

SSRD™ Technology

Ultra-high performance traction motors for passenger cars

In Development

SSRD™ is a scalable rare earth magnet-free motor technology available with aluminium compressed coils, delivering ultra-high performance and efficiency. Controlled by AEM's patented inverter technology, SSRD™ is a direct replacement for permanent magnet motors.



Technology demonstrator

Features

- Scalable technology to match customer requirements.
- Sustainable, magnet-free and copper-free design.
- De-risked supply chain and cost-reduced BoM.
- Fully recyclable without disassembly.
- No back-EMF or short circuit currents ensuring safe failure modes.
- No risk of demagnetisation allowing the motors to run faster and hotter.
- Compressed aluminium windings replace traditional copper coils to improve power density and heat transfer capability with a reduced packing space.
- No cogging or electromagnetic drag losses at high speeds, giving high drive cycle efficiencies.
- Powered by AEM's novel inverter design.



Example Performance

	SSRD™ CV3 Prototype
Peak Power	308 kW (8,000 rpm)
Continuous Power	138 kW
Peak Torque	378 Nm
Max. Speed	30,000 rpm
Power Density	10.4 kW/kg
Cooling	Water / Glycol

AEM are a technology partner who can provide bespoke solutions to meet your requirements. Please contact AEM for further details.

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