

Kempower Power Unit C800

Power Cabinet Version 3 | Power Module Version 1



The Kempower Power Unit is the heart of Kempower's flexible, modular and scalable DC charging system with dynamic power management.

One Power Unit can simultaneously provide energy for up to 8 DC charging outputs: Satellites or Pantographs. By utilizing individual 25 kW power channels in the installed Power Modules, the Power Unit's unique dynamic power management harnesses the full potential of on-demand power routing. This enables significant cost savings in the installed charging hardware and grid connection while optimizing the charging experience.

A triple cabinet Power Unit can have up to twelve 50 kW Power Modules, providing a maximum nominal power of up to 600 kW.

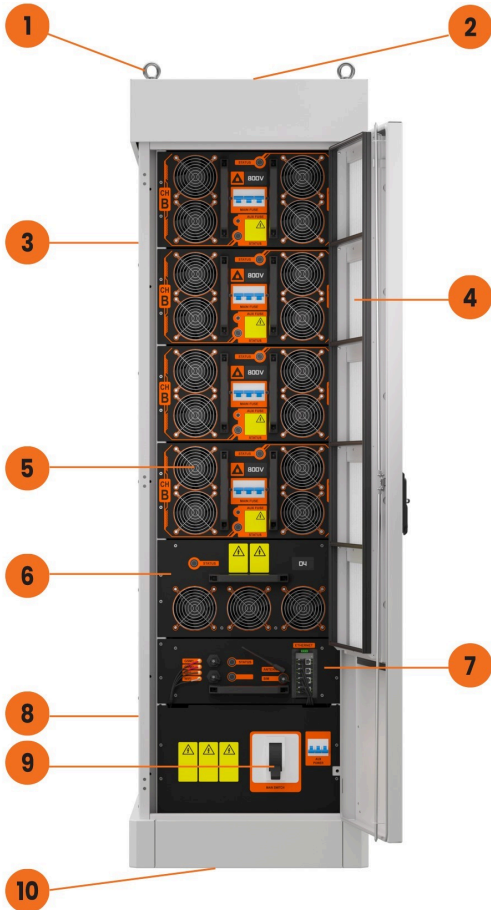
With dynamic power management, the available charging power of all Power Modules is automatically distributed to all connected charging outputs according to the requests of the electric vehicles.

Power range

Up to **600 kW**

Number of charging outputs in the system

1-8



- 1 Lifting lugs
- 2 WiFi/cellular/GPS antenna
- 3 Air outlet (behind cabinet)
- 4 Air inlet
- 5 Power Module (1-4 pcs/cabinet)
- 6 Power distribution module
- 7 Control module
- 8 DC output (DIN rail inside cabinet)
- 9 Main switch
- 10 AC supply cable entry



Charging power for up to 8 charging outputs, 8 single Satellites or 4 double Satellites



1-4 50 kW Power Modules per cabinet



Scalability with add-on Power Modules



Improved cost efficiency of the charging system



Lockable door for safety and easy access



Advanced charging control and customization with Kempower ChargeEye

Product code interpretation

Kempower Power Unit consists of Power Cabinet and Power Modules.

C802•D6•V3•C0

Kempower Power Cabinet C800 double • up to 6 dynamic outputs • Version 3 • unbranded

Item	Code	Description
Product type	C801	Kempower Power Cabinet C800 single ^[1] (four Power Module slots)
	C802	Kempower Power Cabinet C800 double ^[1] (eight Power Module slots)
	C803	Kempower Power Cabinet C800 triple ^[1] (twelve Power Module slots)
Power distribution modules	D4	Up to 4 dynamic outputs ^[2]
	D6	Up to 6 dynamic outputs ^[2]
	D8	Up to 8 dynamic outputs ^[2]
	R	Static power distribution ^[3]
Product version	V3	Version 3
Branding options ^[4]	C0	Unbranded: Solid color RAL7047
	Cn	Branded: Stickers in predefined areas of the unit. Number (n) indicates branding, e.g. C8.

[1] The rated current of a single charging output terminal using a power distribution module is limited to 200 A.

[2] With 300 A charging cables:
500 A (max. 10 min) in +25 °C. Requires at least 3 output terminals and a specific hardware configuration.
375 A continuous in +25 °C. Requires at least 2 output terminals and a specific hardware configuration.

[3] Dynamic power distribution upgrade is available.

[4] Branding according to Kempower Customer Branding Guidelines.

PM850V1

Power Module Version 1 for Kempower Power Cabinet C800

Item	Code	Description
Product type	PM850V1	Power Module Version 1 for Kempower Power Unit C800 (50 kW in standard operation)

General electrical specifications

Input voltage	380...480 VAC +6%/-10%
Network type	TN-S, TN-C, TN-C-S, TT
Input frequency	50...60 Hz
Overvoltage category	III
Icc	70 kA
Power factor at full load	0.92
Output voltage	200...920 VDC
Efficiency at full load	94%
Idle power	20 VA
Standby power	C801: 50 W C802: 100 W C803: 150 W

Environmental specifications

Operating temperature	-30...+55 °C
Current derating ^[1]	Charging current decreases 1.5% for every 1 °C rise in temperature above +40 °C
Maximum altitude without derating	2000 m
Altitude derating	Charging current decreases 1.4% for every 100 m rise above 2000 m
Operational noise level	< 60 dB at 1 m distance
Storage temperature	-40...+60 °C
Ambient air humidity	< 95% relative humidity
Enclosure rating	IP54, IK10

^[1] Thermal performance applies only to a standard, unbranded Kempower Power Unit.

Connections and protocols

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 ChargEye solution

Electrical connections (between Power Unit and vehicle connectors)

DC power cable per vehicle connector (terminals 2 x 150 mm ² per pole)
Control cable 24 VDC
Control bus cable

Electrical protections

Over/undervoltage
Surge protection
Short circuit
Overload protection
Earth leakage current monitoring
Device overtemperature

Power performance

Product type	Number of Power Modules	Number of independent AC supply cables ^[1]	Standard operation			Continuous operation		
			Charging power at 667 VDC	Input current per supply cable at 400 V	Input current per supply cable at 480 V	Charging power at 667 VDC	Input current per supply cable at 400 V	Input current per supply cable at 480 V
C801	1	1	50 kW	91 A	76 A	40 kW	73 A	61 A
	2	1	100 kW	181 A	151 A	80 kW	145 A	121 A
	3	1	150 kW	272 A	227 A	120 kW	218 A	182 A
	4	1	200 kW	362 A	302 A	160 kW	290 A	242 A
C802	5	2	250 kW	91 A	76 A	200 kW	73 A	61 A
	6	2	300 kW	181 A	151 A	240 kW	145 A	121 A
	7	2	350 kW	272 A	227 A	280 kW	218 A	182 A
	8	2	400 kW	362 A	302 A	320 kW	290 A	242 A
C803	9	3	450 kW	91 A	76 A	360 kW	73 A	61 A
	10	3	500kW	181 A	151 A	400 kW	145 A	121 A
	11	3	550 kW	272 A	227 A	440 kW	218 A	182 A
	12	3	600 kW	362 A	302 A	480 kW	290 A	242 A

[1] Each cabinet has a dedicated supply cable.

Figure 1. Power curve – standard operation

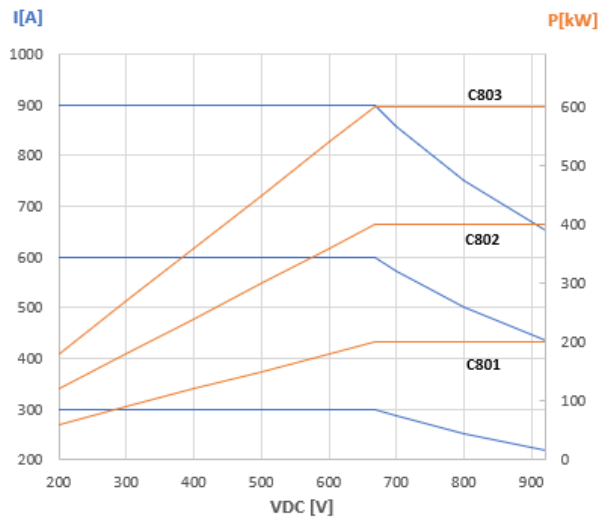
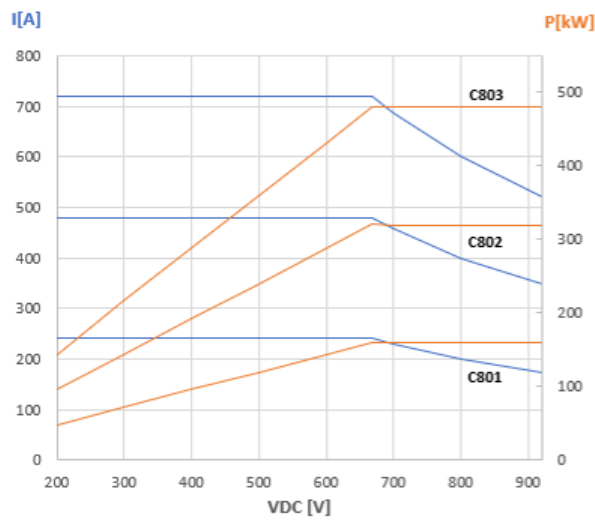


Figure 2. Power curve – continuous operation



Compliance to standards

- IEC 61851-1
- IEC 61851-23
- IEC 61851-21-2

Options

- | | |
|---------------------|--|
| Customized branding | Branding with stickers in predefined areas of the unit
Contact Kempower for availability, pricing, and minimum order quantity |
| Steel base | Installation kit for a single cabinet, for flat surface assembly |

Mechanical dimensions

Size (W x H x D)

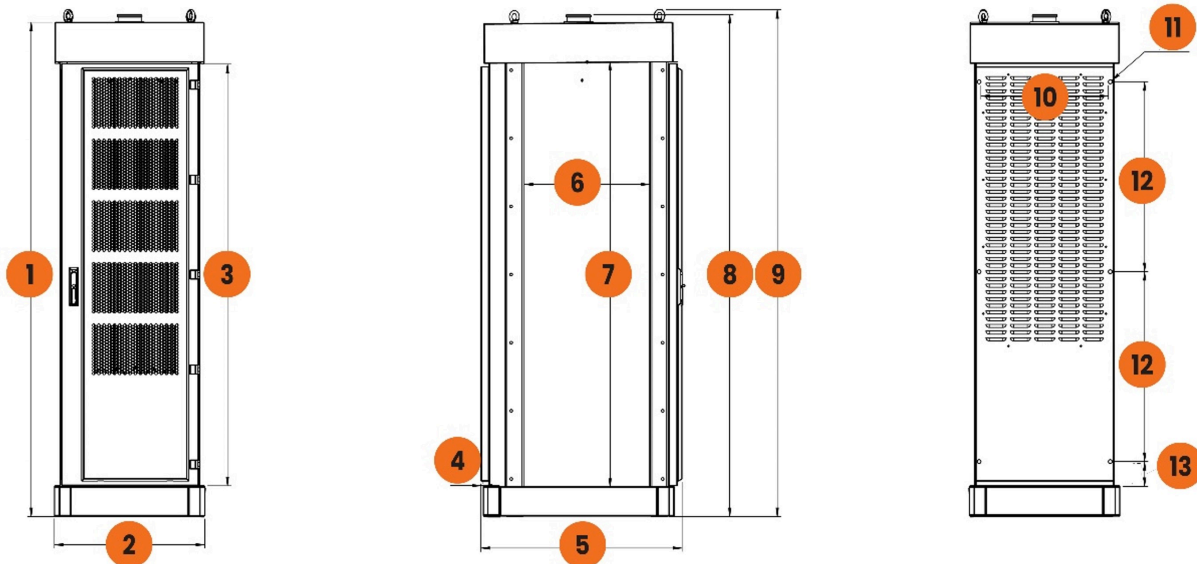
C801: 650 x 2195^[1] x 871 mm

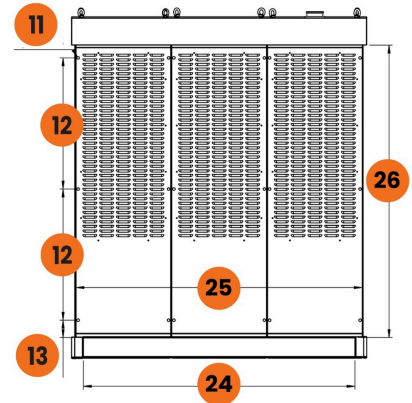
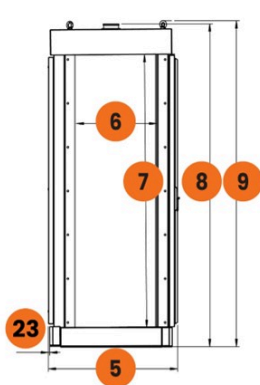
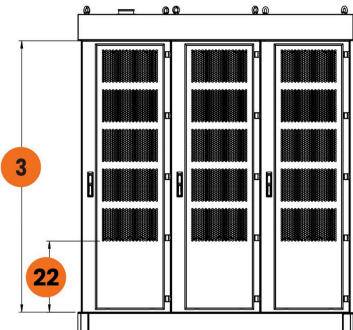
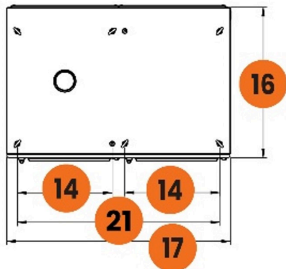
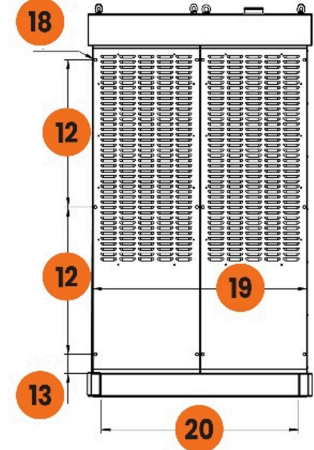
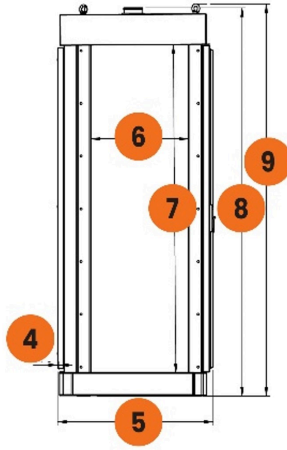
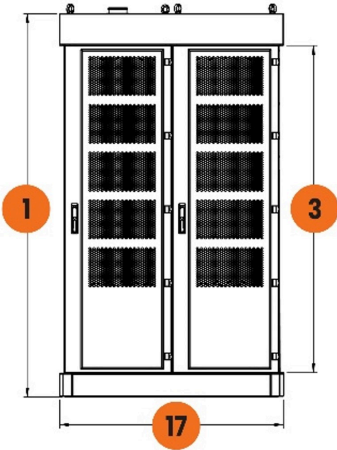
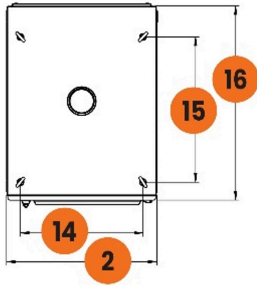
C802: 1250 x 2195^[1] x 871 mm

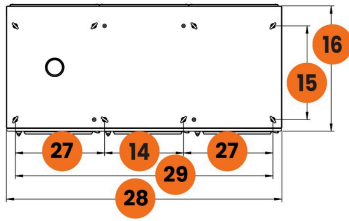
C803: 1850 x 2195^[1] x 871 mm

[1] If using the optional base, add 200 mm to the height.

Product type	Number of Power Modules	Weight
C801	1	300 kg
C801	2	340 kg
C801	3	380 kg
C801	4	420 kg
C802	5	735 kg
C802	6	775 kg
C802	7	815 kg
C802	8	855 kg
C803	9	1165 kg
C803	10	1205 kg
C803	11	1245 kg
C803	12	1285 kg







1	2141 mm	9	2195 mm	17	1250 mm	25	1793 mm
2	650 mm	10	551 mm	18	∅17 mm	26	1832 mm
3	1826 mm	11	∅16 mm	19	1199 mm	27	600 mm
4	10 mm	12	822 mm	20	1102 mm	28	1850 mm
5	871 mm	13	108 mm	21	1130 mm	29	1730 mm
6	543 mm	14	530 mm	22	478 mm		
7	1838 mm	15	629 mm	23	9 mm		
8	2174 mm	16	841 mm	24	1702 mm		

Note: Only Kempower approved partners who have completed the Kempower certification training are permitted to install the charging units. Installation done by an unapproved partner voids the warranty. For more information, contact Kempower Sales Support.