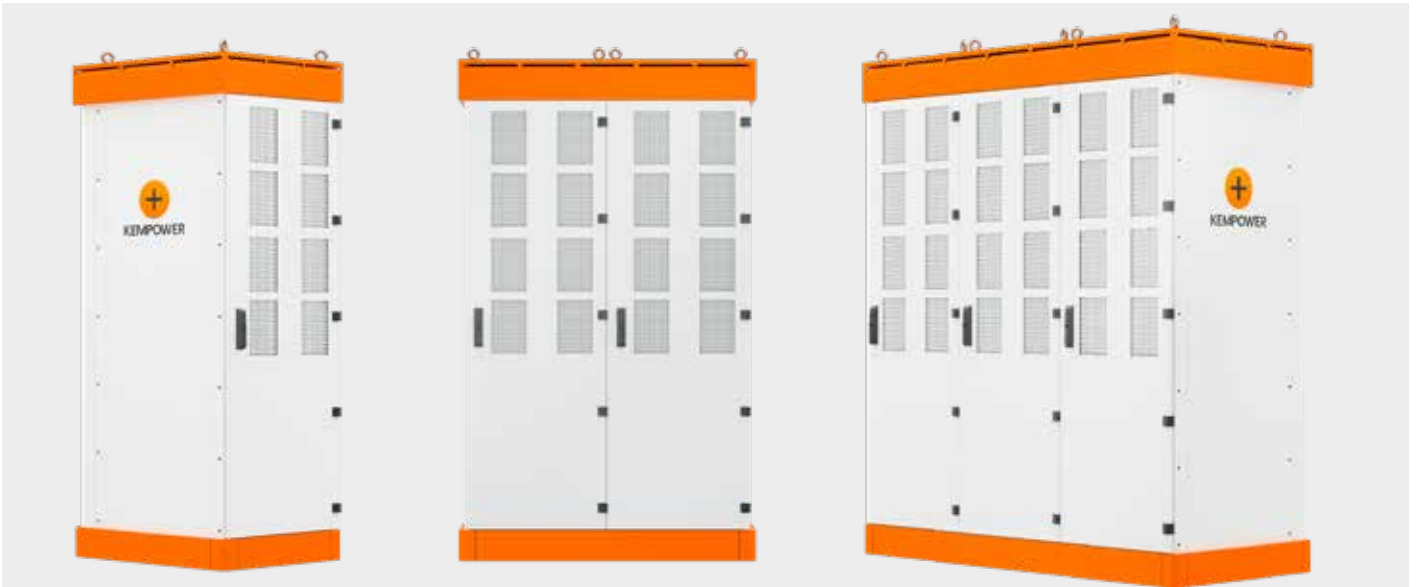


# Kempower Power Unit C500



## The flexible, modular and scalable and Kempower Satellite Charging System

**Kempower Power Unit distributes the charging power to up to 8 Kempower Satellites or Pantographs simultaneously. The unique dynamic power management enables utilizing the full potential of the on-demand power routing, leading to energy and cost savings.**

The Power Unit uses 50 kW power modules. A triple cabinet version can fit up to 12 x 50 kW power modules, providing a maximum nominal power of up to 600 kW.

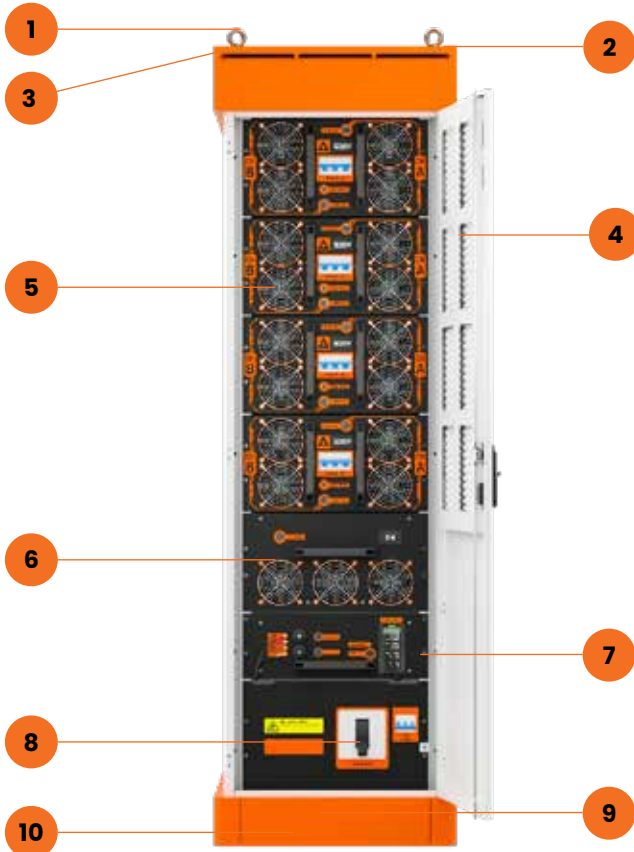
With dynamic power management, the available charging power of all power modules is automatically distributed to all connected charging outputs, depending on the size of the cable and the requirements of the electric vehicles. With static power management, each power module provides pre-set charging power to one dedicated charging output.

Power range

**50–600 kW**

Adaptive voltage range

**150–1000 v**



1. Lifting lugs

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2. WiFi / cellular / GPS antenna

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3. Air outlet

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4. Air inlets

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5. Power module (1 to 4 pcs per CPU)

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6. Static/dynamic power distribution module

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7. Control module

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8. Main switch

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9. AC cable entry

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10. DC output

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



1-4 power modules of 50 kW per cabinet



Scalability with add-on power modules



Improving cost efficiency of the charging system



Lockable door guarantee for safe and easy accessible enclosure



Advanced charging control and customization options with Kempower ChargeEye solution

## Product code interpretation examples:

**C501P160ND4**

**C501P160ND4C0**

C501	Kempower Power Unit C500 single cabinet
P160N	Charging power (P160 = 200 kW)
D4	Power distribution module D4 = Up to 4 adaptive dynamic outputs 150-1000 VDC
C0	Unbranded, black roof & base

## Number of cabinets

C501	Single cabinet*
C502	Double cabinet*
C503	Triple cabinet*

\* The rated current of a single charging output terminal using a power distribution module is limited to 200 A.

## Power distribution modules\*\*

D4	Up to 4 adaptive dynamic outputs 150-1000 VDC
D6	Up to 6 adaptive dynamic outputs 150-1000 VDC
D8	Up to 8 non-adaptive dynamic outputs 150-500 VDC***
S4	Up to 4 static outputs 150-500 VDC***
S8	Up to 8 static outputs 150-500 VDC***

\*\*Note: with 300 A charging cables:

500 A (max. 10 min) in +25°C with single charging output. Requires at least 3 output terminals and a specific hardware configuration.

375 A continuous in +25°C with double charging outputs. Requires at least 2 output terminals and a specific hardware configuration.

\*\*\* Power curve according to Figure 1 on page 7

## General electric specifications

Input voltage (AC)	380...480 VAC +6%/-10%
Input frequency	50...60 Hz
Output voltage	150...1000 VDC
Power factor (at full load)	0.92
Efficiency (at full load)	94%
Idle power	20 VA
Standby power	C501: 50 W, C502: 100 W, C503: 150 W
Over voltage class	III
Icc	35 kA
Network type	TN-S, TN-C, TN-C-S, TT

## Environmental specifications

Operating temperature	-30...+50°C
Current derating	-1.5% of max. charging current per 1°C (above +40°C)
Maximum altitude	2000 m (without altitude derating)
Altitude derating	-1.4% of max. charging current per 100 m (above 2000 m )
Storage temperature	-40...+60°C
Enclosure	IP54, IK10
Operational noise level	< 60 dB (at 1 m distance)
Ambient air humidity	< 95% relative humidity

## Connections & 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 protections

Over/under voltage

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Surge

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Short circuit

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Overload

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Earth leakage current

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Device over temperature

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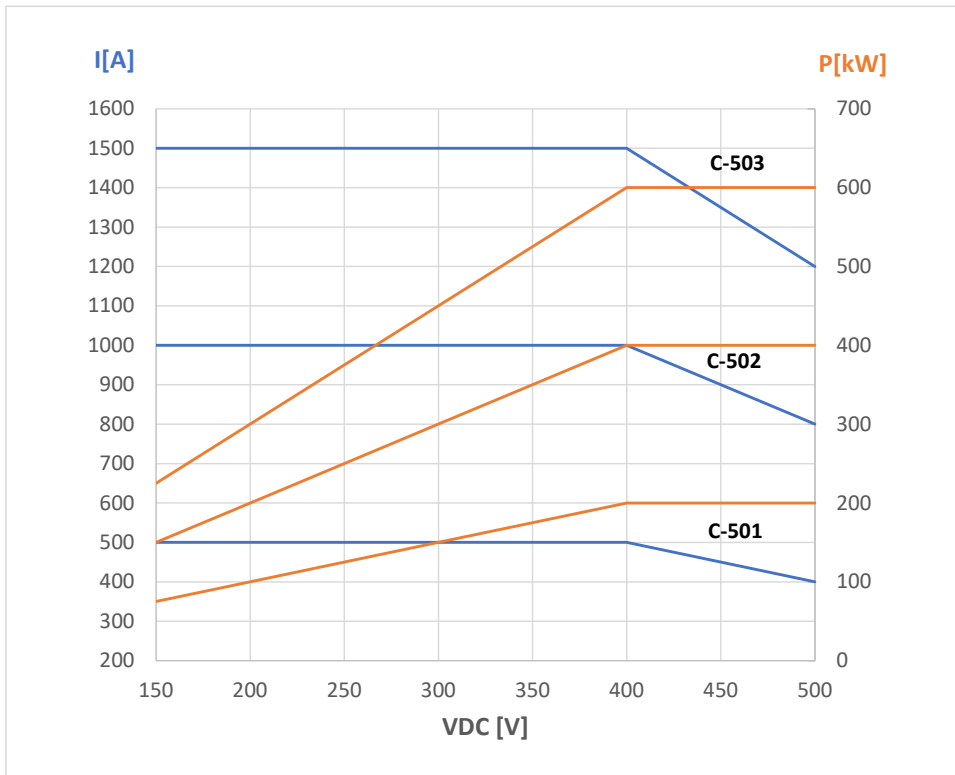
## Power performance

Product code	VDC	Charging (I)	Charging (P)	Input current (at 400 V)	Input current (at 480 V)
C501	150 V	500 A	75 kW	125 A	104 A
	200 V	500 A	100 kW	167 A	139 A
	300 V	500 A	150 kW	250 A	209 A
	400 V	500 A	200 kW	334 A	278 A
	500 V	400 A	200 kW	334 A	278 A
	500 V	250 A	125 kW	209 A	174 A
	600 V	250 A	150 kW	250 A	209 A
	667 V	250 A	167 kW	278 A	232 A
	700 V	250 A	175 kW	292 A	243 A
	800 V	250 A	200 kW	334 A	278 A
	1000 V	200 A	200 kW	334 A	278 A

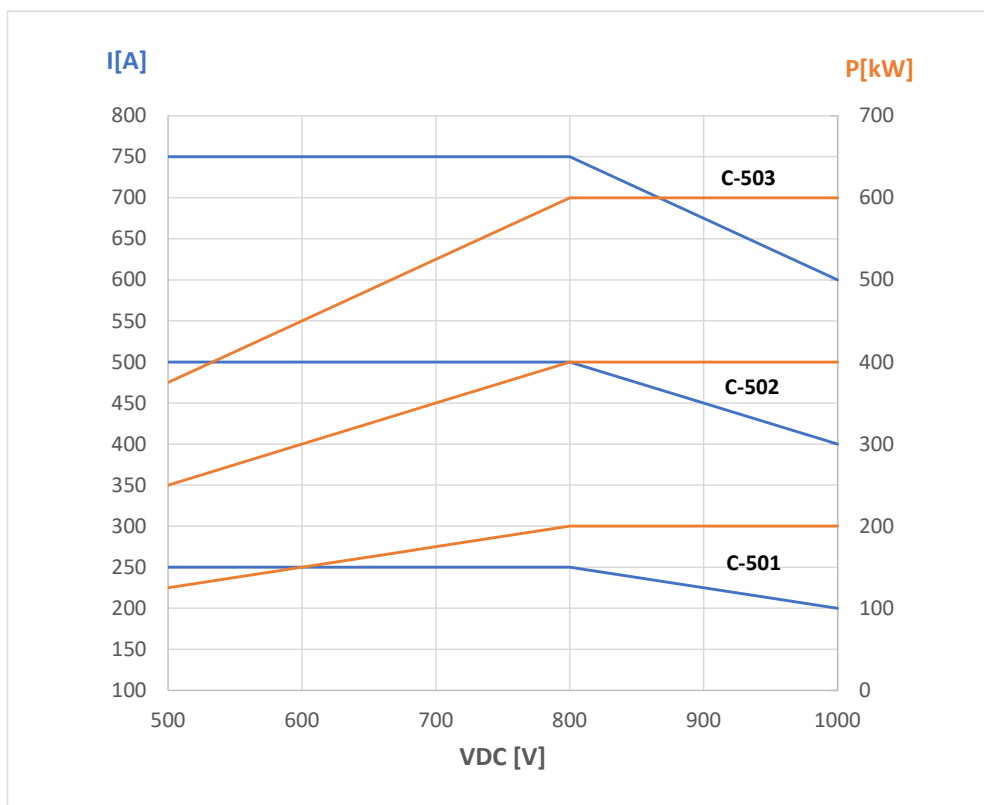
## Power performance

Product code	VDC	Charging (I)	Charging (P)	Input current (at 400 V)	Input current (at 480 V)
C502	150 V	1000 A	150 kW	250 A	209 A
	200 V	1000 A	200 kW	334 A	278 A
	300 V	1000 A	300 kW	501 A	417 A
	400 V	1000 A	400 kW	668 A	556 A
	500 V	800 A	400 kW	668 A	556 A
	500 V	500 A	250 kW	417 A	348 A
	600 V	500 A	300 kW	501 A	417 A
	667 V	500 A	334 kW	557 A	464 A
	700 V	500 A	350 kW	584 A	487 A
	800 V	500 A	400 kW	668 A	556 A
C503	1000 V	400 A	400 kW	668 A	556 A
	150 V	1500 A	225 kW	376 A	313 A
	200 V	1500 A	300 kW	501 A	417 A
	300 V	1500 A	450 kW	751 A	626 A
	400 V	1500 A	600 kW	1001 A	835 A
	500 V	1200 A	600 kW	1001 A	835 A
	500 V	750 A	375 kW	626 A	522 A
	600 V	750 A	450 kW	751 A	626 A
	667 V	750 A	500 kW	835 A	696 A
	700 V	750 A	525 kW	876 A	730 A
	800 V	750 A	600 kW	1001 A	835 A
	1000 V	600 A	600 kW	1001 A	835 A

**Figure 1: Power curve 150-500 VDC**



**Figure 2: Power curve 500-1000 VDC (adaptive voltage)**



## Mechanical dimensions

### (WxHxD), footprint

C501: 650 x 2195 x 841 mm

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C502: 1250 x 2195 x 841 mm

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C503: 1850 x 2195 x 841 mm

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## Weight

C501P40...	280 kg
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C501P80...	320 kg
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C501P120...	360 kg
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C501P160...	400 kg
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C502P200...	680 kg
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C502P240...	720 kg
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C502P280...	760 kg
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C502P320...	800 kg
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C503P360...	1080 kg
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C503P400...	1120 kg
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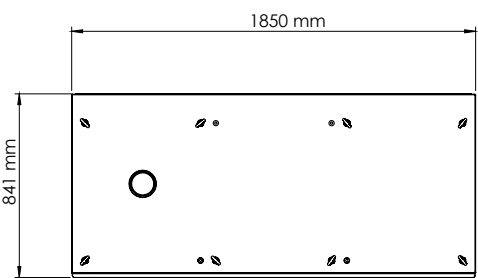
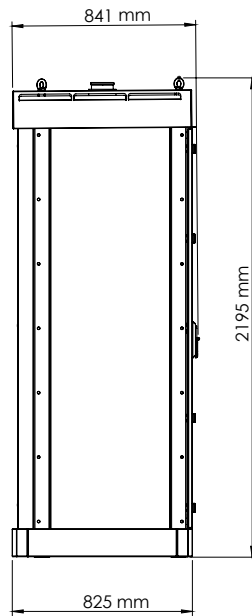
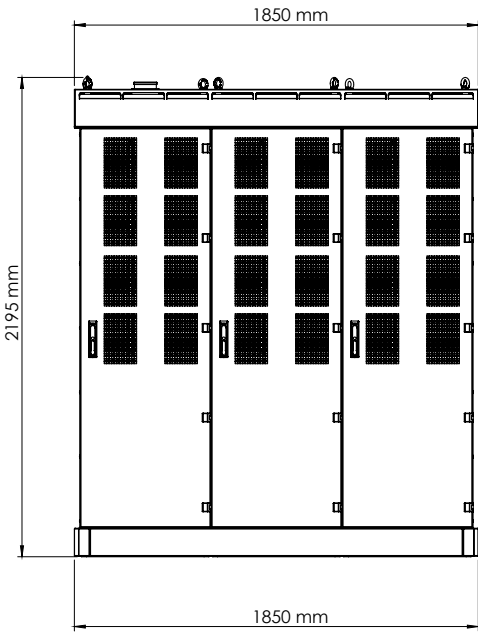
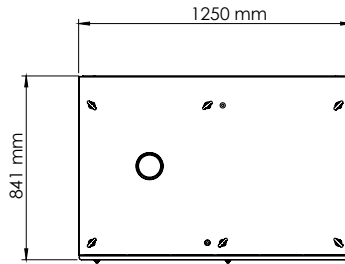
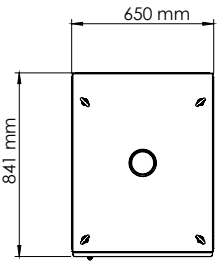
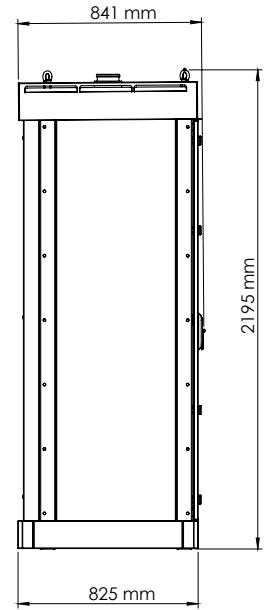
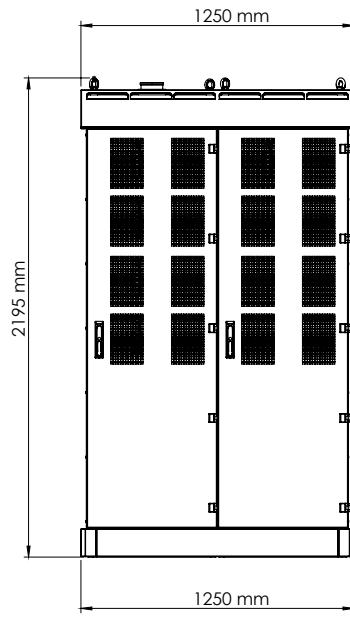
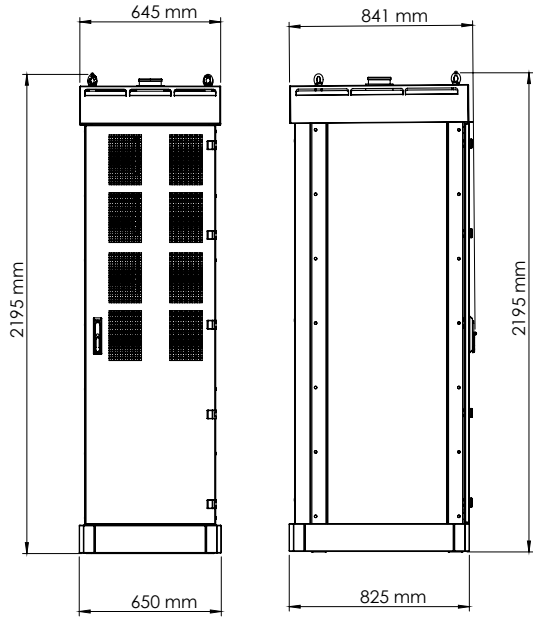
C503P440...	1160 kg
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C503P480...	1200 kg
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## Compliance to standards

Electrical safety	IEC 61851-1, IEC 61851-23
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EMC, harmonics	IEC 61851-21-2
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## Options

Steel base	Installation kit for a single cabinet, for flat surface assembly
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Customized branding	Customer branding options (colors, stickers)*
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\*Please consult Kempower for availability, pricing and MOQ

