



# **magniflux™** **Technology**

An advancement of permanent  
magnet motor design

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The demands of high performance electric motors requires innovative and efficient design. The magniflux™ motor is an ideal solution for applications such as transport, marine and mining requiring high torque with high efficiency delivered across the entire speed range.



### Applications

The magniflux™ technology significantly reduces (>40%) the need of steel backing on the rotor - thereby significantly reducing the weight of the rotor. This is an attractive feature for when the rotor needs to have a fast transient response, reverse direction quickly or quickly switch from motoring to generating.

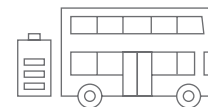
The key benefits of the magniflux™ technology are:

- High efficiency over wide torque and speed range
- High efficiency (up to 97%)
- High power density
- Lightweight rotor
- More field is used to create torque

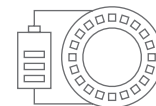
### Model Specifications

	<b>magniPM20</b>	<b>magniPM4</b>
<b>Continuous / Peak Power (kW)</b>	150 / 200	200
<b>Continuous / Peak Torque (Nm)</b>	1500 / 2500	485
<b>Corner / Maximum Speed (RPM)</b>	900-1000 / 2700+	4000
<b>Motor Peak Efficiency</b>	>97%	>96%
<b>DC Bus / Battery Voltage</b>	Typ 600-750	Typ 600-750
<b>Motor Dimension (mm)</b>	Ø480 x 450	Ø430 x 670
<b>Motor Mass (kg)</b>	210	220

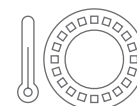
### Why our Electric Motor?



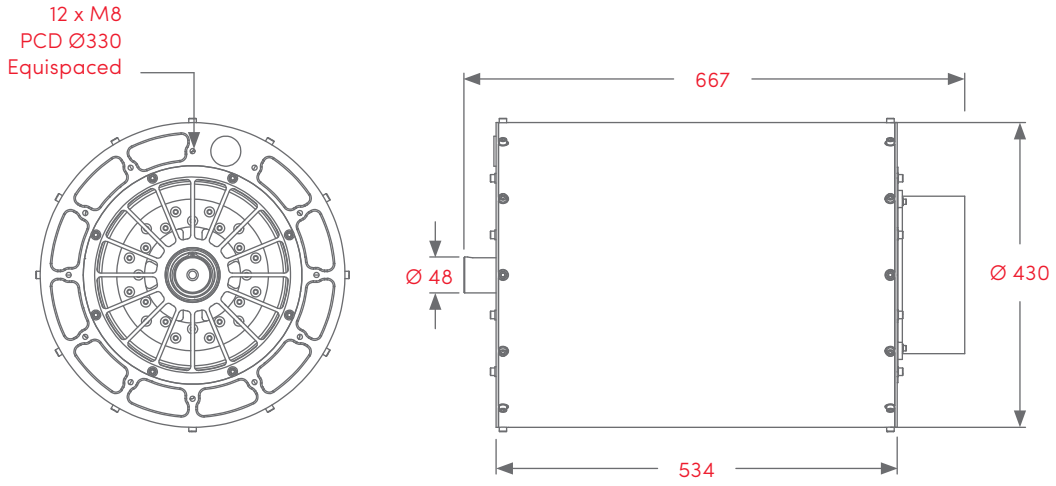
Transport vehicles need to manage and extend their range by conserving battery power (efficiency).



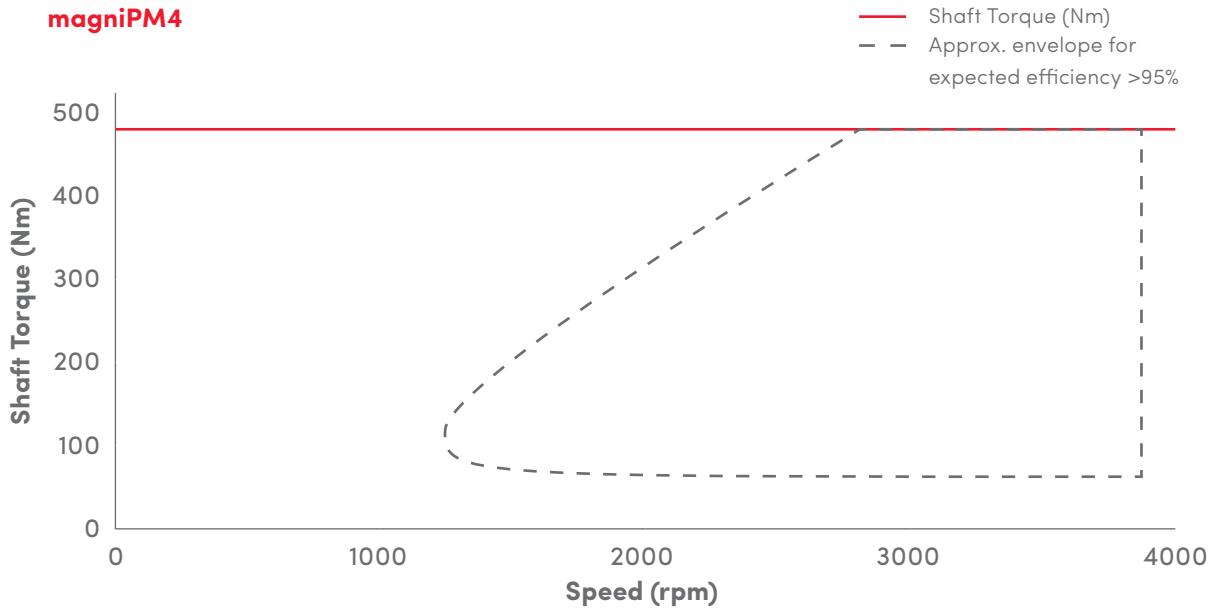
Utilising the stored power to achieve the torque required efficiently (torque performance), while accounting for variable loading (no passengers to full capacity).



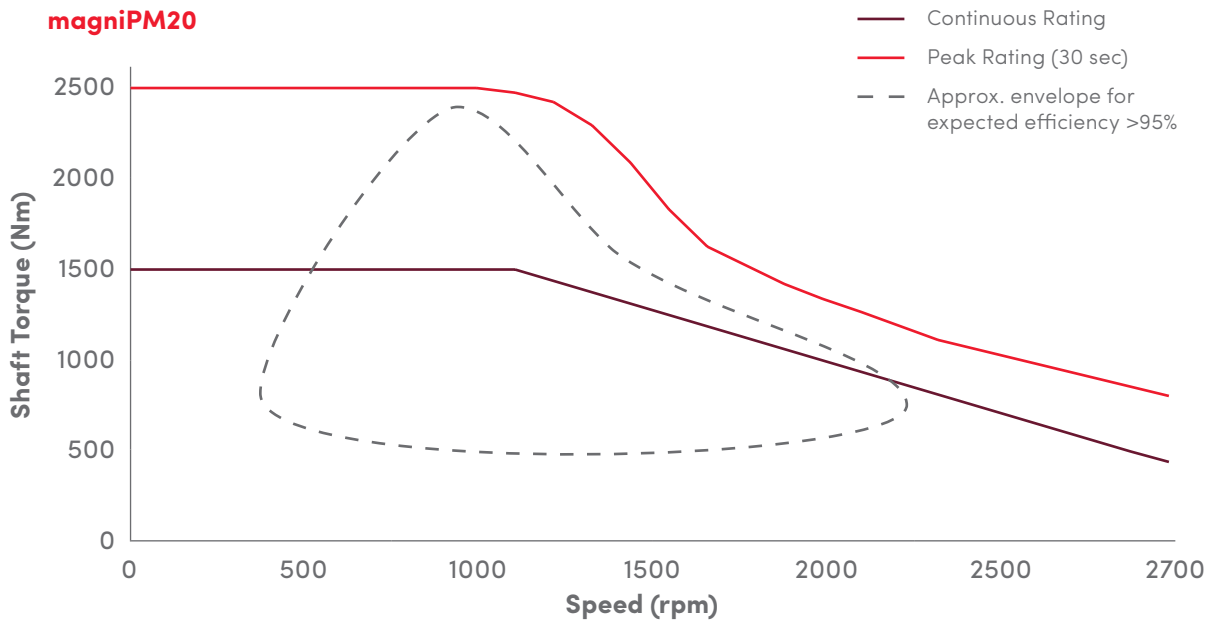
Overall improved efficiency over a wide speed range reduces heating and related deterioration of motor lifetime and reliability.



### magniPM4



### magniPM20



magniX is leading energy innovation by redefining power density and efficiency. Through its pioneering magniflux™ technology applied to superconductor and permanent magnetic motors and generators, magniX is capable of scaling its technology to meet electrical generation and torque requirements for sustainable commercial transport and industry.

**Power magnified.**

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