

FLO Ultra™

Installation Guide





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1. INSTRUCTIONS PERTAINING TO A 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.

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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 broken 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 a 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).
- Ensure compliance to specific Bonding/Grounding instructions for the FLO Ultra[™]. Refer to "Grounding Instructions for Products with a Permanent Power Connection" on page 67 in the FLO UltraTM Installation Guide for more information.



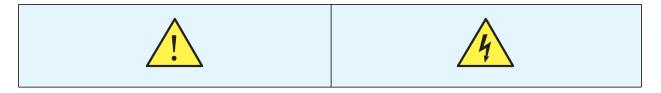
2. Important Safety Instructions

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 installations 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 and 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 connector.
- 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 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 UltraTM Installation Guide* and *FLO UltraTM 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 UltraTM Installation Guide* and *FLO UltraTM User Guide* available 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 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. 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 128* section for more information.
- 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 UltraTM Installation Guide* and *FLO UltraTM 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 UltraTM Installation Guide* and *FLO UltraTM 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 takes into account 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 UltraTM Installation Guide and the FLO UltraTM 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.

Symbol	Description
\sim	Alternating current (AC)
	Direct current (DC)
\oslash	Phase
	CAUTION: This symbol is used to provide awareness of important safety information in these instructions
<u>À</u>	WARNING: This symbol is used to provide warning of hazardous voltage and possibility of electric shock
	Earth "ground" terminal
	Protective (earth) ground Class 1
<i></i>	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™

Model Numbers
FL1SS1B1AA-XX-XXX
FL1SS2B1AA-XX-XXX
FL1SS1A1AA-XX-XXX
FL1SS2A1AA-XX-XXX
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 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 FLO Ultra has the capacity to charge up to 80% in as little as 15 minutes with a 320 kW total capacity (160 kW on each side).

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



4. Specifications

Specification	Description
EI	ectrical
AC nominal current	≈ 408 A
Integrated protection	IM/I, GM/I
Power consumption	337 kVA
Max output power	320 kW (2 x 160 kW) FLO Ultra can be paired to deliver up to 500 kW to a vehicle
Input rating	480 Y-277 V (-15% to 10%)
AC input connection	3-phase: L1, L2, L3, GND
Short circuit current rating	65 kA
Overvoltage category	IV
Power factor	> 98%
THDI (@rated output)	< 5%
Efficiency @nominal output power	> 93%
Max charging voltage	150 to 1000 VDC
Max output current	0.5 up to 500 ADC depending on cable and configuration
Installation configurations	Pull-in Pull-through
Charging port 1 and 2 configurations	1: 2x CCS 1 – 500 A Liquid Cooled 2: 2x CCS 1 - 350A
DC input	Optional 2x up to 500 A 1000 VDC
AC input frequency	60 Hz
Env	ironment
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)
Humidity	5% to 95%, non-condensing
Maximum operating altitude	6 562' (2 000 m)
Enclosure	Aluminum type 3R
Interfac	e and Control
User interface	12.1 in color LCD touchscreen, 10 9/32'' x 6 11/32'' (261 mm x 163 mm)



Specification	Description	
	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 authentification	ISO 14443A/B, ISO 15693, HID, MiFare	
Charging protocol	DIN-SPEC 70121, ISO 15118-2 (tested under ISO 15118-4-5)	
Con	nectivity	
Cellular communication	4G (LTE)	
Communication interface	Optional WAN connection	
Communication protocol	OCPP 1.6J	
	Ready for OCPP 2.0.1	
Energy metering	Incoming AC monitoring	
	DC energy meter	
Certification 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) NIST Handbook 44 S3.40 - Type Evaluation Program	
EMC compliance	FCC 47 CFR Part 15 CAN ICES-003(A) / NMB-003(A)	
Energy Star®	1.2 certified	
Metering certifications	Coming soon	
Accessibility	Meets ADA requirements	
Ha	rdware	
Dimensions (H x W x D)	100-1/8 in x 118-3/8 in x 27-3/4 in (or 48-1/8 cable swing) (2543 mm x 3005 mm x 704 mm (or 1222	
Weight without shipping packaging	mm cable swing)) 1500 lb (680 kg)	



Specification	Description
Standard cable length	18' (5.5 m)
Charging connector	CCS1
	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 purposed only and may not represent your site configuration.

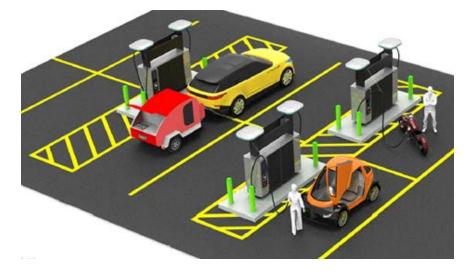
5.1. Site Configuration

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:





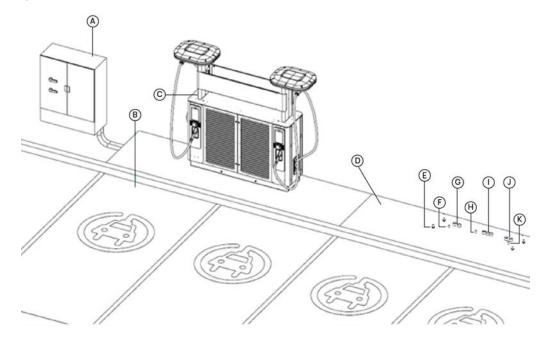
The following image shows the pull-through parking installation:





6. Typical Installation

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



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

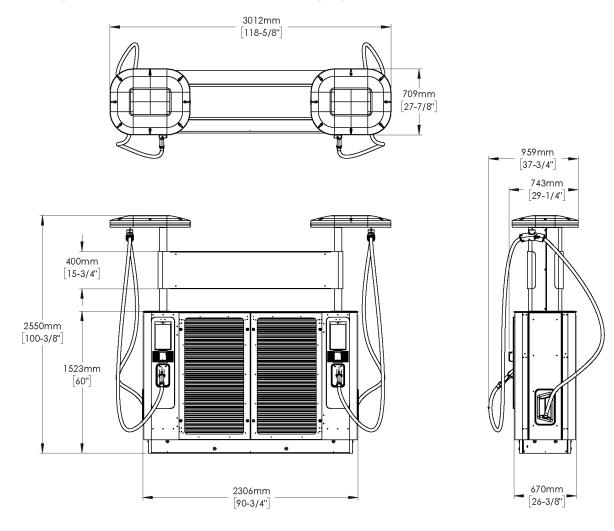
ltem	Description	
А	EVSE branch circuits and metering cabinet	
В	EVSE parking spaces	
С	FLO Ultra station	
D	Concrete slab	
E	Anchors (4x)	
F Outlet 1 - Pairing control and communication conduits / co (optional)		
G	G Outlet 1 - 1000 VDC conduits/conductors (optional)	
H FLO Ultra control and communication conduits / conductors (optiona		
I	3-phase, 3-wire 480Y / 277 VAC conduits/conductors	
J	Outlet 2 - 1000 VDC conduits/conductors (optional)	
К	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 "Surface Area Requirements" on page 32 and "Reach of the Charging Station Connectors" on page 33 for more information.

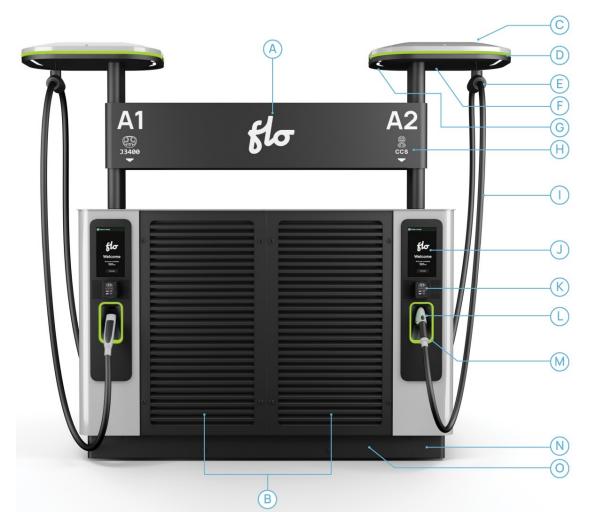
The image below shows the FLO Ultra charging station dimensions:





6.2. Main Exterior Components

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



Part	Description
А	Banner
В	Main compartment doors
С	Canopy
D	Charger status light indicator
E	Cable clamp
F	FLO EZLift
G	Canopy area lighting
Н	Charging station identifier
I	Charging cable
J	User interface touchscreen



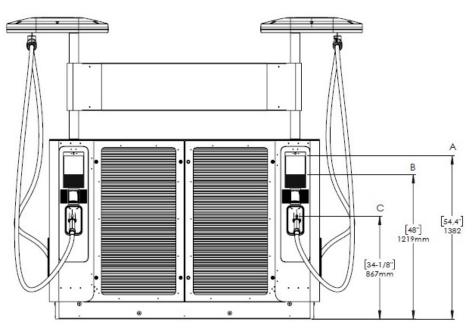
Part	Description
K	Card reader
L	Charging station connector
М	Holster light indicator
N	Protective covers and base covers
0	Power cable entry compartment

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:



Part	Description
Α	Display screen (Highest point of the display screen - No interaction)
В	Highest interaction point on the display screen
С	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 must be large enough to install both the station and the protective bollards, if applicable, and still have enough space for users to circulate. Refer to "*Surface Area Requirements*" on page 32 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.

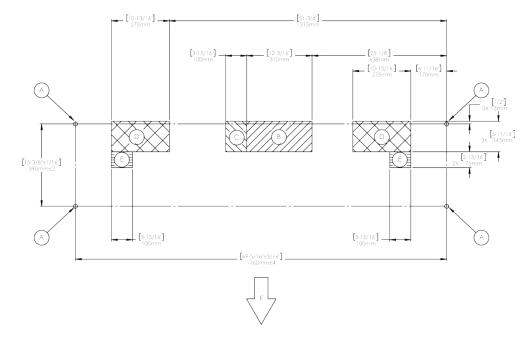
6.5. Anchors and Power Cable Entry

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



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.

Part	Description
Α	Anchors
В	AC power conduits area
С	FLO Ultra communication and control conduit entry area
D	DC power conduits area
Е	PowerSharing communication and control conduit area
F	FLO Ultra front access
G	Concrete mounting pad
Н	AC lug pad
Ι	DC lug pad
J	FLO Ultra power cable compartment enclosure

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 ³/₄" (19.1 mm).

The conduits should rise 1.77" (45 mm) above the FLO Ultra surface mount to enter the power cable entry plates, and the conductors must be bendable to connect to

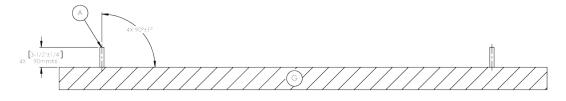


the terminals. Refer to "*Connecting the AC Power Cables*" on page 76 for more information.

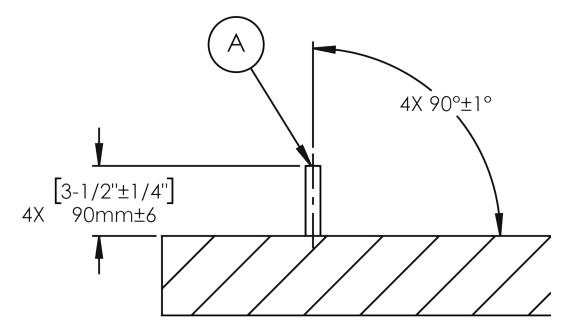
NOTE: Please refer to the site assessment requirements and anchor supplier's recommendation for the selection of the anchors.

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

Front View of the Anchors

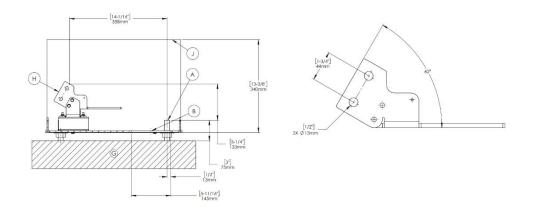


Close-Up View of an Anchor

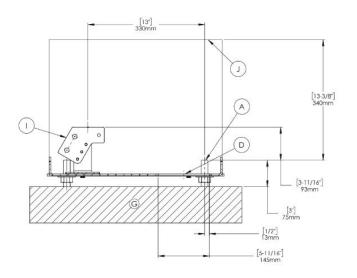


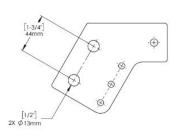


Side View of the AC Power Connections



Side View of DC Power Connections (If Applicable)





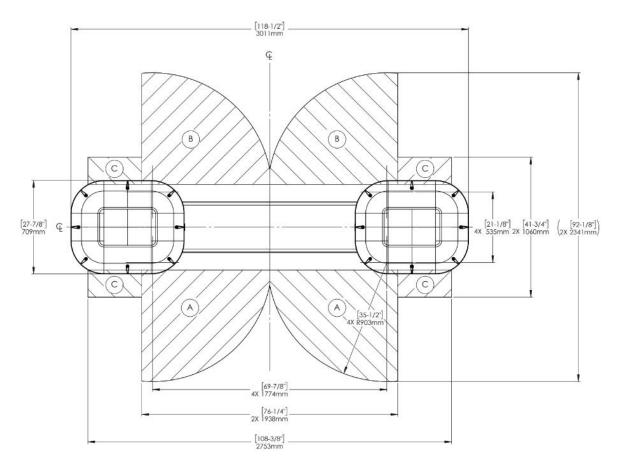


6.6. Surface Area Requirements

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.

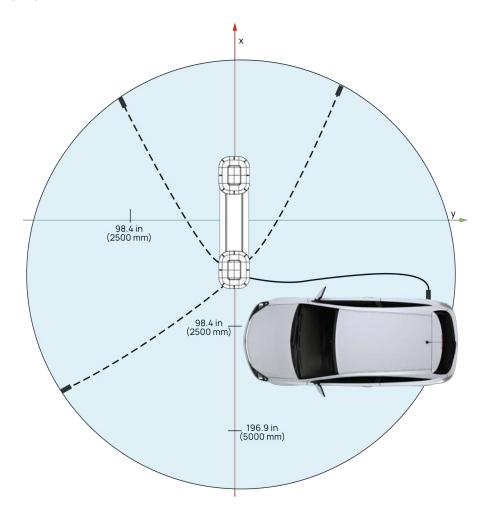


Part	Description
Α	Required space to open the front main compartment doors
В	Required space to open the rear main compartment doors
С	Required space to open the user interface doors



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:



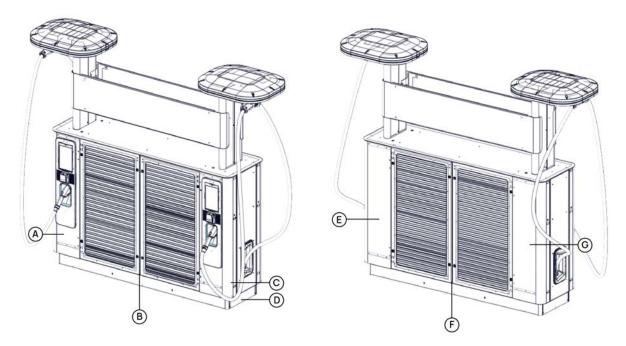
NOTE: Protective barriers, such as wheel stops and low-height bollards, can also be used.

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 into 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.



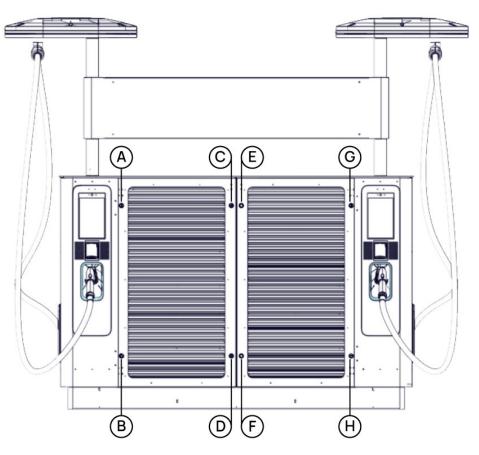
Part	Description
А	User interface compartment (left, front access)
В	Main electric compartment
С	User interface compartment (right, front access)
D	Power cable compartment
E	User interface compartment (left, rear access)
F	Rear compartment
G	User interface compartment (right, rear access)



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:



Part	Description
А	User interface latch-lock (upper left)
В	User interface latch-lock (lower left)
С	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:

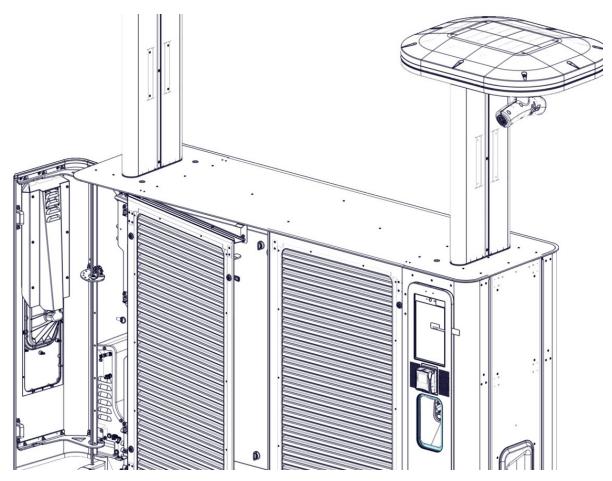
Part	Description
Α	Inner electrical compartment door latch (upper left)
В	Inner electrical compartment door latch (lower left)
С	Inner electrical compartment door latch (upper right)
D	Inner electrical compartment door latch (lower right)



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.





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

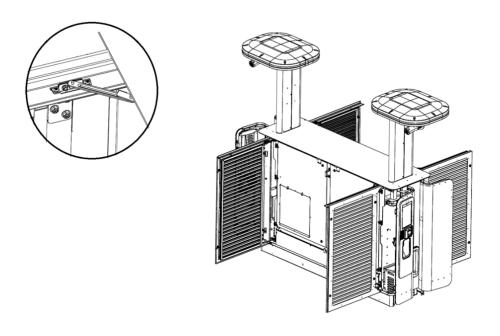
1. Insert the key provided with the FLO Ultra in the latch-lock and turn it 90 degrees counterclockwise.



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

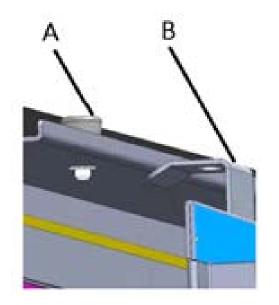
6.8.1.1. Engaging the Door Stays

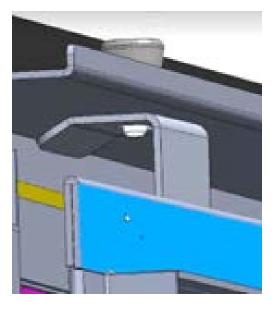
To keep the outer main compartment doors open, open the door to the fullest extent until the door stay engages.





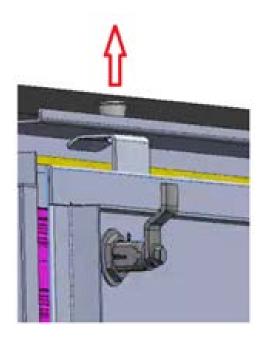
To keep the inner electric compartment doors open, open the doors to the fullest extent and push the doors into the outer main compartment doors until the plungers at the top of the outer doors engage in the inner door holding brackets.





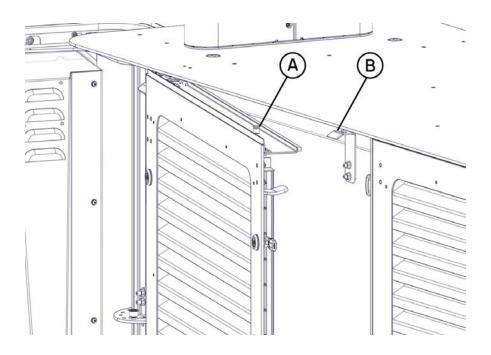
Part	Description
Α	Outer door plunger
В	inner electric compartment door holding brackets

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





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.



Part	Description
А	Inner door plunger
В	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 charger.

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 employers' 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 operating a forklift.
- 10. Use proper footing and the 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.



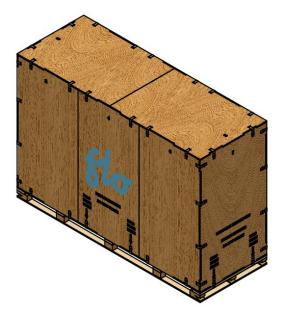
7.3. Unloading the Crate from the Truck

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: 2700 lb (1225 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.

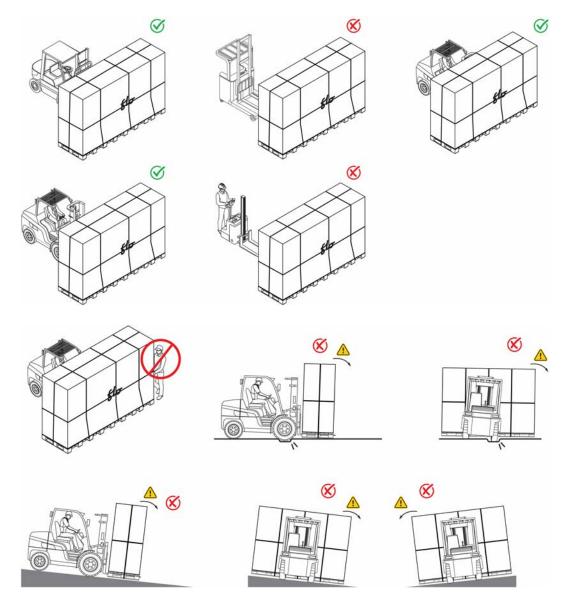
NOTE: Forklift extensions are required to handle the crate from the long side.





7.4. Moving the Crate Safely

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

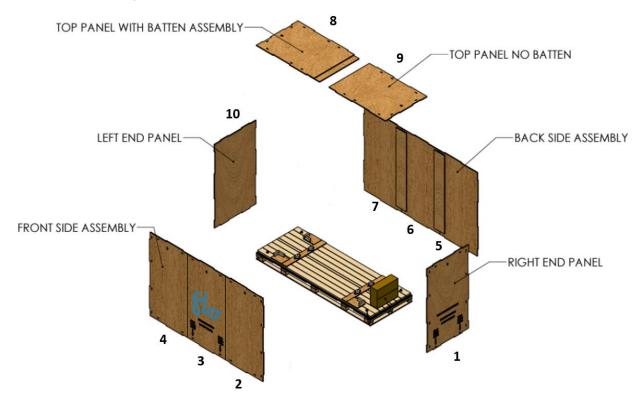




7.4.1. Uncrating the Charging Station

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

Refer to the image below for panel identification:





- 1. Remove the following 28x screws from the crate:
 - a. 4x screws on top of the crate.
 - b. 4x screws on back side assembly panel 5 and back side assembly panel 7.
 - c. 4x screws on front side assembly panel 2 and front side assembly panel
 4.
 - d. 8x screws on each side.



- 2. Remove left end panel 10 by following the steps below:
 - a. Remove the 12x screws
 - b. Remove left end panel 10 carefully and place it out of the way.



- 3. Remove top panel 9 with no batten by following the steps below:
 - a. Remove the 6x screws from the end and 2 side panels.
 - b. Remove top panel 9 with no batten carefully and place it out of the way.







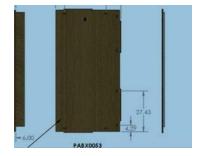


- 4. Remove top panel with batten assembly 8 by following the steps below:
 - a. Remove the 8x screws from the end and 2 side panels.
 - b. Remove top panel with batten assembly 8 carefully and place it out of the way.



- 5. Remove back side assembly panel 7 by following the steps below:
 - a. Remove the 2x screws.
 - b. Remove back side assembly panel 7 carefully and place it out of the way.





- 6. Remove center back side assembly panel 6 by following the steps below:
 - a. Remove the 2x screws.
 - b. Remove center back side assembly panel 6 and place it out of the way.

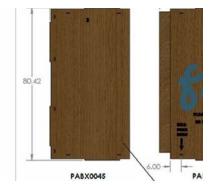






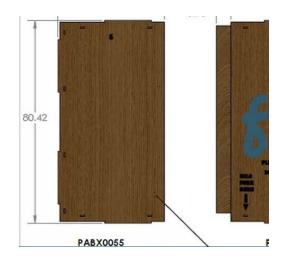
- 7. Remove back side assembly panel 5 by following the steps below:
 - a. Remove the 2x screws from the bottom of the panel.
 - b. Remove the 4x screws from the side of the panel.
 - c. Remove left side wall panel 5 carefully and place it out of the way.





- 8. Remove front side assembly panel 4 by following the steps below:
 - a. Remove the 2x screws from the bottom of the panel.
 - b. Remove front side assembly panel 3 carefully and place it out of the way.







- 9. Remove center front side assembly panel 3 by following the steps below:
 - a. Remove the 2x screws.
 - b. Remove center front side assembly panel 3 carefully and place it out of the way.





- 10. Remove right side wall panel 2 by following the steps below:
 - a. Remove the 2x screws from the bottom of the panel.
 - b. Remove the 4x screws from the side of the panel.
 - c. Remove right side wall panel 2 carefully and place it out of the way.







- 11. Remove right end panel 1 by following the steps below:
 - a. Remove the 2x screws from the bottom of the panel.
 - b. Remove right end panel 1 carefully and place it out of the way.



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



13. Remove the bubble wrap around the banding straps on both sides of the charging station.









14. Remove the banding strap by feeding it through the (PAWT0193) slot.



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



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





17. Remove the (PAWT0203) padding from the door.





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





19. 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.



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



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





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



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





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







25. Remove the (PAWT0193) cable and canopy support padding.









26. Remove the zip ties securing the canopy protective padding in place.



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



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



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OperatorAnspector			Date	
Global Verification				
				P
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Verify that no scratchs we Canopys foams are strapp The relevant documents a Verify that the shipping str	re done during crating ed properly re available in the crate (mar			P

- 29. Keep the cables tied until after the AC and DC power cables are completed. Refer to "Unpacking the Charging Cables" on page 93 for more information.
- 30. Remove the bolts on the 4 corners of the charger at the base of the crate.



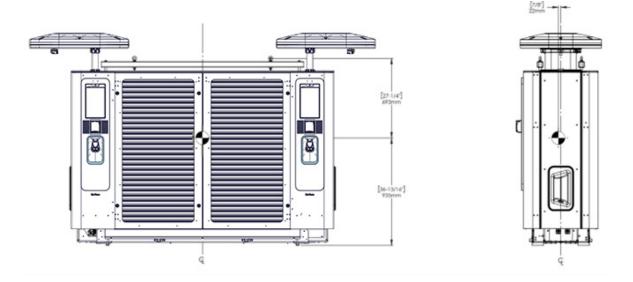


7.5. Lifting

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.





7.6. Hoist Lifting

NOTE: Hoist lifting is the recommended lifting method.

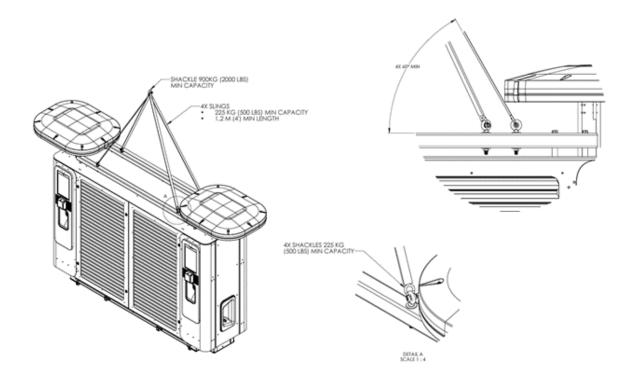


WARNING – Keep a security perimeter around the hoist and under the FLO Ultra during transportation. Do not stand under the FLO Ultra during transportation.

The hoist lifting procedure uses screw eye hooks with an inside measurement of 3/4" (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 equipement 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:
 - 4 shackles with 500 lb (225 kg) minimum capacity each.
 - 1 shackle with 2 000 lb (900 kg) minimum capacity each.
 - 4 slings with 500 lb (225 kg) minimum capacity each and 4' (1.2 m) minimum length.
- 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 19* for more information. Only use a hoist lift that can safely lift the FLO Ultra.
- 4. Ensure the good positioning of the 2 000 lb (900 kg) shackle to avoid tangling or jamming. Do not allow a shackle to be pulled at an angle as this causes the legs to open. Pack the pin with washers to center the shackle. Do a visual check in all directions to make sure the shackle is positioned correctly and that the path of the hoist lift is clear.
- 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 35 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

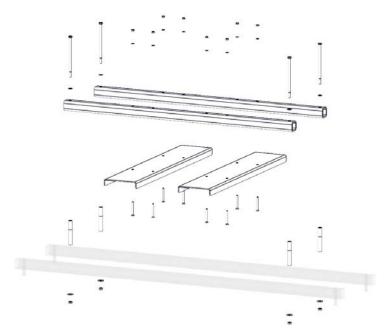
NOTE: The *Forklift Lifting* section is only applicable when you are moving the FLO Ultra with a forklift.

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

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

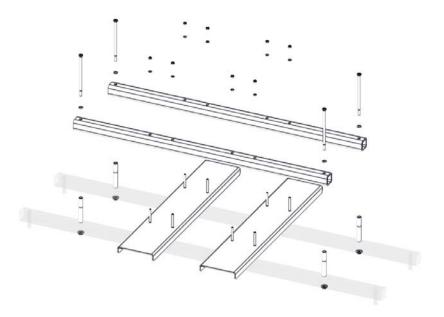
7.7.1. Installing the Lifting Jig on the FLO Ultra

Follow the steps below to install a lifting jig on the FLO Ultra:

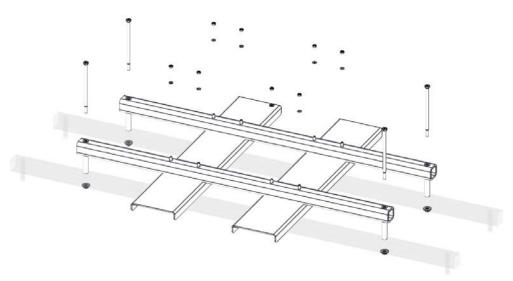




1. Place the forklift lifting jig horizontal bars on top of the FLO Ultra, aligning the extrusions at the bottom with the indentations on top of the FLO Ultra.

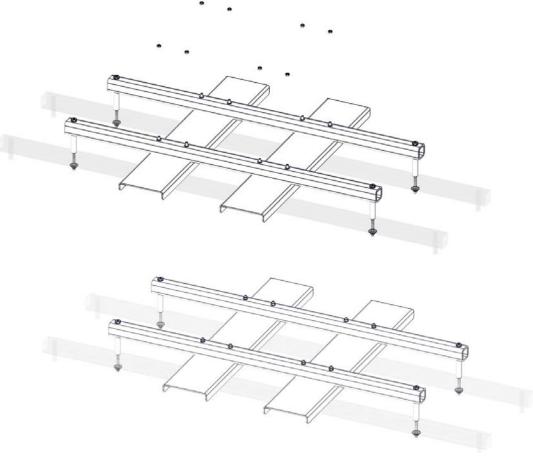


2. Place the angle lift lifting jigs on top of the forklift lifting bars in a perpendicular arrangement, aligning the screw holes of the angle lifting jigs and the lifting bars.



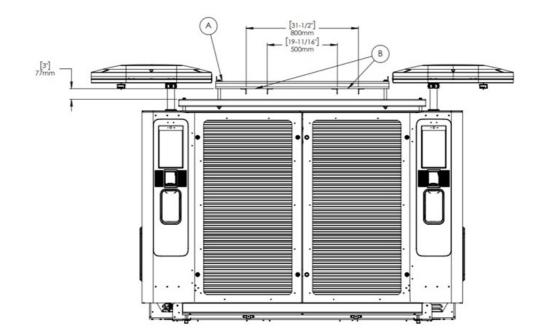


3. Place the washer on top of the angle lift lifting jig screw hole and screw in the head screw. On the bottom of the angle lift lifting jig, add an oversized washer and a bolt to the head screw to secure the parts together. **The torque must be 70 N m (51.6 lb-pi).**





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:

Part	Description
А	Forklift lifting jig
В	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 capicity of the forklift must be over 700 kg (1 540 lbs) to lift the charging station and the lifting jig. Refer to *"Specifications" on page 19* 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 Utra charging station. This equipment must not be used for any other type of lifting.



8. Box Contents

Part Number	Description	Quantity	Box Number
MEDS0739	Lower post support	4	1
MEDS0740	Internal banner support	4	1
MEDS0701	FLO Ultra banner support	4	1
MEDS0700	FLO Ultra banner	2	1
MEDS0934	AC power cable entry plate and 4 self tapping screws	1	1
MEDS0805	DC power cable entry plate	2	1
MEDS0741	Canopy lifting tool	1	2
MEDS0736	Canopy left side covers	2	2
MEDS0737	Canopy right side covers	2	2
MEDS0794	Front and back external lower panels	2	2
MEDS0795	Side external lower panels	2	2
MEDS0797	Front and back interior lower panels	2	2
MESB0311	Hex head screw M6x16	24	3
MESB0343	Socket head screws	4	3
MEDS0734	Spacers for canopy support	4	3
MEWS0096	Washers	4	3
MEDS0806	Screw-on caps	4	3
MEGS0072	Screw-on caps and O-rings	4	3
MEHD0540	Spanner head or Hafren two hole security screw	1	3
MENU0071	Nuts for banner fastening	8	3
MESB0312	Hexagonal head screw M6x20	8	3
MESB0315	Flat-head screw	12	3
MEDS0796	Washers for interior lower panels	12	3
MESB0281	BT screw M6x16	8	3
PRIP1103	Amperage identification labels	1	3
PRIP1104	Additional nameplate labels for charging station identification	1	3
MESB0280	BT screw M6x50	8	3



Part Number	Description	Quantity	Box Number
MEDS1078	Protective corners, right	2	3
MEDS1079	Protective corners, left	2	3
MESB0368	Screws for protective corners	20	3
PRLP1096	Identification stickers (letter A)	2	3
PRLP1097	Identification stickers (letter B)	2	3
MEDS1082	Access key	1	3
PRFM0100	FLO Ultra Installation Guide - English	1	3
PRFM0101	FLO Ultra Installation Guide - French	1	3
TOSR0208	Plastic squeegee	1	3



9. Additional Required Parts

Part	Note
	Refer to the "Connecting the
	AC Power Cables" on page 76
	and "Connecting the Optional
	DC Power Cables and the
	Control Wiring " on page 82
	sections for more information.

10. Additional Recommended Parts (Optional)

FLO recommend using the following parts to complete the installation of the FLO Ultra.

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.

4	The installation shall be in accordance with the local electrical code for products installed in the United States.
4	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.

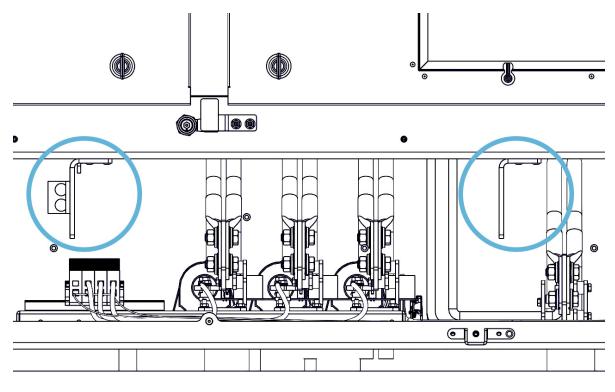
Follow the steps in the sections below to complete the FLO Ultra installation:



11.1. 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 the 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.





11.2. Recommended Tools

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

Tools	Installation Process
Drill #2 square drive bit Ratchet with 15/16" deep socket (or wrench) Utility knife	Uncrating the FLO Ultra
4x shackles 225 kg min 4x slings 225 kg min Shackle 900 kg min Crane or boom truck	Standard lifting
Forklift lifting tool Forklift Torque wrench with 17mm socket 17mm wrench	Forklift lifting (Optional)
Torque wrench with 1-1/8" deep socket 1-1/8" wrench 4' level	FLO Ultra Installation
Torque wrench with 19 mm sockets 19 mm wrench or ratchet Lug crimping tool Duct seal in sufficient quantity Drill Hole-saws (or punching tool) chosen according to conduit sizes 10 mm drill socket Heavy wire cutter Cable pulling tool Cable stripper Lug crimping tool Measuring tape Permanent marker	AC and DC electrical connection
Torque wrench with a 10 mm socket	Installing lower connection enclosure panels



Tools	Installation Process
Ratchet with 13 mm socket (or wrench) Torque wrench with 13 mm socket Post lifting tool	Raising posts
Torque wrench with 10 mm socket	Installing post cover brackets
Ratchet with 17 mm socket (or wrench)	Removing the lifting structure
Torque wrench	Cover holes with screw cap covers
T25 tamper resistant drive bit Torque wrench	Installing post covers
Torque wrench with 10 mm socket	Installing the banner
N/A	Installing the charging cable clamps
T27 tamper resistant drive bit Torque wrench	Installing the skirt
Torque wrench with 10 mm socket	Adding the protective corners



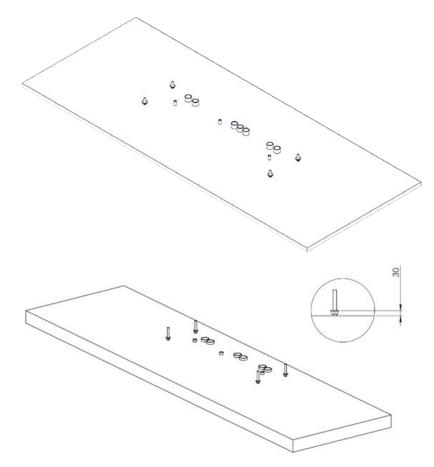
11.3. Securing the FLO Ultra to the Concrete Slab

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) and adjust the height of the nut to accommodate the leveling of the FLO Ultra. There must be exactly 1 3/16" (30 mm) between the washer and the concrete slab.

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.



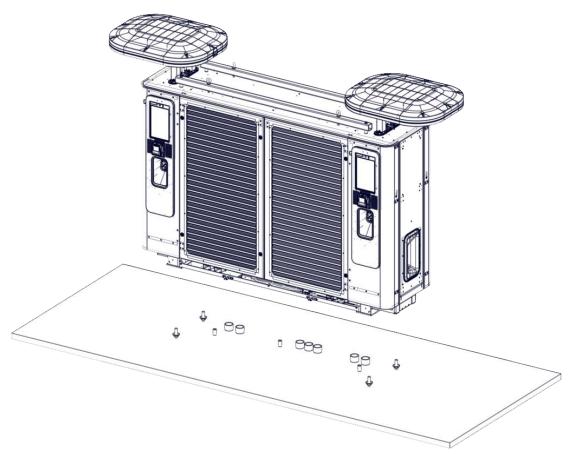


2. Lift the FLO Ultra, following the hoist or forklift instructions, as applicable, and align the base mounting holes with the anchors (4x).



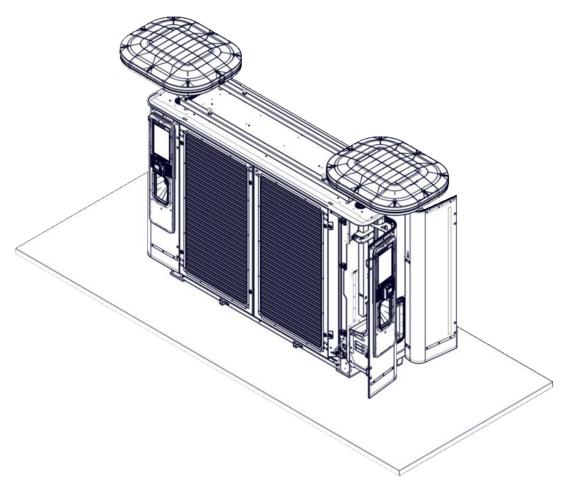
WARNING: Ensure a safety perimeter under and around the hoist and supended FLO Ultra. Make sure no people are in the vicinity of the suspended charger.

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 28*.



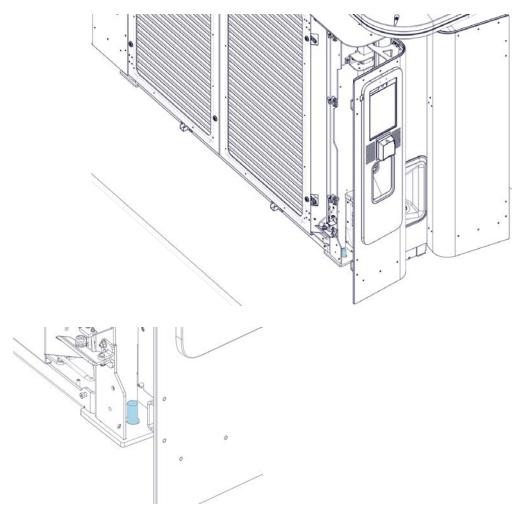


3. Slowly lower the station, aligning the FLO Ultra mounting holes (4x) with the anchors until the FLO Ultra rests on the washers/nuts (4x).



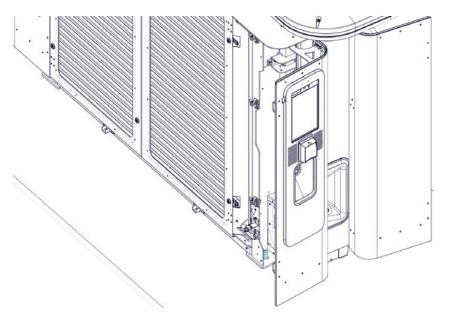


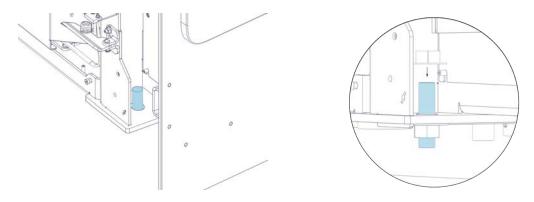
4. Insert the washers and nuts, then loosely fasten the nuts (4x), leaving sufficient space to adjust the height of the nuts to level the FLO Ultra, as detailed in the next step.





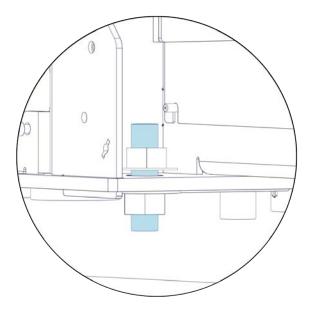
5. Level the FLO Ultra by adjusting the height of the nuts to ensure the lowest flat washer is at a height of 1 3/16" (30 mm) to maintain sufficient space between the base of the FLO Ultra and the concrete slab for the installation of the side, rear and front lower panels after the power cable connection. Refer to "Connecting the AC Power Cables" on page 76 and "Connecting the Optional DC Power Cables and the Control Wiring " on page 82 for more information.







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 UL Ultra Site Planning Application Note*, provided by request to installers.

11.4. Power Module Verification

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

- 1. Open rear doors.
- 2. Remove rear 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 step 3 correctly before moving on to the next step.

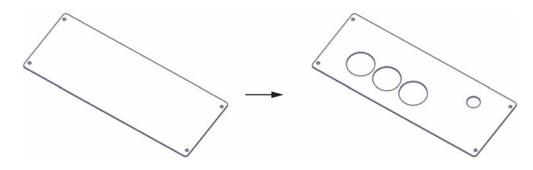
- 4. Reinstall the rear filters and secure the thumbscrews.
- 5. Close and lock all the charging station doors.

NOTE: It is possible to access the filters from the 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.



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

L1, L2, L3 Wire Specifications and Connections Table

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

Ground Wire Specifications and Connection Table

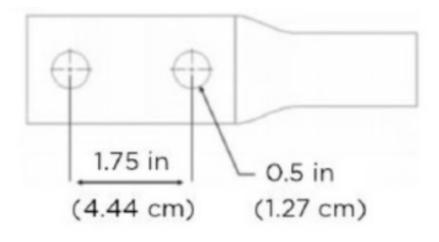
Size of the conductor	2 AWG – 350 MCM, 33 mm ² – 175 mm ²
Insulation stripping length	NA
Conductor material	Copper or aluminium
End style	Mechanical lug
Bolt socket sizes / nuts	5/16" hex socket
Tightening torque	42 N m (375 in-lb)



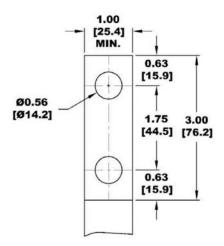
NOTE: The AC input conductor terminals (lugs) must follow the minimal requirement below:

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

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



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



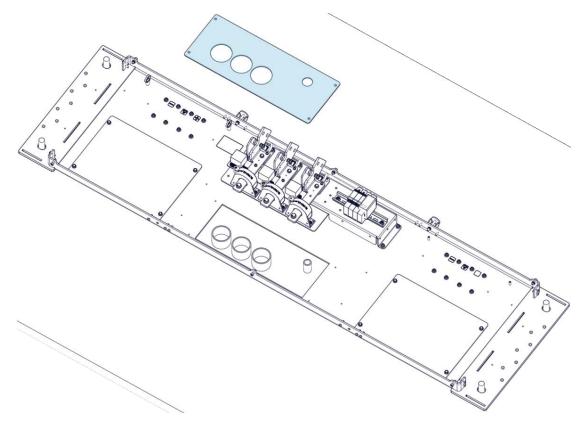


Conduit Recommendations Table

Typical conduit size for AC conductors	4'' (102 mm)
Typical conduit size of control and communication cables	1'' (25 mm)
(Ethernet upstream and other small cables)	1 (2511111)

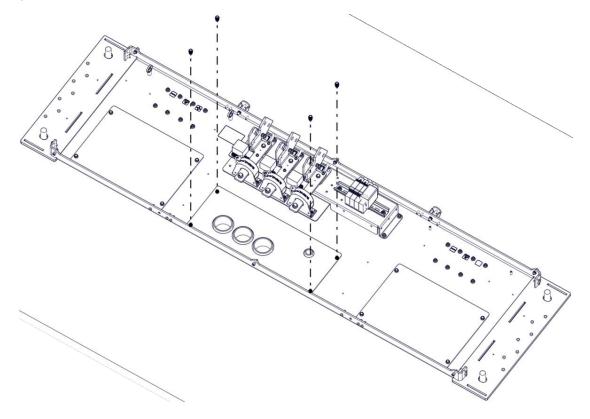
AC input

3. Pull the cables through the power cable entry access plate (MEDS0934) openings and place the power cable entry plate back in its position.





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

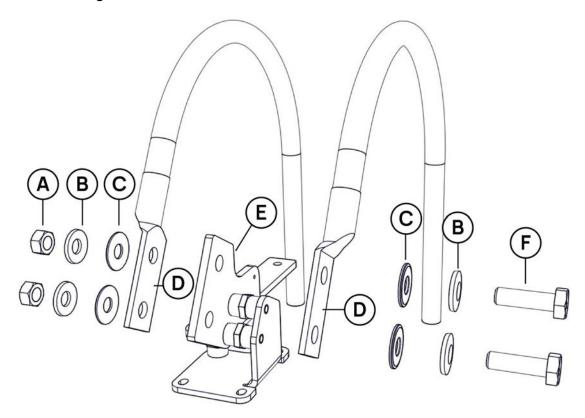


5. Seal the area surrounding the conduits and the gap between the conductors in the conduits.



6. Connect the L1, L2, L3 cable conductor terminals (lugs) (up to 2 lugs per phase) to the incoming AC terminal busbars.

NOTE: Follow local regulations when choosing your number of conductor terminals (lugs).

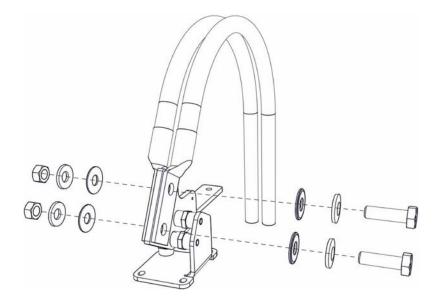


Part	Description	
А	Nut	
В	Belleville washer	
С	Washer	
D	Compression lug	
E	AC terminal busbar	
F	Head screw	

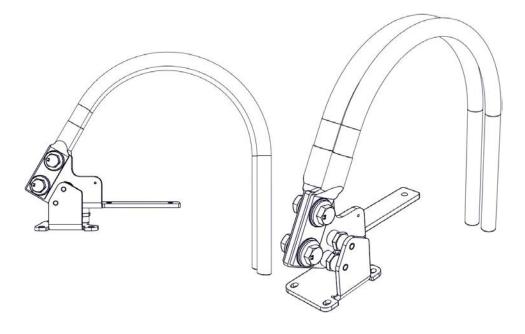


7. Place the washers, the belleville washers with the concave side towards the busbar, and the bolts on either side of the compression lugs.

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



8. Tighten the nuts in accordance with the lug manufacturer torque recommendation. Refer to the *L1, L2, L3 Wire Specifications and Connections Table* and *Ground Wire Specifications and Connection Table* in list item number 2.



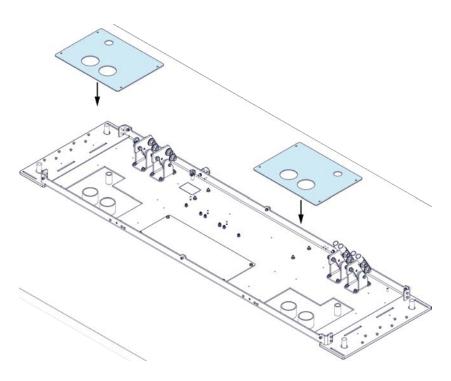


13. Connecting the Optional DC Power Cables and the Control Wiring

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.

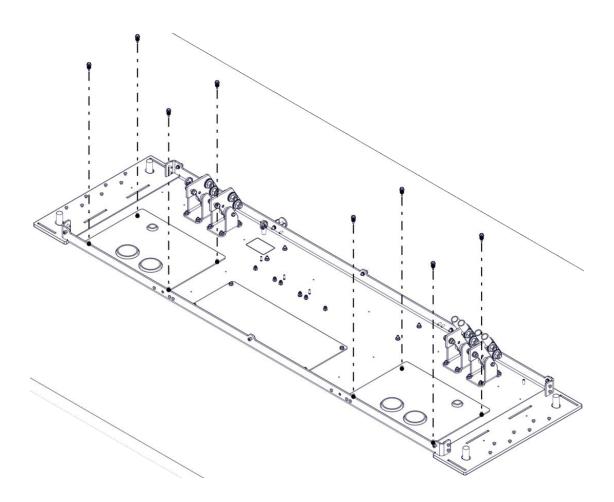
NOTE: In order to accommodate future power sharing capabilities on stations with the DC input option, you must cut out three holes in the access plates (MEDS0805) to accommodate the additional cables during the installation process. It is not possible to make modifications at a later date.

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





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



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

Number of conductors	2 per line
Size of the conductors	4/0 AWG – 700 MCM, 120 mm ² – 355 mm ²
Voltage rating	1 000 V
Conductor material	Copper or aluminum
End style	Compression terminals
Insulation stripping length	Depends on the terminal to be crimped
Bolt socket sizes / nuts	19 mm socket and 18 mm deep socket
Tightening torque	70 N m (52 ft-lb)

Ground Wire Specifications and Connections Table

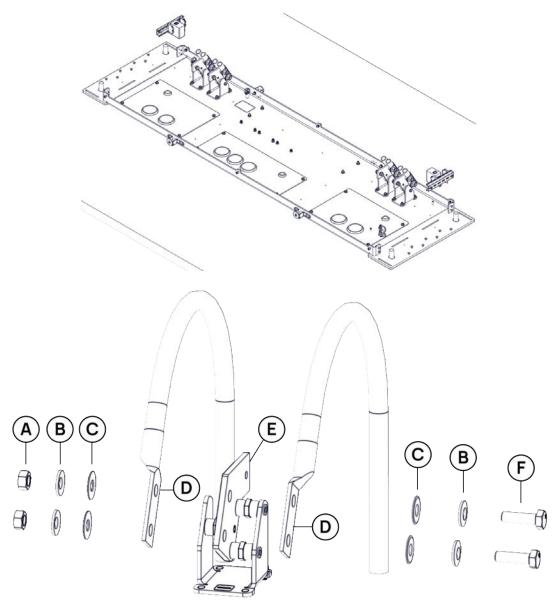
Ground wire (optional)	2 AWG – 350 MCM, 33 mm ² – 175 mm ²
Conductor material	Copper or aluminium
End style	Mechanical lug
Insulation stripping length	NA
Bolt socket sizes / nuts	5/16" (8 mm) hex socket
Tightening torque	42 N m (375 in-lb)

Conduit Recommendations Table

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



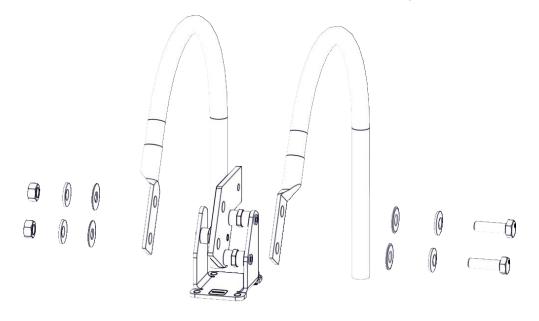
RECOMMENDATION: FLO recommends the use of a dieless cable crimping tool kit to crimp the cables.



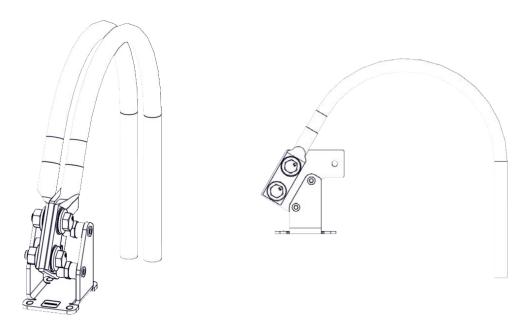
Part	Description	
А	Nut	
В	Belleville washer	
С	Washer	
D	Compression lug	
E	DC terminal busbar	
F	Head screw	



- 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.

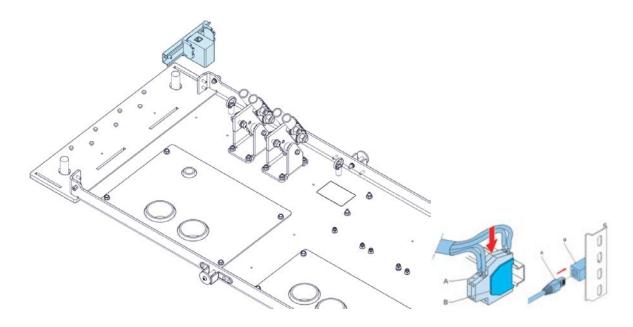


8. Tighten the nuts in accordance with the lug manufacturer torque recommendation. Refer to the *DC+ and DC- Wire Specifications and Connection Table* in list item #5.





9. Connect the wires (3 twisted pairs) to the 3 terminal blocks and the RJ45 communication cable of each paired charger (2x).



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.

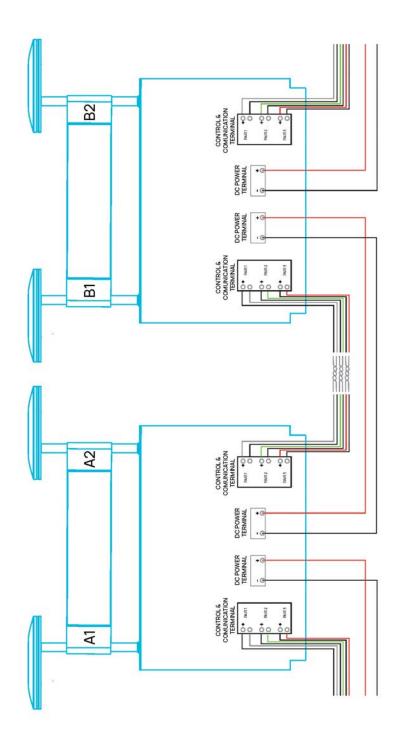
NOTE: This harness can be built using unshielded twisted-pair cables. Using a shielded cable is not required, but special care should be taken if using a shielded cable. The shield should NEVER be terminated (connected to GND) on both sides, but only at one end (either one). This is critical to avoid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



Terminal Block Table

From Charger 1 TB1 or TB3	Wire Connections	To Charger 2 TB1 or TB3
1	+	1
2		2
3	-	3
4	+	4
5	-	5
6	+	6







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

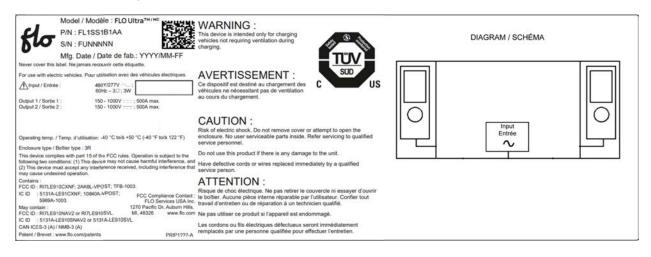
Refer to the image below for information on the nameplate label with DC input. The amperage sticker (input current) (PRIP1103) can be seen on the left side of the label. The station ID with the DC input sitcker (PRIP1104) can be seen on the right side of the label.

SIN : FUNNNN	WARNING : This device is intended only for charging vehicles not requiring venillation during charging.	DIAGRAM / SCHÉMA
Mfg. Date / Date de fab.; YYYY/MM Never cover this label. Ne jamais recouvrir cette étiquette.	SEE DIAGRAM.	
For use with electric vehicles. Pour utilisation avec des véhicules électr	AVERTISSEMENT : SUD	
▲ Input / Entrée : 480 Y/277V ~ ; 60 Hz - 3⊘; 3W	Ce dispositif est destiné au chargement des CUS US	
Output 1 / Sortie 1 : 150 - 1000V	au cours du chargement. PLUS D'UNE ALIMENTATION, VOIR SCHÉMA.	
Input/Dutput 1 / Entrée/Sortie 1 : 150 - 1000V	CAUTION : Risk of electric shock. Do not remove cover or attempt to open the	Input/Output 1 Input Entrée/Sortie 1 Entrée
Operating temp, / Temp, d'utilisation: -40 °C to/à +50 °C (-40 °F to/à 12	(2 °F) enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel.	
Enclosure type / Bolter type: 3R This device complies with part 15 of the FCC rules. Operation is subject following two conditions: (1) This device may not cause harmful interfer (2) This device must accept any interference received, including interference may cause underived operation.	ence, and Have defective courts or wires ranksceri immeritately by a qualified	
Contains: FCC ID: RTLE910CXNF; 2AKRL-VP0ST; TFB-1003. IC ID: :5131A-LE91CXNF; 10460-VP0ST; FCC Compliance 5698A-1003. FLO Service May contain: T27 Pachto [Cr, Au FCC ID: RTTLE910NAV2 or RTT_E910SVL. ML 4528 CAN ICES-3 (A) 1 MMB-3 (A) CON ICES-3 (A) 1 MMB-3 (A)	USA Inc. travail d'entretien ou de réparation à un technicien qualifié	



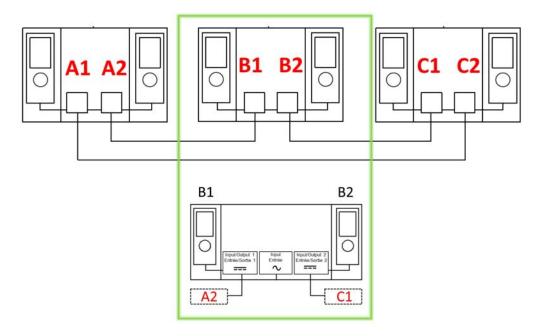
14.2. Nameplate Label without DC Input

Refer to the image below for information on the nameplate label without DC input.



14.3. Nameplate Label on a Multi-Unit Charger with DC Input

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





14.4. Amperage Value Sticker

The table below shows the amperage the charging station pulls and the corresponding total power that is available as output. Using the provided label sheet (PRIP1103), select and install the appropriate value onto the nameplate label, according to the site configuration:

Amperage	Total Power
408 A	320 kW
320 A	250 kW
230 A	180 kW
204 A	160 kW
160 A	125 kW
128 A	100 kW



15. Unpacking the Charging Cables

Follow the steps below to unpack the cables.

- 1. Remove the tie-rap tying the cables to the lifting jig (shown in orange).
- 2. Unwrap charging cables around the canopy on the top of the charger and through the openings of the foam.



3. Remove the 2 foams on top of the charger, under the canopies.

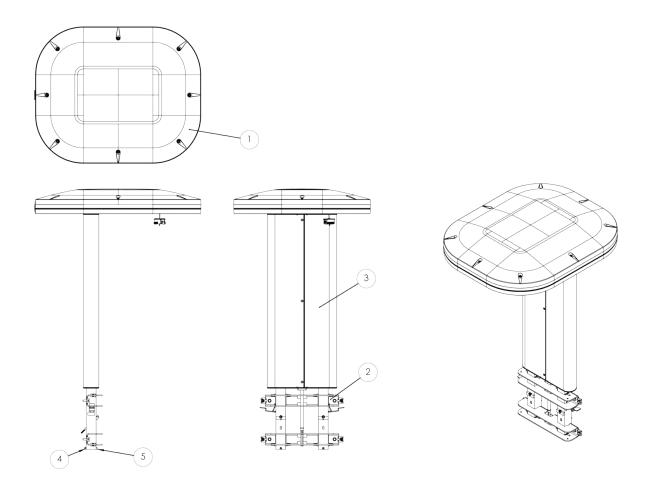




16. Raising the Canopy

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

The canopy contains the following 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 or lifting jig:

- 1. Remove the forklift lifting jig (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 list item #2 in the *Installing the Lifting Jig* subsection of *"Forklift Lifting" on page 58*.
- 3. Insert screw plugs (4x) (ASME0638) and tighten them to 10 N m (88.5 in-lb) using the double-hole drive bit (MEHD0540).

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

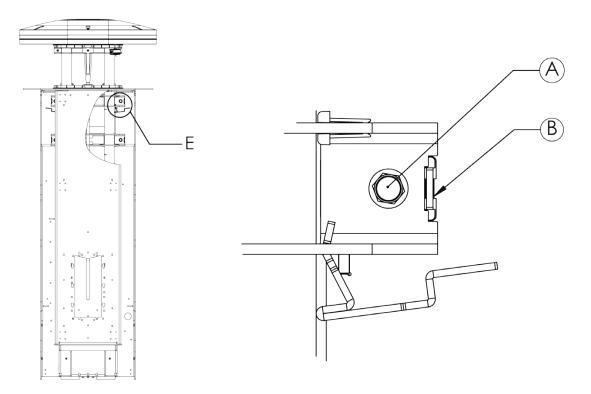


16.2. Lifting the Canopy

NOTE : At least two people must complete the *Lifting the Canopy* step.

Follow the steps below to lift the canopy safely:

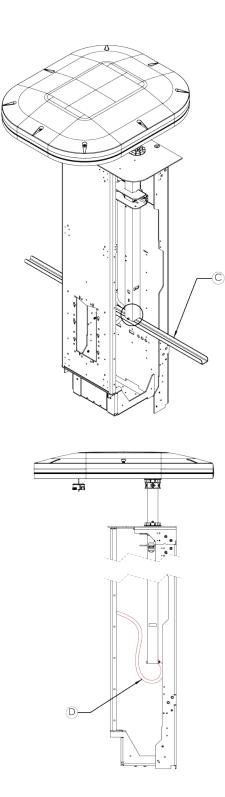
1. Unscrew the bolts (A) (4x) until you can insert the lifting wedges (B) (4x).

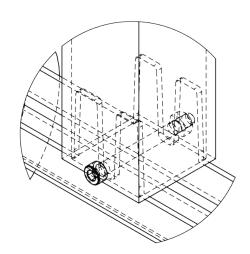


2. Lightly tighten bolts (A)(4x) by hand.



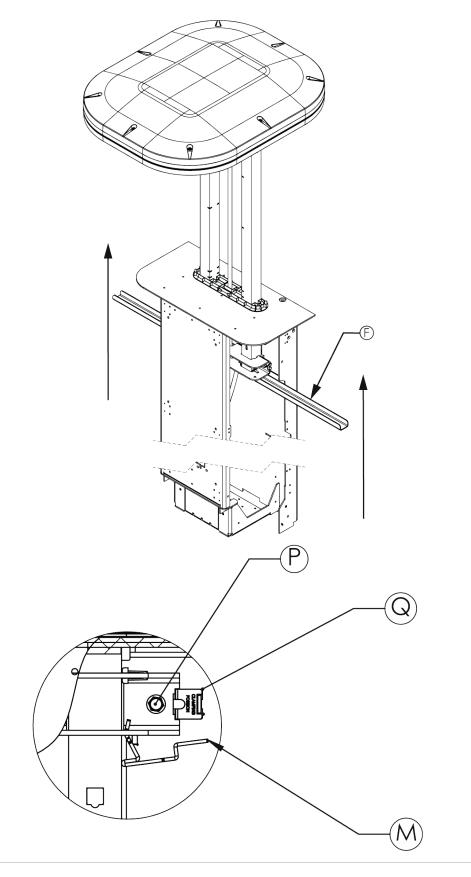
3. Insert the lifting tool (C) (MEDS0741) into the extrusion, taking care to position the power cable (D) correctly.







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





NOTE: The 2 latches must be correctly engaged.

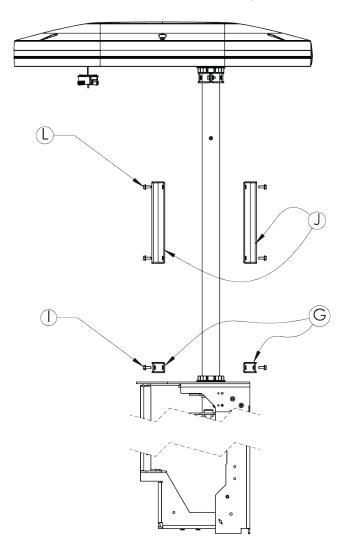
5. Remove the canopy lifting tool (F in the image above).



16.3. Assembling the Cover Support

Follow the steps below to assemble the cover support:

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



2. Tighten bolts (I) (2x) (MESB0311) to 10 N m.



- 3. Insert the middle support (J) (MEDS0740) into its grooves.

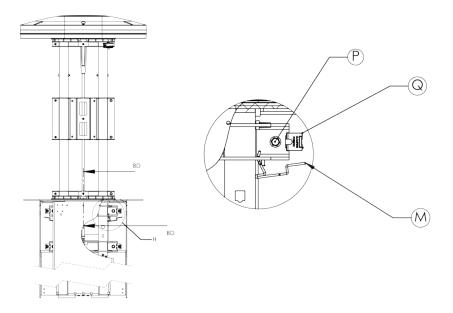
4. Tighten bolts (L) (MESB0311) (4x) to 10 N m.



16.4. Complete the Final Positioning of the Canopy

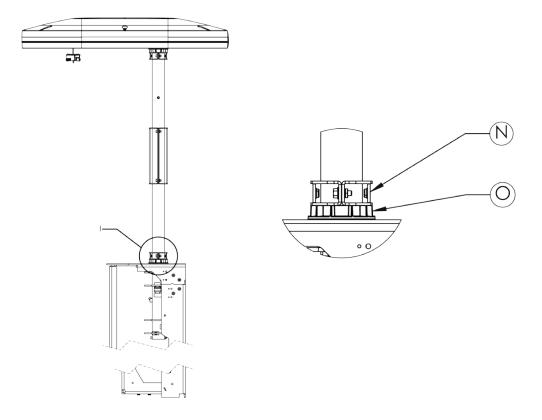
Refer to the images and table below for more information on the parts:

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



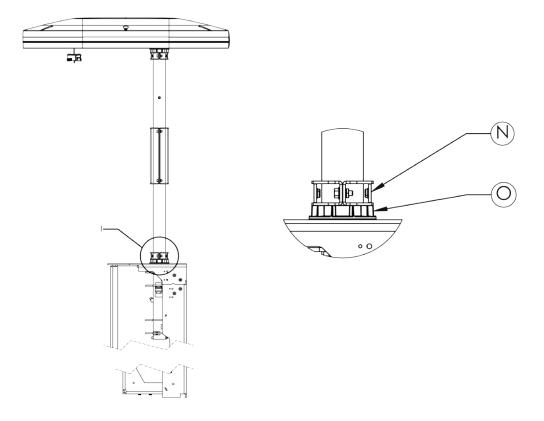


2. Lower the canopy so that the lower support (N) (MEDS0739) rests completely on the plastic part (O).



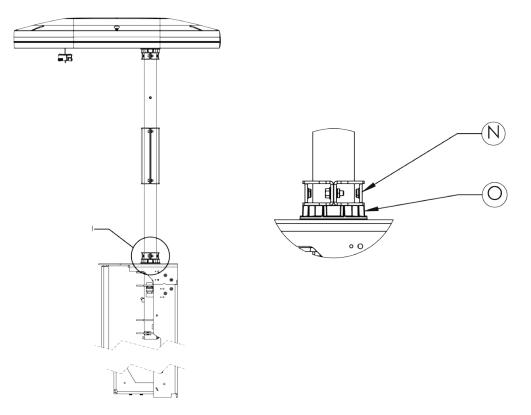


3. Lower the canopy so that the lower support (N) (MEDS0739) rests completely on the plastic part (O).

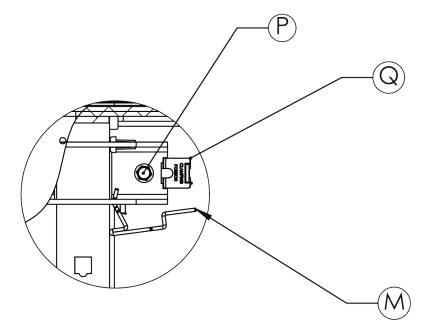




4. Lower the canopy so that the lower support (N) (MEDS0739) rests completely on the plastic part (O).

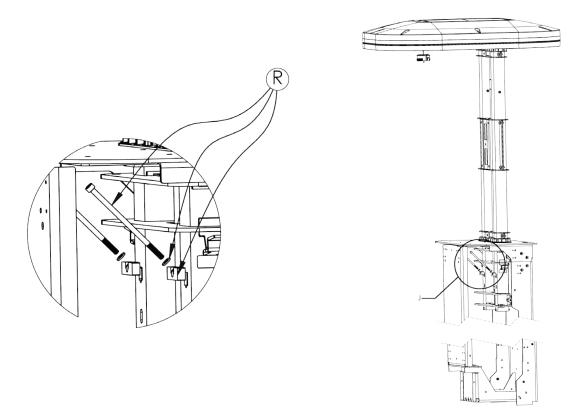


5. Slightly loosen the 4 bolts (P) and pull out the 4 spacers (Q) completely.

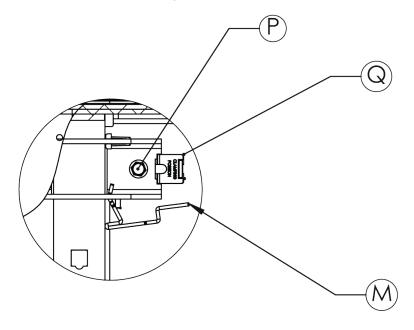




6. Insert the 2 tension bolt assemblies (R) (MESB0343, MEWS0096 and MEDS0734).



- 7. Tighten both tension bolts to 3 N m.
- 8. Tighten the 4 support bolts (P) gradually and evenly to 16 N m.

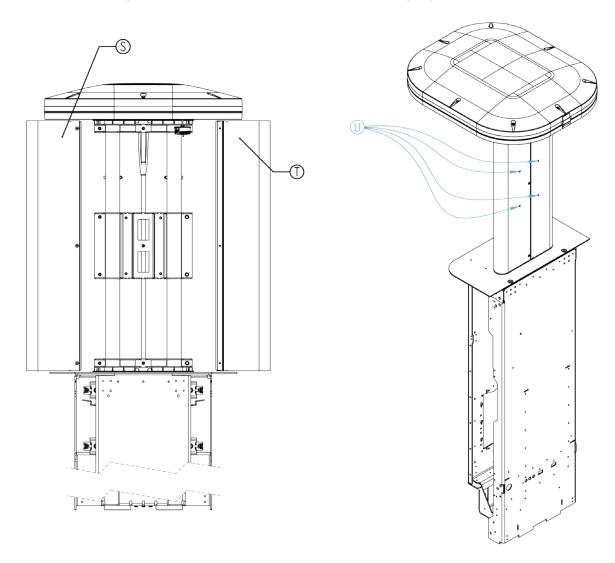




16.5. Assembling the Canopy Pole Covers

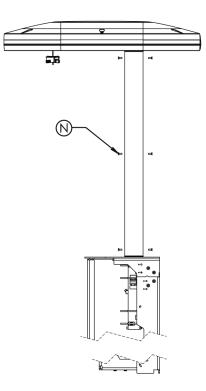
Follow the steps below to assemble the canopy pole covers:

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.





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



- 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

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) for applying the sticker
- Soft cloth for decal cleaning

16.6.1. Preparing the Surface

NOTE: Do not apply the 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.

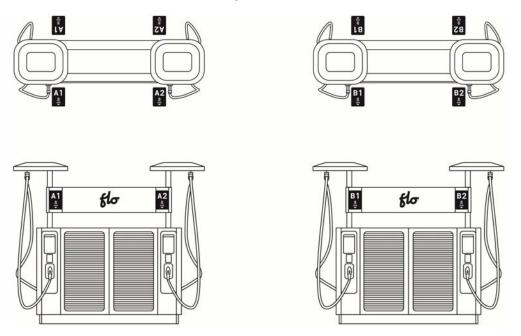
Make sure the surface is completely dry before starting the sticker application.

16.6.2. Sticker Order

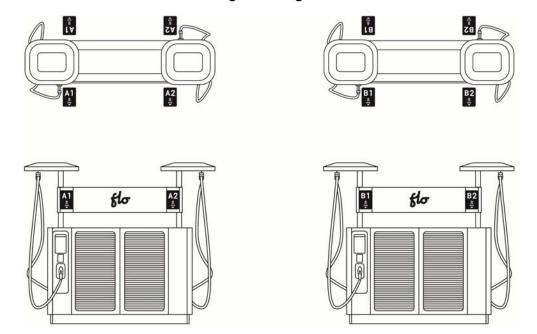
The stickers should be arranged in order from A to D, left to right on the front of the banner. Once the stickers are applied on the front side, the same letter should be applied in the same position on the rear banner. Refer to the images below according to your site and charging station configuration.



Sticker Placement on a Pull-In Configuration



Sticker Placement on a Pull-Through Configuration





16.6.3. Application Method

Image: State of the state of the

Follow the steps below to apply the stickers correctly:

- 1. Place the banner on a flat stable surface to install the stickers (PRLP1096 or PRLP1097).
- 2. Using the hinge method, peel back the sticker liner about 40 mm or $1\frac{1}{2}$ ", exposing the adhesive, and fold back the liner.
- 3. Line up the sticker over the red area in the upper banner corner indicating *Install letter sticker here to cover red area*, making sure that the sticker is inside the positioning marks and covers the red area completely.
- 4. Beginning from the middle of the top edge and working horizontally, use the application squeegee (TOSR0208) to apply the sticker with firm overlapping strokes.
- 5. 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 banner 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.

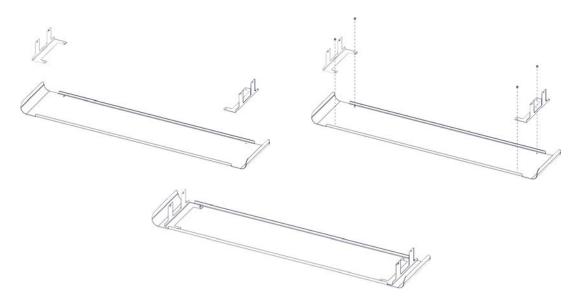
NOTE: If bubbles appear, use a sharp blade to lightly pin prick the sticker to release the trapped air. Use the squeegee (TOSR0208) to smooth out the graphic.

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

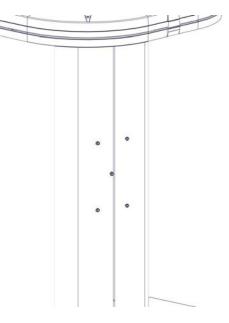


16.7. Installing the Banner

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

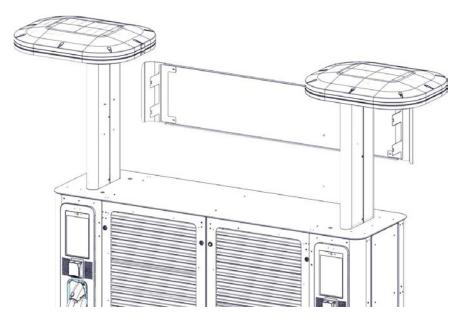


2. Insert and loosely fasten the banner support screws (8 screws; 4 on each side) (MESB0312) into the banner brackets.

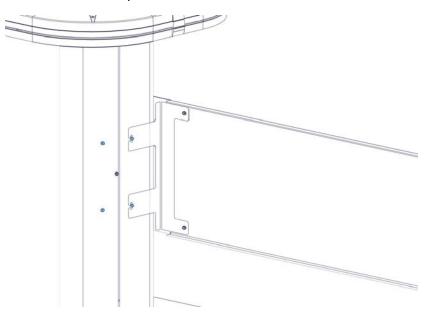




3. Hook the rear banner to the bracket screws (2 on each side).

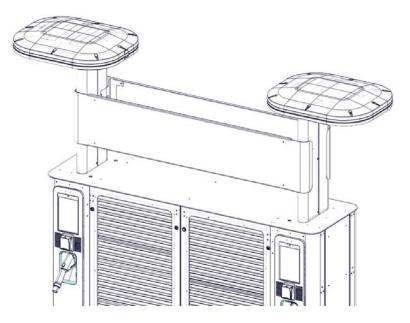


 Tighten the screws (4x) (MESB0312) with a torque of 6 N m, tighten the nuts (4x) (MENU0071) with a torque of 6 N m.





5. Repeat the steps for the front banner.

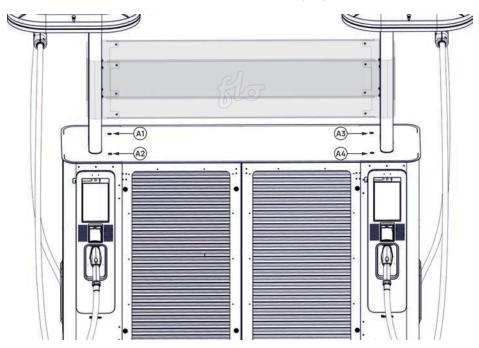




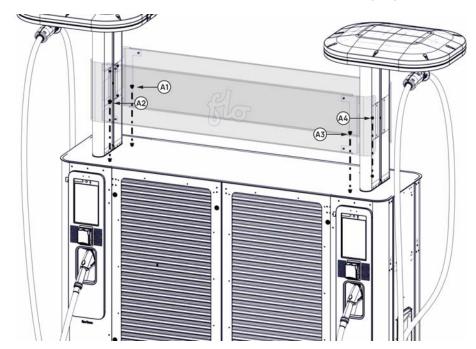
16.8. Installing the Screw Caps on Top of the FLO Ultra

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

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

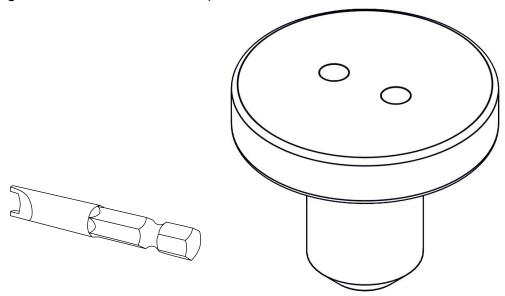






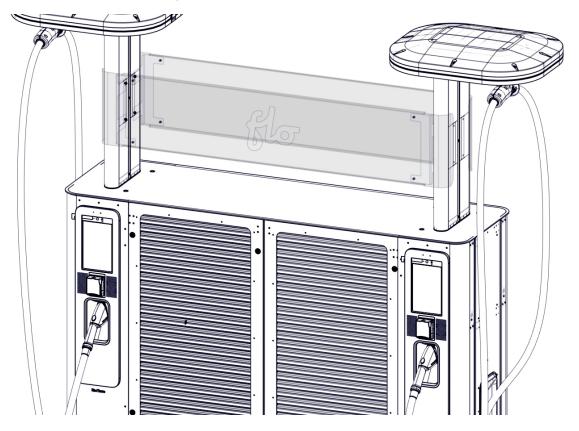
2. Place the (4x) screw caps in the holes on top of the charging station.

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





4. Make sure not to over tighten the screws.

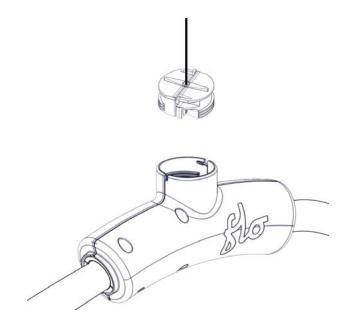




16.9. Installing the Charging Cable Clamp

Follow 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.



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

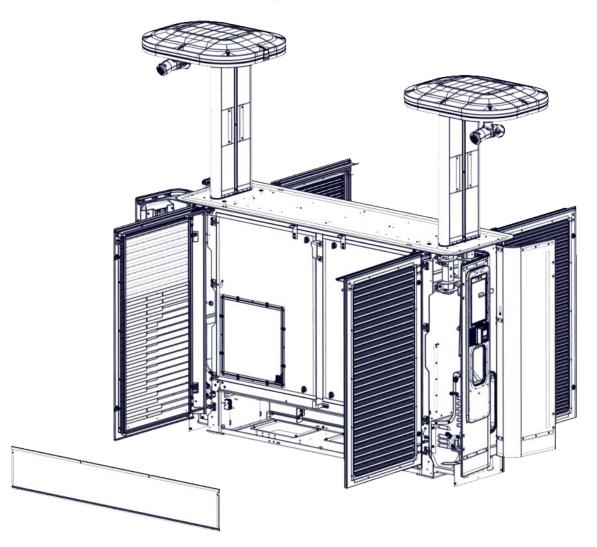


17. Installing the Protective Plate on the Electrical Compartment

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

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

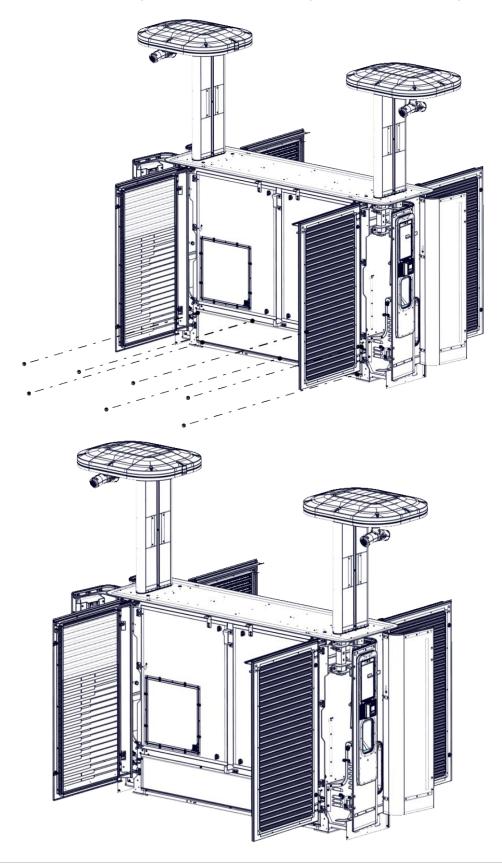
1. Open the main doors before installing the protective panels.



2. Place the panel so it is aligned with the screw holes.



3. Insert the screws and tighten to torque, making sure not to over-tighten.

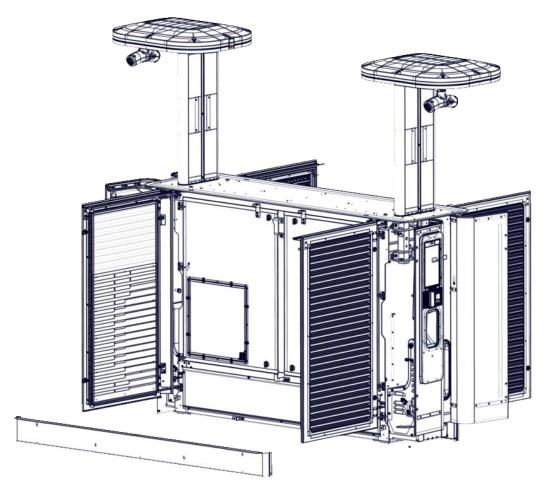




18. Installing the Lower Panels

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

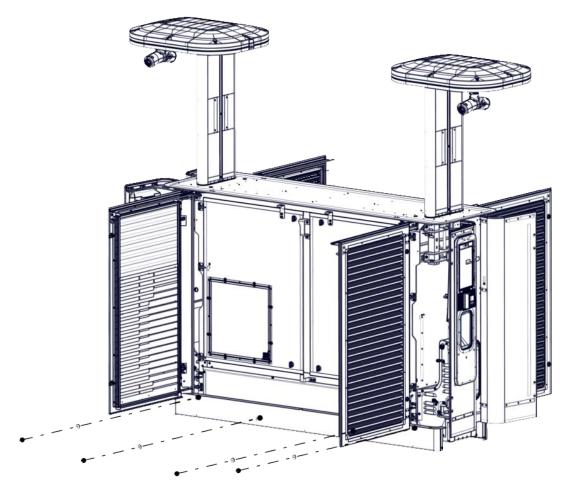
- 1. Open all the doors before installing the lower panels, including the main doors and the UI doors.
- 2. Identify the correct positioning of the front panel by looking for the inscription inside the lower panel. For example, *Front Top*.



3. Place the front panel so it is aligned with the screw holes.



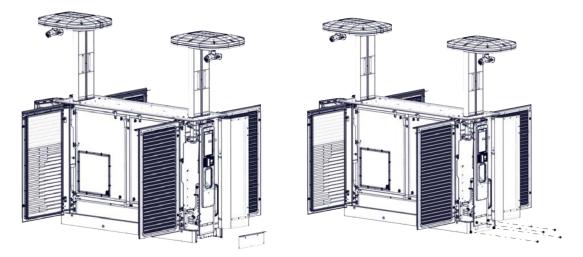
4. Loosely fasten the panel to the FLO Ultra base with the screws (MESB0280 and MEDS0796). Do not tighten the screws at this stage.



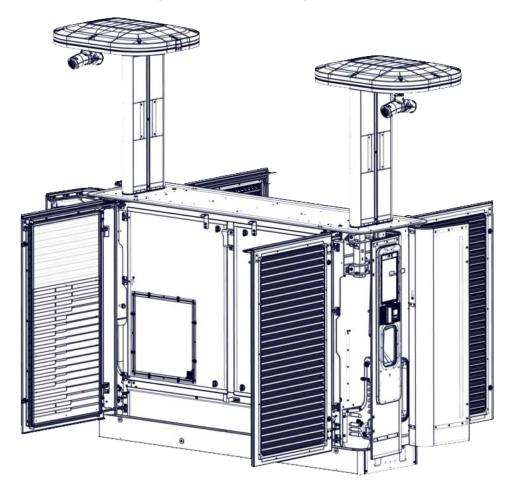
- 5. Repeat steps 1-3 with the back lower panel.
- 6. Repeat steps 1-3 with the side panels.

NOTE: For the side panels, only use washers with the 2 top bolts (MESB0281 and MEDS0796)





7. Tighten the screws making sure not to over tighten.





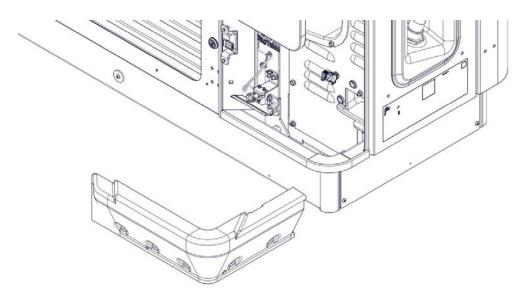
19. Adding the Protective Corners

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.

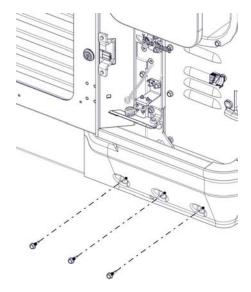
NOTE: For correct alignment of the protective corners, make sure the screws are at the bottom of the protective corner. Refer to the image below:



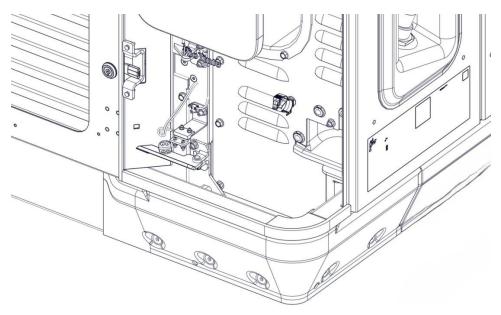
4. Install the right back protective corner by sliding it on the ground until it is against the lower panel.



5. Once the protective corner (MEDS1079) is in place, use the provided self tapping screws (MESB0368) to fasten it in place. Do not over tighten the screws over 4 N m.

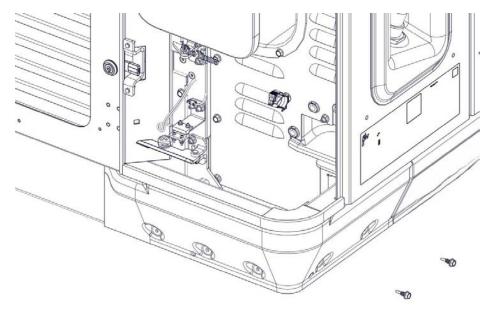


6. Align the protective corner labeled MEDS1078 over the side of the charger, making sure that the shorter side of the corner is on the side of the charger and that it overlaps over the already installed MEDS1079 protective corner.

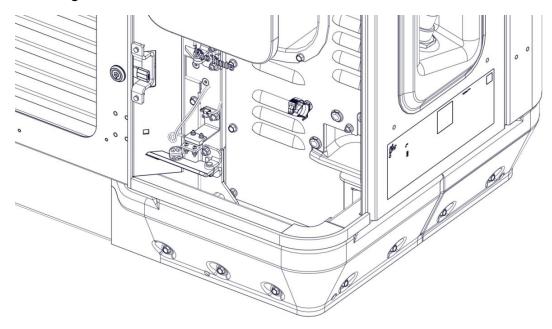




7. Once the MEDS1078 protective corner is in place, use the provided self tapping screws (MESB0368) to fasten it in place. Do not overtighten the screws over 4 N m.



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





20. Commissioning

To ensure easy and efficient commissioning, please consult the *FLO Commissioning Guide*, and 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 UltraTM charging station, please contact the FLO Client Integration Team at 1-888-852-3518.



21. 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.

21.1. 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.

21.2. 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.

21.3. Cabinet Cleaning

We recommend 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.



21.4. 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 26* for more information.
 - Charger status light indicators: The lights turn on. Refer to "*Main Exterior Components*" on page 26 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 damage.



21.5. Removing Graffitti

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

21.5.1. 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.



22. Copyright and Liability

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