

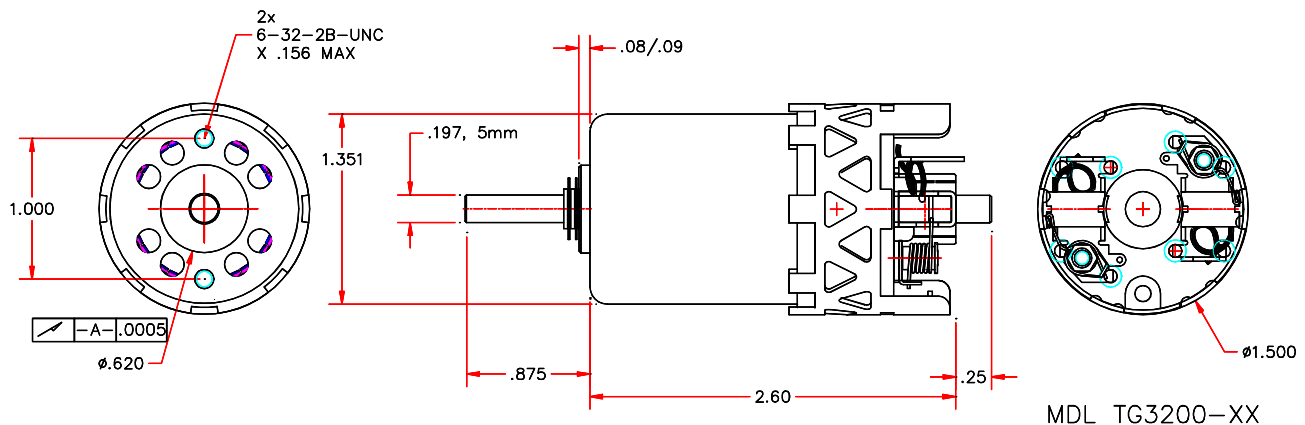


Brush Motor

TG3200 Series



- High Speed
- High Torque
- High Efficiency
- **No Cogging**
- **No Hysteresis**
- **No Iron Losses**
- **No Lamination Ringing**
- Exceptional Efficiency
- Rapid start and stop
- Spectacular Power/Weight Ratio
- Low Inductance Armature
- Compact Size & Light Weight
- Expanded Voltage and Current Ranges

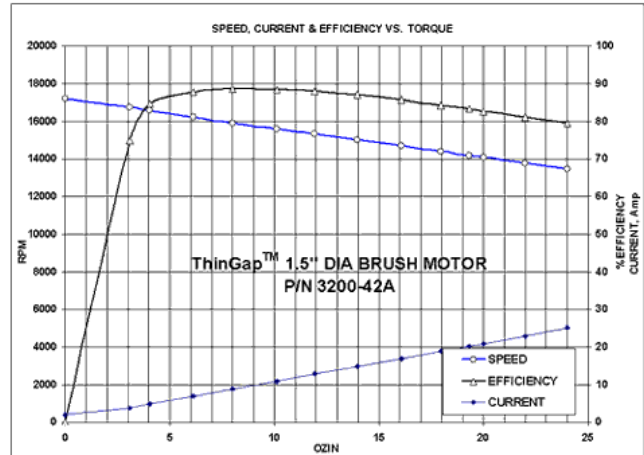
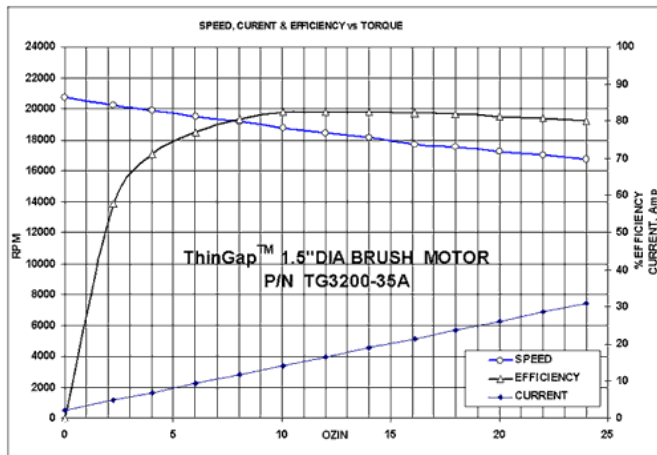


TG3200 Series

ThinGap™ is a Trademark of G&G Technology, Inc.

ThinGap™ products are manufactured or covered by U.S. patent 6,111,329 with other U.S. and foreign patents pending. These specifications are subject to change at any time, without notice.

TG3200 Brush Motor	-35A	-42A
Max Continuous Power - P_{max}	300 w	260 w
Max Continuous Torque - T_{cont}	23 oz-in.	23 oz-in.
Max Efficiency @ 25C	82%	88%
Max Permissible Speed - W_{max}	35,000 rpm	35,000 rpm
No Load Speed	22,000 rpm @ 12 vdc	17,700 rpm @ 12 vdc
Motor Constant - K_m	2.8 oz-in./sqrt (watt)	2.7 oz-in./sqrt (watt)
Torque Constant - K_t	0.72 oz-in./amp.	0.87 oz-in./amp.
Back EMF Constant - K_e	1875 rpm/v	1550 rpm/v
No Load Current - I_o	2.7 amps	1.9 amps
Max. Continuous Current - I_{max}	32.6 amps	26.5 amps
Terminal-to-Terminal Resist. - R_t	0.054 Ω	0.094 Ω
Armature Resistance - R_m	0.048 Ω	0.088 Ω
Cogging Torque - T_c	0 oz-in.	0 oz-in.
Hysteresis Torque - T_h	0 oz-in.	0 oz-in.
Viscous Drag Torque - T_{ac}	0.74 oz-in./krpm	0.74 oz-in./krpm
Friction Torque - T_{fr}	1.0 oz-in.	1.0 oz-in.
Ambient Temp Range	-34 to 160 C	-34 to 160 C
Max Armature Winding Temp	250C	250C
Thermal Resistance - TPR (winding to ambient)	1.76 C/watt	1.76 C/watt
Armature Inductance - L	<10 μ H	<15 μ H
Starting Current	0.5 amps @ 0.08 vdc	0.5 amps @ 0.08 vdc
Armature Weight - W_a	1.76 oz	1.76 oz
Motor Weight - W_t	10 oz	10 oz
Armature Inertia - J	9.96×10^{-4} oz-in.-sec ²	9.96×10^{-4} oz-in.-sec ²
Max Continuous Winding Temp for determining all motor parameters 160 C.		
Magnet Material – Neodymium, Bearing Type – Ball, Brush – Silver Graphite		
Integrated fan for forced air cooling.		
Peak power is limited to the temperature rise of the armature.		
Motor testing performed at 25 C ambient with mounting heat sink of 3" x 3/8" x 8" aluminum.		



For Information Contact

NPC Robotics

800-444-3528

info@npcinc.com

NPC30424