VANGUARD™

MVG MOTORS

High-power motors that seamlessly integrate and complete a full battery system for OEM application needs.

BRUSHLESS PERMANENT MAGNET
> Ensures high efficiency.

AUTOMOTIVE-GRADE DURABILITY
> Built to automotive standards for unmatched reliability. Delivers outstanding resilience and reliability.

MAINTENANCE-FREE OPERATION
> Designed to operate without the need for regular maintenance.

EASY INTEGRATION FEATURES
> Reduces development costs and enhances flexibility for legacy applications. Standard mounting to support ICE replacement.



MOTORS

TECHNICAL SPECIFICATIONS



SPECIFICATION	MVG1500	MVG1500	MVG1500	MVG3500	MVG5000
MOTOR TYPE	Brushless PM	Brushless PM	Brushless PM	Brushless PM	Brushless PM
APPLICATION	Deck	Deck	Transmission	Utility	Utility
VOLTAGE CLASS	48V	48V	48V	48V	48V
VOLTAGE RANGE	24-72V	24-72V	24-72V	24-72V	24-72V
OUTPUT POWER (CONTINUOUS)	1 kW	0.8 kW	1 kW	3.5 kW	5 kW
OUTPUT POWER (PEAK)	3.8 kW	4 kW	3.8 kW	6 kW	7.5 kW
TORQUE OUTPUT CONTINUOUS	3.3 Nm	3.2 Nm	3.3 Nm	9.6 Nm	13.6 Nm
MAXIMUM TORQUE	16 Nm	13 Nm	16 Nm	28 Nm	47 Nm
BASE SPEED	3200 RPM	4000 RPM	3200 RPM	3500 RPM	3500 RPM
MAXIMUM SPEED	4000 RPM	4000 RPM	4000 RPM	4500 RPM	4500 RPM
EFFICIENCY (PEAK)	>87%	>87%	>87%	>92%	>92%
MINIMUM OPERATING TEMPERATURE RANGE	-4˚F / -20°C	-4˚F / -20°C	-4˚F / -20°C	–4˚F / -20°C	-4˚F / -20°C
MOTOR D-RATE TEMPERATURE	176˚F / 80°C	176˚F / 80°C	176˚F / 80°C	248˚F / 120°C	248˚F / 120°C
MOTOR OFF PROTECTION TEMPERATURE	212˚F / 100°C	212˚F / 100°C	212˚F / 100°C	284˚F / 140°C	284˚F / 140°C
ENCLOSURE RATING	IP65	IP65	IP65	IP66 + Pressure Wash	IP66 + Pressure Wash
D X L BODY (MM)	With mounting included: Diameter - 246.22 Height - 160.6	With mounting included: Diameter - 246.22 Height - 160.6	With mounting included: Diameter - 224 Height - 187	Mount type: SAE J609 Diameter - 170 Length with shaft - 248.3	Mount type: SAE J609 Diameter - 170 Length with shaft - 288.3
PTO (MM)	Shaft Length: 0.678 in (17.13 mm) Diameter: 0.75 in (19.05 mm) x 0.619 in (15.70 mm) wide	Shaft Length: 0.678 in (17.13 mm) Diameter: 0.75 in (19.05 mm) x 0.619 in (15.70 mm) wide	Shaft Length: 1.92 in (48.4 mm) Diameter: 0.66 in (16.925 mm)	Shaft Length: 2.3 in (58.42 mm) Diameter: 3/4 in (19.05 mm) Keyway Size: 1.9 in (48.26 mm) L x 0.1835 in (4.66 mm) W x 0.094 in (2.38 mm)	Shaft Length: 2.3 in (58.42 mm) Diameter: 3/4 in (19.05 mm) Keyway Size: 1.9 in (48.26 mm) L x 0.1835 in (4.66 mm) W x 0.094 in (2.38 mm)
WEIGHT (KG)	8.07	7.8	8.07	10.2	15.0

VANGUARD™

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[1] See vanguardpower.com for warranty details.

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