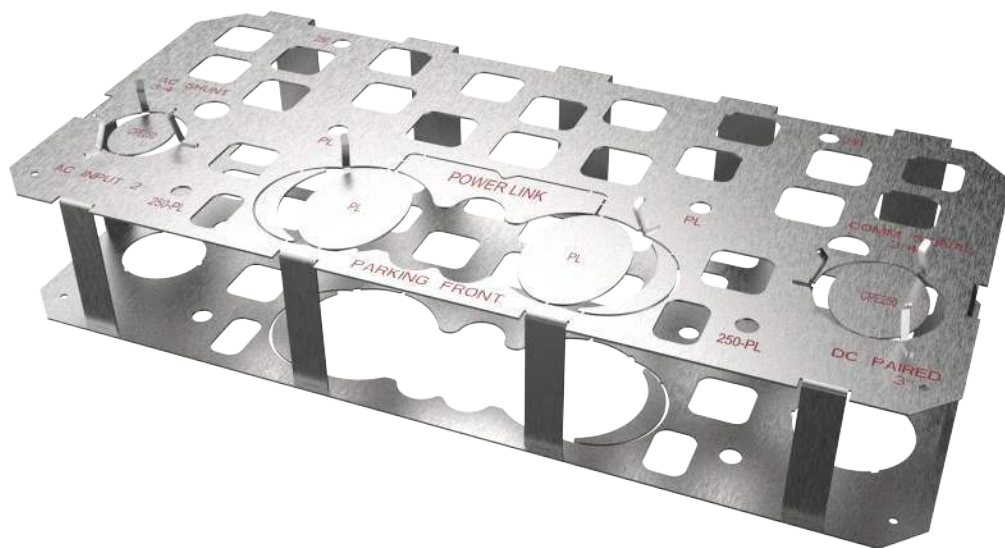


# Concrete Mounting Template

for Express Plus Power Link and Express 250



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# IMPORTANT SAFETY INSTRUCTIONS

## SAVE THESE INSTRUCTIONS

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### WARNING:

1. This guide contains important instructions you must follow to install, operate, and maintain the Express Plus DC fast-charging platform with Power Block model CPPB0001xxx and Power Link model CPPL0001xxx.
  2. **Read and follow all warnings and instructions before servicing, installing, or operating the ChargePoint® charging station.** Install and operate only as instructed. Failure to do so may lead to death, injury, or property damage, and will void the Limited Warranty.
  3. **Only use licensed professionals certified by ChargePoint for installation and service, adhere to all national and local building codes and standards, and ensure compliance with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances that may apply.** Before installing the ChargePoint unit, consult with a licensed contractor, such as a licensed electrician, and use a trained installation expert to ensure compliance. Inspect the charging station for proper installation before use.
  4. **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 a grounded, metal, permanent wiring system, or an equipment grounding conductor shall 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 shall comply with all applicable codes and ordinances.
  5. **Install the ChargePoint charging station on a concrete pad using a ChargePoint-approved method.** Failure to install 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.
  6. **This charging station is not suitable for use in Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
  7. **Supervise children near this device.**
  8. **Do not put fingers into the electric vehicle connector (plug).**
  9. **Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**
  10. **Do not use this product if the enclosure/exterior/housing or the electric vehicle connector is broken, cracked, or open, or shows any other signs of damage.**
  11. **Use only copper conductor wire rated for 90°C.**
- 



**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.**

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## 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](https://chargepoint.com/guides).

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## Symbols Used in This Document

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

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# Introduction 1

## Compatibility

This ChargePoint® Concrete Mounting Template (CMT) (99-002865-02) for Express Plus Power Link and Express 250 can be used interchangeably across these product lines to properly mount a DC dispenser ("charging station") to a concrete pad.

- Express 250 (standalone or paired configurations)
- Express Plus Power Link

## Charging Stations Differ By Product

These product lines each include a DC fast-charging station, either as the main product (Express 250) or a unit (Power Link) within a charging system (Express Plus). The charging stations have charging cables that you can plug in to an electric vehicle to charge it with DC power.

## 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 the template for that concrete pad. This template is installed to align anchor bolts and conduit openings to ensure correct positioning when you subsequently install a charging station onto the concrete pad.

## Concrete Mounting Template Kit Contents

The kit includes these parts:

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

## Order a Template for Every Charging Station/Dispenser

You will need a Concrete Mounting Template for every charging station dispenser that you install.



**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](https://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.

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## Surface Conduit Entry Is Different (Order That Separately)



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

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Before you begin, contact ChargePoint ([chargepoint.com/guides](https://chargepoint.com/guides)) to obtain an approved Surface Conduit Entry kit for that station type.

# Tools and Materials 2

- ChargePoint Concrete Mounting Template (CMT) for Express 250 and Express Plus Power Link (99-002865-02)
- two 24 mm socket wrenches
- 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



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**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.

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# 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**
  - Standalone
  - Paired



### Wiring Varies


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

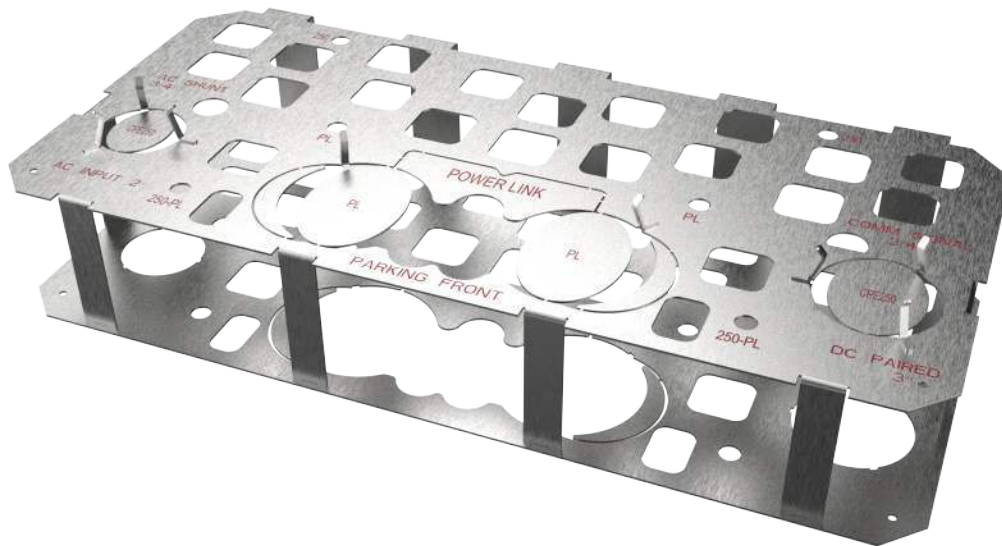


**CAUTION:** Do not use bell ends on conduits. Remove all bell ends. Bell ends can interfere with station placement.



## Generic Legend

Shape of Opening	Part
extra small circle	four anchor bolts
	 <b>IMPORTANT:</b> 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 <i>left</i> side	conduit for AC input for Express 250
large circle on <i>right</i> side	conduit for DC sharing between Paired Express 250
extra large circle (front center)	conduit for DC input for Power Link
crescent breakaway (off-center front)	(anticipated late 2022)
polygon (center middle)	(anticipated late 2022)
PARKING FRONT	front edge nearest the parking lot

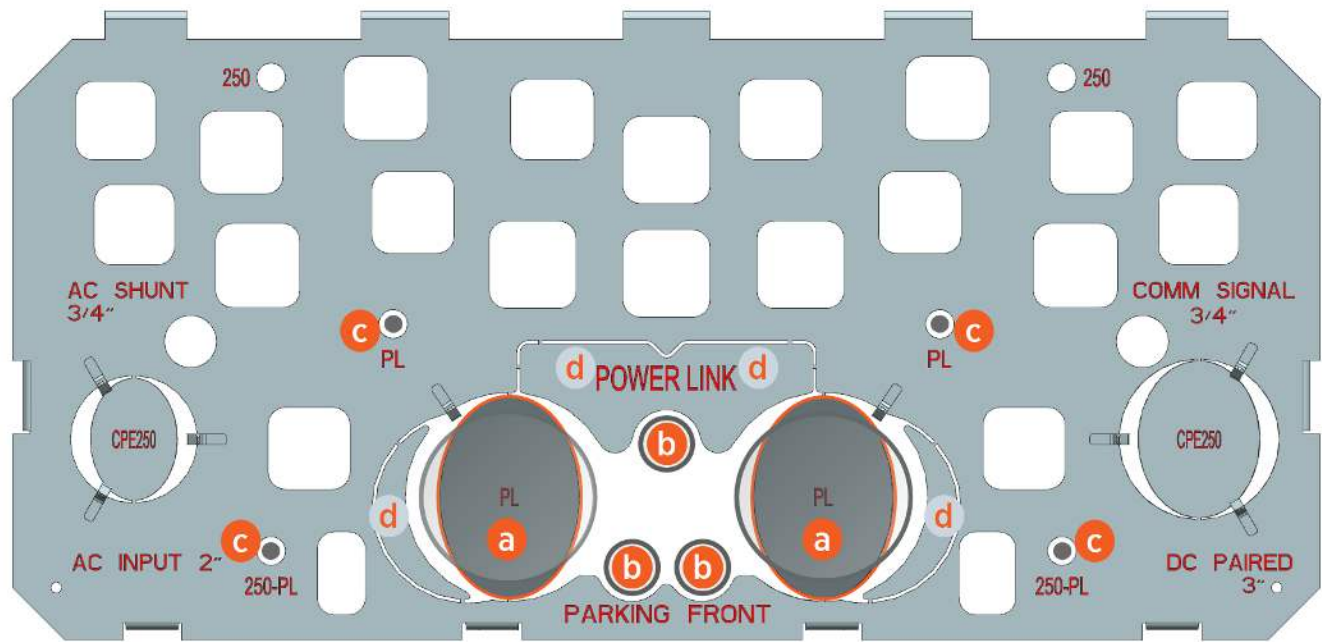


# Express Plus Power Link

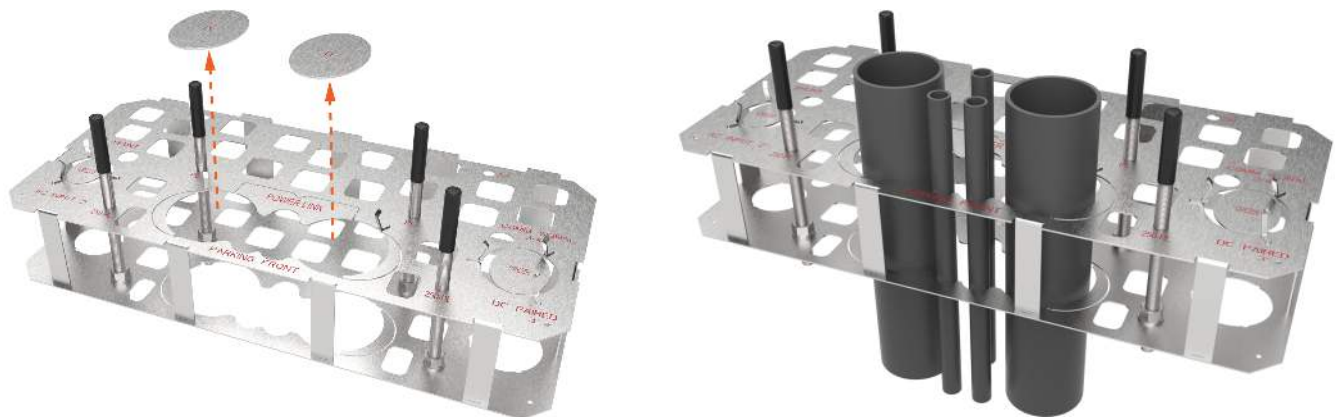
The Power Link receives DC input from an upstream component called a Power Block or Power Hub that centralizes AC to DC power conversion for multiple stations.

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.



Route or Break Away for Conduit or Wiring	Description	Quantity
a. breakaway for DC input conductors	each up to 103 mm (4 in) trade size conduit	1 or 2
b. 48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet	21 mm (¾ in) trade size conduit <b>Note:</b> Check site drawings.	1-3
c. anchor bolts	M16	4
d. (anticipated late 2022)		



**Note:** Example only — check site drawings.

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## Express 250

Each Express 250 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 parking lot) and two at the rear of the template.

### Standalone or Paired

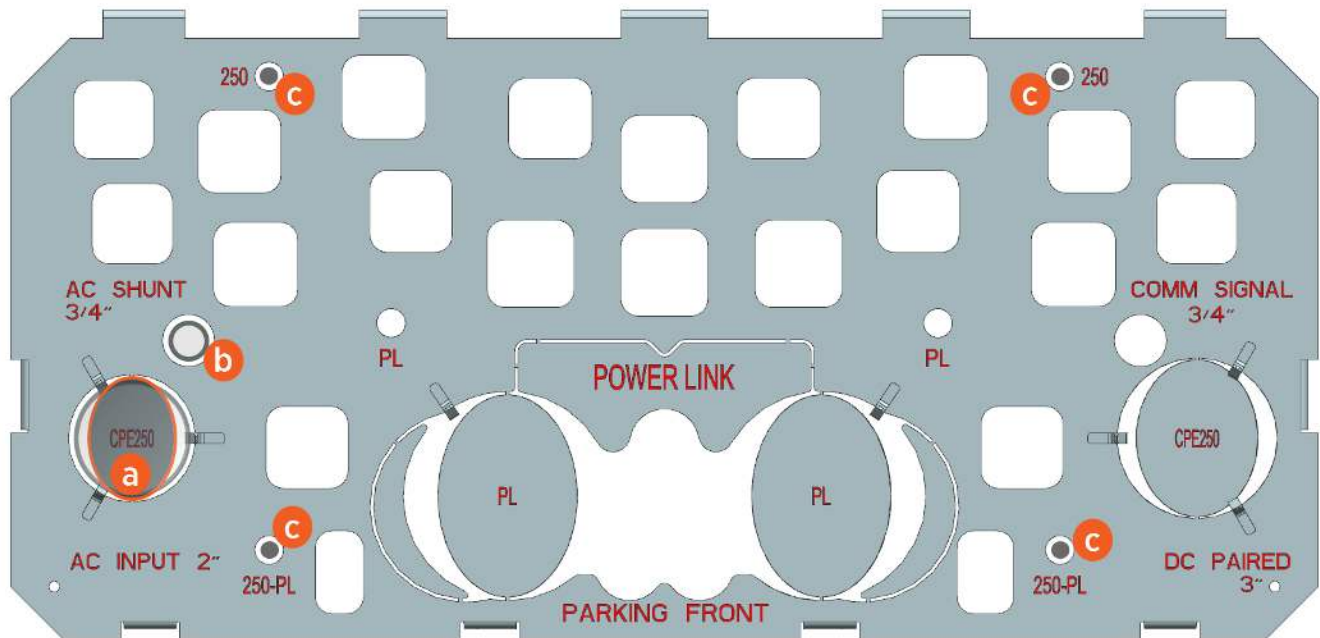
The standalone configuration uses only the conduit for AC input.

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

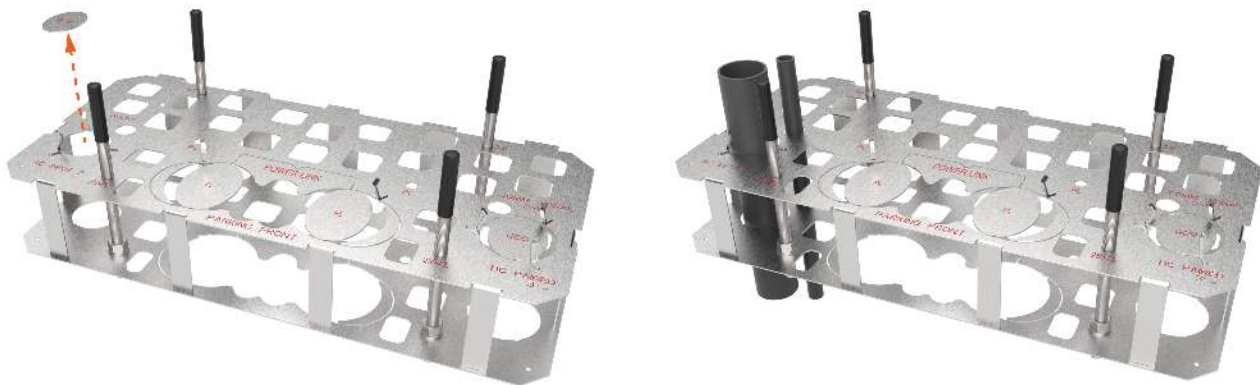
**Note:** Each Express 250 communicates with ChargePoint via a cellular network. No communication wiring is needed between the station and the building.

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 Configuration



Route or Break Away for Conduit or Wiring	Description	Quantity
a. breakaway for AC conduit (left side) <b>Note:</b> AC conduit may include an AC disconnect switch in the circuit.	53 mm (2 in) trade size • runs to breaker panel	1
b. (optional) shunt trip conduit (left side) <b>Note:</b> Check site drawings.	21 mm (3/4 in) trade size • runs to breaker panel	
c. anchor bolts	M16	4

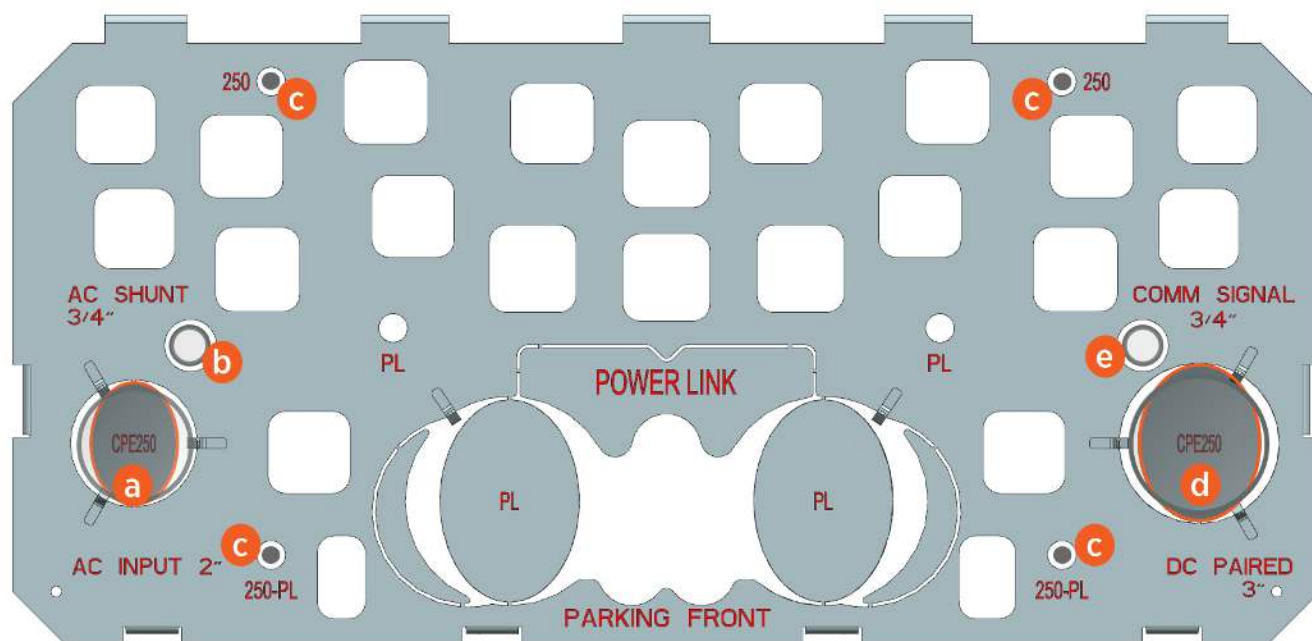


## Paired Express 250 Configuration

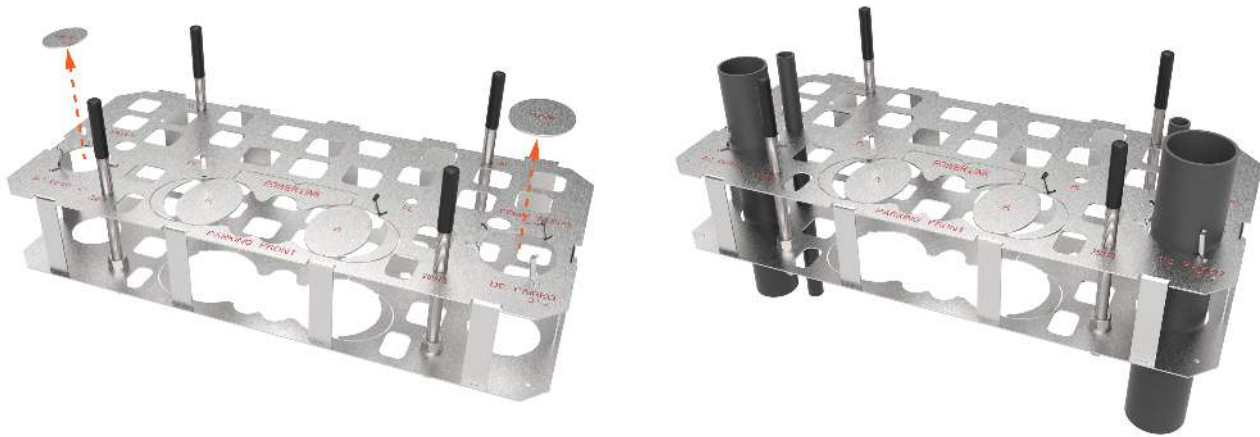
If two Express 250 charging stations are “paired,” they share DC power to allow faster (higher amperage) charging to a vehicle as needed.

For a paired configuration, follow the diagram. In addition to the [Express 250 Standalone Configuration requirements](#), you must also run two additional conduits *between* the paired stations: an Ethernet wire for communication and a conduit for DC conductors.

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



Conduit or Wiring	Description	Quantity
a. breakaway for AC conduit (left side) <b>Note:</b> AC conduit may include an AC disconnect switch in the circuit.	53 mm (2 in) trade size <ul style="list-style-type: none"> <li>runs to breaker panel</li> </ul>	1
b. (optional) shunt trip conduit (left side) <b>Note:</b> Check site drawings.	21 mm (3/4 in) trade size <ul style="list-style-type: none"> <li>runs to breaker panel</li> </ul>	1
c. anchor bolts	M16	4
d. breakaway for DC conduit (right side)	78 mm (3 in) trade size <ul style="list-style-type: none"> <li>runs between the two paired stations</li> </ul>	1
e. Ethernet conduit (right side)	21 mm (3/4 in) trade size <ul style="list-style-type: none"> <li>runs between the two paired stations</li> </ul>	1



# Plan a Future Upgrade 4

You can use the same Concrete Mounting Template (CMT) to install an Express 250 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 to Express Plus Power Link

This example shows the conduit and anchor bolt locations to install an Express 250 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"><li>a. Express 250 conduits</li><li>b. Express 250 anchor bolts</li></ul>	<ul style="list-style-type: none"><li>c. Install Express Plus Power Link conduits now to upgrade later</li></ul>



### **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 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.

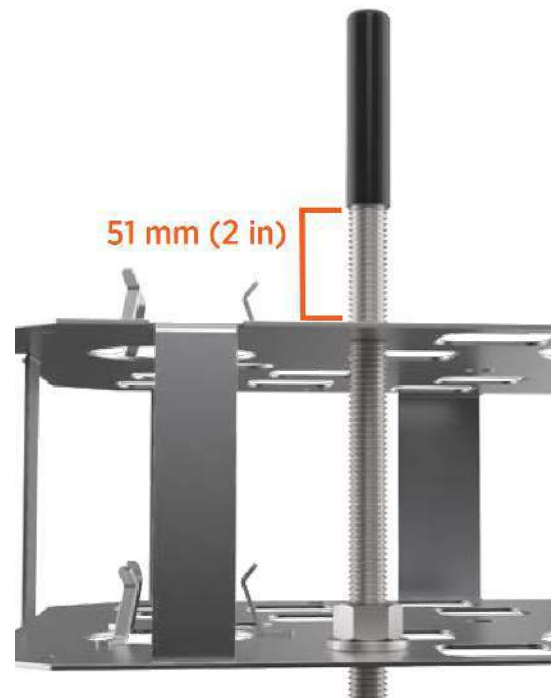
3. Between the top and bottom plate, install a nut onto the bolt from below.

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.

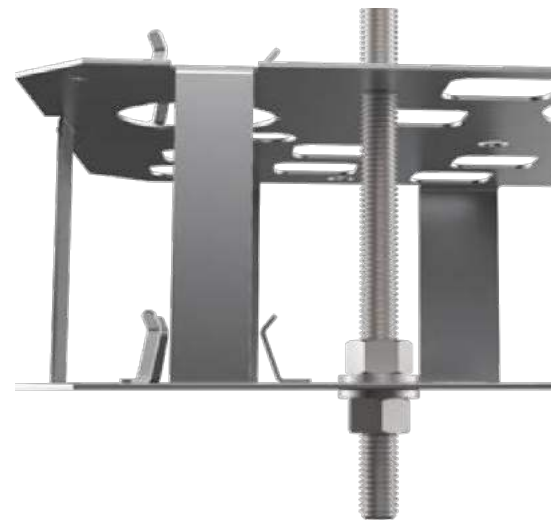


6. Repeat the previous steps to partially install the remaining three corner bolts.

**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 N·m (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](https://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.

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6. Do not flex the template.  
Gently press the template down onto the conduits.
7. Ensure the conduits are plumb.
8. Check that the template is level from front to back and side to side.

**Tool:** a level

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 afterward when it is curing*, the concrete pad will not pass inspection.

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**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.

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## Concrete and Check

10. Pour the concrete.



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

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

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## 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](https://chargepoint.com/guides) ([chargepoint.com/guides](https://chargepoint.com/guides)).

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## 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.

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