

# BRUSHLESS DRIVE



**CD1-k drive**



**LBD drive**

• **Caratteristiche hardware**

**Alimentazione potenza:** trifase 400-480Vac (+10/-15%)  
**Alimentazione logica:** 24 Vdc  
**Corrente di picco:** 2.7-7.2-14-30-45-70-90A a 400Vac  
**Feedback incrementale:** Resolver a 16 bit, Encoder, Sin/Cos  
**Feedback assoluto:** Sin/Cos singolo/multigiro, HIPERFACE, ENDAT  
**Uscita encoder:** incrementale, line driver, risoluzione programmabile da 64 a 16384 p/r  
**Ingresso analogico:** 2 IN +/- 10V risoluzione a 14 bit  
**Interfaccia:** 6 IN logici, 4 OUT logiche, Drive OK, RS232, CANopen DS402  
**Filtro ECM:** integrato

• **Caratteristiche funzionali**

**PWM:** 8KHz  
**Anello di corrente:** 62,5µs  
**Anello di velocità:** 500µs  
**Anello di posizione:** 500µs  
**Auto-tuning:** 3 bande, 2 filtri

**Caratteristiche di Movimento**

Posizionatore interno, profilo di velocità, homing, interpolazione di posizione lineare o cubica real time.

**Dimensioni [mm]:**  
 230Vac: 200x199x65  
 400-480Vac: 2.7-7.2A: 230x230x65 - 14A: 230x258x83 - 30÷90A: 230x288x110

**Accessori:**  
 Cavi potenza motore con connettore  
 Cavi resolver/encoder motore con connettore

• **Hardware features**

**Power supply:** 3 phase 400-480Vac (+10/-15%)  
**Logic supply:** 24 Vdc  
**Peak current:** 2.7-7.2-14-30-45-70-90A at 400Vac  
**Incremental feedback:** 16 bit resolver, Encoder, Sin/Cos  
**Absolute feedback:** Sin/Cos single turn or multiturns, HIPERFACE, ENDAT  
**Encoder output:** incremental, line driver, programmable resolution from 64 to 16384 p/r  
**Analog input:** 2 IN +/- 10V 14 bit resolution  
**Interfaces:** 6 logical IN, 4 logical OUT, Drive OK, RS232, CANopen DS402  
**ECM filter:** integrated

• **Functional features**

**PWM:** 8KHz  
**Digital current loop:** 62,5µs  
**Digital speed loop:** 500µs  
**Position loop:** 500µs  
**Auto-tuning:** 3 bands, 2 filters

**Movement Features**

Internal positioning, speed profile, homing  
 Real time mode with linear and cubic interpolation of position

**Dimensions [mm]:**  
 230Vac: 200x199x65  
 400-480Vac: 2.7-7.2A: 230x230x65 - 14A: 230x258x83 - 30÷90A: 230x288x110

**Accessories:**  
 Motor power cable with connector  
 Motor resolver/encoder cable with connector

**DESIGNAZIONE**

**ORDERING CODE**

Tipo Type	Interfaccia Interface	Alimentazione Power Supply	Corrente di picco Peak current
<b>CD1</b>	<b>K</b>	<b>400</b>	<b>4.5A</b>
<b>CD1</b>	<b>K</b> CANopen DS402	<b>400</b> 400-480V Trifase 400-480V Three Phase	<b>2.7A - 7.2A - 14A - 30A - 45A - 70A - 90A (400-480V)</b>

**• Caratteristiche hardware**

**Alimentazione potenza:** monofase 230Vac - trifase 400Vac  
**Alimentazione logica:** 24 Vdc  
**Corrente nominale:** 5.5/8.5 A 230V - 4/10/22.5/35 A 400V  
**Corrente di picco:** 11/17 A 230V - 8/20/45/100 A 400V  
**Feedback:** Resolver, encoder incrementale TTL, encoder incrementale TTL+HES, incrementale SinCos, incrementale SinCos+HES, Hiperface encoder  
**Uscita encoder:** incrementale TTL  
**Ingresso analogico:** 2 IN +/- 10V risoluzione a 12 bit  
**Uscita analogica:** 8 bits 2.5V  
**Interfaccia:** 5 IN logici, 3 OUT logiche, Drive OK, RS232, CANopen DS402  
**Resistenza di frenatura:** 30W inclusa.  
 Disponibili connessione per resistenza esterna  
**Funzione STO:** 2 canali conformi SIL2  
**Interfaccia:** CANopen DS402 (2 RJ45 connectors), ± 10V, Pulse/direction  
**Selezione indirizzo/velocità CAN:** tramite selettori  
**Gestione sensore termico motore:** PTC/NTC  
**Filtro EMC:** integrato

**• Caratteristiche funzionali**

Protezione sovraccarico  
 Protezione corto-circuito  
 Protezione verso terra  
 Protezione I<sup>2</sup>t

**Dimensioni [mm]:**

- LBD2311 e LBD2317 = H 147x W 70 x D 140  
 - LBD40008, LBD40020, LBD40045 = H 220 x W 70 x D 182  
 - LBD40100 = H 220 x W 80 x D 206

**Peso [kg]:**

- LBD2311 e LBD2317 = 1.5  
 - LBD40008 e LBD40020 = 2.2  
 - LBD40045 = 2.4  
 - LBD40100 = 3.3

**Accessori:**

Cavi potenza motore con connettore  
 Cavi resolver/encoder motore con connettore  
 Cavo Interfaccia CAN (da RJ45 a DSUB9 femmina)  
 Cavo Interfaccia CAN (da RJ45 a DSUB9 maschio)

**• Hardware features**

**Power supply:** 230Vac single phase - 400Vac Three Phase  
**Logic supply:** 24Vdc  
**Rated current:** 5.5/8.5 A 230V - 4/10/22.5/35 A 400V  
**Peak current:** 11/17 A 230V - 8/20/45/100 A 400V  
**Feedback:** Resolver, TTL incremental encoder, TTL incremental encoder+HES, SinCos incremental, SinCos incremental+HES, Hiperface encoder  
**Encoder output:** Incremental TTL  
**Analog input:** 2 IN +/- 10V 12 bit resolution  
**Analog output:** 8 bits 2.5V  
**Interfaces:** 5 logical IN, 3 logical OUT, Drive OK, RS232, CANopen DS402  
**Braking resistor:** 30W included.  
 External connections available  
**STO function:** 2 channels, SIL2 compliant  
**Interface:** CANopen (2 RJ45 connectors), ± 10V, Pulse/direction  
**CAN Speed/address selection:** by switches  
**Motor thermal sensor:** PTC/NTC  
**EMC filter:** integrated

**• Functional features**

Overload protection  
 Short circuit protection  
 Short to ground protection  
 I<sup>2</sup>t protection

**Dimensions [mm]:**

- LBD2311 e LBD2317 = H 147x W 70 x D 140  
 - LBD40008, LBD40020, LBD40045 = H 220 x W 70 x D 182  
 - LBD40100 = H 220 x W 80 x D 206

**Weight [kg]**

- LBD2311 e LBD2317 = 1.5  
 - LBD40008 e LBD40020 = 2.2  
 - LBD40045 = 2.4  
 - LBD40100 = 3.3

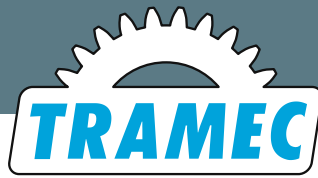
**Accessories:**

Motor power cable with connector  
 Motor resolver/encoder cable with connector  
 CAN Interface Cable (from RJ45 to DSUB9 female)  
 CAN Interface Cable (from RJ45 to DSUB9 male)

**DESIGNAZIONE**
**ORDERING CODE**

Tipo Type	Alimentazione Power Supply	Corrente di picco Peak current	Interfaccia Interface	Opzioni Options
	<b>23</b>	<b>11 (A)</b>	<b>CAN</b>	<b>XXX</b>
<b>LDB</b>	<b>23</b> 230V	<b>11 (A) - 17 (A)</b> 230V	<b>CAN</b> CANopen DS402	Riservato Reserved
	<b>40</b> 400V	<b>008 (A) - 020 (A) - 045 (A) - 100 (A)</b> 400V		





# BRUSHLESS MOTOR



**DESIGNAZIONE**
**ORDERING CODE**

Tipo	Tipo prodotto	Taglia motore	Codice coppia di stallo	Tipo motore	Velocità	Alimentazione	Tipo connessione	Codice freno e albero motore	Feedback	Direzione connessione	Raffreddamento	Riservato
Type	Product type	Motor size	Stall torque code	Motor type	Speed	Voltage	Connection type	Brake and de shaft extension	Feedback	Connection direction	Cooling	Reserved [mm]
<b>MMB</b>	<b>B</b>	<b>56</b>	<b>G4</b>	<b>j</b>	<b>3</b>	<b>H</b>	<b>7</b>	<b>A</b>	<b>05</b>	<b>0</b>	<b>0</b>	<b>XX</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)

**(1) Tipo / Type**
**MMB**
**(2) Tipo prodotto / Product type**
**B** Complete Brushless Servomotor

**(3) Taglia motore / Motor size**

<b>28</b>	Flangia / Flange 58	<b>63</b>	Flangia / Flange 115
<b>36</b>	Flangia / Flange 70	<b>71</b>	Flangia / Flange 142
<b>56</b>	Flangia / Flange 92	<b>10</b>	Flangia / Flange 190
		<b>13</b>	Flangia / Flange 240

**(4) Codice coppia di stallo / Stall torque code**

Intero: numero+numero Integer: digit+digit	Frazionario: lettera+numero Fractional: letter+digit	Superiore a 100Nm: +lettere o numeri Over hundred: +digit or letter	Superiore a 300Nm: numero+numero+numero Over threehundred: digit+digit+digit
<b>02</b> 2 Nm	DX 0.X Nm	C0 100 Nm	300 300 Nm
<b>12</b> 12 Nm	EX 1.X Nm	CA 105 Nm	375 460 Nm
<b>25</b> 25 Nm	FX 2.X Nm	C1 110 Nm	460 460 Nm
..... etc	GX 3.X Nm	CB 115	
	HX 4.X Nm	.... etc	
	IX 5.X Nm	B0 200 Nm	
	LX 6.X Nm	BA 205 Nm	
	MX 7.X Nm	B1 210 Nm	
	NX 8.X Nm	BB 215	
	OX 9.X Nm	.... etc	

**(5) Tipo motore / Motor type**

Taglia / Frame size	Serie / Series	Descrizione / Description
<b>28</b>	S	Sinusoidale 4 poli versione corta / <i>Sinusoidal 4 poles shot version</i>
<b>36</b>	P	Sinusoidale 8 poli versione corta / <i>Sinusoidal 8 poles shot version</i>
<b>56</b>	S	Sinusoidale 8 poli inerzia standard / <i>Sinusoidal 8 poles standard inertia</i>
<b>63</b>	J	Sinusoidale 10 poli bassa inerzia / <i>Sinusoidal 10 poles low inertia</i>
<b>71</b>	Q	Sinusoidale 10 poli bassa inerzia / <i>Sinusoidal 10 poles low inertia</i>
<b>100</b>	I	Sinusoidale 6 poli inerzia standard / <i>Sinusoidal 6 poles standard inertia</i>
<b>132</b>	I	Sinusoidale 6 poli inerzia standard / <i>Sinusoidal 6 poles standard inertia</i>

**(6) Velocità / Speed**

<b>2</b>	2000 rpm	<b>A</b>	1500 rpm
<b>3</b>	3000 rpm	<b>D</b>	4500 rpm
<b>6</b>	6000 rpm		

**(7) Alimentazione / Voltage**

<b>M</b>	220 / 230V
<b>H</b>	380 / 400V

**(8) Tipo connessione / Connection type**

<b>7</b>	Connettori girevoli a 90° / <i>Swiveling 90° angled connectors</i>
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**(9) Freno / Brake**

<b>A</b>	Senza freno, albero con chiavetta / <i>Without brake, keyed shaft</i>
<b>B</b>	Con freno, albero con chiavetta / <i>With brake, keyed shaft</i>

**(10) Feedback / Feedback**

<b>05</b>	Resolver 2 poli (standard) / <i>Resolver 2 poles (Standard)</i>
Disponibili anche encoder incrementali, assoluti, sin/cos / <i>Available incremental encoders, absolute, sin / cos</i>	

**(11) Direzione connessione / Connection direction**

0 Standard
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**(12) Raffreddamento / Cooling**

0 Raffreddamento naturale / <i>Natural convection</i>
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**(13) Riservato / Reserved [mm]**

XX
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**CARATTERISTICHE TECNICHE**

**Range:** da 0.2 a 115 Nm  
**Alimentazione:** 220/400 Vac  
**Protezione:** IP65 (eccetto per i motori serie B28) - IP67 a richiesta

**TECHNICAL FEATURES**

**Range:** from 0.2 up to 115 Nm  
**Voltage:** 220/400 Vac  
**Protection:** IP65 (except for flange end for B28 series) - IP67 on request

Tipo Type	Coppia di stallo Stall torque [Nm]	Velocità Speed [rpm]	Coppia di picco Tp Peak torque Tp [Nm]	Inerzia Jm Inertia Jm [10-4kgm <sup>2</sup> ]	Corrente di stallo Stall current [Arms]	Costante di coppia Kt Torque constant Kt [Nm/A]
<b>400V</b>						
MMB28.D4S_3H	0.40	3000	1.4	0.13	0.28	1.45
MMB28.D6S_3H	0.60	3000	2.1	0.18	0.41	1.45
MMB28.D8S_3H	0.80	3000	2.8	0.23	0.55	1.45
MMB28.D2S_6H	0.20	6000	0.7	0.07	0.28	0.73
MMB28.D4S_6H	0.40	6000	1.4	0.13	0.55	0.73
MMB28.D6S_6H	0.60	6000	2.1	0.18	0.83	0.73
MMB28.D8S_6H	0.80	6000	2.8	0.23	1.10	0.73
MMB36.D7P_3H	0.70	3000	3.0	0.38	0.48	1.46
MMB36.E3P_3H	1.30	3000	6.0	0.78	0.89	1.46
MMB36.E8P_3H	1.80	3000	8.0	1.08	1.24	1.46
MMB36.F3P_3H	2.30	3000	11.0	1.43	1.58	1.46
MMB36.D7P_6H	0.70	6000	3.0	0.38	0.96	0.73
MMB36.E3P_6H	1.30	6000	6.0	0.78	1.79	0.73
MMB36.E8P_6H	1.80	6000	8.0	1.08	2.47	0.73
MMB36.F3P_6H	2.30	6000	11.0	1.43	3.16	0.73
MMB56.E2S_3H	1.20	3000	4.2	0.73	0.81	1.48
MMB56.F4S_3H	2.40	3000	8.5	1.40	1.62	1.48
MMB56.G4S_3H	3.40	3000	10.5	1.84	2.30	1.48
MMB56.E2S_DH	1.20	4500	4.2	0.73	1.22	0.99
MMB56.F4S_DH	2.40	4500	8.5	1.40	2.43	0.99
MMB56.G4S_DH	3.40	4500	10.5	1.84	3.44	0.99
MMB63.04J_3H	4.0	3000	10	1.75	2.5	1.63
MMB63.06J_3H	6.0	3000	15	2.51	3.7	1.63
MMB63.08J_3H	8.0	3000	20	3.29	4.9	1.63
MMB63.10Q_3H	10.0	3000	25	4.07	6.1	1.63
MMB63.04J_DH	4.0	4500	10	1.75	3.7	1.09
MMB63.06J_DH	6.0	4500	15	2.51	5.5	1.09
MMB63.08J_DH	8.0	4500	20	3.29	7.4	1.09
MMB63.10Q_DH	10.0	4500	25	4.07	9.2	1.09
MMB71.04Q_3H	4.5	3000	13.8	3.62	2.8	1.63
MMB71.08Q_3H	9.0	3000	27.6	6.04	5.5	1.63
MMB71.12Q_3H	12.5	3000	41.4	8.20	7.7	1.63
MMB71.16Q_3H	16.0	3000	55.2	10.70	9.8	1.63
MMB71.20Q_3H	20.0	3000	69.0	13.10	12.3	1.63
MMB71.04Q_DH	4.5	4500	13.8	3.62	4.1	1.09
MMB71.08Q_DH	9.0	4500	27.6	6.04	8.3	1.09
MMB71.12Q_DH	12.5	4500	41.4	8.20	11.5	1.09
MMB71.16Q_DH	16.0	4500	55.2	10.70	14.7	1.09
MMB71.20Q_DH	20.0	4500	69.0	13.10	18.4	1.09
MMB10.30I_2H	30	2000	99	170	12.2	2.45
MMB10.43I_2H	43	2000	139	238	17.6	2.45
MMB10.54I_2H	54	2000	163	300	22	2.45
MMB10.66I_2H	66	2000	199	370	26.9	2.45



Tipo Type	Coppia di stallo Stall torque [Nm]	Velocità Speed [rpm]	Coppia di picco Tp Peak torque Tp [Nm]	Inerzia Jm Inertia Jm [10-4kgm²]	Corrente di stallo Stall current [Arms]	Costante di coppia Kt Torque constant Kt [Nm/A]
<b>400V</b>						
MMB10.24I_3H	24	3000	89	136	14.7	1.63
MMB10.30I_3H	30	3000	99	170	18.4	1.63
MMB10.43I_3H	43	3000	139	238	26.3	1.63
MMB10.54I_3H	54	3000	163	300	33.1	1.63
MMB13.40_AH	40.0	1500	120	65	12.3	3.26
MMB13.69_AH	69.0	1500	204	114	21.2	3.26
MMB13.94_AH	94.0	1500	280	150	27.1	3.46
MMB13.CBI_AH	115.0	1500	345	192	36.8	3.13
MMB13.40_2H	40.0	2000	120	65	16.4	2.44
MMB13.69_2H	69.0	2000	204	114	28.2	2.44
MMB13.94_2H	94.0	2000	280	150	38.5	2.44
<b>220V</b>						
MMB28.D4S_3M	0.40	3000	1.4	0.13	0.48	0.84
MMB28.D6S_3M	0.60	3000	2.1	0.18	0.72	0.84
MMB28.D8S_3M	0.80	3000	2.8	0.23	0.95	0.84
MMB28.D2S_6M	0.20	6000	0.7	0.07	0.48	0.42
MMB28.D4S_6M	0.40	6000	1.4	0.13	0.95	0.42
MMB28.D6S_6M	0.60	6000	2.1	0.18	1.43	0.42
MMB28.D8S_6M	0.80	6000	2.8	0.23	1.91	0.42
MMB36.D7P_3M	0.70	3000	3.0	0.38	0.83	0.84
MMB36.E3P_3M	1.30	3000	6.0	0.78	1.55	0.84
MMB36.E8P_3M	1.80	3000	8.0	1.08	2.14	0.84
MMB36.F3P_3M	2.30	3000	11.0	1.43	2.74	0.84
MMB36.D7P_6M	0.70	6000	3.0	0.38	1.67	0.42
MMB36.E3P_6M	1.30	6000	6.0	0.78	3.10	0.42
MMB36.E8P_6M	1.80	6000	8.0	1.08	4.29	0.42
MMB36.F3P_6M	2.30	6000	11.0	1.43	5.48	0.42
MMB56.E2S_3M	1.20	3000	4.2	0.73	1.40	0.86
MMB56.F4S_3M	2.40	3000	8.5	1.40	2.81	0.86
MMB56.G4S_3M	3.40	3000	10.5	1.84	3.98	0.86
MMB56.E2S_DM	1.20	4500	4.2	0.73	2.11	0.57
MMB56.F4S_DM	2.40	4500	8.5	1.40	4.21	0.57
MMB56.G4S_DM	3.40	4500	10.5	1.84	5.96	0.57
MMB63.04J_3M	4.0	3000	10	1.75	4.3	0.94
MMB63.06J_3M	6.0	3000	15	2.51	6.4	0.94
MMB63.08J_3M	8.0	3000	20	3.29	8.5	0.94
MMB63.10Q_3M	10.0	3000	25	4.07	10.6	0.94
MMB63.04J_DM	4.0	4500	10	1.75	6.4	0.63
MMB63.06J_DM	6.0	4500	15	2.51	9.6	0.63
MMB63.08J_DM	8.0	4500	20	3.29	12.8	0.63
MMB63.10Q_DM	10.0	4500	25	4.07	15.9	0.63

**DESIGNAZIONE**

<b>MMB56G4S_3H 7 A 05 0 0 57</b>	TIPO ES. MMB56G4S3H
	Tipo connessione 7 (Connettori girevoli a 90°)
	Freno e albero motore A (senza freno, albero con chiavetta)
	Feedback 05 (Resolver 2 poli)
	Direzione connessione 0 Standard
	Raffreddamento 0 (Naturale)
Codice interno standard 57	

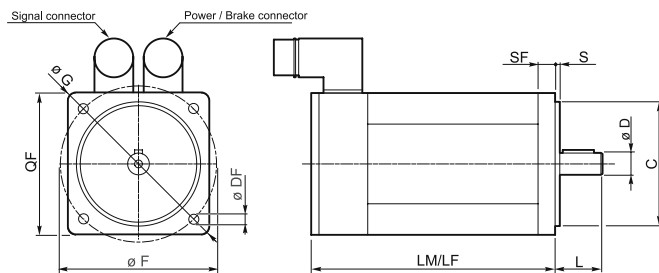
**ORDERING CODE**

<b>MMB56G4S_3H 7 A 05 0 0 57</b>	TYPE ES. MMB56G4S3H
	Connection type 7 (Swiveling 90° angled connectors)
	Brake and shaft extension A (Without brake, keyed shaft)
	Feedback 05 (Resolver 2 poles)
	Connection Direction 0 Standard
	Cooling 0 (Natural convection)
Internal standard code 57	

DIMENSIONI

OVERALL DIMENSIONS

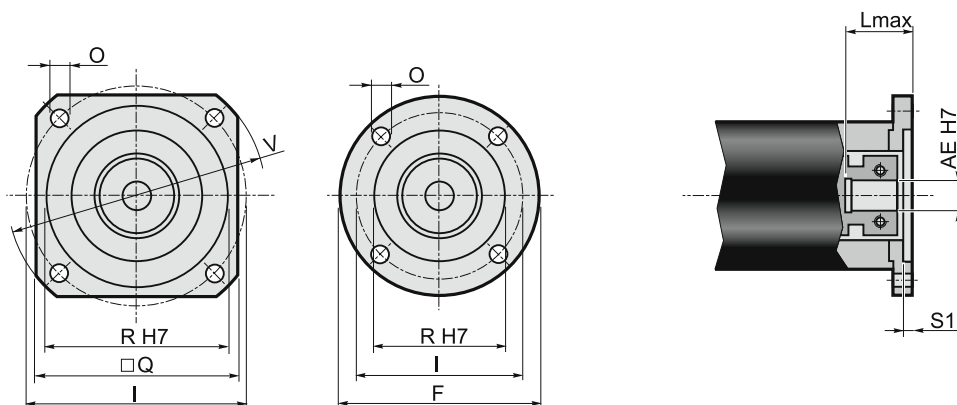
Tipo Type	Coppia di stallo Stall torque [Nm]	LM	LF	D	L	QF	C	S	F	DF	SF	G	Peso motore Motor weight [kg]	Peso motore con freno Motor weight with brake [kg]
MMB28.D2S	0.20	106	130	Ø9j6	20	58.00	Ø40.00j6	2.5	Ø63	5.5x7.00	12	Ø82.02	1.4	1.6
MMB28.D4S	0.40	121	145	Ø9j6	20	58.00	Ø40.00j6	2.5	Ø63	5.5x7.00	12	Ø82.02	1.6	1.8
MMB28.D6S	0.60	136	160	Ø9j6	20	58.00	Ø40.00j6	2.5	Ø63	5.5x7.00	12	Ø82.02	1.8	2.0
MMB28.D8S	0.80	151	175	Ø9j6	20	58.00	Ø40.00j6	2.5	Ø63	5.5x7.00	12	Ø82.02	2.0	2.2
MMB36.D7P	0.70	116	152	Ø11j6	23	70.00	Ø60.00j6	2.5	Ø75	Ø5.80	9	Ø98.99	1.6	2.2
MMB36.E3P	1.30	141	177	Ø11j6	23	70.00	Ø60.00j6	2.5	Ø75	Ø5.80	9	Ø98.99	2.1	2.7
MMB36.E8P	1.80	166	202	Ø11j6	23	70.00	Ø60.00j6	2.5	Ø75	Ø5.80	9	Ø98.99	2.6	3.2
MMB36.F3P	2.30	191	227	Ø11j6	23	70.00	Ø60.00j6	2.5	Ø75	Ø5.80	9	Ø98.99	3.1	3.7
MMB56.E2S	1.20	127	170	Ø14j6	30	91.30	Ø80.00j6	3.0	Ø100	Ø6.50	11	Ø129.12	3.5	4.1
MMB56.F4S	2.40	152	195	Ø14j6	30	91.30	Ø80.00j6	3.0	Ø100	Ø6.50	11	Ø129.12	4.4	5.0
MMB56.G4S	3.40	177	220	Ø14j6	30	91.30	Ø80.00j6	3.0	Ø100	Ø6.50	11	Ø129.12	5.4	6.0
MMB63.04J	4.0	160	192	Ø19j6	40	100.00	Ø95.00j6	3.0	Ø115	Ø9.00	18	Ø141.42	4.5	5.5
MMB63.06J	6.0	180	212	Ø19j6	40	100.00	Ø95.00j6	3.0	Ø115	Ø9.00	18	Ø141.42	5.5	6.5
MMB63.08J	8.0	204	236	Ø19j6	40	100.00	Ø95.00j6	3.0	Ø115	Ø9.00	18	Ø141.42	6.5	7.5
MMB63.10Q	10.0	224	256	Ø19j6	40	100.00	Ø95.00j6	3.0	Ø115	Ø9.00	18	Ø141.42	7.5	8.5
MMB71.04Q	4.5	148	183	Ø24k6	50	142.00	Ø130.00j6	3.5	Ø165	Ø12.50	12	Ø200.81	7.0	8.5
MMB71.08Q	9.0	173	208	Ø24k6	50	142.00	Ø130.00j6	3.5	Ø165	Ø12.50	12	Ø200.81	9.0	10.5
MMB71.12Q	12.5	198	228	Ø24k6	50	142.00	Ø130.00j6	3.5	Ø165	Ø12.50	12	Ø200.81	11.0	12.5
MMB71.16Q	16.0	223	253	Ø24k6	50	142.00	Ø130.00j6	3.5	Ø165	Ø12.50	12	Ø200.81	13.0	14.5
MMB71.20Q	20.0	248	273	Ø24k6	50	142.00	Ø130.00j6	3.5	Ø165	Ø12.50	12	Ø200.81	15.0	16.5
MMB10.24I	24	301	365	Ø32k6	58	190.00	Ø180.80j6	5.0	Ø215	Ø13.00	16	Ø268.70	25.0	31.6
MMB10.30I	30	326	390	Ø32k6	58	190.00	Ø180.80j6	5.0	Ø215	Ø13.00	16	Ø268.70	29.0	35.6
MMB10.43I	43	376	440	Ø32k6	58	190.00	Ø180.80j6	5.0	Ø215	Ø13.00	16	Ø268.70	37.0	43.6
MMB10.54I	54	426	490	Ø32k6	5	190.00	Ø180.80j6	5.0	Ø215	Ø13.00	16	Ø268.70	45.0	53.6
MMB10.66I	66	476	540	Ø32k6	58	190.00	Ø180.80j6	5.0	Ø215	Ø13.00	16	Ø268.70	53.0	62.6
MMB13.40	40.0	293	343	Ø38k6	80	240.00	Ø230.00j6	4.0	Ø265	Ø14.50	18	Ø339.41	42.0	49.0
MMB13.69	69.0	373	423	Ø38k6	80	240.00	Ø230.00j6	4.0	Ø265	Ø14.50	18	Ø339.41	55.0	62.0
MMB13.94	94.0	433	483	Ø42k6	142	240.00	Ø230.00j6	4.0	Ø265	Ø14.50	18	Ø339.41	74.0	81.0
MMB13.CBI	115.0	493	543	Ø42k6	142	240.00	Ø230.00j6	4.0	Ø265	Ø14.50	18	Ø339.41	92.0	99.0



<b>LM</b>	Lunghezza motore Motor length
<b>LF</b>	Lunghezza motore con freno Motor length with brake
<b>D</b>	Diametro Diameter
<b>L</b>	Lunghezza albero Length of shaft
<b>GF</b>	Quadro flangia Square flange
<b>C</b>	Centraggio Centering
<b>S</b>	Spessore Thickness
<b>F</b>	Interasse fori Wheel base fixing holes
<b>DF</b>	Diametro fori di fissaggio Diameter fixing holes
<b>SF</b>	Spessore flangia Thickness flange
<b>G</b>	Dimensione diagonale Diagonal dimensione

Accoppiamenti motori Brushless con riduttori epicicloidali  
REP - EP

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Brushless Motor	Coppia Torque	AE	Lmax	F/Q	I	R (H7)	O	S1	Tipo flangia Type flange								
									EP55	EP75	EP90	EP120	EP155	REP075	REP100	REP125	REP150
MMB28.D2S	0.2	9	20	58	63	40	5.5	2.5	P03	P03	P17	-	-	P03	P17	-	-
MMB28.D4S	0.4	9	20	58	63	40	5.5	2.5	P03	P03	P17	-	-	P03	P17	-	-
MMB28.D6S	0.6	9	20	58	63	40	5.5	2.5	P03	P03	P17	-	-	P03	P17	-	-
MMB28.D8S	0.8	9	20	58	63	40	5.5	2.5	P03	P03	P17	-	-	P03	P17	-	-
MMB36.D7P	0.7	11	23	70	75	60	5.8	2.5	P04	P04	P03	-	-	P04	P03	-	-
MMB36.E3P	1.3	11	23	70	75	60	5.8	2.5	P04	P04	P03	-	-	P04	P03	-	-
MMB36.E8P	1.8	11	23	70	75	60	5.8	2.5	P04	P04	P03	-	-	P04	P03	-	-
MMB36.F3P	2.3	11	23	70	75	60	5.8	2.5	P04	P04	P03	-	-	P04	P03	-	-
MMB56.E2S	1.2	14	30	91.3	100	80	6.5	3	-	P07	P06	P05	-	P07	P06	P05	-
MMB56.F4S	2.4	14	30	91.3	100	80	6.5	3	-	P07	P06	P05	-	P07	P06	P05	-
MMB56.G4S	3.4	14	30	91.3	100	80	6.5	3	-	P07	P06	P05	-	P07	P06	P05	-
MMB63.04J	4	19	40	100	115	95	9	3	-	-	P07	P06	P03	-	P07	P06	P03
MMB63.06J	6	19	40	100	115	95	9	3	-	-	P07	P06	P03	-	P07	P06	P03
MMB63.08J	8	19	40	100	115	95	9	3	-	-	P07	P06	P03	-	P07	P06	P03
MMB63.10Q	10	19	40	100	115	95	9	3	-	-	P07	P06	P03	-	P07	P06	P03
MMB63.12J	12	19	40	100	115	95	9	3	-	-	P07	P06	P03	-	P07	P06	P03
MMB71.04Q	4.5	24	50	142	165	130	12.5	3.5	-	-	-	P08	P05	-	-	P08	P05
MMB71.08Q	9	24	50	142	165	130	12.5	3.5	-	-	-	P08	P05	-	-	P08	P05
MMB71.12Q	12.5	24	50	142	165	130	12.5	3.5	-	-	-	P08	P05	-	-	P08	P05
MMB71.16Q	16	24	50	142	165	130	12.5	3.5	-	-	-	P08	P05	-	-	P08	P05
MMB71.20Q	20	24	50	142	165	130	12.5	3.5	-	-	-	P08	P05	-	-	P08	P05
MMB10.24I	24	32	58	190	215	180.8	13	5	-	-	-	-	-	-	-	-	-
MMB10.30I	30	32	58	190	215	180.8	13	5	-	-	-	-	-	-	-	-	-
MMB10.43I	43	32	58	190	215	180.8	13	5	-	-	-	-	-	-	-	-	-
MMB10.54I	54	32	58	190	215	180.8	13	5	-	-	-	-	-	-	-	-	-
MMB10.66I	66	32	58	190	215	180.8	13	5	-	-	-	-	-	-	-	-	-
MMB13.40	40	38	80	240	265	230	14.5	4	-	-	-	-	-	-	-	-	-
MMB13.69	69	38	80	240	265	230	14.5	4	-	-	-	-	-	-	-	-	-
MMB13.94	94	42	142	240	265	230	14.5	4	-	-	-	-	-	-	-	-	-
MMB13.CBI	115	42	142	240	265	230	14.5	4	-	-	-	-	-	-	-	-	-

