

This robust line of gearmotors was designed and engineered for continuous operation, low audible noise and extended life. The GR1 series is intended for use in frozen beverage machines. The 5700B brushless motor offers extended life, high efficiency, and controllability for demanding applications.

**GEAR REDUCER FEATURES**

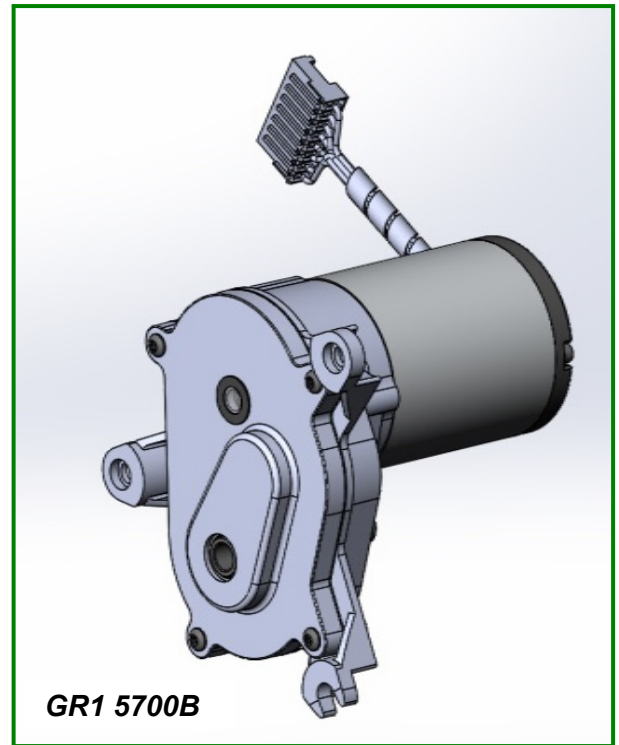
- Housing Material:** Aluminum die cast
- Gears:** Hardened Steel & Thermoplastic
- Bearings:** Ball on gears and output shaft
- Lubrication:** Synthetic Grease
- Seals:** Gasket on gearbox and Lip Seals on Shafts
- Output speeds:** 1 to 55 RPM
- Duty:** Continuous

**MOTOR FEATURES**

- Type:** Electronically Commutated
- Voltage:** 12Vdc to 32Vdc
- Output Power:** 45 to 140 Watts with External Drive
- Phase Connection:** 3 Phase Wye
- Slot / Poles:** 12 / 8
- Rotor Magnets:** High Energy skewed to reduce cogging
- Insulation Class:** F
- Rotation:** Reversible
- Rotor Positioning:** Three Hall Effect Sensors
- Bearings:** Ball

**INTEGRAL CONTROL FEATURES**

- Type:** Two quadrant trapezoidal programmable
- Speed Control:** 0 to 5Vdc or 0 to 10Vdc
- Protection:** Over current and over temperature
- Braking:** Dynamic
- Programming Options:** Acceleration, velocity, current limit



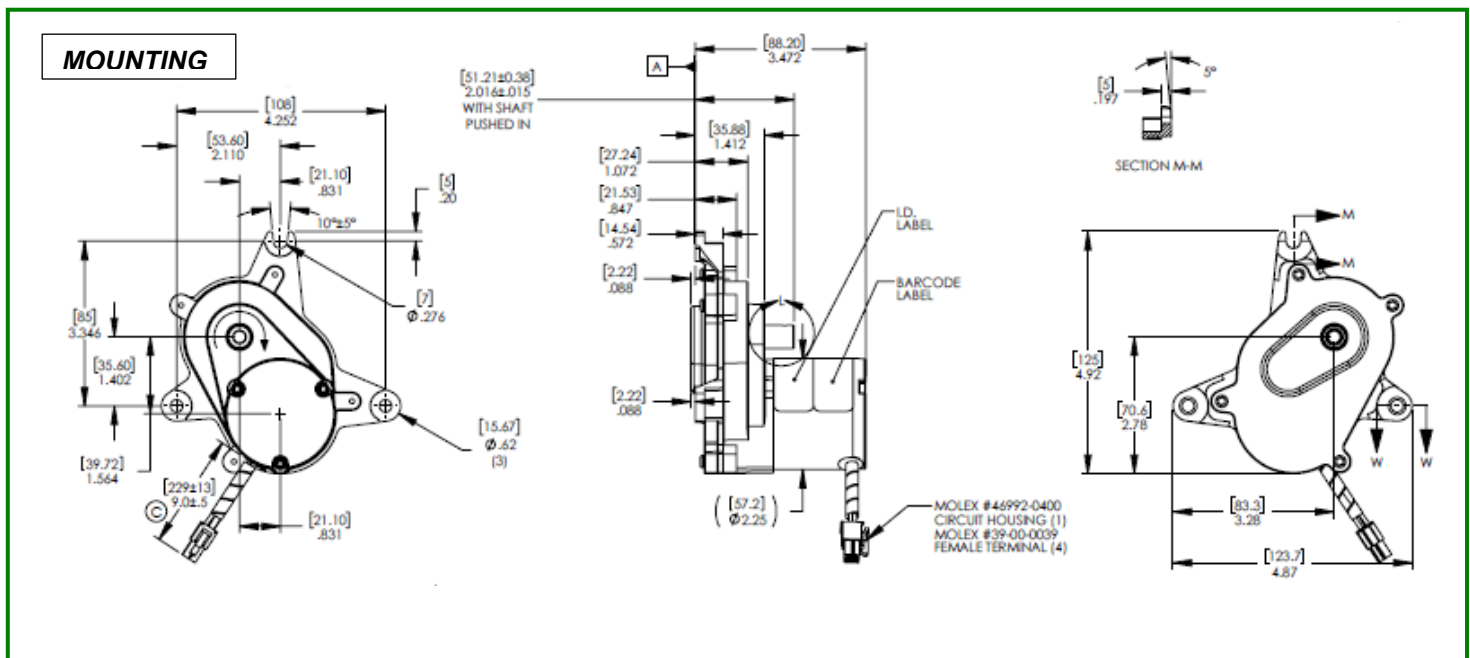
**GR1 5700B**

**Maximum Permissible Torque: 55 In.Lb (6.2 Nm)**  
**Speed: Up to 55 RPM**

*Note: Speed and torque combinations will vary depending on the motor/gearbox combination.*

**TYPICAL APPLICATIONS**

- Food Service Equipment
- Granita and Frozen Beverage Machine Auger
- Soft Serve Gelato Machine Auger

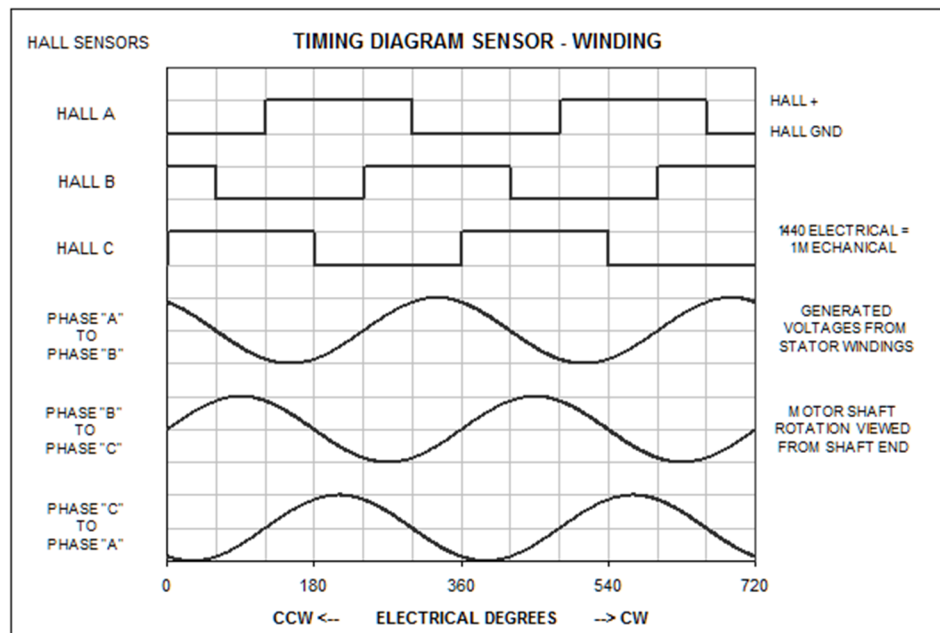


**Integral Controller: Lead Wire Color Code**

Board Position	Designation	Lead Color
1	Digital I/O "A"	Gray
2	Digital I/O "B"	White/Red
3	Direction	White/Black
4	Signal Ground	Green
5	Enable Input	Orange
6	5 Vdc (output)	Yellow
7	Input Power (12-32Vdc)	Red
8	Power Ground	Black
9	Analog Input 2	Violet
10	Analog Input 1 (speed)	Blue
11	Tachometer Output "B"	Brown
12	Tachometer Output "A"	White

Board Position	Designation	Lead Color
1	Motor Phase A	Blue
2	Motor Phase B	White
3	Motor Phase C	Brown
4	Hall A	Green
5	Hall B	Orange
6	Hall C	Yellow
7	5 Vdc (Vcc)	Red
8	Ground	Black

Model	Output Power (Watts) with Integral Control	Output Power (Watts) without Integral Control	Peak Torque (Lb.In)
GR1-5706B	12	45	35
GR1-5719B	25	100	35
GR1-5738B	45	140	<b>External Controller (Hall Only): Lead Wire</b>



In order to properly commutate the Merkle-Korff 2.25" BLDC motor, the following table is provided to indicate the required motor phase state for a given hall-effect state.

Direction	120° Hall Spacing			Motor Phases		
	HA	HB	HC	MA	MB	MC
(NOTE 1)						
CW	1	0	0	DC+	OFF	DC-
	1	1	0	OFF	DC+	DC-
	0	1	0	DC-	DC+	OFF
	0	1	1	DC-	OFF	DC+
	0	0	1	OFF	DC-	DC+
	1	1	1	DC+	DC-	OFF
CW	1	0	0	DC-	OFF	DC+
	1	0	1	DC-	DC+	OFF
	0	0	1	OFF	DC+	DC-
	0	1	1	DC+	OFF	DC-
	0	1	0	DC+	DC-	OFF
	1	1	0	OFF	DC-	DC+

NOTE 1: Direction viewed from motor shaft (gearbox output shaft rotation may not be the same)