



GPM50

RHINO SERIES

Key Features



Space Saving



Minimal Wiring



Cost Savings



Easy Installation



ePConnected™ - Real Time Data
Monitoring (RTDM)



Matched for Best Performance Output

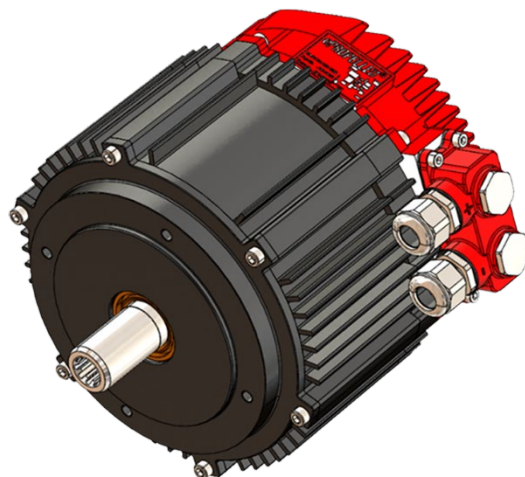
DATASHEET

The Future of Highly Efficient, Compact, Integrated Motor Drive

Unlock the future of autonomous mobility with our cutting-edge PMSM-IPM type motor, designed for Unmanned Ground Vehicles (UGV). Delivering an impressive 6 kW continuous power and 11 kW peak power, this motor offers a 52 Nm peak torque and speeds up to 7500 RPM, ensuring exceptional performance for demanding missions.

Engineered with an integrated pre-tuned controller and Field-Oriented Control (FOC) technology, it maximizes efficiency (up to 90%), providing smooth and reliable power. Built with high-quality materials, low-friction bearings, and powered by eP Intelligent Assist™, you get real-time monitoring, software updates, and custom configurations at your fingertips.

With an IP67 rating, it thrives in demanding environments, operating between -40°C to 60°C ambient conditions, with natural cooling for long-lasting reliability. Compact, efficient, and customizable—this motor is the perfect solution for your next-generation unmanned vehicle.

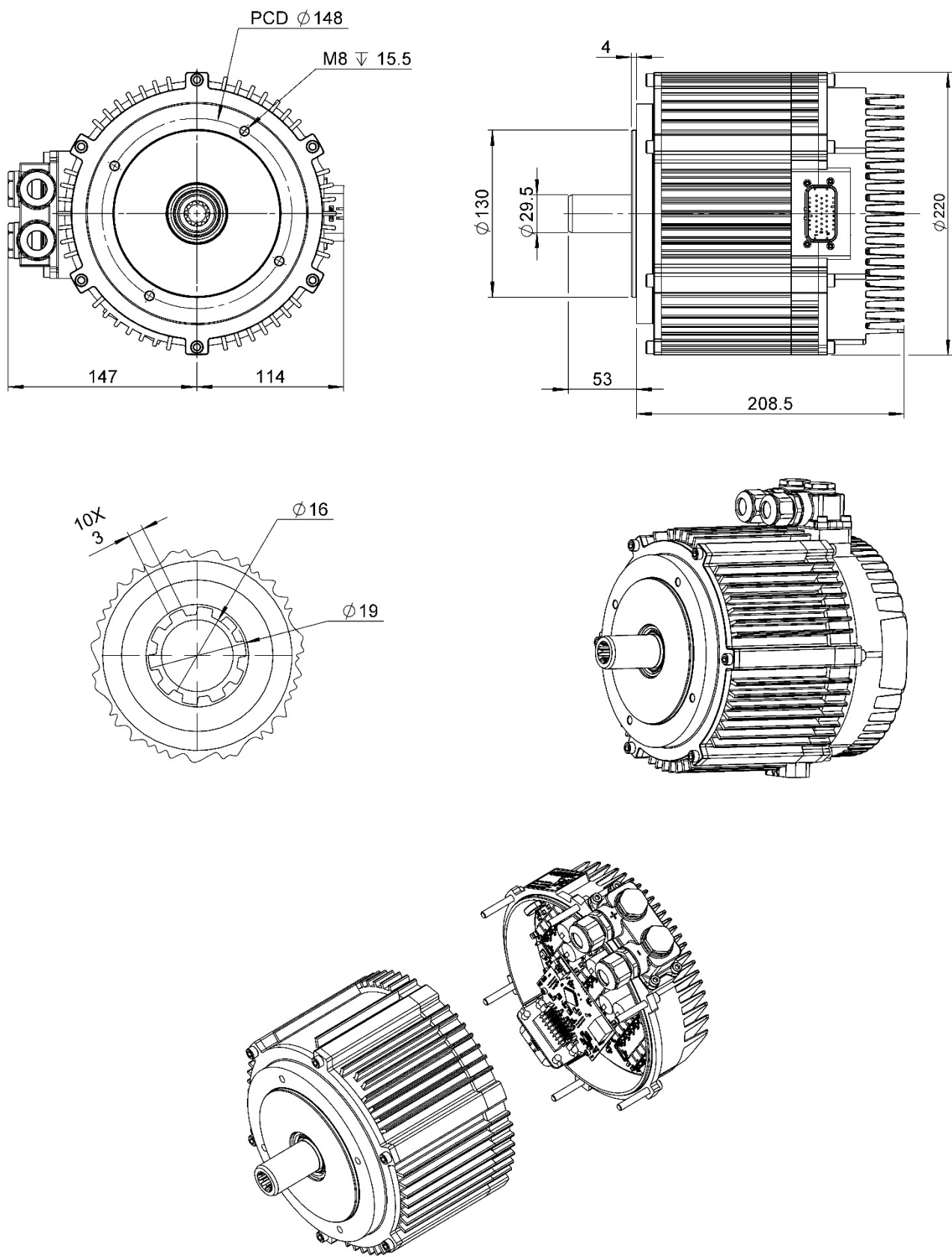


Technical Specifications

MODEL	SPECIFICATIONS
Motor	
Type	PMSM-IPM
Continuous power	6 kW
Peak power	11 kW
Peak torque	52 Nm
Max speed	7500 RPM
Motor sensor type	Quadrature Encoder
Rotation direction	CW (Facing drive end Cover)
Controller	
Control method	FOC
Mounting	Integrated with motor
Rated voltage	48 V
Operating voltage range	42 V – 56 V
Max Continuous operation	60 min
Max system efficiency	90%
Battery current	280 A, 60 Sec
Communication protocol	CAN 2.0 A
Connector	DB23Pin
Data monitoring	ePConnected™
Motor mounting with gearbox	Customizable
Mechanical - Integrated motor & controller	
Dimension (DxL)	220 mm x 208.5 mm
Weight	14.5 kg
Shaft spline	Internal Spline
Shaft projection	53 mm
Motor drive end cover	eP-Standard (can be customized)
Drive End Mounting bolt	4*M8
Electrical	
Power cable	35 Sq.mm
Lug	M8
Environmental	
IP rating	IP67
Ambient temperature	-40 to 60°C
Cooling type	Natural cooling
Required airflow around the motor	≥2 m/s

Note: The above specifications are subject to change in the final product.

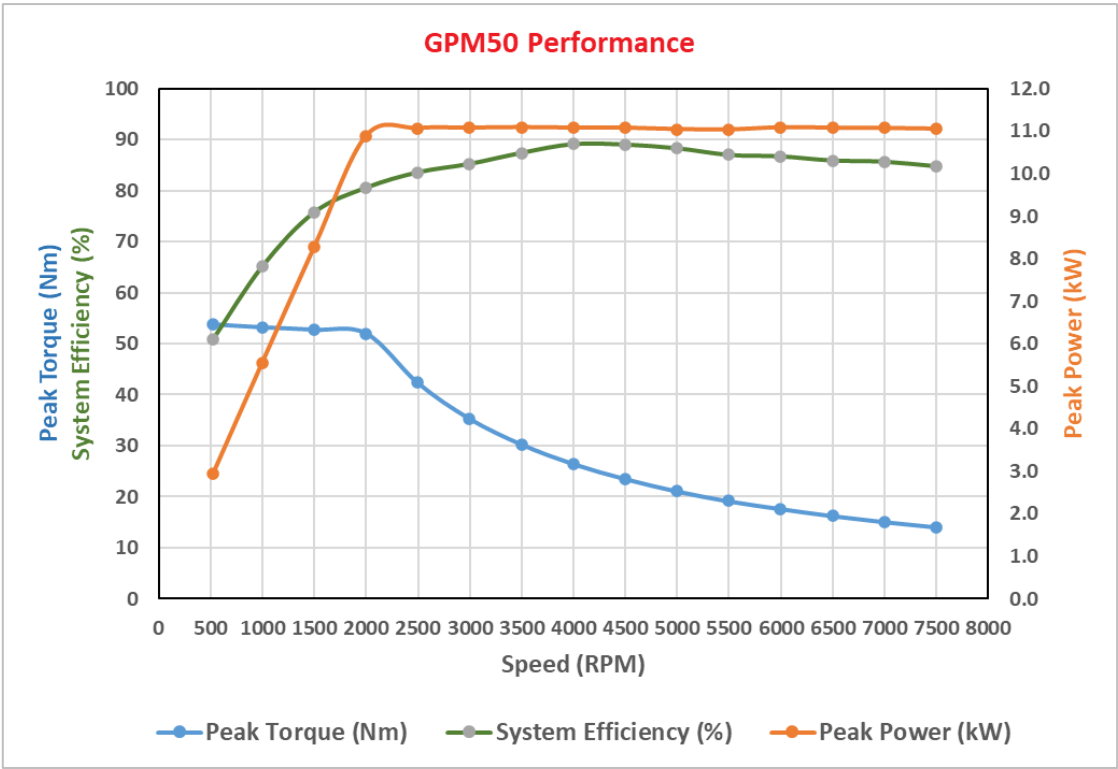
Motor Dimensions



*All Dimensions are in mm

GPM50 Performance Data

S. NO	BATTERY VOLTAGE (V)	BATTERY CURRENT (A)	SPEED (RPM)	PEAK TORQUE (Nm)	INPUT POWER (kW)	PEAK POWER (kW)	SYSTEM EFFICIENCY (%)
1	51.99	111.3	523	53.78	5.8	2.9	50.9
2	51.99	164.0	997	53.21	8.5	5.6	65.1
3	51.99	210.0	1498	52.73	10.9	8.3	75.7
4	51.99	260.0	2001	52	13.5	10.9	80.6
5	51.99	254.8	2497	42.35	13.2	11.1	83.6
6	51.99	250.0	2998	35.3	13.0	11.1	85.2
7	51.99	244.1	3499	30.28	12.7	11.1	87.4
8	51.99	239.1	3998	26.47	12.4	11.1	89.1
9	51.99	239.4	4499	23.52	12.4	11.1	89.0
10	51.99	240.6	4998	21.11	12.5	11.0	88.3
11	51.99	244.0	5499	19.17	12.7	11.0	87.0
12	51.99	246.0	5998	17.66	12.8	11.1	86.7
13	51.99	248.0	6499	16.28	12.9	11.1	85.9
14	51.99	248.6	6999	15.11	12.9	11.1	85.6
15	51.99	250.9	7500	14.08	13.0	11.1	84.7



Note: All specifications are subject to change without notice. For more information, including ordering products, contact us at info@epropelled.com | +1 (603) 236 7444 (USA) | +44 20 7993 4998 (UK) | +91-7824863268 (India).