

On-board equipment platform for electric mining vehicles



ABB's modular platform of onboard equipment can be optimized to fit powertrain needs of electric mining vehicles. The BORDLINE® offering is a harmonized platform covering motor inverters and auxiliary inverters, as well as energy storage systems. Full electrification of the powertrain is covered in the portfolio with traction and auxiliary motors, offering an economical and highly efficient electric operation.

01 Powertrain solutions for electric mining vehicles

Vehicles

- Heavy haul trucks
- Dump trucks
- Excavators / Shovels
- Loaders
- Other machinery

Applications and systems

- Payloads up to 400 metric tons
- Open-pit and underground vehicles
- Pure battery to trolley assisted
- Hydrogen or diesel hybrid

As a pioneer in the electrification of vehicles and the world's leading independent supplier of drive systems and charging infrastructure for all types of electromobility, ABB offers a wide range of innovative solutions.

Advanced drivetrain technology

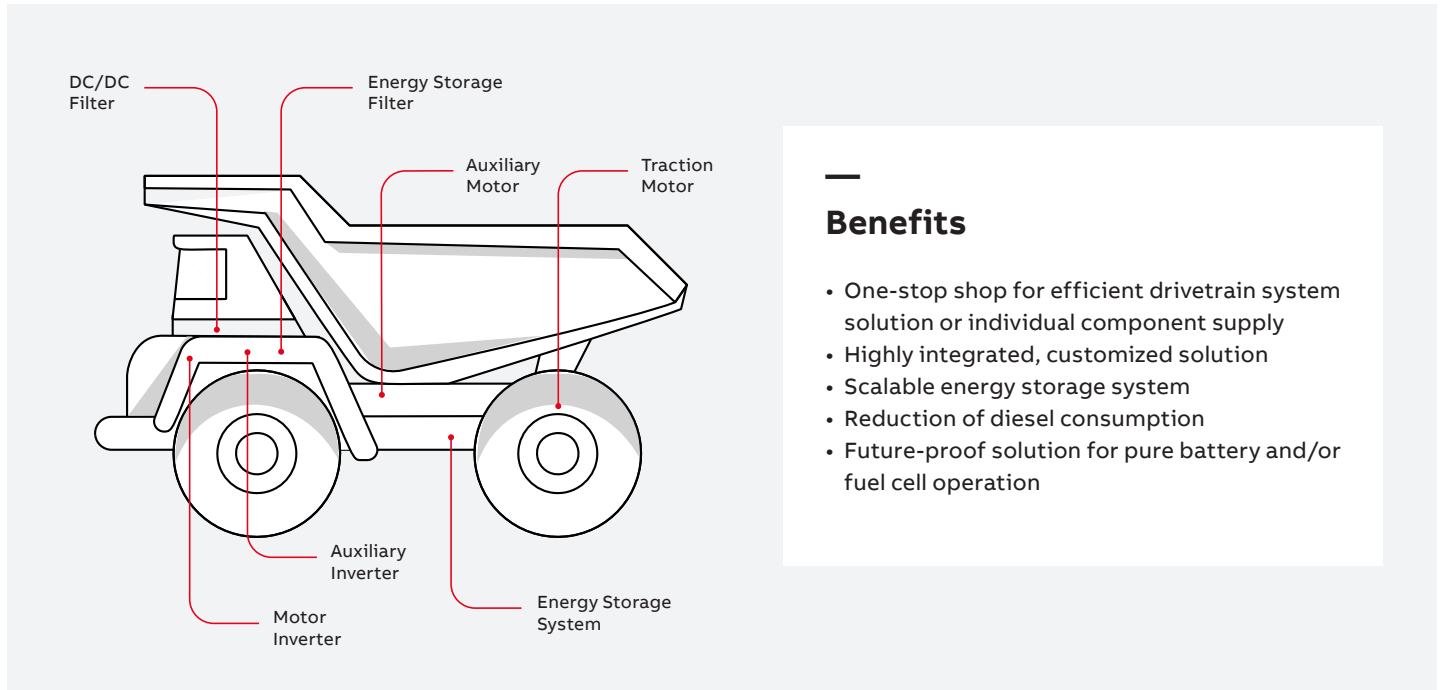
The electric powertrain ensures advanced control of the vehicle. The state-of-the-art drive designed for traction application controls wheel speed and closely regulates the torque transmitted to the drive wheels. Speed and torque control reduce wheel spin under adverse conditions and provide improved vehicle traction. This eliminates tire wear which saves maintenance cost.

In addition, the electric motors provide high torque which make gearboxes obsolete or reduces them to a minimum. This enables an energy efficient system and reduces cost for mechanical components.

Energy storage system

ABB's high performance energy storage system based on the latest cell technology completes the electric powertrain solution. The battery technology supports safety aspects and high cycle life helps to optimize total cost of ownership.

Complete electrification portfolio



Benefits

- One-stop shop for efficient drivetrain system solution or individual component supply
- Highly integrated, customized solution
- Scalable energy storage system
- Reduction of diesel consumption
- Future-proof solution for pure battery and/or fuel cell operation

Blockdiagram

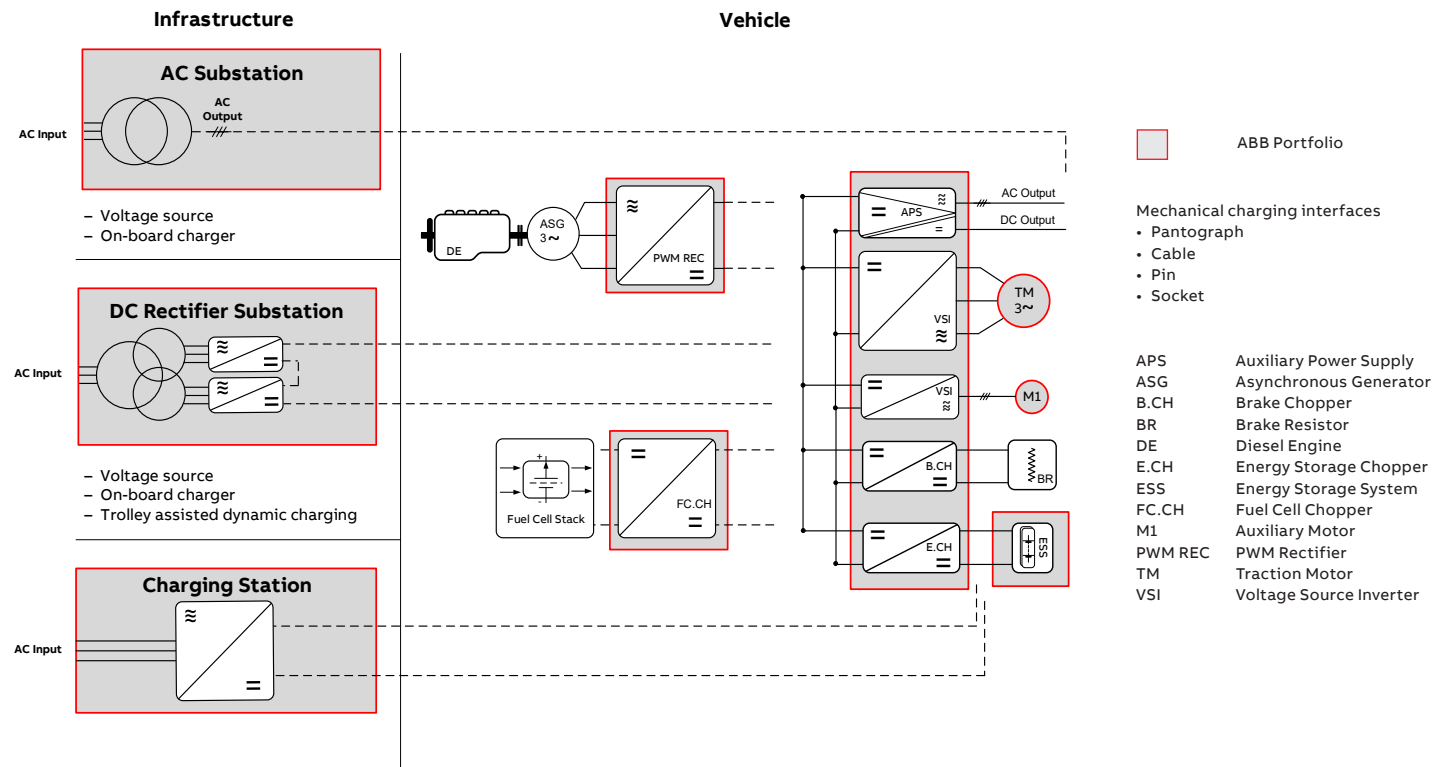


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