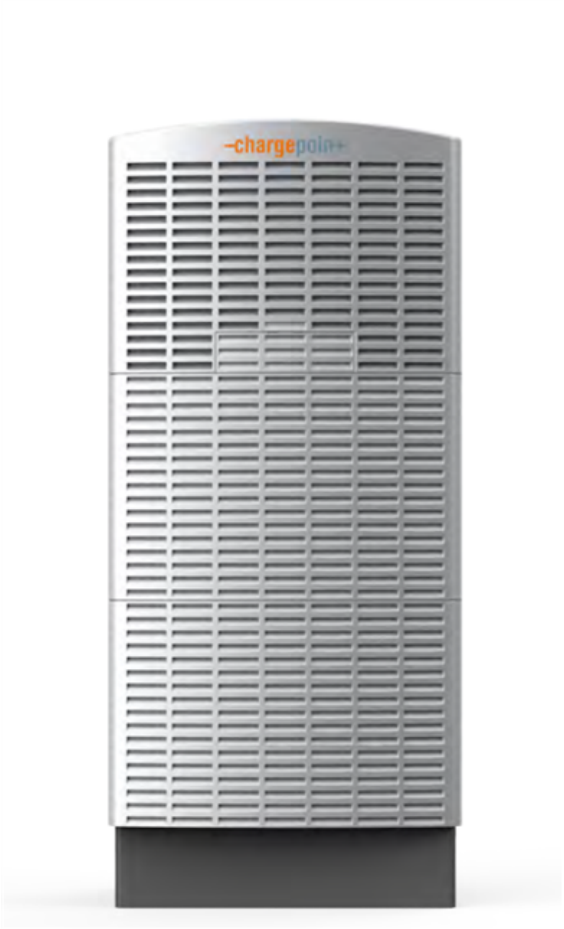
Power Block

Express Plus DC Fast Charging Platform

Installation Guide



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

This manual contains important instructions for ChargePoint® products that shall be followed during installation, operation and maintenance of each product.

WARNING:

1. **Read and follow all warnings and instructions before servicing, installing, or operating the ChargePoint® product.** 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 product and adhere to all national and local building codes and standards.** Before installing the ChargePoint product, 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 product for proper installation before use.
3. **Always ground the ChargePoint product.** A touch current of >3.5 mA AC RMS is possible in case of a fault condition of loss of electrical continuity of the earthing conductor. Failure to ground the product can lead to risk of electrocution or fire. The product 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 product using a ChargePoint-approved method.** Failure to install on a surface that can support the full weight of the product can result in death, personal injury, or property damage. Inspect the product for proper installation before use.
5. **The product is 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 or connector adapter. Do not touch fingers to charging rails.**
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, the flexible output cable, the vehicle inlet, the electric vehicle connector, or the electric vehicle connector adapter is broken, cracked, open, or shows any other signs of damage. Do not use this product if internal parts are accessible, including wiring.**
10. **Wire and wire terminal information are provided in the ChargePoint product Site Design Guide and Installation Guide.**
11. **Torques for installation of wire terminals are provided in the ChargePoint product Installation Guide.**
12. **The ChargePoint product maximum operating temperature is 50 °C (122 °F).**

13. **Do not use an electric vehicle connector adapter with any charger or EV that is capable of exceeding the adapter's rated voltage of current capacity. Some EVs and EVSE combinations are capable of multiple voltages or limited durations of current overloading designed for normal EVSE-to-EV connections. Use of an electric vehicle connector adapter in these situations could result in unsafe conditions such as fire, burns, or exposure of high voltage.**

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.

Product Disposal

Applicable to NA - Do not dispose of as part of unsorted domestic waste. Inquire 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.

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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

NOTE: Helpful information to facilitate 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.

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.

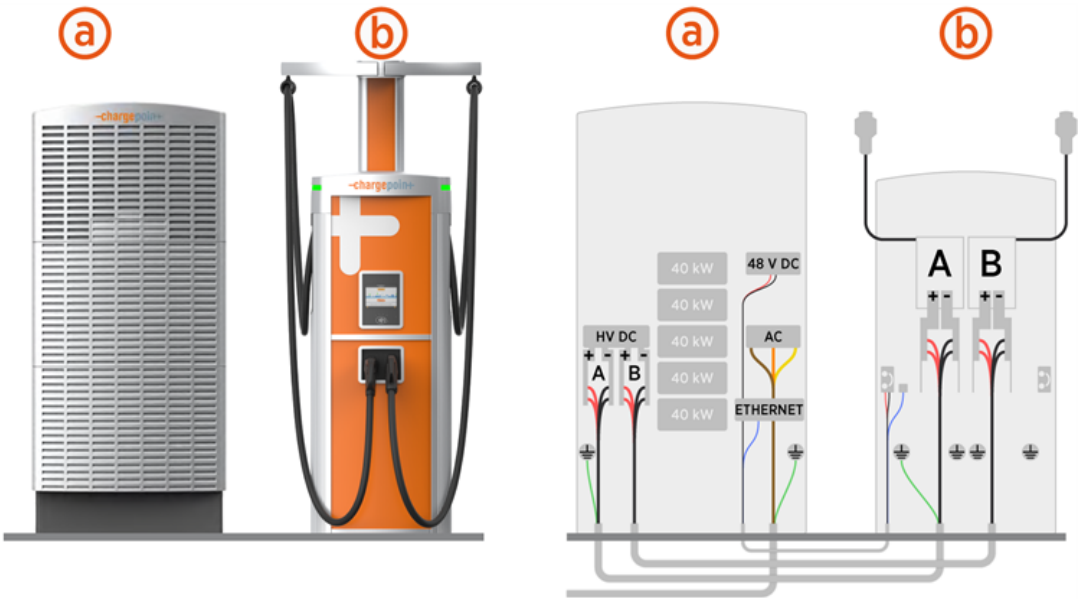
Month & Year	Version Number	Description
September, 2025	v1	In section Prepare for Installation, added information related to auto transformers and neutral-to-ground bonding.

Contents

Introduction 1

Express Plus Components

Express Plus is a scalable DC fast charging platform. It consists of Power Block and Power Link.



(a) Power Block contains Power Modules, which convert the upstream AC power into DC power. A Power Block can accommodate up to five Power Modules, each of which can output up to 40 kW of DC power. Power Block provides the charging current on two HV DC buses. It also provides 48 V DC power and Ethernet to connected Power Links.

(b) Power Link receives HV DC power from Power Block to charge a vehicle. It can be installed with one or two charging cables. With two cables, it can simultaneously charge two vehicles.

From simultaneous charging of two vehicles at up to 500 kW from single station and sequential charging of six or more vehicles, Express Plus can be configured to meet various charging needs. Multiple Power Blocks and Power Links can be interconnected in many ways with HV DC wires for charging current, Ethernet cables for network communications, and 48 V DC wires to power the electronics in Power Link. The illustration above shows a sample wiring between single Power Block and Power Link.

IMPORTANT: Contact ChargePoint representative for the ChargePoint approved wiring architectures. Non-approved wiring between Power Blocks and Power Links may not enable Express Plus to function as expected.

For full specifications and certifications, refer to the *Express Plus Datasheet* at ChargePoint Product Reference Documentation.

Wires Entry

- Stub-up entry: The wires can be entered into the Power Link 1000 and Power Block from the bottom side through conduits or armored cables laid underground.
- Surface entry: At sites where the wires cannot be laid underground, they can be entered into the Power Link 1000 and Power Block from the rear side through wireways or armored cables laid above ground.

Express Plus Guides

Access ChargePoint documents at ChargePoint Product Reference Documentation.

Document	Content	Primary Audiences
Datasheet	Full station specifications	Site designer, installer, and station owner
Site Design Guide	Civil, mechanical, and electrical guidelines to scope and construct the site	Site designer or engineer of record
Concrete Mounting Template Guide	Instructions to embed the charging station template in a concrete pad with anchor bolts and conduit placement (these may also be included in the Site Design Guide)	Site construction contractor
Surface Conduit Entry Kit Guide	Instructions for sites where conduit cannot be run underground	Installer
Construction Signoff Form	Checklists used by contractors to ensure the site is correctly completed and ready for product installation	Site construction contractor
Installation Guide	Anchoring, wiring, and powering on	Installer
Operation and Maintenance Guide	Operation and preventive maintenance information	Station owner, facility manager, and technician
Service Guide	Component replacement procedures, including optional components	Service technician
Declaration of Conformity	Statement of conformity with directives	Purchasers and public

Questions

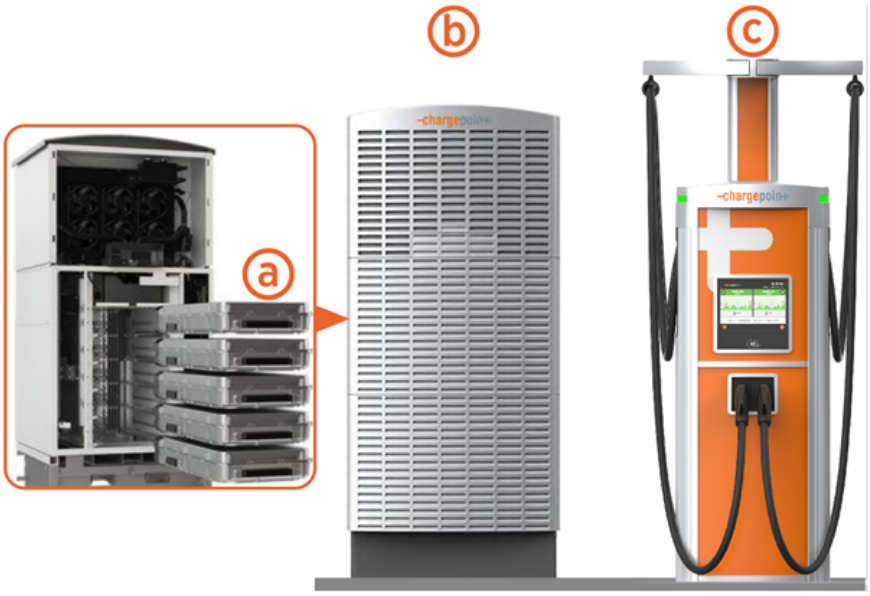
For assistance, go to chargepoint.com/support and contact technical support using the appropriate region-specific number.

Prepare for Installation 2

Follow this topic to install the ChargePoint® Express Plus DC fast-charging platform. You will need at least two people to install this system.

Express Plus Components

Express Plus is a scalable DC fast charging platform that is based on the modular building blocks outlined below.



(a) Power Module: Self-contained AC to DC power conversion system that operates an output of between 100 and 1000 V and delivers up to 40 kW of power.

(b) Power Block: Power cabinet that houses up to five Power Modules and supplies DC output power to Power Link 1000s. Each Power Block can output up to 200 kW of power.

(c) Power Link 1000: Dispenser that delivers DC power to EVs through flexible, lightweight charging cables equipped with industry standard connectors such as CCS1, CCS2, CHAdeMO, and NACS. The Power Link 1000 can accommodate up to two charging cables. Built-in cellular networking enables remote management via the ChargePoint Platform.

Check Site Readiness

The Power Block and Power Link 1000 can be installed on either a newly poured pad or an existing concrete surface. The Power Block and Power Link 1000 also support wiring run above ground for locations where no underground wiring access exists (such as parking garages) or where underground junction boxes are not permitted.

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.

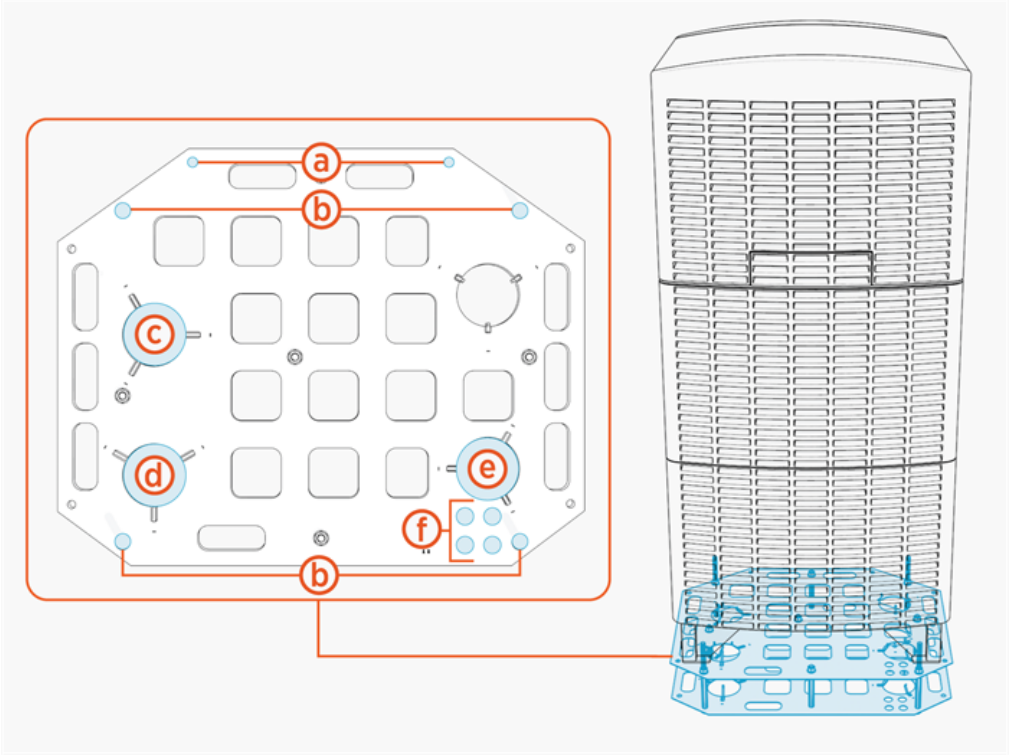
Before beginning work, check that the site meets these civil and mechanical requirements:

Express PlusPower Block Pre-Installation Checklist		
	Each concrete pad must be fully cured and smooth, and must not exceed a slope of approximately 20 mm per meter (0.25 in per ft).	☐
	Each Power Block concrete pad has either a site drawing approved by a structural engineer for this specific site, or an existing concrete pad that has been approved by a structural engineer for the Power Block's dimensions and weight.	☐
	Each Power Link 1000 pad must conform to the design requirements listed in the *Express Plus Site Design Guide*.	☐
	Walls, fences, or slopes must not prevent water from draining from the pad.	☐
	You have sufficient space around the installation pad to use a forklift and other lifting equipment, unpack crates, remove packing materials, and allow two people to freely move throughout the area.	☐

Power Block Readiness

Concrete Mounting Template (CMT)

The Power Block Concrete Mounting Template (CMT) should already be embedded in the concrete pad, unless the site is using a surface-conduit entry. Verify the AC and DC conduits are positioned correctly.



(a) M16 anchor bolt (x2) locations for mounting SCE gland plate (applicable only for surface entry of wires).

(b) M16 anchor bolt (x4) locations 76 mm (3 in) above concrete for mounting Power Block.

(c) HV DC output B wires exit.

(d) HV DC output A wires exit.

> **NOTE:** The DC output of Power Block is the DC input for Power Link 1000.

(e) AC input wires entry.

(f) LV DC output, shunt trip wires, and Ethernet cable exit.

- One for shunt trip (if used).
- Three for LV wires and Ethernet cable.

> **IMPORTANT:** In regions that use conduits, the conduits must be laid per the conduit layout defined by the Concrete Mounting Template (CMT) and the outer diameter of conduits must not exceed the trade sizes listed below. In regions that do not use conduits and/or use armored cables, the cables may be laid per the conduit layout defined by the CMT.
>
> The Concrete Mounting Template CMT must be embedded with its top panel positioned 51 mm (2 in) below the concrete surface.

The following table provides the maximum size and quantity of conduits that can be installed on Power Block:

Conduits For	Conduit Quantity x Trade Size	
	North America	Europe
HV DC output wires	2 x 4 inch max. or 4 x 3 inch max.	2 x 110 mm max. or 4 x 78 mm max.
AC input wires	1 x 4 inch max.	1 x 110 mm max.
LV DC, shunt trip, and Ethernet output wires	4 x 1 inch max.	4 x 25 mm max.

IMPORTANT:

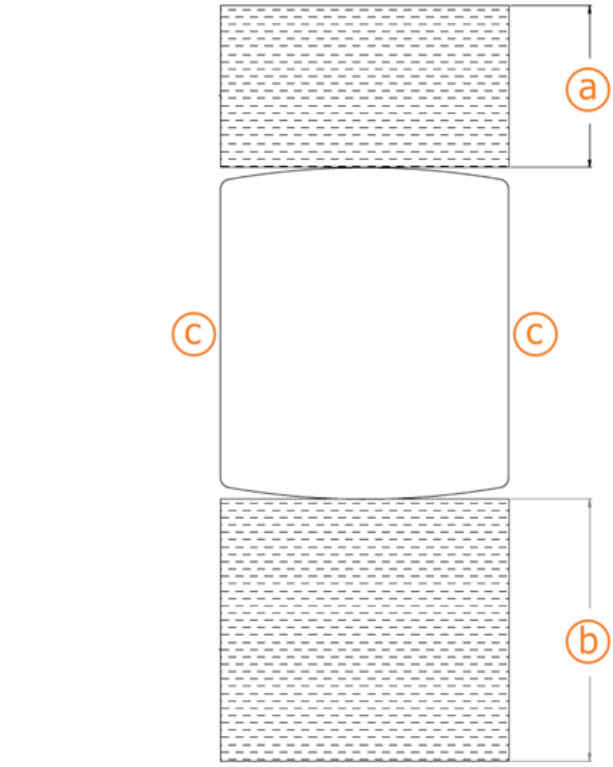
- The actual conduit size and quantity must be chosen based on site-specific wiring requirements.

  For wire specifications, see the *Express Plus Site Design Guide*.

Clearances

The Power Block requires minimum site and service clearances.

NOTE: Image not to scale.

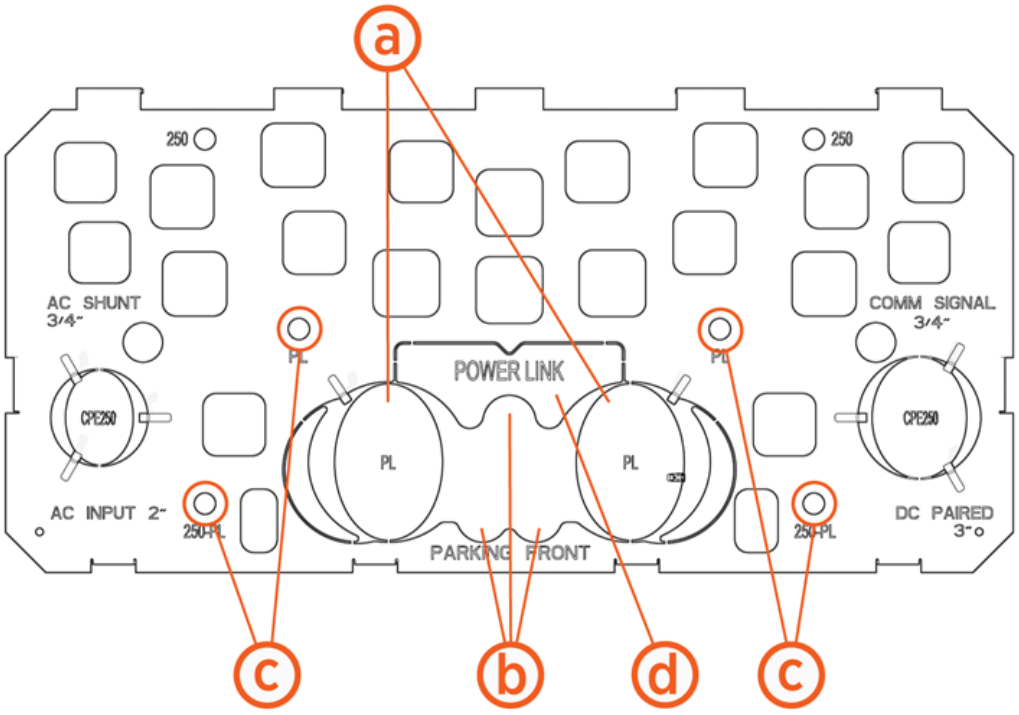


Power Block	Clearance
a. Rear	610 mm (24 in) recommended (for rear service access) 457 mm (18 in) required
b. Front	1000 mm (39.3 in)
c. Side	51 mm (2 in)

Power Link 1000 Readiness

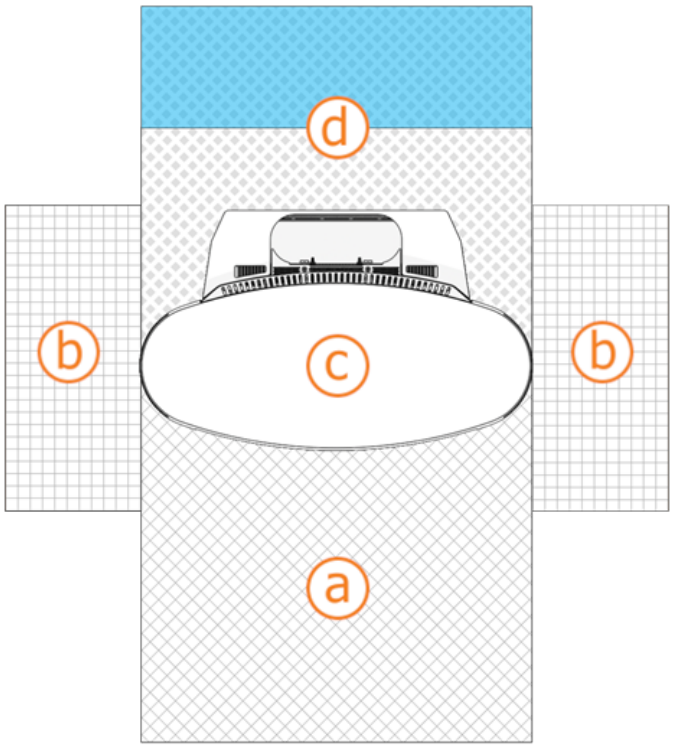
Concrete Mounting Template (CMT)

If the Power Link 1000 is pedestal-mounted and using stub-up wiring, ensure the Power Link 1000 Concrete Mounting Template (CMT) is already embedded in the concrete pad.



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 1000	4

Clearances



NOTE: Image not to scale.

Power Link 1000		Clearance
(a) Front		
	Minimum open space	610 mm (24 in)
	Door swing + width of unit	730 mm (28 3/4 in)
(b) Side		305 mm (12 in) from top corner to top corner Two Power Link 1000 units can share side clearance provided adequate clearance is allowed for Cable Management Kit (CMK) arms. **NOTE:** CMK arms cannot share side clearance.
(c) Top	Pedestal mounted:	26 mm (1 in) from top of Cable Management Kit (CMK)

Power Link 1000	Clearance
Overhead mounted:	305 mm (12 in) from top of Power Link 1000
(d) Rear	203 mm (8 in) or 457 mm (18 in) with liquid cooled cable. This provides clearance for CMK and liquid cool cable service. **NOTE:** If two Power Link 1000 are positioned back-to-back, there must be at least 610 mm (24 in) of shared clearance.

CAUTION: You will need greater clearance for special methods and accessories.

Special Method	Clearance
Surface conduit entry	Rear: 610 mm (24 in)

CAUTION: You must meet additional site requirements for special methods and accessories. See the *Express Plus Site Design Guide*.

General Estimates for Lifting

Electrical Readiness

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

- The appropriate circuit protection and metering is in place at the installation site.
- A grounding conductor that complies with local codes is properly grounded to earth at the service equipment or, when supplied by a separate system, at the supply transformer.
- A correctly rated, dedicated breaker is installed for each Power Block:

Nominal Voltage	Input Current Rating	Branch Circuit Capacity and Breaker	Breaker Size
Europe: 400 V	315 A	350 A or 400 A	400 A
North America: 480 V	260 A		350 A or 400 A

- Breakers have shunt trip capability (if specified) to each Power Block.
- All necessary electrical infrastructure has been completed per local codes and ChargePoint specifications for 3-phase power plus ground, with properly sized wire at the station.
  Neutral is not required for system operation, however Neutral-to-ground bonding is required at the Main Distribution Panel (MDP) supplying the charging station.

  IMPORTANT: This requirement applies to Canadian installations. Whether using a step-up or step-down autotransformer, refer to the "*Hydro-Québec bulletin - Choosing the right one 600/480 V transformer*" for specific guidance.

- Wi-Fi and cellular signal strength meet the requirements stated in the Site Design Guide.

For questions about site specifications, refer to the *Express Plus Datasheet* and *Express Plus Site Design Guide*.

IMPORTANT: The Power Link 1000 is tested to IEC 61000-4-5, Level 5 (6 kV @ 3000 A) standards. In geographic areas that experience frequent thunderstorms, supplemental surge protection must be installed at the service panel.

Bring These Tools and Materials

Installing the Express Plus requires at least two people. Additionally, the installer must bring the following tools and materials. These are not provided by ChargePoint.

Tools

Forklift

- Rated for ≥ 680 kg (1500 lb)
- Maximum size of forklift tines:
  - Width = 102–127 mm (4–5 in)
  - Maximum thickness ≤ 57 mm (2.25 in)
- If your site has height constraints, use alternative equipment

Stepladder

Hard hat

Safety glasses

Measuring tape or other tool to measure height, length, and distance

Lock out/tag out equipment

Cut-resistant gloves

Head lamp

Level

Use hand to tighten

Phillips screwdriver set

- #2 Phillips screwdriver with long handle
- #3 Phillips screwdriver
- #5 Phillips screwdriver
- Right angle (90°) #5 Phillips screwdriver

Torx wrench set

- T20
- T25
- T30

Torque wrenches for 4 to 95 Nm (3 to 70 ft-lb)

Socket wrench set including deep sockets, up to 25 mm

Hydraulic hole punch tool (to cut 4 inch holes in gland plate)

Multimeter with Cat III 1000 V ratings, such as Fluke 87V or similar

Wire strippers, including Ethernet (Cat6 STP) cable

Wire cutters, including Ethernet (Cat6 STP) cable

Dieelectric grease

Cable ties

Isopropyl wipes and towel roll

Coolant funnel
Two gallon coolant

Wire brush (to remove concrete from bolts)

Box cutter

Flat head screwdriver

Torx security wrench

- T25

Adjustable wrench

Cable puller or fish tape

Conduit cutters (to cut up to 4 inch conduits)

Ethernet tester such as a Klein Tools VDV526-052 VDV LAN Scout Jr. Tester or similar

Ethernet (RJ45) connector crimping tool

Lug crimping tool

Torque paint pen

Permanent marker

Duct seal compound

Padlock provided by station owner if required (for security panel on Power Block)

Broom and vacuum

Smartphone with: Internet connectivity

ChargePoint installer login credentials

QR code scanner (usually built into the camera app)

Exact location of stations or units, including parking space

Ferrule crimp tool (for 16 mm^2 or 6 AWG wire)

Tightening Torque

Component (xFasteners)	Component Material	Tool	Torque
• Anchor bolt base nuts (x4)	Metal	24 mm deep socket	**54 Nm (40 ft-lb)**
• Anchor bolt top nuts (x4)	Metal	24 mm deep socket	**95 Nm (70 ft-lb)**
• Power Block enclosure mounting nuts (x7)	Metal	15 mm socket	**19 Nm (168 in-lb)**
• HV DC output wire lug nuts (x16)	Metal	18 mm socket	**21 Nm (15.5 ft-lb)**
• DC fuse mounting nuts (x6)	Metal	15 mm socket	**19 Nm (14 ft-lb)**
• AC input wire lug nuts (x12)	Metal	19 mm socket	**21 Nm (15.5 ft-lb)**
• Power Module rack retention nuts	Metal	15 mm	**19 Nm (14 ft-lb)**
• Pedestal rear and front upper cover screws (x10) • Pedestal rear and front lower cover screws (x4) • Pedestal side cover screws (x10)	Metal	T30 Torx	**7.0 Nm (62 in-lb)**
• Enclosure top cover screw (x4) • Enclosure upper side cover screws (x16) • Enclosure lower side cover screws (x12)	Metal	T30 Torx	**7.0 Nm (62 in-lb)**

Materials

- AC and ground conductors as required by site drawings
- DC conductors as required by site drawings
- 48 V DC wiring as required by site drawings
- Shunt trip wiring (if on site drawings)

- Power Block DC and AC lugs:
  - Plated copper compression lugs (not mechanical)
  - Must fit M12 stud size
  - Must fit 44.5 mm (1.75 in) hole spacing
  - 2-hole specified for North America
  - Maximum tongue width ≤ 50.8 mm (2 in)

- **NOTE:** Check site drawings for quantity of lugs.

- Power Link 1000 DC lugs:
  - Copper plated compression lugs (not mechanical)
  - Must fit M12 stud size
  - Must fit 44.5 mm (1.75 in) hole spacing
  - 2-hole specified for North America
  - Maximum tongue width:
    - ≤ 48 mm if 2 conductors per line
      or
    - ≤ 24.5 mm if 3 conductors per line

- **NOTE:** Check site drawings for quantity of lugs.

- Cat6 Shielded Twisted Pair (STP) Ethernet wiring

  NOTE: FTP, UTP, and lesser grades of cable do not have the required noise immunity

- RJ45 shielded connectors
- Type LB conduit body (for overhead installation only) - maximum 3 inch

Check Express Plus Shipping Crates

Each Express Plus ships in multiple crates. Ensure you have all components at the installation site.

NOTE: Refer to the *Power Link 1000 Installation Guide* for all the components' list.

CAUTION: Always transport and store the charging components in their original packaging. Use appropriate lifting equipment (forklift or crane, lifting straps, and any corresponding attachments and accessories). Ensure the load rating of all lifting equipment is adequate for the weight of the crated components.

CAUTION: Keep components in original packaging, free of moisture, and protected from damage until you install or service them at the site. Store all shipments of components in a dry covered location and protect from moisture.

IMPORTANT: Leave components in the shipping crate until needed. When removing, protect them from damage (such as scratches) by placing them flat on a blanket or tarp, face up. Do not stand up cover panels, as they may be knocked or blown over. Cover charging connectors to prevent damage or ingress.

Power Block	• Power Block unit(s)
	• Pedestal
	• Gland plates
	• Enclosure (upper and lower cabinets together)
	  • Lower heat exchanger (dry box hex)
	
	NOTE: This ships in a box inside the lower cabinet of the enclosure.
	
	• Fuses
	• Doors and covers
	  • Lower door preinstalled

Power Module	• Up to five per Power Block
Installation Kit	• Duct seal compound • Propylene glycol coolant **NOTE:** The coolant label references its Material Safety Datasheet. • T25 Torx security screwdriver • Coolant funnel

WARNING: Lower heat exchanger and each Power Module are heavy. Two people are needed to install these components.

Express Plus Guides

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Questions

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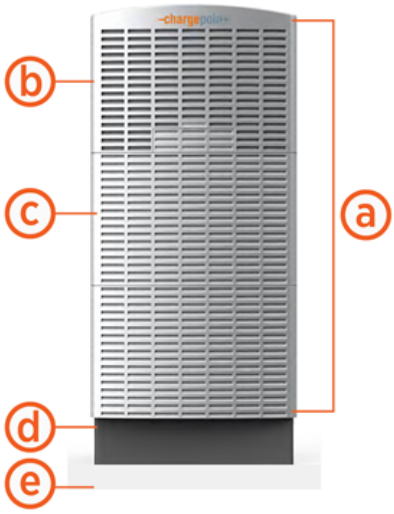
Install Power Block 3

Follow these instructions to anchor, install, and wire each Power Block.



(a) Enclosure

(b) Upper cabinet (wet box)

Preassembled

(c) Lower cabinet (dry box)

Preassembled

Built-in slots for forklift tines

(d) Pedestal

Built-in slots for forklift tines

(e) Pad

IMPORTANT: If the site has height constraints for installation, contact ChargePoint to get the instructions and clearances that you will need for the modified process. You will likely need a crane with lifting shackles and a spreader bar (constraints may differ among sites).

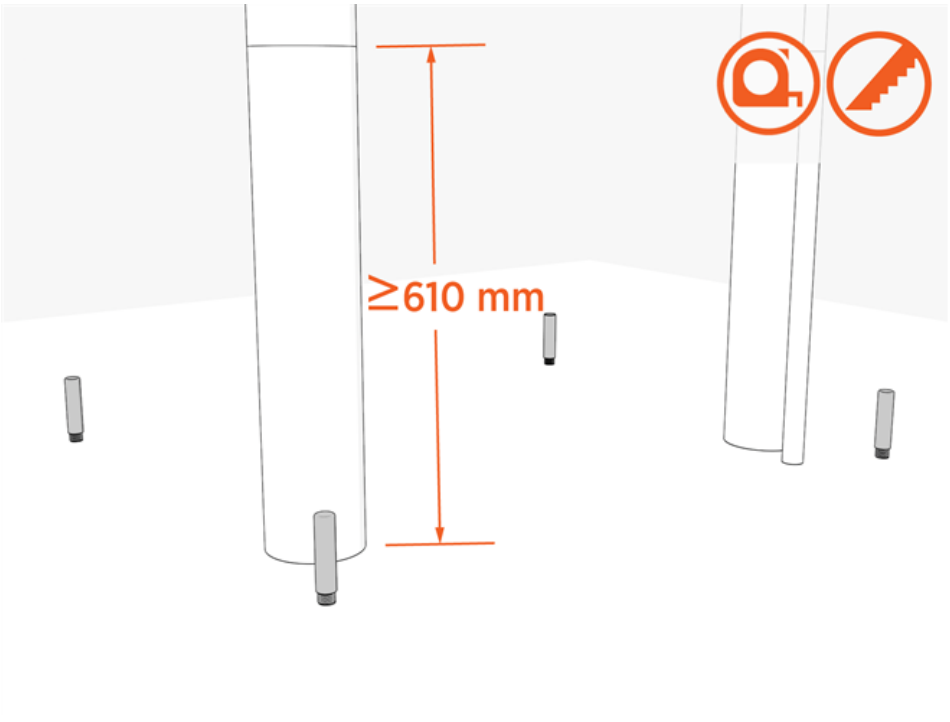
Note to ChargePoint Personnel:

- If the site has height constraints for installation, the installer must first check clearance from the ceiling above the pad and from any objects to ensure nothing will obstruct the movement of equipment and components during this modified installation.
- Installer may remove the upper cabinet (refer to the Service Guide).
- With the upper cabinet removed, the four M10 threaded mounting points on the lower cabinet (at upper corners) can accept crane lifting shackles but, only with a spreader bar.
- Installer may use a crane with lifting shackles and a spreader bar to install the pedestal (onto the pad), then lower cabinet, and upper cabinet.
- Installer must reinstall upper cabinet onto lower cabinet (refer to the Service Guide).

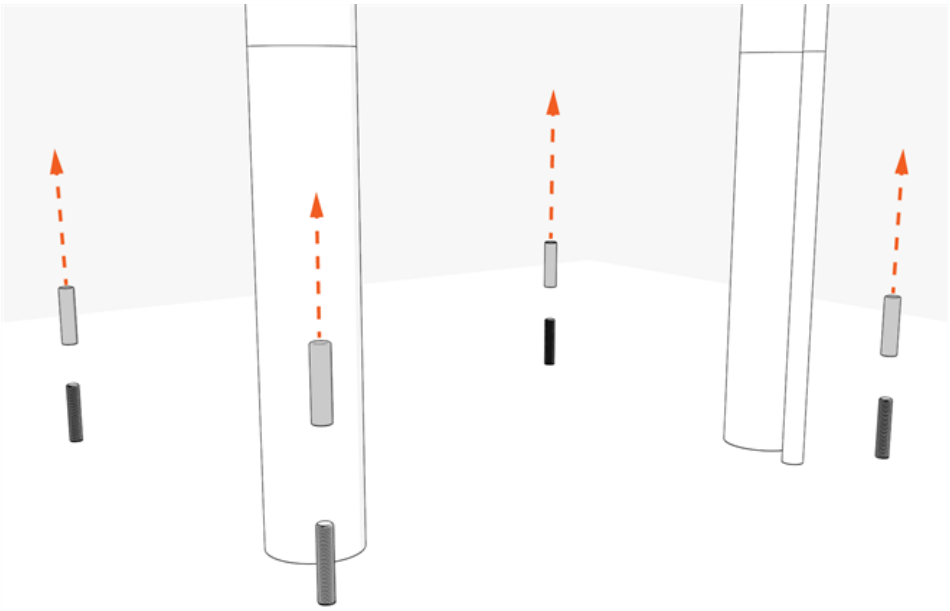
Prepare Power Block Pad

To prepare the Power Block pad, complete the following steps:

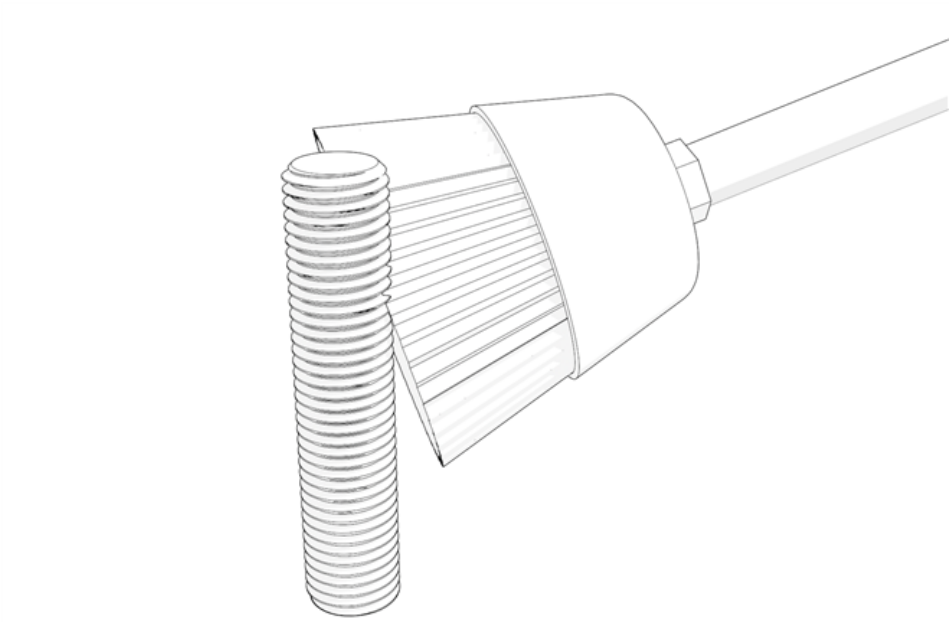
1. Ensure all stub-ups are at least 610 mm (24 in) high. If armored cable is used, strip the outer jacket to the same height.



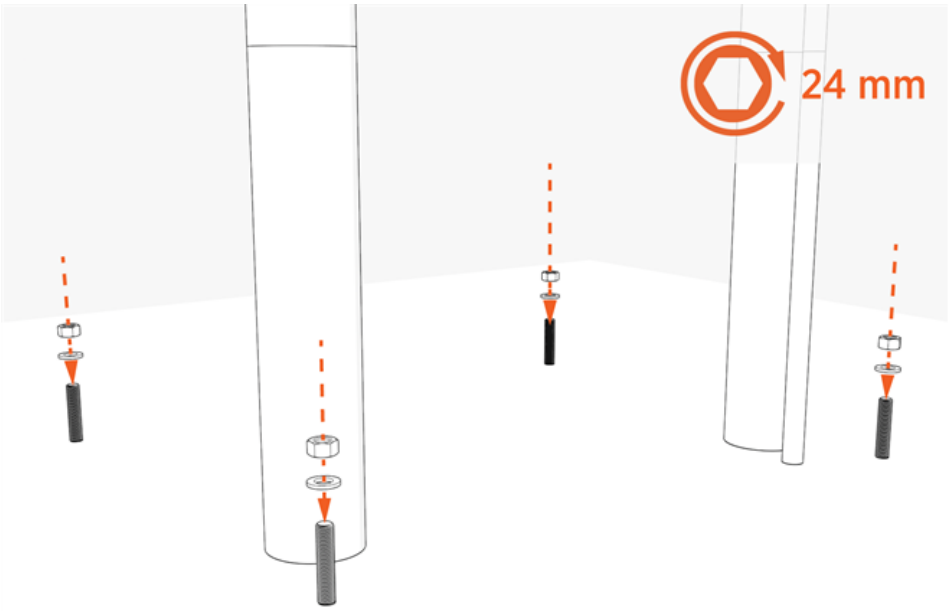
2. Remove plastic caps.



3. Use a wire brush to clean bolt threads. Alternatively, use a spare hex nut and run it down the stub-ups to clean the threads.



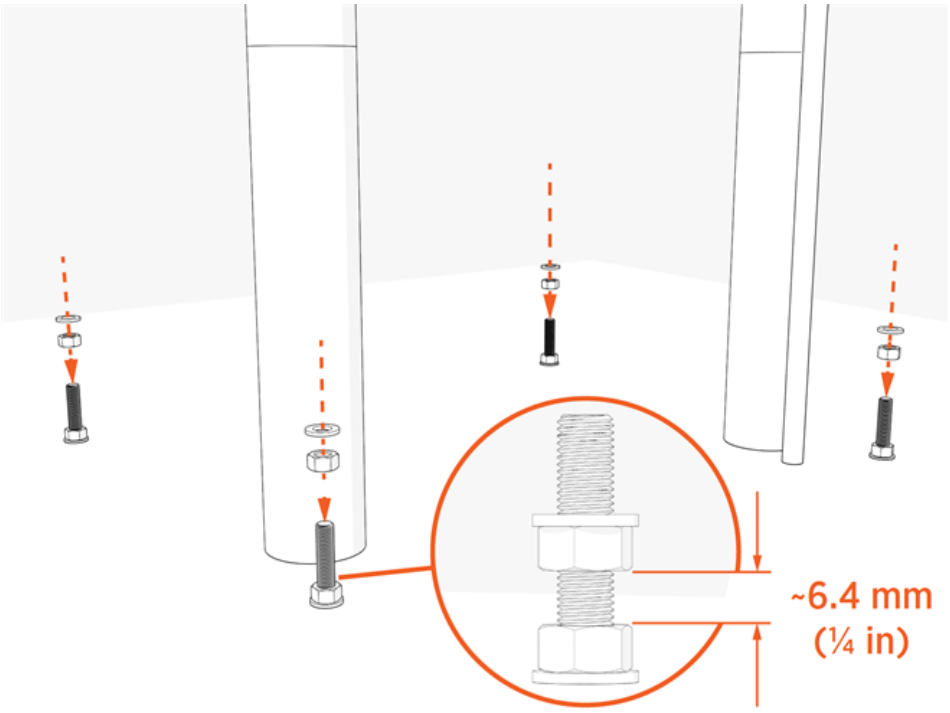
4. Install one washer and one nut onto each bolt. Torque to **54 Nm (40 ft-lb)**.



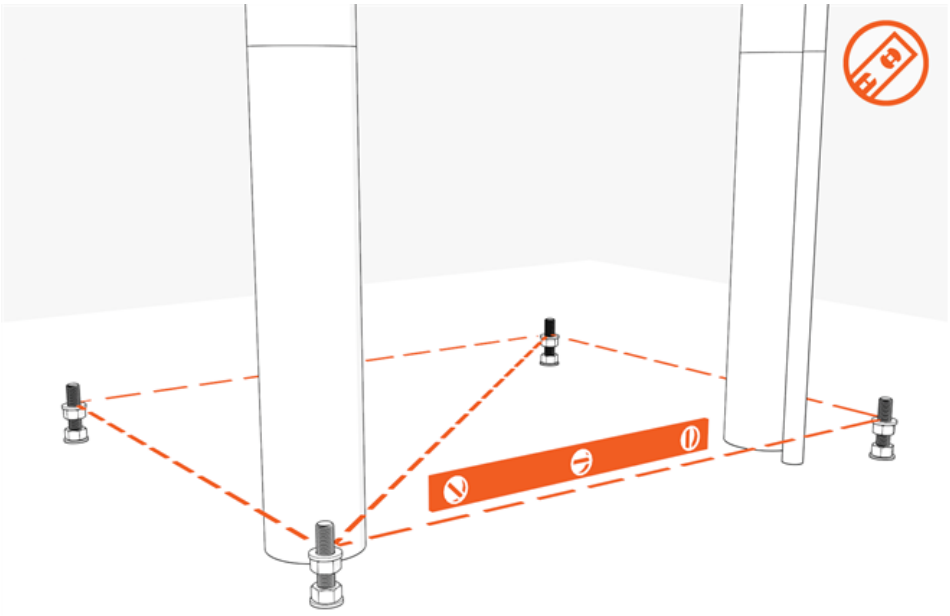
NOTE: Washer and nut should be flush against concrete.

- If epoxied, do not exceed the epoxy torque rating.

5. Install washers and leveling nuts. Maintain ~6.4 mm (1/4 in) between each leveling nut and bottom nut.



6. Check the leveling nuts.

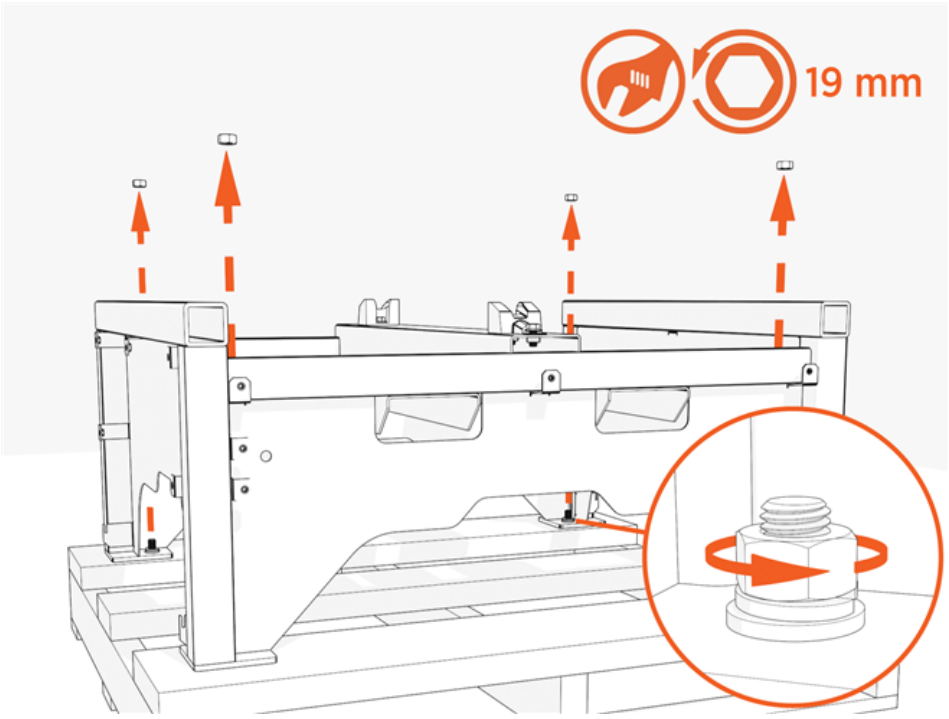


Install Power Block Pedestal

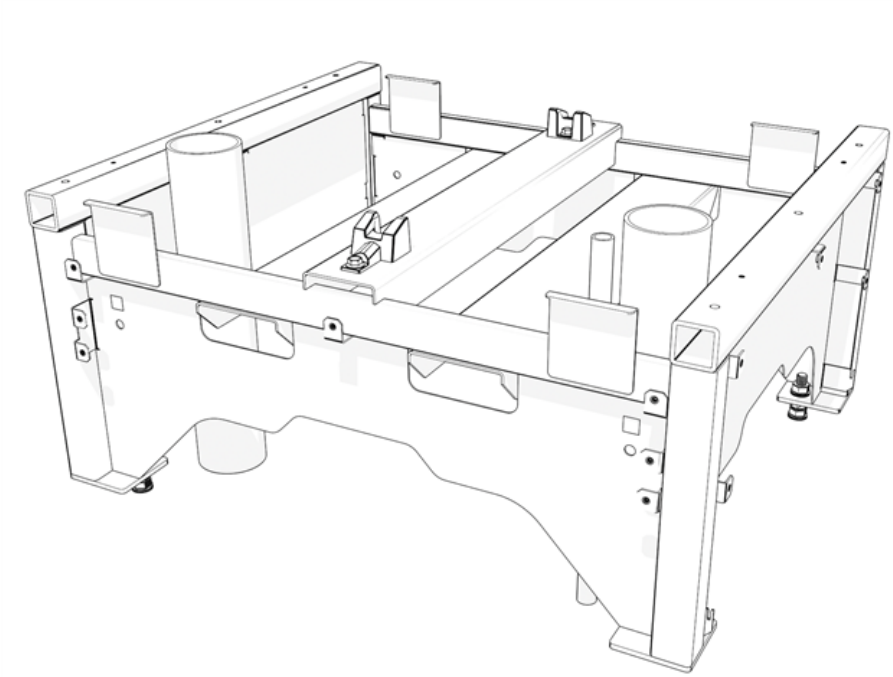
To install the Power Block pedestal, complete the following steps:

Uncrate the Pedestal

1. Unfasten and lift off the crate cover.
2. Uninstall four corner nuts and one center front nut. Discard nuts, washers, and bolts.



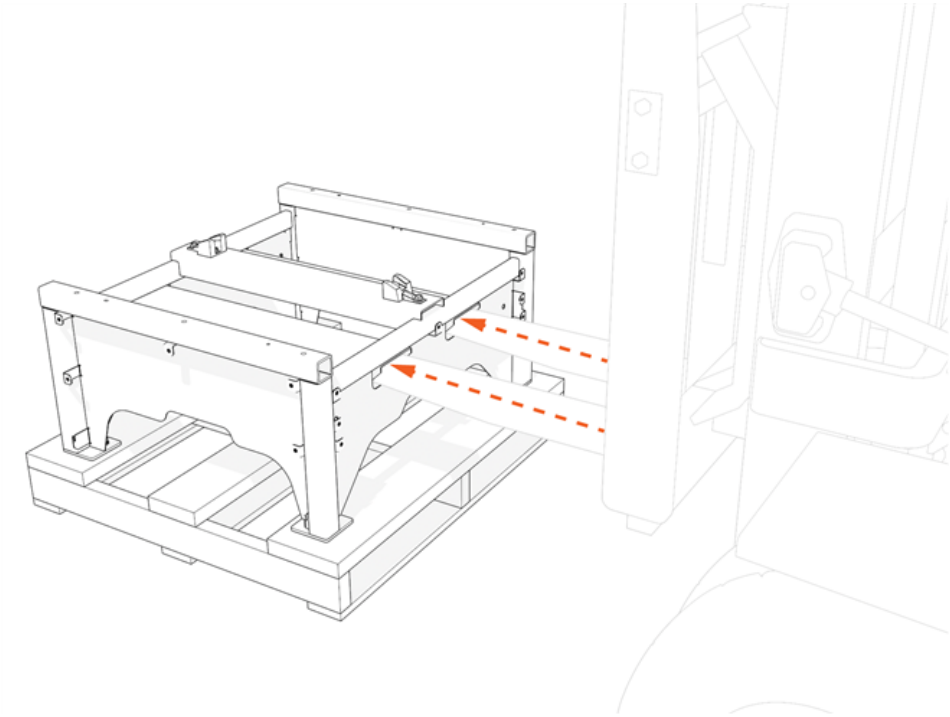
3. Uninstall three nuts and bolts from each gland plate. Remove the gland plates temporarily.



4. Check the rubber gaskets on the underside of the pedestal.
   If you find any gaps, contact ChargePoint (chargepoint.com/support).

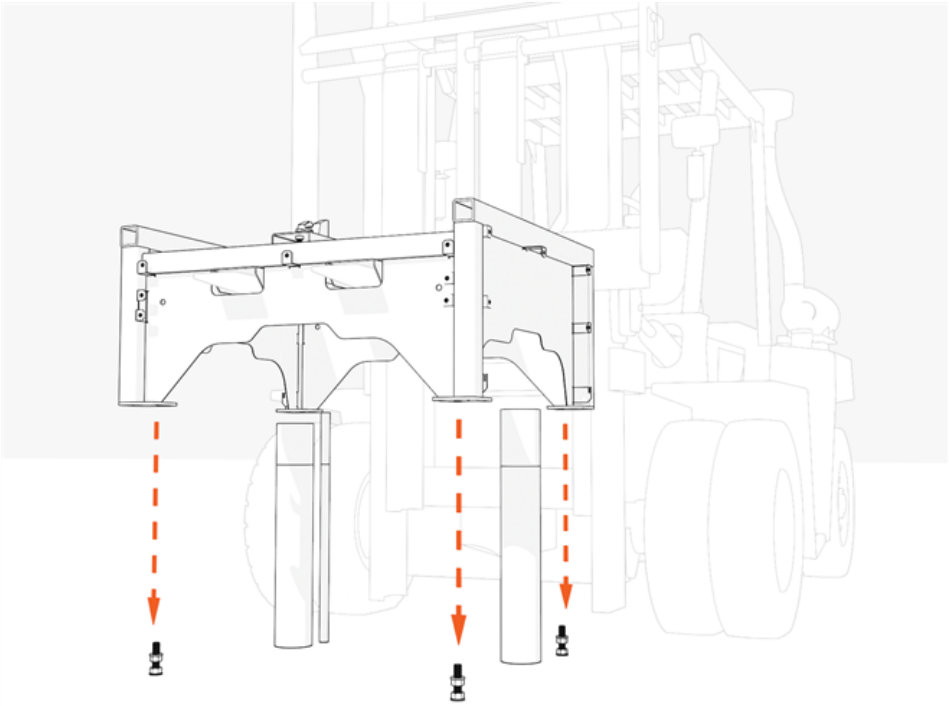
Mount and Secure the Pedestal

1. Before you move the pedestal onto the pad, adjust the forklift tines to 102-127 mm (4-5 in) width. Insert the forklift tines through the rectangular openings at front and back.



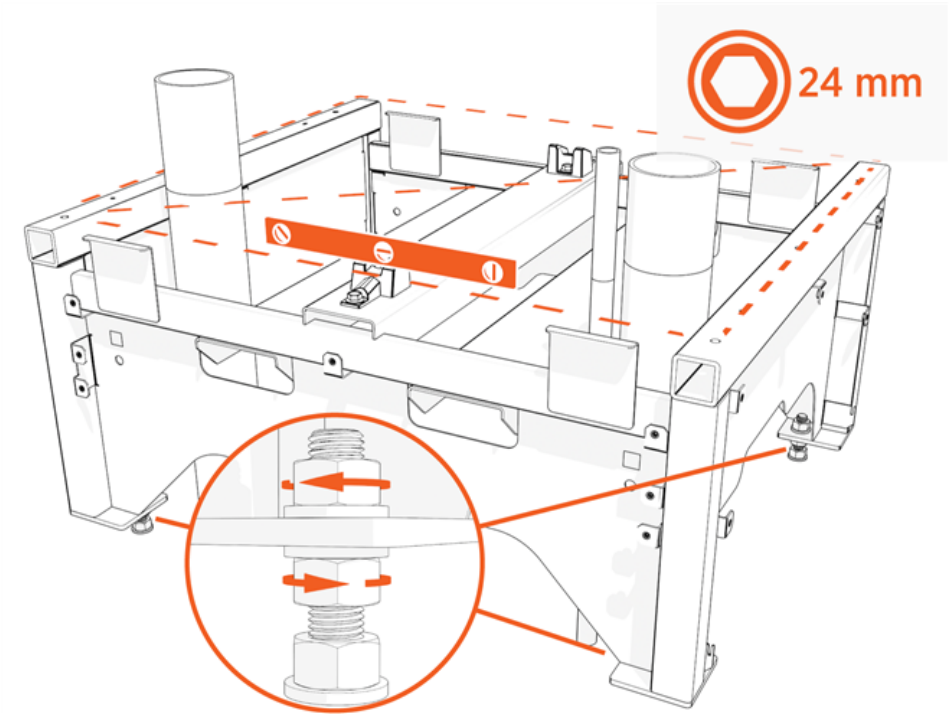
CAUTION: If any wider, the forklift tines may hit a conduit stub-up.
Do not hit a wall or other obstacle that may be behind the Power Block pad.

2. Suspend the pedestal above the pad. As you lower the pedestal down, align the holes in the pedestal feet to the anchor bolts.

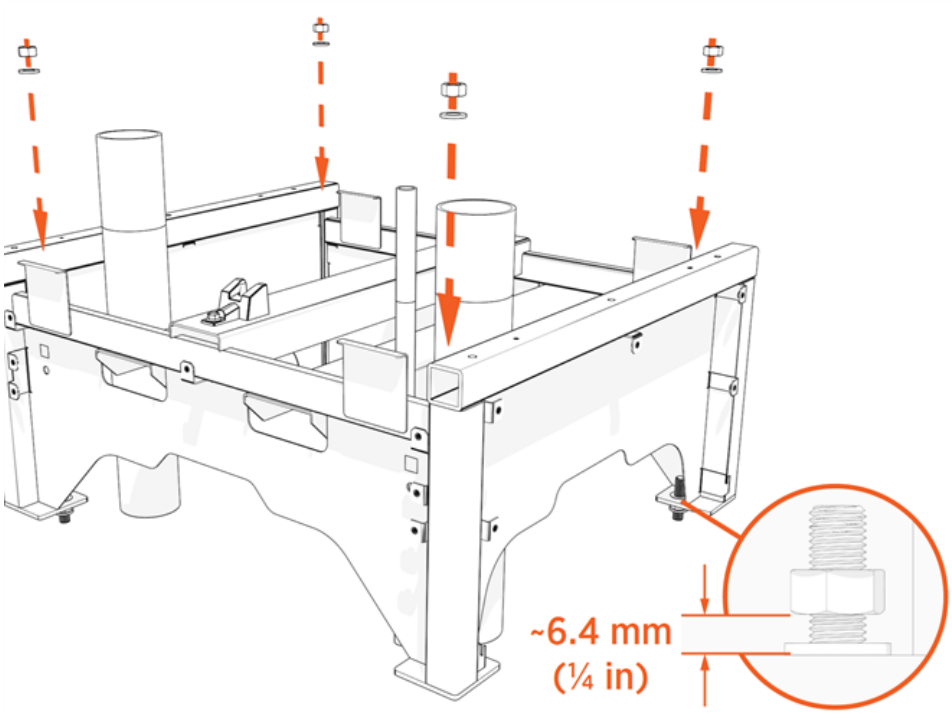


NOTE: Move wiring out of the way.

3. When the pedestal is fully seated, check that all sides are level. If not, adjust three of the leveling nuts.

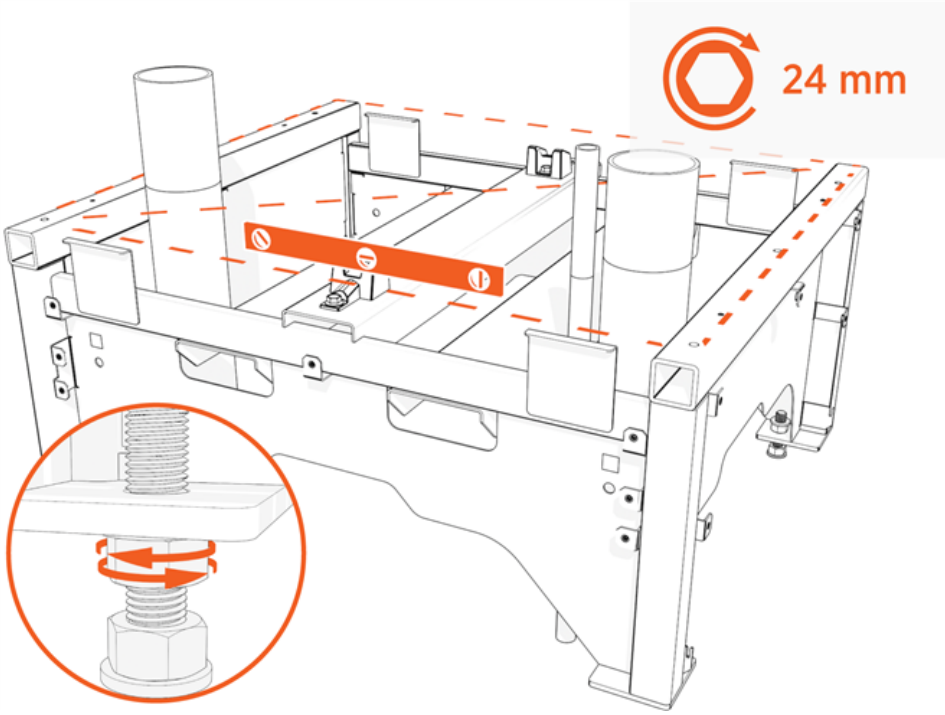


4. Partially install a washer and "top" nut.

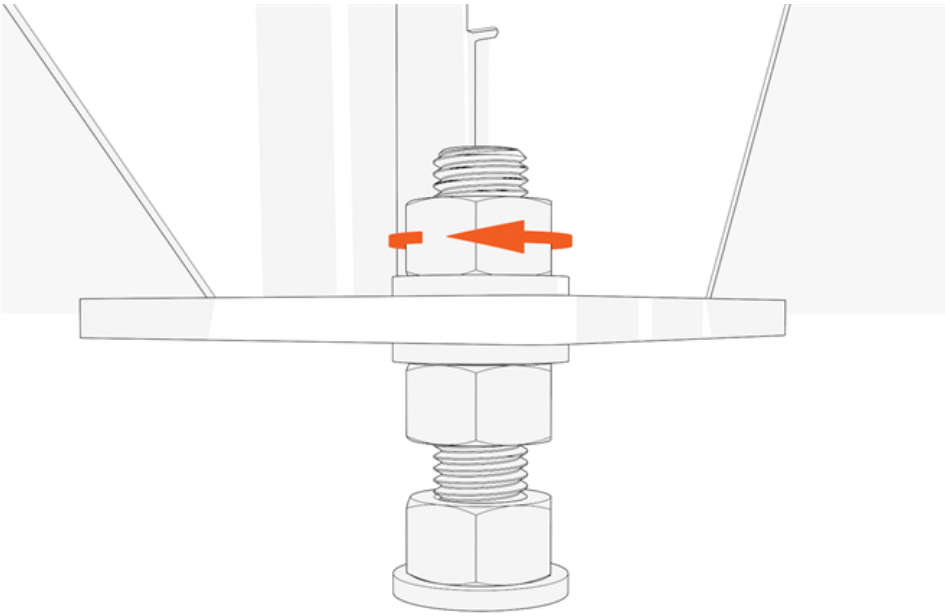


NOTE: Do not tighten yet. Leave ~6.4 mm (1/4 in) gap between the top nut and the pedestal foot.

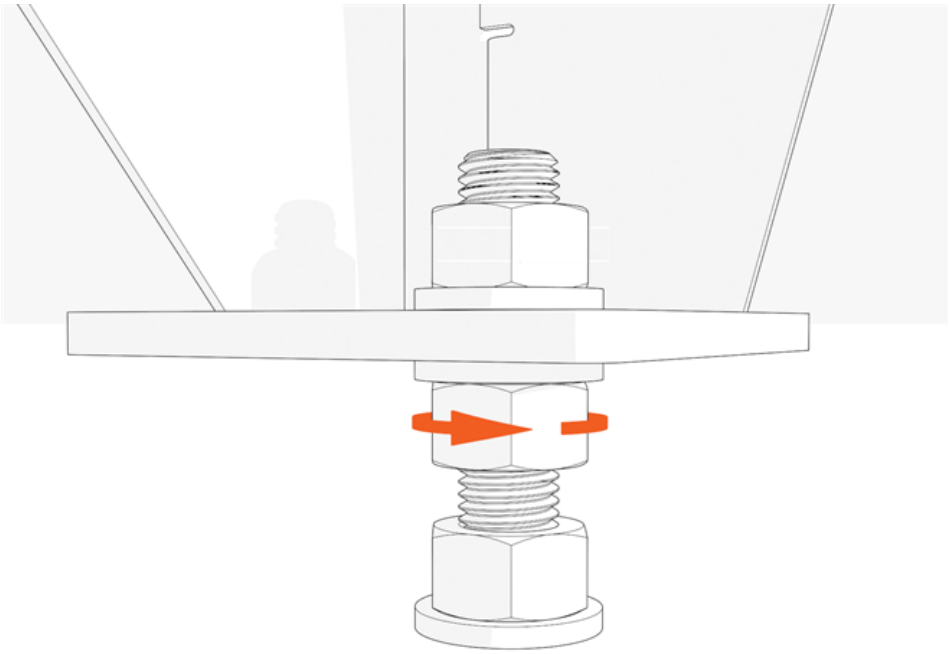
5. Recheck and adjust leveling nuts again.



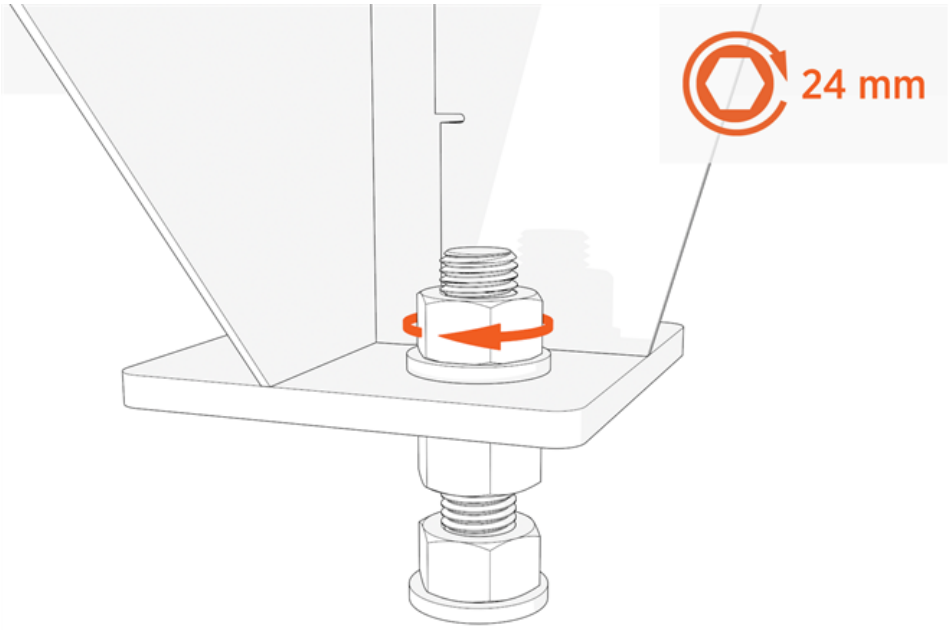
6. When the pedestal is level, tighten four top nuts by hand.



7. Rotate the fourth (last) leveling nut to be flush against the pedestal.

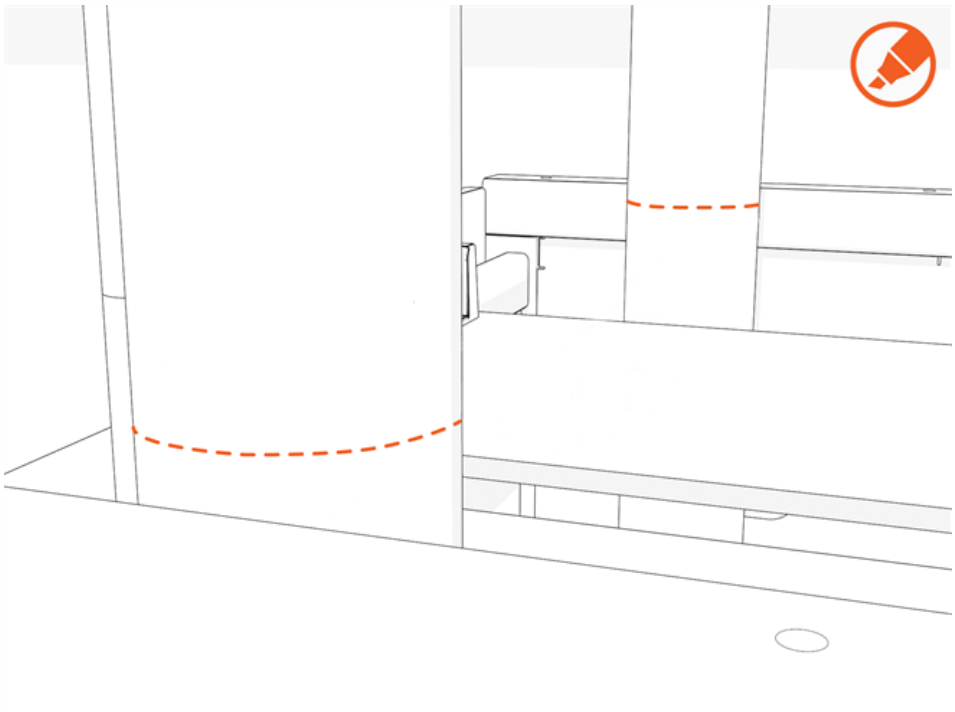


8. Torque all top nuts to **95 Nm (70 ft-lb)**.

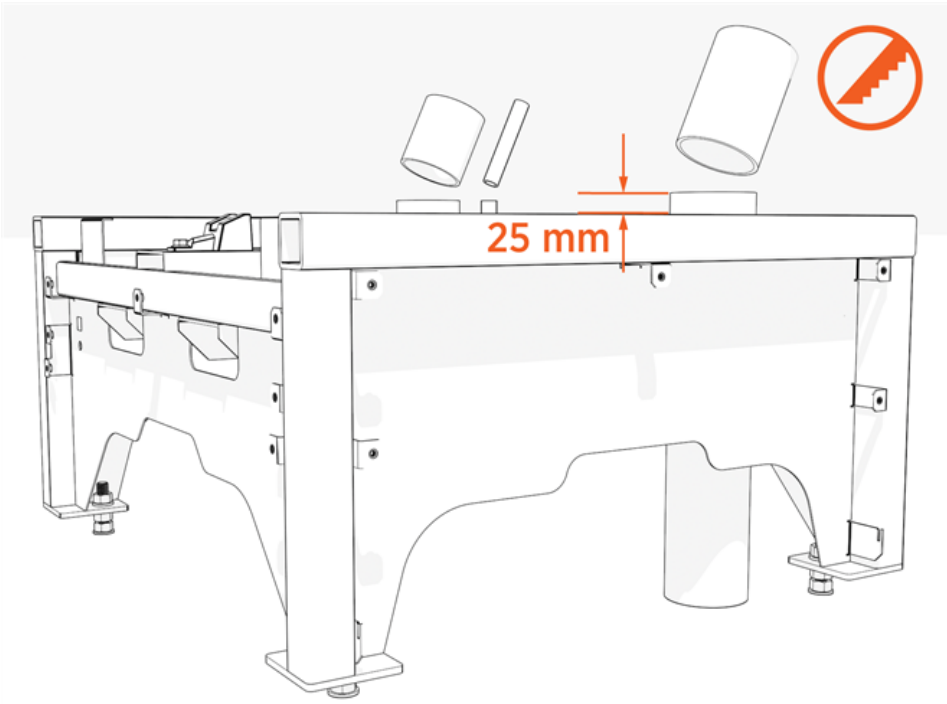


Prepare Gland Plates

1. Mark the conduit stub-ups at the height of the pedestal top surface.



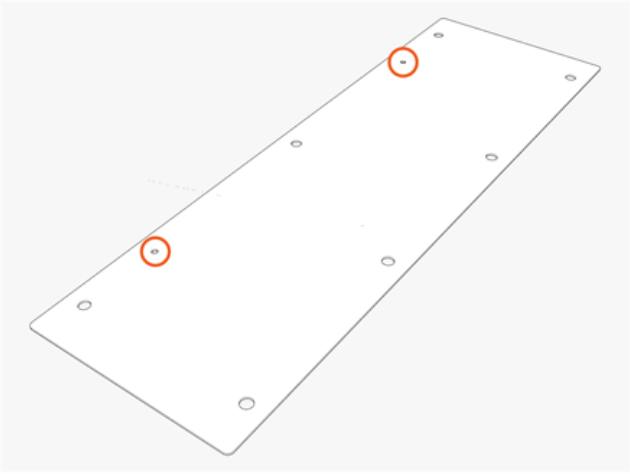
2. Measure and cut each conduit stub-up to a height of 25 mm (1 in) above the gland plate and file the edges smooth.

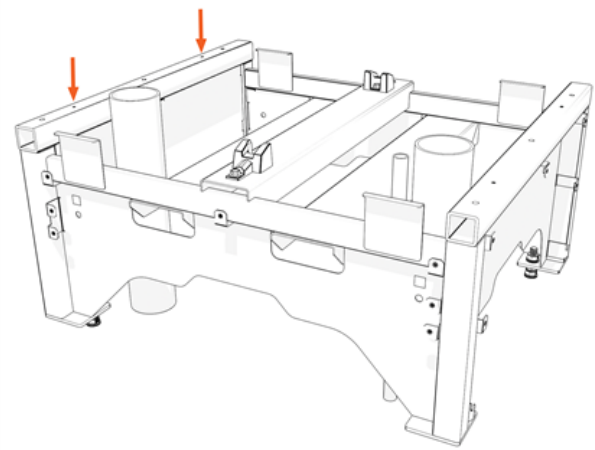


CAUTION: If you fail to file the edges, wires can be damaged by the stub-up.

CAUTION: Do not use conduits with bell ends. They may interfere with tolerances inside the enclosure.

3. Use the two outer pins to align each gland plate.



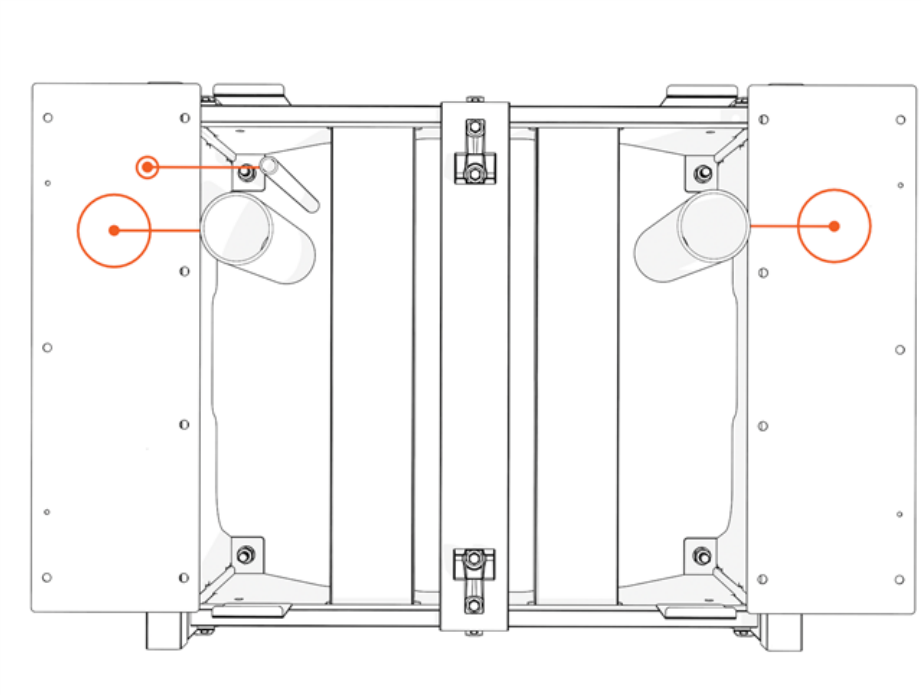


CAUTION:

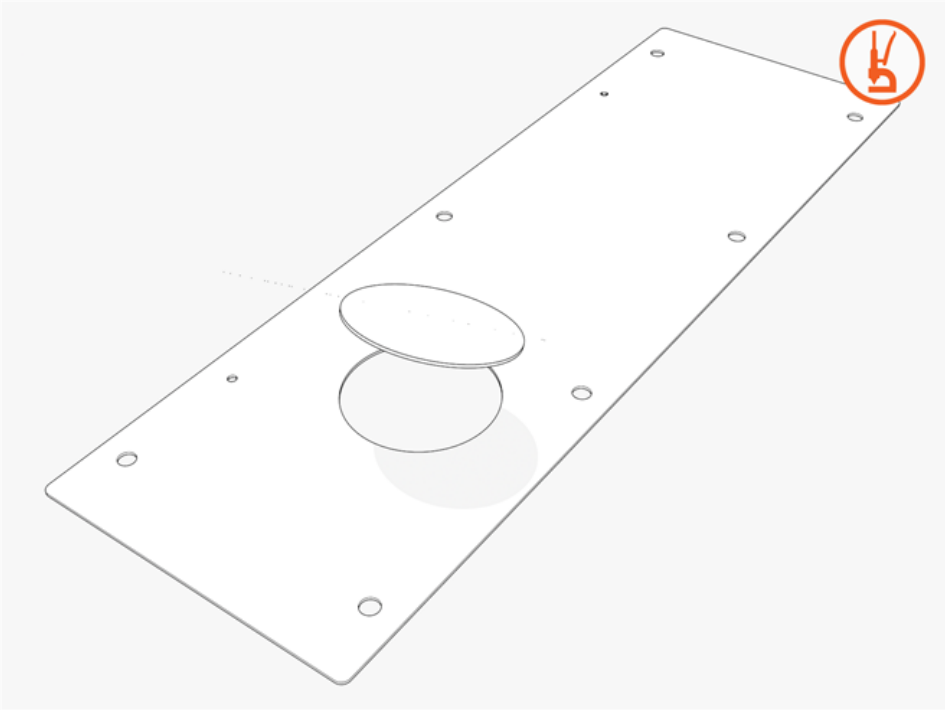
- Gland plates are directional.
- So, first determine the orientation of the gland plates *prior* to punching the gland plates.

4. Mark the gland plate with the exact locations of each stub-up.

5. Mark a pilot point on the gland plates.

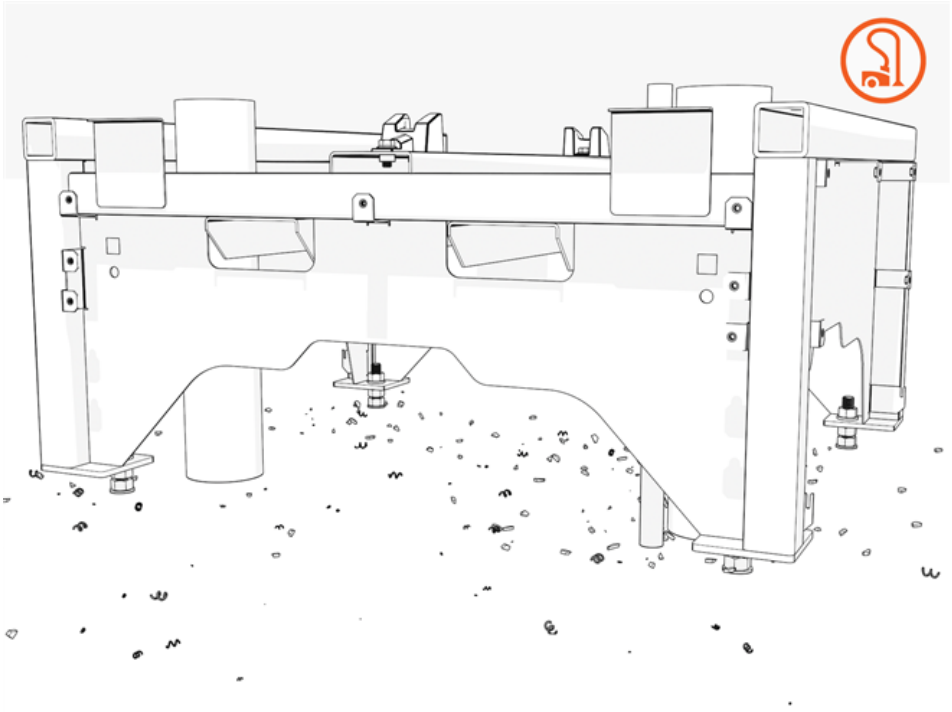


6. Use the hydraulic hole punch to create holes for all conduits.



IMPORTANT: You must match the size of each conduit.

7. Vacuum all metal shavings and any other debris.



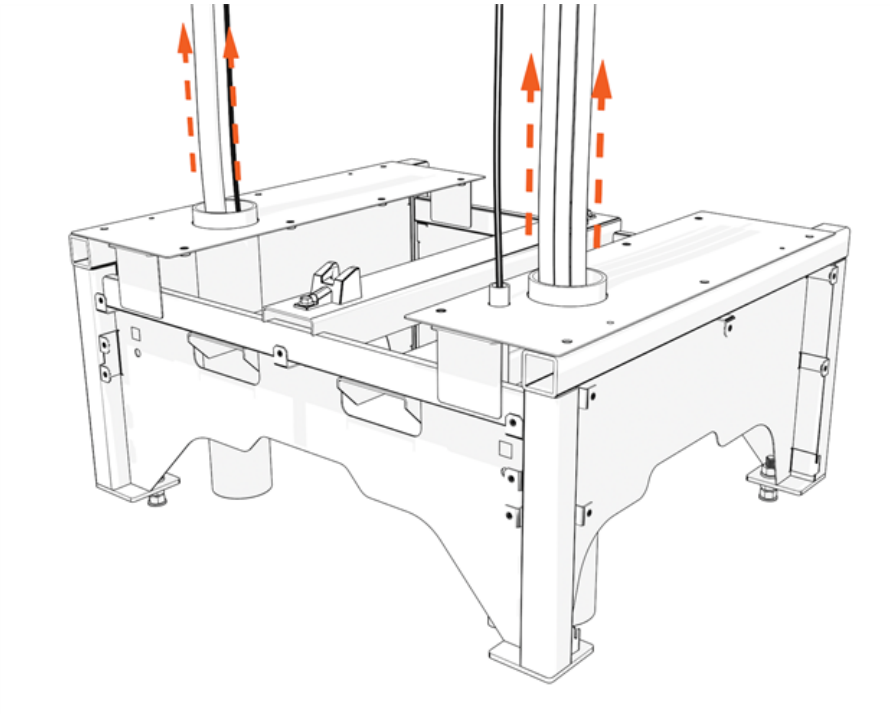
Pull Wiring Through Conduits

1. Pull all wires. Match the locations shown on the Power Block Concrete Mounting Template (CMT).

DC output	1 or 2 conduits
DC auxiliary input (optional)	1 conduit
AC input	1 conduit
48 V DC and Cat6 Shielded Twisted Pair (STP) Ethernet conduits: i. Shunt trip, if present ii. One Ethernet, one 48 V DC out iii. Two Ethernet, either one or two 48 V DC out iv. Three Ethernet, either one or two 48 V DC out	1, 2, 3, or 4 conduits **NOTE:** Check site drawings for the conduit configurations.

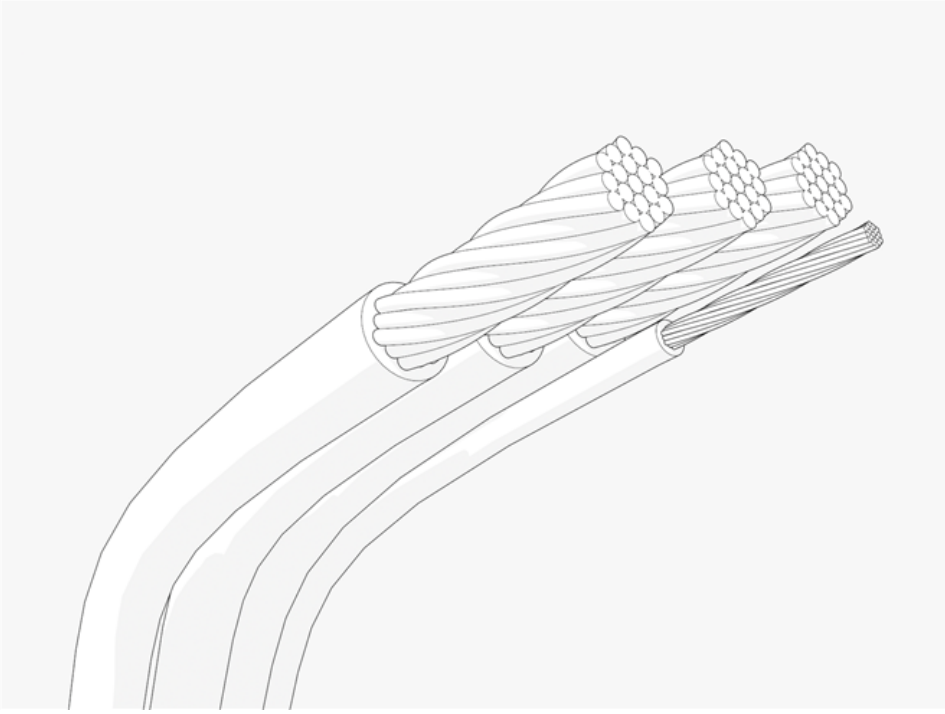
IMPORTANT: Do not pull a Neutral wire.

2. Retain these lengths of service loops:
    - 1219 mm (4 ft) of conductor and ground wire at Power Block
    - 1524 mm (5 ft) of conductor and ground wire at Power Link 1000
    - 1829 mm (6 ft) of Ethernet and 48 V wire at each end



NOTE:
- For maximum wire and ground sizes and their minimum conduit sizes, see the *Express Plus Site Design Guide*.
- To route surface conduit wiring, refer to the "Appendix B, Surface Conduit Entry Kit Installation" chapter in this guide.

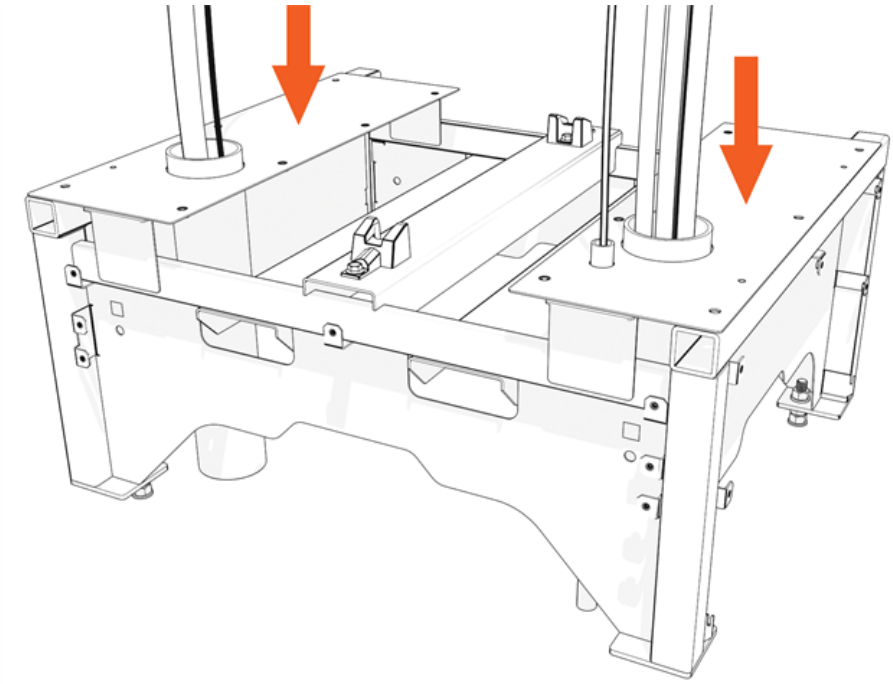
3. Perform a continuity check of wires. Repair any damaged wires.



IMPORTANT: If you fail to repair damaged wires, you may impact site commissioning.

IMPORTANT: Please ensure that AC and DC High Voltage wires have gone through Insulation Resistance Testing as per Electrical Readiness section.

4. Reinstall gland plates.



Install Power Block Enclosure

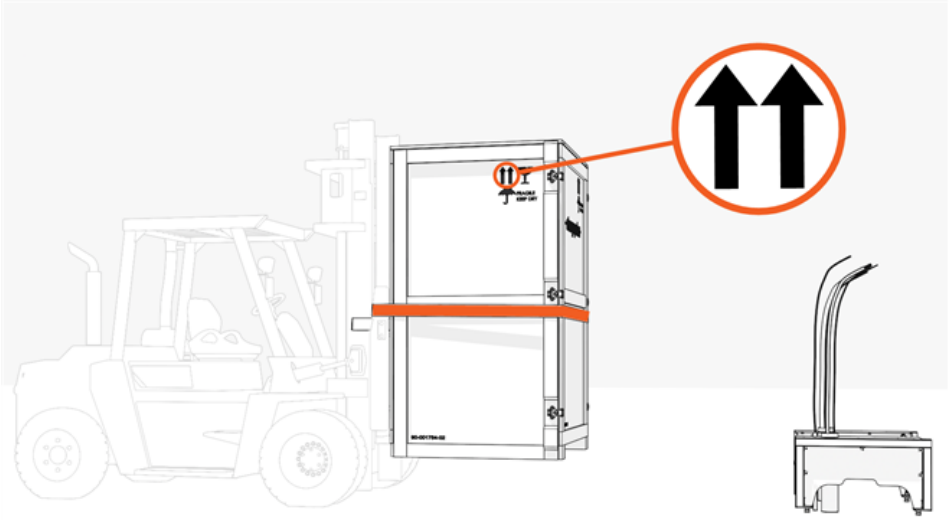
To install the Power Block enclosure, complete the following steps:

WARNING: The crate is heavy and can cause injury or death if dropped. Do not stand or walk beneath the crate while it is being lifted. Take precautions against the crate tipping or sliding.

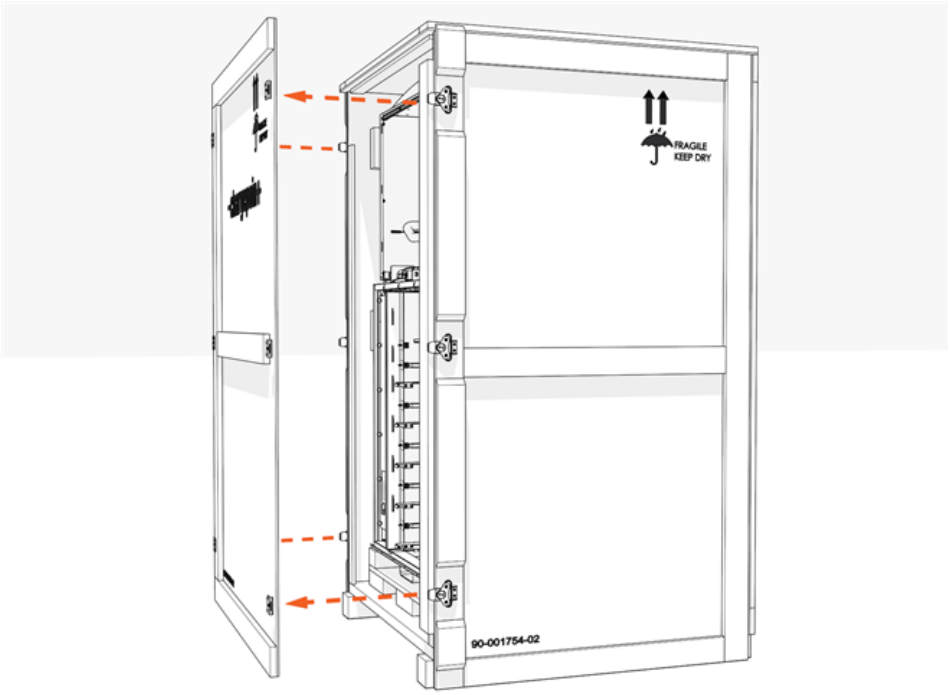
CAUTION: Maintain the upright orientation of the crate.

Prepare the Enclosure

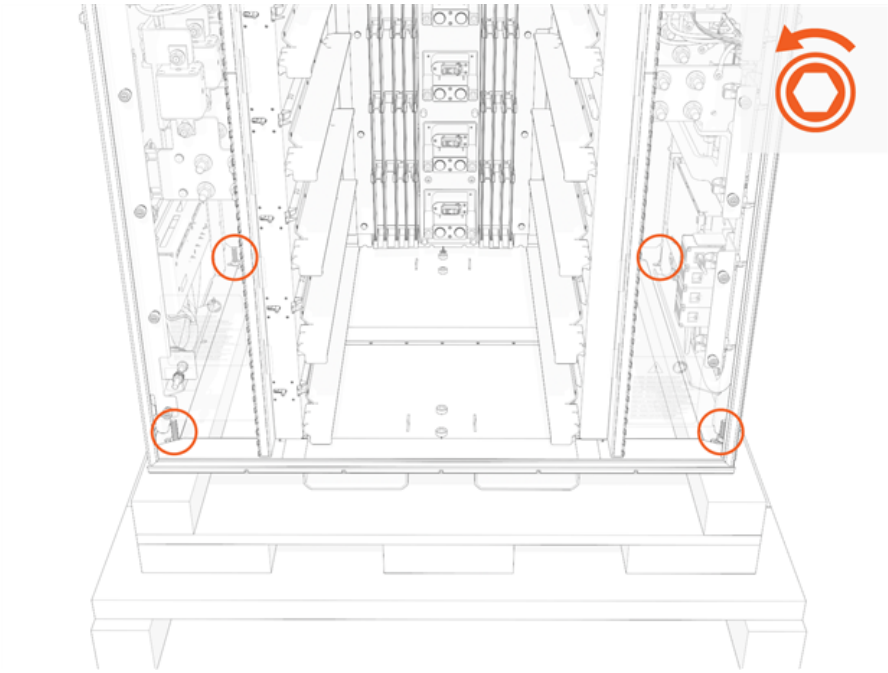
1. Transport the crate to the installation site. Use lifting straps to stabilize.



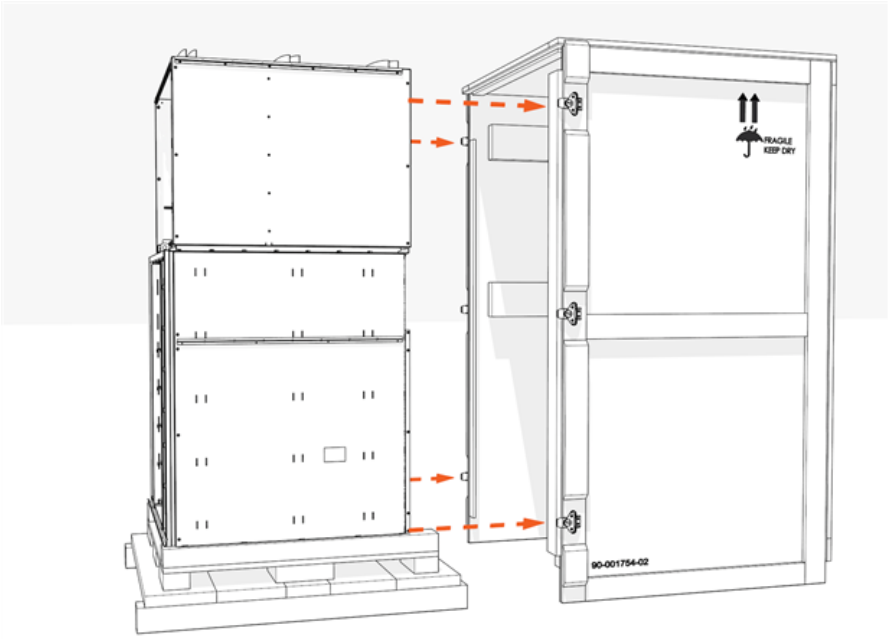
2. Unfasten and lift off the crate front.



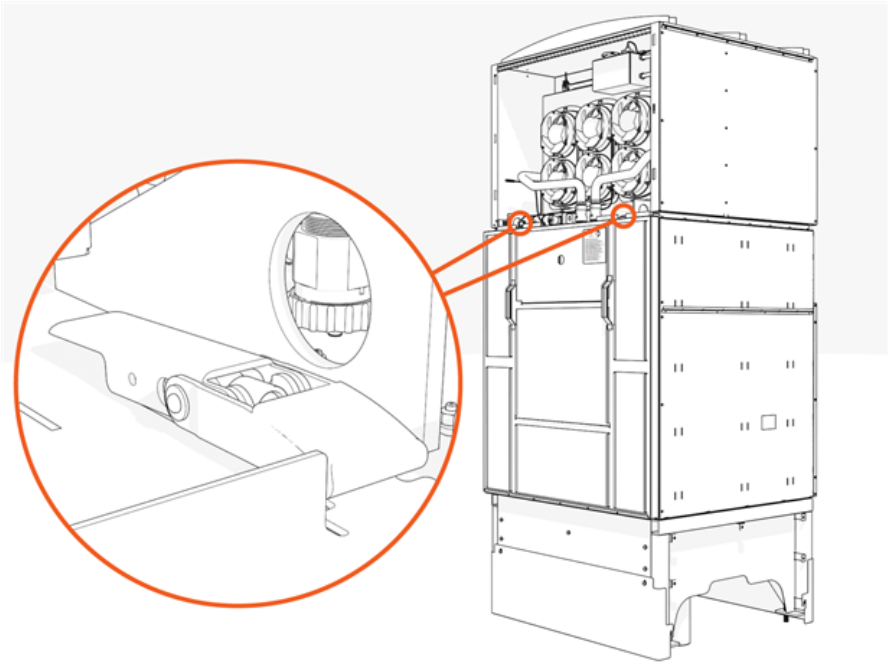
3. Use two persons to remove the crate:
    a. Uninstall four lag bolts from the crate bottom.



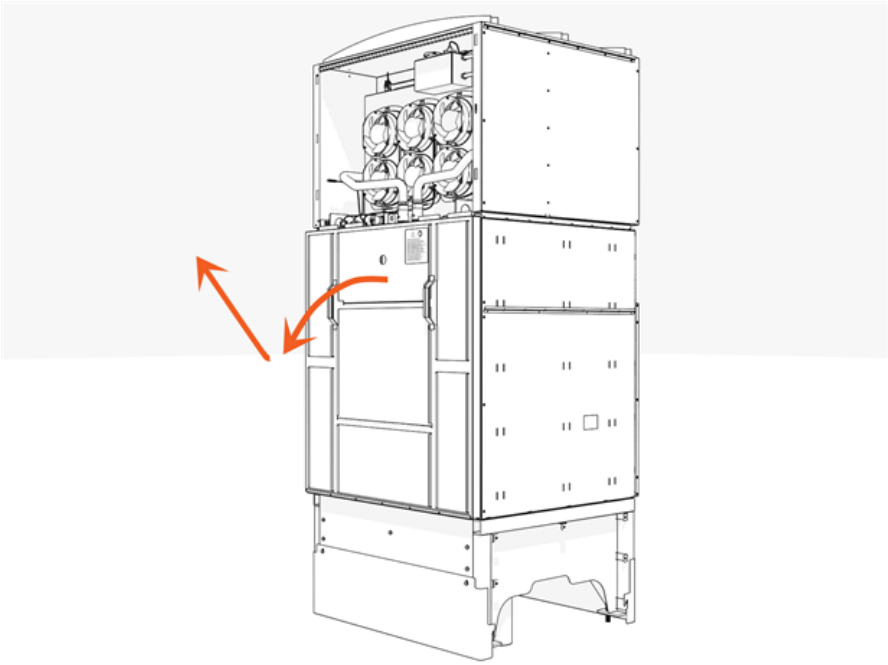
    b. Slide off the top, sides, and back of the crate.



4. Uninstall the lower door:
    a. Unfasten the two latches.



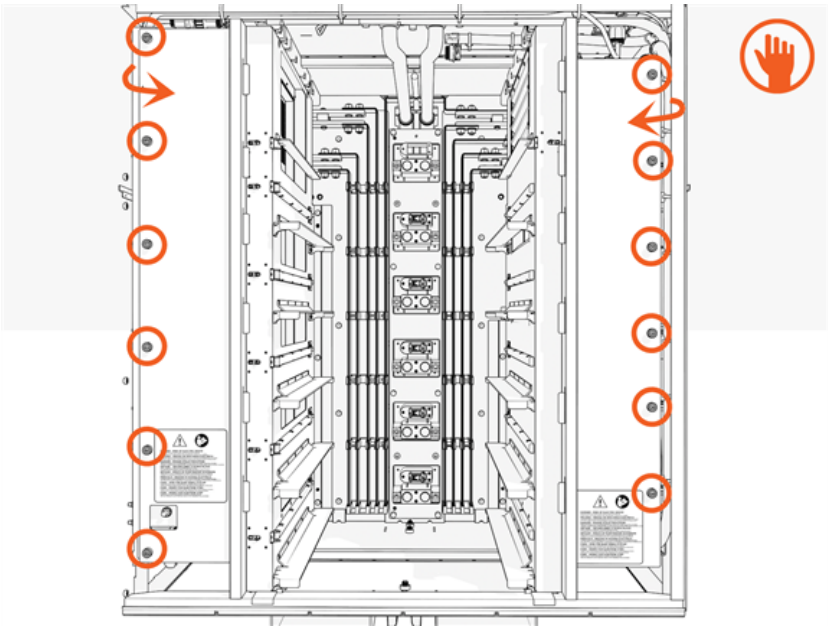
    b. Hold and tilt out the top of the door. Lift up and off.



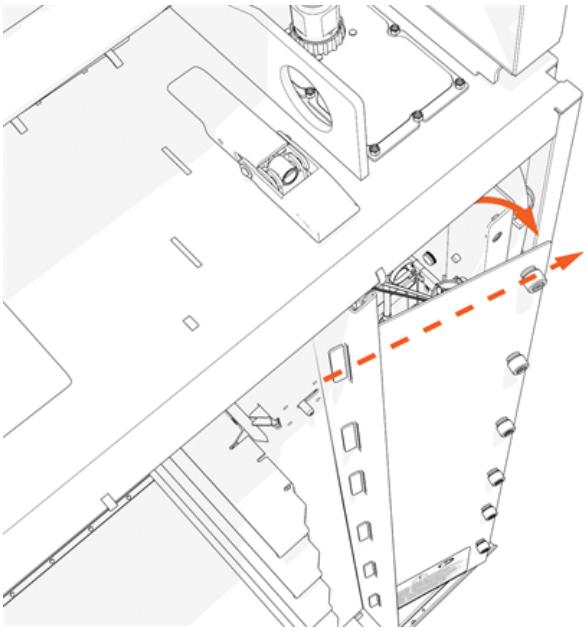
5. Remove the package that contains the lower heat exchanger (dry box hex).

> **NOTE:** You will install this later.

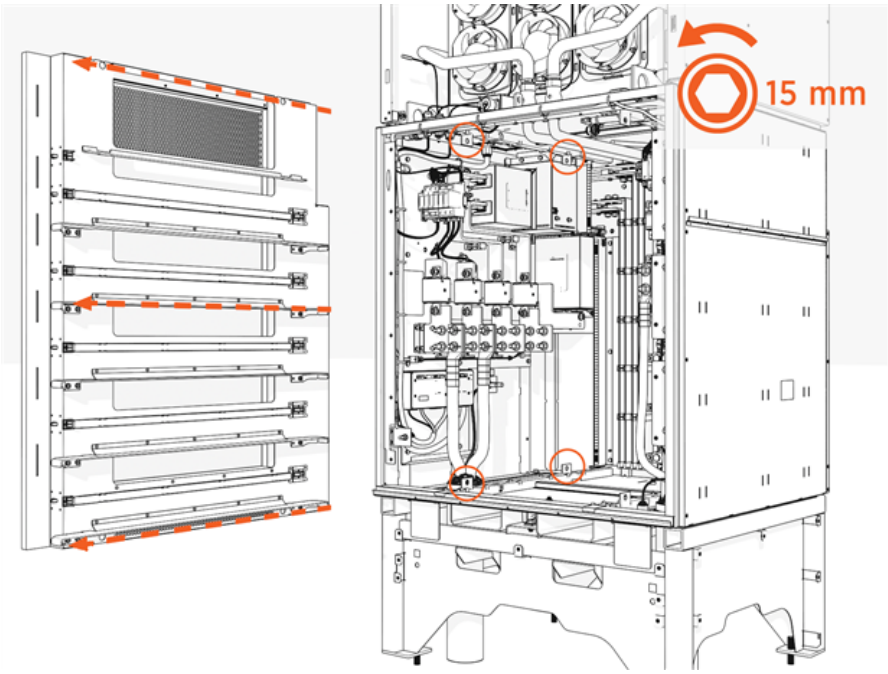
6. Remove two transparent shields (touchsafe panels):
   a. Loosen six captive screws by hand for each transparent shield (or, use a #5 Phillips screwdriver).



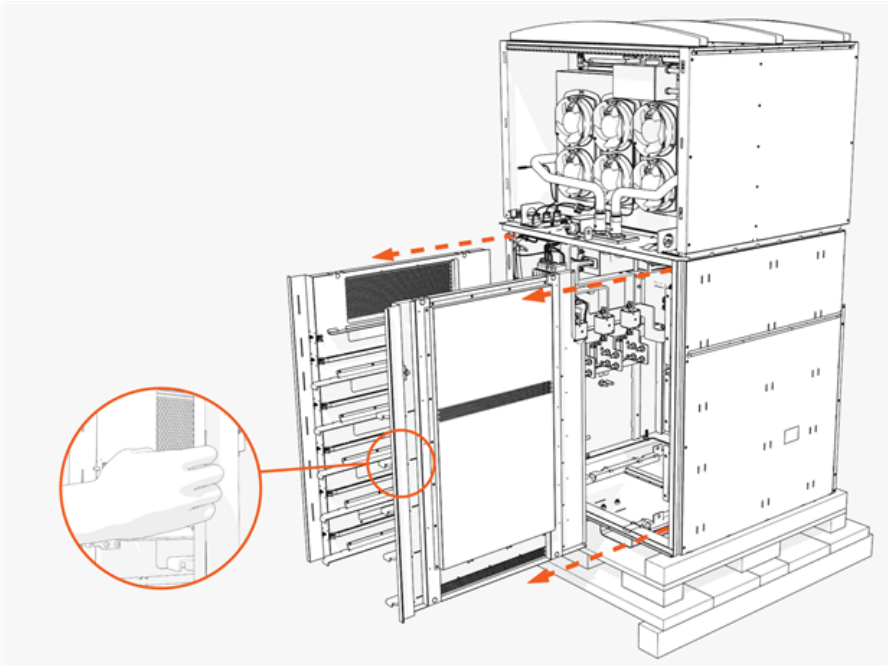
   b. Slightly rotate out the edge with the screws.



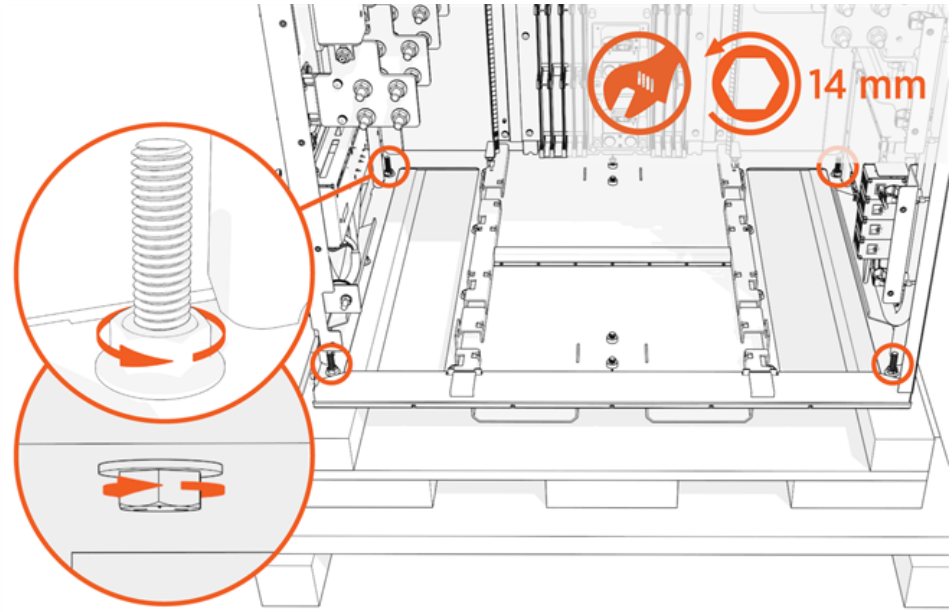
7. Remove two racks:
   a. Uninstall the two upper and two lower screws attaching the rack to the lower cabinet interior.



   b. Hold the outer edge of the rack and slide it out.



8. Uninstall four nuts from the base of the crate. Discard these nuts, washers, and bolts.

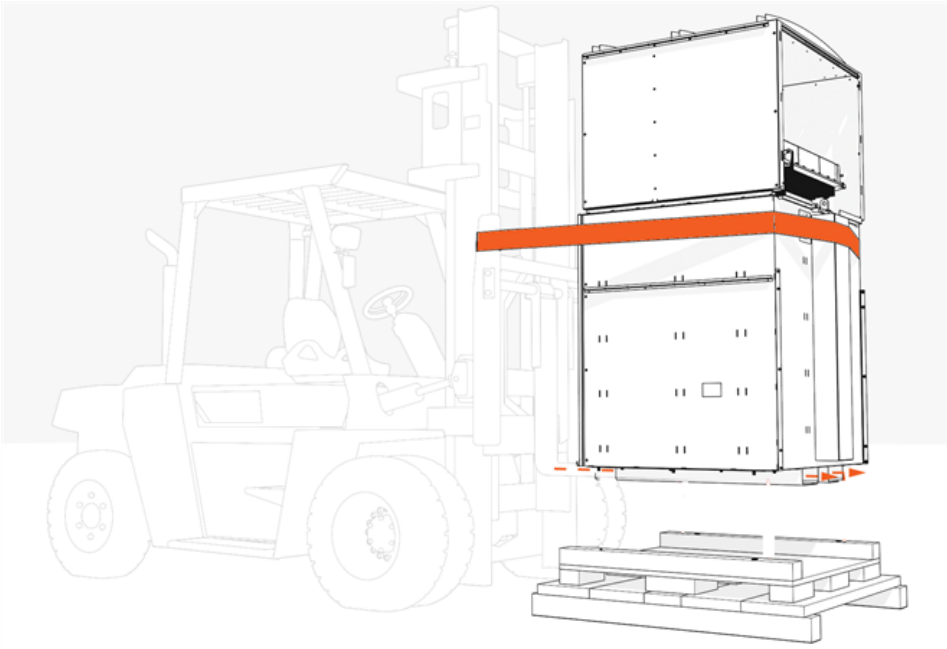


CAUTION: Do not drag the bottom of the Power Block enclosure at any time. Gaskets underneath can be damaged.

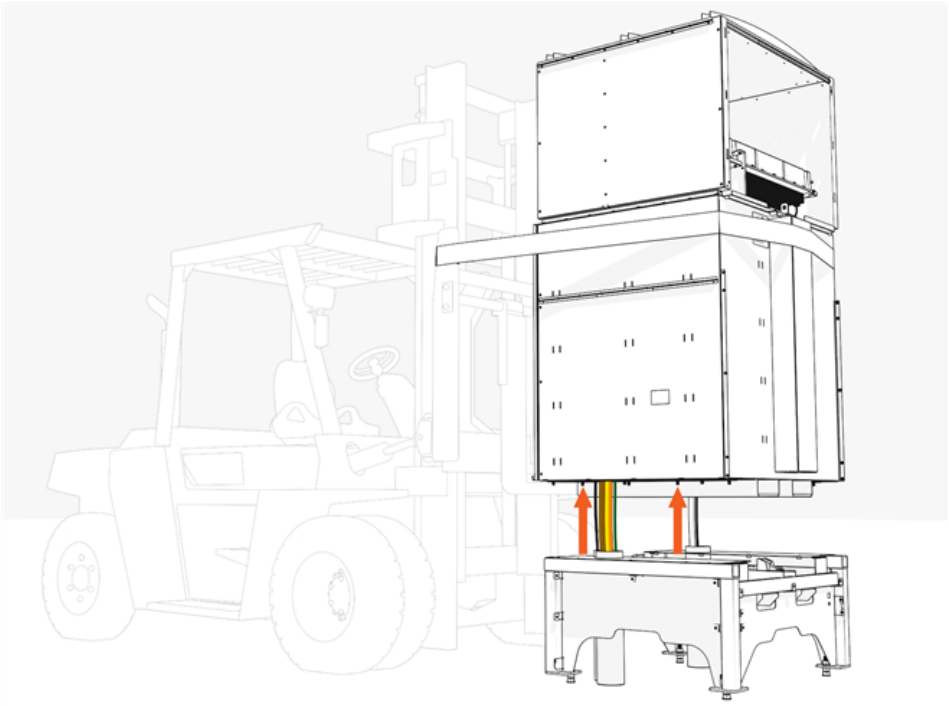
Position and Secure the Enclosure Using a Forklift

NOTE: You can position and secure the enclosure by using a forklift or by using an overhead lift (see Position and Secure the Enclosure Using an Overhead Lift).

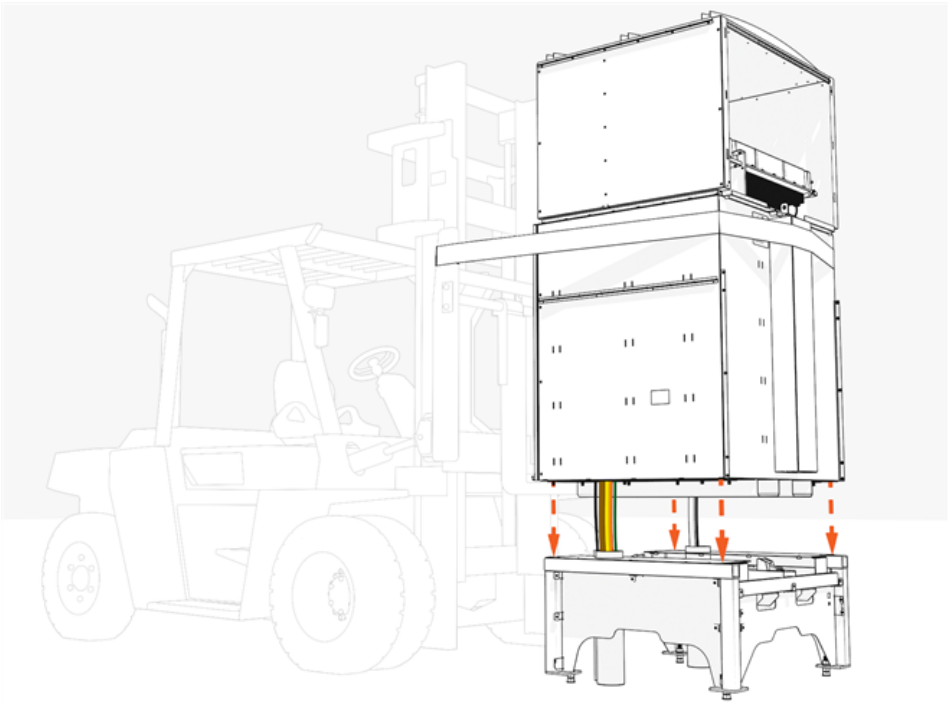
1. Insert forklift tines into slots at bottom of the enclosure. Position straps around upper half.



2. Move and hold enclosure above pedestal. Keep it elevated. Route wiring up through bottom of enclosure.



3. Slowly move the enclosure down toward the pedestal. Continue to pull wiring up through bottom.

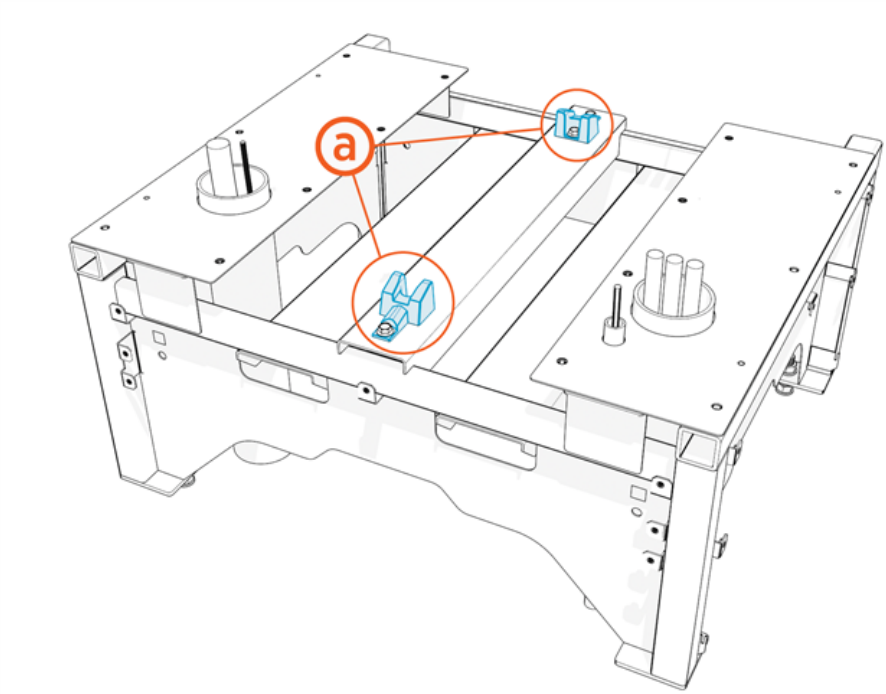


4. Position the enclosure a few centimeters (inches) above the pedestal. Continue to move wiring out of the way. Align the screw holes with approximately 6 mm (1/4 in) of space between the enclosure and the pedestal.
5. The pedestal beam has rough alignment features **(a)** that assist in aligning the enclosure bolt holes with the mounting nuts in the pedestal.

   To properly engage the rough alignment features, position the enclosure approximately within:

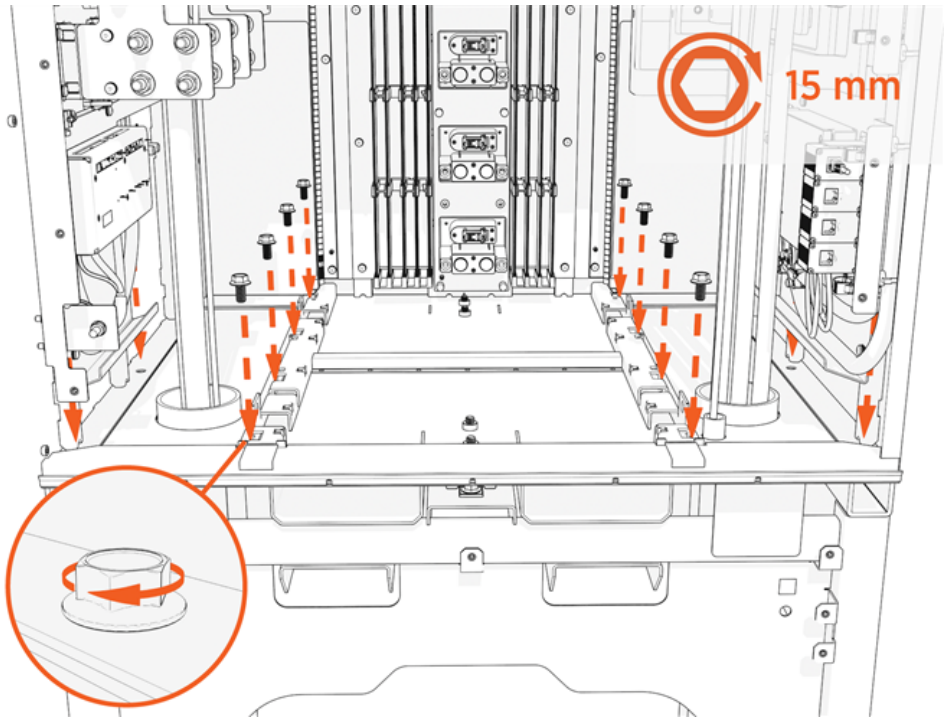
   - ± 50 mm (2 in) front-to-back
   - ± 28 mm (1 in) side-to-side

   of the nominal hole alignment while lowering it onto the pedestal.



NOTE: After lowering the enclosure, if the holes (see Step 6 below) are not aligned, then re-raise the enclosure and try again with more precision.

6. Install seven hex bolts on each plate. Torque to **19 Nm (168 in-lb)**.



Position and Secure the Enclosure Using an Overhead Lift

You can use an overhead lift in tight locations where a forklift cannot reach or cannot be onsite to lift and move the Power Block into place.

NOTE: Installing the Express Plus requires at least two people. Additionally, the installer must bring the following tools and materials. These are not provided by ChargePoint

Bring These Tools and Materials

The following are required:

Tools

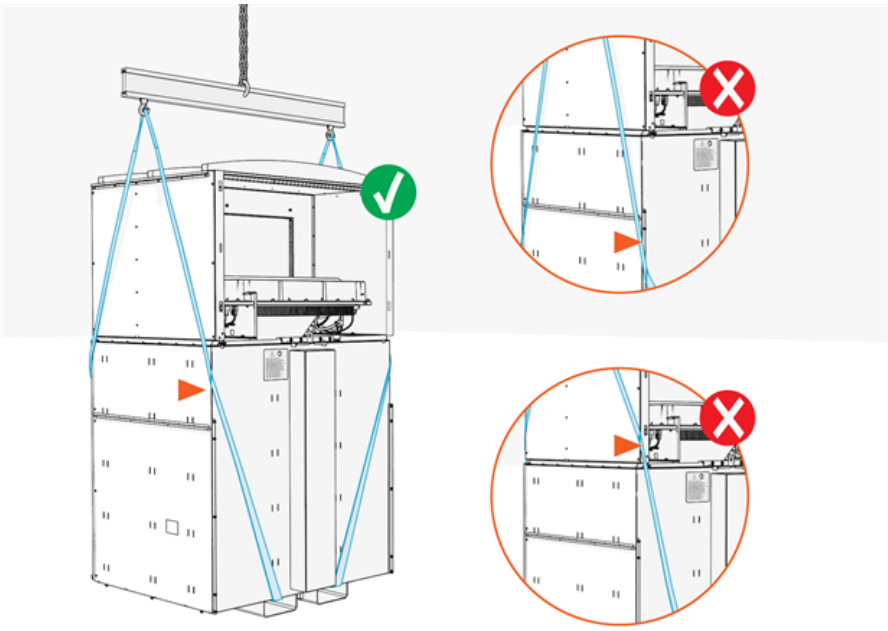
Icon	Description	Icon	Description
	Nylon lifting straps (x2) • Length: 4.572 m to 6.096 m (15 ft to 20 ft) • Capacity: 567 kg (1250 lb)		Spreader bar (x1) (steel lifting beam with shackles) • Length: 1 m to 2 m (3.28 ft to 6.56 ft) • Capacity: 907.19 kg (2000 lb)

Icon	Description	Icon	Description
			CAUTION: Lifting using the spreader bar is essential. Lifting from the forks without one: • Will be unstable • Will put extra forces on the straps and sheet metal • Has not been tested, nor approved

1. Prepare the enclosure for the overhead lift:
   a. Attach the spreader bar to your lifting device.
   b. Feed one end of each lifting strap through the fork lift tunnels.
   c. Attach both ends of the lifting straps to the spreader bar. The attachment points should be 1 m to 1.5 m (39.37 in to 59.06 in) apart and centered on the spreader bar.

NOTE: These steps can be done with the spreader bar on the ground or in a raised position, centered above the enclosure.

2. After the spreader bar is in the raised position, ensure the following:
    a. The lengths of the lifting straps, both front and rear are approximately equal. Otherwise, the enclosure will tilt when raised.
    b. The straps are wrapped around the corners of the enclosure, roughly halfway up the height--above the side brackets, but below the top enclosure. This will prevent damage to the straps or the enclosure.



3. Follow **Steps 2 through 6** of the previous section (Position and Secure the Enclosure Using a Forklift section).

Connect Power Block Wiring

To connect the Power Block wiring, complete the following steps:

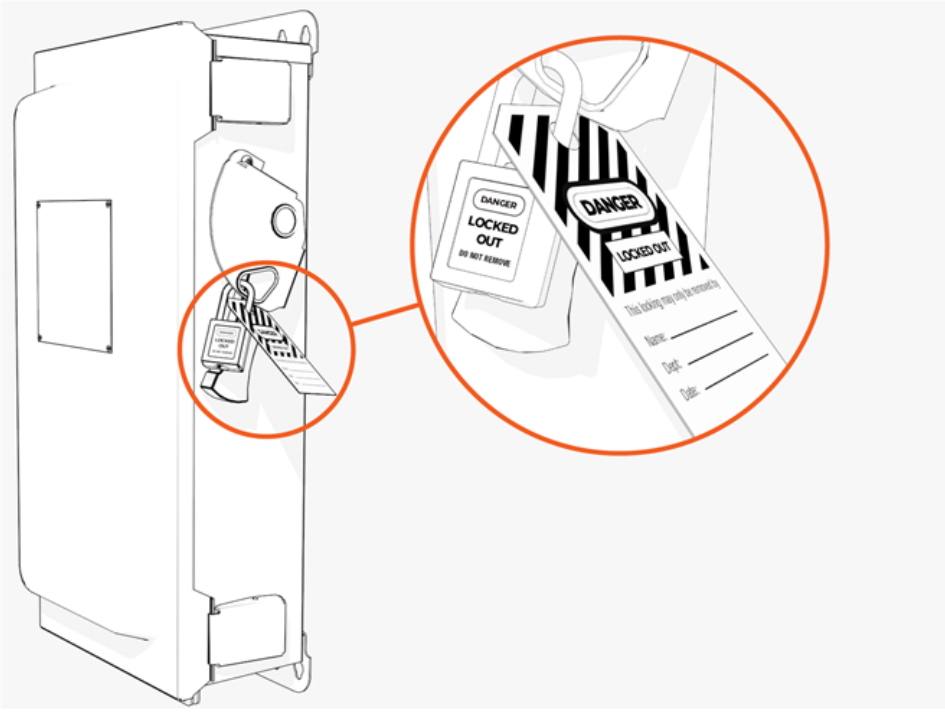
DANGER: RISK OF SHOCK

- Before any procedure, disconnect the power.
- Follow local code and site lockout/tagout procedure to de-energize the station.
- Wait for energy to dissipate (approximately five minutes).
- Keep power off until all covers and panels are reinstalled and the work is complete.

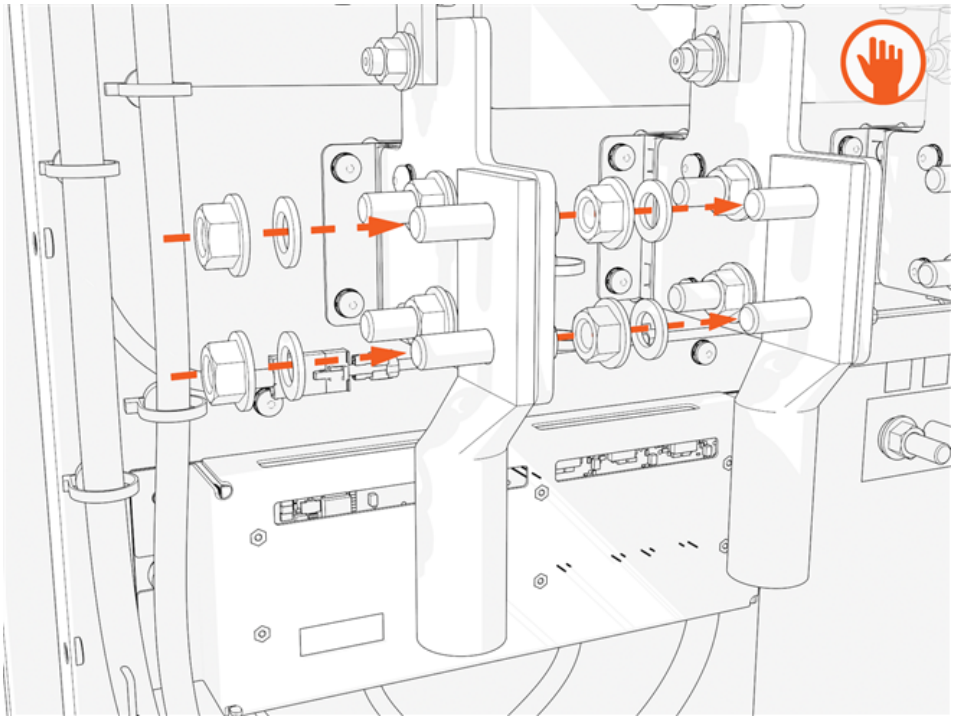
FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.

CAUTION: Ensure a grounding conductor that complies with local code is properly grounded to earth at service equipment or, when supplied by a separate system, at the supply transformer.

1. Disconnect power at the site electrical panel. 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.



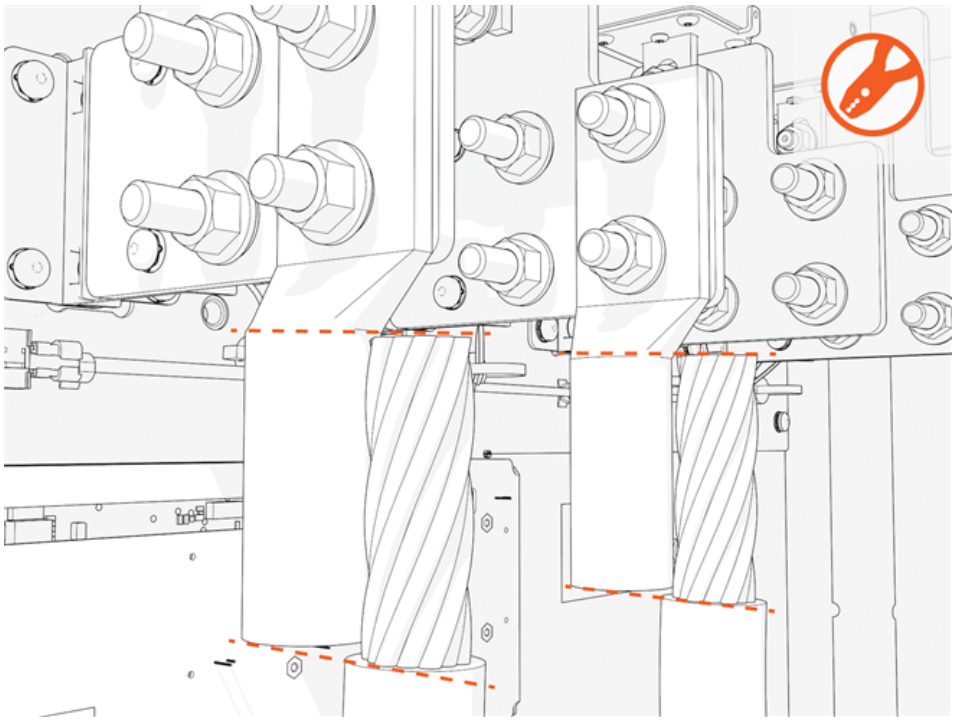
2. Install lugs without the conductors onto bus bars and hand-tighten.
    a. DC output
    b. AC input



NOTE: Use included bolts, washers, and nuts.

3. Measure the length from each conductor to its corresponding lug. Mark the conductor at the point where you will need to cut it.

4. Strip and cut the conductors to the desired length.



Install Fuse Kits, Conductors and Lugs, and Ground Wires

To install fuse kits, conductors, lugs and ground wires, complete the following steps:

DC Fuse Kits

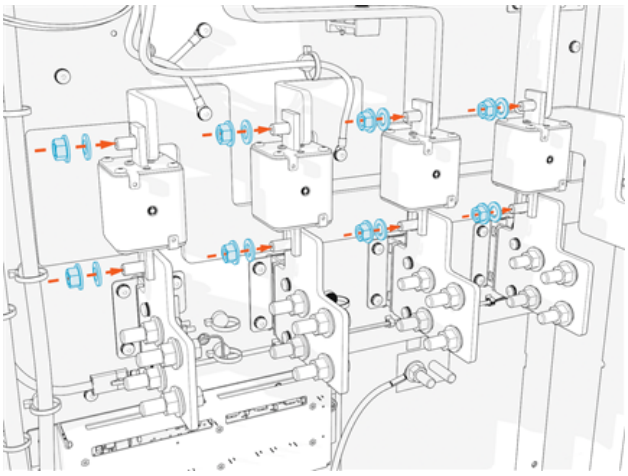
IMPORTANT:

- To prevent damage to the Bus bar insulators (plastic), the DC Fuse Kits *should be installed before* the DC conductors.
- Route all wiring away from the fuses. Each fuse can reach very high temperatures.
- The rating on the fuse label will be higher than the rating on the fuse packaging. This is normal and is done so that the fuse performance is sufficient at elevated temperatures.

IMPORTANT: In the **DC Fuse Kit** Box:

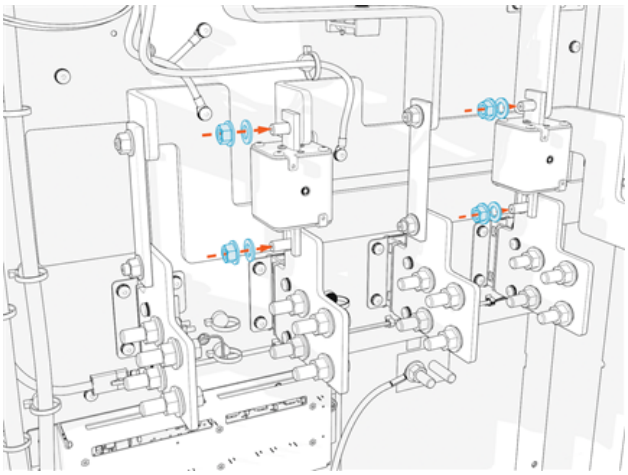
- Make sure to install the *PB amperage sticker* that is included in this box.
- Note that this DC Fuse Kit Box box could have been packaged and shipped to you using *either one* of the following two configurations: either as Type A configuration **or** as Type B configuration (see details below).

Type A configuration:

Fuses	Contents
	Type A configuration contains: • Fuses (x4)

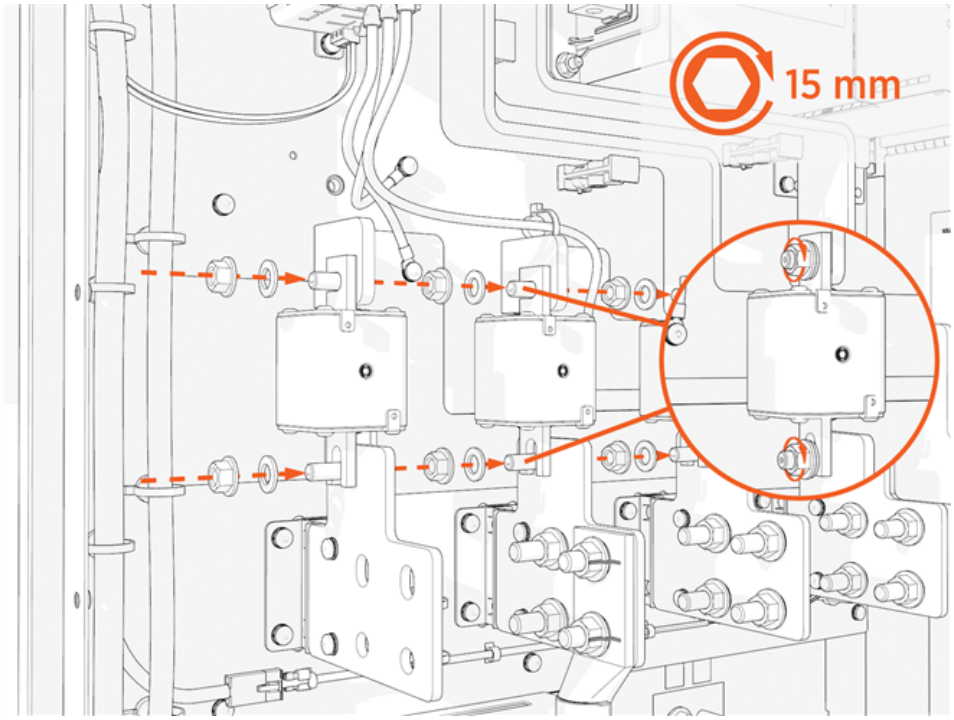
OR

Type B configuration:

Fuses and bus bars	Contents
	Type B configuration contains: • Fuses (x2) • Bus bars (x2) that have already been installed at the factory These two bus bars (in Type B configuration) take the place of the other two fuses (that are in Type A configuration).

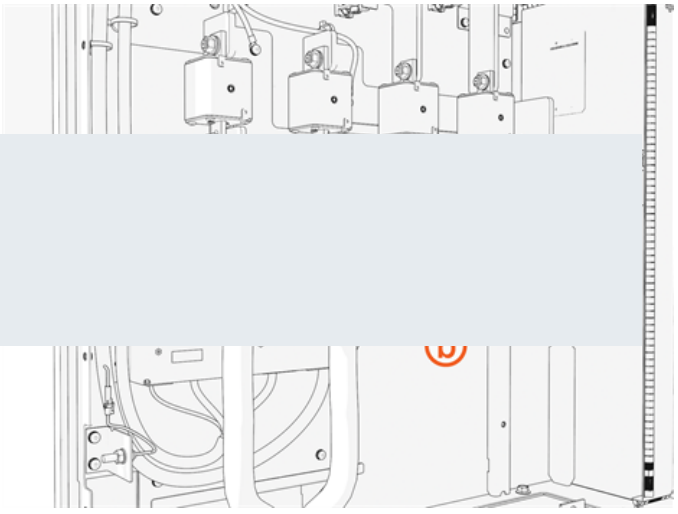
To install all C fuses, complete the following steps:

1. Install all DC fuses (regardless of number of lugs used) between the landing bus bar and the DC bus bar. Torque to **19 Nm (14 ft-lb)**.



IMPORTANT: For high voltage DC or AC lugs, 2-hole lugs are specified in North America. Single hole lugs are only permitted in Europe. The lugs must be installed **within +/- 10° from vertical** to avoid interference.

a. DC output lugs
b. DC ground wire



NOTE: For each AC and DC bus bar, only one washer per bus bar hole is required, even if lugs are installed onto the front and back of the same bus bar.

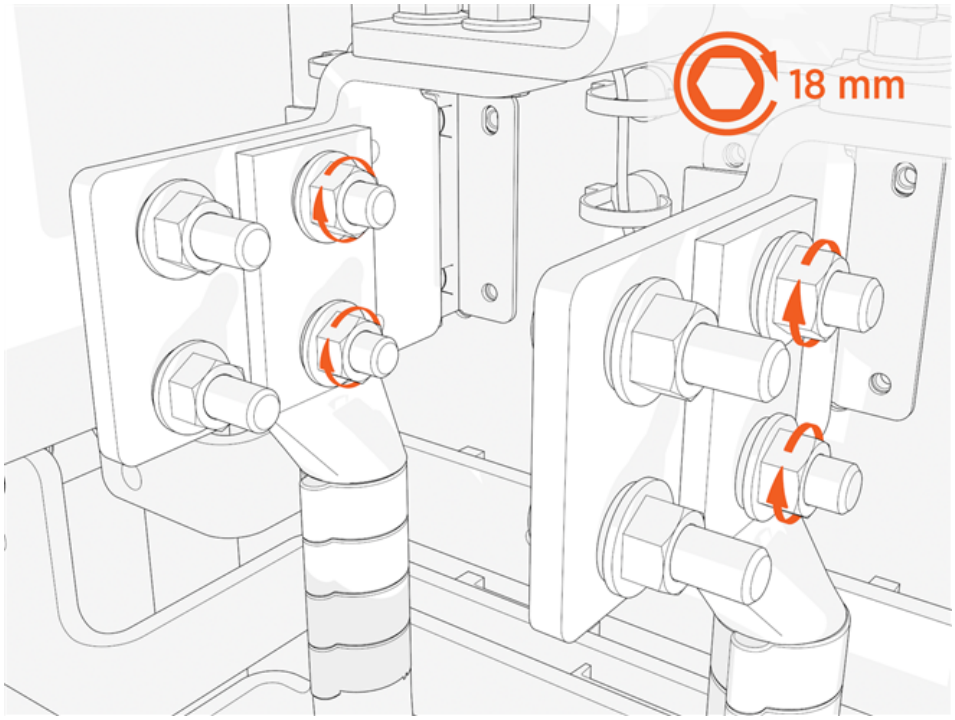
DC Output Lugs

To uninstall the DC output lugs, complete the following steps:

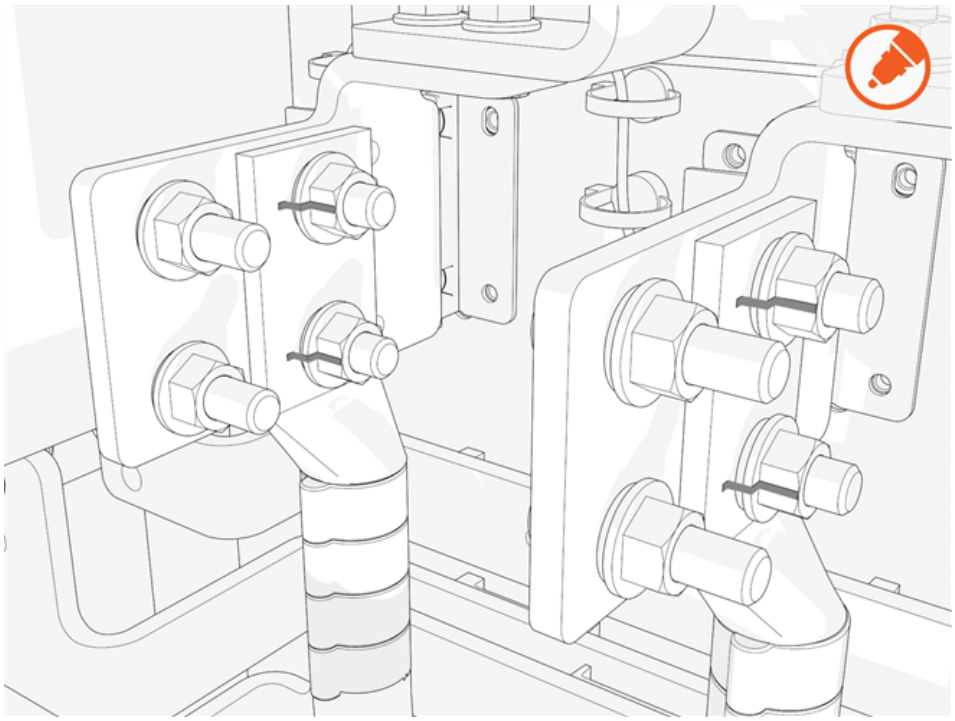
1. Uninstall the lugs (if you installed them previously to measure length). Apply dielectric grease onto the back of each lug.
2. Crimp a DC output lug onto each conductor.

> **NOTE:** Use the lug manufacturer's crimp tool and die.

3. Install lugs onto each bus bar and torque to **21 Nm (15.5 ft-lb)**.



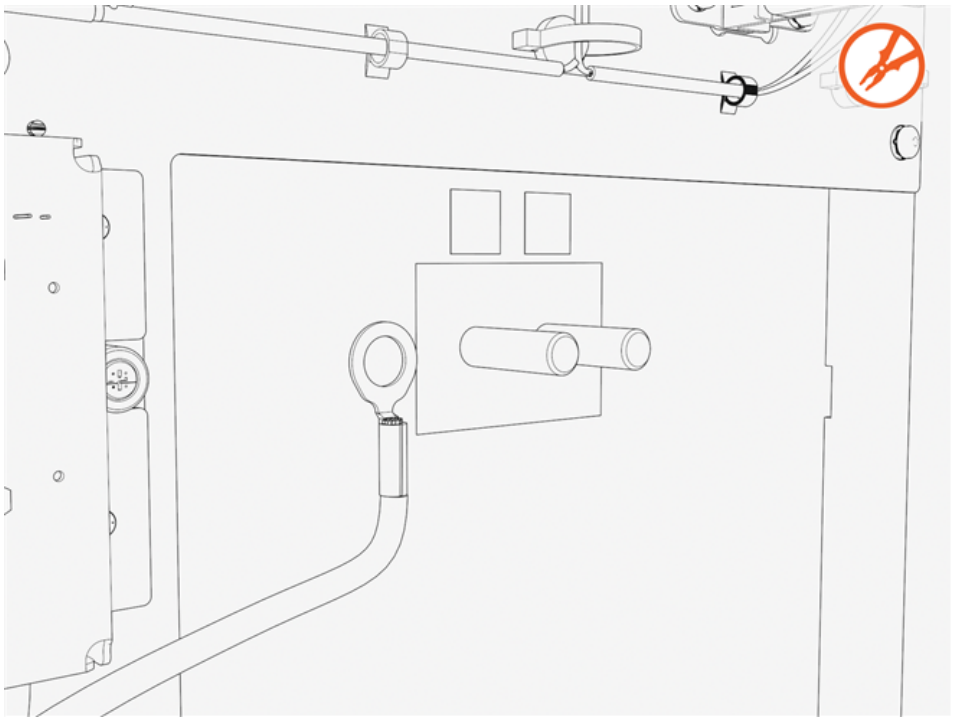
4. Mark all torqued power connections.



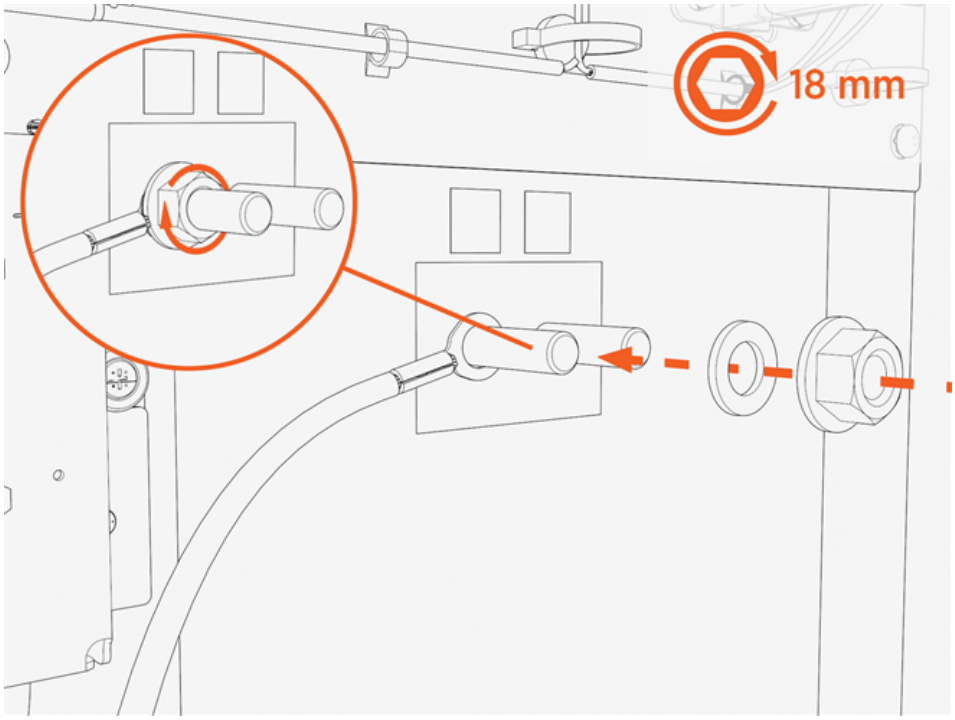
DC Ground Wire

To install DC ground wires, complete the following steps:

1. Crimp a 13 mm (1/2 in) single-hole lug onto the DC ground wire.



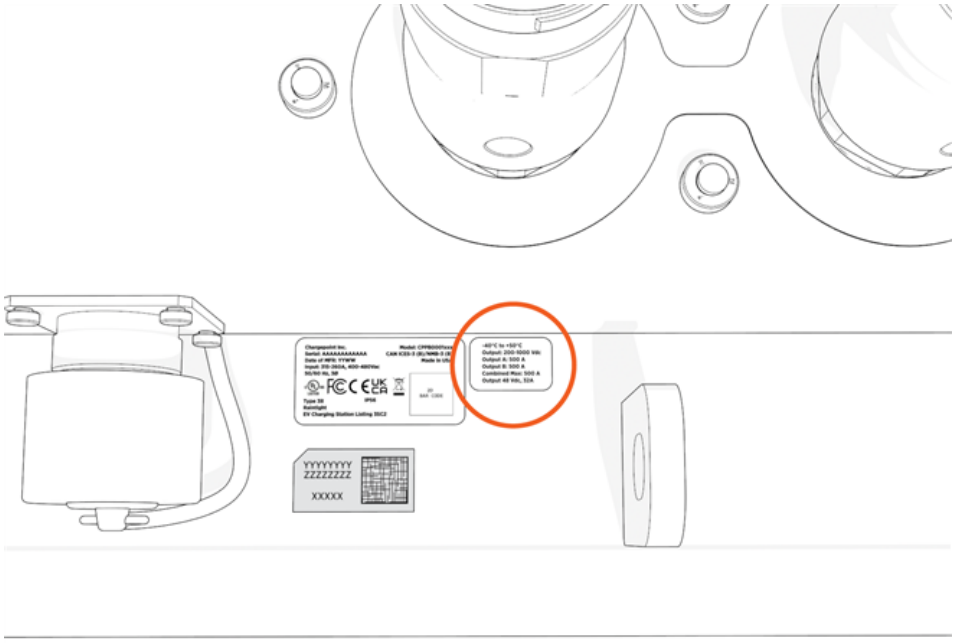
2. Connect the GND (protective earth) service wiring to the stud on the left side of the enclosure.



Adhere Ratings Label

IMPORTANT: Position the label near the serial number label, next to Ethernet port.

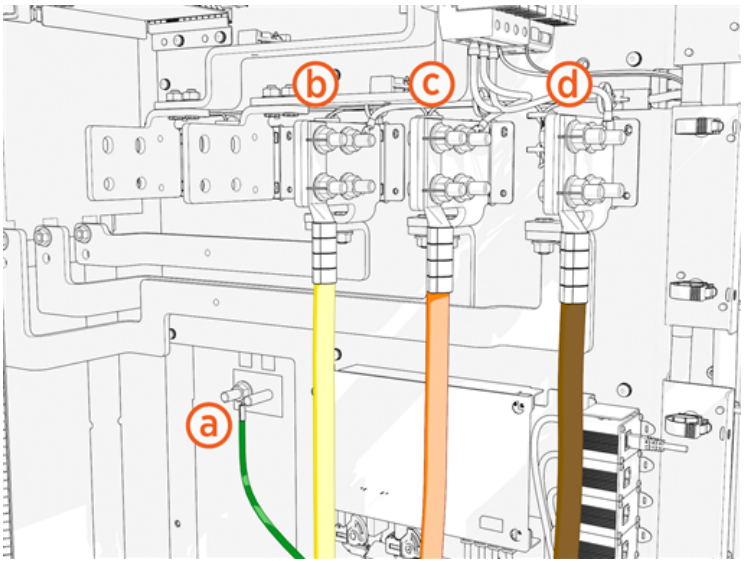
1. Adhere the associated ratings label.



AC Input Lugs

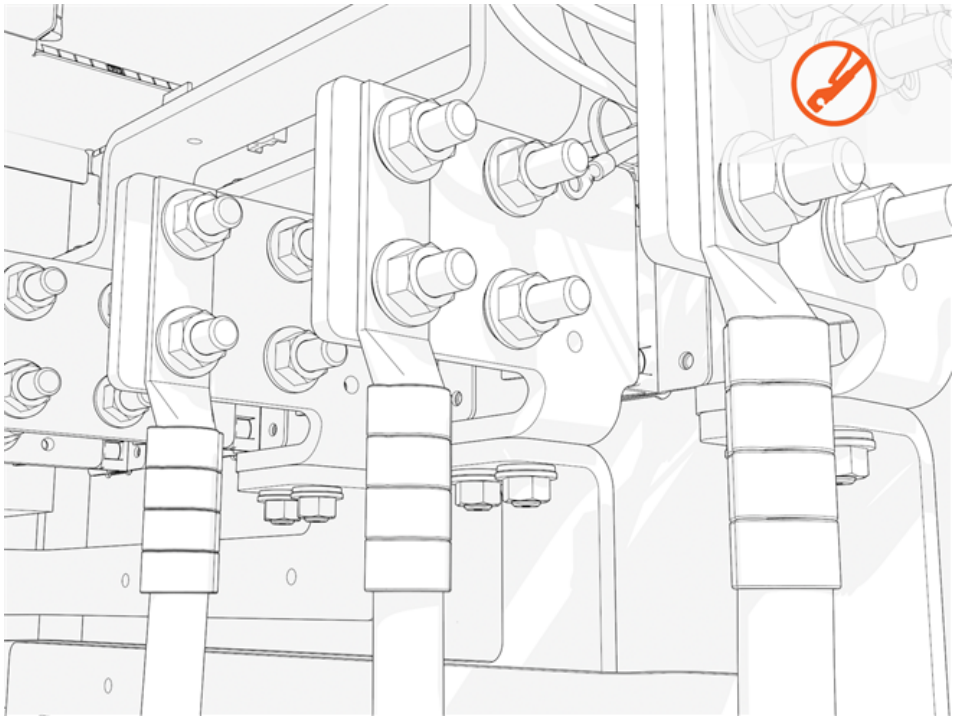
IMPORTANT: If the AC input wiring uses only one 750 kcmil conductor, it must be installed on the bus bar in the position farthest from the wall (toward the center) to avoid interference.

a. Ground wire
b. L3
c. L2
d. L1

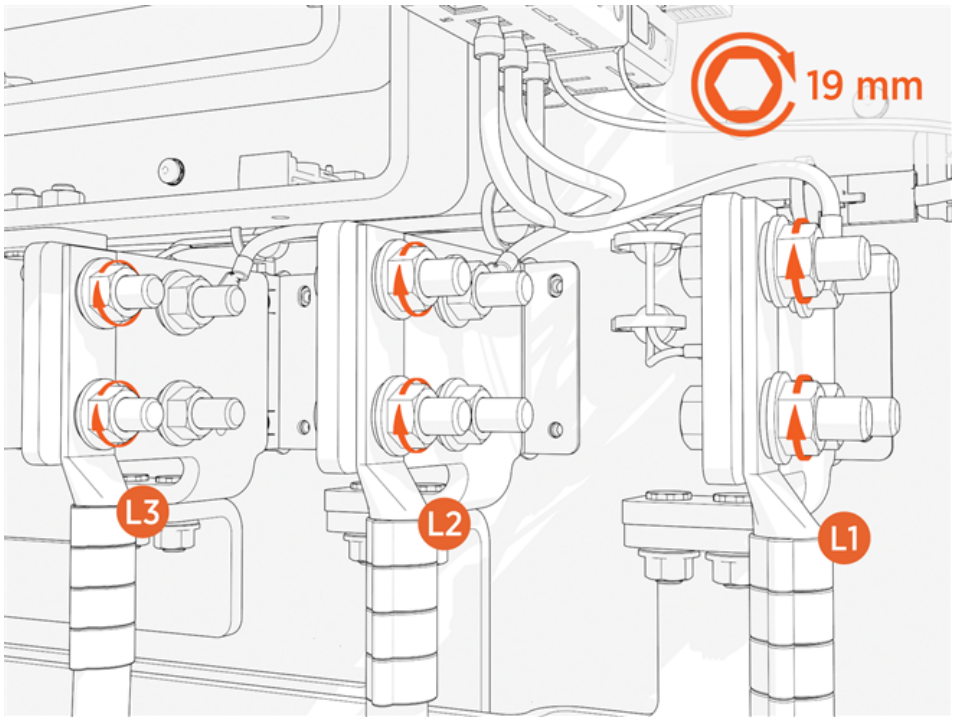


1. Uninstall the lugs (if you installed them previously to measure length). Apply dielectric grease onto the back of each lug.
2. Strip and crimp an AC input lug onto each conductor.

> **NOTE:** Use the lug manufacturer's crimp tool and die.

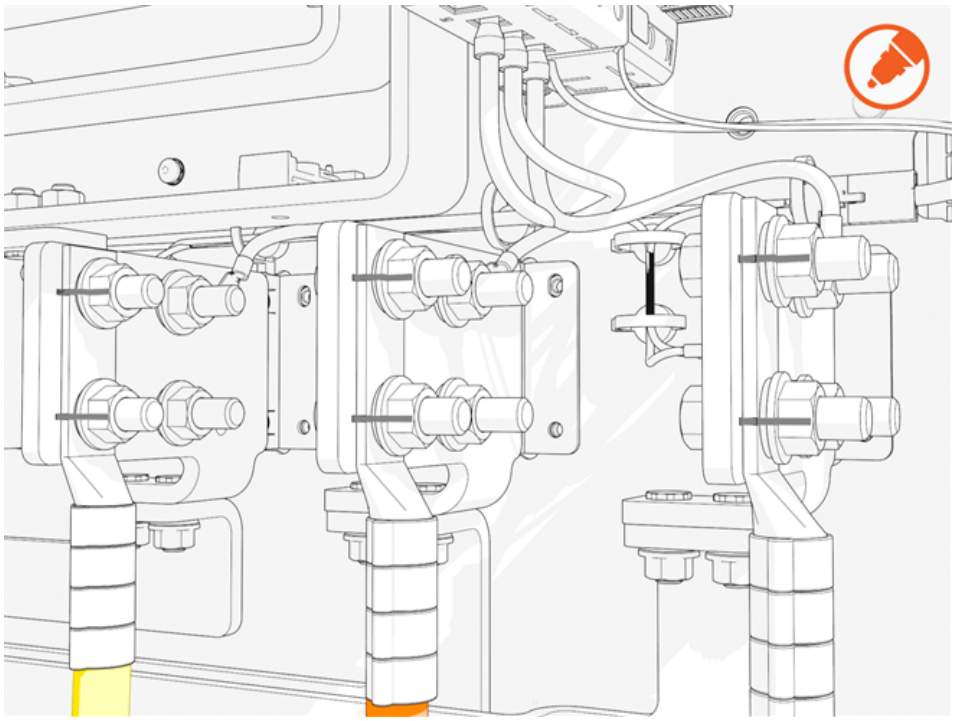


3. Install the L1, L2, and L3 lugs onto each bus bar with M12 bolts. Torque to **21 Nm (15.5 ft-lb)**.



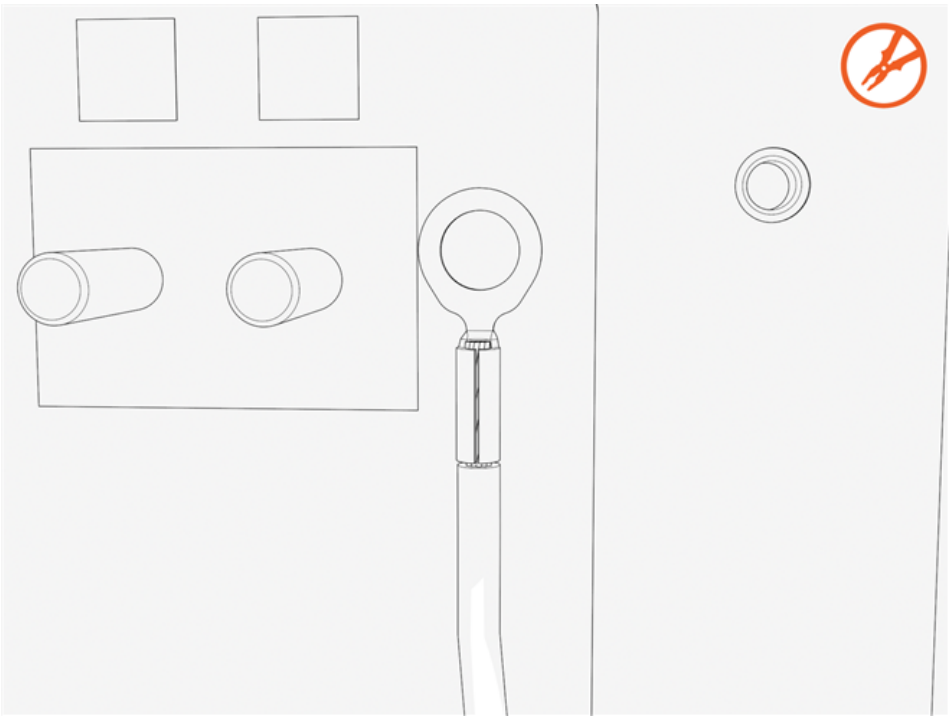
IMPORTANT: Ensure the L1, L2, and L3 cables are installed in the correct order for counter-clockwise phase rotation. Incorrect installation creates a phase rotation error later in the process.

4. Mark all torqued power connections.

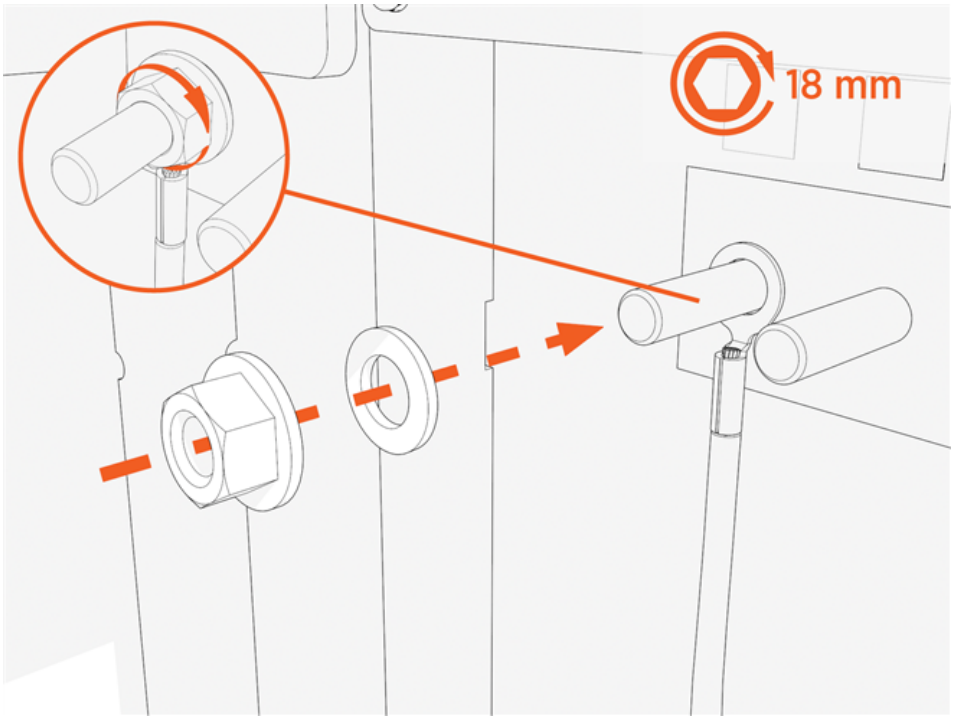


AC Ground Wire

1. Crimp a 13 mm (1/2 in) single-hole lug onto the AC ground wire.



2. Connect the GND (protective earth) service wiring to the stud on the left side of the enclosure and torque to **21 Nm (15.5 ft-lb)**.



IMPORTANT: Ensure that the deep socket and extension is used to avoid side or angular loading of the ground stud.

48 V DC and (if Applicable) Shunt Trip

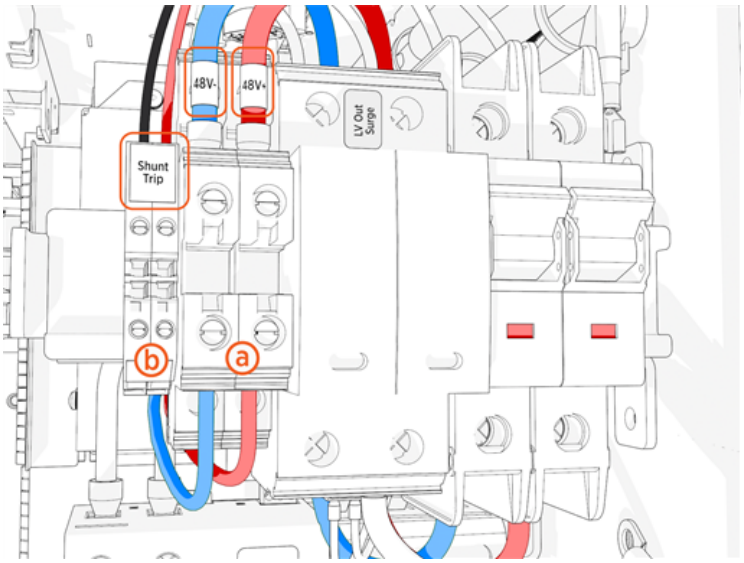
Check the 48 V DC wiring requirements in the site drawings:

48 V DC Wire Size	Conduit Size	Installation
16 mm^2 (6 AWG)	21 mm (3/4 in)	Install two 48 V DC wires and one Ethernet cable into one conduit.

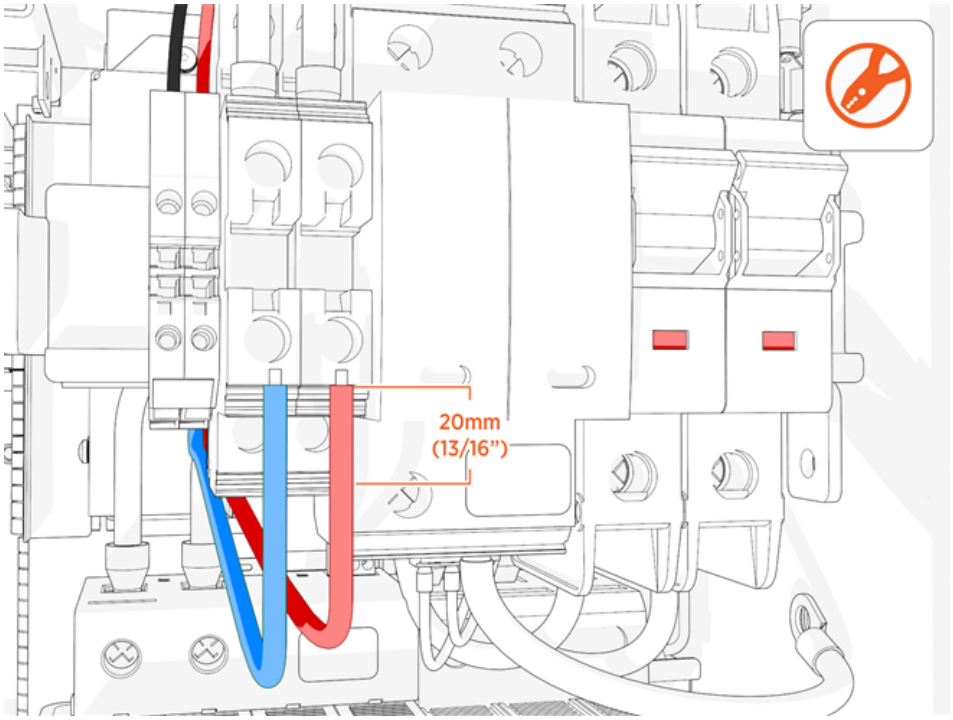
NOTE: Use only copper conductor wire rated for 90 °C (194 °F).

a. 48 V DC
b. Shunt trip (if any)

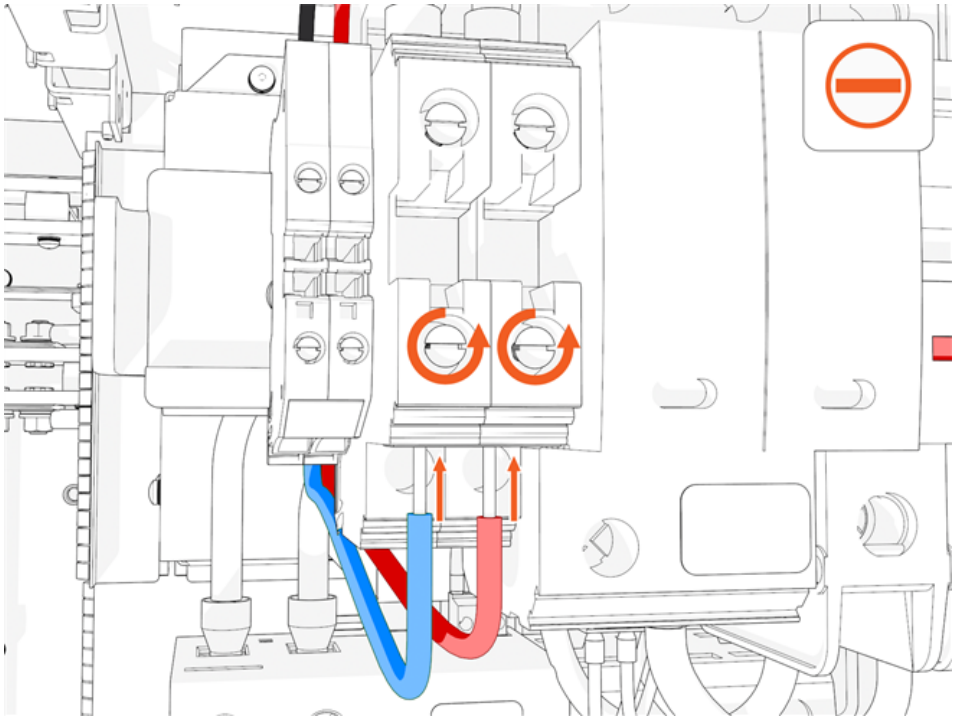
NOTE: Notice the labels.



1. Strip each 48 V DC and any shunt trip wires to 15 mm (5/8 in).

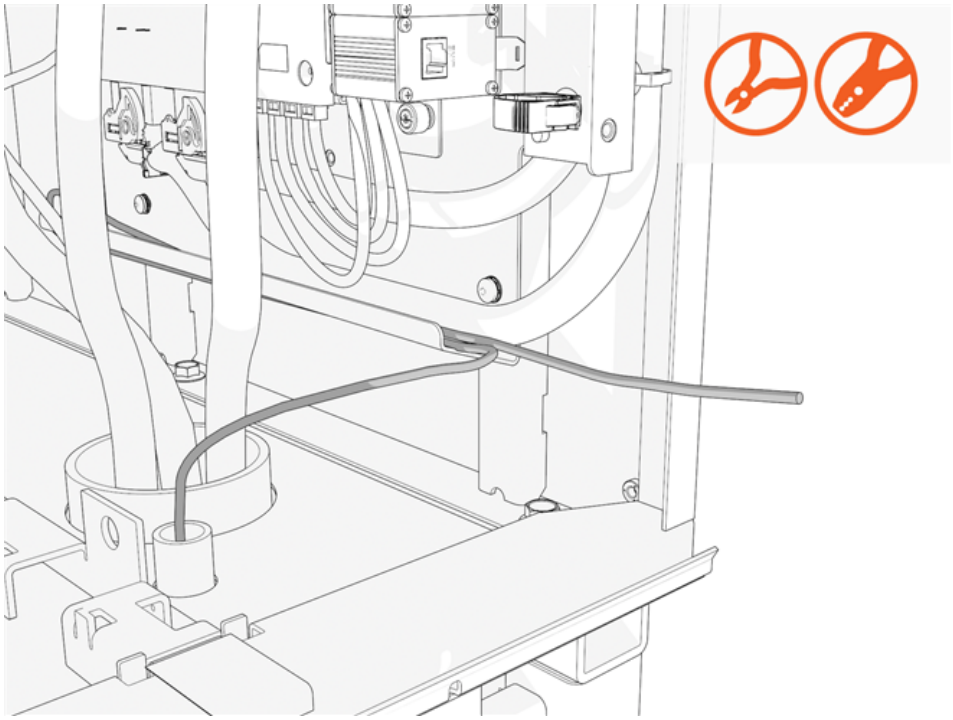


2. Loosen each terminal tab and seat the wire. Tighten the screw. Push-pull to test.

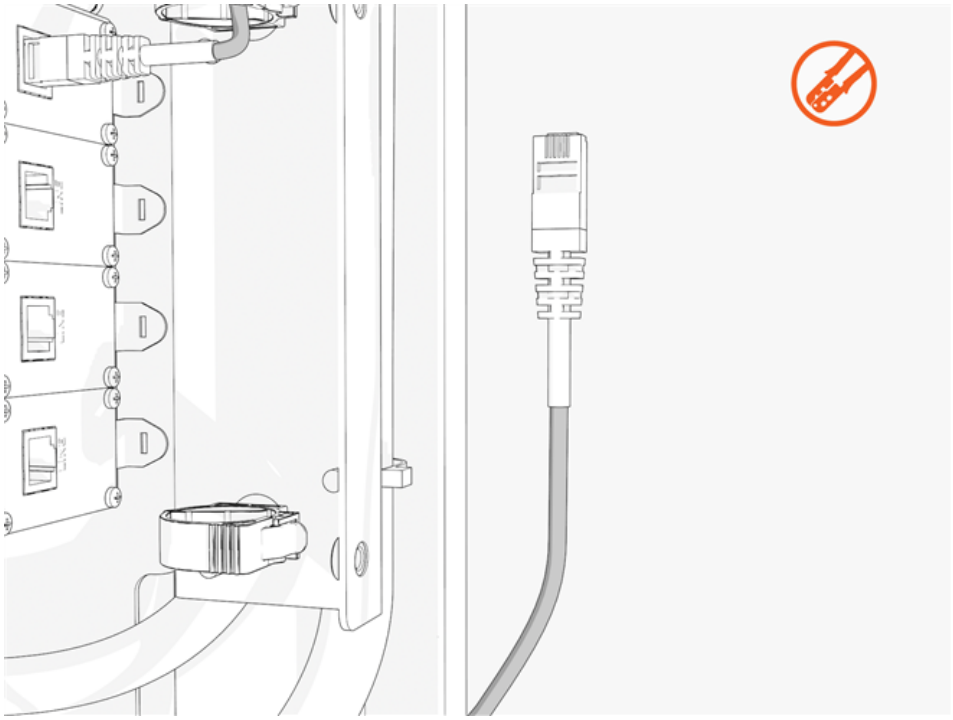


Cat6 STP Ethernet Cable

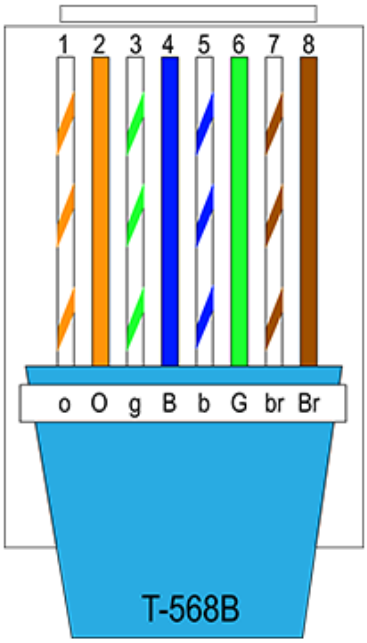
1. Trim each Cat6 STP Ethernet cable to provide a 914 mm (36 in) service loop.



2. Terminate both ends. Field crimp a shielded connector onto each Ethernet wire.

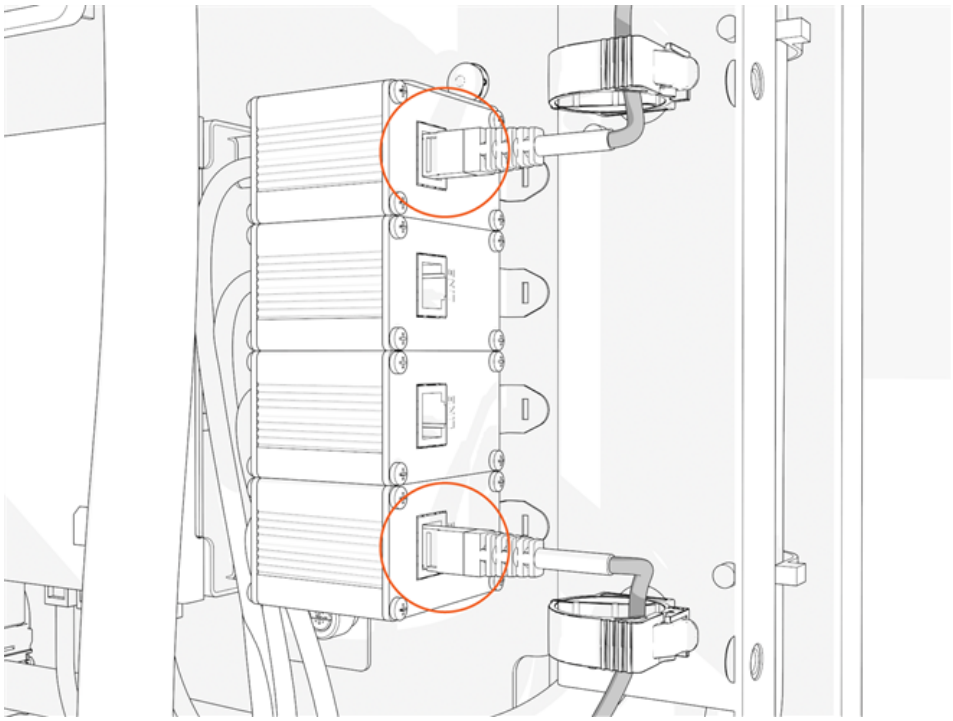


3. Use a straight-through T568B pattern.



4. Connect the shield wire termination.
5. Test each Ethernet wire functionality.

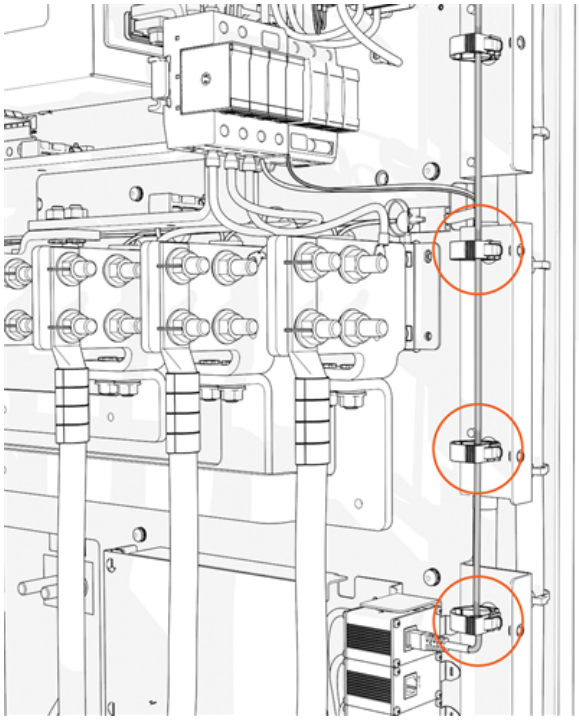
6. Connect each Ethernet connector to an available port (at lower right). Push-pull to test.



NOTE: Ports are interchangeable.

Route and Secure

1. Route the Ethernet, 48 V DC, and shunt trip wires down the front, right side. Secure onto the cable-routing clips.
2. Position excess Ethernet wire loops behind the controller board mounts.

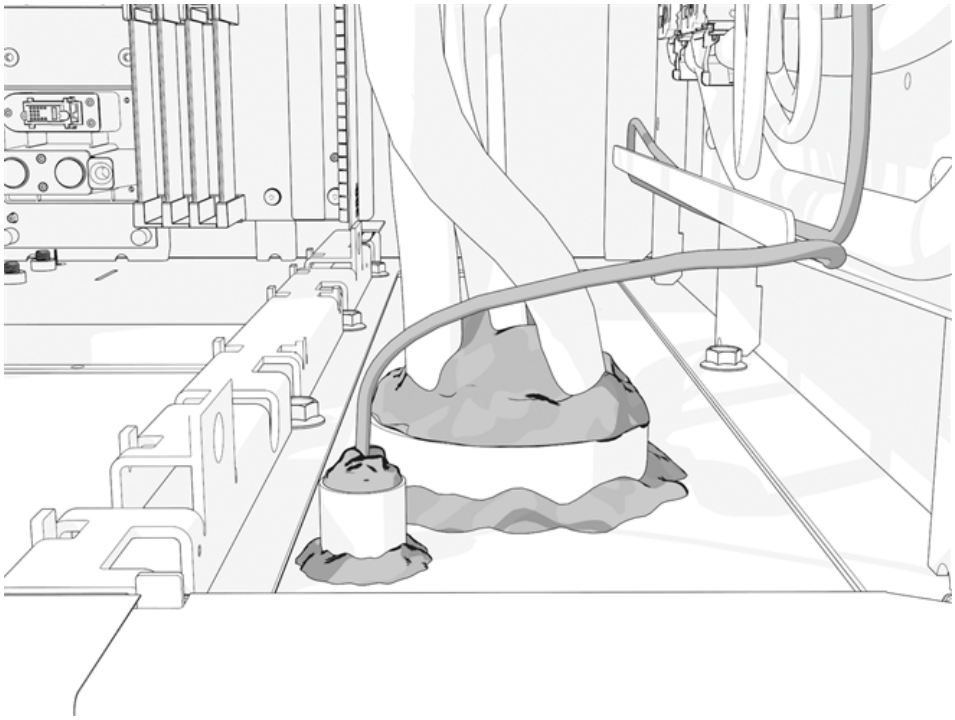


NOTE: This is to prevent covers from pinching these wires.

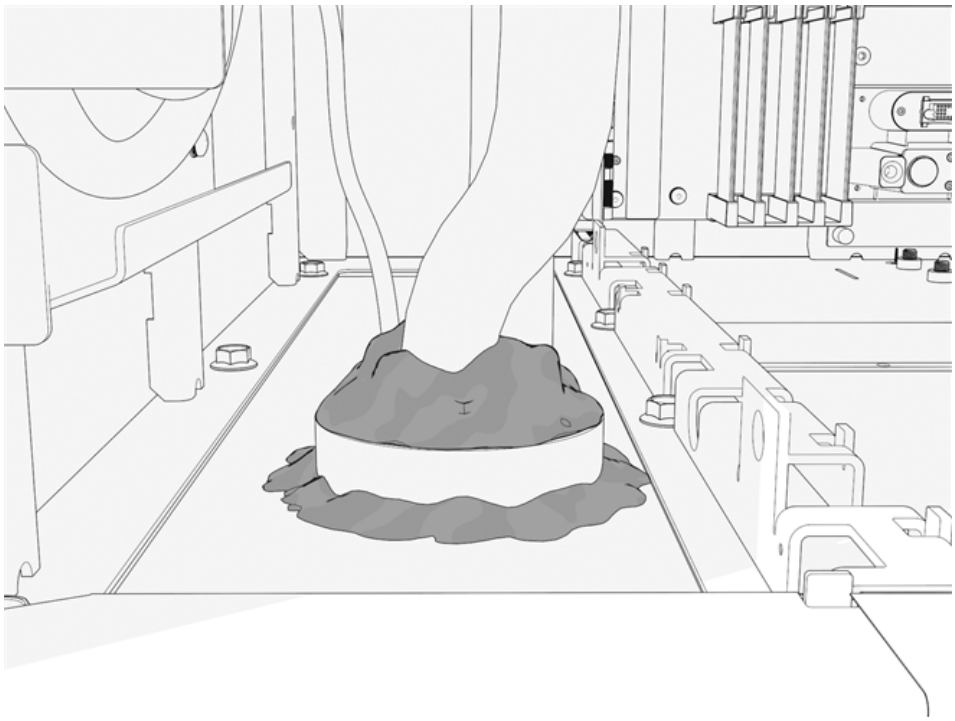
Seal Completely

IMPORTANT: The conduit opening must be sealed to protect the wiring from any debris, pests, and other matter.

1. Vacuum all wire ends and metal shavings from the enclosure.
2. Use duct seal compound (included) to seal all wiring openings and seal inside conduits.



3. Use the duct seal compound to seal the conduits around and to the gland plates.



Install Power Block Internal Parts and Fill Coolant

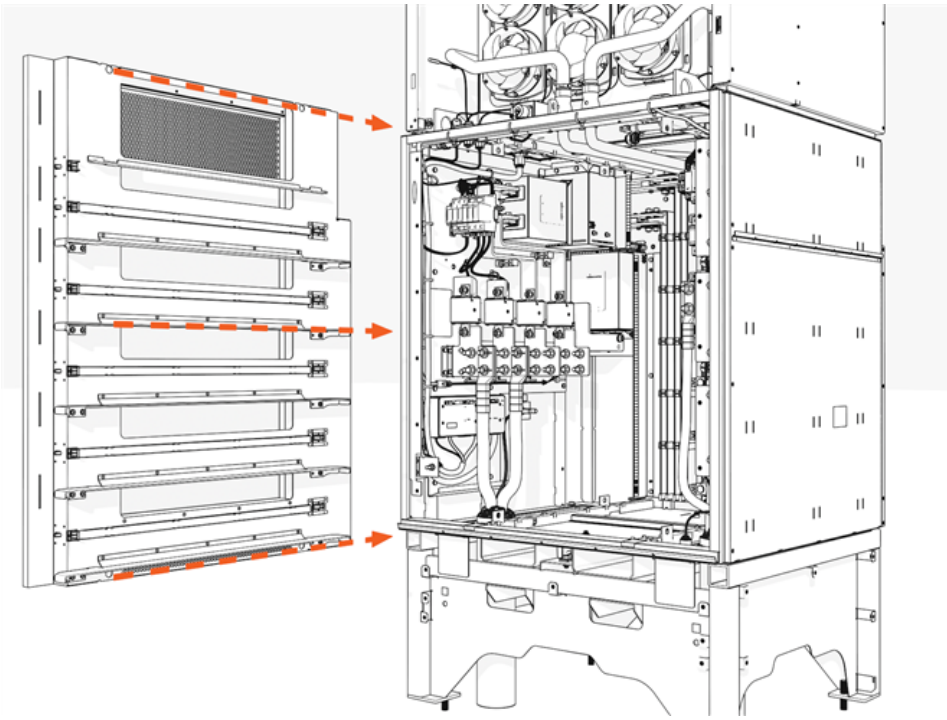
A Power Block can use up to five Power Modules, which ship in separate pallets. To install Power Block internal parts and fill coolant, complete the following steps:

> **CAUTION:** Install the rack with latches on the left. Orient the supports toward each other to form shelves for each Power Module.

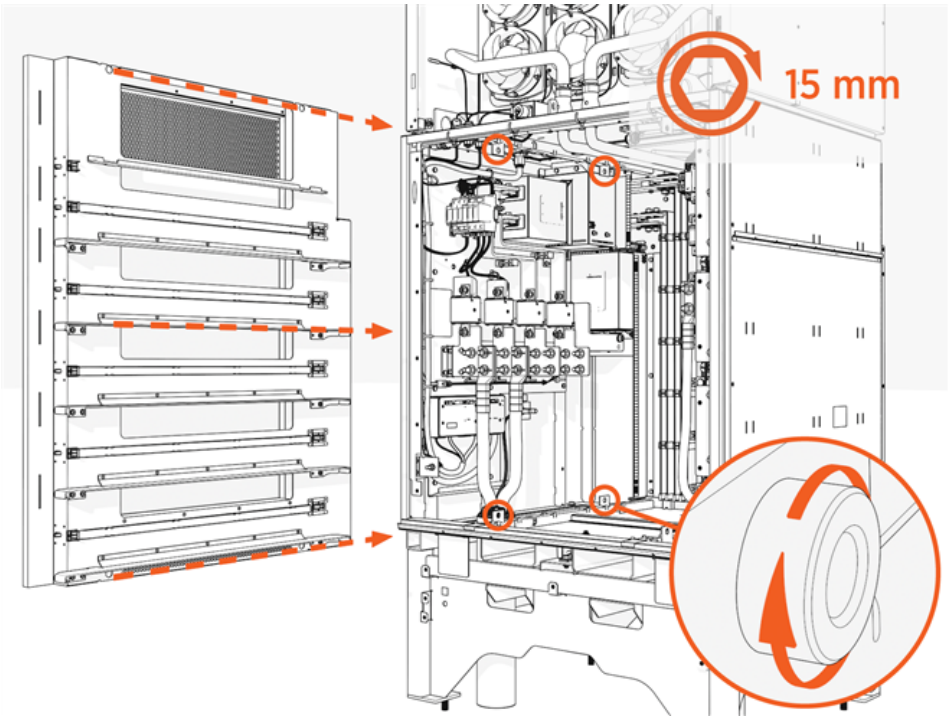
Install Left and Right Racks

To install the left and right racks, complete the following steps:

1. Align each rack vertically along the guide rails. Slide into the lower cabinet.



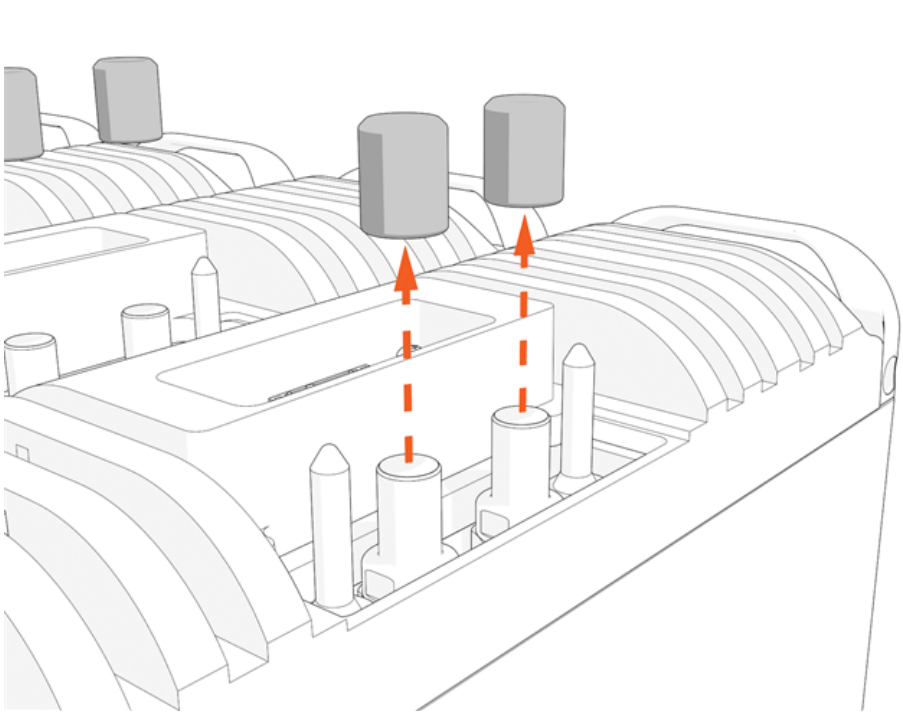
2. Install screws into the cabinet interior (front and rear, upper and lower) for each rack and torque to **19 Nm (14 ft-lb)**.



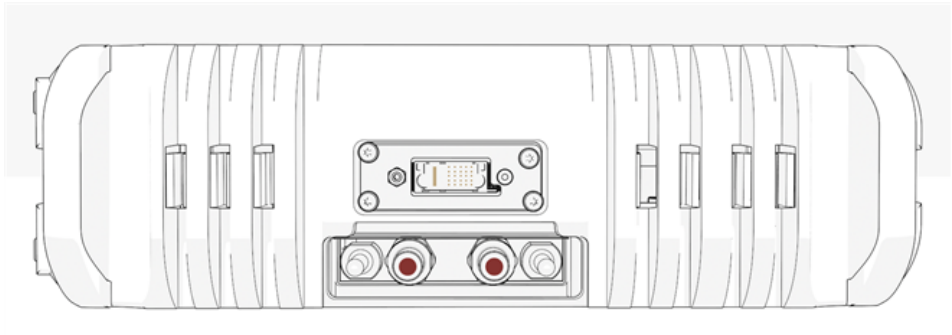
Power Module Installation

To install the Power Module, complete the following steps:

1. Remove caps from the coolant ports.

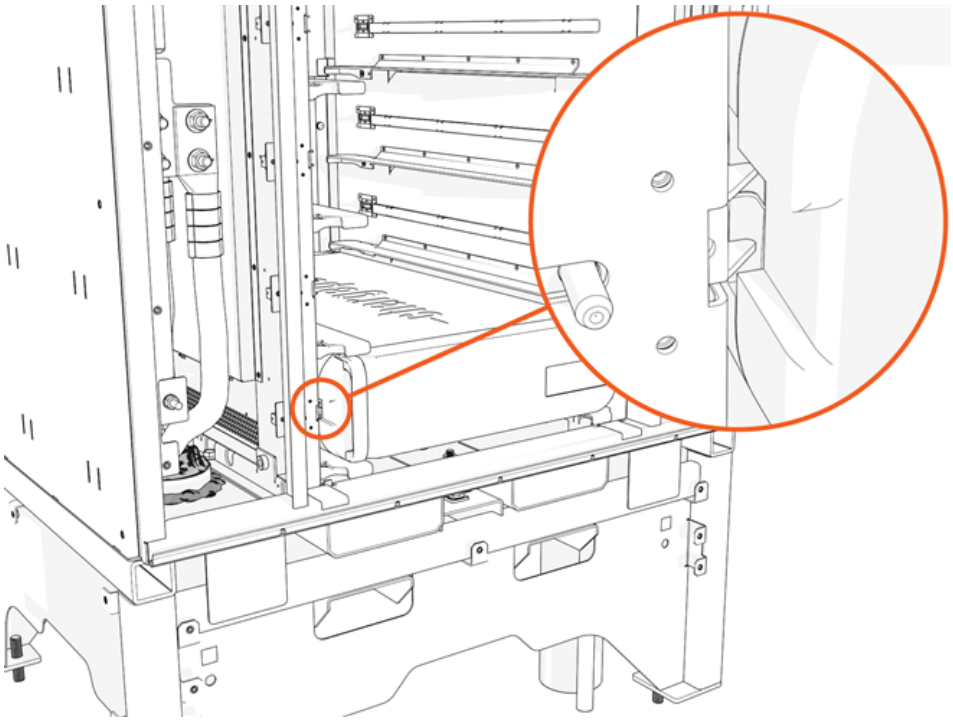


2. Position the Power Module with the data connector above the coolant port to align with the module mate.

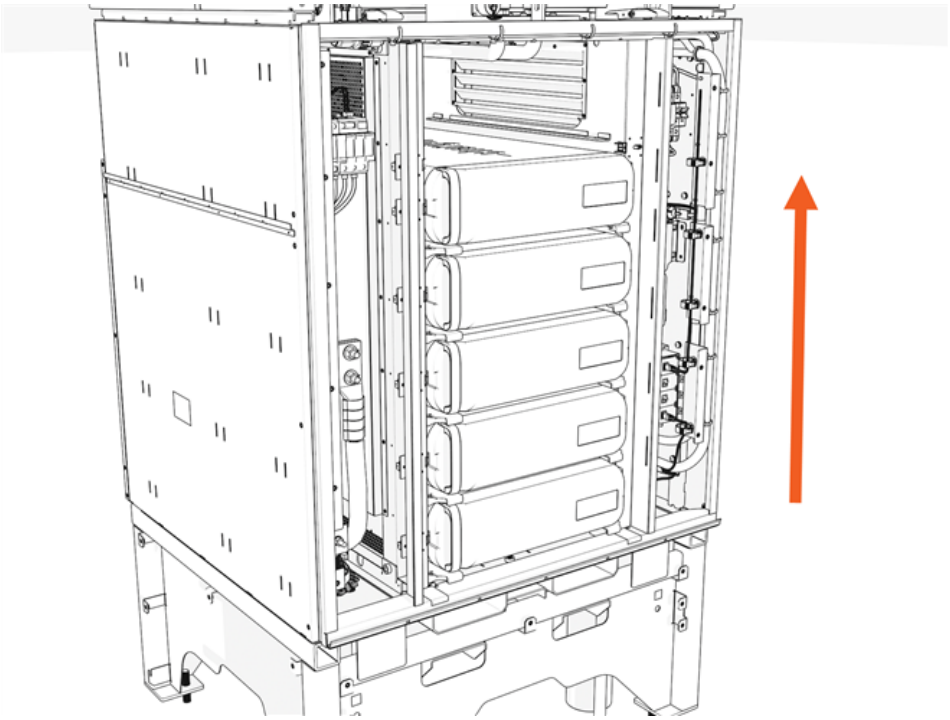


3. Insert the Power Module onto the rack and slide it in until the latch locks.

> **IMPORTANT:** Install Power Modules from lowest to highest.



Insert Power Modules from the bottom rack to the top.



Install the Lower Heat Exchanger

To install the lower heat exchanger, complete the following steps:

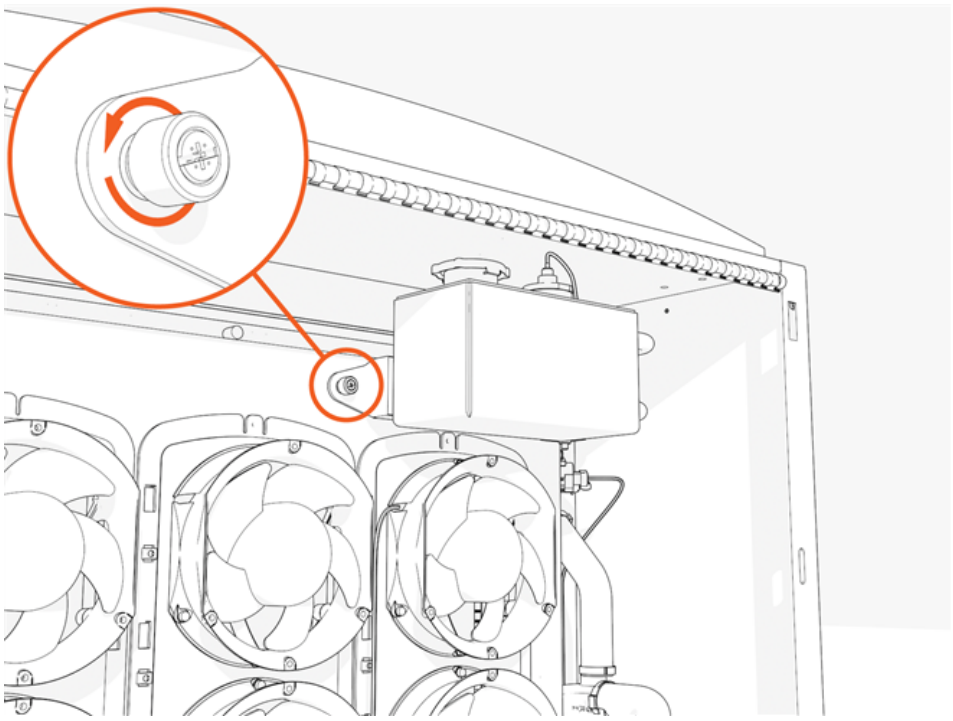
NOTE: Cut any zip ties to release the round multipin power connector.

Fill Coolant

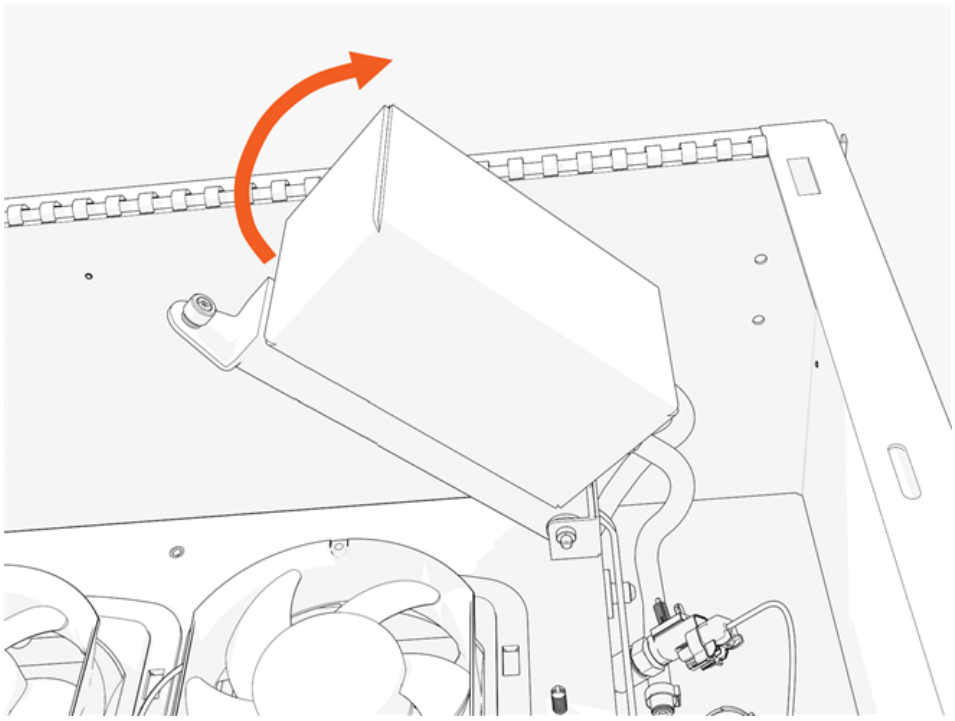
To fill coolant, complete the following steps:

Open Reservoir

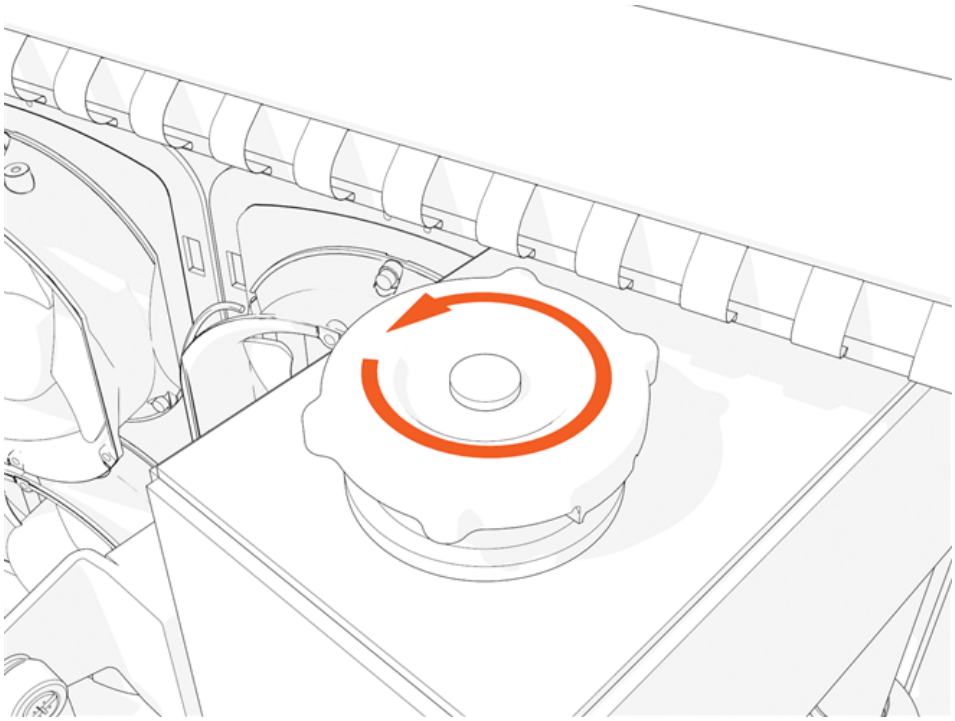
1. Open the coolant reservoir to release pressure. Loosen the captive screw.



2. Pull the left side of the reservoir to rotate out. Hold it open.



3. Push down and unscrew the cap.



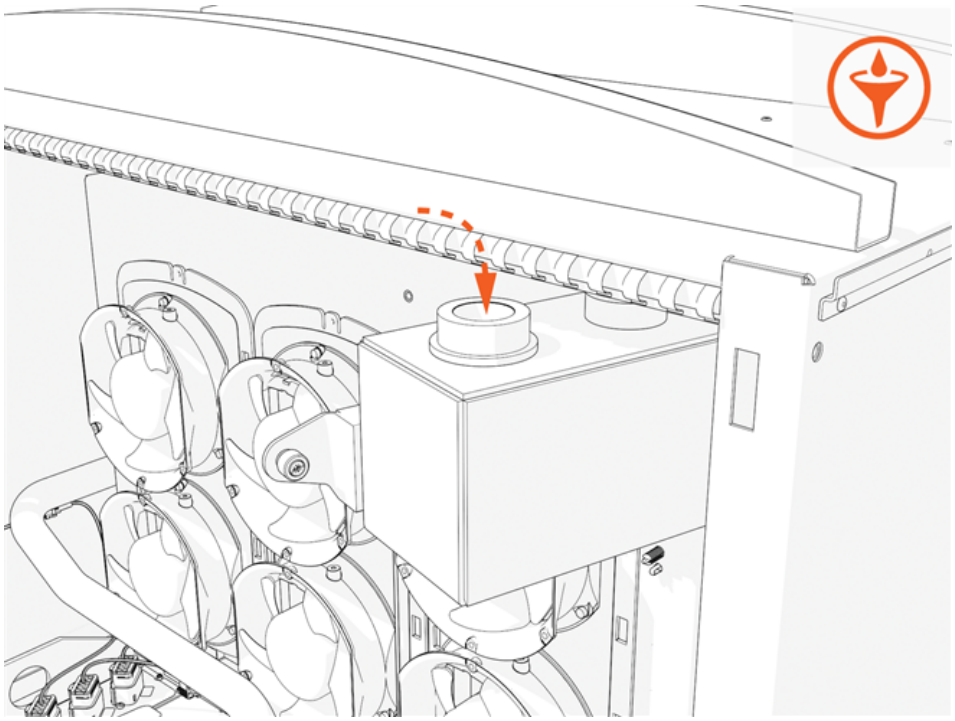
Pour Coolant

To pour the coolant, follow the instructions below:

Refill

1. Position the stepladder so you can view the top of the coolant reservoir.
2. Hold the reservoir open and place the funnel into it.

3. Pour in new coolant. Fill to the bottom of the neck or to the maximum level indicated on the reservoir.



4. Replace the cap.
5. Slowly release the reservoir back into position. Tighten the captive screw by hand.

Deaerate

IMPORTANT: Deaerate to clear any trapped air that may have entered the coolant hoses during service. You must power on the Power Block to do this. If you fail to do so, you may impair performance and damage components.

1. If you removed them, reinstall all Power Modules. (For details, see the Power Module topic (in this guide) or under the *Power Block Service Guide*.)
2. If you removed it, reinstall the front door. (For details, see the Panels, Doors, and Safety Shields topic under the *Power Block Service Guide*.)
3. Reinstall the removed panels. (For details, see the Panels, Doors and Safety Shields topic under the *Power Block Service Guide*.)

4. Power on. (For details, see the Power On topic under Appendix A of this guide.)

DANGER: RISK OF SHOCK

Do not turn on Power Block if other people are installing or servicing any other connected units.

First check that all connected units are off and no work is being performed. Inform everyone on-site of your plan and timing, follow lock out/tag out procedures, and ensure that everyone remains safe.

Alternatively, you may postpone the step to drawdown and deaerate until it is safe to do so. Continue to close up the Power Block now. Then after all units are installed and the site is clear to power on the Power Block, follow the steps to drawdown and deaerate.

5. The Power Block startup runs the deaeration sequence.
6. Alternatively, log in to the ChargePoint Platform Dashboard (na.chargepoint.com or eu.chargepoint.com).
7. Find and select the Power Block you are servicing.
8. Go to Status/Actions tab and select the Purge Coolant System button.
9. If coolant level is low, top off the coolant.

Top Off

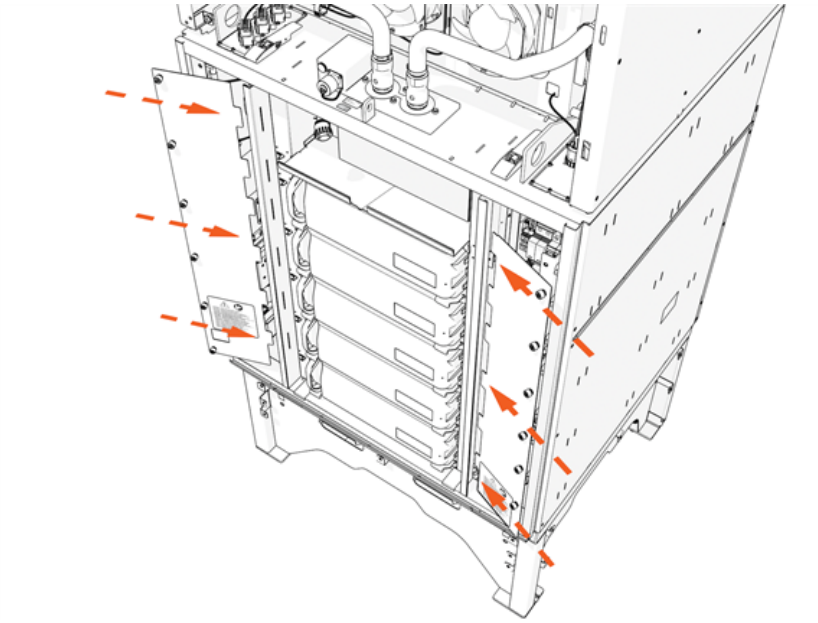
1. Remove the front upper panel. (For details, see the Panels, Doors and Safety Shields topic under the *Power Block Service Guide*.)
2. Top off the coolant.
3. Replace the cap.
4. Slowly release the reservoir back into position. Tighten the captive screw by hand.

Reinstall Transparent Shields

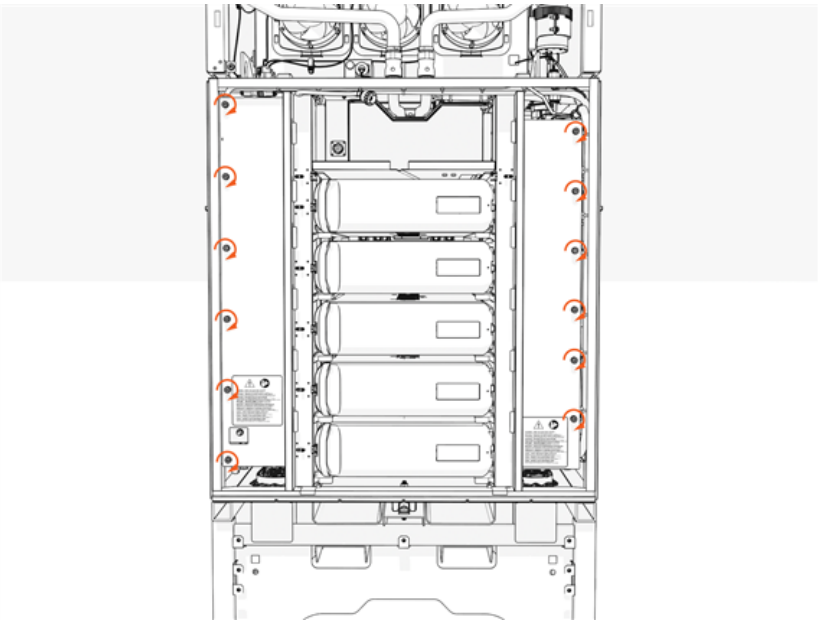
To reinstall the transparent shields, complete the following steps:

1. Align the tabs on the transparent panel with the slots in the racks. Insert the tabs into the slots.

> **NOTE:** For the left shield only, align the hole over the door switch.



2. Tighten the captive screws.



3. Slide the heat exchanger onto the top shelf.

Install Power Block Covers and Door

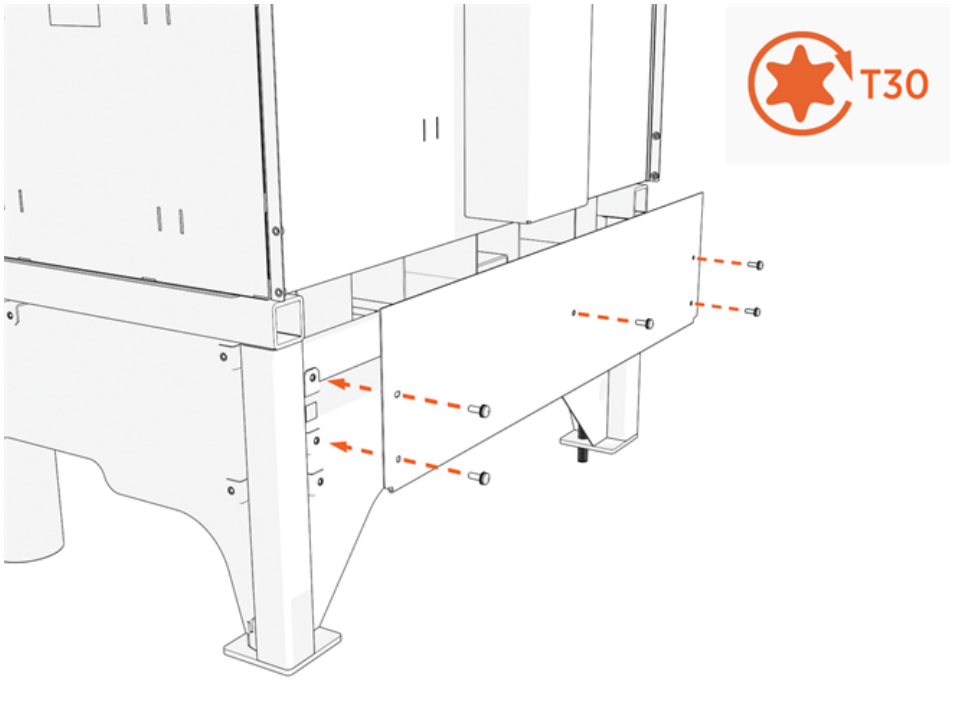
This topic provides information on installing Power Block covers and door.

Pedestal Covers

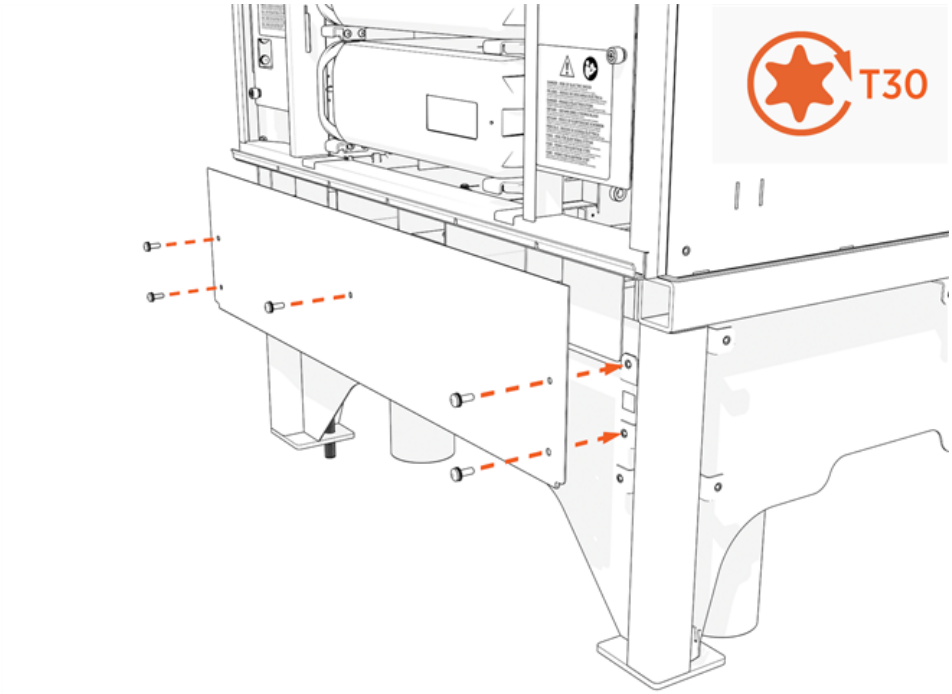
To install pedestal covers, complete the following steps:

Upper Covers (Front and Rear Pedestal)

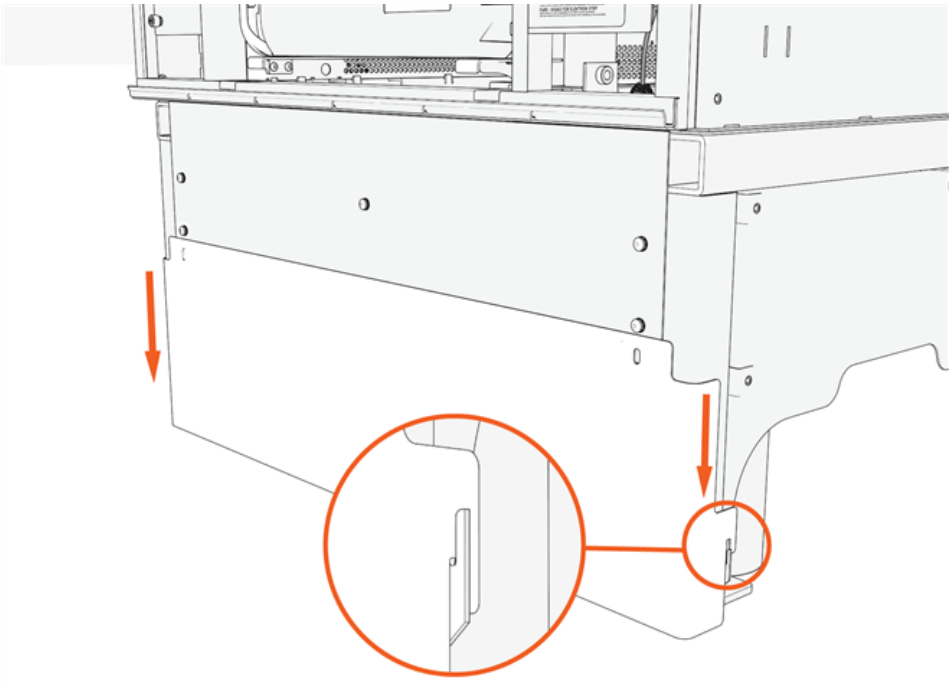
1. Align the rear upper cover and install screws. Torque to **7.0 Nm (62 in-lb)**



2. Repeat with the front upper cover.

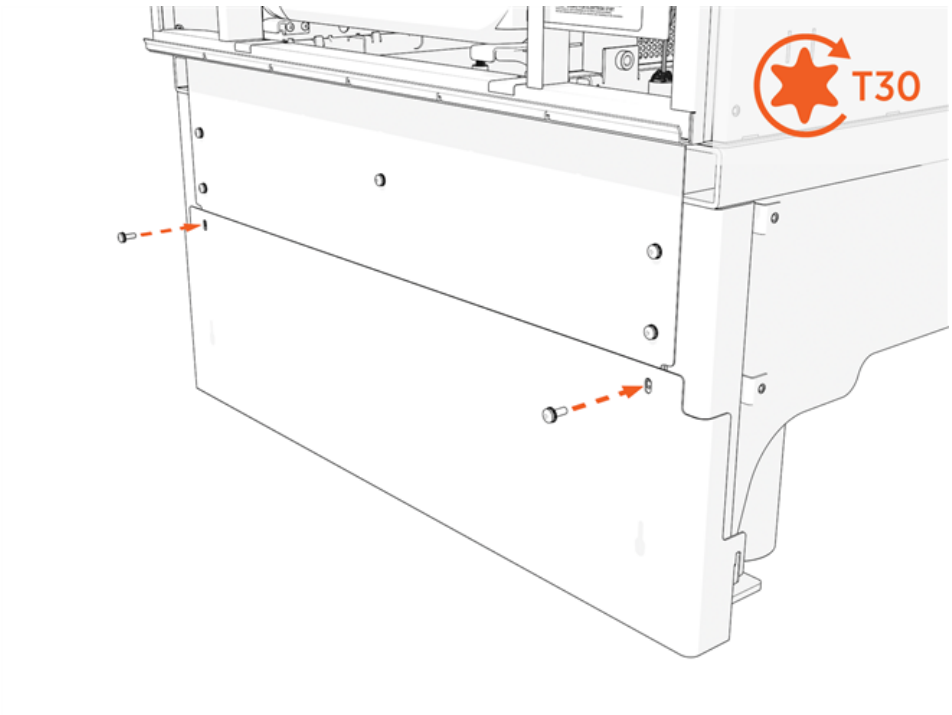


3. Notice the hooks near the bottom inside of the lower covers. Align the hooks. Slide each lower cover down onto the pedestal.



NOTE: Ensure the two hooks (left and right) engage at the bottom.

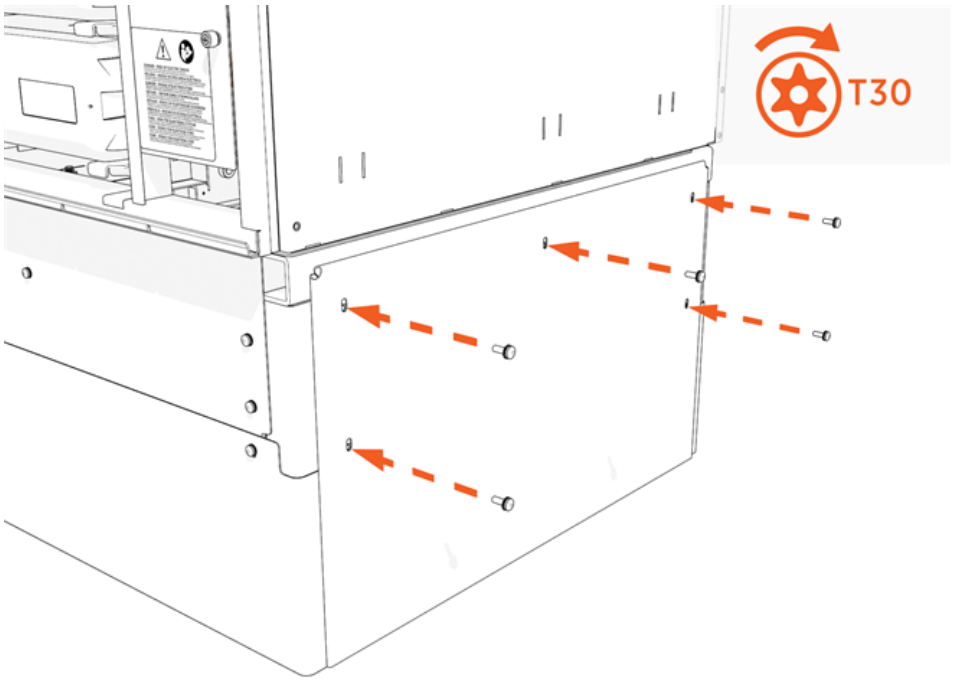
4. Install the screws into each cover. Torque to **7.0 Nm (62 in-lb)**.



5. Notice the hooks near the bottom inside of the side covers. Align the hooks. Slide each side cover down onto the pedestal.

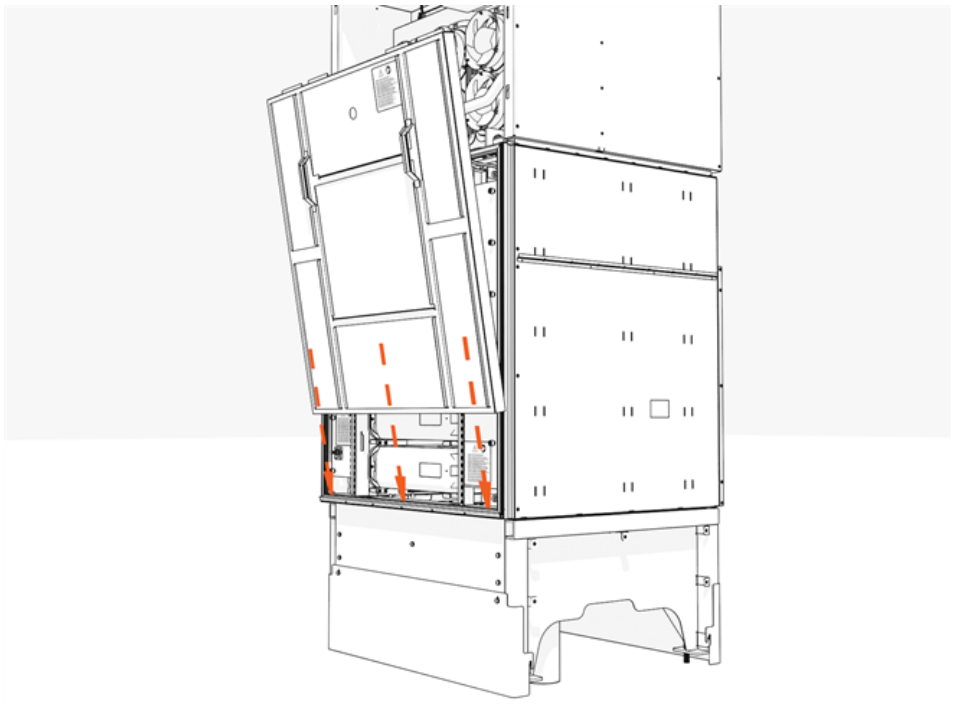
NOTE: Ensure the two hooks (left and right) engage at the bottom.

6. Install screws into each side cover. Torque to **7.0 Nm (62 in-lb)**.

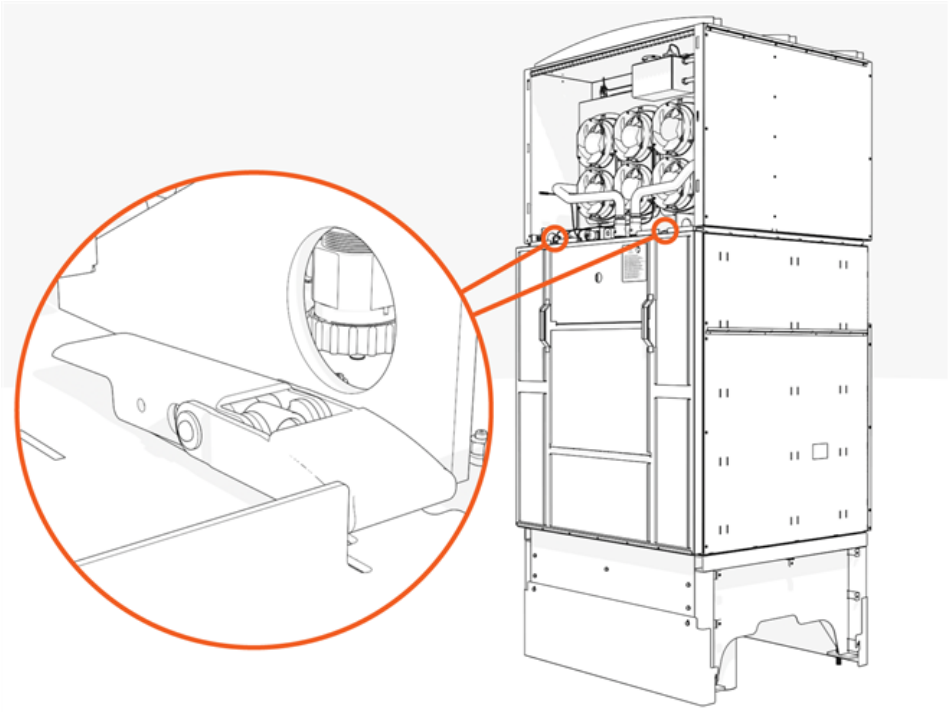


Lower Front Door

1. Hook the bottom of the door onto the lip of the cabinet.

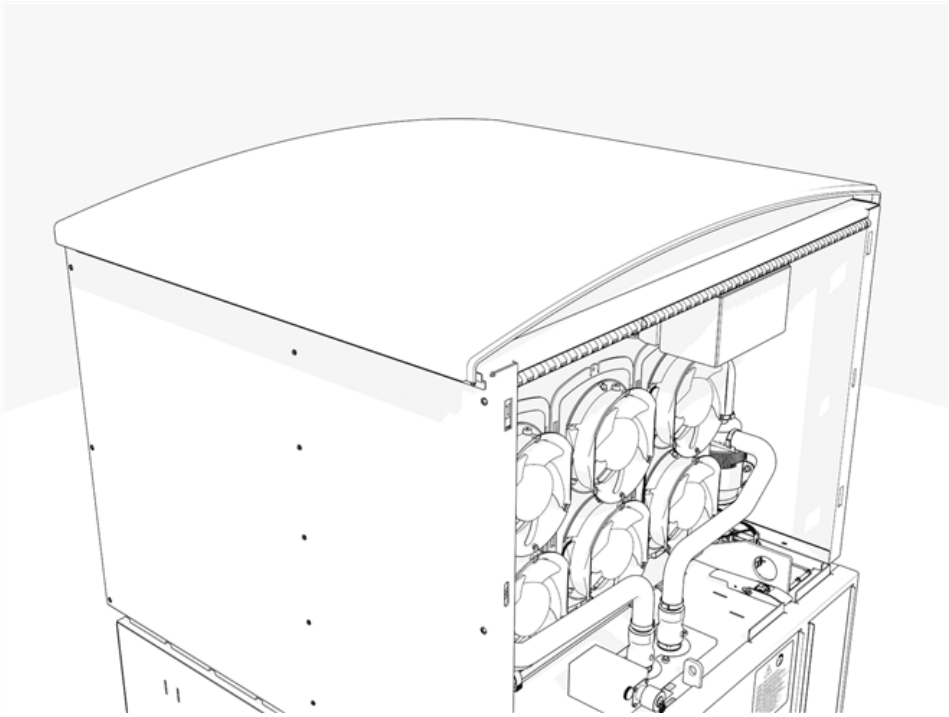


2. Align and fasten the two latches at the top.

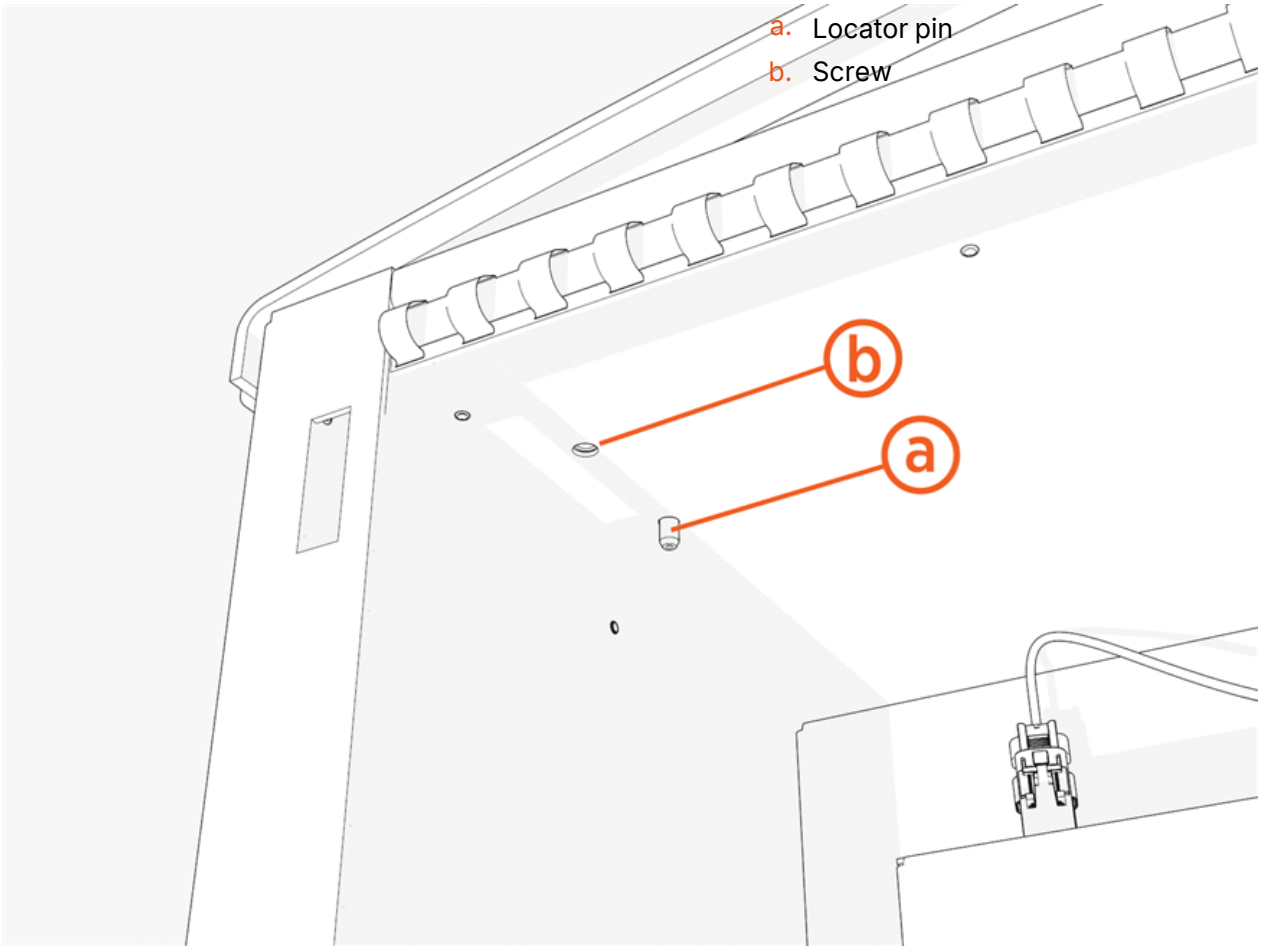


Enclosure Top cover

1. Align the top cover (arched).



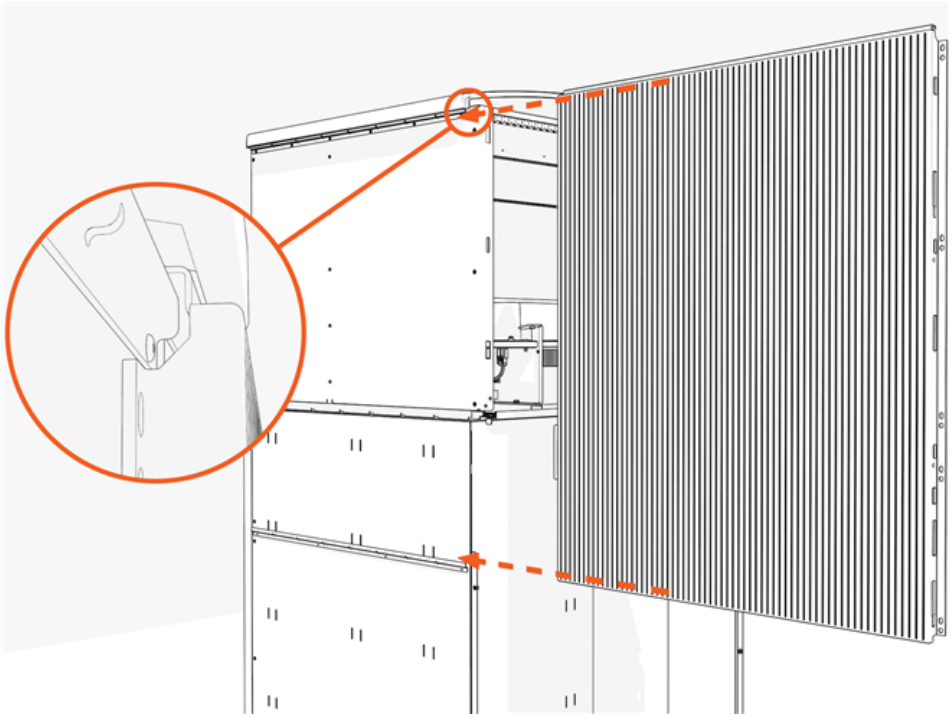
2. Follow these instructions to fit the locator pins and install the M6 screws:



   a. Fit four locator pins into the corners of the top inside.
   b. Install four M6 screws into the corners of the top inside. Torque to **7.0 Nm (62 in-lb)**.

Enclosure Side covers

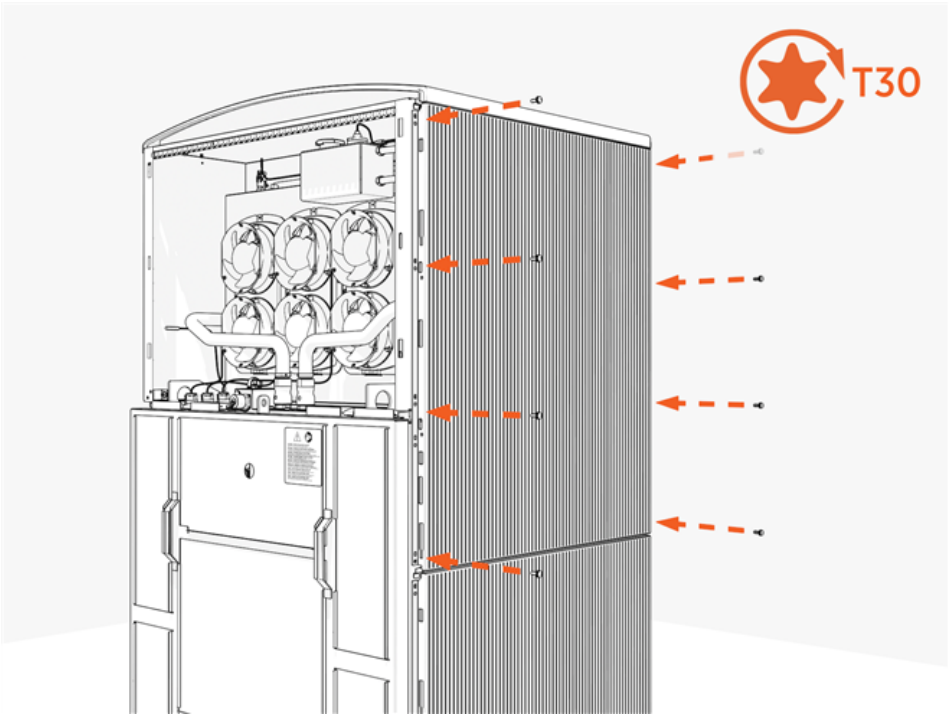
1. Slide the four side covers into the rails.



NOTE: Panels are identical.

Upper Side covers

1. Install screws on the front and rear edges. Torque to **7.0 Nm (62 in-lb)**.

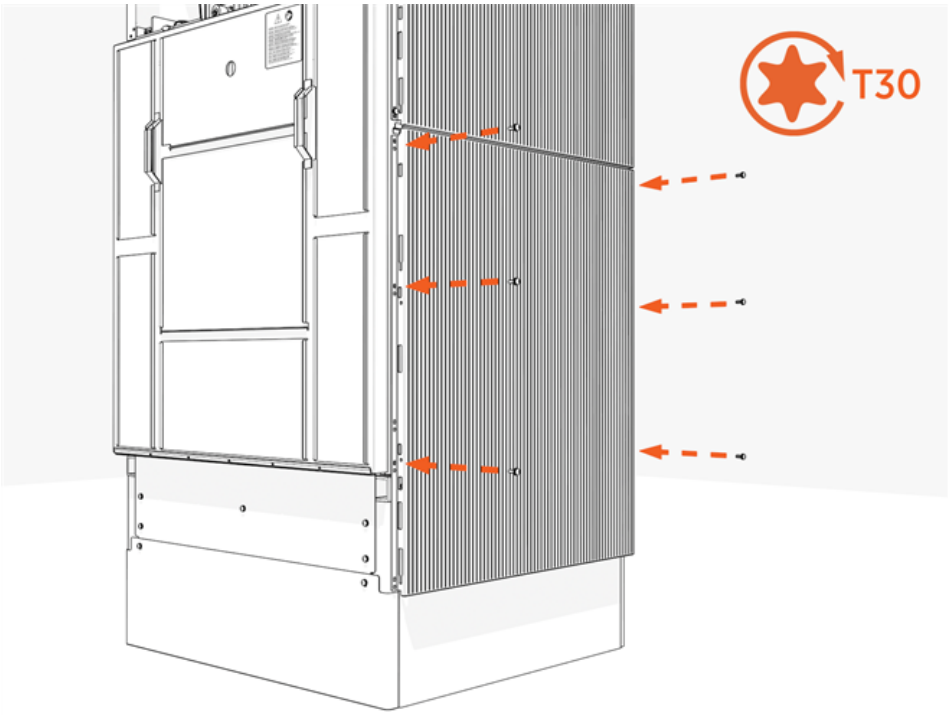


NOTE: Start with the bottom corner.

2. Repeat on the second upper side cover.

Lower Side covers

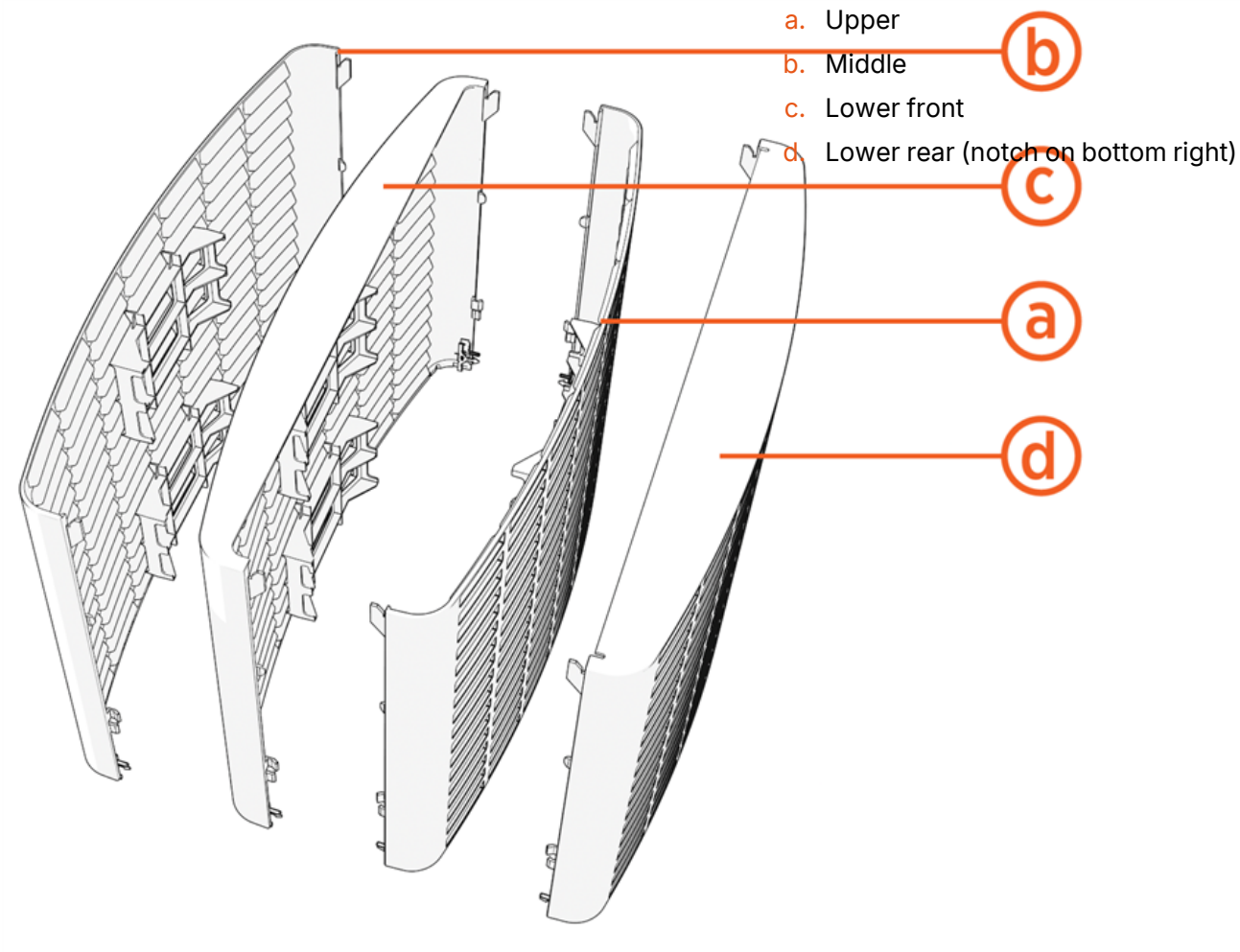
1. Install screws on the front and rear edges of both lower side covers. Torque to **7.0 Nm (62 in-lb)**.



> **NOTE:** You can access all four screws on each upper cover, but only three on each lower cover (because the pedestal overlaps the fourth screw).

2. Repeat on the second lower side cover.

Enclosure Front and Back Covers

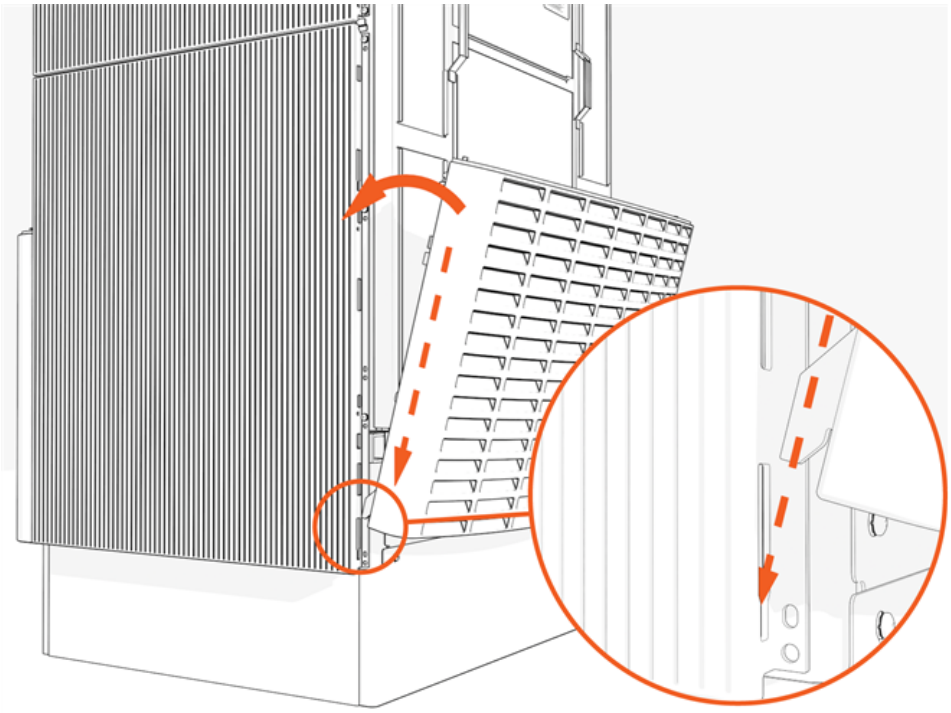


Lower and Middle Covers

1. Start with the lower cover.

> **NOTE:** Rear lower cover has a small notch in the bottom right corner.

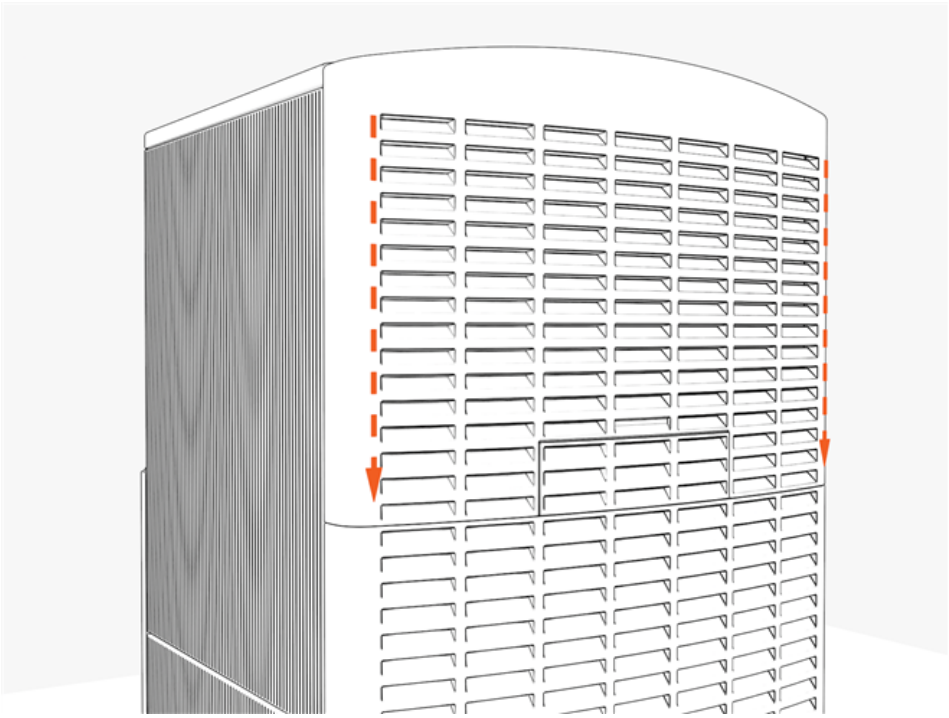
2. Align the four hooks at the bottom, then the top corners. Shift the cover into position.



3. Repeat with the middle cover.

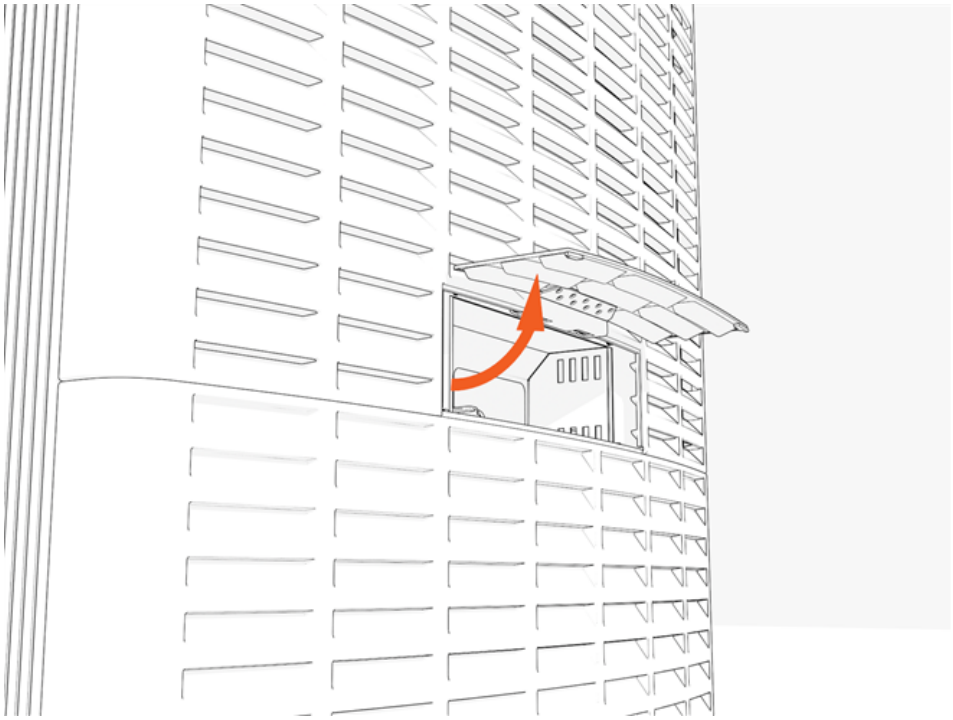
Upper cover

1. Hang the upper cover at all four corners. Push down to engage.

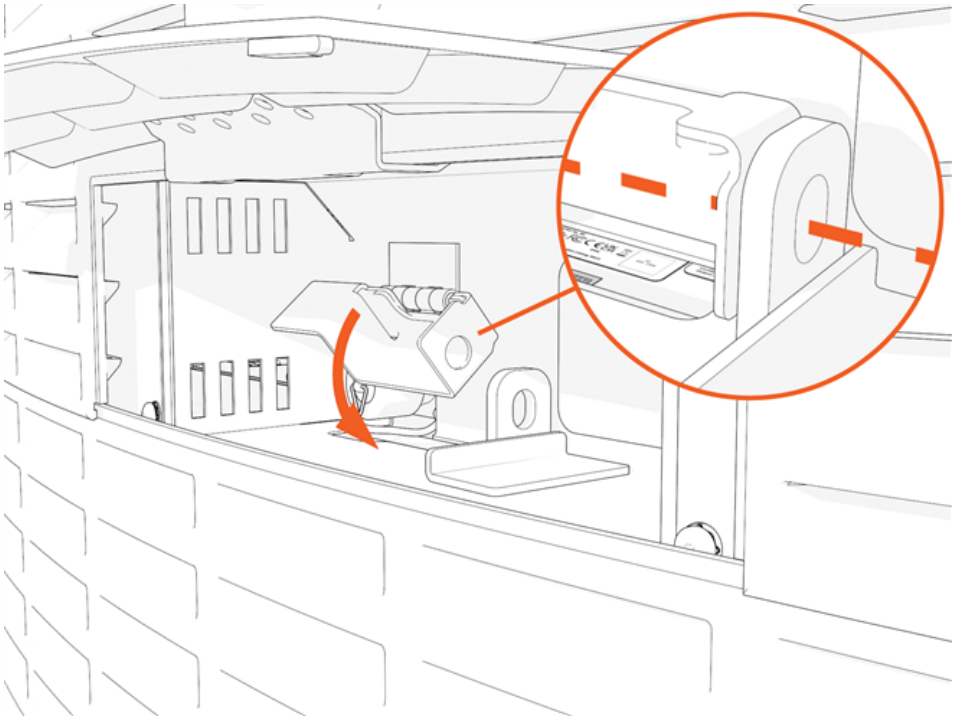


Lock

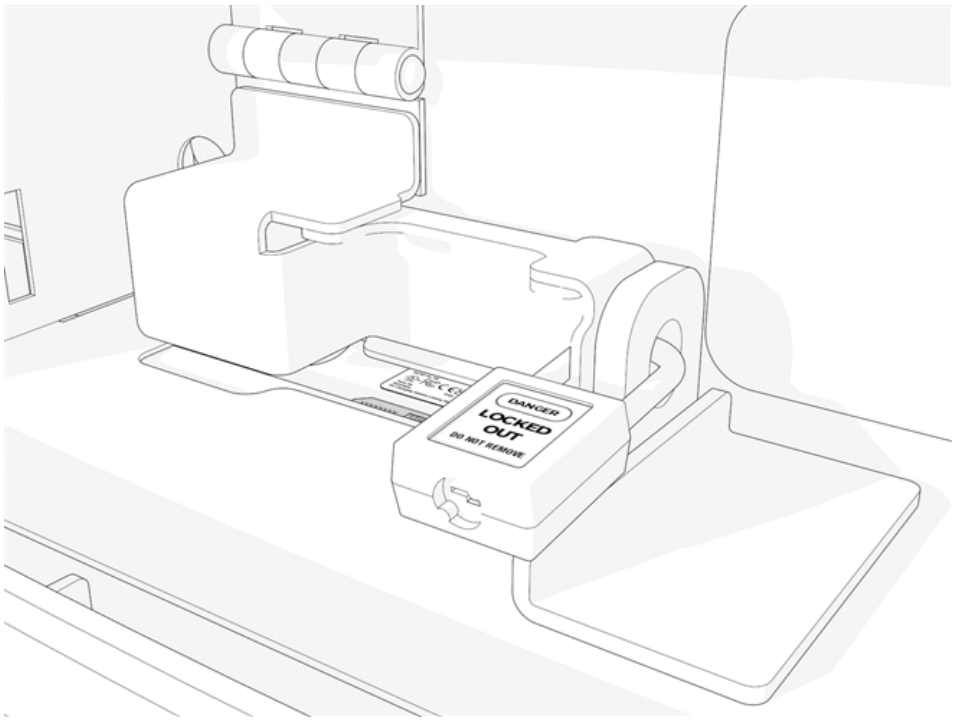
1. Lift open the security panel.



2. Lower the metal tab to align the two holes.



3. Insert the padlock through the two holes and lock it.



Recommended Install Checklist Express PlusPower Block 4

Before leaving the installation site, complete the post-installation checklist using the link below:

https://docs.chargepoint.com/ref-docs-sec/content/pdfs/3-dc/System/pb1000/pb1000-install_checklist.pdf

Provide the checklist and any spare parts (activation labels, and so on.) to the person responsible for activating the stations. This completes the installation of the Power Block charging station.

Appendix: Set Up Power Block A

IMPORTANT: Do not power on Power Block after completing the installation (after installing the covers). An authorized commissioning partner will commission, power on, pinpoint, and configure Power Block after installation. If you are authorized to do so, complete the following procedures:

Power On

NOTE: Power Block must pass commissioning before power on, or warranty limitations apply.

1. Ensure all doors and panels, covers, vinyl signs, and all other parts have been correctly installed and the work is complete.
2. Turn on power at the same points that you turned it off.

   NOTE: If the site has a remote shunt trip switch, ensure that the switch is in the operating position.

3. Wait for self-diagnostics to run. The system may take several minutes to initiate. You may see messages intermittently until the system fully boots up.

Self-Diagnostic	After Installation	After Service or Power Outage
Electrical safety checks	✓	✓
Lighting checks	✓	✓
Display panel checks	✓	✓
Component operation checks	✓	✓
Network connectivity checks	✓	✓

IMPORTANT: Be sure to complete the post-installation checklist.

Set Up Power Block

At first power on the Power Block at the breaker panel.

Then, set up Power Link 1000. To do so, refer to the *Power Link Installation Guide*.

Appendix: Surface Conduit Entry (SCE) Kit Installation B

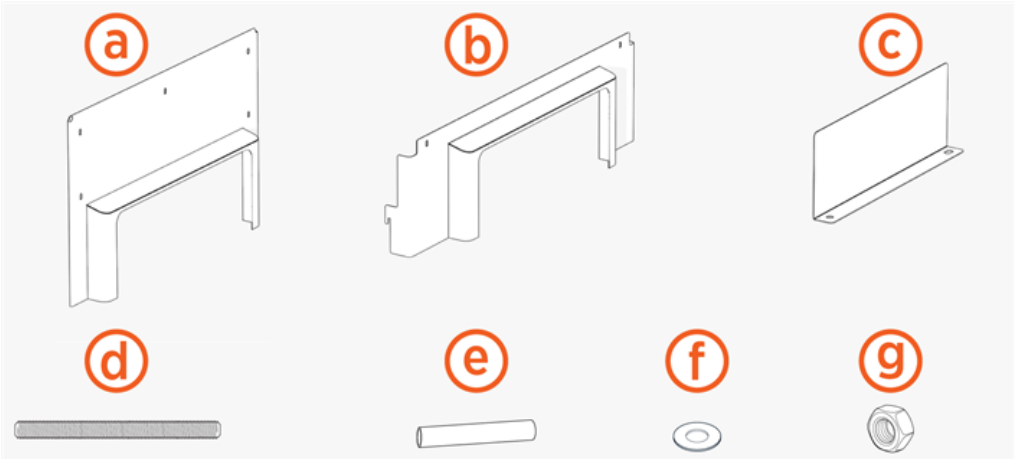
Purpose of SCE Kit

This SCE kit is for Express Plus Power Block in situations where the site cannot run conductors underground or the site is not using stub-up entry through Concrete Mounting Template (CMT) embedded in a concrete pad.

NOTE: This document is a supplement to the *Express Plus Installation Guide* instructions related to Power Block. Make sure to follow all instructions in the Installation Guide except for the ones about CMT and stub-up entry of wiring.

NOTE: The illustrations in this document are for demonstration purposes only. Make sure to install the SCE kit according to the proposed side of conduit entry in the site drawings.

SCE Kit Contents



a. Side cover (1) - for left or right side of the Power Block pedestal
b. Rear cover (1) - for rear side of the Power Block pedestal

> **NOTE:** Both side and rear covers are included in this kit. You will only need one of these depending on which side of the pedestal the conduits enter inside the Power Block. Replace the standard cover shipped with the Power Block with a suitable cover and dispose of the unused covers in accordance with local municipal recycling guidelines.

c. SCE gland plate (1)
d. M16 (5/8 in) anchor bolts (2) - for mounting SCE gland plate
e. M16 (5/8 in) spacer (2)
f. M16 (5/8 in) washer (6)
g. M16 (5/8 in) nut (6)

Tools and Materials Required

- Cut-resistant gloves
- Protective eyewear
- Marker
- Vacuum

For Installing Anchor Bolts

- Concrete drill with level feature recommended
- 25 mm (1 in) and 6 mm (1/4 in) concrete bits
- 24 mm (15/16 in) socket or open ended wrench
- 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.
- Paper towels

> **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.

- Level

For Installing Surface Conduit Entry

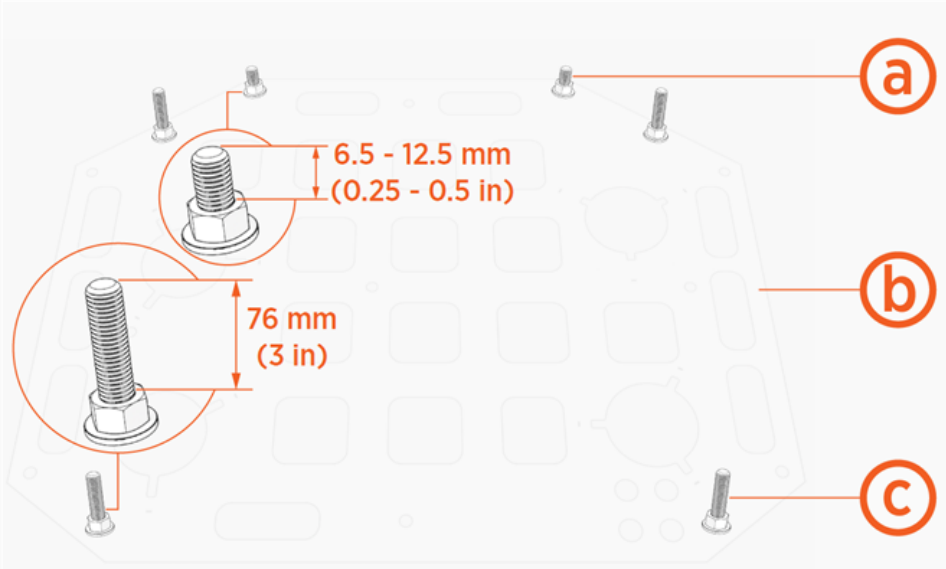
- Surface wireways: Refer to the *Express Plus Installation Guide* and site drawings to find out the wiring and conduit requirements.

> **NOTE:** A flexible conduit is recommended to route wiring from the SCE gland plate into the pedestal gland plate (i.e., gland plate installed on the pedestal).

- Sheet metal hole saw with pilot bit for conduit sizes listed in the *Express Plus Installation Guide*
- Cable puller or fish tape
- Tools for cutting, assembling, and securing wireways

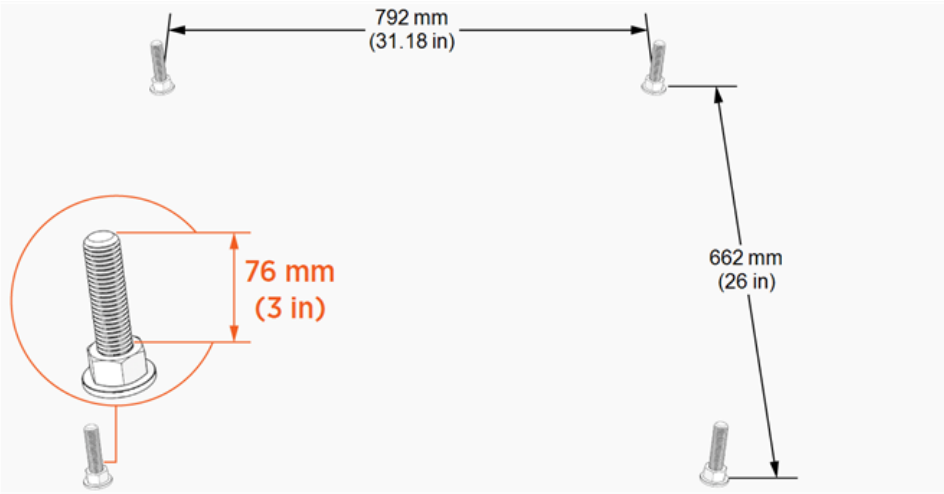
Before You Begin

- If CMT is used (i.e., embedded in concrete), make sure that the anchor bolts for the SCE gland plate and Power Block pedestal are installed according to the proposed side of conduit entry and mounting specifications in the site drawings.



a. Anchor bolts for SCE gland plate (example showing rear side conduit entry)
b. CMT embedded in concrete
c. Anchor bolts for Power Block pedestal

- If CMT is not used (i.e., not embedded in concrete):
  - Make sure that the anchor bolts for the Power Block pedestal are installed according to the mounting specifications in the site drawings.

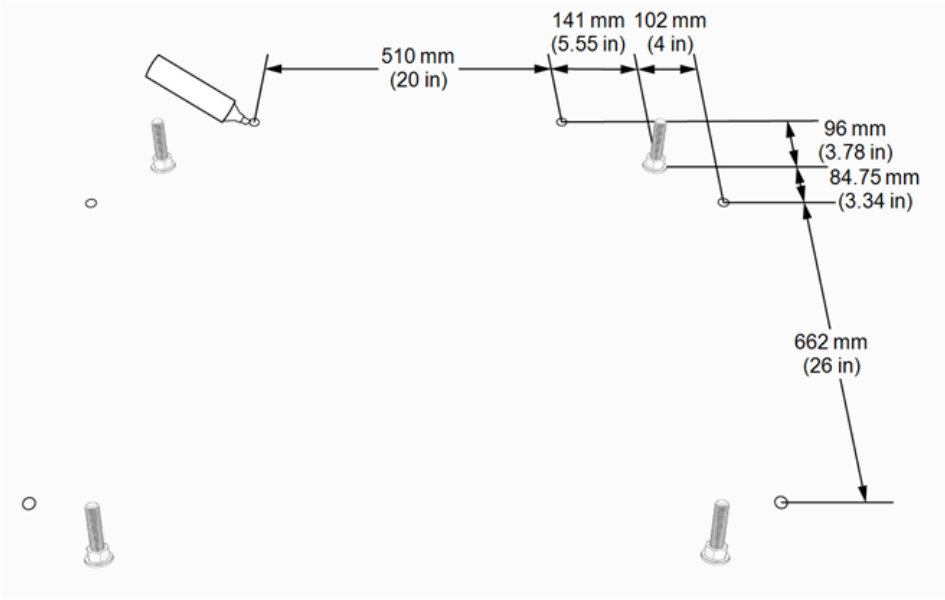


  - Refer to the site drawings to find out which side of the pedestal the conduits must enter inside the Power Block.
  - Make sure to dispose of the unused CMT in accordance with local municipal recycling guidelines.

Install Anchor Bolts

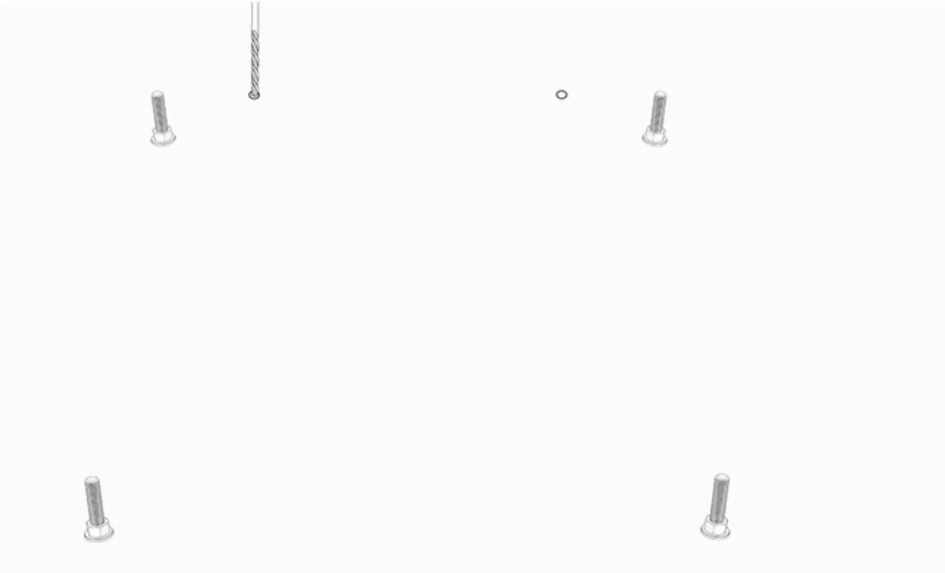
Skip this procedure if CMT is used and/or anchor bolts for the SCE gland plate are already installed.

1. Measure the locations for the SCE gland plate anchor bolts and mark them using a marker.



NOTE: The illustration above shows SCE gland plate anchor bolt locations at the left, right, or rear side of the Power Block. Measure the locations according to the proposed side of conduit entry in the site drawings. Also, make sure to leave enough clearance (i.e., 610 mm or 24 in) for servicing.

2. Use the 6 mm (1/4 in) concrete drill bit to drill a pilot hole about 51 mm (2 in) deep at the two marked locations. The holes must be parallel to each other and perpendicular to the surface.

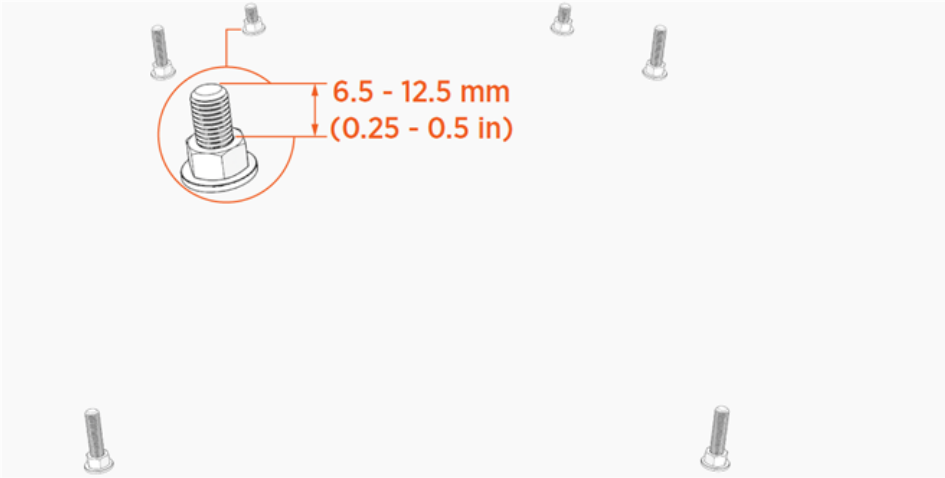


3. Use a vacuum to clean dust from holes.
4. Use the 25 mm (1 in) concrete drill bit to drill anchor holes a minimum of 229 mm (9 in) deep. Anchor bolts must have 127 mm +/- 12.7 mm (5 in +/- 1/2 in) above surface.
5. Thread a washer and a nut onto each anchor bolt so that the measurement from the top of the nut to the top of the bolt is between 6.5 - 12.5 mm (0.25 - 0.5 in).
6. Put a piece of tape above each nut to prevent it from floating upward when you rotate the bolt into the epoxy later.
7. Prepare the epoxy. Ensure the applicator is dispensing correctly mixed epoxy before beginning work (for example, the Hilti epoxy is white when unmixed and gray when mixed).
8. Fill the first anchor 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.

9. Insert the anchor bolt into the hole. Rotate the anchor bolt as you insert it to draw epoxy into the threads. Take out the anchor bolt to see how close to the surface the epoxy has filled. If the epoxy is below surface level, add enough to fill the hole to surface level. Use paper towels to wipe off any excess.

10. Measure the nut distance from the top of anchor bolt again and adjust if needed.



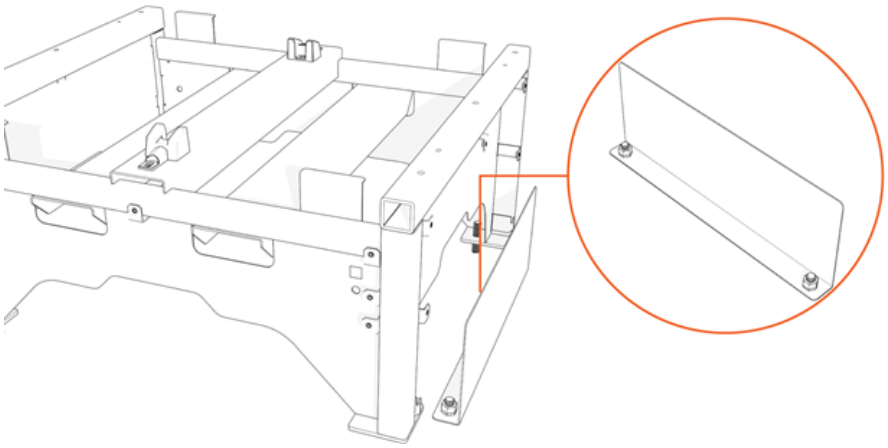
11. Use a level to check that the anchor bolt is plumb. If needed, adjust it while the epoxy is still setting.
12. Repeat the above epoxy steps for another anchor bolt.
13. Allow the epoxy to cure for the initial cure time listed on the epoxy before beginning to install the surface conduit entry.

Install Surface Conduit Entry

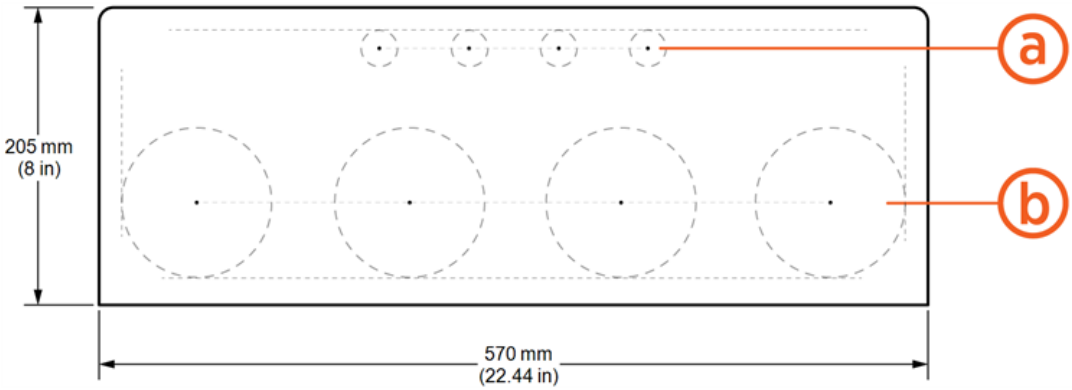
NOTE: You can install SCE before or after the installation of Power Block pedestal.

1. Install the SCE gland plate onto the anchor bolts. Make sure that the bent edge of the SCE gland plate is facing inwards to the Power Block pedestal.
2. Install one nut and washer onto each (i.e., two) anchor bolt and flush against the base.

   Torque to 54 Nm (40 ft-lb).



3. Refer to the *Express Plus Installation Guide* and site drawings to find out the proposed wiring and conduit requirements. Based on the proposed wiring and conduit requirements, draw a conduit layout to mark pilot hole locations on the SCE gland plate.

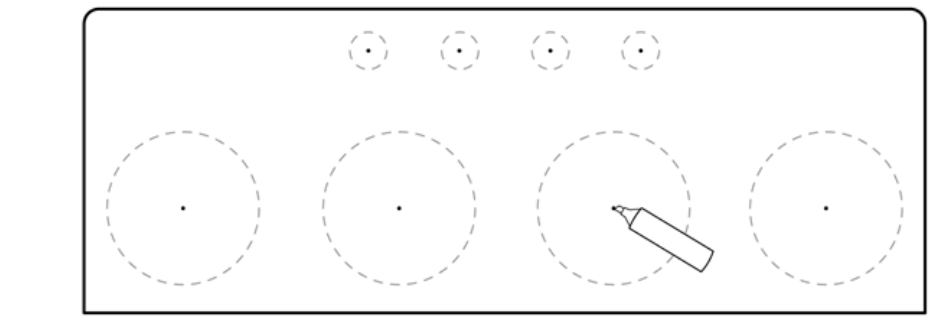


NOTE: The conduit layout shown below is for demonstration purposes only.

	Description	Maximum Size	No. of holes
a	Holes for 48 V DC and Ethernet conduits	21 mm (3/4 in)	1 - 4
b	Holes for AC input, DC output, or DC auxiliary input conduits	103 mm (4 in)	1 (AC input) 1 (DC auxiliary input) 1 or 2 (DC output)

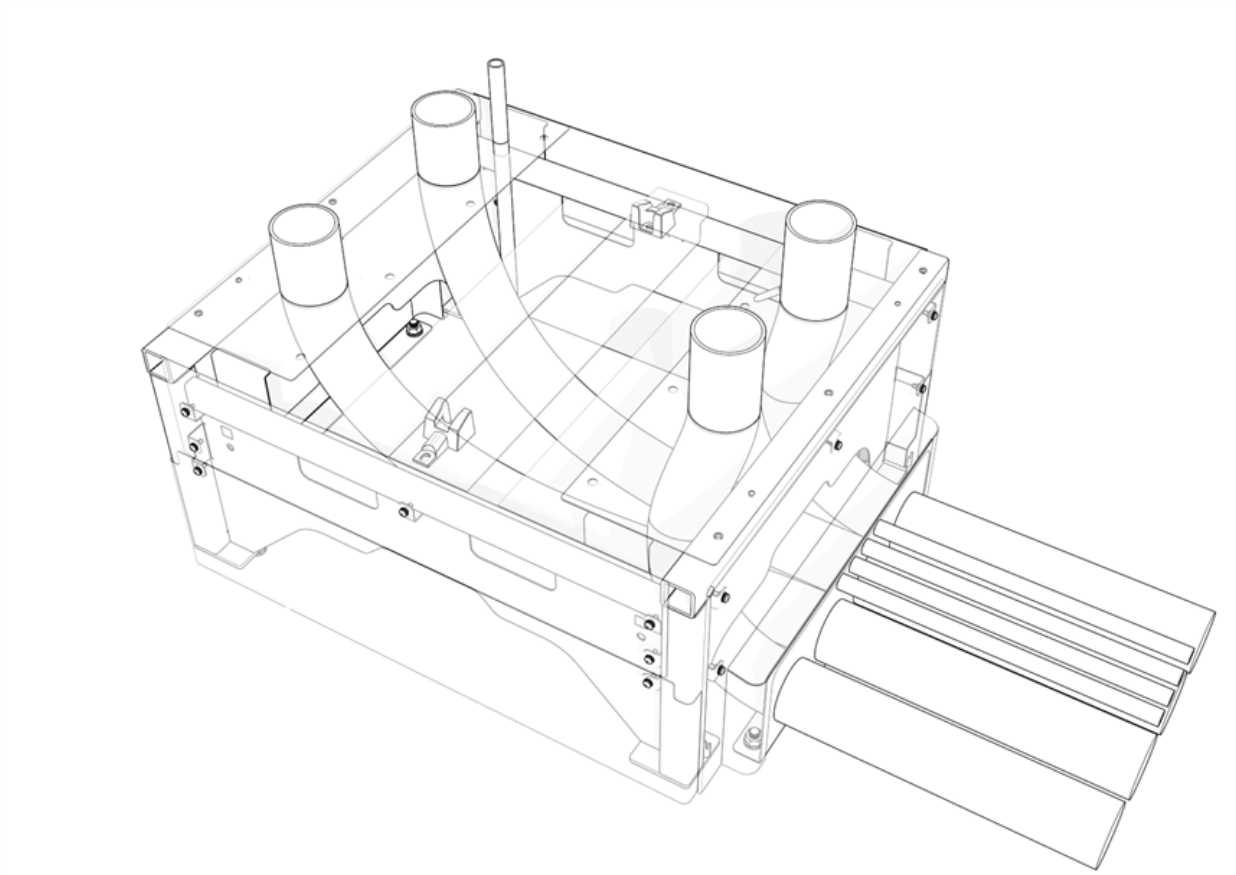
NOTE: Leave a minimum clearance of 15 mm (0.6 in) around the edges.

4. Use a marker to mark pilot hole locations on the SCE gland plate.



5. Use a suitable hole saw, position the hole saw's pilot bit on the marked location, and drill a hole into the SCE gland plate. Repeat for other marked locations.
6. Vacuum all metal shavings.

7. Use a flexible conduit to route wiring from the SCE gland plate into the pedestal gland plate.

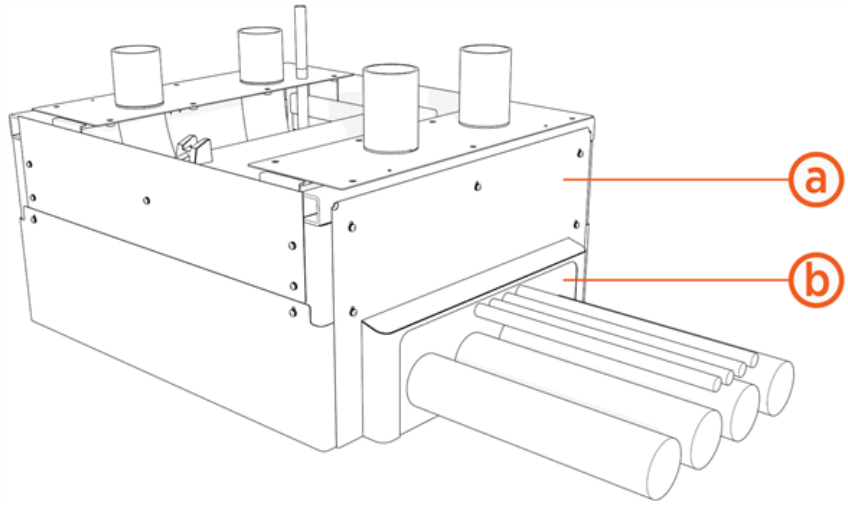


NOTE: Refer to the *Express Plus Installation Guide* to route and connect wiring inside the Power Block, and use the duct seal compound shipped with the Power Block to seal around each conduit inside the Power Block.

8. Install pedestal covers.

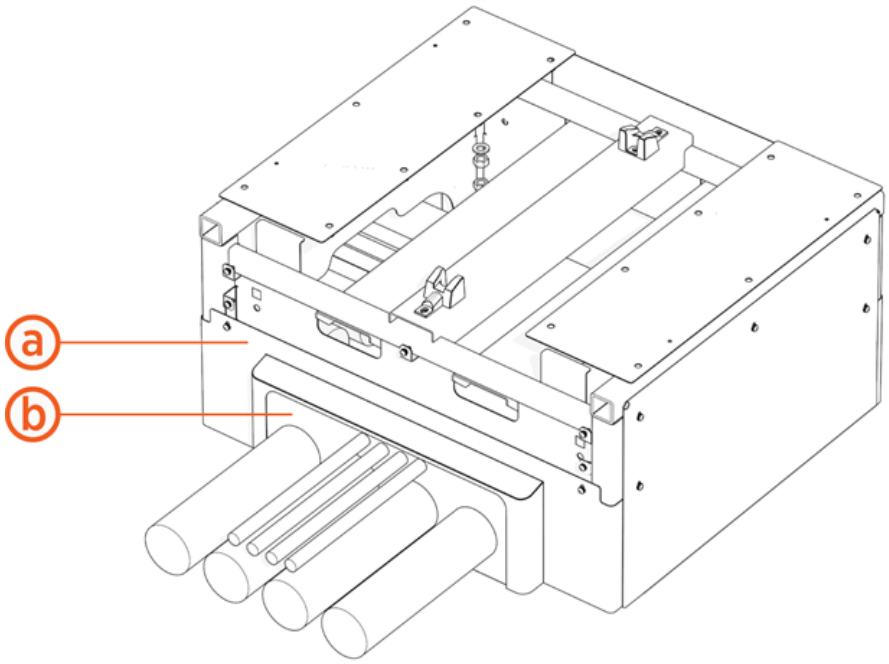
> **NOTE:** Reuse the screws shipped with the Power Block to install the pedestal covers. The installation instructions can be found in the *Express Plus Installation Guide*.

- If the SCE gland plate is installed on left or right side of the Power Block pedestal, use the side cover.



a. Pedestal side cover
b. SCE gland plate

- If the SCE gland plate is installed on rear side of the Power Block pedestal, use the rear cover.



a. Pedestal rear cover
b. SCE gland plate

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.

FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B 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 residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

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.

ISED (formerly Industry Canada)

This device complies with the licence-exempt RSS standard(s) of Innovation, Science and Economic Development Canada (ISED). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Cet appareil est conforme aux flux RSS exemptés de licence d'Innovation, Sciences et Développement économique Canada (ISDE). L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter.

Radiation Exposure Statement: This equipment complies with the IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.

Énoncé d'exposition aux rayonnements: Cet équipement est conforme aux limites d'exposition aux rayonnements ioniques RSS-102 Pour un environnement incontrôlé. Cet équipement doit être installé et utilisé avec un Distance minimale de 20 cm entre le radiateur et votre corps.

FCC/IC Compliance Labels

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