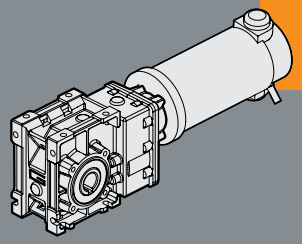
TRANSTECNO®
THE MODULAR GEARMOTOR

ECMB

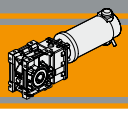
ECMB



MOTORIDUTTORI C.C. AD ASSI ORTOGONALI

PERMANENT MAGNETS D.C. BEVEL HELICAL GEARMOTORS

TRANSTECNO · GENUINE · PRODUCTS ·



ENERGY SAVING

Caratteristiche tecniche — *Technical features*

Le caratteristiche principali dei motoriduttori a corrente continua della 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 D.C. gearmotor range are:

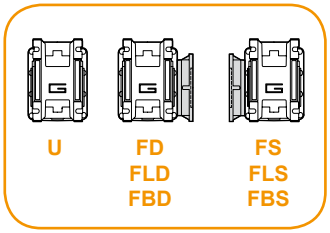
- *Low voltage power supply 12/24 Vdc*
- *Suitable for encoder assembly*
- *Motor power ratings available from 100 to 800W S2*
- *Ferrite magnets*
- *Die-cast aluminum housing*
- *Permanent synthetic oil long-life lubrication*
- *Ground helical gears*

Designazione — *Classification*

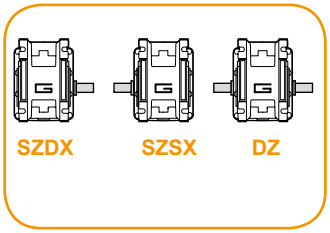
MOTORIDUTTORE / *GEARMOTOR*

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

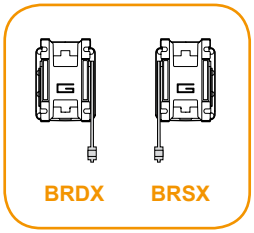
Versione Riduttore *Gearbox Version*



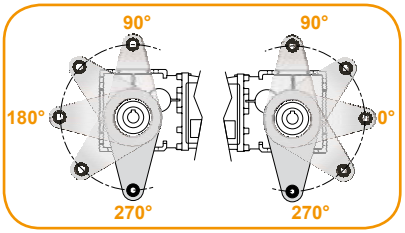
Albero di uscita *Output shaft*



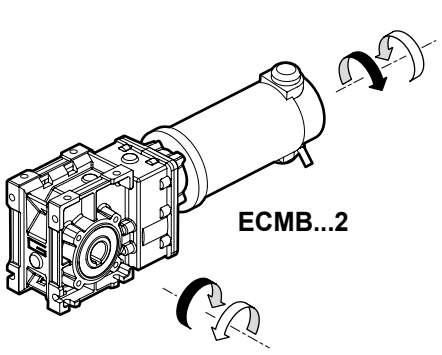
Braccio di reazione *Torque arm*

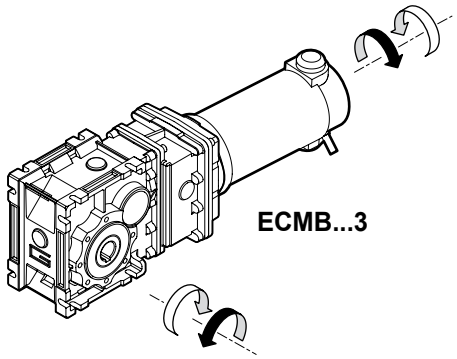


Angolo *Angle*



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*

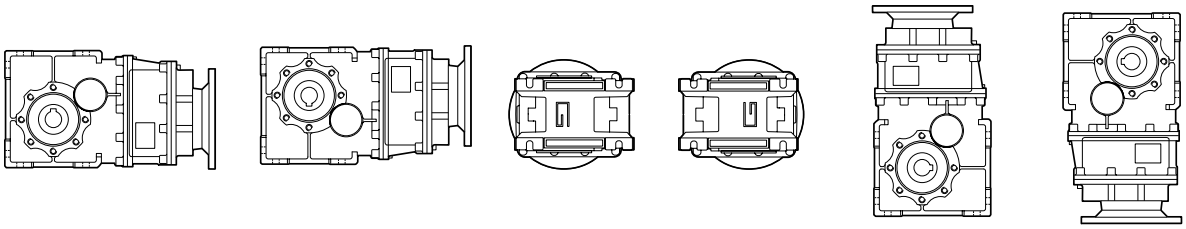
Tutti i riduttori nelle taglie 402, 502 e 633 sono forniti completi di lubrificante sintetico viscosità 320, pertanto possono essere installati in qualunque posizione di montaggio e non necessitano di manutenzione.

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.

CMB	**Quantità di olio** (litri) / ***Oil quantity*** *(litres)*					
	B3	**B8**	**B6**	**B7**	**V5**	**V6**
402	0.4					
502	0.52					
633	1.3					
	Lubrificati a vita / *Life lubrication*					

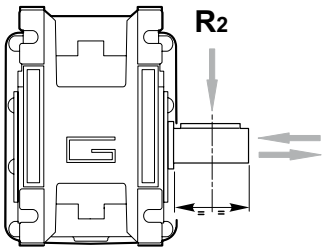
N.B.
Le quantità di lubrificante sono indipendenti dalla posizione di montaggio per le taglie 402, 502 e 603.
The oil quantity does not depend on mounting position for sizes 402, 502 and 603.

Posizioni di montaggio / *Mounting positions*



B3 (standard) **B8** **B6** **B7** **V5** **V6**

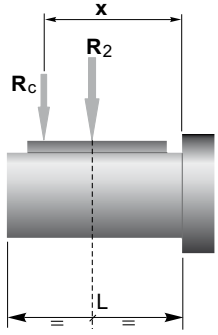
Carichi radiali — *Radial loads*



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

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**
a	86	104	118
b	66	79	93
R_{2MAX}	3500	4200	6500

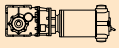
$$R_c = \frac{R_2 \cdot a}{(b+x)} \leq R_{2MAX}$$

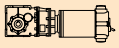
$$R \leq R_c$$

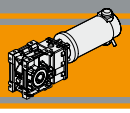
a, b = valori riportati nella tabella
a, b = values given in the table

Dati tecnici per servizio S2

Technical data for S2 duty

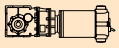
P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
100						
(3000 min^{-1})	**485**	1.8	16.8	6.18	**070/402**	120/240
	401	2.2	13.8	7.49		
	326	2.8	11.3	9.20		
	254	3.5	9.9	11.83		
	240	3.7	9.4	12.48		
	202	4.4	7.9	14.83		
	170	5.3	6.6	17.63		
	161	5.6	7.7	18.60		
	134	6.7	6.4	22.33		
	125	7.2	6.0	23.91		
	104	8.6	5.9	28.89		
	97	9.2	5.5	30.84		
	89	10.0	5.1	33.57		
	84	10.7	4.8	35.63		
	70	12.8	4.0	42.75		
	54	16.6	3.1	55.31		
	51	17.7	2.9	59.06		
	47	19.2	2.7	64.29		
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	10.0	4.3	23.91		
	104	12.1	4.2	28.89		
	97	12.9	3.9	30.84		
	89	14.1	3.6	33.57		
	84	14.9	3.4	35.63		
	70	17.9	2.8	42.75		
	54	23.2	2.2	55.31		
	51	24.7	2.1	59.06		
	47	26.9	1.9	64.29		
	54	23.2	4.23	55.31	**100/502**	120/240/24E
	51	24.7	3.96	59.06		
	47	26.9	3.64	64.29		
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	11.1	3.2	14.83		
	170	13.2	2.7	17.63		
	161	13.9	3.1	18.60		
	134	16.7	2.6	22.33		
	125	17.9	2.4	23.91		

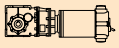
P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
250						
(3000 min^{-1})	**104**	21.6	2.4	28.89	**180/402**	120/240/24E
	97	23.1	2.2	30.84		
	89	25.1	2.0	33.57		
	84	26.7	1.9	35.63		
	70	32.0	1.6	42.75		
	54	41.4	1.2	55.31		
	51	44.2	1.2	59.06		
	47	48.1	1.1	64.29		
	134	16.7	5.1	22.33	**180/502**	120/240/24E
	125	17.9	4.8	23.91		
	104	21.6	4.5	28.89		
	97	23.1	4.2	30.84		
	89	25.1	3.9	33.57		
	84	26.7	3.7	35.63		
	70	32.0	3.1	42.75		
	54	41.4	2.4	55.31		
	51	44.2	2.2	59.06		
	47	48.1	2.0	64.29		
350						
(3000 min^{-1})	**485**	6.5	4.79	6.18	**250/402**	120/240
	401	7.8	3.95	7.49		
	326	9.6	3.22	9.20		
	254	12.4	2.82	11.83		
	240	13.1	2.68	12.48		
	202	15.5	2.25	14.83		
	170	18.5	1.90	17.63		
	161	19.5	2.21	18.60		
	134	23.4	1.84	22.33		
	125	25.0	1.72	23.91		
	104	30.3	1.69	28.89		
	97	32.3	1.58	30.84		
	89	35.2	1.45	33.57		
	84	37.3	1.37	35.63		
	70	44.8	1.14	42.75		
	54	57.9	0.88	55.31		
	51	61.9	0.82	59.06		
	47	67.3	0.76	64.29		
	485	6.5	8.50	6.18	**250/502**	120/240
	401	7.8	7.01	7.49		
	326	9.6	5.71	9.2		
	254	12.4	5.65	11.83		
	240	13.1	5.36	12.48		
	202	15.5	4.51	14.83		
	170	18.5	3.79	17.63		
	161	19.5	4.41	18.6		
	134	23.4	3.68	22.33		
	125	25.0	3.43	23.91		
	104	30.3	3.24	28.89		
	97	32.3	3.03	30.84		
	89	35.2	2.79	33.57		
	84	37.3	2.63	35.63		
	70	44.8	2.19	42.75		
	54	57.9	1.69	55.31		
	51	61.9	1.58	59.06		
	47	67.3	1.46	64.29		



Dati tecnici per servizio S2

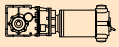
Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
350						
(3000 min^{-1})	**106**	29.5	5.83	28.17	**250/633**	120/240
	89	35.4	4.86	33.81		
	84	37.6	4.57	35.92		
	77	40.7	4.79	38.88		
	64	49.4	3.95	47.16		
	52	60.7	3.21	57.93		
	49	64.5	3.02	61.63		
	41	77.5	2.52	73.96		
	38	82.3	2.37	78.58		
	32	97.7	1.99	93.33		
	21	147.2	1.33	140.52		
	17	190.4	1.02	181.81		
	14	221.3	0.88	211.31		
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	35.8	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		

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
500						
(3000 min^{-1})	**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		
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		
	54	73	0.7	55.31		
	51	73	0.7	59.06		
	47	73	0.7	64.29		
	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		
	97	74	1.3	30.84		
	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		

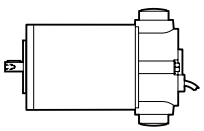
Dati tecnici per servizio S2

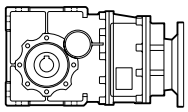
Technical data for S2 duty

P_1 [W]	n_2 [min^{-1}]	M_2 [Nm]	sf	i		Versione motore *Motor version*
500						
(3000 min^{-1})	**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		
	17	279	0.7	181.81		
	14	279	0.7	211.31		

Motori applicabili

Motor adapters



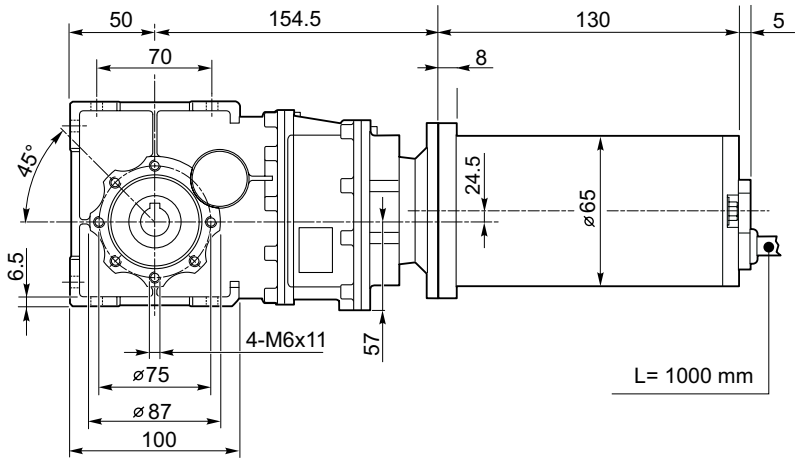


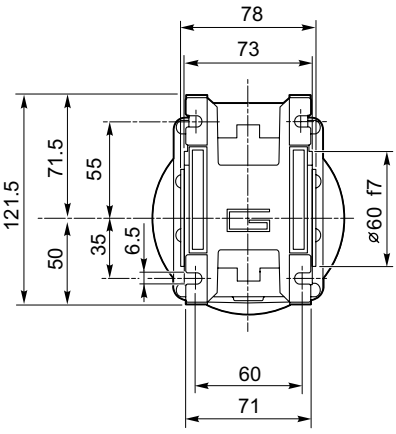
		EC					
		070.120 070.240	**100.120 100.240 100.24E**	**180.120 180.240 180.24E**	**250.120 250.240**	**350.120 350.240**	**600.120 600.240**
CMB	**402**	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29
	502		6.18 - 64.29	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29	6.18 - 64.29
	633				6.58 - 211.31	6.58 - 211.31	6.58 - 211.31

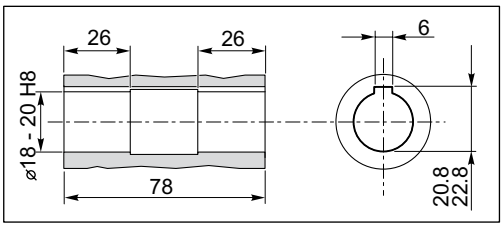
6.18 - 64.29 Rapporti di riduzione i *Ratio i*

Dimensioni | ***Dimensions***

ECMB70/402 U







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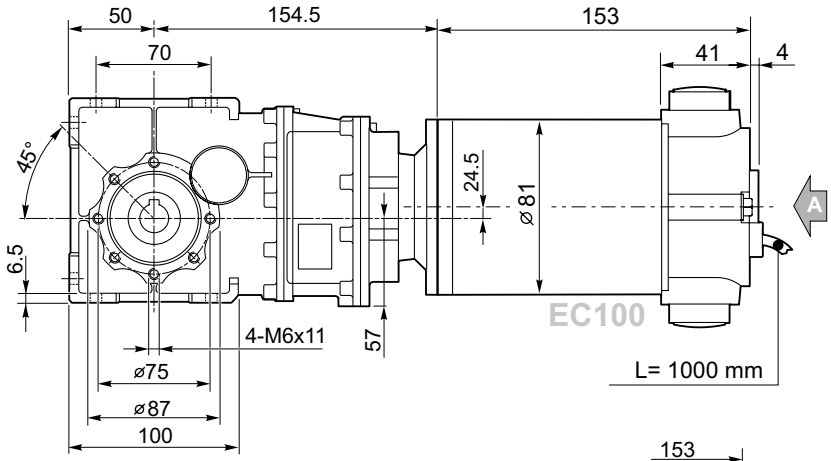

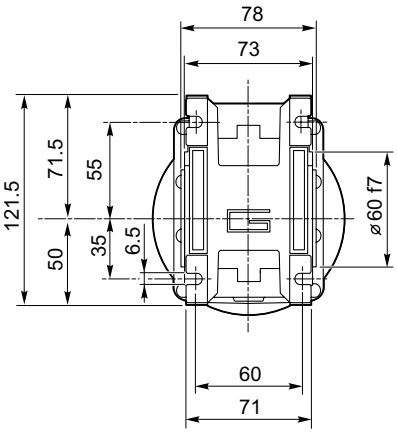

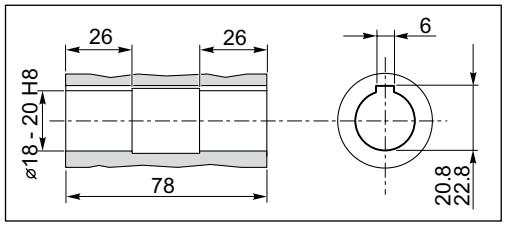

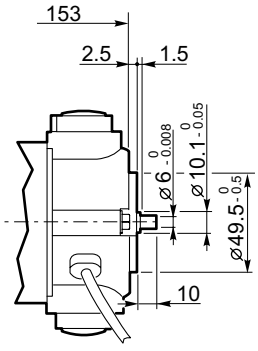

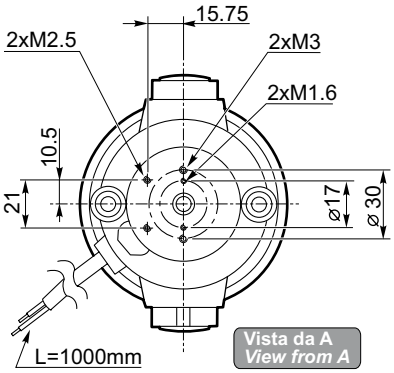

Dimensioni *Dimensions*

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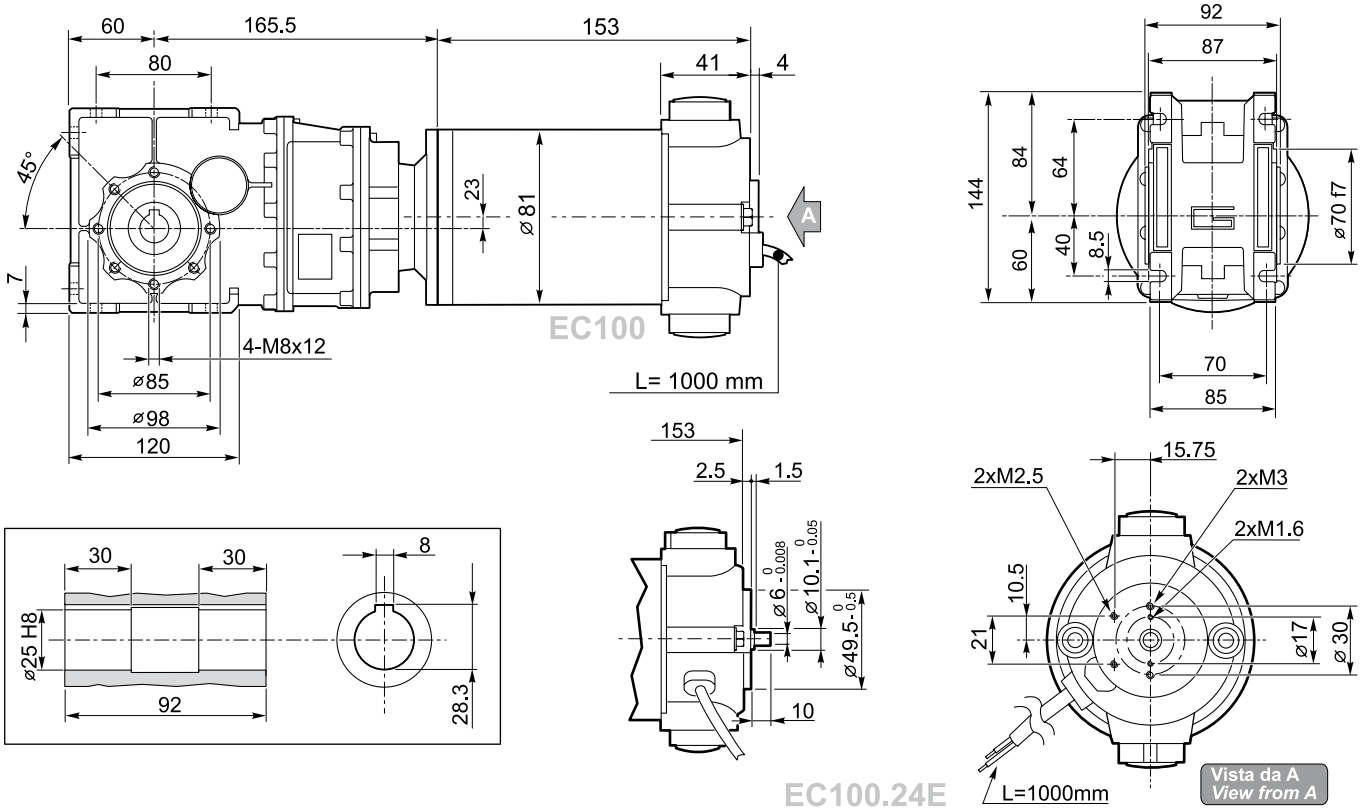

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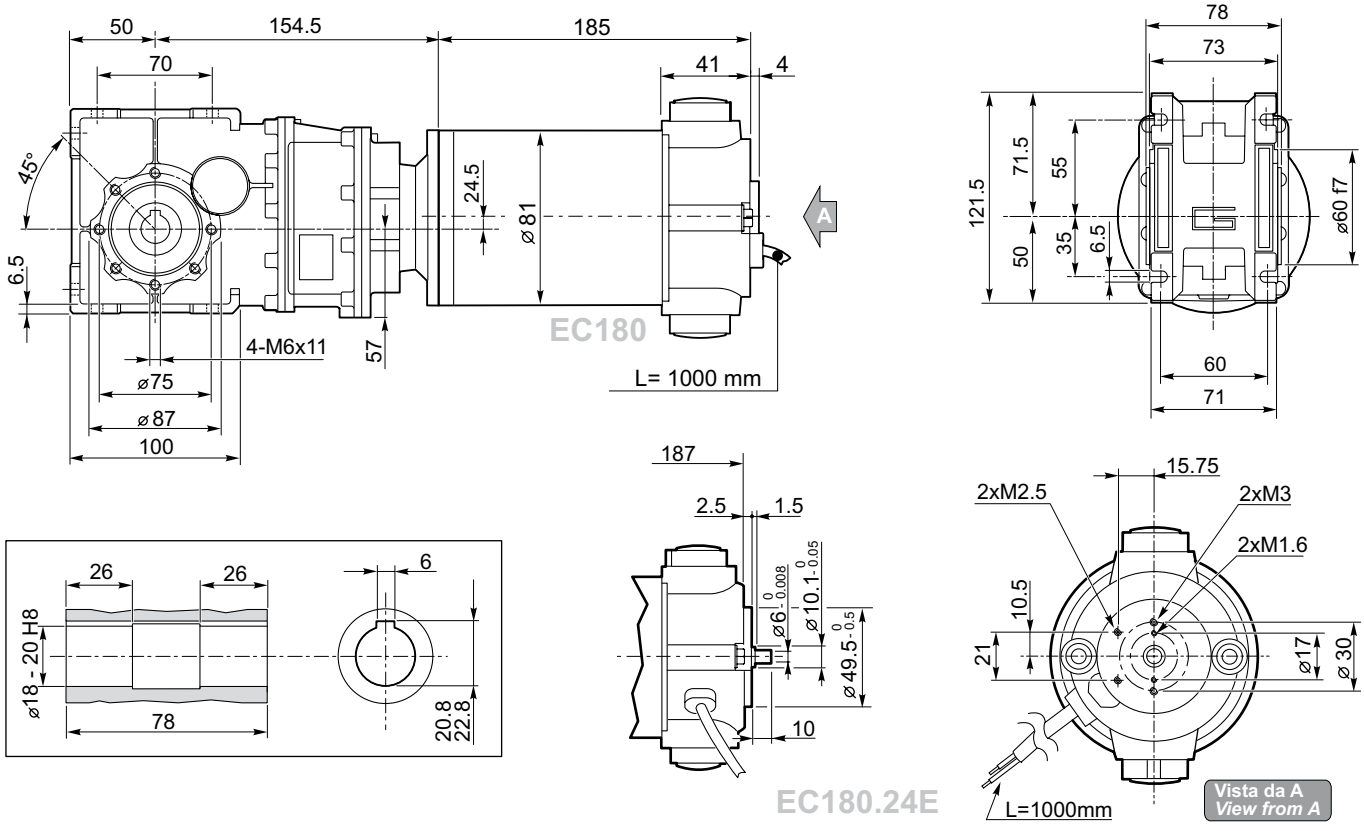

Dimensioni *Dimensions*

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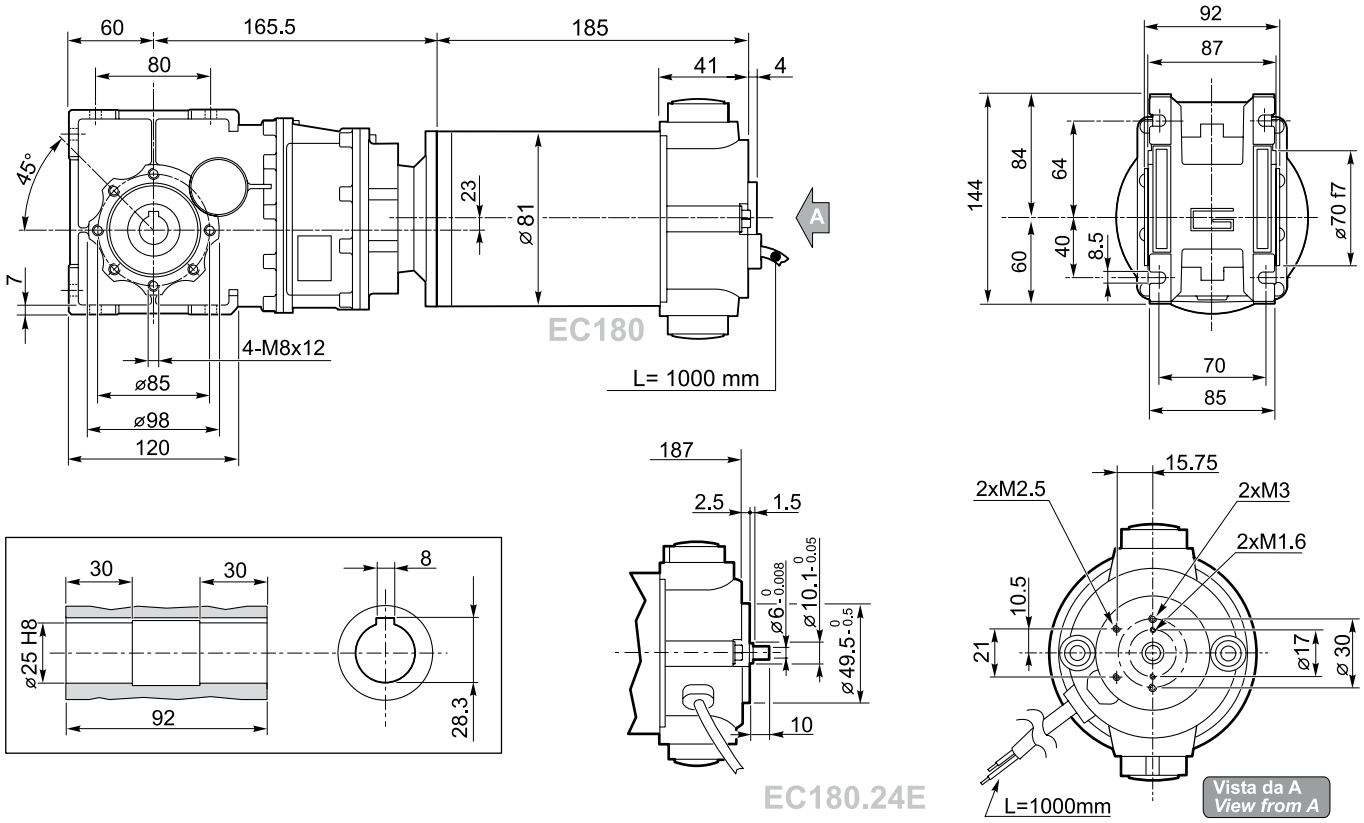

Dimensioni ***Dimensions***

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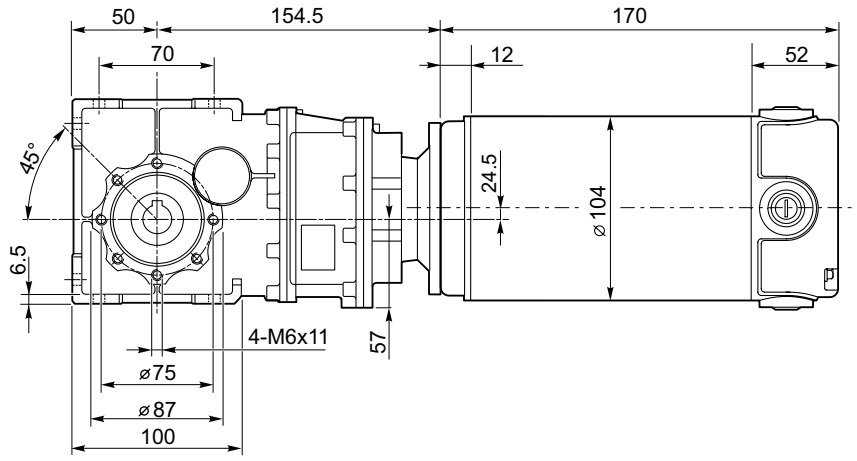

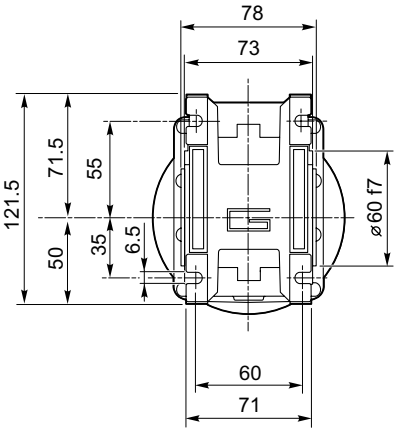

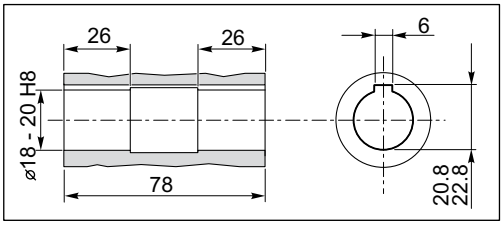

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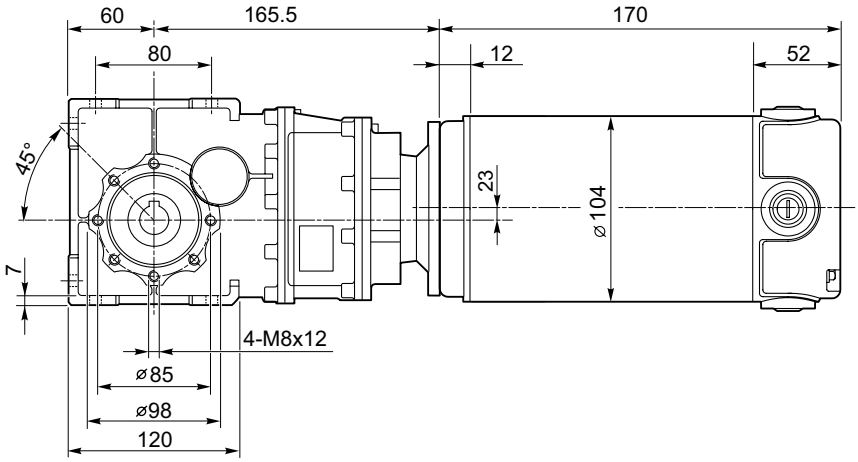

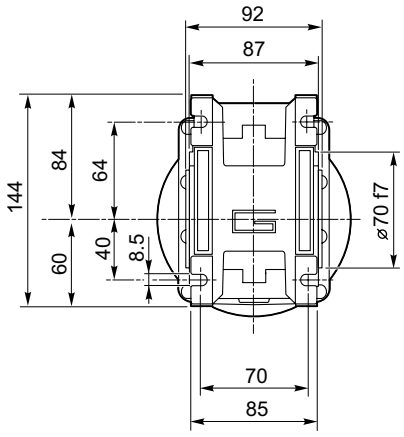

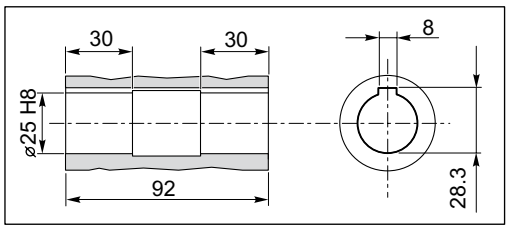

Dimensioni ***Dimensions***

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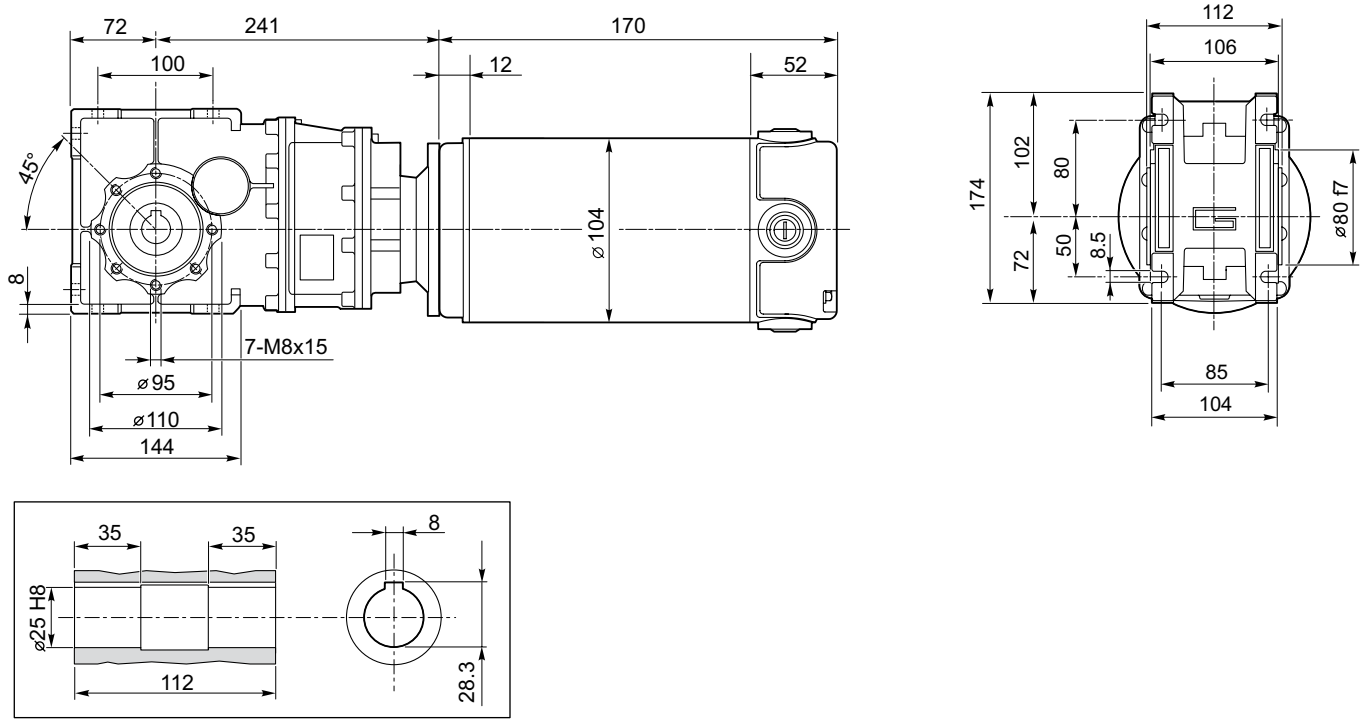

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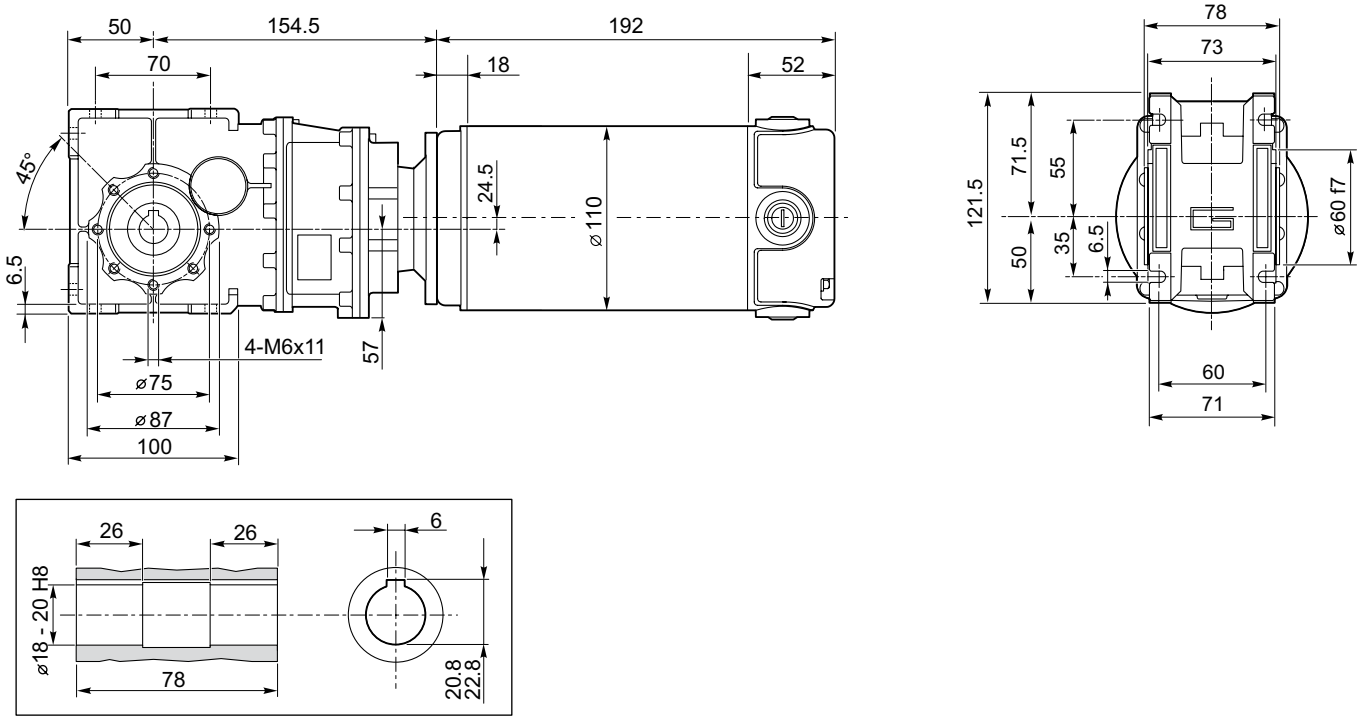

Dimensioni ***Dimensions***

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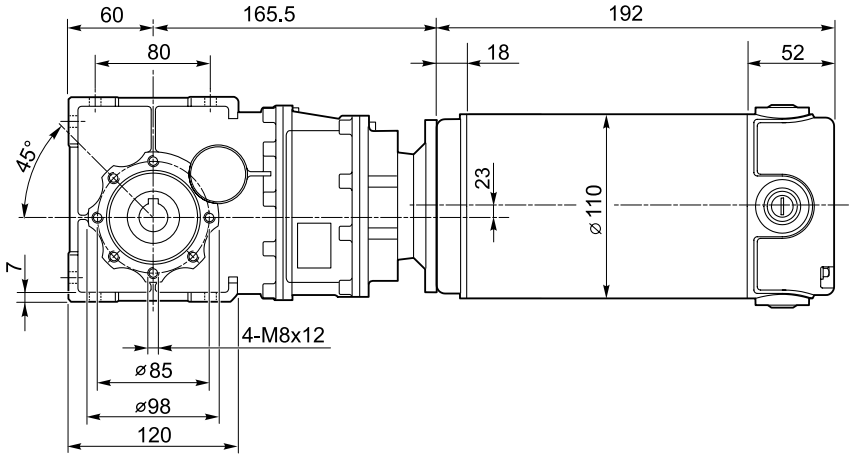

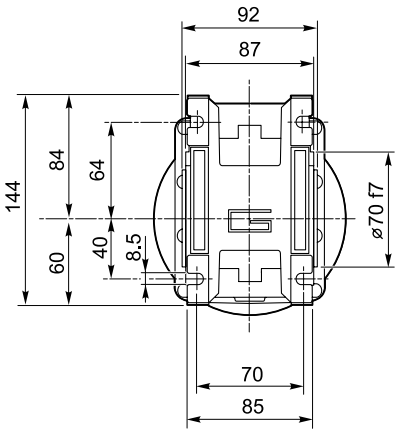

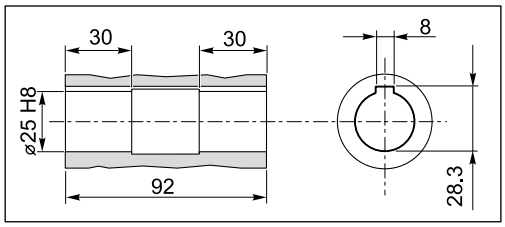

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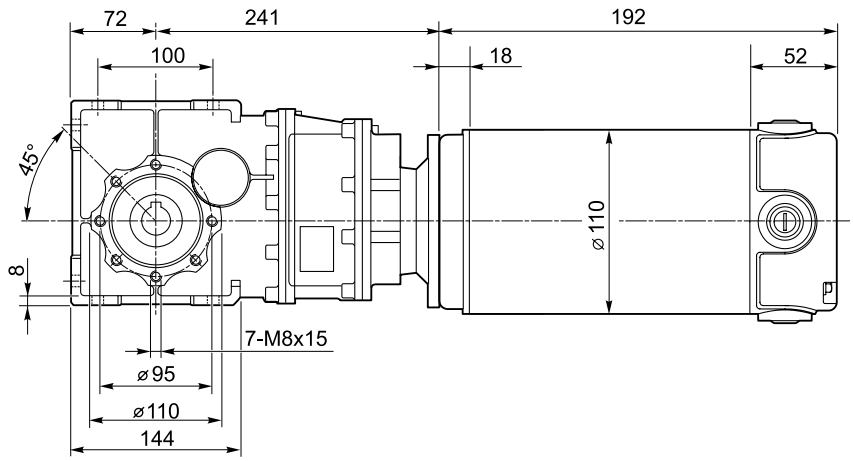

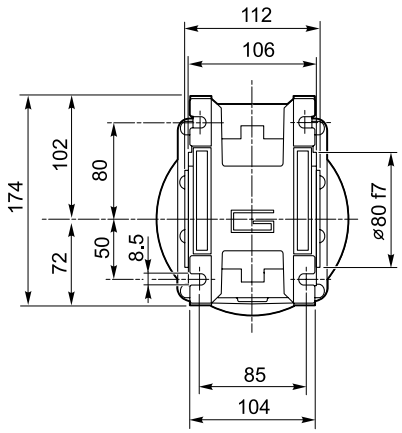

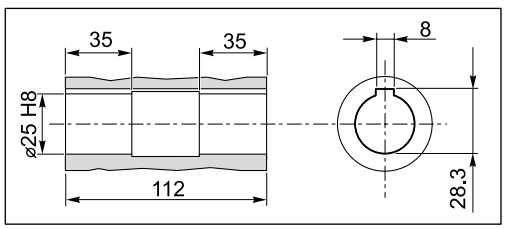

Dimensioni *Dimensions*

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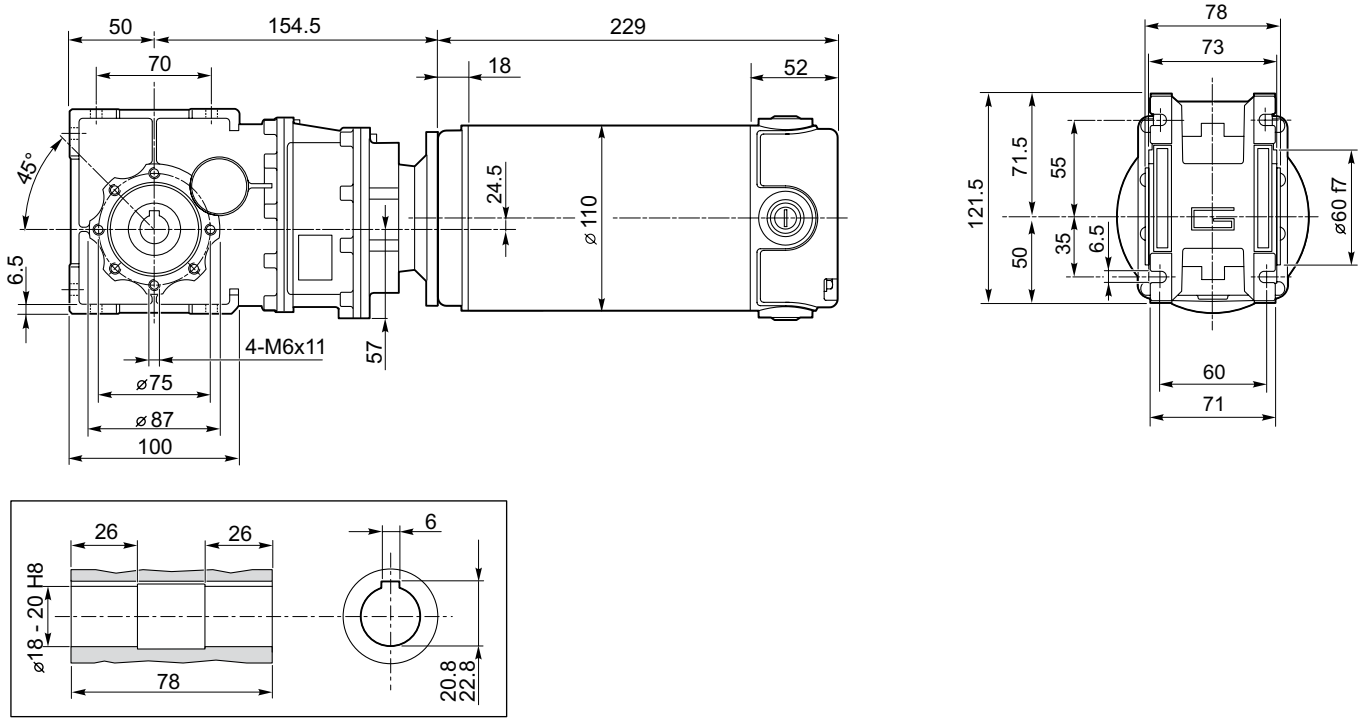

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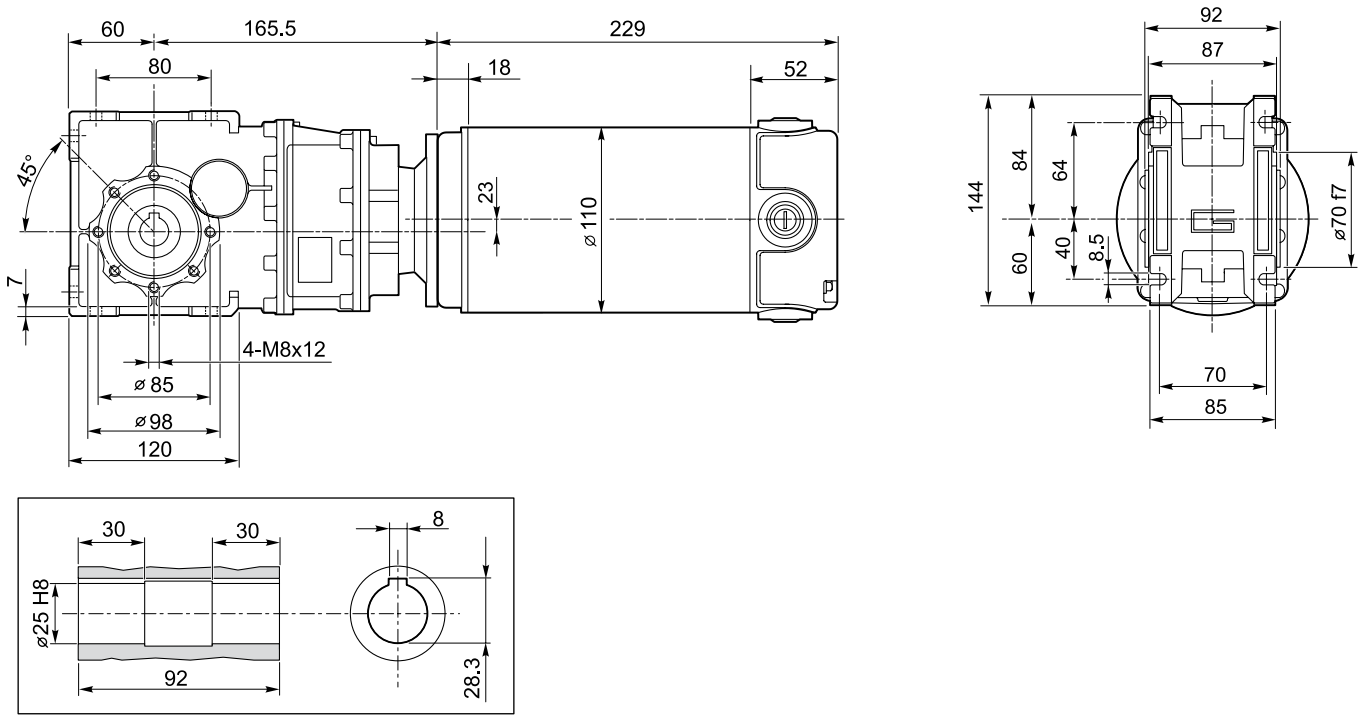

Dimensioni ***Dimensions***

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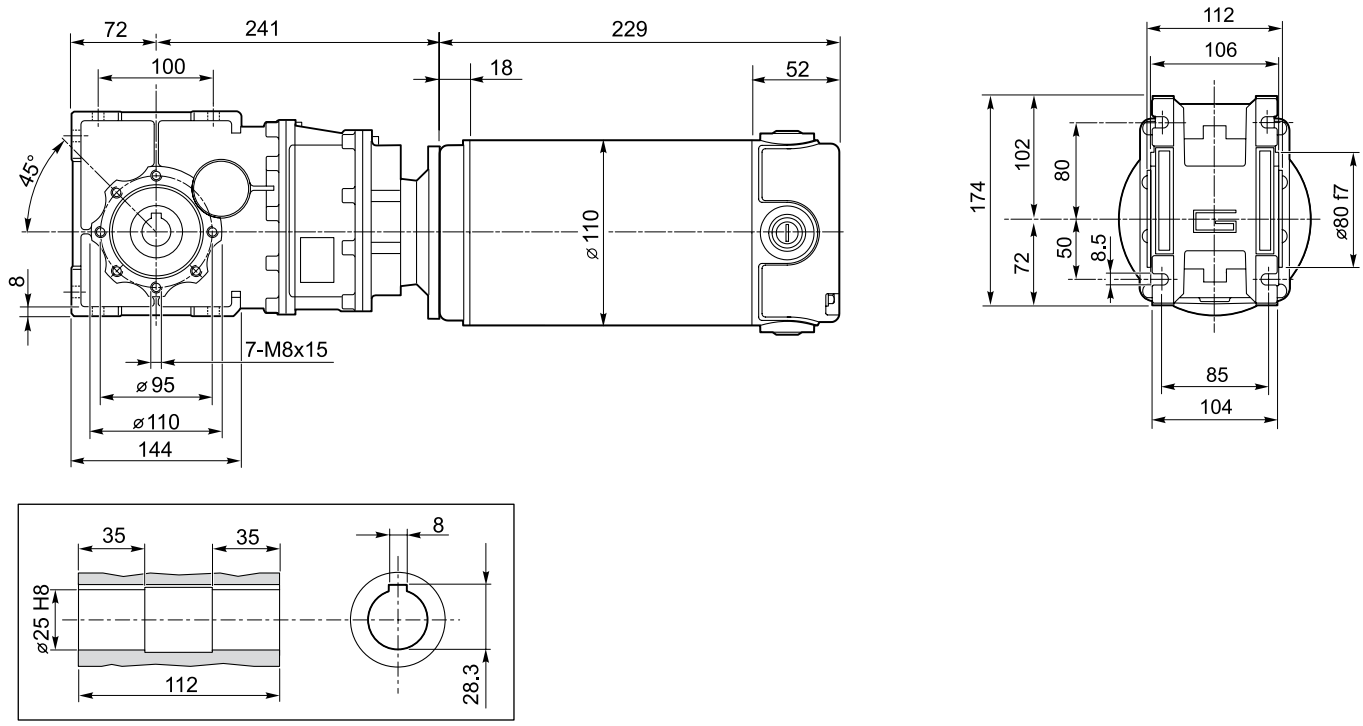
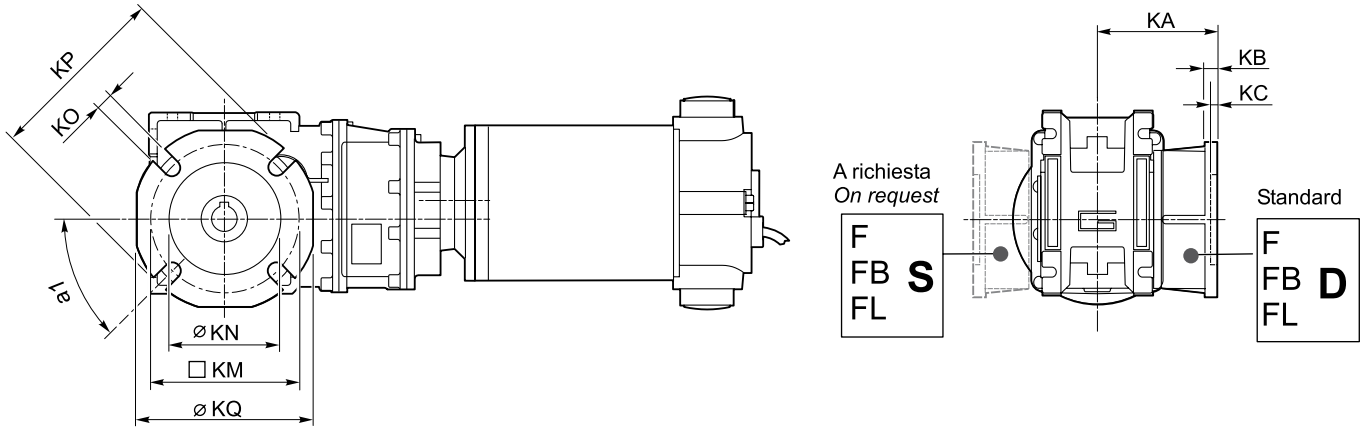


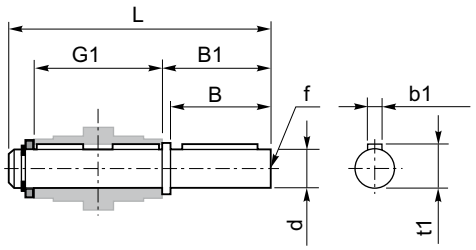
ECMB.../... F... **Flange uscita /** ***Output flanges***



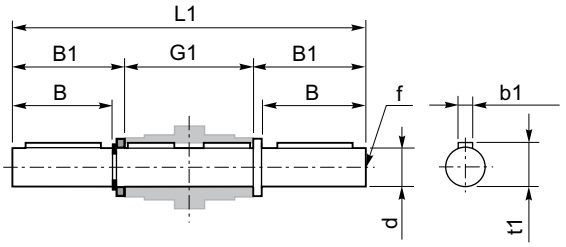
	Flange uscita / *Output flanges*																									
	F									**FL**									**FB**							
CMB	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN** H8	**KO**	**KP**	**KQ**	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN** H8	**KO**	**KP**	**KQ**	**a_1**	**KA**	**KB**	**KC**	**KM**	**KN** H8	**KO**	**KP**	**KQ**
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

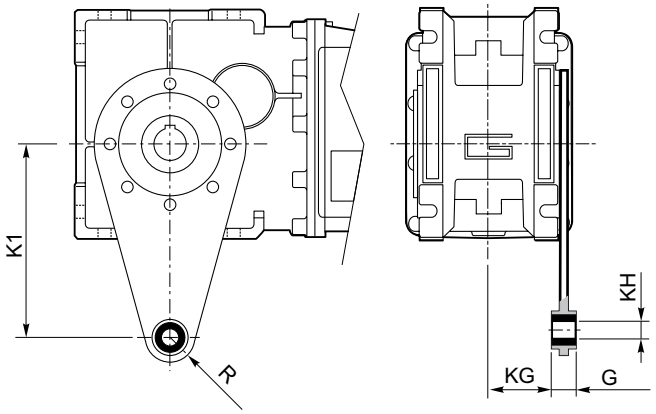
Accessori / *Accessories*

SZ



DZ





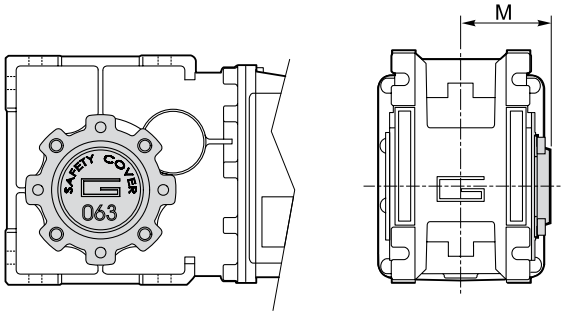
Albero lento / *Output shaft*

CMB	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

Braccio di reazione / *Torque arm*

CMB	K1	G	KG	KH	R
402	100	14	31	10	18
502	100	14	38	10	18
633	150	14	47.5	10	18

SC - *Safety cover*



CMB	M
402	54.5
502	62.5
633	73

Note

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