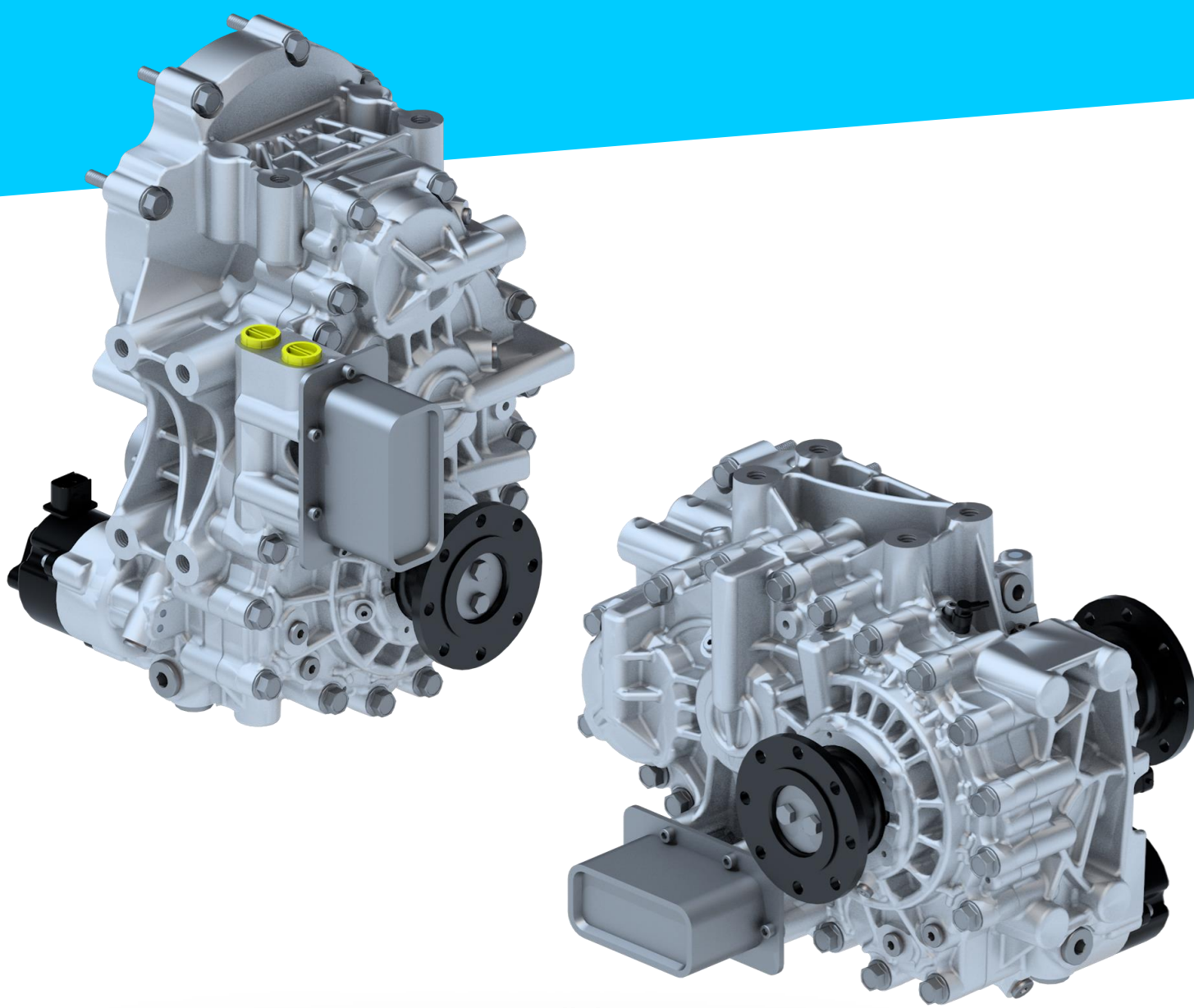


ROTATRAC

eGFZ9125 series 10

1-speed spur gear drive



The mobile machinery market has a growing need to increase productivity and performance, lower operating costs through improving efficiency, and reduce exhaust and noise emissions. Electric drives are an important element in achieving this goal. The central component of an electric drive train is the gearbox technology. This is why Bosch Rexroth has developed the highly efficient gearbox eGFZ9125 based on many years of experience and comprehensive know-how. This central drive is an ideal solution for both 2-wheel and 4-wheel drive configurations.

CUSTOMER BENEFITS

- Drive with high power density for off-highway vehicles
- Plug and drive system – all necessary components integrated
- Efficient monitoring
- Flexibility with e-motor connection
- Versatile output solutions

FUNCTION AND BENEFITS

Drive with high power density for off-highway vehicles

Developed specifically for high-speed electric motors, eGFZ9125 combines high power density with an efficiency of up to 98 % while optimizing noise. This enables the integration of a zero-emission drive into existing installation space requirements for off-highway applications like reach stackers, telehandlers or municipal vehicles. Compared to electric direct drives without gearboxes, two axes can also be driven with only one electric motor without having to accept disadvantages in terms of efficiency and acoustics (see Figure "Application solutions").

Plug and drive system

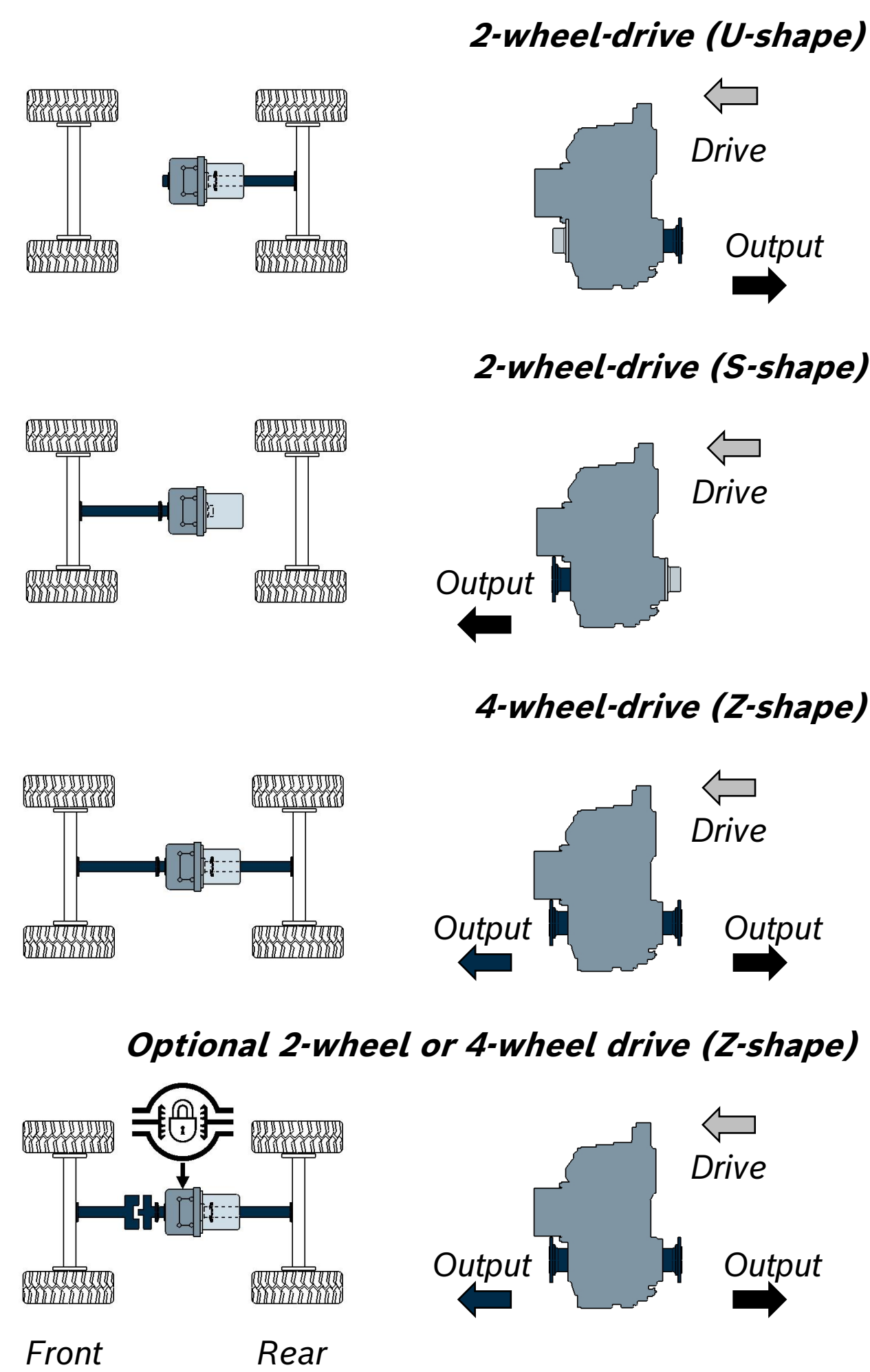
Due to the components already in the gearbox, like heat exchanger and oil pump, eGFZ9125 can be integrated easily into the existing cooling circuit of the electric drives (like the inverter and e-motor). A separate cooling circuit is thus not required.

APPLICATIONS



TECHNICAL DATA

1-speed spur gear drive ROTATRAC eGFZ9125	
Gear ratio:	4....6
Max. output torque:	3800 Nm
Max. input speed:	16000 min ⁻¹
For continuous performance:	120 kW
Ambient temperature:	-20 °C to +70 °C
Cooling:	Water glycol mixture / optional oil
Oil pump:	Integrated
Heat exchanger:	Integrated



Application solutions

Efficient monitoring

Sensors integrated in the standard version, for instance for the temperature, as well as optional connections for speed measurement in combination with CAN bus communication of common standards ensure the required safety during operation.

Flexibility with e-motor connection

eGFZ9125 is optimized for mounting various electric motors, especially high-speed, high-efficiency, compact permanently excited synchronous motors like the Rexroth EMS1H and Bosch SMG, but also motors with similar power from other manufacturers.

Versatile output solutions

Different strategies of voltage supply and battery storage requirements have a direct effect on the installation space in the vehicle frame.

The variability of the mounting position (horizontal and vertical) of the eGFZ as well as the wide range of options for the output-side flange versions according to DIN ISO give the manufacturer a great deal of design freedom.

Depending on the requirements in the drive train, the output can be designed as a U-, S- or Z-shape gearbox version.

In addition to a rigid four-wheel drive, the eGFZ9125 offers the option of axle disengagement or permanent four-wheel drive with compensation via a lockable center differential (see Figure "Application solutions").