Express 250

Surface Mount Plate

IMPORTANT SAFETY INSTRUCTIONS: SAVE THESE INSTRUCTIONS

WARNING:

1. Read and follow all warnings and instructions before installing and 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.

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 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.

4. 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.

5. This charging station is not suitable for use in or around hazardous locations, such as near flammable, explosive, or combustible materials.

6. Do not use this product if the enclosure, EV cable, or the EV connector is broken, cracked, open, or shows any other indication of damage.

7. Do not put fingers into the electric vehicle connector.

8. This device should be supervised when used around children.

Important: Under no circumstances will compliance with the information in this manual relieve the user of his/her responsibility to comply with all applicable codes or safety standards. This document describes the most commonly-used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact ChargePoint, Inc. **ChargePoint, Inc. is not responsible for any damages that may result from custom installations that are not described in this document or for any failure to adhere to installation recommendations.**

Product Disposal

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.

No Accuracy Guarantee

Commercially reasonable efforts were made to ensure that the specifications and other information in this manual are accurate and complete at the time of its publication. However, the specifications and other information in this manual are subject to change at any time without prior notice.

Copyright and Trademarks

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.

Introduction

This document describes how to install a surface mount plate that allows an Express 250 DC fast charging station to be anchored without pouring new concrete. The surface mount plate is used with drilled and epoxied anchor bolts. When surface mounting an Express 250, there are two options for wiring:

- Reusing an existing AC underground conduit (possibly pulling new conductors)
- Using a Surface Conduit Entry (SCE) kit that provides a rear conduit entry box for conductors to enter the station through surface wireways (refer to the SCE kit's installation guide for full installation details)

Installing the Express 250 using the surface mount plate requires one ChargePoint Certified Installer and about 2 to 2.5 hours to complete (not including epoxy cure time). This time estimate includes the full charging station installation, including the applicable steps described in the *Express 250 Installation Guide*. If this is a Paired installation, allow an additional hour. This time estimate does not include the time needed to pull cables.

Note: This document is a supplement to the normal charging station installation described in the *Express 250 Installation Guide* that ships with the station. Ensure all installation instructions from that guide are followed except where this guide deviates.

Note: Shunt trip wiring is normally a feature of the Express 250, but is not required for operation. If shunt trip wiring will be used, run a conduit or wireway for the low voltage shunt trip wires that is separate from the AC conductor conduit or wireway.

Before You Begin

DANGER: RISK OF SHOCK. Before performing this procedure, follow standard practice and local code to de-energize the circuit designated for each Express 250 at the service panel and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off. Keep power off for this circuit until all cover panels are correctly reinstalled and the work scope is completed. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR LOSS OF LIFE.

Important: You must be a licensed electrician and complete an online training course to become a ChargePoint certified installer, and to get a login for ChargePoint. If you do not complete this training, you will be unable to complete the installation process. Go to: chargepoint.com/installers or chargepoint.com/eu/installers

CAUTION: Do not use power tools during installation or servicing. Over-torquing can damage the equipment.

CAUTION: Do not install the charging station in inclement weather. If you must complete the installation in rain or wind, you must use a weather-proof shelter that covers all boxes and components.

Note: For assistance, go to chargepoint.com/support and find your region's technical support number.

Tools and Materials

For a surface mount plate installation, the installer must bring:

- All tools and materials mentioned in the *Express 250 Charging Station Installation Guide.* An online copy is available at chargepoint.com/installers or chargepoint.com/eu/installers
- Concrete drill, level feature recommended
- 25 mm (1 in) and 6 mm (1/4 in) concrete bits
- 25 mm (1 in) rebar bit if needed
- 24 mm (15/16 in) open ended wrench
- Flathead screwdriver
- 750 ml of epoxy with bonding strength of 11.7 MPa minimum, compressive strength of 82.7 MPa minimum, and tensile strength of 49.3 MPa minimum, such as Hilti HIT-RE 500 V3 (normal cure time), Hilti HY-200 (fast curing), or similar

  Note: Different epoxy types have different cure times at various temperatures. Check local temperatures for the site in advance to help choose an appropriate epoxy.
- Vacuum and/or brush
- Marker
- Isopropyl wipes
- Paper towels

Important: Read the *Express 250 Charging Station Installation Guide*, *Express 250 Charging Station Site Design Guide,* and site drawings to source and bring the correct AC conductors (required), shunt trip wiring (optional), DC conductors and lugs (Paired installations only), and Ethernet wiring (Paired installations only).

Important: If the Express 250 will be paired, check the serial number on the rear surface just under the cable swing arms. For North America stations with SNs prior to 1929xxxx, or EU/UK SNs prior to 2003xxxx, the station also requires a Pairing Upgrade Kit. Contact ChargePoint for the kit and the installation guide for that configuration.

Check Site Readiness

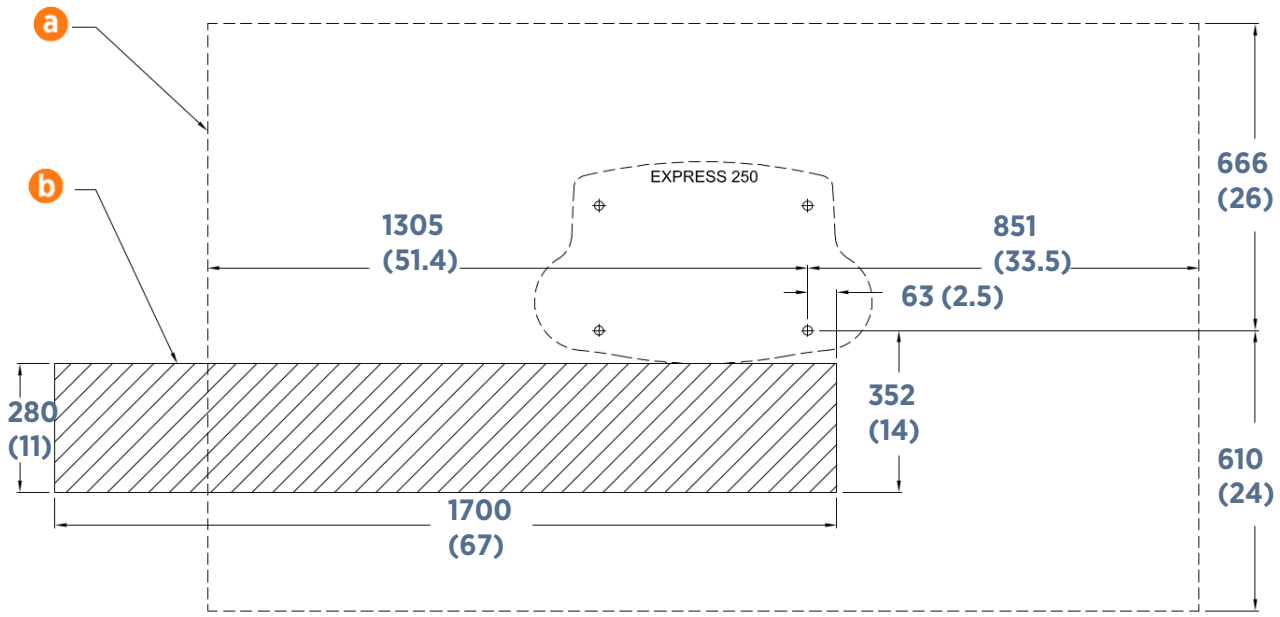
Before beginning work, check that the site meets the basic requirements outlined below, as illustrated in the following image. Measurements are listed in mm (in).

- The panel breaker serving the charging station matches the site drawing requirements depending on local code and the type of installation: 62.5 kW Standalone, 125 kW Paired, or 50 kW de-rated (when replacing a previous, lower-amperage system).
- The smooth, level concrete pad has been approved by a structural engineer for the Express 250 dimensions and weight, OR the pad conforms to these general specifications*:
  - At least 305 mm (12 in) deep (or deep enough to be 305 mm (12 in) below the frost line)
  - At least 1296 mm (51 in) on each side
  - Contains #4 rebar top and bottom 305 mm (12 in) on center
  - Concrete 2500 PSI minimum

  ** These pad specifications are applicable in most conditions, as described in the Express 250 Site Design Guide. In some extreme conditions, a larger pad would be required.*
- Charging station sites are positioned so that each station is centered on a parking space (unless curbside), with the front of the station facing the vehicle. (This maximizes cable reach.)
- The cellular signal strength at the station location has been tested and is consistently strong. If RSRQ is measured at -10 dB or better, then RSRP can be -90 dBm or better. If RSRQ cannot be measured or is not adequate, RSRP must be -85 dBm or better.
- The service clearance of open space (not necessarily at system grade) extends a minimum of 683 mm (26.9 in) beyond the station in front, 396 mm (15.6 in) beyond the station in back, and 788 mm (31 in) beyond the station on each side (image callout a, below).

Important: If the Express 250 will use a SCE kit, check the SCE installation guide to ensure enough rear space for the conduit box and its service clearance.

- The front of the station has 352 mm (14 in) of space at grade from the front right anchor, extending 1700 mm (67 in) to the left, without any permanent obstructions (bollards, wheel stops, etc.) (image callout b).

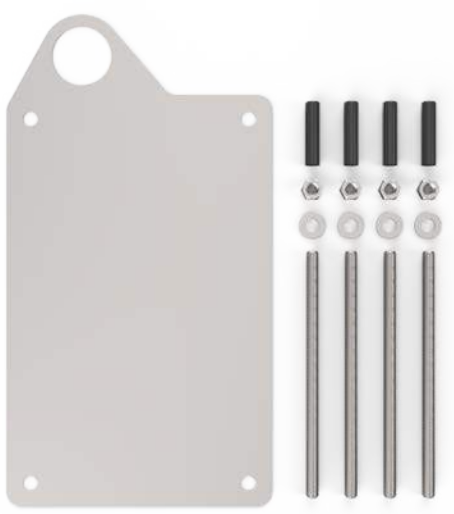


If the site does not meet these basic requirements, contact ChargePoint before continuing.

Check the Surface Mount Plate Kit Contents

Check the contents of the Surface Mount Plate Kit before beginning work. The kit includes:

- Surface mount plate
- M16X300 anchor bolts, washers, and nuts (x4)
- Anchor bolt plastic caps (x4)



Prepare the Express 250

1. Receive the Express 250 station and its Power Modules at the site.
2. Follow the directions in section 1 of the *Express 250 Charging Station Installation Guide* to familiarize yourself with the process, crate contents, and required tools and materials.
3. Begin installation with the next section of this document, "Install Surface Mount Anchor Bolts" on page 8.

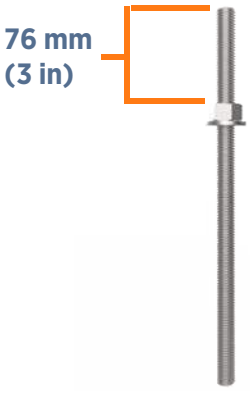
Install Surface Mount Anchor Bolts

1. Follow standard practice and local code to de-energize the applicable circuit and lock out/tag out the disconnect before proceeding. Use a multimeter to test that power is off.
2. Place the surface mount plate at the proposed location. Align the large left hole with AC conduit if present (for example, when replacing an older station). Check that the station placement on the pad meets the site requirements.

Important: Ensure the rear clearance leaves room for surface conduit runs if present, and for service clearance.

3. Use a marker to mark the locations for the Express 250 anchor bolts. Remove the surface mount plate.
4. Use the 6 mm (1/4 in) concrete drill bit to drill each pilot hole about 51 mm (2 in) deep. The holes must be parallel to each other and perpendicular to grade.

5. Use a vacuum or brush to clean the dust from the holes.
6. Use the 25 mm (1 in) concrete drill bit to drill each anchor hole a minimum of 229 mm (9 in) deep. Anchor bolts must have 127 mm +/- 12.7 mm (5 in +/- 1/2 in) above grade.
7. Place the surface mount plate on the ground again. Verify that the new holes for the Express 250 align with the holes in the surface mount plate.
8. Thread a washer and a nut onto each anchor bolt, so that the measurement from the top of the nut to the top of the bolt is 76 mm (3 in).

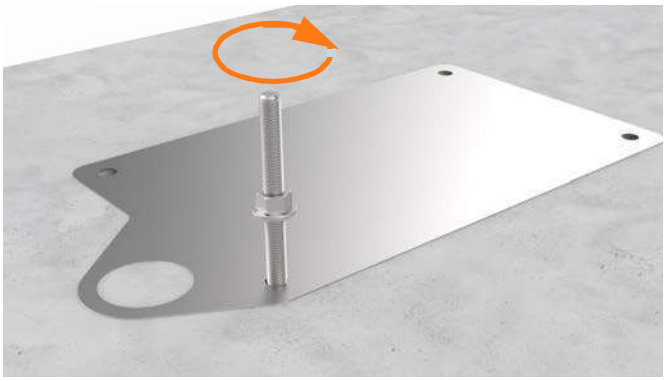


9. Put a piece of tape above each nut to prevent it from floating upward when rotating the bolt into the epoxy later.
10. Prepare the epoxy. Ensure the applicator is dispensing correctly mixed epoxy before beginning work (for example, the Hilti epoxy is white when unmixed and grey when mixed).

11. Fill the first anchor bolt hole with epoxy until the epoxy is about 44.5 mm (1.75 in) from the top of the hole.

Important: Continue immediately to the next step because the epoxy sets within about eight minutes.

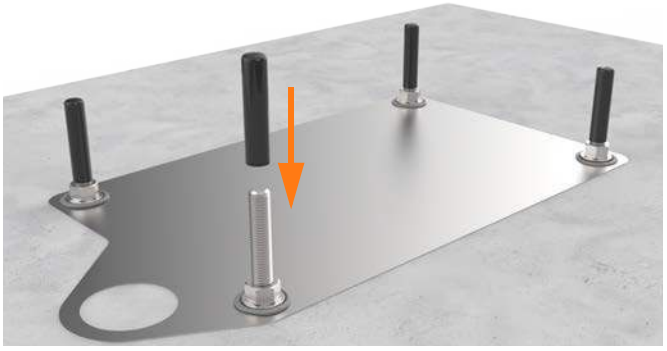
12. Insert the mounting bolt into the hole. Rotate the mounting bolt as you insert it to draw epoxy into the threads. Lift the anchor bolt again to see how close to the surface the epoxy has filled. If the epoxy is below grade level, add enough to fill the hole to grade level. Use paper towels to wipe up any excess.



13. Measure the nut distance from the top of each bolt again and adjust if needed. These nuts help secure the surface mounting plate to the concrete and should be flush against the base when installed.

14. If the Express 250 station will not be immediately installed, insert a protective plastic cap over the bolt.

15. Use a level to check that each anchor bolt is plumb. If needed, adjust while the epoxy is still setting.



16. Repeat the above epoxy steps for each of the other three anchor bolts.

17. **Stop.** Allow the epoxy to cure for the initial cure time listed on the epoxy, before beginning to install the Express 250.

Anchor and Label the Express 250 Station

1. Check that the epoxy has set completely.
2. Torque all four nuts to 94.9 Nm (70 ft-lbs).
3. Follow the instructions in the *Express 250 Installation Guide* from the beginning of the guide to the end of the section “Mount and Secure the Express 250”. The station should now be mounted on the anchor bolts, leveled, and secured with the anchor washers and nuts.

Important: The station should rest on the leveling nuts, not on the surface mount plate.

4. Stop before connecting the AC wiring.
5. If required, adjust the ratings with a new label over the existing ratings line, just below the swing arms in the back:

   a. If the Express 250 is being connected to wiring and a breaker of 80 A, affix the 50 kW ratings label to the station

   b. If the Express 250 is being paired, affix the 125 kW label to the station

6. Continue normal installation of the Express 250 charging station per the *Express 250 Installation Guide* until the on-screen configuration. When prompted for either “replacement” or “new installation”, choose New.
7. Complete normal Express 250 installation and testing per the Installation Guide.

Warranty Information and Disclaimer

The Warranty you received with your Charging Station is subject to certain exceptions and exclusions. For example, your use 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 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.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the manufacturer's instruction manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case, you will be required to correct the interference at your own expense.
Important: Changes or modifications to this product not authorized by ChargePoint, Inc., could affect the EMC compliance and revoke your authority to operate this product.
Exposure to Radio Frequency Energy: The radiated power output of the 802.11 b/g/n radio and cellular modem (optional) in this device is below the FCC radio frequency exposure limits for uncontrolled equipment. The antenna of this product, used under normal conditions, is at least 20 cm away from the body of the user. This device must not be co-located or operated with any other antenna or transmitter by the manufacturer, subject to the conditions of the FCC Grant.

FCC/IC Compliance Labels:

Visit chargepoint.com/labels/

chargepoint.com/support

75-001418-01 r1