FLO Ultra™

Installation Guide

Table of Contents

1. INSTRUCTIONS PERTAINING TO RISK OF FIRE OR ELECTRIC SHOCK

IMPORTANT SAFETY INSTRUCTIONS.
SAVE THESE INSTRUCTIONS.

	**WARNING** – When using electric products, basic precautions should always be followed, including the following. This manual contains important instructions for all FLO Ultra™ models that shall be followed during installation, operation, and maintenance of the unit.

	**CAUTION** - To reduce the risk of fire, connect only to a circuit provided with 530 A maximum branch circuit over current protection in accordance with the Canadian Electrical Code CSA C22.1 and National Electrical Code ANSI/NFPA 70.

1. Read all the instructions before using this product.
2. This device should be supervised when used around children.
3. Do not put fingers into the electric vehicle connector.
4. Do not use this product if the flexible power cord or Electric Vehicle (EV) cable is frayed, has insulation, or any other signs of damage.
5. Do not use this product if the enclosure or the electric vehicle connector is broken, cracked, open, or shows any other indication of damage.
6. Operating temperature range: -40 °F to 122 °F (-40 °C to 50 °C)
7. Installation and commissioning activities must be conducted by qualified personnel in accordance with the applicable local rules. Maintenance must be conducted by qualified technicians certified by FLO, unless FLO has authorized in writing that a specific modification, disassembly or repair may be performed by a licensed electrician instead of licensed service provider.
8. Communicate with a certified contractor, certified electrician, or trained installer to ensure compliance with local building code, regulation, security standards and weather conditions.

9. Verify with local authorities that the location where the EVSE is to be installed is free from underground pipelines or electrical equipment, otherwise you might inflict serious injuries on yourself and others.
10. Pollution Degree 3.
11. Overvoltage category III.
12. DO NOT INSTALL ON OR OVER COMBUSTIBLE SURFACES.
13. The installation shall not be made in a commercial garage (repair facility) or closer than 20 feet (508 mm) of an outdoor motor fuel dispensing device.
14. Class 1 wiring methods are to be used for field wiring connections to terminals of a Class 2 circuit (Ethernet or control signal).
15. Ensure compliance to specific Bounding/Grounding instructions for the FLO Ultra™. Refer to "*Grounding Instructions for Products with a Permanent power Connection*" on page 56 in the *FLO Ultra™ Installation Guide* for more information.

2. Important Safety Instructions

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

Read all the instructions before using this product.
Please keep up to date instructions throughout the product life cycle.

This document provides instructions to install the FLO Ultra charging station and should not be used for any other product.

2.1 General Safety Instructions

NOTE: The symbols in the table above apply to all the items in the list below.

1. Perform a hazard assessment prior to performing any activities and use adequate personal protective equipment.
2. Before installing the FLO Ultra charging station, review this guide carefully and consult with a licensed contractor or a licensed electrician to ensure compliance with local jurisdiction, safety standards and applicable codes.
3. Under no circumstances will compliance with the information in this manual relieve the user of their responsibility to comply with all applicable codes or safety standards.
4. Reasonable efforts have been made to ensure that the specifications and other information contained in this guide are accurate and complete at the time of publication. However, specifications and other information contained in this manual are subject to change at any time without notice.
5. FLO cannot be held responsible for any damage that may occur resulting from custom installation not described in this document.
6. If for any reason it is not possible to install the Flo Ultra according to the procedures provided in this guide, the installer should contact the FLO team.
7. Connect the power supply of the charging station with conductors rated for usage at a temperature of at least 167 °F (75 °C).
8. Any modification to any part of the charging station will void the warranty, and any modification done to the charging station is forbidden without express written permission from FLO.
9. Handle parts with care since they can be sharp-edged. Always use safety glasses and protection gloves when unpacking and installing the FLO Ultra.
10. The input cable strain relief, conduits or armed-cable bushings adapter must be:
    a. Certified for both Canada and USA.
    b. Waterproof (3R enclosure type)
11. This charging station is designed to be used with electric vehicles equipped with a CCS 1 or a J3400 connector (Autumn 2025).
12. Avoid installing the charging station in bad weather conditions to prevent ingress of moisture or debris.
13. The EVSE may cause Electromagnetic Interference (EMI).
14. Ensure that the upstream disconnect is in the open position and follows workplace electrical safety procedures, as required by the local jurisdiction.

15. In the event of an earthquake in the region, the FLO Ultra charging station must undergo a detailed inspection by a certified technician before being put back into service.

2.2 Responsibilities

The following sections provide information about the owner and installer's responsibilities:

2.2.1 Owner Responsibilities

The owner is the legal entity who has the legal or business licenses to own or operate the electric vehicle charging station for commercial or business use, according to local jurisdiction.

During the operation of the FLO Ultra charging station, the owner has the legal responsibility for the safety and security of users, bystanders, employees and third parties who may be affected by the charging station. The owner has the following responsibilities in addition to those defined by local jurisdictions:

1. Read the *FLO Ultra™ Installation Guide* and *FLO Ultra™ User Guide* completely and consult with support for any outstanding questions related to the installation and use of the FLO Ultra Charging station.
2. Keep to *FLO Ultra™ Installation Guide* and *FLO Ultra™ User Guide* for consultation and update the version of the documents available for consultation at recorded intervals.
3. Be aware of and implement the applicable laws and rules according to the local jurisdiction.
4. Identify the possible site hazards and do a risk assessment that takes into account the working conditions on the site prior to starting work on the site.
5. Make sure the FLO Ultra charging station is installed for use with all the protective devices and equipment, as indicated in this guide, and according to local jurisdiction.
6. Make sure that all protectives' measures for use are in effect after installation and after all maintenance work, according to this guide and local jurisdiction.

7. Make an emergency plan that instructs people what to do in the event of an emergency relating to the FLO Ultra charging station or to another site emergency.
8. Make sure that all individuals working on the site or on the FLO Ultra charging station including employees, owners and third parties are qualified according to the applicable local jurisdiction and/or rules to do the required and assigned work.
9. Make sure that there is sufficient space around the FLO Ultra charging station to safely do installation and maintenance activities. Refer to the "*USER MAINTENANCE INSTRUCTIONS*" on page 113 section for more information.
10. Identify a site operator who is responsible for the safe operation of the FLO Ultra charging station and for the coordination of all work, if the owner is absent or will not be completing the work themselves.

2.2.2 Installer Responsibilities

The installer or installation engineer has the following responsibilities, in addition to the preceding *Owner Responsibilities* if they are delegated, and in addition to responsibilities defined by the local jurisdiction:

1. Read the *FLO Ultra™ Installation Guide* and *FLO Ultra™ User Guide* completely and consult with support for any outstanding questions related to the installation and use of the FLO Ultra charging station.
2. Keep the *FLO Ultra™ Installation Guide* and *FLO Ultra™ User Guide* available on hand during the installation process and all maintenance activities.
3. Be fully prepared on the details of the site, the FLO Ultra charging station and how to complete a safe installation on the specific site.
4. Make sure the FLO Ultra charging station is installed for use with all the protective devices and equipment, as indicated in this guide, and according to the local jurisdiction.
5. Make sure the FLO Ultra charging station is installed for use with all the protective devices and equipment, as indicated in this guide, and according to the local jurisdiction.
6. Make sure that all protective measures for use are in effect after installation and after all maintenance work, according to this guide and

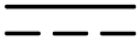
local jurisdiction.

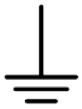
7. Be fully qualified to complete the installation described in the FLO Ultra Installation Guide according to local jurisdiction, including but not limited to certifications and health and safety requirements.
8. Identify the possible site hazards and do a risk assessment that considers the working conditions on the site prior to starting work on the site.
9. Obey all local rules and regulations, and the instructions in the *FLO Ultra™ Installation Guide* and the *FLO Ultra™ User Guide*.

2.3 Safety Symbols on your Product

The symbols in the table below may be present on your charging station and in this guide. Please refer to the table below for information on the symbols.

Table 1: Safety Symbols

Symbol	Description
	Alternating current (AC)
	Direct current (DC)
	Phase
	CAUTION: This symbol is used to provide awareness of important safety information in these instructions
	WARNING: This symbol is used to provide warning of hazardous voltage and possibility of electric shock

	Earth ''ground'' terminal
	Protective (earth) ground Class 1
	Chassis
	Hot surface

2.4 FCC Statement

FCC Statement (for USA only)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/television technician for help.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. In order to avoid the possibility of exceeding the FCC

radio frequency exposure limits, human proximity to the antenna shall not be less than 7.87'' (20 cm) during normal operation.

NOTE: 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 instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

2.4.1 Supplier's Declaration of Conformity 47 CFR 2.1077 Compliance Information

Unique identifier: FLO Ultra™

Table 2: Model Numbers

Model Numbers
FL1DS1A1AA-XX-XXX
FL1DS2A1AA-XX-XXX

NOTE: The X's in the table above represent the colors of the models. X's have been used in order to add to the color range in the future.

Responsible Party - U.S. Contact Information

FLO Services
1270 Pacific Dr, Auburn Hills,
Michigan,
United States
48326

1 855 543 8356
Info@flo.com

FCC Compliance Statement

This device complies with part 15 of the FCC rules. Operation is subject to the

following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

2.5 Industry Canada Compliance

This device complies with Industry Canada license-exempt RSS standard(s). 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.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. 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 tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

3. Introduction

3.1 About FLO Ultra

The FLO Ultra DC fast charging station delivers the ultimate fast charging experience for every EV driver.

Smart Design
The FLO Ultra fast charger is easy to find and use and is designed to get you back on the road quickly and safely.

Brilliantly Simple
Two independent ports double the charging capacity, while our innovative cable management system FLO EZLift™ makes handling the cables effortless. Intuitive lighting puts drivers at ease any time of day.

Built-to-Last
Station reliability and uptime are paramount when you're on the road. The modular architecture, rugged aluminum enclosure and easy serviceability are just a few of the ways FLO Ultra exemplifies fast charging done right.

The FLO Ultra™ is a robust station with an aluminum enclosure. It has dual DC fast charger outlets with a modular design that allows you to connect additional chargers together.

The unique design favors visibility with a highly visible lighting canopy and state of charge indicators so you can spot the FLO Ultra at a distance, and includes easy-to-use features like the FLO EZLift™ motorized cable management system and flexible payment options.

3.2 About this Guide

The *FLO Ultra™ Installation Guide* should be used as instructions for the installation of the FLO Ultra including the unpacking, moving, lifting, site preparation, final assembly and commissioning.

This guide will provide you with information about the FLO Ultra and its components, guide you through the installation of a station on a particular site, and provide you with general information about upkeep and support.

In addition to the Installation Guide, you may want to refer to the following guides for complimentary information:

- *FLO Ultra™ Ordering Guide*
- *FLO Ultra™ User Guide*
- *FLO Ultra™ Site Planning Application Note*

This icon serves as a visual indicator to identify installation steps where a torque value should be applied.

4. Specifications

Table 3: Specifications

Specification	Description
Electrical	
AC nominal current	408 A
Integrated protection	IM/I, GM/I
AC power consumption	337 kVA
AC Input voltage	480 Y-277 V (-15% to 10%)
AC input connections	3-phase: L1, L2, L3, GND
AC short circuit current rating	65 kA
Overvoltage category	IV
Power factor	> 98 %
THDI (@rated output)	> 5 %
Efficiency @nominal output power	> 95%
DC output voltage (from charging holster)	150 to 1000 VDC
DC output current (from charging holster)	0.5 to 500 A (liquid cooled cable)
DC output power (from charging holster)	320 kW (2 x 160 kW) – Independent unit 480 kW – with UltraConnect (Coming Autumn 2025)
DC interconnect voltage (with optional UltraConnect)	1000 V
DC interconnect current (with optional UltraConnect)	500 A
Installation configurations	Pull-in Pull-through
Charging port 1 and 2 configurations	2x CCS 1 – 500 A Liquid Cooled 1x CCS1 - 500 A & 1x J3400 – 500 A Liquid Cooled (Coming Autumn 2025)
DC input	2x up to 500 A 1000 VDC
AC input frequency	60 Hz
Environment	
Operating temperature	-40 °F to 122 °F (-40 °C to 50 °C) (Derating)
Storage temperature	-40 °F to 158 °F (-40 °C to 70 °C)
Operating humidity	5% to 95%, non-condensing

Storage humidity	95%, non-condensing
Maximum operating altitude	6 562' (2 000 m)
Enclosure	Aluminum type 3R
Interface and Control	
User interface	12.1 in color LCD touchscreen, 10 9/32'' x 6 11/32'' (261 mm x 163 mm) English, French, Spanish Charging station status LED indicators Vehicle state of charge LED indicators
Credit card reader	Standard card reader: tap (NFC, insert, swipe)
RFID user authentication	ISO 14443A/B, ISO 15693, HID, MiFare
Charging protocol	DIN-SPEC 70121, ISO 15118-2 (tested under ISO 15118-4-5)
Connectivity	
Cellular communication	4G (LTE)
Communication interface	WAN connection available
Communication protocol	OCPP 1.6J Ready for OCPP 2.0.1
Energy metering	Incoming AC monitoring DC energy meter
Certificate and Compliance	
Certifications	UL2202 / UL2231-1 / UL2231-2 CSA C22.2 No 346 / CSA C22.2 No 281.1 / CSA C22.2 No 281.2 cTÜVus (homologate NRTL)
EMC compliance	FCC 47 CFR Part 15 CAN ICES-003(A) / NMB-003(A)
Energy Star®	1.2 certified
Accessibility	Meets ADA requirements
Hardware	
Dimensions (H x W x D)	100-1/8 in x 118-3/8 in x 27-3/4 in (or 48-/8 cable swing) (2543 mm x 3005 mm x 704 mm (or 1222 mm cable swing))

Shipping dimensions	132” x 48” x 90” (335 x 122 x 229 cm)
Weight	1500 lbs (680 kg)
Weight with shipping packaging	2700 lbs (1225 kg)
Standard cable length	18' (5.5 m)
Charging connector	CCS 1 IEC 62196
Cable Management System (CMS)	FLO EZLift™ motorized cable management (standard)

5. Site Preparation

The sections below detail the typical site preparation required to install the FLO Ultra, as well as information about the FLO Ultra that must be taken into account before starting the installation.

NOTE that the images below are for illustrative purposes only and may not represent your site configuration.

5.1 Site Configuration

The FLO Ultra user interface can be located on either side of the charging station or on the same side to support the pull-in or pull-through parking configurations.

The following image shows the pull-in parking installation:

Figure 1 : Pull-In parking installation

The following image shows the pull-through parking installation:

Figure 2: Pull-Through parking installation

5.2 Transformer

In general, EV charging stations are designed as a continuous load with 100% demand factor, per the National Electrical Code (NEC) or Canadian Electrical Code (CEC).

For more installation details and additional notes on equipment sizing to support your site engineer's infrastructure planning, please refer to the *FLO Ultra Site Planning Application Note*, under section *Electrical Considerations* available on the FLO website.

5.3 Protective Barrier Equipment

It is recommended to consider installing **protective barrier equipment**, such as **bollards or wheel stoppers**, to protect the FLO Ultra charging station from accidental impact. Refer to the *FLO Ultra Site Planning Application Note*, under section Protective Barrier Equipment on the FLO website.

6. Typical Installation

The image below shows the main parts of a typical site installation:

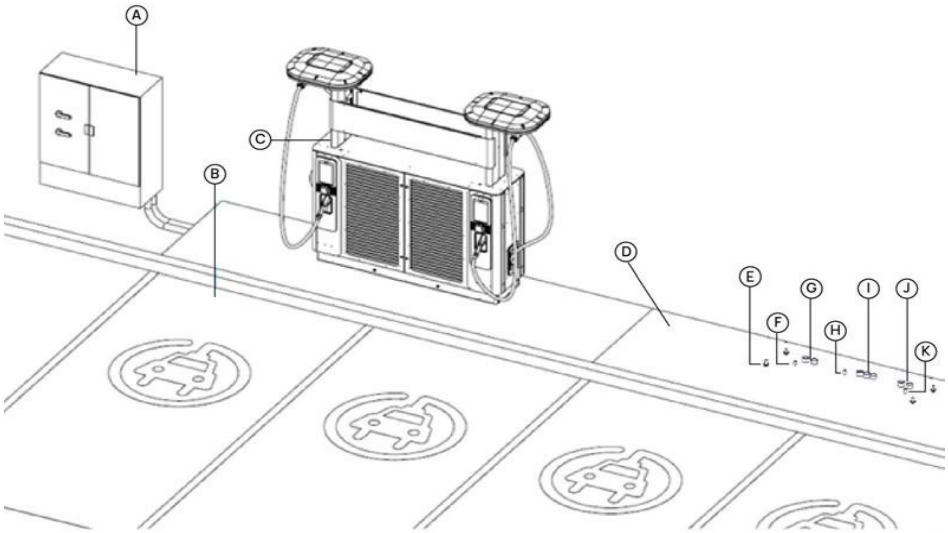


Figure 3 : Typical Installation

NOTE: Items E to K on the image show the connections on the mounting pad before the FLO Ultra installation.

Table 4: Typical Installation

Item	Description
A	EVSE branch circuit and metering cabinet
B	EVSE parking spaces
C	FLO Ultra station
D	Concrete slab
E	Anchors (4x)
F	Outlet 1 -Pairing control and communication conduits / conductors (optional)
G	Outlet 1 – 1000 VDC conduits / conductors (optional)
H	FLO Ultra control and communication / conductors (optional)
I	3-phase, 3-wire 480Y / 277 VAC conduits / conductors
J	Outlet 2 – 1000 VDC conduits / conductors (optional)
K	Outlet 2 – Pairing control and communication conduits / conductors (optional)

6.1 Charging Station Dimensions

Ensure that the selected site is large enough to house the Flo Ultra charging station. Refer to the *"Surface Area Requirements"* on page 30 and *"Reach of the Charging Station Connectors"* on page 31 for more information,

The image below shows the FLO Ultra charging station dimensions:

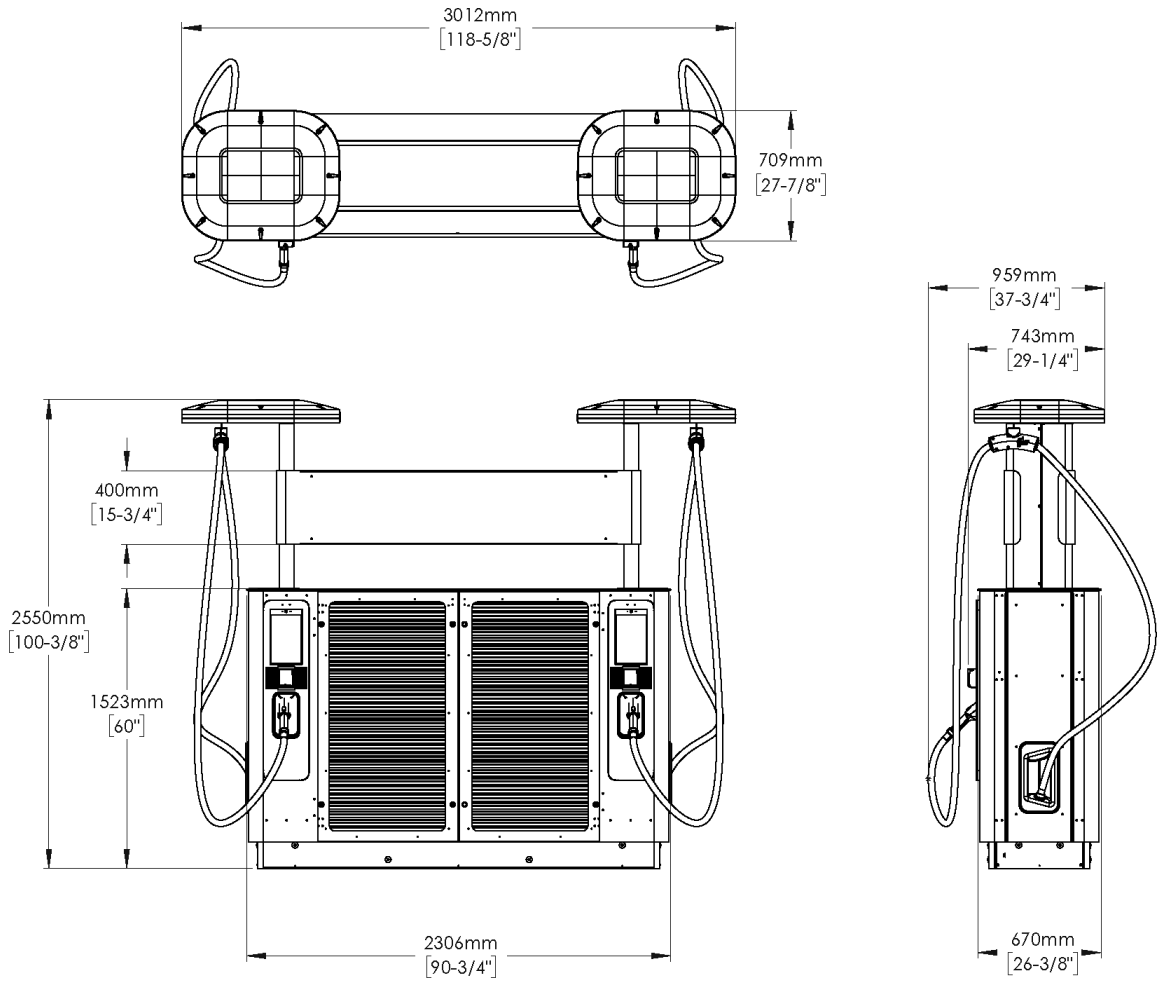


Figure 4: Charging Station Dimensions

6.2 Main Exterior Components

The image below shows the FLO Ultra charging station's main exterior components:

Figure 5: Main Exterior Components

Table 5: Main Exterior Components

Item	Description
A	Banner
B	Main compartment doors
C	Canopy
D	Charger status light indicator
E	Cable clamp
F	FLO EZLift
G	Canopy area lighting
H	Charging station identifier
I	Charging cable
J	User interface touchscreen
K	Card reader
L	Charging station connector
M	Holster light indicator
N	Protective covers and base covers
O	Power cable entry compartment

6.3 Height of Operable Parts

The FLO Ultra charging station offers mounting configurations that support compliance to the American Disability Act's (ADA) standard for accessibility.

Compliance with the ADA requirements is subject to site design and installation which are the responsibility of the installers.

See the image below for the interaction heights of the various FLO Ultra components:

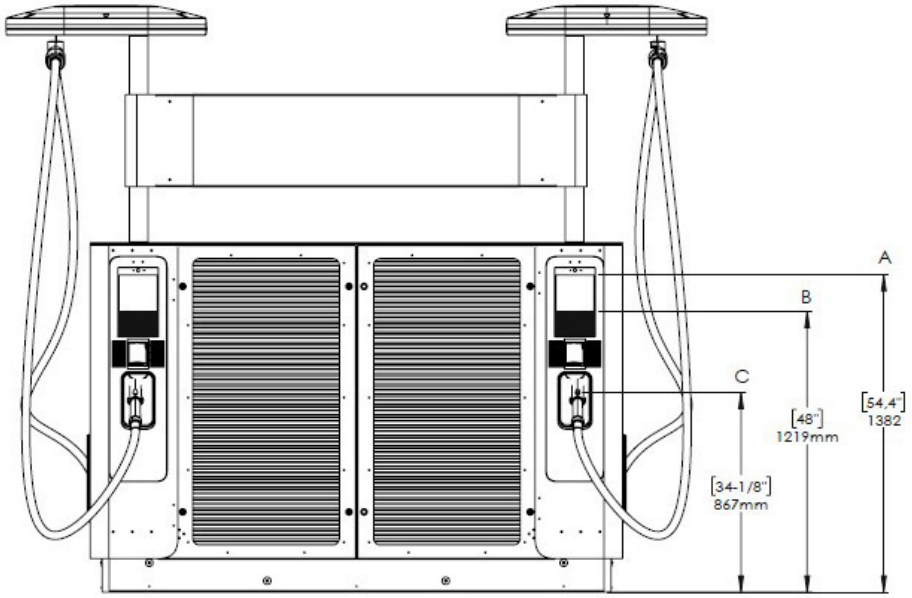


Figure 6: Height of Operable Parts

Table 6: Height of Operable Parts

Part	Description
A	Display screen (Highest point of the display screen – No interaction)
B	Highest interaction point on the display screen
C	Charging station connector (Lowest point of interaction)

6.4 Mounting Pad

The mounting pad is a concrete slab on which the FLO Ultra is installed.

Follow the installation guidelines below to ensure the correct installation of the mounting pad and the FLO Ultra:

- The FLO Ultra must be installed on a concrete mounting pad.
- The surface of the concrete mounting pad should be large enough to install the station and ideally the protective bollards, if applicable, and still have enough space for users to circulate. Refer to *"Surface Area Requirements"* on page 30 for more information.
- The ground underneath the concrete mounting pad must be properly drained and stabilized (as required), so that it is not affected by various types of weather, such as rain and snow, and variations in temperature such as freezing.

NOTE: This section contains FLO recommendations; however, the final installation of the mounting pad is the responsibility of the contractors who install the mounting pad. Failure to meet surface area requirements results in the warranty being voided.

NOTE: The design of the mounting pad and the positioning of the protective bollards must take into account the accessibility standards of the American Disability Act (ADA)or any other universal accessibility standards imposed by the legislation in effect for the installation site.

6.5 Anchors and Power Cable Entry

RECOMMENDATION: Make sure that the anchors have been installed and the site is fully ready before the scheduled installation begins.

The anchors (A) and conduits should be positioned to allow for the mounting of the FLO Ultra. The conduits and conductors complying with the local regulations must be brought under the appropriate station perimeter area (B, C, D or E) as shown in the top view of the FLO Ultra mounting, in the image below:

Top View of the Anchors

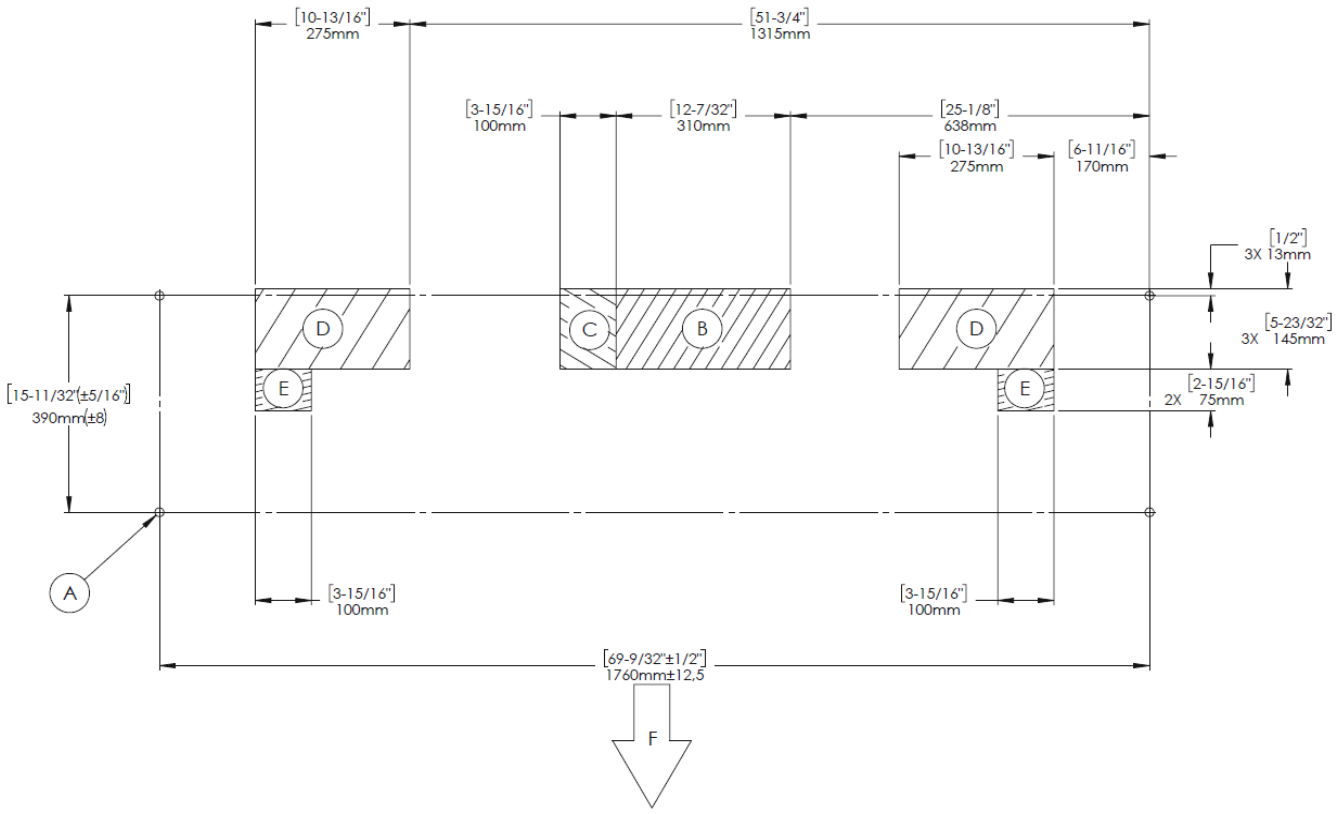


Figure 7: Required foundation features

NOTE: The following *Parts Description* table below contains information for all images in the *Anchors and Power Cable Entry* section. Please refer back to this table when viewing all images in the section.

Table 7: Anchors and Power Cable Entry

Item	Description
A	Anchors
B	AC power conduits
C	FLO Ultra communication and control conduit entre area
D	DC power conduits area
E	PowerSharing communication and conduit area
F	FLO Ultra front access
G	Concrete mounting pad

H	AC lug pad
I	DC lug pad
J	FLO Ultra power cable compartment enclosure
N	Protective covers and base covers
O	Power cable entry compartment

IMPORTANT NOTE: The height of the 4 threaded anchors (A) should rise 3" (76.2 mm) above the FLO Ultra surface mount and have a diameter of 5/8"(15.8 mm). See *Figure 9: Anchor bolt detail - 1*.

The conduits should rise 3" (76.2 mm) above the FLO Ultra surface mount to enter the power cable entry plates, and the conductors must be bendable to connect to the terminals. Refer to *"Connecting the AC Power Cables"* on page 63 for more information.

NOTE: Please refer to the site assessment requirements and anchor supplier's recommendation for the selection of the anchors.

The power cable compartment and lug pad dimensions are detailed in the side-view images below:

Front View of the Anchors

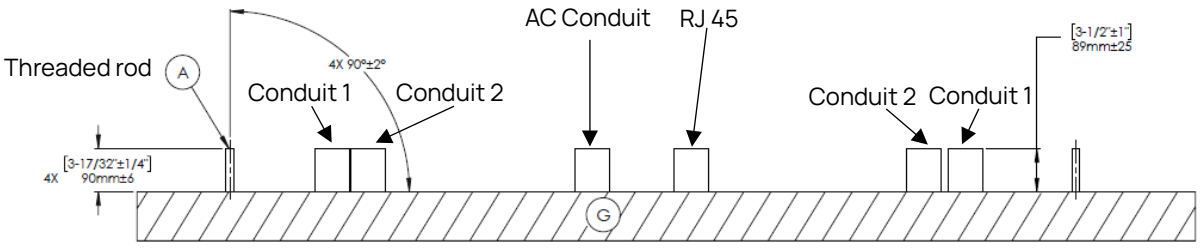


Figure 8: Front view of the anchors

Close-Up view of an Anchor

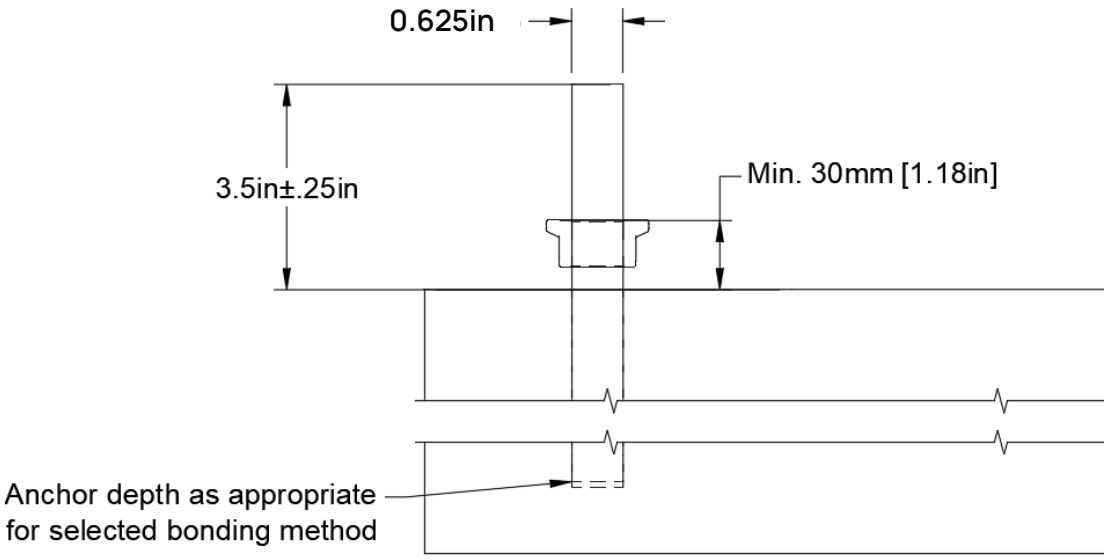


Figure 9: Anchor bolt detail - 1

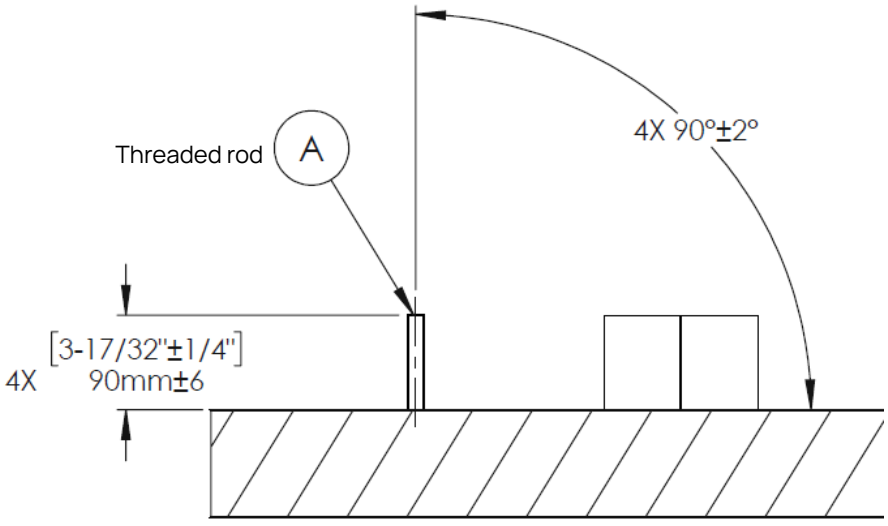


Figure 10: Anchor bolt detail - 2

Side View of the AC Power Connections

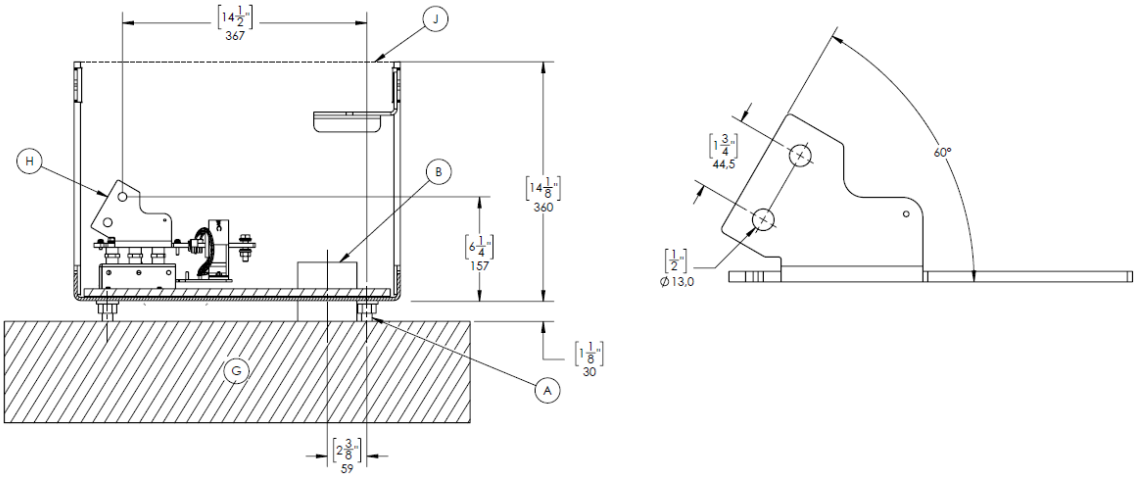


Figure 11: AC Power Connections - Side View

Side View of the DC Power Connections (If Applicable)

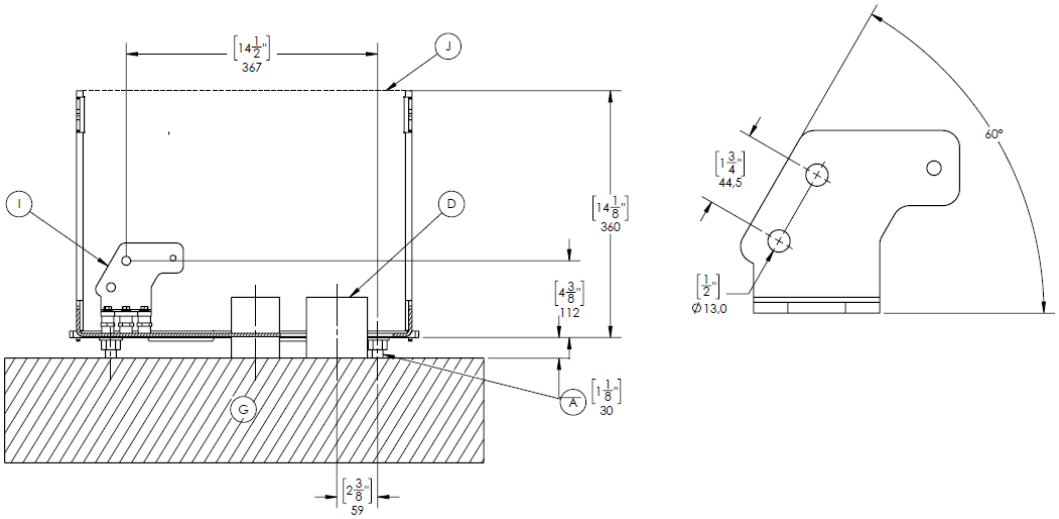


Figure 12: DC Power Connections - Side View

6.6 Surface Area Requirements

The minimum required clearance for the maintenance and operation is indicated in the top view image below. Zones A, B and C should be free of obstacles.

NOTE:

- Additional space may be required to meet the ADA requirements.
- Failure to meet surface area requirements results in the warranty being voided.
- The bollard placement must take these zones into consideration and not be located in zones A, B and C.

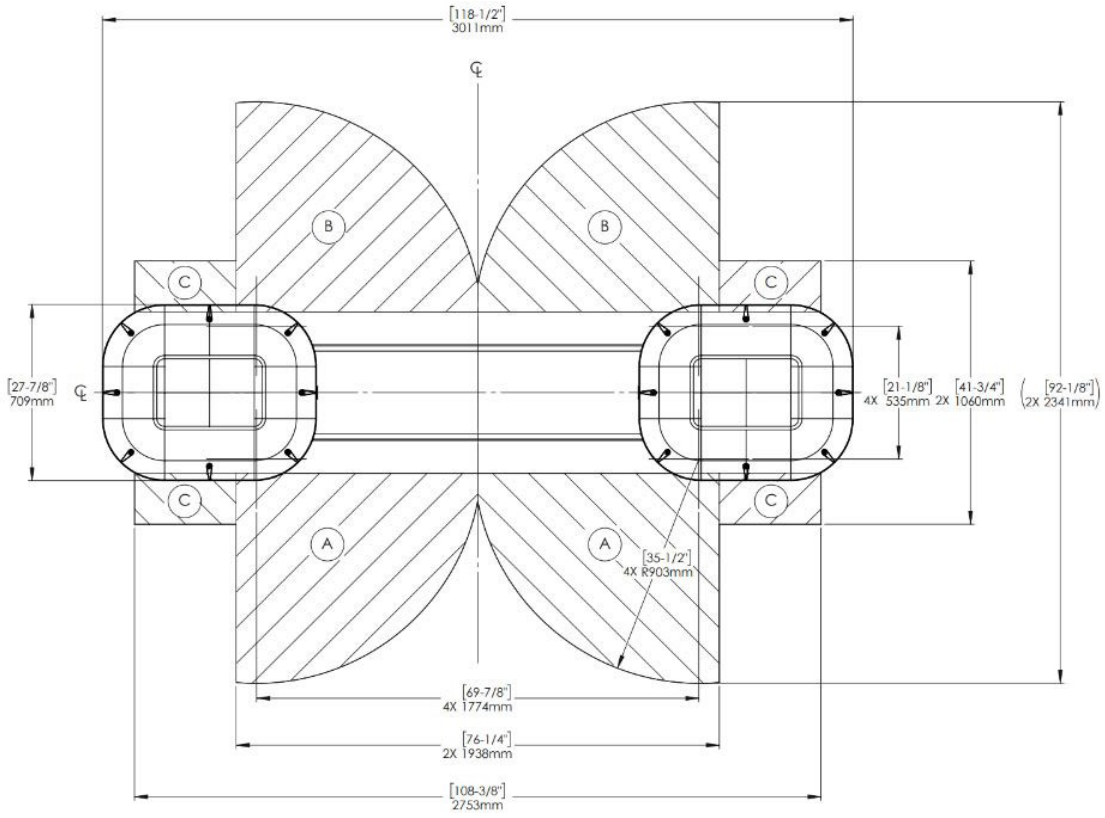


Figure 13: Surface Area Requirements

Table 8: Surface Area Requirements

Part	Description
A	Required space to open the front main compartment doors
B	Required space to open the front rear compartment doors
C	Required space to open the user interface doors

6.7 Reach of the Charging Station Connectors

The reach of the charging station connectors must be taken into consideration when planning the site installation. The image below shows the reach of the FLO Ultra charging station connectors:

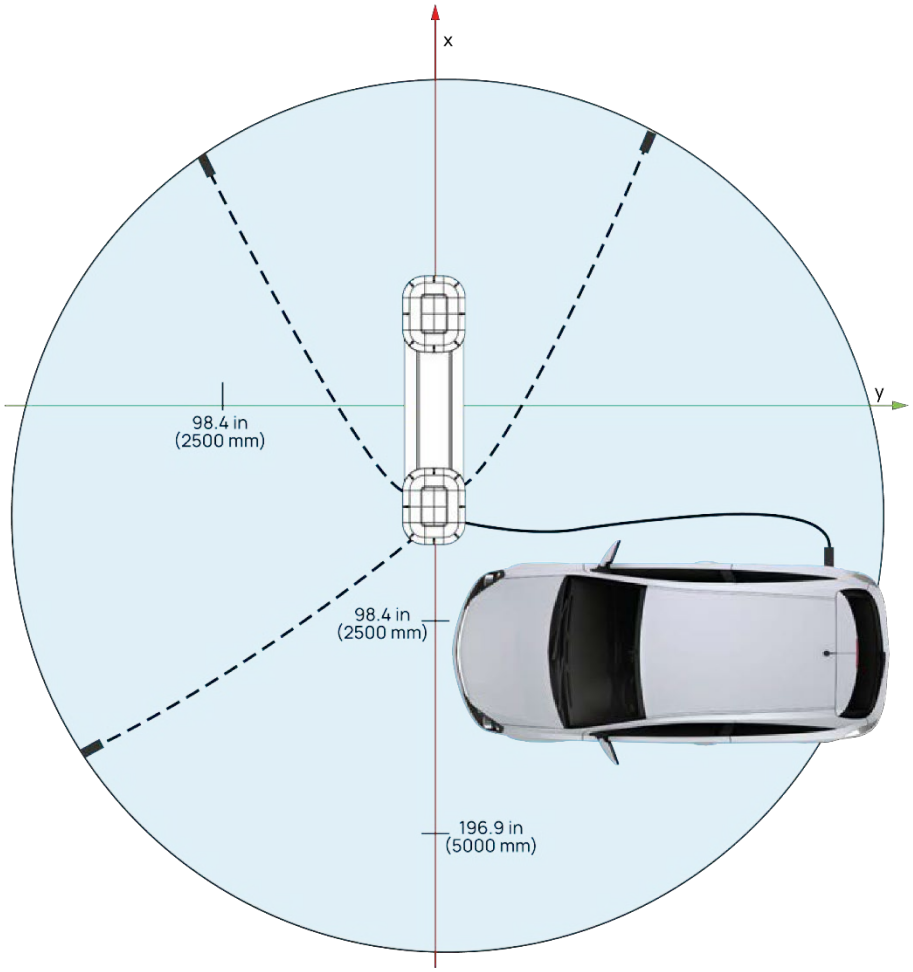


Figure 14: Cable Reach

NOTE: Protective barriers, such as wheel stops and low-height bollards, can also be used.

To optimize the user experience, their positioning should be planned to minimize physical interference between the cable management system and the protective barriers and bollards. Inappropriate positioning or height of bollards could also reduce the reach of the charging cable. Protective measures must be integrated in the charging site in compliance with ADA standards and local legislation.

6.8 Compartment Access

Follow the instructions in the sections below to access the UI compartment, the main electrical compartment, and the electrical cable compartment.

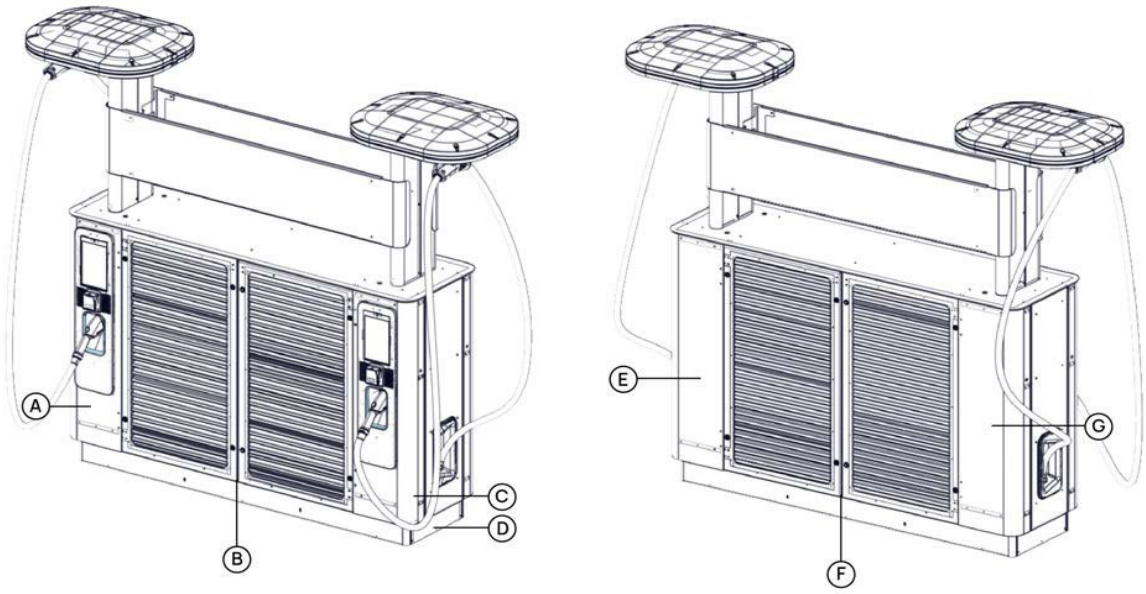


Figure 15: Compartment Access

Table 9: Compartment Access

Part	Description
A	User interface compartment (left, front access)
B	Main electrical compartment
C	User interface compartment (right, front access)
D	Power cable compartment
E	User interface compartment (left, rear access)
F	Rear compartment
G	User interface compartment (right, rear access)

6.8.1 Accessing the Door Compartments

Each of the user interface doors, and outer main compartment doors is locked with a two-latch locking mechanism. The inner electric compartment doors are equipped with a latch closing mechanism.

The image below shows the location of the latch locks of the outer door-accessible compartments:

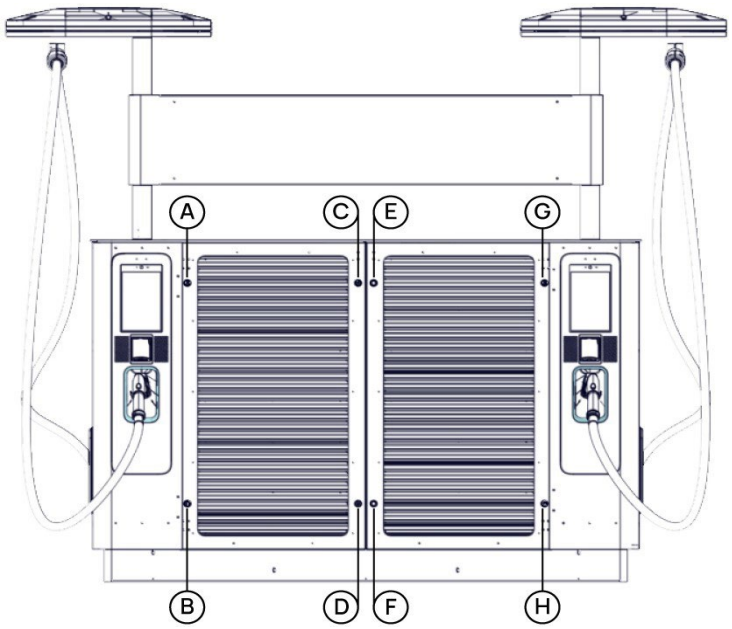


Figure 16: Outdoor - Accessible Compartments

Table 10: Outdoor - Accessible Compartments

Part	Description
A	User interface latch-lock (upper left)
B	User interface latch-lock (lower left)
C	Outer main-compartment door latch-lock (upper left)
D	Outer main compartment door latch-lock (lower left)
E	Outer main compartment door latch-lock (upper right)
F	Outer main compartment door latch-lock (lower right)
G	User interface latch-lock (lower right)

The image below shows the inner electrical compartment door latches:

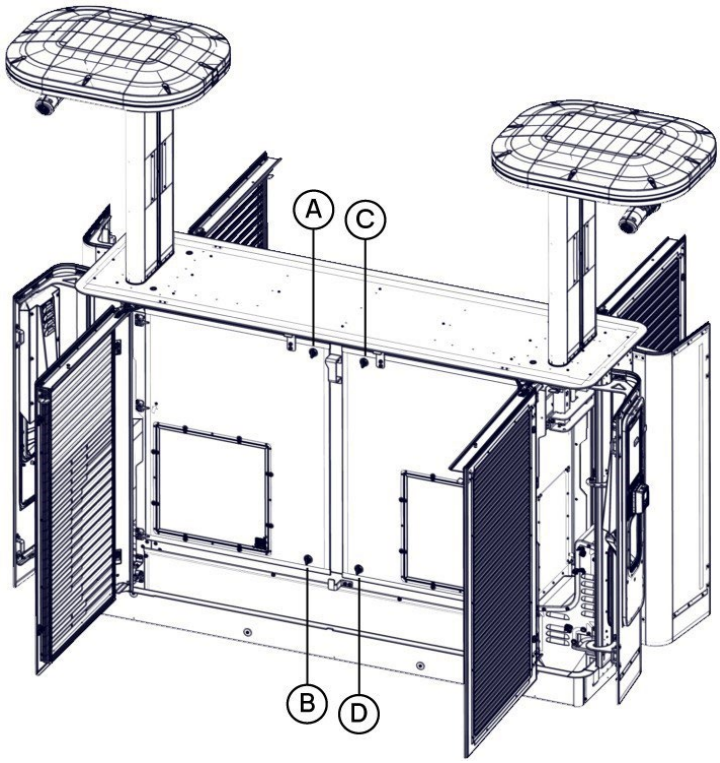


Figure 17: Inner Door Electrical Compartment

Table 11: Inner Door Electrical Compartment

Part	Description
A	Inner electrical compartment door latch (upper left)
B	Inner electrical compartment door latch (lower left)
C	Inner electrical compartment door latch (upper right)
D	Inner electrical compartment door latch (lower right)

The image below shows a zoomed in view of the door accessible compartments when the outer main compartment door and user interface doors are open:

NOTE:

- **The user interface doors must first be open in order to open the outer main compartment doors.**
- **The outer main compartment doors must be open to access the inner electric compartment doors.**

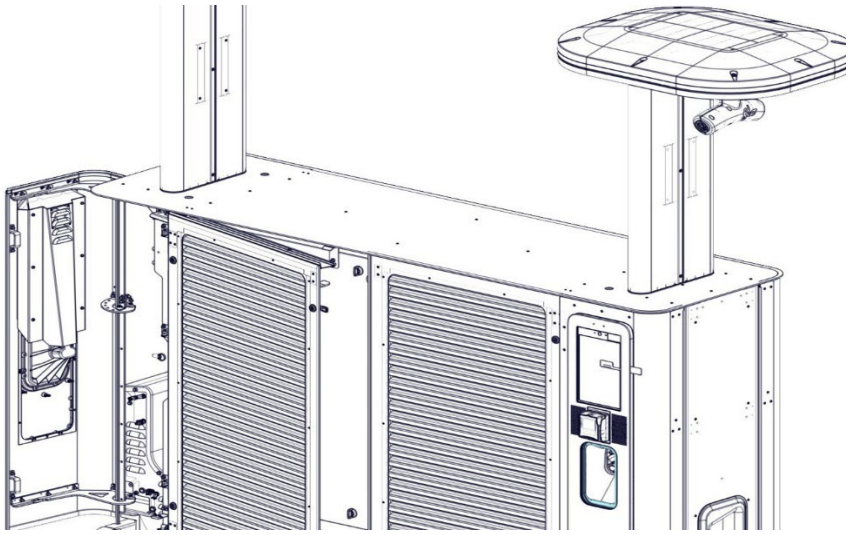


Figure 18: Doors Opening

To access any of the latch-lock compartments listed follow the steps below:

1. Insert the key provided with the FLO Ultra in the latch-lock and turn it 90 degrees counterclockwise.

Figure 19: FLO Ultra Access Key

2. Repeat the action for any other latch-lock on the doors you want to open.

6.8.1.1 Engaging the Door Stays

To keep the outer main compartment doors open, fully open the door until the door stay engages.

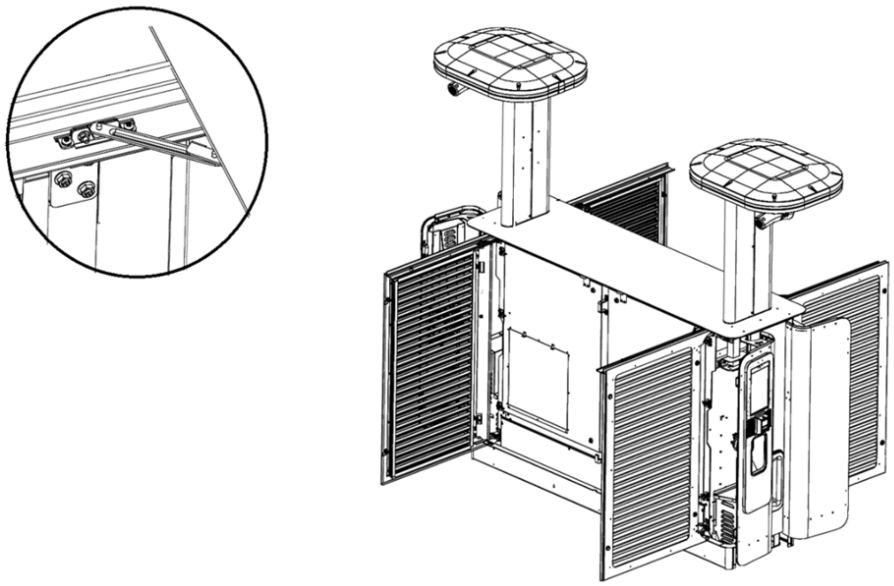


Figure 20: Engaging the Doors Stays

To keep the inner electric compartment doors open, fully open the doors and push the doors into the outer main compartment doors until the plungers at the top of the outer doors engage in the inner door holding brackets.

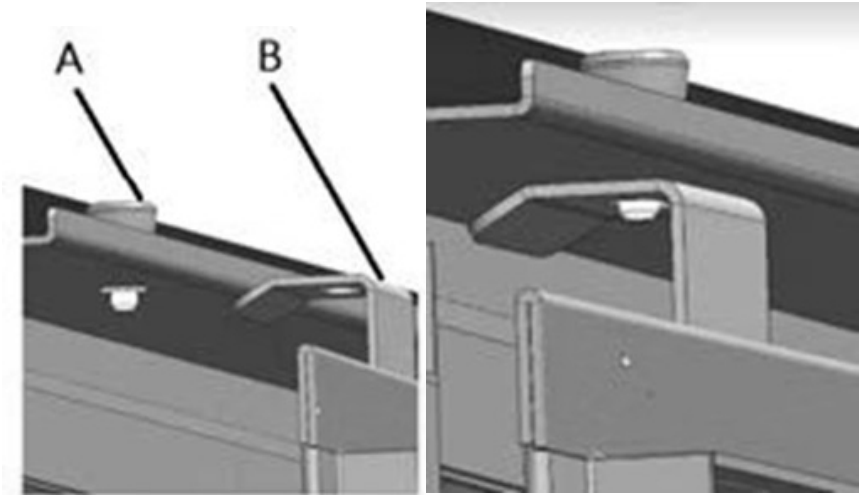


Figure 21: Engage the Outer Door Plungers

Table 12: Outer Door Stay Components

Part	Description
A	Outer door plunger
B	Inner electric compartment door holding brackets

NOTE: To release the inner door, pull the plungers upwards.

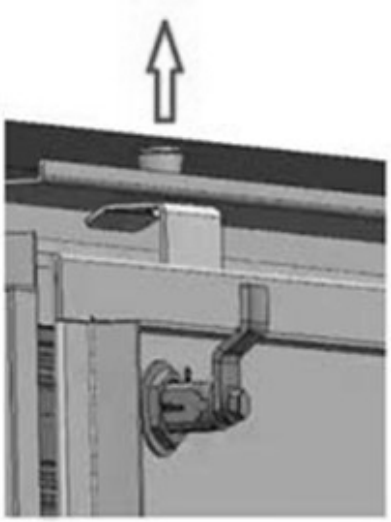


Figure 22: Inner Door plungers

To close the outer main compartment doors and engage the door stays, push the doors into the charging station until the plungers at the top of the outer doors engage in the charging station holding brackets.

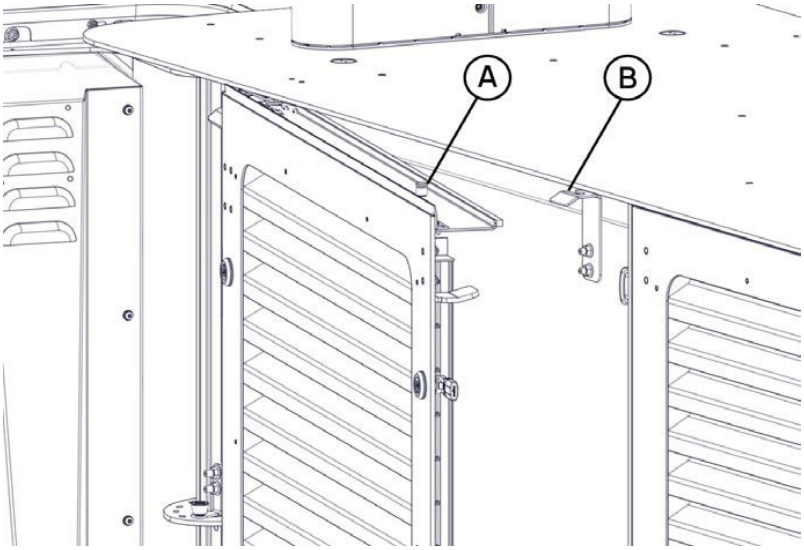


Figure 23: Close the Outer Main Compartment Doors

Table 13: Outer Door Stay Components

Part	Description
A	Inner door plunger
B	Charging station holding brackets

7. MOVING AND STORING INSTRUCTIONS

Follow the moving and storing instructions detailed in this section.

7.1 Safety Training

1. Only trained and certified workers may operate a forklift.
2. Ensure operators are trained on the types of trucks used for moving the chargers.

FLO recommends following the guidelines below to move the crate safely with a forklift:

7.2 Forklift Operations

1. Follow local safety guidelines and regulations.
2. Follow your employer's safety guidelines and regulations.
3. Always operate the vehicle according to the manufacturer's instructions.
4. Always wear a seat belt when the forklift has one.
5. Never exceed the rated load and ensure it is stable and balanced.
6. Do not raise or lower the load while traveling.
7. Keep a safe distance from the platform and ramp edges.
8. Be aware of other vehicles in the work area.
9. Have clear visibility of the work area and ensure you have enough clearance when raising, loading, and operate a forklift.
10. Use proper footing and handhold, if available, when entering the lift.
11. Use horns in obstructed areas.
12. Watch for pedestrians.
13. Do not give rides or use the forks to lift people.

7.3 Unloading the Crate from a Truck

Follow the steps below to correctly and safely unload the FLO Ultra transportation crate from the truck:

Before unloading the crate from the truck, please note the following considerations:

- Packaged product weight and dimensions:
  - Weight: 2 700 lb (1 225 kg)
  - Dimensions: 132 x 48 x 90 inches (335 x 122 x 229 cm)
- Lifting modes:
  - The FLO Ultra must be picked up by the forklift from one of the two long sides.

NOTE: Forklift extensions are required to handle the crate from the long side.

Figure 24: FLO Ultra Crate

7.4 Moving the Crate Safely

FLO recommends that you follow the guidelines below to handle the box safely with a forklift:

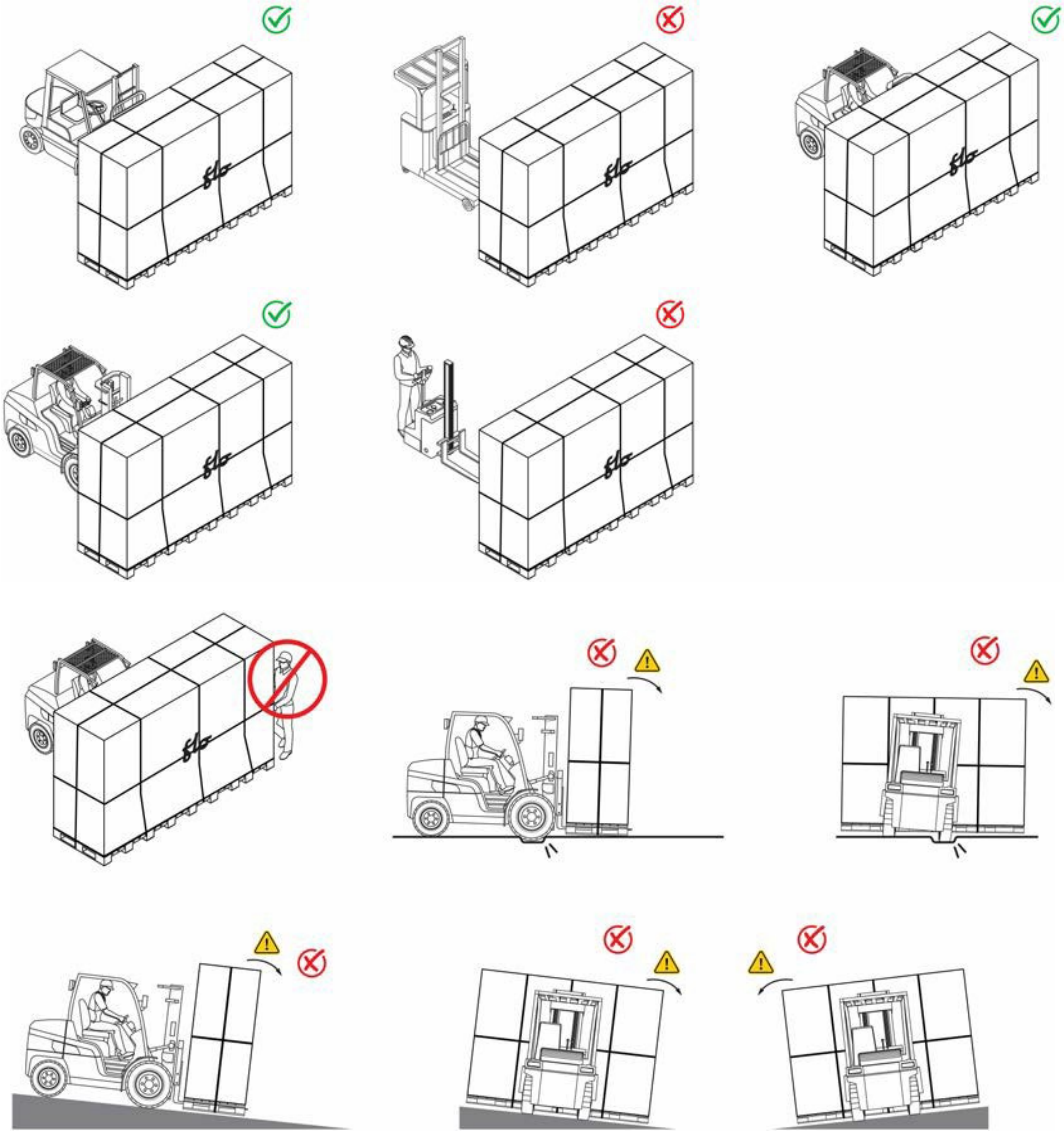


Figure 25: Moving the Crate Safely

7.4.1 Storage of the charging station

If a FLO Ultra charging station will be stored for a prolonged period of time between receipt of shipment and installation (e.g. days-weeks), please ensure that the unit is either stored uncrated in a sheltered environment, or that measures are taken to prevent the buildup of moisture and humidity inside the shipping crate (e.g. remove side panel of drill ventilation holes).

7.4.2 Uncrating the Charging Station

Follow the instructions below to remove the charging station from the shipping crate:

1. Using a utility knife, cut the shrink wrap at the base of the unit. Follow the cutting lines shown below.

Figure 26: Cut the Shrink Wrap - Horizontal

2. Cut the middle of the shrink wrap on the long side of the pallet.

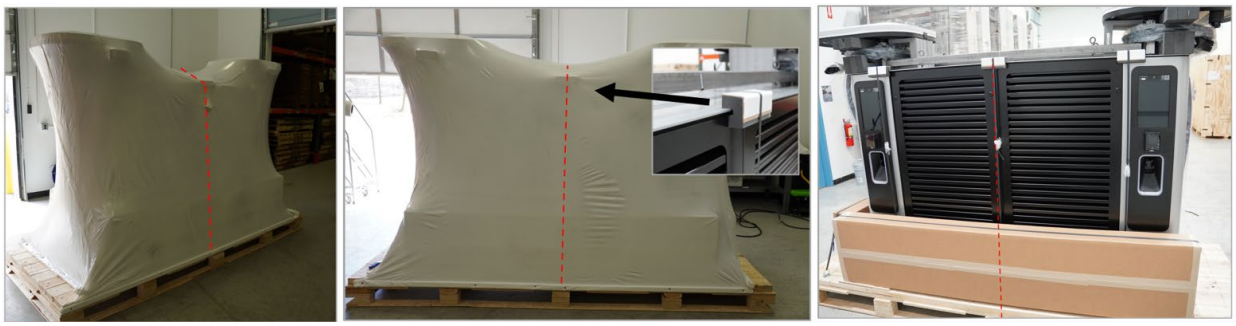


Figure 27: Cut the Shrink Wrap - Vertical

Remove the fasteners from around the 3 boxes (ASAC0001, ASAC0002 and ASAC0003) attached to the pallet.

Figure 28: Remove the Boxes Fasteners

3. Remove the bubble wrap around the branding straps on both sides of the charging station.

Figure 29: Remove Bubble Wrap

4. Remove the banding strap by feeding it through the slot (PAWT1093).

Figure 30: Remove the Banding Strap

5. Remove the plastic banding on both sides of the charging station that holds the door padding in place and the handle and hinge padding as well.

Figure 31: Remove the Plastic Banding - Door Padding

6. Remove the padding (PAWT0200) and protector (PAWT0202) from the top of the charging station.

Figure 32: Remove the Padding - Top

7. Remove the padding (PAWT0197) from the top of the UI doors.

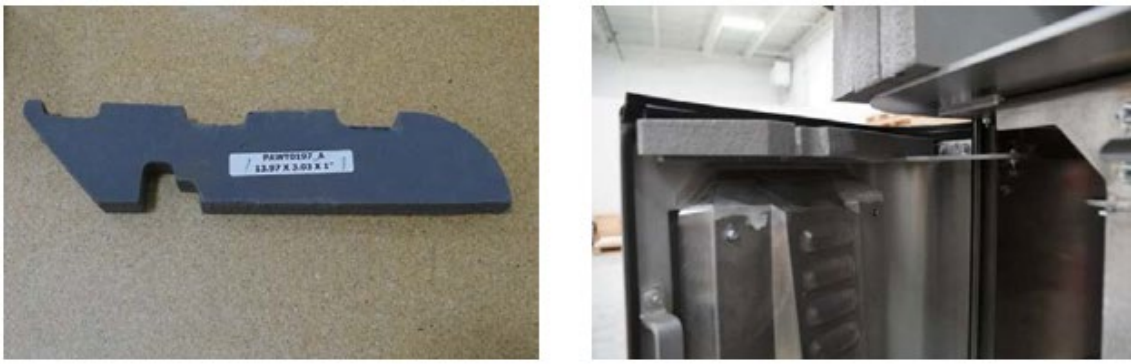


Figure 33: Remove the Padding - UI Doors

8. Remove padding (PAWT0203) from the door.

Figure 34: Remove the Padding - Doors

9. Remove door brace (MEDS1089) under the UI door by unscrewing the screw.

Figure 35: Remove Door Brace

10. Remove the outer compartment door padding at the bottom of the charging station.

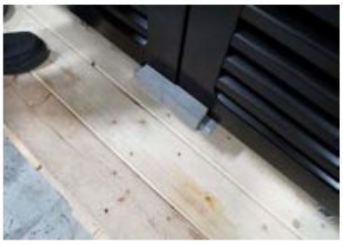


Figure 36: Remove the Door Padding - Bottom

11. Open the outer right compartment door to remove the padding (PAWT0196) inside at the top.



Figure 37: Remove the Door Padding - Inside

12. Remove padding (PAWT0198) from the brace (MEDS1087).


Figure 38: Remove the Padding - Door Braces

13. Remove the lower shelf brace (MEDS1087) by unscrewing the 2x screws (MESB0131) using a 10 mm socket wrench.



Figure 39: Remove the Lower Shelf Brace

14. Remove the piece of cardboard (PABX0049) placed under the AC power cables.

Figure 40: Remove the Cardboard

15. Perform a visual check on the charger looking for any scratches or dings.

Figure 41: Perform Visual Check

16. Keep the cables tied. Unpacking the cables must be done once the AD and DC power connections are completed. Refer to *"Unpacking the Charging Cables"* on page 83 for more information.

17. Remove the bolts and the 4 corners of the charger at the base of the crate.

Figure 42: Remove the bolts

7.5 Lifting

The FLO Ultra includes a hoist attachment or an optional forklift attachment to assist with the handling.

7.5.1 Center of Gravity

The images below show the FLO Ultra's center of gravity.

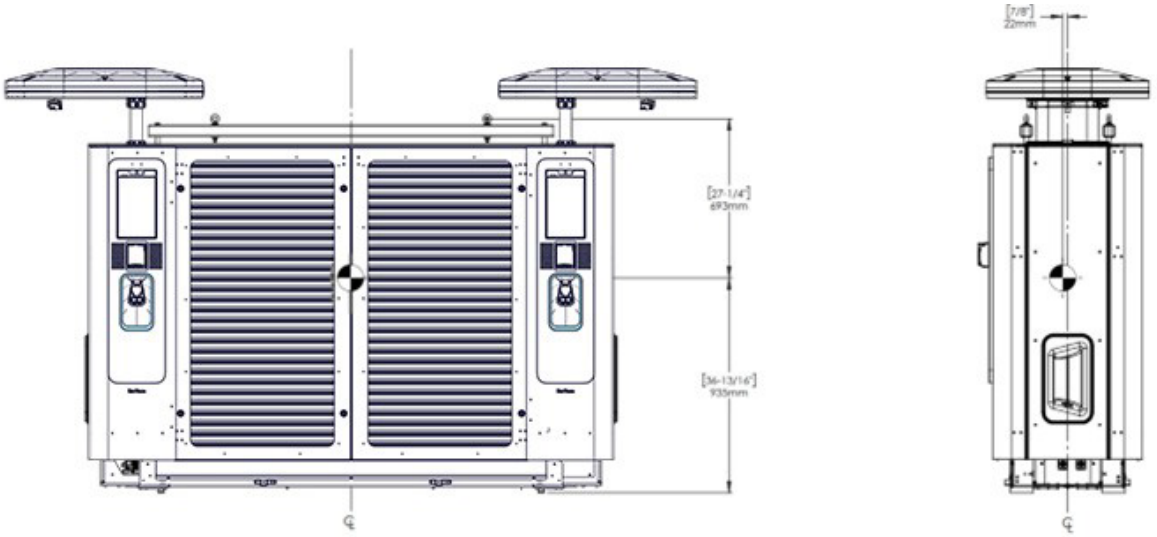


Figure 43: FLO Ultra Center of Gravity

7.6 Hoist Lifting

NOTE: Hoist lifting is the recommended lifting method.

⚠	**WARNING** – Keep a security perimeter around the hoist and under the FLO Ultra during transportation. Do not stand under the FLO Ultra during transportation.

The hoist lifting procedure uses screw eye hooks with an inside measurement of ¾'' (19 mm) provided by FLO.

	**WARNING** – It is mandatory to use the provided eye hooks. No substitutions are permitted for security reasons.

NOTE: Please ensure you use equipment with the appropriate lifting grade according to local regulations while lifting the charging station with the hoist.

Follow the steps below to correctly lift the Flo ultra with a hoist:

1. Use the following equipment to ensure safe lifting practices:
2. Attach the elements as specified in the image above.
3. Confirm the lifting capacity of the hoist lift to make sure it can safely lift the weight of the FLO Ultra. Refer to *"Specifications"* on page 16 for more information. Only use a hoist lift that can safely lift the FLO Ultra.
4. Ensure Gently place the FLO Ultra at the correct location making sure to pull the AC and DC cables through the frames of the lower electric connection compartment to allow for AC and DC connections.
5. Open the doors and engage the door stays at the top of the doors to keep them open. Refer to *"Accessing the Door Compartments"* on page 32 for more information.

	**WARNING** – Keep a security perimeter around the hoist and under the FLO Ultra during transportation. Do not stand under the FLO Ultra during transportation.

6. Lift the FLO Ultra and transport it to the correct location. Avoid abrupt turns, stops and starts.
7. Gently place the FLO Ultra at the correct location making sure to pull the AC and DC cables through the frames of the lower electric connection compartment to allow for AC and DC connections.
8. Unfasten the charging station from the forklift, remove the strap and then retract the forklift forks.

7.7 Forklift Lifting

NOTE: The *Forklift Lifting* section is only applicable when you are moving the FLO Ultra with a forklift.

NOTE: The lifting jig (ASME0586) is optional and sold separately from the FLO Ultra charging station. Please refer to the FLO Ultra™ Ordering available at flo.com.

Follow the instructions below to correctly lift a FLO Ultra with a forklift.

7.7.1 Installing the Lifting Jig on the FLO Ultra

Follow the steps below to install the lifting jig on the FLO Ultra.

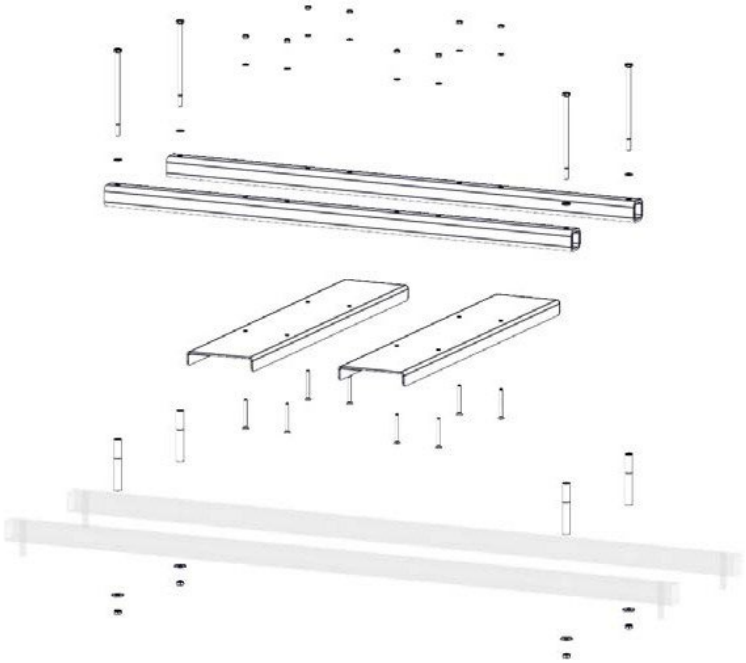


Figure 44: Lifting Jig Installation - Exploded View

1. Place the forklift lifting jig horizontal bars on the top of the FLO Ultra, aligning the extrusions at the bottom with the indentations on the top of the FLO Ultra.

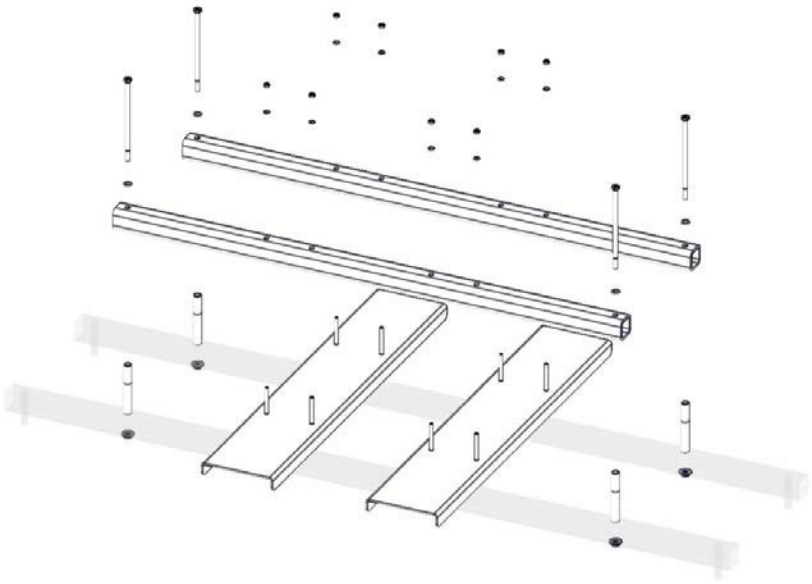


Figure 45: Lifting Jig Installation - Step 1

2. Place the angle lift lifting jigs on top of the forklift lifting bars in a perpendicular arrangement, aligning the screw holes of the angle lifting jigs and the lifting bars.

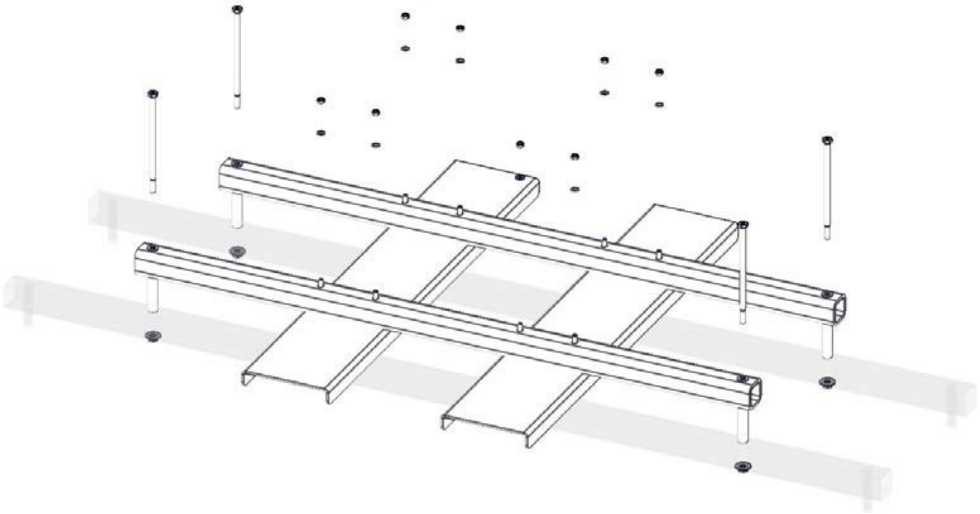


Figure 46: Lifting Jig Installation - Step 2

3. Place the washer on top of the angle lift lifting jig screw hole and screw in the head screw. On the bottom of the angle lift lifting jig, add an oversized washer and a bolt to the head screw to secure the parts together. The torque must be 70 N M (51.6 lb-in).

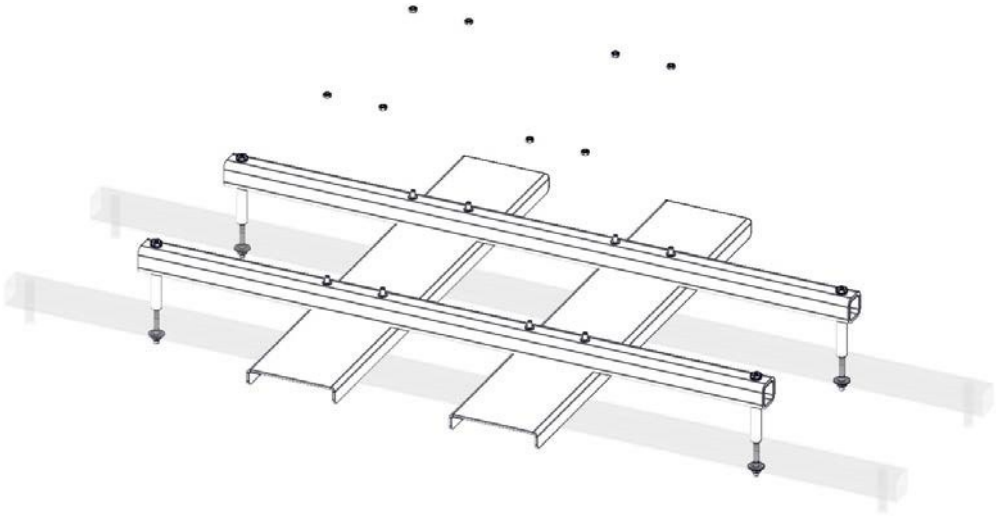


Figure 47: Lifting Jig Installation - Step 3

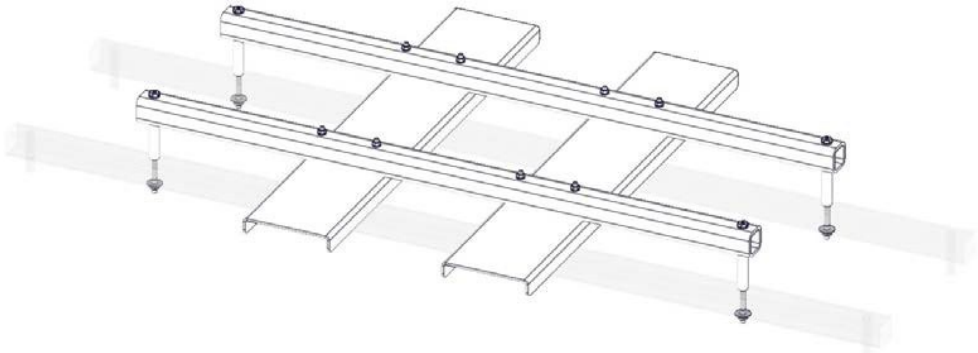


Figure 48: Lifting Jig Installation - Step 4

7.7.2 Lifting the FLO Ultra with a Forklift

Follow the steps below to correctly and securely lift the FLO Ultra with a forklift:

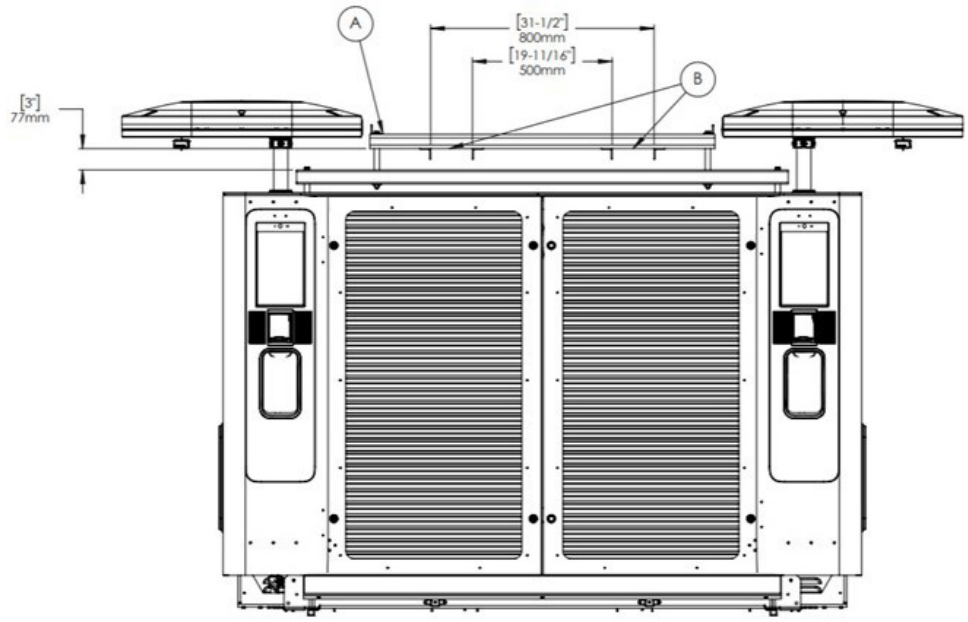


Figure 49: FLO Ultra Forklift Lifting

Table 14: Lifting Jig Components

Part	Description
A	Forklift lifting jig
B	Fork position for lifting

1. Ensure that the operator is qualified and certified to operate the forklift.
2. Ensure that the lifting jig is properly installed and that all screws are correctly tightened and secured before lifting, according to the previous section *Installing the Lifting Jig on the FLO Ultra*.
3. Confirm the lifting capacity of the forklift to make sure it can safely lift the weight of the FLO Ultra. Only use a forklift that can safely lift the FLO Ultra. The lifting capacity of the forklift must be over 700 kg (1 540 lb) to lift the charging station and the lifting jig. Refer to *"Specifications"* on page 16 for more information.
4. Raise the forks to the height indicated by position B.
5. Secure the charging station to the forklift using a strap or chain. Use the long, unpainted lifting bars to anchor the lifting jig to the charging station.

6. Ensure the good positioning of the forks between the forklift lifting jig and the FLO Ultra (identified by each of the arrows of B). Do a visual check to ensure the right positioning of the forks and that the path of the forklift is clear.
7. Lift the FLO Ultra and transport it to the correct location. Avoid abrupt turns, stops and starts during transportation.
8. Gently place the FLO Ultra at the correct location.
9. Re-use the lifting jig for other FLO Ultra installations or recycle it; however, lifting equipment may only be used to lift a FLO Ultra charging station. This equipment must not be used for any other type of lifting.

8. Box Contents

The tables below outline the contents of the boxes included in the crate in which the Ultra is shipped. Please ensure that all items are present for your project.

Table 15: List of Included Part - Box 1

Part number	Quantity	Description
MEDS0739	4	Lower post support
MEDS0740	4	Internal banner support
MEDS0701	4	FLO Ultra banner support
MEDS0700	2	FLO Ultra banner
MEDS0934	1	AC power cable entry plate and 4 self-tapping screws
MEDS0805	2	DC power cable entry plate

Table 16: List of Included Part - Box 2

Part number	Quantity	Description
MEDS0741	1	Canopy lifting tool
MEDS0736	2	Canopy left side covers
MEDS0737	2	Canopy right side covers
MEDS0794	2	Front and back external lower panels
MEDS0795	2	Side external lower panels
MEDS0797	2	Front and back interior lower panels

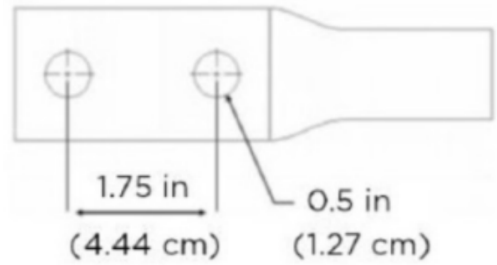
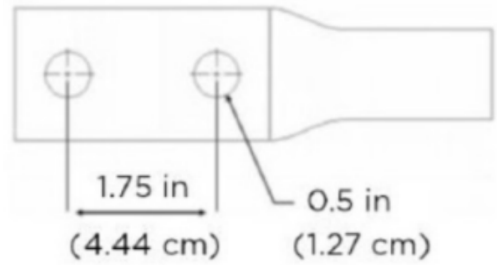
Table 17: List of Included Part - Box 3

Part number	Quantity	Description
MESB0311	24	Hex head screw M5x16
MESB0343	4	Socket head screwa
MEDS0734	4	Spacers for canopy support
MEWS0096	4	Washers
MEDS0806	4	Screw-on-caps
MEGS0072	4	Screw-on-caps and O-rings
MEHD0540	1	Spanner head (Hafren) two-holes security screw
MENU0071	8	Nuts for banner fastening
MESB0312	8	Hexagonal head screw M6x20
MESB0315	12	Flat-head screw
MEDS0796	12	Washers for interior lower panels
MESB0281	8	BT screw M6x16
PRIP1103	1	Amperage identification labels
PRIP1104	1	Additional nameplate labels for charging station identification
MESB0280	8	BT screw M6x50
MEDS1078	2	Protective corner, right
MEDS1079	2	Protective corner, left
MESB0368	20	Screws for protective corners
PRLP1097	2	Identification stickers (lettrer B)
MEDS1082	2	Access key
PRFM0100	1	FLO Ultra Installation Guide – English
PRFM0101	1	FLO Ultra Installation Guide – French
MEHD0546	2	Alcohol wipe
TOSR0208	1	Plastic squeegee

9. Additional Required Parts

The installer is recommended to have the following additional parts outlined on hand to complete the installation of the FLO Ultra charger:

Table 18: Additional Parts for Installation

Part	Qty.	Note
Compression lugs (AC Input) 	3-6	3 if single conductor per phase 6 if double conductors per phase Select die appropriate for selected conductor material and size Recommend dieless cable crimping kit and lugs with dimensions as indicated to the left.
Compression lugs (DC power) 	2-4	2 if single conductor per phase 4 if double conductors per phase Select die appropriate for selected conductor material and size Recommend dieless cable crimping kit and lugs with dimensions as indicated to the left.
Power conductors (AC)		>90°C rated aluminum or copper 4/0AWG-700MCM, 120mm^2-355mm^2
Power conductors (DC)		>90°C rated aluminum or copper 4/0 AWG-700 MCM, 120mm^2-355mm^2
Power conductors (grounding)		>90°C rate aluminum or copper 2 AWG-350 MCM, 33mm^2-175mm^2
DC interlock signaling wires		Only required if using UltraConnect 18AWG copper, twisted pair, 6 Conductors, 300V, 75°C, UL
Cat5+ ethernet cables		Underground
Nut and washers		On each anchor (4x), to accommodate the leveling of the FLO Ultra

10. Additional Recommended Parts (Optional)

FLO Recommends using the following parts to complete the installation of the Flo Ultra.

Table 19: Additional Recommended Parts

Part
Forklift lifting jig (ASME0586)
Soft cloth
Neutral cleaning agent (without ammonia)
Ethernet cables

11. INSTALLATION INSTRUCTIONS

This product must be installed according to the installation instructions detailed in this guide before use.

Any modification to any part of the charging station will void the warranty, and any modification done to the charging station is forbidden without express written permission from FLO.

	The installation shall be in accordance with the local electrical code for products installed in the United States.
	The installation shall be in accordance with the Canadian electrical Code, Part I (ref: CSA C22.2 no. 107.1 art. 5.26) for products installed in Canada.

Follow the steps in the sections below to complete the FLO Ultra installation:

11.1 Site Signal Strenght

Before starting the installation, the site must be surveyed to determine if the cellular signal strength is adequate according to the cellular network used. Large concrete structures such as underground parking garages or remote locations may have poor cellular signal strength.

An adequate cellular signal strength is required for the communication to work properly. A signal that is inadequate will negatively impact communication between the FLO Ultra and the CPO backend. The signal strength can be easily estimated using cell phones, using the following methods:

- **Android (preferred)**: The Play Store has several applications, for example, *G-NetTrack*, for measuring cellular signal strength. It is also possible to look at the cellular signal strength in the About Phone parameters through the Sim card Status parameters.
- **iOS:** Dial *3001#12345#* from the phone to enter Field Test Mode. Detailed signal strength information will be available in this mode.

The *rsrp0* parameter indicates the site's dBm reading.

11.1.1 Cellular Signal Strength References

The following table quantifies the quality of the signal based on the cellular signal strength in dBm.

NOTE: The FLO Ultra uses 4G/LTE.

	Excellent	Good	Fair	Poor	Deadzone
4G / LTE	>-90 dBm	-91 dBm to -105 dBm	-106 dBm to -110 dBm	-111 dBm to -119 dBm	<-120 dBm
		Adequate		**Inadequate**	**Not Functional**

11.1.2 Inadequate Cellular Signal on Site

If a site has an inadequate cellular signal, the FLO Ultra can be configured to work with an existing Internet service through a WAN connection made via Ethernet.

11.2 Grounding Instructions for Products with a Permanent Power Connection

Products with a permanent power connection must follow the instructions below:

This product must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor must be run with a circuit conductors and connected to the equipment grounding terminal or lead on the product. Connections to the battery charger shall comply with all local codes and ordinances.

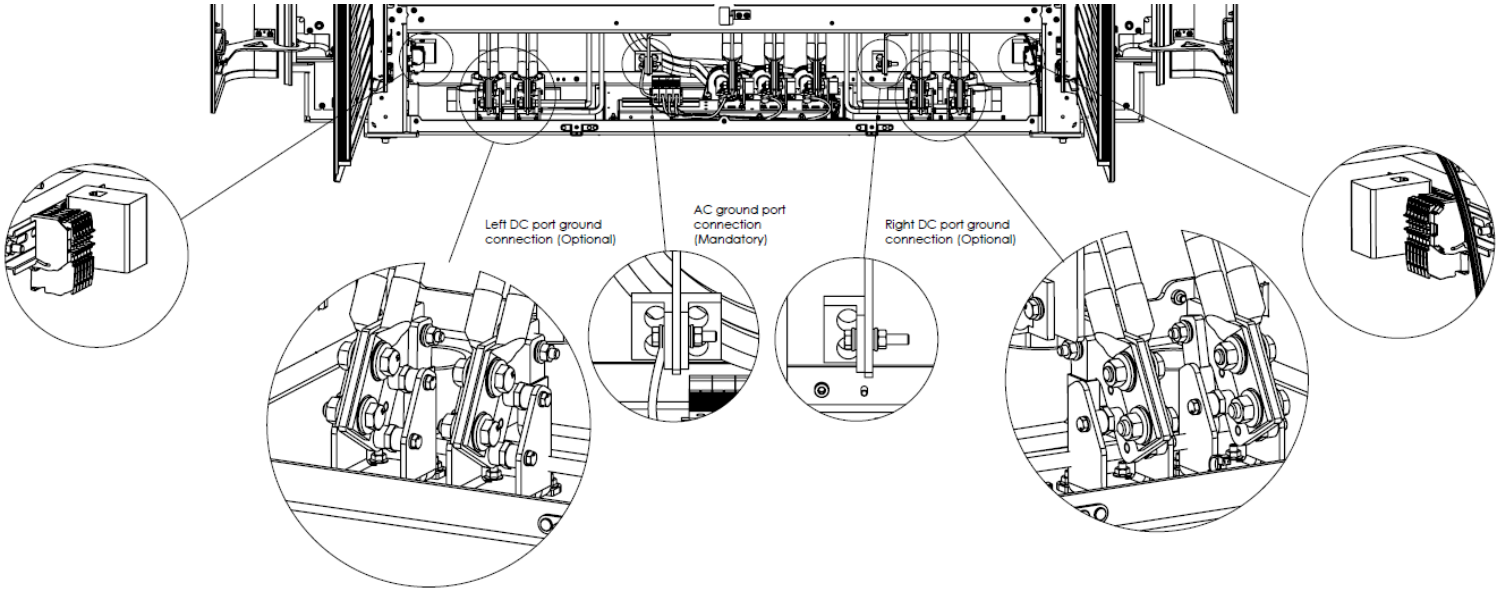


Figure 50: Grounding Instructions - Permanent Power Connections

NOTE: The grounding wire is to be connected from the grounding lug of one station to the grounding lug of a neighboring station. For the DC connections, when required by electrical code.

11.3 Recommend Tools

The tools in the following section table are not provided by FLO but we recommend using them to complete the FLO Ultra installation.

Table 20: Recommended Tools

Tool	Installation Process
• Handheld drill • Torque wrench • Standard ratchet driver or wrench • #2 square drive bit • T25 tamper resistant drive bit • T27 tamper resistant drive bit • 15/16" deep socket • 1-1/8" deep socket • 10, 13 and 19 mm metric sockets	Multiple
• Utility knife	Uncrating the FLO Ultra
• 4x shackles 225 kg (~500lb) min • 4x slings 225 kg (~500 lb.) min • Shackle 900 kg (~2000 lb.) min • Crane or boom truck	Standard lifting
• Forklift • Forklift lifting jig (ASME0586)	Forklift lifting (Optional)
• 4' level	FLO Ultra base installation
• Lug crimping tool • Duct seal in sufficient quantity • Hole-saws (or punching tool) chosen according to conduit sizes • Heavy wire cutter • Cable pulling tool • Cable stripper • Measuring tape • Permanent marker	AC and DC electrical connection
• Soft cloth • Neutral cleaning agent (without ammonia)	Decal and other cleaning

11.4 Securing the FLO Ultra on the Concrete Slab

⚠	**CAUTION** - Elements related to the concrete slab and anchors must be in accordance with the site specifications, and assessment, previously completed by civil engineers to follow local jurisdiction.

NOTE: The concrete slab must be level to ensure correct installation.

1. Insert a nut and washer (not provided by FLO) on each anchor (4x). See *Figure 9: Anchor bolt detail - 1* for details regarding threaded rods. Adjust the height of the nut to accommodate the leveling of the FLO Ultra. There must exactly 1 3/16'' (30 mm) between the washer and the concrete base.

   IMPORTANT NOTE: Make sure the space between the washer and the concrete slab is 1 3/16'' (30 mm). If adjustments are necessary, it is possible to make them by screwing or unscrewing the nut under the washer.

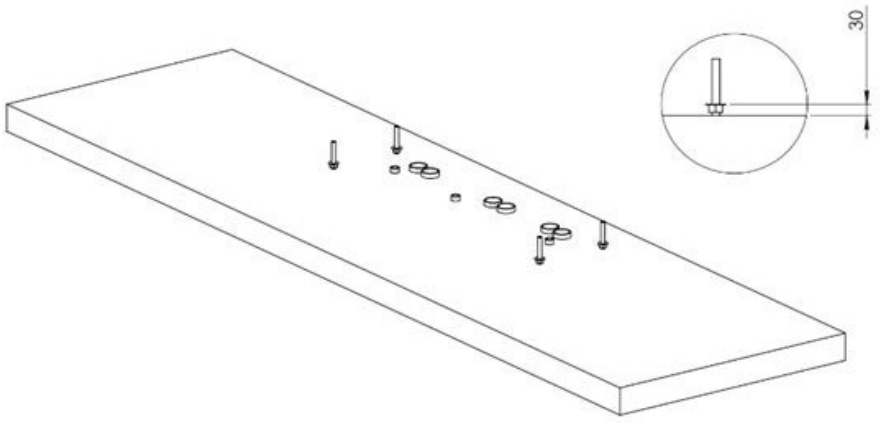


Figure 51: Conrete Slab Overview

2. Lift the FLO Ultra, following the hoist or forklift instructions, as applicable, and align the base mounting holes with the anchors (4x).

	WARNING - Ensure a safety perimeter under and around the hoist and suspended FLO Ultra. Make sure no people are in the vicinity of the suspended charger.

NOTE: Align the FLO Ultra so the conduits are align conduit openings are centered over the conduits., as indicated in *"Anchors and Power Cable Entry"* on page 25.

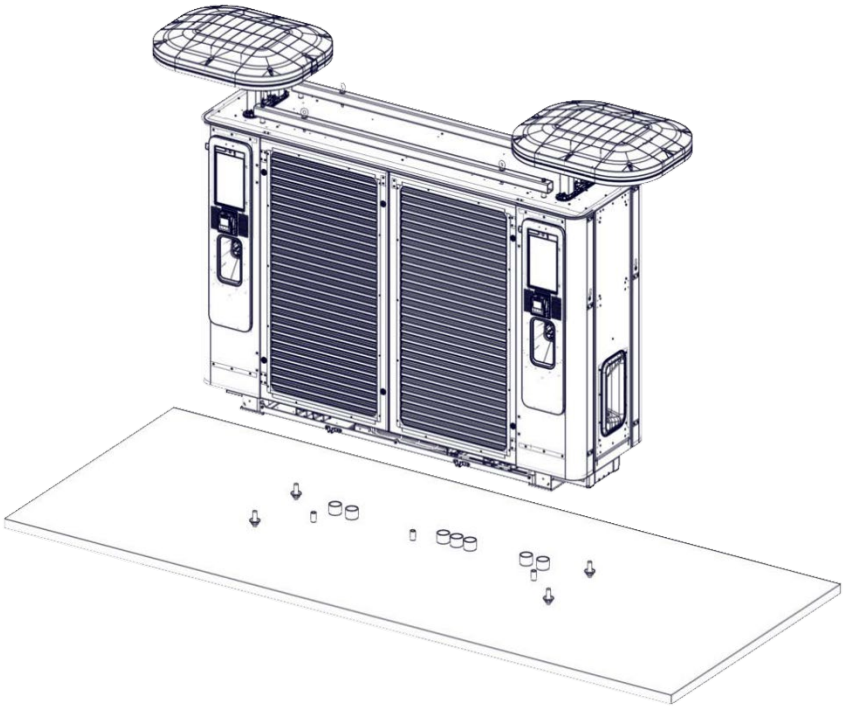


Figure 52: Concrete Slab - FLO Ultra Alignement

3. Slowly lower the station, aligning the FLO Ultra mounting holes (4x) with the anchors until the FLO Ultra rests on the washers/nuts (4x).

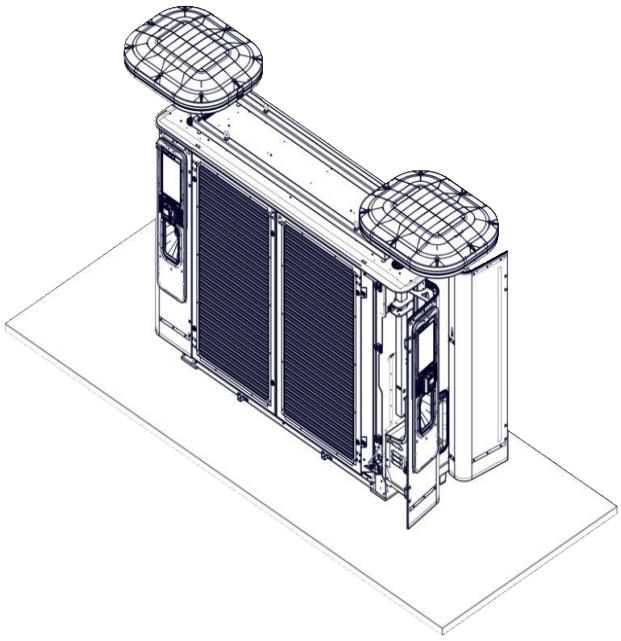


Figure 53: Concrete Slab - FLO Ultra Dropped to the Ground

4. Insert the washers and nuts, then loosely fasten the nuts (4x), leaving sufficient space to adjust the height of the nuts to level the FLO Ultra, as detailed in the next step.

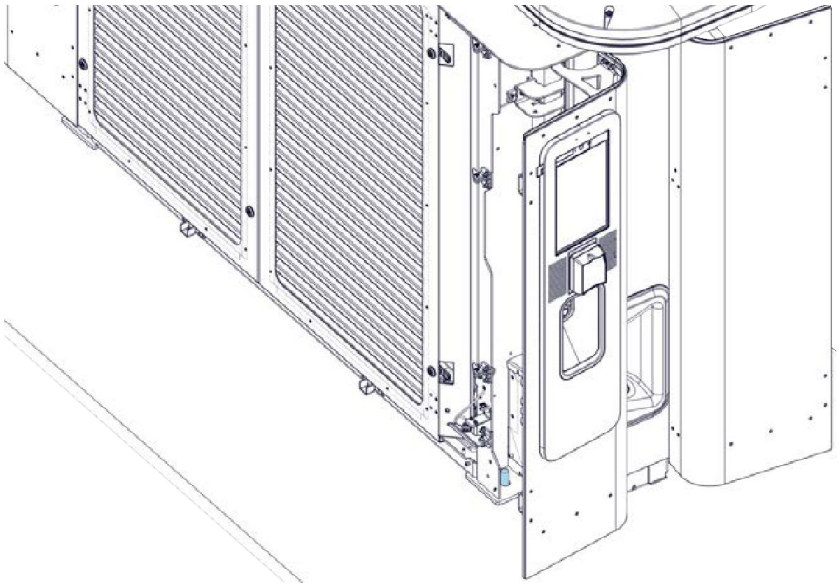


Figure 54: Anchor Bolt - Overview

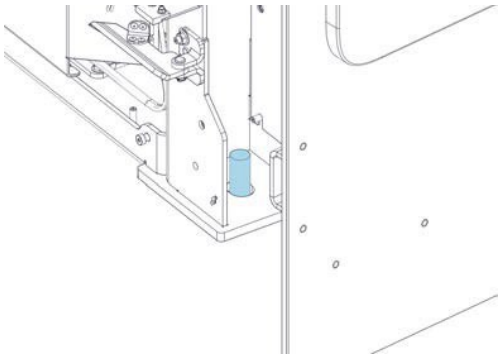


Figure 55: Anchor Bolt - Zoom In

5. Level the FLO Ultra by adjusting the height of the nuts to ensure the lowest flat washer is at a height of 1 3/16'' (30 mm) to maintain sufficient space between the base of the FLO Ultra and the concrete slab for the installation of the side, rear and front lower panels after the power cable connection. Refer to *"Connecting the AC Power Cables"* on page 63 and *"Connecting the Optional DC Power Cables and the Control Wiring "* on page 69 for more information.

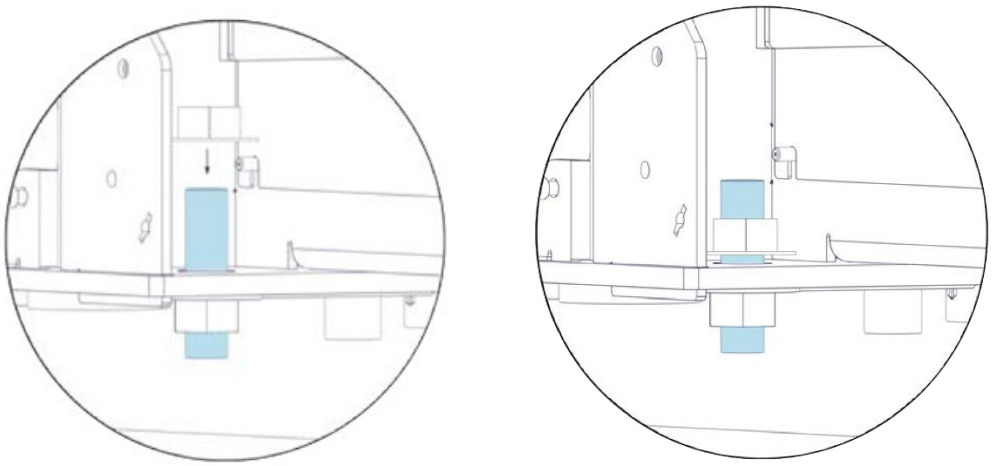


Figure 56: FLO Ultra Leveling

6. Tighten the nuts (4x) according to anchors' recommended specifications to secure the FLO Ultra on the concrete slab.
   NOTE: For more information, please refer to the *FLO Ultra Site Planning Application Note*, provided by request to installers.

11.5 Power Module Verification

Before beginning the AC and DC power connection, make the following verifications:

1. Open rear doors.
2. Remove filters by unscrewing the thumbscrews.
3. Press down on each power module connector firmly (16 total / 8 per side).

   IMPORTANT NOTE: Make sure to recheck that you have completed 3 correctly before moving on the next step.

4. Reinstall the rear filters and secure the thumbscrews.
5. Close and lock all the charging station doors.

NOTE: It is possible to access the filters from either side by opening the outer and inner doors.

12. Connecting the AC Power Cables

1. Punch holes in the AC power cable entry access plate (MEDS0934) to match the size and locations of the conduits.

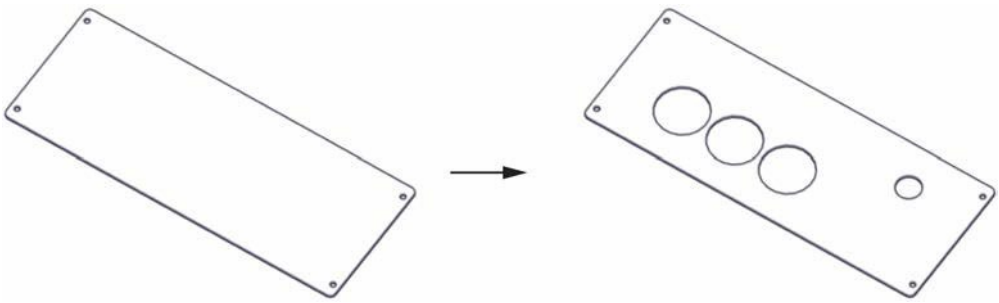


Figure 57: AC Power Cables Access Plate

2. Use the tables below as a reference for the AC electrical input connection (L1, L2, L3).

L1, L2, L3 Wire Specification and Connections Table

Table 21: L1, L2, L3 Wire Specification and Connections Table

Number of conductors	1 or 2 per phase
Size of the conductors	4/0 AWG – 700 MCM, 120 mm^2 – 355 mm^2
Voltage rating	600 V
Temperature rating	194°F (90 °C)
Conductor material	Copper or aluminum
End style	Conductors terminals (lugs)
Insulation stripping length	Depends on the terminal to be crimped
Bolt sockets sizes / nuts	19 mm socket and 18 mm deep socket
Tightening torque	70 N m (52 ft-lb)

Ground Wire Specifications and Connection Table

Table 22: Ground Wire Specifications and Connection Table

Size of the conductors	2 AWG – 350 MCM, 33 mm^2 – 175 mm^2
Insulation stripping length	Depends on the terminal to be crimped
Conductor material	Copper or aluminum
End style	Mechanical lug
Bolt socket sizes / nuts	5/16'' hex socket
Tightening torque	42 N m (375 in-lb)

NOTE: The AC input conductor terminals (lugs) must follow the minimal requirement below:

- Conductor terminals (lugs) (appropriate size according to conductor size), one for each AC conductor termination in each FLO Ultra on site.

  RECOMMANDATION: FLO recommends the use of a dieless cable crimping tool to making crimping the cables easier.

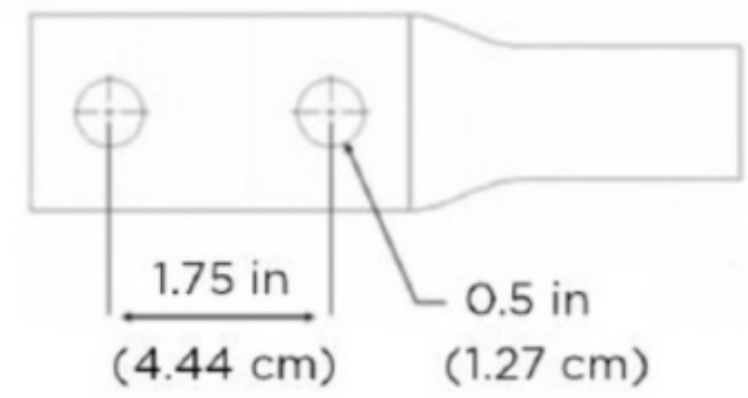


Figure 58: Bus Bar Dimensions - 1

The following image details the bus bar dimensions of the connection points.

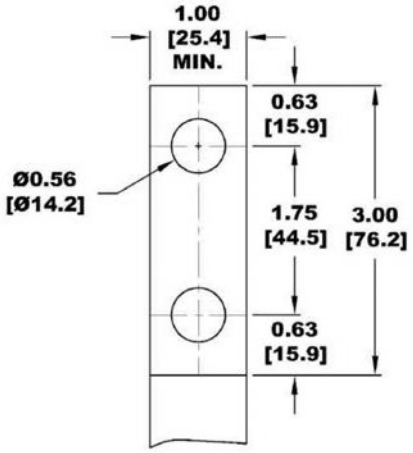


Figure 59: Bus Bar Dimensions - 2

Conduit Recommandations Table AC Input

Table 23: Conduit Recommendations Table AC Input

Typical conduit size for AC conductors	4'' (102 mm)
Typical conduit size of control and communication cables (Ethernet upstream and other small cables)	1'' (25 mm)

NOTE: Always check the local code for final conduit sizes, as the sizes above are only recommendations.

3. Pull the cables through the power cable entry access plate (MEDS0394) openings and place the power cable entry plate back in its position.

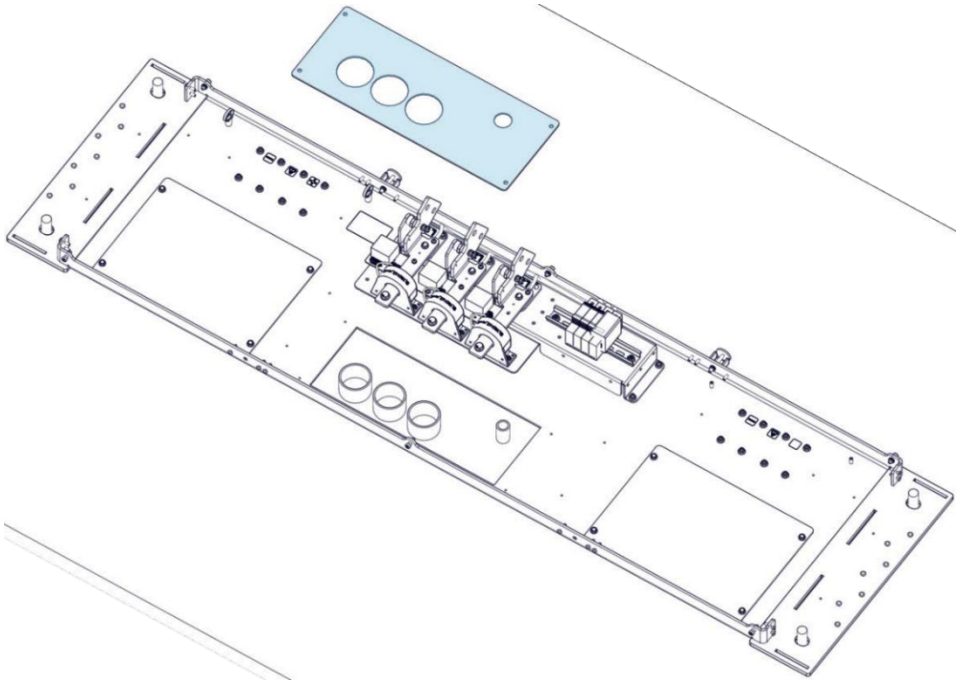


Figure 60: AC Power Cable Access Plate Positioning

4. Tighten the screws (4x) (MESB0368) to secure the power cable entre plate.

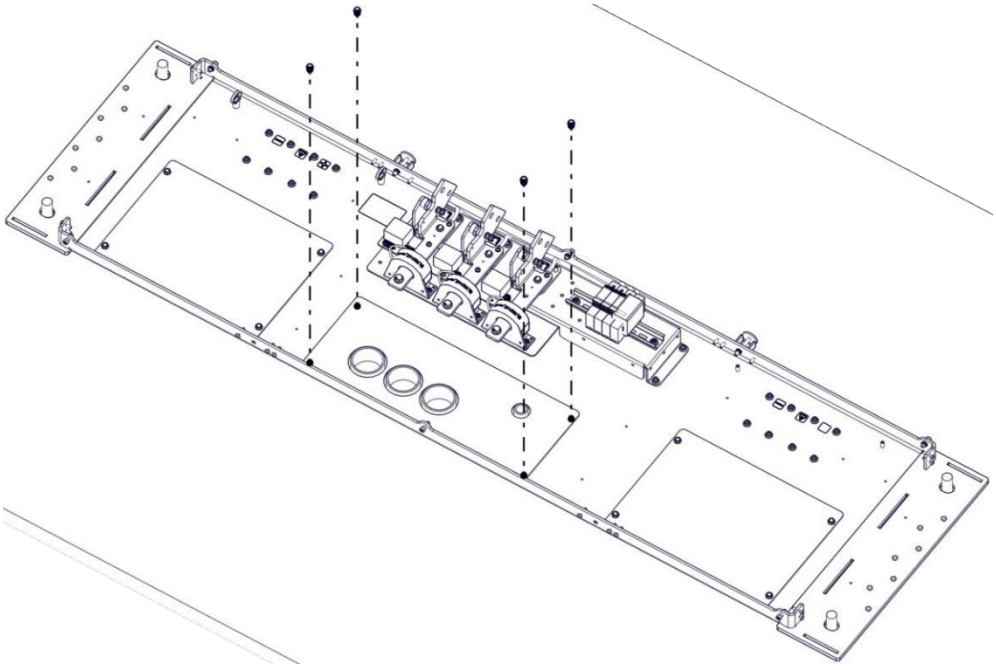


Figure 61: AC Access Plate Installation

5. Seal the area surrounding the conduits and the gap between the conductors in the conduits.
6. Connect the L1, L2, L3 cable conductor terminals (lugs) (up to 2 lugs per phase) to the incoming AC terminal busbars.

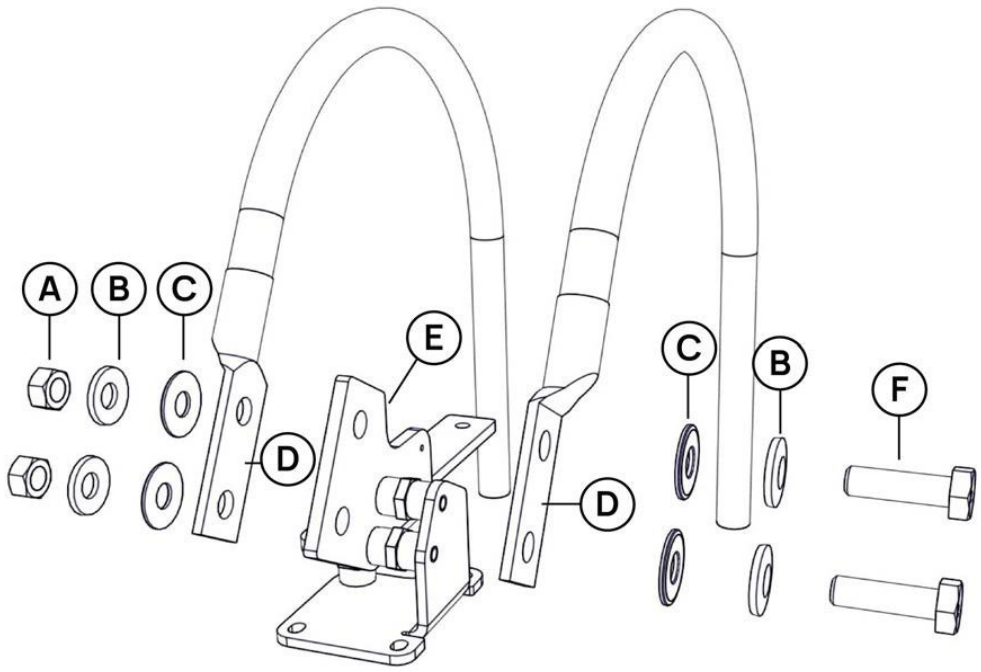


Figure 62: AC Cable Conductor Terminal - Exploded View

Table 24: Connecting the AC Power Cables - Components

Part	Description
A	Nut
B	Belleville washer
C	Washer
D	Compression lug
E	AC terminal busbar
F	Head screw

7. Place the washers, the Belleville washers with the concave side towards the busbar, and the bolts on either side of the compression lugs.

   NOTE: The Belleville washers must be placed correctly to ensure a correct installation.

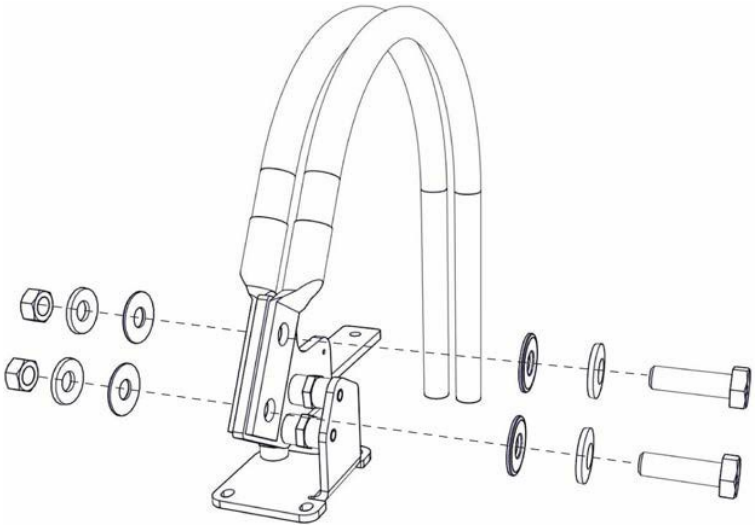


Figure 63: AC Cable Conductor Terminal - Assembling

8. Tighten the nuts in accordance with the lug manufacturer torque recommendation. Refer to the **Table 21: L1, L2, L3 Wire Specification and Connections Table** and **Table 22: Ground Wire Specifications and Connection Table**.

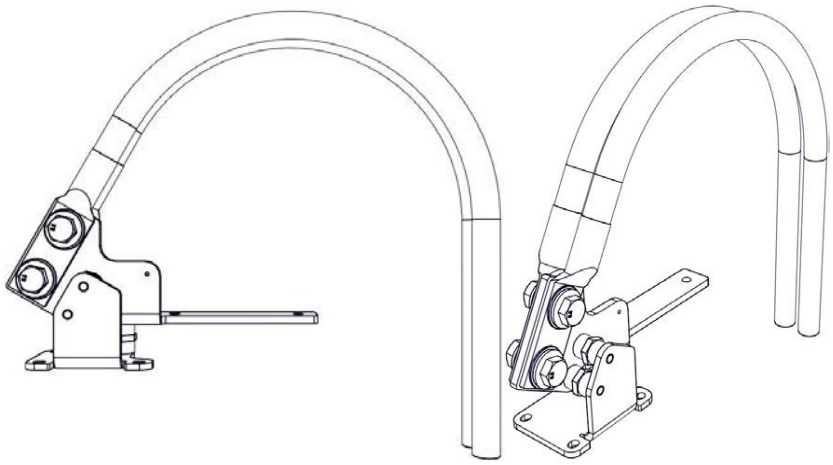


Figure 64: Assembled AC Cable Conductor Terminal – Overview

9. For the ground connection for AC power, please refer on section *11.1 Grounding Instructions for Products with a Permanent Power Connection* on page 56.

13. Connecting the Optional DC Power Cables and the Control Wiring

1. Punch holes in the DC power cable entry access plate (MEDS0805) to match the size and locations of the power and optional control conduits.

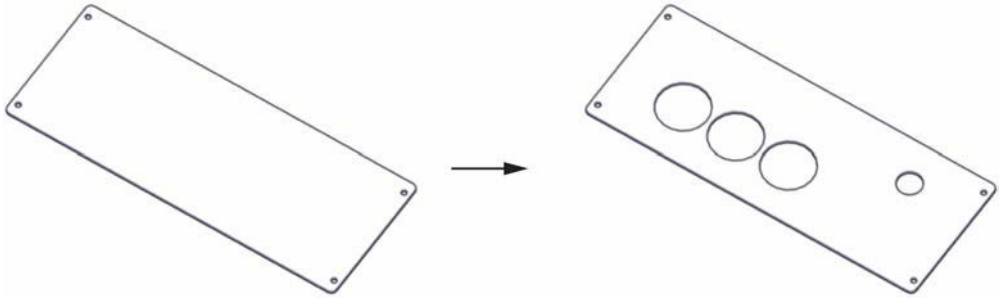


Figure 65: : DC Power Cables Access Plate

2. Pull the power cables through the power cable entre access plate (MEDS0805) openings and place the power cable entry plate back in its position.

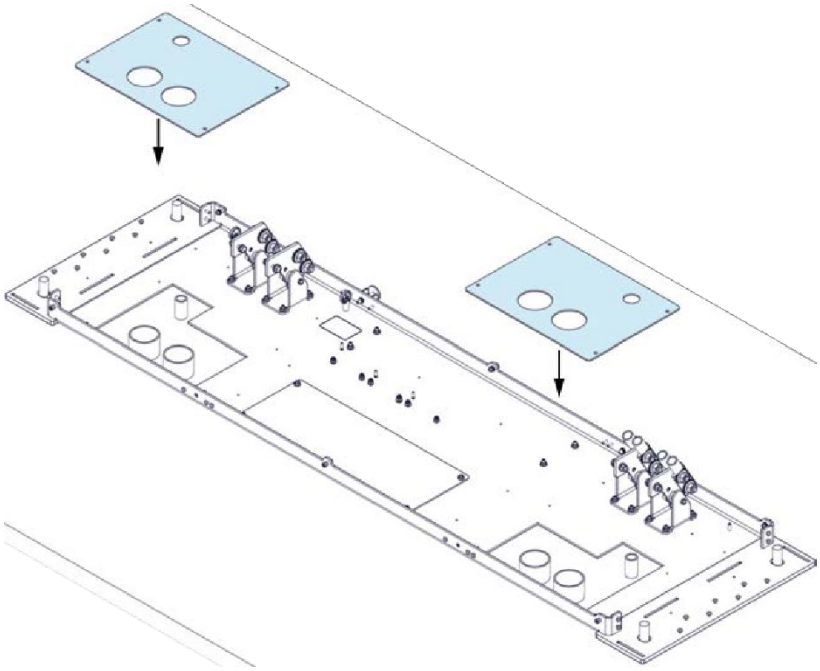


Figure 66: DC Power Cable Access Plate Positioning

3. Tighten the screws (MESB0368) (4 per plate) to secure the cable entry plates, one (1) on each side.

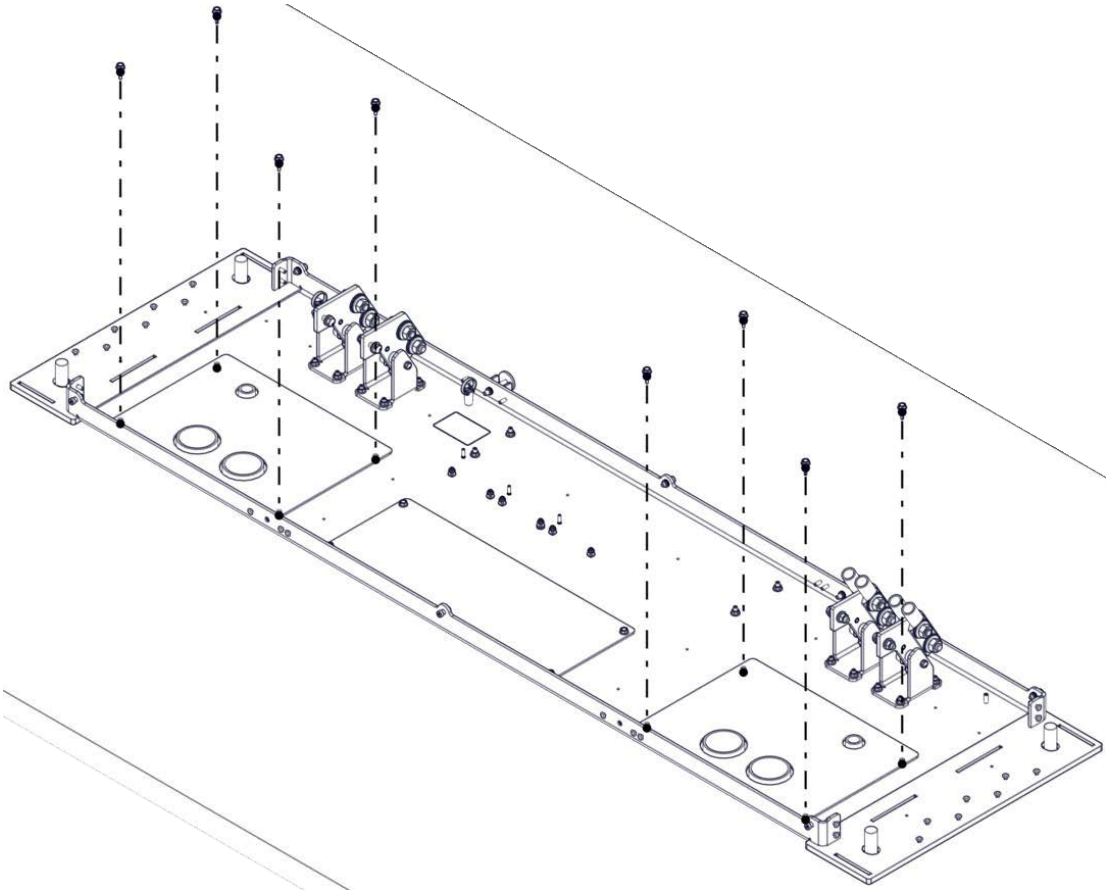


Figure 67: DC Access Plate Installation

4. Seal the area surrounding the conduits and the gap between the conductors and the conduits.

5. Use the table below as a reference for the DC electrical bus connection (DC+ and DC-)

DC+ and DC- Wire Specifications and Connection Table

Table 25: DC+ and DC- Wire Specifications and Connection Table

Number of conductors per set	1 or 2
Size of the conductors	4/0 AWG – 700 MCM, 120 mm^2 – 355 mm^2
Voltage rating	1 000 V
Current rating	500 A

Temperature rating	194°F (90 °C)
Conductor material	Copper or aluminum
End style	Conductors terminals
Insulation stripping length	Depends on the terminal to be crimped
Bolt sockets sizes / nuts	19 mm socket and 18 mm deep socket
Tightening torque	70 N m (52 ft-lb)

Ground Wire Specifications and Connections Table

Table 26: Ground Wire Specifications and Connections Table

Ground wire (optional)	2 AWG – 350 MCM, 33 mm^2 – 175 mm^2
Conductor material	Copper or aluminum
End style	Mechanical lug
Insulation stripping length	NA
Bolt socket sizes / nuts	5/16'' (8 mm) hex socket
Tightening torque	42 N m (375 in-lb)

Conduit Recommendations

Table 27: DC Conduit

Typical conduit size for DC conductors	4'' (102 mm)
Typical conduit size of control and communication cables (Ethernet upstream and other small cables)	1'' (25 mm)

NOTE: Always check the local code for final conduit sizes, as the sizes above are only recommendations.

RECOMMANDATION: FLO recommends the use of a dieless cable crimping tool kit to crimp the cables.

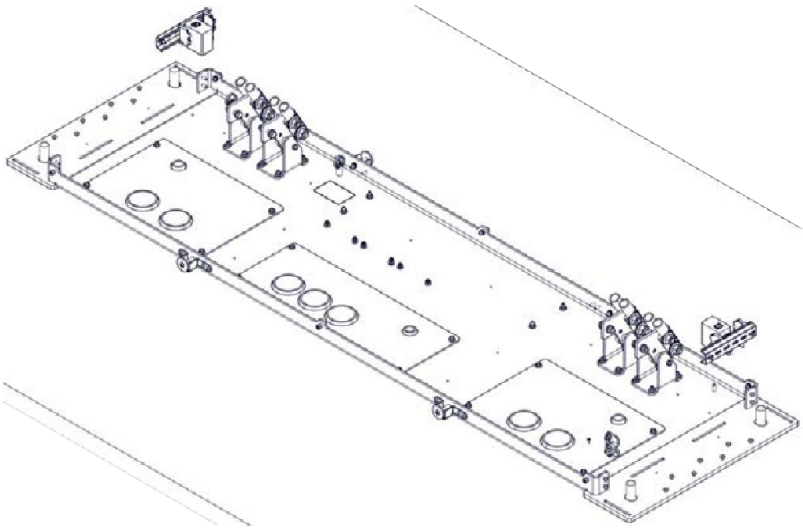


Figure 68: Access Plates Installation - Final View

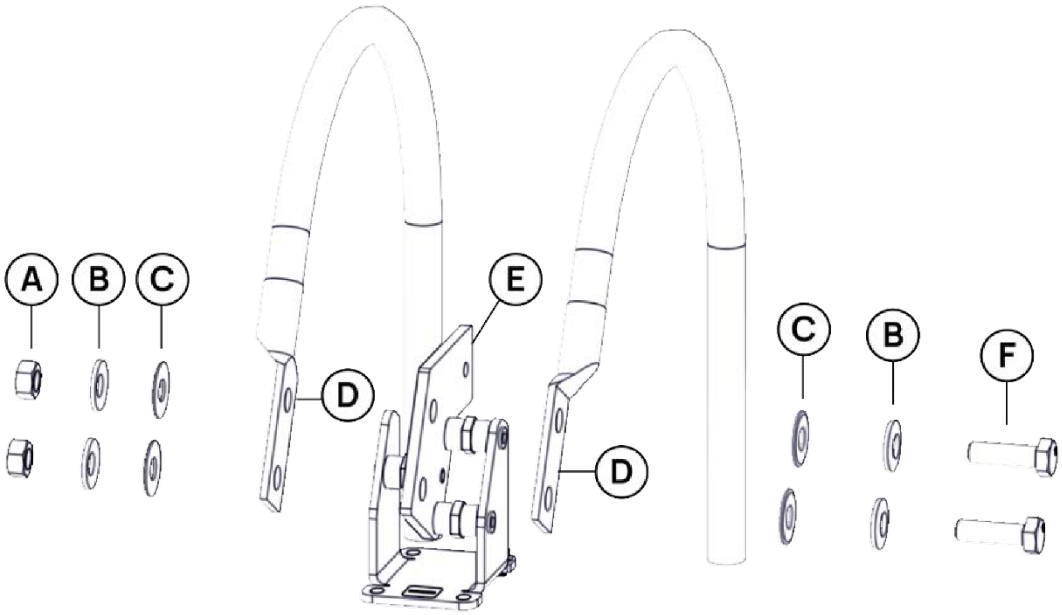


Figure 69: DC Cable Conductor Terminal - Components

Table 28: Connecting the DC Power Cables - Components

Part	Description
A	Nut
B	Belleville washer
C	Washer
D	Compression lug
E	DC terminal busbar
F	Head screw

6. Connect the DC+ and DC- cable lugs (up to 2 lugs per phase) to the incoming DC terminal busbars.
7. Place the washers, the Belleville washers with the concave part towards the busbar, and the bolts on either side of the compression lugs.

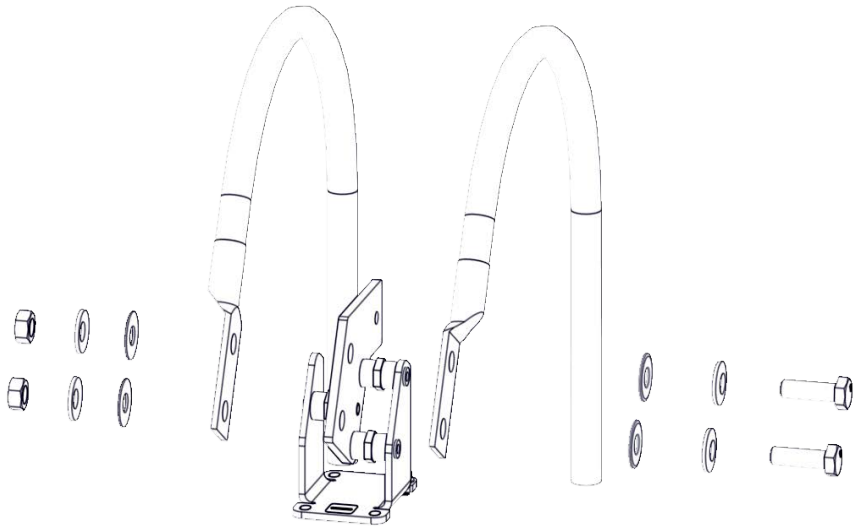


Figure 70: DC Cable Conductor Terminal - Exploded View

8. Tighten the nuts in accordance with the lug manufacturer torque recommendation. Refer to the **Table 25: DC+ and DC- Wire Specifications and Connection Table**.

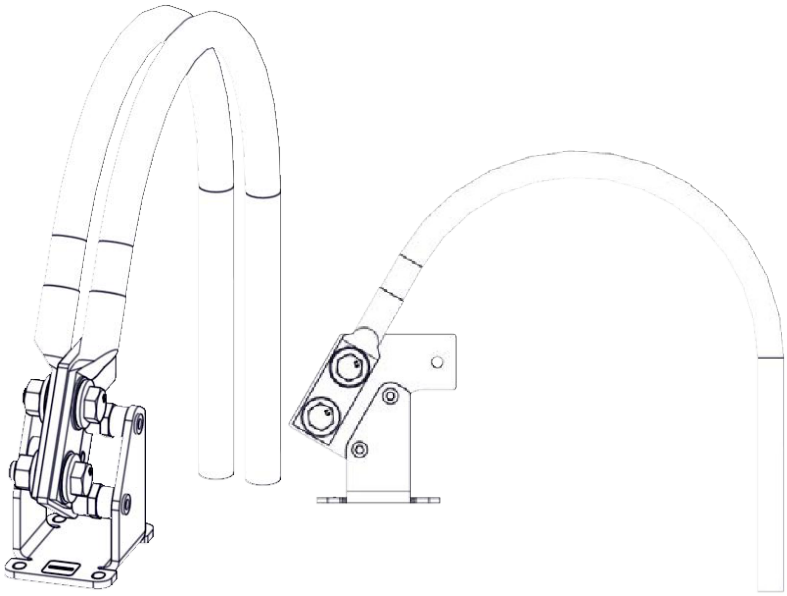


Figure 71: Assembled DC Cable Conductor Terminal – Overview

9. For the ground connection for DC power, please refer on section *11.1 Grounding Instructions for Products with a Permanent Power Connection* on page 56.
10. Connect the wires (3 twisted pairs) to the 3 terminal blocks and the RJ45 communication cable of each paired charger (2x).

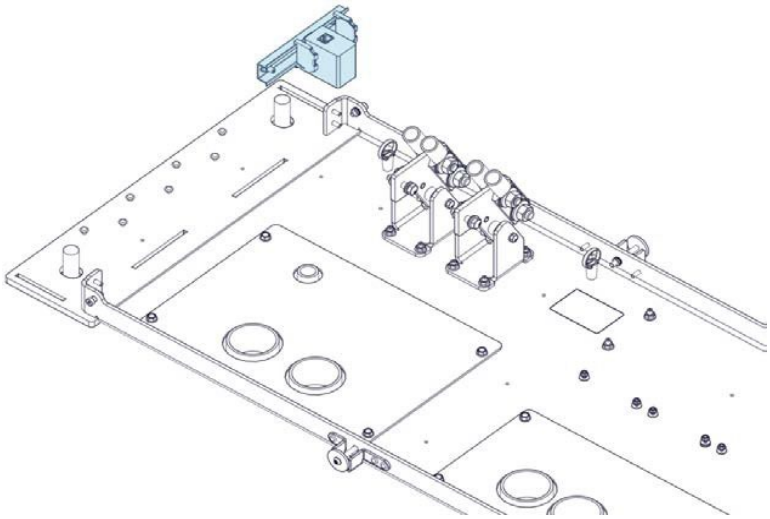


Figure 72: Connection - Terminal Blocks and RJ45 Cable - 1

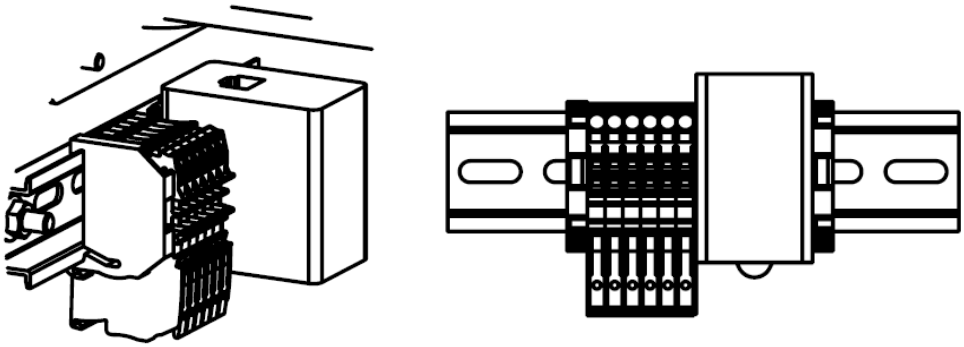


Figure 73: Connection - Terminal Blocks and RJ45 Cable - 2

NOTE: Reverse the polarity of the conductors (3 twisted pairs) wired to the terminal blocks of the paired chargers as detailed in the pairing wiring diagram below.

NOTE: This harness can be built using unshielded twisted-pair cables. Using a shielded cable is not required, but special care should be taken if using a shielded cable. The shield should NEVER be terminated (connected to GND) on both sides, but only at one end (either one). This is critical to avoid building any group loop in the system.

Table 29: Connection – Power and Communication areas

Control and Communication Terminals		
From Charger 1 Com	**To Charger 2**	**Cable Type**
1	2	Twisted pair
2	1	
3	4	Twisted pair
4	3	
5	6	Twisted pair
6	5	
RJ45	LAN	Cat5e or better

NOTE: Refer to Item **E** from **Table *7*: Anchors and Power Cable Entry** on page 26 to locate Power and Communication areas and on Figure 50: Grounding Instructions - Permanent Power Connections on page 57 to locate DC port ground connections.

Table 30: Connection - DC Power Conduits area

Control and Communication Terminals		
From Charger 1 DC	**To Charger 2 DC**	
+	-	MANDATORY
-	+	MANDATORY
GND	GND	Optional in certain areas, see local electrical code

NOTE: Refer to Item **D** from **Table *7*: Anchors and Power Cable Entry** on page 26 to locate Power and Communication areas and on Figure 50: Grounding Instructions - Permanent Power Connections on page 57 to locate DC port ground connections.

13.1 WAN Connection (Coming Autumn 2025)

If required, the FLO Ultra offers the possibility of connecting the unit through a WAN connection.

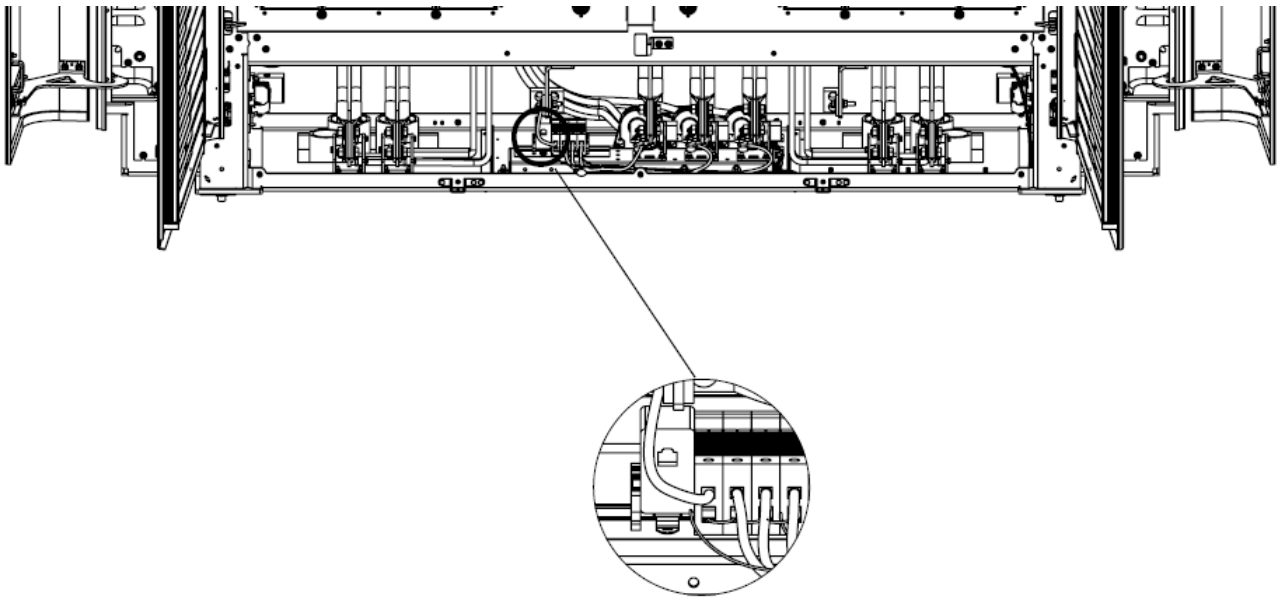


Figure 74: Location the WAN port

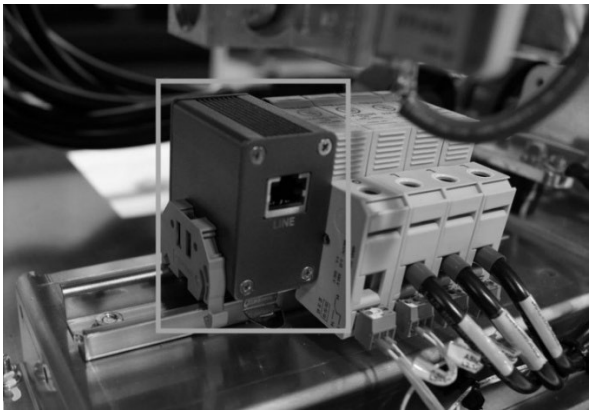


Figure 75: WAN Connection Closed View

14. Nameplate Labels on your Charger

The following nameplate labels indicating essential information, such as model, brand and number, safety information and critical specifications, including voltage and amperage data are on your charger.

14.1 Nameplate Label with DC Input

Refer to the image below for information on the nameplate label with DC input. The amperage sticker (input current) (PRIP1103) can be seen on the left side of the label. The station ID with the DC input sticker (PRIP1104) can be seen on the right side of the label.

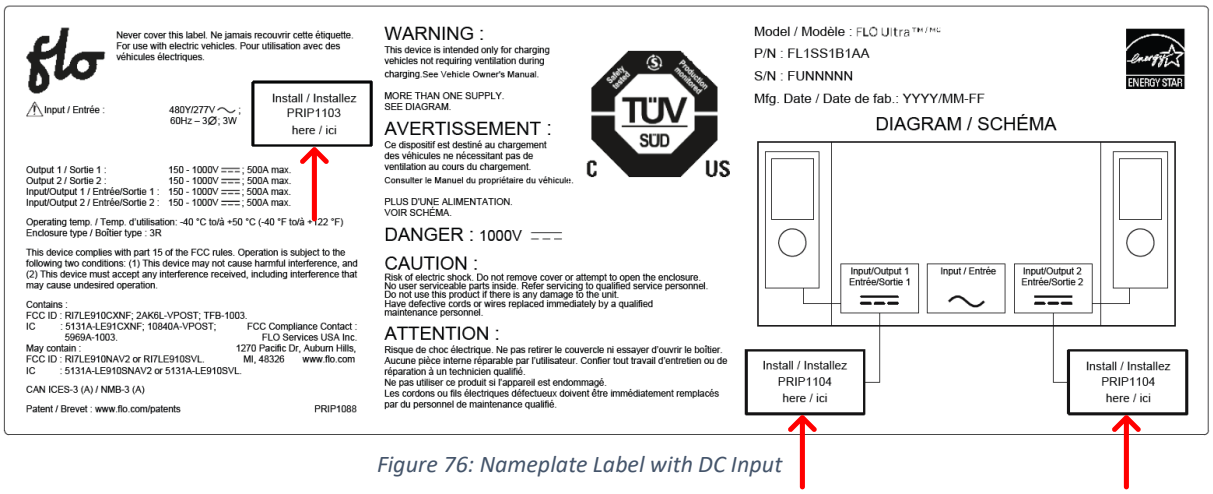


Figure 76: Nameplate Label with DC Input

PRIP1103

127 A PRIP1103	153 A PRIP1103	204 A PRIP1103
218 A PRIP1103	229 A PRIP1103	255 A PRIP1103
267 A PRIP1103	270 A PRIP1103	280 A PRIP1103
293 A PRIP1103	299 A PRIP1103	306 A PRIP1103
318 A PRIP1103	331 A PRIP1103	344 A PRIP1103
357 A PRIP1103	360 A PRIP1103	363 A PRIP1103
369 A PRIP1103	376 A PRIP1103	383 A PRIP1103
395 A PRIP1103	400 A PRIP1103	408 A PRIP1103

Figure 78: Amperage Stickers

PRIP1104

A1	A2	B1
B2	C1	C2
D1	D2	E1
E2	F1	F2
Not connected Non connectée	Not connected Non connectée	

Figure 77: DC Input Stickers

14.2 Nameplate Label on a Multi-Unit Charger with DC Input

Refer to the images below for information on the nameplate label for a multi-unit charger installation with DC input.

Configuration: 2 FLO Ultra

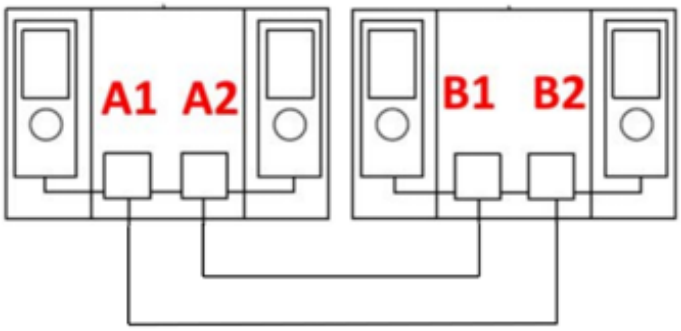


Figure 79: Nameplate Label on a Multi-Unit Charger with DC Input (2 stations)

Configuration: 3 FLO Ultra

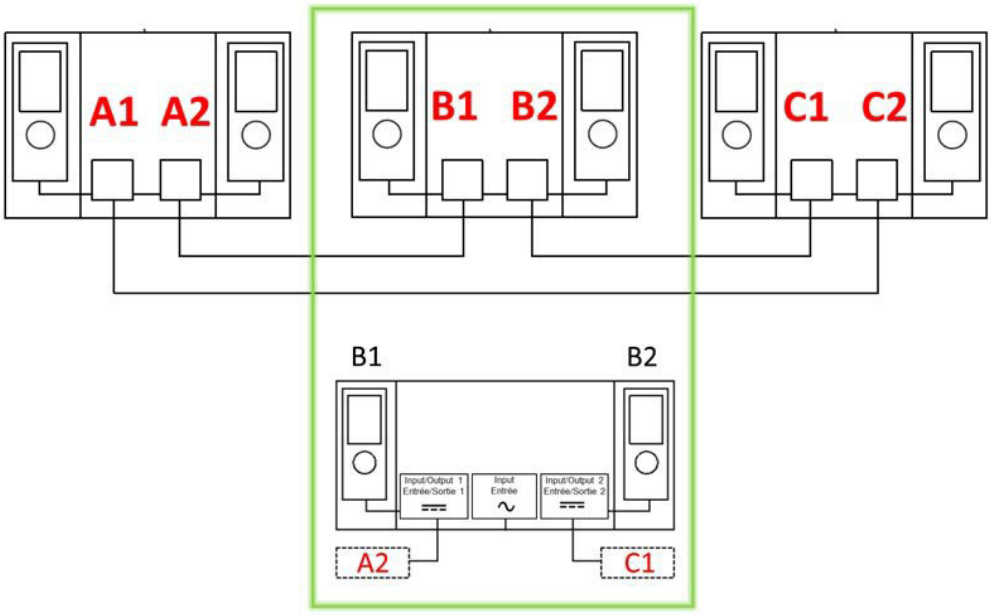


Figure 80: Nameplate Label on a Multi-Unit Charger with DC Input (3 stations)

14.3 Nameplate Label Installation

Follow the steps below to apply the selected stickers (PRIP1104):

1. Clean and degrease the surface of the nameplate label with the alcohol pad (MEHD0546).
2. Make sure not to touch the surface with your hands.
3. Allow the surface to dry before proceeding to the installation steps. If necessary, wipe with a soft cloth.
4. Using the hinge method, peel back and line up the sticker over the rectangle area making sure the sticker is inside the positioning area.
5. If necessary, use the application squeegee (TOS0208) to apply the sticker with firm overlapping strokes. Move from the center outwards to the edges to avoid trapped air.
6. Apply enough pressure to ensure a good bond between the adhesive and the nameplate surface.
7. Once the sticker is applied, go over the whole sticker with the squeegee (TOSR0208) and check that there are no remaining pockets of trapped air.

14.4 Amperage Value Sticker

Context

Some installations may require the installation of a FLO Ultra with reduced power to accommodate the site's limited electrical infrastructure and fully utilize the power reduction feature.

14.4.1 Derating on the FLO Ultra

Derating Mechanism

The maximum AC input current limit of the FLO Ultra is controlled via a parameter in the charging station's firmware. This floating-point value ranges from 0 to 408 A and is set during commissioning.

Compliance with electrical code

To comply with various electrical standards, power cables and circuit breakers must be sized according to the maximum current indicated on the equipment's nameplate. To reduce installation costs, some installers reduce the size of the wiring and circuit breakers. It may therefore be advantageous to have a nameplate more representative of the FLO Ultra's derating value entered in the charging station's firmware.

The FLO Ultra is certified for variable maximum input current capacity. Therefore, the FLO Ultra is supplied with a set of current labels (PRIP1103) to be applied to the nameplate in the designated area.

Installations requiring a FLO Ultra with power derating:

- The installer must ensure that the FLO Ultra can be derated via firmware to the desired value, in accordance with electrical regulations
- FLO recommends sizing the conduits, conductors, and circuit breakers of the project's FLO Ultras to support the maximum voltage of 408 A and thus ensure their futureproofing on site.

14.4.2 Derating on the FLO Ultra

The table below shows the amperage the charging station pulls and the corresponding total power that is available as output. Using the label sheet provided (PRIP1103).

Select and install the appropriate value onto the nameplate label, according to the site configuration:

Table 31: Derating - Amperage Value

Amperage [A]	Total Power [kW]	Amperage [A]	Total Power [kW]
127	100	318	249
153	120	331	260
204	160	344	270
218	171	357	280
229	180	360	282
255	200	363	285
267	209	369	289
270	212	376	295
280	220	383	300
293	230	395	310
299	234	400	314
306	240	408	320

14.5 Amperage Sticker Installation

NOTE: The installation of the amperage sticker is mandatory to commission the FLO Ultra.

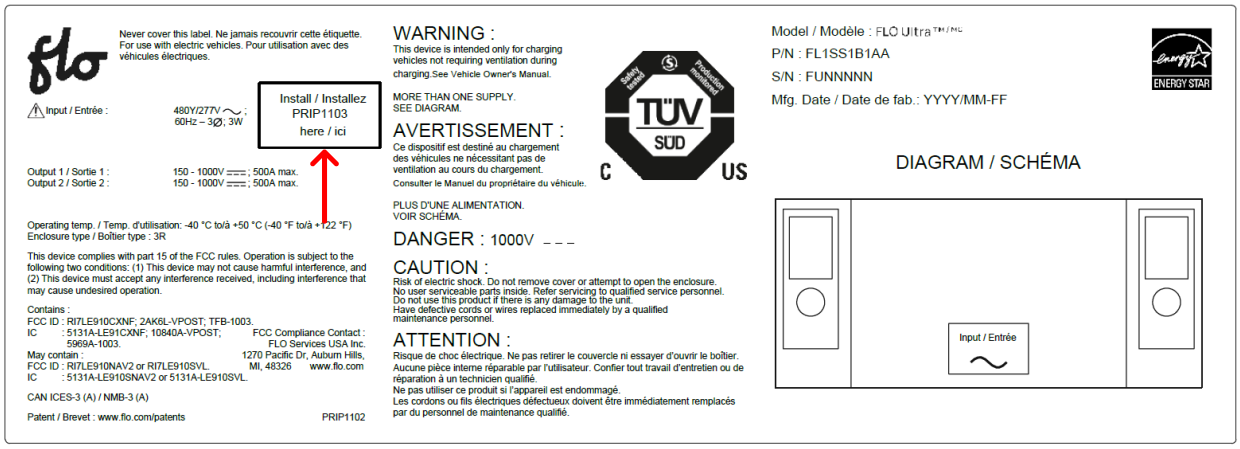


Figure 81: Amperage Sticker Application Location

Follow the steps below to apply the selected stickers (PRIP1103):

8. Clean and degrease the surface of the nameplate label with the alcohol pad (MEHD0546).
9. Make sure not to touch the surface with your hands.
10. Allow the surface to dry before proceeding to the installation steps. If necessary, wipe with a soft cloth.
11. Using the hinge method, peel back and line up the sticker over the rectangle area making sure the sticker is inside the positioning area.
12. If necessary, use the application squeegee (TOS0208) to apply the sticker with firm overlapping strokes. Move from the center outwards to the edges to avoid trapped air.
13. Apply enough pressure to ensure a good bond between the adhesive and the nameplate surface.
14. Once the sticker is applied, go over the whole sticker with the squeegee (TOSR0208) and check that there are no remaining pockets of trapped air.

15. Unpacking the Charging Cables

Follow the steps below to unpack the cables.

1. Remove the nylon cable ties and the foams (PAWT0193) tying the charging cables to the canopies.

Figure 82: Untie the Charging Cables

2. Remove the nylon cable ties and unwrap charging cables around the canopy on the top of the charger and through the openings of the foam.

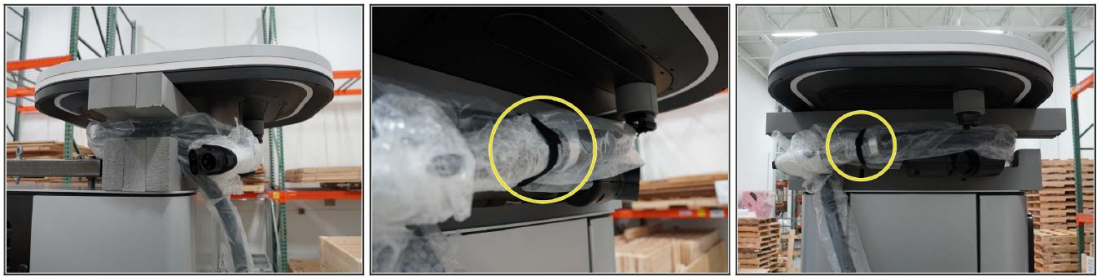


Figure 83: Unwrap the Charging Cables

3. Remove the 2 foams (PAWT0201) behind the canopy post, under the canopies.

Figure 84: Remove Foams

16. Raising the Canopy

The following sections detail the steps involved in installing the canopy.

The canopy contains the following components:

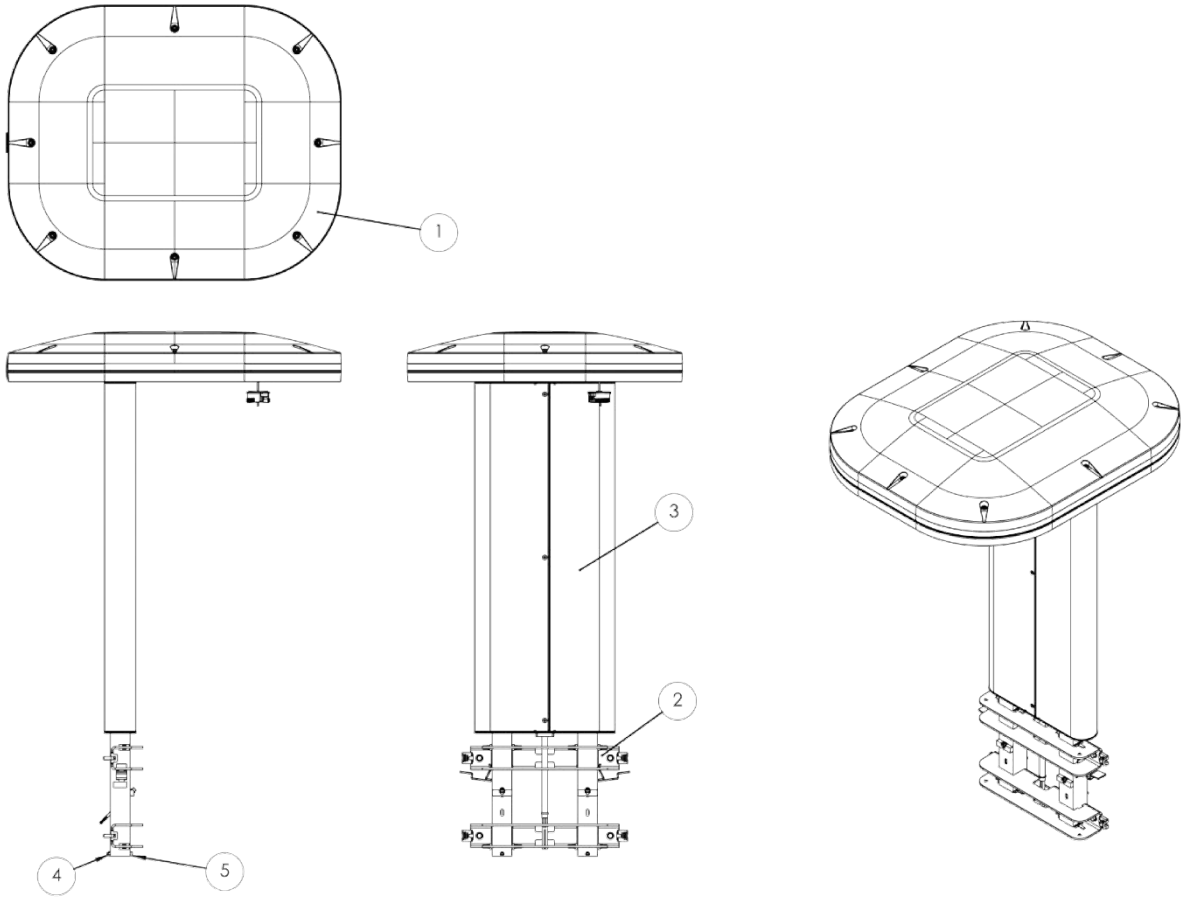


Figure 85: Canopy Components

Table 32: Canopy Components

Part	Description
1	Canopy – Left side
2	Pole mounting brackets
3	On-site installation kit
4	Tightening nut
5	Fastening bolt

16.1 Removing the Brackets and the Lifting Jig

Follow the instructions below if you have installed an accessory of lifting jig:

1. Remove the forklift lifting jib (ASME0586), if applicable.
2. Unscrew the bolts (2x) securing the front lifting bar and remove it. Repeat the operation for the rear lifting bar. Refer to the list #2 in the *Installing the Lifting Jig* subsection of *"Forklift Lifting"* on page 48.
3. Insert screw plugs (4x) (ASME0638) and tighten them to 10 N m (88.5 lb-in) using the double-hole drive bit (MEHD0540).

IMPORTANT NOTE: Be sure to use the appropriate tools to ensure the integrity of the charging station, to maintain the 3R waterproof rating of the housing.

16.2 Lifting the Canopy

NOTE: At least two (2) people must complete the *" Lifting the Canopy» step*.

Follow the steps below to lift the canopy safely.

1. Unscrew the bolts (A) (4x) until you can insert the lifting wedges (B) (4x).

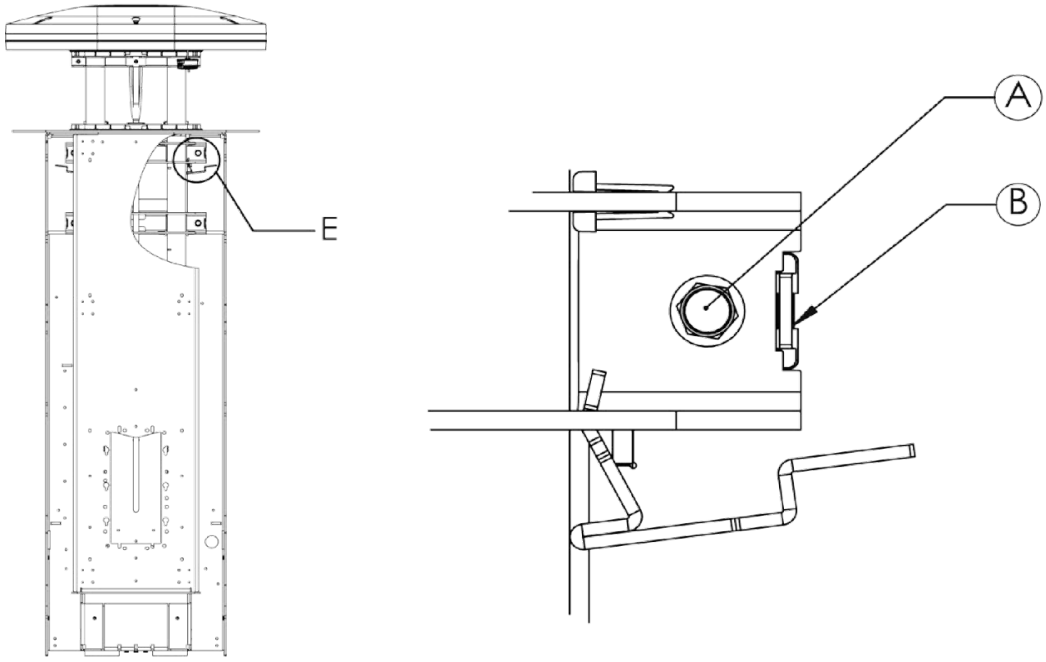


Figure 86: Unlock the Canopy before Lifting

2. Lightly tighten bolts (A) (4x) by hand.
3. Insert the lifting tool © (MEDS0741) into the extrusion, taking care to position the power cable (D) correctly.

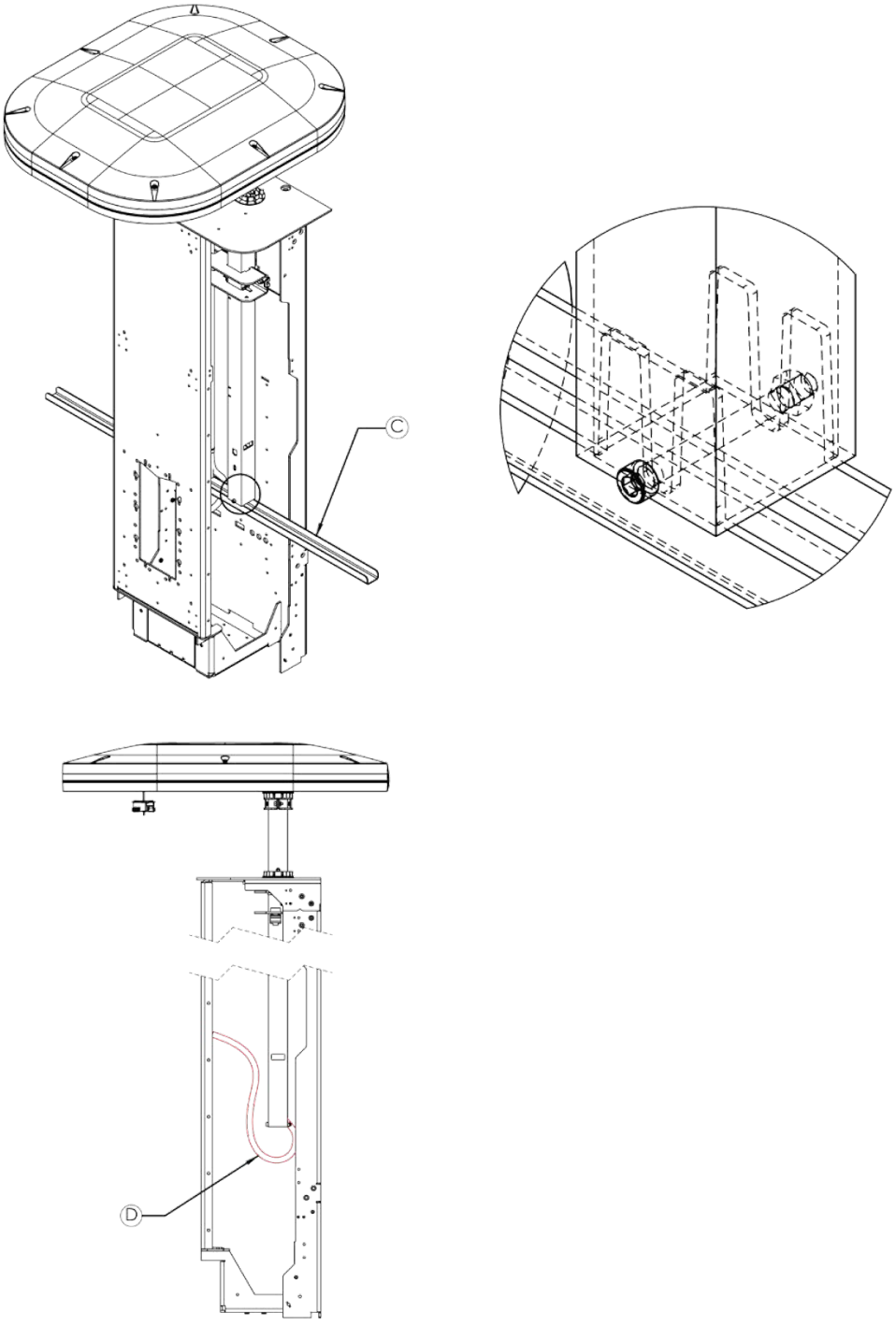


Figure 87: Canopy Lifting Tool and Power Cable

4. Raise the canopy until the 2 latches (M) click into place.

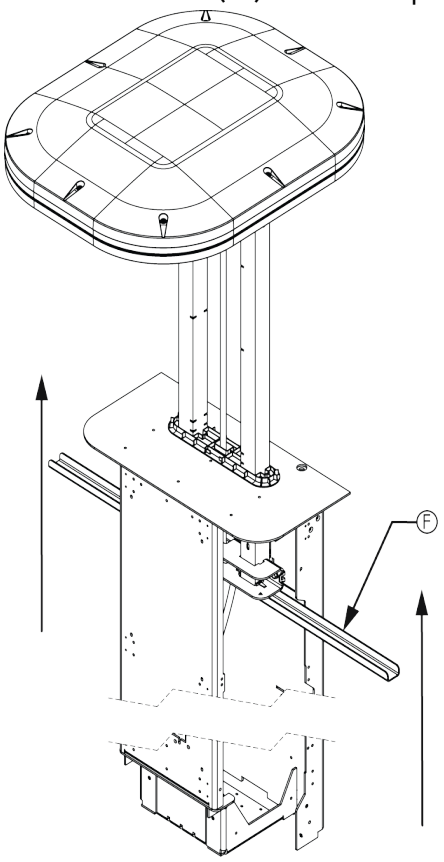


Figure 88: Raising the Canopy

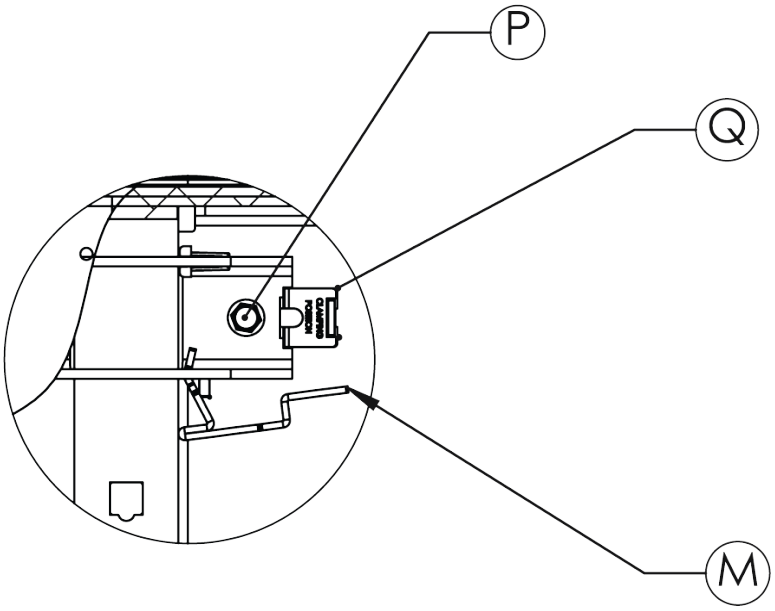


Figure 89: Engage the Canopy Latches

NOTE: The 2 latches must be correctly engaged.

5. Remove the canopy lifting tool (F in the image above)

16.3 Assembling the Cover Support

Follow the steps below to assemble the covers support:

1. Insert the lower support (G) (MEDS0739) into the grooves on the post.

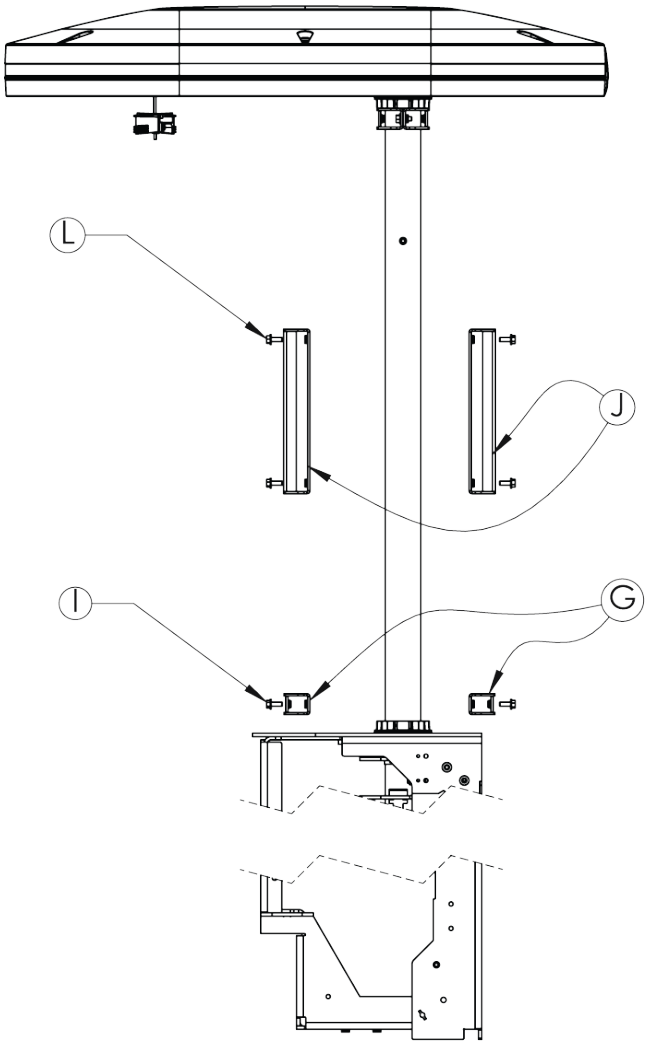


Figure 90: Lower Support Insertion

2. Tighten the bolts (I) (2x) (MESB0311) to 10 N m.
3. Insert the middle support (J) (MEDS0740) into its grooves.

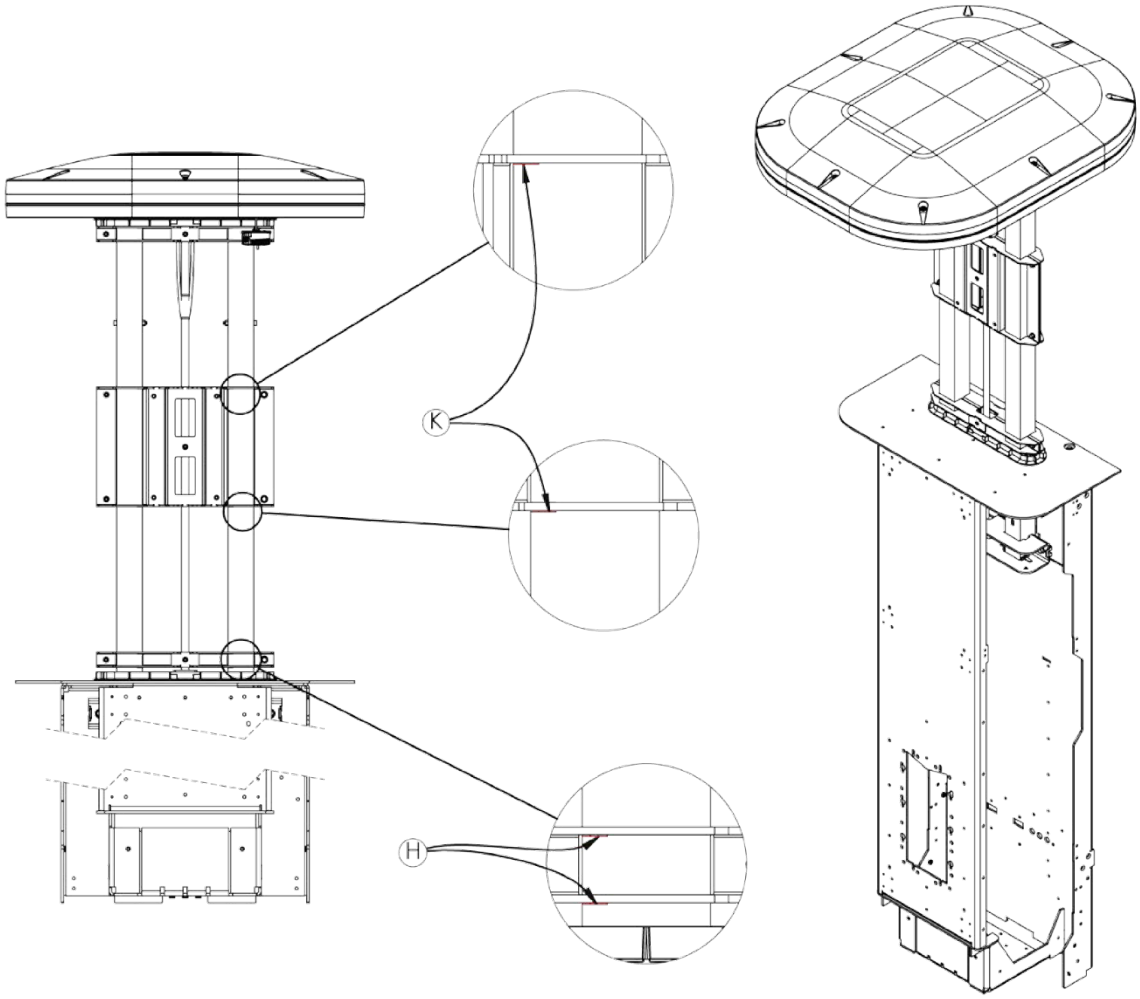


Figure 91: Middle Support Insertion

4. Tighten bolts (L) (MESB0311) (4x) to 10 N m.

16.4 Complete the Final Positioning of the Canopy

Refer to the images and the table below for more information on the parts:

1. Lift and hold the 2 latches (M) to unlock them.

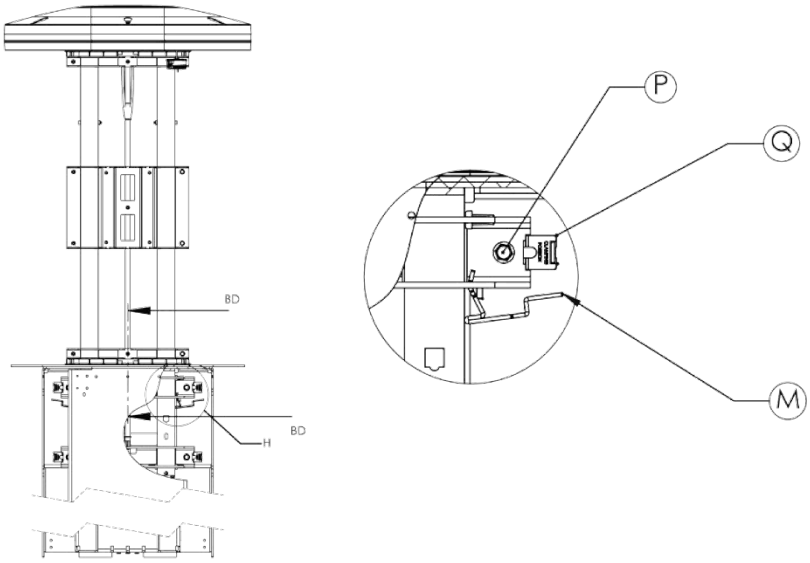


Figure 92: Latches - Lift and Hold

2. Lower the canopy so that the lower support (N) (MEDS0739) rests completely on the plastic part (O).

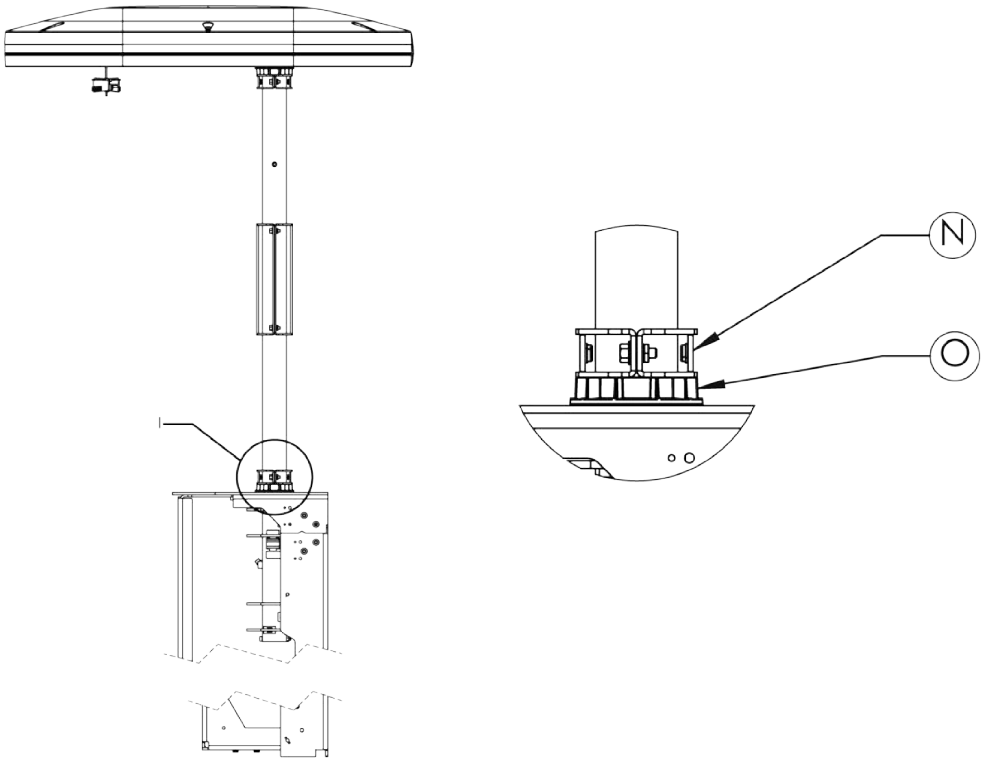


Figure 93: Lower the Canopy

3. Slightly loosen the 4 bolts (P) and pull out the 4 spacers (Q) completely.

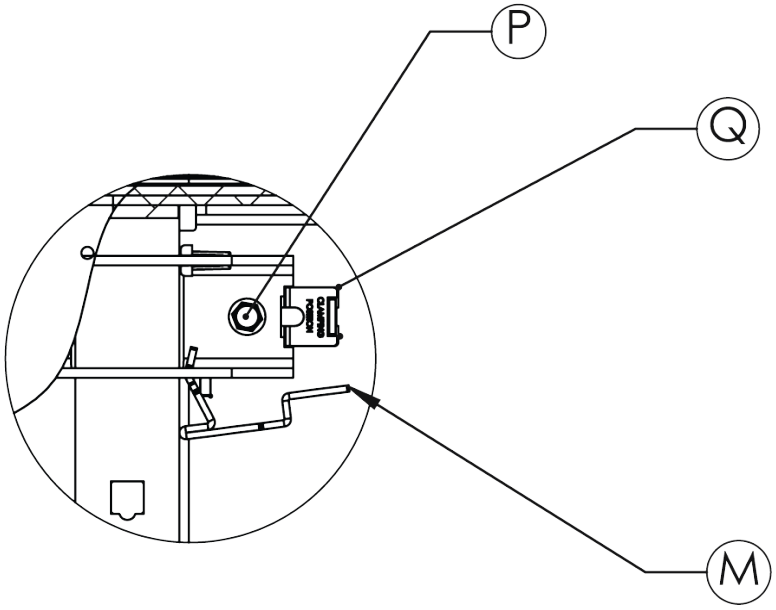


Figure 94: Pull Out the Spacers

4. Tighten the 4 support bolts (P) gradually and evenly to 16 N m.

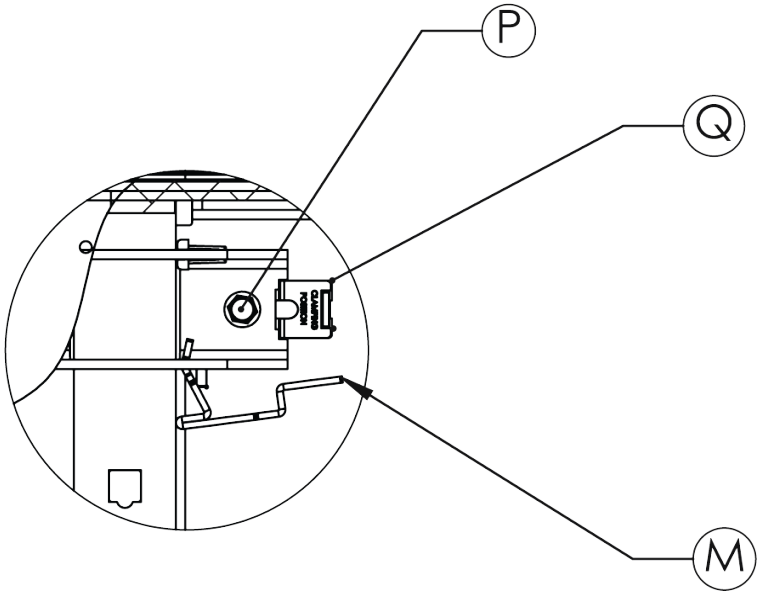


Figure 95: Tighten the Support

16.5 Assembling the Canopy Pole Covers

Follow the steps below to assemble the canopy pole covers:

1. Slide on the two covers (S and T) (MEDS0736 and MEDS0737), ensuring that the 4 fastening holes (U) face the inside of the charging station.

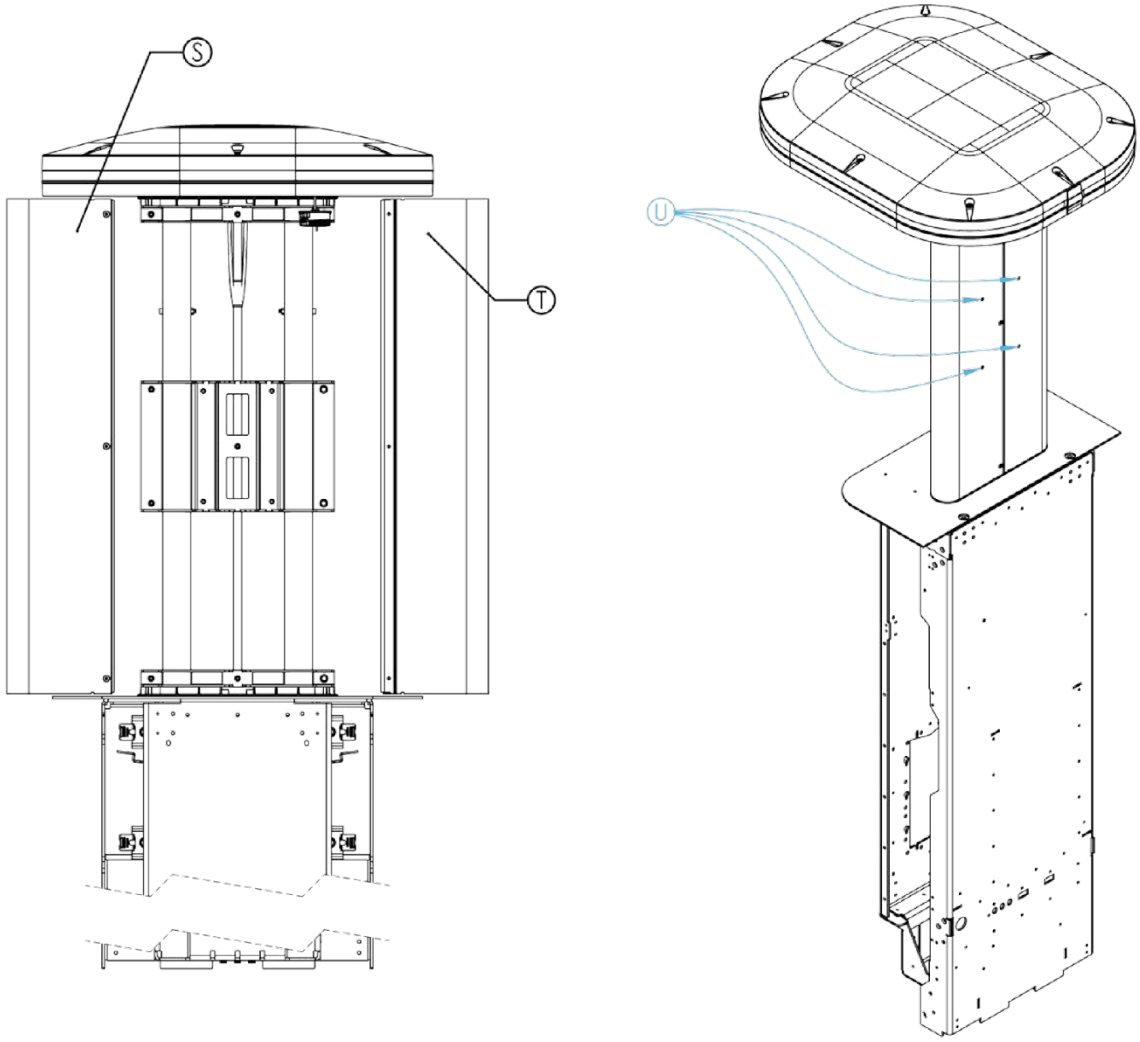


Figure 96: Sliding the Covers

2. Partially insert the 6 screws (N) (MESB0315).

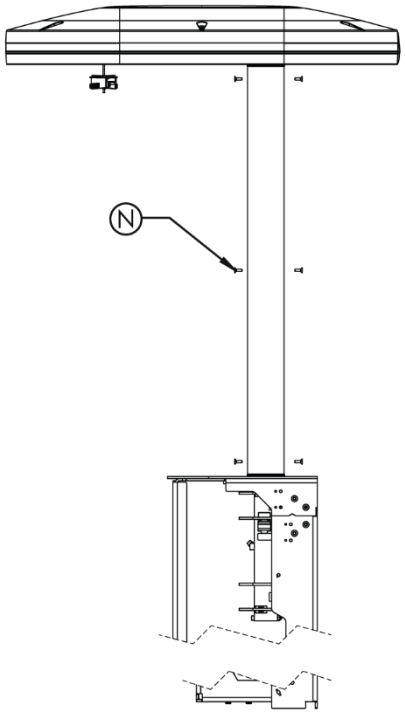


Figure 97: Insert Cover's Screws

3. Tighten the 6 screws (N) to 5 N m.
4. Repeat steps 1 to 3 for the other canopy.

NOTE: Make sure you have positioned the left and right canopy pole covers correctly before proceeding to the next step.

16.6 Installing the Letter Stickers on the Banner

The FLO Ultra charging station comes standard with a banner labeled A1 and A2 to designate the connectors.

- If more than one (1) FLO Ultra is installed at the same site, please follow the instructions in this section.
- If the installation site only includes one unit, please read section 16.6.1 & 16.6.2 and skip to section *"16.7 - Installing the Banner"*.

Follow the instructions below to apply the letter stickers on the banner. FLO recommends the following guidelines to ensure a successful application:

Use the following required tools:

- Application squeegee (TOSR0208)
- Alcohol wipe (MEHD0546)
- Soft cloth or decal cleaning

16.6.1 Side Identification

NOTE: Do not apply stickers in temperatures below -5 °F (-20 °C) to ensure sticker adhesion.

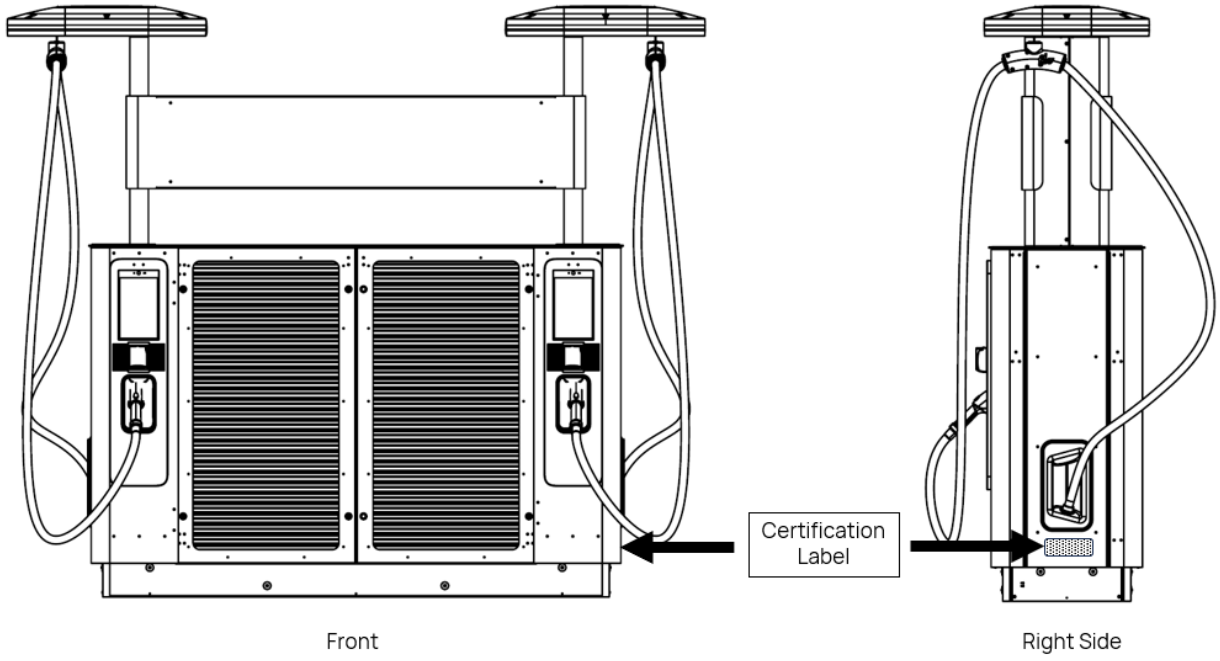


Figure 98: FLO Ultra Side Identification

16.6.2 Sticker Order

Stations must be labeled using the provided adhesive letters. Start with the first station on the left, which should be marked with the letter "A" on both sides of the station banner. Subsequent stations should then be labeled sequentially in alphabetical order from left to right, ensuring the same letter appears on both sides of each station's banner. Once the stickers are applied on the front side, the same letter should be applied in the same position on the rear banner. Refer to the images below according to your site and charging station configuration.

Sticker Placement on a Pull-In Configuration

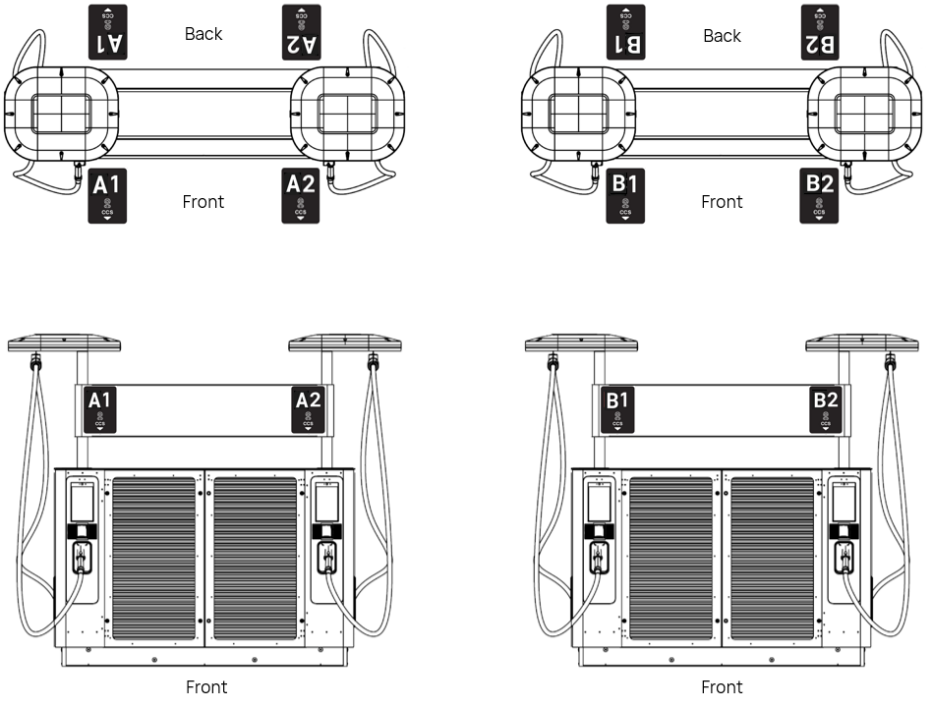


Figure 99: Sticker Placement - Pull-In Configuration

Sticker Placement on a Pull-Through Configuration

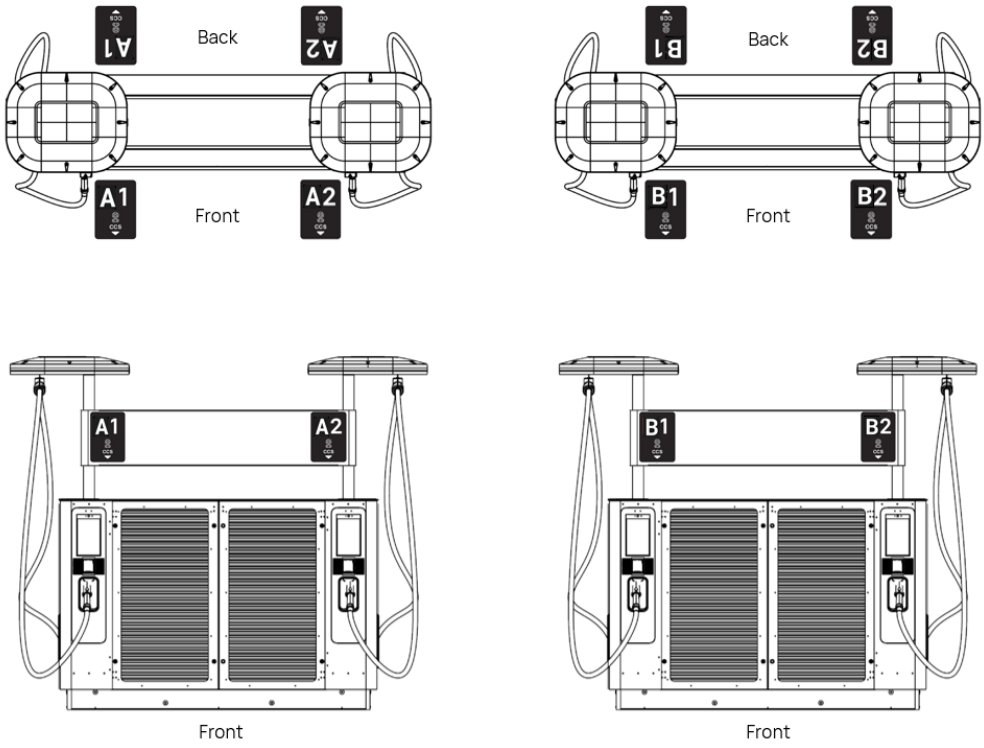


Figure 100: Sticker Placement - Pull-Through Configuration

16.6.3 Preparing the Surface

Follow the instructions below to apply the letter stickers on the banner. FLO recommends the following guidelines to ensure a successful application:

Use the following required tools:

- Application squeegee (TOSR0208)
- Alcohol wipe (MEHD0546)
- Soft cloth or decal cleaning

NOTE: Do not apply stickers in temperatures below -5 °F (-20 °C) to ensure sticker adhesion.

Confirm that the surface is in good condition and does not have defects such as cracks, chips or other damage. The surface on which the stickers are applied must be clean and dry.

As needed, clean and degrease the surface of the banner by spraying a 50/50 mixture of ethyl alcohol (70%) and water on the surface where the sticker will be applied, and wipe with a soft cloth.

Make sure the surface is completely dry before starting the sticker application.

16.6.4 Application Method

Follow the steps below to apply the stickers correctly:

15. Place the banner on a flat stable surface to install the letter "B" stickers (PRLP1097).
16. Clean and degrease the surface of the banner (Letter "A" zone) with the alcohol pad (MEHD0546).
17. Make sure not to touch the surface with your hands.
18. Allow the surface to dry before proceeding to the installation steps. If necessary, wipe with a soft cloth.
19. Locate the positioning markers near the 4 corners of the letter "A".
20. Using the hinge method, peel the protective film from the sticker about 4 cm or 1 ½" from the bottom.
21. Align the sticker over the letter "A" area in the upper banner corner indicating Install letter sticker here to cover red area, making sure the sticker is inside the positioning marks and covers the red area completely.

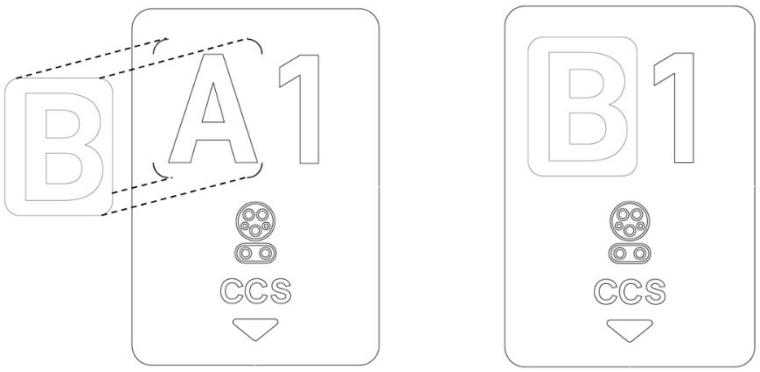


Figure 101: Letter Sticker Installation

22. Beginning from the middle of the top edge and working horizontally, use the application squeegee (TOS0208) to apply the sticker with firm overlapping strokes.
23. Move from the center outwards to the edges to avoid trapped air.
24. Apply enough pressure to ensure a good bond between the adhesive and the banner surface.
25. Once the sticker is applied, go over the whole sticker with the squeegee (TOSR0208) and check that there are no remaining pockets of trapped air.

NOTE: If bubbles appear, use a sharp blade to lightly pin prick the sticker to release the trapped air. Use the squeegee to smooth out the graphic.

Give the sticker edges an additional squeegee swipe to ensure good adhesion and avoid lifting.

16.7 Installing the Banner

1. Align the banner supports (2x) MEDS0701) with the banner studs (a4x) and loosely fasten the nuts (4x) (MENU0071).

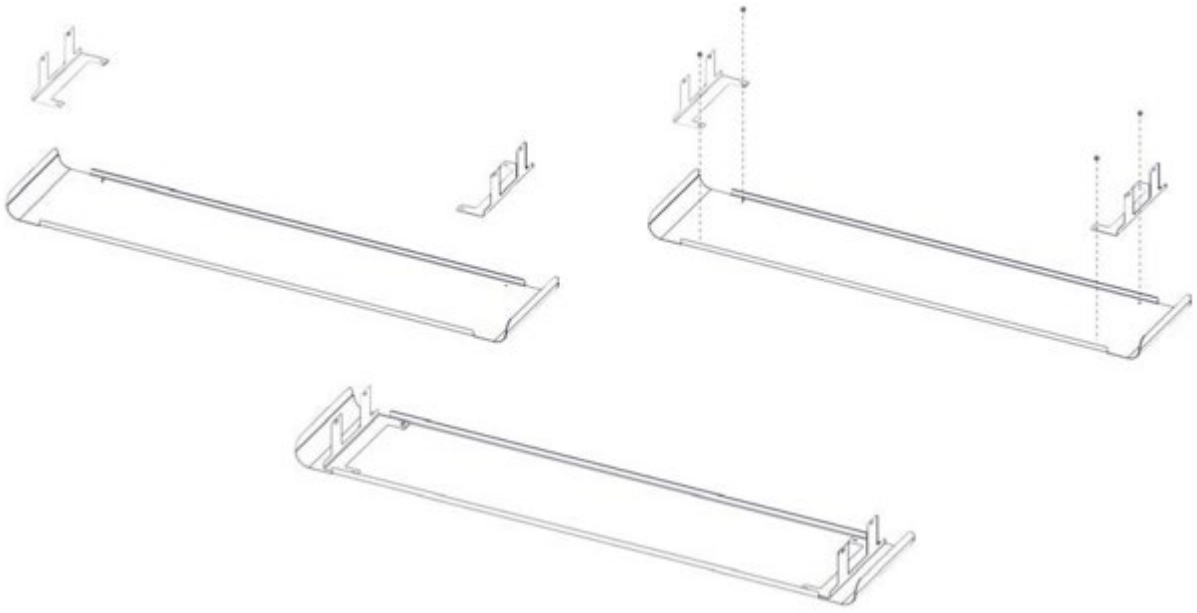


Figure 102: Banner Supports Installation

2. Insert loosely fasten the banner support screws (8 screws; 4 on each side) (MESB0312) inti the banner brackets.

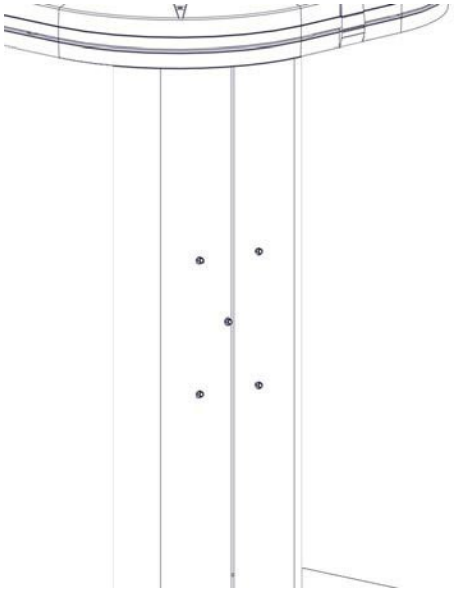


Figure 103: Fasten the Banner Support Screws

3. Hook the rear banner to the bracket screws (2 on each side).

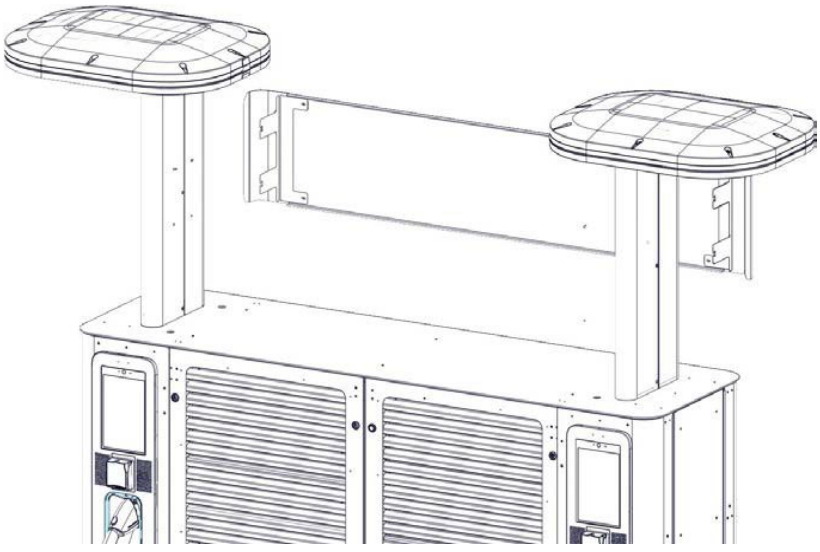


Figure 104: Hook the Rear Banner

4. Tighten the screws (4x) (MESB0312) with a torque of 6 N m, tighten the nuts (4x) (MENU0071) with a torque of 6 N m.

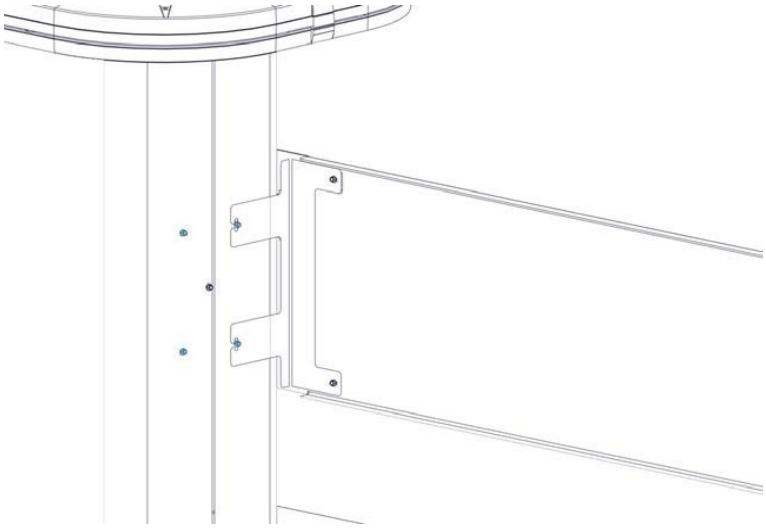


Figure 105: Screw the Rear Banner

5. Repeat the steps for the front banner.

16.8 Installing the Screws Caps on Top of the FLO Ultra

Follow the instruction below to install the screws caps (ASME0638) on the holes left by the lifting jig:

1. Locate the holes left by the removal of the lifting jig.

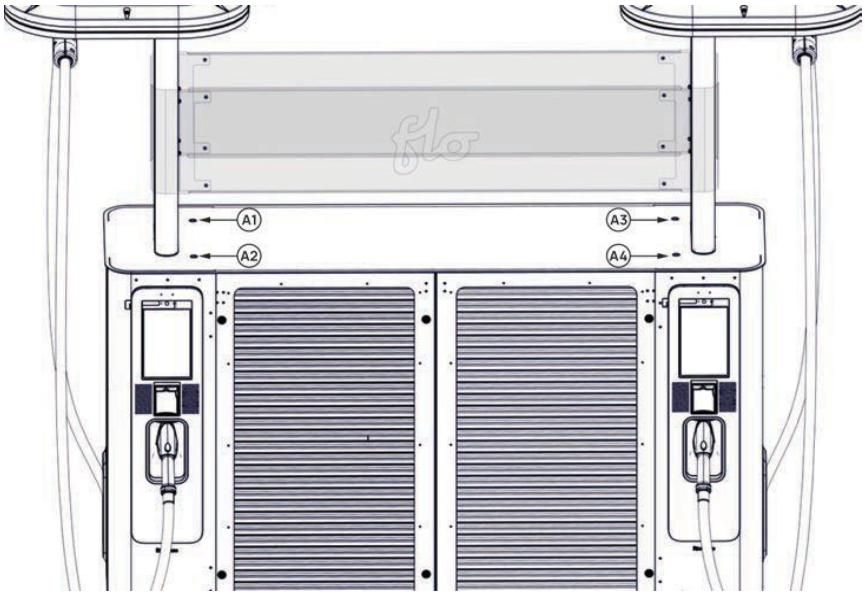


Figure 106: Locate Screw Cap Holes

2. Place the (4x) screws caps in the holes on the top of the charging station.

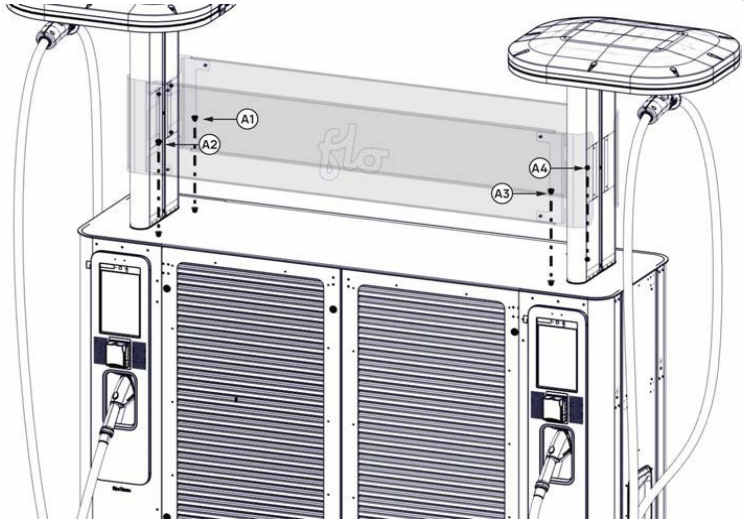


Figure 107: Insert the Screws Caps

3. Use the spanner head or Hafren two-hole security drive bit (MEHD0540) to tighten the two-hole security screw.

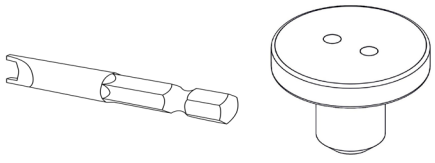


Figure 108: Hafren Two-Hole Security Drive Bit

4. Make sure not to overtighten the screws.

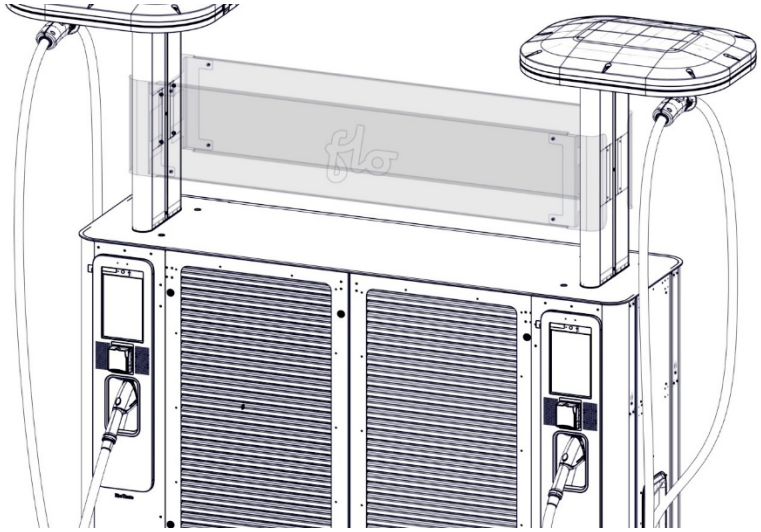


Figure 109: Screws Caps Installed

16.9 Installing the Charging Cable Clamp

Following the steps below to install the cable clamp on the bottom of the FLO Ultra canopy.

1. Pull the FLO EZLift wire from the canopy towards you to ensure a good grip.
2. Insert the round end of the cable wire into the cable clamp.

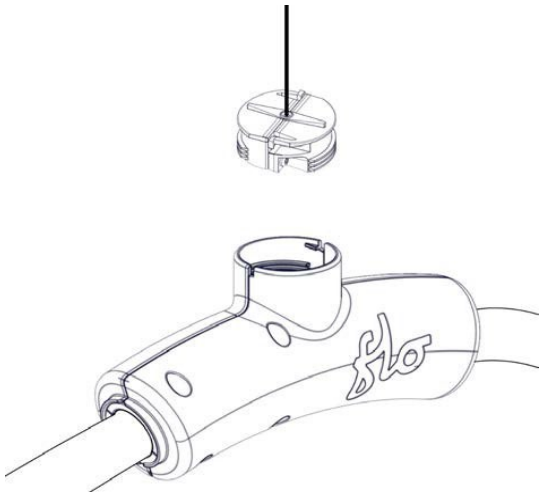


Figure 110: FLO EZLift Cable Clamp

3. Turn the upper part clockwise until you hear a click, indicating that the cable clamp is locked in place.

17. Installing the Protective Plate on the Electrical Compartment

The protective panels seal the electrical compartment from the outside elements.

Follow the steps below to install the protective plate of the electrical compartment:

1. Open the main doors before installing the protective panels.

2. Place the panel so it is aligned with the screw holes and insert the top screws (4x) and tighten to 5.5 N m, making sure to not over-tighten. Insert the bottom screws (3x) and tighten to 3 N m, making sure not to over-tighten.

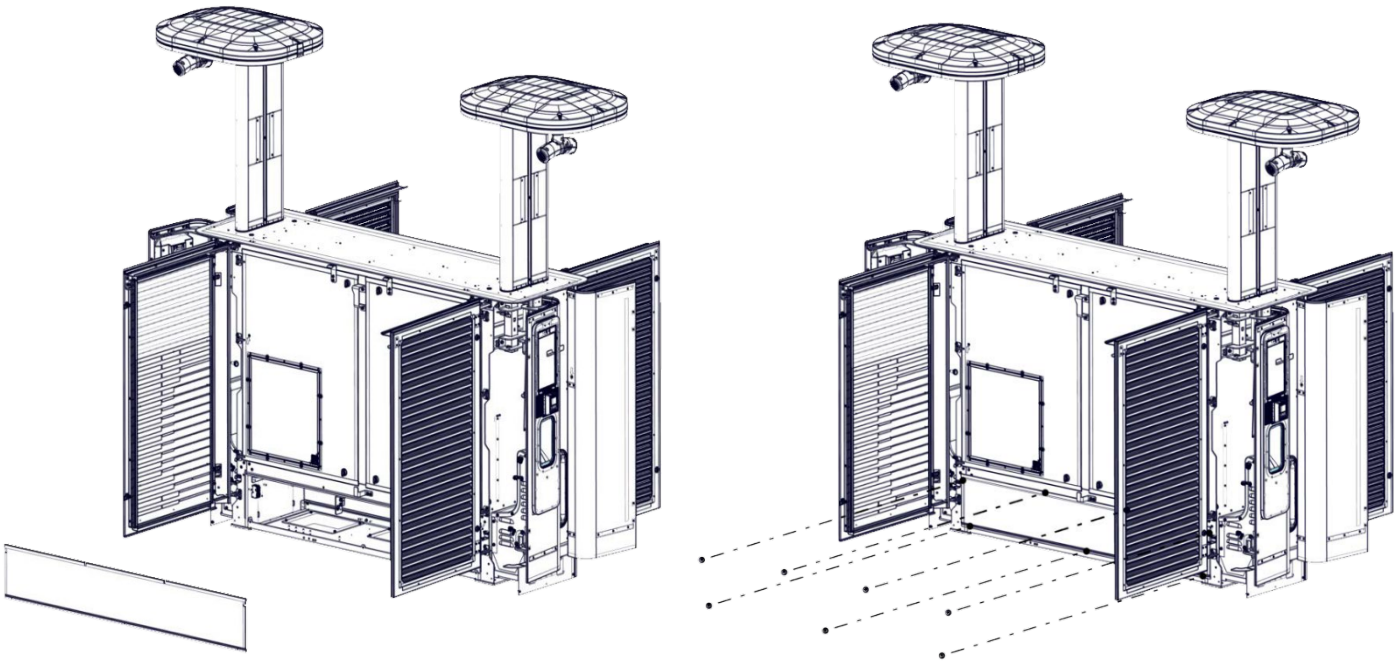


Figure 111: Protective Plate Installation

18. Installing the Lower Panels

The lower panels seal the electrical compartment from the outside elements. Follow the steps below to install the lower panels:

1. Open all the doors before installing the lower panel, including the main doors and the UI doors.

2. Identify the correct positioning of the front panel by looking for the description inside the lower panel. For example, *Front Top*.

3. Place the front panel so it is aligned with the screw holes. Loosely fasten the panel to the FLO Ultra base with the screws (MESB0280) and MESB0796). Do not tighten the screws at this stage.

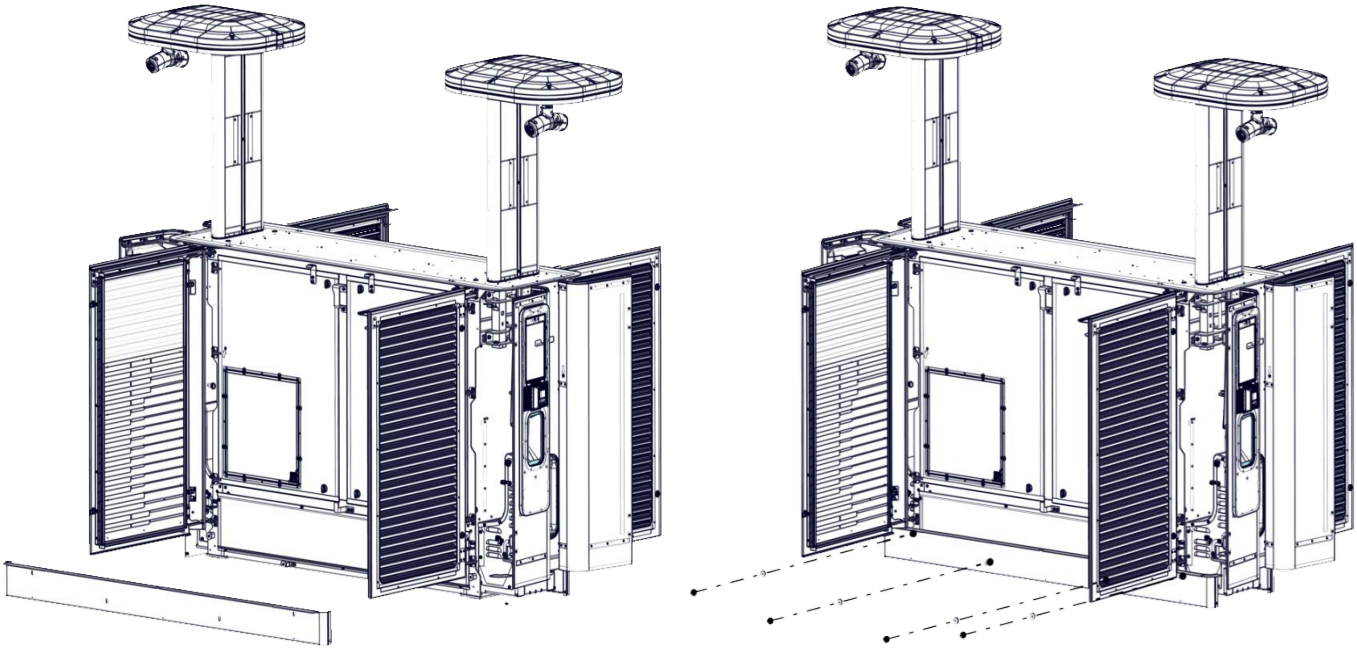


Figure 112: Front and Back Lower Panels Installation

4. Repeat steps 1-3 with the back lower panel.

5. Repeat steps 1-3 with the side panels.

NOTE: For the side panels, only use washers with the 2 top bolts (MESB0281 and MESB0796).

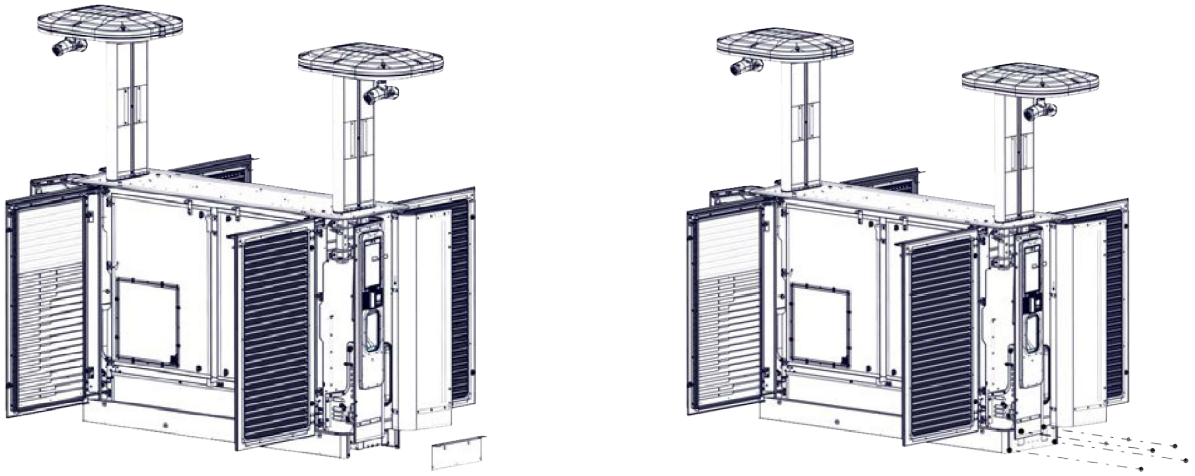


Figure 113: Side Lower Panels Installation

7. Tighten the screws making sure not to overtighten.

19. Adding the Protective Corners

The protective corners are installed to prevent cable damage from the cables rubbing against the door corners.

Follow the steps below in order to install the protective corners:

1. Make sure the FLO Ultra is in its final position and that the bottom plate and lower panel have been correctly installed.
2. Open the UI doors.
3. Align the protective corner labeled MEDS1079 over the right back lower panel, making sure that the shorter side of the door cover is on the side of the charger.

   NOTE: For the correct alignment of the protective corners, make sure the screws are at the bottom of the protective corner. Refer to the image below:

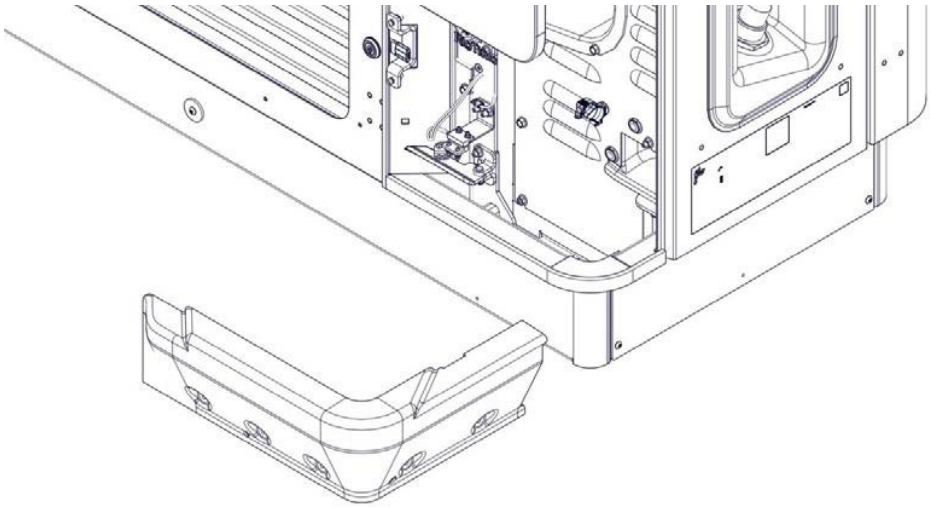


Figure 114: Protective Corner Aligment

4. Install the right back protective corner by sliding it in the ground until it is against the lower panel. Once the protective corner (MEDS1079) is in place, use the provided self-tapping screws (MESB0368) to fasten it in place. Do not overtighten the screws over 4 N m.

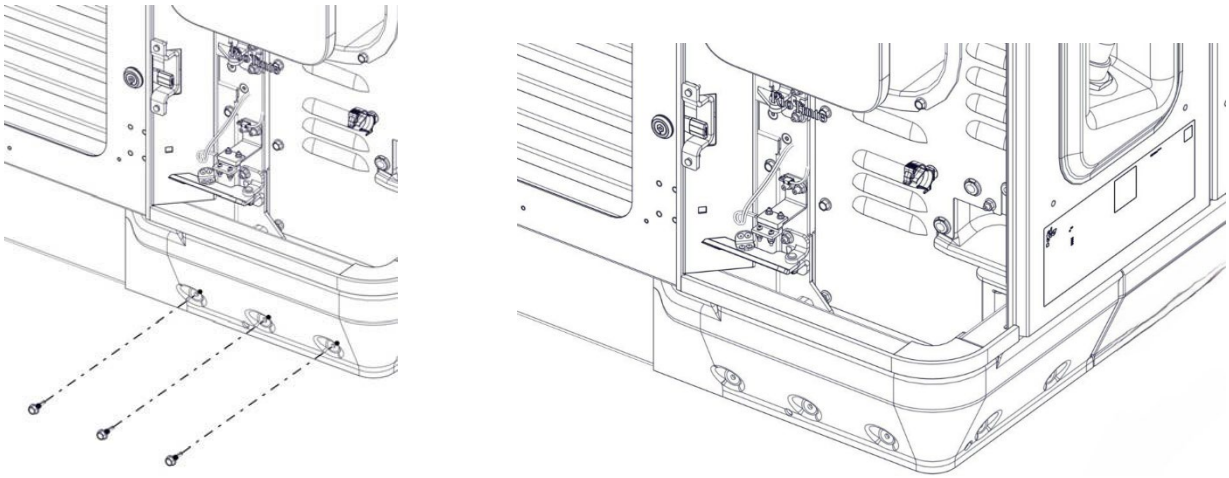


Figure 115: Protective Corner Installation - 1

5. Align the protective corner labeled MEDS1078 over the side of the charger, making sure that the shorter side of the corner is on the side of the charger and that it overlaps over the already installed MEDS1079 protective corner.

6. Once the MEDS1078 protective corner is in place, use the provided self-tapping screws (MESB0368) to fasten is in place. Do not overtighten the screws over 4 Nm.

Figure 116: Protective Corner Installation - 2

7. Repeat steps 1-7 on the other side of the charger, beginning with the front of the charger this time.

20. Installation Checklist

To facilitate the commissioning of the FLO Ultra EV Charging Station and to ensure the installation was complete and conform to our standards, a pre-commissioning inspection must be completed. Inspection points of the following sections must be validated. Each inspection points of the lists below apply for each FLO Ultra deployed on a charging site.

Once the pre-commissioning inspection checklist has been completed successfully (one inspection checklist per charging station), the station can be commission.

20.1 Fastener Torque Values

Table 33: Fastener Torque Value

Fastener	Torque Value
• Forklift jig to charger mounting screws	70 Nm (51.6 ft-lbs.)
• AC input lugs	70 Nm (51.6 ft-lbs.)
• Ground wires	42 Nm (31 ft-lbs.)
• DC power lugs	70 Nm (51.6 ft-lbs.)
• MESB0281 – Electric compartment protective plate fasteners • MESB0312 – Banner to canopy screws • MENU0071 – Banner bracket screws	6 Nm (4.4 ft-lbs.)
• MESB0311 – Lower canopy support bolts • MESB0311 – Canopy middle support bolts	10 Nm (7.37 ft-lbs.)
• MESB0343 – Canopy tension bolt assembly bolts	3 Nm (2.2 ft-lbs.)
• Canopy support bolts	16 Nm (11.8 ft-lbs.)
• MESB0315 - Canopy cover screws	5 Nm (3.7 ft-lbs.)

20.2 Pre-commissioning inspection points supported by pictures

- Charger visual inspection (clean, no scratch, dent) – Pictures of all sides and the site
- Validate supply connection – All 3 phases
- Validate that the top sign panel is installed
- Validate that the base cover is installed
- Charging station's nameplate
- If applicable, position of the lock box for the charger(s) key(s) and interconnect equipment
- Screens (2x) show the authentication message
- Cable clamps (2x) are tightened on the charging cables
- Charging cables (2x) exit the cabinet in the proper way (charging cables must exit the cabinet the opposite way than the UI)
- Visual Inspection of the SAE/COMBO connector and cable (If equipped) - connection points
- Visual Inspection of the NACS connector and cable (If equipped) - connection points
- Visual Inspection (4 sides) of the transformer size and housing (no scratch, dent) - nameplate

20.3 Pre-commissioning inspection points supported by measures and observations

- Charging station is levelled
- Air filters are installed
- Inspect the presence of bollards (and that the unit door can open freely)
- Ground inspection: from transformer to charger and inside the charger
- Validate and note the three phases and ground conductors' torque at input terminal
- Validate that the unbalance of tension between phases remain below 2%
- Inspect that the charger doors (10x) are closed and locked
- Pass a RFID card in front of the card reader to validate the unit emits a sound and the screen is functional (i.e. a FLO card or any card with RFID tag, no need to start a session)

20.4 Pre-commissioning inspection points supported by measures and observations

- Validate that both FLO EZLift™ cable management system retracts correctly
- Perform a functionality test on charger 1 and 2
- Validate that both screens show authentication message
- Validate that both credit card readers show authentication message

21. Commissioning

Before we begin:
It is important to understand the primary responsibilities of the Site Host Administrator and the Installer/Electrician.

Site Host Administrator

The Site Host Administrator is the person designated by your organization to be the primary point of contact for management of the charging stations.

The Site Host Administrator will receive an interactive Site Host Form via email. This form will capture essential configuration details for FLO to commission each charging station and connect it to the FLO network.

The Site Host Form will also contain information for setting up the Owner's Web Portal.

Installer/Electrician

Before the commissioning process can begin, station installation must be complete. The on-site electrical contractor will then work with FLO's Commissioning Specialists to finalize the pre-activation process.

Before leaving the site, the electrical contractor must contact FLO to initiate the commissioning process.

EV charging stations have different commissioning requirements. Please refer to the information below to guide you through the process.

- Installation of the charging station must be completed in accordance with the applicable FLO installation Guide.

- Upon completion of the installation, please contact the FLO Client Integration Team (1-888-852-3518) who will ensure the stations are connected and visible online.

Pro Tip: Site Host Administrators and Electrical Contractors that follow this guide may reduce the station activation time by as much as 7 business days.

Incomplete or inaccurate information could result in multiple visits which will cause delays and added expense to the Site Host.

Now that we've clarified responsibilities, the electrical contractor can proceed to the relevant product page for additional details.

Readiness checklist:

The site host admin has completed and submitted the Site Host Form.

Station(s) are installed as per the installation guide(s) and energized.

Electrical contractor is on site.

Next steps:

The electrical contractor must call the integration team (1-888-852-3518) to verify station connectivity.

FLO will remotely commission the charging station. Standard commissioning may take up to 10 days. FLO Performance Warranty commissioning may take up to 5 days.

Once the station is online, you will receive a confirmation email with details for accessing the Owner's Web Portal.

To ensure easy and efficient commissioning, make sure you have all the information you need before contacting FLO customer service.

Please refer to the instructions in this document for submitting the form and photos.

You will have to provide information and photos related to the following items:

- Site details
- Installer contact information
- Relative photos at different inspection points (before and after commissioning)
- FLO Ultra serial number

To commission your FLO Ultra™ charging station, please contact the FLO Client Integration Team at 1-888-852-3518.

22. USER MAINTENANCE INSTRUCTIONS

We recommend that station owners perform the following maintenance. All other maintenance activities must be performed by FLO technicians or by qualified service personnel mandated directly by FLO.

22.1 General Exterior Maintenance

FLO recommends regular cleaning of the charging station to avoid potential accumulation of dirt, debris, dust or snow on the unit and the concrete mounting pad.

22.2 Banner Sticker Cleaning

FLO recommends cleaning the sticker surface and surrounding area with a soft cloth and water or mild detergent when the graphic shows signs of dirt.

Be careful around the sticker edges since chemicals and liquids can detrimentally affect adhesives if they are close enough to get under the surface. Reduced adhesion could result in the graphic lifting.

22.3 Cabinet Cleaning

FLO recommends wiping the surfaces and display screen with a neutral cleaning agent (pH 6 to 8) such as water and a soft cloth (non-woven nylon hand pad).
NOTE: Do not use products with ammonia such as Windex because they may damage display screens.

22.4 Visual Inspection of the Cabinet

Make sure the following components are exempt of damage:

- General structural integrity: No slanting, no missing parts. no visibly obvious damage.
- EV charge cables: No cracks or ruptures, no visible internal wires.
- Connectors: No cracks or ruptures:
    - Contact pins: No corrosion.
- Cable management system and canopy:
    - Wires: No degradation.
    - Cable clamps: No cracks or ruptures. Refer to *"Main Exterior Components"* on page 23 for more information.
    - Charger status light indicators: The lights turn on. Refer to *"Main Exterior Components"* on page 23 for more information.
    - Area lighting: The light turns on.
- Cabinet:
    - Doors: The locking mechanisms are intact and functional.
    - Coating: No cracks or ruptures.
    - Display screen: No cracks.
    - Display screen: The screen reacts to touch.
    - Display screen: The backlight lights up.
    - Card reader: No cracks or ruptures.
    - Holster light indicator: The lights turn on.
- Banner
    - Stickers: No peeling, cracks or chips.

Contact the manufacturer if you see any damage

22.5 Removing Graffiti

Follow the instructions in the sections below to remove the graffiti:

22.5.1 Cleaning the Enclosure

Use the cleaning method adapted to the surface:

- **Painted Surface**: A neutral cleaning agent (pH 6 to 8) such as soapy water or 70% alcohol isopropyl with microfiber towel.
- **Wrapped Surface**: A glass cleaner or a 70% alcohol isopropyl with microfiber towel.
- **Display Screen**: Soapy water with microfiber towel.

NOTE: Do not use products with ammonia such as Windex because they may damage display screens.

23. Table of Figures

24. Table of Tables

25. Copyright and Liability

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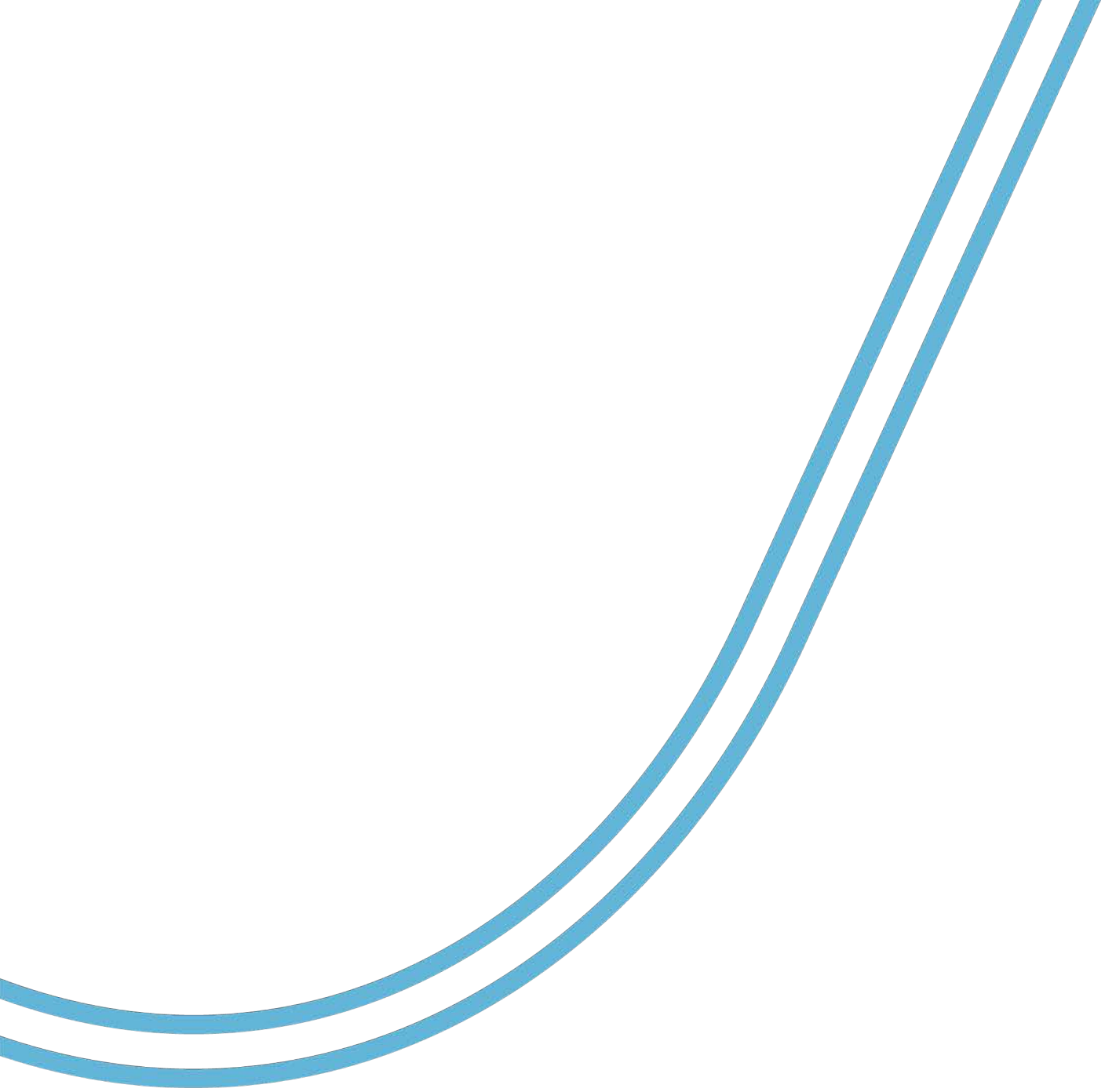

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