Issue 10-2026

HDRM™Titan

Heavy-duty, magnet-free motors with patented compressed coil technology

Concept Design

The HDRM™Titan 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™Titan motors are a direct replacement for permanent magnet machines.



New Features

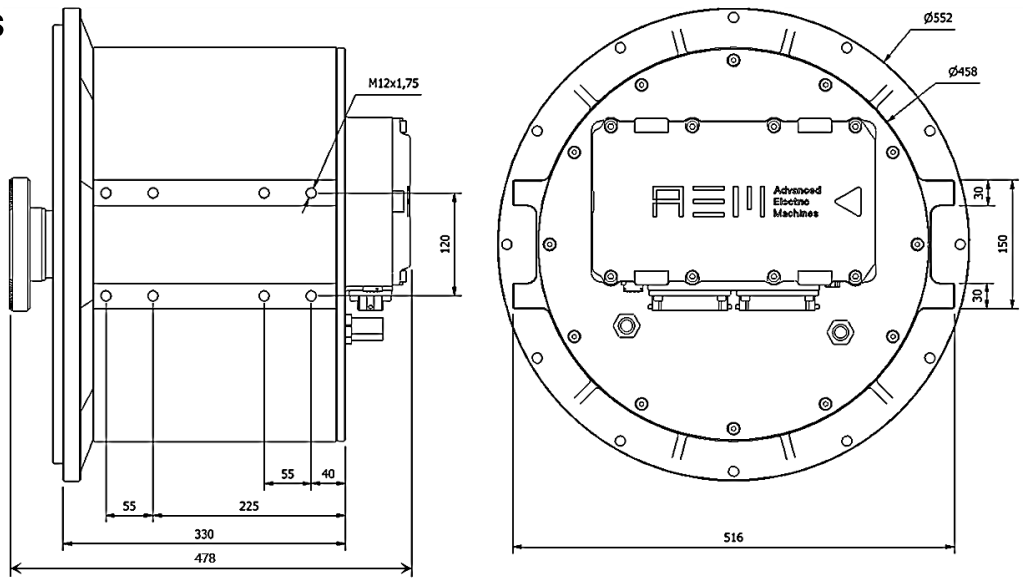
+ Peak power of 700kW and 5000Nm peak torque
+ Continuous power of 500kW and 3500Nm continuous torque
+ Compressed coil technology and improved thermal management
+ Extruded housing design allowing for multiple length options
+ Changeable output shaft options



Same Great Benefits

→ 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.

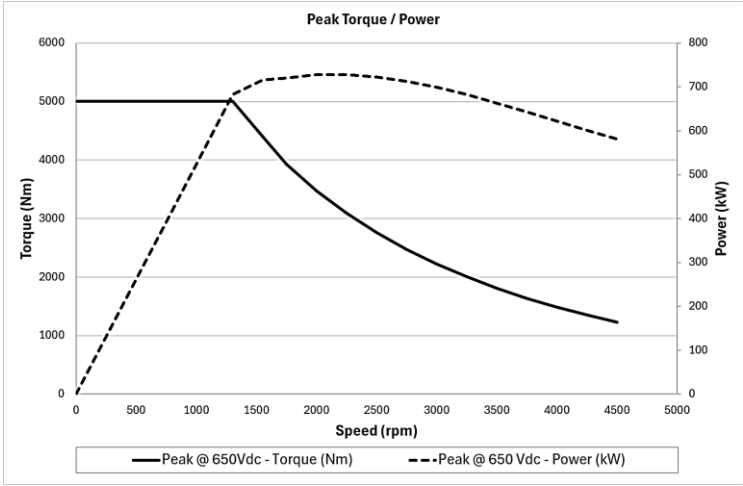
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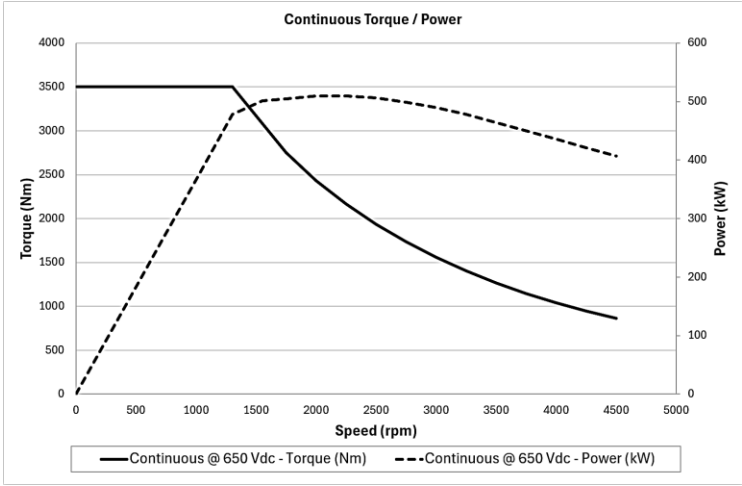
Headline Machine & Electrical Properties

Performance	
Peak Power	>700 kW
Continuous Power	500 kW
Peak Torque	5,000 Nm
Continuous Torque	3,500 Nm
Max. Speed	5,000 rpm
Weight (dry)	<300 kg

Electrical	
Maximum Voltage	1000Vdc
Nominal/Rated Voltage	650Vdc
Operating Voltage (Full Perf.)	600Vdc-850Vdc
Minimum Voltage	500Vdc
Maximum Current	900Arms
Frequency at Max Speed	1667Hz

Performance Specification



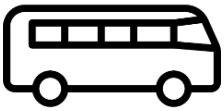


Target Applications

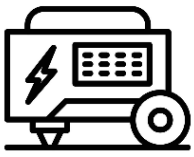

HCV


Construction


Marine


Bus


Agriculture


Genset

- All dimensions, specifications and performance documented are targets for the product.
- 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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