

Epiroc charging products

A flexible OEM agnostic charging solution for battery electric vehicles



Flexible charging for battery powered machines

Epiroc offers flexible charging solutions for all types of battery electric vehicles. This also includes providing input for design of charging bays as well as offering lifting tools for Epiroc batteries.

7-meter cable is standard for all charging posts

Main benefits

Powerful cabinets to ensure that battery electric machines with any energy density are supported and can be charged within reasonable time.

Dynamic charging to allow power channel routing to deliver multiple sessions simultaneously, optimizing power delivery and efficiency.

Flexibility enabled by allowing up to 8 charge posts to be connected, from a distance of up to 100 m away from the power cabinet.

CCS2.0 (combination 1+2)
Globally Standardized
Charging Protocol

Mobile charger comes with a 5-meter cable as standard

Ergonomic and well balanced with robust wheels to enhance ease of mobility, ideal for shop environments





All chargers are CE and CSA/UL certified.



Charging products are offered and supported globally by trained Epiroc service technicians. Service agreements on different levels are also available.



Power is adjustable per charging post in 20 kW increments. For example 160 kW from one charging cabinet can be split into 80+40+20+20 kW among 4 charging posts.

All power cabinets built up by common plug and play power module



Door interlock switches to eliminate live work

LTE, WiFi and ethernet connectivity for local and wireless updates, control and monitoring of charge sessions

Supporting a sustainable future

The mining industry is moving towards more sustainable operations and we are offering several machine models with a battery powered driveline. To support your investments in this new technology, we offer a range of charging products that can be customized for your individual needs.



+ Charging products

Every time you are designing your charging bay in the mine, a flexible solution is needed. Therefore we can offer you charging products with different configurations. These products are created to suit all types of operations no matter when and where.



+ Service agreements

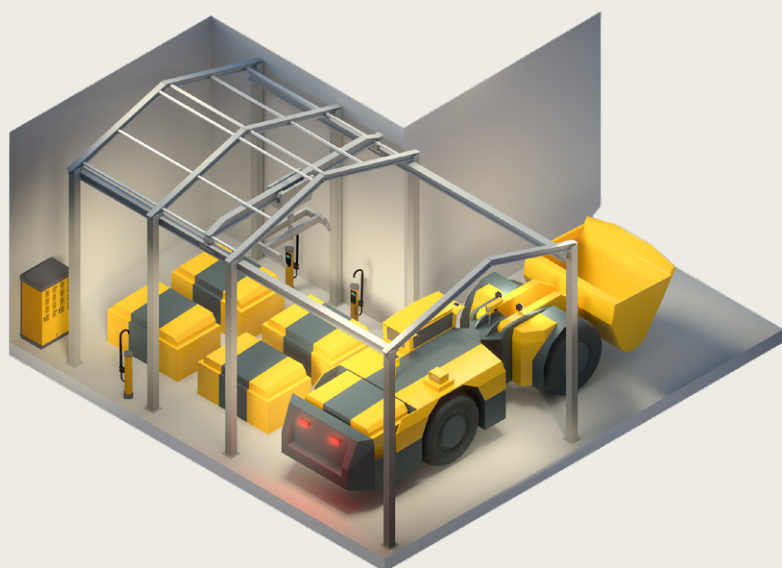
Service agreements are available for our charging products. The customer is given several options of service at 3 different levels. This will ensure a sound maintenance plan for a long lasting, high performing product.



+ Connectivity

Having connectivity to the chargers is essential to enable fleet support, diagnostics and analytics. The monitoring is done through two connectivity options:

1. Cloud service, to enable full smart services, support and API integration.
2. Through a local service, where monitoring can be supported through OCPP protocol.



Charge bays

Epiroc Charging products are more than just chargers. There needs to be dedicated areas for machines to be charged, referred to as charge bays. The charge bays can be designed in many different configurations depending on the equipment and battery fleet size. We offer charge bay design and electrical infrastructure support to ensure maximum output and efficiency of your equipment. 3D modeling can be used to illustrate the charge bays to suit your specific space claims and electrical requirements.

Lifting tools

When swapping batteries safety is of outmost importance. This is one of the reasons why we have developed a customized lifting tool for each battery model. The lifting tool secures the weight and balance, to keep the battery steady when swapping. This makes the swap safer as well as more efficient for the operator.



Technical specifications

Power parameters

Parameters	Mobile charger	Power cabinet 160kW MV	Power cabinet 200 kW	Power cabinet 400 kW	Power cabinet 600 kW
Power modules	1	4	4	8	12
No. of AC supply cables	1	1	1	2	3
Nominal input power	58 kVA (CCS1) 47 kVA (CCS2)	172 kVA	252 kVA	502 kVA	752 kVA
Peak charging power	50 kW	N/A	200 kW	400 kW	600 kW
Input current @400V per supply cable	N/A	N/A	362 A	362 A	362 A
Input current @480V per supply cable	N/A	N/A	302 A	302 A	302 A
Continuous charging power	40 kW	160 kW	160 kW	320 kW	480 kW
Input current @400V per supply cable	63 A	248 A	290 A	290 A	290 A
Input current @480V per supply cable	60 A	208 A	242 A	242 A	242 A

** For 160kW MV input current @630V input = 159

*** For 160kW MV input current @1000V input = 100

Nominal input power

Certifications	Power cabinet 200 kW	Power cabinet 160 kW MV	Power cabinet 400 kW	Power cabinet 600 kW	Mobile charger	Charging posts
CE	Yes	Yes	Yes	Yes	Yes	Yes
CSA	Yes	Yes	Yes	Yes	Yes	Yes
UL	Yes	Yes	Yes	Yes	Yes	Yes

General electrical specifications

Parameters	Input voltage	Input frequency	Output voltage	Power factor at full load	Efficiency at full load	Idle power	Standby power	Overvoltage category	Icc	Network type
Power cabinets	380 - 480 VAC +6%/-10%	50 - 60 Hz	200 - 920 VDC	0.92	94%	20 VA	50, 100, 150 W	III	70 kA	TN-S, TN-C, TN-C-S, TT

Environmental specifications

Parameter	Specification
Operating temperature	-30 to +50 °C
Current derating	Charging current decreases 1.5% for every 1 °C rise in temperature above +40 °C
Maximum altitude without derating	2 000 m
Altitude derating	Charging current decreases 14% for every 100 m rise above 2 000 m
Operational noise level	< 60 dB at 1 m distance
Storage temperature	-40 to +60 °C
Ambient air humidity	< 95% relative humidity
Enclosure rating	IP54, IK10

Technical specifications

Connections and protocols

Parameter	Specification
WiFi	802.11 b/g/n (2.4/5 GHz)
Cellular/GPS	LTE-FDD, LTE-TDD, WCDMA, GSM
Ethernet	RJ45, IEEE 802.3/802.3u
OCPP	1.6j/2.0.1
Connectivity	Kempower ChargeEye solution + local connectivity solution through OCPP protocol available depending on customer requirements

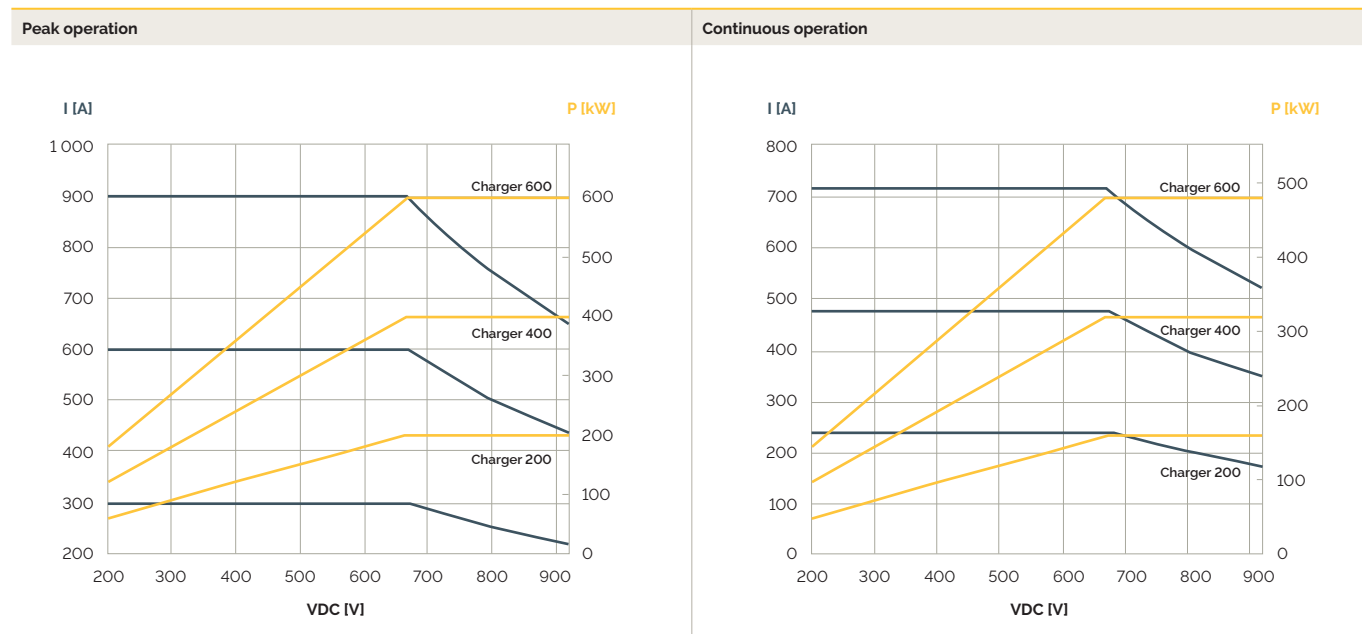
Electrical protections

Protection
Overvoltage protection
Undervoltage protection
Surge protection
Overload protection
Earth leakage monitoring
Device overtemperature
Short circuit

Dimensions and weight

Models	Power cabinet 200 kW	Power cabinet 160 kW MV	Power cabinet 400 kW	Power cabinet 600 kW	Charging post	Mobile charger
Dimensions	650 x 2 195 x 841 mm	1 250 x 2 195 x 841 mm	1 250 x 2 195 x 841 mm	1 850 x 2 195 x 841 mm	420 x 420 x 1 800 mm	670 x 640 x 1 220 mm
Weight	400 kg	680 kg	800 kg	1 200 kg	80 kg	130 kg

Power curves



United in performance. Inspired by innovation.

Performance unites us, innovation inspires us, and commitment drives us to keep moving forward. Count on Epiroc to deliver the solutions you need to succeed today and the technology to lead tomorrow.
epiroc.com

