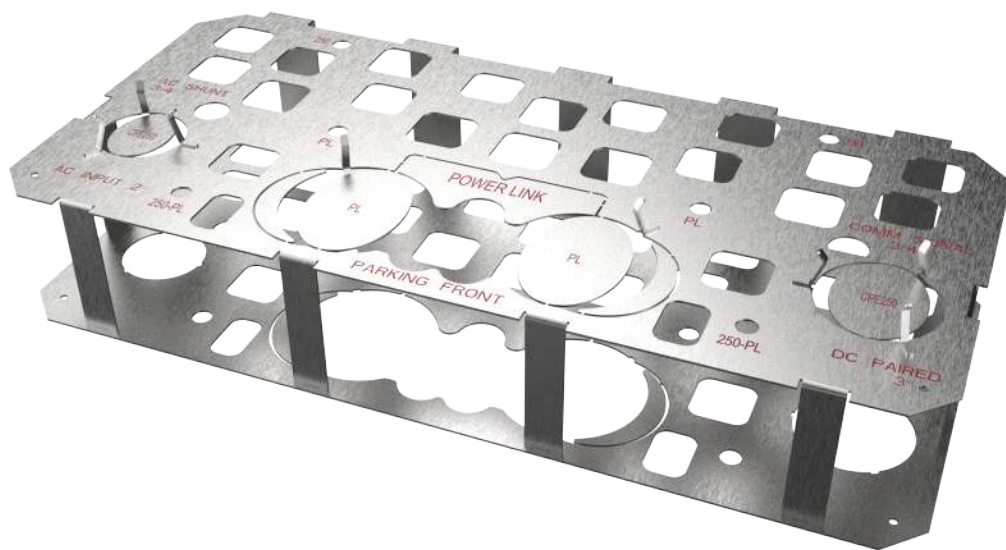


Concrete Mounting Template



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

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. **Only use licensed professionals to install your ChargePoint charging station and adhere to all national and local building codes and standards.** Before installing the ChargePoint charging station, consult with a licensed contractor, such as a licensed electrician, and use a trained installation expert to ensure compliance with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances. Inspect the charging station for proper installation before use.
 3. **Always ground the ChargePoint charging station.** Failure to ground the charging station can lead to risk of electrocution or fire. The charging station must be connected to an earthed, metal, permanent wiring system or an equipment earth conductor shall be run with circuit conductors and connected to the equipment earth 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. **The product components are not suitable for use in Class 1 hazardous locations, 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, as specified, rated for 90 °C (194 °F).**
-



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.**

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.com/guides.

Copyright and Trademarks

©2013 – 2023 ChargePoint, Inc. All rights reserved. This material is protected by the copyright laws of the United States and other countries. It may not be modified, reproduced or distributed without the prior, express written consent of ChargePoint, Inc. CHARGEPOINT is a US, UK and EU registered trademark and service mark of ChargePoint, Inc. and cannot be used without the prior written consent of ChargePoint.

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: Crucial step for installation success



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

Important Safety Instructions	2
1 Introduction	5
Compatibility	5
Concrete Mounting Template Kit Contents	5
2 Tools and Materials	7
3 Conduit and Anchor Bolt Configurations	8
Identify Model and Configuration	8
Generic Legend	9
Express Plus Power Link	10
Express 250 and Express 280	12
4 Plan a Future Upgrade	16
Instructions	16
For Example Only	17
5 Assemble the Concrete Mounting Template	18
6 Install the Concrete Mounting Template	21
Trench, Lay Conduits, Form, and Rebar	21
Concrete Mounting Template	22
Concrete and Check	22

Introduction 1

Compatibility

This ChargePoint® Concrete Mounting Template (CMT) can be used interchangeably across product lines to properly mount a DC dispenser ("charging station") to a concrete pad.

Purpose of the Concrete Mounting Template

Most sites install and run service wiring underground to a concrete pad. Then the charging station is installed on that concrete pad. The Concrete Mounting Template is used to align anchor bolts and conduit openings to ensure correct positioning.

Concrete Mounting Template Kit Contents

- Concrete Mounting Template (CMT) metal template
- Threaded mounting bolts (x4), 16 mm thread, 305 mm long, with plastic caps on one end
- M16 nuts (x8)
- M16 washers (x8)

Order a Template for Every Charging Station/Dispenser

You will need a Concrete Mounting Template for each charging station dispenser.

WARNING: Risk of Death, Personal Injury, Property Damage, and Voided Warranty

- You are required to engage or be a ChargePoint certified installer, and required to use a ChargePoint-approved mounting method, such as this Concrete Mounting Template, to install the ChargePoint charging station.
 - If you fail to use the approved mounting method, you risk the station tipping over, and that can cause death, personal injury, or property damage, and will void all ChargePoint and other warranties and ChargePoint is *not* responsible.
 - You must be a licensed electrician and complete the training at chargepoint.com/installers to become ChargePoint certified.
-



IMPORTANT: The number and location of conduits and wiring differ for each installation. Always refer to site drawings for conduit and wiring details.

Surface Conduit Entry Does Not Use CMT (Order Separately)



WARNING: Do not use this concrete mounting template (CMT) for surface conduit entry. That requires different components.

Before you begin, contact ChargePoint to obtain an approved Surface Conduit Entry kit.

Tools and Materials 2

- ChargePoint Concrete Mounting Template (CMT)
- 24 mm socket wrenches (x2)
- Pliers (to adjust the guide tabs on the template openings so that conduits can pass through)
- Level
- Digging tools appropriate for the site (shovel, spade, and similar tools)
- Materials to prepare the form for pouring concrete
- Concrete as specified by site drawings
- Rebar as specified by site drawings
- Conduit, ducting, and armored cable in the amounts and types specified by site drawings that comply with local code (conduit sizes and routing are provided in this guide)
- Cut-resistant gloves
- Protective eyewear



WARNING: Refer to the model-specific Site Design Guide and your specific site drawings for all construction requirements, pad specifications, and conductor specifications for your site.

Conduit and Anchor Bolt Configurations 3

Identify Model and Configuration

Conduit and Bolt Locations Vary

Use the appropriate conduits and anchor-bolt locations for your product, configuration, and model.

Express Plus

- Power Link

Express 250 and Express 280

- Standalone
- Paired




Wiring Varies

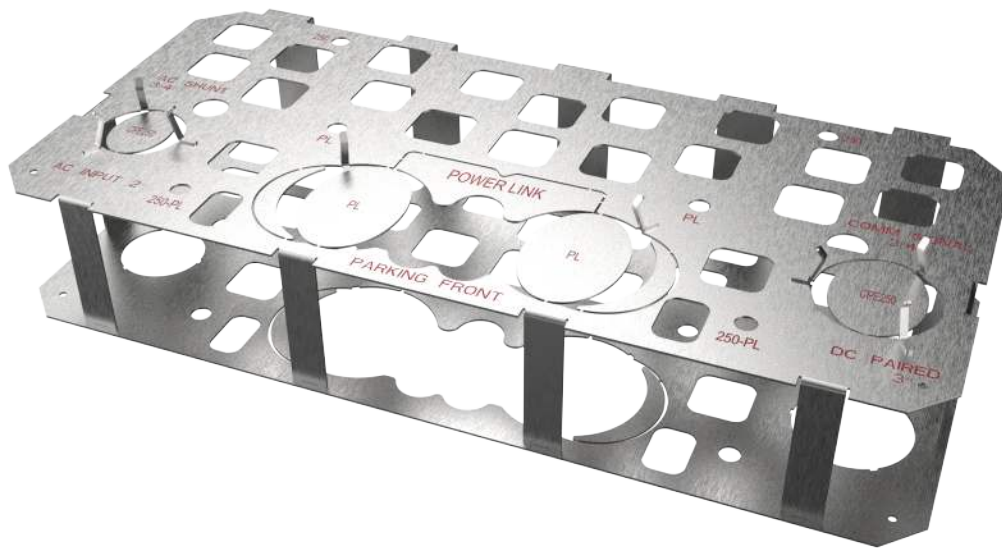
The number and type of wiring is typically different, so check the site drawings for your specific installation.

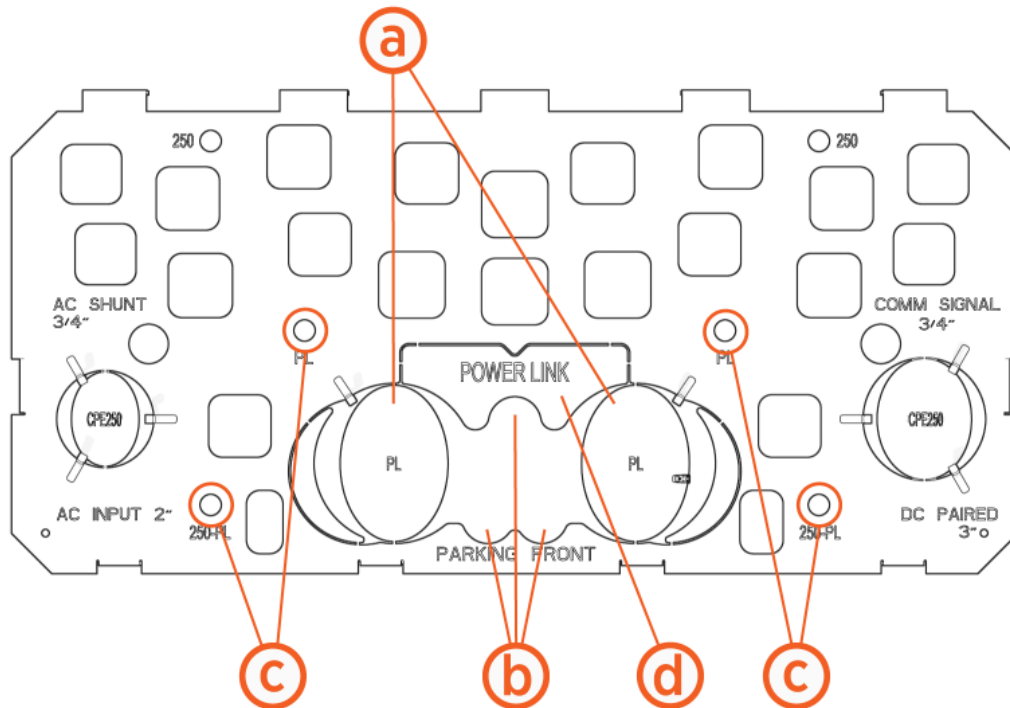


CAUTION: Do not use bell ends on conduits. Remove all bell ends. Bell ends can interfere with station placement.

Generic Legend

Shape of Opening	Part
Extra small circle	Anchor bolts (x4)
	 IMPORTANT: All stations require four anchor bolts.
Square	Concrete embedment and tie-off points (to maintain the position of the template while you pour the concrete and when it is curing)
Small circle	Conduit for wiring (48 V DC, Ethernet, both of those, or shunt trip)
Medium circle on left side	Conduit for AC input for Express 250 or Express 280
Large circle on right side	Conduit for DC sharing between Paired Express 250 or Paired Express 280
Extra-large circle (front centre)	Conduit for DC input for Power Link
Parking Front	Marking indicates front edge nearest the parking lot





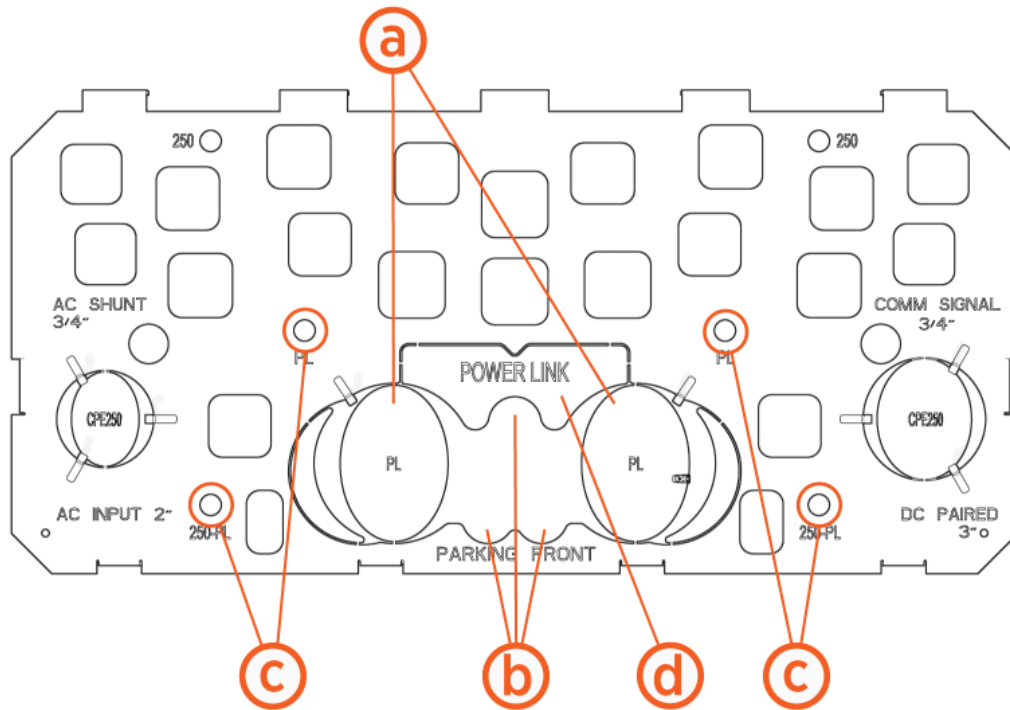
Space For	Max. Size	Max. Quantity
a. DC input conductors' conduit entry	Each up to 91 mm (3.5 in) trade size conduit	2
b. 48 V DC wires' and Cat6 Shielded Twisted Pair (STP) Ethernet cable's conduit entry	21 mm (3/4 in) trade size conduit Note: Check site drawings.	3
c. M16 anchor bolts entry	76 mm (3 in) above concrete for mounting Power Link	4

Express Plus Power Link

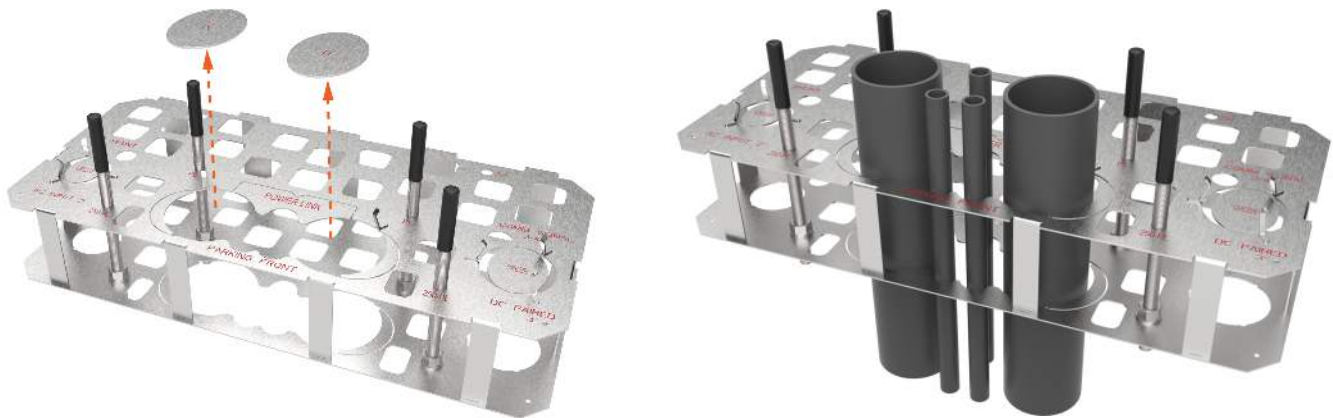
The Power Link receives DC input from an upstream component called a Power Block or Power Hub that centralises AC to DC power conversion for multiple stations.

If the quantity listed in the table is a range or option, check the site drawings.

Install four Power Link anchor bolts: two at the front-center edge of the template and two near the middle.



Space For	Max. Size	Max. Quantity
a. DC input conductors' conduit entry	Each up to 91 mm (3.5 in) trade size conduit	2
b. 48 V DC wires' and Cat6 Shielded Twisted Pair (STP) Ethernet cable's conduit entry	21 mm (3/4 in) trade size conduit Note: Check site drawings.	3
c. M16 anchor bolts entry	76 mm (3 in) above concrete for mounting Power Link	4



Note: Example only — check site drawings.

Express 250 and Express 280

Each Express 250 or Express 280 station requires AC power from the site's electrical panel. That AC conduit includes a ground conductor.

Optional shunt trip wiring can run from the station to the breaker panel. Check the site drawings for this. Install four anchor bolts, with two at the front (nearest the car park) and two at the rear of the template.

Standalone or Paired

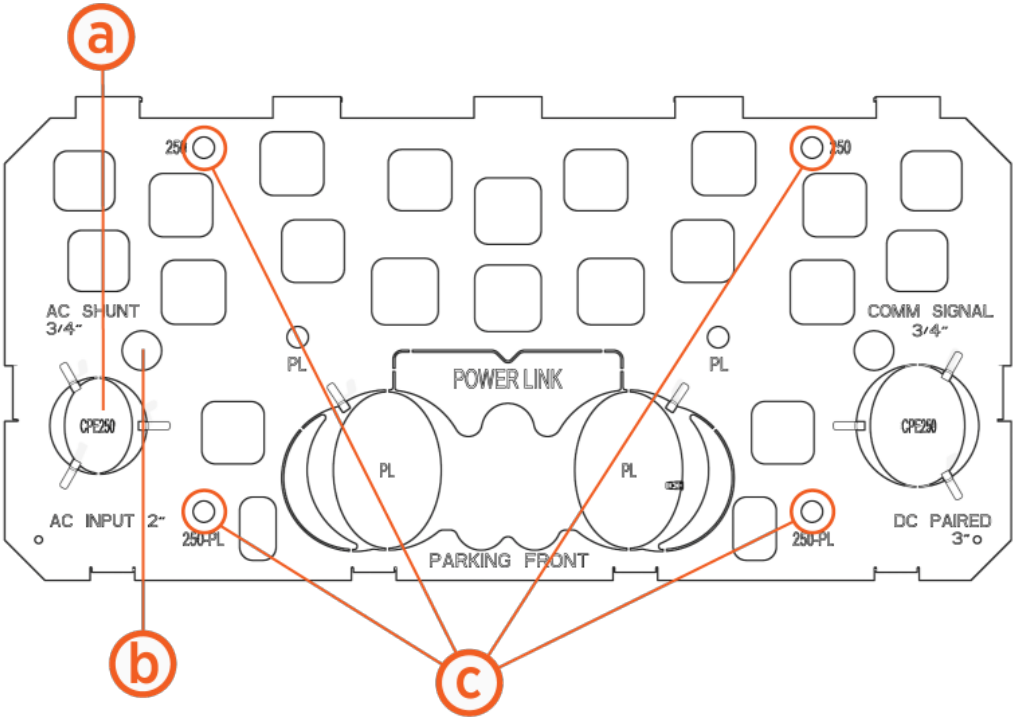
The standalone configuration uses only the conduit for AC input.

Stations in a paired configuration also run a DC conduit and Ethernet between the paired stations.

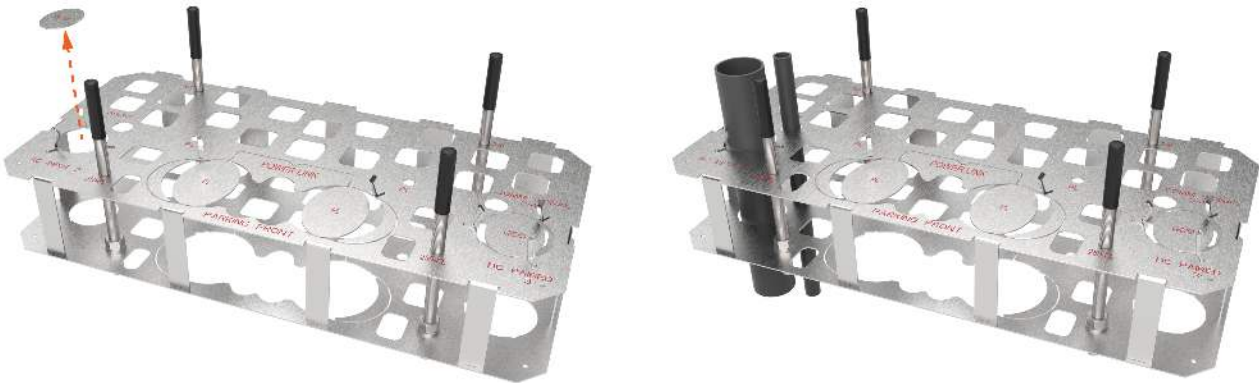
Note: Each Express 250 or Express 280 communicates with ChargePoint via a cellular network. No communication wiring is needed between the station and the building.

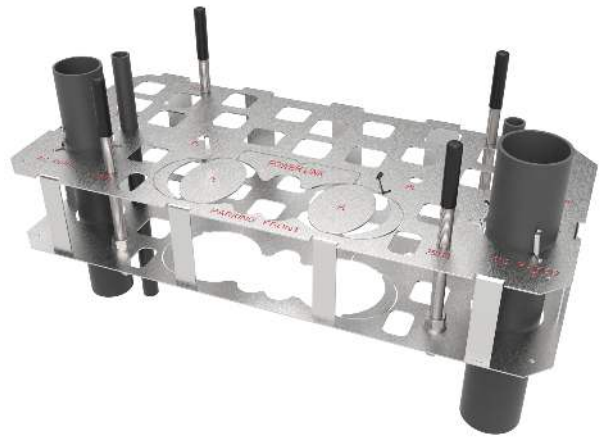
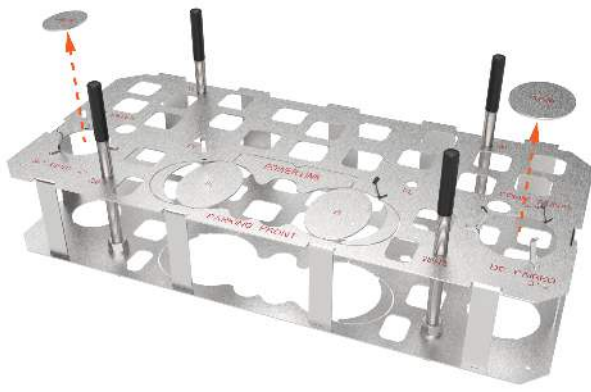
Standalone		Paired	
AC input conduit	1	AC input conduit	1
—		DC shared conduit	1
(optional) shunt trip wiring conduit	1	(optional) shunt trip wiring conduit	1
Anchor bolts	4	Anchor bolts	4
—		Ethernet conduit	1

Standalone Express 250 and Express 280 Configuration



Route or Break Away for Conduit or Wiring	Description	Quantity
a. Breakaway for AC conduit (left side) Note: AC conduit may include an AC disconnect switch in the circuit.	53 mm (2 in) trade size <ul style="list-style-type: none">runs to breaker panel	1
b. (optional) shunt trip conduit (left side) Note: Check site drawings.	21 mm (3/4 in) trade size <ul style="list-style-type: none">runs to breaker panel	
c. Anchor bolts	M16	4





Plan a Future Upgrade 4

You can use the same Concrete Mounting Template (CMT) to install an Express 250 or an Express 280 now, and in the future, reuse the same concrete pad for an Express Plus Power Link.

Note: Not applicable to all products and models.

Instructions

Install the template for future compatibility to upgrade later:

1. Install anchor bolts in the template at the locations required for the current station only.
2. Install conduits for both current AND future stations in the concrete now.

Note: Future conduit stub-ups must rise at least 25 mm (1 in) above grade, but not higher than 33 mm (1.3 in), to prevent interference with the current station.

3. Do not pull future wires through until you upgrade the station.

Note About Future Upgrades:

In the future, when the station is swapped, installers can cut the old anchor bolts and stub-ups to grade level if required.

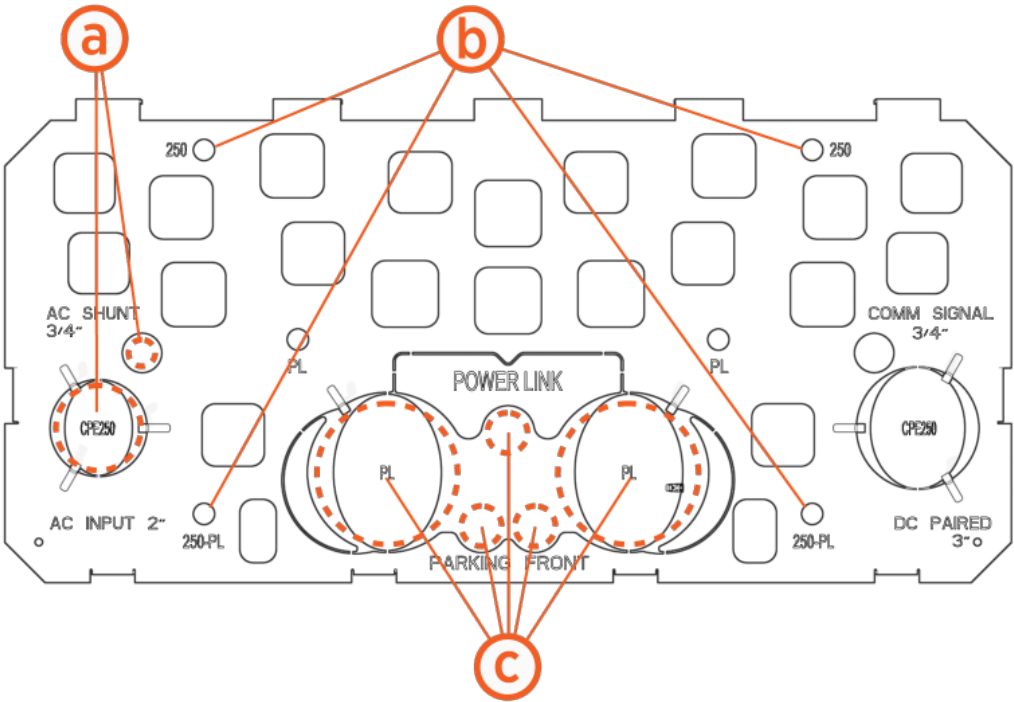
They will drill new anchor bolts and epoxy them in place using another ChargePoint upgrade template.

At the time of that future installation, installers will need to use an approved method to extend the conduit stub-ups and seal all gaps. Consult the Installation Guide and site drawings for that station for more detail.

For Example Only

Express 250 Standalone or Express 280 Standalone to Express Plus Power Link

This example shows the conduit and anchor bolt locations to install an Express 250 Standalone or Express 280 Standalone that you will upgrade to an Express Plus Power Link in the future:



Station You Install Now	Preparation for Later Upgrade
<ul style="list-style-type: none">a. Express 250 or Express 280 conduitsb. Express 250 or Express 280 anchor bolts	<ul style="list-style-type: none">c. Install Express Plus Power Link conduits now to upgrade later

WARNING: Upgrades Will Vary



This is a specific example. Other upgrade configurations will vary.

You must consult the specific configurations for your upgrade and include both current and future conduits.

Assemble the 5 Concrete Mounting Template



CAUTION: The template has sharp edges. Wear cut-resistant gloves.

Before pouring concrete, install the anchor bolts, washers and nuts into the template.

Install the anchor bolts in the locations indicated by the diagrams in this guide.

1. Hold a mounting bolt by its plastic cap.

Ensure that the plastic cap is pressed down fully onto the bolt. Leave the cap on to protect the threads.

Note: The caps stay on until the day you install the charging station.

2. Insert the uncapped end through the hole in the top plate only.

Note: Do not pass through to the bottom yet.

-
3. Between the top and bottom plate, install a nut onto the bolt from below.

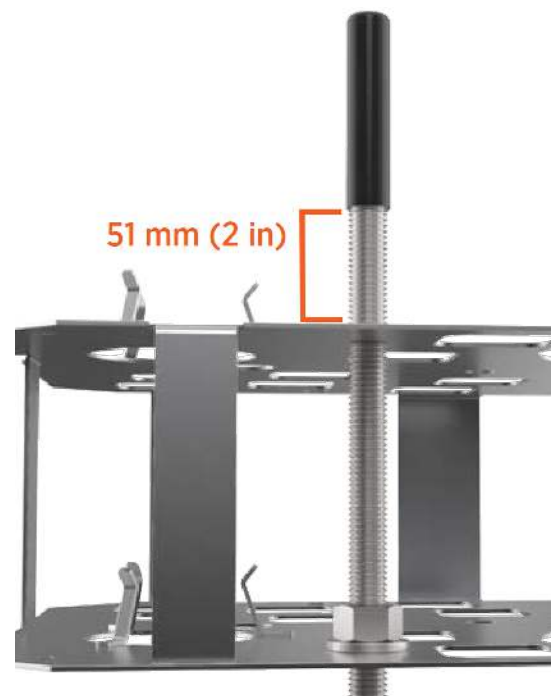
Place a washer below the nut.



4. Place the nut and washer flush against the bottom plate.

5. Turn the bolt thread through the nut, washer, and bottom plate.

Stop when the bottom of the plastic cap is 51 mm (2 in) from the top plate.

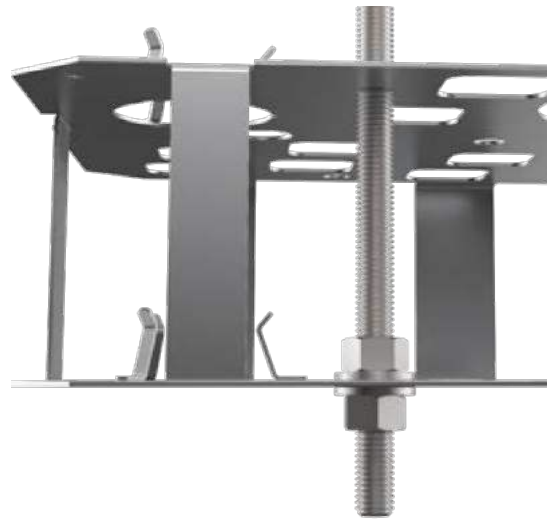


-
6. Repeat the previous steps to partially install the remaining three corner bolts.

Note: Do not insert any additional bolts. Only install the four anchor bolts at the required locations.

7. From under the bottom plate, install a washer and nut onto the end of each bolt (until washer and nut are flush with the bottom plate).

Torque each nut to 5.6 Nm (50 in-lb).



Install the 6 Concrete Mounting Template

WARNING: Risk of Death, Personal Injury, Property Damage, and Voided Warranty



- You are required to engage or be a ChargePoint certified installer, and required to use a ChargePoint-approved mounting method, such as this Concrete Mounting Template, to install the ChargePoint charging station.
- If you fail to use the approved mounting method, you risk the station tipping over, and that can cause death, personal injury, or property damage, and will void all ChargePoint and other warranties and ChargePoint is *not* responsible.
- You must be a licensed electrician and complete the training at chargepoint.com/installers to become ChargePoint certified.



IMPORTANT: The number and location of conduits and wiring differ for each installation. Always refer to site drawings for conduit and wiring details.

Trench, Lay Conduits, Form, and Rebar

1. Trench and excavate an opening to accommodate the wiring conduits and the concrete mounting pad.
The opening must meet national and local codes and requirements and conform to site drawings.
2. Run conduits to each station as required by the site drawings.
3. Build the form and lay rebar for the foundation.



CAUTION: The conduits must be plumb and positioned properly to ensure that a charging station, which delivers high-voltage electricity, has a stable foundation.

The tolerance where the conduits enter the charging station is 2 mm (1/16 in).

Concrete Mounting Template

4. Align the template with the PARKING FRONT marking at the front of the station according to the site drawings.



IMPORTANT: Position the template with the guide tabs UP.
This will help guide the conduits.

5. Lower the template onto the conduit stub-ups until the top of the template is 51 mm (2 in) below where the top of the concrete will be.



IMPORTANT: The surface of the concrete must align with the bottom of the plastic caps.
Do not force or bend the conduits.

6. Do not flex the template.
Gently press the template down onto the conduits.
7. Ensure that the conduits are plumb.
8. Check that the template is level from front to back and side to side.
9. Tie or shim the template to the rebar to prevent the template from moving when you pour the concrete.

Do this only through the square openings.



IMPORTANT: Before pouring concrete, you must secure the template and conduits in place.
If the conduits rise or float out of position when you are pouring the concrete or afterwards when it is curing, the concrete pad will not pass inspection.



IMPORTANT: Only use the square openings in the template to secure its height. Do not use the round openings. If you do, it can cause irregularities for, interfere, or obstruct installation.

Concrete and Check

10. Pour the concrete.



IMPORTANT: Check that the concrete surface between the conduits remains completely level and free of irregularities.

11. Check that the concrete pad conforms to all requirements, specs, and site drawings.

Next Steps

Consult with your ChargePoint representative and construction manager to determine the next steps to prepare for site approvals.

You may need to review the Construction Signoff Form (chargepoint.com/guides).

Limited Warranty Information and Disclaimer

The Limited Warranty you received with your charging station is subject to certain exceptions and exclusions. For example, your use of, installation of or modification to the ChargePoint® charging station in a manner in which the ChargePoint® charging station is not intended to be used or modified will void the limited warranty. You should review your limited warranty and become familiar with the terms thereof. Other than any such limited warranty, the ChargePoint products are provided “AS IS”, and ChargePoint, Inc. and its distributors expressly disclaim all implied warranties, including any warranty of design, merchantability, fitness for a particular purposes and non-infringement to the maximum extent permitted by law.

Limitation of Liability

CHARGEPOINT IS NOT LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOST PROFITS, LOST BUSINESS, LOST DATA, LOSS OF USE, OR COST OF COVER INCURRED BY YOU ARISING OUT OF OR RELATED TO YOUR PURCHASE OR USE OF, OR INABILITY TO USE, THE CHARGING STATION, UNDER ANY THEORY OF LIABILITY, WHETHER IN AN ACTION IN CONTRACT, STRICT LIABILITY, TORT (INCLUDING NEGLIGENCE) OR OTHER LEGAL OR EQUITABLE THEORY, EVEN IF CHARGEPOINT KNEW OR SHOULD HAVE KNOWN OF THE POSSIBILITY OF SUCH DAMAGES. IN ANY EVENT, THE CUMULATIVE LIABILITY OF CHARGEPOINT FOR ALL CLAIMS WHATSOEVER RELATED TO THE CHARGING STATION WILL NOT EXCEED THE PRICE YOU PAID FOR THE CHARGING STATION. THE LIMITATIONS SET FORTH HEREIN ARE INTENDED TO LIMIT THE LIABILITY OF CHARGEPOINT AND SHALL APPLY NOTWITHSTANDING ANY FAILURE OF ESSENTIAL PURPOSE OF ANY LIMITED REMEDY.



chargepoint.com/support

75-001534-02 r2