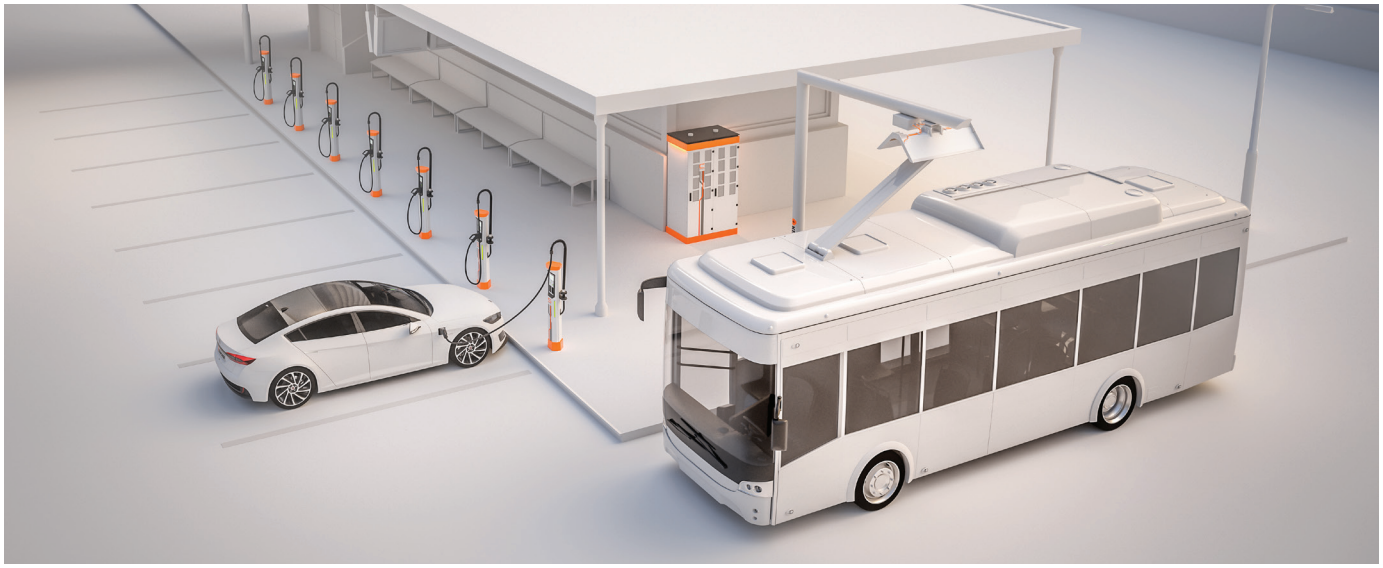
Advanced Satellite Charging System

Technical Datasheet

C-Series C800 Charging Power Units



Kempower Charging Power Units

The heavy-duty, electromechanical design of Kempower Charging Power Units (CPU) consists of control, dynamic and power modules. Each cabinet utilizes 1 to 4 power modules, each of which providing a charging power of up to 50 kW. A full CPU provides a maximum power of up to 200/400/600 kW, depending of the CPU version.

The charging power management can be set as dynamic, utilizing different dynamic logics, or as static. With dynamic, the maximum charging power is automatically distributed and optimized between up to 8 charging outputs simultaneously. With static, each power module is assigned for a specific S-Series satellite or pantograph, providing pre-set charging power to each charging output.

- Dynamic Charging Power Management (pat. pend.) for intelligent, adaptive, automatic charging power distribution
- Scalability with add-on power modules
- The charging power can be routed to up to 4 S-Series double or 8 single charging satellites and/or pantographs, up to 8 charging outputs.

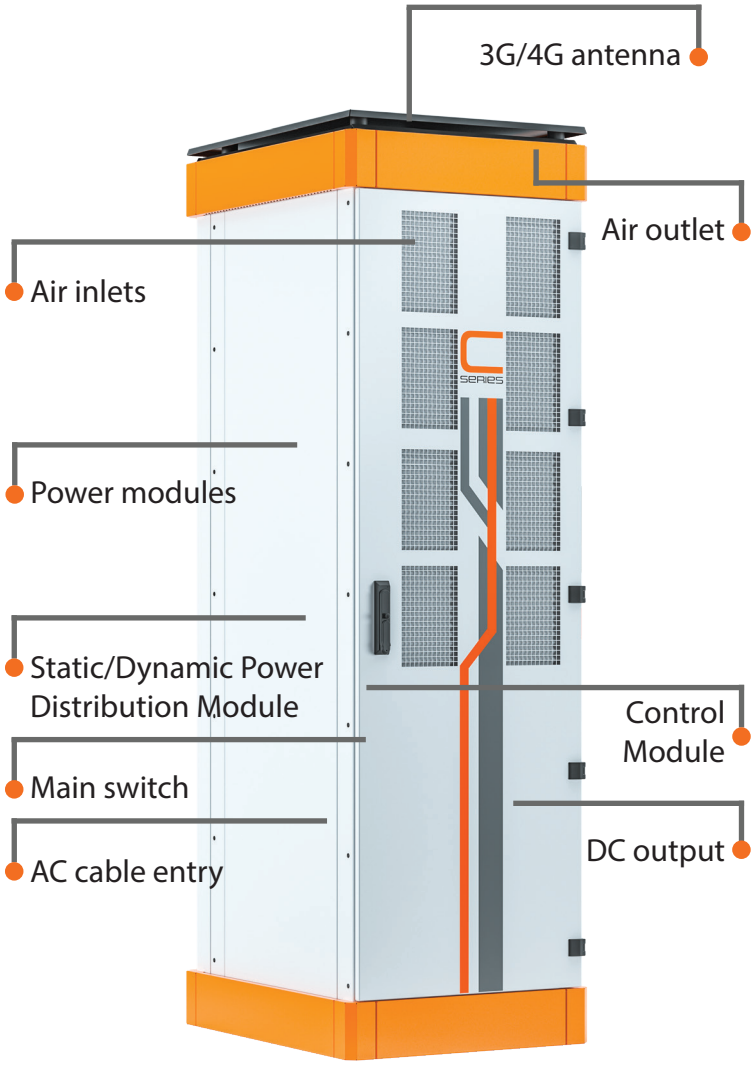
CPU's doors are equipped with a swing handle with a tumbler lock for easy & safe enclosure.

C-Series C800 Charging Power Unit

Technical datasheet

⚠ Recommended max. DC cabling between C-Series CPU Cabinet and S-Series satellites/pantograph is up to 50 meters. For longer distancies, please consult Kempower.

Features and Dimensions



C-Series product codes

C801 - P160 - N - S8

- **C801** — Voltage class and mechanical size indicator
  801=800V model, single cabinet
- **P160** — DC charging power
  Based on Continuous Operation rating. See table on page 3
- **N** — Charging cabinet options
  N= Neutral
- **S8** — Power distribution module
  S = Static, D= Dynamic

Type	Description
801	single cabinet
802	dual cabinet
803	triple cabinet

Type	Description
S4	up to 4 static outputs
S8	up to 8 static outputs
D4	up to 4 dynamic outputs
D8	up to 8 dynamic outputs

Specification

General electric specifications C800-Series

Input voltage	380...480 V_{AC} + - 10%, 50...60 Hz
Input current	See table below
Max. output power	50...600 kW
Output current	See table below
Output voltage	200...800 V_{DC}
Max. output voltage	920 V_{DC} with 400 V_{AC} 1000 V_{DC} with 480 V_{AC}
Power factor	0.94 at P_N
Efficiency	94% @ output P_N
Standby power	C801: 50 W / C802: 100 W / C803: 150 W

Environmental specifications

Operating temperature	-40...+55°C (with derating)
Derating high ambients	1,5%/1°C up to +55°C max
Maximum altitude	2000 m
Altitude derating	1%/100 m above 1000 m
Storage temperature	-40...+60°C
Protection class	IP54, IK10
Ambient air humidity	< 95% relative humidity
Operational noise level	< 60 dB (1 m distance)

Features

3G/4G/LTE, WiFi, OCPP 1.6/2.0, connectivity to ChargEye cloud-based back-end, service and management dashboard, easy power-up of power modules

Electrical protections

Over/under voltage, surge protection, short circuit, earth leakage current, over temperature

Compliant to standards

Electrical safety	IEC 61851-1, IEC 61851-23
EMC	IEC 61851-21-2, EN 61000-1, -2, -3, -4
Harmonics	61000-3-12

Mechanical dimensions (WxHxD)

C801: 650x2150x825 mm
C802: 1250x2150x825 mm
C803: 1850x2150x825 mm
Weight: See table below

Model-specific values

C-Series C800
200 - 920 V_{DC}

		Intermittent operation 50 kW output / power module					**Continuous operation** 40 kW output / power module				
Product code	**Weight [kg]**	**Charging power (P_{DC}) [kW]**	**Max. charging current (667 V_{DC}) [A]**	**Input power [kVA]**	**Input current 400 V_{AC} [A]**	**Mains fuse [A]**	**Charging power (P_{DC}) [kW]**	**Max. charging current (667 V_{DC}) [A]**	**Input power [kVA]**	**Input current 400 V_{AC} [A]**	**Mains fuse [A]**
C801 P40 N _	280	50	75	57	83	100	40	60	46	67	80
C801 P80 N _	320	100	150	114	165	200	80	120	93	134	160
C801 P120 N _	360	150	225	172	248	315	120	180	139	200	250
C801 P160 N _	400	200	300	229	330	400	160	240	185	267	315
C802 P200 N _	680	250	375	286	413	500	200	300	231	334	400
C802 P240 N _	720	300	450	343	495	630	240	360	278	401	500
C802 P280 N _	760	350	525	400	578	630	280	420	324	467	500
C802 P320 N _	800	400	600	458	660	800	320	480	370	534	630
C803 P360 N _	1080	450	675	515	743	2x400	360	540	416	601	2x315
C803 P400 N _	1120	500	750	572	826	2x500	400	600	463	668	2x400
C803 P440 N _	1160	550	825	629	908	2x500	440	660	509	734	2x400
C803 P480 N _	1200	600	900	686	991	2x630	480	720	555	801	2x500

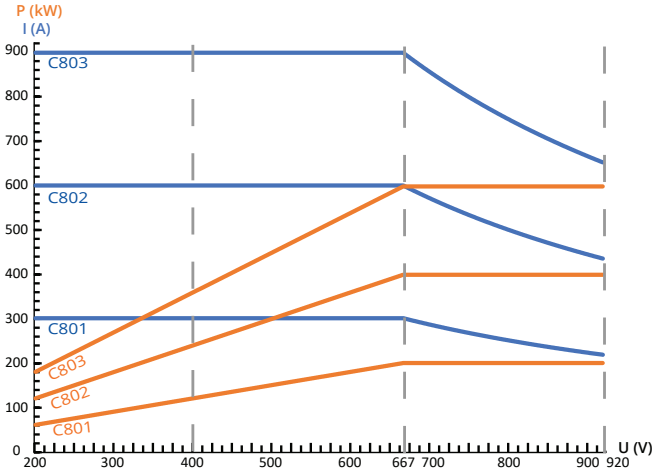
Notice: Over 500 A requires at least two charging outputs

- The charging power levels in the **Intermittent operation** table are available for circa 30 minutes, in +40°C ambient temperature
- After this, the power derating starts automatically and slowly decreases the output power, until the **Continuous operation** charging power level is reached (see table)
- The time for the maximum charging power depends of the ambient temperature, as the temperature increases, the time for the maximum charging power gets shorter
- In **Continuous operation**, the charging power is available continuously within the specified (max. +40°C) ambient temperature
- At higher ambient temperatures, derating may occur.

C-Series C800 Output Power & Current Graphs

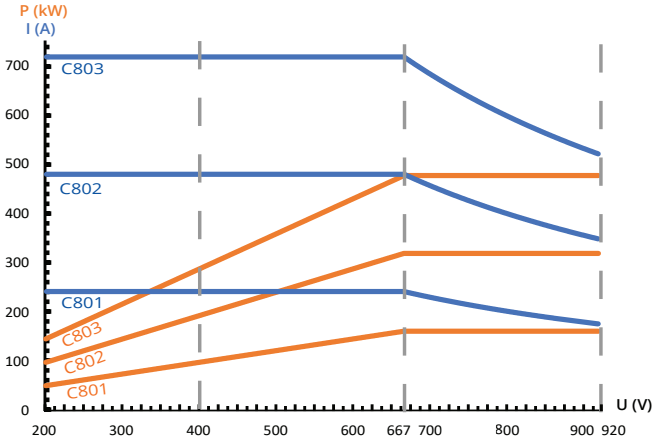
Intermittent operation

The output power equals 50 kW,
at voltages from 667 V to 920 V.



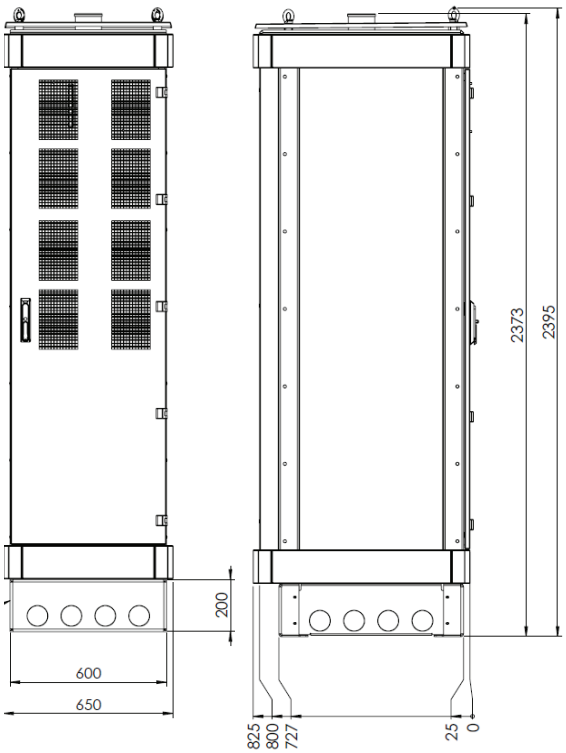
Continuous operation

The output power equals 40 kW,
at voltages from 667 V to 920 V.



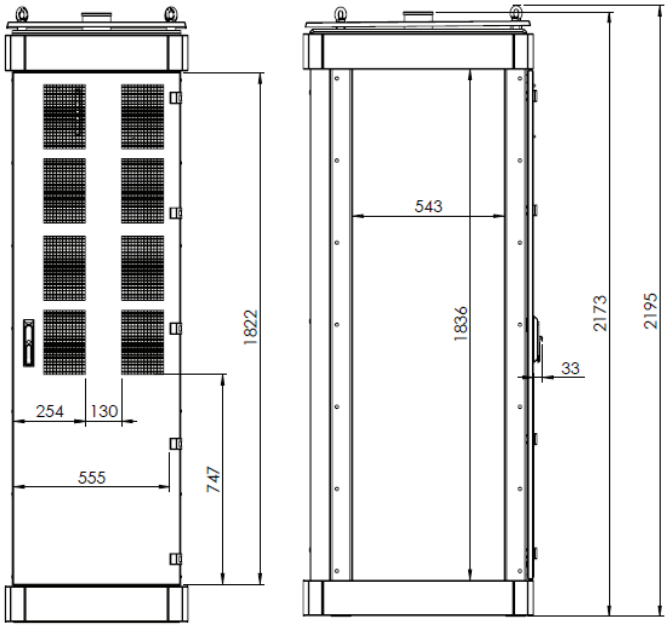
C-Series C800 Options

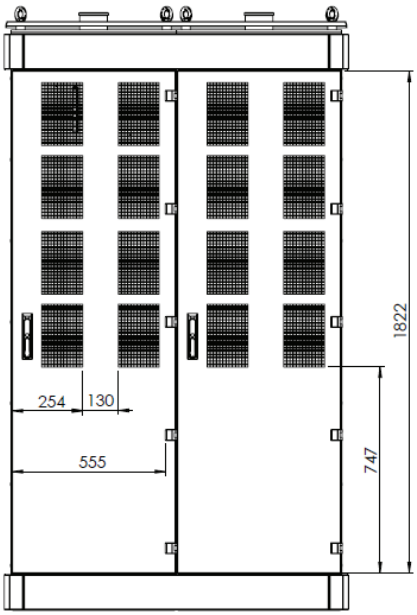
Item	Description
C-Series steel foundation	Installation kit for a single CPU cabinet, for flat surface assembly.
Stainless steel cabinet	Stainless steel cabinet instead of the standard cabinet.
Customized branding (colours, stickers)	Consult your sales representative at Kempower for customer branding options (colors, stickers), pricing and MOQ.

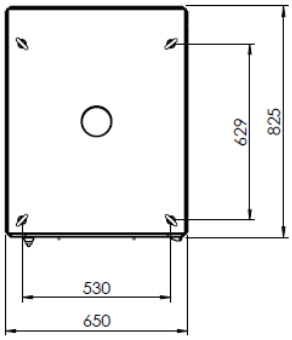


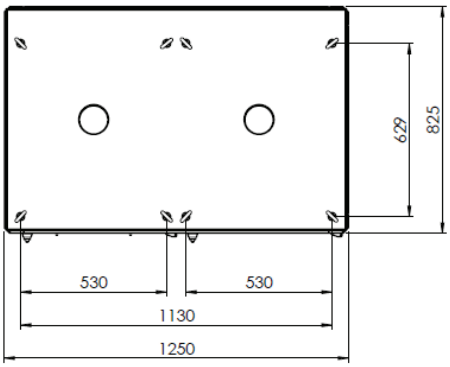
Note: if an optional base is used, the height
of the CPU increases with 200 mm in all models

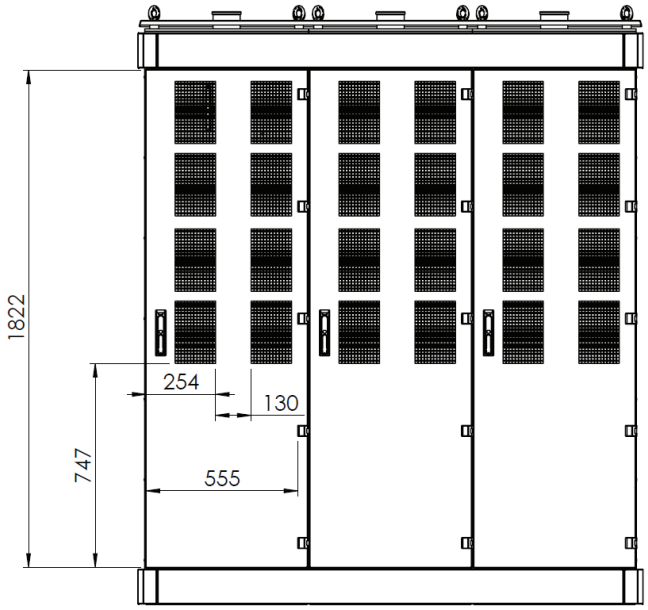
C-Series C800 Mechanical Dimensions

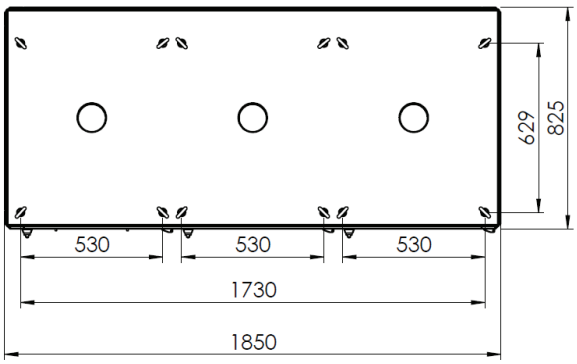












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