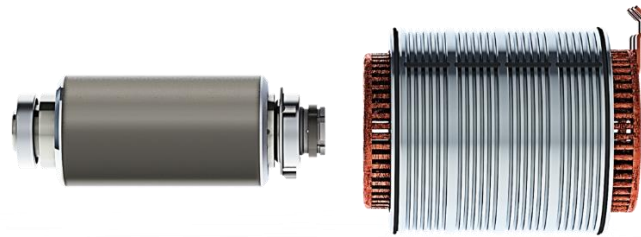




# High Performance Radial Field Traction Motor TM91

## TM91 Traction Motor

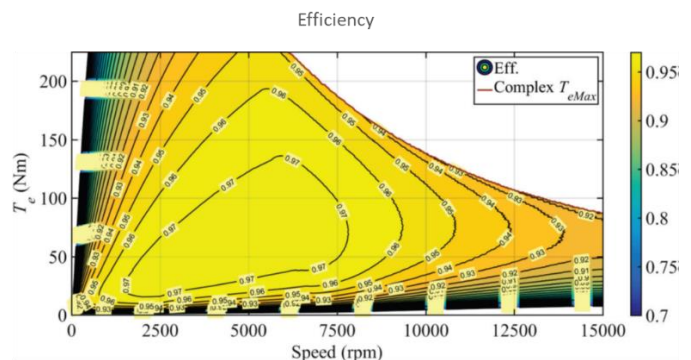
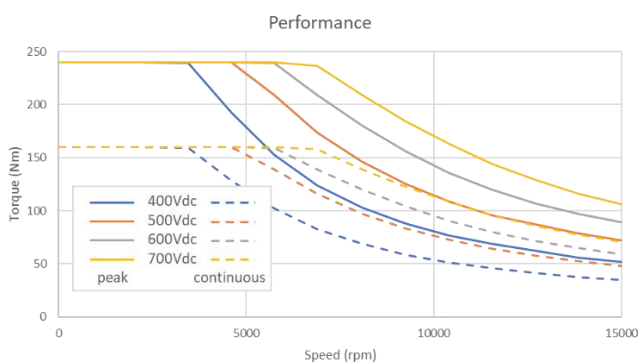
- Magnomatics TM91 traction motor delivers high-power performance in a small and light weight package
- A highly refined Interior Permanent Magnet rotor design and novel internal heat management result in efficient use of materials to develop extremely high power for the size and weight
- Traction Motor can be provided as a cartridge style motor for close integration into other systems or as a stand-alone electric motor
- Traditional and simple manufacturing methods are retained to offer best value and quickly scalable production volumes
- High thermal stability and fast overload recovery times are possible – good for repeated acceleration and regenerative braking cycles



## Dimensions and Benefits

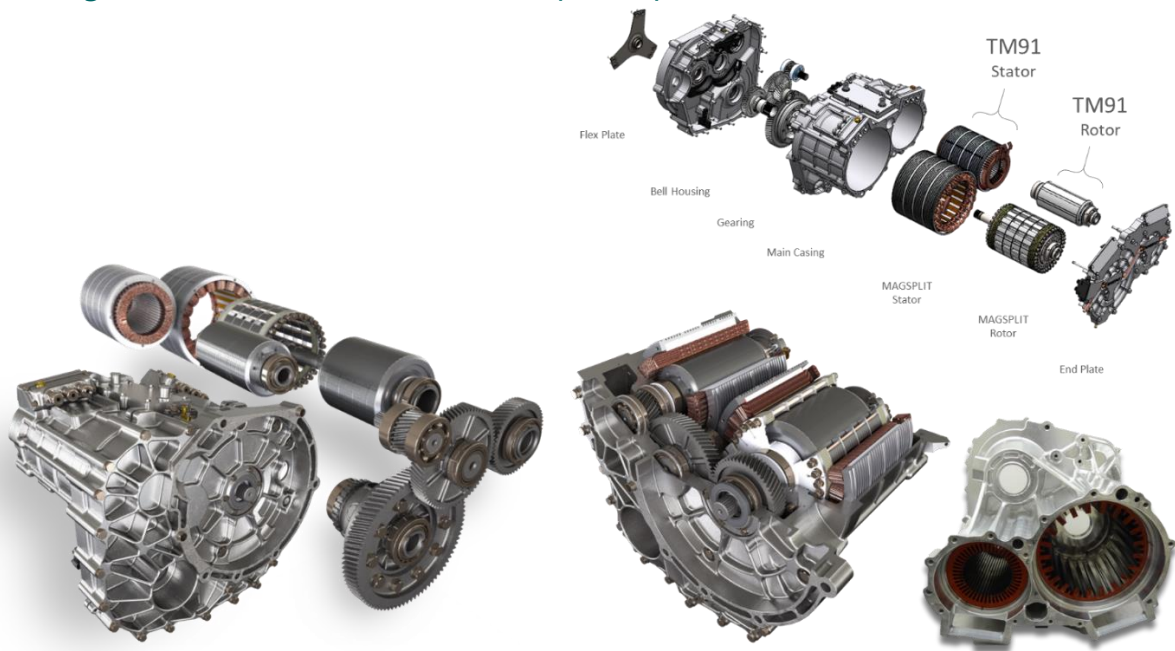
- Electric traction motor for electric vehicles and hybrid vehicles applications. It is a compact, lightweight traction motor with efficient power delivery.
- Dimensions: from 168mm (D) 220mm (L) (stator); 250mm (L) (shaft), weight: 22.5 kg as cartridge machine
- Dimensions: 180mm (D) 275mm (L) for non-cartridge option, weight: 27kg (including casing)
- Automotive resolver position feedback
- Stator cooling by 50-50 water-glycol @ 6 l/min(minimum) at 60°C, (low pressure drop cooling jacket)
- Low pressure oil circulation at 0.5 l/min to 2 l/min for bearing lubrication (oil can be shared with gear or other system)
- Peak efficiency available over a wide operating range, making traction motor useful for many applications

## Performance and efficiency



Technical Specifications	
Diameter - cartridge option (with casing)	160 mm (180 mm)
Length - cartridge option (with casing)	220 mm (275 mm)
Weight - cartridge option (with casing)	22.5kg (27kg)
Efficiency	97%
Cooling	Oil lubrication and water jacket
Rated torque	160 Nm
Max torque	240 Nm
Rated speed	15,000 rpm
Max speed	15,000 rpm
Rated power	120 kW
Max power	168 kW
Supply voltage	700 VDC

### Example of integration of TM91 into ultra-compact hybrid transmission



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