

Endurance 20 Series Permanent-Magnet DC Motors

2.0-Inch (50.8 mm), 4-pole, 1/8 HP Fixed Brushes

Allied Motion's Endurance 20 series of 2.0-inch (50 mm) diameter PMDC motors are a cost-effective solution for a wide variety of industrial and commercial applications like pumps and electric actuators.

With rated voltages from 12 to 48 VDC, and continuous power output up to 1/8 HP, Endurance 20 models are especially suitable for battery-fed applications. They offer excellent performance, long service life, and high reliability. Custom design versions are available to exactly match customer needs.

These motors can be combined with our 28.3:1 planetary gearbox for smooth low speed, high torque operation. It is also capable of accepting a variety of encoders or brake options.

The ability to add sealing options makes this motor robust enough for the most demanding operating environments.

Features and Benefits

- 2.0-inch (50 mm) diameter black housing
- Continuous power output up to 1/8 HP (0.12 kW)

- Continuous speed up to 6200 RPM
- Low cogging design
- Higher starting torque than typical 2-pole designs
- Aluminum die-cast end frames
- Ball bearing construction
- IP54 protection level
- Optimized brush life
- Class B (130 °C) winding
- Bonded neodymium magnets
- 1/4-inch (6.35 mm) cold-rolled steel shaft

Options

- Customized shaft, mounting, and lead configurations to match customer application requirements
- Integrated 28.3:1 planetary geared output
- Stainless steel shaft
- EMI/RFI suppression circuit
- IP67 sealing (wash-down version)
- Chrome- or zinc-plated housing



- Reliable 2.0-inch dia., 4-pole PMDC motor and gearmotor
- 12 to 48 VDC, up to 1/8 HP
- Up to 6200 RPM continuous from the standard motor version
- Up to 2 lb-in (0.226 Nm) cont. torque

SPECIFICATIONS

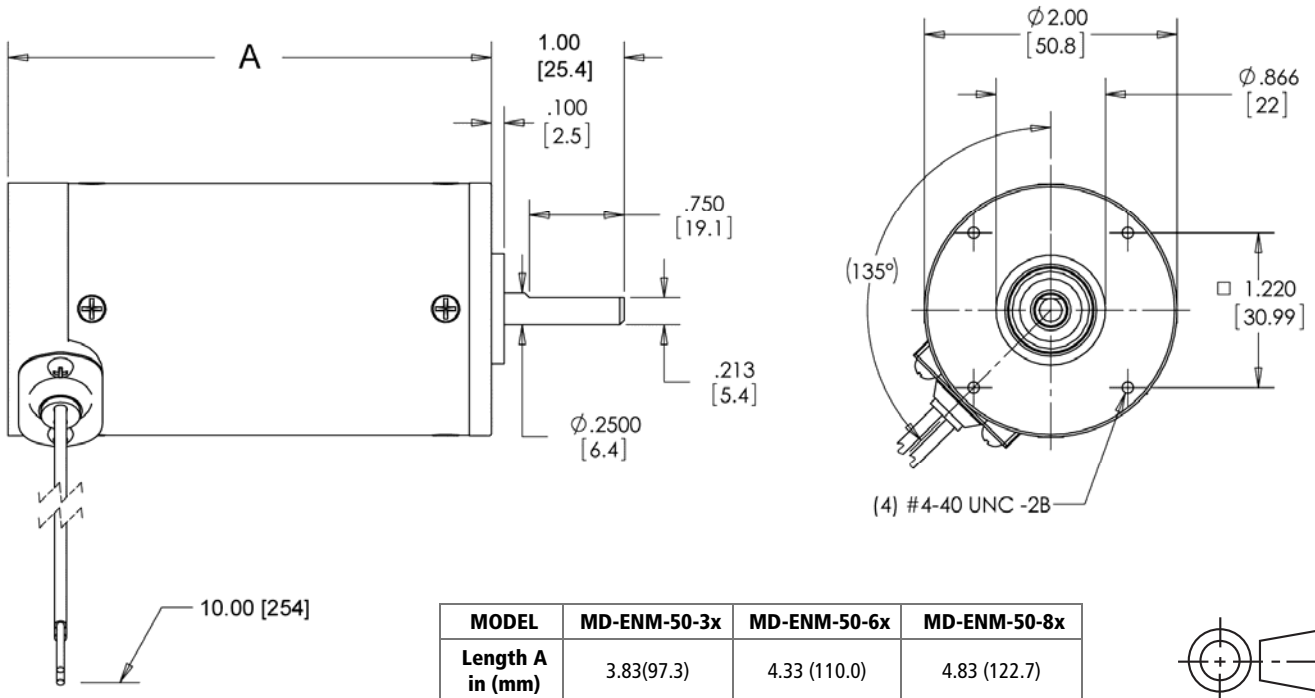
Model	Weight lb (kg)	Voltage VDC	Cont. Torque lb-in (Nm)	Cont. Speed RPM	No Load Speed RPM	Current ADC			Cont. Power* HP (W)
						Peak	Cont.	No Load	
MD-ENM-50-3Q	1.3 (0.59)	12	1.0 (0.113)	5750	6850	48	8.8	2	0.09 (68)
MD-ENM-50-3R	1.3 (0.59)	24	1.19 (0.134)	6200	7125	33	5.3	1	0.12 (87)
MD-ENM-50-6Q	1.6 (0.73)	12	1.38 (0.155)	3750	4500	39	8.1	1	0.08 (61)
MD-ENM-50-6R	1.6 (0.73)	24	1.19 (0.134)	3800	4800	18	4.3	1	0.09 (66)
MD-ENM-85-8Q	1.9 (0.86)	12	1.44 (0.162)	3267	4075	31	7.4	1.5	0.07 (56)
MD-ENM-50-8R	1.9 (0.86)	24	2.0 (0.226)	3387	4275	22	5.2	1	0.11 (80)

* Motor mounted to aluminum plate 6" x 6" x 0.5" (152 x 152 x 13 mm)

PMDC Motor

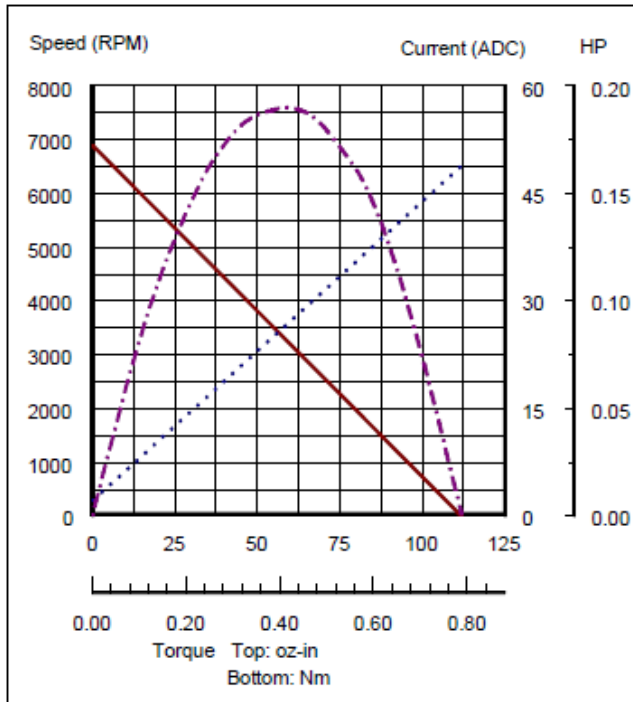
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DIMENSIONS

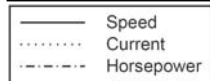
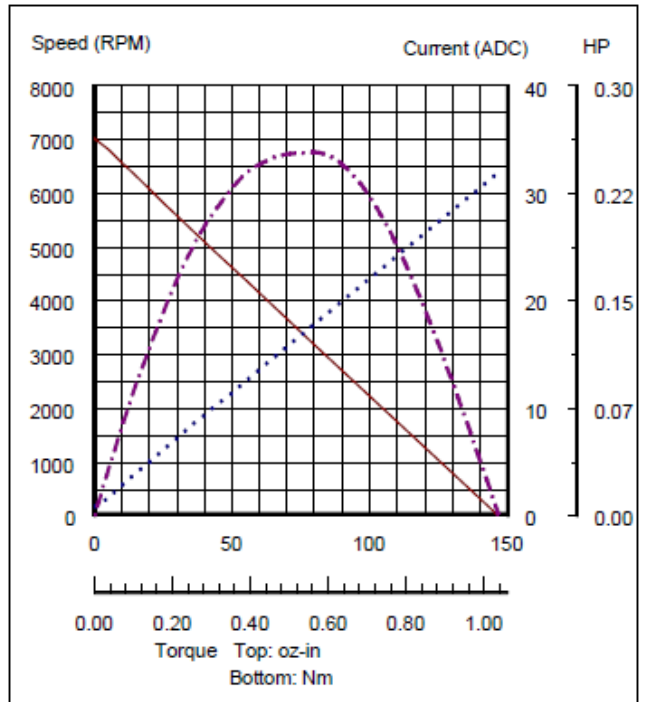


PERFORMANCE

MD-ENM-50-3Q



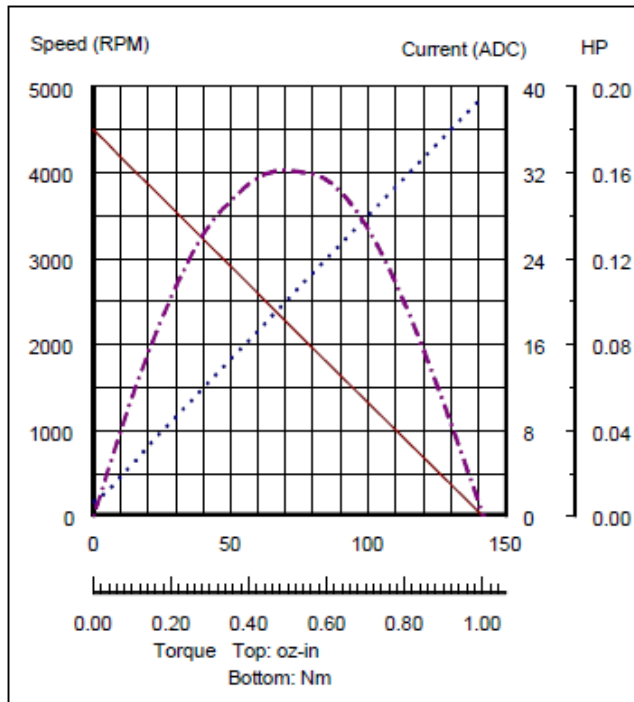
MD-ENM-50-3R



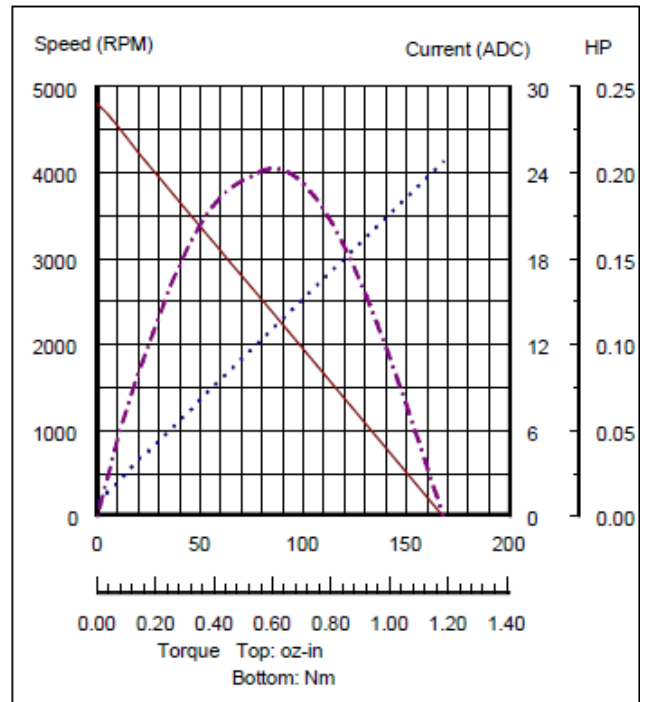
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PERFORMANCE

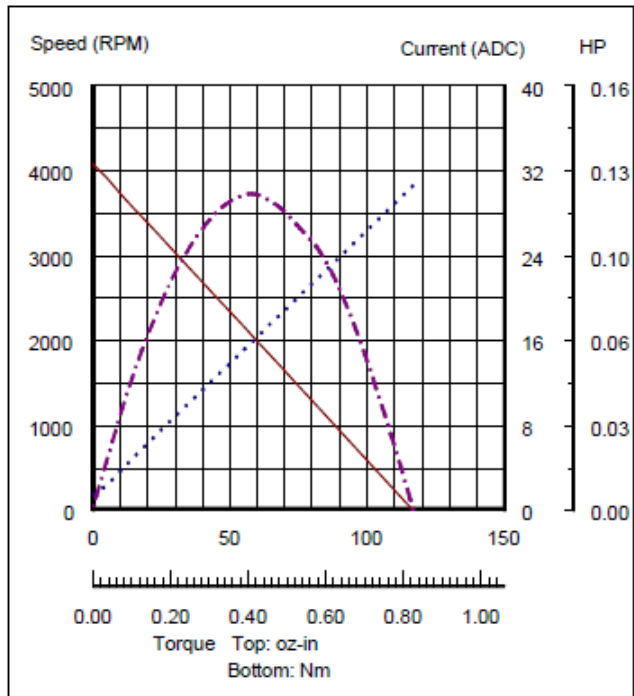
MD-ENM-50-6Q



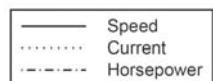
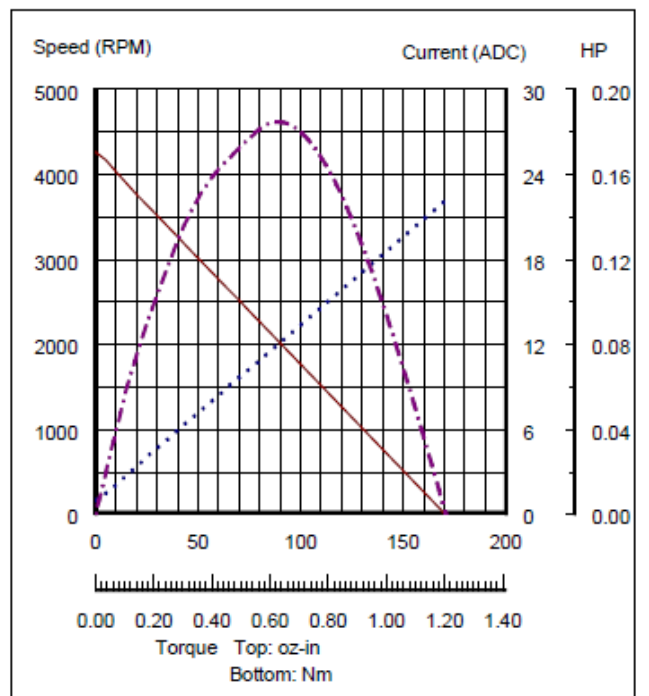
MD-ENM-50-6R



MD-ENM-50-8Q



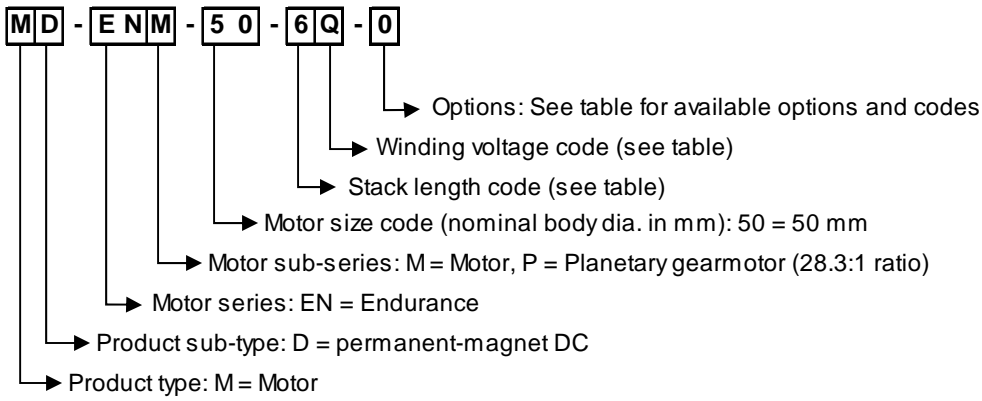
MD-ENM-50-8R



PMDC Motor

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MODEL NUMBERING



Stack Height in. (mm)
3 = 1.0 (25.4)
6 = 1.50 (38.1)
8 = 2.0 (50.8)

Voltage (VDC)
Q = 12 [std]
R = 24
Z = 36
G = 48

Options
S = Stainless steel shaft
7 = IP67 sealing
R = EMI/RFI suppression circuit
C = Chrome-plated housing
Z = Zinc-plated housing