

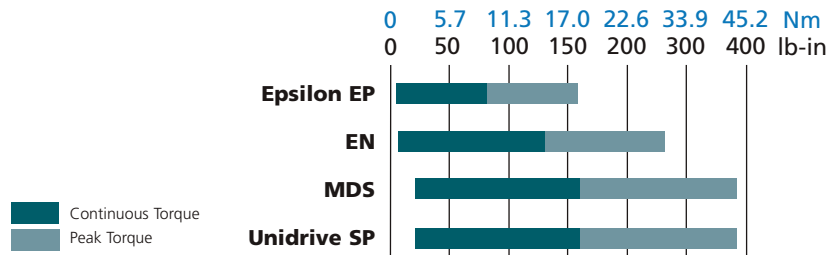
MG MOTOR—230V

The MG Motor is low inertia motor that is great for dynamic applications with torque requirements between 5 lb-in (0.57 Nm) and 163 lb-in (18.4 Nm). MG motors use Neodymium magnets to achieve a high torque to inertia ratio giving them a size advantage when compared to competitors' motors. MG motors are available in English (NEMA 23, 34, or 56) and Metric (IEC-72-1) flanges with or without brakes. The standard encoder resolution is 2048 lines per rev. MG motors come standard with MS style connectors. All models are rated IP65. For applications that require custom motors, the MG line is the choice.

MG



Servomotors



MG Motor Specifications

Motor Model	Cont. Stall Current Arms	Peak Current Arms	Motor Resistance Ohms	Motor Inductance mH	Max Operating Speed RPM	Encoder Resolution lines/rev	Inertia lb-in-sec ² kg-cm ²	Motor Ke Vrms/krpm	Motor Kt lb-in/Arms Nm/Arms	Motor Weight lb kg
MG-205	1.3	4.3	18.5	26.40	5000	2048	0.000099 0.112	28	4.1 0.47	3 1.3
MG-208	2.3	7.8	7.3	12.50	5000	2048	0.000169 0.191	28	4.1 0.47	4 1.8
MG-316	3.5	12	3.9	9.40	4000	2048	0.000560 0.630	38	5.5 0.62	8.3 3.8
MG-340	5.7	19.5	1.9	6.80	3000	2048	0.001458 1.646	57	8.3 0.94	14.6 6.6
MG-455	7.2	26.4	1.1	7.40	3000	2048	0.002658 3.000	60	8.8 0.99	20 9.1
MG-490	10.3	45	0.4	3.30	3000	2048	0.005175 5.823	59	8.6 0.97	28.6 13.0
MG-4120	11.8	49.2	0.4	3.20	3000	2048	0.007458 8.4	72	10.5 1.19	37 16.8

MG Holding Brake Specifications

Motor Frame Size	Volt DC	Current (A)	Static Torque		Mechanical Disengagement Time-Brake Released ms	Mechanical Engagement Time-Brake Holding ms	Added Inertia	
			lb-in	Nm			lb-in-sec ²	kg-cm ²
2"	24	0.21	10	1.13	40	25	0.000025	0.028
3"	24	0.52	60	6.78	250	100	0.00015	0.17
4"	24	0.088	230	27.12	250	100	0.00041	0.46

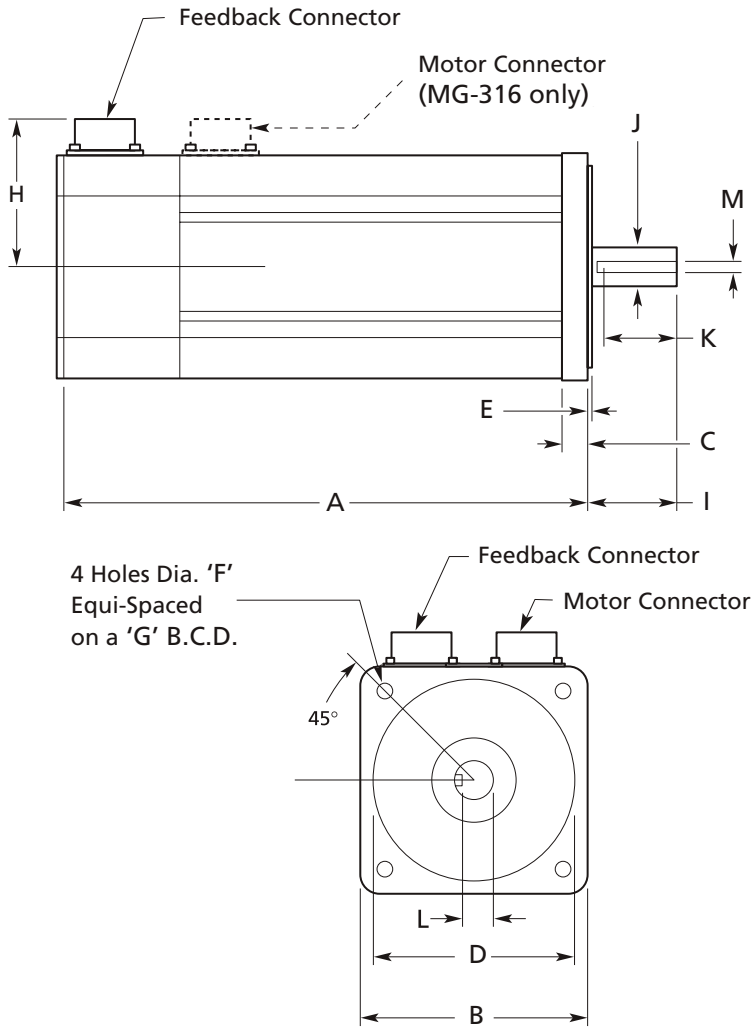
MG MOTOR DIMENSIONS

English Dimensions inches (mm)	2"		3"		4"		
	MGE-205	MGE-208	MGE-316	MGE-340	MGE-455	MGE-490	MGE-4120
A Length Overall - Unbraked (Max)	5.55 (141)	6.75 (171.4)	7.24 (183.9)	10.24 (260.1)	8.61 (218.7)	11.11 (282.1)	13.61 (345.7)
A Length Overall - Braked (Max)	-	-	8.74 (222)	-	10.61 (269.5)	13.11 (332.9)	15.61 (396.5)
B Flange Square	2.25 (57.2)	2.25 (57.2)	3.31 (84.1)	3.31 (84.1)	5 (127)	5 (127)	5 (127)
C Flange Thickness	0.46 (11.7)	0.46 (11.7)	0.44 (11.2)	0.44 (11.2)	0.53 (13.5)	0.53 (13.5)	0.53 (13.5)
D Pilot Diameter	1.502 (38.15)	1.502 (38.15)	2.877 (73.08)	2.877 (73.08)	4.5 (114.3)	4.5 (114.3)	4.5 (114.3)
E Pilot Thickness	0.06 (1.6)	0.06 (1.6)	0.06 (1.6)	0.06 (1.6)	0.1 (2.5)	0.1 (2.5)	0.1 (2.5)
F Bolt Hole Diameter	0.205 (5.21)	0.205 (5.21)	0.233 (5.66)	0.233 (5.66)	0.375 (9.525)	0.375 (9.525)	0.375 (9.525)
G Bolt Circle Diameter	2.625 (66.68)	2.625 (66.68)	3.875 (98.43)	3.875 (98.43)	5.875 (149.23)	5.875 (149.23)	5.875 (149.23)
H Signal Connector Height - Unbraked (Max)	2 (51)	2 (51)	2.5 (64)	2.5 (64)	3.2 (81.3)	3.2 (81.3)	3.7 (95)
H Signal Connector Height - Braked (Max)	-	-	2.5 (64)	2.7 (68)	3.3 (83)	3.3 (83)	3.3 (83)
I Shaft Length	1.2 (30.5)	1.2 (30.5)	1.2 (30.5)	1.2 (30.5)	1.9 (48.2)	1.9 (48.2)	1.9 (48.2)
J Shaft Diameter	0.375 (9.53)	0.375 (9.53)	0.4997 (12.7)	0.4997 (12.69)	0.6245 (15.862)	0.875 (22.23)	0.875 (22.225)
Shaft key Dimensions							
K Keyway Length (Min)	0.563 (14.3)	0.563 (14.3)	0.9 (22.9)	0.9 (22.9)	1.5 (38.1)	1.5 (38.1)	1.5 (38.1)
L Keyway Depth	0.3 (7.6)	0.3 (7.6)	0.42 (10.7)	0.42 (10.7)	0.51 (13)	0.77 (19.6)	0.77 (19.6)
M Keyway Width	0.127 (3.23)	0.127 (3.23)	0.1265 (3.2)	0.1265 (3.21)	0.189 (4.801)	0.189 (4.801)	0.189 (4.801)
Metric Dimensions inches (mm)	2"		3"		4"		
	MGM-205	MGM-208	MGM-316	MGM-340	MGM-455	MGM-490	MGM-4120
A Length Overall - Unbraked (Max)	5.49 (139.5)	6.69 (170)	7.24 (183.9)	10.24 (260.1)	8.59 (218.2)	11.09 (281.7)	13.59 (345.2)
A Length Overall - Braked (Max)	-	-	8.74 (222)	11.74 (298.2)	10.59 (269)	13.09 (332.5)	15.59 (396.0)
B Flange Square	66 (2.598)	66 (2.598)	3.5 (89)	3.5 (89)	4.76 (121)	4.76 (121)	4.76 (121)
C Flange Thickness	0.4 (10.2)	0.4 (10.2)	0.44 (11.2)	0.44 (11.2)	0.51 (13)	0.51 (13)	0.51 (13)
D Pilot Diameter	1.9685 (50)	1.969 (50)	3.15 (80.01)	3.15 (80.01)	4.331 (110.1)	4.331 (110.1)	4.331 (110.1)
E Pilot Thickness	0.12 (3)	0.12 (3)	0.12 (3)	0.12 (3)	0.12 (3)	0.12 (3)	0.12 (3)
F Bolt Hole Diameter	0.197 (5)	0.197 (5)	0.276 (7.01)	0.276 (7.01)	0.394 (10)	0.394 (10)	0.394 (10)
G Bolt Circle Diameter	3.15 (80)	3.15 (80)	3.937 (100)	3.937 (100)	5.709 (145)	5.709 (145)	5.709 (145)
H Signal Connector Height - Unbraked (Max)	2 (51)	2 (51)	2.5 (64)	2.5 (64)	3.2 (81.3)	3.2 (81.3)	3.2 (81.3)
H Signal Connector Height - Braked (Max)	-	-	2.5 (64)	2.7 (68)	3.3 (83)	3.3 (83)	3.3 (83)
I Shaft Length	1.2 (30.5)	1.2 (30.5)	1.2 (30.5)	1.2 (30.5)	1.99 (50.5)	1.99 (50.5)	1.99 (50.5)
J Shaft Diameter	0.315 (8)	0.315 (8)	0.5512 (14)	0.5512 (14)	0.748 (19)	0.9449 (24)	0.9449 (24)
Shaft key Dimensions							
K Keyway Length (Min)	0.551 (14)	0.551 (14)	0.79 (20)	0.79 (20)	1.58 (40)	1.46 (37)	1.46 (37)
L Keyway Depth	0.26 (6.7)	0.26 (6.7)	0.43 (10.9)	0.43 (10.9)	0.61 (15.49)	0.784 (19.9)	0.784 (19.9)
M Keyway Width	0.0787 (2)	0.0787 (2)	0.2 (5.08)	0.2 (5.08)	0.236 (6)	0.3149 (7.998)	0.3149 (7.998)

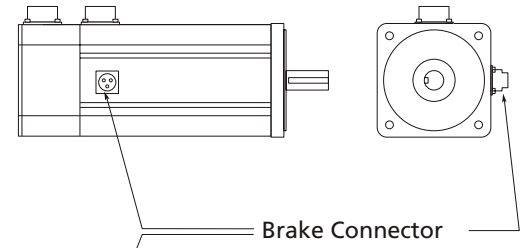
MG MOTOR DIMENSIONS

The dimensional information found on these pages is not to be used for design purposes. For complete engineering controlled drawings, please refer to the web site or MME Power CD.

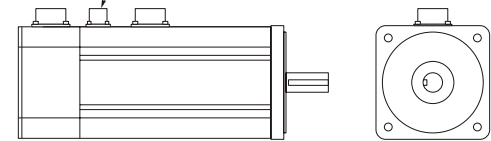
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Power CD
for complete data



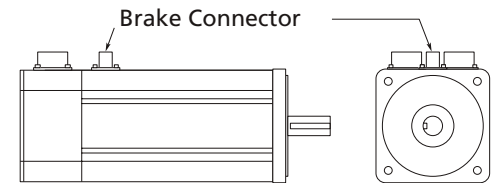
MG-316



MG-340



MG-455—MG-4120



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