CP4000

Networked Charging Station

Site Design Guide

IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING: This manual contains important instructions for Home Flex. When using electric products, always follow basic precautions, including the following:

WARNING:

1. **Read and follow all warnings and instructions before servicing, installing or operating the ChargePoint® charging station.** Install and operate it only as instructed. Failure to do so may lead to death, injury or property damage and will void the Limited Warranty.
2. **ChargePoint recommends that installation, commissioning, and break-fix services be performed by a licensed electrician who is also a ChargePoint-certified technician.** These systems operate at high voltage, and without strict adherence to safety protocols, proper protective equipment, and ChargePoint technical guides, there is significant risk to people, equipment, and the environment. Please ensure full compliance with all applicable local and national buildings, electrical, and safety codes.
3. **Always ground the ChargePoint charging station.** Failure to ground the charging station can lead to risk of electric shock. The charging station must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor should be run with circuit conductors and connected to the equipment grounding terminal or lead on the Electric Vehicle Supply Equipment (EVSE). Connections to the EVSE must comply with all applicable codes and ordinances.
4. **Install the ChargePoint charging station on a concrete pad using a ChargePoint-approved method.** Failure to install it on a surface that can support the full weight of the charging station can result in death, personal injury or property damage. Inspect the charging station for proper installation before use.
5. **This charging station is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases (This charging station is not suitable for use in any ATEX classified area, such as near flammable, explosive, or combustible vapors or gases).**
6. **Supervise children near this device.**
7. **Do not put fingers into the electric vehicle connector.**
8. **Do not use this product if any cable is frayed, has broken insulation or shows any other signs of damage.**
9. **Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open or shows any other signs of damage.**
10. **Use only copper conductor wire rated for 90°C (194°F).**

11. Do not operate the charging station in temperatures outside its operating range of -40˚F to 122˚F (-40˚C to +50˚C).
12. Ensure the charging cable is positioned so it is not stepped on, tripped over, or subjected to damage or stress. Do not close a garage door on the charging cable.

IMPORTANT: Under no circumstances will compliance with the information in a ChargePoint guide such as this one relieve the user of the responsibility to comply with all applicable codes and safety standards. This document describes approved procedures. If it is not possible to perform the procedures as indicated, contact ChargePoint. ChargePoint is not responsible for any damages that may result from custom installations or procedures not described in this document or that fail to adhere to ChargePoint recommendations.

Warranty Implication

IMPORTANT: Please be advised that all installation, commissioning, and break-fix services must be performed by a ChargePoint-certified technician. Engaging non-certified personnel for these services will result in warranty implications, as doing so constitutes a breach of policy.

Support Services

https://www.chargepoint.com/legal/support-services

For more information about ChargePoint's training and certification programme, visit https://www.chargepoint.com/partners/training-certification

Product Disposal

Applicable to NA - Do not dispose of as part of unsorted domestic waste. Enquire with local authorities regarding proper disposal. Product materials are recyclable as marked.

Applicable to EU - To comply with Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), devices marked with this symbol may not be disposed of as part of unsorted domestic waste inside the European Union. Enquire with local authorities regarding proper disposal. Product materials are recyclable as marked.

Document Accuracy

The specifications and other information in this document were verified to be accurate and complete at the time of its publication. However, due to ongoing product improvement, this information is subject to change at any time without prior notice. For the latest information, see our documentation online at ChargePoint Product Reference Documentation.

Copyright and Trademarks

Symbols

This guide and product use the following symbols:

DANGER: Risk of electric shock

WARNING: Risk of personal harm or death

CAUTION: Risk of equipment or property damage

IMPORTANT: Critical detail that must be followed to achieve intended results

NOTE: Important contextual details or procedural clarifications

REINSTALL NOTE: Essential instructions to follow when reinstalling a part or component

Read the manual for instructions

Ground/protective earth

Illustrations Used in This Document

The illustrations used in this document are for demonstration purposes only and may not be an exact representation of the product. However, unless otherwise specified, the underlying instructions are accurate for the product.

Contents

Revision History

This page provides a summary of revisions made, listing the month and year of each update along with a brief description of the changes made.

Month & Year	Description
May, 2026	• Updated IMPORTANT SAFETY INSTRUCTIONS section to revise the warning regarding installation and servicing by a certified technician and to add warranty implication. • Added a warranty limitation Caution in the Introduction chapter.

Introduction 1

This topic describes how to design a project site for the ChargePoint CP4000 charging station for electric vehicles. This includes guidelines and best practices for electrical infrastructure and capacity planning, construction and concrete work required prior to installation of charging stations and mobile signal requirements.

For full specifications and certifications for CP4000 charging stations, refer to the CP4000 Datasheet found online at: ChargePoint Product Reference Documentation.

CAUTION: Warranty limitation

- If the charging station is not installed, commissioned, or serviced by a ChargePoint certified technician using a ChargePoint-approved method, it is *excluded* from all ChargePoint and other warranties and ChargePoint is not responsible.
- You must be a licensed electrician and complete training at https://www.chargepoint.com/partners/training-certification to become ChargePoint certified and to access ChargePoint's web-based installer tools or ChargePoint Installer app.

Initial Site Guidelines

ChargePoint recommends the CP4000 charging station solution for home and commercial charging station installations.

An on-site evaluation is needed to determine conduit and wiring requirements from the panel to the proposed parking spaces, to evaluate construction and concrete requirements for mounting the charging stations and to measure mobile signal levels for the station and identify suitable locations for any necessary mobile signal booster equipment.

Site Requirements

The site requirements are as follows:

- Must be at an elevation no greater than 2000 metres above mean sea level.
- Must not expose the charging station to ambient temperatures above 50°C, including through external influences such as direct sunlight.
- Must have sufficient air circulation so that the station is cooled during operation.

- Must be located where a vehicle can be parked between 0.5 m and 5.0 m from the charging station and connected without putting strain on the charging cable.

Mounting Requirements

The CP4000 can be mounted on a concrete pedestal or on a wall.

The wall mounting requirements are as follows:

- Must be on a smooth, plumb, stable, strong wall.
- Can be mounted on wood stud, masonry or concrete walls.

The pedestal mount requirements are as follows:

- Must be on concrete that is a minimum 600 mm wide x 600 mm long x 600 mm deep.
- Must not be installed in asphalt.

Power Supply Requirements

Review the CP4000 Datasheet at ChargePoint Product Reference Documentation.

The ChargePointCP4000 charging station is designed to operate on rated voltages of 230 V (phase-neutral) or 400 V (phase-phase) at 50 Hz.

IMPORTANT: Risk of non-compliance with electrical safety standards and local regulations. Site Operator Responsibilities:

CP4000 charging station installations must comply with all regulatory requirements for low voltage installations according to IEC 60364-1 and IEC 60364-5-52.

Consult with your electricity grid operator regarding requirements for local regulations. Depending on the desired rated power, the installation of the charging station may require registration with and/or approval by your electricity grid operator.

Each charging station requires:

- A dedicated three phase or single phase electrical circuit.
- A new circuit breaker at the electrical panel.
- Electrical cable and conduit installed in the appropriate location with appropriate circuit protection and metering, in accordance with all local codes and regulations.
- An upstream MCB (Type Cx) for every supply line. The “x” depends on the nominal current of the supply line from the MCB to the charging station.

The CP4000 delivers up to 22.2 kW per charging port. Refer to the Datasheet for additional circuit sharing and power select options. Various options are available for power management. If a site has limited power capacity or needs to reduce costs for electrical infrastructure, consider ChargePoint power management options for power sharing at the circuit, panel, transformer or site level. Refer to the Datasheet for complete details on available power management options.

Mobile Connectivity

The CP4000 charging station needs strong mobile connectivity to allow it to communicate with the ChargePoint network. To ensure adequate signal strength in underground garages or other enclosed

parking structures, mobile network repeaters may be required.

A connection is needed for station owners and operators to access these features:

- User authentication, access control and billing.
- Energy usage reporting.
- Charging station utilisation and charging session details for analytical reporting.
- Automatic power management.
- Real-time charging status to drivers using the ChargePoint mobile app or web portal.
- Ability for drivers to use the ChargePoint mobile app and Tap to Charge, Apple Pay or Android Pay on their smartphone to start and stop sessions.
- Notifications to drivers when vehicle battery is full or stops charging.
- Notifications to drivers regarding waiting-list position.
- Notifications to drivers prior to pricing increases for overstay of parking at EV spots.
- Station fault alarms and remote diagnostic capability.
- Over-the-air software upgrades for new station features or enhancements.

If you have pre-existing infrastructure or are using your own preferred electrical contractor to prepare your site, a completed Construction Sign-off Form is required to certify compliance with electrical specification requirements and to ensure that everything was prepared to ChargePoint specifications.

IMPORTANT: ChargePoint recommends consulting with an engineer to create site specific drawings. Ensure the installation complies with all applicable rules and regulations.

Charging Station Placement

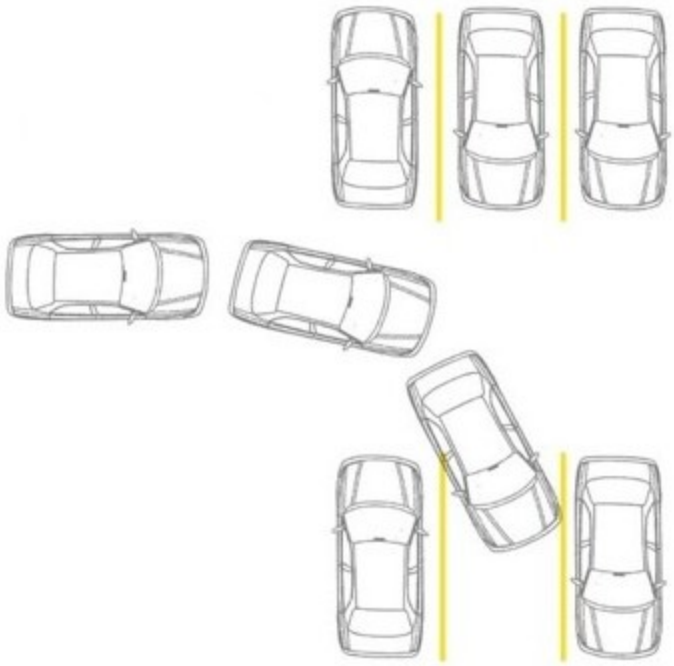
WARNING: The charging station must be installed on a level concrete base or a flat wall rated for the weight of the station. Tarmac cannot support the full weight of the station. Failure to install the station on a suitable surface may cause the station to tip over, resulting in death, personal injury or property damage.

Layout Considerations

The layout considerations are as follows:

- Identify station locations for EV charging spots.
- To help minimise costs, choose station locations that are as close as possible to the available electrical infrastructure.
- Determine raceway or conduit runs for electrical wiring from the electrical panel and consider a layout to minimise linear conduit costs to all proposed EV parking spaces.
- If possible, avoid or minimise trenching requirements, especially more costly trenching to run conduit under asphalt surfaces.

- Consider locations where it will be easy to add future stations.
- Identify suitable locations with smooth, plumb surfaces for wall-mounted stations or suitable floor surfaces for pedestal-mounted stations.
- The charging station must not block ramps or pathways, and cables must not extend across ramps or pathways when connected to a vehicle. Avoid high pedestrian traffic areas such as thoroughfares and marked escape routes.
- The charging station must not be installed in close vicinity to running water, sprinklers, water jets or irrigation systems.
- Choose adjacent parking spaces in an area with adequate lighting.
- For stall parking, ChargePoint prefers using perpendicular parking stalls to better accommodate vehicles with front and rear charge ports.



NOTE: While ChargePoint tests charging stations with a majority of upcoming vehicles, ChargePoint cannot guarantee the port locations of future vehicles and cannot warrant the configurations proposed will work for all vehicles.

- Consider how easily drivers can find the stations they need to access.
- Use dual-port pedestal mount stations where possible in open areas for adjacent parking or adjoining parking spaces.
- Consider protective bollards and wheel stops where appropriate, especially for open tandem parking spaces.

Electrical Considerations

The electrical considerations are as follows:

- Evaluate existing electrical infrastructure to determine if the existing utility service and electrical panel capacity is sufficient.
- Ensure the electrical wiring, overcurrent circuit protection, and metering (if required) is in place by reviewing the datasheet, as well as the wiring diagram and grounding requirements in this document.
- Use 16 mm^2 or 10 mm^2 wire to the station.
- The cable entering the station must be less than 25 mm in diameter. For higher demand, you must feed the station with two circuits, each with a maximum diameter of 25 mm.
- The station must be grounded adequately according to local code requirements.
- Size all conduit and electrical wiring in accordance with all local code requirements. ChargePoint recommends using a certified electrician to evaluate available capacity and identify any upgrades that may be required.
- If a dedicated EV electrical panel is required, choose a panel location in close proximity to the existing electrical supply.

Additional Considerations

The additional considerations are as follows:

- Identify costs for any necessary upgrades and/or a new dedicated electrical panel.
- Determine appropriate mounting type: wall mount vs pedestal mount.
- Establish the quantity of each type of charging station in the initial order.
- Measure mobile signal levels using professional mobile test equipment to ensure adequate mobile coverage at the charging station location.

> **NOTE:** To ensure adequate mobile signal strength in underground or enclosed parking structures, mobile repeaters may be required. Use an indoor antenna located near EV parking spaces and an outdoor antenna typically located at the garage entrance ceiling or on the rooftop where cellular signals are best. See additional details in Introduction.

- Determine cost budget options for electrical infrastructure to satisfy current needs and future needs.
- Prioritise charging station locations based upon immediate and future needs, construction timelines and costs.

Plan for the Future

Consider both current and future EV charging needs as EV adoption grows.

- Add extra capacity if electrical panels are being upgraded now.
- Use sub-panels as a way to shorten the electrical path.
- Consider running raceway or conduit to all planned EV parking spots, but pulling electrical wiring from the panel to meet current needs.
- Oversize the conduit between the main electrical panel and future stations.

- Install pull or junction boxes at the end of an existing row of charging stations to ease cable pulls for future stations.
- Consider installing a dedicated electrical panel for EV charging, then leverage ChargePoint power management to efficiently use available power at a site to support more EV charging ports than would otherwise be possible without power management.

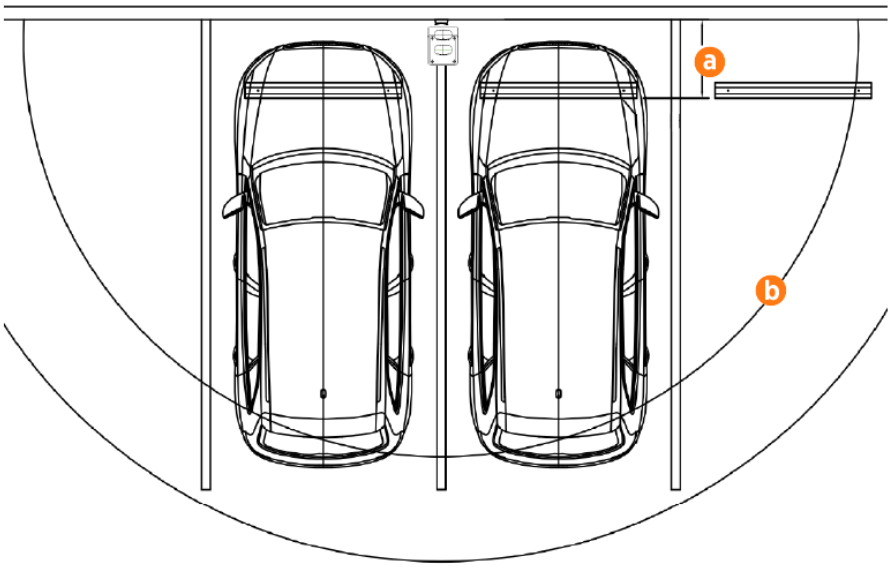
Civil and Mechanical Design 2

Use the guidance below to design the civil and mechanical aspects of the site.

The station can be installed attached to a wall or on a concrete pedestal. The pedestal can be a newly poured pad or an existing concrete surface.

Wall-Mounted Stations

For wall-mounted stations, the wall must be smooth, stable, plumb and sturdy. The minimum height of the wall must be 1250 mm. Place wheel stops (a) 900 mm from the wall. The arc shows the usable reach of the charging cable for cable-attached stations (b). This can be used to estimate reach for shuttered sockets as well.



IMPORTANT: Ensure that the wall supports the station. If mounting to a hollow wall, bridge at least two studs.

WARNING: If not installed correctly, the ChargePoint charging station may pose a fall hazard, leading to death, personal injury or property damage. Always use the provided Concrete Mounting Template shown preinstalled here, or a ChargePoint approved surface mounting solution, to install the ChargePoint charging station.

Always install in accordance with applicable codes and standards using licensed professionals. Non-approved installation methods are performed at the risk of the contractor and void the Limited One-Year Parts Exchange Warranty.

Pedestal-Mounted Stations

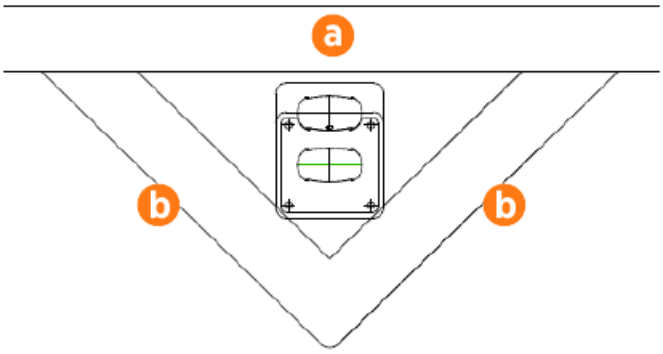
For newly poured pedestal mounted installations, the mounting surface must be smooth and cannot exceed a slope of 6 mm per 300 mm. The concrete base must measure at least 600 mm on all sides, including underground. For installations in existing concrete, epoxy anchors can be used. Consult a civil engineer to ensure sufficient volume and strength of concrete.

There are three basic pedestal base designs:

- In front of a curb **(a)** 900 mm x 2 **(b)**

  Area: 0.42 m^2

  Volume: 0.26 m^3

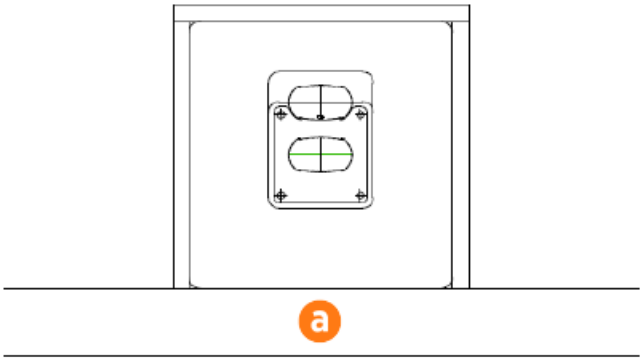


- Behind a curb **(a)** in a planter or berm 600 mm on each side

  Area: 0.37 m^2

  Volume: 0.23 m^3

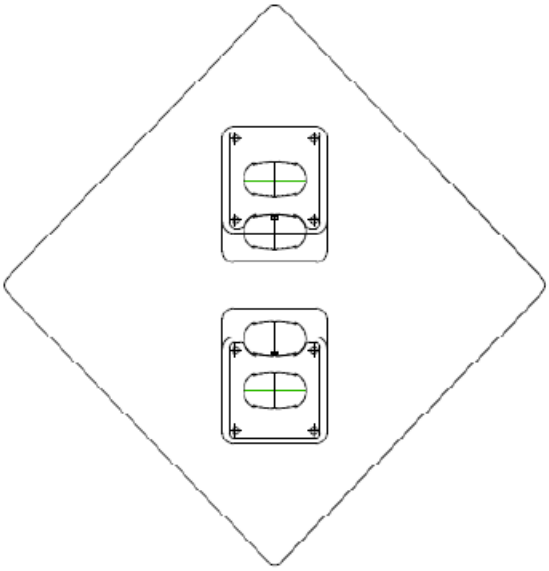
> **NOTE:** Use a retaining wall as needed to prevent dirt from accumulating on the pad.



- Two stations back to back, centered between four spaces 900 mm on each side.

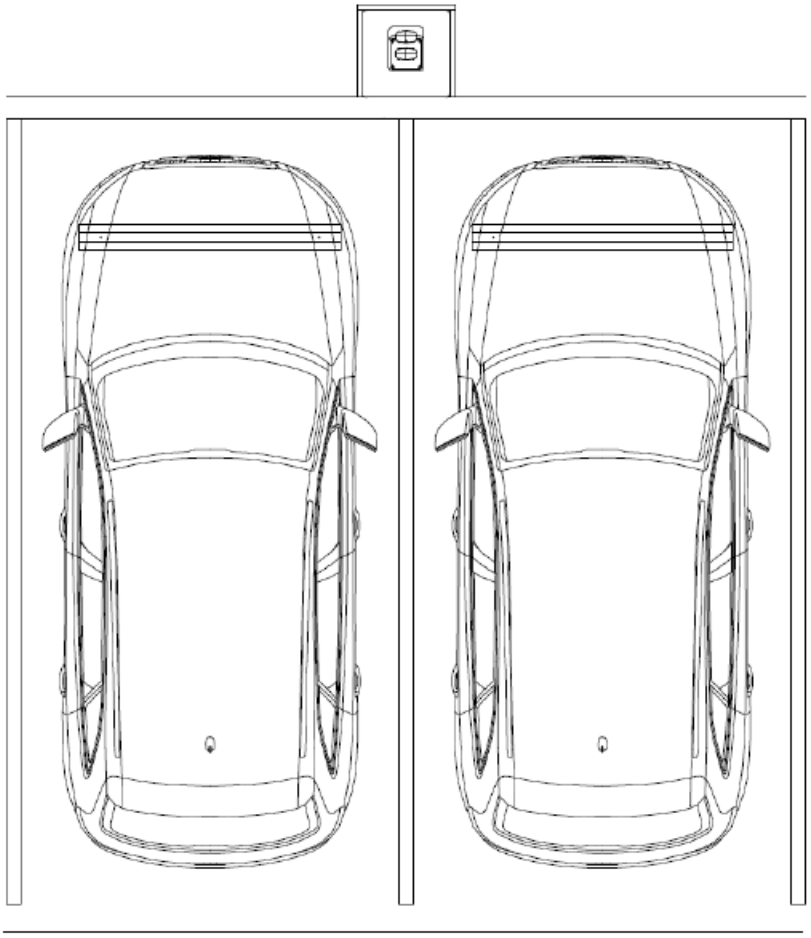
  Area: 0.84 m^2

  Volume: 0.51 m^3

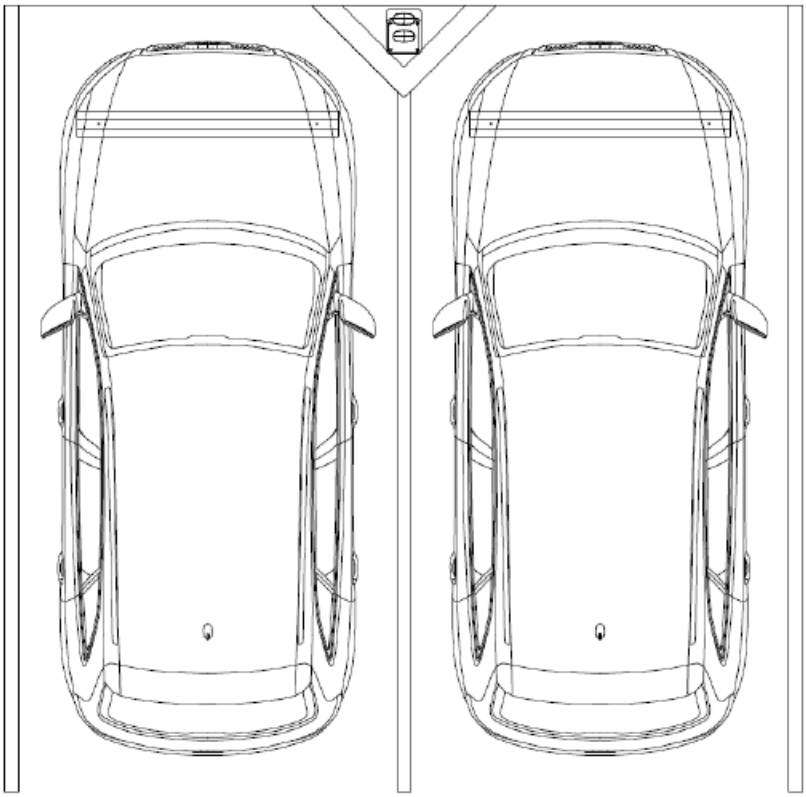


The pedestal base design can be configured in a variety of ways to serve different parking arrangements. Ensure a sufficient volume of concrete to provide anchoring for the charging station.

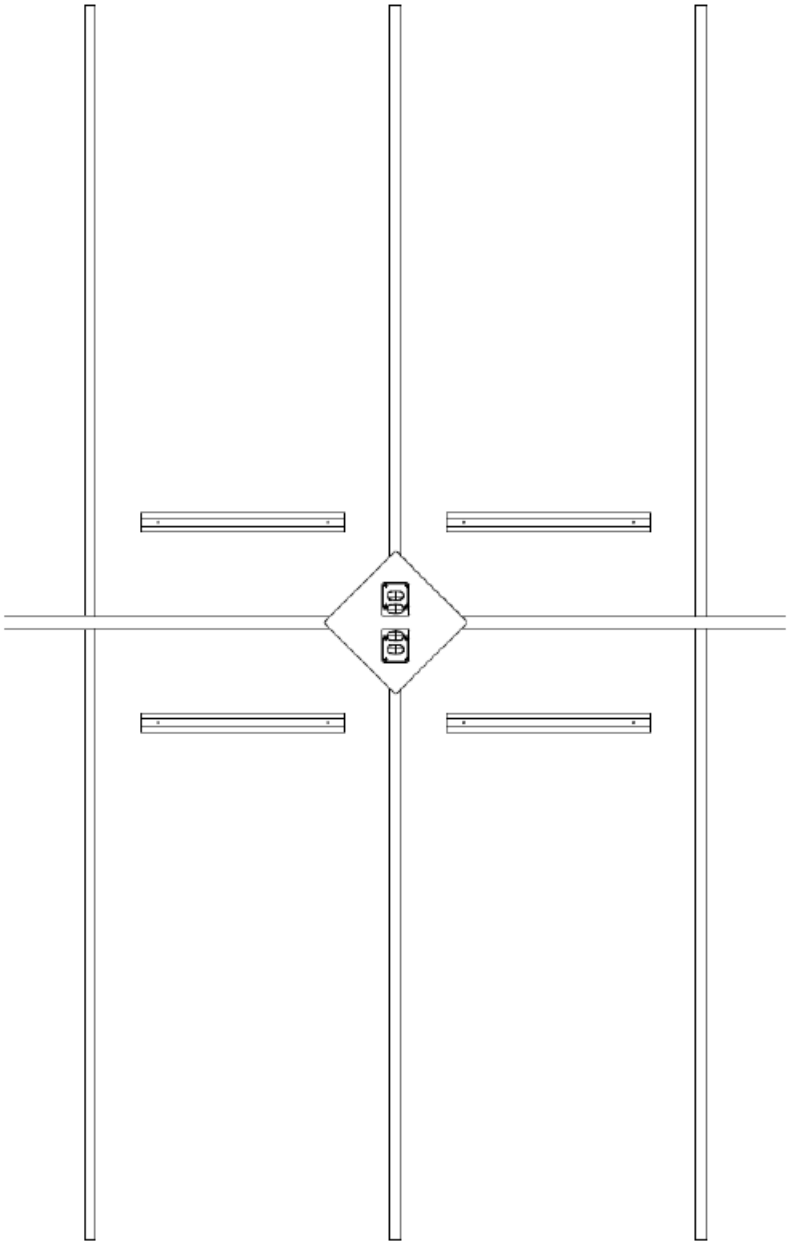
- Place the station behind the kerb in a planter or berm between spaces with wheel stops 900 mm from the front of each stall.



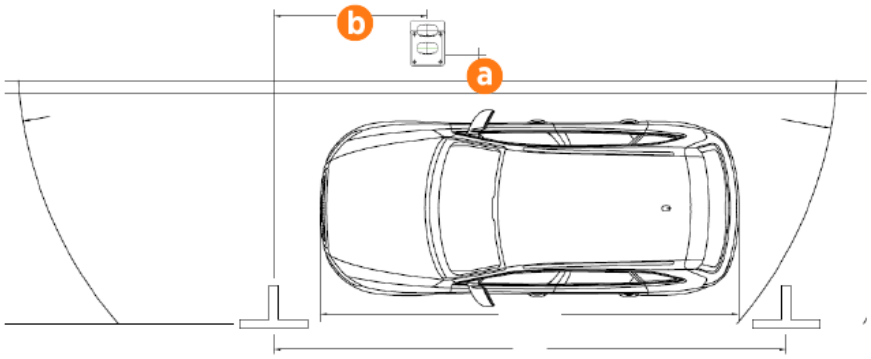
- Place the station in front of the kerb between spaces with wheel stops 900 mm from the front of each stall. The base of the charging station can be flush with the parking spaces or at kerb level.



- Place two stations back to back centred on four spaces with wheel stops 900 mm from the front of each stall. The base of the charging station can be flush with the parking spaces or at kerb level.



- Place a single port station for a single parallel parking space 6 m long. Place the station **(a)** 450 mm from the curb, and 1.8 m from the front of the parking space **(b)**. The arc shows the usable reach of the charging cable for cable-attached stations **(b)**. This can be used to estimate reach for shuttered sockets as well.



Drainage

Ensure any site slopes, walls or fencing do not trap water around the charging station installation site. The system is only built to withstand water to the height of the conduit stub-up.

WARNING: Exposing the ChargePoint charging station to water above the height of the conduit stub-up could create an electrocution, shock, or fire hazard. Cut power to the charging station if it has been exposed to standing water and contact ChargePoint before the charging station is powered on.

The charging station complies with the IP54 enclosure standard. It is protected against water splashes and sprays. However, do not install the station in close proximity to running water, sprinklers, water jets or irrigation systems.

Clearances

For pedestal installations, the conduit stub-up must be a minimum of 230 mm (9 in) from any obstructions to the rear. This includes other charging stations. Check applicable codes for any additional clearance requirements.

Accessibility

To meet the accessibility requirements, the product charging cables are no more than 1220 mm (48 in) above ground and no more than 254 mm (10 in) away.

This complies with **American** Disability Act (ADA) requirements, if the station is installed at grade. If your installation must comply with ADA standards, or the disability access regulations for other regions, consider this when designing the height of the pad or when planning a wall-mounted installation.

This complies with **Europe** disability requirements, if the station is installed at grade. If your installation must comply with disability access regulations, consider this when designing the height of the pad or when planning a wall-mounted installation.

Also consider site design factors such as placement of bollards, wheel stops or other vehicle obstacles when planning charging station access for disabled parking stalls. Check disability access regulations for guidance on the clearances needed for wheelchair access to charging cables and user interfaces.

Electrical Design 3

The wall mount CP4000 installation uses surface mount wiring. The pedestal mount CP4000 installation requires service wiring installed underground. (If a pedestal mount installation requires surface run conduit, contact ChargePoint before beginning work to obtain an approved installation method.) Conduit and wire size are determined based on the length of the runs from the electrical panel to the station location. Service wiring must be run through the conduit to comply with local electrical codes. Consult national and local codes or a project engineer to determine the grade, quality, and size of the conduit or cable. The CP4000 Concrete Mount Kit accommodates service wiring through the flare, conduit or locally appropriate wiring method.

NOTE: All wiring and conduit is supplied by the contractor unless otherwise indicated.

Power Supply Requirements

Typically, 16 mm^2 insulated electrical wire is used, depending upon the rating of the circuit and the distance between the electrical panel and the charging station. The cable entering the station must be less than 25 mm in diameter. For higher demand, you must feed the station with two circuits, each with a maximum diameter of 25 mm.

When planning multiple EV charging stations, it is best practice to separate non-continuous from continuous loads, with all branch circuits for EV charging on a dedicated electrical panel assembly with adequate circuit breakers. When sizing new electrical panels dedicated for EV charging, all branch circuits must support continuous load.

CAUTION: The CP4000 charging station is tested to IEC 61000-4-5, Level 5 (6 kV @ 3000 A) standards. In geographic areas that experience frequent thunderstorms, appropriate supplemental surge protection is recommended to guard against product damage.

Conduit

The outside diameter of conduit must not exceed the sizes called out in the conduit layout drawing: 45 mm. Conduit stub-ups must not extend higher than 660 mm above grade.

For wall mounted stations, flex conduit must be used to bring the wire to the station.

Wiring Requirements

For full product specifications, refer to the CP4000 Datasheet. Using that data, ensure that the installation location is equipped with service wiring that supports the CP4000's power requirements:

- AC conductors (L1, L2, L3)
- Neutral
- Ground conductor

When pulling electrical wiring for CP4000 pedestal mount, ensure at least 1.5 m of wire remains above grade.

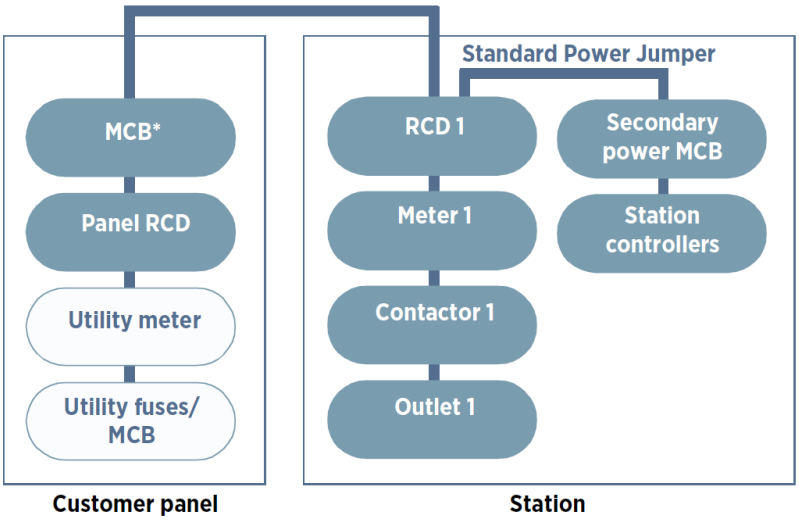
When pulling electrical wiring for wall-mounted stations, the conduit and wire must be brought to the location where the stations will be mounted. Flex conduit may be used to bring the wire to the station. The CP4000 has two M32L cable glands in the bottom of the charging station and two rubber knockouts in the rear. For wall mounted installations, the cable can be brought in from the rear or bottom of the station. For pedestal installations, the wiring must be brought from the bottom.

Standard Wiring Options

NOTE: All stations are delivered with the standard power jumper. The standard power jumper is always installed on the right RCD.

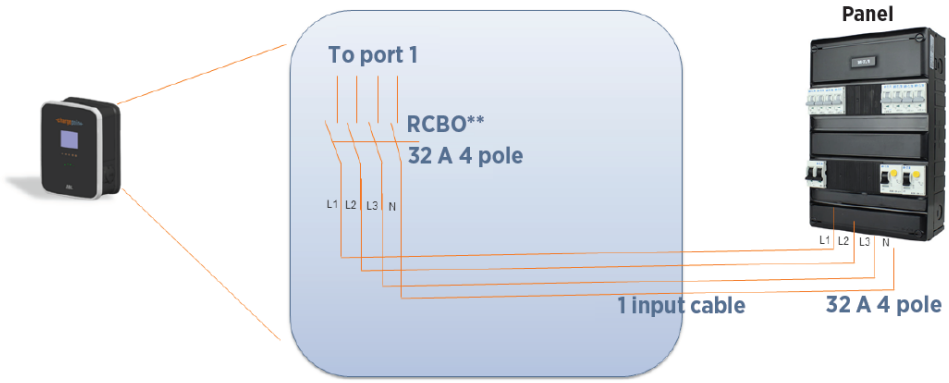
Output	Input Circuits	Panel Breaker Required	Breakers Required
Single Port Stations			
22 kW	1	3-phase 32 A x 1	1
11 kW	1	3-phase 16 A x 1	1
7.4 kW	1	1-phase 32 A x 1	1
3.7 kW	1	1-phase 16 A x 1	1
Dual Port Stations			
22 kW	2	3-phase 32 A x 2	2
11 kW	2	3-phase 16 A x 2	2
7.4 kW	2	1-phase 32 A x 2	2
3.7 kW	2	1-phase 16 A x 2	2

Standard Wiring, Single Port Station



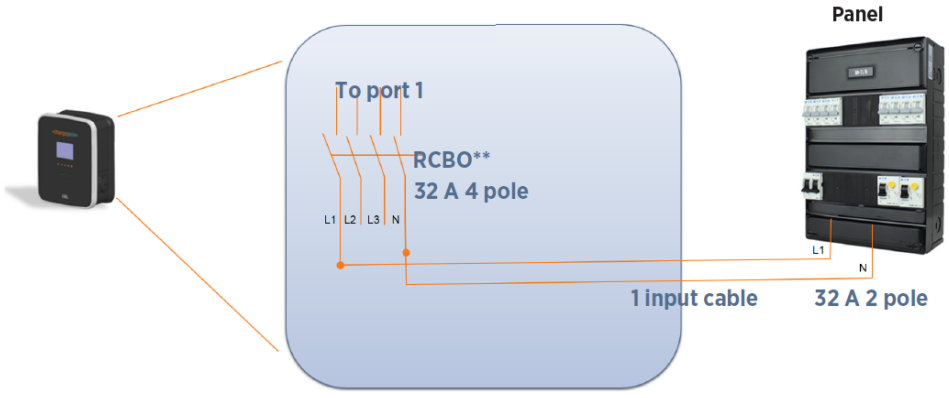
*MCB: Miniature Circuit Breaker

Three Phase Wiring



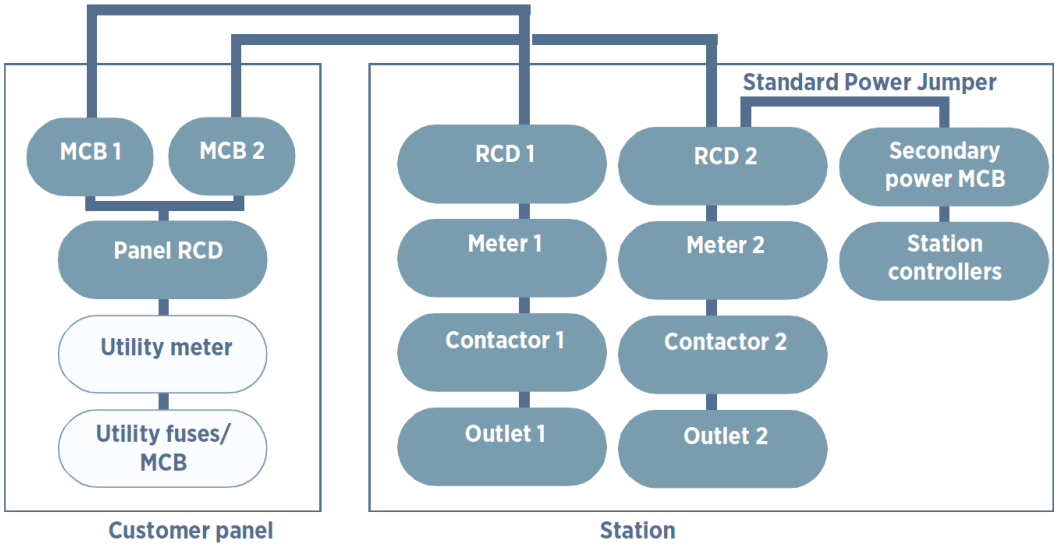
**RCBO: Residual-Current Circuit Breaker with Overcurrent Protection

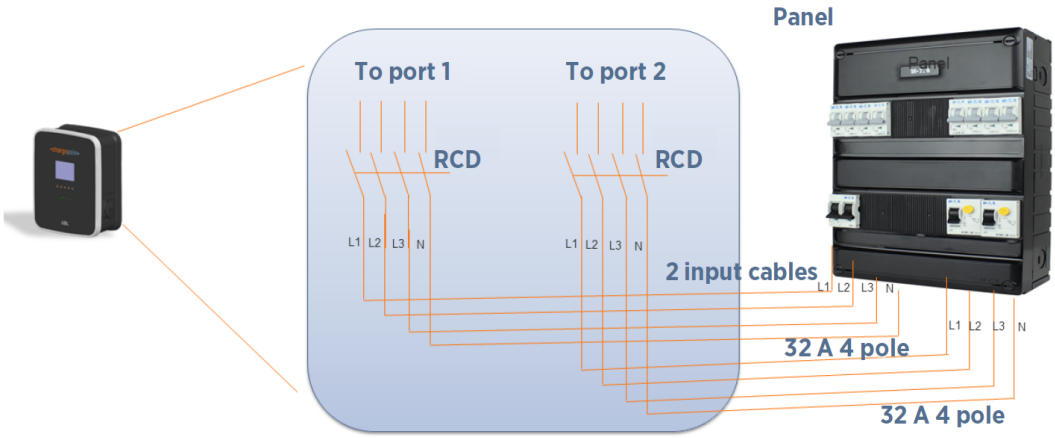
Single Phase Wiring



**RCBO: Residual-Current Circuit Breaker with Overcurrent Protection

Standard Wiring, Dual Port Station

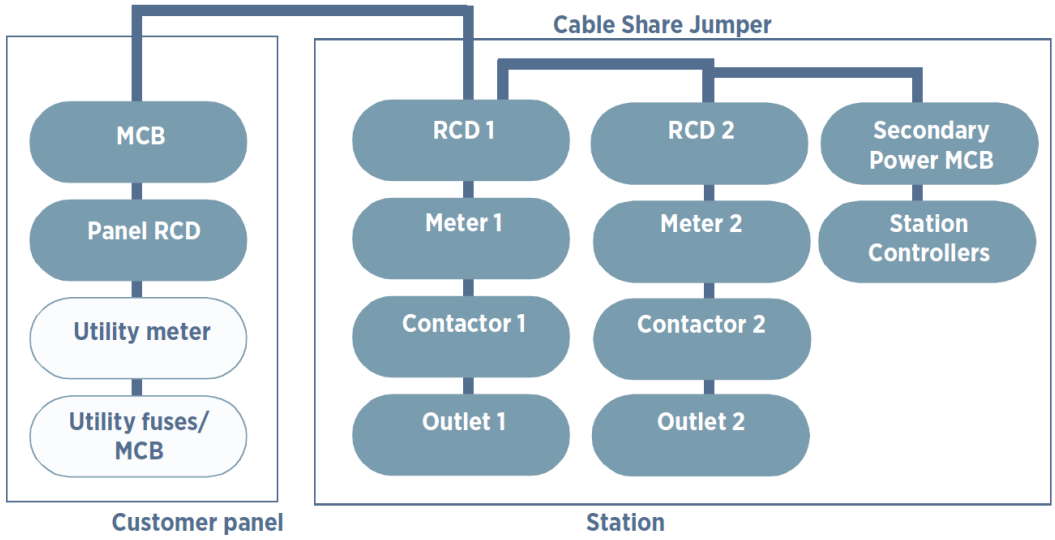


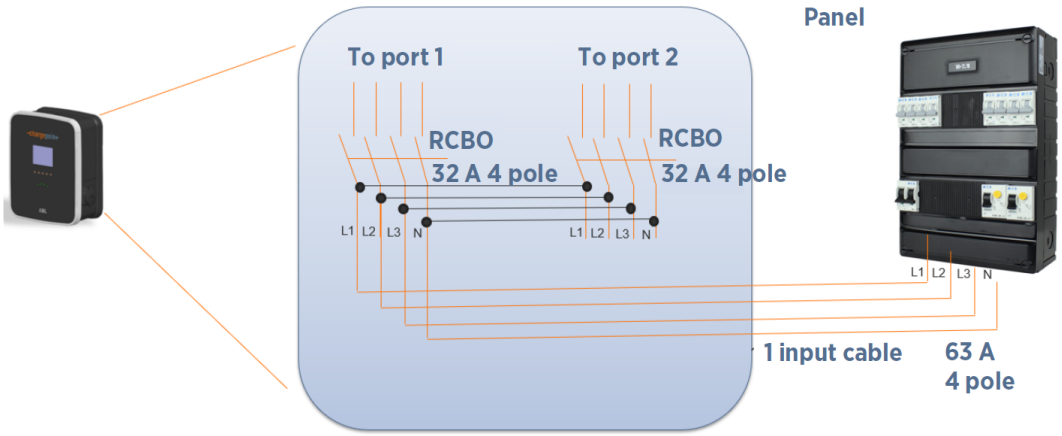


Circuit-Sharing Wiring (Dual-Port Station Only)

To power a dual port station using a single power cable, use the Cable Share Jumper. The L1 to L1 Cable Share Jumper is included with the CP4000. The L1 to L2 Cable Share Jumper is an alternative and is sold separately. Circuit sharing is available only for dual port station configurations.

Output per port	Input Circuits	Panel Breaker Required	Breakers Required
22 kW	1	3-phase 63 A x 1	1
11 kW	1	3-phase 32 A x 1	1
7.4 kW	1	one-phase 63 A x 1	1
3.7 kW	1	1-phase 32 A x 1	1





Meeting Power Supply Requirements

The charging station is designed for connection to and operation on rated voltages of 230 V (phase-neutral) or 400 V (phase-phase) at 50 Hz.

- Comply with all regulatory requirements for low voltage installations according to IEC 60364-1 and IEC 60364-5-52.
- Always connect the device to the protective earth conductor of the power source.
- Reserve a power source exclusively for the charging station and ensure that it complies with HD 60364-7-722:2012.
- Protect the charging station branch circuit in the panel (mains) with a suitable miniature circuit breaker (MCB).

Consult your electricity grid operator regarding requirements for local regulations. Depending on the desired rated power, the installation of the charging station may require registration with and/ or approval by your electricity grid operator.

Grounding Requirements

The CP4000 must be connected to a grounded, metal, permanent wiring system. An equipment-grounding conductor must be run with circuit conductors and connected to an equipment-grounding terminal on the

CP4000.

A grounding conductor that complies with applicable codes must be grounded to earth at the service equipment or, when supplied by a separate system, at the supply transformer, or may be grounded to an earth electrode. Ensure the grounding conductor complies with all applicable codes.

Mobile Connectivity

Mobile connectivity is required for all CP4000 installations. The CP4000 includes a 3G mobile modem (with 2G backup) for wide area networking. It supports these bands:

- UMTS/HSPA/3G/WCDMA Band: 800/850/900/1900/2100 MHz
- 2G/GSM/GPRS Band: 850/900/1800/1900 MHz

The charging station should be located where mobile signal levels are optimal for 3G. A consistently strong mobile signal is needed before station owners can activate the station.

Do not rely on mobile phone applications to measure mobile signals when conducting site surveys. Use a mobile signal detection device (such as an Snyper-LTE+ Spectrum (EU) by Siretta) to take signal strength readings at the exact proposed charging station location. Take mobile readings at the exact location of each proposed charging station location. Ensure the RSSI is -85 dBm or better, with -70 dBm or better preferred.

NOTE: These numbers are all negative, so -70 dBm is excellent signal strength and -113 dBm is little to no signal.

For reference, RSSI Signal Strength ratings are shown here:

RSSI	Signal Strength
Greater than -70 dBm	Excellent
-70 dBm to -85 dBm	Acceptable
-86 dBm to -113 dBm	Contact mobile provider for repeater installation

If the signal strength is closer to -85 dBm, verify that the ECIO value is -10 or better.

If the RSSI signal is below -85 dBm, ChargePoint recommends contacting your telecommunication company to request a mobile repeater. If you have a provider for company mobile phones, consult them first. A 3G (or 4G that is backwards compatible to 3G and 2G) repeater can improve the mobile signal for the charging stations as well as for employees and customers that are on that network in the area.

NOTE: To future-proof your site, ChargePoint recommends measuring RSRP to ensure that the site is covered for future use of 4G/LTE. An RSRP of -90 or better with an RSRQ of -10 or better ensures that any future equipment will also work at this location.

Consult your ChargePoint account manager for additional guidance. ChargePoint O&M partners can validate acceptable cellular signal strength at the site using a cellular strength reader.

4 Pedestal Mount Concrete Preparation

The CP4000's pedestal mount can be installed either:

- Into the ground by casting into new concrete.
- Onto an existing concrete surface.

WARNING: Danger of improper installation and structural failure. Site Operator Responsibilities:

- Do not use expanding anchor bolts.
- Do not install the CP4000 on an asphalt surface.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE OR PROPERTY DAMAGE.

The required kit components, required tools and installation steps vary depending on the type of installation.

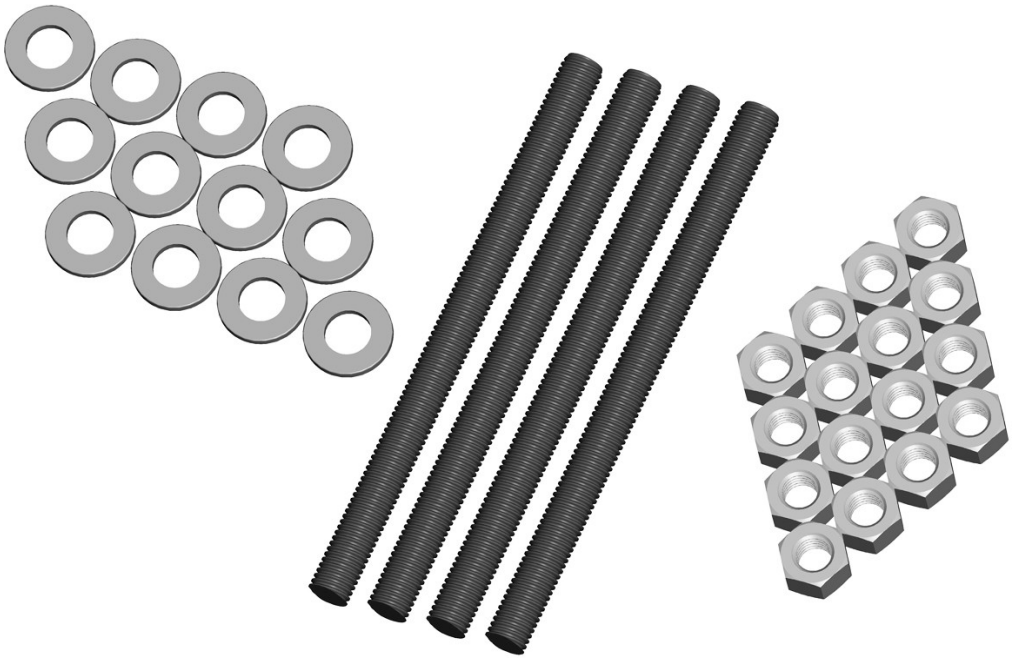
NOTE: UNIMI manufactures and sells precast concrete and plastic foundations. ChargePoint approves installing product charging stations on precast UNIMI concrete or plastic foundations, according to the instructions UNIMI provides. Contact your ChargePoint sales representative if you have questions.

This topic provides basic guidelines for all approved installation types.

Installation Overview

To install the CP4000 pedestal mount into the ground, you need the following components:

- M16 x 250 threaded rods (4)
- M16 nuts (16)
- M16 washers (12)
- Bolt Pattern Template for mounting with a CMK 75-001238-01



These components can be purchased from ChargePoint by ordering a CP4000 Pedestal Mount Kit.

When installing onto an existing concrete surface, you only need eight nuts and eight washers. Additionally, required consumables are described below.

Installation on New Concrete

Before casting new concrete, review the site for suitability to install a CP4000. The CP4000 requires space behind the conduit stub-up for the Cable Management Kit (CMK), if applicable. To ensure adequate clearance, refer to the illustrations below and to the CP4000 Mounting Template included in the Pedestal Mount Kit.

NOTE: If the original copy of the installation template is lost, a new one can be printed at: ChargePoint Product Reference Documentation. Ensure that the PDF version of the mounting template is accurate by printing at 100% scale on A3 paper and verifying at least one dimension.

IMPORTANT: ChargePoint recommends consulting with an engineer to create site specific drawings. Ensure the installation complies with all applicable rules and regulations.

- The concrete block must measure at least 600 mm on all sides, including underground.
- The bolt threads must extend 55 mm above the concrete.
- The conduit must not exceed a maximum of 45 mm in diameter and extend 660 mm above the concrete.
- The service wiring must extend 1.5 m above the concrete surface.

Tools Needed

In addition to the items in the CP4000 Pedestal Mount Kit, you also need:

- An M16 spanner wrench.
- A digging shovel with steel scoop.
- A spirit level.
- Grade C30 concrete.
- Materials to build a temporary frame to support the template over the installation site.
- Materials to build a wooden version of the template.

Preparation

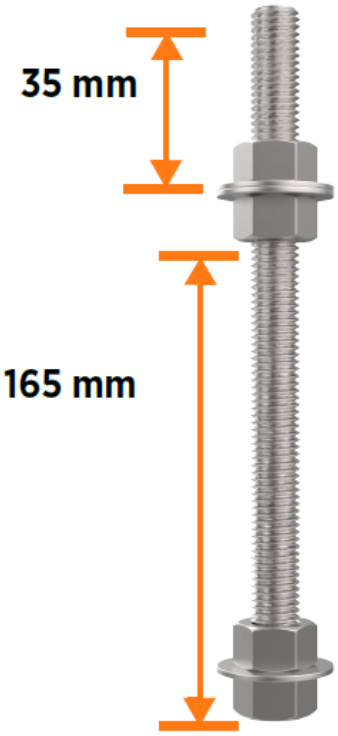
Before you begin:

1. Dig a hole with the minimum measurements of 600 mm x 600 mm x 600 mm.

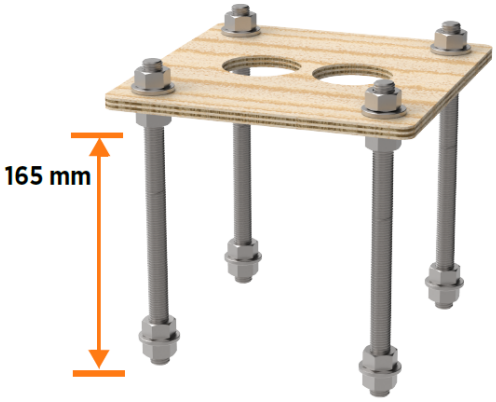
   IMPORTANT: The concrete block you create must be at least 600 mm on all sides.

2. Ensure that electrical cable and conduit has been installed in the correct location and that the appropriate circuit protection and metering is in place, following all local codes and regulations.
3. Ensure that enough power cable (1.5 m) is above the planned ground level to create a service loop. It can be trimmed back during installation as needed.
4. Create a base for the concrete as required by local codes and regulations.
5. Create a wooden version of the template.
6. Build a temporary frame to support the wooden template over the hole.
7. Before pouring the concrete pad, make sure that all pedestal mounting components are readily available at the installation site.

8. Install two nuts, with two washers captured between them, onto each of the three bolts, as illustrated. Lock them together so the lower end of the upper nut is located 165 mm from the bottom of the bolt. This sets the length of the exposed threads.



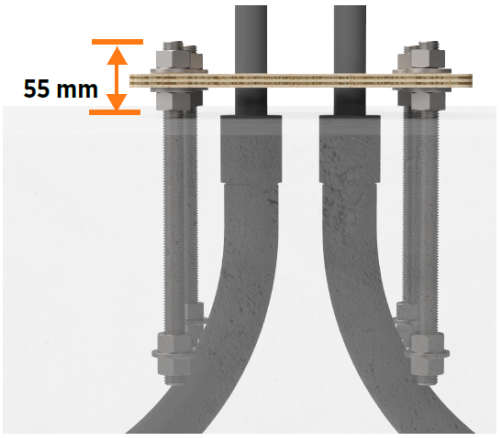
9. Insert the four bolts through the wooden template. This ensures the relative position of the bolts and ensures that the flange of the pedestal fits over the bolts.
10. On the bottom end of each bolt, install a nut, a washer and a nut. Lock the two nuts together so that the lower nut aligns to the bottom of the bolt. This provides retention for the bolt in the concrete.



Installation Instructions

The installation instructions are as follows:

1. Pour the concrete into the hole you prepared.
2. Immediately after pouring the concrete, push the bolts into the concrete. Rotate each bolt to draw concrete into the threads. You may need to slightly loosen the hexagon nuts to rotate the mounting bolts. Ensure correct alignment and that the top 55 mm of the bolts remain exposed.



IMPORTANT: Rotate the bolts as you insert them. This allows the concrete to fully coat the threads of the bolts, reducing the amount of trapped air.

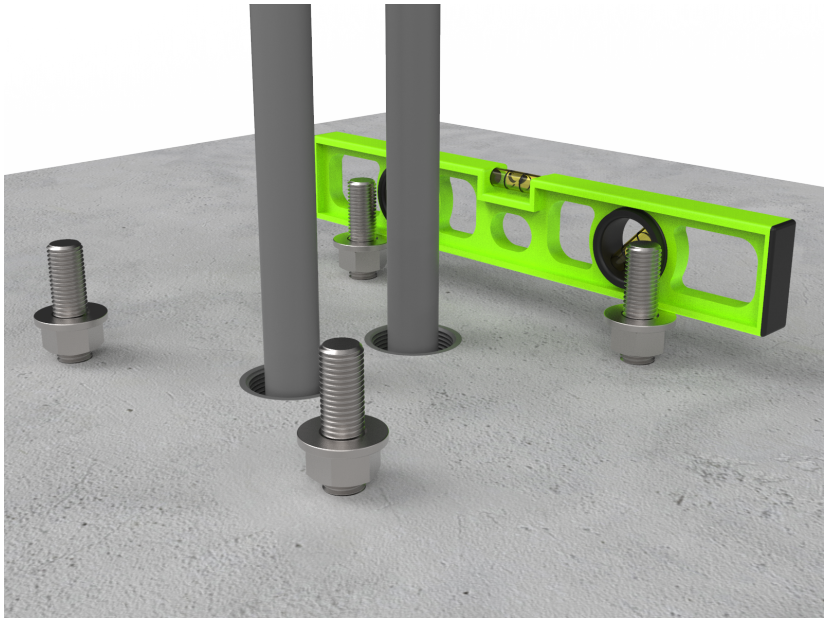
3. Retighten the hexagon nuts to the template.
4. Remove any boards or shims supporting the mounting template. Leave the mounting template in place until the concrete is fully cured.

Complete After Concrete Cures

When the concrete is fully cured, perform the following steps:

1. Remove the upper nut and the washer.
2. Adjust the remaining nuts and washers until about 35 mm of bolt is exposed above each washer.

3. Use a spirit level and adjust the height of the nuts as required to ensure that the four washers are completely level with each other.



You are now ready to install the CP4000 pedestal mount charging station.

Installing on Existing Concrete

If installing on existing concrete, review the site for suitability to install a CP4000. The CP4000 requires space behind the power stub-up for the pedestal and (optional) CMK. To ensure adequate space, refer to the CP4000 Installation Template included in the Concrete Mounting kit.

IMPORTANT: Ensure that the installation complies with all applicable codes and ordinances.

- Review the dimensions of the existing concrete slab. To safely mount a CP4000 charging station, the concrete must be at least 200 mm thick. At this thickness, all CP4000 mounting bolts must be positioned at least 380 mm from the front edge, at least 305 mm from the side edges and at least 150 mm from the rear edge of the concrete slab.
- If an existing charging station is already in place at the installation site, turn off all power to the station and disassemble according to the original manufacturer's instructions. Cut away any existing bolts or non-power conduit stub-ups to ground level. Seal cut-away conduits at the slab end and disconnect wiring at the other end.
- Ensure that you have adequate wiring. Service wiring for the CP4000 must extend 1.5 m above the platform's surface.
- ChargePoint recommends creating a rigid template based on the paper template to position the bolts.

Tools and ConsumablesRequired

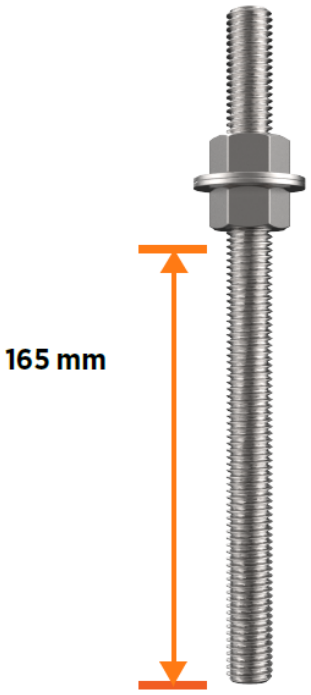
Quantity	Description	Purpose
1	CP4000 Pedestal Mount Kit or equivalent parts	Mounting hardware: nuts, bolts and washers, plus the mounting template.
1	Electric drill or hammer drill (a 12-mm chuck may be required depending on drill bits used)	Drill holes in existing concrete.
1	Epoxy adhesive for concrete such as Hilti RE-500	Fill drilled holes and secure anchor bolts.
1	Electrical cleaning and maintenance aerosol, such as any angle spray duster	Clean drilled holes. **Note:** Compressed air will work.
1	Slow spiral round-shank masonry drill bit, 25 mm in diameter	Drill 25 mm holes in concrete. **Note:** The holes must be at least 165 mm deep.
1	Drill bit for concrete embedded rebar, round 25-mm bit size	Drill a 25-mm hole through the rebar.
1	Nylon loop handle brush, 25 mm brush diameter, 75 mm length brush, 215 mm length overall	Clean drilled holes.
4	Push-on round cap, fits 16 mm-17.5 mm OD, 12 mm inside height	Keeps the epoxy inside the drilled holes in situations where the slab is only 200 mm deep.

NOTE: If the original copy of the installation template is lost, a new one can be printed at: ChargePoint Product Reference Documentation. Ensure that the PDF version of the mounting template is accurate by printing at 100% scale on A3 paper and verifying at least one dimension.

Installation Instructions

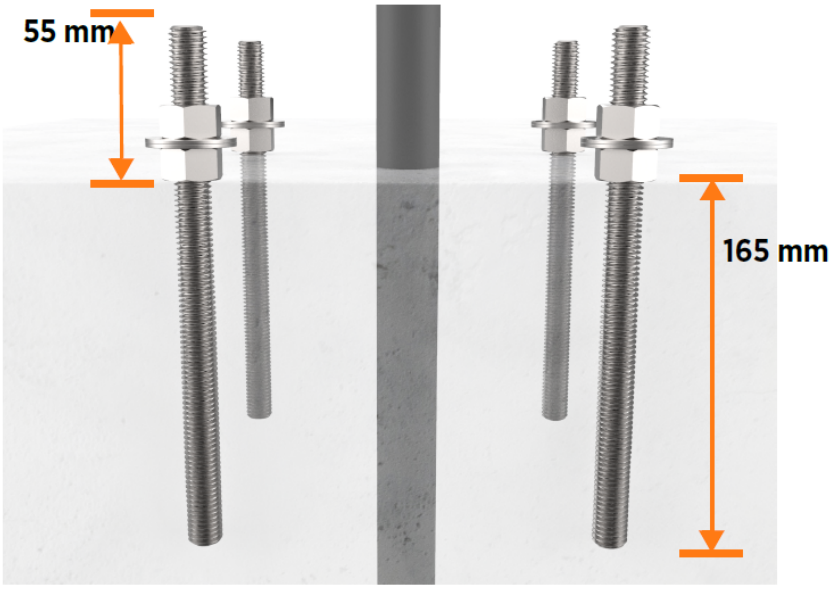
The installation instructions are as follows:

1. Install two nuts with two washers captured between them. Lock them together so the lower end of the nut is located 165 mm from the bottom of the bolt. This sets the length of the exposed threads.



2. Use the Installation Template to mark the hole locations.

3. Remove the template and drill four 25-mm diameter holes 165 mm deep into the concrete. When locating the template, consider the station's total footprint. For reference, a template is included in the Concrete Mounting kit.
    - Bolts must be parallel after installation. Therefore, ensure drill holes are plumb by using a spirit level to check the angle of the drill after drilling 25 – 30 mm.
    - If installing over existing buried conduit, position the centre of the template around the conduit stub-up.
    - You may need two drill bits: one for the concrete (with the pilot); and another for the rebar (without the pilot). Always start the hole using the standard drill bit, then switch to the rebar drill bit only if drillin through rebar.



4. Remove all dust from inside the drilled holes using compressed air, a vacuum and/or a brush.
5. If the concrete slab is only 200 mm deep, insert a plug in each hole to keep the epoxy in place until it hardens. Place the plug over the long end of a bolt and use the bolt to push the plug to the bottom of the hole.
6. Fill each hole with epoxy to about 65 – 75 mm below the top. Continue immediately to the next step because the epoxy sets within about eight minutes.
7. Inserting the threaded bolts displaces the epoxy, causing it to fill the holes to grade level. If the epoxy is below grade level, you can add more after the next step.
8. Place the Installation Template over the holes. This ensures the relative position of the bolts and that the flange of the pedestal fits over the bolts.
9. Insert the bolts through the template into the holes. Rotate the bolts as you insert them to draw epoxy into the threads.

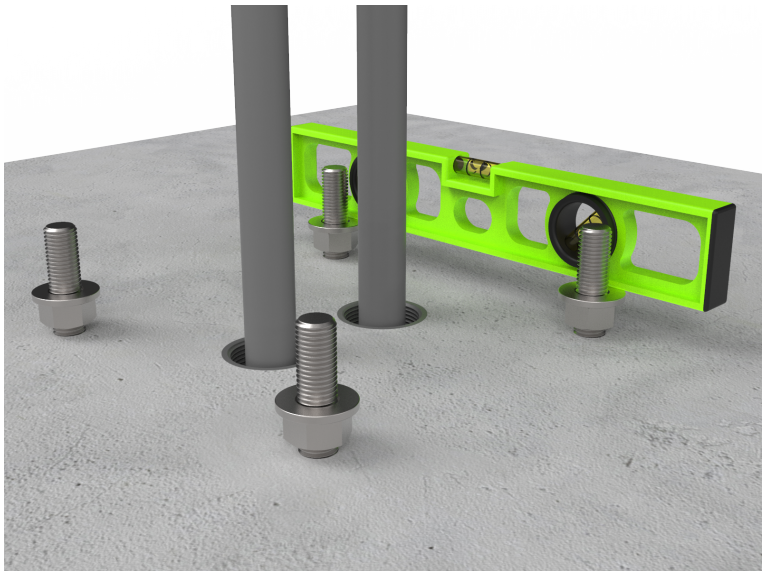
IMPORTANT: Rotating the bolts while inserting them allows the epoxy to fully coat the threads of the bolts, reducing the amount of trapped air.

10. If needed, top up the holes with epoxy to grade level.
11. Allow the epoxy to cure according to manufacturer's instructions before proceeding.

Complete After Concrete Cures

When the epoxy is fully cured, perform the following steps:

1. Remove the upper nut and the washer.
2. Adjust the remaining nuts and washers until about 35 mm of bolt is exposed above each washer.
3. Use a spirit level and adjust the height of the nuts as required to ensure that the four washers are completely level with each other.



You are now ready to install the CP4000 pedestal mount charging station.

Declaration of Conformity

Category/Directive	Standard	Scope
General Safety Requirements Directive 2001/95/EC Low Voltage Directive 2014/35/EU	IEC61851-1, (3rd ed.) IEC 61851-22 Ed. 2.0 IEC61439-7 Ed. 1.0; 2014-02	Electric vehicle conductive charging systems, general requirements Low-voltage switchgear and control gear assemblies: electric vehicle charging stations
Electromagnetic Compatibility (EMC) Directive 2014/30/EU	EN 301 489-1 EN 301 489-3 EN 301 489-52 IEC 61000-3-X IEC 61000-4-X IEC 61000-6-X	EMC for standard radio and service EMC for short range radio, EMC for Mobile device, EMC for conductive electric vehicle charging station
Radio Equipment Directive (RED) 2014/53/EU	EN 300 330 v2.1.1 EN 301 893 v2.0.7 EN 300 328 v2.1.1 EN 301 511 v12.1.10 EN 301 908-1 v11.1.1	RF testing for Wi-Fi and BT, RF testing for RFID, RF testing for Cell modem
RoHS Directive 2011/65/EU	EN 50581:2012	Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

See test report 2230436KAU-001a and 2230436KAU-040a

See test report 230436KAU-004_Draft