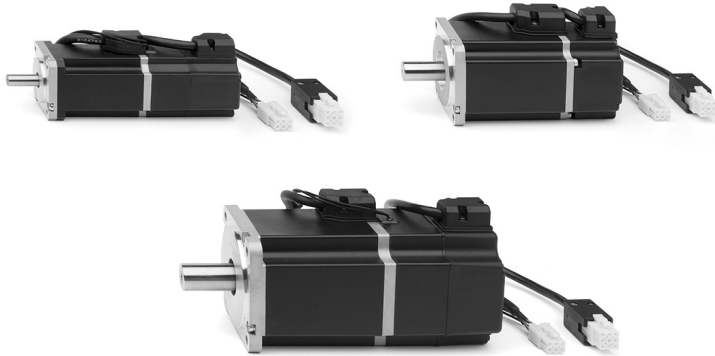


Series MTB motors for electric actuation

Brushless motors in power classes 100, 400, 750, 1000 W

SERIES MTB MOTORS



- » Low inertia motors
- » Available with or without brake
- » With incremental 13 bit encoder
- » Different sizes or power classes available
- » IP65 version available

The Camozzi motors Series MTB have been designed to be connected in an easy and practical way to the new product range within electrical actuation, being able to drive both electromechanical cylinders and axes.

The Series MTB of synchronous AC Brushless motors is available with a power of 100, 400, 750, 1000 W.

The standard motors are equipped with a 13 bit encoder with 10,000 increments per cycle and are offered with or without a motor brake. Due to the high dynamics of these motors, it is possible to guarantee a constant torque at any speed.

Due to the low mass inertia, they are particularly suitable for high work dynamics, like sudden changes in direction or high moving frequencies.

GENERAL DATA

Power	100 W (Mod. MTB-010-...) 400 W (Mod. MTB-040-...) 750 W (Mod. MTB-075-...) 1000 W (Mod. MTB-100-...)
Type of motor	permanently excited synchronous servo motor
Magnet	Neodymium, iron and boron (NdFeB)
Housing	Aluminium
Colour	black
Protection class: motor on the shaft connector	IP65 IP40 IP20
Insulation class	class A
Shaft end	no machining
Nominal torque	0.32 Nm (100 W) - 1.27 Nm (400 W) - 2.4 Nm (750 W) - 4.77 Nm (1000 W)
Peak torque	3 × nominal torque
Braking torque (only for motors with brake)	0.32 Nm (100 W) - 1.27 Nm (400 W) - 2.4 Nm (750 W) - 4.77 Nm (1000 W)
Service life	> 20.000 h (at nominal load)
Motor connection	cable (300 mm) available out of the motor
Encoder connection	cable (300 mm) available out of the encoder (motors with 1 KW power are equipped with an outgoing motor connector)
Cooling	with an integrated radiator
Thermal monitoring	not available
Encoder	incremental 13-bit TTL encoder, 10 000 pulses/revolution
Ambient temperature	0°C ÷ 40°C
Storage temperature	-15°C ÷ 70°C
Air humidity	up to 80% of relative air humidity
Max. installation height	at below 1000 metres above sea level

CODING EXAMPLE

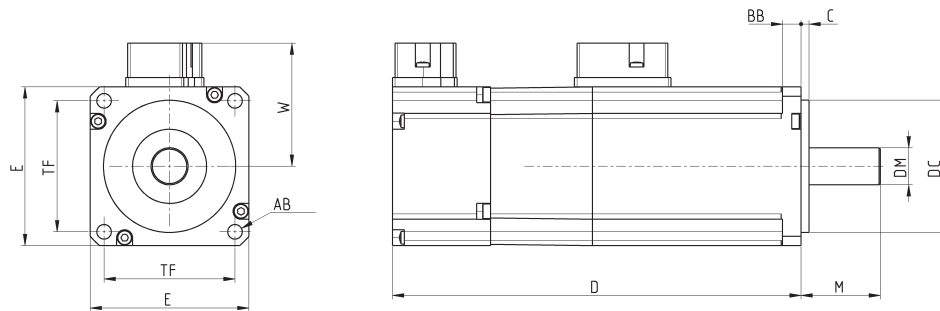
MTB	-	010	-	2	-	0	-	E
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MTB	SERIES
010	POWER: 010 = 100 W 040 = 400 W 075 = 750 W 100 = 1000 W
2	SUPPLY: 2 = 220 V DC
0	BRAKE: 0 = without brake F = with brake
E	ENCODER: E = incremental 13 bit
	VERSION: = Standard P = IP65

Series MTB Brushless motors - dimensions

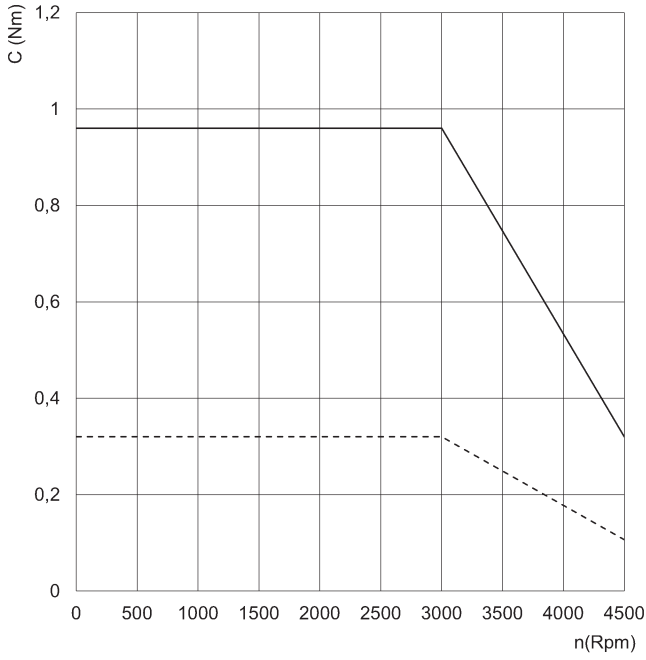


Supplied with:
1 motor
4 screws



Mod.	Power	D	E	W	$\varnothing_{DM}^{(h6)}$	M	\varnothing_{DC}	C	TF	\varnothing_{AB}	BB	Weight (Kg)
MTB-010-2-0-E	100 W	110.5	42	32	8	25	30 f7	2.5	31.8	3.4	12	0.63
MTB-010-2-0-EP	100 W	110.5	42	32	8	25	30 f7	2.5	31.8	3.4	12	0.75
MTB-010-2-F-E	100 W	139	42	32	8	25	30 f7	2.5	31.8	3.4	12	0.76
MTB-010-2-F-EP	100 W	139	42	32	8	25	30 f7	2.5	31.8	3.4	12	0.9
MTB-040-2-0-E	400 W	121.5	60	46.5	14	30	50 h7	3	49.5	5.5	7.5	1.31
MTB-040-2-0-EP	400 W	121.5	60	46.5	14	30	50 h7	3	49.5	5.5	7.5	1.4
MTB-040-2-F-E	400 W	159	60	46.5	14	30	50 h7	3	49.5	5.5	7.5	1.86
MTB-040-2-F-EP	400 W	159	60	46.5	14	30	50 h7	3	49.5	5.5	7.5	1.95
MTB-075-2-0-E	750 W	140	80	56.5	19	40	70 f6	3	63.6	6.6	9	2.66
MTB-075-2-0-EP	750 W	140	80	56.5	19	40	70 f6	3	63.6	6.6	9	2.75
MTB-075-2-F-E	750 W	176	80	56.5	19	40	70 f6	3	63.6	6.6	9	3.32
MTB-075-2-F-EP	750 W	176	80	56.5	19	40	70 f6	3	63.6	6.6	9	3.45
MTB-100-2-0-EP	1000 W	141	130	113	24	55	110	3	102.5	9	12	5.8
MTB-100-2-F-EP	1000 W	175	130	113	24	55	110	3	102.5	9	12	7.7

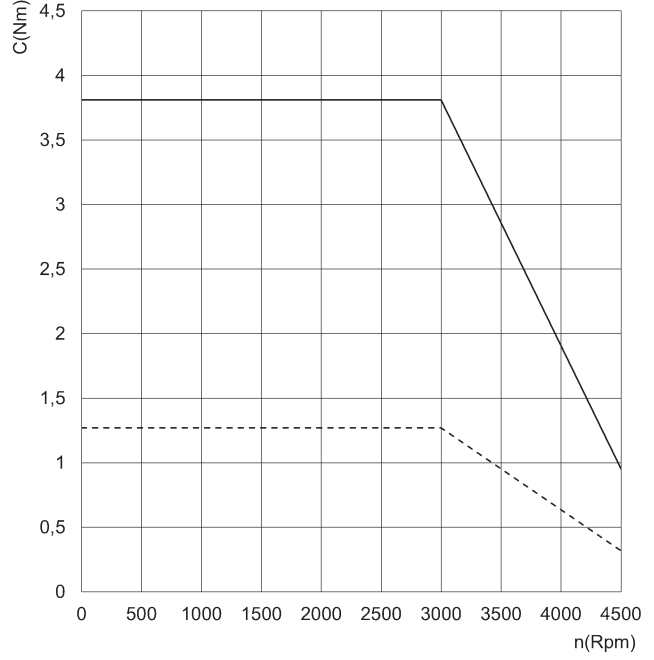
Torque-speed curves



MTB-010..

C = torque
n = number of revolutions per minute

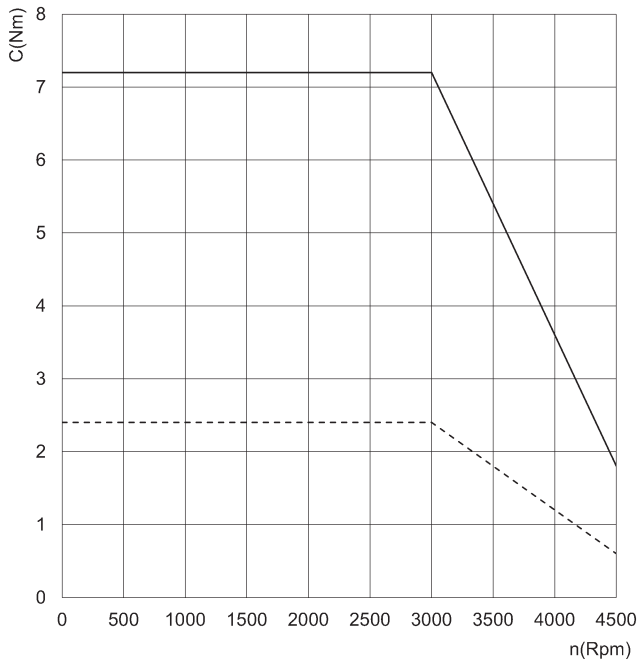
The continuous line represents the peak torque of the motor.
The dashed line represents the nominal torque of the motor.



MTB-040..

C = torque
n = number of revolutions per minute

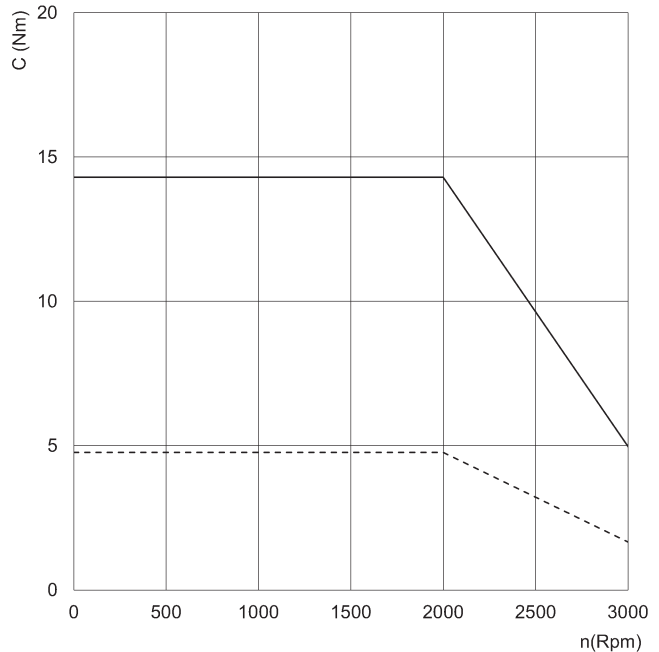
The continuous line represents the peak torque of the motor.
The dashed line represents the nominal torque of the motor.



MTB-075..

C = torque
n = number of revolutions per minute

The continuous line represents the peak torque of the motor.
The dashed line represents the nominal torque of the motor.



MTB-100..

C = torque
n = number of revolutions per minute

The continuous line represents the peak torque of the motor.
The dashed line represents the nominal torque of the motor.

Series MTS motors for electric actuation

Stepper motors with Nema 23, 24, 34 fixing flange



- » Low inertia motors
- » Different sizes or power classes available
- » Version with incremental encoder
- » Version with incremental encoder and brake
- » IP65 version available

The new Camozzi motors Series MTS have been designed to be connected in an easy and practical way to the new product range within electrical actuation, being able to drive both electromechanical cylinders and axes.

The new Series MTS electrical Stepper motors are available in the sizes Nema 23, Nema 24 and Nema 34. Each motor version comes with its own driving version that is interfaceable with the QSet configuration software, especially developed by Camozzi in order to simplify the setting up of the electric actuator.

GENERAL DATA

	Models: MTS-23-18-060-0-0-S-C MTS-23-18-060-0-0-E-C MTS-23-18-060-0-F-E-C MTS-23-18-120-0-0-S-CP	Models: MTS-24-18-250-0-0-S-C MTS-24-18-250-0-0-E-C MTS-24-18-250-0-F-E-C MTS-24-18-250-0-0-S-CP	Models: MTS-34-18-701-0-0-S-C
Shaft	single	single	single
Leads	4	4	5
Length	41 mm	85 mm	125.5 mm
Holding torque	0.6 Nm 0.6 Nm/1.2 Nm (Nema 23 IP65 only)	2.5 Nm	7.1 Nm
Current per phase	4.5 A/Phase	4.5 A/Phase	7 A/Phase
Resistance	0.48 Ω/Phase	0.65 Ω/Phase	0.49 Ω/Phase
Motor inertia	135 g·cm ²	900 g·cm ²	2750 g·cm ²
Dielectric strength	500 V AC/min	500 V AC/min	500 V AC/min

CODING EXAMPLE

MTS	-	23	-	18	-	060	-	0	-	0	-	S	-	C
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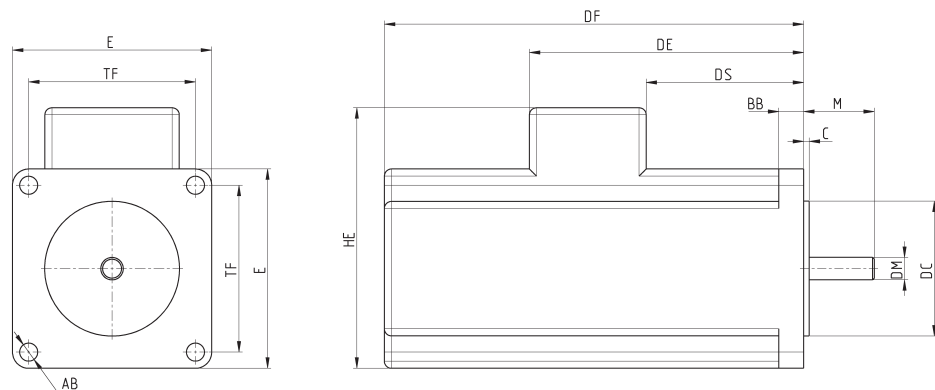
MTS	SERIES
23	MOTOR SIZE FLANGE CONNECTION: 23 = Nema 23 24 = Nema 24 34 = Nema 34
18	RESOLUTION IN DEGREES PER REVOLUTION: 18 = 1.8° per step
060	TORQUE: 060 = 0.6 Nm with Nema 23 only 120 = 1.2 Nm with Nema 23 IP65 only 250 = 2.5 Nm with Nema 24 only 701 = 7.1 Nm with Nema 34 only
0	ELECTRICAL CONNECTION: 0 = connector
0	BRAKE: 0 = without brake F = with brake
S	ENCODER VARIANTS: S = single shaft without encoder E = single shaft with encoder (SIZE Nema 23 and 24 only)
C	MECHANICAL SHAFT VARIANTS: C = cylindrical shaft
	VERSION: = Standard P = IP65

SERIES MTS MOTORS

Series MTS Stepper motors - dimensions

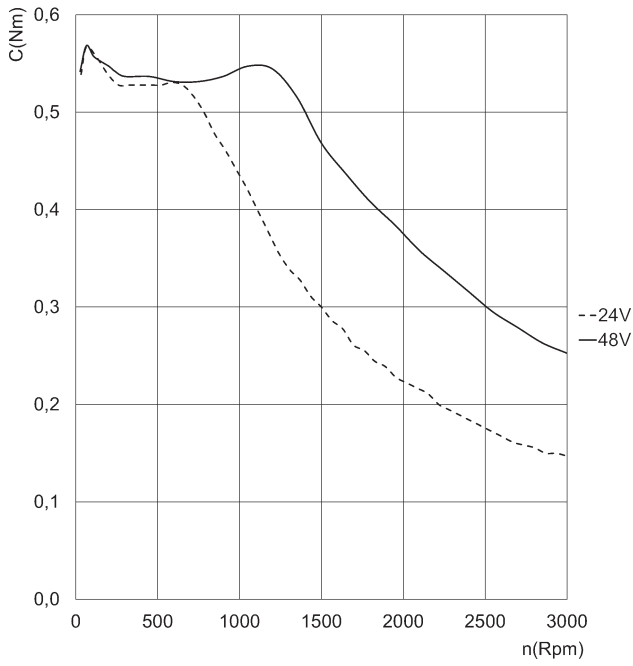


Supplied with:
1 motor
4 screws



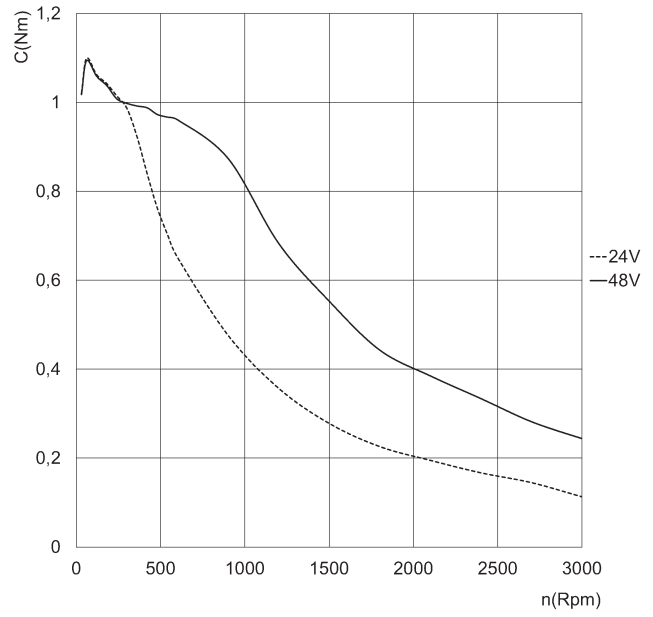
Mod.	Brake	Encoder	Nema	DS	DE	DF	HE	E	L	DM ^(h7)	M	DC ^(H10)	C	TF	AB	BB	Weight (Kg)
MTS-23-18-060-0-0-S-C	-	-	23	-	-	41	-	56.4	300 ± 10	6.35	20.6	38.1	1.6	47.14	5.1	5	0.42
MTS-23-18-120-0-0-S-CP	-	-	23	41	-	-	-	56.4	300 ± 10	6.35	20.6	38.1	1.6	47.14	5.1	7	0.8
MTS-23-18-060-0-0-E-C	-	×	23	31.5	-	64.5	73.6	56.4	200 ± 50	6.35	20.6	38.1	1.6	47.14	5.1	7	0.42
MTS-23-18-060-0-F-E-C	×	×	23	31.5	64.5	105.5	73.6	56.4	200 ± 50	6.35	20.6	38.1	1.6	47.14	5.1	7	0.62
MTS-24-18-250-0-0-S-C	-	-	24	-	-	85	-	60	300 ± 10	8	20.6	38.1	1.5	47.14	4.5	7	1.41
MTS-24-18-250-0-0-S-CP	-	-	24	95	-	-	-	60	300 ± 10	8	20.6	38.1	1.5	47.14	4.5	8	1.6
MTS-24-18-250-0-0-E-C	-	×	24	78	-	111	77.4	60	200 ± 50	8	20.6	38.1	1.5	47.14	4.5	8	1.41
MTS-24-18-250-0-F-E-C	×	×	24	78	111	152	77.4	60	200 ± 50	8	20.6	38.1	1.5	47.14	4.5	8	1.62
MTS-34-18-701-0-0-S-C	-	-	34	125.5	-	-	98	86	300 ± 10	14	37	73	2	69.6	6.5	10	3.8

Torque-speed curves



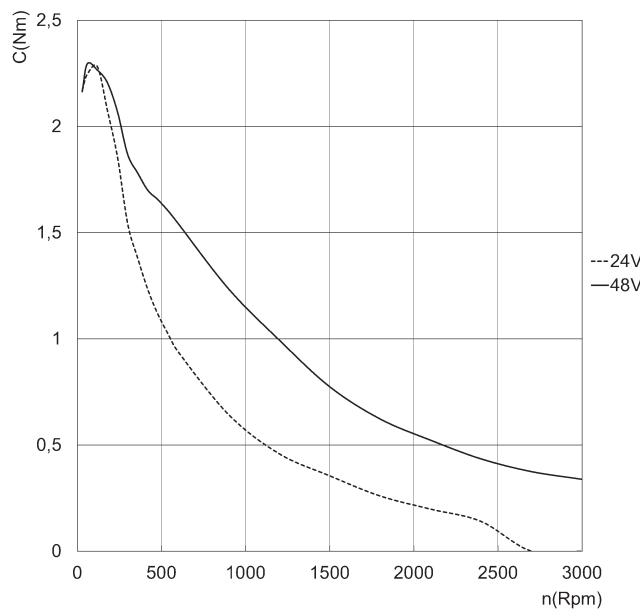
Nema 23 motors
 Mod. MTS-23-18-060-0-0-S-C
 Mod. MTS-23-18-060-0-0-E-C
 Mod. MTS-23-18-060-0-F-E-C

C = torque [Nm]
 n = revolutions per minute [Rpm]



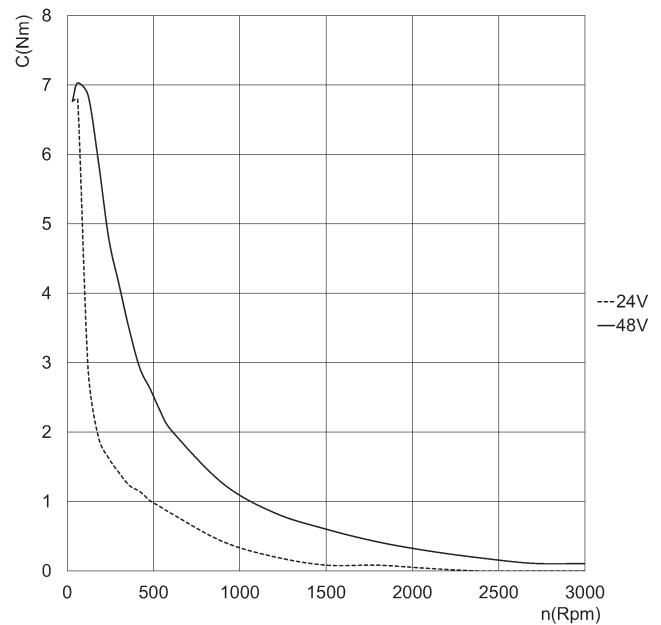
Nema 23 motors IP65
 Mod. MTS-23-18-120-0-0-S-CP

C = torque [Nm]
 n = revolutions per minute [Rpm]



Nema 24 motors
 Mod. MTS-24-18-250-0-0-S-C
 Mod. MTS-24-18-250-0-0-E-C
 Mod. MTS-24-18-250-0-F-E-C
 Mod. MTS-24-18-250-0-0-S-CP

C = torque [Nm]
 n = revolutions per minute [Rpm]



Nema 34 motors
 Mod. MTS-34-18-701-0-0-S-C

C = torque [Nm]
 n = revolutions per minute [Rpm]