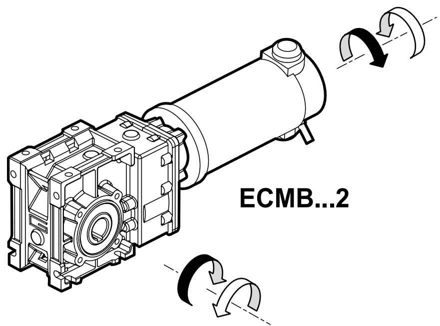


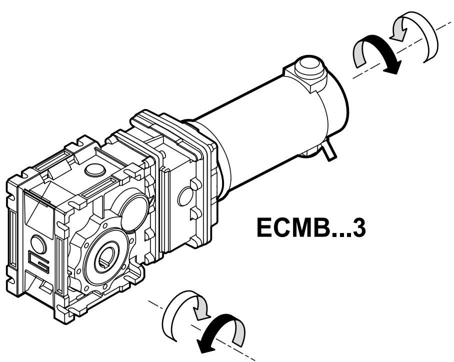
Angolo
Angle



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

Sensi di rotazione — *Direction of rotation*





Simbologia — *Symbols*

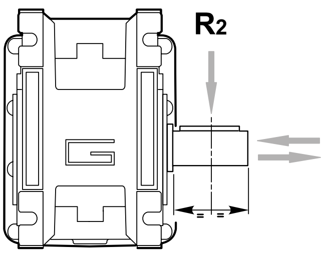
n_1	[min^{-1}]	Velocità in ingresso / *Input speed*	M_2	[Nm]	Coppia in uscita in funzione di P_1 / *Output torque referred to P_1*
n_2	[min^{-1}]	Velocità in uscita / *Output speed*	sf		Fattore di servizio / *Service factor*
i		Rapporto di riduzione / *Ratio*	A_2	N]	Carico assiale ammissibile in uscita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

Lubrificazione — *Lubrication*

Tutti i riduttori nelle taglie 402, 502 e 633 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, 502 and 603 in all mounting positions; for this reason they can be installed in any assembly position and do not require maintenance.

Carichi radiali — *Radial loads*

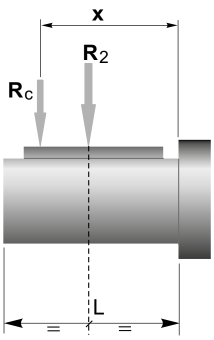


$A_2 = R_2 \times 0.2$

n_2 [min^{-1}]	R_2 [N] CMB 402	CMB 502	CMB 633	CMB 903
400	905	1116	1835	2682
300	996	1228	2020	2952
200	1141	1406	2312	3379
170	1204	1484	2441	3567
140	1414	1743	2604	3806
100	1582	1949	2913	4686
90	1638	2019	3321	4853
60	2047	2490	3801	5556
40	2524	3029	4492	6614
30	2778	3334	5159	7540
20	3180	3816	5906	8631
15	3500	4200	6500	9500
10	3500	4200	6500	9500

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:



	CMB 402	CMB 502	CMB 633	CMB 903
a	86	104	118	157
b	66	79	93	117
R_{2MAX}	3500	4200	6500	9500

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

$$R \le R_c$$

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

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*
100						
(3000 min^{-1})	**485**	1.8	16.8	6.18	**070/402**	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		
	54	17	5.9	55.31	**070/502**	12E/24E
	51	18	5.5	59.06		
	47	19	5.1	64.29		
	41	22	4.5	72.50		
	41	22	8.8	73.96	**070/633**	12E/24E
	38	24	8.3	78.58		
	32	28	7.0	93.33		
	21	42	4.6	140.52		
	17	54	3.6	181.81		
	14	63	3.1	211.31		
	13	71	2.7	238.31		
140						
(3000 min^{-1})	**485**	2.6	12.0	6.18	**100/402**	120/240/24E
	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		
	54	23	4.2	55.31	**100/502**	120/240/24E
	51	25	4.0	59.06		
	47	27	3.6	64.29		
	41	30	3.2	72.50		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
140						
(3000 min^{-1})	**41**	31	6.3	73.96	**100/633**	120/240/24E
	38	33	5.9	78.58		
	32	39	5.0	93.33		
	21	59	3.3	140.52		
	17	76	2.6	181.81		
	14	89	2.2	211.31		
	13	100	2.0	238.31		
250						
(3000 min^{-1})	**485**	4.6	6.7	6.18	**180/402**	120/240/24E
	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		
	134	17	5.1	22.33	**180/502**	120/240/24E
	125	18	4.8	23.91		
	104	22	4.5	28.89		
	97	23	4.2	30.84		
	89	25	3.9	33.57		
	84	27	3.7	35.63		
	70	32	3.1	42.75		
	54	41	2.4	55.31		
	51	44	2.2	59.06		
	47	48	2.0	64.29		
	41	54	1.8	72.50		
	52	43	4.5	57.93	**180/633**	120/240/24E
	49	46	4.2	61.63		
	41	55	3.5	73.96		
	38	59	3.3	78.58		
	32	70	2.8	93.33		
	21	105	1.9	140.52		
	17	136	1.4	181.81		
	14	158	1.2	211.31		
	13	178	1.1	238.31		

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*
350						
(3000 min^{-1})	**485**	6.5	4.8	6.18	**250/402**	120/240
	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		
	485	6.5	8.5	6.18	**250/502**	120/240
	401	7.8	7.0	7.49		
	326	9.6	5.7	9.2		
	254	12	5.7	11.83		
	240	13	5.4	12.48		
	202	16	4.5	14.83		
	170	19	3.8	17.63		
	161	20	4.4	18.6		
	134	23	3.7	22.33		
	125	25	3.4	23.91		
	104	30	3.2	28.89		
	97	32	3.0	30.84		
	89	35	2.8	33.57		
	84	37	2.6	35.63		
	70	45	2.2	42.75		
	54	58	1.7	55.31		
	51	62	1.6	59.06		
	47	67	1.5	64.29		
	41	76	1.3	72.50		
	106	30	5.8	28.17	**250/633**	120/240
	89	35	4.9	33.81		
	84	38	4.6	35.92		
	77	41	4.8	38.88		
	64	49	4.0	47.16		
	52	61	3.2	57.93		
	49	65	3.0	61.63		
	41	78	2.5	73.96		
	38	82	2.4	78.58		
	32	98	2.0	93.33		
	21	147	1.3	140.52		
	17	190	1.0	181.81		
	14	221	0.9	211.31		
	13	250	0.8	238.31		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
500						
(3000 min^{-1})	**485**	9	3.4	6.18	**350/402**	120/240
	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		
	326	14	4.0	9.20	**350/502**	120/240
	254	18	4.0	11.83		
	240	19	3.7	12.48		
	202	22	3.2	14.83		
	170	26	2.7	17.63		
	161	28	3.1	18.60		
	134	33	2.6	22.33		
	125	36	2.4	23.91		
	104	43	2.3	28.89		
	97	46	2.1	30.84		
	89	50	2.0	33.57		
	84	53	1.8	35.63		
	70	64	1.5	42.75		
	54	83	1.2	55.31		
	51	88	1.1	59.06		
	47	96	1.0	64.29		
	41	109	0.9	72.50		
	139	32	5.3	21.56	**350/633**	120/240
	113	40	4.3	26.48		
	106	42	4.1	28.17		
	89	51	3.4	33.81		
	84	54	3.2	35.92		
	77	58	3.4	38.88		
	64	71	2.8	47.16		
	52	87	2.2	57.93		
	49	92	2.1	61.63		
	41	111	1.8	73.96		
	38	118	1.7	78.58		
	32	140	1.4	93.33		
	21	210	0.9	140.52		
	17	272	0.7	181.81		
	14	279	0.7	211.31		

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

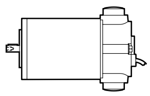
Dati tecnici per servizio S2 — *Technical data for S2 duty*

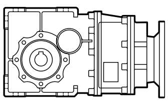
P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
500						
(3000 min^{-1})	**63**	71	5.5	47.25	**3350/903**	120/240
	52	86	4.5	57.52		
	45	99	3.9	66.17		
	36	124	3.1	83.2		
	28	162	2.4	108.09		
	23	198	2.0	132.23		
	20	221	1.8	147.92		
	18	250	1.6	167.09		
	16	286	1.4	191.06		
	14	332	1.2	221.88		
	11	393	1.0	262.96		
800						
(3000 min^{-1})	**485**	15	2.1	6.18	**600/402**	120/240
	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		
	485	15	3.7	6.18	**600/502**	120/240
	401	18	3.1	7.49		
	326	22	2.5	9.20		
	254	28	2.5	11.83		
	240	30	2.3	12.48		
	202	36	2.0	14.83		
	170	42	1.7	17.63		
	161	45	1.9	18.60		
	134	53	1.6	22.33		
	125	57	1.5	23.91		
	104	69	1.4	28.89		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
800						
(3000 min^{-1})	**97**	74	1.3	30.84	**600/502**	120/240
	89	80	1.2	33.57		
	84	85	1.1	35.63		
	70	102	1.0	42.75		
	54	132	0.7	55.31		
	51	140	0.7	59.06		
	47	140	0.7	64.29		
	41	140	0.7	72.50		
	306	23	5.0	9.81	**600/633**	120/240
	287	25	4.7	10.44		
	239	30	3.9	12.53		
	225	32	3.7	13.31		
	190	38	3.5	15.81		
	169	43	4.0	17.77		
	139	52	3.3	21.56		
	113	63	2.7	26.48		
	106	67	2.6	28.17		
	89	81	2.1	33.81		
	84	86	2.0	35.92		
	77	93	2.1	38.88		
	64	113	1.7	47.16		
	52	139	1.4	57.93		
	49	148	1.3	61.63		
	41	177	1.1	73.96		
	38	188	1.0	78.58		
	32	223	0.9	93.33		
	21	279	0.7	140.52		
	114	63	5.6	26.30	**600/903**	120/240
	99	72	4.8	30.25		
	76	94	4.1	39.26		
	63	113	3.4	47.25		
	52	138	2.8	57.52		
	45	158	2.5	66.17		
	36	199	2.0	83.20		
	28	259	1.5	108.09		
	23	317	1.2	132.23		
	20	354	1.1	147.92		
	18	400	1.0	167.09		
	16	457	0.9	191.06		
	14	531	0.7	221.88		
	11	557	0.7	262.96		

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

Motori applicabili — *Motor adapters*



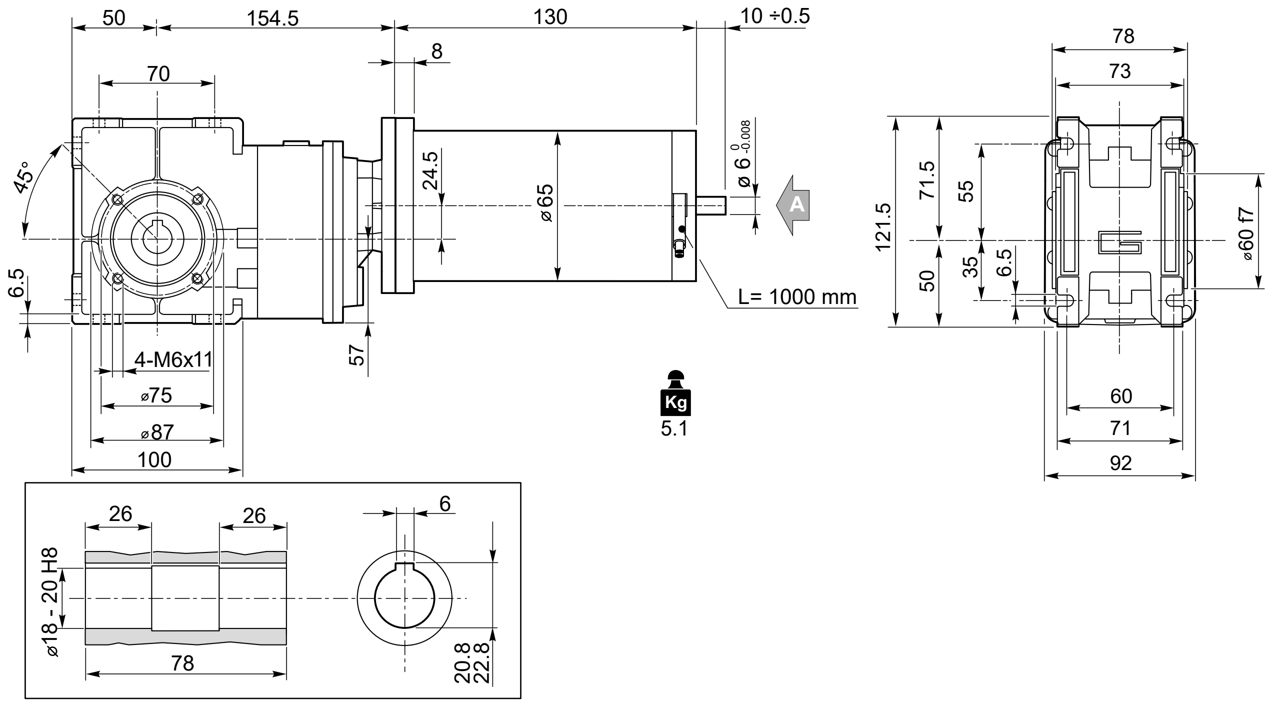


		EC					
		070.12E 070.24E	100.120 100.240 100.24E	180.120 180.240 180.24E	250.120 250.240	350.120 350.240	600.120 600.240
CMB	402	6.18 - 72.50					
	502	6.18 - 72.50					
	633	6.58 - 238.31					
	933					6.65 - 262.96	

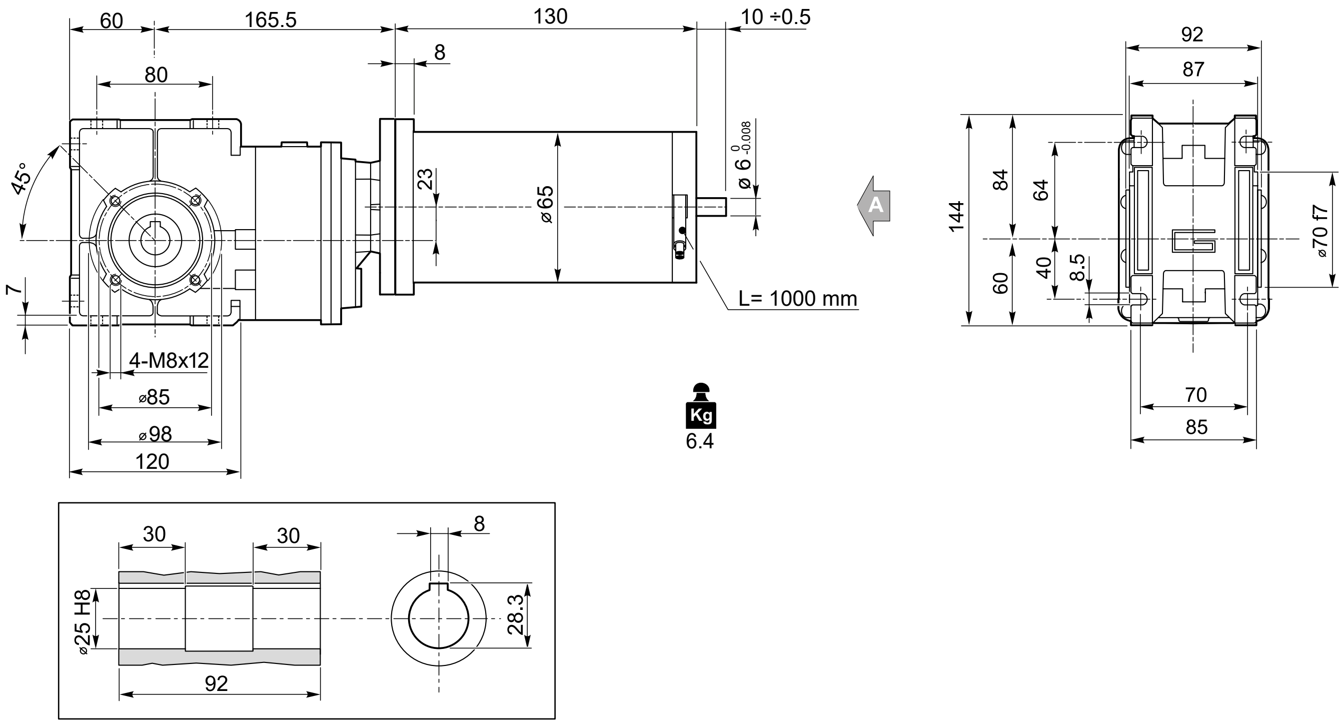
6.18 - 72.50 — Rapporti di riduzione i / *Ratio i*

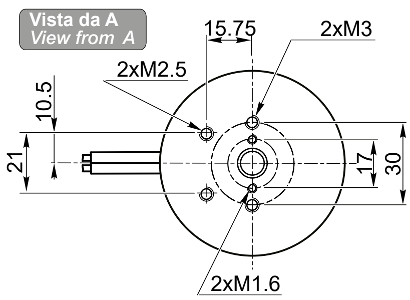
Dimensioni *Dimensions*

ECMB070/402 U



ECMB070/502 U

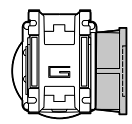




Freno / *Brake* H23

Encoder H24

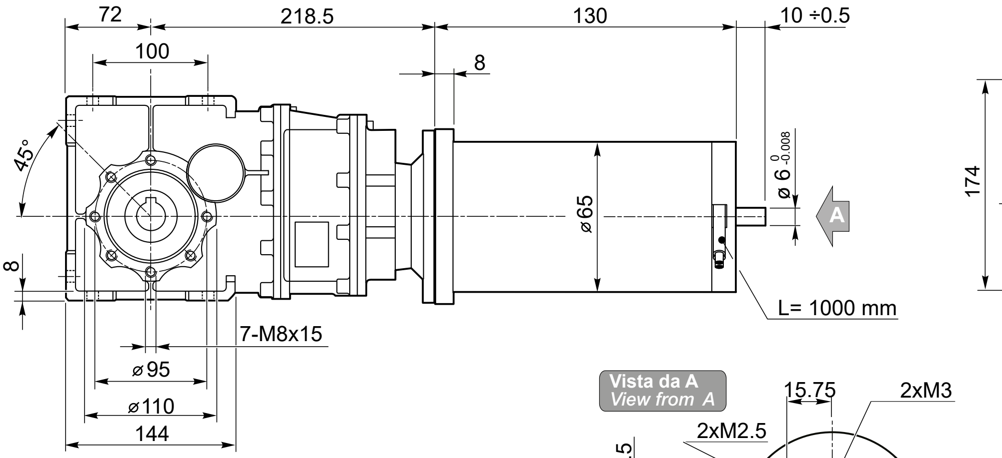
Motori / *Motors* IP66 I2

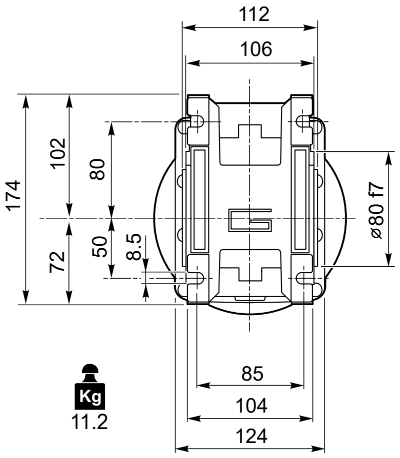


M17

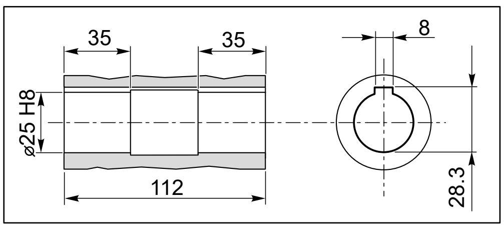
Dimensioni *Dimensions*

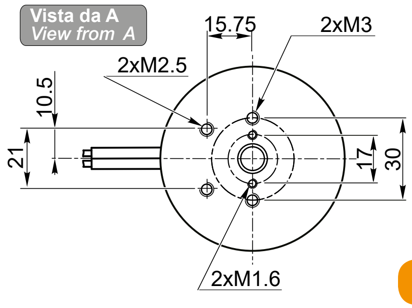
ECMB070/633 U





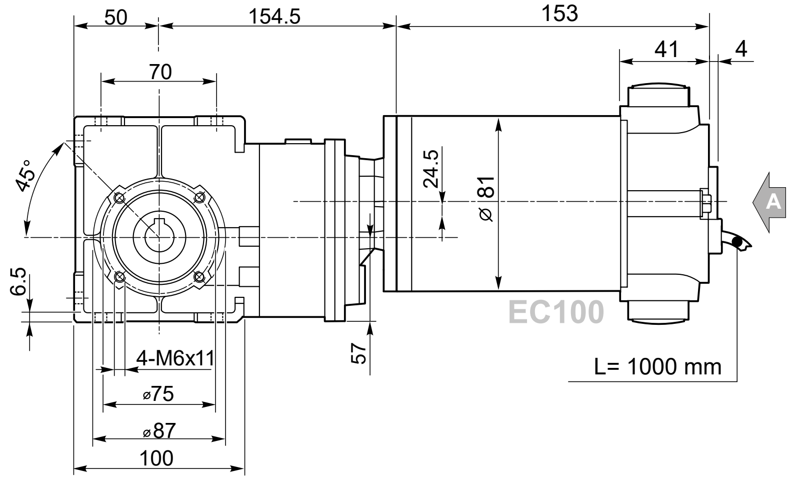
Kg
11.2

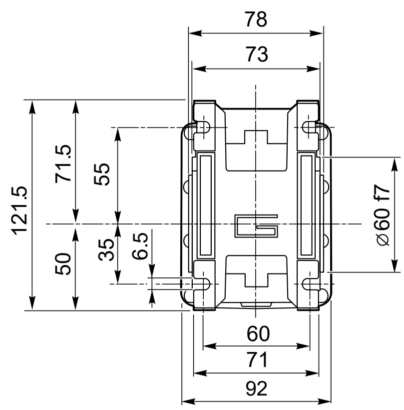




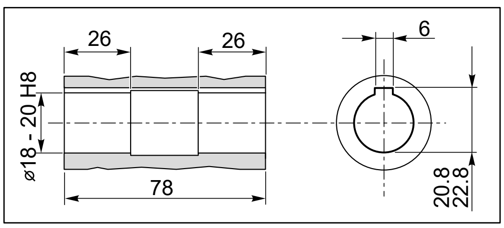
Motori / *Motors* IP66 → I2

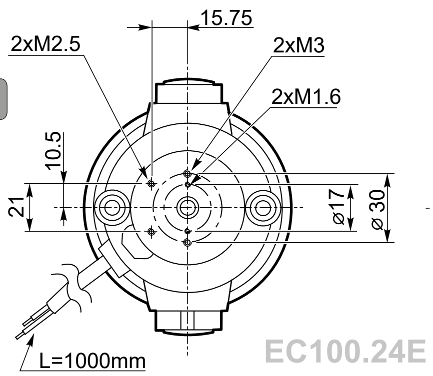
ECMB100/402 U

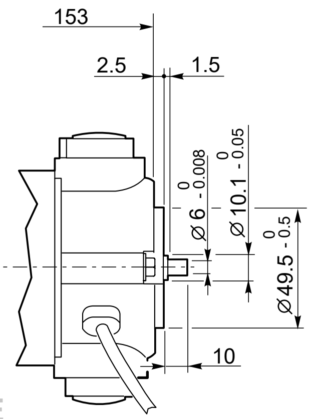




Kg
6.1



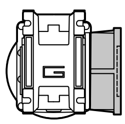




Motori / *Motors* IP66 → I4

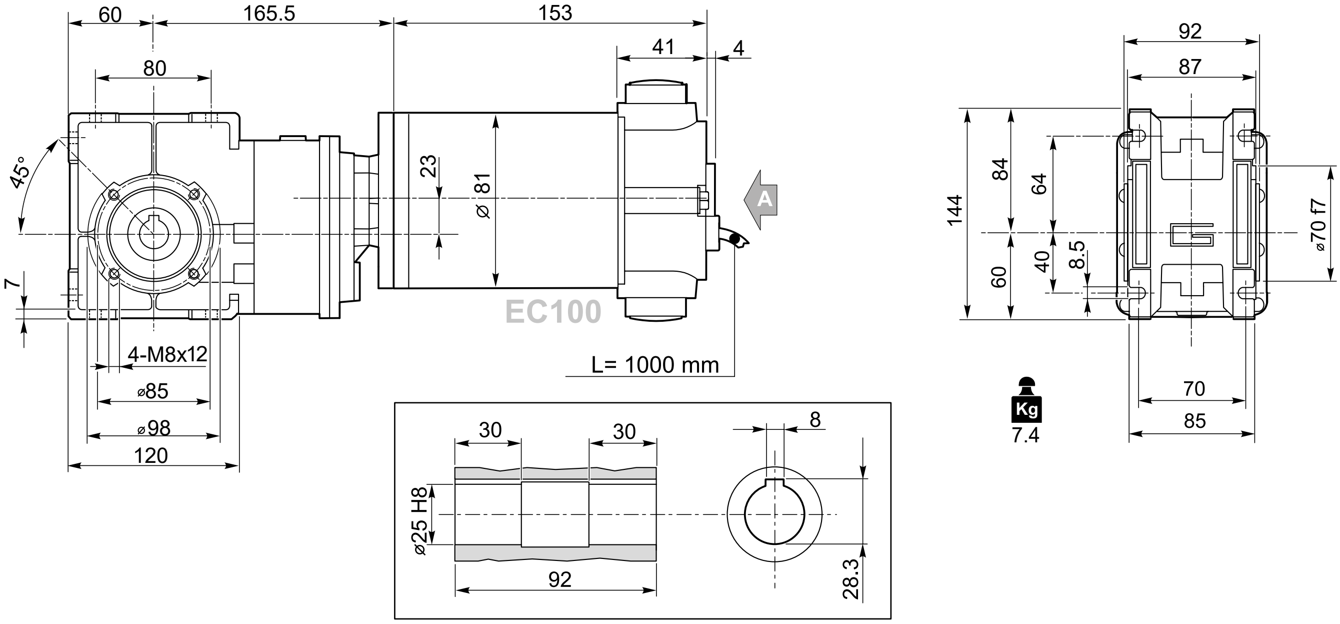
Encoder → H24

Freno / *Brake* → H23

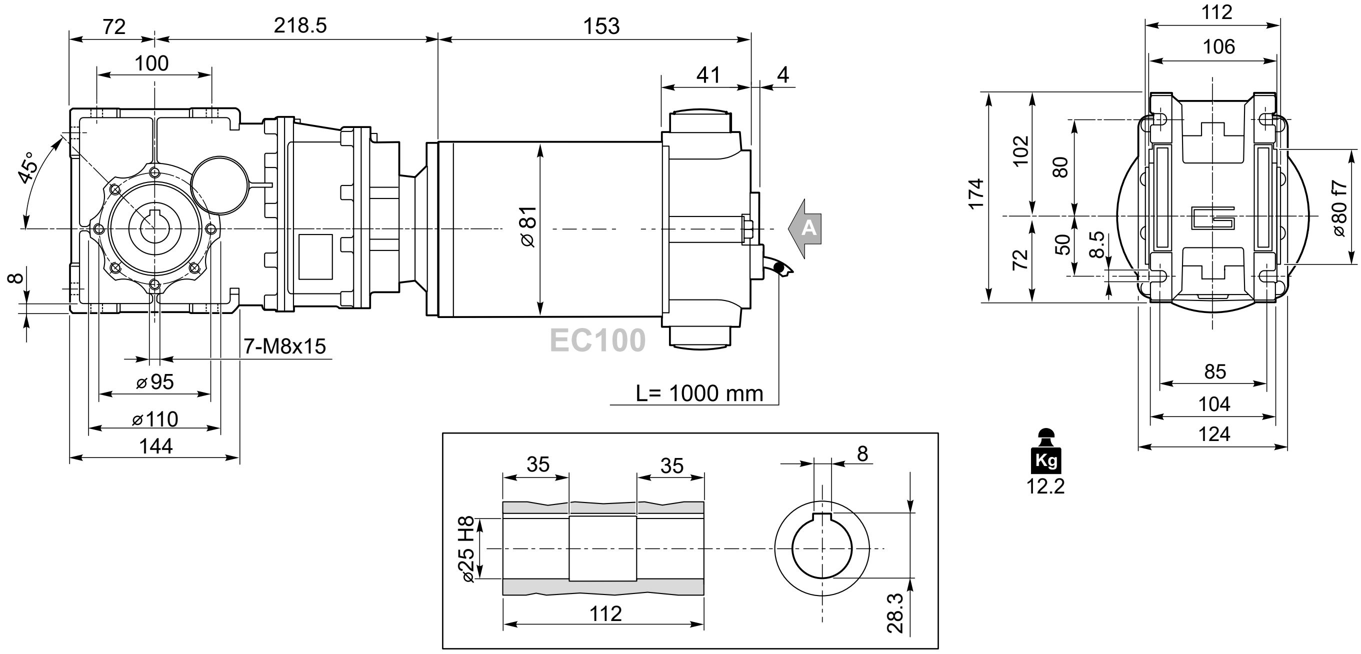

→ M17

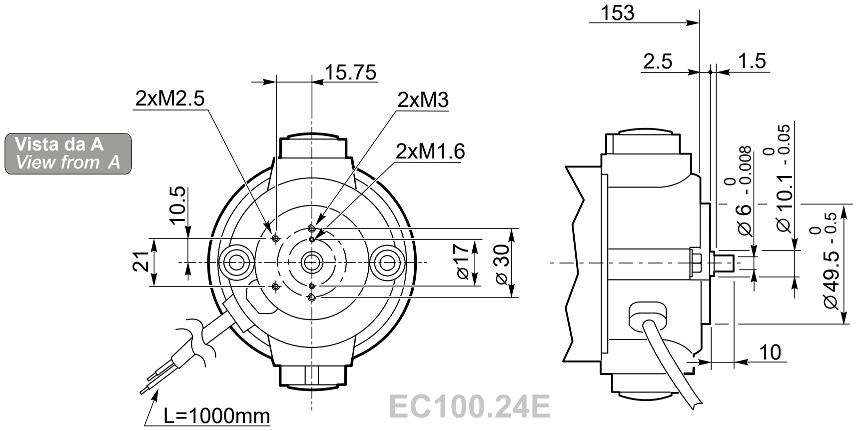
Dimensioni | ***Dimensions***

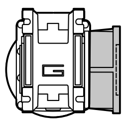
ECMB100/502 U



ECMB100/633 U







M17

Freno / *Brake* H23

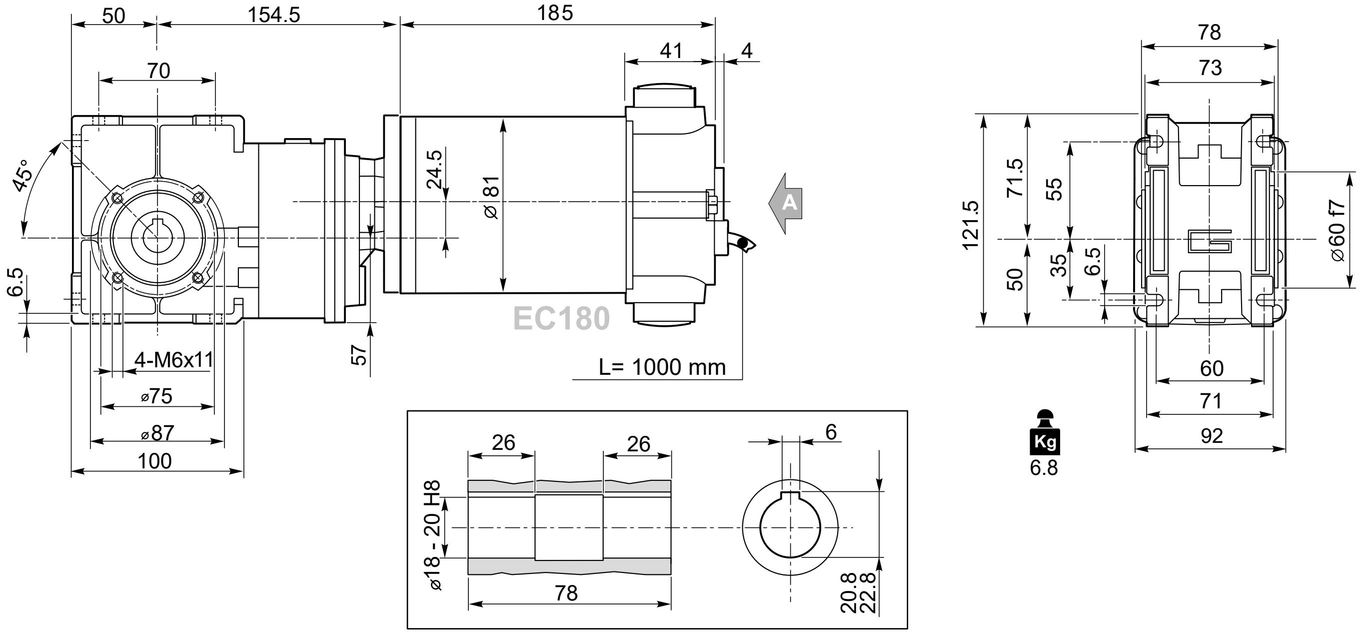
Encoder H24

Motori / *Motors* IP66 I4

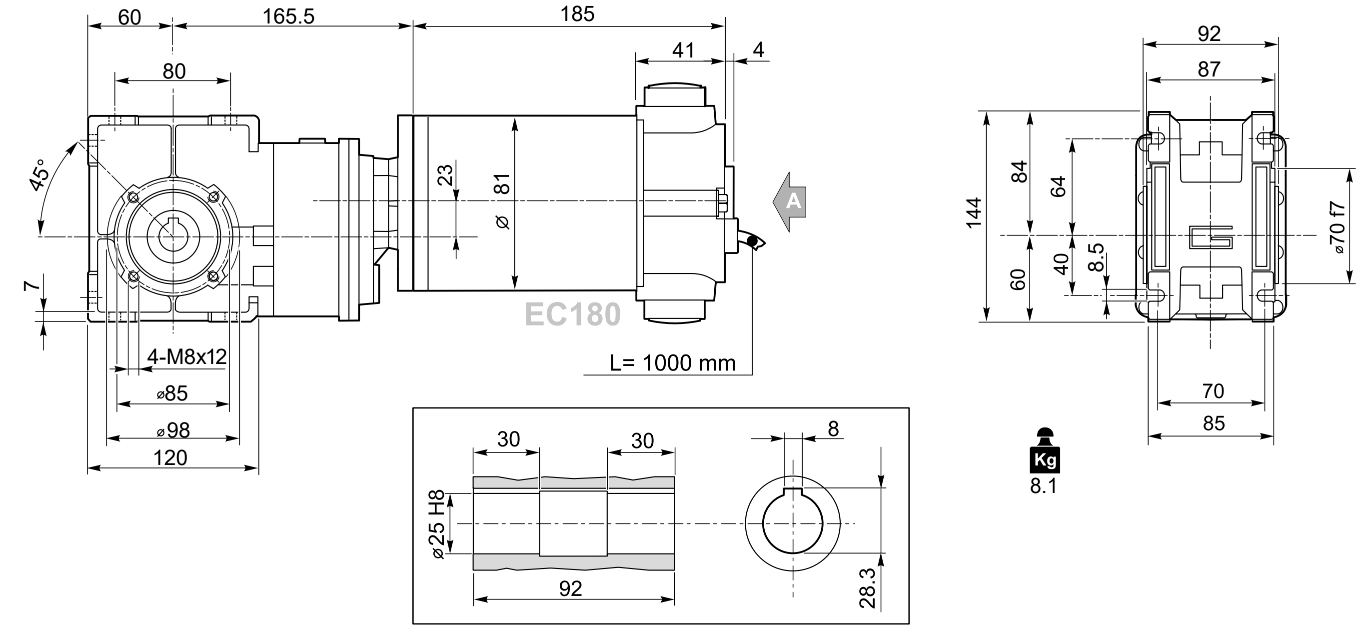
ECMB

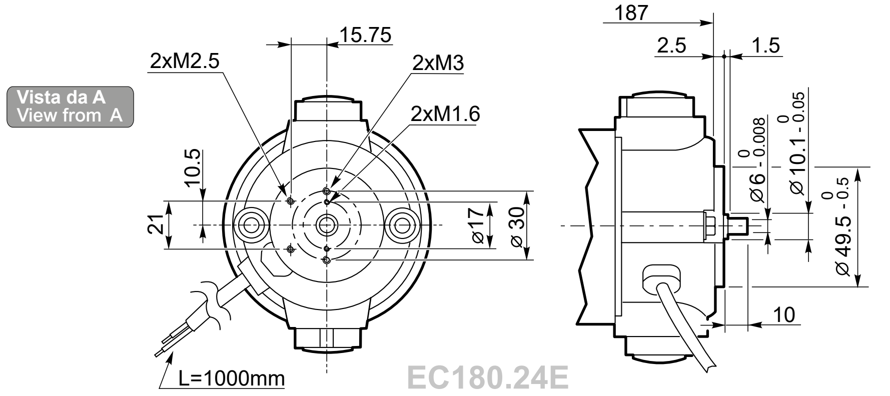
Dimensioni *Dimensions*

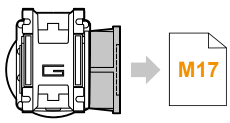
ECMB180/402 U



ECMB180/502 U







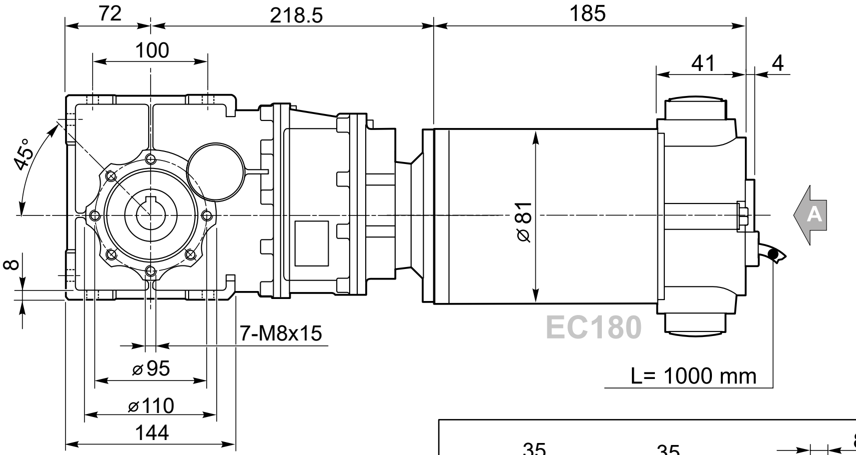
Freno / *Brake* H23

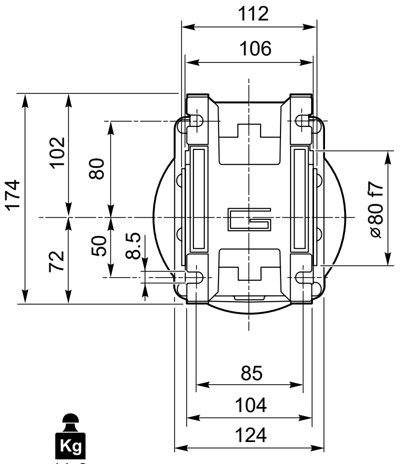
Encoder H24

Motori / *Motors* IP66 I6

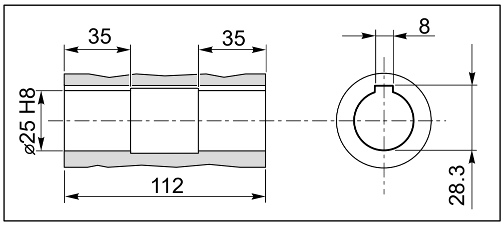
Dimensioni *Dimensions*

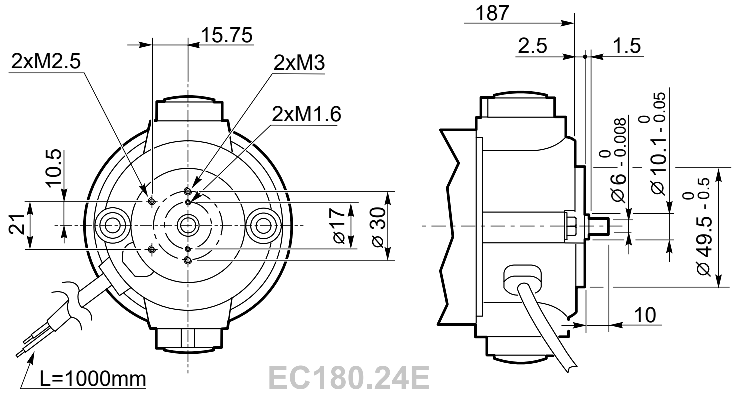
ECMB180/633 U

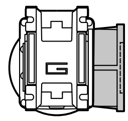




Kg
11.9







M17

Freno / *Brake* H23

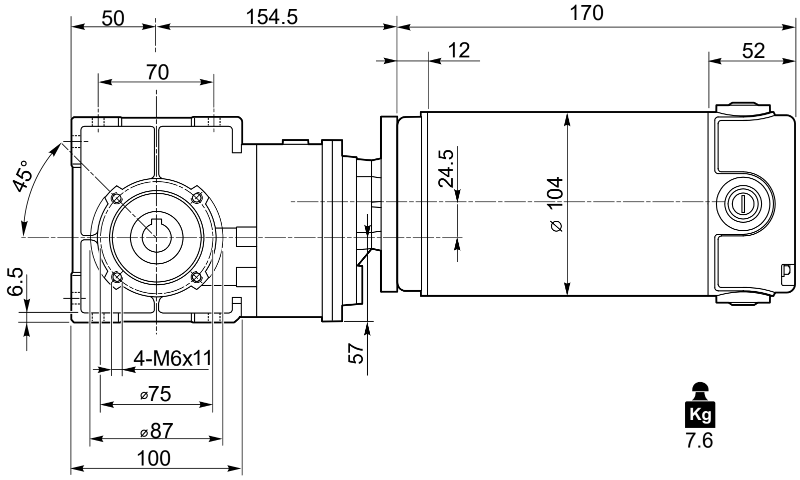
Encoder H24

Motori / *Motors* IP66 I6

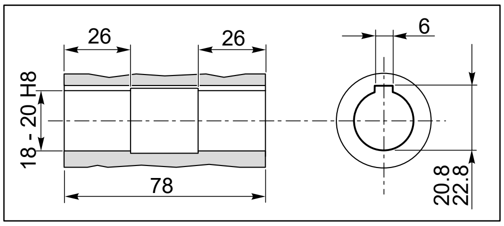
ECMB

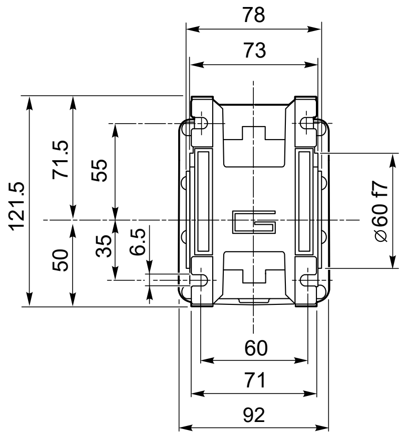
Dimensioni *Dimensions*

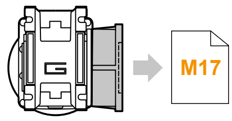
ECMB250/402 U



Kg
7.6

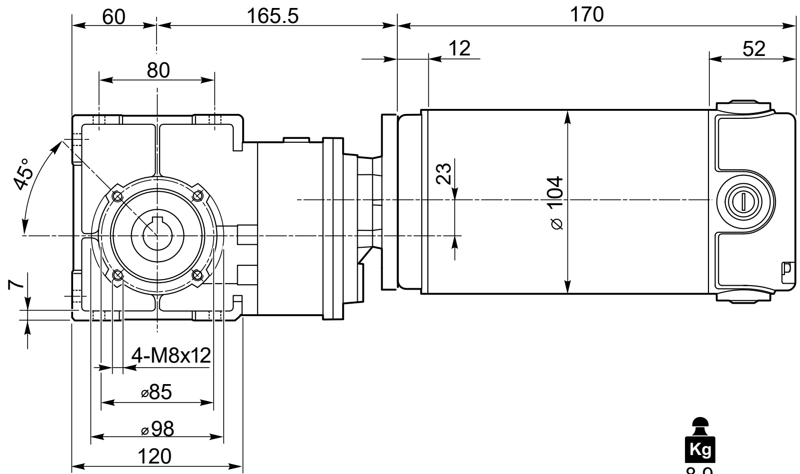




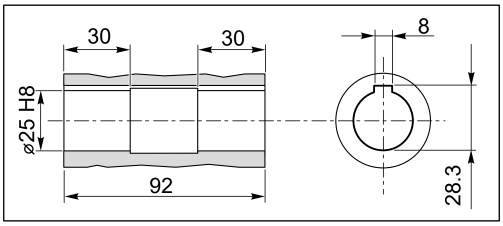


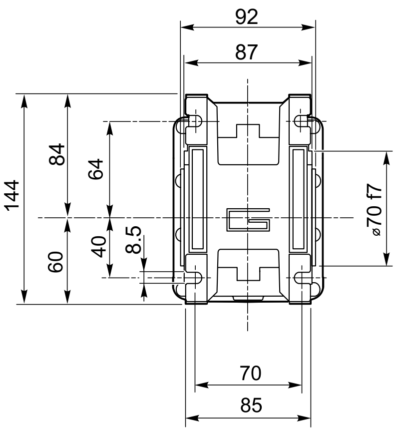
Motori / *Motors* IP66 → I8

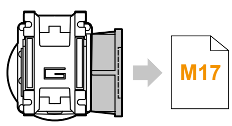
ECMB250/502 U



Kg
8.9



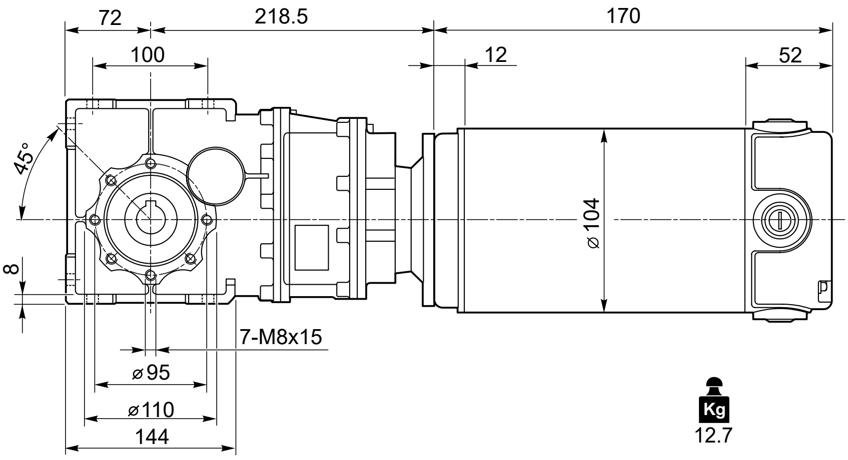


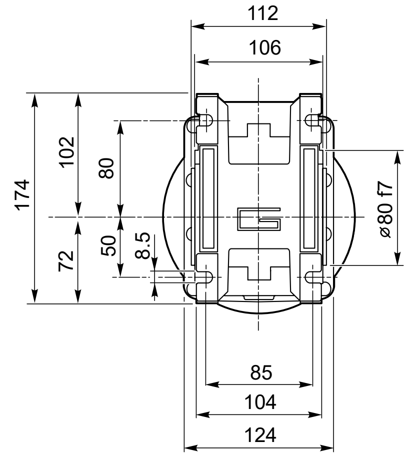


Motori / *Motors* IP66 → I8

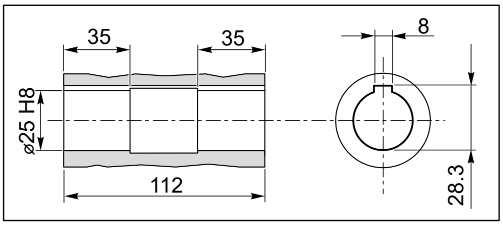
Dimensioni — ***Dimensions***

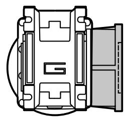
ECMB250/633 U





Kg 12.7

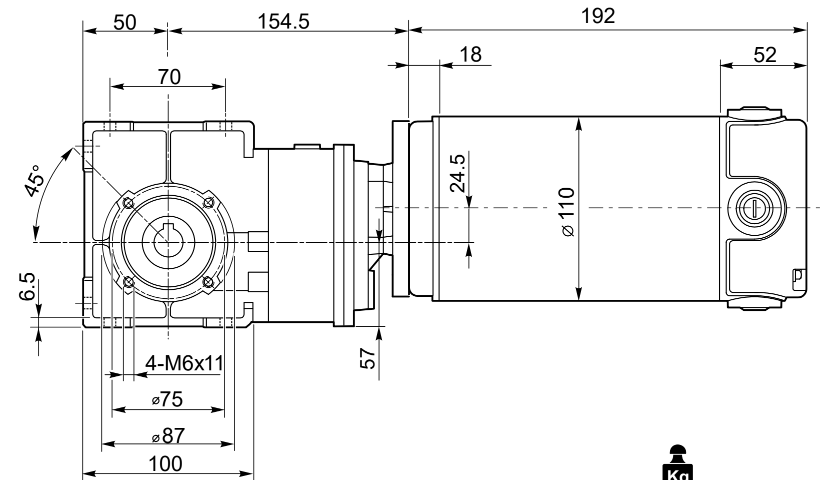


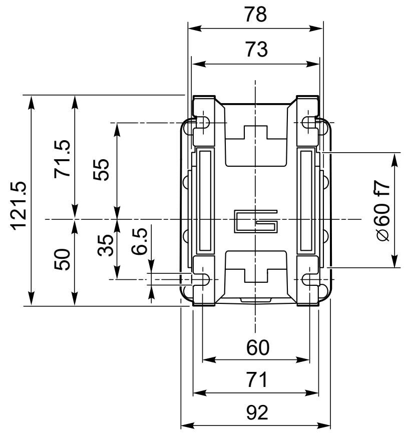


M17

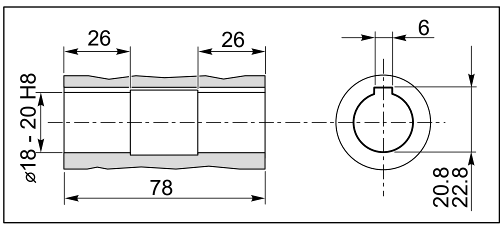
Motori / *Motors* IP66 → I8

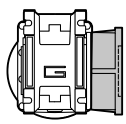
ECMB350/402 U





Kg 8.7





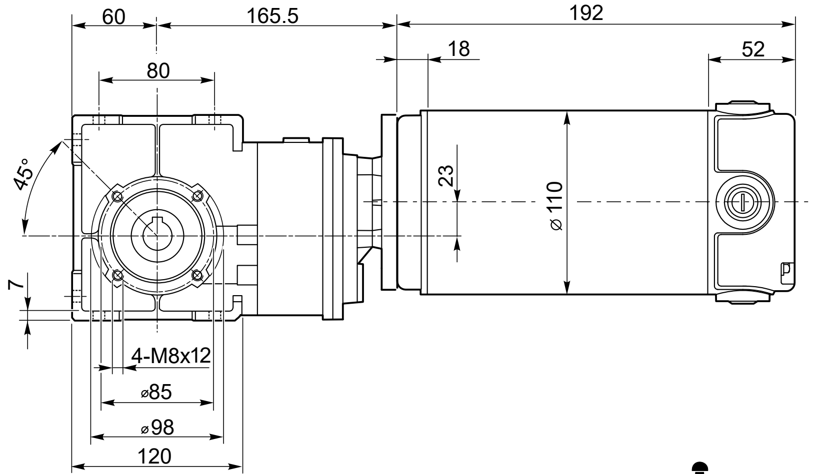
M17

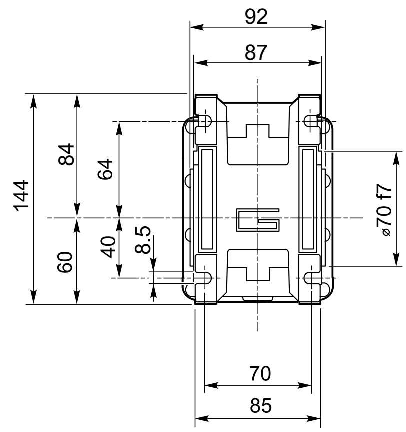
Freno / *Brake* → H23

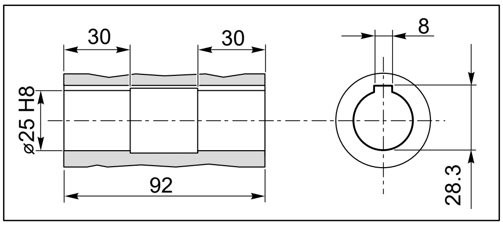
Motori / *Motors* IP66 → I10

Dimensioni *Dimensions*

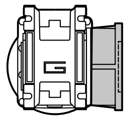
ECMB350/502 U







Kg 10.0

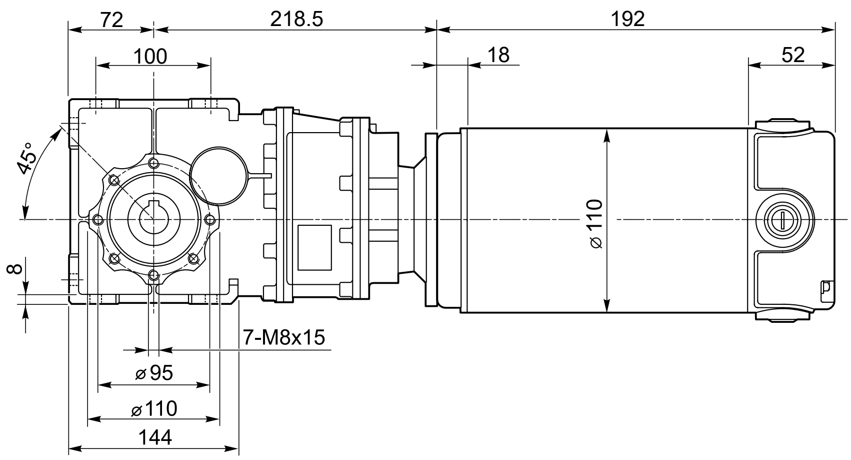


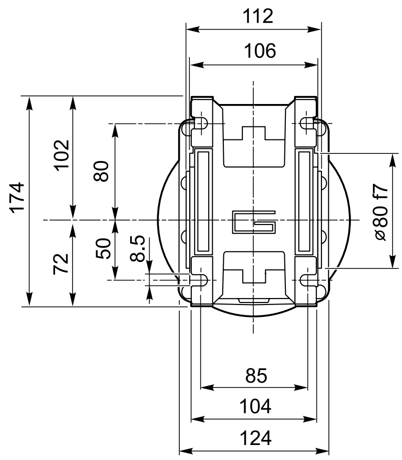
M17

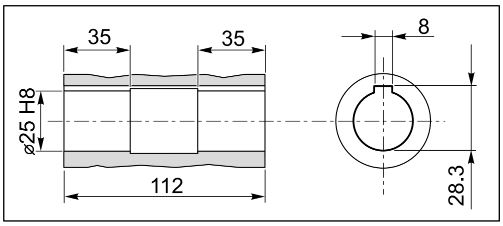
Freno / *Brake* H23

Motori / *Motors* IP66 I10

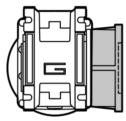
ECMB350/633 U







Kg 13.8



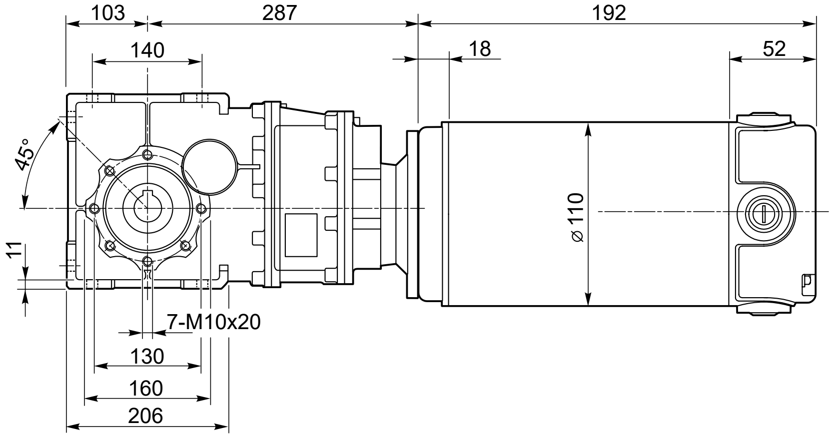
M17

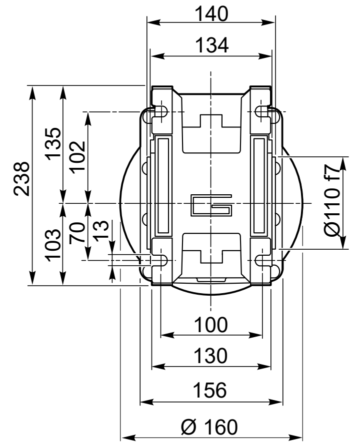
Freno / *Brake* H23

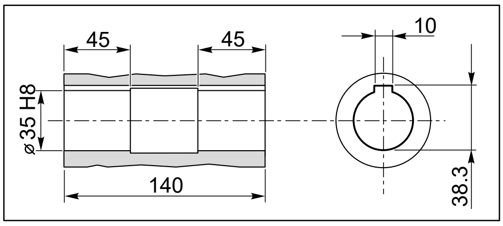
Motori / *Motors* IP66 I10

Dimensioni *Dimensions*

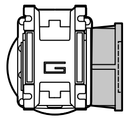
ECMB350/903 U







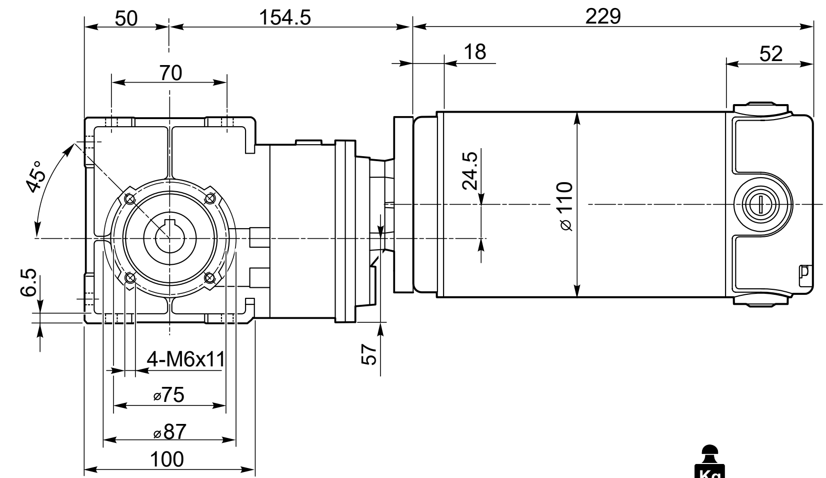
Kg
23.4

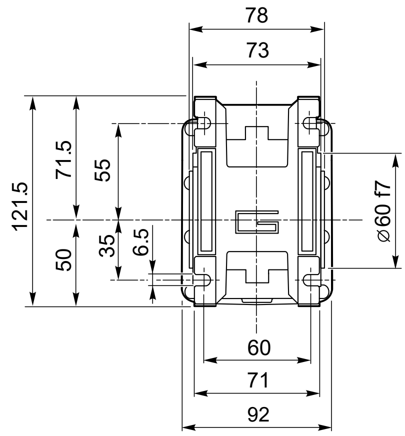


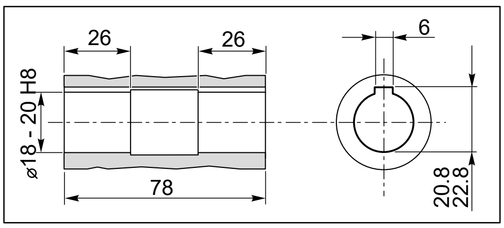
M17

Freno / *Brake* H23

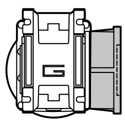
ECMB600/402 U







Kg
10.5



M17

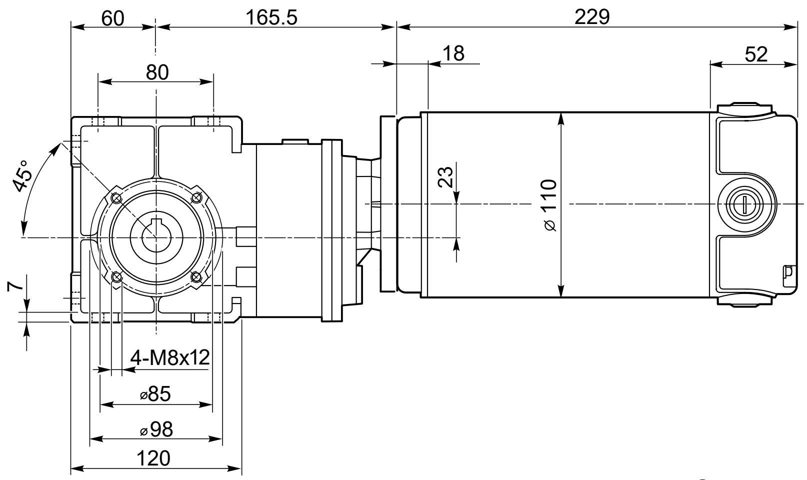
Freno / *Brake* H23

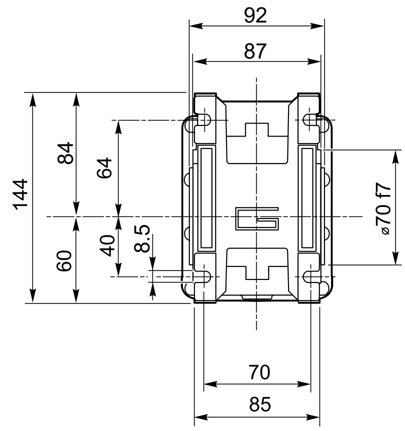
Motori / *Motors* IP66 I12

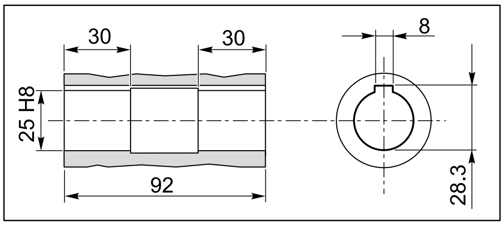
ECMB

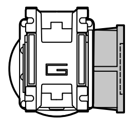
Dimensioni — ***Dimensions***

ECMB600/502 U







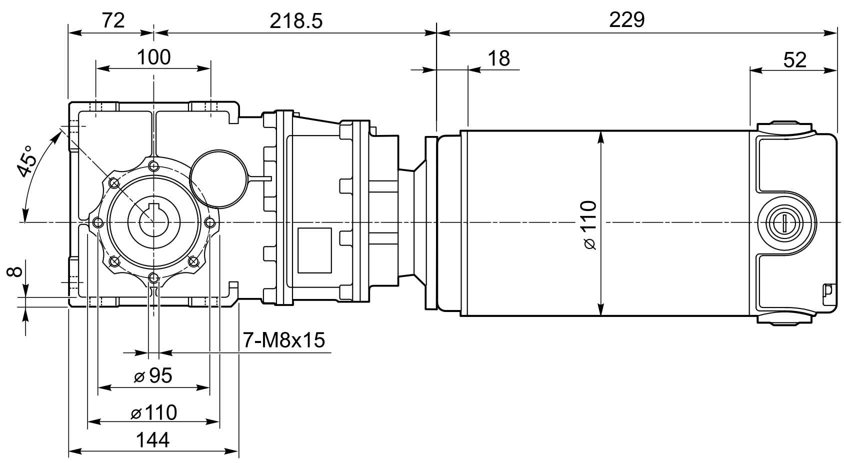


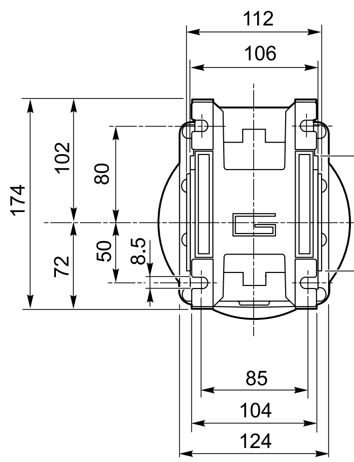
M17

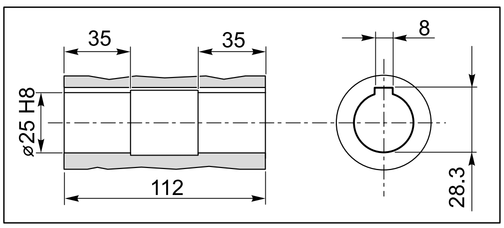
Freno / *Brake* H23

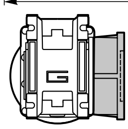
Motori / *Motors* IP66 I12

ECMB600/633 U









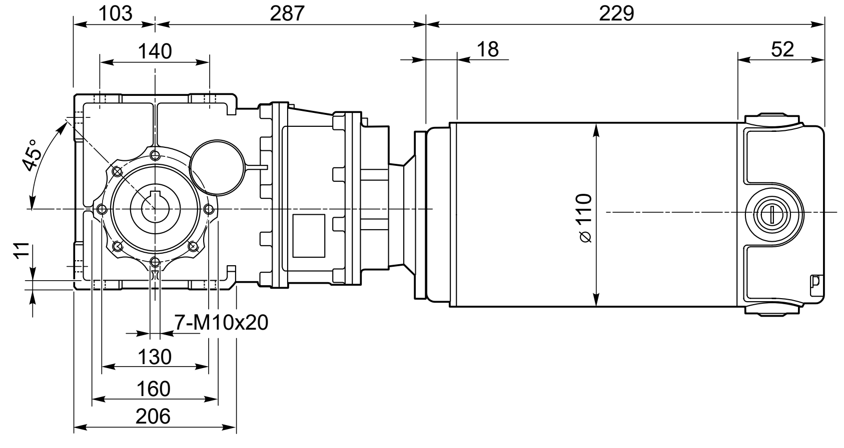
M17

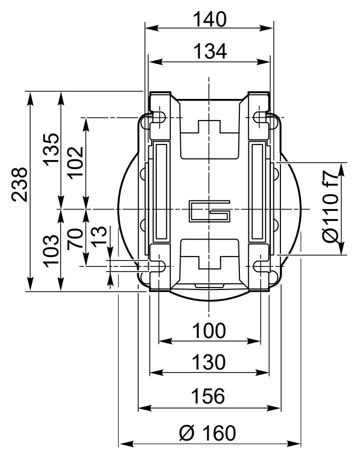
Freno / *Brake* H23

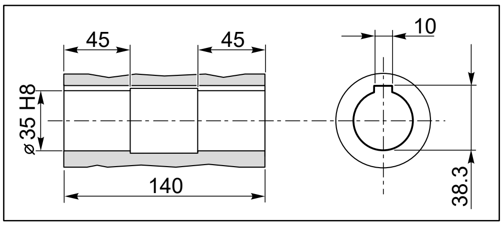
Motori / *Motors* IP66 I12

Dimensioni *Dimensions*

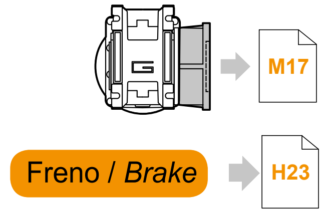
ECMB600/903 U



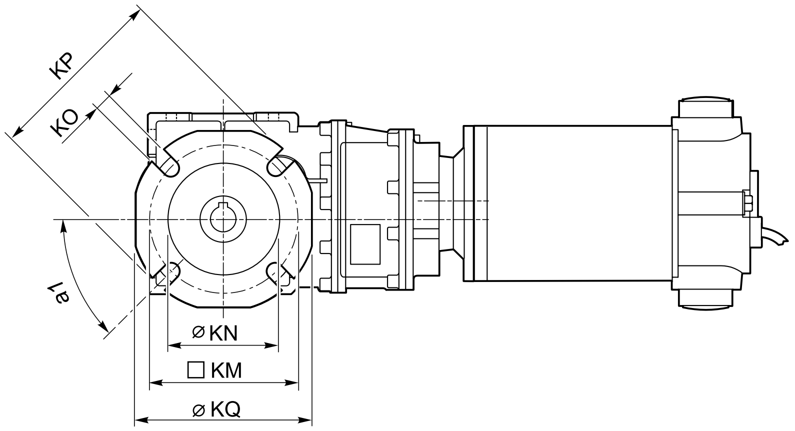


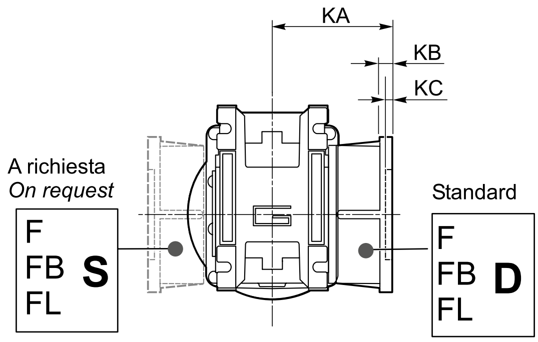


Kg
25.5



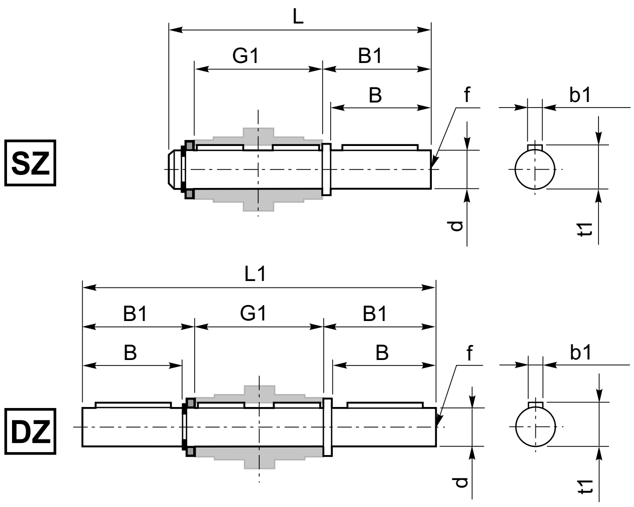
ECMB.../... F... **Flange uscita / *Output flanges***

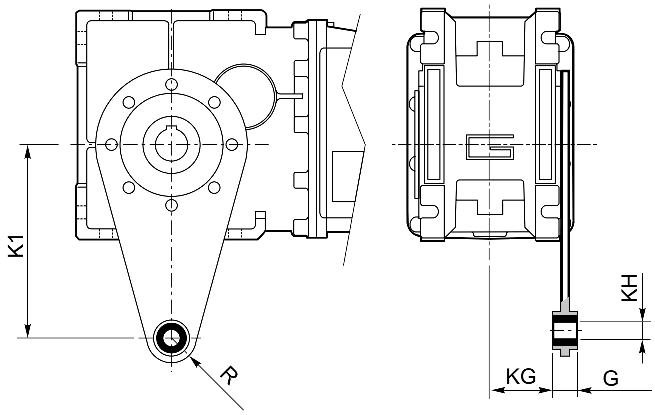




	Flange uscita / *Output flanges*																										
	F									FL										FB								
CMB	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ	a_1	KA	KB	KC	KM	KN H8	KO	KP	KQ
402	45°	67	7.5	4.5	80-95	60	9	110	95	45°	97	7.5	4.5	80-95	60	9	110	95	45°	80	8.5	5	115-125	95	9.5	140	112
502	45°	90	9	5	90-110	70	11	125	110	45°	120	9	5	90-110	70	11	125	110	45°	89	9	5	130-145	110	9.5	160	132
633	45°	82	10	6	150 - 160	115	11	180	142	45°	112	10	8	150 - 160	115	11	180	142	45°	98	11	5	165	130	11	200	160
933	45°	111	13	6	175-188	152	14	210	200	-									-								

Accessori — *Accessories*





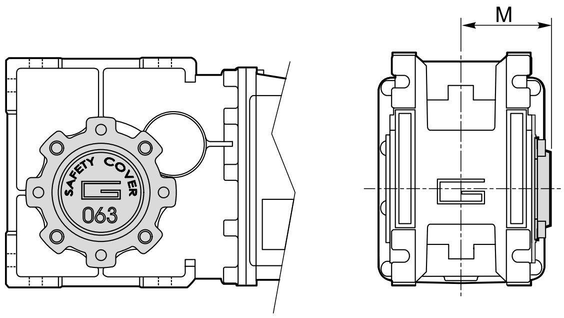
Albero lento / *Output shaft*

CMB CMBIS	d h7	B	B1	G1	L	L1	f	b1	t1
402	18	40	43	78	128	164	M6	6	20.5
502	25	50	53.5	92	153	199	M10	8	28
633	25	50	53.5	112	173	219	M10	8	28
903	35	80	84.5	140	234	309	M12	10	38

Braccio di reazione / *Torque arm*

CMB CMBIS	K1	G	KG	KH	R
402	100	14	31	10	18
502	100	14	38	10	18
633	150	14	47.5	10	18
903	200	25	56.5	20	30

SC - *Safety cover*



CMB CMBIS	M
402	54.5
502	62.5
633	73
903	94

MA TRANSTECNO S.A.P.I. DE C.V.
Av. Mundial # 176, Parque Industrial
JM Apodaca, Nuevo León,
C.P. 66600
MÉXICO
T +52 8113340920
info@transtecno.com.mx
www.transtecno.com.mx

TRANSTECNO SRL
Via Caduti di Sabbiuno, 11/D-E
40011 Anzola dell'Emilia (BO)
ITALY
T+39 051 64 25 811
F +39 051 73 49 43
sales@transtecno.com
www.transtecno.com

HANGZHOU TRANSTECNO POWER TRANSMISSIONS CO LTD
No.4 Xiuyan Road Fengdu Industry Zone
Pingyao Town Yuhang District
Hangzhou City, Zhejiang Province
311115 – CHINA
T +86 571 86 92 02 60
F +86 571 86 92 18 10
info-china@transtecno.com
www.transtecno.cn

TRANSTECNO U.S.A. LLC
5440 S.W. 156th Place Miami,
FL 33185 - USA
Tel: +1 (305) 220-4423
Fax: +1 (305) 220-5945
usaoffice@transtecno.com

TRANSTECNO B.V.
Ind. terrein Wieken/Vinkenhoef
De Stuwdam,43
3815 KM Amersfoort - NETHERLANDS
Tel: +31(0) 33 45 19 505
Fax: +31(0) 33 45 19 506
info@transtecno.nl
www.transtecno.nl

SALES OFFICE INDIA
A/10, Anagha, S.N. Road, Mulund (W) Mumbai
400080 - INDIA
Tel: +91 9820614698
Fax-Italy: +39 051 73 49 43
indiaoffice@transtecno.com

SALES OFFICE BRAZIL
Rua Dr. Freire Alemão 155 / 402 - CEP. 90450-060
Auxiliadora Porto Alegre RS - BRAZIL
Tel: +55 51 3251 5447
Fax: +55 51 3251 5447
Mobile: +55 51 811 45 962
braziloffice@transtecno.com
www.transtecno.com.br

TRANSTECNO AANDRIJFTECHNIEK B.V.
De Stuwdam 43
3815 KM Amersfoort - NETHERLANDS
Tel: +31 (0) 33 20 4 7 006
info@transtecnoaandrijftechniek.nl
www.transtecnoaandrijftechniek.nl

SALES OFFICE SOUTH KOREA
D-304 Songdo BRC Smart Valley 30, Songdomirae-ro,
Yeonsu-gu, Incheon, 406-840 - KOREA
Tel: +82 70 8288 2107
Fax: +82 32 815 2107
Mobile: +82 10 5094 2107
koreaoffice@transtecno.com

TRANSTECNO IBÉRICA
THE MODULAR GEARMOTOR, S.A.
C/Enginy, 2 Nave 6 - 08850 Gavà (Barcelona) - SPAIN
Tel: +34 931 598 950
info@transtecno.es
www.transtecno.es

SALES OFFICE OCEANIA
44 Northview drive, Sunshine west 3020
Victoria - AUSTRALIA
Ph +61 03 9312 4722
Fax +61 03 9312 4714
Mobile: +61 0438060997
oceaniaoffice@transtecno.com
www.transtecno.com.au

SALES OFFICE FRANCE
Tel: +33 (0) 6 85 12 09 87
Fax-Italy: +39 051 73 49 43
franceoffice@transtecno.com
www.transtecno.fr

TRANSTECNO®
the modular gearmotor

www.transtecno.com