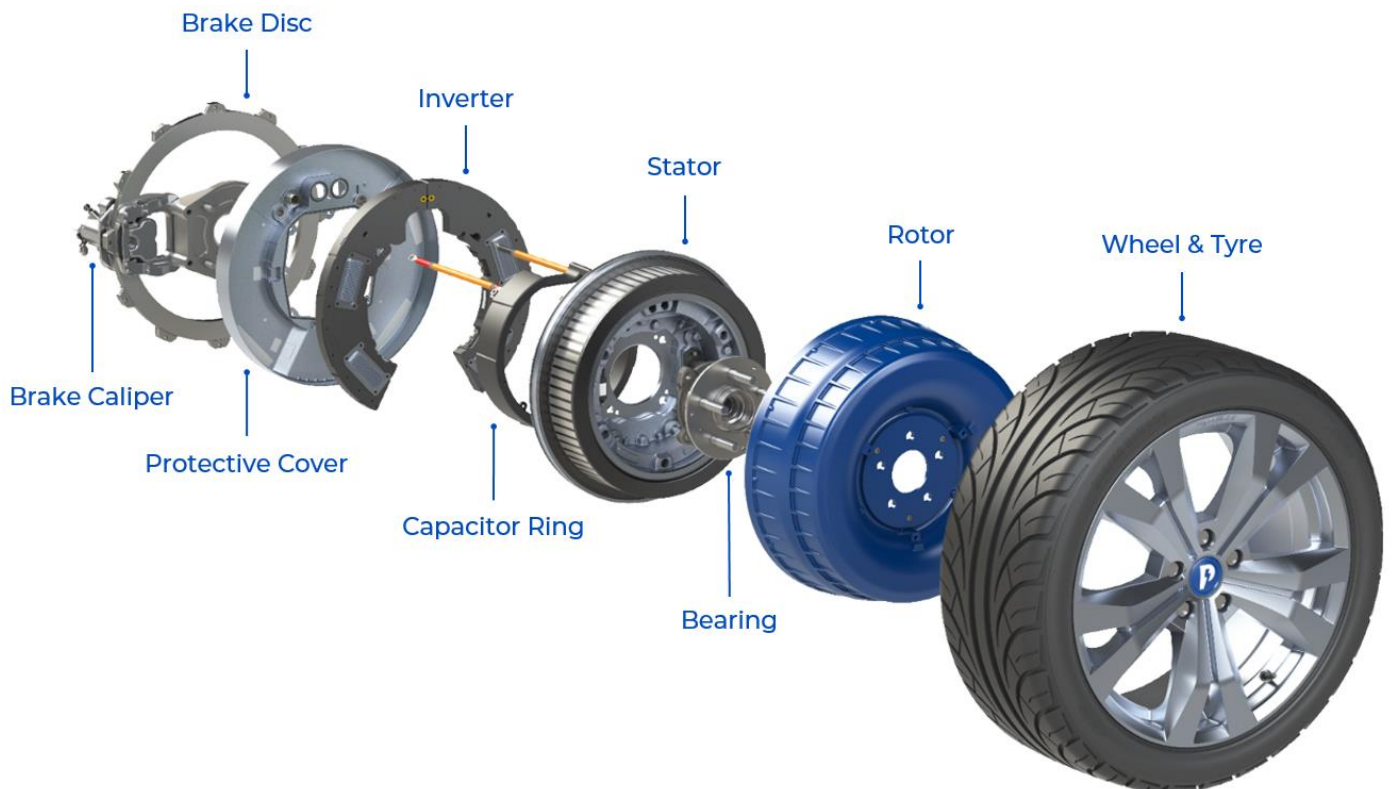




Datasheet

Protean Electric is an automotive technology firm. Our ProteanDrive in-wheel motors have integrated inverter and digital control, packaged with a compatible friction brake. All made using patented technologies to withstand a 300,000km vehicle lifetime, including water and dirt ingress, shock and vibration, pot-holes and kerb strike.



Features:

- Packaged into an 18" wheel rim
- Torque demand control over CAN bus
- High torque direct drive (no gearing) for optimal efficiency
- Permanent magnet synchronous radial flux machine with outer rotor
- Design lifetime of 300,000km or 15 years with verification through bench and vehicle durability testing
- Integrated friction brake
- Integrated wheel bearing
- Integrated inverter and control electronics with distributed architecture
- Developed in accordance with ISO 26262 functional safety standard

Parameters:

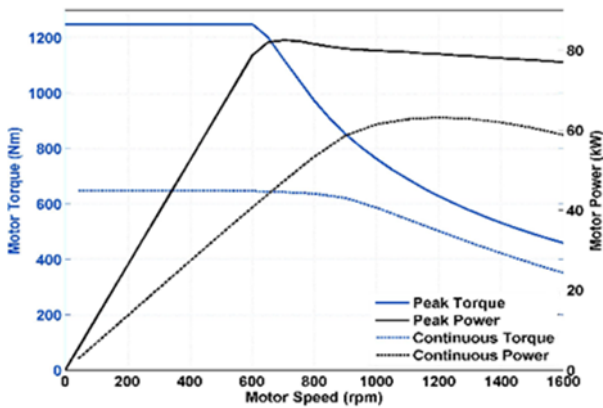
Characteristic		Pd18	Units
Peak Output Power *	@400 Vdc (GB/T 18488 certified value)	80 (78)	kW
Continuous Output Power *		60 (60)	kW
Peak Torque		1250 (1240)	Nm
Continuous Torque		650 (600)	Nm
Motor Dimensions (diameter, axial depth to rear of stator, excluding cable glands)		433, 125	mm
Motor Mass (including inverter, excluding bearing, brake and cables)		36	kg
Maximum Speed **		1600	rpm
HV DC Supply Voltage Range		150 to 435	Vdc
Coolant Inlet Temperature Range		-40 to +70	°C
Coolant Flow Rate (up to 50/50 Water/Glycol)		13	LPM
Ambient Temperature Range		-40 to +90	°C
Control Interface (torque demand)		CAN 2.0b	
Ingress Protection Rating		IP6K9K	
Power and Control Electronics		Integrated inverter with distributed architecture and axle cross-checking	
Foundation Braking Solution		Integrated brake disc	

* Maximum achievable power is approximately proportional to HV DC supply voltage

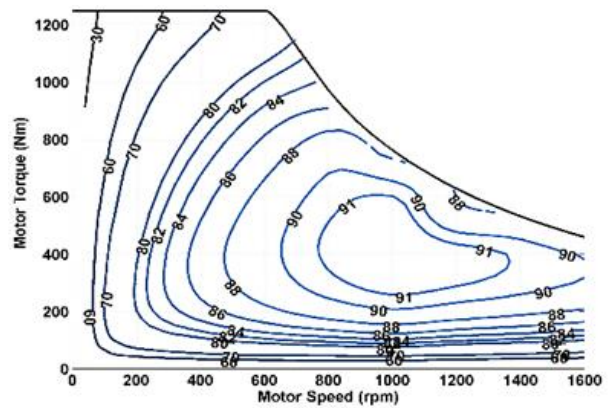
** Higher speed variant available on application up to 2200rpm

Performance at 400 Vdc and 50 °C coolant:

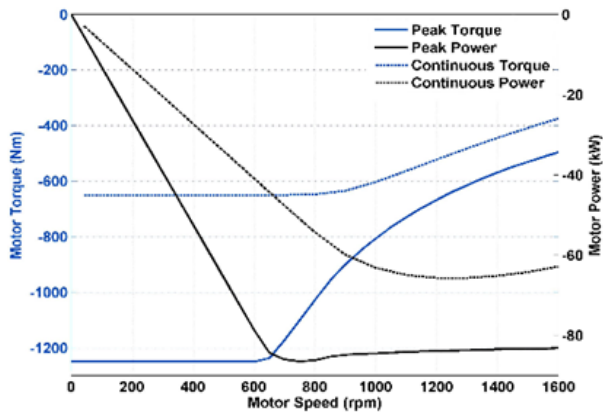
Driving Torque & Power



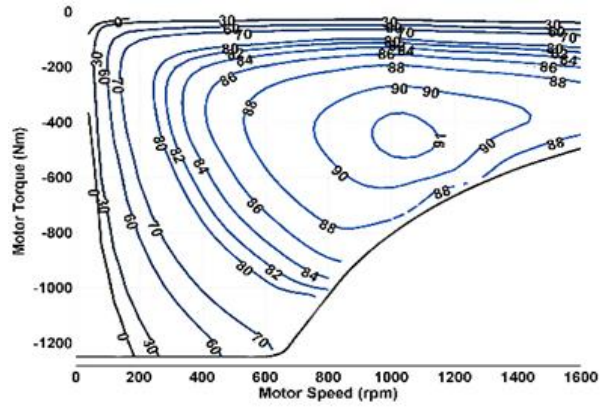
Driving Efficiency (DC supply-to-wheel)



Braking Torque & Power



Braking Efficiency (DC supply-to-wheel)



For more information please visit our website or email enquiries@proteanelectric.com