



GM14904S015

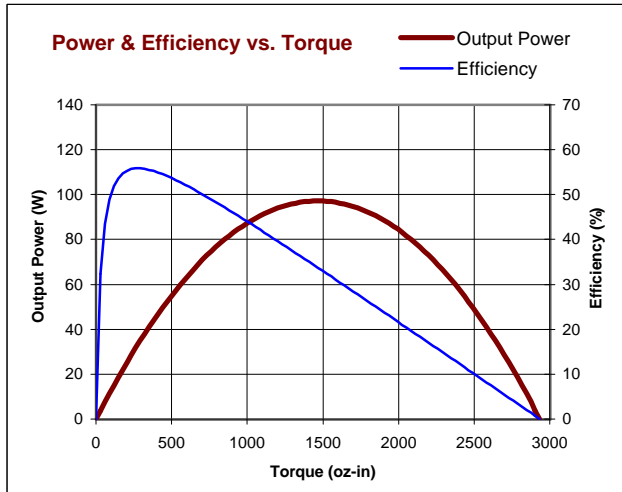
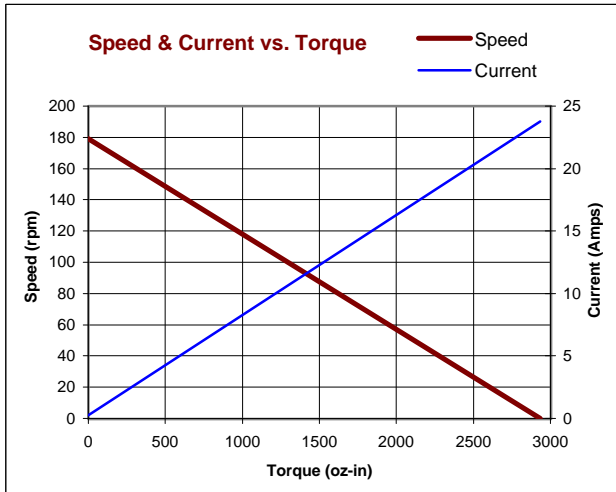
Lo-Cog® DC Gearmotor

Assembly Data	Symbol	Units	Value	
Reference Voltage	E	V	24	
No-Load Speed	S _{NL}	rpm (rad/s)	179	(18.7)
Continuous Torque (Max.) ¹	T _C	oz-in (N-m)	374	(2.6)
Peak Torque (Stall) ²	T _{PK}	oz-in (N-m)	2934	(20.7)
Weight	W _M	oz (g)	41.7	(1183)
Motor Data				
Torque Constant	K _T	oz-in/A (N-m/A)	8.67	(6.12E-02)
Back-EMF Constant	K _E	V/krpm (V/rad/s)	6.41	(6.12E-02)
Resistance	R _T	Ω	1.01	
Inductance	L	mH	1.6	
No-Load Current	I _{NL}	A	0.26	
Peak Current (Stall) ²	I _P	A	23.8	
Motor Constant	K _M	oz-in/√W (N-m/√W)	8.63	(6.09E-02)
Friction Torque	T _F	oz-in (N-m)	1.6	(1.1E-02)
Rotor Inertia	J _M	oz-in-s ² (kg-m ²)	3.7E-03	(2.6E-05)
Electrical Time Constant	τ _E	ms	1.58	
Mechanical Time Constant	τ _M	ms	7.0	
Viscous Damping	D	oz-in/krpm (N-m-s)	0.18	(1.2E-05)
Damping Constant	K _D	oz-in/krpm (N-m-s)	55	(3.7E-03)
Maximum Winding Temperature	θ _{MAX}	°F (°C)	311	(155)
Thermal Impedance	R _{TH}	°F/watt (°C/watt)	45.9	(7.7)
Thermal Time Constant	τ _{TH}	min	28.8	
Gearbox Data				
Reduction Ratio			19.7	
Efficiency ³			0.84	
Maximum Allowable Torque		oz-in (N-m)	500	(3.53)
Encoder Data				

- ### Included Features
- 2-Pole Stator
 - Ceramic Magnets
 - Heavy-Gauge Steel Housing
 - 11-Slot Armature
 - Silicon Steel Laminations
 - Stainless Steel Shaft
 - Copper-Graphite Brushes
 - Diamond Turned Commutator
 - Motor Ball Bearings
 - Output Ball Bearing
 - Wide Face Gears

- ### Customization Options
- Alternate Winding
 - Sleeve or Ball Bearings
 - Modified Output Shaft
 - Custom Cable Assembly
 - Special Brushes
 - EMI/RFI Suppression
 - Alternate Gear Material
 - Special Lubricant
 - Optional Encoder
 - Fail-Safe Brake

1 - Specified at max. winding temperature at 25°C ambient without heat sink. 2 - Theoretical values supplied for reference only.
 3 - Effective gearbox efficiency for this unit improved by use of ball bearings.



All values are nominal. Specifications subject to change without notice. Graphs are shown for reference only.

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