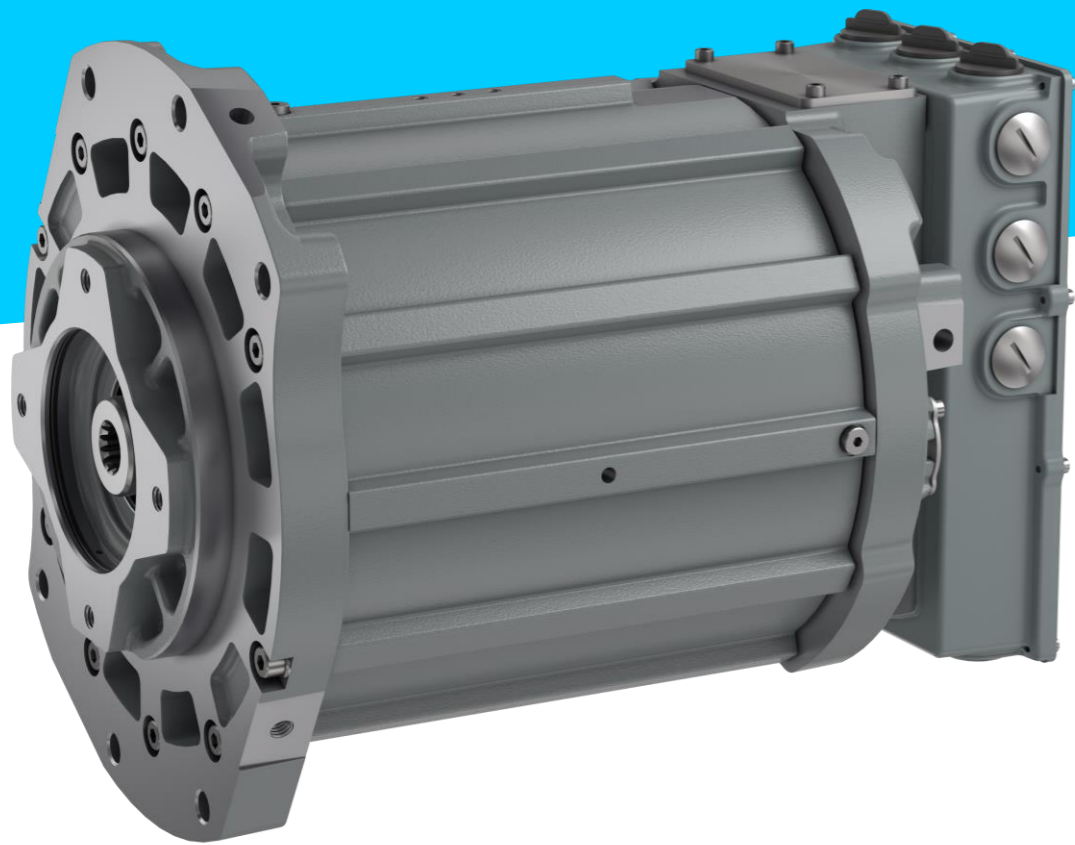


eLION Motor EML1

Heavy duty design for Off-Highway applications

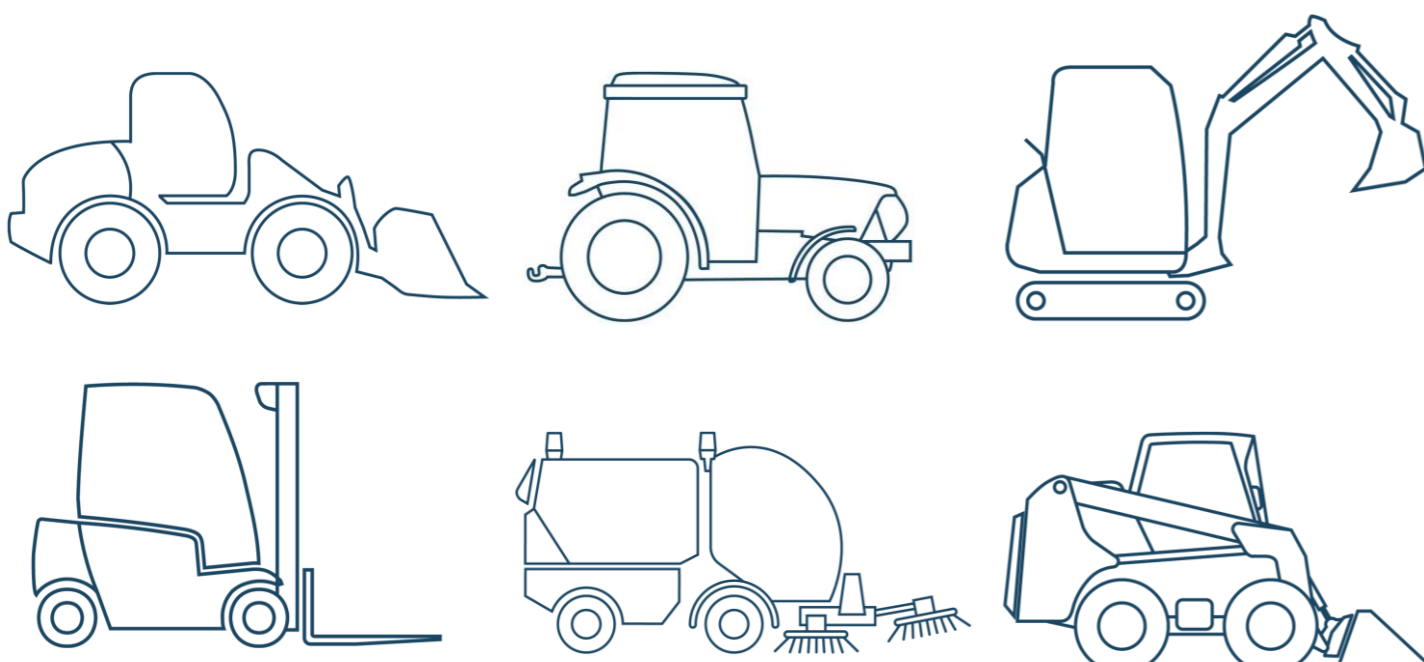


Specifically designed for the off-highway market, Bosch Rexroth has developed its eLION solution portfolio to be robust, scalable and safe. As a result, additional requirements for enhanced productivity and performance, as well as improved efficiency and reduced exhaust emissions are met. With an already strong position as an engineering partner in the hydraulic world, Bosch Rexroth has a strong position with off-highway vehicle manufacturers. The eLION portfolio provides easily integrated electric solutions for various functions in off-highway vehicles, whether they be diesel-electric, hybrid, or fully-electric.

CUSTOMER BENEFITS

- Robust design to endure off-highway conditions
- Optimized electrical machines for various functions
- Dedicated portfolio for medium power applications
- Easy integration with standardized mechanical interfaces
- High efficiency
- Sustainable designs and solutions for mobile machines

APPLICATIONS



FUNCTION AND BENEFITS

Robust design to endure off-highway conditions

The eLION motors fulfill the protection rating IP6K7 and IP6K9K. Additionally, they have a mechanical strength of 50 g shock and 10 g random vibration. The motors operate reliably between ambient temperatures of -40 °C and +100 °C and benefit from a resolver feedback.

Optimized electrical machines for various functions

To serve the off-highway market for applications such as construction, excavator, agriculture, material handling, among many others, the eLION motor portfolio is available in a dedicated range of performance. By taking advantage of the portfolio and Bosch Rexroth's vast experience, various machine functions can be realized – such as traction, implements, or swing drive.

Dedicated portfolio for medium power applications

The low voltage eLION motor portfolio provides solutions for medium sized off-highway with various functions. The motor portfolio includes one motor diameter with four standard lengths, realizing a nominal power of up to 47 kW and a nominal torque of up to 74 Nm.

TECHNICAL DATA

eLION Motor EMS1	
Axial radius:	130 mm
Nom. voltage:	96 V _{DC}
Nom. power:	up to 47 kW
Max. power:	up to 79 kW
Nom. torque:	up to 150 Nm
Max. torque:	up to 345 Nm
Max. speed:	up to 8,900 rpm
Cooling:	50:50 Water-Glycol Mixture
Coolant flow rate (@ 65 °C)	nom. 9 L/min
Data sheet:	RE96730



Typical 96V application – Telehandler



Typical 96V application – Wheel Loader

Easy integration with standardized mechanical interfaces

The eLION motors easily connect with axles, pumps and gearboxes using standardized flanges according to SAE J617 and SAE J744 as well as hub and spline shafts according to ANSI B92.1. Consequently, neither adaption flanges nor reduction connection stages are necessary and savings on weight, costs, and maintenance are achieved.

High Efficiency

Throughout the operating range, the eLION motor reaches peak efficiencies over 97 % over a wide range of speeds and torques. This is due to the selected materials and advanced magnetic design of the motor.

Sustainable designs and solutions for mobile machines

The eLION portfolio enables sustainable machine solutions, which offer a reduced or demanded local zero emissions. Through precise control and electrification of functions such as traction or implements, efficiency and machine performance are enhanced. And of course, the substantial reduction or complete elimination of local emissions and overall machine noise, assist Bosch Rexroth in its contribution.