



Express 280

DC Fast Charging Station

Installation Guide for Standalone and Paired Stations



IMPORTANT SAFETY INSTRUCTIONS

SAVE THESE INSTRUCTIONS

WARNING:

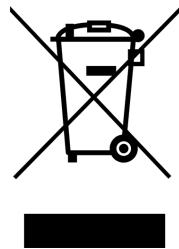
- 1. Read and follow all warnings and instructions before servicing, installing, or operating the ChargePoint® charging station.** Install and operate only as instructed. Failure to do so may lead to death, injury, or property damage, and will void the Limited Warranty.
- 2. Only use licensed professionals 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. **Only use licensed professionals certified by ChargePoint for installation and service, adhere to all national and local building codes and standards, and ensure compliance** with local building and electrical codes and standards, climate conditions, safety standards, and all applicable codes and ordinances. 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 Class 1 hazardous locations, such as near flammable, explosive, or combustible vapors or gases.**
- 6. Supervise children near this device.**
- 7. Do not put fingers into the electric vehicle connector.**
- 8. Do not use this product if any cable is frayed, has broken insulation, or shows any other signs of damage.**
- 9. Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open, or shows any other signs of damage.**
- 10. Use only copper conductor wire rated for 90 °C (194 °F).**



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

Product Disposal

Do not dispose of as part of unsorted domestic waste. Inquire 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.com/guides.

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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



Read the manual for instructions



Ground/protective earth

Illustrations Used in This Document

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

Contents

Important Safety Instructions	ii
1 Prepare for Installation	1
ChargePoint Documentation	1
Check Site Readiness	3
Check Express 280 Shipping Crates	7
Bring These Tools and Materials	11
2 Secure Charging Station	16
Disconnect Power	16
Prepare Mounting Pad	18
Unpack the Station	20
Prepare the Station	23
Position the Station	34
Level and Secure the Station	37
3 Connect AC Wiring	40
Route Ground Wire and AC Conductors	40
Trim Wires and Connect Ground Wire	42
Connect AC Conductors	46
4 Pair Express 280 Stations	55
Route DC Conductors	55
Connect the DC Conductors	60
Connect Ethernet Wiring	65
Install Rating Labels	70
5 Install Side Panels, Power Modules, and the Touchscreen	72
Install the Side Panels	72
Install the Power Module	77
Install the Touchscreen	82
Fill the Coolant Reservoir	85

6 Install Cable Management Kits (CMK)	88
Install the Mast - Standard and Tall CMK	88
Install the Swingarm Assembly - Standard CMK	90
Install the Tool Balancer Assembly - Tall CMK	92
Install the CMK Covers - Standard and Tall CMK	93
7 Install Cables, Top Cap, and Front and Rear Panels	95
Install the Cables	95
Suspend the Charging Cable	103
Install the Top Cap	108
Install the Rear Cover Panels	110
Install the Front Cover Panels	113
Install the Area Light Bar	117
8 Set Up Express 280	119
Power On	119
Set Up Express 280	120
9 Recommended Checklist	122
Third-Party Service Providers	124
Questions	124
A Install Surface Conduit Entry Box	125
Prepare the Surface Conduit Entry (SCE) Box Base	126
Attach SCE Box Base	127
Install the SCE Box Cover	130

Prepare for Installation 1

This document describes how to install a ChargePoint® Express 280 DC fast charging station. An Express 280 can be installed to operate by itself (called “Standalone”) or to share power with one other Express 280 for higher throughput (called “Paired”).

IMPORTANT: You must be a licensed electrician and complete online training to become a ChargePoint certified installer. If you do not complete training, you cannot access the ChargePoint network to complete installation.



Find online training at: chargepoint.com/installers

If the charging station is not installed by a ChargePoint certified installer, using a ChargePoint approved method, it is not covered under warranty and ChargePoint is not responsible for any malfunctions.

ChargePoint Documentation

Access ChargePoint documents at chargepoint.com/guides.

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
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	Service technician

ChargePoint Documentation

Document	Content	Primary Audiences
	procedures, including optional components	
Declaration of Conformity	Statement of conformity with directives	Purchasers and public

ChargePoint Documentation (continued)



CAUTION: Use low torque settings when working with power tools during installation or servicing. Over-torquing can damage the equipment.



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

Note: For all charging station specifications other than dimensions and weights, refer to the product's Datasheet found online at chargepoint.com/guides.

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

Installing the Express 280 requires two people and takes approximately 3-4 hours. This time estimate does not include the time needed to pull DC and Ethernet cable for a Paired installation if it is not already done. Paired installation also requires contacting a ChargePoint support technician to perform any required software updates and configuration.



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

Check Site Readiness

The Express 280 is installed on a concrete pad. Details on how to prepare this pad are described in the *Express 280 Site Design Guide*.



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 the following civil and mechanical requirements:

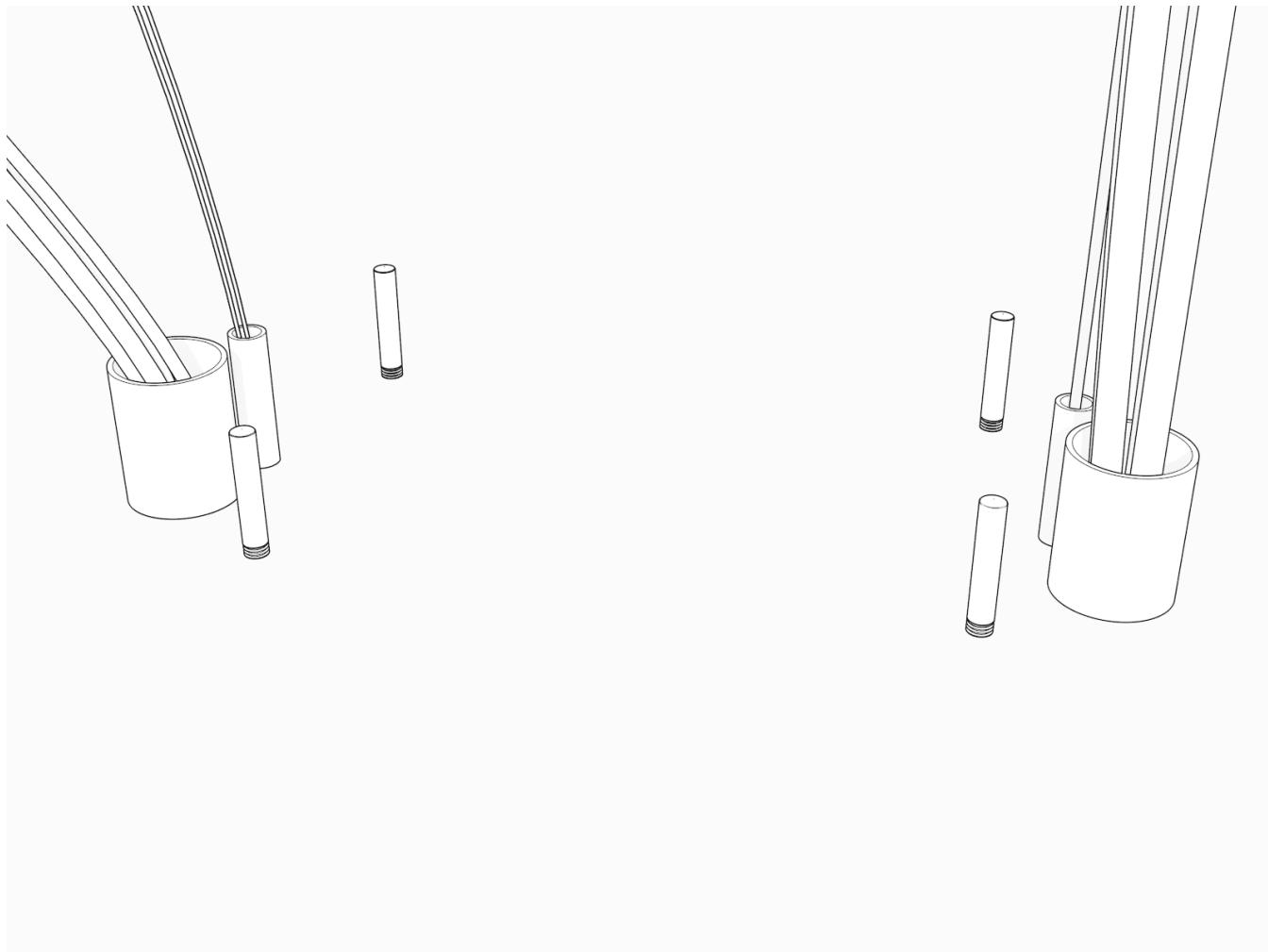
- The concrete pad is ready and the concrete is fully cured and level.
- The concrete pad either has a site drawing approved by a structural engineer for this specific site, OR conforms to these specifications:
 - At least 305 mm (12 in) deep (or deep enough to be 305 mm (12 in) below the frost line)
 - At least 1296 mm (51 in) on each side
- Walls, fences, or slopes do not prevent water from draining from the pad.
- 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.
- Enough space is available 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.

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

Confirm Anchor Bolt and Conduit Placement

Ensure the following:

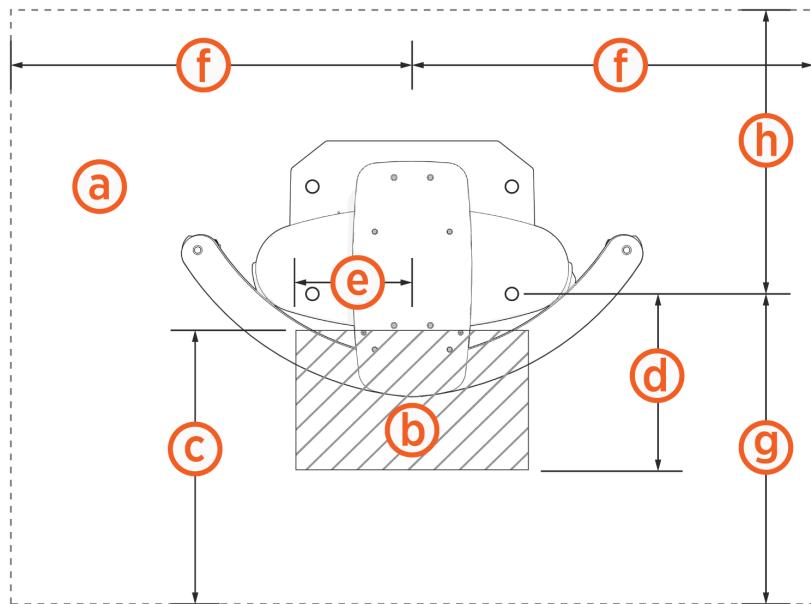
- Standalone installations require two conduit stub-ups on the left side for AC wiring and shunt trip wiring.
- Paired installations also require conduit stub-ups on the right side for DC wiring and Ethernet connection.



For information about the Concrete Mounting Template, refer to the *Express 280 Site Design Guide* available on chargepoint.com/guides.

Check Clearances

The Express 280 requires the following minimum functional and service clearances:



- Service clearance of open space (not necessarily at system grade)
- Power Module service clearance (at grade, measured from station front): 330.2 mm (1 ft 1 in)
- Front service clearance (measured from station front): 609.6 mm (2 ft)
- Power Module service clearance (measured from front anchor bolt): 383 mm (1 ft 3.1 in)
- Power Module service clearance (measured from station center): 290 mm (11.4 in)
- Side service clearance (measured from station center): 1072 mm (3 ft 6 in)
- Front service clearance (measured from front anchor bolt): 510 mm (1 ft 8.1 in)
- Rear service clearance (measured from front anchor bolt): 663 mm (2 ft 2.1 in)

Allow 26 mm (1 in) clearance above the station if installing a Cable Management Kit (CMK).

Note: Listed side clearances are the minimum required for operation and service. For paired charging stations, the bend radius of the DC cable and conduit might require spacing them further apart.

Note: Rear clearance must be at grade level +/- 25 mm (1 in).



IMPORTANT: Remove any concrete that is not level with the rest of the surface so you can level the components. Use a grinder or a hammer and chisel to remove any bumps in the concrete.

Confirm Electrical Requirements

Ensure these electrical requirements are in place at the installation site:

- Appropriate circuit protection and metering.
- 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 station, per this table:

Nominal Voltage	Max AC Current	Circuit Breaker Size
480 VAC	100 A	125 A (125% continuous load required by National Electrical Code NEC guidelines)

Nominal Voltage and Circuit Breaker Size

- Breakers have shunt trip capability if the site drawing calls for shunt trip wiring.
- All necessary electrical infrastructure has been completed per local codes and ChargePoint specifications for 3-phase WYE power plus ground with properly sized wire at the station. Neutral is not required for system operation; however, neutral ground bonding is required within the transformer or Main Distribution Panel (MDP), whichever is feeding the charging station.

	Voltage Rating	Temperature Rating	Maximum Conductor Size for Terminals
Phase conductors	600 V	90 °C	1/0 AWG
AC ground conductor	600 V	90 °C	6 AWG

Maximum Conductor Sizes

- Cellular signal strength is consistently strong to allow installation and station operation. Use a cellular signal detection device (such as a Snyper, Octopus, or similar) to ensure the signal is -85 dBm or better. (Note that these numbers are negative, so -70 dBm is stronger than -85 dBm, and -90 dBm is weaker.) If the signal is below -85 dBm, install multi-carrier, multi-band repeaters to boost signal strength. Repeaters are often required for installations in underground garages or enclosed parking structures.
- **Paired only:** All four DC copper conductors are installed between stations as follows:

	Voltage Rating	Temperature Rating	Maximum Conductor Size for Terminals	Insulation Type
DC power conductors	1000 V	90 °C	300 Kcmil, 1x per pole	XHHW-2

DC Conductor Details

- **Paired only:** Outdoor rated Ethernet Cat5e or Cat6 cable, without terminations, is pulled between the two stations with 3 m (10 ft) of service loop at each end.

Refer to the *Express 280 Datasheet* and *Express 280 Site Design Guide* for more information about site specifications.



IMPORTANT: The Express 280 charging station 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.

Check Express 280 Shipping Crates

Each Express 280 ships in between five and seven crates. Ensure you have all crates at the installation site.

Contents	Max. Shipped Dimensions	Max. Shipped Weight*
Express 280 charging station	2387.6 x 1054.1 x 806.45 mm (94 x 41-1/2 x 31-3/4 in)	310 kg (685 lbs)
Power module crate with 1 power module	901.7 x 571.5 x 368.3 mm (35-1/2 x 22-1/2 x 14-1/2 in)	50 kg (110 lbs)
Power module crate with 2 power modules	901.7 x 571.5 x 676.40 mm (35-1/2 x 22-1/2 x 26-1/2 in)	98 kg (215 lbs)
Cable Management Kit (standard)	1121 x 654 x 241-1/3.3 mm (44 x 25-3/4 x 9-1/2 in)	25 kg (55 lbs)
Cable Management Kit (tall, optional)	1372 x 381 x 407 mm (54 x 15 x 16 in)	45 kg (100 lbs)
Holster and cable 6 m	600 x 600 x 150 mm (23-1/2 x 23-1/2 x 6 in)	24 kg (53 lbs)
Holster and cable 9 m	600 x 600 x 150 mm (23-1/2 x 23-1/2 x 6 in)	33 kg (73 lbs)
Concrete Mounting Template	1117.6 x 838.2 x 914.4 mm (44 x 33 x 36 in)	9.5 kg (21 lbs)

*Includes the weight of the crate; see the Express 280 Datasheet for the weight of the component.

Shipping Crate Dimensions and Weights

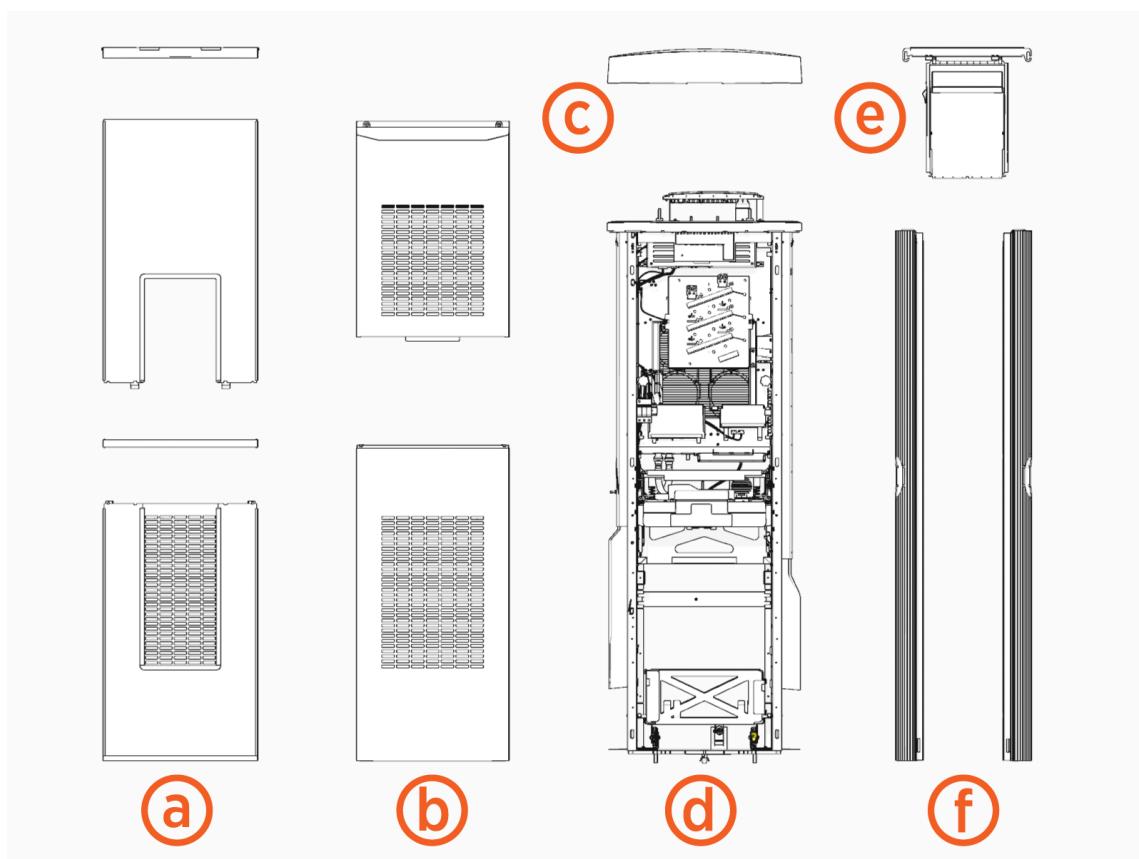


IMPORTANT: Always transport and store the Express 280 in its original packaging. Use appropriate lifting equipment (forklift, crane and lifting straps, etc.). Ensure the load rating of all lifting equipment is adequate for the weight of the crated Express 280 as shown above.

Express 280 Charging Station Box Contents



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.



(a) Front panels and light bar

(b) Rear panels

(c) Top cap

(d) Express 280 main body

(e) Touchscreen

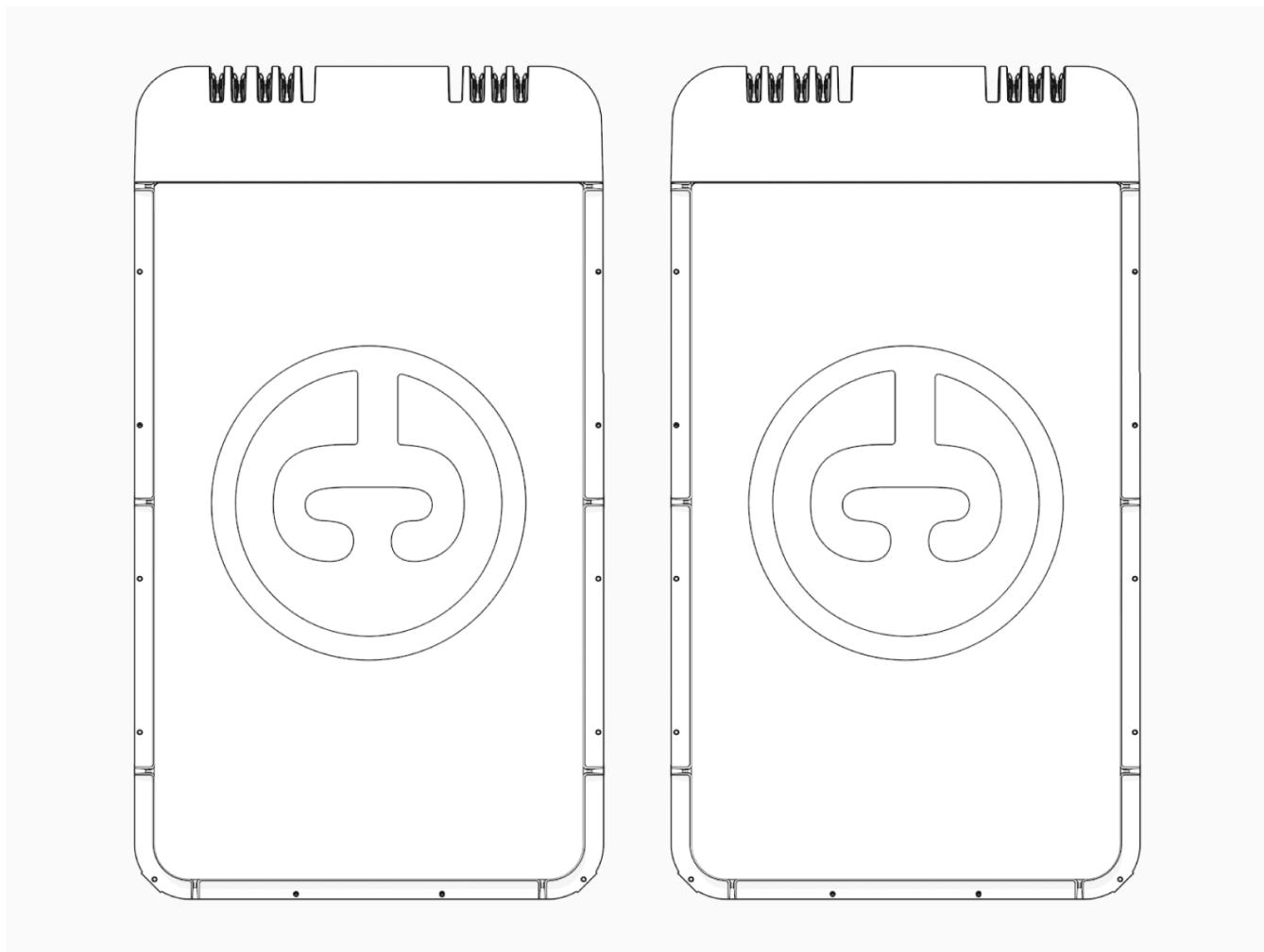
(f) Side panels

ChargePoint also provides the following (not shown):

- Coolant funnel
- 2.5 cm x 183 cm (1 in x 6 ft) lifting straps

Power Module Box Contents

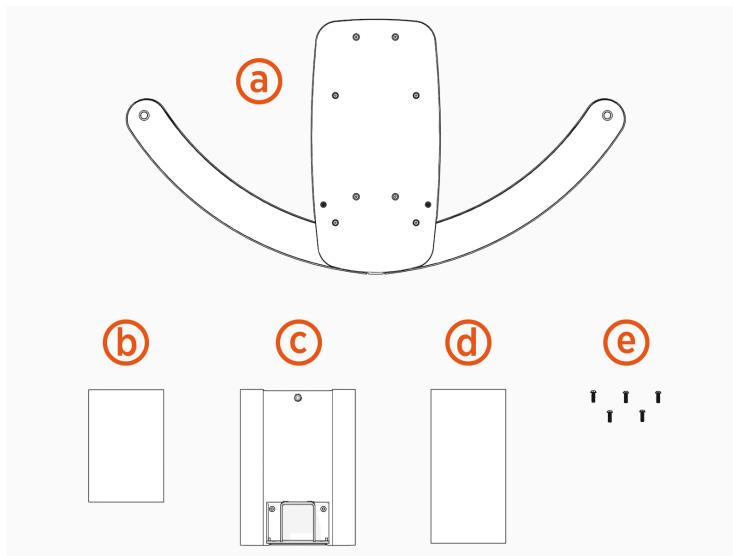
Power Module crates can hold one or two Power Modules.



CAUTION: Always rest a Power Module flat on the ground until it is being installed. Power Modules are not stable in any other position. Images of Power Modules standing with the handles on top only illustrate the proper installation position.

Standard Cable Management Kit (CMK) Box Contents

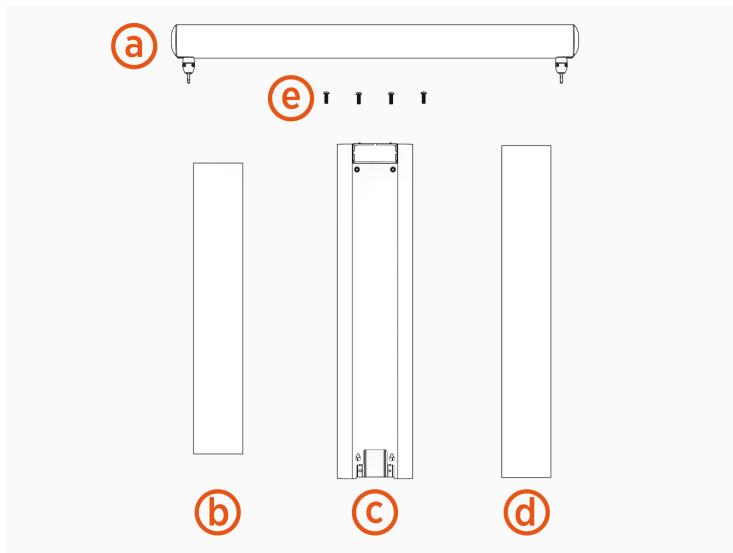
Check the standard CMK package for the following components:



- (a) Swingarm assembly
- (b) CMK front cover
- (c) Mast
- (d) CMK rear cover
- (e) M6 hex screws (5)

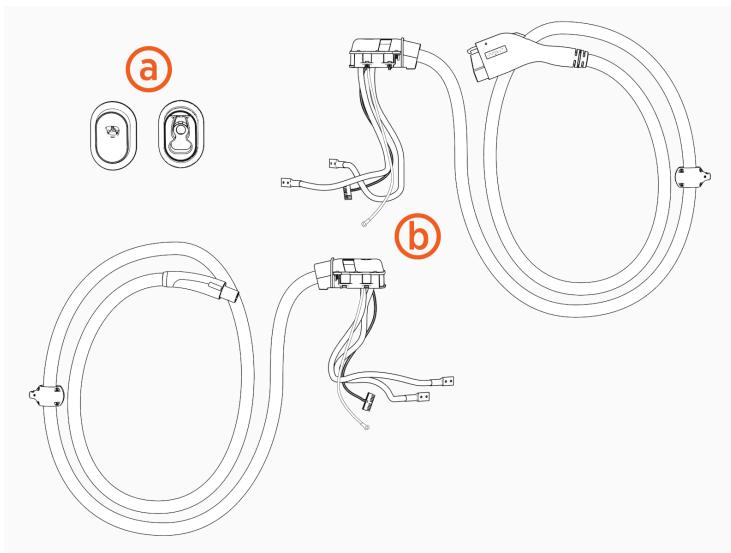
Tall Cable Management Kit (CMK) Box Contents (Optional)

Check the tall CMK package for the following components:



- (a) Tool balancer assembly
- (b) Front cover
- (c) Mast
- (d) Rear cover
- (e) M10 hex screws (x4)

Holster and Cable Box Contents



- (a) Holsters
- (b) Smart cables

Bring These Tools and Materials

Installing the Express 280 requires at least two people . Additionally, the approved installer must bring the following tools and materials. These are not provided by ChargePoint.



CAUTION: Comply with these guidelines to prevent component damage.

- Use tools suitable to torque metric standard fasteners. All fasteners used on the Express 280 are in metric standard.
- Use the given torque values to tighten the fasteners.
- Ensure that the tools such as torque tool, multimeter, and Ethernet tester are calibrated.



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



Lock out/tag out equipment



Cut-resistant gloves

	Safety glasses		Head lamp
	Measuring tape or other tool to measure height, length, and distance		Level
	Torx wrench set <ul style="list-style-type: none"> • T20 • T25 • T27 		Torx security wrench <ul style="list-style-type: none"> • T25
	Torque wrenches for 4 to 95 Nm (3 to 70 ft-lb)		Adjustable wrench
	Socket wrench set including deep sockets, up to 25 mm		Cable puller or fish tape
	Socket extension, 4 in		Screwdriver, flat blade SL4
	Multimeter with Cat III 1000 V ratings, such as Fluke 87V or similar		Paired stations only - Ethernet tester such as a Klein Tools VDV526-052 VDV LAN Scout Jr. Tester or similar
	Wire strippers, including Ethernet (Cat6 STP) cable		Paired stations only - Ethernet (RJ45) connector crimping tool
	Wire cutters, including Ethernet (Cat6 STP) cable		Lug crimping tool
	Isopropyl wipes and towel roll		Duct seal compound
	Wire brush (to remove concrete from bolts)		Broom and vacuum
	Conduit cutters (to cut up to 4 inch conduits)		Cable ties



Smartphone with Internet connectivity



QR code scanner (usually built into the camera app)



ChargePoint installer login credentials



Exact location of stations or units, including parking space

- AC lugs (x3):
 - All lugs must be nickel, tin, or silver plated copper compression (not mechanical) lugs
 - Holes for an M6 (1/4 in) stud at 19 mm (3/4 in) stud hole spacing
 - Maximum width 30 mm (1.18 in)
- AC grounding lug, crimp or mechanical
- If not already installed for this site, and if applicable for local code requirements, shunt trip wiring: size 0.08 to 2.5 mm² (28 to 14 AWG), fine stranded or solid
- If not already installed for this site, AC and ground conductors with these specifications:

Voltage Rating	Temperature Rating	Maximum Conductor Size for Terminals
Phase conductors - 600 V	90° C	1/0 AWG
Ground conductor- 600 V	90° C	6 AWG

AC and Ground Conductor Specifications

If this is a Paired installation, the certified installer also needs these tools and materials:

- Cable puller or fish tape
- DC conductors (x4):
 - 2 positive and 2 negative conductors; 1 positive and 1 negative in each direction
 - Copper only, minimum current carrying capacity 200 A and 1000 V rated
 - DC cable run must be continuous. Do not splice DC cables
 - Consult site drawings for site-specific conductor size and length
 - Leave 61 cm (2 ft) of each conductor above grade at each end

Voltage Rating	Temperature Rating	Maximum Conductor Size for Terminals	Insulation Type
Phase conductors - 1000 V	90° C	300 kcmil, 1x per pole	XHHW-2

DC Conductor Specifications

- DC lugs (x4):
 - All lugs must be nickel, tin, or silver plated copper compression (not mechanical) lugs
 - 2-hole lugs, 1 in spacing, 3/8 in hole size, and 1.23 in max tongue width

- DC cable lug crimper and die that is compatible with lug size and brand
Note: The lug die and crimp tool must match the lug manufacturer. Always review the lug manufacturer's instructions for compatibility.
- Multimeter with toner attachment, such as Fluke 117 or similar
- Permanent marker
- Torque paint pen
- Ethernet wiring for DC (paired stations only):
 - Minimum of CAT5e or better
 - Outdoor or plenum rated wiring
 - Maximum run length of 100 m (328 ft)
 - Leave 3.2 m (10.5 ft) of wire above grade at each end
 - Field crimp using straight-through pattern T-568B
- Ethernet crimp tester capable of testing for correct T-568B (split pair) pattern, such as a Klein Tools VDV526-052 VDV LAN Scout Jr. Tester or similar

Torque Values

Component	Fastener	Qty	Tool	Torque
Enclosure Body Anchor top nuts	Nut, M16x2.0, 13 mmTHK, Hex, Grade DH, HDG	12	24 mm (15/16 in) socket wrench	94.9 Nm (70 ft-lb)
Rodent Guard Bracket	Screw, M5x0.8, 8 mm length, But Hd, Torx, T-25, SS, Patch	4 (2 per side)	T25 Torx screwdriver	4.5 Nm (40 in-lb)
AC Conductors (L1, L2, L3) Lugs	Nut, KEPS, M6x1.0, 7.5mm thick, Conical Washer, Steel, Zinc	6	10 mm (3/8 in) socket wrench	5.6 Nm (50 in-lb)
DC Conductors	NUT, M8x1.25, 8.8mm thick, KEPS, CONICAL WASHER, Steel, Zinc	8	13 mm (1/2 in) socket wrench	6.8 Nm (60 in-lb)
Holsters	Screw, M6x1.0, 8 mm length, PanHd, Torx, T-25, EXT SEMS 2, SS, Patch	2	T25 Torx screwdriver	2.8 Nm (25 in-lb)
Side Panels	[Use captive screws in Frame]	6	T25 Torx screwdriver	2.8 Nm (25 in-lb)
CMK Mast (top 2)	Screw, M6x1.0, 10 mm length, ButWasHd, Torx, T-25, STL, Zinc	2	T25 Torx screwdriver	5.6 Nm (50 in-lb)
CMK Mast (bottom 4)	Screw, M6x1.0, 22 mm length, ButHd, Torx, T-30, SS, Patch	4	T30 Torx screwdriver	5.6 Nm (50 in-lb)
CMK Swingarm	Screw, M6x1.0, 10 mm length, ButWasHd, Torx, T-25, STL, Zinc	5	T25 Torx screwdriver	5.6 Nm (50 in-lb)
Charge Cable Housing	Screw, M6x1.0, 20 mm length, LowCap, Torx, T-25, SS	4 per charge	T25 Torx screwdriver	4.5 Nm (40 in-lb)

Torque Values

Component	Fastener	Qty	Tool	Torque
		cable		
Charge Cable Nuts	Nut, KEPS, M6x1.0, 7.5mm thick, Conical Washer, Steel, Zinc	4 per charge cable	10 mm (3/8 in) socket wrench	5.6 Nm (50 in-lb)
Charging Cable	[Use captive screw in tetherball]	1	T25 Torx screwdriver	2.8 Nm (25 in-lb)
Top Cap	M5x0.8, 16mm length, PanHd, Torx, T-25, SS, Patch	4	T25 Torx screwdriver	2.8 Nm (25 in-lb)
Front Lower Panel Screw	M5x0.8, 10 mm length, PanHd, Torx, T-25, SS, Patch	2	T25 Torx screwdriver	2.8 Nm (25 in-lb)
Rear Lower Panel Screw	M5x.08, 14 mm length, PanHd, Torx, T-25, SS, Patch	2	T25 Torx screwdriver	2.8 Nm (25 in-lb)
Front & Rear Upper Panels	Captive screw in sheet metal panel	2	T25 Security Torx Screwdriver	2.8 Nm (25 in-lb)
Area Light Bar	2 Screws, captured (Screw, M4x0.7, 12 length, Captive, TR-Torx, T-25, SS, Patch)	2	T25 Security screwdriver	2.8 Nm (25 in-lb)

Torque Values (continued)

Secure Charging Station 2

Follow these instructions to anchor each Express 280 charging station.



CAUTION: To protect the charging cables from damage, keep them wrapped throughout the installation process.



IMPORTANT: If the site has height constraints for installation, contact ChargePoint to get instructions and clearances that you will need for the modified process.

Alternatively, you may use a forklift bracket kit, or a crane with lifting shackles and a spreader bar (constraints may differ among sites).

Disconnect Power



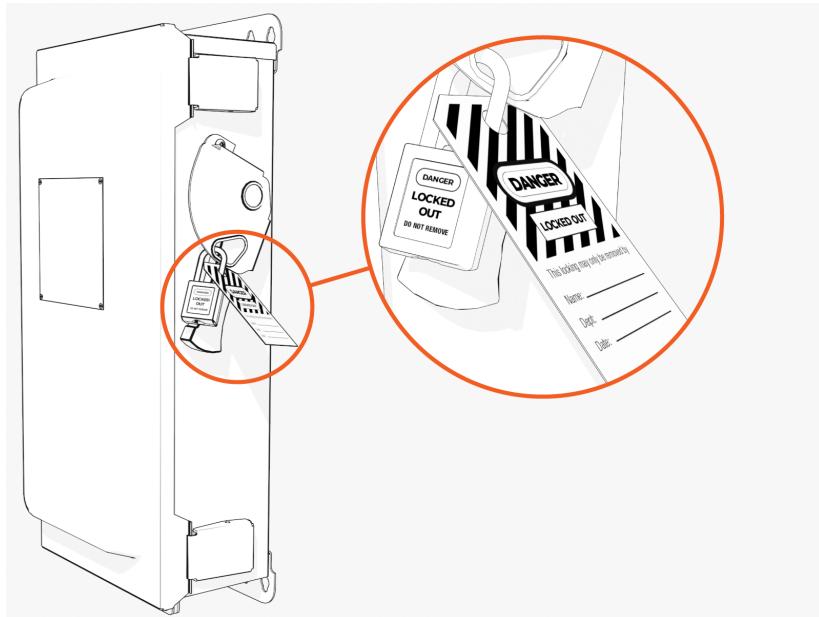
DANGER: RISK OF SHOCK

- 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.

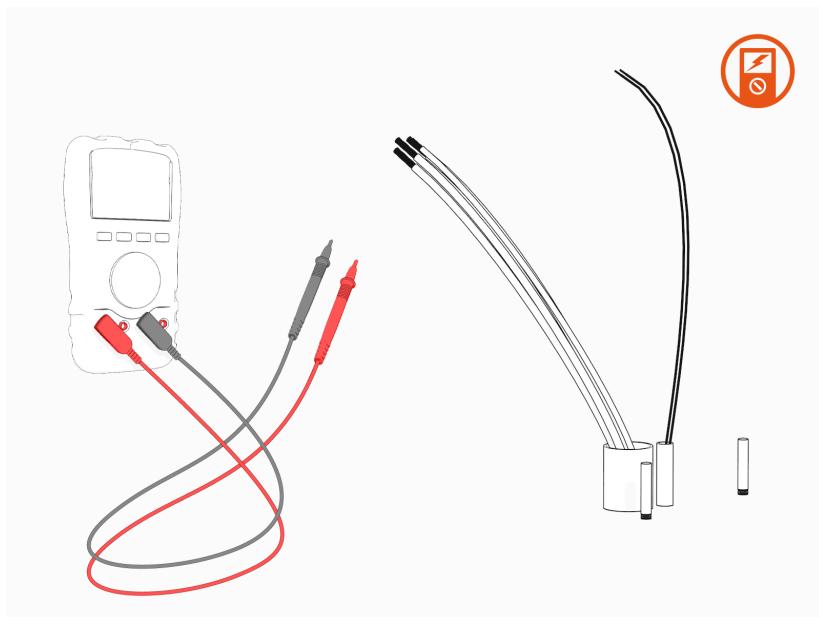
FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY, LOSS OF LIFE, OR PROPERTY DAMAGE.

1. Disconnect power at the site electrical panel.

Note: Follow standard practice and local code to de-energize the applicable circuit and lockout/tagout the disconnect before proceeding.

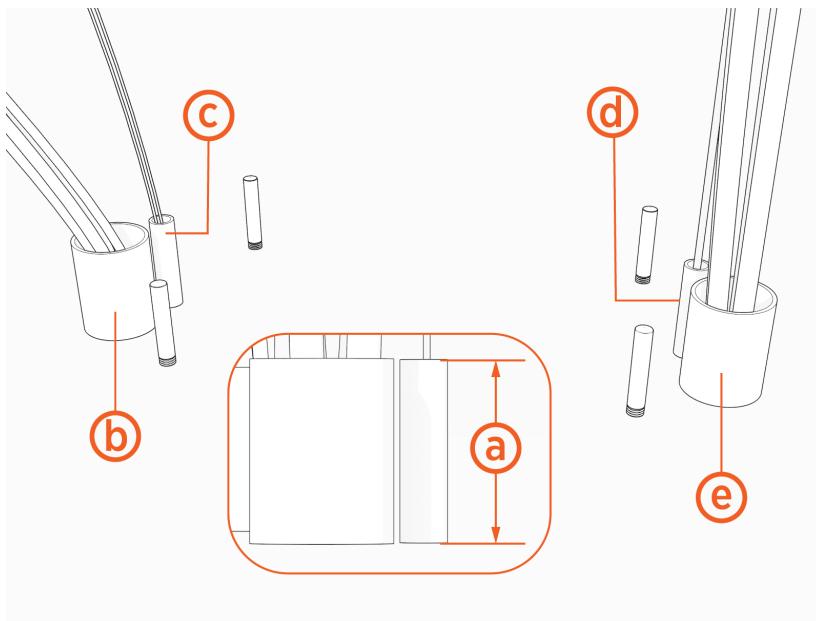


2. Use a multimeter to test that the unit is de-energized.



Prepare Mounting Pad

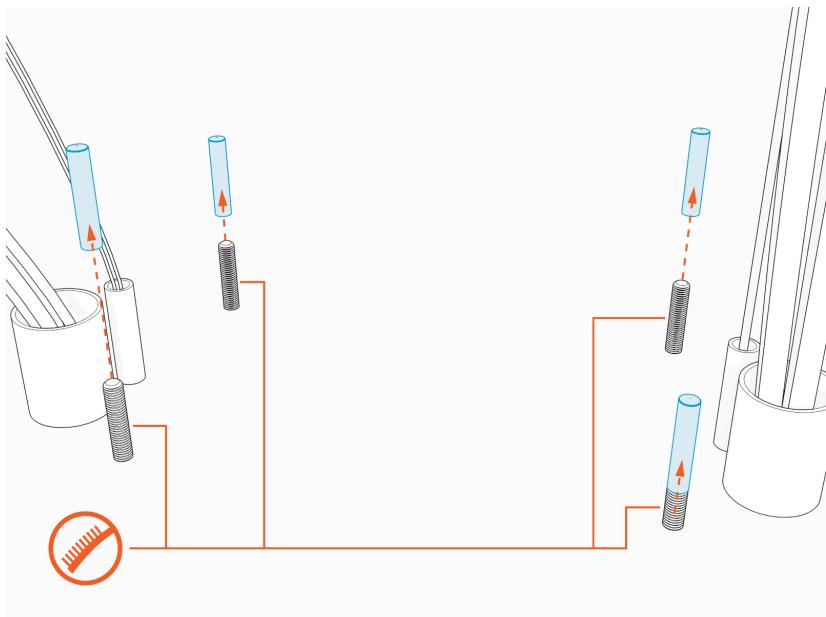
1. Ensure AC and DC conduit stub-ups (if applicable) are 76.2 mm (3 in) (a) above grade.



- (a) All conduit must be cut to 76.2 mm (3 in) above grade
 - (b) AC wiring conduit (max 76.2 mm / 3 in trade size)
 - (c) Shunt trip wiring (max 19.1 mm / 3/4 in size)
 - (d) Ethernet conduit (max 19.1 mm / 3/4 in size)
 - (e) DC wiring conduit (max 76.2 mm / 3 in trade size)
2. If not already done, pull service wiring through the conduit in the installation pad as described in the *Express 280 Site Design Guide*.

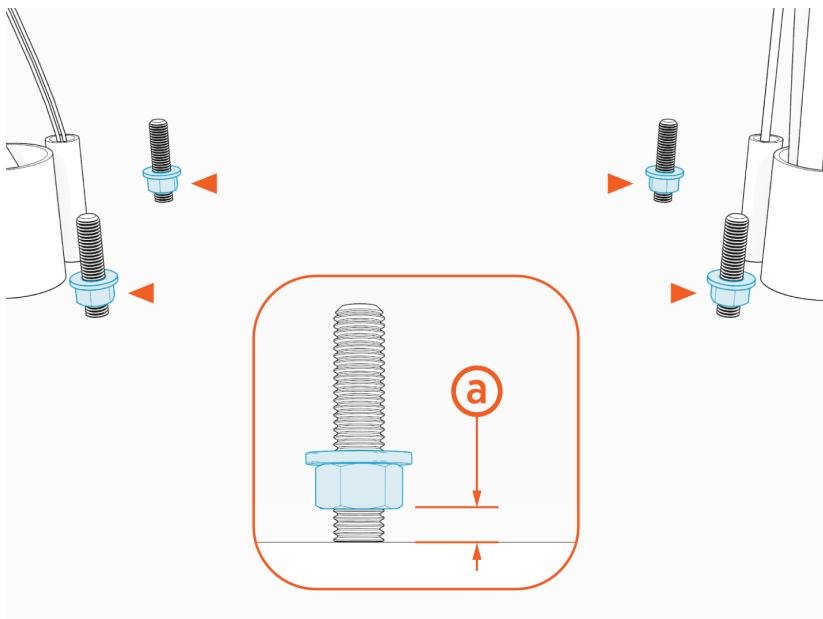
3. Remove the plastic caps.

Use a wire brush to clean bolt threads.

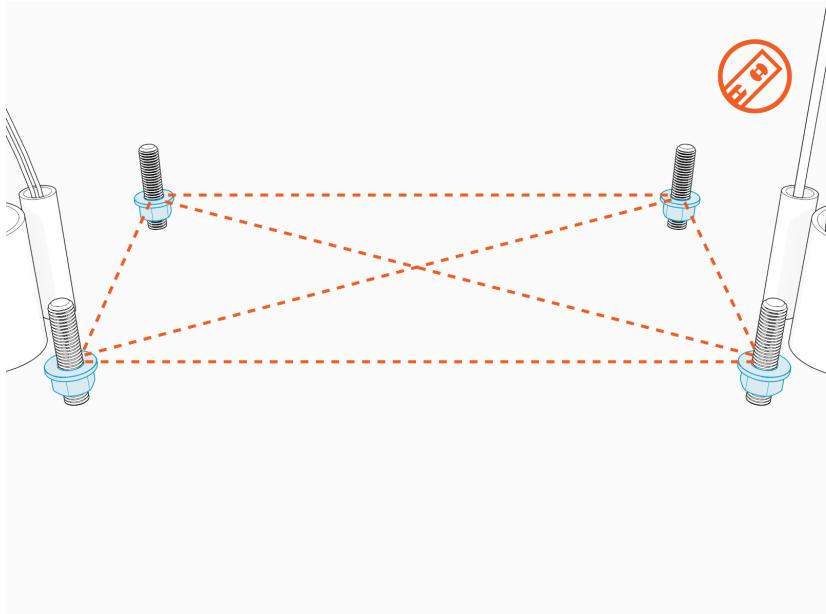


4. Install leveling nuts and washers onto the bolts.

Maintain a space of ~6.4 mm (1/4 in) (a) between the bottom of each leveling nut and the concrete.

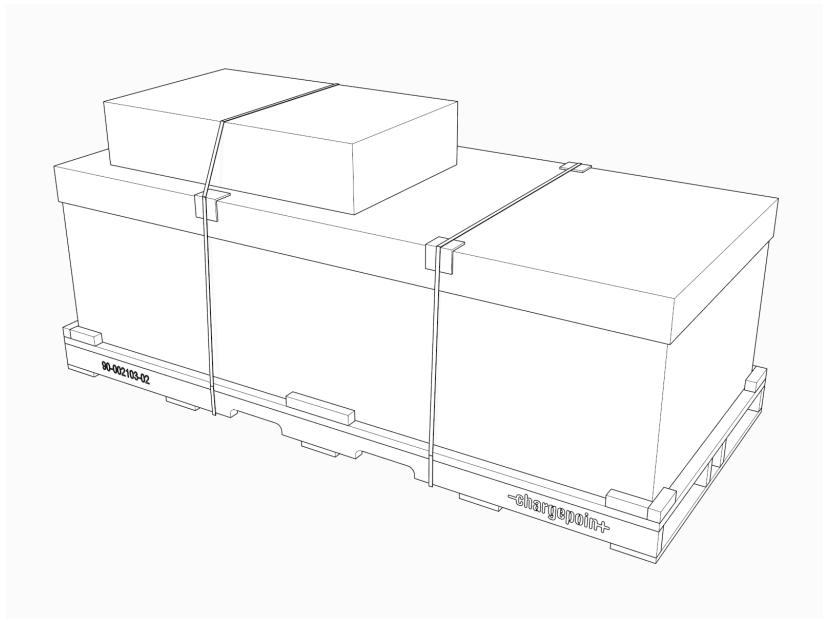


-
- Check that the nuts are level with each other.



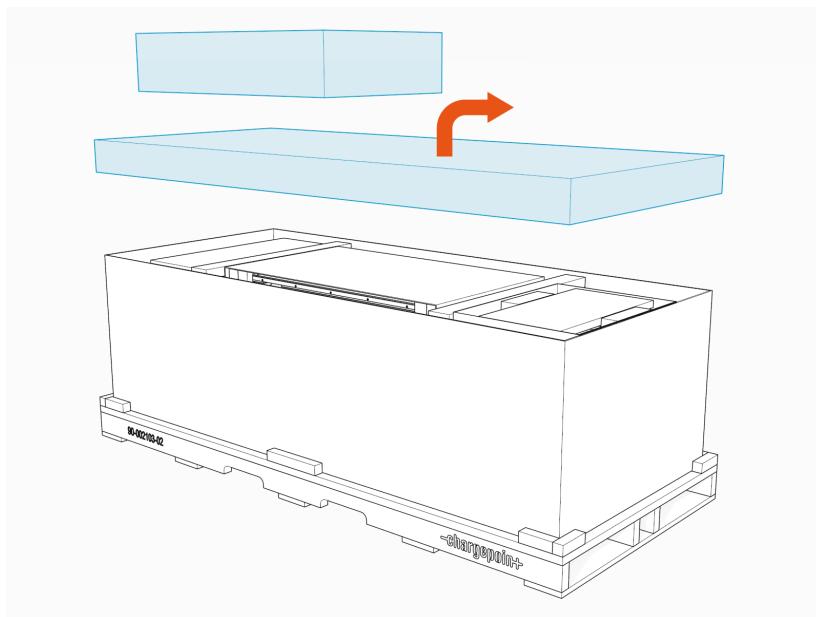
Unpack the Station

- Transport the box horizontally to the installation site.

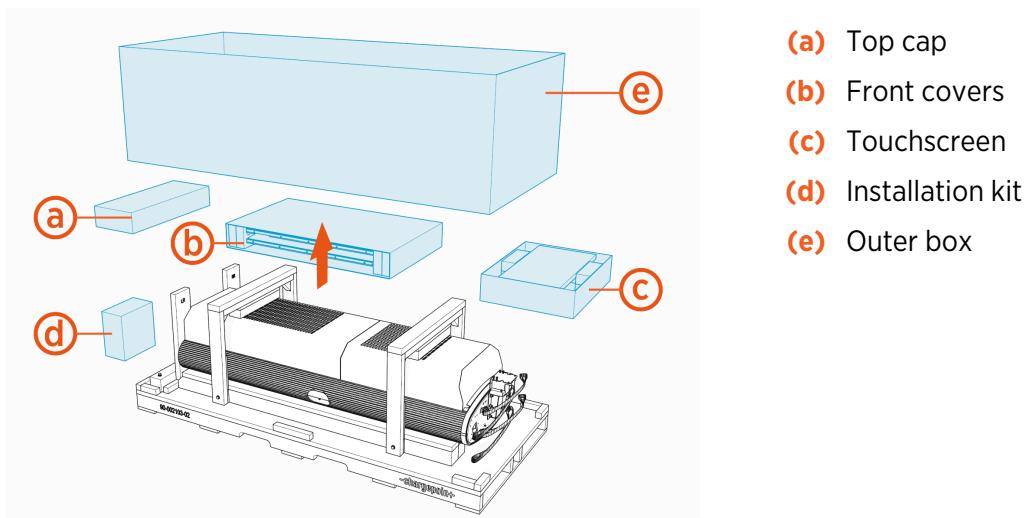


2. Lift the top of the box off.

Save the top of the box for later use.



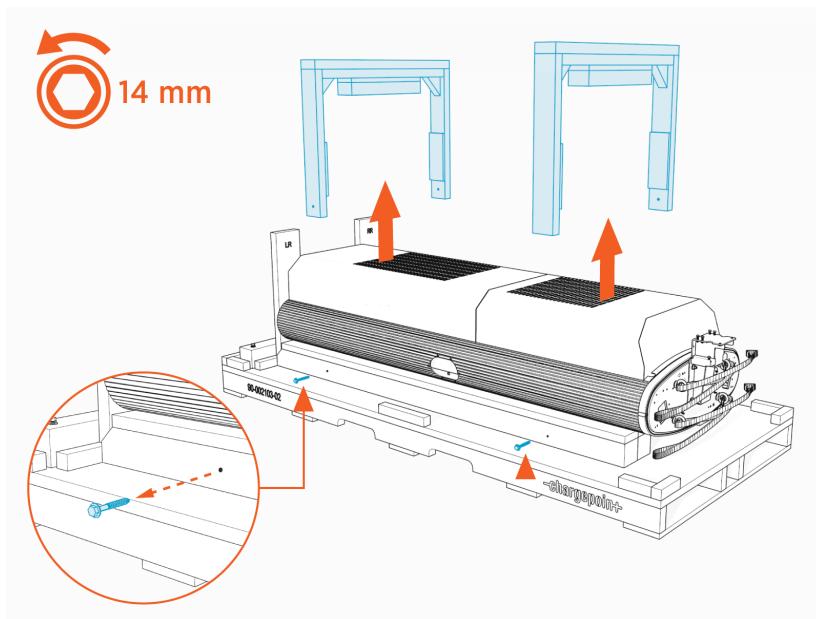
3. Remove the smaller boxes and the outer box.



- (a) Top cap
- (b) Front covers
- (c) Touchscreen
- (d) Installation kit
- (e) Outer box

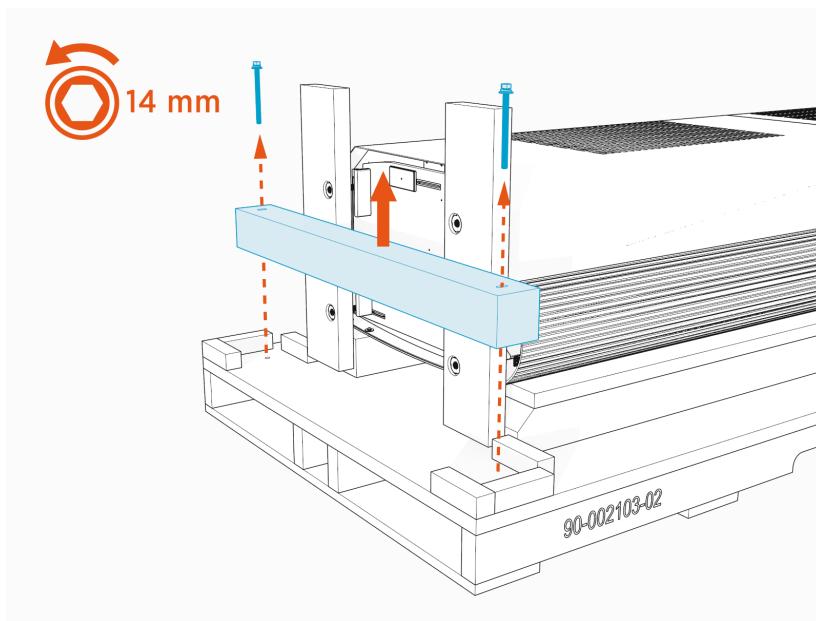
-
4. Remove the bolts securing the packing braces.

Remove the braces.



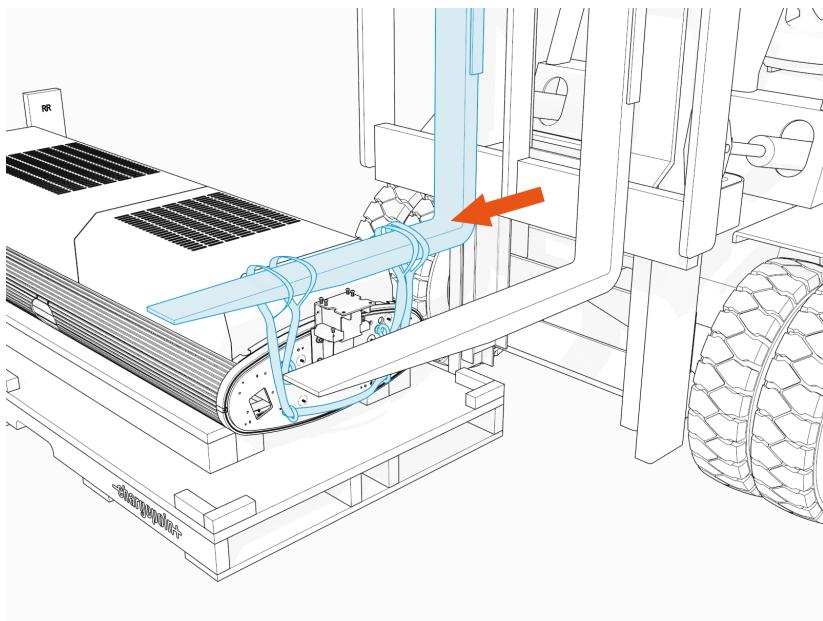
5. Remove the bolts securing the brace underneath the station.

Remove the brace.



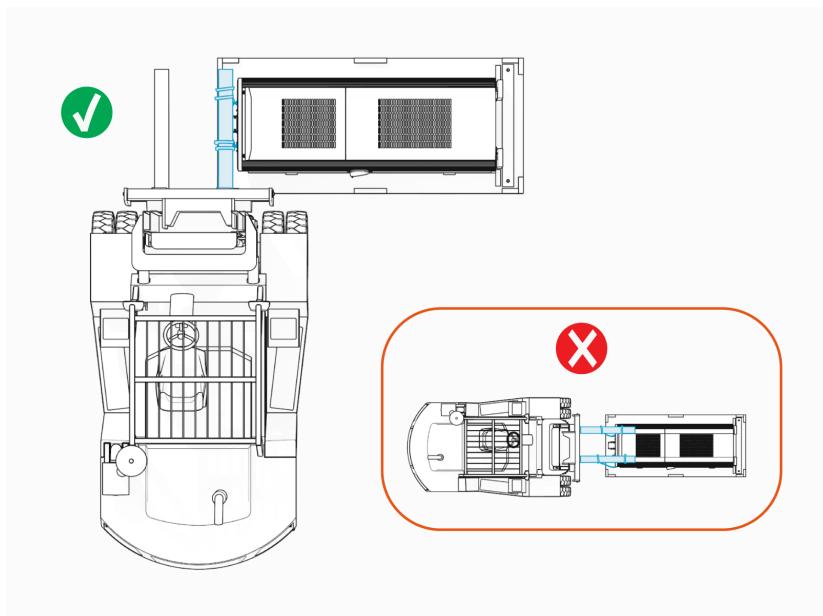
Prepare the Station

1. Locate the eye bolts and lifting straps at the top of the Express 280.

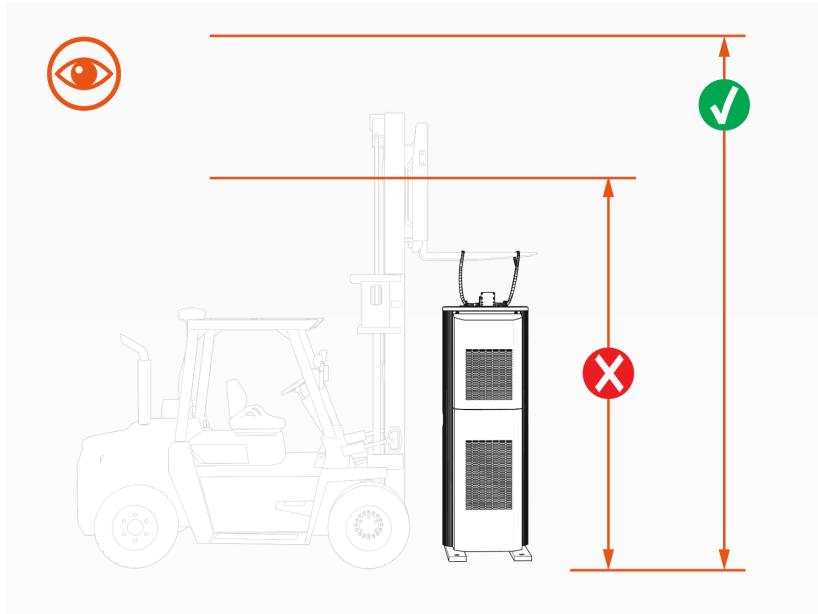


2. Position the forklift so the lift is perpendicular to and near the top of the station.

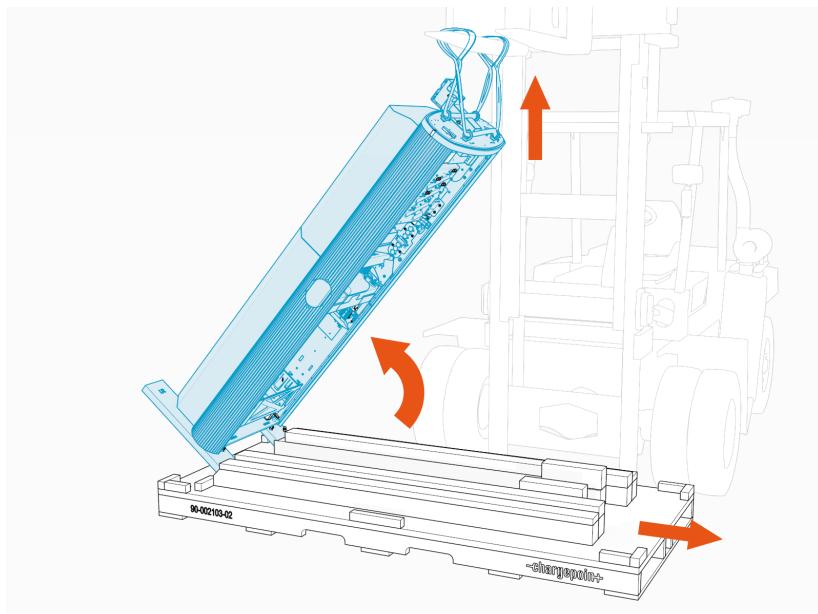
Place both lifting straps on one blade of the forklift.



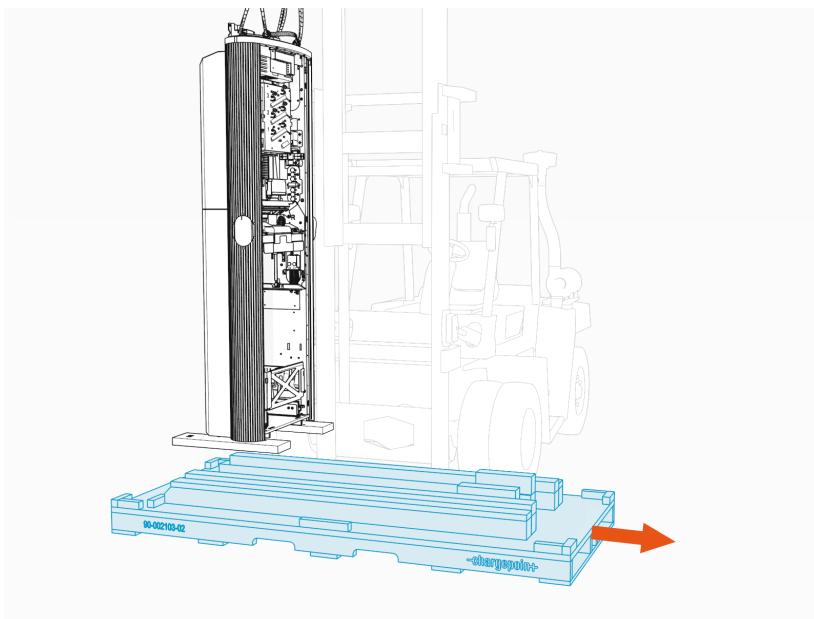
-
3. Ensure there is sufficient height clearance.



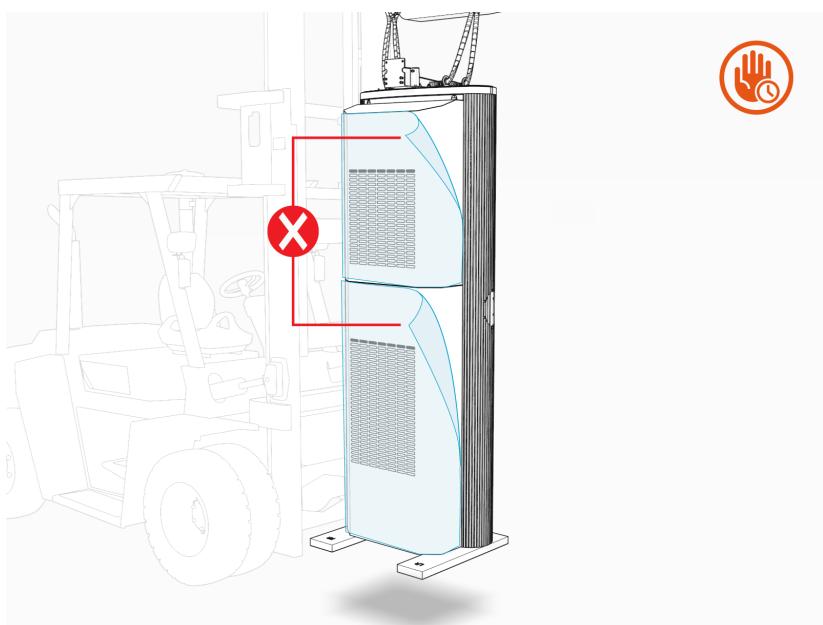
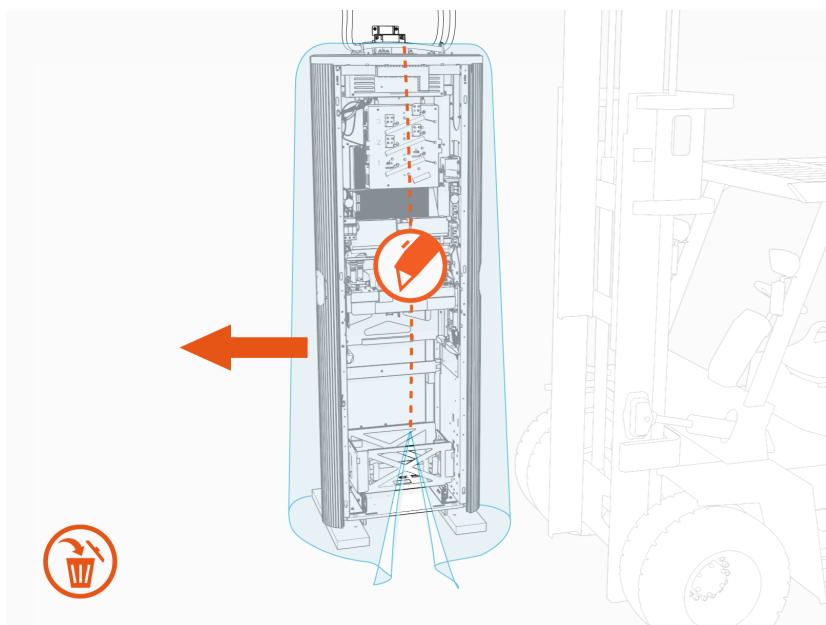
4. Carefully tilt the Express 280 up until vertical. Lift the station.



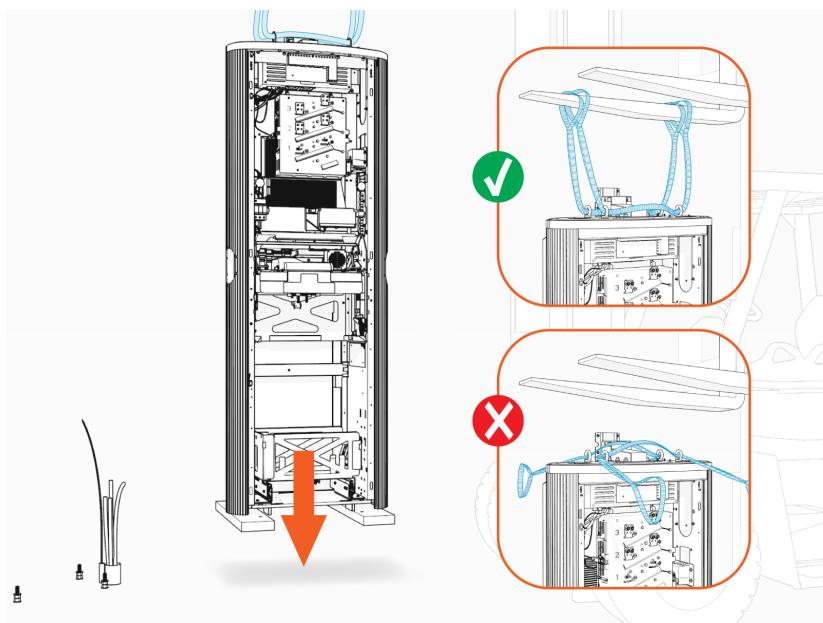
5. Slide the bottom of the shipping crate aside.



6. Remove the plastic shipping bag.

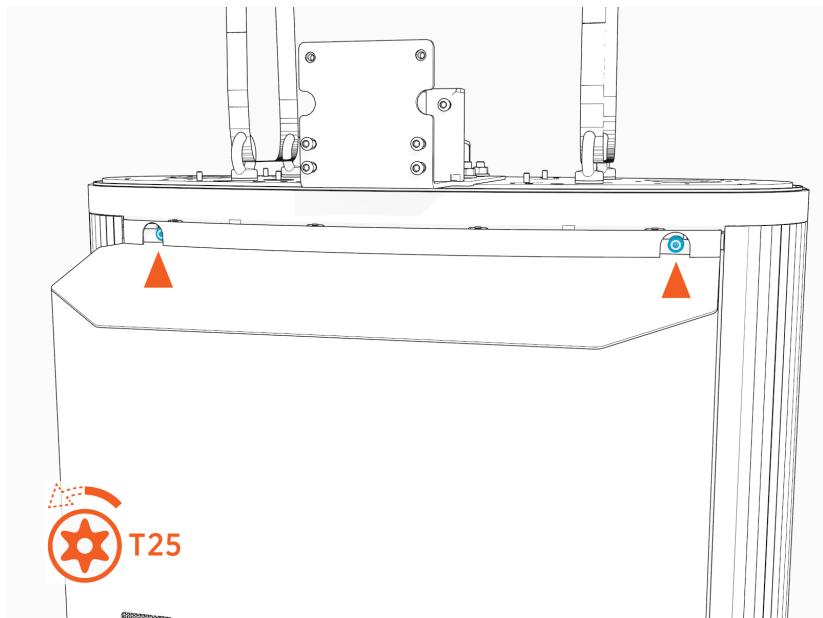


7. Set the station down gently on the concrete near, but not on, the anchor bolts. Keep the lifting straps taut. Do not remove them.



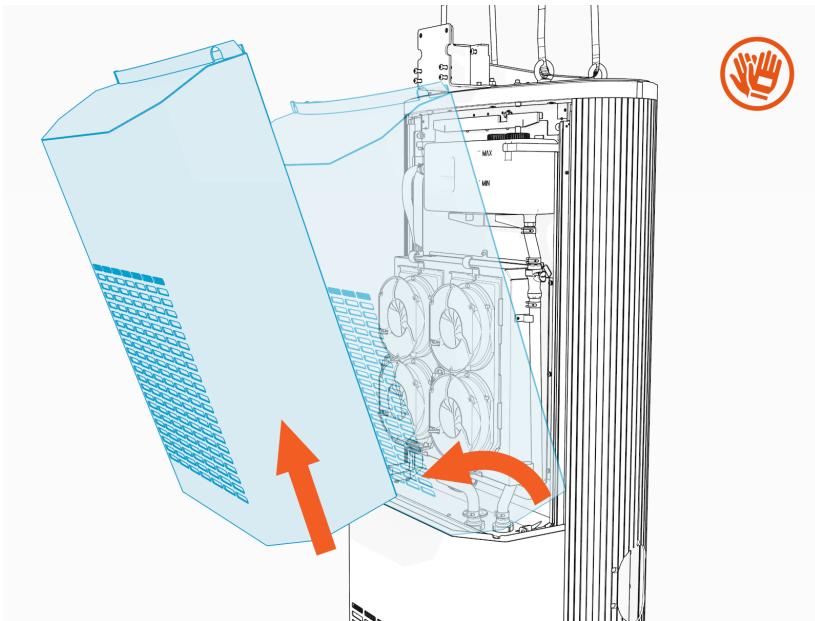
Remove the Back Panels

1. Using a T25 Security screwdriver, loosen the two screws on the upper back panel.

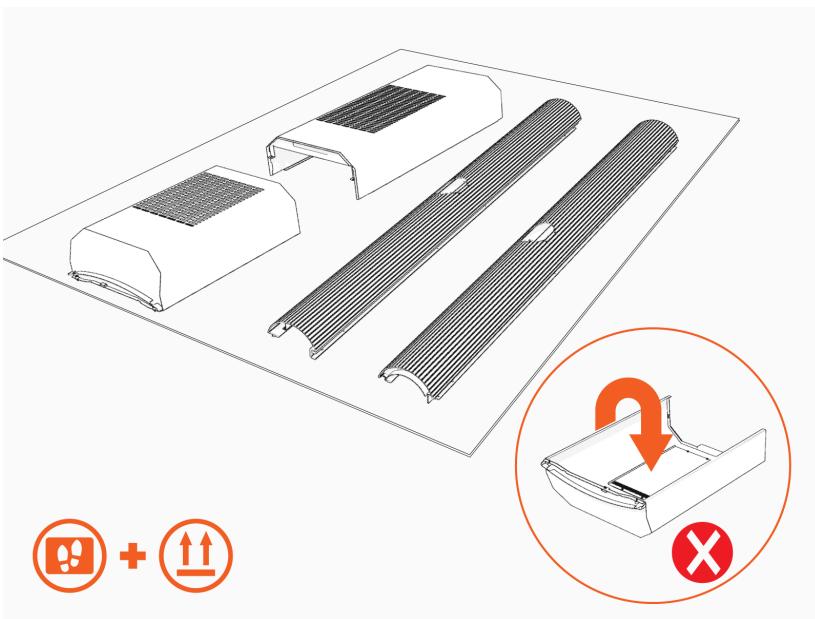


2. Tilt the panel away and lift up to remove it.

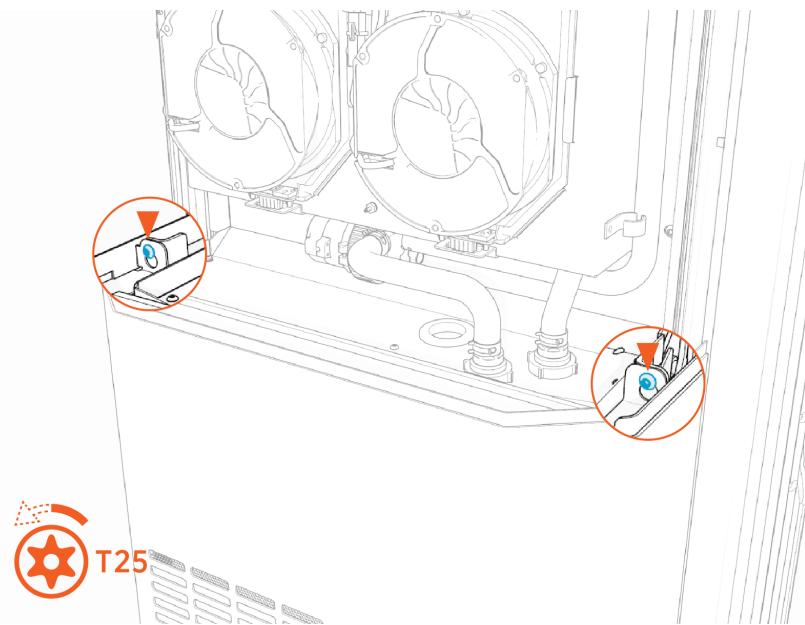
IMPORTANT: Wear cut-resistant gloves and hold the sides of the panel gently when removing it.



3. Set the panels gently on the shipping box lid. Position panels with the outside surfaces facing up to avoid scratches.

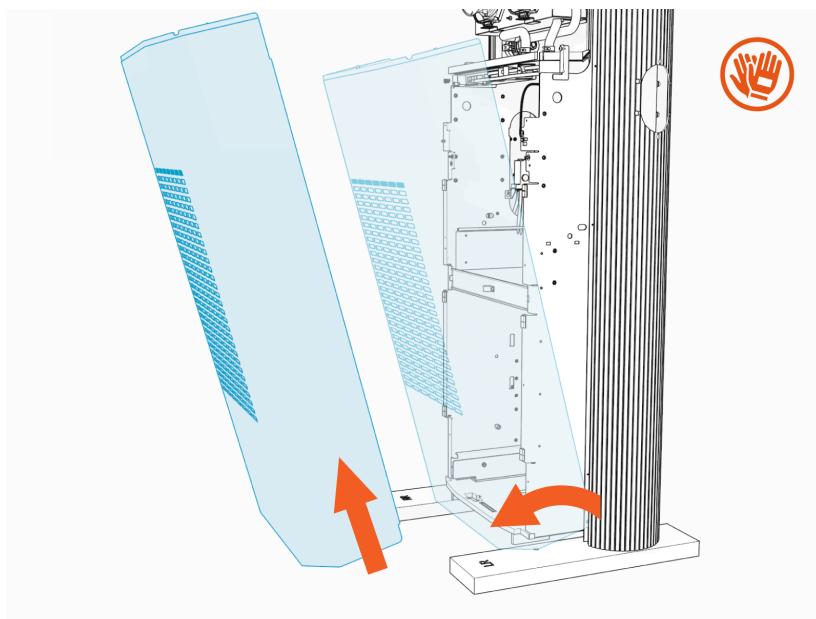


- Using a T25 Torx screwdriver loosen, but do not remove, the two screws on the lower back panel.



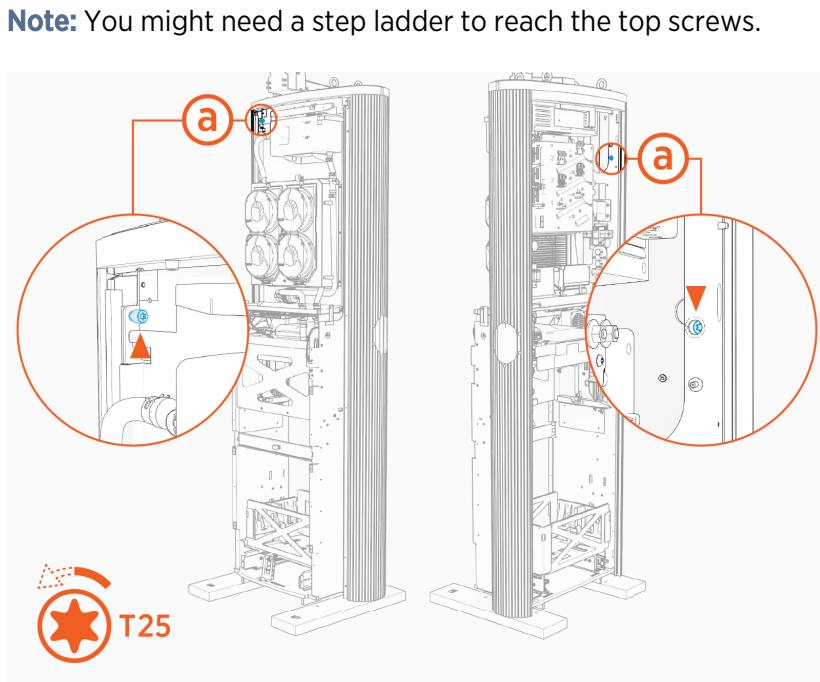
- Lift the panel up and pull it away to remove it.

IMPORTANT: Wear cut-resistant gloves and hold the sides of the panel gently when removing it.

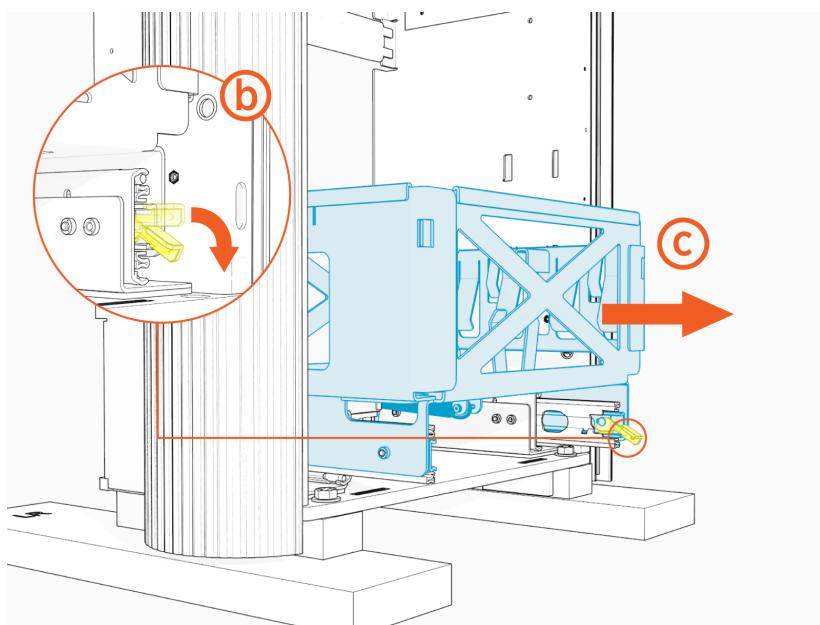


Remove the Side Panels

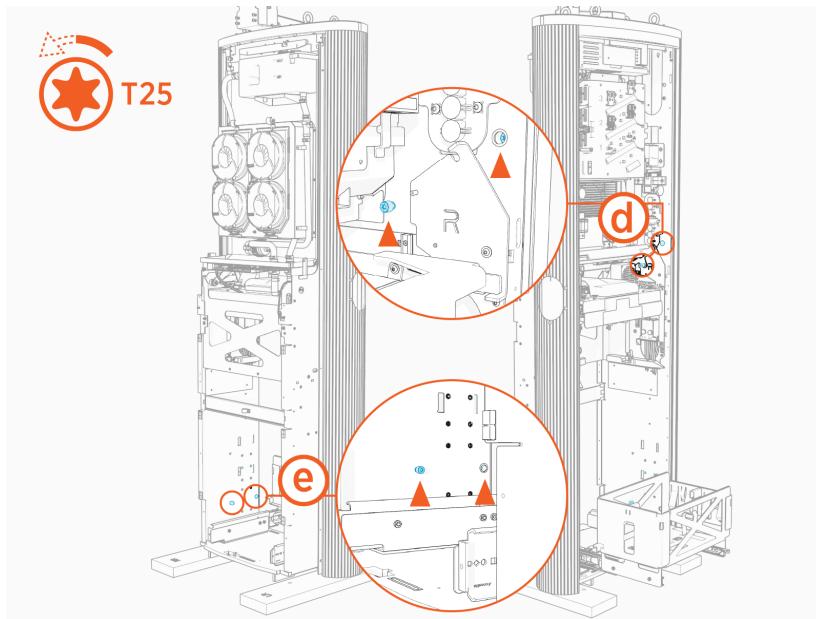
1. Using a T25 Torx screwdriver, loosen the top four screws **(a)**, two on each side.



2. Press down on the Power Module yellow release latch **(b)** and slide the tray out **(c)**.

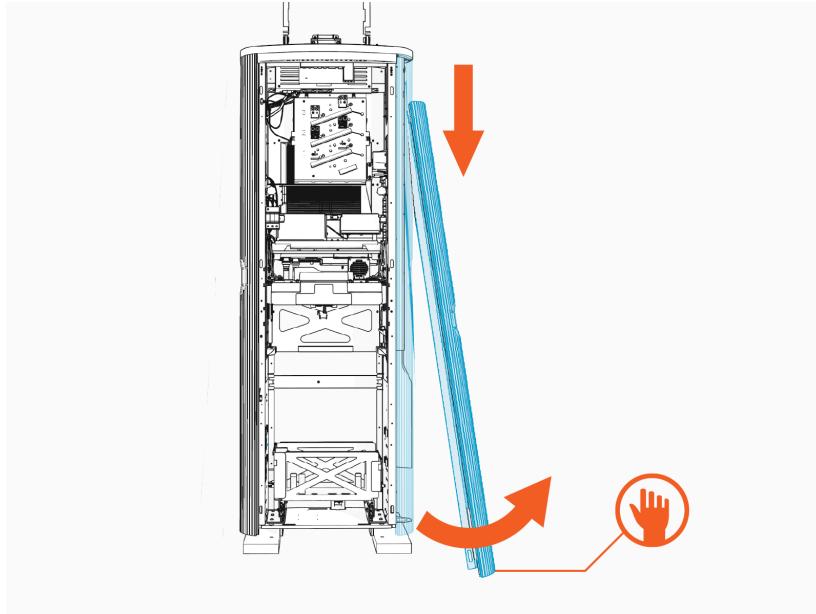


3. Loosen the two middle (d) and two lower captive screws (e).

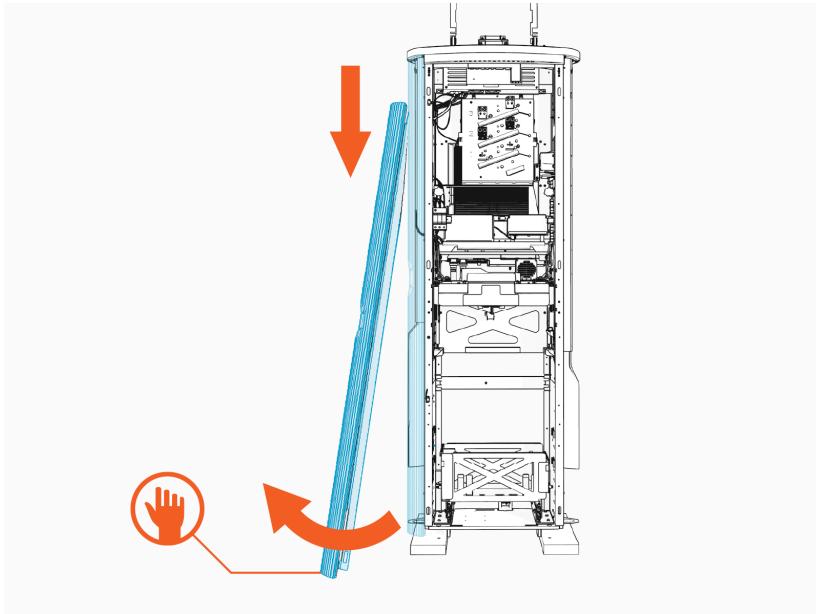


4. Tilt the bottom of the right side panel out slightly to extract its top edge from under the bottom edge of the area light bar. Lift the side panel off the guide pins on each side of the frame and remove it.

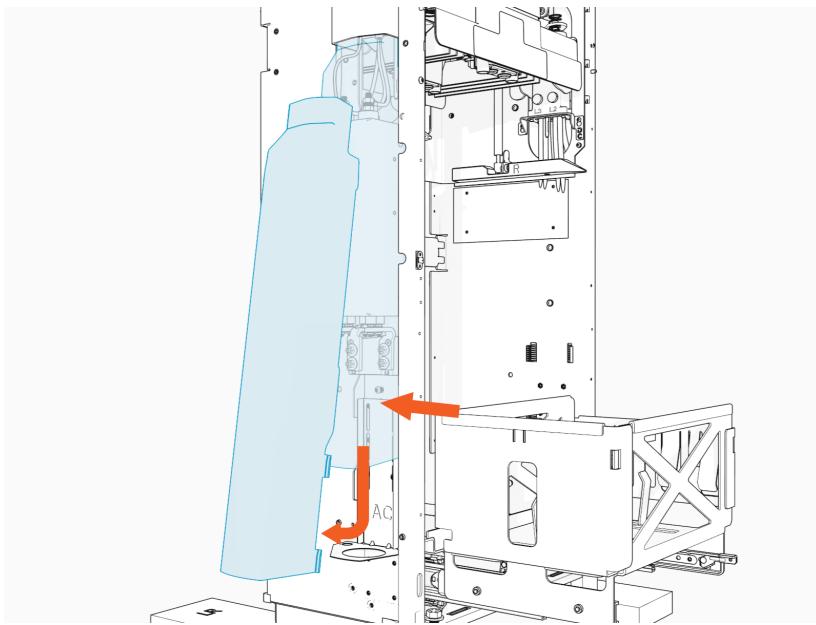
Set the panel aside gently.



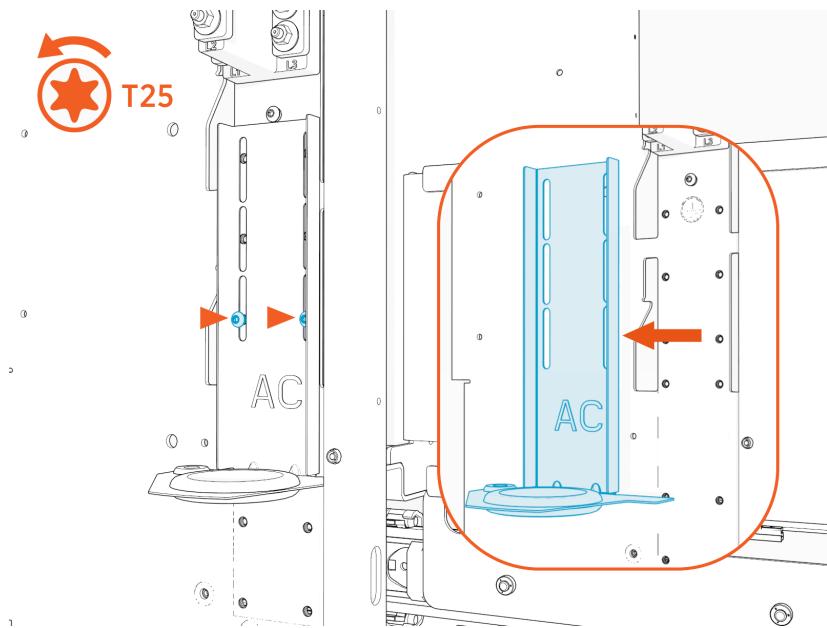
5. Remove the left side panel.



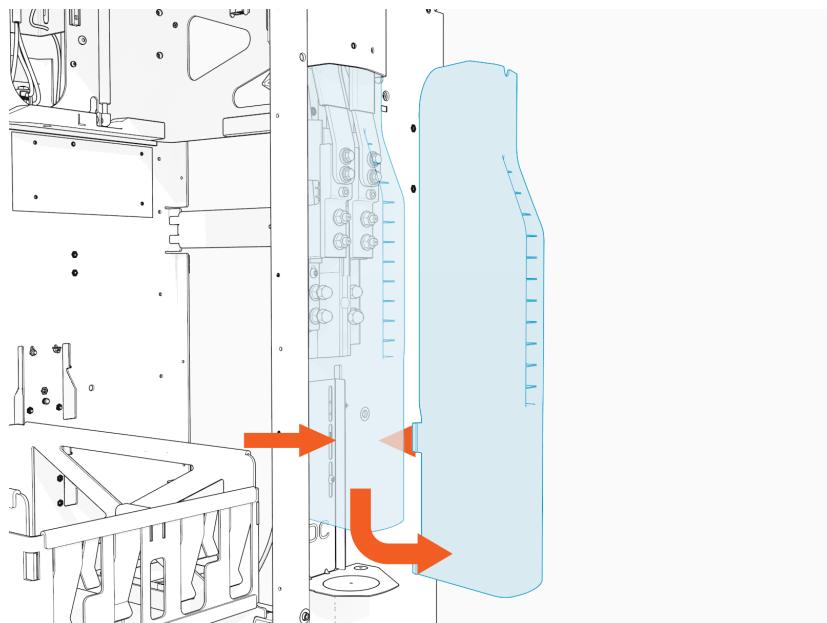
6. Remove the AC wire cover on the left side of the Express 280 by pressing on its sides and sliding it downward and away from the station.



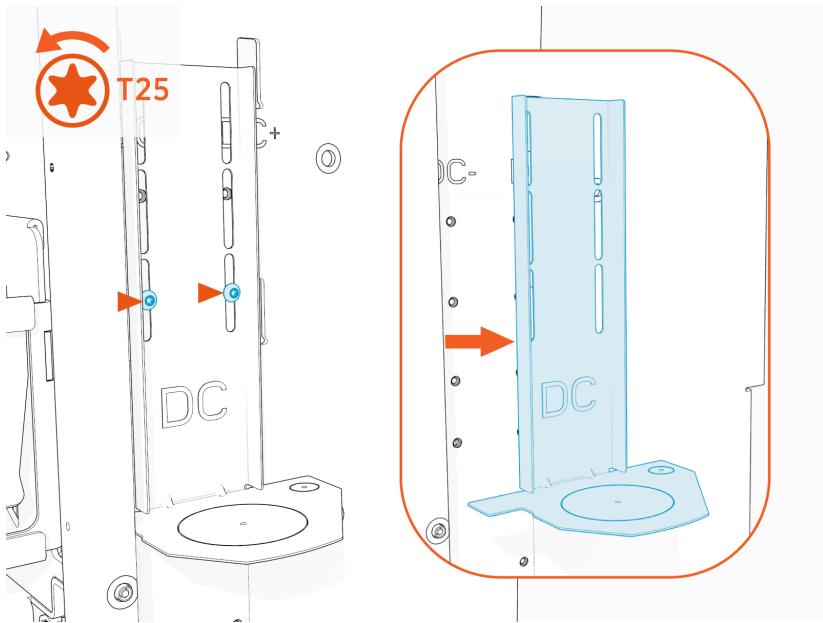
7. Use a T25 Torx screwdriver to remove the two screws and the AC rodent guard bracket.



8. Paired stations only - Remove the plastic DC wiring cover on the right side of the Express 280 by pressing on its sides and pulling it away.

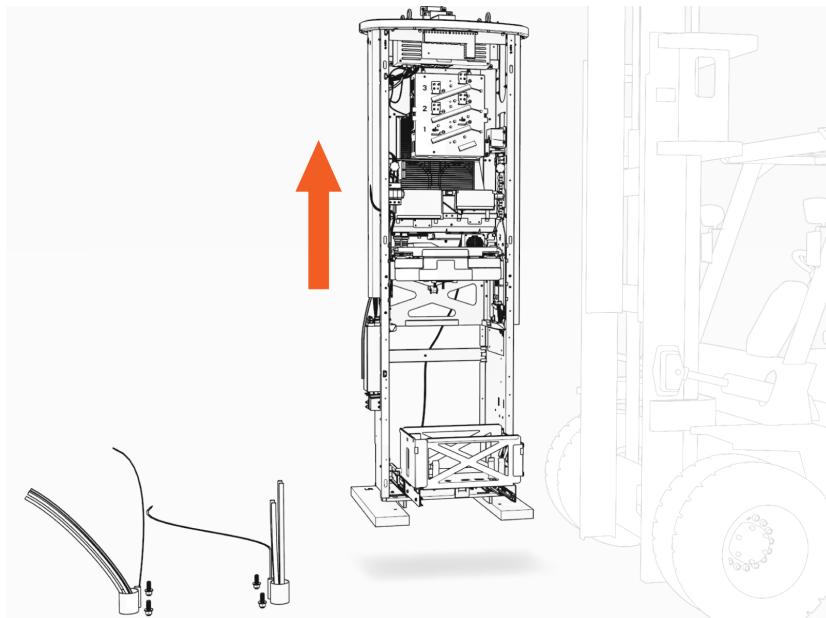


-
9. Paired stations only - Use a T25 Torx screwdriver to remove two screws and the DC rodent guard bracket.

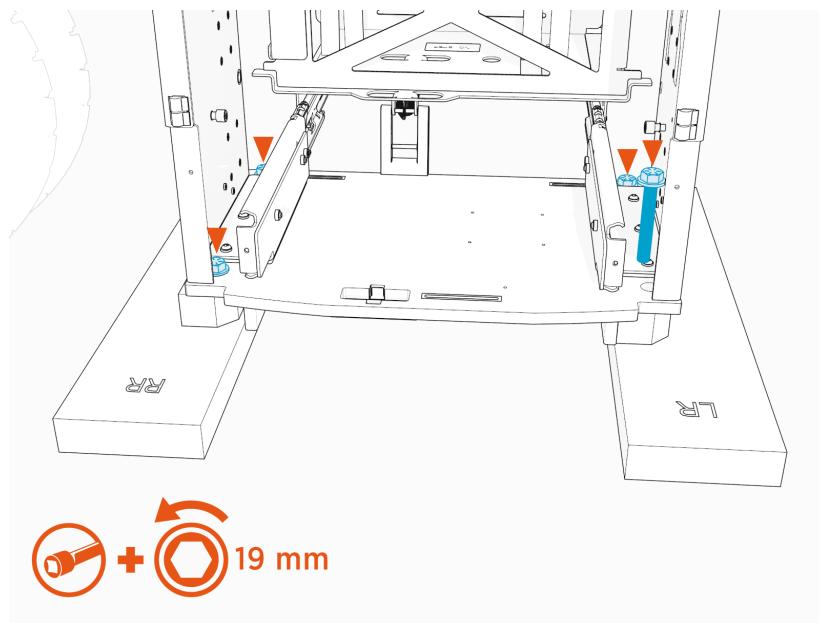


Position the Station

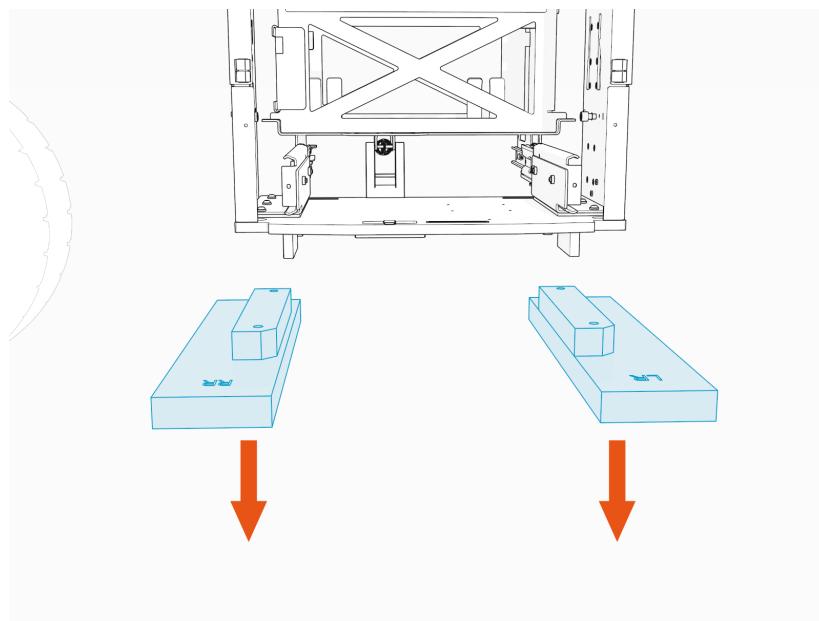
1. Use the forklift to lift the station off the ground.



- Using a 19 mm (3/4 in) socket wrench, remove the bolts from the base of the station.

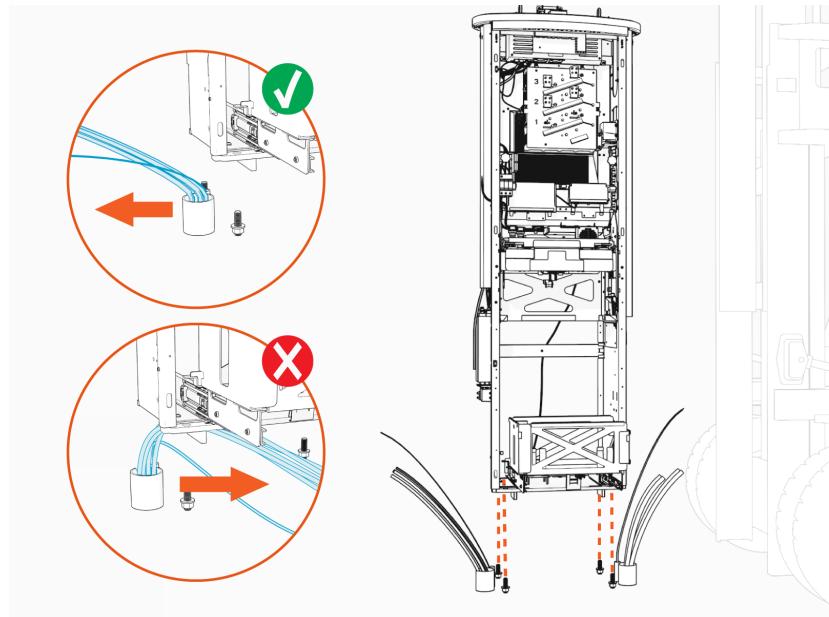


- Remove the wooden stands.



4. Position the Express 280 over the mounting bolts, ensuring the bolts align with the corresponding holes in the bottom of the Express 280.

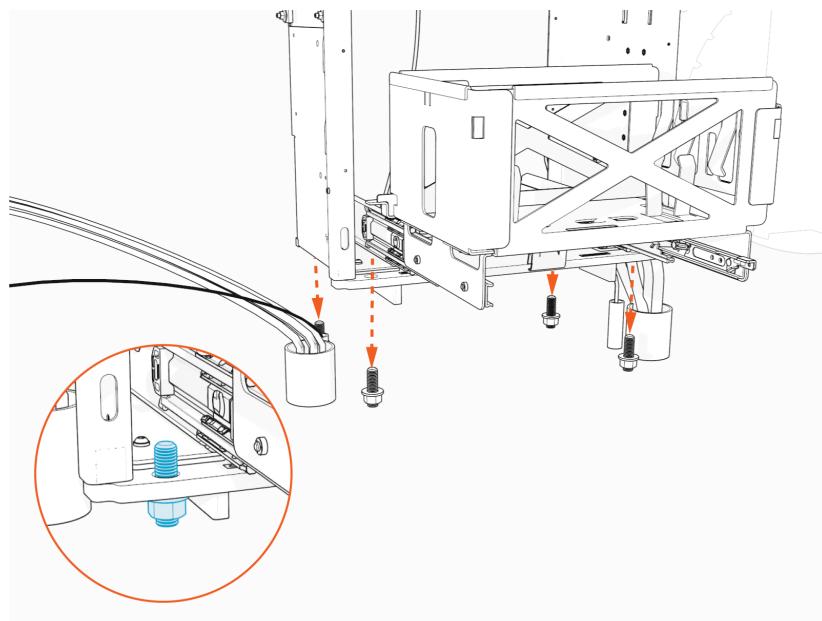
Move the service wiring out of the way to ensure it is not pinched or trapped.



IMPORTANT: Ensure the station position is consistent with the site design plans. Refer to the *Express 280 Site Design Guide* for more information.

5. Lower the Express 280 onto the anchor bolts. Do not remove the forklift.

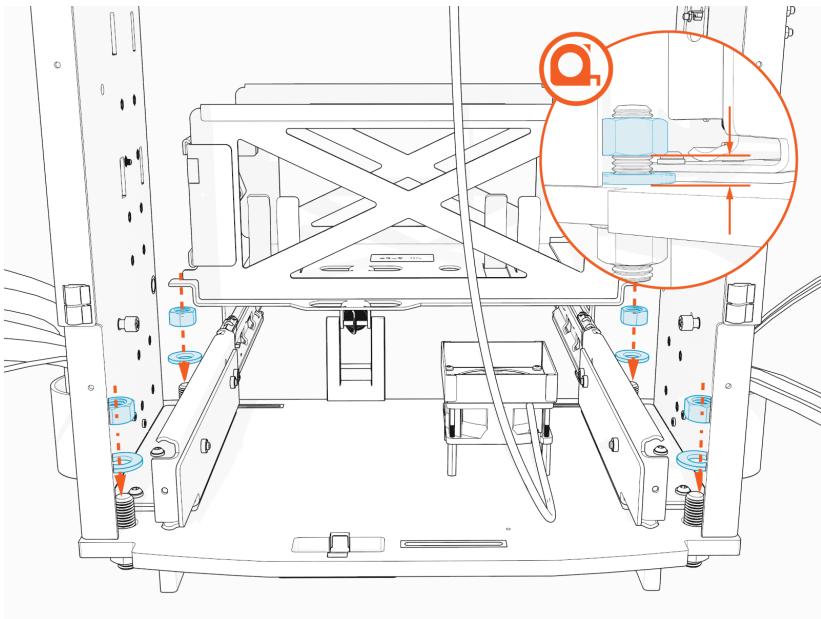
Note: The Express 280 should rest on the leveling nuts and washers, not on the rails.



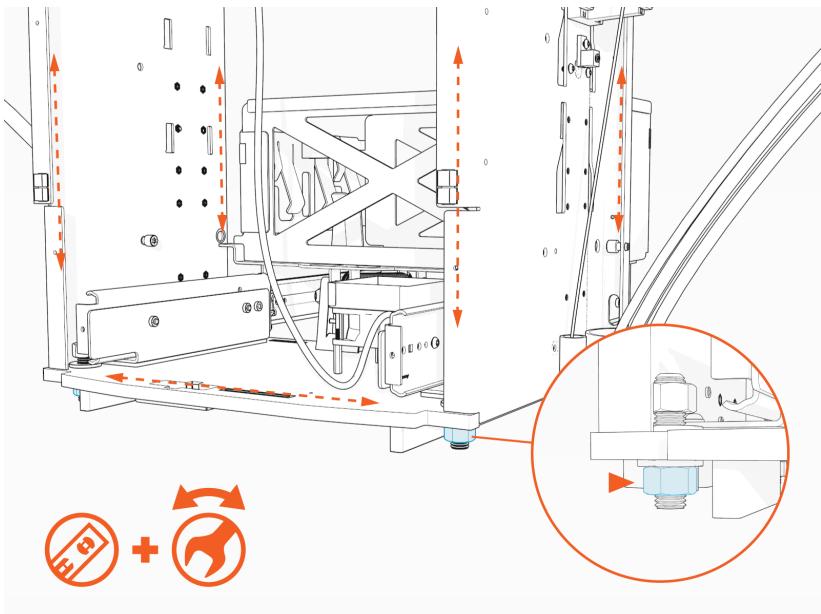
Level and Secure the Station

1. Install a washer and nut onto each of the four mounting bolts.

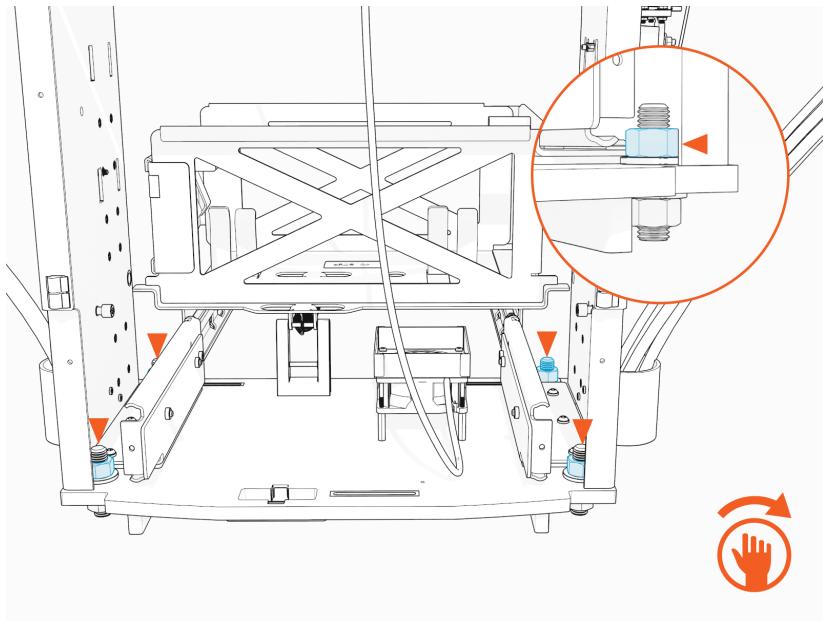
For easier leveling, leave a 6.4 mm (1/4 in) gap between the bottom of these top nuts and the base plate of the frame.



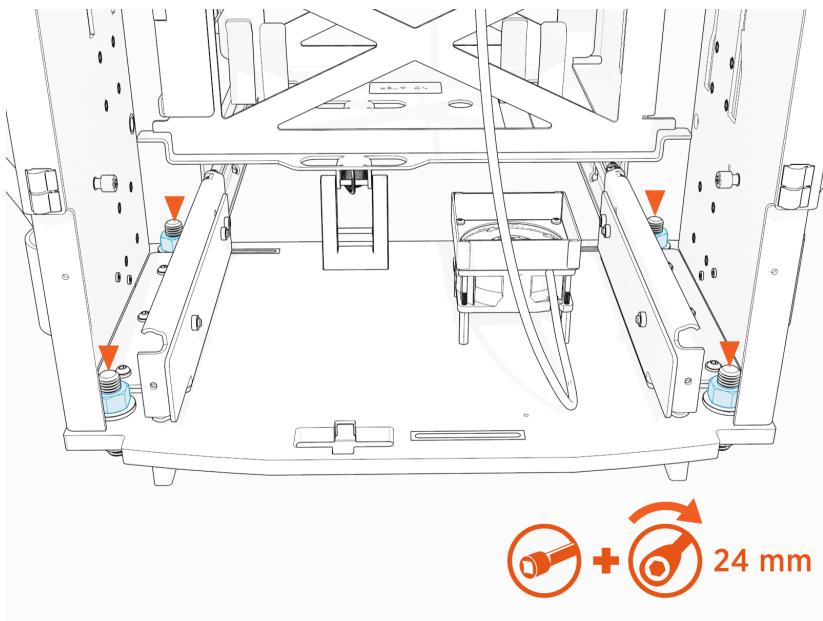
2. Using a level on all four sides, adjust the bottom corner leveling nuts to ensure that the Express 280 is level both horizontally and vertically.



-
3. When level, tighten top nuts by hand.

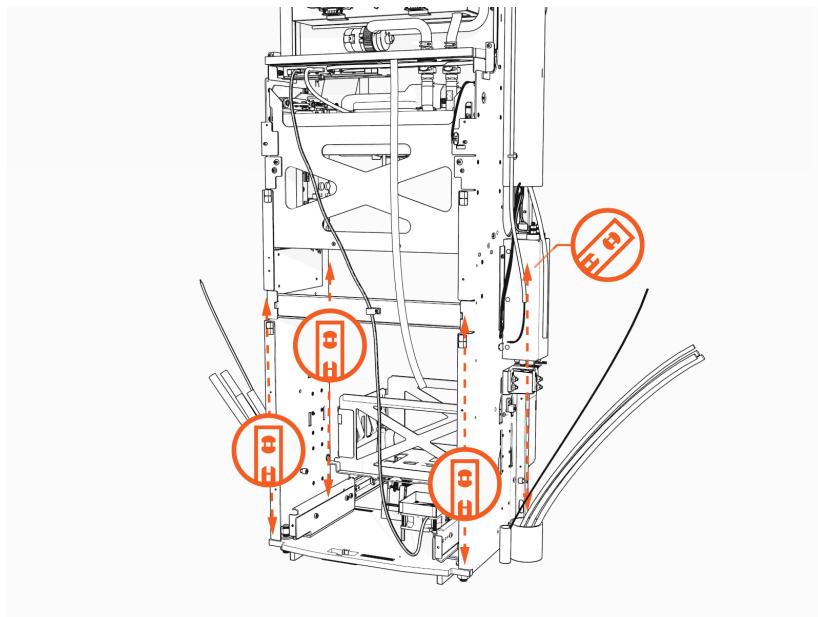


4. Use a 24 mm (15/16 in) socket wrench to **torque all top nuts to 94.9 Nm (70 ft-lb)**.

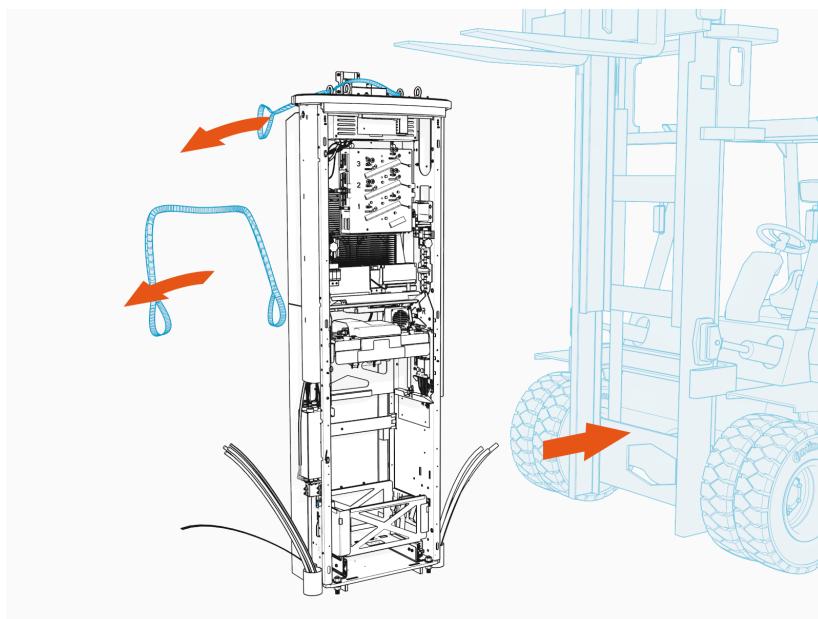


5. Using a level, re-check the vertical and horizontal alignment to ensure the tightening of the nuts did not cause the Express 280 to shift.

Make any adjustments to ensure the Express 280 is level and all nuts are tightly secured.



6. Remove the lifting straps.



Connect AC Wiring 3

Note: If the station is being connected to wiring and a breaker of 100 A, a separate 62.5 kW ratings label must be applied over the existing ratings on the station (below the cable swingarms in the back), to indicate the charging station capacity. Wipe down the surface area with a lint-free cloth and isopropyl alcohol wipes prior to application.



DANGER: RISK OF SHOCK. Before performing any procedure, the technician must disconnect the power to the charging station at the service panel. Follow 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. Keep power off for the circuit until all cover panels are correctly 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 codes is properly grounded to earth at service equipment or, when supplied by a separate system, at the supply transformer. Ensure neutral ground bond.



CAUTION: Ensure no bell ends are left on any conduit after all wires are pulled. Bell ends can interfere with station placement.

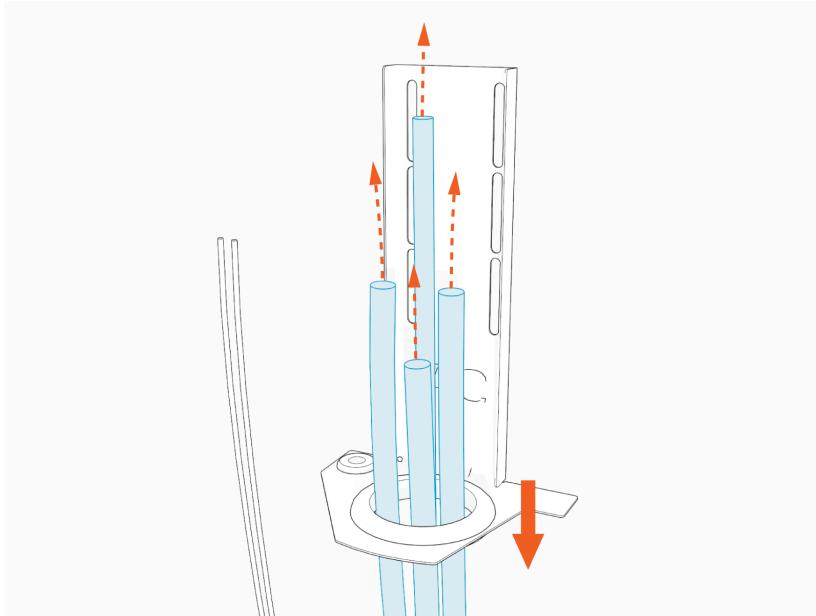


IMPORTANT: The AC terminal block on the Express 280 accepts a maximum wire size of 55 mm² (1/0 AWG) stranded wires. If using a larger gauge wire to accommodate a long run, reduce the wire size at the local external disconnect.

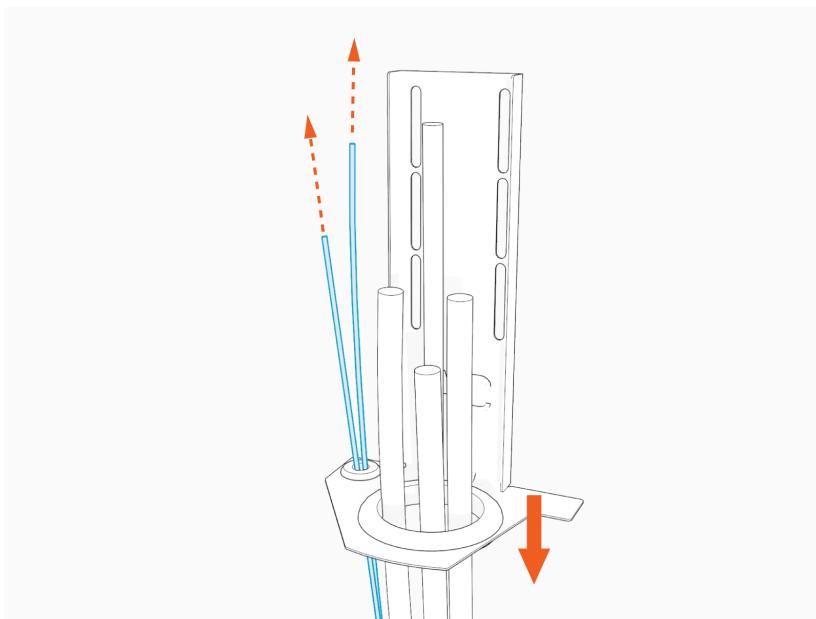
Route Ground Wire and AC Conductors

1. If the installation requires above-ground conduit, visit [Surface Conduit Entry Box](#) for steps to install a Surface Conduit Entry (SCE) kit.

-
2. Route the AC wiring bundle through the larger rodent bracket grommet.

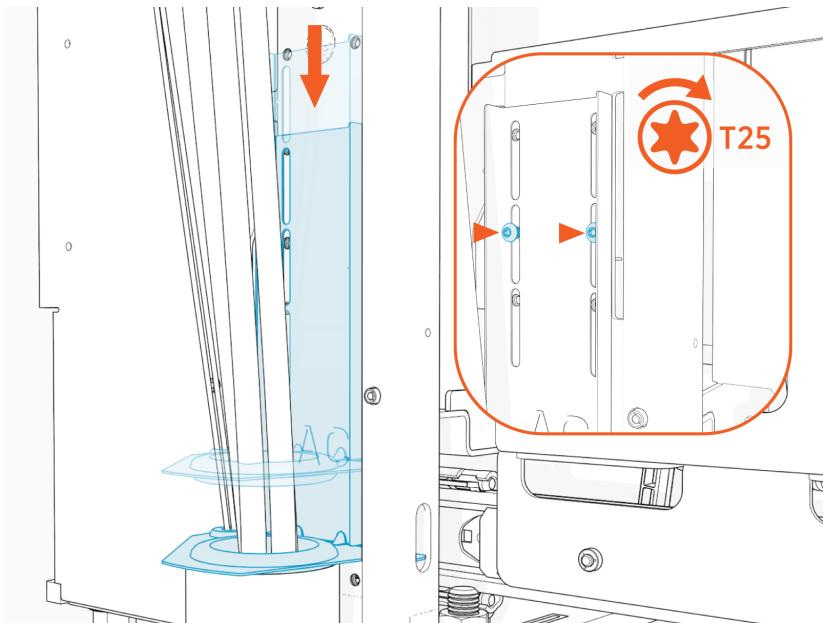


3. Route the shunt trip wiring through the smaller rodent bracket grommet.



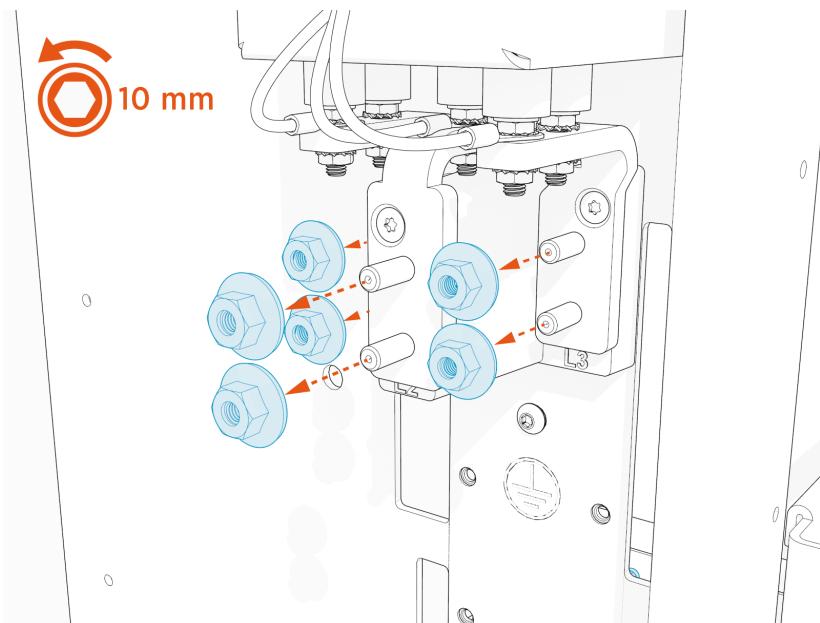
- Align the rodent guard bracket to ensure it rests on the conduit opening.

Use a T25 Torx screwdriver and two screws to secure the rodent guard bracket. **Torque screws to 4.5 Nm (40 in-lb).**

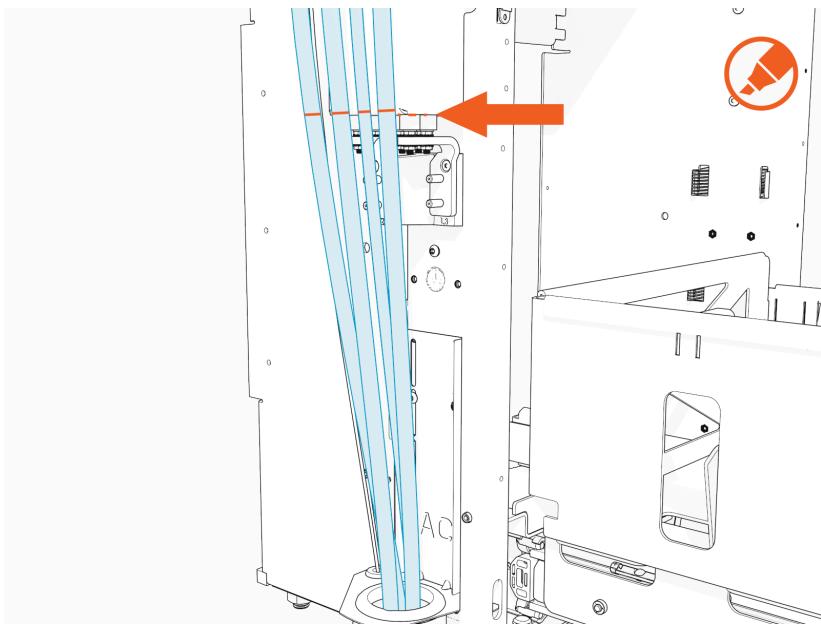


Trim Wires and Connect Ground Wire

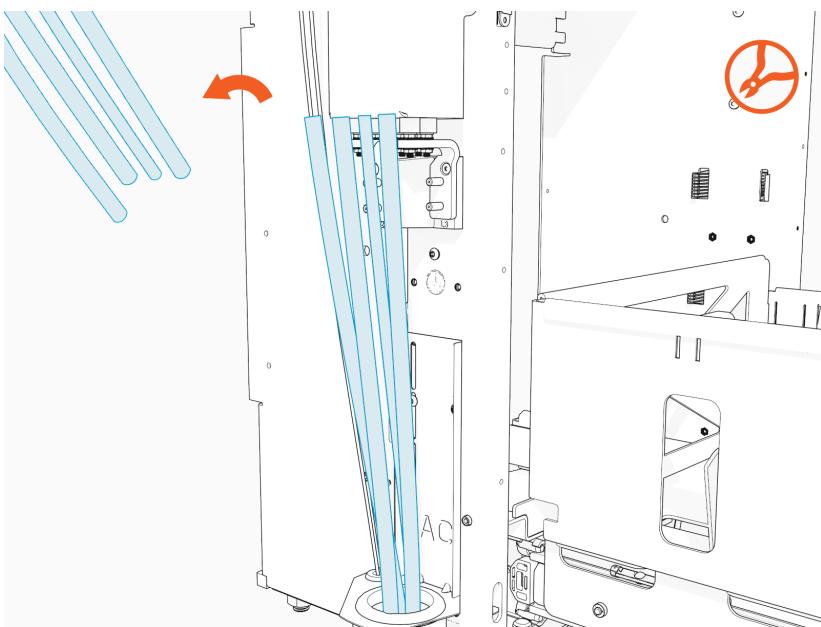
- Remove the installed nuts from the AC terminal blocks.



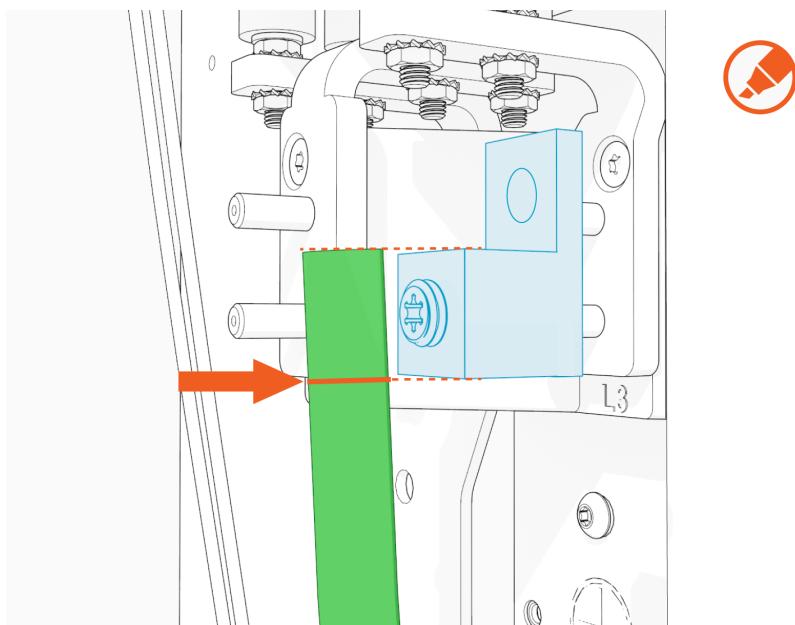
- Measure and mark the length needed to extend the ground and AC conductors from the conduit opening to the Express 280 terminal blocks.



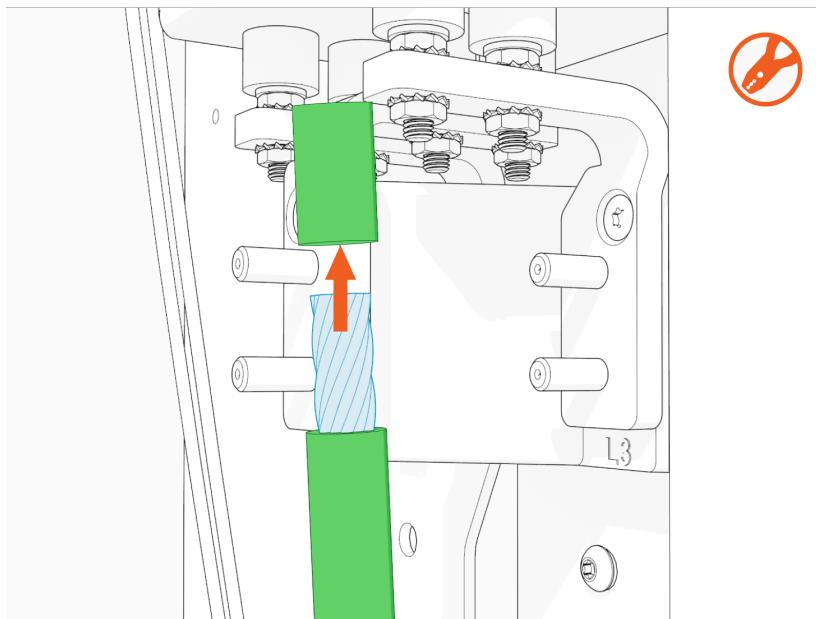
- Trim the excess wire.



-
4. Mark the height of the lug on the end of the ground wire.

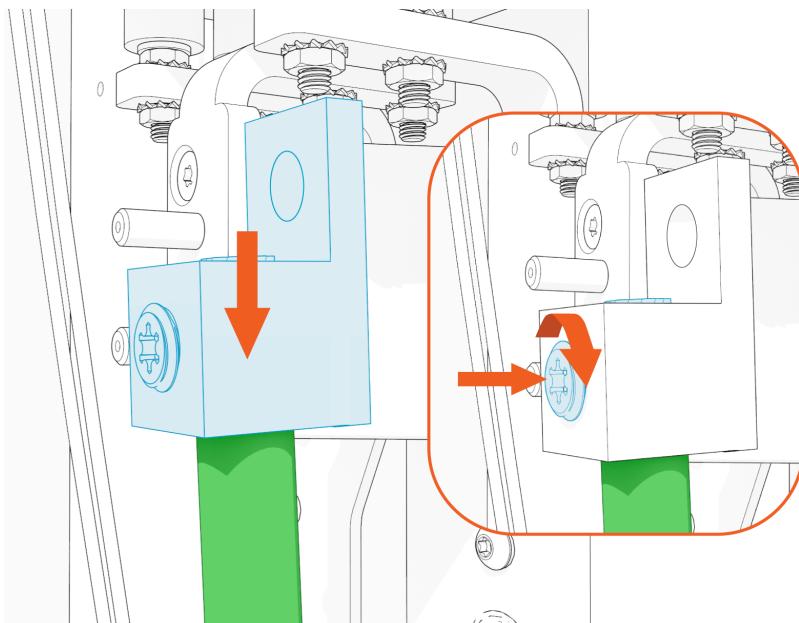


5. Use a wire stripper to remove the outer jacket of the wire to the marked length.

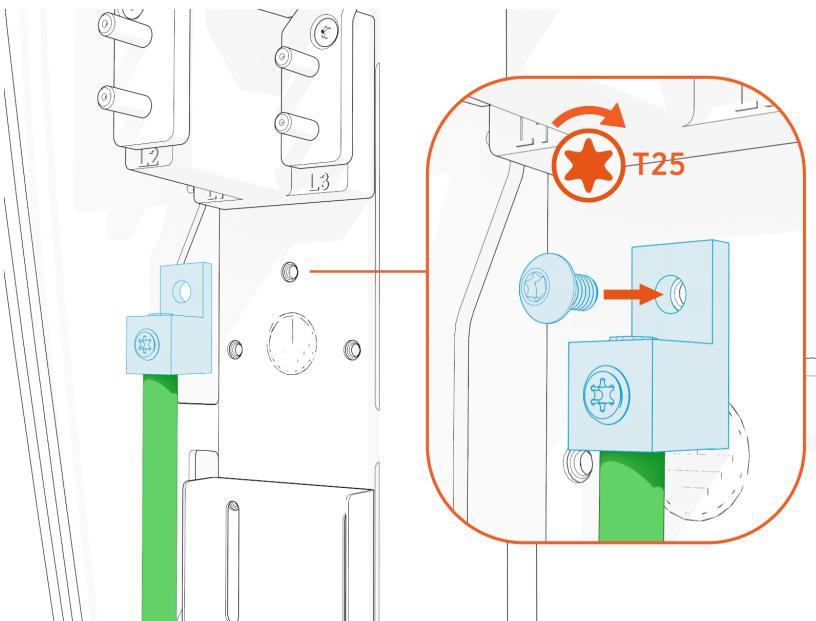


6. Insert the stripped end of the ground wire into the lug.

Note: Ground wires do not need to be crimped.

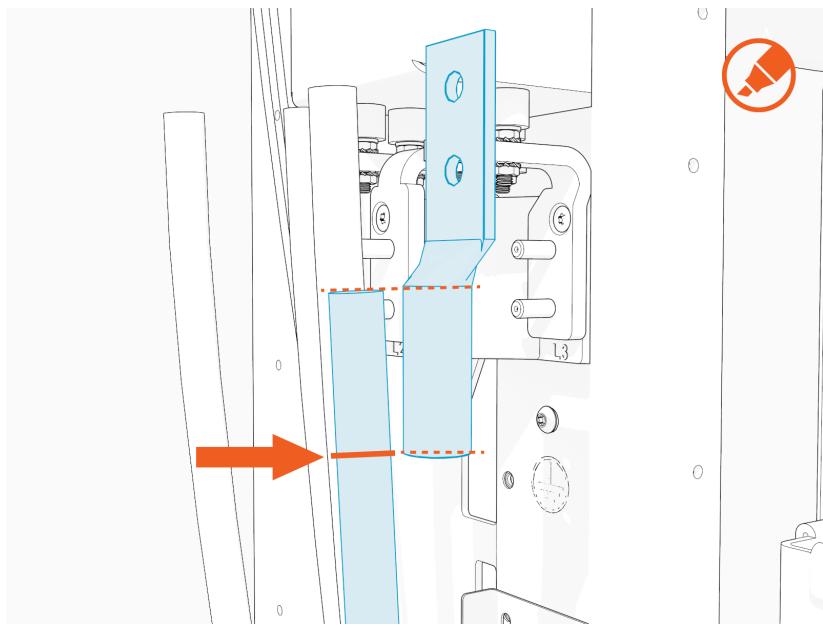


7. Use a T25 Torx screwdriver to mount and secure ground lug to the terminal block.

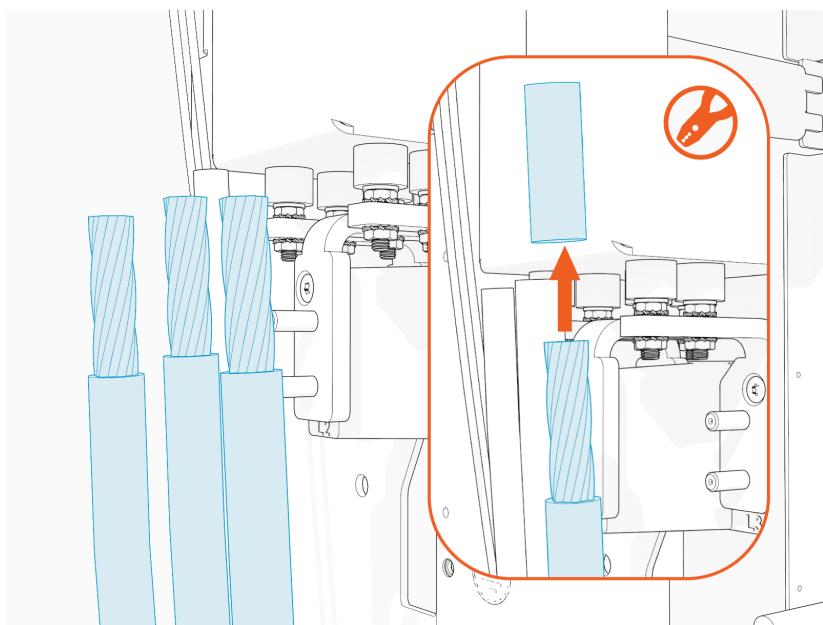


Connect AC Conductors

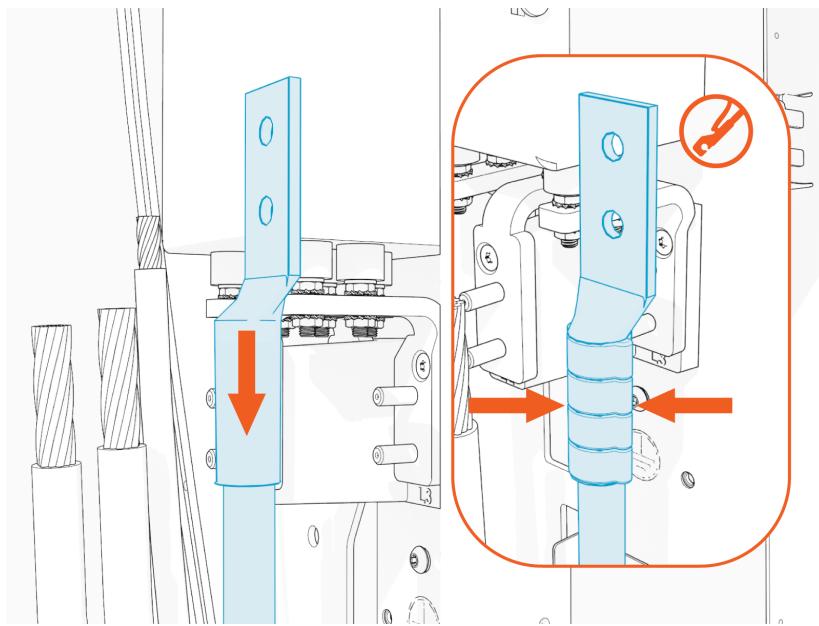
1. Mark the barrel height of the lug on the end of each service wire.



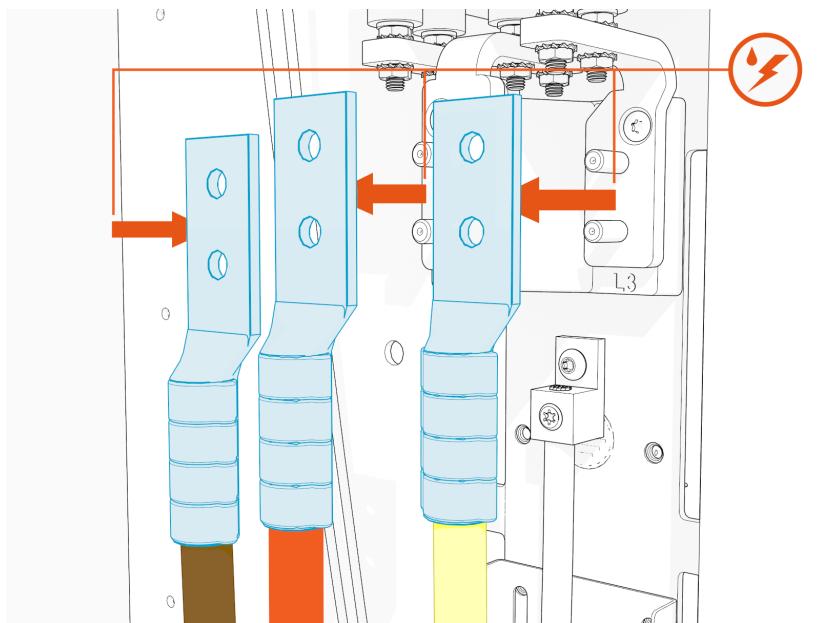
2. Use a wire stripper to strip the jacket on the marked wire.



3. Insert the stripped end of the wire into the lug barrel and crimp the barrel.



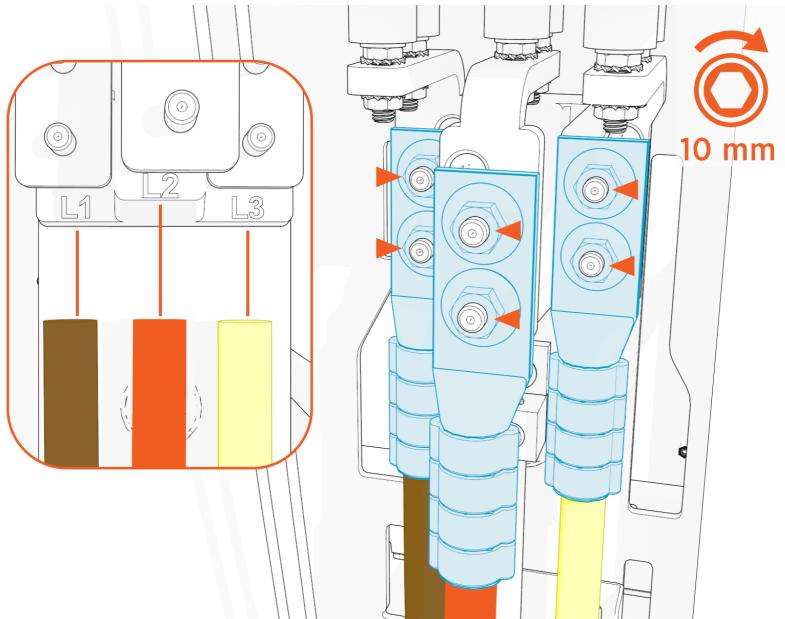
4. Apply dielectric grease to the lug mating surface.



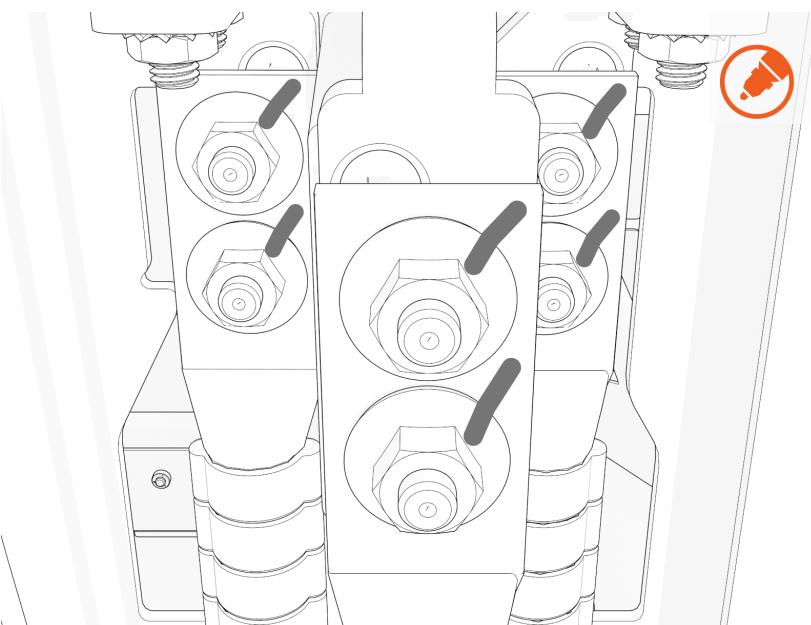
5. Use a 10 mm (3/8 in) socket wrench to mount and secure L1 , L2 , and L3 lugs to the terminal block.
Torque conductor nuts to 5.6 Nm (50 in-lb).



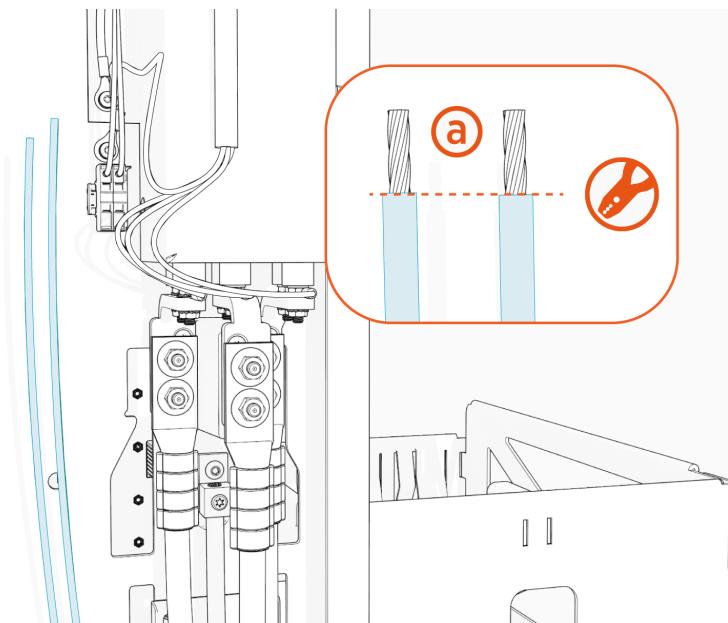
IMPORTANT: Do not use impact torque drivers.



6. Ensure that terminal fasteners are torqued correctly.
7. Mark all torqued terminal fasteners.

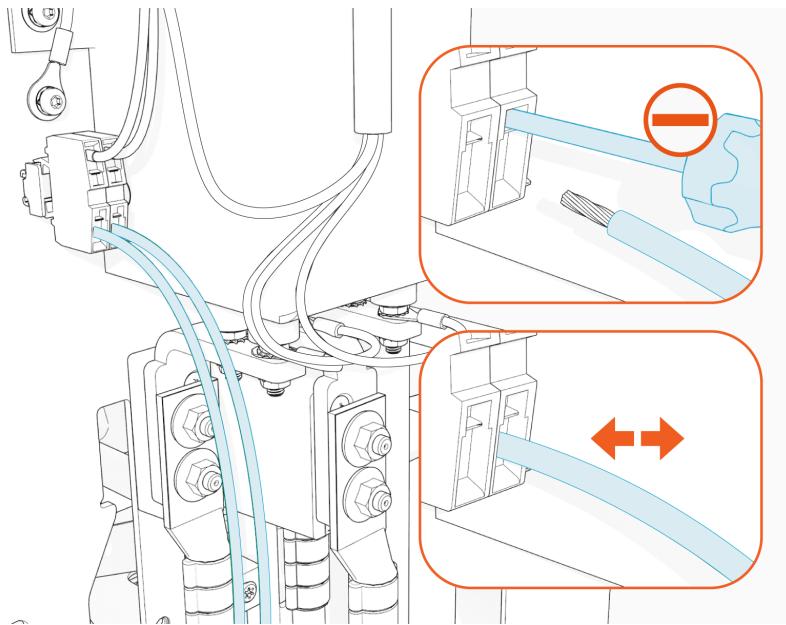


8. Use a wire stripper to remove 8 mm (5/16 in) the outer jacket (**a**) of the shunt trip wire.



9. Insert the shunt trip wires.

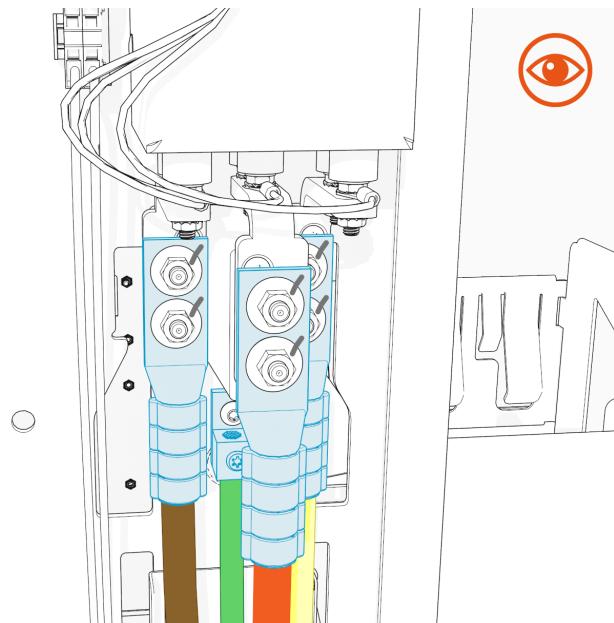
- a. Insert a small (SL4) flat-blade screwdriver into the upper slot on each of the two shunt trip terminals above the AC terminal block.
- b. Insert the shunt trip wire from the smaller conduit into the lower slot. Shunt wires are interchangeable.
- c. Remove the screwdriver.
- d. Insert the second shunt trip wire.
- e. Perform a pull-push test to confirm the wires are secure.



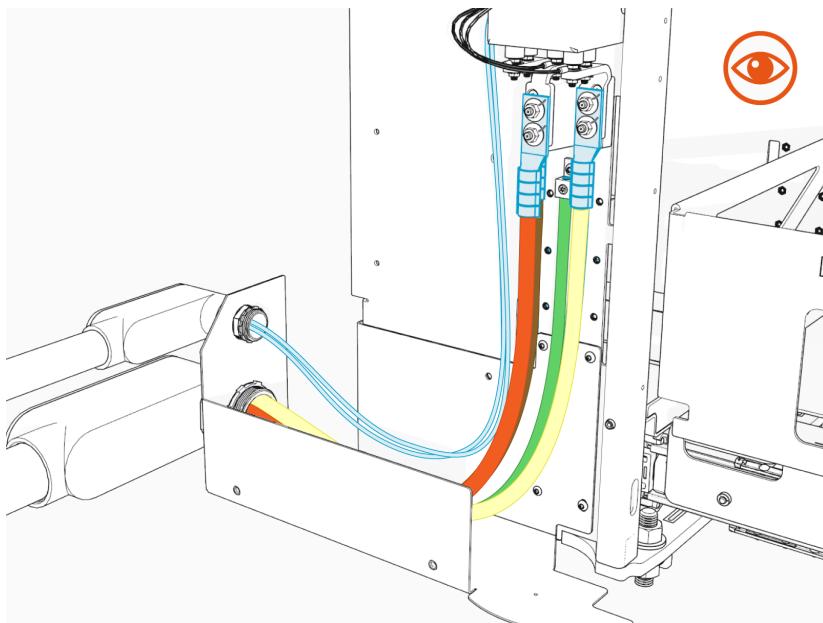
10. Use cable ties to bundle shunt trip and Ethernet wires together.

11. Use a multimeter and ensure no continuity exists between terminals.

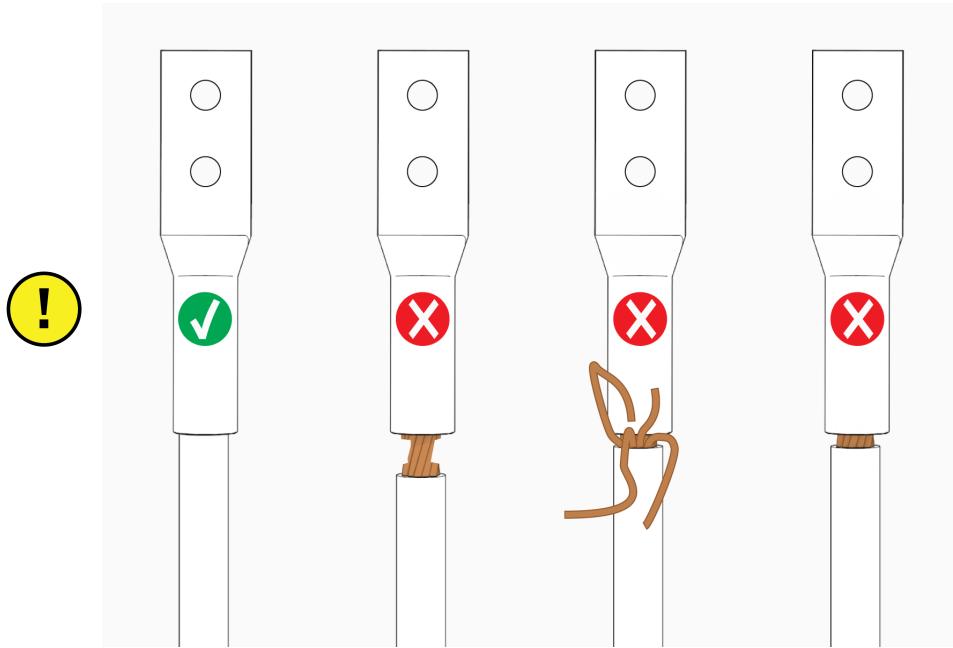
Ground Conduit Entry



Surface Conduit Entry

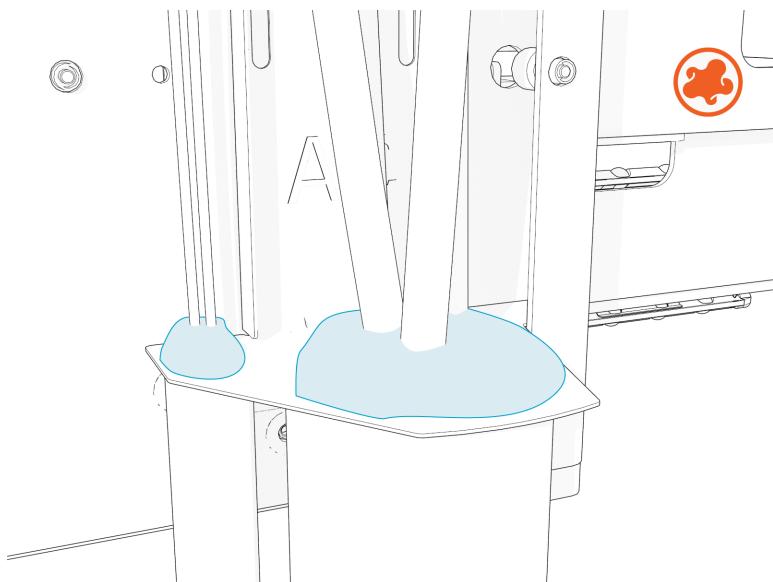


IMPORTANT: You should not see any copper wire outside the terminal block.



-
12. Use the supplied duct seal compound to completely seal the following AC openings against pest ingress:

- The inside of the conduit opening
- Within the rodent guard bracket openings for wiring
- Around the edges of the rodent guard bracket where it will meet the side panel



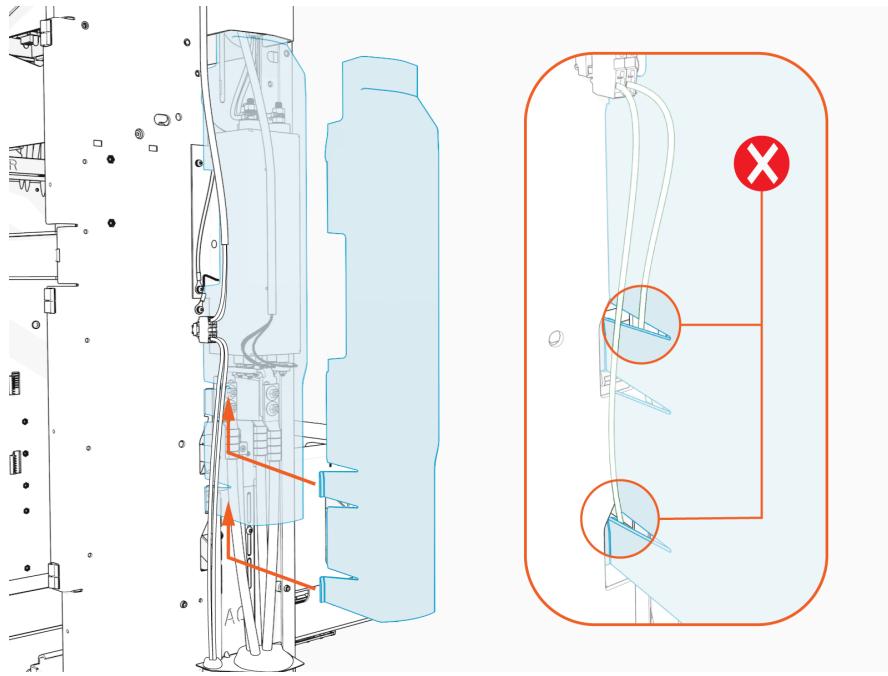


IMPORTANT: The conduit opening must be sealed to protect the wiring from the environment.

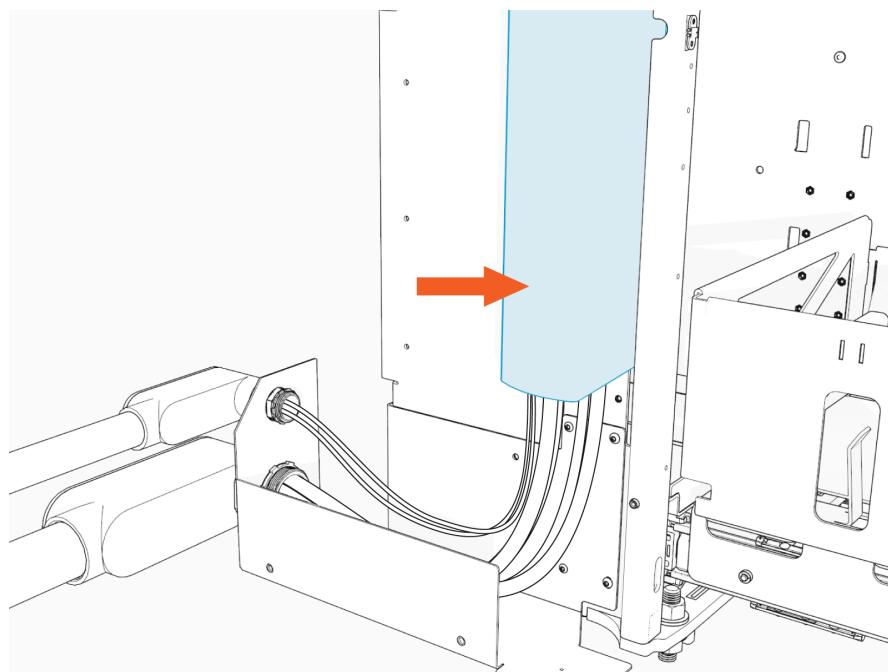
13. Install the AC wire cover.

- a. Squeeze the sides of the wiring cover and guide the tabs into the slots on the station.
- b. Slide the wiring cover up until it snaps into place. Ensure no wires get pinched.

Ground Conduit Entry



Surface Conduit Entry



Pair Express 280 Stations 4

This section describes the steps needed to connect the DC conductors, connect Ethernet communication, and install labels.



IMPORTANT: If the Express 280 is being installed as a Standalone station, skip this section and continue to [Install Side Panels, Power Modules, and the Touchscreen](#).

Route DC Conductors

The wiring on the DC side (the right side of the charging station) is only connected for Paired installations. Do not connect this wiring for Standalone installations.



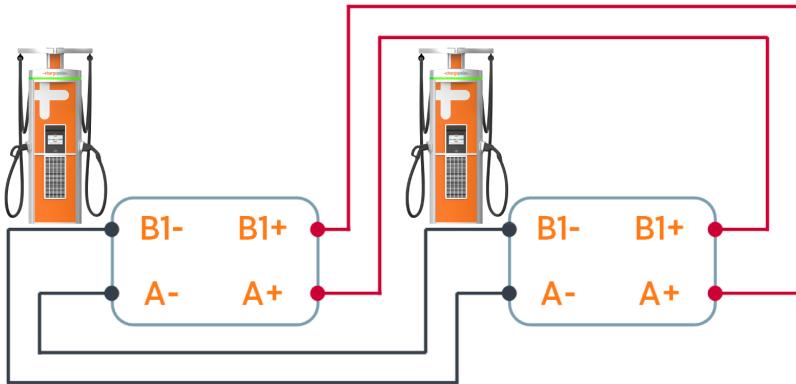
DANGER: RISK OF SHOCK. Leave the power disconnected at the service panel to BOTH Express 280 charging stations to be paired. Keep power off for both circuits until all cover panels are correctly installed and the work scope is completed. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN SERIOUS INJURY OR LOSS OF LIFE.



IMPORTANT: DC terminal blocks on the Express 280 can accept a maximum wire size of 300 kcmil. Check site plans and local code for site-specific requirements.

1. Label each end of each DC conductor to aid installation as follows:

- “Station 1 A+” (output) on one end and “Station 2 B1+” (input) on the other end
- “Station 1 A-” (output) on one end and “Station 2 B1-” (input) on the other end
- “Station 1 B1+” (input) on one end and “Station 2 A+” (output) on the other end
- “Station 1 B1-” (input) on one end and “Station 2 A-” (output) on the other end



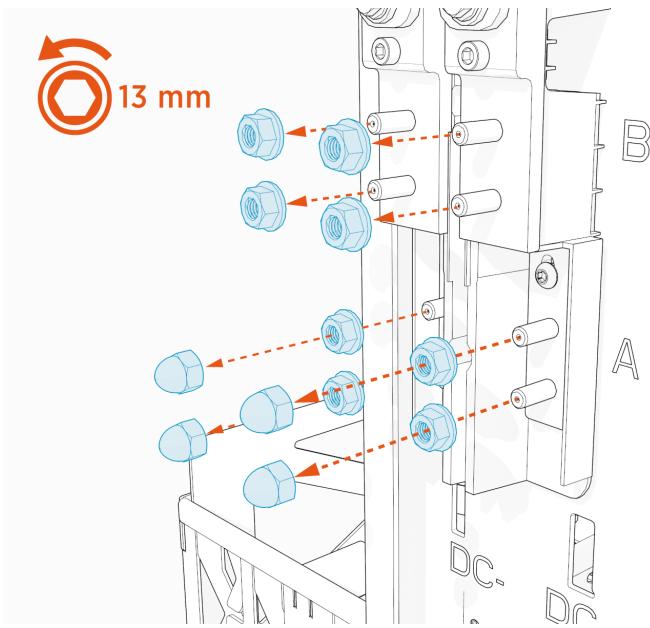
CAUTION: Be sure to connect positive to positive, and negative to negative, on the same wire. Do not reverse the polarity.

2. Use the multimeter and toner attachment to test each DC conductor for continuity. If any errors are found, adjust the conductor labels.

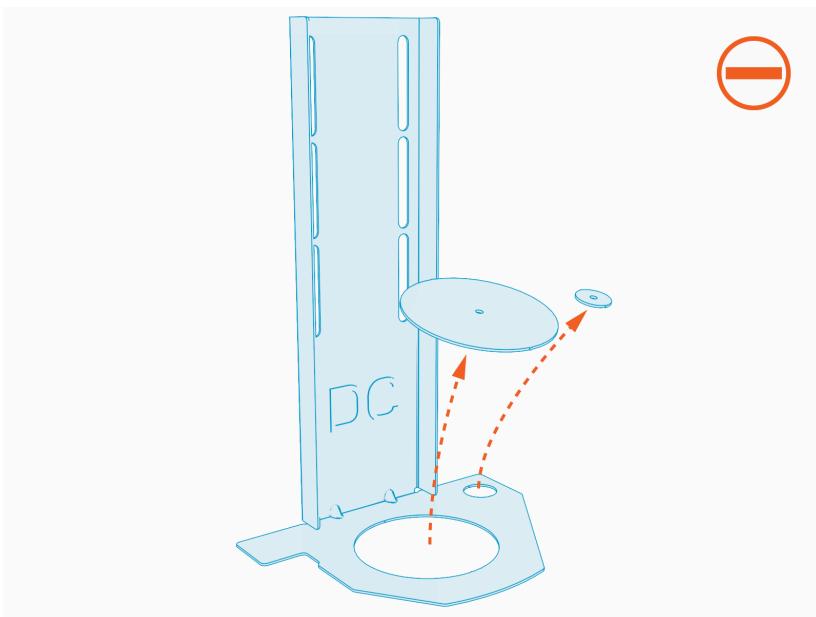


IMPORTANT: If the installation requires above-ground conduit, visit [Surface Conduit Entry Box](#) for steps to install a Surface Conduit Entry (SCE) kit.

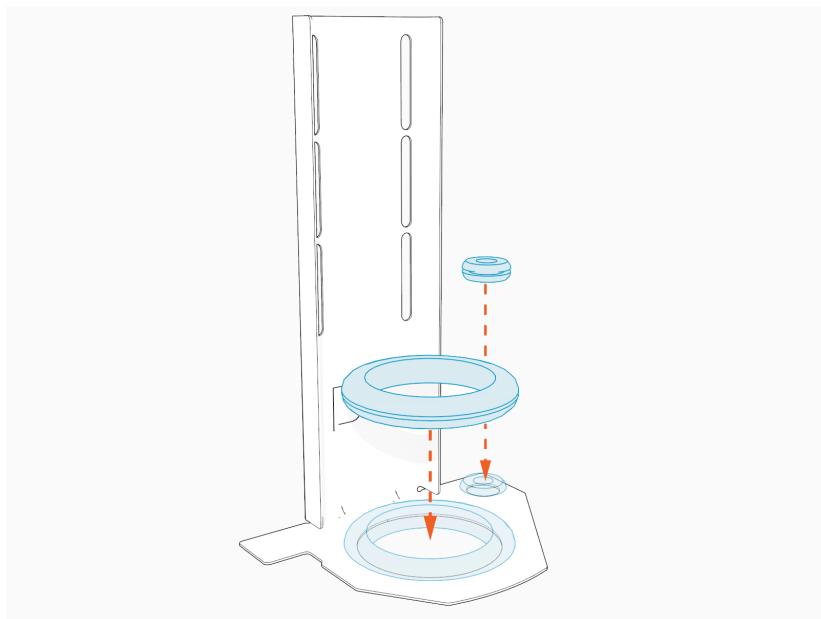
-
3. Remove the installed nuts from the DC A and B terminal blocks.



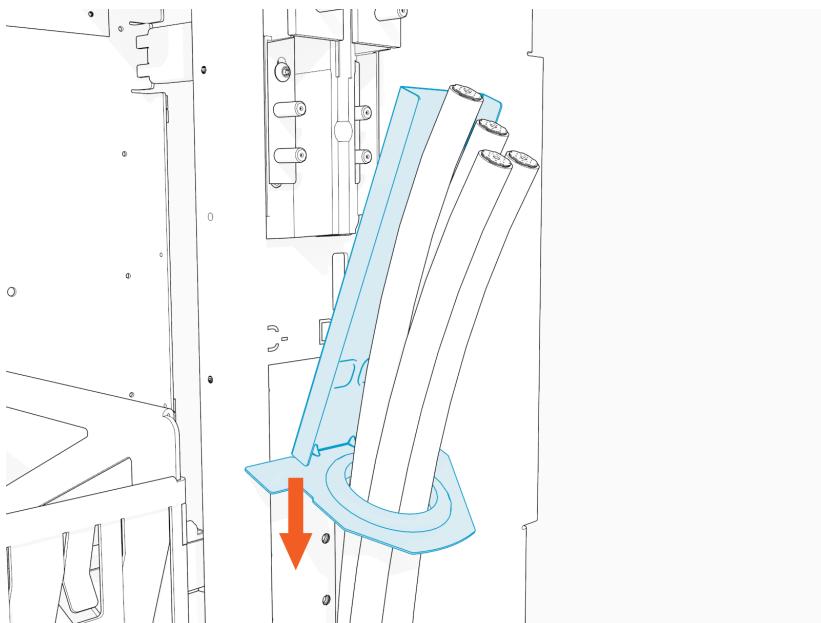
4. Use a flat head screwdriver to push out both punch-out discs in each DC rodent guard bracket.



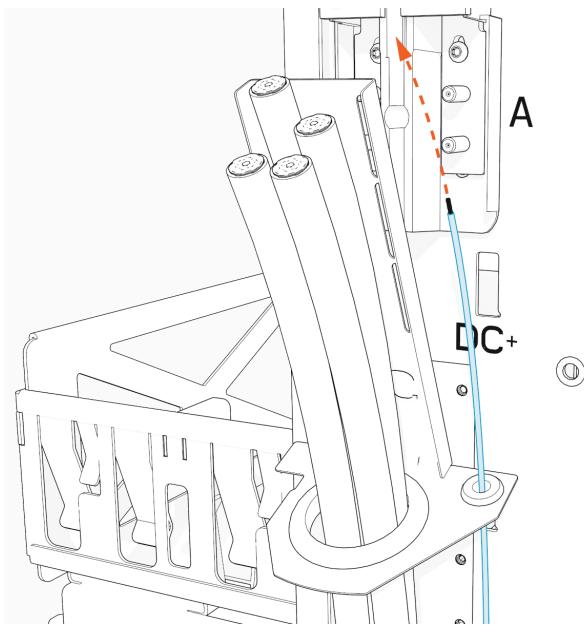
-
5. Install the grommets (included) into both bracket holes. Grommets protect wiring from the edges of the metal bracket.



6. Route the DC wiring bundle through the larger rodent bracket grommet.



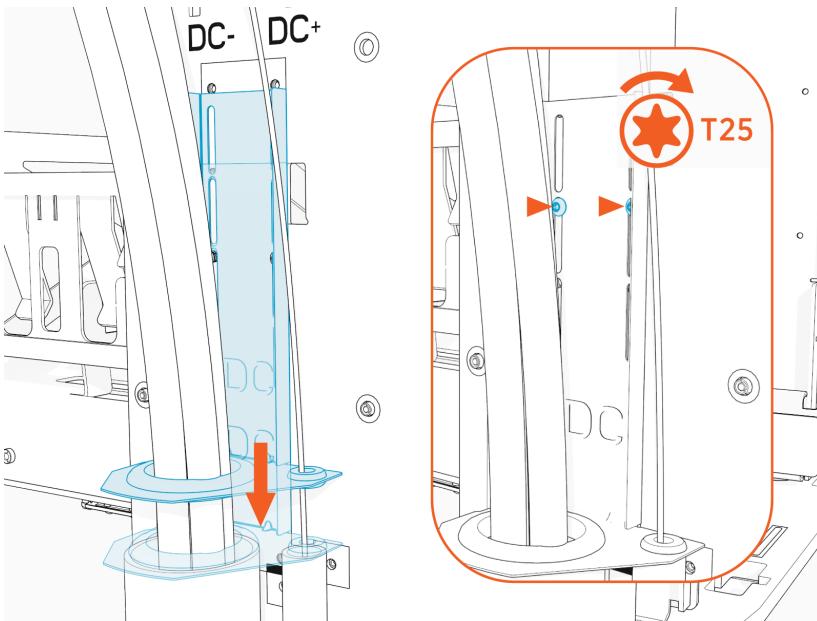
-
7. Route the Ethernet wire through the smaller rodent bracket grommet.



IMPORTANT: Begin cutting, crimping lugs, and landing the DC conductors on one station only as described below, then cut and crimp lugs for the other station. Trimming and crimping for lugs on both sides at once can create misalignment from wire movement within the conduit.

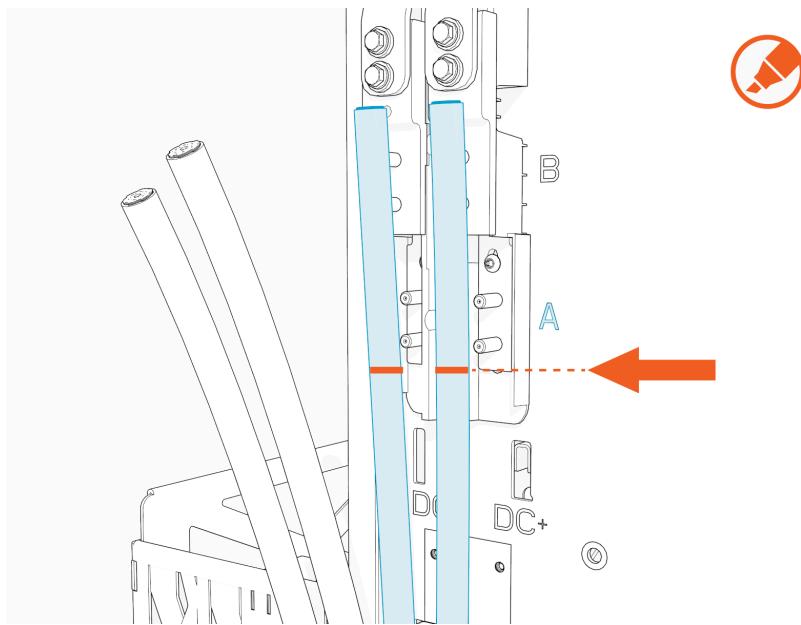
8. Align the rodent guard bracket to ensure it rests on the conduit opening.

Use a T25 Torx screwdriver and two screws to secure the rodent guard bracket. **Torque screws to 4.5 Nm (40 in lbs).**

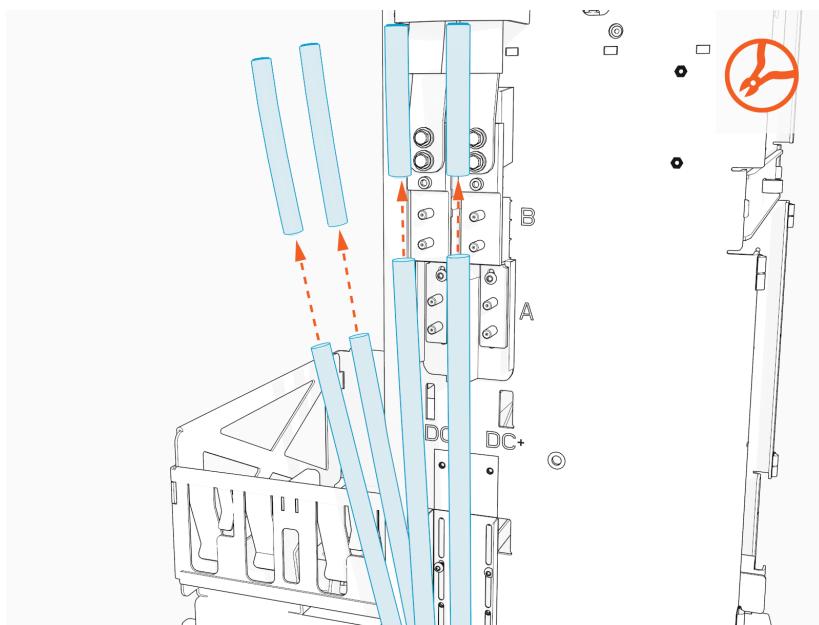


Connect the DC Conductors

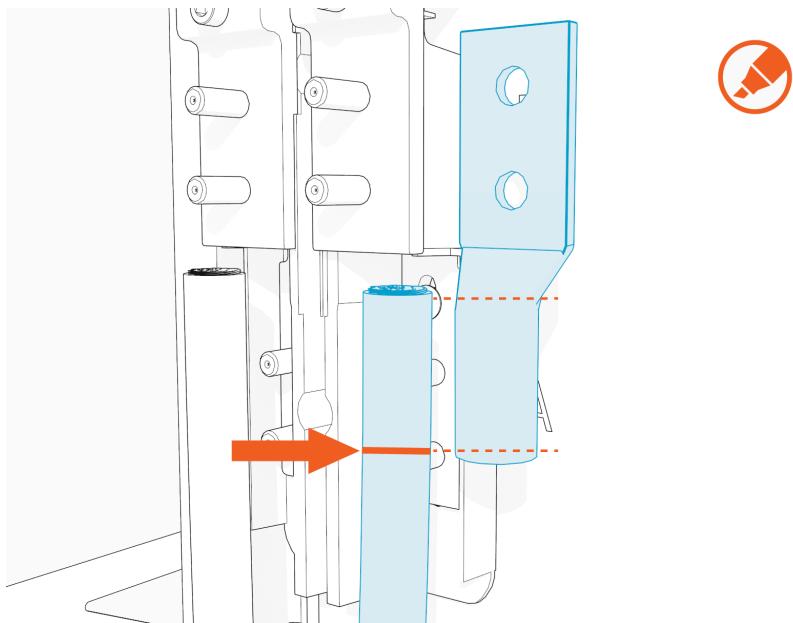
1. Measure the height of the A (output) and B1 (input) terminals.



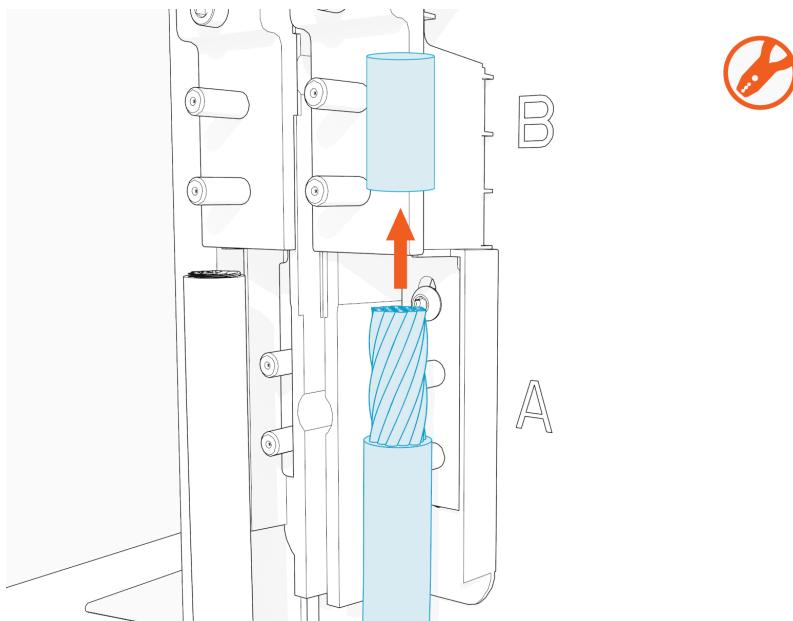
2. Trim the corresponding conductors to length.



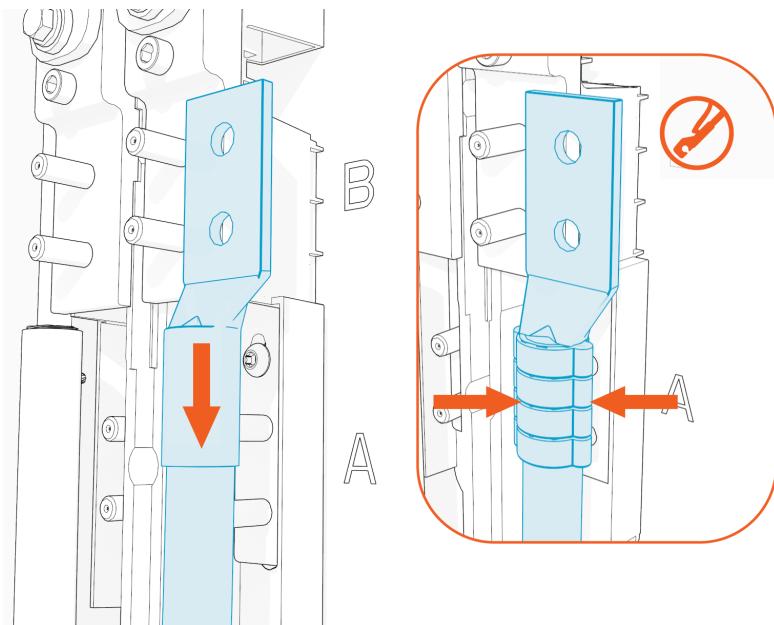
3. Mark the barrel height of the lug on the end of the each conductor.



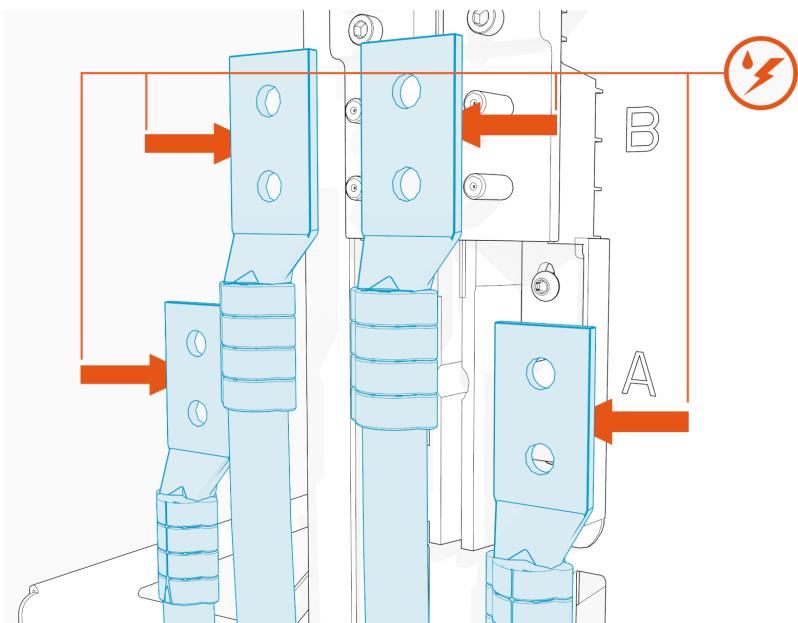
4. Use appropriate tools to remove insulation from each marked large conductor.



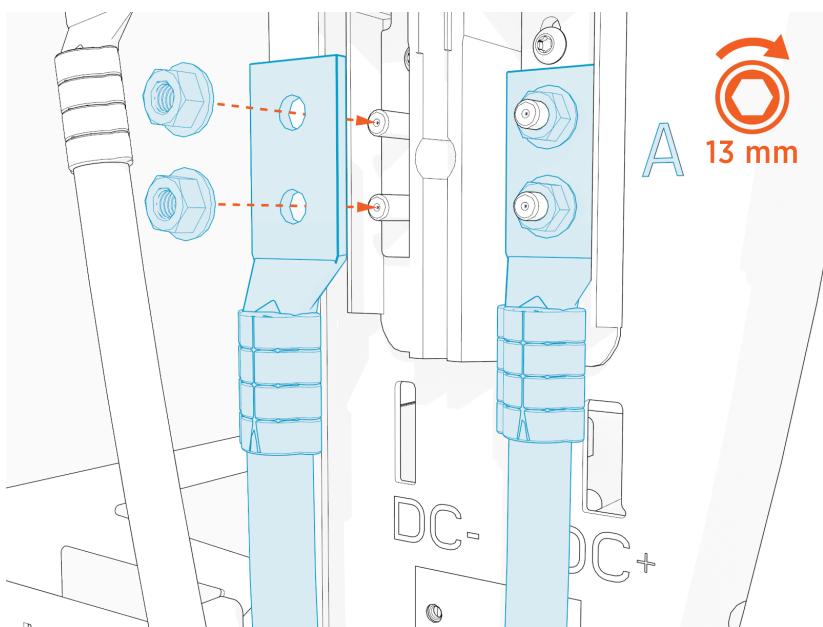
- Insert the stripped end of the DC conductor into the compression lug barrel and crimp it. Ensure the lug specifications meet the requirements noted in [Bring Tools and Materials](#). Use the directions found with the crimp tool.



- If recommended by the wire manufacturer or local code, apply an anti-oxidant joint compound to the stripped wire material to make a gas-tight joint with the lug.
- Apply a thin coating of the specified dielectric grease on each lug.

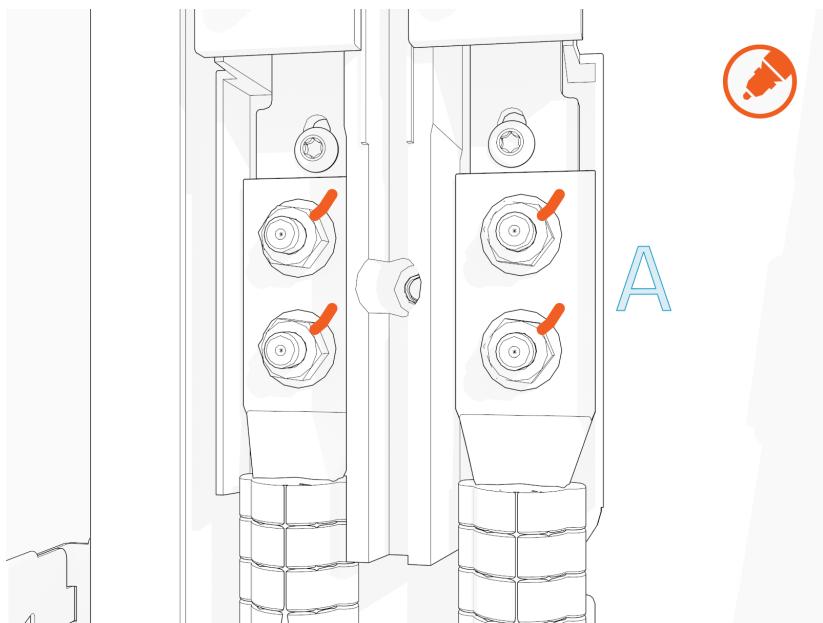


8. Use a 13 mm (3/8 in) socket wrench to mount and secure the A lugs on the lower terminal blocks.
Torque to 6.8 Nm (60 in-lb).

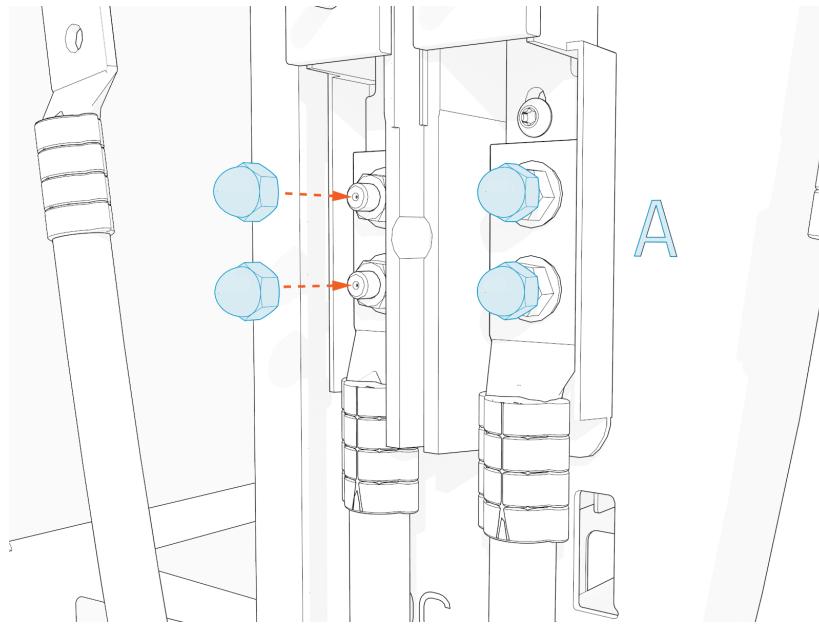


CAUTION: Do not under- OR over-torque the DC fasteners. Excess torque, even with hand tools, can damage the terminal blocks.

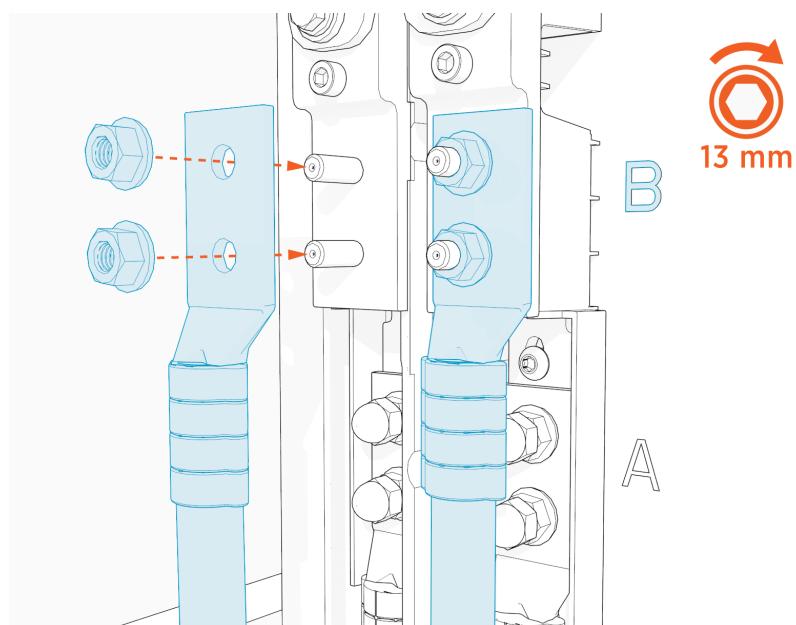
9. Mark all torqued conductor connections.



-
10. Screw an acorn (cap) nut onto each A terminal block. Hand tighten.

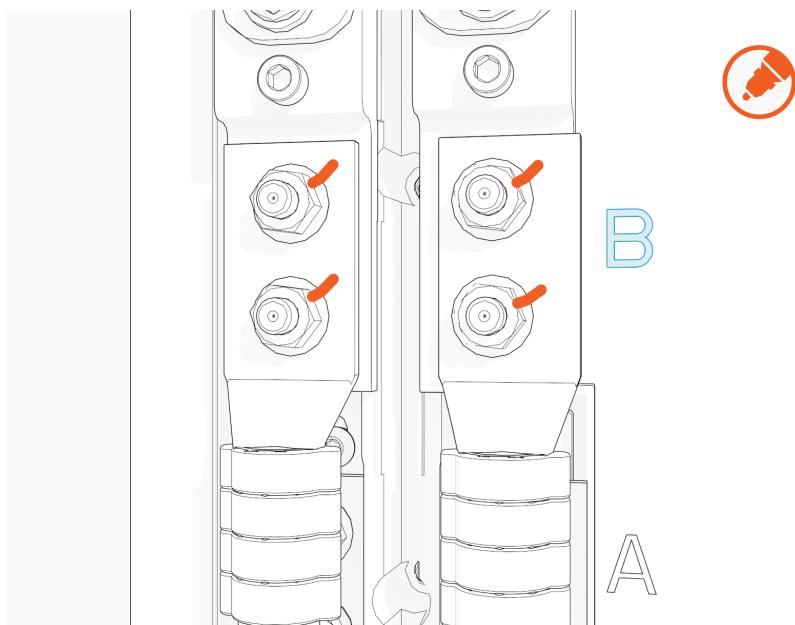


11. Remove the installed nuts from the DC B terminal blocks.
12. Use a 13 mm (3/8 in) socket wrench to mount and secure the B lugs on the upper terminal blocks.
Torque to 6.8 Nm (60 in-lb).



CAUTION: Do not under- OR over-torque the DC fasteners. Excess torque, even with hand tools, can damage the terminal blocks.

13. Mark all torqued conductor connections.



14. Complete the above steps for Station 2.



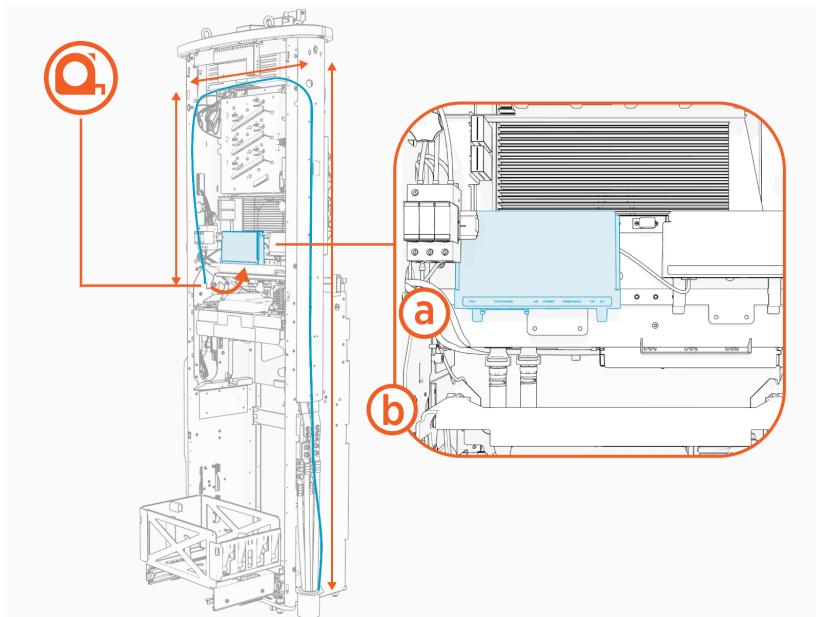
IMPORTANT: Double check that all conductor nuts are torqued correctly.

Connect Ethernet Wiring

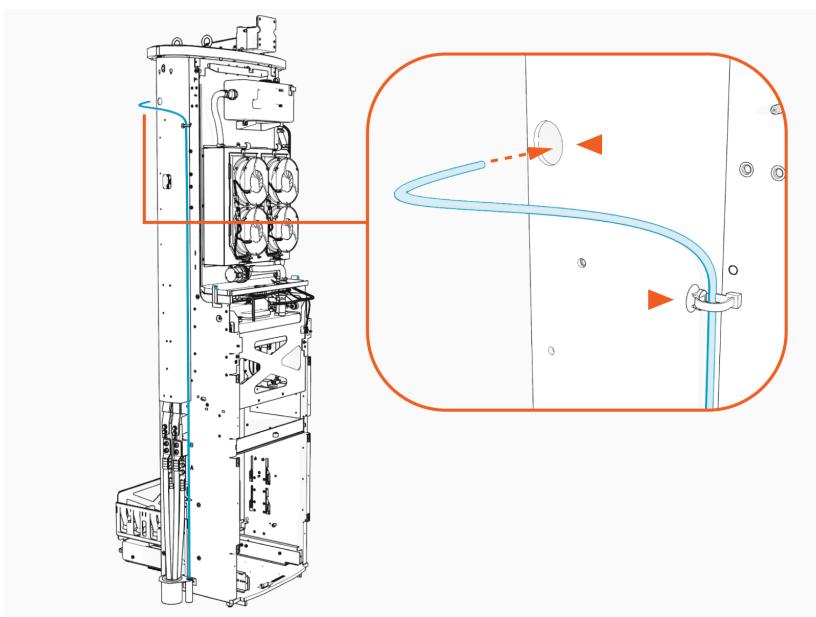
Ethernet wiring is only connected for Paired installations. Do not connect Ethernet wiring for Standalone installations.

1. Measure the length needed to extend the Ethernet wiring from the conduit opening, up the side of the frame, and into the Express 280's Station Management Unit (**a**), located above the Power Module mechanism (**b**).

Trim the excess wire.

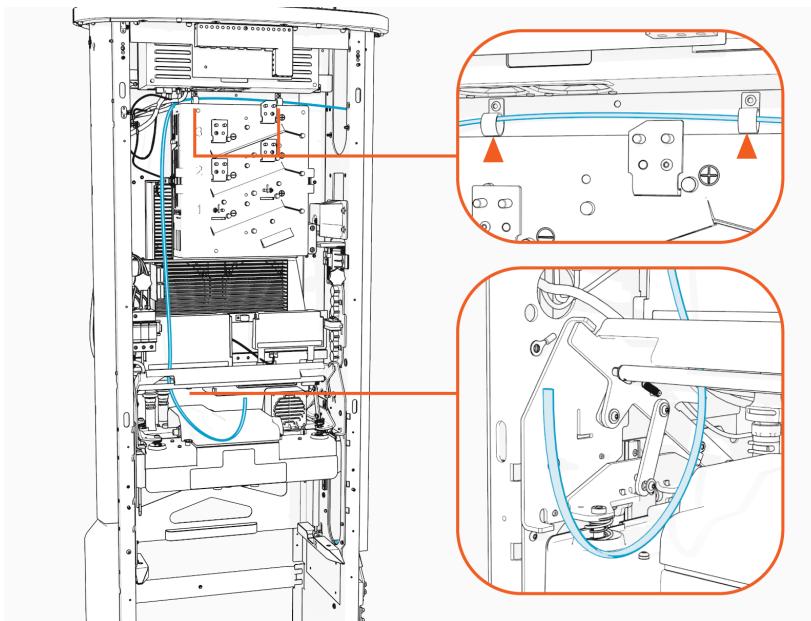


2. Route the Ethernet wire up the rear side of the frame, through the plastic P-clip and into the top wiring hole.

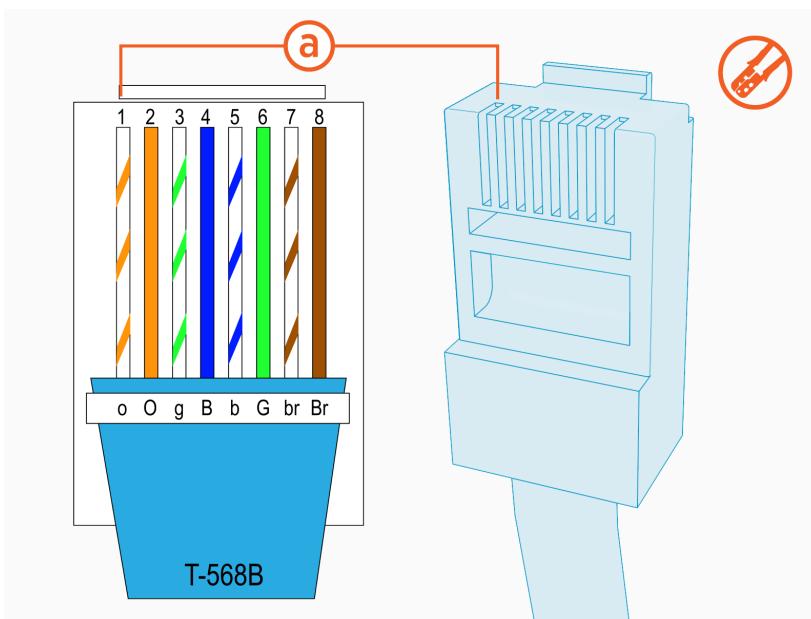


3. Route the Ethernet wire across the charging station from right to left between the auxiliary power supply and the contactor assembly.

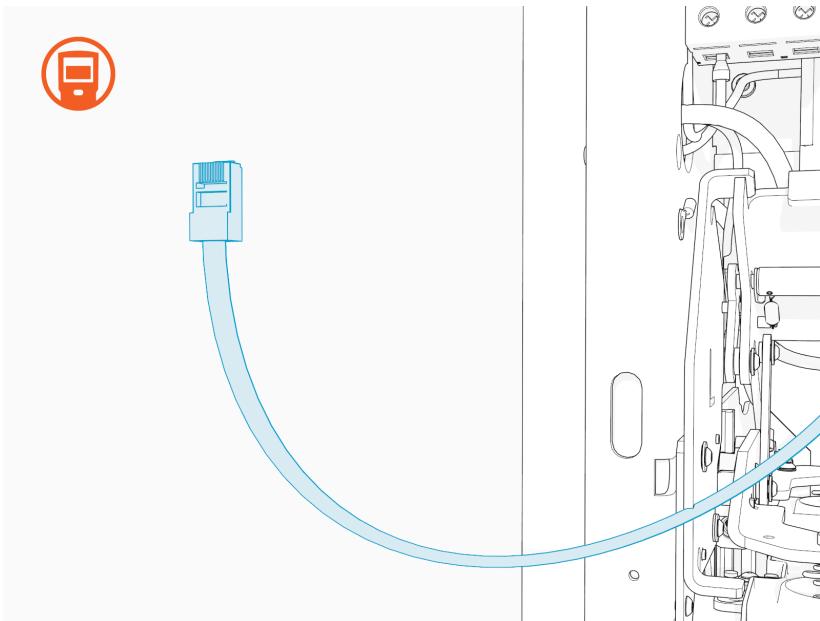
Secure the Ethernet wire to the existing cable bundle at each corner.



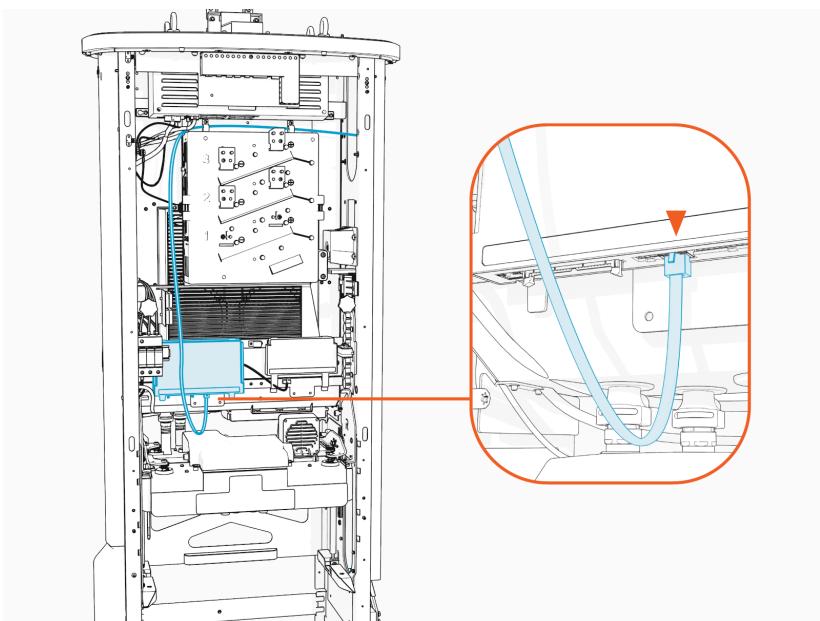
4. Crimp the Ethernet wire in a straight-through T-568B style into RJ45 connectors at both ends. Note the location of Pin 1 relative to the clip in the image and the order of the orange, blue, green, and brown wires in the pattern.



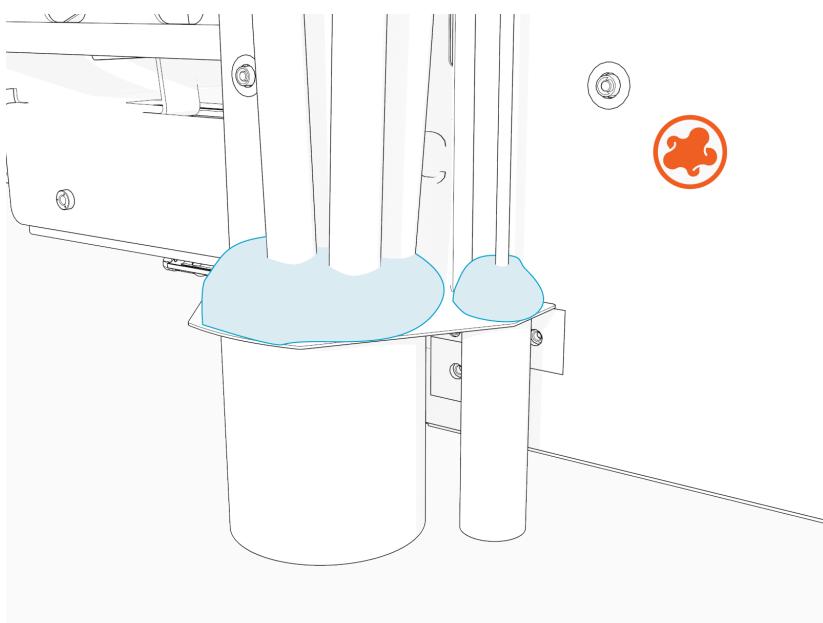
5. Test the Ethernet wire for functionality.



6. Plug the Ethernet wire into the **Ethernet** port of the Station Management Unit.

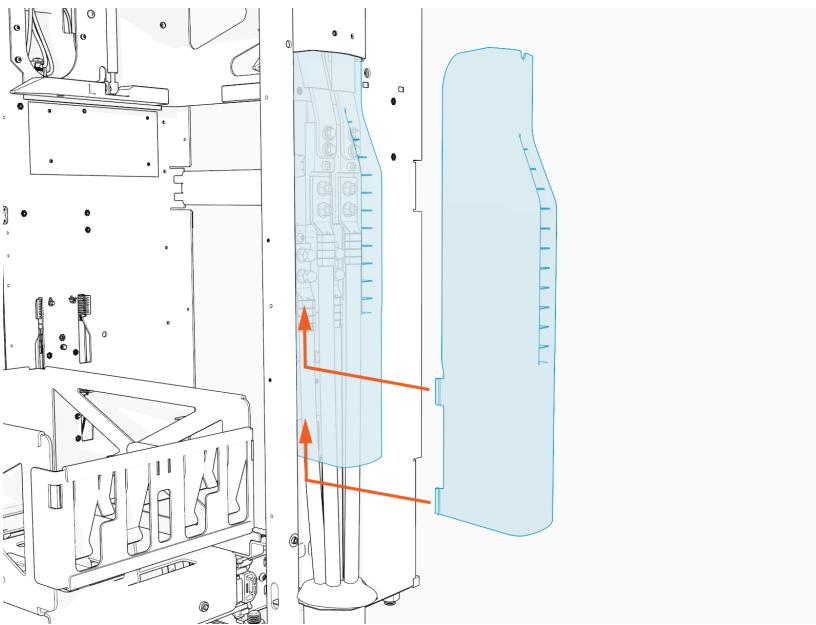


7. Use the duct seal compound included in the crate to completely seal all DC openings against pest ingress:
 - a. The inside of the conduit opening
 - b. Within the rodent guard bracket openings for wiring, to pad any sharp edges and block ingress
 - c. Around the edges of the rodent guard bracket where it will meet the side panel



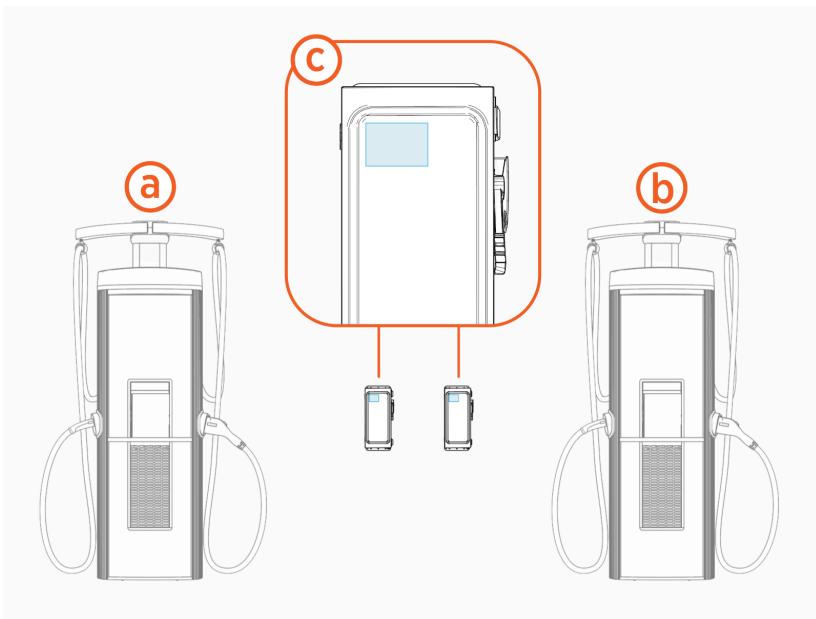
IMPORTANT: The conduit opening must be sealed to protect the wiring from the environment.

-
8. Install the DC wiring cover on the right side of the Express 280 by pressing on its sides and pushing it inward and upward.



Install Rating Labels

1. Identify the two charging stations to be paired. For each pair, check site plans to see which charging station is designated station 1 (**a**) and which is station 2 (**b**). If the plans do not define it, designate them now.
2. Affix the AC disconnect labels to the disconnect (**c**) responsible for AC power to this charging station and to the disconnect for its Paired partner.



3. Using permanent marker, write the last three numbers of both Paired stations' serial number (found on the Express 280 nameplate label) on each disconnect label, so that future technicians know which disconnect to power off for service.

This is especially important for sites with multiple pairs of charging stations.



IMPORTANT: Disconnect numbers must be written in permanent marker. Normal ballpoint pen ink does not stay legible on the label.

Install Side Panels, Power Modules, 5 and the Touchscreen

If the installation requires above-ground conduit, visit [Install the SCE Box Cover](#) for steps to install a Surface Conduit Entry (SCE) box cover before installing the side panels.

Install the Side Panels

Side panels prevent electrical shock hazard before powering on the charging station. These steps are the same for both Standalone and Paired installations.

Attach the Holsters

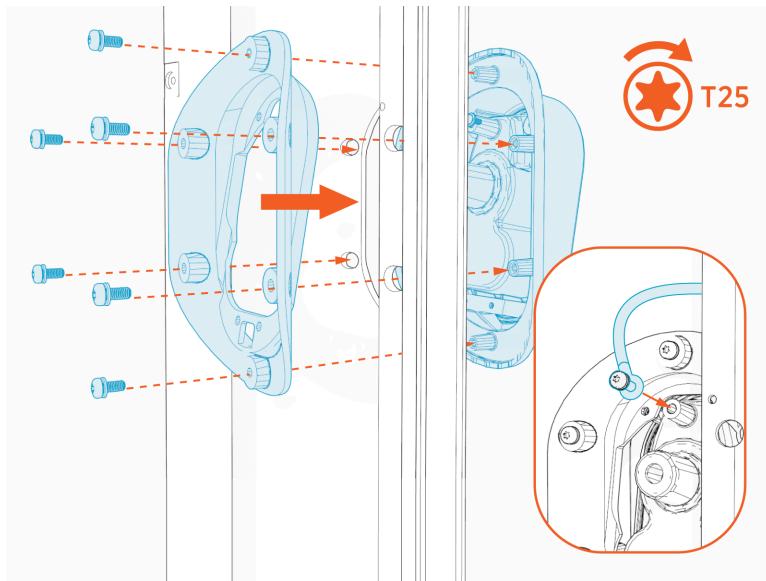
1. Remove holsters from packaging.
2. Hold the appropriate outer holster to the right side panel.

3. Install the holster.

Installation kits come in two configurations; kits with inner brackets and kits without inner brackets. Refer to the section that applies to your configuration.

Installation Kits with Inner Brackets

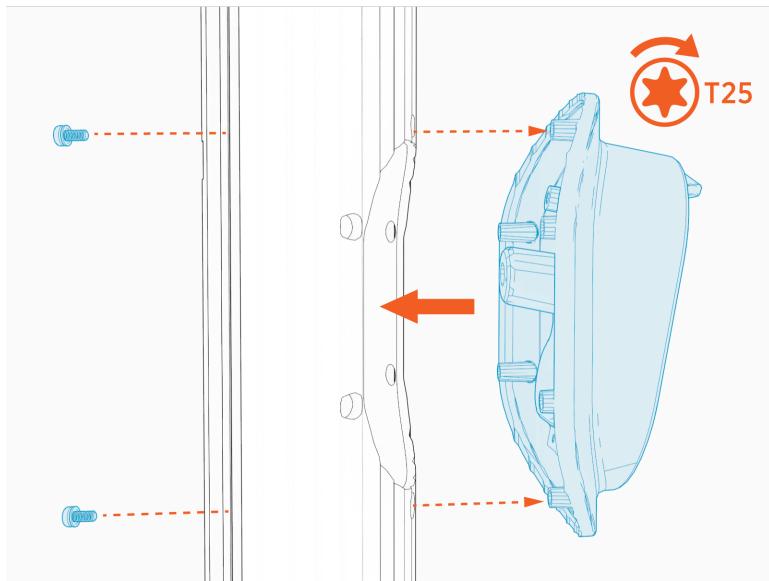
- a. Use a T25 Torx screwdriver to secure the inner bracket and outer holster to the right side panel. **Torque to 2.8 Nm (25 in-lbs).**
- b. Use a T25 Torx screwdriver to connect the ground cable to the holster.



Installation Kits without Inner Brackets

- a. Use a T25 Torx screwdriver to secure the outer holster to the right side panel. **Torque to 2.8 Nm (25 in-lb).**

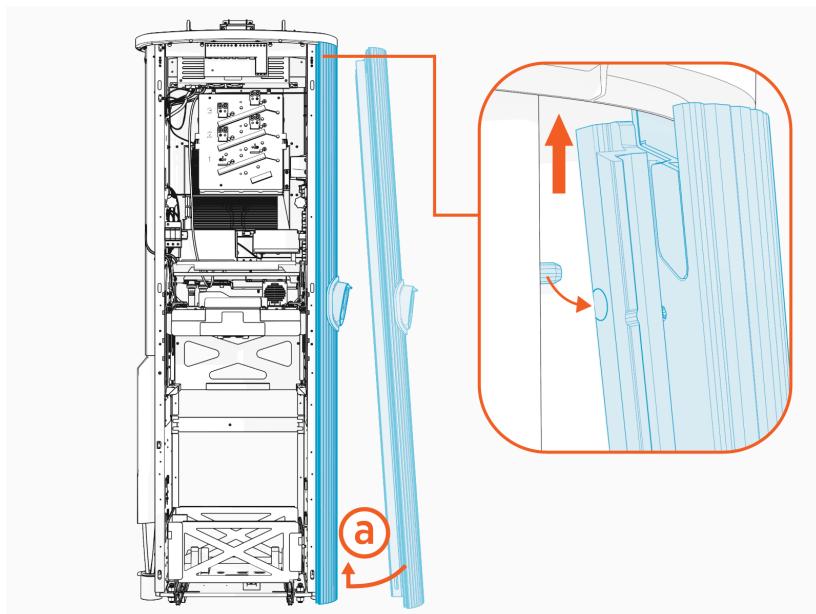
- b. If a ground wire is connected to the side panel, use a T25 Torx screwdriver to connect the ground cable to the holster.



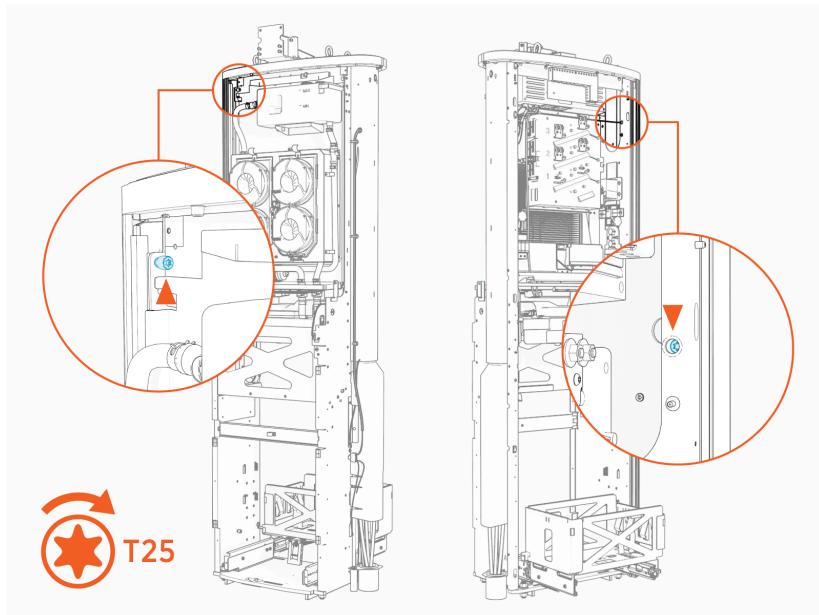
4. If installing a dual port station, repeat these steps for the second side panel.

Install the Side Panels

1. Position the panel so the oval cutout (a) is on the bottom near the back of the station. Slightly tilt the right side panel and slide its top edge under the bottom edge of the area light bar. Align the holes in the side panel with the guide pins on each side of the frame.

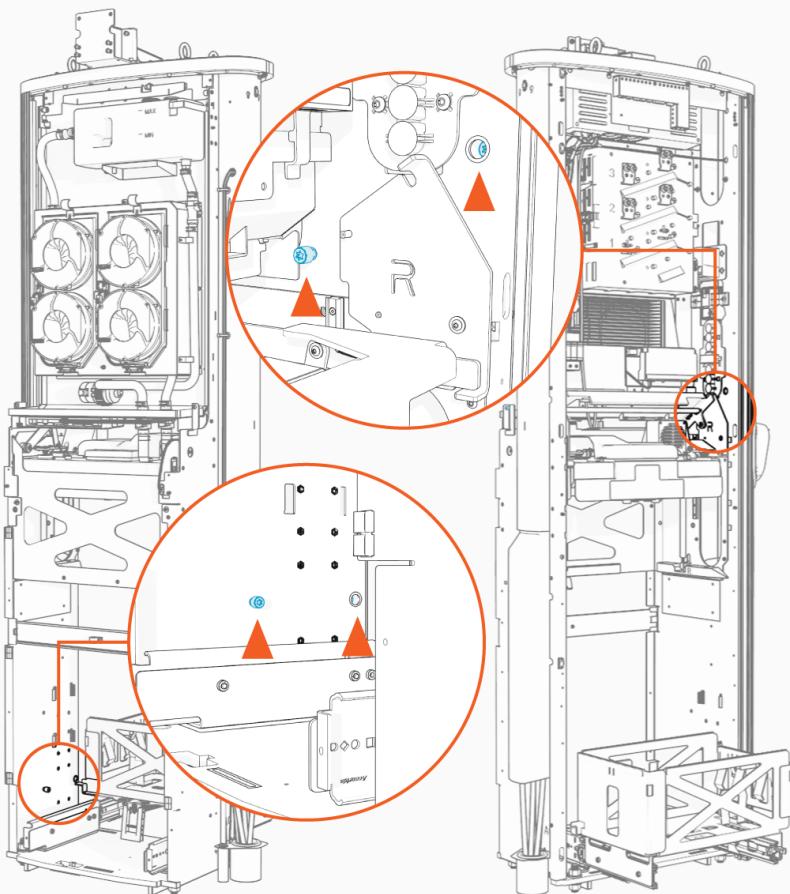


-
- Using a step ladder, hold the side panel and loosely secure the top two captive screws with a T25 Torx screwdriver.

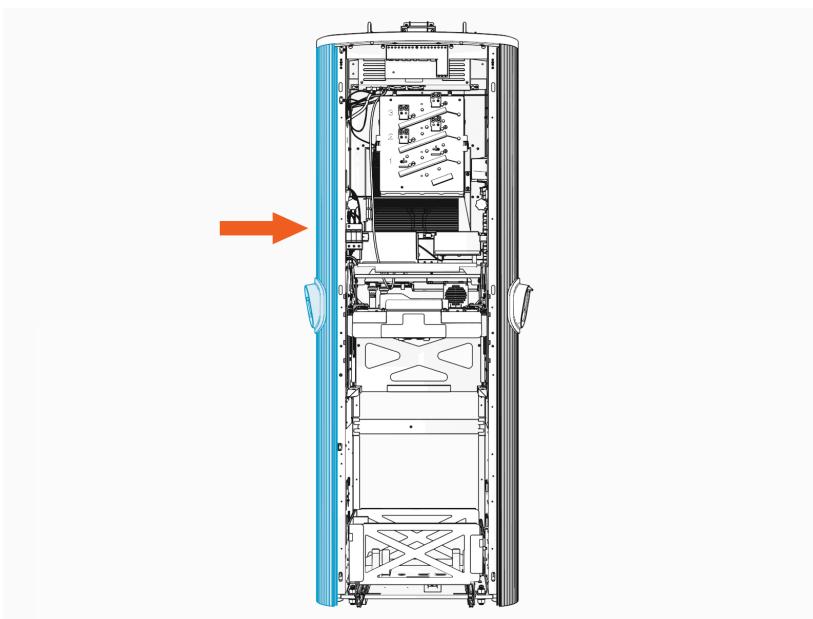


- Use a T25 Torx screwdriver to loosely secure the bottom two screws. Loosely secure the middle two screws just above the Power Module mechanism.

Note: Access to the middle screws is easier with the Power Module mechanism handle in the closed (down) position.



4. Use a T25 Torx screwdriver to tighten all six right side panel screws. **Torque the screws to 2.8 Nm (25 in lb).**
5. Repeat these steps to install the left side panel.



Install the Power Module

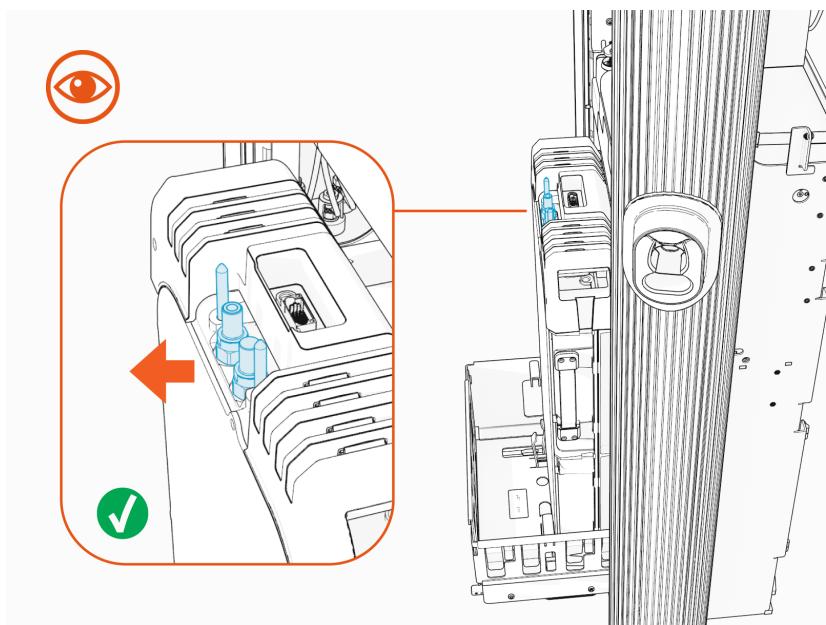


IMPORTANT: Power Modules are 45 kg (98.5 lbs) each. Installing or replacing Power Modules requires two people.



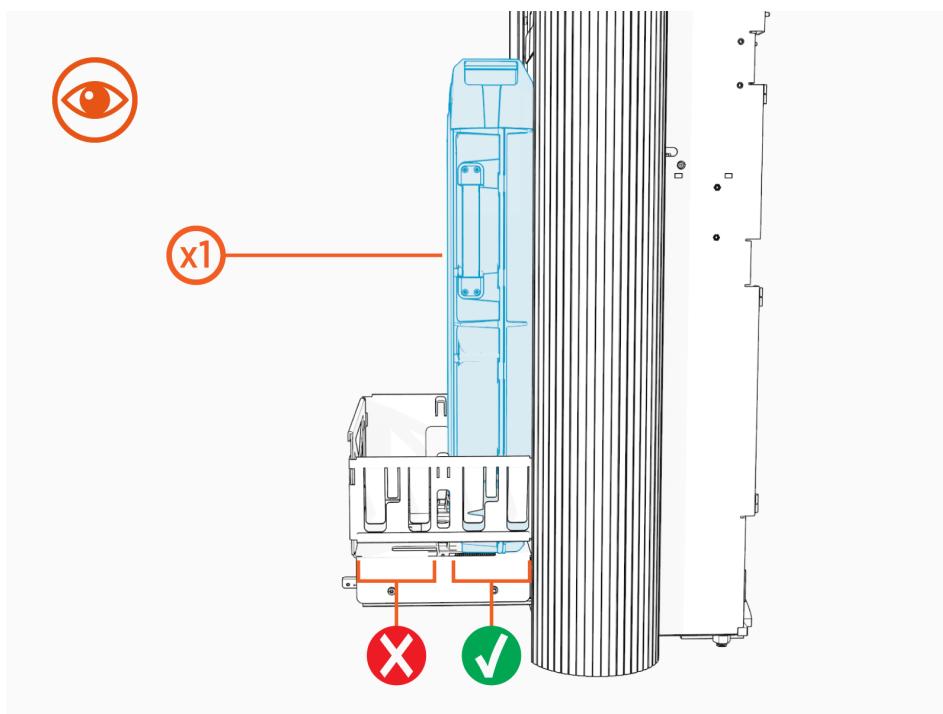
IMPORTANT: Always rest a Power Module flat on the ground until it is being installed. Power Modules are not stable in any other position. Images of Power Modules standing up with the handles on top are only to illustrate the proper installation position.

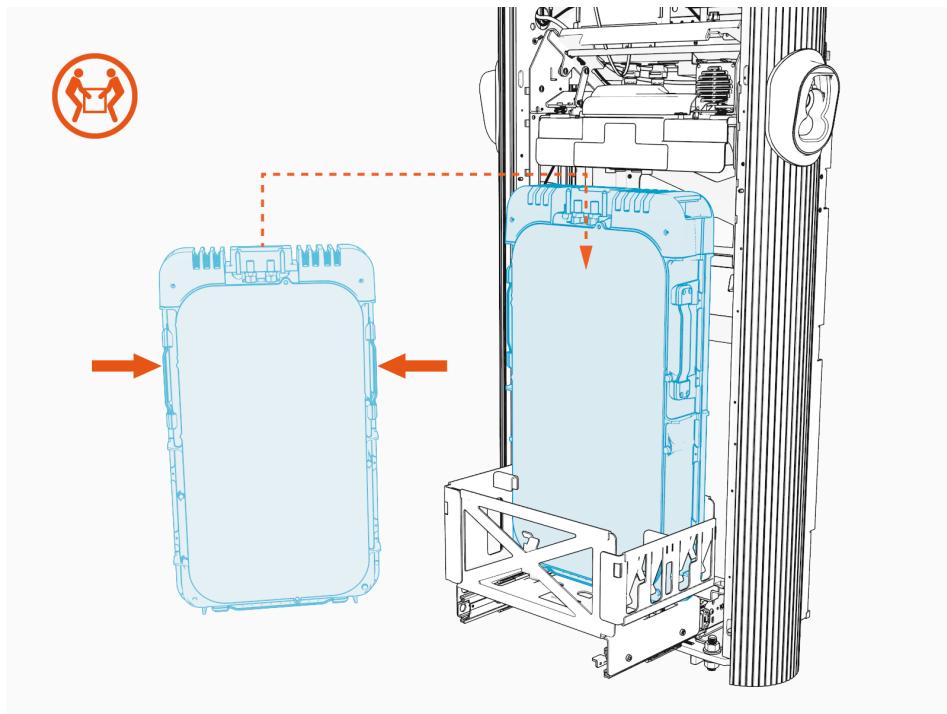
-
1. Install the rear Power Module first. Ensure the communication pins are closest to the back of the station.



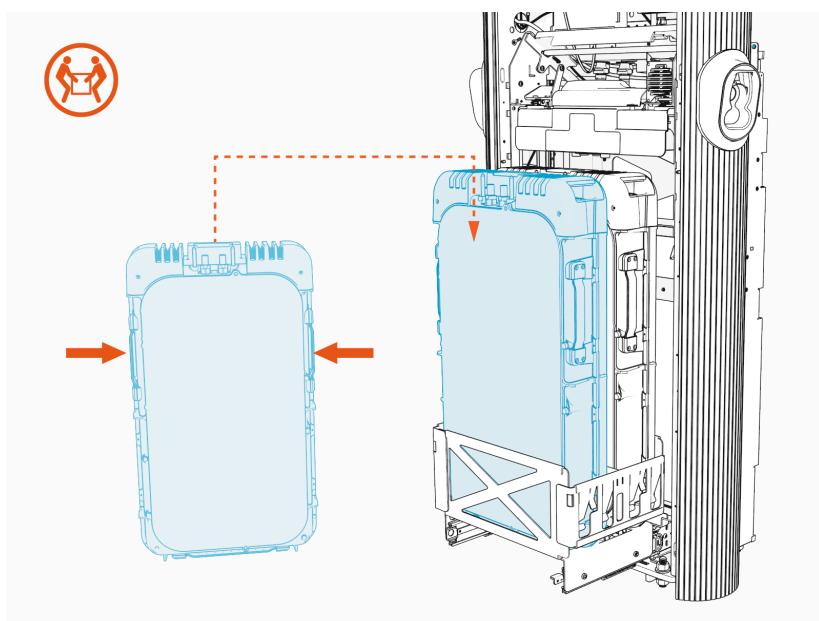
Using two people, lift the Power Module by its side handles and gently place it into its holder.

Note: If only one Power Module is being installed, it must be installed in the rear holder.

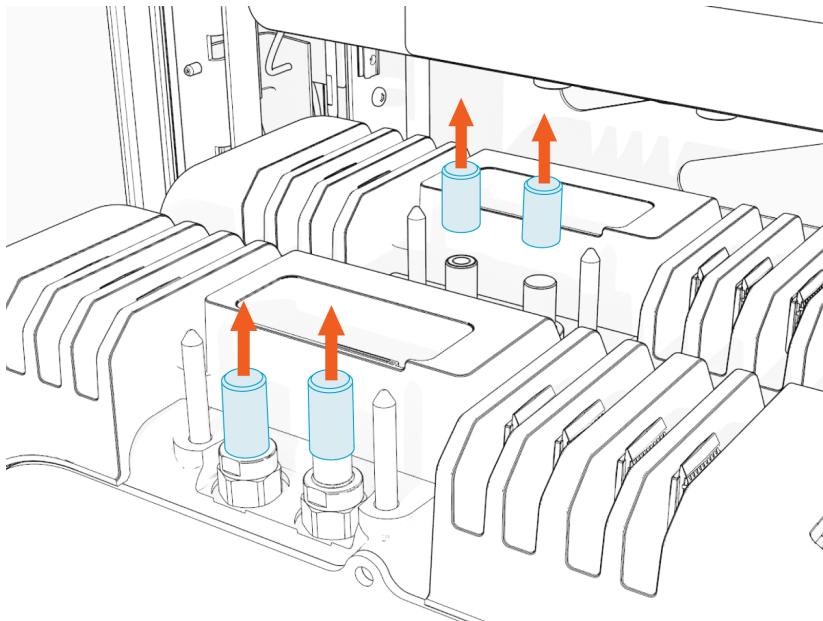




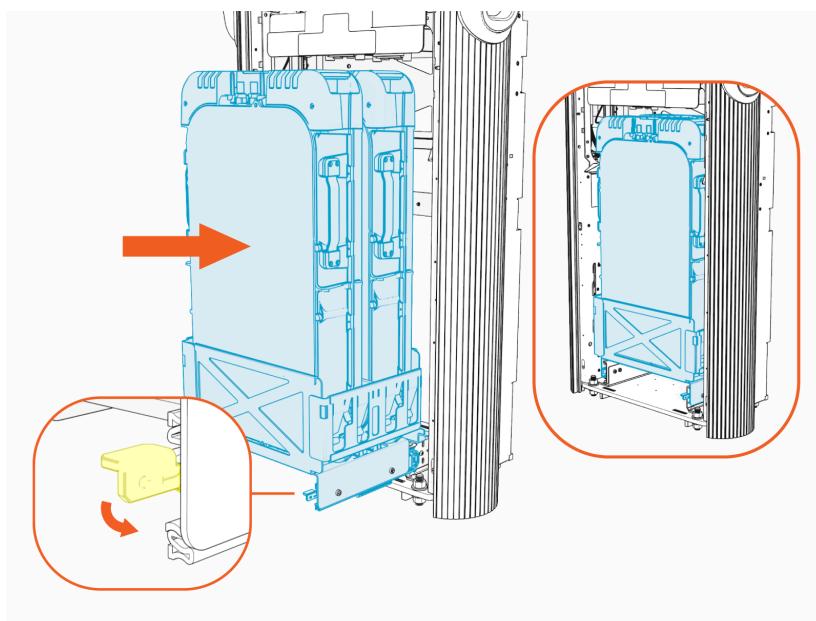
2. Repeat the step for the second Power Module, if applicable.



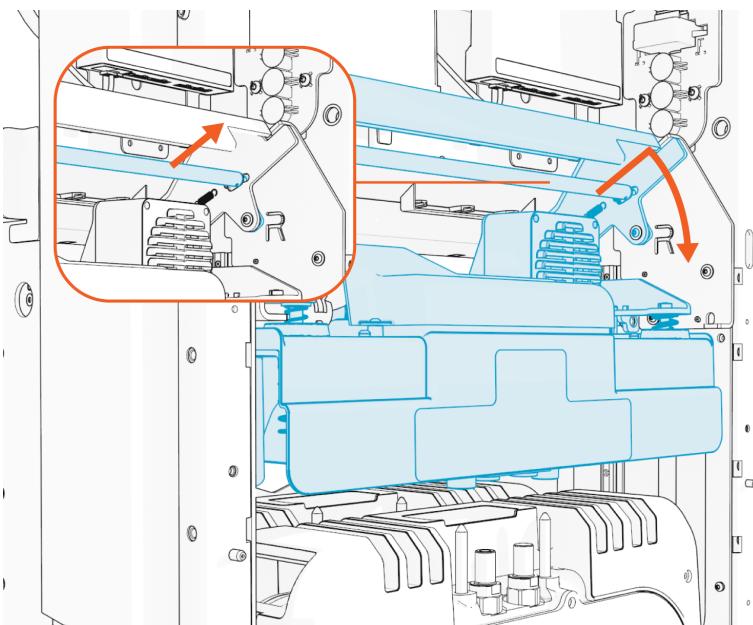
-
3. If not already done, remove the safety caps from the coolant ports.



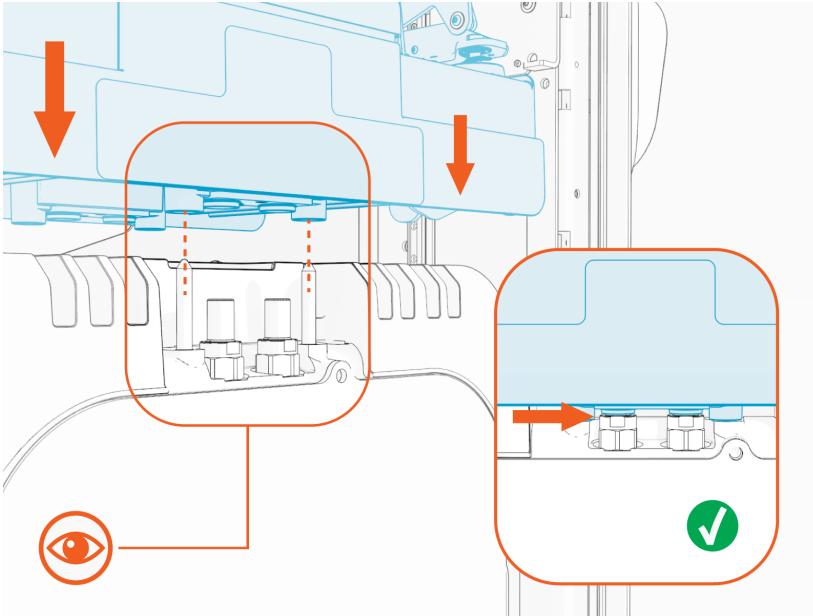
4. At the bottom right of the Express 280, press and hold the yellow release latch while pushing the Power Module tray into the station until it locks into place.



- Using two hands, squeeze the Power Module mechanism's release bar and lower it part of the way down while checking alignment with the ports and guide posts.



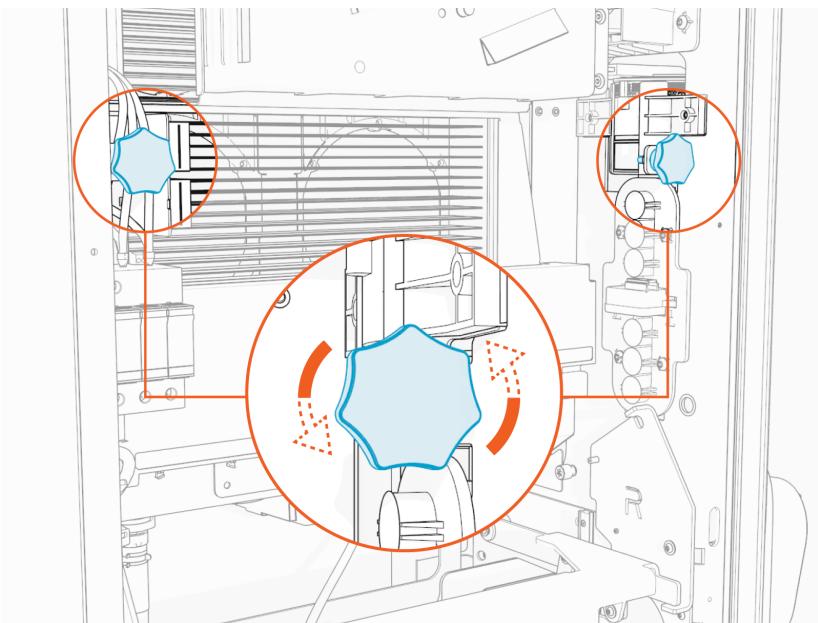
- Lower the Power Module mechanism until you hear a click as the mechanism locks into place. Ensure the mechanism is fully engaged with all Power Module connectors. The Power Module mechanism should fully cover the ridges on the Power Module's top edge.



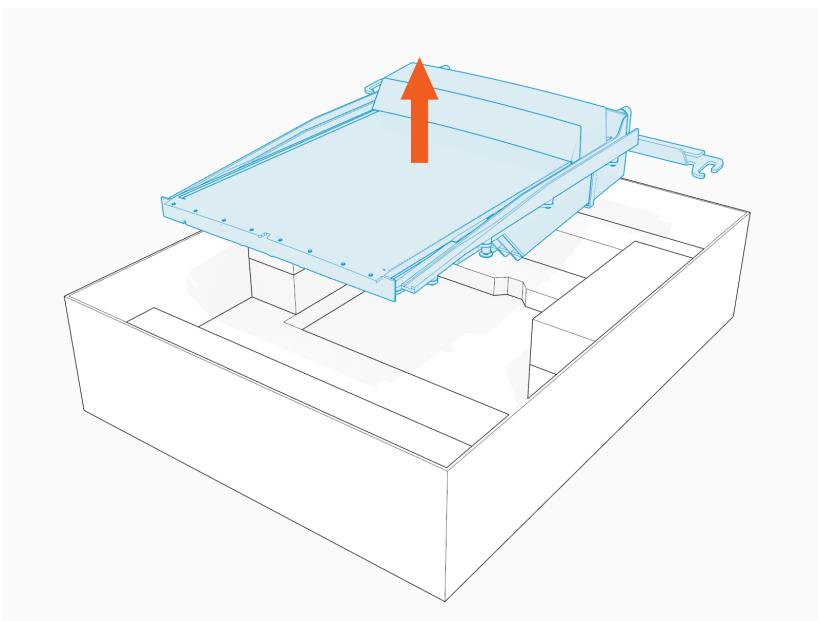
Note: If the mechanism does not engage, raise it again and push the Power Modules to the back of the station to realign, then try again. Do not apply excessive force.

Install the Touchscreen

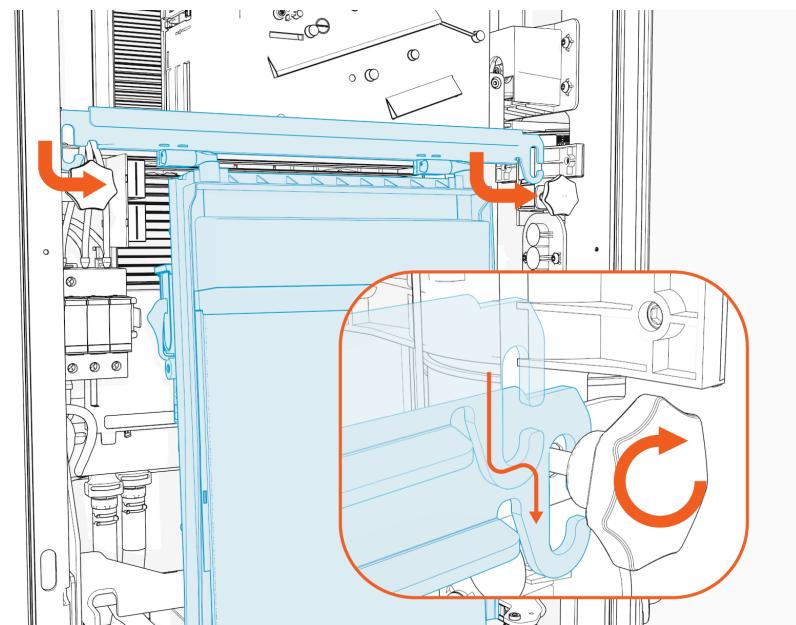
1. Loosen but do not remove the retention knobs.



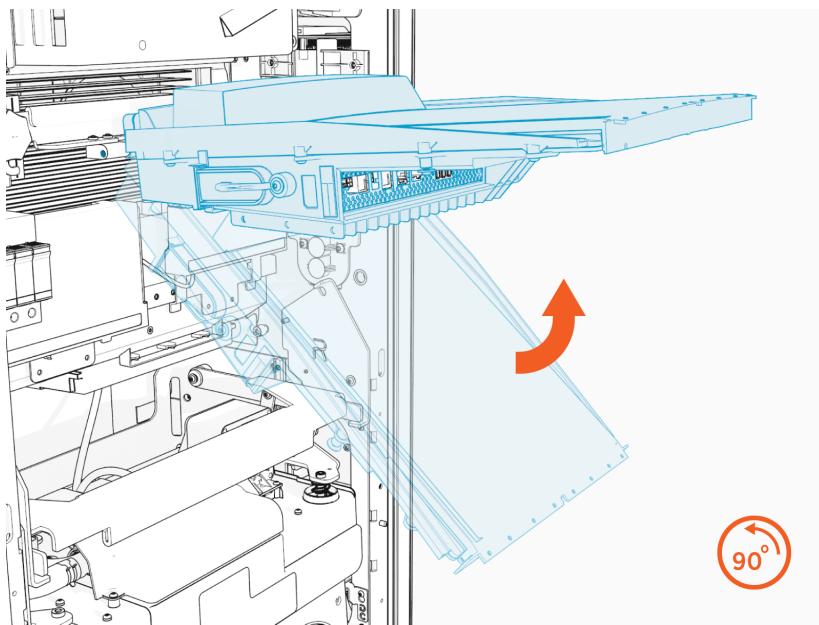
2. Remove the touchscreen from the packaging.



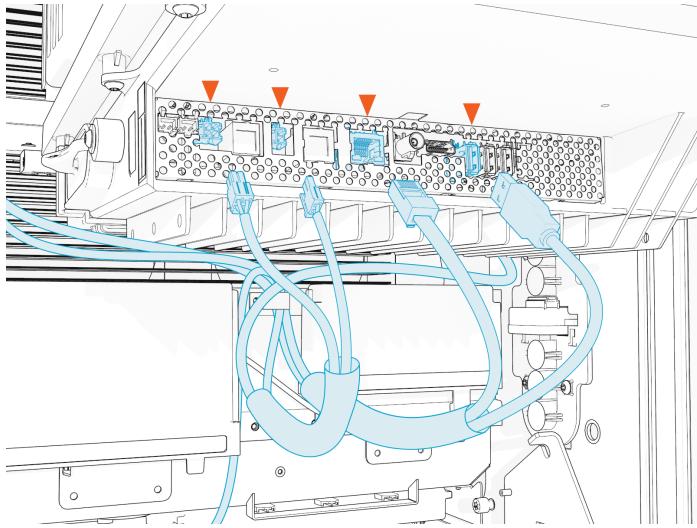
3. Align the hooks of the touchscreen's mounting bracket over the retention knob supports. Tighten the knobs enough to secure the touchscreen.



4. Swing the bottom of the touchscreen out to a 90-degree angle.



5. Connect all cables to the underside of the touch screen:

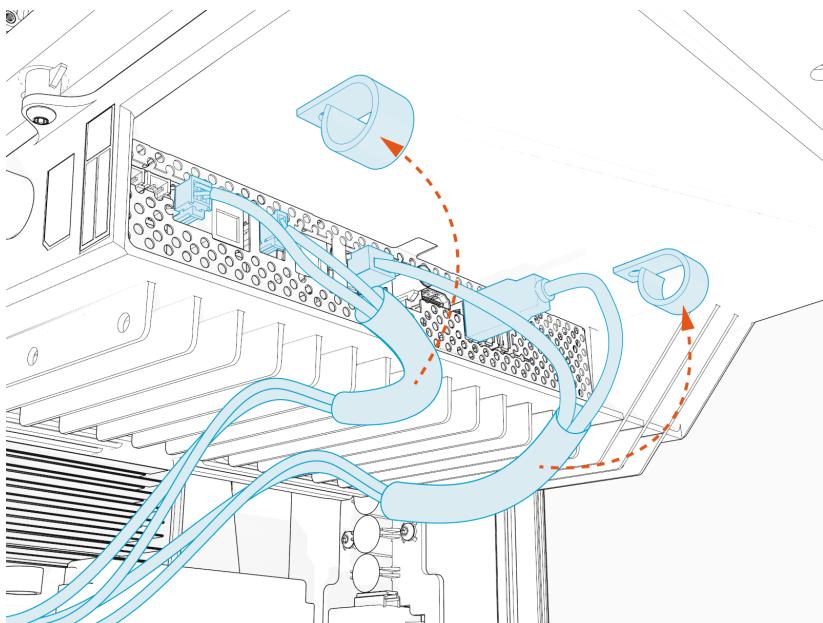


- (a) Speaker
- (b) Power 24 VDC power
- (c) RJ45 to dispenser cable control
- (d) USB to LED display



IMPORTANT: Perform a pull-push test to ensure that each cable is correctly seated. Failure to connect these correctly could prevent the system from powering on.

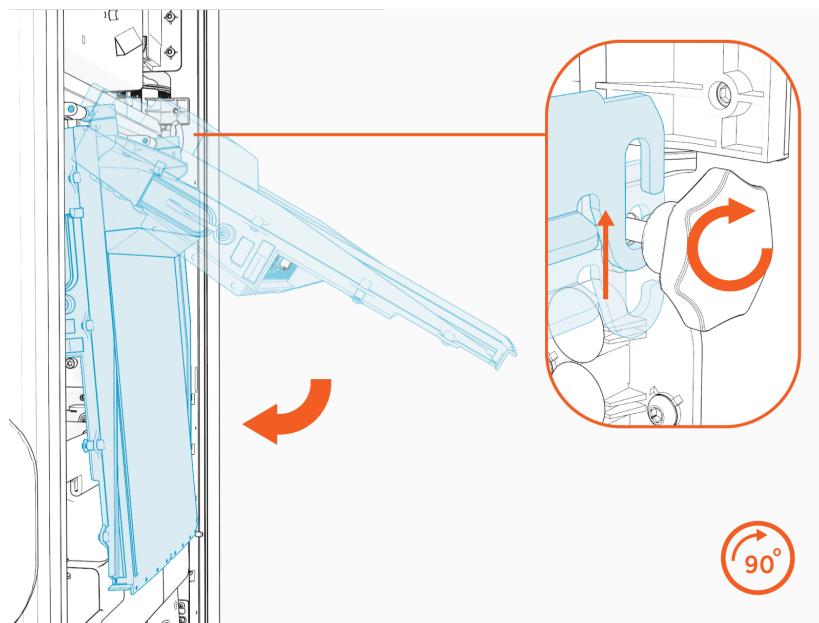
6. Route excess wiring through the wire management rings under the touchscreen to prevent it being pinched in the panels.



7. Swing the touchscreen down.

Loosen both retention knobs and slide the touchscreen beam up.

Re-tighten the knobs in the highest position.



Fill the Coolant Reservoir

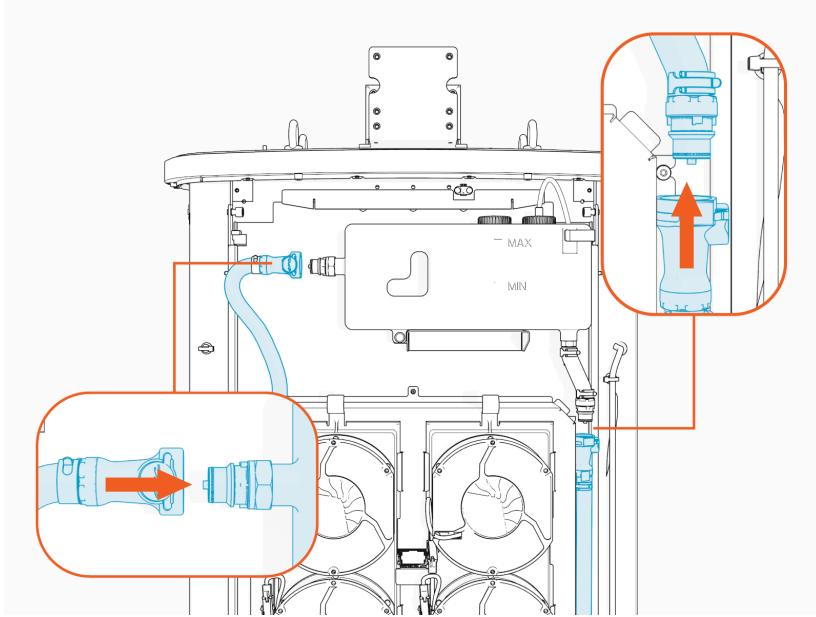
The Express 280 is shipped with an empty coolant reservoir. Coolant and a funnel are included with the product. Most coolant lines are already connected to the reservoir with quick connect fittings, except the ones shown below.



IMPORTANT: Always fill the coolant reservoir after installing the Power Modules in the station mechanism, since Power Modules are part of the coolant path. Filling the reservoir first does not allow full station coolant levels.

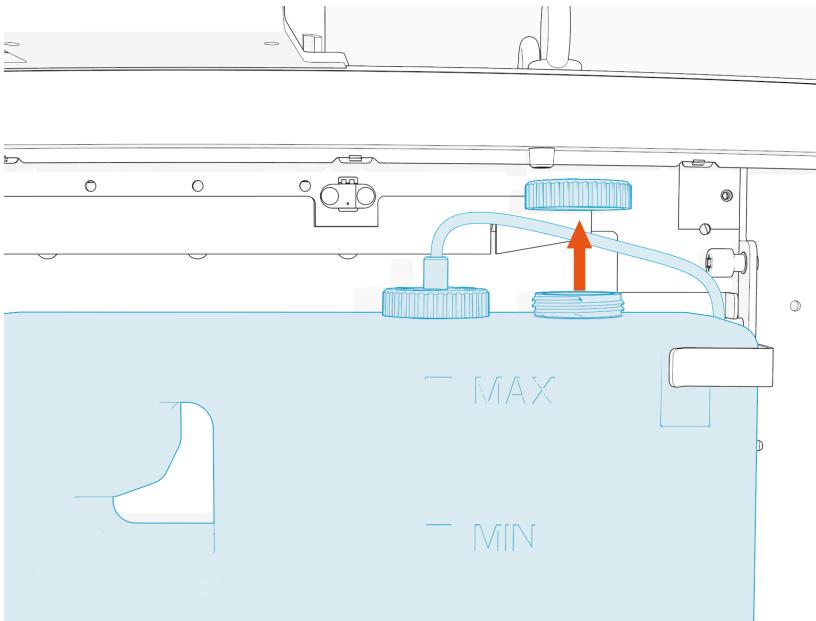
1. Remove the plastic shipping wrap.
2. Attach the quick connect line on the right side of the coolant reservoir. The line audibly clicks when connected.

-
3. Attach the quick connect line on the left side of the coolant reservoir.



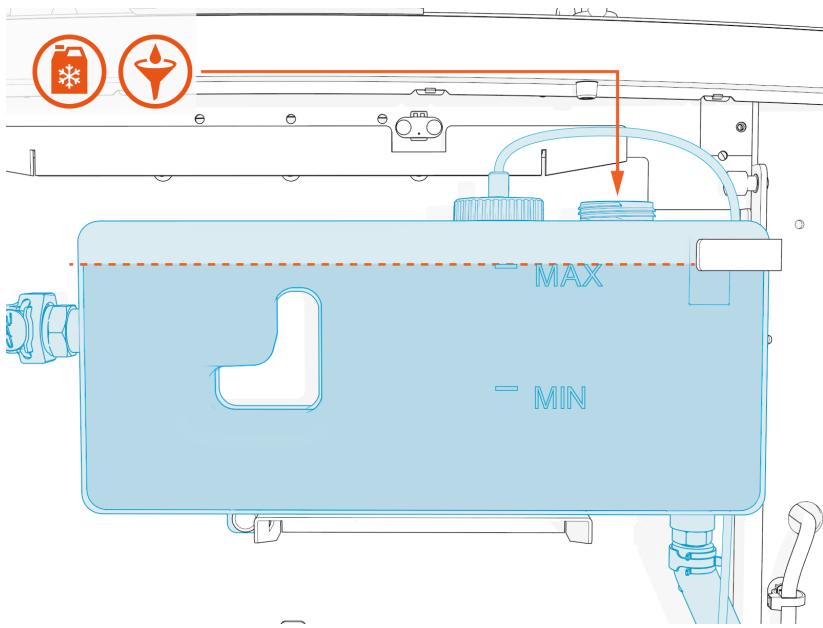
Note: Perform a push-pull test to ensure the quick connect lines are secure.

4. Using a step ladder if needed, unscrew the reservoir fill cap.

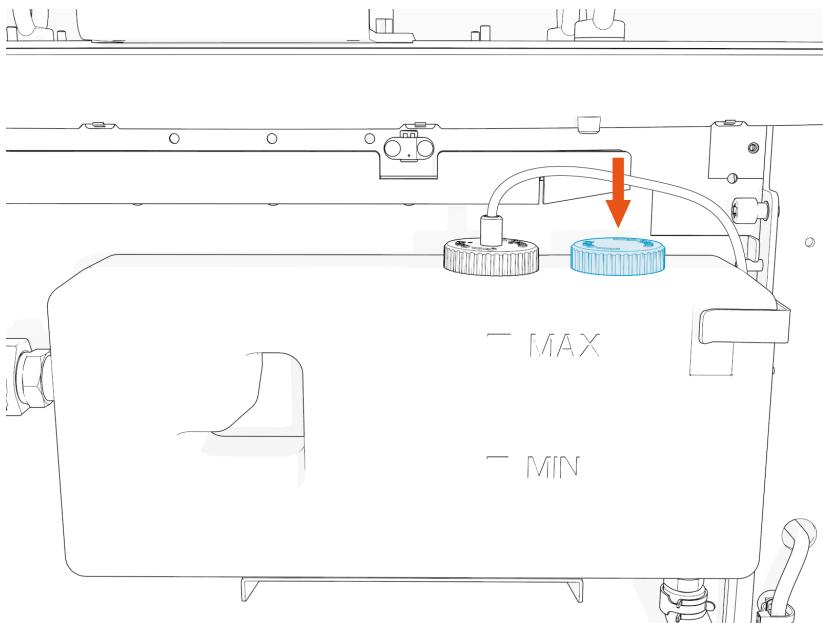


Note: Do not unscrew the level sensor wiring cap when adding coolant.

5. Use a funnel to fill the reservoir to the marked MAX line with coolant.



6. Replace the reservoir cap.



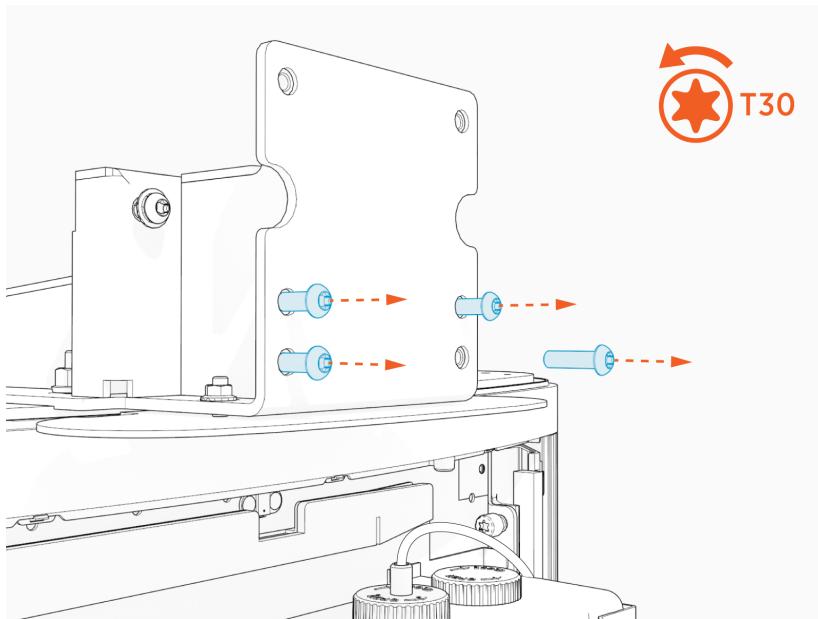
7. Use the cloth to wipe up any coolant spills.

Install Cable Management Kits 6 (CMK)

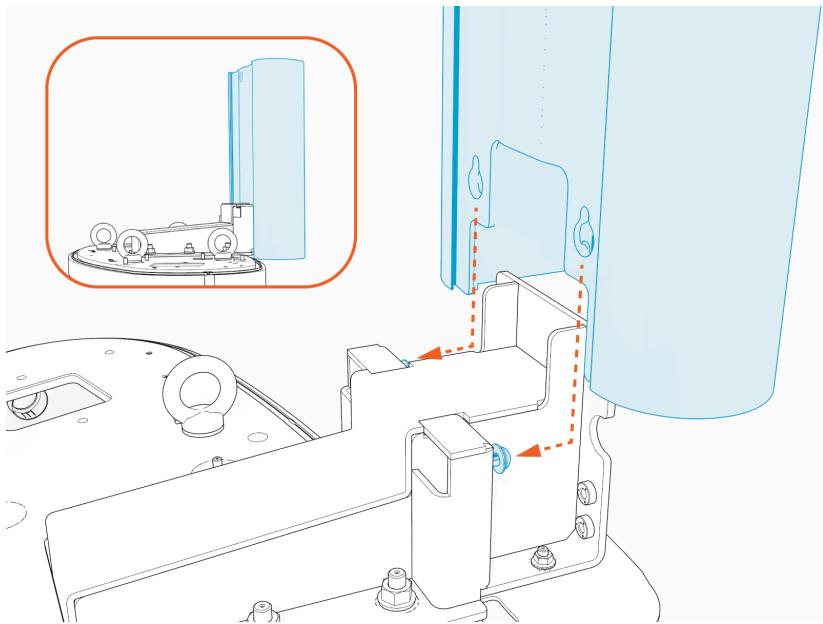
Cable Management Kits (CMK) are available in two heights: standard 2.4 m (8 ft) and tall 3 m (10 ft). If you are installing a tall CMK, refer to [Install Tall CMK](#) for instructions.

Install the Mast - Standard and Tall CMK

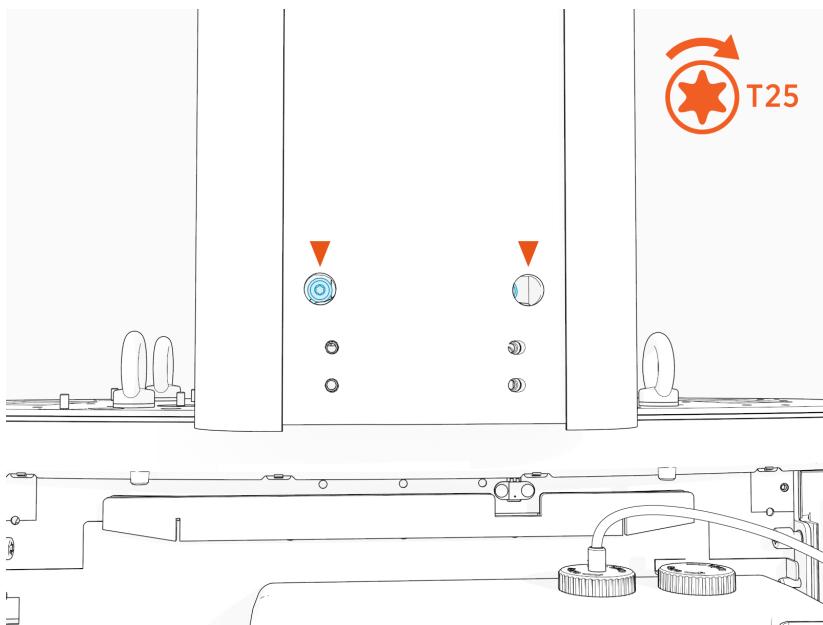
1. Using a T30 Torx screwdriver, remove four pre-populated screws.



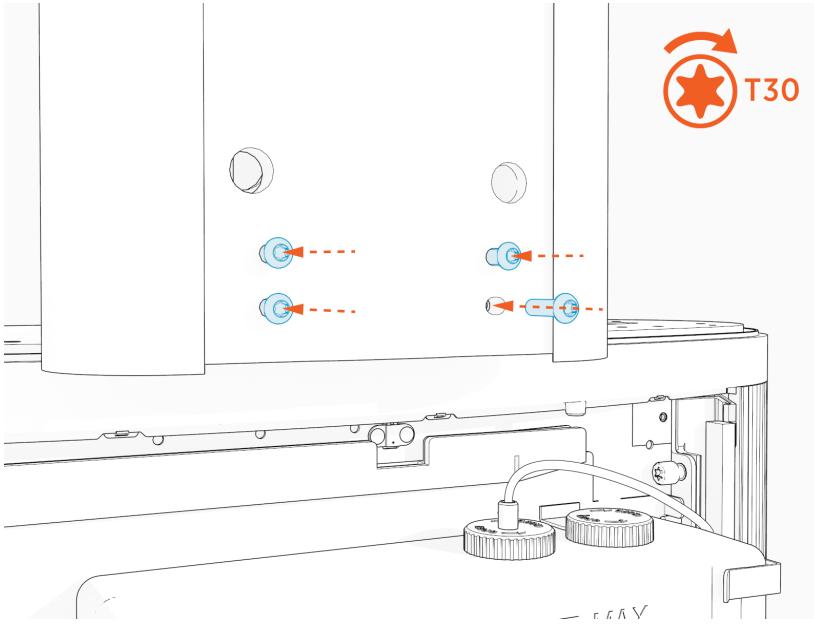
2. Hook mast on to the two existing screws.



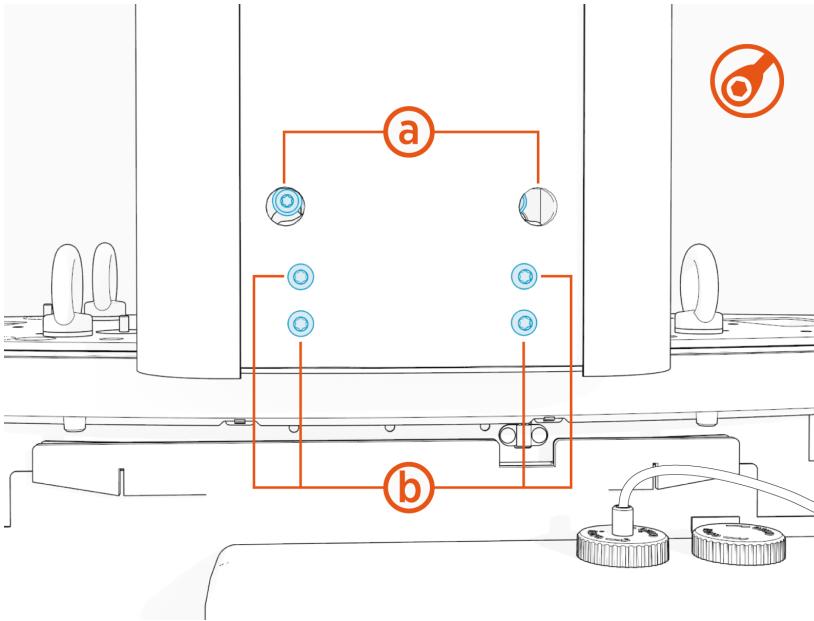
3. Use T25 Torx screwdriver to tighten two screws.



-
4. Insert the four screws removed earlier and use a T30 Torx screwdriver to secure the mast.



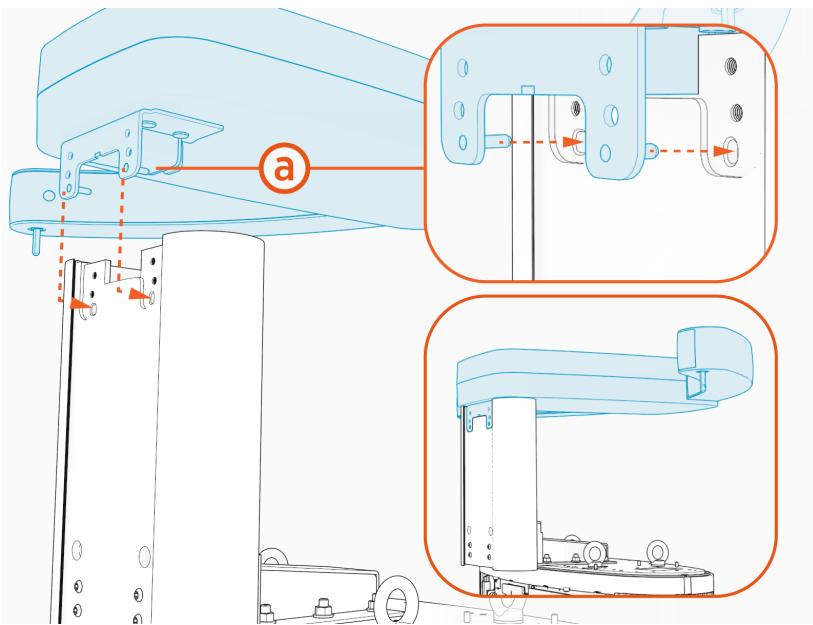
5. Using a T25 Torx screwdriver, **torque the two upper screws (a)** to 5.6 Nm (50 in-lbs).
Using a T30 Torx screwdriver, **torque the four lower screws (b)** to 5.6 Nm (50 in-lbs).



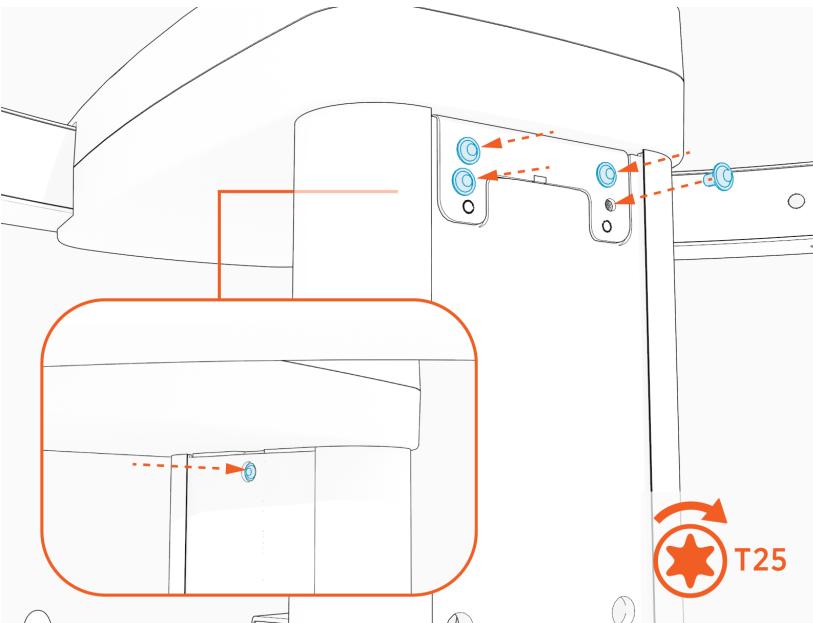
Install the Swingarm Assembly - Standard CMK

If you are installing a tall CMK, jump to [Install a Tool Balancer Assembly](#) for instructions.

1. Align the placement pins (a) and hook the swingarm assembly onto the studs (x2) on the mount bracket.



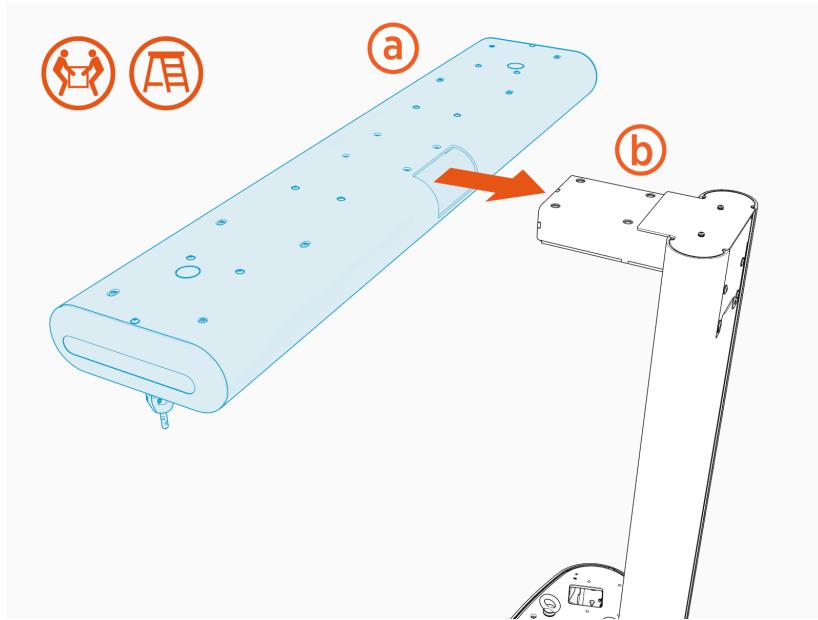
2. Use a T25 Security screwdriver and five screws (four at rear and one at front side) to secure the swingarm to the mounting bracket. **Torque to 5.6 Nm (50 in-lb).**



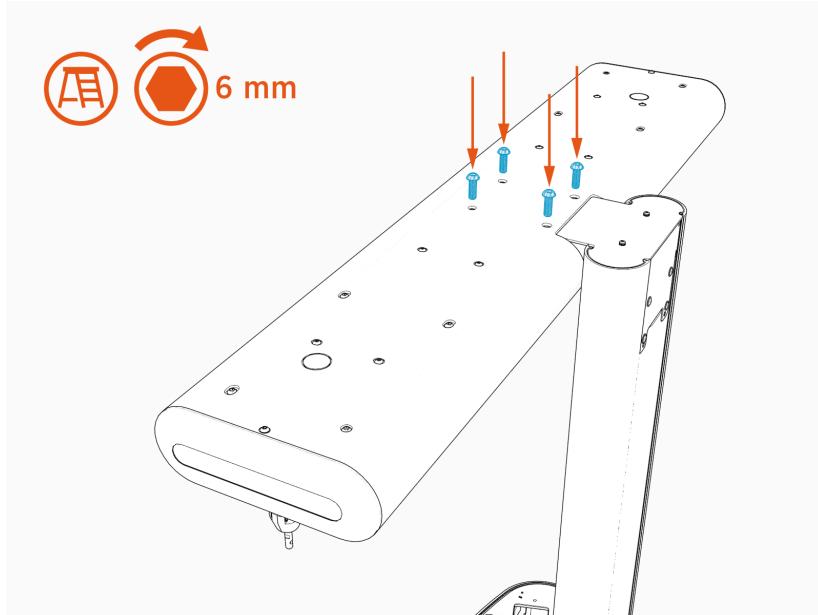
3. Jump to Install CMK Covers and continue.

Install the Tool Balancer Assembly - Tall CMK

1. Find the M10 hex screws (x4) included in the tall CMK package.
2. Slide the tool balancer assembly **(a)** onto the mast **(b)**.

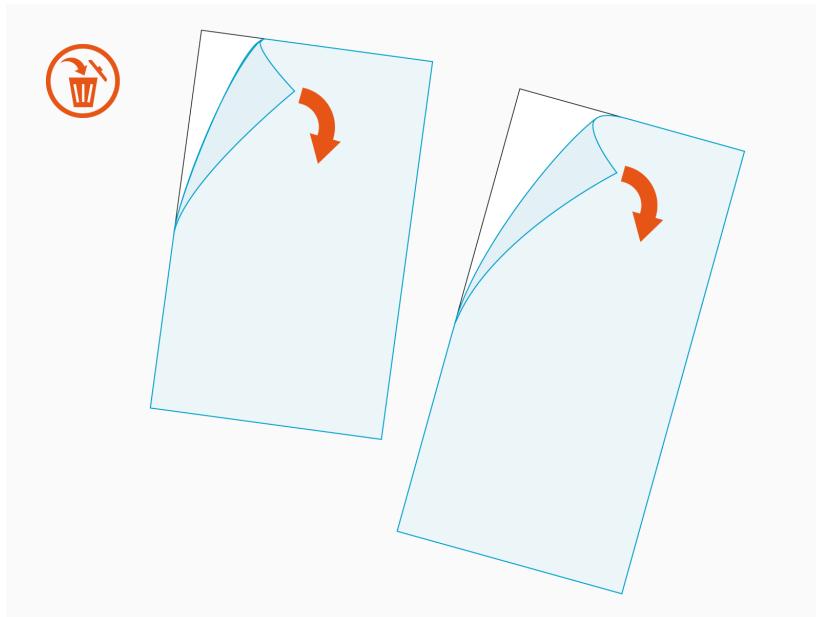


3. Use a 6 mm hex driver and four screws to secure the swingarm to the mounting bracket. **Torque to 5.6 Nm (50 in-lb).**

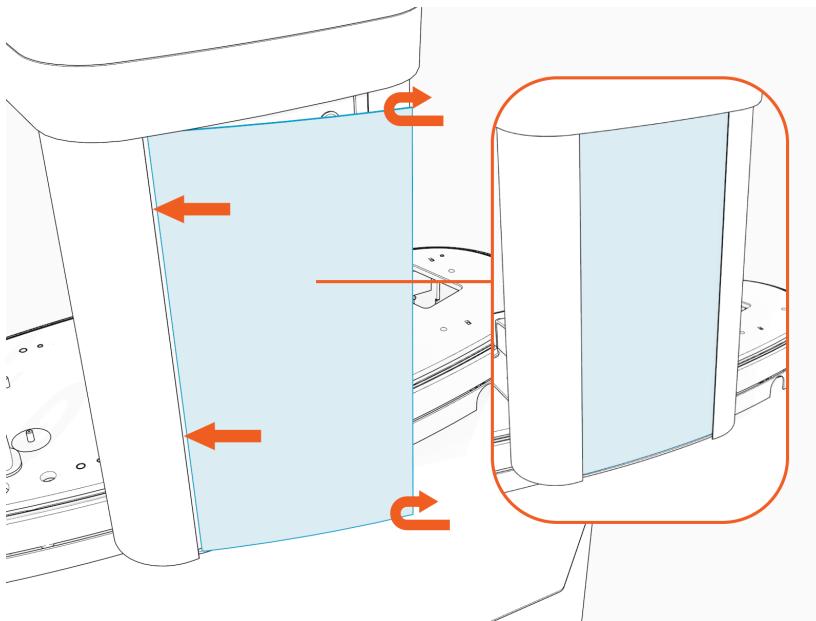


Install the CMK Covers - Standard and Tall CMK

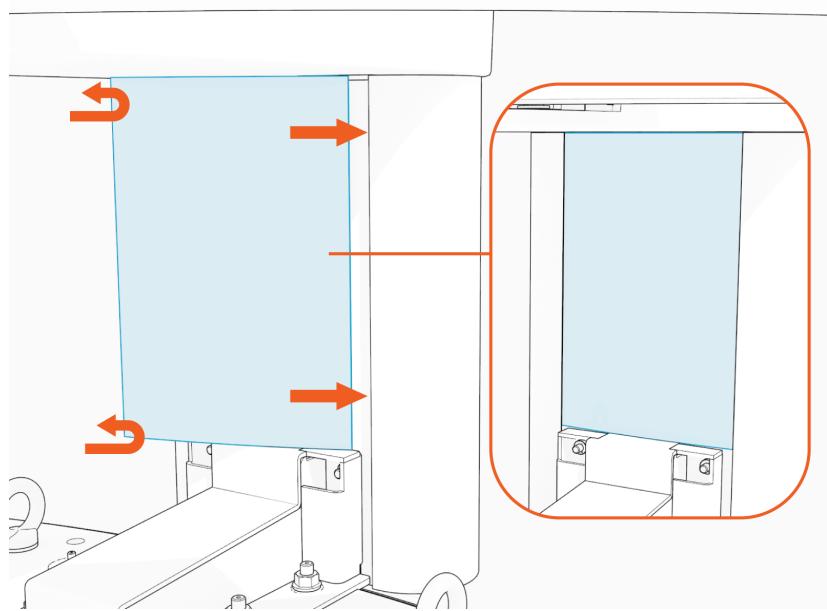
1. Remove the protective film.



2. Insert one side of the rear cover into the groove on the rear side of mast.
Bend the other side of the cover into the groove on the other rear side of mast.



3. Repeat for the front cover.



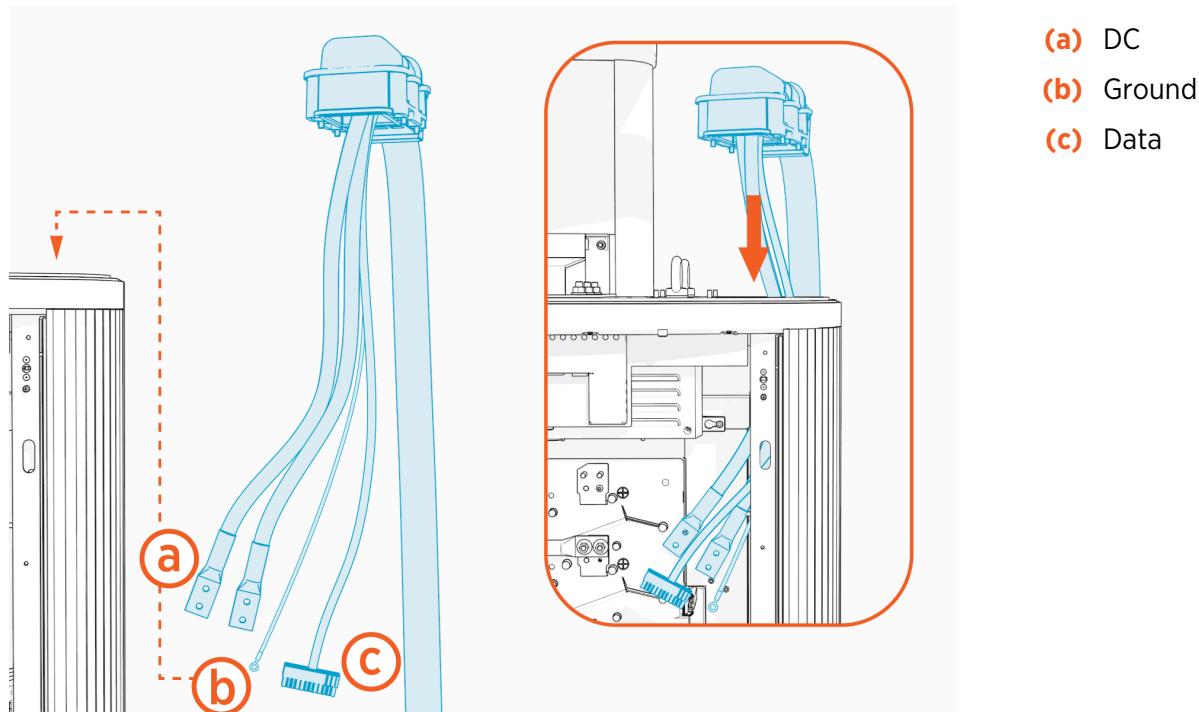
Install Cables, Top Cap, and Front and Rear Panels

7

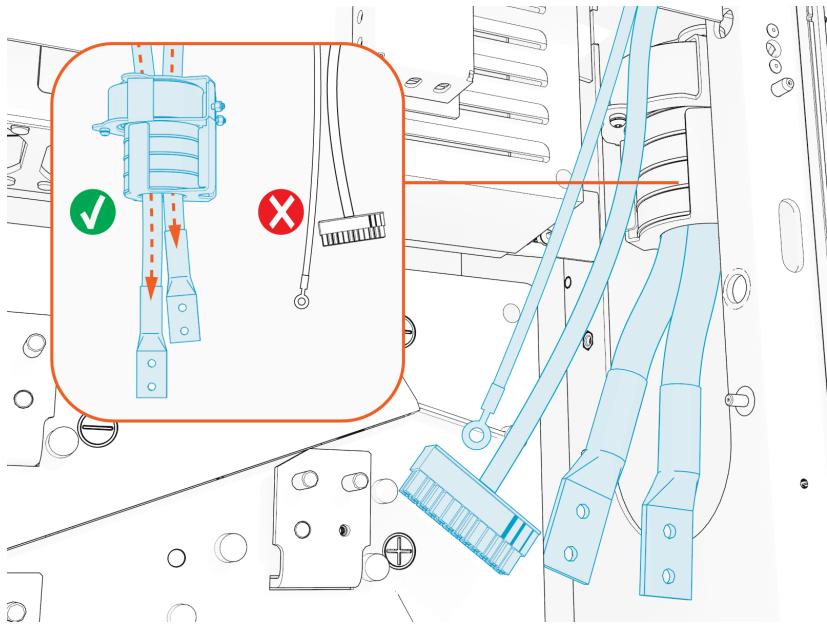
These steps are the same for both Standalone and Paired installations.

Install the Cables

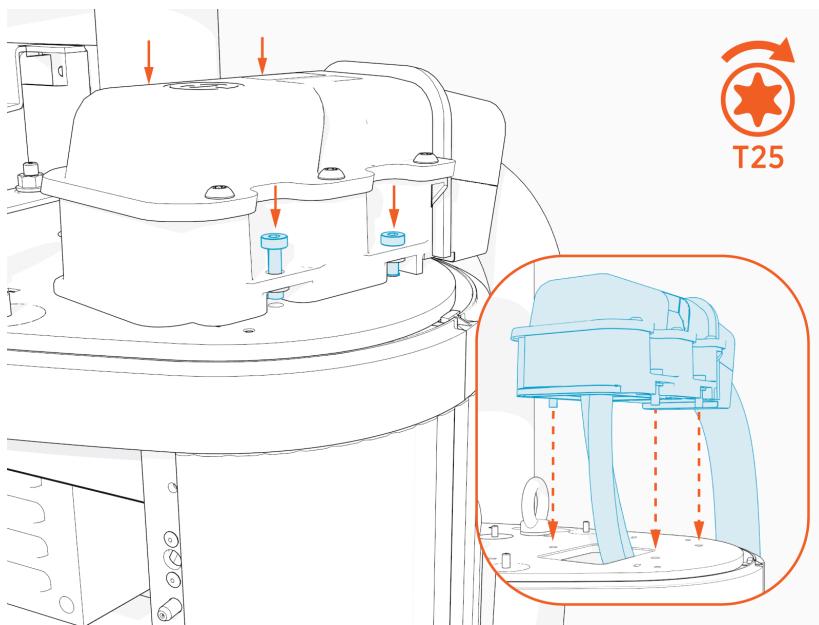
1. Guide the DC, ground, and data cables gently through the top of the station.



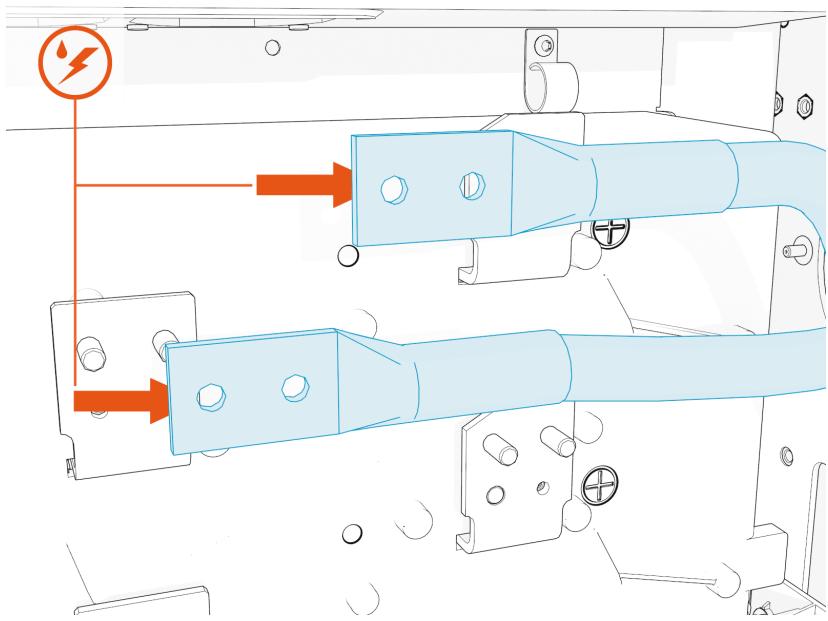
-
2. Route the cables through the ferrite stack.



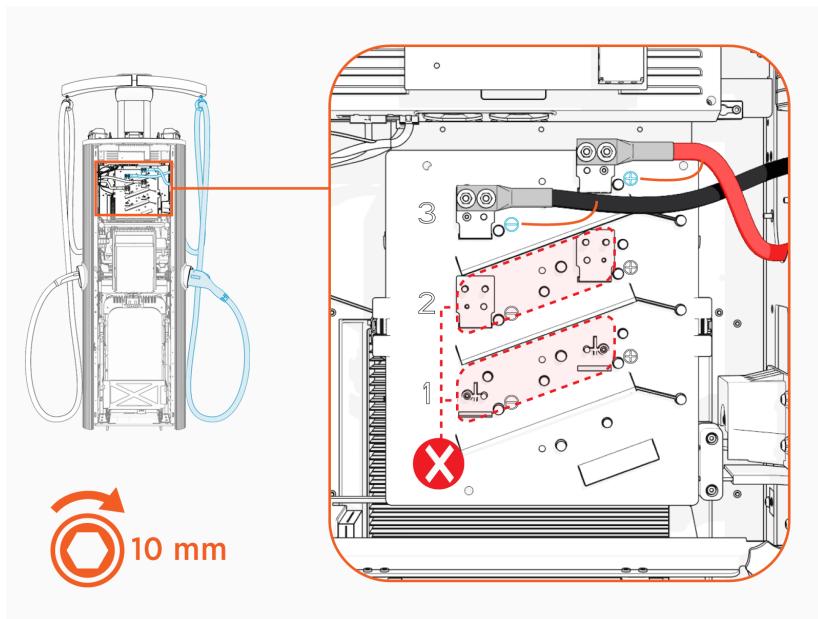
3. Use a T25 Torx screwdriver to tighten the four screws securing the charging cable housing. Torque to **4.5 Nm (40 in-lb)**.



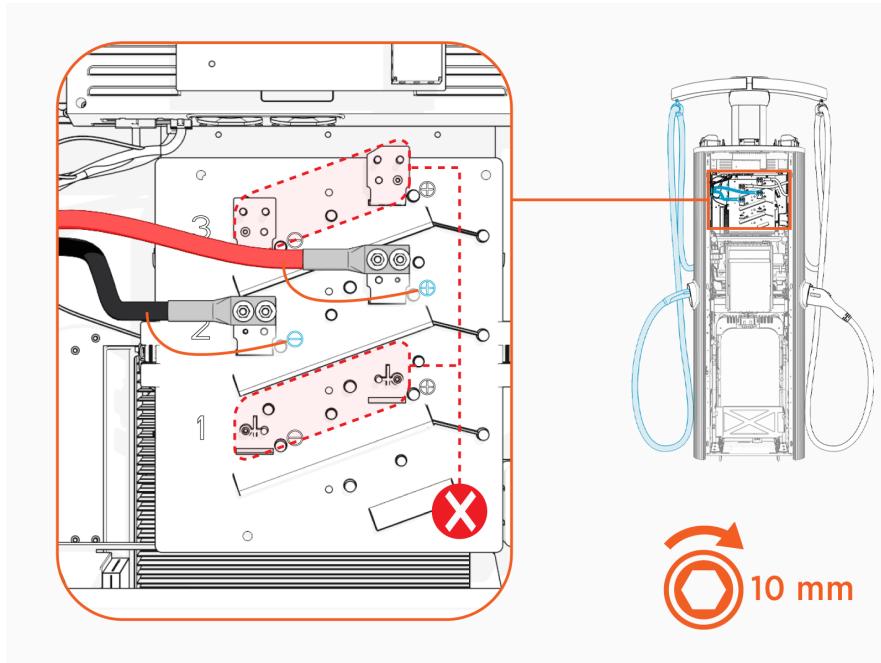
-
4. Apply a thin coat of dielectric grease on each lug.



-
5. When connecting a charging cable on the right side of the station, use a 10 mm (3/8 in) socket hex driver to connect the positive and negative DC conductors from the front tabs of the connector box to the upper set of connectors.



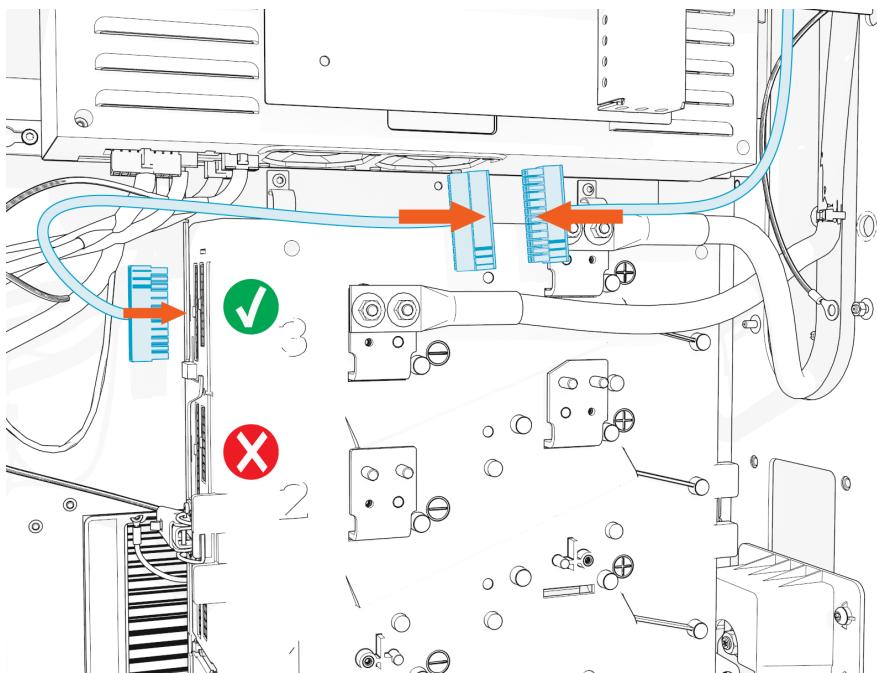
Use the middle set of DC connectors for charging cables on the left side of the station.



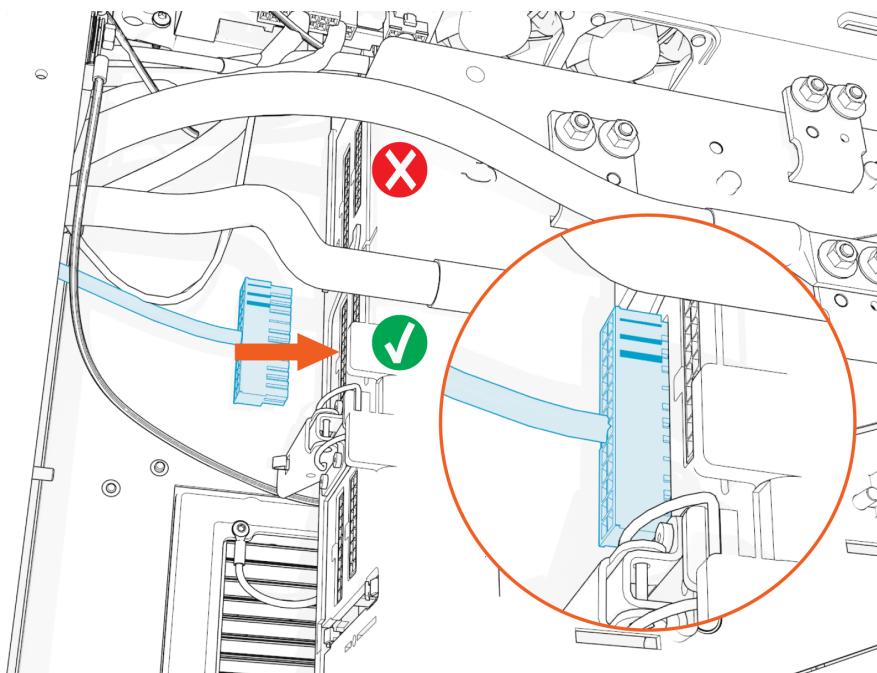
IMPORTANT: Ensure the cables have the proper polarity and that they are connected to the correct set of terminals in the correct row.

6. If the station is being configured with two CCS charging cables, or if a single CCS cable is installed, connect a data cable extension to the main data cable.

Guide the data cable extension behind the contactor box to connect to the CCS cable and the upper data connector.

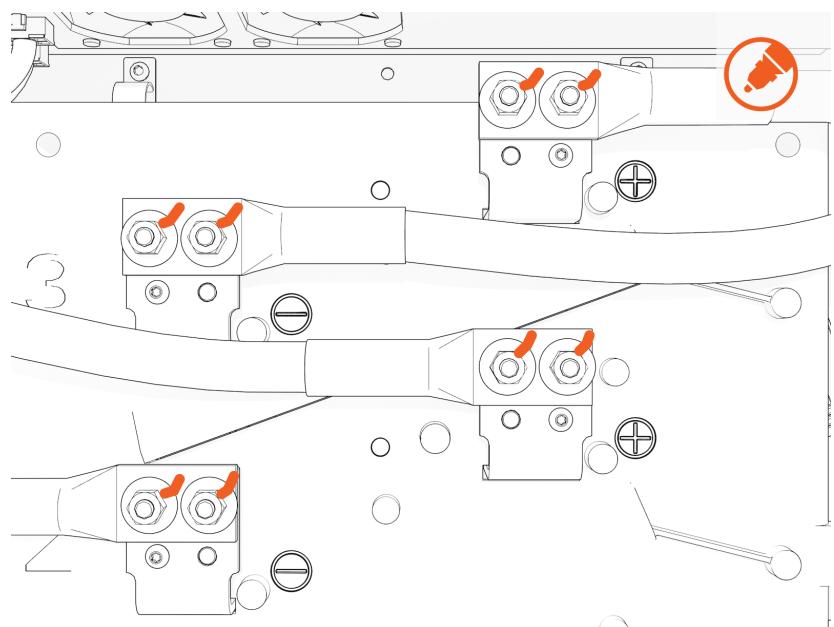


If the single CCS is being installed on the left side when standing in front of the station, you do not need the data cable extension. Connect the data cable to the lower data connector.



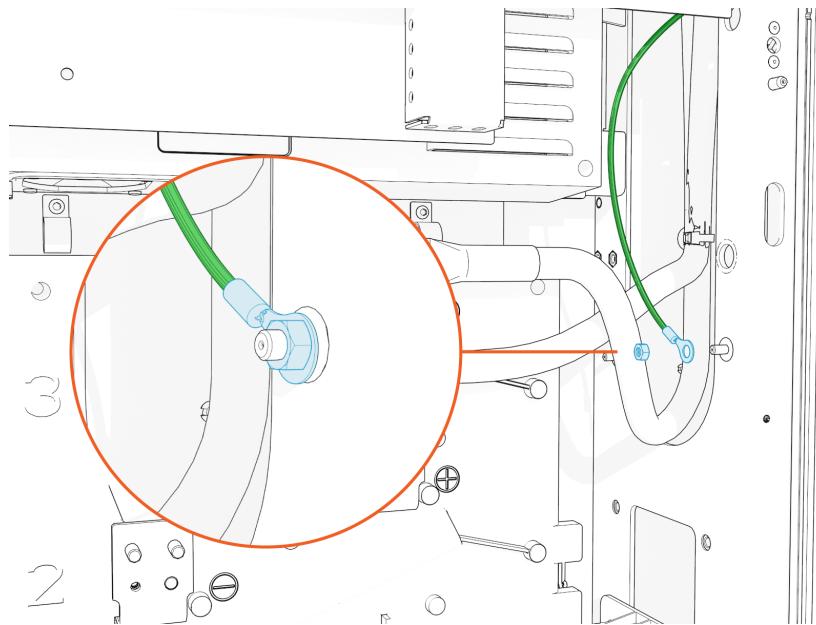
7. **Torque each charge cable nut to 5.6 Nm (50 in-lb).**

8. Mark all torqued power connections.

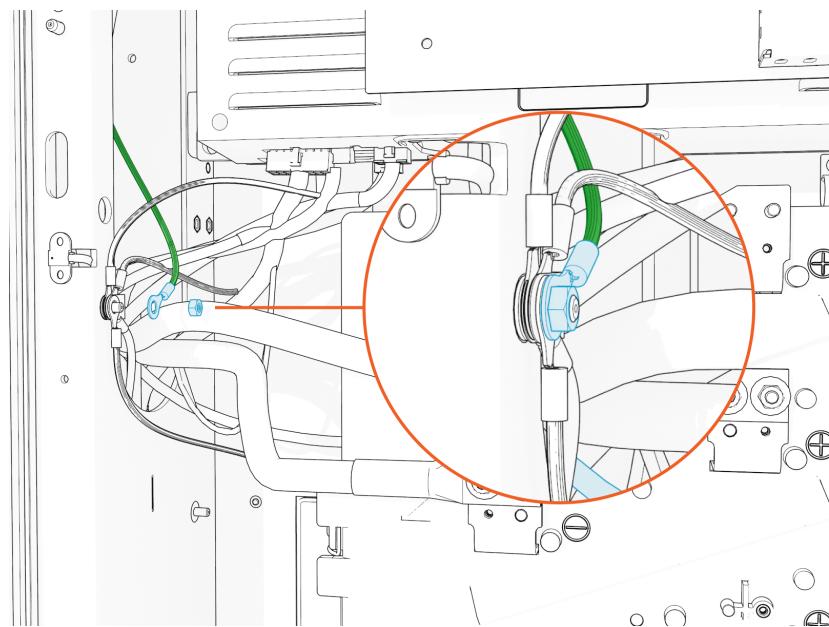


-
9. Connect ground cable.

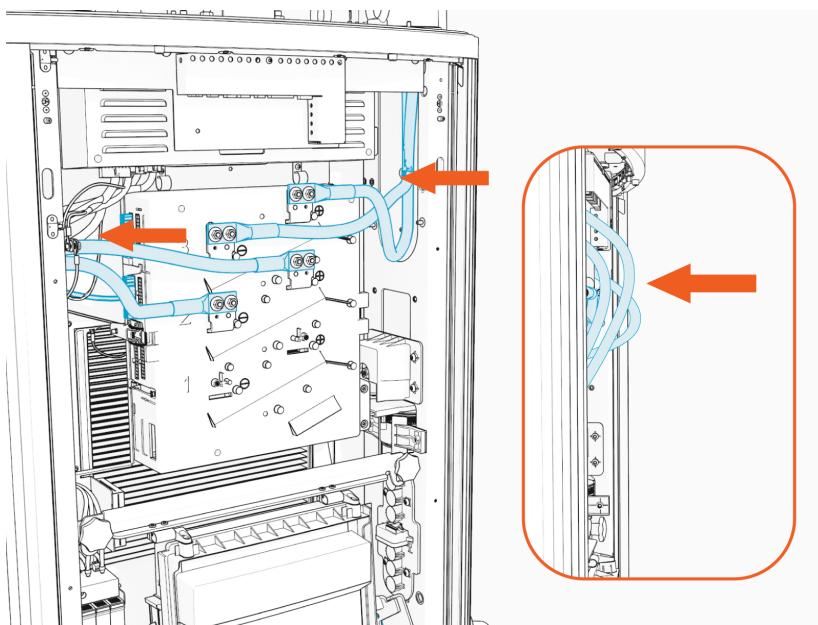
Ground cable right side



Ground cable left side



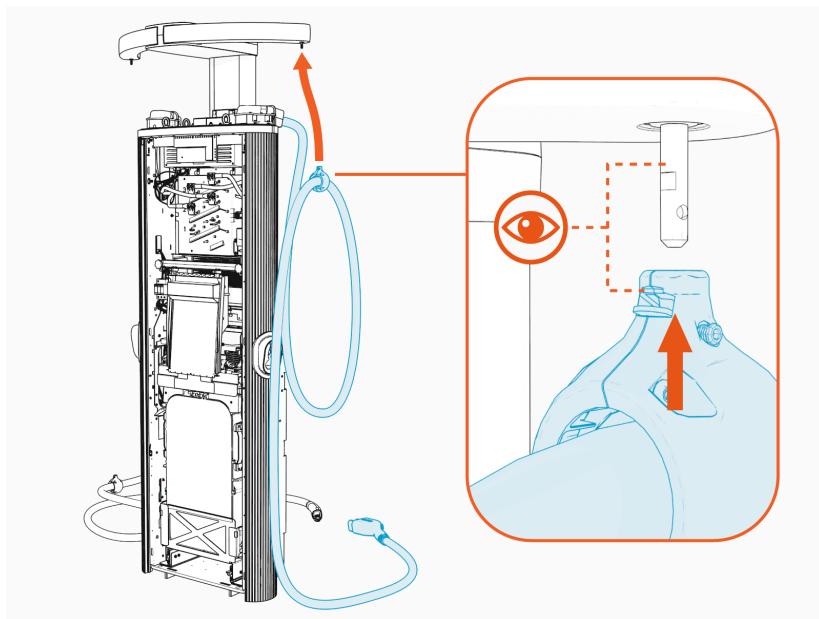
-
10. Tuck the cables into the station body so they don't get caught or pinched.



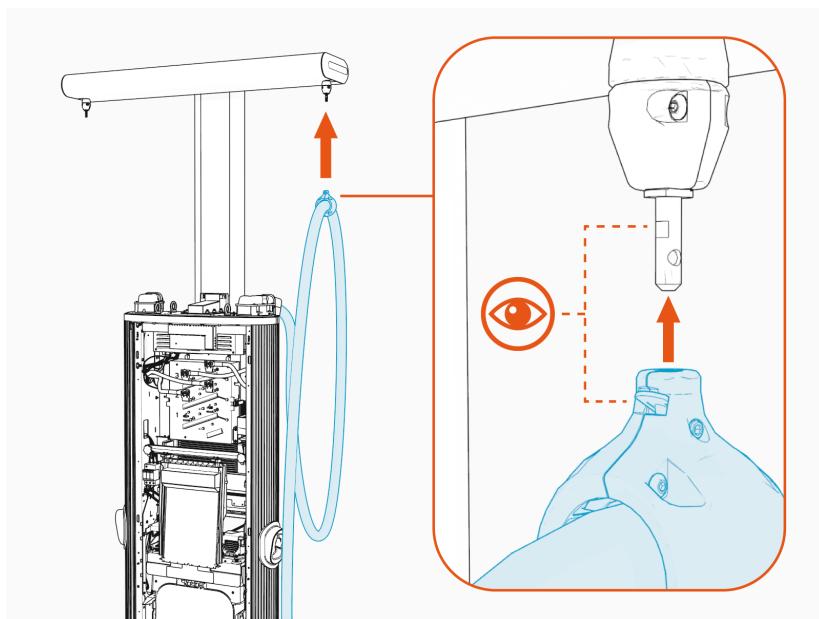
Suspend the Charging Cable

1. Loosen the screw in the tetherball if it is not already loose.
2. Align the spring in the ball clamp with the flat notch on the anchor pin. While aligned, gently push the ball clamp onto the anchor pin.

Standard CMK

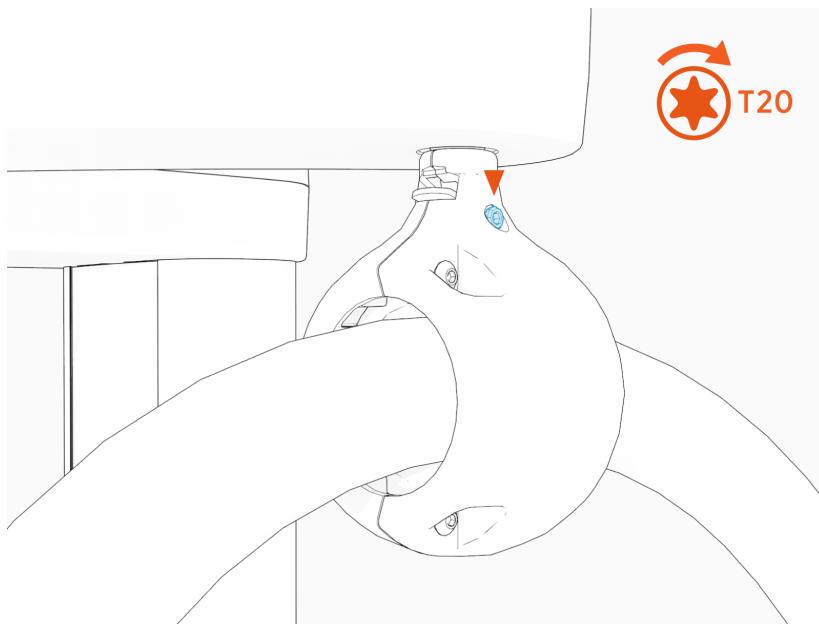


Tall CMK

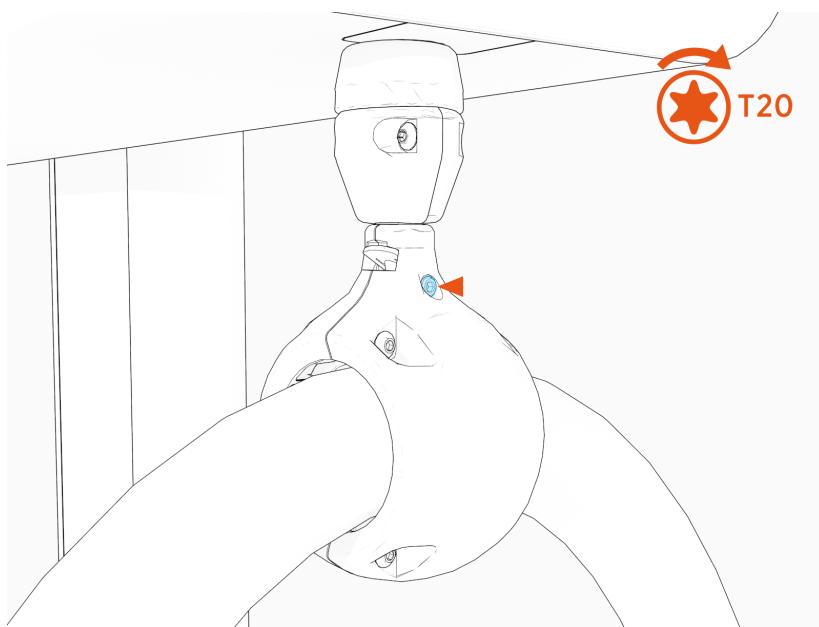


-
3. Use a T20 Torx screwdriver to **torque the set screw (a)** to 2.8 Nm (25 in-lbs).

Standard CMK

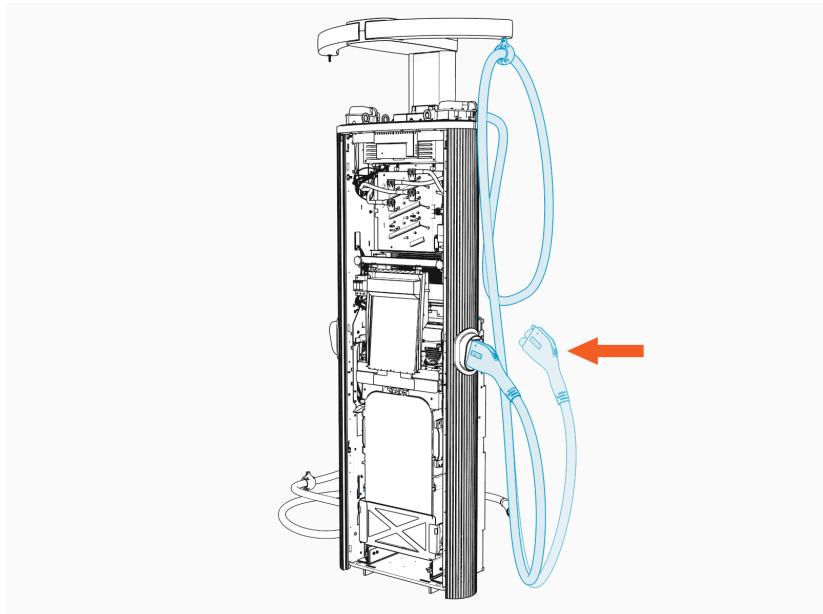


Tall CMK

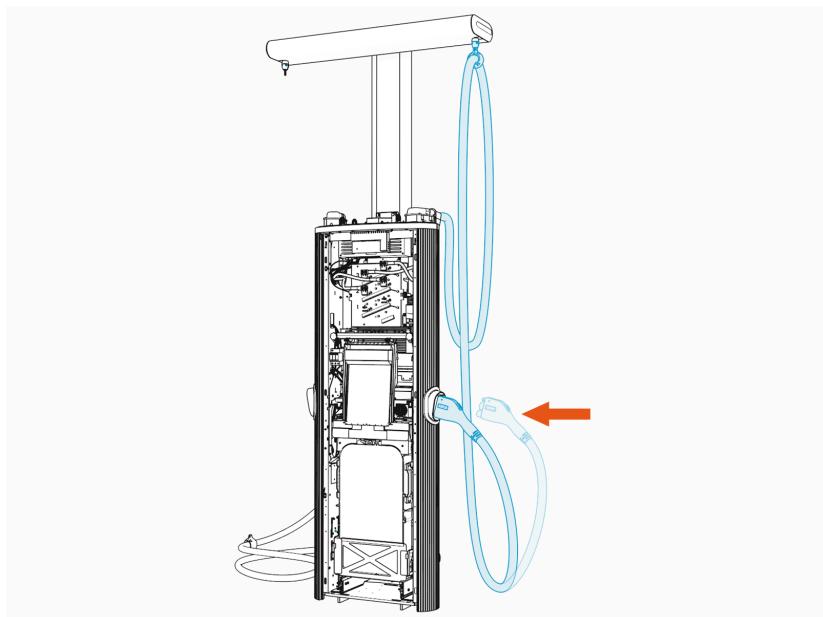


4. Unwrap the charging cable connectors and insert each connector into its corresponding holster.

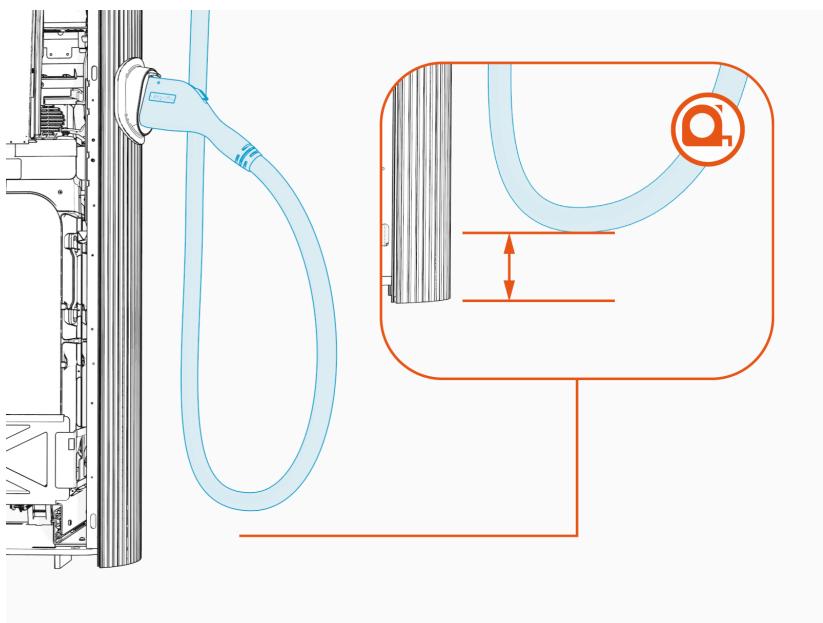
Standard CMK



Tall CMK

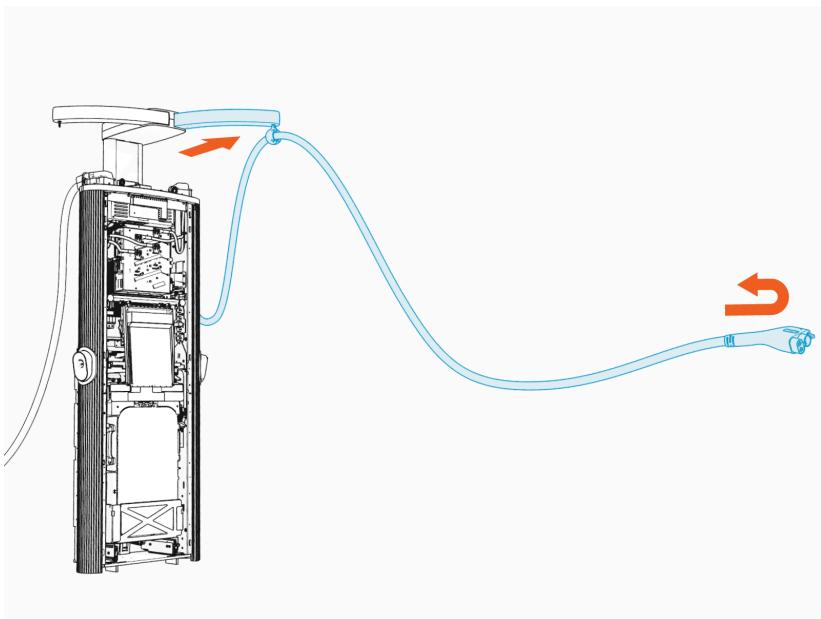


-
5. Check the lowest point of the cable. It should be a few inches above the ground. Adjust the position of tetherball on the charging cable if necessary.

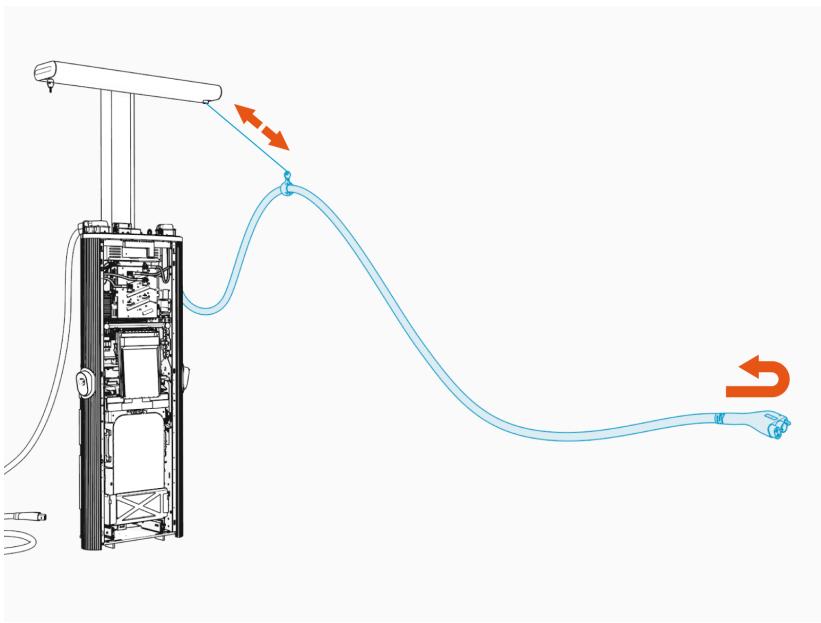


6. Tug on cable to confirm that it is securely attached and check that the CMK is functioning. If you find limited motion or retraction, contact ChargePoint at chargepoint.com/support.

Standard CMK



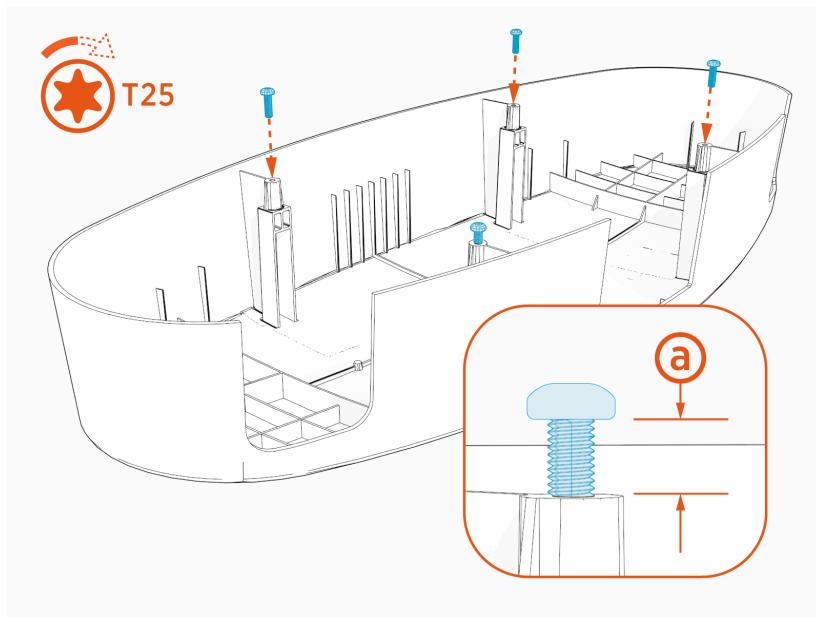
Tall CMK



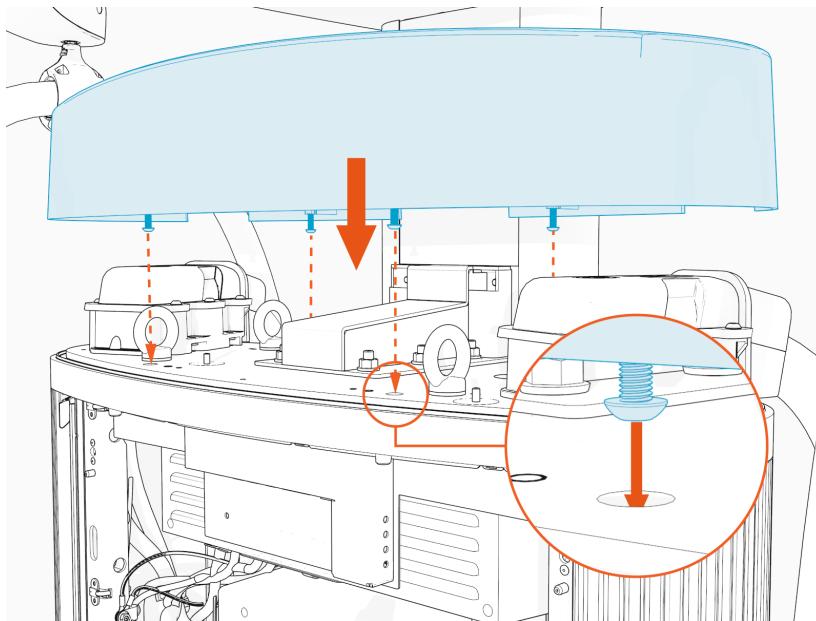
7. If two charging cables are to be installed, repeat for the other side.

Install the Top Cap

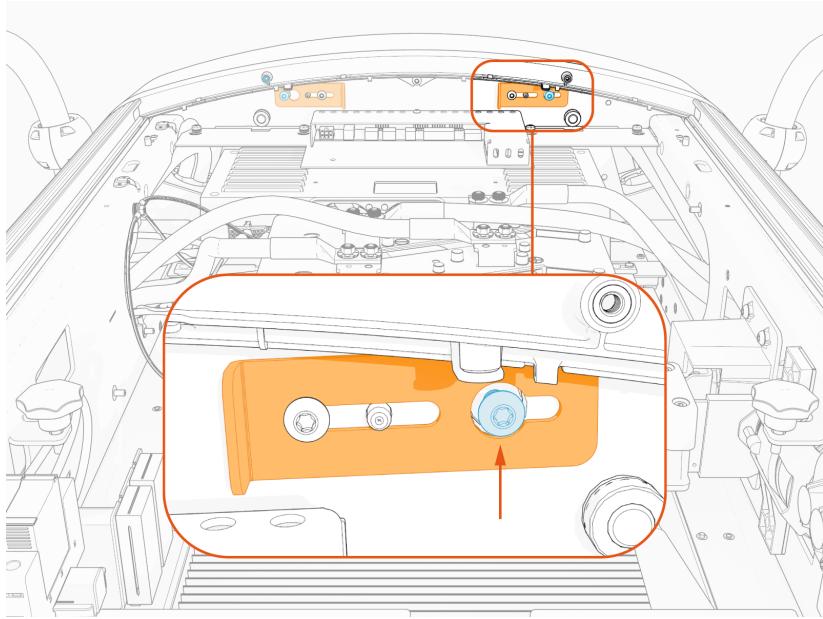
1. Remove the top cap from the packaging.
2. Install the four screws that shipped with the top cap. Allow 10 mm clearance (a). Ensure the screws are secure.



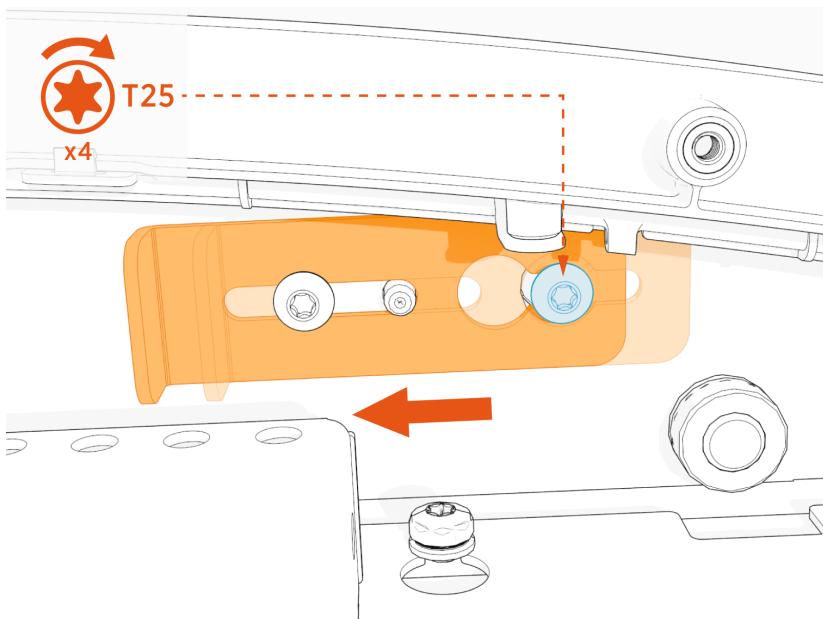
3. Align the top cap screws with the corresponding holes on the station. Place the top cap onto the Express 280.



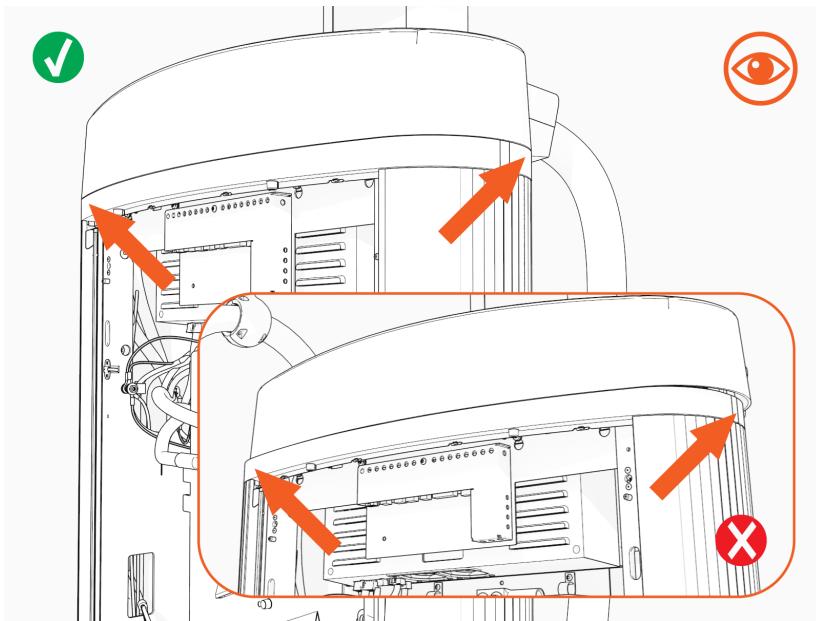
4. Ensure the screws go through the keyhole openings on the orange latches inside the station.



5. Slide each latch toward the center of the station.



-
6. Ensure the top cap is centered on the Express 280.



7. Use a T25 Torx screwdriver to torque the four top cap screws to 25 in-lbs.

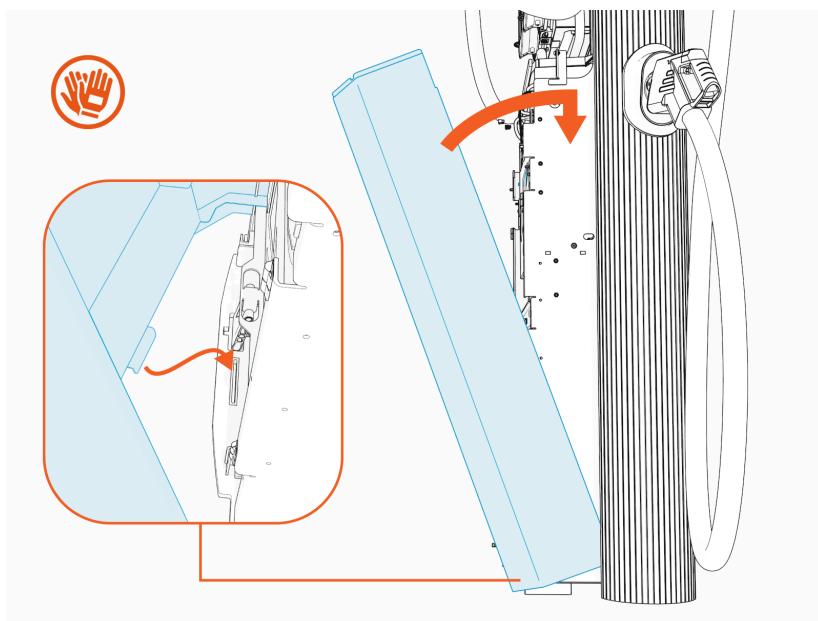
Install the Rear Cover Panels

! **IMPORTANT:** When installing the rear panels, take special care to ensure that each panel is correctly positioned. Failure to do so can prevent station operation.

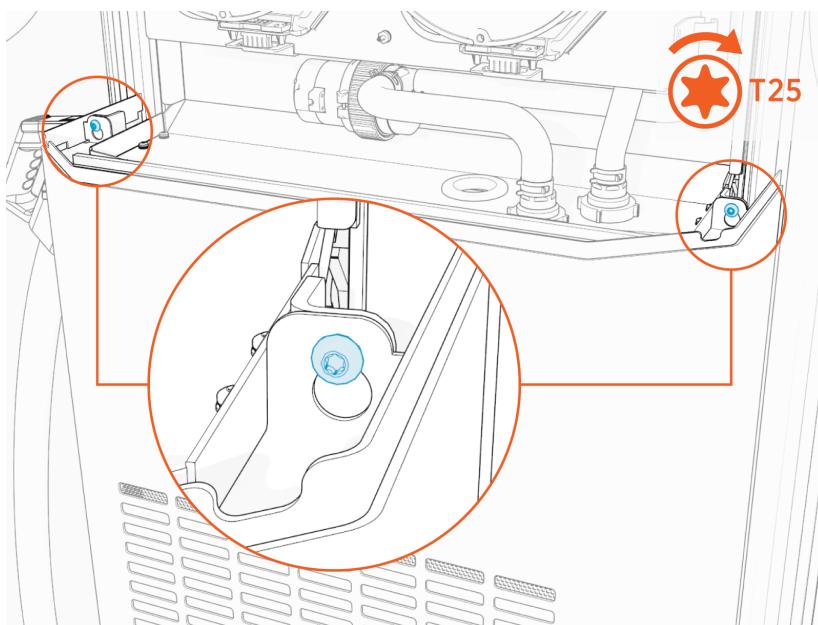
! **IMPORTANT:** Small gauge wiring routed on the sides of the frame could be sheared if caught by panel tabs. Ensure wiring is cleared from guide holes when installing bottom and middle rear panels.

! **IMPORTANT:** Wear cut-resistant gloves when installing bottom and middle rear panels.

1. Align the guide tab along the bottom edge of the lower rear panel to the matching slot on the Express 280.

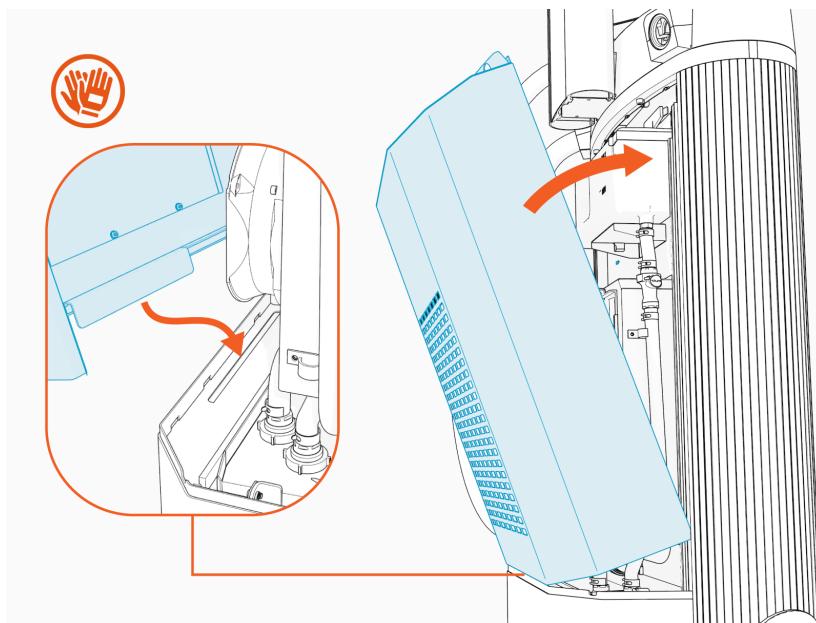


2. Carefully push the panel forward and down until the key holes align with the screws on the station. Use a T25 Torx screwdriver and two screws to secure the top of the lower rear panel to the enclosure frame. **Torque to 2.8 Nm (25 in-lb)**.

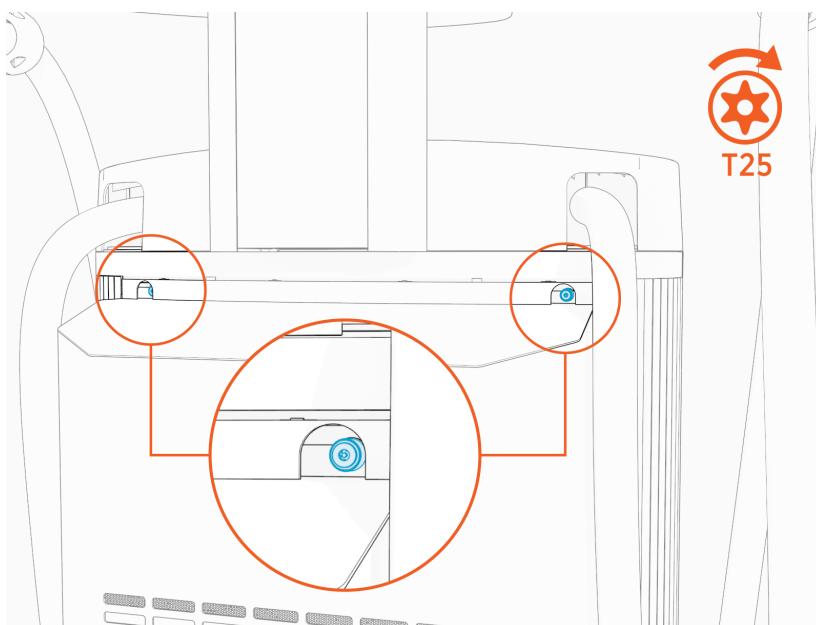


3. Using two hands, align the guide tab along the bottom edge of the upper rear panel to the matching slot on the lower rear panel. Carefully push the panel forward and down.

IMPORTANT: Wear cut-resistant gloves and hold the sides of the panel gently when installing it.



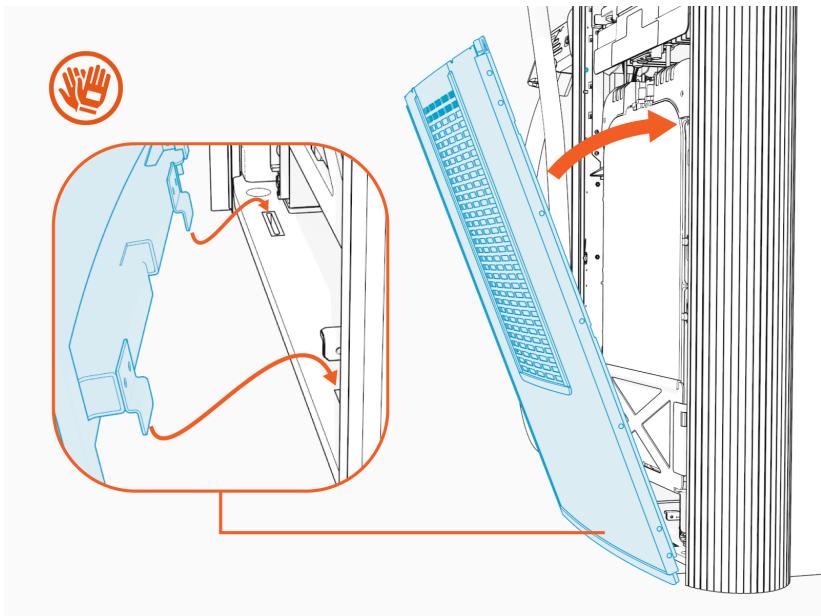
4. Use a T25 Torx Security screwdriver and two screws to secure the top of the upper rear panel to the enclosure frame. **Torque to 2.8 Nm (25 in-lb).**



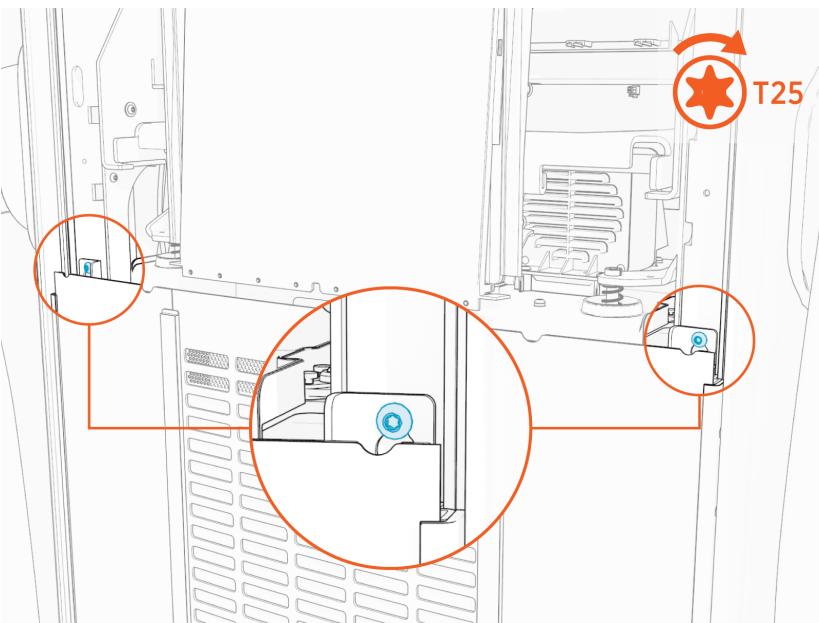
5. Remove the blue protective film from the two rear panels.

Install the Front Cover Panels

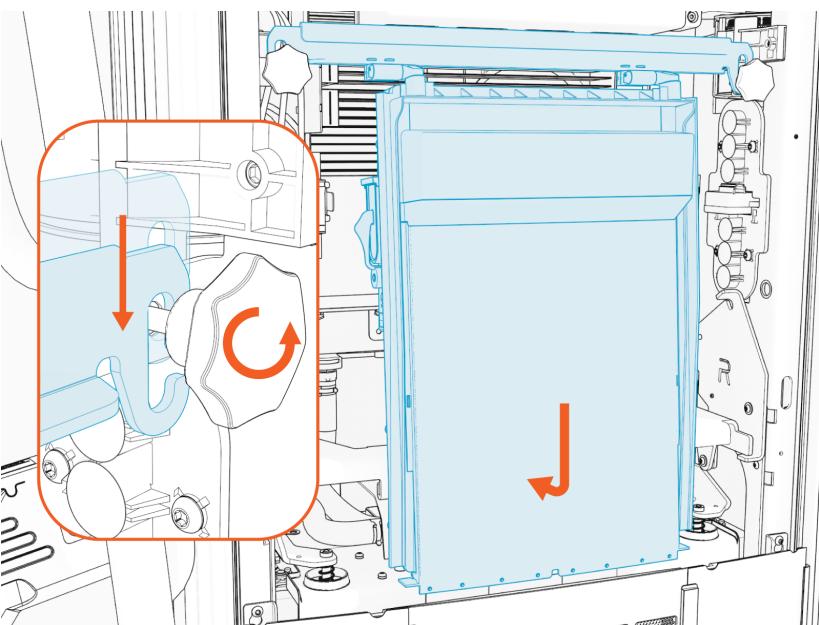
1. Align the guide tabs on the front bottom panel to the matching slots on the Express 280's frame. Push the panel down carefully until the bottom edge aligns with the bottoms of the side panels. Ensure the panel installation does not tear or break the gaskets on the inner edges of the side extrusions.
IMPORTANT: Wear cut-resistant gloves and hold the sides of the panel gently when installing it.
2. Tilt panel forward until it aligns with the slots on the side panels. Press panel downward into place.



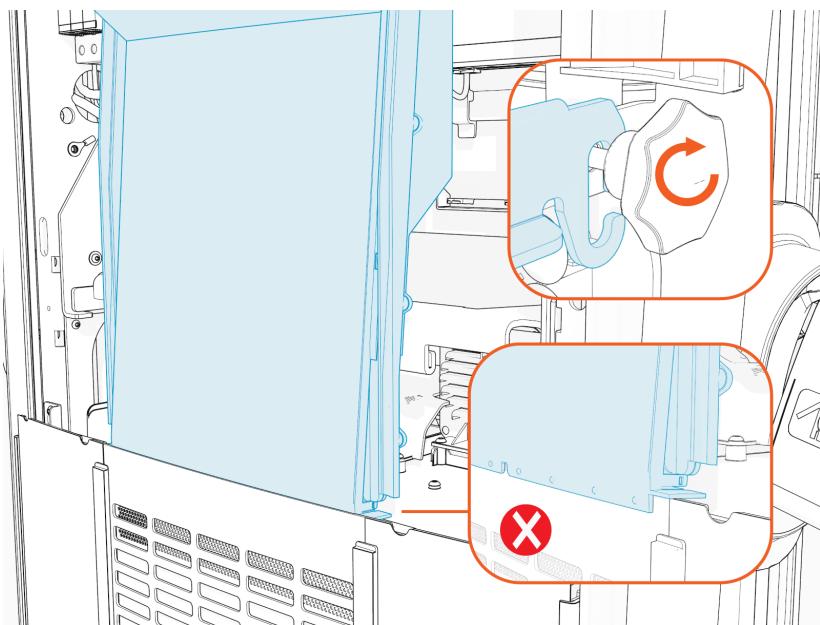
3. Using a T25 Torx screwdriver and two captured M5 screws, secure the lower front panel in place.
Torque to 2.8 Nm (25 in-lb).



4. Press the bottom of the touchscreen down so the lower edge fits inside the bottom panel.



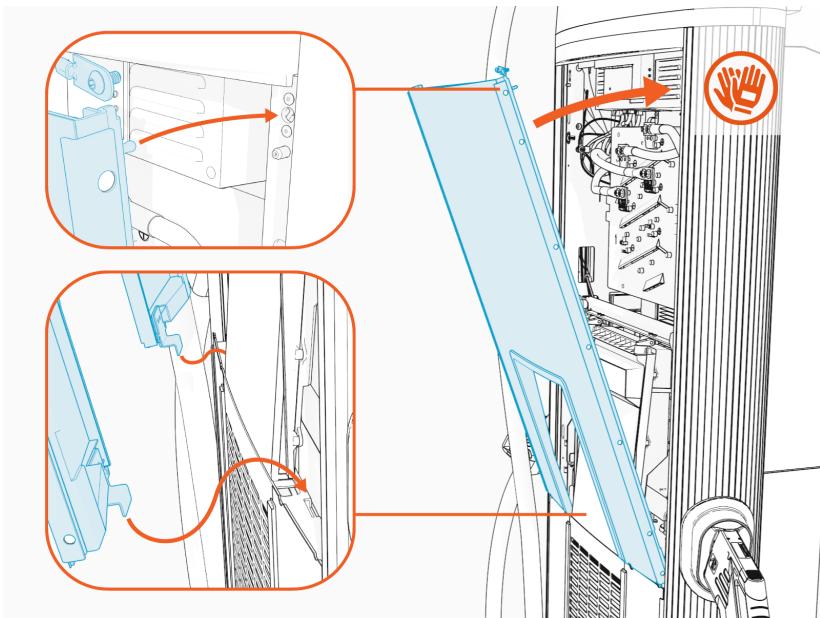
- Keeping pressure on the edge of the touchscreen to properly seat it inside the panel, slide the touchscreen beam down. Re-tighten the knobs to secure it.



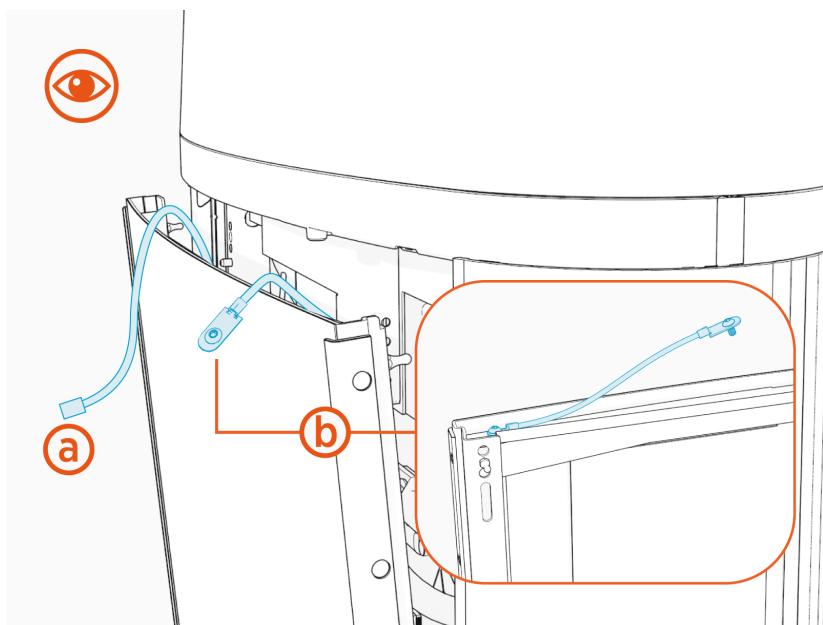
IMPORTANT: Ensure the touchscreen is centered horizontally with the front panel.

- Using two hands, align the guide tabs on the front upper panel with the corresponding slots.

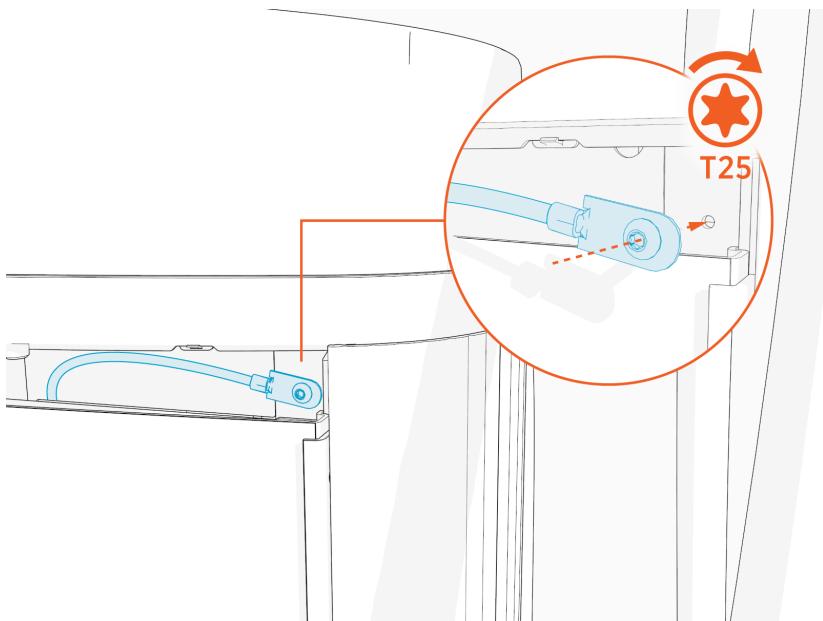
IMPORTANT: Wear cut-resistant gloves and hold the sides of the panel gently when installing it.



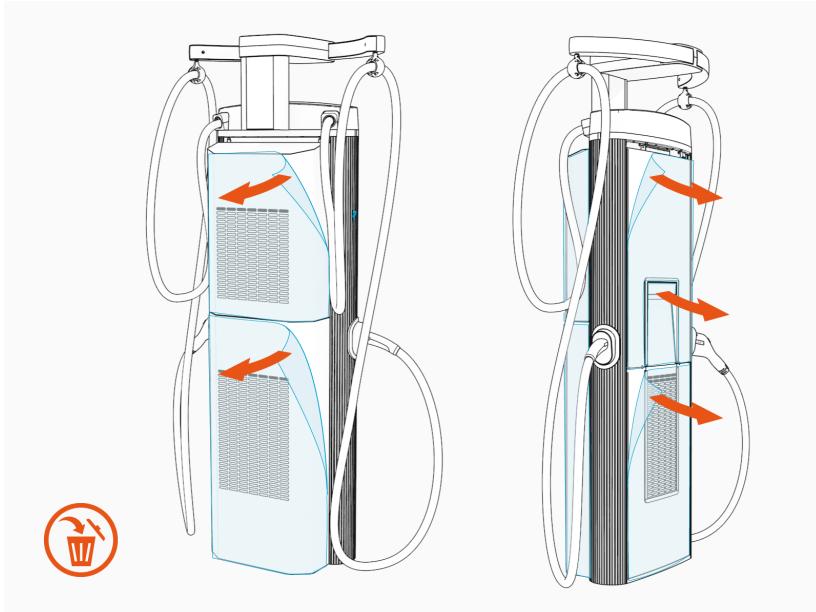
-
7. Ensure the power cable (a) and the ground cable (b) at the top of the Express 280 are not captured by this front upper panel and are easily accessible.



8. Carefully push the panel toward the station body until the alignment posts snap into place.
9. Use a T25 Torx screwdriver to secure the ground cable from the front panel to the station frame.

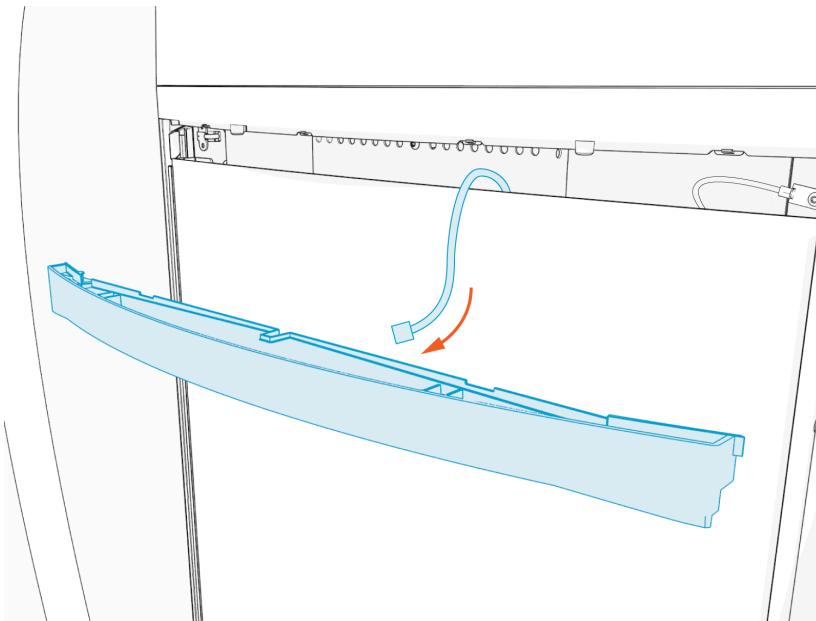


10. Remove the blue protective film from front and rear panels and screen.



Install the Area Light Bar

1. Position the area light bar above the upper front panel.
2. While holding the area light bar near the opening at the top of the Express 280, guide the power cable through the notch in the center of the area light bar.

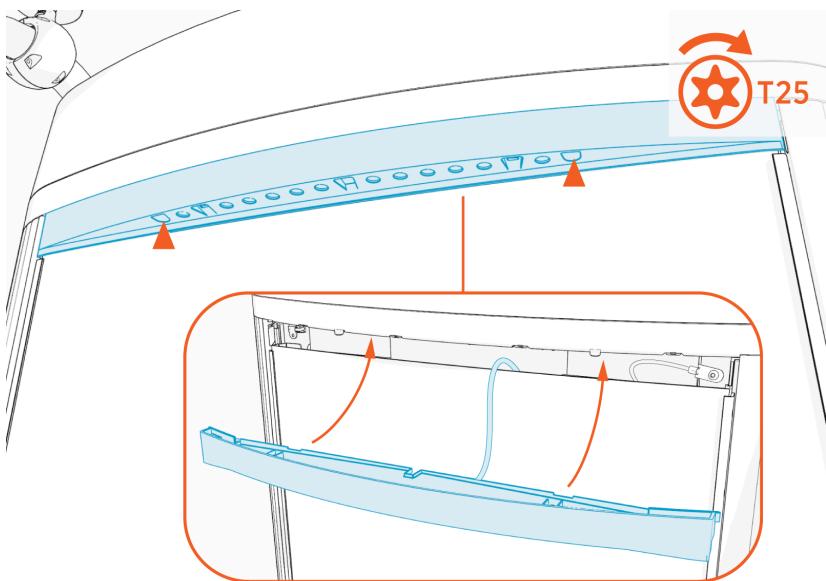


3. Connect the power cable from the Express 280 to the area light bar.

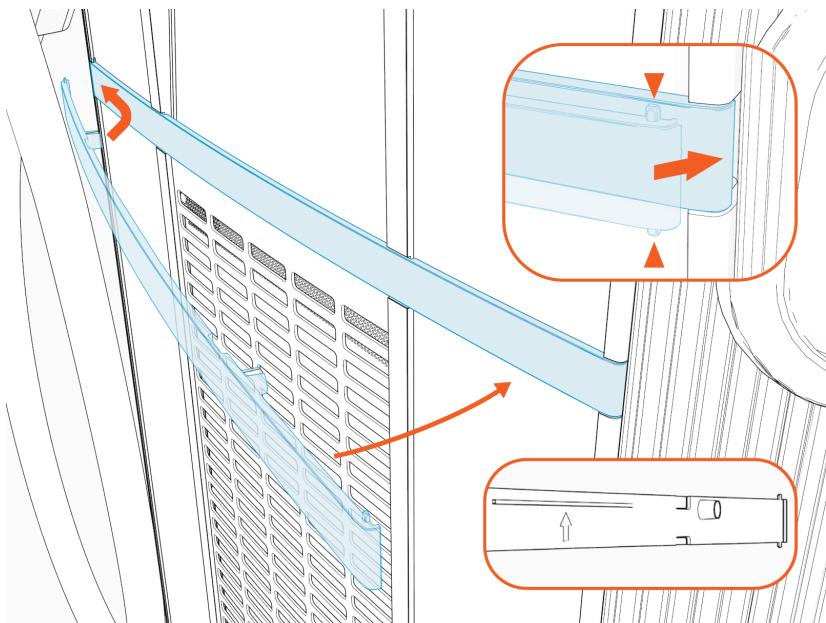


IMPORTANT: Make sure to route the cable carefully so it does not get pinched.

4. Use a tamper resistant T25 Torx screwdriver to tighten the two captive screws on the bottom edge of the area light bar. **Torque to 2.8 Nm (25 in-lb).**



5. Attach the trim panel.



IMPORTANT: You have now completed the physical installation of the Express 280. Follow the steps in the next section to complete the installation. Do not leave the installation site until you complete all steps in the next section and verify the Express 280 is operating correctly.

Set Up Express 280

8

IMPORTANT: Do not power on Express 280 after completing the installation (after installing the covers). An authorized commissioning partner will commission, power on, pinpoint, and configure Express 280 after installation. If you are authorized to do so, complete the following procedures:

Power On

You must be a ChargePoint certified installer, technician, or commissioning partner to power on the charging station, or warranty limitations apply.

1. Ensure all 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.
4. View diagnostics information.
5. If you have not yet configured the station (such as pricing, messaging, and additional options), do so after installation or service is complete. Refer to the Express Plus *Operation and Maintenance Guide*.

Self-Diagnostics

The station runs the following self-diagnostics after being energized. 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	✓	✓

Station Self-Diagnostic Tasks

View Diagnostics Information

1. Log in to the ChargePoint Cloud Dashboard at na.chargepoint.com or eu.chargepoint.com.
2. Select **Stations**.
3. Select the station name to view the station specific information.
Apply filters to filter out the station you are looking for.
4. Select **Status/Actions** tab > **Component Diagnostics** to view the diagnostics information.
5. Alternatively, select the **Diagnostics** tab.



IMPORTANT: If a red status alert appears, contact ChargePoint immediately at chargepoint.com/support. A yellow status alert provides you with information; unless functionality appears affected, typically no action is required.

Set Up Express 280

After you power on the charging station at the breaker panel, set up Express 280. To do so, you need:

- ChargePoint installer login credentials.
- Activation label (QR code label including the MAC address and activation password).
- The exact location (to the parking space) where the Express 280 is installed.
- A smartphone with ChargePoint Installer app, Internet connectivity, and QR code scanner (usually built into the camera app).

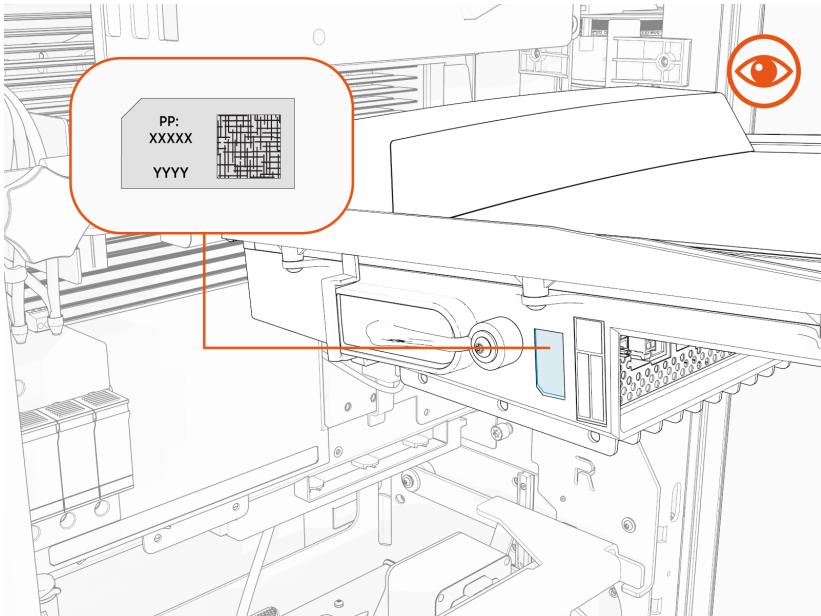
Scan the QR code to download the Installer app, and sign up if necessary.



Follow the steps below to set up Express 280:

1. Open the ChargePoint Installer app and log in.
2. Follow the onscreen prompts.

Note: To connect to Express 280 and complete setup, you need to scan the QR code or manually enter the MAC address and password of Express 280. You can find them on the activation label affixed on top of the display or non-display unit.



Recommended Checklist 9

To adhere to ChargePoint best practices, complete this checklist before you leave the site.

Express 280 Post-Installation Checklist		
1.	Ensure all clearance requirements for service and ventilation of the Express 280 are met. Refer to Check Clearances .	<input type="checkbox"/>
2.	Ensure the AC and DC conduit stub-ups inside the Express 280 are at least 76.2 mm (3 in) above the concrete pad. See Prepare Mounting Pad .	<input type="checkbox"/>
3.	Ensure leveling nuts are installed on the anchor bolts and the Express 280 pedestal is level. See Level and Secure the Station .	<input type="checkbox"/>
4.	Ensure the Express 280 pedestal top nuts are torqued to 94.9 Nm (70 ft-lb). See Level and Secure the Station .	<input type="checkbox"/>
5.	If the site required surface entry of wires, ensure the Express 280 Surface Conduit Entry Kit was used. See Install Surface Conduit Entry Box .	<input type="checkbox"/>
6.	Ensure the conductors, cables, and lugs meet the specifications listed in the Bring These Tools and Materials section.	<input type="checkbox"/>
7.	All cables (HVDC, LVDC) are labeled correctly and clearly identified. See Connect Wires .	<input type="checkbox"/>
8.	Ensure charging cables are installed and they do not touch the ground when plugged into holsters and hanged to the Cable Management Kit (CMK). See Suspend the Charging Cable .	<input type="checkbox"/>
9.	Ensure the Cable Management Kit (CMK) is installed at the maximum height for outdoor Express 280 installations and that the charging cables extend and retract fully and operate smoothly. See Suspend the Charging Cable .	<input type="checkbox"/>
10.	Ensure that all fasteners on the field-installed components are properly torqued. See Torque Values .	<input type="checkbox"/>
11.	Ensure an electrical installer will be on site during commissioning.	<input type="checkbox"/>
12.	Verify all site construction work is complete.	<input type="checkbox"/>
13.	Ensure the site is inspected by authority having jurisdiction (AHJ).	<input type="checkbox"/>
14.	Verify the site is energized by utility.	<input type="checkbox"/>
15.	Ensure site AC voltage measurements are within acceptable range (480 V AC +/- 10% (Phase-Phase)).	<input type="checkbox"/>
16.	Ensure all ground and earth connections are made, including those to ground lugs.	<input type="checkbox"/>

Post Installation Checklist

Express 280 Post-Installation Checklist

17.	Ensure all connections have correct polarity and are installed on the correct bus. See <u>Install the Cables</u> .	<input type="checkbox"/>
18.	Ensure all service wires are inserted into their designated terminal blocks, and ensure all electrical connections are clean and snug (not pinched or trapped).	<input type="checkbox"/>
19.	Ensure all electrical enclosures are cleaned and vacuumed and are free of wire strands, metal shavings, debris, packaging material, or all other foreign objects.	<input type="checkbox"/>
20.	Ensure the <u>48 V DC breaker is powered on</u> and all panels are installed.	<input type="checkbox"/>
21.	Ensure that any twists in charging cables are removed and straightened.	<input type="checkbox"/>
22.	Ensure Express 280 is fully secured and does not rock or move.	<input type="checkbox"/>
23.	Ensure the parking area is clean and free of all packaging, debris, and anything that could damage vehicle tires.	<input type="checkbox"/>
24.	Ensure all local required forms are prepared.	<input type="checkbox"/>

Post Installation Checklist (continued)

Third-Party Service Providers

Services Performed

Description of Service Provided	
Location	
Unit	
Panel ID	
Breaker	

Services Performed

Contact Information

Service Provider	
Technician Name	
Service Company Name	
Address	
Contact Person	
Phone	

Service Provider Contact Information

Site Owner/Customer	
Contact Person	
Business Name	
Site Address	
Phone	

Site Owner / Customer Contact Information

Questions

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

Install Surface Conduit Entry Box A

Surface Conduit Entry (SCE) kits allow above-ground conduit in Express 280 charging station installations where new concrete pads or underground conductors are not possible. The SCE kit also supports adding above-ground conduit to pair an already-installed standalone Express 280 station with another Express 280 station for shared DC output.

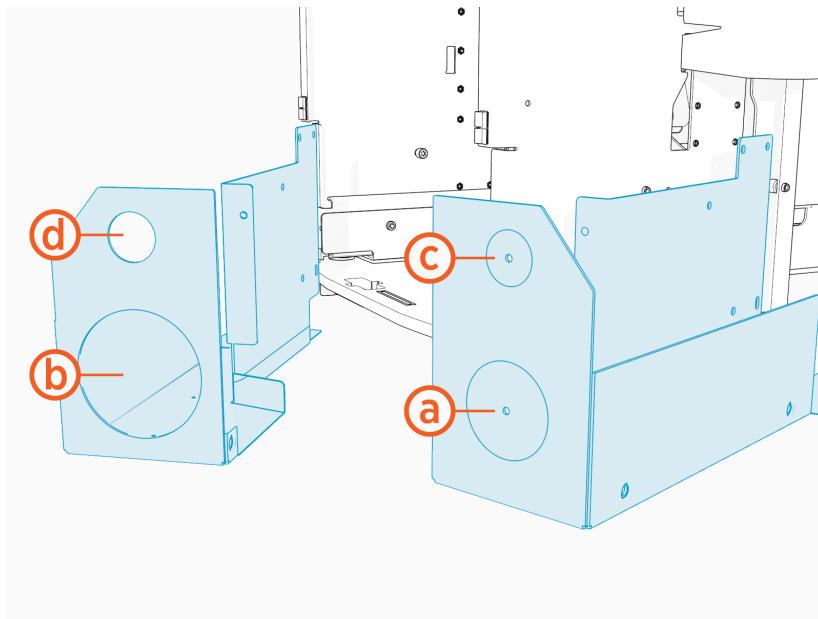
Follow these instructions to install a SCE kit on each Express 280 charging station. These steps are the same for both standalone and paired installations.



IMPORTANT: If the site has height constraints for installation, contact ChargePoint to get instructions and clearances that you will need for the modified process.

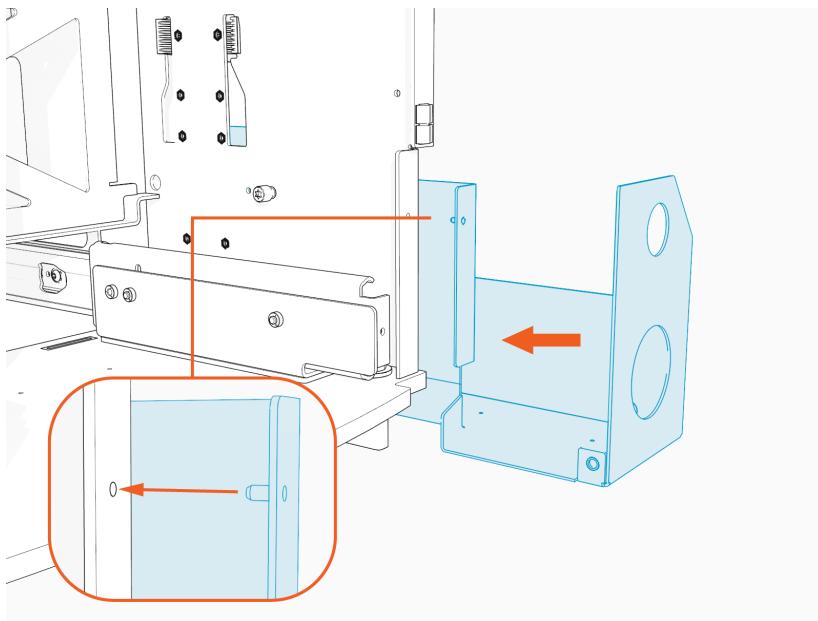
Prepare the Surface Conduit Entry (SCE) Box Base

1. Measure the diameter of the conduit.
2. Using the pilot holes on the SCE box base as a guide, use a sheet metal drill bit to create a hole in the rear face of the box for AC wires (a). Drill the circle for DC wires (b) only if the station will be paired. If the station will have shunt trip wiring (c) or Ethernet (d), use a 45 mm (1-3/4 in) core bit to drill holes based on the pilot hole markings.

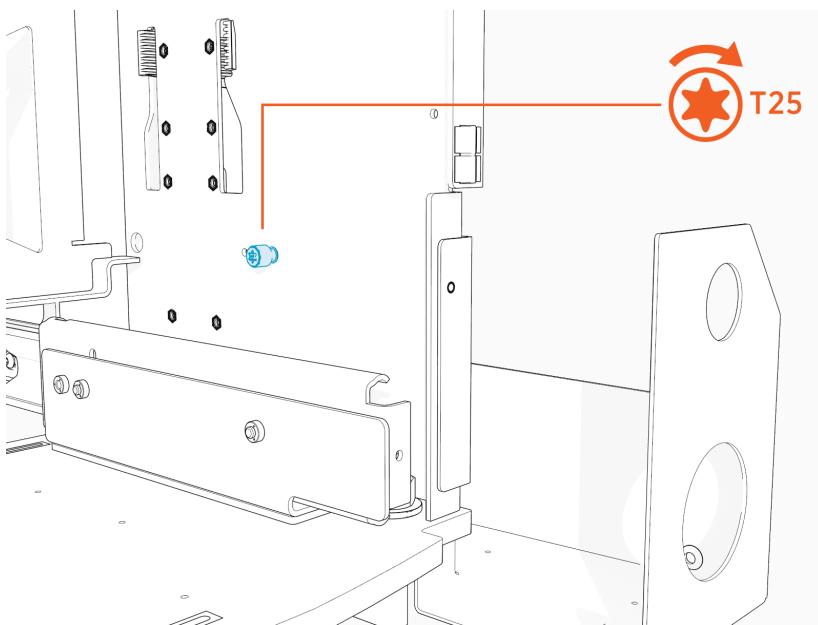


Attach SCE Box Base

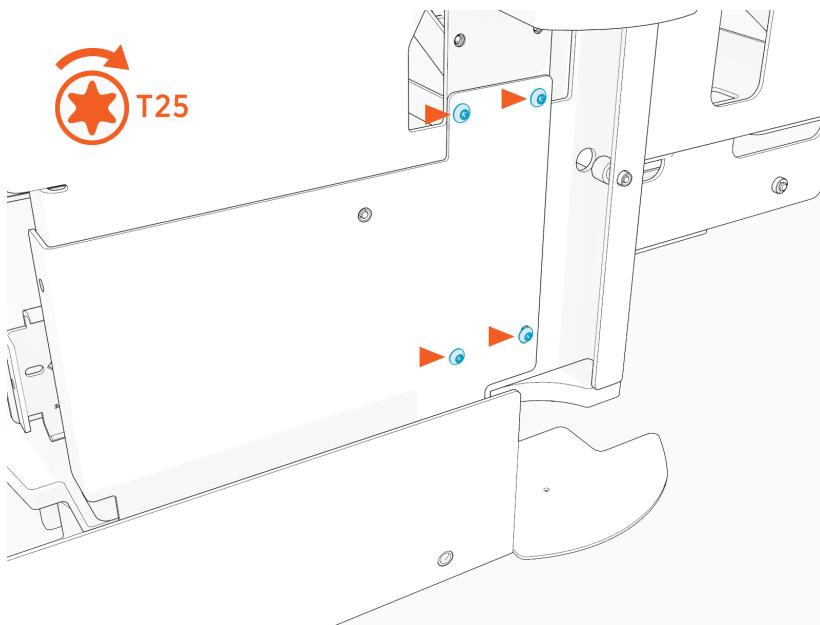
1. Align the pin on the SCE box base to hole on the station frame.



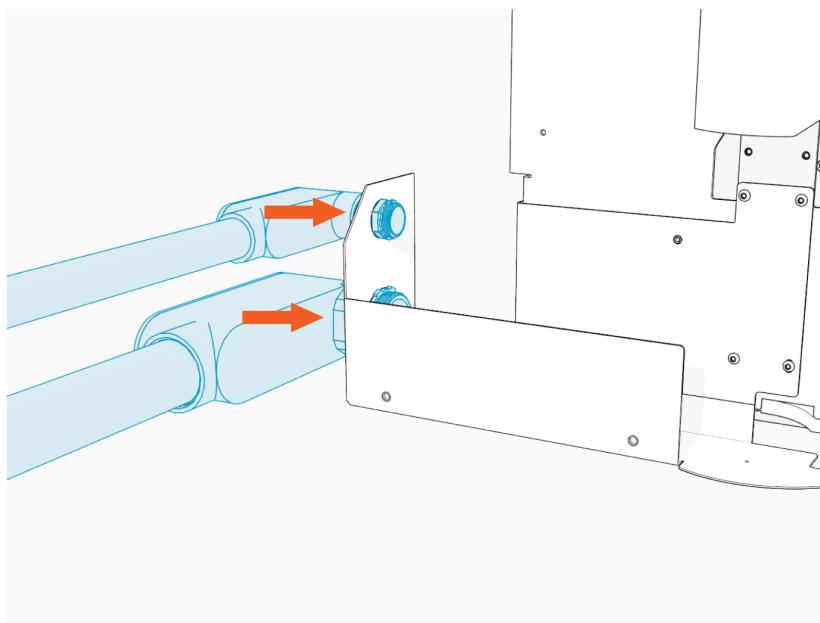
2. Use a T25 Torx screwdriver to tighten the thumb screw to secure the SCE box base to the station frame.



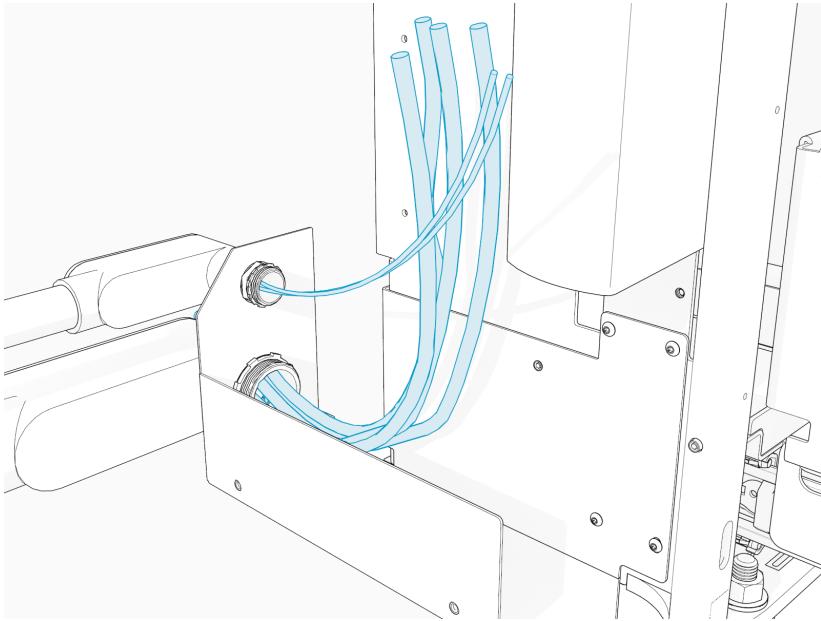
3. Use a T25 Torx screwdriver and four screws to secure the SCE box base to the frame. Torque to **4.5 Nm (40 in-lb)**.



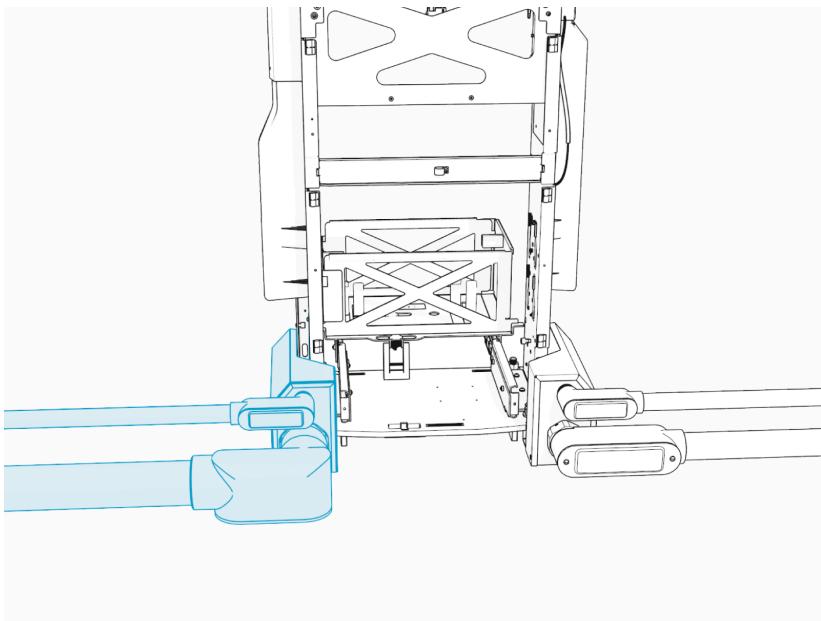
4. Secure the AC conduit to the SCE box base.



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5. Feed AC conduit through the hole in the SCE box base.



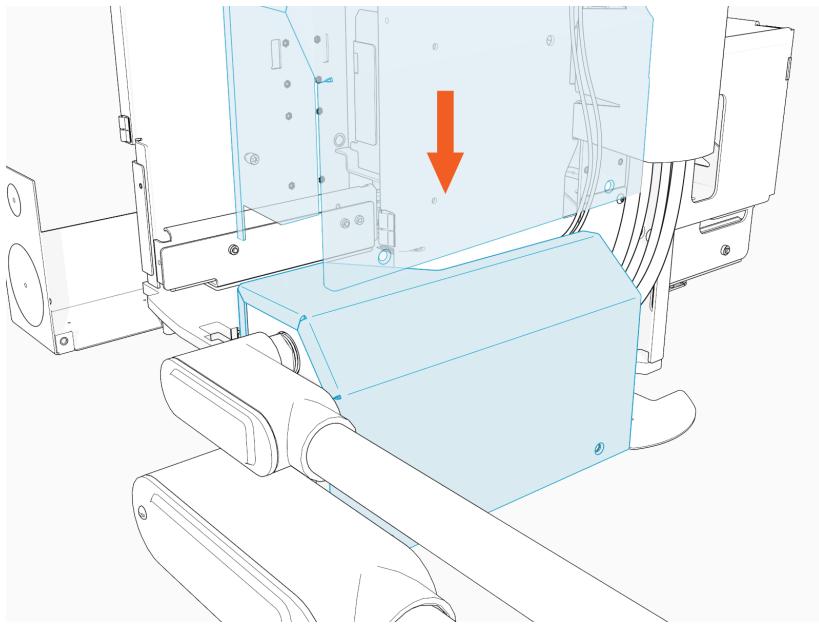
6. Paired stations only - If you are pairing two Express 280 stations, complete the previous steps to secure the SCE box base for DC conduit.



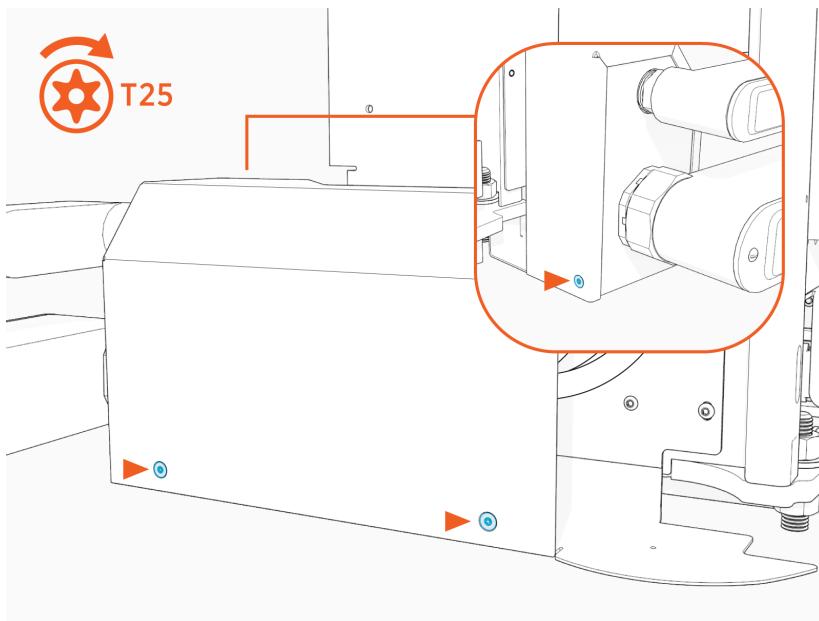
7. Paired stations only - Feed DC conduit through the hole in the SCE box base.
8. Go to [Trim AC Wires](#) and continue to connect AC wiring to the station.

Install the SCE Box Cover

1. Slide the SCE box cover into place.



2. Use a T25 Security screwdriver and three screws to secure slide the SCE box cover.



3. Go to Install Side Panels.

Limited Warranty Information and Disclaimer

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

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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.

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.

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