



Case Study: Mining Equipment – Complete Drop-In Battery Pack Solution

For many smaller OEMs aiming to electrify (heavy) equipment, the challenges are clear:

- **Standard battery suppliers can't meet your product or volume needs**
- **Large-volume players shy away from complex, custom requirements**
- **You need a partner who listens—and delivers—on time and on budget**

That's exactly where PowerBattery makes the difference.

Project Overview

In just six months, PowerBattery designed, engineered, and certified a fully integrated drop-in battery pack solution for a leading international OEM in the mining sector—one of the world's most demanding environments for electrification.

Key Design Drivers

- **Single battery module platform to electrify most of their product portfolio**
- **Reliable operation up to 50°C in harsh underground environments**
- **Fast charging capability: 400A / 256kW**
- **Fault tolerance with safe bypass to guarantee vehicle uptime**
- **Easy maintenance and rapid module exchange**
- **Minimal operational risk for end users**

Project Results

- **625Ah / 400kWh total capacity, across 25 standardized modules**
- **System voltage: 640VDC – IP67 rated – liquid cooled**
- **Engineered for extreme durability and safety**
- **Certified and ready for volume production**



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With this project, our customer took a strategic leap forward, gaining a competitive edge in the rapidly electrifying mining sector.

