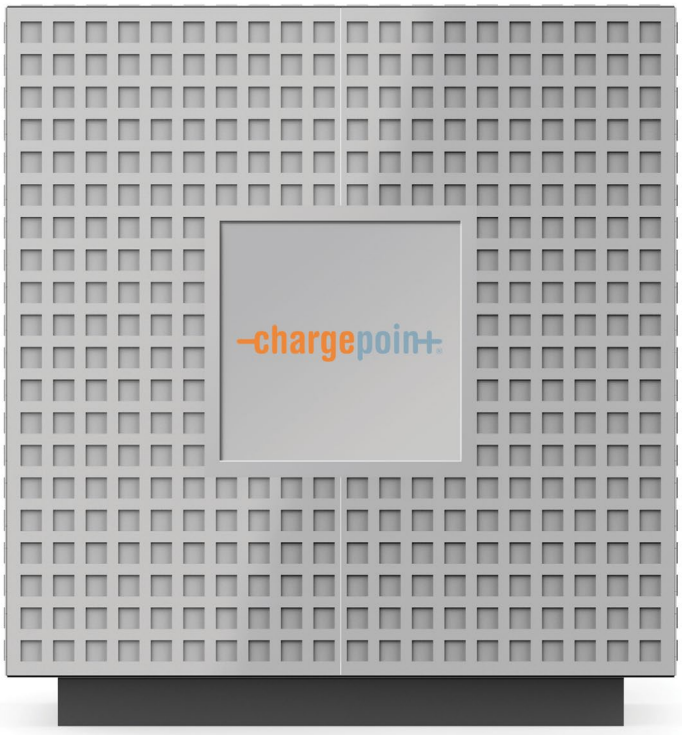
Express Plus

Specifications for Power Cube, Power Modules and Station



Power Cube

Express Plus Station

Express Plus Specifications

Power Cube Electrical Input

Input Rating	380–480 V AC, 3 phase, up to 800–640 A, 50/60 Hz
Wiring	4 conductors (L1, L2, L3 and Ground) or 5 conductors (L1, L2, L3, N and Ground)

Power Cube Electrical Output

Max Output Power	500 kW @ 400–1,000 V
Output Voltage	200–1,000 V DC
Max Output Current	1,250 A
Number of Stations Served	Each cube can serve up to eight stations
Max Modules per Power Cube	16

Station Electrical Output

Max Output Power	400 kW
Output Voltage, Charging	200–1,000 V DC
Max Output Current	400 A
Max Modules per Station	2

Power Module

Max Output Power	31.25 kW
Max Output Current	78 A

Station Functional Interfaces

Max Connector Types per Station	Up to three different connector types per station
Supported Connector Types	CHAdeMO, CCS2 (IEC 61851-23), CCS1 (SAE J1772™ Combo), GB/T (20234.3-2011 DtC)
Cable Length	3.8 m (12.5 ft)
Driver Interaction Display	Full-colour 10-inch (25.4 cm) LCD display for driver interaction
Top Display	Full-colour 20-inch (50.8 cm) LED display for notification
Authentication	RFID: ISO 15693, ISO 14443, NFC Plug and Charge: IEC 15118-1 Remote: Mobile and authentication in vehicle (if supported by vehicle)

Measurement & Connectivity Features

Power Measurement Accuracy	+/- 1% from 10% to full scale
Power Report/Store Interval	10 seconds
Driver Power Reporting	One second
Local Area Network	2.4 GHz and 5 GHz Wi-Fi (802.11 b/g/n)
Wide Area Network	3G GSM, 3G CDMA and LTE

Energy Management Features

Dynamic Power Management	Allows a fixed maximum power output per station or lets the system dynamically manage the power distribution per station
Power Module Energy Balancing	Balances the number of hours of operation of each module and optimises power module usage
Remote Energy Management	Supported through the ChargePoint Network API services

Safety and Operational Ratings

Vehicle Safety Communication	CHAdeMO – JEVS G104 over CAN, CCS2 – IEC 61851-23 and CCS1 – SAE J1772 over PLC
Plug-out Detection	Power terminated per JEVS G104 (CHAdeMO), IEC 61851-23 (CCS2) and SAE J2931 (CCS1) specification
Power Cube Enclosure Rating	Type 3R, IP 44
Station Rating	Type 3R, IP 44
Safety Compliance	For Europe, complies with: IEC 62196, IEC 61851 For U.S., complies with UL 2202, UL 2231-1, UL 2231-2
Power Cube and Station Surge Protection	Tested to IEC 6100-4-5, Level 5 (6 kV @ 3,000 A). In geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	EU: EN55011, EN55022 & IEC61000-4; U.S.: FCC part 15 Class A
Power Conversion Efficiency	96%
Power Factor	0.99
Harmonics	iTHD < 7% (Complies with IEEE 519 Requirements)
Power Module Cooling	Liquid cooling technology
Charging Cable Cooling	Liquid cooling technology (depending on configuration)
Operational Altitude	<2,000 m (<6,500 ft)
Operational High Altitude (Optional)	<3,000 m (<9,800 ft) (output power derating may apply)
Operating Temperature	-30°C to +50°C (-22°F to +122°F)
Storage Temperature	-40°C to +50°C (-40°F to +122°F)
Operating Humidity	Up to 95% @ +50°C (+122°F) non-condensing

Generic Specifications

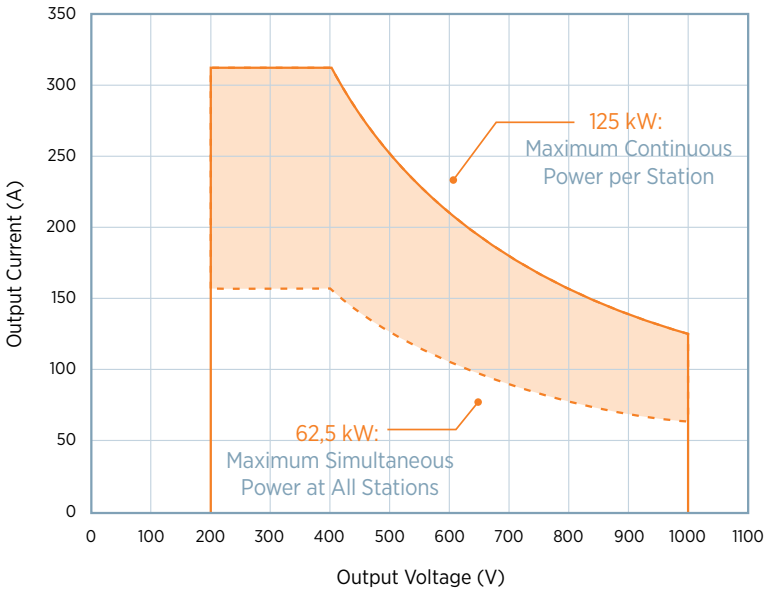
Power Cube Dimensions	1,750 mm x 1,750 mm x 1,750 mm (5 ft 9 in x 5 ft 9 in x 5 ft 9 in)
Station Dimensions	2,230 mm x 712 mm x 420 mm (7 ft 4 in x 2 ft 4 in x 1 ft 4 in)
Power Module Dimensions	760 mm x 430 mm x 130 mm (2 ft 6 in x 1 ft 5 in x 5 in)
Power Cube Weight (without modules)	750 kg (1,653 lb)
Station Weight (without modules)	250 kg (551 lb)
Power Module Weight	38 kg (84 lb)

Two Station Configuration
No Cube + Two Stations

Express Plus Station
with 2 x 31.25 kW
Power Modules

Express Plus Station
with 2 x 31.25 kW
Power Modules

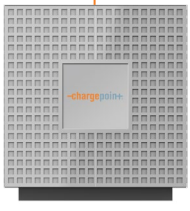
Shared 125 kW
Up to **125 kW** max continuous power per station
and **62.5 kW** max simultaneous power on two stations



Power Sharing from 62,5 kW to 125 kW.
Maximizes power to each station, minimizes charging time.

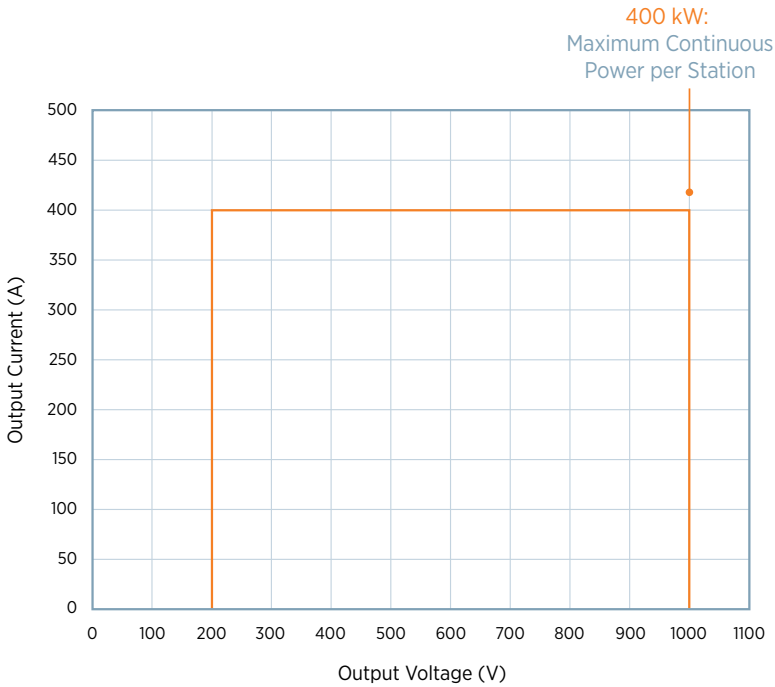
Single Station Configuration
One Cube + One Station

Express Plus Station
without Power Modules

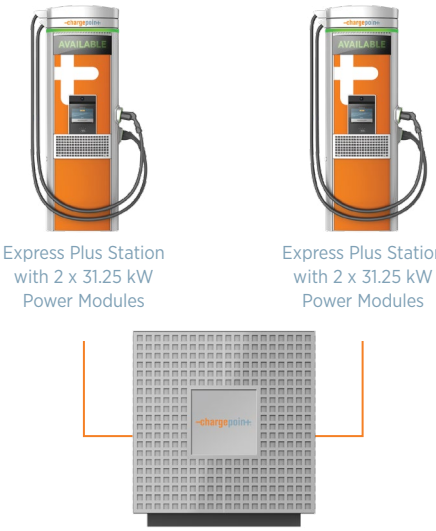


Power Cube
with 13 x 31.25 kW Power Modules

400 kW
Up to **400 kW** max continuous power per station



Two Station Configuration
One Cube + Two Stations

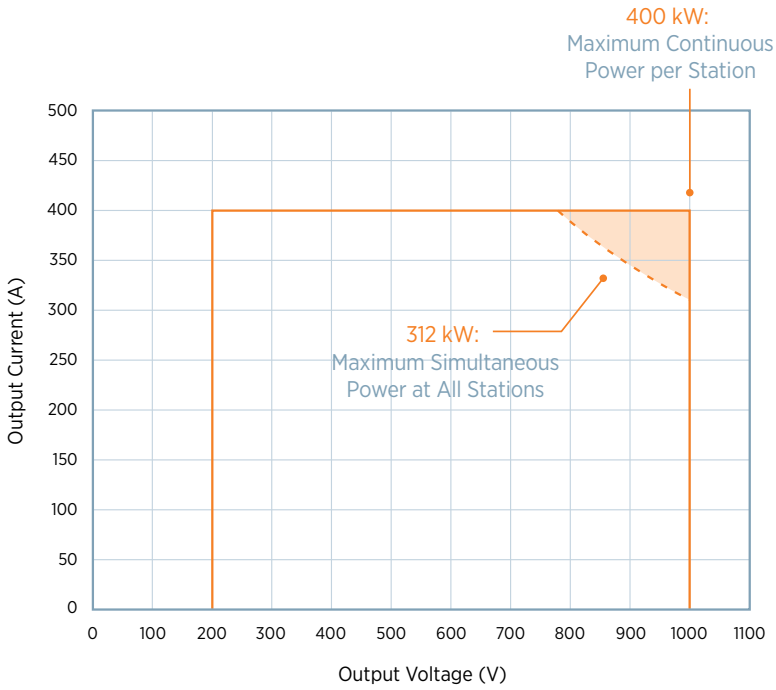


Express Plus Station
with 2 x 31.25 kW
Power Modules

Express Plus Station
with 2 x 31.25 kW
Power Modules

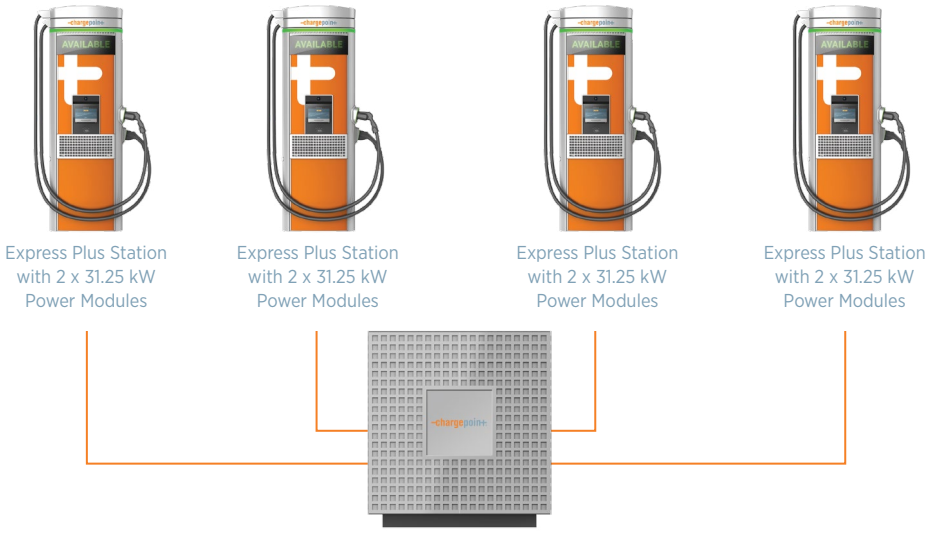
Power Cube
with 16 x 31.25 kW Power Modules

Shared 625 kW
Up to **400 kW** max continuous power per station
and **312 kW** max simultaneous power on two stations

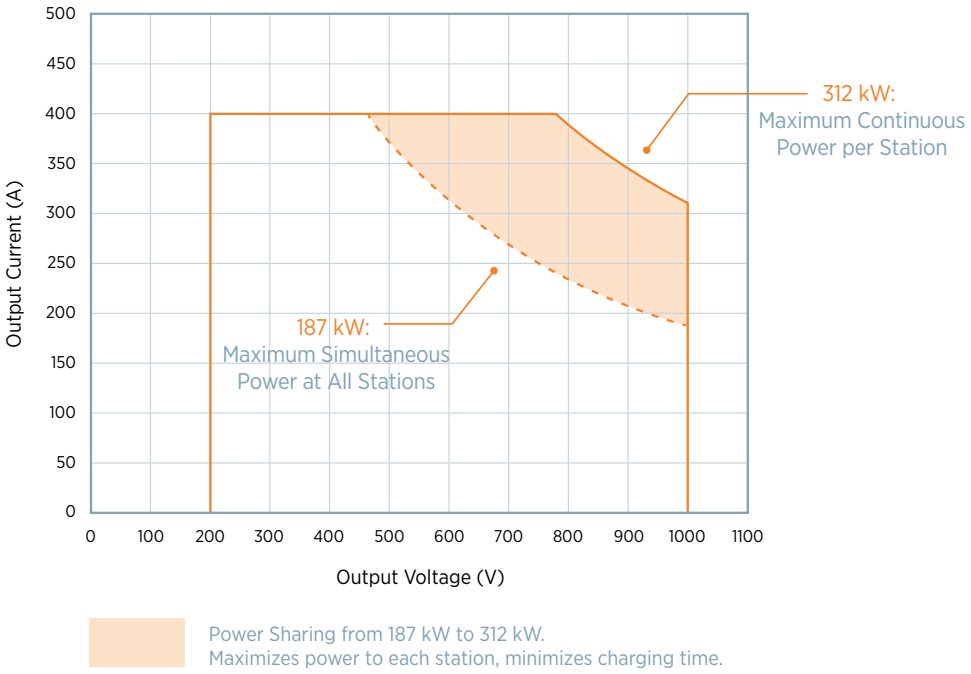


Power Sharing from 312 kW to 400 kW.
Maximizes power to each station, minimizes charging time.

Four Station Configuration
One Cube + Four Stations



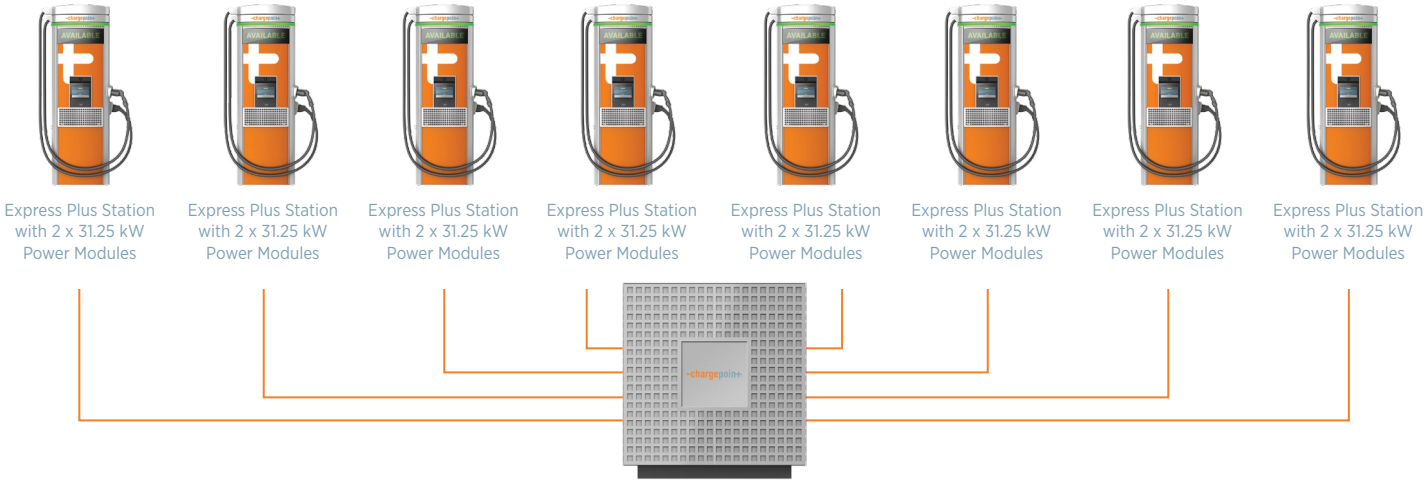
Shared 750 kW
Up to **312 kW** max continuous power per station and
187 kW max simultaneous power on all four stations



Power Sharing from 187 kW to 312 kW.
Maximizes power to each station, minimizes charging time.

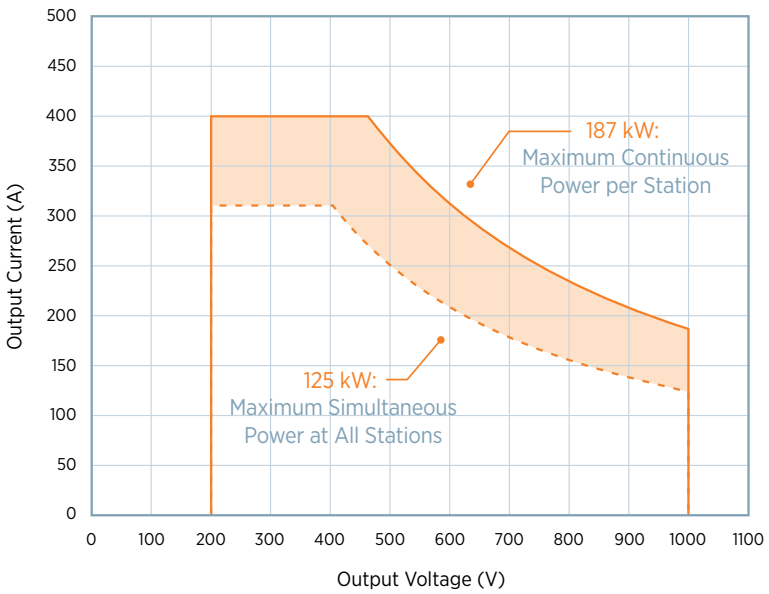
Eight Station Configuration

One Cube + Eight Stations



Shared 1,000 kW

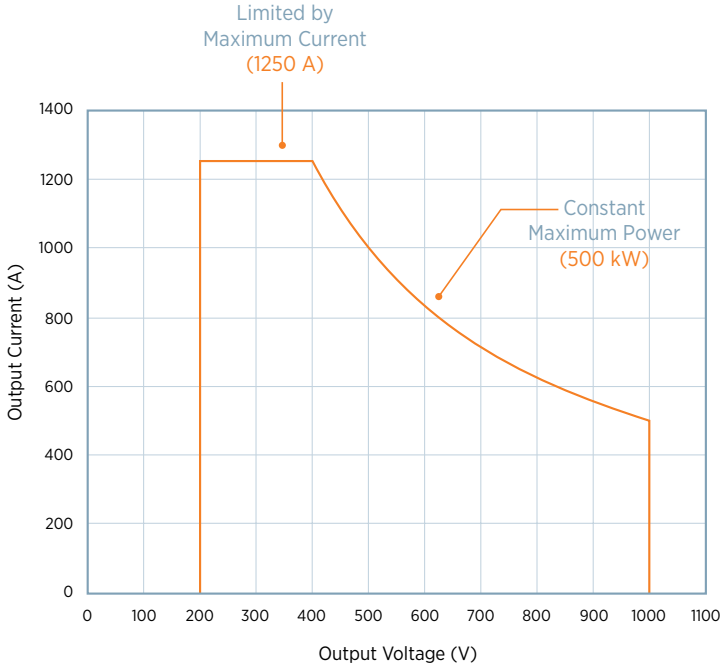
Up to **187 kW** max continuous power per station and
125 kW max simultaneous power on all eight stations



Power Sharing from 125 kW to 187 kW.
Maximizes power to each station, minimizes charging time.

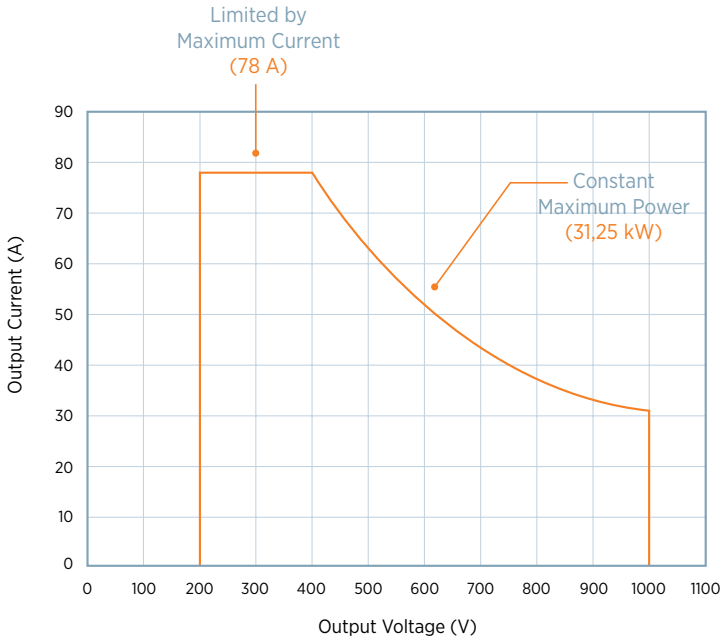
Power Cube Output Characteristic

16 Modules x 31.25 kW per Module



Power Module Output Characteristic

31.25 kW



Contact Us

To learn more about ChargePoint Express 250:

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