

Load & Haul

Charging station

Go Electric.
Go Sandvik.



Rethink the equipment. Keep the same mine.

The future of underground mining is electric and battery powered.
On this new path, we rethink the machines so that you can keep the mine same.

Fastest pitstop on the market with AutoSwap

Sandvik offers you the fastest fueling pitstop on the market for battery electric equipment: in Sandvik loaders and trucks, swapping batteries is done without any major infrastructure such as overhead cranes or forklifts, and in just a couple of minutes. When it is time for a battery change, the operator drives to the battery swapping bay, lowers the depleted battery, picks up a full battery, and continues operation. Thanks to the AutoSwap and AutoConnect functions, all of this is done without leaving the equipment cabin.

Recharge your batteries at the charging station

For charging the BEV equipment's depleted batteries, Sandvik's charging station and a connection to the mine electric grid is all you need. The charging station consists of charging and cooling units that form a functional pair: charging unit and cooling unit. For maximum flexibility, the same station can be used for charging any Sandvik branded BEV loader or truck. The cooling unit uses low electrical conductivity coolant for increased battery safety.

Get organized: stack in piles or line up

The units are all the same size, contributing to flexible and organized positioning of the charging station. The units can be placed next to each other on the ground and locked together with a special bar. To save ground space, they can also be stacked, one on top of the other.

Easy relocation and handling

The charging units and cooling units are easy to relocate with a forklift. The recommended lifting directions are from the front to the back. Additionally, the units include side pockets for easy handling with forklift, which are especially useful when turning and adjusting the unit locations. Additionally, hoisting brackets are included in each corner of the units.

The standard charging station consists of:

- 2 pieces charging unit
- 1 piece cooling unit



Technical specification

Charging station

Sandvik charging unit	
Enclosure dimensions	L: 1550 mm W: 1550 mm H: 1600 mm
Weight	2100 kg
Operating temperature and relative humidity	+10 - +40 °C, 100%
Input voltage	480/600/1000 VAC (50 and 60 Hz)
Nominal input power	400 kVA (see table below)
Max charging power	320 kW (270 kW at 480 V)
Total harmonic distortion (THD)	Less than 2%
Output voltage	Min. 480 VDC Max. 850 VDC
Ingress protection	IP65
User interface	7" touchscreen display
Cooling	Water cooled
Data monitoring	My Sandvik Digital Services Knowledge Box™

Electric cables
Charging cables (HV&LV) - 15m
CAN cable from charging unit to cooling unit - 7.5m
Cooling hoses
Cooling hoses from cooling unit to charging unit, 2pcs - 7.5m
Cooling hoses from cooling unit to battery, 2pcs - 15m
Electronic manuals
Instructions (Operators' and maintenance) manual
Parts manual
ToolMan - USB stick
Options
Charging cables (HV&LV) - 30m, 40m or 50m
CAN cable from charging unit to cooling unit - 15m, 20m, 25m
Cooling hoses from cooling unit to charging unit, 2pcs - 15m, 20m, 25m
Cooling hoses from cooling unit to battery, 2pcs - 30m, 40m, 50m

Example on electric input power needed for charging battery of Toro™ LH518iB with different charging rates:

Electric input power			
Charging station with 2x charging units, 1x cooling unit		Charging station with 1x charging unit, 1x cooling unit	
Charge rate (C)	482 kWh battery	Charge rate (C)	241 kWh battery pack
1C	650 kVA	1C	350 kVA
C/2	350 kVA	C/2	200 kVA
C/3	250 kVA	C/3	150 kVA

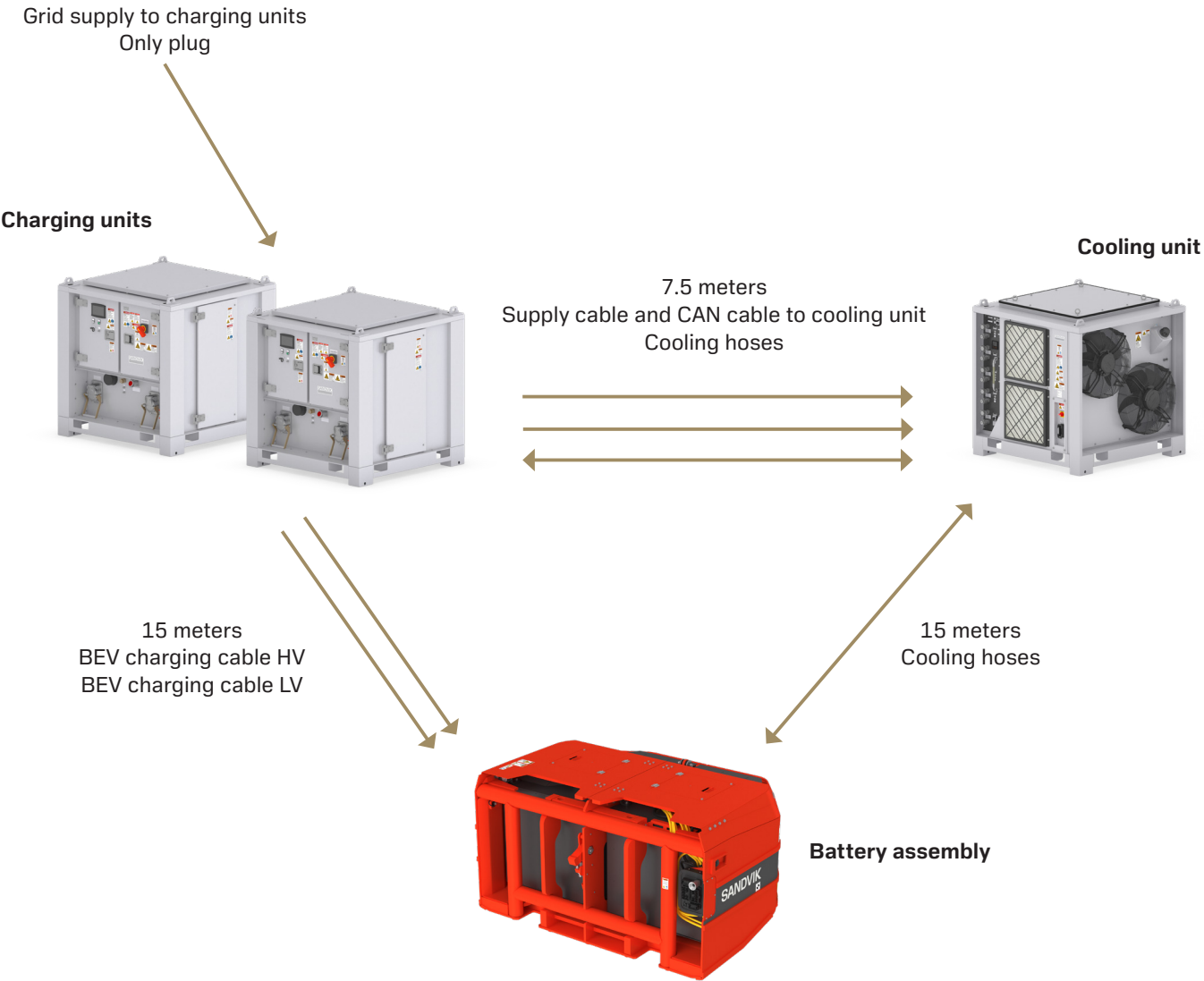
Sandvik cooling unit	
Enclosure dimensions	L: 1550 mm W: 1550 mm H: 1600 mm
Weight	1250 kg
Operating temperature and relative humidity	+10 – +40 °C, 100%
Refrigerant	R134a
Amount of refrigerant	16 kg
Input voltage	400 VAC (50 and 60 Hz)
Electric input power	43.6 kVA
Liquid cooling power	60 kW
Thermal load to environment	Up to 104 kW
Coolant	Low electrical conductivity coolant (40% Dynalene LC-EG, 60% distilled water)
Coolant volume	85 liters (75 l tank + 10 l internal system)
Ingress protection	IP54

Electric cables
Supply cable to cooling unit - 7,5m
Electronic manuals
Instructions (Operators' and maintenance) manual
Parts manual
ToolMan - USB stick
Options
Supply cable to cooling unit - 15m, 20m or 25m



Charging station

Connection layout



Charging connections

Standard kit	Quantity	Quantity	Standard length	Optional lengths
	Charging station with 2x charging units, 1x cooling unit	Charging station with 1x charging unit, 1x cooling unit		
Cooling unit power cable	1	1	7.5 m	15 / 20 / 25 m
Cooling unit CAN cable	2	1	7.5 m	15 / 20 / 25 m
Battery charging cable (HV)	2	1	15 m	30 / 40 / 50 m
Battery communication cable (LV)	2	1	15 m	30 / 40 / 50 m
Cooling hose (cooling unit to charging unit)	4	2	7.5 m	15 / 20 / 25 m
Cooling hose (cooling unit to battery)	2	1	15 m	30 / 40 / 50 m
Cooling hose (battery to cooling unit)	2	1	15 m	30 / 40 / 50 m



