Issue 08-2026

HDRM™300C/300TC

Magnet-free traction motors with patented compressed coil technology

In Development

The HDRM™300 Series are rare earth magnet-free motors offering market-leading performance, efficiency and sustainability for a range of applications. Using off-the-shelf power electronics, the HDRM™300 motors are a direct replacement for permanent magnet machines.

New Features

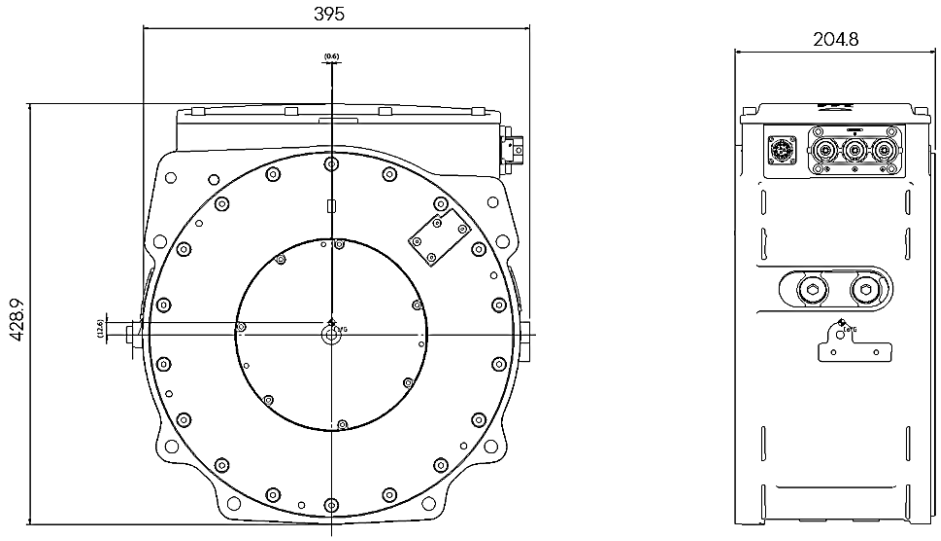
+ Compressed coil technology, significant uplift to 300Nm continuous performance
+ Higher DC Voltage Operating Range up to 1000Vdc
+ Amphenol PowerLok 3-phase connector
+ Ingress Protection Level IP6K9K
+ Higher maximum speed of 9,000rpm



Same Great Benefits

→ Peak efficiency >97%.
→ Modular, stackable design for a wide range of applications.
→ Freewheeling capability allowing vehicle to coast when necessary.
→ Inverter agnostic.
→ No risk of demagnetization, allowing motors to run faster and hotter.
→ No back-EMF or short circuit current to ensure safe failure modes.
→ No cogging at high speeds for high drive cycle efficiencies.

Dimensions



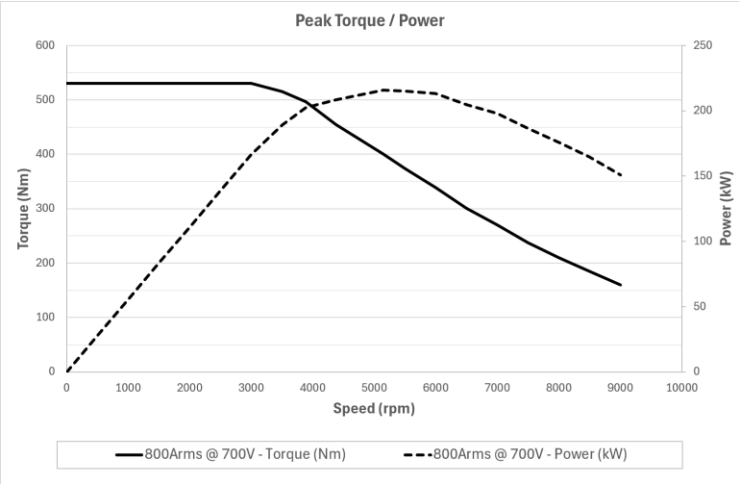
Advanced Electric Machines reserves the right to change or modify product specifications, configurations, or dimensions at any time without notice.

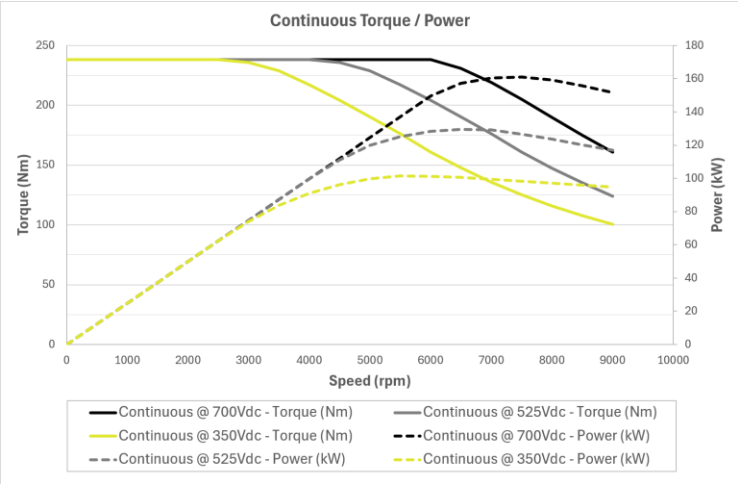
10-11 Teal Farm Way, Washington, NE38 8BG | +44 (0)191 4477 010 | info@advancedelectricmachines.com | **www.advancedelectricmachines.com**

Performance

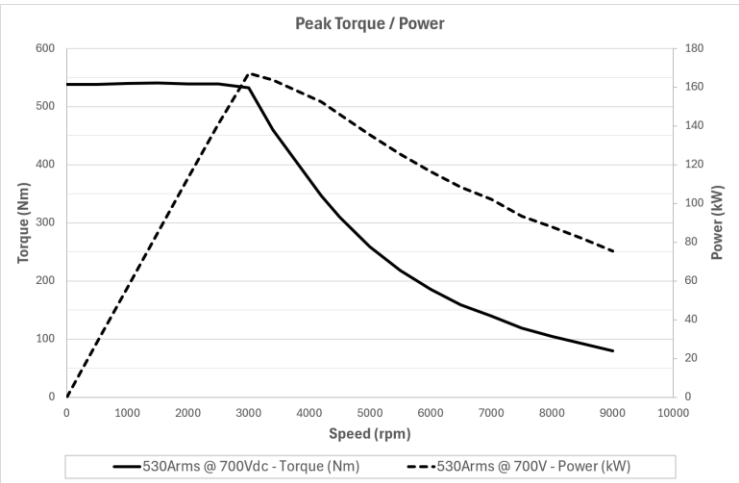
	HDRM™300C	HDRM™300TC
Voltage	300-1000Vdc	500-1000Vdc
Peak Power	119 kW (350V), 163 kW (525V), 215 kW (700V)	140 kW (500V), 168 kW (700V), 200 kW (850V)
Continuous Power	100 kW (350V), 129 kW (525V), 160 kW (700V)	98 kW (500V), 128 kW (700V), 167 kW (850V)
Peak Torque	540 Nm	
Continuous Torque	238 Nm	300 Nm
Max Current for Peak Torque	800Arms	530Arms
Weight (dry)	86kg	85kg
Max. Speed	9,000rpm	
Cooling	Water / Glycol	

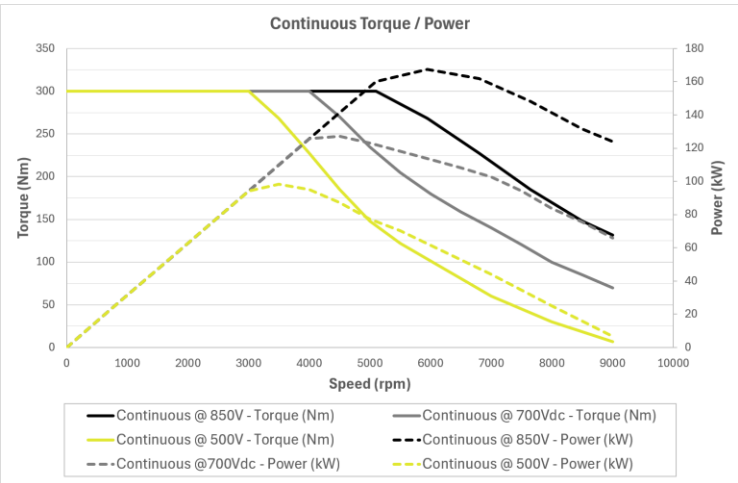
HDRM™ 300C





HDRM™ 300TC





- Performance will vary based on chosen inverter.
- Continuous torque/power curves are modelled. HDRM300C continuous current 300Arms, HDRM300TC 240Arms.
- Maximum operating voltage 1000Vdc – performance at this voltage will be greater than represented in the charts.
- Motor performance may vary based on the customer's duty cycle, system integration and operating conditions.
  - Conditions include but not limited to: coolant flow rate, coolant temperature, inverter parameters and mounting arrangement.
  - Customer must validate exact performance in the end application.

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www.AdvancedElectricMachines.com
info@AdvancedElectricMachines.com
+44 (0)191 4477 010

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