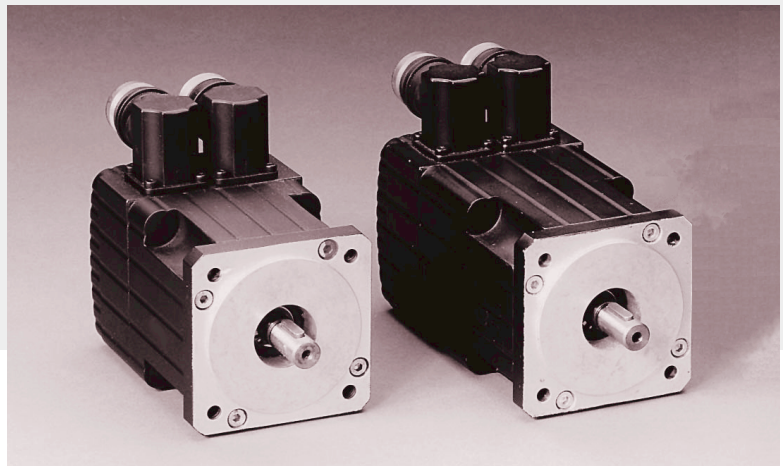


MOOG

G403 Series High Power Density Brushless Servo Motors



Moog's G400 Series brushless motors are built with rare earth magnets (SmCo) and offer the highest peak torque per motor volume. The G403 Series is packaged in a compact, lightweight aluminum housing for maximum heat transfer.

Moog G403 Series brushless motors are mechanically compatible with Moog's 303A Series Motors and come with the following standard features:

- Slot & Key Shafts
- Optional Shaft Seal (IP67 Sealing)
- Integral Resolver
- Right Angle Connectors
- Thermistor
- Class H Insulation
- CE Compliant

SPECIFICATIONS

MOTOR	UNITS		MODELS			
	METRIC	ENGLISH	G403-031		G403-032	
PERFORMANCE						
△ Continuous Stall Torque	Nm	lb-in	0.60	5.31	1.65	14.6
△ Continuous Stall Current	Arms	Arms	1.60	1.60	3.20	3.20
△ Peak Stall Torque	Nm	lb-in	1.50	13.3	4.70	41.6
△ Peak Stall Current	Arms	Arms	4.60	4.60	10.60	10.6
△ Nominal Speed	rpm	rpm	8800	8800	6300	6300
△ Nominal Power	kW	hp	0.45	0.60	0.95	1.27
△ Theoretical No Load Speed	rpm	rpm	9600	9600	7200	7200
△ Max Speed	rpm	rpm	10500	10500	8000	8000
Torque Constant	Nm/Arms	lb-in/Arms	0.40	3.54	0.53	4.69
Back EMF Constant	Vpk/rad/sec	Vpk/krpm	0.33	34.6	0.43	45.0
ELECTRICAL						
Max Voltage		Vpk	360		360	
△ Resistance $\emptyset - \emptyset$		Ohm	15.2		4.9	
Inductance $\emptyset - \emptyset$		mH	18.8		8.5	
△ Electrical Time Constant		msec	1.2		1.7	
MECHANICAL						
Inertia	kg-cm ²	lb-in-sec ² x 10 ⁻⁴	0.16	1.42	0.39	3.45
Weight	kg	lb	1.4	3.1	2.0	4.4

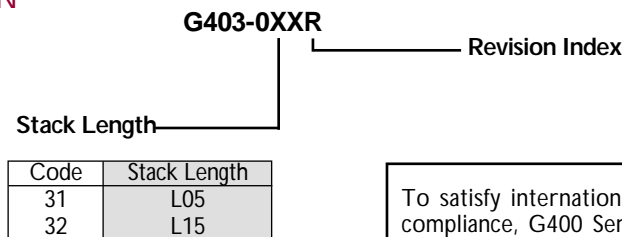
NOTES:

- △ With motor mounted on a 300 x 300 x 12 mm steel heat sink with a coil temperature 100°C over still air ambient (max. 40°C)
- △ For at least 1 second out of 10 seconds and less than 15% saturation. Contact Moog for higher torque at lower duty cycle.
- △ K_t-line shows non-linearity between current and torque at high end.
- △ Nominal values at maximum continuous output power with conditions as in note 1.
- △ Speed, where EMF is equal to bus voltage 325V (for 310V bus voltage this value is reduced by 4.6%)
- △ Speed, where EMF is 360 volts
- △ At 25°C (80°F) coil temperature
- 8. Currents are rms phase amperes
- 9. Specification tolerances are ±10%
- 10. 1 Nm = 8.85 lb-in
- 11. 1 N = 0.225 lb
- 12. 1 kW = 1.341 hp
- 13. 1 kg-cm² = 8.85 lb-in-sec² x 10⁻⁴

RESOLVER-TRANSMITTER

	SPECIFICATIONS
Input voltage	4.0 Vac rms
Input frequency	3400 Hz - 8000 Hz
Input current	≤ 35 mA rms
Transformation Ratio	0.5

MODEL NUMBER DEFINITION

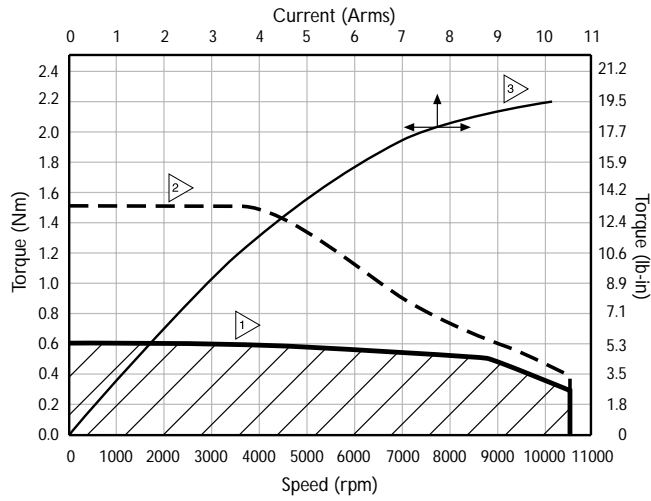


To satisfy international regulations for safety and EMC compliance, G400 Series motors are equipped with CE compliant connectors. Accordingly these motors are not direct electrical replacements for Moog 300A Series motors. To facilitate 300 Series motor replacement, Moog offers adapter cables which allow the G400 Series motor to be directly connected to existing system cables without the need for rewiring or connector replacement.

Contact sales office for adapter cable part numbers and installation instructions.

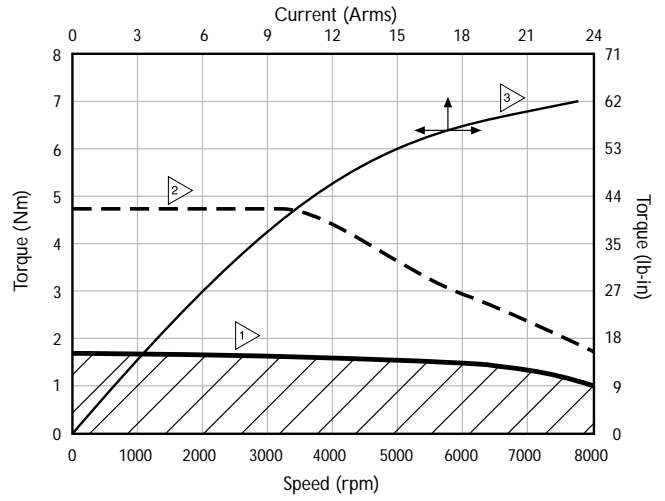
PERFORMANCE CURVES

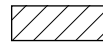
MODEL G403-031



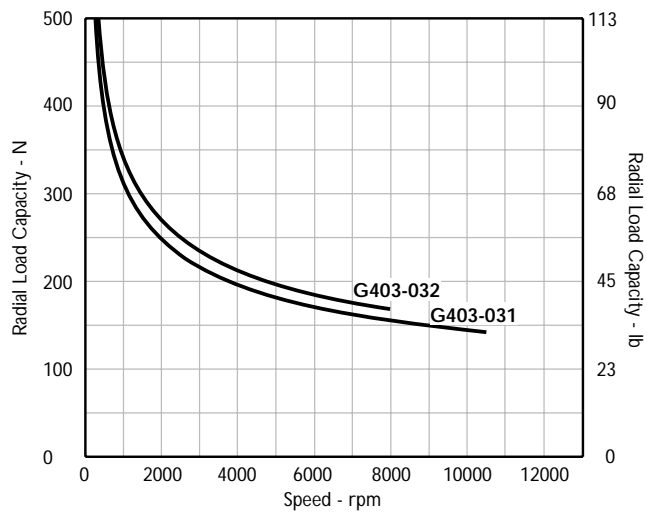
Conditions : See notes $\triangle 1$, $\triangle 2$ and $\triangle 3$

MODEL G403-032



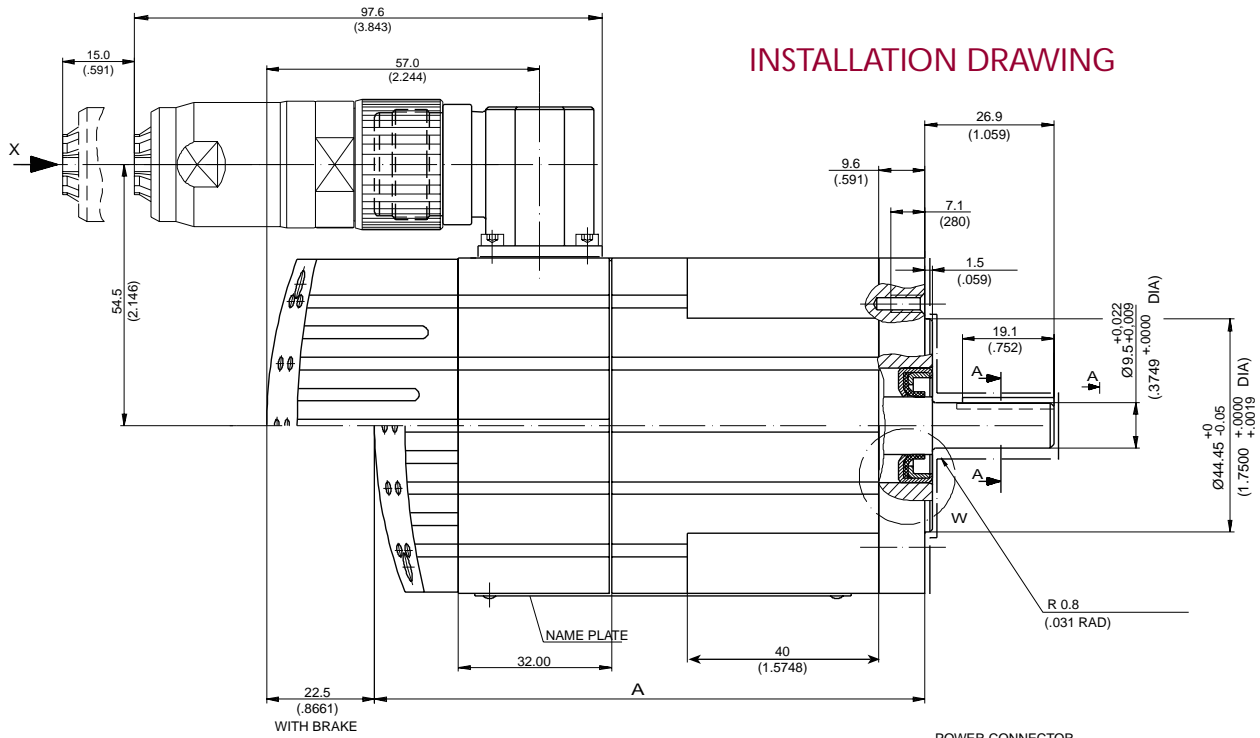
 Designates Continuous Operating Area

BEARINGS - RADIAL LOAD CAPACITY

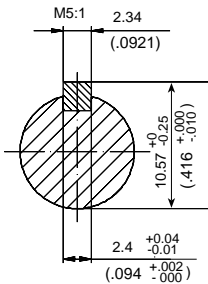


Radial Load Capacity (for 20,000 hr. B10 life) applied at shaft extension mid-point.
Consult factory for other loading conditions.

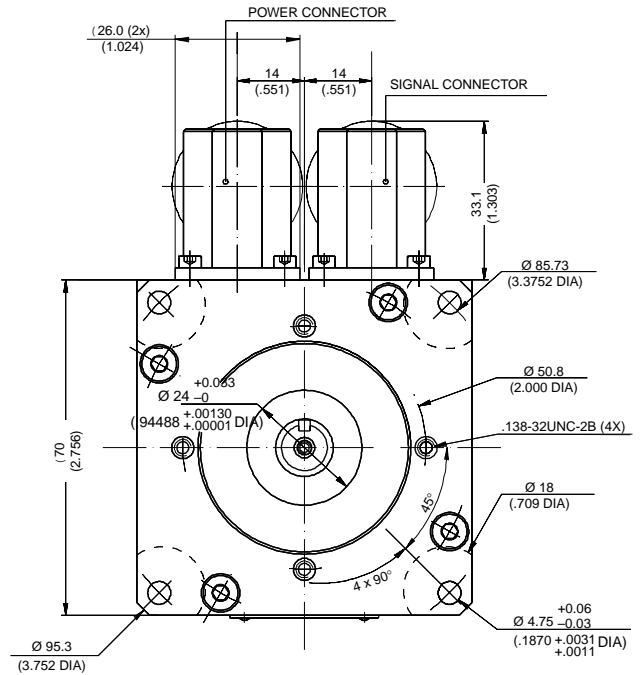
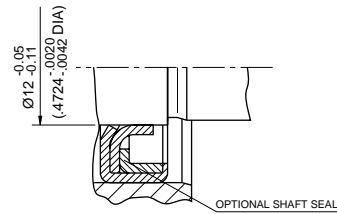
INSTALLATION DRAWING



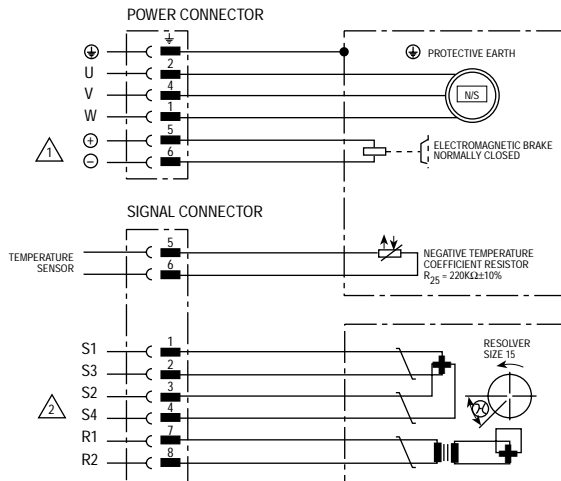
SECTION A-A



DETAIL W

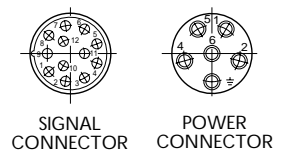


CONNECTOR PIN OUTS



MODEL NO.	"A"
G403-031	114.9 (4.524)
G403-032	140.4 (5.528)

VIEW X



NOTES:

- ⚠ MOTOR WITHOUT BRAKE
- ⚠ PIN 5 AND 6 NOT CONNECTED
- ⚠ NOT CONNECTED
- ⚠ SIGNAL CONNECTOR PIN 9, 10, 11, 12
- 3. DIMENSIONS IN PARENTHESIS ARE IN INCHES