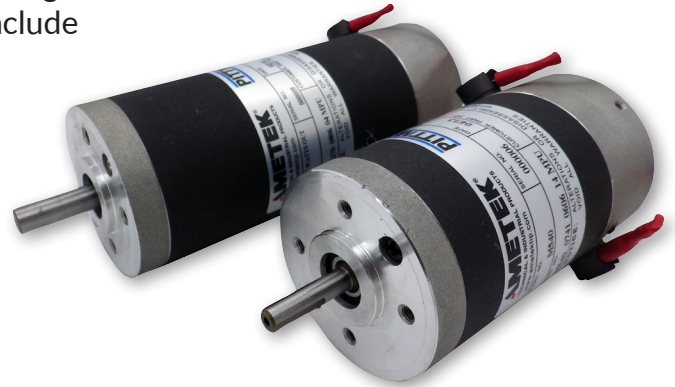


M500 Series Industrial DC Servo Motor - 0.05-0.1 kW

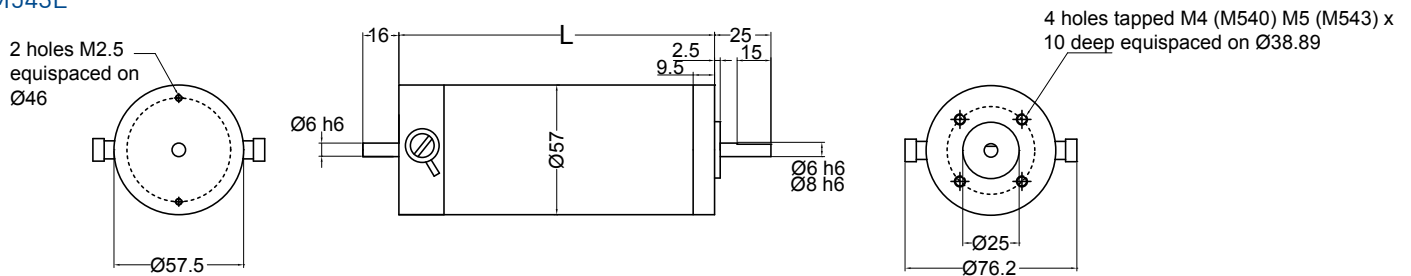
The M500 series provides the ideal solution for use in applications that require output power ratings up to 100 watts combined with fast response and accurate control. The robust low inertia construction ensures smooth running and reliable operation in industrial environments. Options include a DC tachogenerator to provide accurate velocity control using analogue control techniques and/ or a choice of dual track encoders when digital control is required.



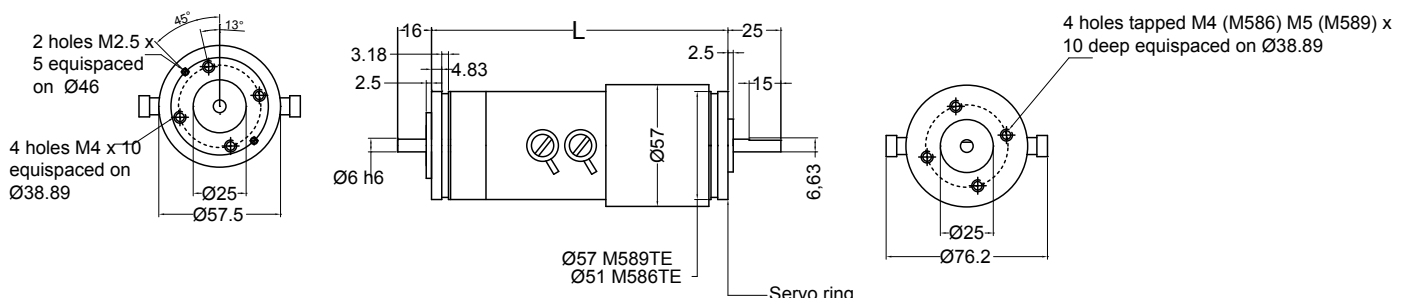
Mechanical specification

Outline dimensions (mm)

M540E
M543E



M586TE
M589TE



Motors	Length (L) mm	Mass kg
M540E	102	1.0
M543E	140	1.6
M586TE	142	1.3
M589TE	183	1.8

Typical Performance

DC Servo Motors	No-load Speed	Rated Speed	Rated Torque	Rated Current	Peak Torque	Using Servo Amplifier	DC Supply V DC
	rpm	rpm	Nm	Amps	Nm		
M540E	3200	2500	0.20	3.5	1.0	DCD60 7/14	24
M543E	2700	2200	0.40	3.5	1.44	DCD60 7/14	35
M543E	3700	3000	0.35	3.5	1.44	DCD60 7/14	48
Version with built-in Tachometer							
M586TE	4000	3200	0.20	4.0	0.8	DCD60 7/14	24
M589TE	2700	2200	0.40	3.5	1.44	DCD60 7/14	35
M589TE	3700	3000	0.35	3.5	1.44	DCD60 7/14	48

Electrical specification

Specification	Units	M540E 0741	M543E 1270	M586TE 0585	M589TE 1270
Maximum Voltage	V DC	60	60	60	60
Typical Voltage	V DC	24	36	24	36
Maximum Continuous Output Power	Watts	52	94	60	94
Maximum No-load speed	rpm	6000	4700	6000	4700
Typical speed @rated torque	rpm	2250	2250	3250	2250
Rated torque	Nm	0.2	0.4	0.2	0.4
Maximum peak torque	Nm	1.1	1.44	1.05	1.44
Typical no-load current	Amps	0.5	0.30	0.5	0.30
Rotor inertia	Kgcm ²	0.270	0.530	0.388	0.680
Mechanical time constant	ms	8.4	8.0	10.2	10.2
Torque constant	Nm/A	0.071	0.121	0.056	0.12
Voltage constant	V/1000 rpm	7.41	12.7	5.8	12.7
Terminal resistance	ohms	1.55	2.2	1.15	2.2
Rotor inductance	mH	3.39	6.4	1.4	6.4
Commutation	Copper - graphite				
Bearings	Pre-loaded ball				
Maximum radial load	45N				
Maximum axial load	22N				
Tacho Specification					
Voltage constant	V/1000rpm	14+/- 10%			
Average ripple	Peak/peak	0.7@1000rpm			
Ripple frequency	Per rev	21			
Rotor Resistance	Ohms	600-800			
Max continuous speed	rpm	4000			

Encoder option

M500 series motors are available fitted with quadrature (RS422 line driver) encoders to provide feedback of motor position. Motors thus equipped are therefore ideally suited for use with motion systems employing closed loop controllers. The standard 'E5' encoder option has 1000 pulses per rev (4000 positions) and is supplied complete with a cable assembly.

