

---

## DC Brushless Servo Motors

---

- BM Series Brushless Servomotors
- Standard NEMA Frame Sizes
- Rare-earth Neodymium Iron Boron Magnets provide maximize performance
- Skewed Stator with 8-pole design minimizes torque ripple and cogging for smooth velocity control over a greater speed range
- Optional IP65-level Construction allows use in harsh environments, including wash-down
- Choice of Encoder or Resolver Feedback
- Optional Brake, Front Shaft Seal, and Gear Reducers



### **High-Performance Motor Design**

The BM Series Servomotors are I<sup>2</sup>T's high-performance DC brushless rotary motors. These motors feature neodymium iron boron magnets for maximum torque and acceleration in a small package. The BM series motors are capable of reaching speeds of 10,000 rpm and accelerations to 270,000 rad/sec<sup>2</sup> for improved machine cycle times. The BM series motors have standard NEMA frame sizes and have continuous torque ranges from 75 oz-in to 280 in-lb and peak torque ranges up to 840 in-lb.



## BM Series Servo Motor Specifications

Model →	Units	BM75	BM130	BM200	BM250	BM500	BM800	BM1400	BM2000	BM3400	BM4500
<b>Stall Torque, Continuous</b>	lb-in (N-m)	4.69 (0,53)	8.75 (1,0)	12.5 (1,41)	17.19 (1,94)	31.88 (3,6)	48.75 (5,5)	85.31 (9,6)	130 (14,7)	210 (23,7)	280 (31,5)
<b>Peak Torque</b>	lb-in (Nm)	12.5 (1,41)	21.88 (2,5)	31.25 (3,5)	43.75 (5,0)	79.69 (9,0)	125.0 (14,0)	212.5 (24,0)	390 (43,9)	630 (70,8)	840 (94,4)
<b>Maximum Speed</b>	rpm	10,000	10,000	8,000	8,000	6,000	6,000	6,000	2,700	2,700	2,700
<b>Rated Speed</b>	rpm	4,000	4,000	4,000	4,000	4,000	3,000	3,000	2,400	2,400	2,400
<b>Torque Constant (K<sub>t</sub>)</b>	lb-in/A RMS (N-m/A RMS)	0.78 (0,08)	1.94 (0,22)	1.79 (0,20)	2.46 (0,28)	2.45 (0,28)	6.56 (0,74)	6.56 (0,74)	7.7 (0,87)	7.5 (0,85)	10.1 (1,14)
<b>Back EMF Constant (K<sub>e</sub>)</b>	Volts peak/krpm	7.5	18.7	17.2	23.8	23.6	62	62	99	99	99
<b>Resistance (line-to-line)</b>	ohms (25° C)	1.0	2.0	1.1	1.1	0.5	1.2	0.5	0.72	0.24	0.13
<b>Inductance (line-to-line)</b>	mH	0.8	1.8	1.1	1.3	2.8	3.8	1.7	5.4	2.2	1.4
<b>Rotor Moment of Inertia</b>	oz-in/sec <sup>2</sup> Kg-m <sup>2</sup>	0.0007 0,52 x 10 <sup>-5</sup>	0.0013 0,92 x 10 <sup>-5</sup>	0.0019 1,3 x 10 <sup>-5</sup>	0.011 7,8 x 10 <sup>-5</sup>	0.020 13,9 x 10 <sup>-5</sup>	0.042 30,0 x 10 <sup>-5</sup>	0.080 56,0 x 10 <sup>-5</sup>	0.1536 108,7x10 <sup>-5</sup>	0.3702 217,4x10 <sup>-5</sup>	0.4608 326,1x10 <sup>-5</sup>
<b>Maximum Acceleration</b>	rad/sec <sup>2</sup>	270,000	270,000	270,000	60,000	65,000	46,000	42,000	40,625	32,675	29,094