

Right-Angle PMDC Brush Gear Motors RAD 30 & 36 Series

3/8 HP, Single-Reduction Worm Drive

Allied Motion's RAD series of right-angle PMDC brush gear motors are designed to power wheelchairs and other medical equipment. These are powerful, long-life gear motors that offer the quiet operation so essential in power wheelchair applications. The RAD series are available wound for 12, 24 or 48 VDC, and are capable of continuous output power of up to 3/8 HP. Versions are available with either a 2-pole or a 4-pole PMDC brush motor.

In addition to power wheelchairs, the RAD series is an ideal choice for AGV's, material handling vehicles, and for recreational, scooter and other personal mobility vehicles.

Options

- Gearbox cover design versions to fit specific wheelchair mounts
- Left- and right-hand pairs calibrated to <3% speed variation
- Customized output shaft configurations to mate with virtually any wheel hub design
- Custom lead and/or connector configurations
- High temperature Class H (180 °C) winding insulation
- Weather-proof (IP65) design



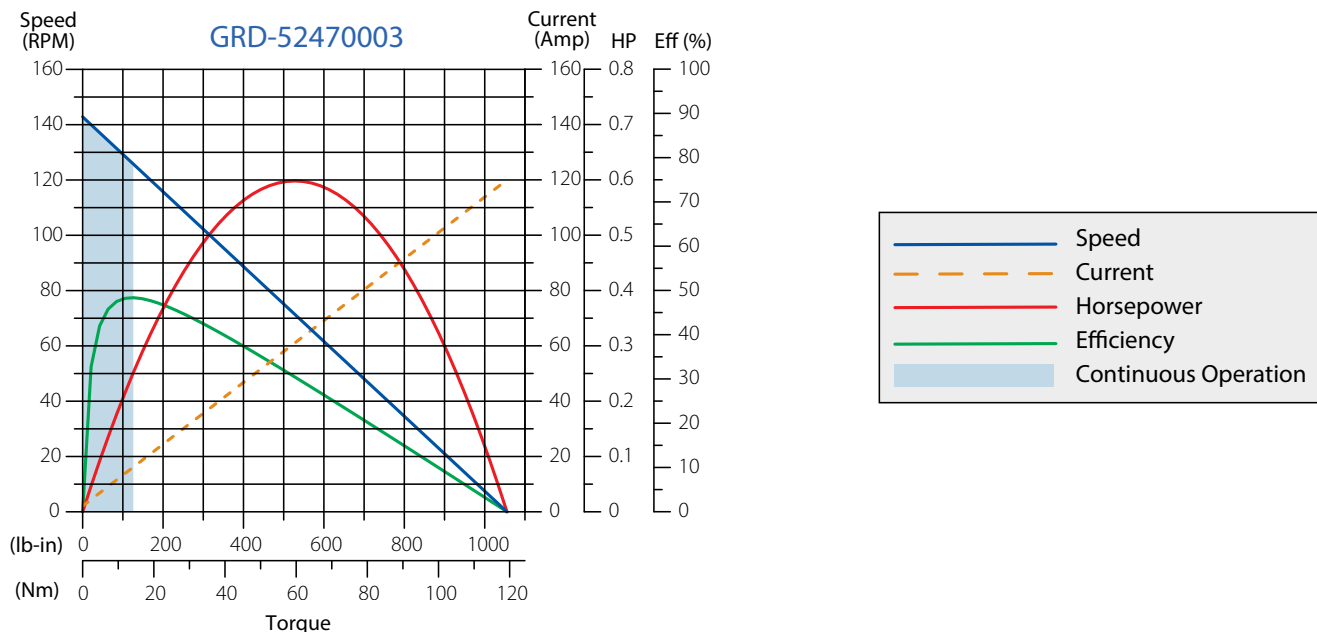
Features & Benefits

- Specifically designed for power wheelchairs and similar mobility equipment
- 12, 24 or 48 VDC winding; 2-pole or 4-pole PMDC brush motor
- Up to 3/8 HP continuous output power
- Fully sealed motor and gearbox for no-leak operation
- Hardened, precision ground steel worm for quiet operation and extended service life
- Cast aluminum gearbox for strength and minimum weight
- Class A (105 °C) winding insulation
- Cartridge-style brushes for easy maintenance
- Integral electromechanical parking brake
- Choice of motor disengage at brake or gearbox

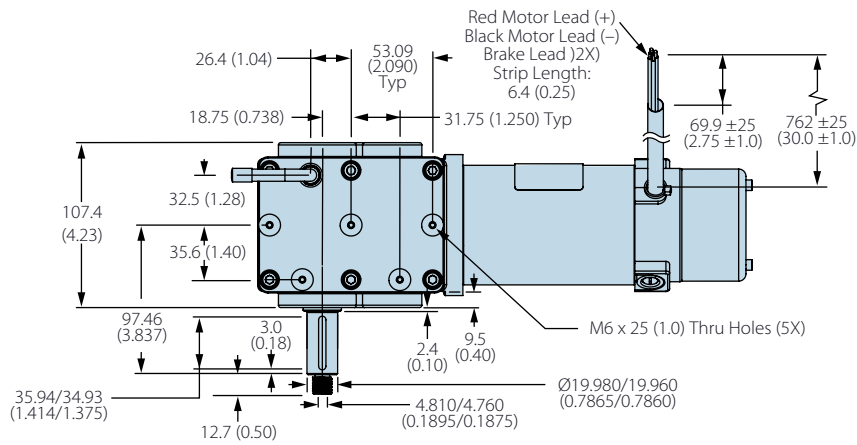
RAD 30 Series Gear Motors – Specifications

Model	GRD-52470003	
Type	Right-angle shaft	
Motor Type	PMDC brush, 2-pole	
Frame Size	76.2 mm 3.0 in)	
Winding Voltage	22.5 VDC	
Torque	Rated	8.5 Nm (75 lb.in)
	Peak	41.1 Nm (364 lb.in)
Rated Speed	108 rpm	
No-load Speed	112 - 117 rpm	
Rated Power	96 W (0.12 HP)	
Current — ADC	Rated	12
	Peak	40
	No-load	5
Gear Ratio	29.14:1	
Peak Efficiency	41%	
Rotation (shaft view)	CCW (positive voltage to positive motor terminal)	
Bearing Type	Radial ball bearing	
Backlash (no load)	14.8 - 44.3 arcmin	
Weight	7.3 kg (16.0 lb)	
Ambient Operating Temperature at Rated Duty	22 °C max	
Ambient Storage Temperature	-30 to 80 °C	
IP Rating	IP 52	

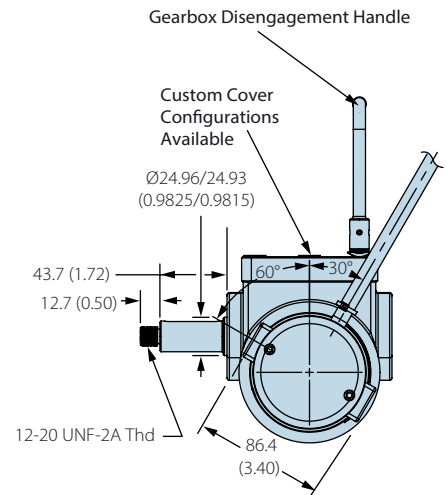
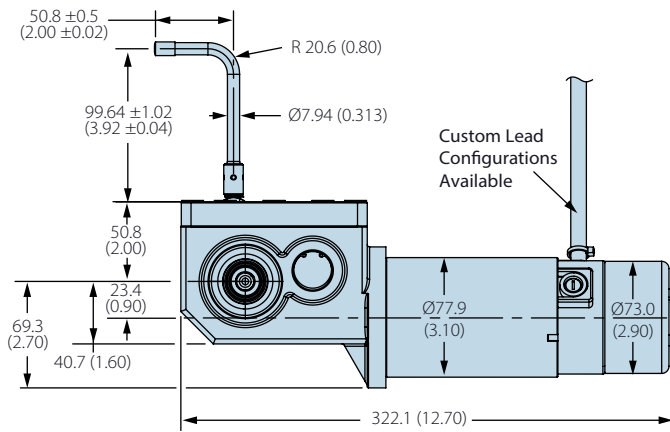
RAD 30 Series Gear Motors – Performance



RAD 30 Series Gear Motors Dimensions — mm (in)



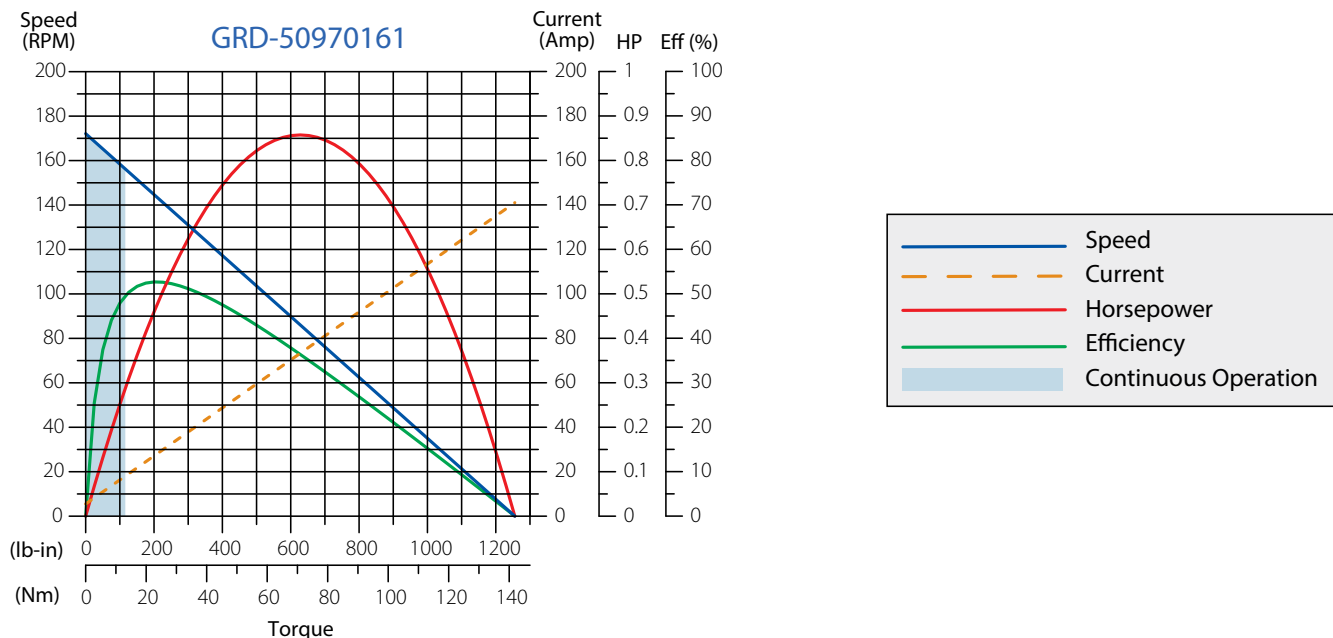
CCW Rotation as Viewed From Output with RED +



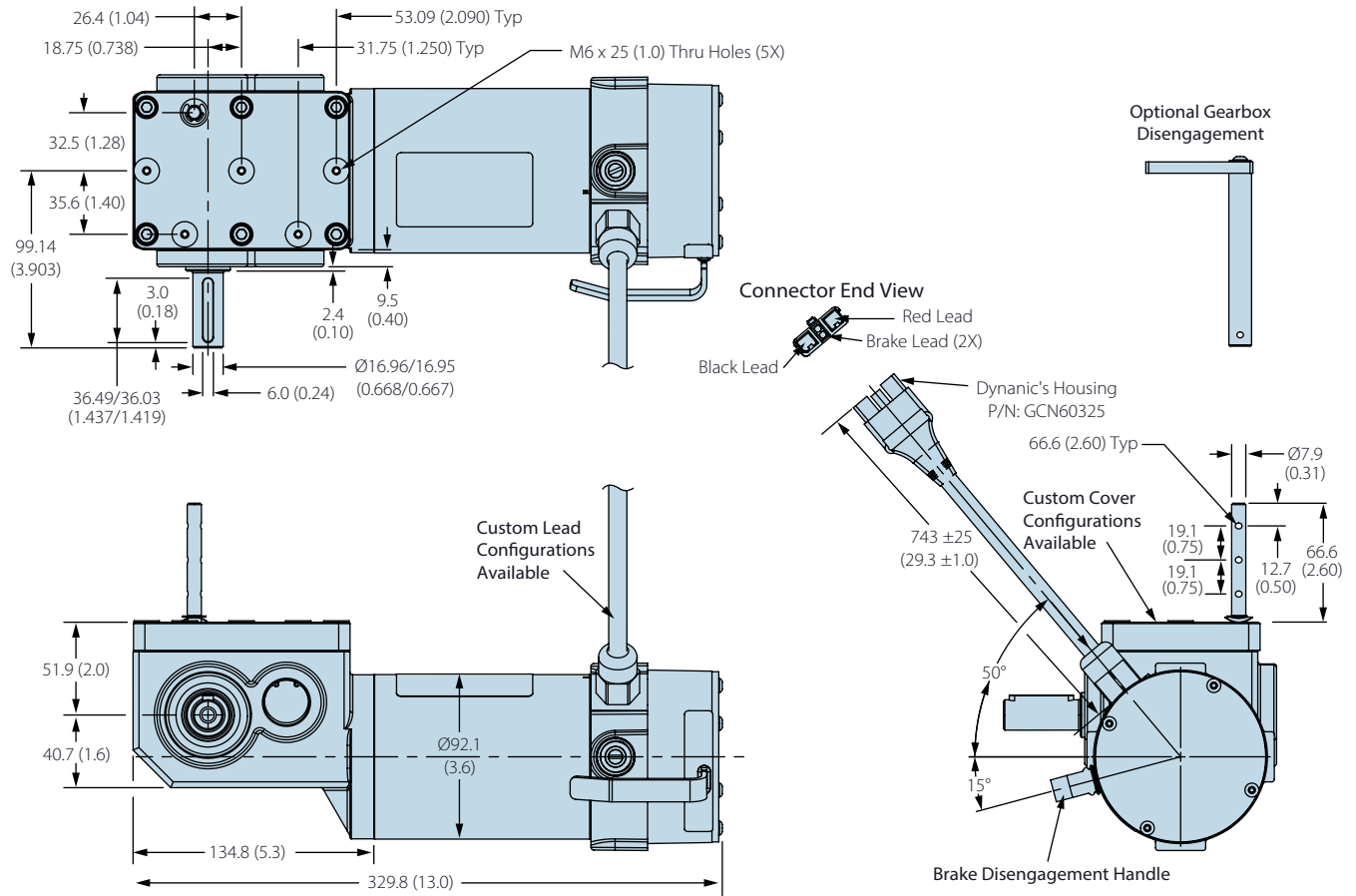
RAD 36 Series Gear Motors – Specifications

Model	GRD-50970161	
Type	Right-angle shaft	
Motor Type	PMDC brush, 4-pole	
Frame Size	91.4 mm 3.6 in)	
Winding Voltage	24 VDC	
Torque	Rated	11.3 Nm (100 lb.in)
	Peak	90.4 Nm (800 lb.in)
Rated Speed	170 rpm	
No-load Speed	165 - 185 rpm	
Rated Power	201 W (0.27 HP)	
Current — ADC	Rated	18
	Peak	96
	No-load	7
Gear Ratio	24:1	
Peak Efficiency	54%	
Rotation (shaft view)	CCW (positive voltage to positive motor terminal)	
Bearing Type	Radial ball bearing	
Backlash (no load)	10.9 - 32.7 arcmin	
Weight	8.0 kg (17.5 lb)	
Ambient Operating Temperature at Rated Duty	22 °C max	
Ambient Storage Temperature	-30 to 80 °C	
IP Rating	IP 52	

RAD 36 Series Gear Motors – Performance



RAD 36 Series Gear Motors Dimensions — in (mm)



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