

POWERPHASE® HD 250(+)

UQM PowerPhase® HD 250(+) was specifically designed for heavy-duty drive applications. Providing up to 95 percent efficiencies, this system consists of a high performance liquid cooled permanent magnet motor and a high-power, liquid-cooled inverter with a full-featured digital signal processor controller. Improved stall duration is now available with latest software.

FEATURES

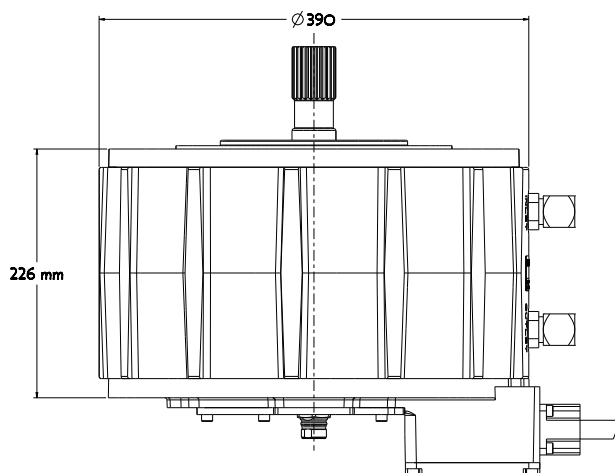
- EV/HEV traction drive
- Power dense, brushless permanent magnet motor
- High efficiency (95%)
- CAN bus communication
- Torque control, speed control and voltage control
- Built-in safety features
- Real time data event logging
- Highly improved stall duration at 900 Nm

SYSTEM SPECIFICATIONS

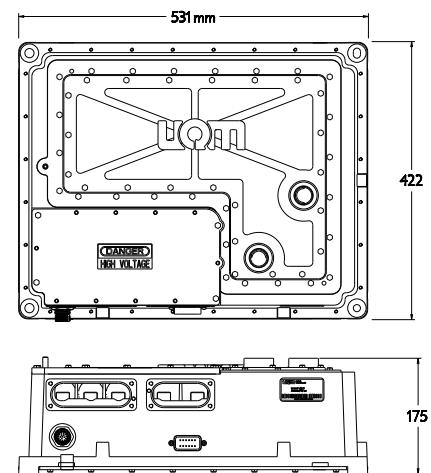
Operating speed	0-5500 rpm
Maximum / continuous power	250 kW / 180 kW
Maximum / continuous torque	900 Nm / 520 Nm
Peak efficiency	95%
Operating voltage	450-750 VDC
Communication	CAN bus



POWERPHASE® HD 250(+) MOTOR



POWERPHASE® HD 250(+) CONTROLLER



POWERPHASE® HD 250(+)

MOTOR PERFORMANCE

SPECIFICATIONS

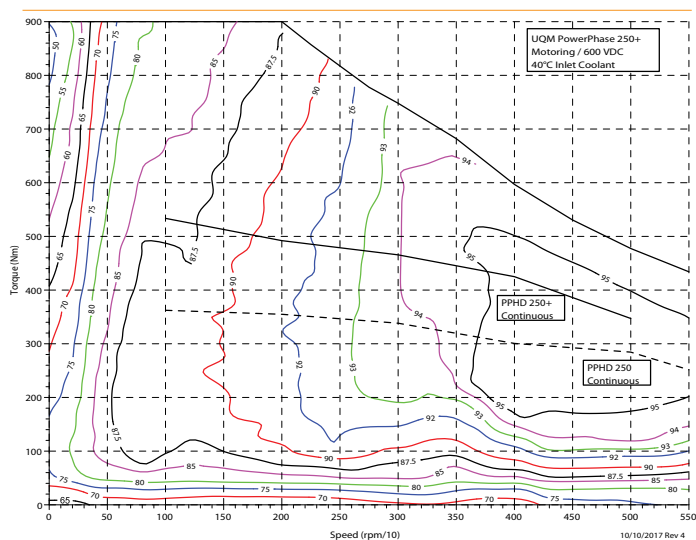
Peak power	335 hp	250 kW
Continuous power [◇]	241 hp	180 kW
Peak torque	664 lbf ft	900 Nm
Continuous torque	384 lbf ft	520 Nm
Maximum efficiency	95%	
Continuous Power density	1.8 hp/lb	3.0 kW/kg

* Continuous ratings with 40C coolant

DIMENSIONS

Length	8.9 in	226 mm
Diameter	15.4 in	390 mm
Weight	187 lb	85 kg

PERFORMANCE CURVE



To view additional efficiency maps, please contact us.

Continuous power ratings at 40° C. Efficiency is motor + inverter, tested on calibrated dynamometer.

CONTROLLER PERFORMANCE

OPERATING VOLTAGE

Operating voltage input range	450-750 VDC
Minimum voltage	450 VDC
Nominal input voltage	600 VDC
Maximum voltage	750 VDC
DC current limitation, motoring	500 A

DIGITAL SIGNAL PROCESSOR

Nominal input voltage	12 VDC or 24 VDC
Input supply voltage range	9 to 35 VDC
Input supply current range	1 to 5 A

LIQUID COOLING SYSTEM

Minimum coolant flow	10 l/min 50/50 water/glycol
Maximum inlet temperature	140° F 60° C

INVERTER TYPE

Control type	PWM & phase advance
Power device	IGBT
Switching frequency	3 to 12 kHz
Standby power	14 W

DIMENSIONS

Length	20.9 in	531 mm
Width	16.6 in	422 mm
Height	6.9 in	175 mm
Weight	88.0 lb	40 kg



UQM Technologies is a developer and manufacturer of power-dense, high-efficiency electric motors, generators and power electronic controllers for the automotive, commercial truck, and bus markets. A major emphasis for UQM is developing products for the alternative-energy technologies sector, including propulsion systems for electric, hybrid electric, plug-in hybrid electric and fuel cell electric vehicles.

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*All product photos are for illustrative purposes only. Photos displayed may contain items that are not included in the default configuration for that system. **All specifications are subject to change. Variation will exist.