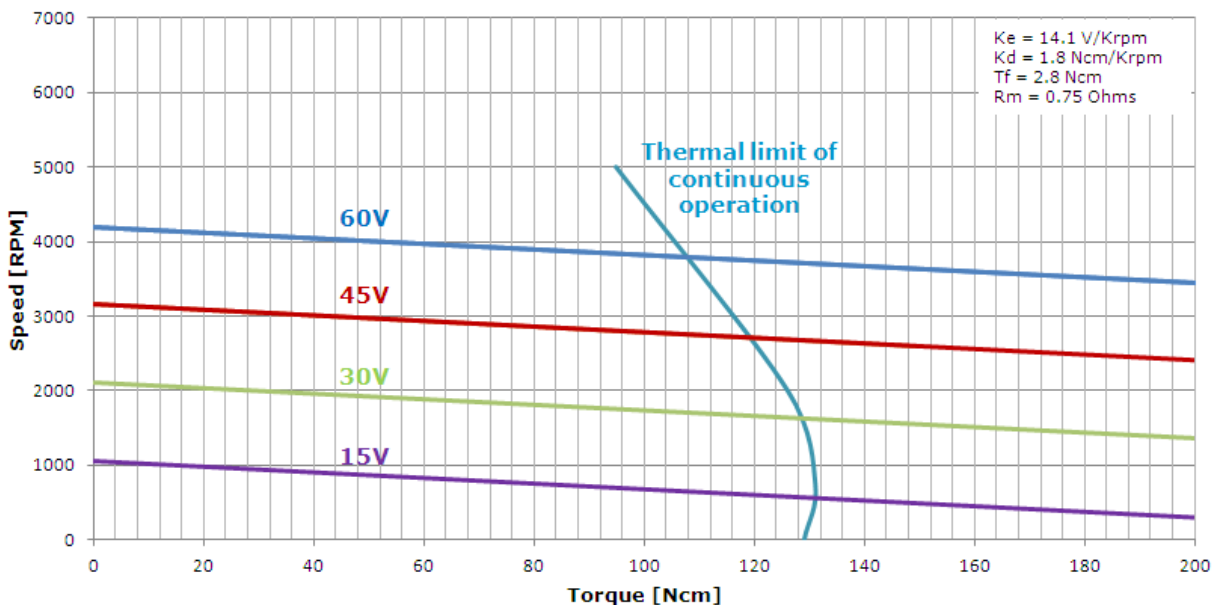
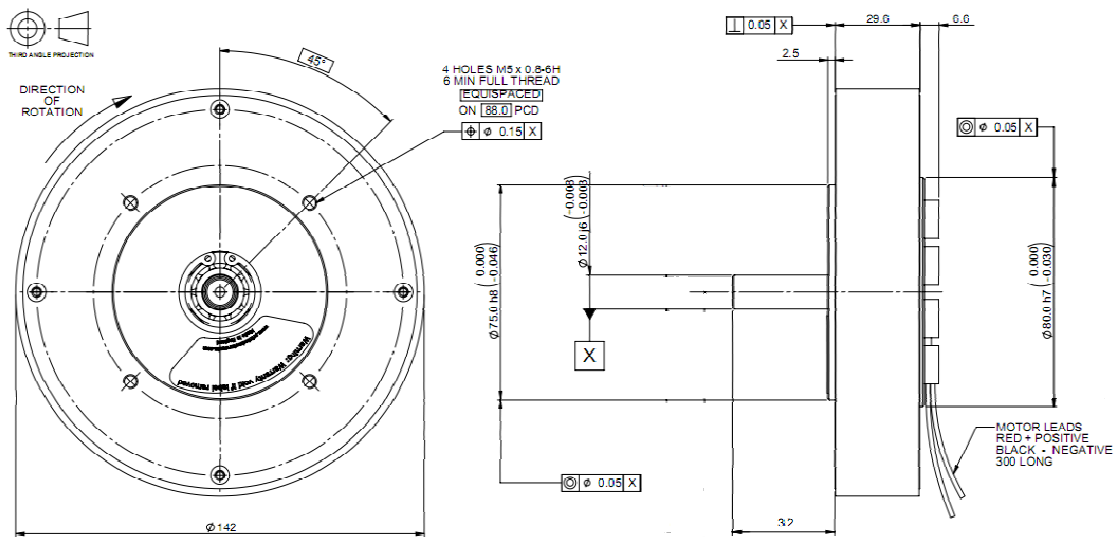
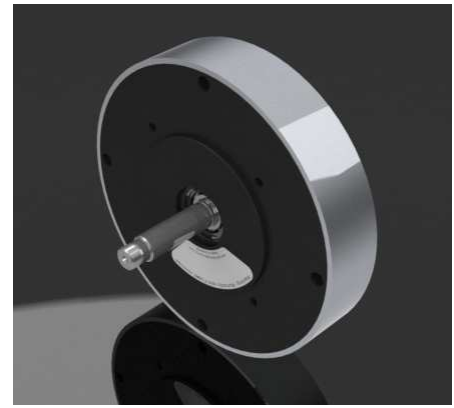


The Printed Motor Works GN12 is an exceptionally powerful and extremely accurate servo motor that provides all the advantages of the printed armature with the thin profile made possible by using rare earth magnet materials. The GN12 is suitable for all types of industrial automation, robotics and scientific applications.



NOTE: The above voltages are examples, not a predefined maximum or minimum. Due to ongoing product improvements data is subject to change without notice.

Applications: Servo mechanisms, motion control, industrial robots, CNC machining, printing machinery, logistics solutions, medical mobility, medical scanners, flight simulators, marine autopilots and high ambient temperature ventilation.

Markets: Industrial automation, automotive, medical, life sciences, aerospace, printing, logistics, instrumentation, test and measurement, oil & gas and offshore marine.

Design Modifications

- Encoders
- Timing pulleys
- Long leads
- Tri-rated cable
- Customised shafts
- EMC suppression
- Connectors
- US mounting customisation

Performance Specifications	Symbol	Units	GN12
Peak Torque	Tp	N-cm (oz-in)	1162 (1645)
Rated Speed	N	RPM	3000
Rated Continuous Torque @ 25°C	T ₂₅	N-cm (oz-in)	110 (155)
Rated Power Output	P	Watts	344
Maximum Recommended Speed	Nmax	RPM	6000
Continuous Stall Torque	Ts	N-cm (oz-in)	109 (154)
Cogging Torque	Tc	N-cm (oz-in)	0 (0)
Electrical Specifications			
Rated Terminal Voltage	E	Volts	49
Rated Continuous Current	I	Amps	9.2
Peak Current	Ip	Amps	92
Continuous Stall Current	Is	Amps	8.9
Winding Specifications			
Terminal Resistance ± 10%	Rm	Ohms	0.75
Armature Resistance ± 10%	Ra	Ohms	0.61
Back EMF Constant ± 5%	Ke	V/kRPM	14.1
Torque Constant ± 5%	Kt	N-cm/Amp (oz-in/Amp)	13.5 (19.1)
Viscous Damping Constant	Kd	N-cm/KRPM (oz-in/KRPM)	1.8 (2.56)
Armature Inductance	L	µH	<100
Temperature Coefficient of KE	C	%/°C Rise	-0.09
Number of Commutation Bars	Z		141
Mechanical Specifications			
Moment of Inertia	Jm	Kg-cm ² (oz-in-sec ²)	1.342 (0.019)
Average Friction Torque	Tf	N-cm (oz-in)	2.8 (3.97)
Weight	W	kg (Ibs)	2.8 (6.2)
Diameter	D	mm (In)	140 (5.5)
Length	LG	mm (In)	25.8 (1.016)
Permitted Radial Load		Kg (Ibs)	14.28 (31.47)
Permitted Axial Load		Kg (Ibs)	10.7 (23.6)
Figure of Merit			
Mechanical Time Constant	Tm	ms	4.5
Electrical Time Constant	Te	ms	<0.07
Thermal Specifications			
Thermal Resistance at Rated Speed	RAAR	°C/Watt	1.3
Thermal Resistance at Stall	RAAS	°C/Watt	1.9