Electric Vehicle Infrastructure
Terra HP high power charging

Terra HP is a modular high power charging system with high output current capability, supporting both 400 V_{DC} and 800 V_{DC} vehicles. A single power cabinet system can deliver up to 375 A and 160 kW continuously, and 175 kW peak. With two power cabinets the system delivers up to 500 A and 350 kW.

With unique ABB Dynamic DC power sharing technology two charge posts can be powered by just two instead of four power cabinets, whereby available power is dynamically shared between the charge posts. This is a cost effective solution for sites with multiple charge posts.

Terra HP is ideally suited for highway rest stops and petrol stations where the highest power is required to minimize charging time. Depending on customer needs Terra HP supports 500 A CCS with a liquid cooled cable and 200 A CHAdeMO.

A charge post paired with one power cabinet can deliver 375 A and 160 kW continuously, meaning today's 400 V_{DC} drive train vehicles can charge at high power. Next generation vehicles are sup-ported with an output voltage range of up to 920 V_{DC}.

A charge post paired with two power cabinets delivers up to 500 A and 350 kW. With ABB Dynamic DC power sharing technology a second charge post can be added to an installation with two power cabinets, whereby available power is dynamically shared between the charge posts. As this requires only two instead of four power cabinets to reach 500 A at two charge posts, investments are significantly reduced.

The system is modular and expandable over time. It is possible to add additional power cabinets and charge posts later on. This is a cost efficient way to scale charging sites with the demands of a growing EV base.

All ABB EV chargers come with Internet based ABB Ability Connected Services to allow customers to easily connect their chargers to different software systems like back-offices, payment platforms or smart grid energy systems. This enables remote assistance, tailored diagnostic trouble shooting and repair, and remote updates and upgrades. A reliable, secure, cost efficient and future proof connectivity solution, based on open industry interfaces.

ABB Terra HP key features
- High output of 375 A and 160 kW continuous per power cabinet
- Charging up to 500 A and 350 kW with two power cabinets
- Dynamic DC functionality: 500 A on two charge posts with only two instead of four power cabinets
- Future proof due to wide output voltage range of 150 – 920 V_{DC}, supporting todays and next generation EVs
- 500 A CCS with liquid-cooled cable
- 200 A CHAdeMO
- Integrated chiller in the charge post allows for ease of installation and creates redundancy on site level

- High brightness, intuitive, easy to use 7" touchscreen display
- Integrated RGB led strips with customizable color
- Multiple payment options
- IEC 61000 EMC Class B (residential) compliant with optional external EMC filter if needed

ABB Terra HP optional features
- 15" high brightness touch screen
- Customizable user interface
- Site power management
- Integrated payment terminal

Why charging operators prefer ABB
- ABB Ability Connected Services:
  - Easily connect chargers to back offices, payment platforms or smart grid systems
  - Remote diagnostics, repair and over-the-air software updates, keeping costs low
- ABB's years of EV charging experience and close cooperation with EV manufacturers
- High volume production with a globally distributed manufacturing base
- Local ABB presence in over 100 countries

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175 kW
375 A
150-920 V$_{DC}$

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Dynamic DC
2 x 350 kW
2x 500 A
150-920 V$_{DC}$

Technical specifications	
Compliance and certification	CE models and UL models available
Environment	IP 54, outdoor use
Mechanical impact protection	IK 10 (screen: IK 08)
Operating temperature	-35 °C to +55 °C (with derating)

Charge post	
DC output current	500 A CCS (liquid cooled) 200 A CHAdeMO
DC output voltage range	150 – 920 V$_{DC}$
User interface	7" high brightness touch screen
Lights	RGB led strips with customizable colors White top light
RFID	ISO/IEC 14443A/B, ISO/IEC 15393, FeliCa™1, NFC, Mifare, Calypso, (option: Legic)
Network connections	GSM/2G/3G 10/100 base-T Ethernet
Dimensions (H x W x D)	2390 x 620 x 440 mm
Weight	250 kg

Power cabinet	
Output power per power cabinet	175 kW peak 160 kW continuous (375 A)
AC Input – CE models	400 V$_{AC}$ ±10%, 50 Hz 3P + PE (no neutral) 277 A nominal @400 V$_{AC}$ (160 kW output) 308 A peak @360 V$_{AC}$ (175 kW output)
AC Input – UL models	480 V$_{AC}$ ±10%, 60 Hz 3P + PE (no neutral) 215 A nominal @480 V$_{AC}$ (160 kW output) 272 A peak @360 V$_{AC}$ (175 kW output)
Efficiency (full load)	≥ 94% at full load
Power factor	≥ 0.97
EMC emission	Standard: Class A (industrial) Optional: Class B (residential) with external filter
Dimensions (H x W x D)	2030 x 1170 x 770 mm
Weight	1340 kg

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Notice: product under development, specifications may deviate without prior notice