

IP57/M500 Series - Planetary Geared DC Servo Motor

The IP57/M500 series geared dc servo motor utilise a high strength planetary gearhead.

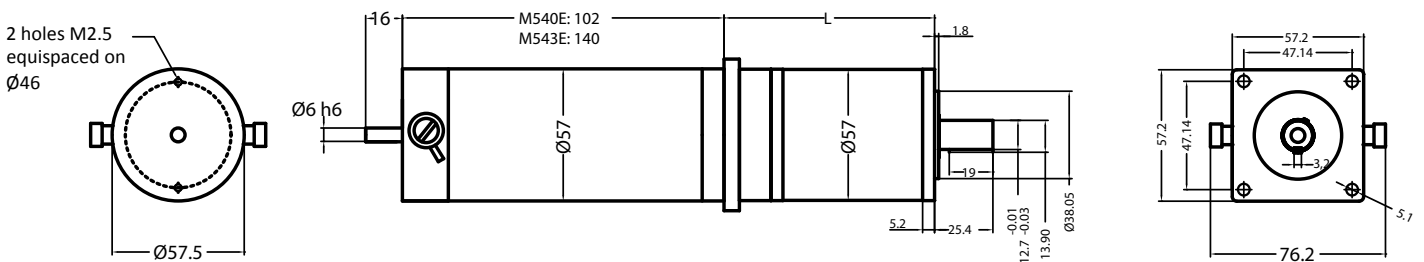
Features:

- Low cost due to advanced design and manufacturing techniques
- Controlled backlash for accurate positioning
- High continuous and peak capacity
- Wide range of motor options including encoders, brakes and tacho feedback
- Wide range of standard gear ratios

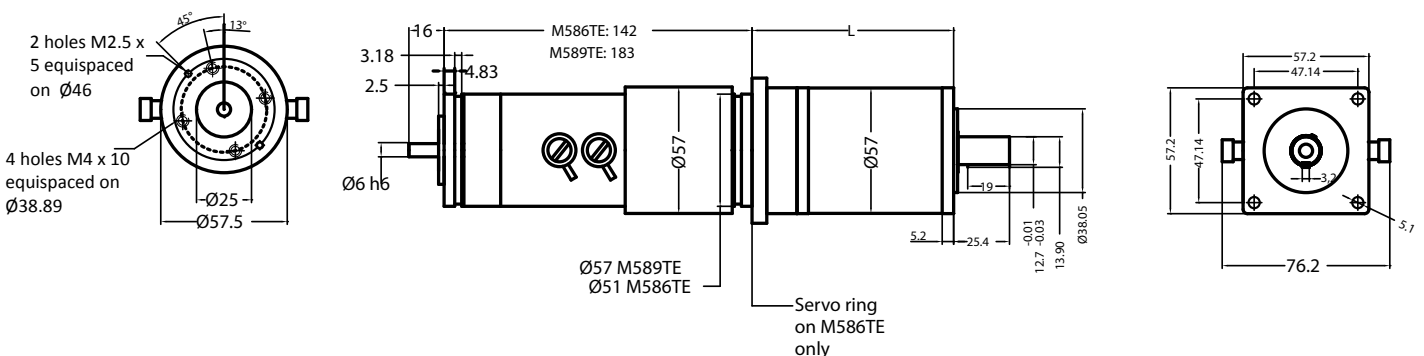


Outline dimensions (mm)

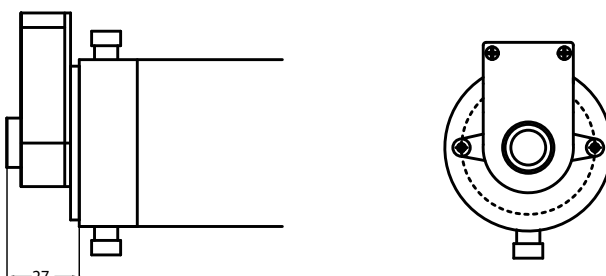
IP57 with M540E and M543E



IP57 with M586T and M589TE



Encoder option



M500 series 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.

Specification

Gear Ratio	Motor	L mm	Rated Speed rpm	Rated Torque Nm	Max radial load 5 mm from bearing N	Max Axial load N	Typical Backlash arc.min
IP57-M01-5:1	M540E/M586E	60.7	500	0.9	560	490	≤20
	M543E/M589E	74.2	440	1.8			
IP57-M01-10:1	M540E/M586E	74.2	250	1.8			
	M543E/M589E	74.2	220	3.6			
IP57-M02-25:1	M540E/M586E	72.7	100	4			
	M543E/M589E	86.45	80	8			
IP57-M02-50:1	M540E/M586E	86.45	50	8			
IP57-M02-100:1	M540E/M586E	86.45	25	12			
IP57-M03-125:1	M540E/M586E	85.7	20	15			
IP57-M03-250:1	M540E/M586E	99.45	10	20			≤40

M500 Series - DC Servo Motor - Electrical Data

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			