

Load & Haul

# BEV Battery Module

Go Electric.  
Go Sandvik.



# A more powerful battery in the same package.

## **Increased capacity**

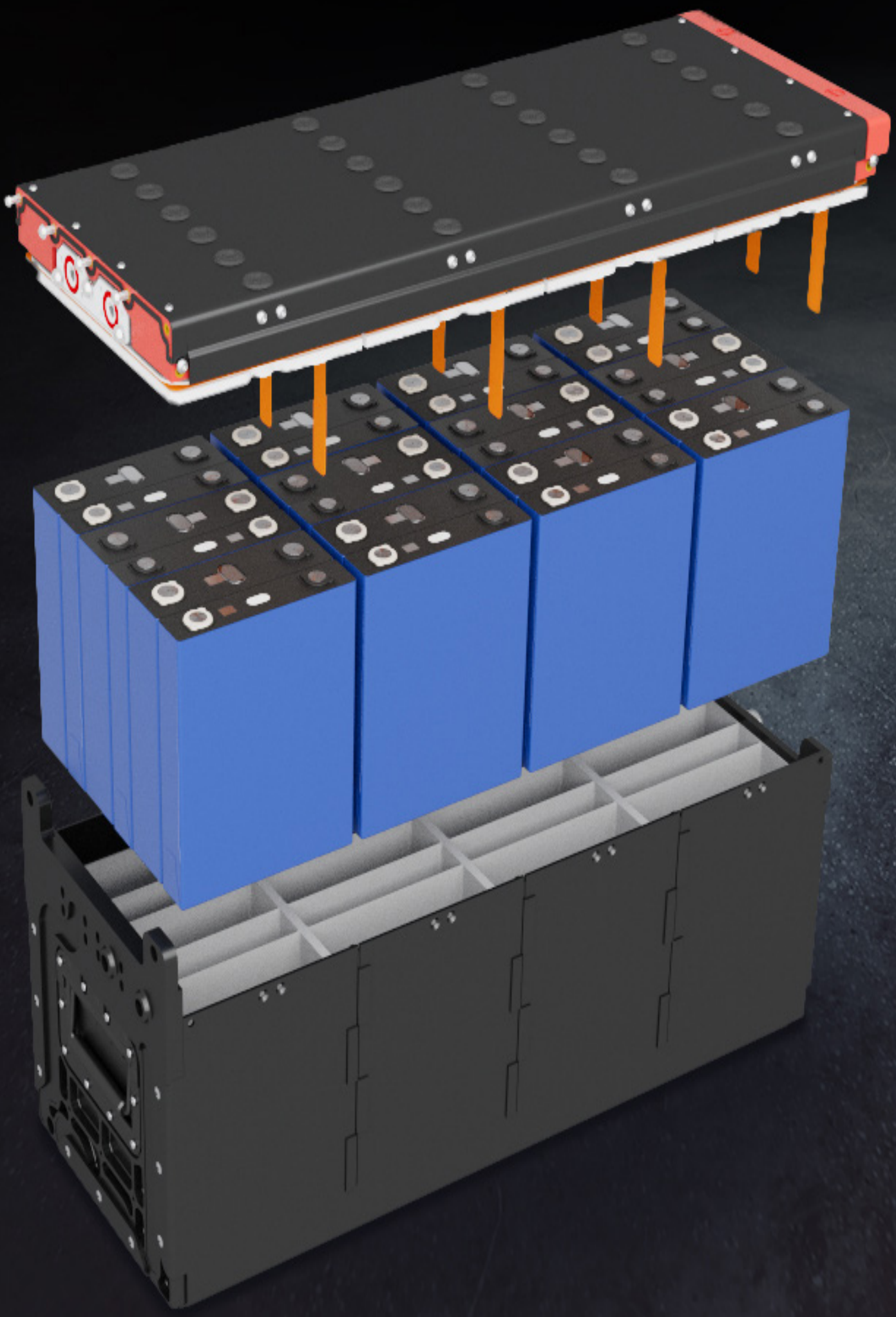
Sandvik batteries are purpose built to withstand tough underground mining conditions. This module for Sandvik battery-electric loaders and trucks, has 36 percent more capacity compared to the previous version. This allows for a longer run time, which means increased production and a lower total cost of ownership.

## **Increased safety**

This new module includes a variety of safety improvements that allow it to operate seamlessly in rough mining environments. It features foam potting at the top and bottom, as opposed to only the bottom in the previous version. This blocks moisture, dust and contaminants, prevents isolation faults and conducts heat away from a hot cell inside the module. Other safety features include pressure vents and a laser welded aluminum housing. The entire module also is touch and tool safe, meaning no exposed live conductors and no voltage over 40V to mitigate shock.

## **Compatible with existing BEVs**

The new battery module is the same size and shape as previous modules. The module is designed where there is only one way to assemble the battery pack, reducing risks of mistakes. This allows for easy exchange of older modules. The change out can be done in the mine in one shift.

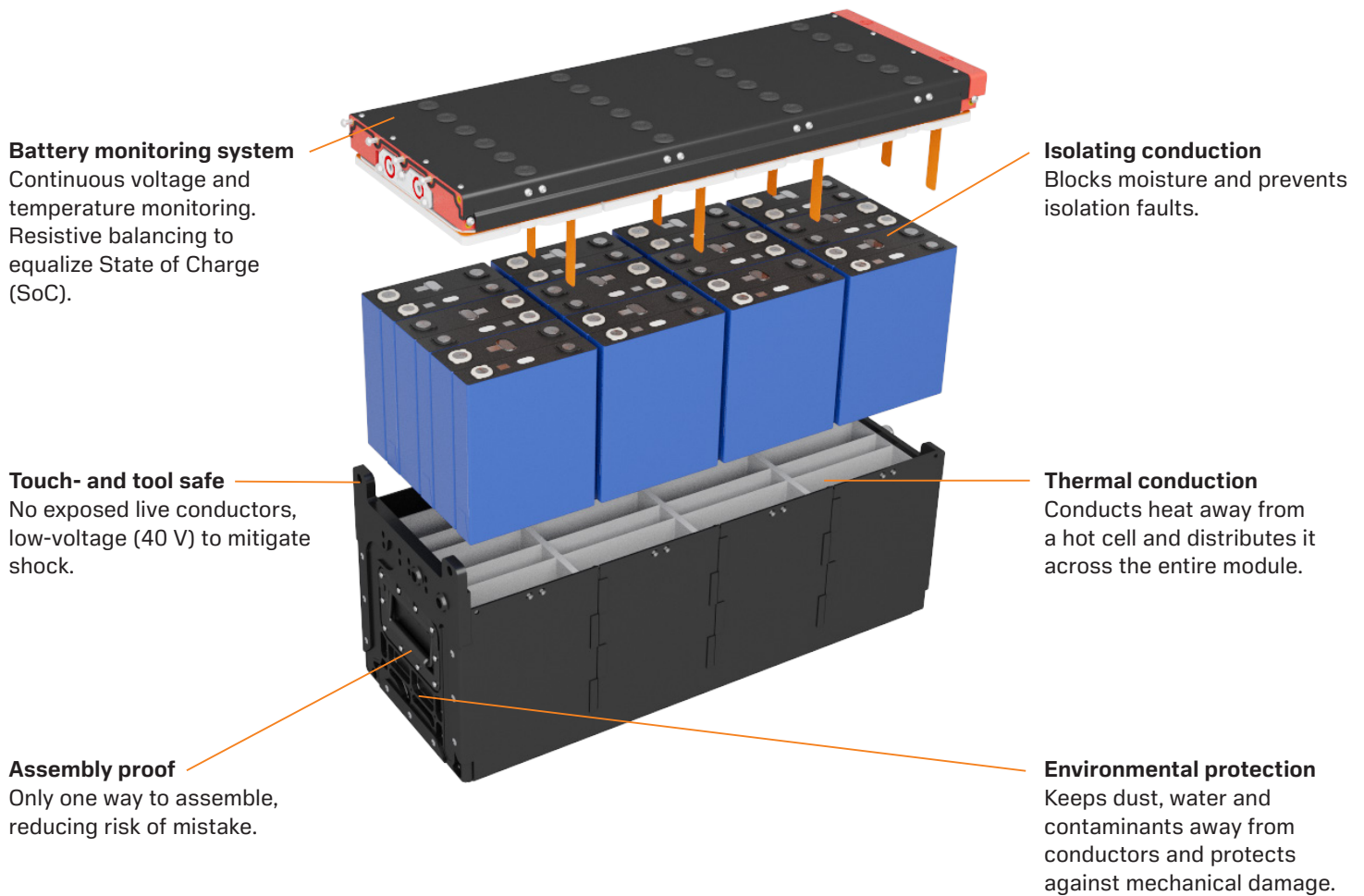


# Technical specification

## Battery Module

Sandvik battery module		Testing and certifications
Dimensions	L: 754 mm (30 ") (excluding alignment pin and fittings) W: 285 mm (11 ") H: 303 mm (12 ") (excluding mounting flange)	UL 2580 Batteries for Use in Electric Vehicles
Chemistry	Lithium Iron Phosphate (LiFePO4)	UL 1642
Capacity	15 kWh (393 Ah)	UN 38.3 Transport safety
Weight	134 kg (295 lbs)	IEC 62485-6 Battery installations used for electric off-road vehicles
Insulation rating	1000 V	IEC 62619 Industrial application testing
Voltage	Minimum: 30.0 VDC Nominal: 38.4 VDC Maximum 43.8 VDC	IEC 62660-3 Safety requirements for secondary batteries (traction battery)
Ingress protection	IP65 and steel enclosure for increased protection and safety	IEC 60204-1 Safety requirements for secondary batteries and battery installations
Current rating	Discharge: Continuous: 1C (~400A) Peak: 1.5C (~600A) for 20-30 mins  Charge: Continuous: 1C (~400A) Recommended: C/2 (~200A)	Battery directive 2006/66/EC
Cooling	Liquid cooled 10 lpm at 0.9 bar pressure drop 2 bar max pressure rating Quick disconnect fittings Dynalene (water glycol)	CE HSE compliance
		ROHS Restriction of Hazardous substances
		Low Voltage Directive 2014-30-EU
		EMC Directive 2014/30/EU
		<b>Battery testing</b>
		Crush test
		Shock test
		Vibration test
		Overcharge test
		Thermal test
		Forced discharge test
		Altitude test
		External short circuit test

# Battery module safety features





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