

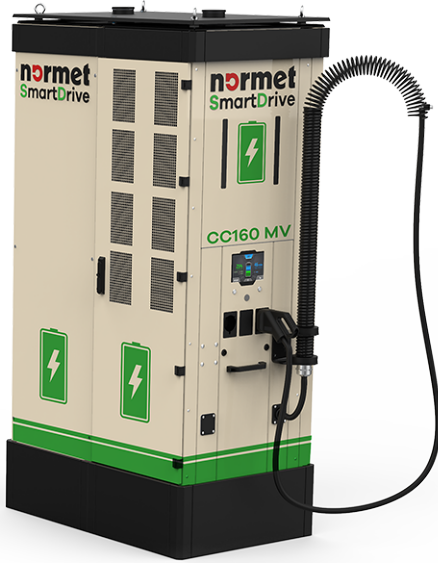


CC160 MV Charger

Normet reserves the right to change
this specification without further notice

Pictures may include options and additional equipment.

INTRODUCTION



Normet SmartDrive CC160 MV charger cabinets provide power where you need it the most. The 160 kW DC charger cabinet provide fast charging, robust and durable design is tailor made for harsh conditions.

Key features and benefits:

- 160 kW power output
- Multi voltage version, selectable supply voltage
- Compatible with CCS standards
- Dynamic dual charging capability
- 7" touchscreen with user friendly user interface
- Advanced cable support system
- Cloud based back-end, service and management dashboard
- Future-proof technology

GENERAL ELECTRIC SPECIFICATION

Selectable input voltage	3-phase 380-1000 VAC
Input frequency	50-60 Hz
Nominal input current	268 A at 380-460 VAC 224 A at 480-550 VAC 187 A at 575-690 VAC 113 A at 950-1000 VAC

Nominal input power	186 kVA
Power factor at full load	0.94
Efficiency at nominal output power	94%
Transformer loss	2%
Maximum output power	160 kW
Maximum output current	240 A
Output voltage range	200-920 VDC

ELECTRICAL PROTECTIONS

Over/under voltage, Surge protection, Short circuit, Earth leakage current, Over temperature

ENVIRONMENTAL SPECIFICATION

Operating temperature	-40°C to +55°C
Derating high temperatures	1,5%/1°C (+40 to +55°C)
Maximum altitude	4000 masl
Altitude derating	1%/100 m above 2000 masl
Enclosure class	IP54, IK10
Humidity	<95% relative humidity
Operational noise level	<55 dB

GENERAL

DC connection standard	CCS
Connector type	CCS type 2, 250 A, air cooled
DC cable length	7 m
DC charging outlets	1 pcs
Cabinet cooling	Forced air cooled
Electrical safety	IEC 61851-1, IEC 61851-23
EMC	IEC 61851-21-2, EN 61000-1...4
Connectivity	3G/4G/LTE, WiFi, OCPP 1.6/2.0

ACCESSORIES

- Second DC charging outlet with dynamic charging control
 - UL/CSA approval (mandatory in US/Canada)
 - Satellite readiness with dynamic module
 - Safety protection shelter
 - Fogmaker Novec 1230 fire suppression system
- Additional equipment:
- Fire suppression service tool kit

SERVICES

NORMET SERVICES

Our services cover the whole life cycle of your equipment. They include start-up and commissioning, genuine spare parts, upgrades & modifications, and remanufacturing, as well as rental and leasing offerings, and field services. We also offer improvement services such as operator training and process audits.

SPARE PARTS

Genuine parts from Normet Services ensure that you always have the highest quality parts available to keep your equipment up and running. Depending on your needs, we can offer everything from individual parts to complete parts contracts, and our professionals around the world have the experience to ensure that you have the parts you need when you need them.

Initial spare parts package:

Available for one year of use*. Includes periodical service, most common wearing parts and most critical safety parts.

Spare parts packages made for customer needs:

Available based on years of use*. Includes periodical service, most common wearing parts and most critical safety parts.

* Recommendations are based on average time – can vary a lot depending on work site conditions.

UPGRADES AND MODIFICATIONS

Our Upgrades and Modifications services are designed to ensure the economical, efficient and purposeful performance of your equipment over its entire life cycle. A service provided by a reliable OEM like Normet ensures the safety and performance of your equipment. Normet Upgrades and Modifications save you both time and money, while delivering the high quality you expect from us.

SERVICE CONTRACTS



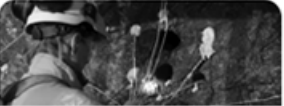

With a service agreement, Normet manages your fleet with guaranteed availability and agreed costs, giving you transparency for your life cycle costs, annual operational budget and fleet uptime. This lets you focus on your core operations. Each service agreement is built and customized to meet the individual customer's needs from our portfolio of services. Depending on the level of service agreement you need, you can choose anything from basic technical support for an individual machine all the way up to services for your entire fleet, as well as process performance. The service levels we offer are:

- Parts Availability
- Fleet Support
- Fleet Availability
- Process Performance

The content of a service level can be tailored to meet your particular requirements.

TRAINING SERVICE

Our Training Services are available for you and your operators throughout the equipment lifecycle and they include:

	 Operation & Maintenance	 Spraying	 Charging	 Scaling
ADVANCED	Advanced fault diagnostics & troubleshooting	Concrete chemicals, testing and preparing for EFNARC-certificate test	-	-
INTERMEDIATE	Troubleshooting training Foundations of electrics, hydraulics and mechanics NorSmart	Advanced training in concrete spraying Economics of concrete spraying	Advanced training in explosives Economics of charging	Advanced training in scaling Economics of scaling
BASIC	Operation and Maintenance Training Basic Product Training	Basic understanding of concrete spraying	Basic understanding of charging	Basic understanding of scaling
LEVEL	SERVICE	PROCESS KNOWLEDGE		

START-UP AND COMMISSIONING

1. OPERATOR TRAINING

	Start-up training	Commissioning
1.1 Classroom training		
General introduction and operation of charger	Basic	No classroom training included in commissioning
Safety instructions	Basic	
Use of manuals	Basic	
Technical introduction of equipment	Basic	
Hands-on service and pre-operation checks	Basic	
1.2 Practical training		
Pre-operation checks	Basic	Introduction
Safety instructions	Basic	Introduction
Preparing the charger for specific operation conditions	Basic	Not covered
Operation	Basic	Introduction
Charger daily checks	Basic	Introduction
Troubleshooting	Basic	Not covered

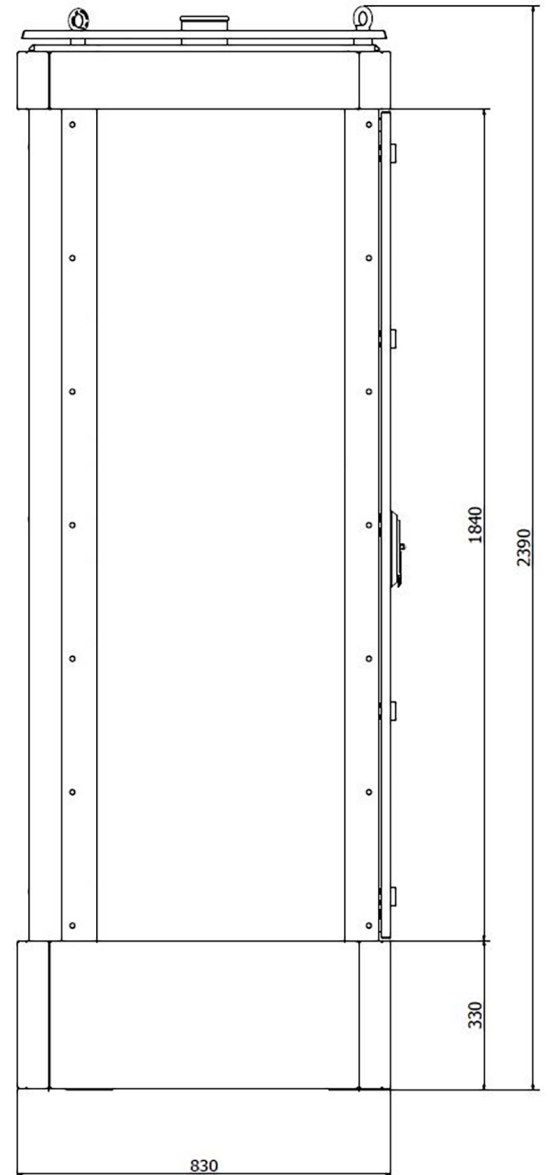
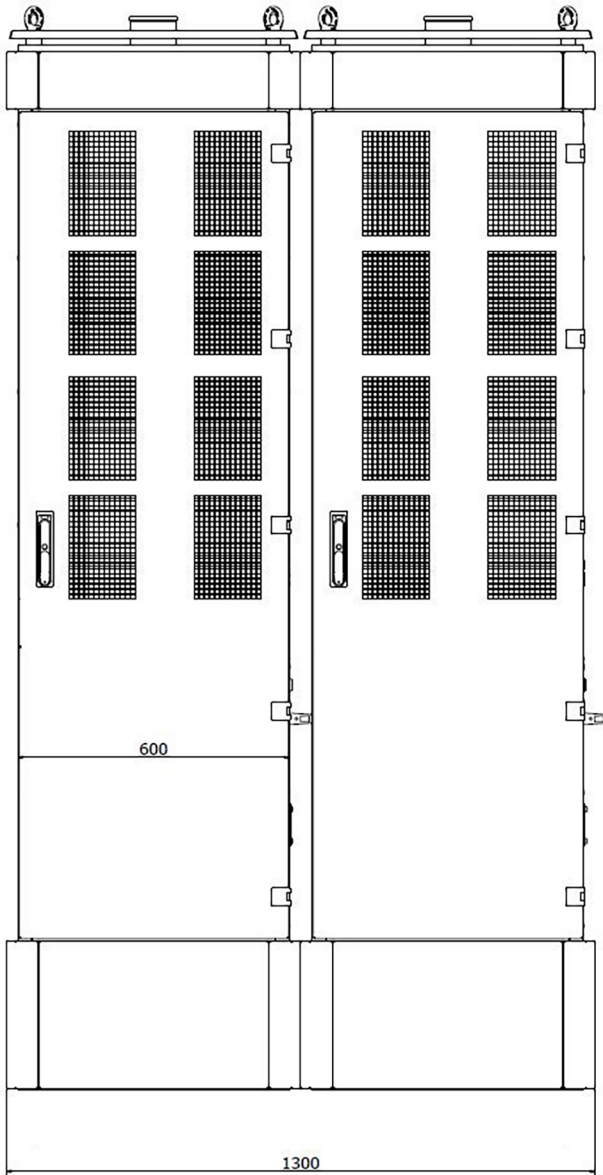
2. MAINTENANCE AND REPAIR TRAINING

General operation of charger	Basic	Introduction
Symbols of drawings and codes	Basic	Not covered
Control systems	Basic	Introduction
Function of main components (depending on charger)	Basic	Introduction
Locations of components in the machine	Basic	Not covered
Periodical maintenance	Basic	Introduction
Troubleshooting	Basic	Not covered
Use of manuals and safety instructions	Basic	Introduction
Installation assistance	Basic	Not covered

DIMENSIONS

Height	2390 mm	Depth	830 mm
Width	1300 mm	Weight	1050 kg

MECHANICAL DRAWINGS



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