



HCS SERIES EVSE PEDESTAL INSTALLATION GUIDE

Please Note

This installation guide includes the latest information at the time of printing. ClipperCreek, Inc. reserves the right to make changes to this product without further notice. Changes or modifications to this product by other than an authorized service facility may void the product warranty.

Before You Begin:

Read these instructions completely, including the Safety Instructions. If you have questions about the use of this product, contact your Service Representative.

Note to the Installer:

Be sure to leave these instructions with the user.

Note to the User:

Keep these instructions for further reference.

Important Safety Instructions

ClipperCreek Electric Vehicle Supply Equipment (EVSE or “charger”) is designed with the safety concerns of the end user as an utmost priority; however, the following safety precautions must be read and followed:

- The charger and electrical wiring should be installed by a qualified electrician in accordance with local electrical codes and ordinances.
- Grounding Instructions - The charger should be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor should be run with circuit conductors and connected to a grounding terminal or lead on the charger. Connections to the charger should comply with all local electrical codes and ordinances.
- Call your local service provider anytime a procedural question arises; DO NOT attempt to perform a procedure you are unsure of.
- Read all installation instructions carefully before performing the pedestal and charger installation.

Notes: _____

Installation Requirements

Required Equipment for a Single-Mount Pedestal with one HCS Charging Station (One EVSE per Pedestal):

- One (1) ClipperCreek HCS EVSE Pedestal Kit.
- One (1) ClipperCreek HCS Charging Station (EVSE).
- One (1) dedicated 208 or 240 VAC branch circuit.
- One (1) circuit breaker appropriately sized for the EVSE charging capacity.¹
- Two (2) Live Line conductors with enough length to comfortably pull all the way through and above the top of the pedestal.²
- One (1) Ground Line conductor with enough length to comfortably pull all the way through and above the top of the pedestal.²
- Conduit sized to fit all three conductors.
- Four (4) Anchor Bolts with Nuts and Washers

Required Equipment for a Dual-Mount Pedestal with two HCS Charging Stations (Two EVSEs per Pedestal):

- One (1) ClipperCreek HCS EVSE Pedestal Kit.
- One (1) ClipperCreek Dual-Mount HCS Pedestal Kit.
- Two (2) ClipperCreek HCS Charging Stations (EVSEs).
- Two (2) dedicated 208 or 240 VAC branch circuits.
- Two (2) circuit breakers, appropriately sized with respect to the charging capacity of each EVSE.¹
- Two pairs (2x2) Live Line conductors (one pair for each EVSE) with enough length to comfortably pull all the way through and above the top of the pedestal.²
- Two (2) Ground Line conductors (One for each EVSE) or a single bonded Ground Line with enough length to comfortably pull all the way through and above the top of the pedestal.²
- Conduit sized to fit all Live Line and Ground Line conductors.
- Four (4) Anchor Bolts with Nuts and Washers

¹ Refer to the EVSE documentation to determine the appropriate circuit breaker current capacity.

² All conductors must be appropriately sized for the EVSE current capacity, in accordance with local and NEC electrical codes.

Tools Required for Assembling the Pedestal

The following tools are required for the installation and assembly of the pedestal components.

- L-shape T27 Torx Driver (there are some tight spaces, advise using both the long and short T27’s for faster assembly)
- #2 Phillips Head Screwdriver
- 5/16” Flathead Screwdriver (for Ground Block Lug)
- Box Wrench (appropriately sized for the Anchor Nuts)

Pedestal Dimensions

Figure 1: HCS Pedestal Dimensions for Single-Mount and Dual-Mount Installations

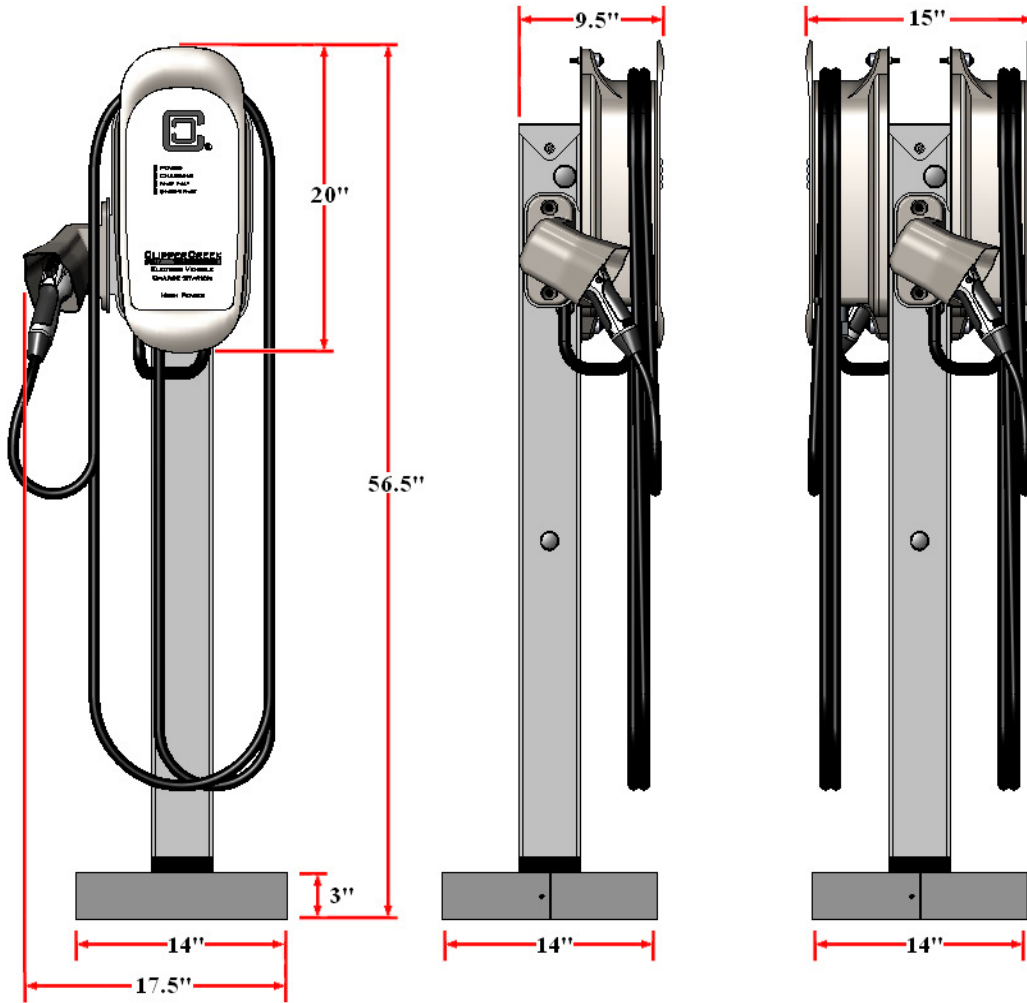


Figure 2: HCS Pedestal Base Dimensions

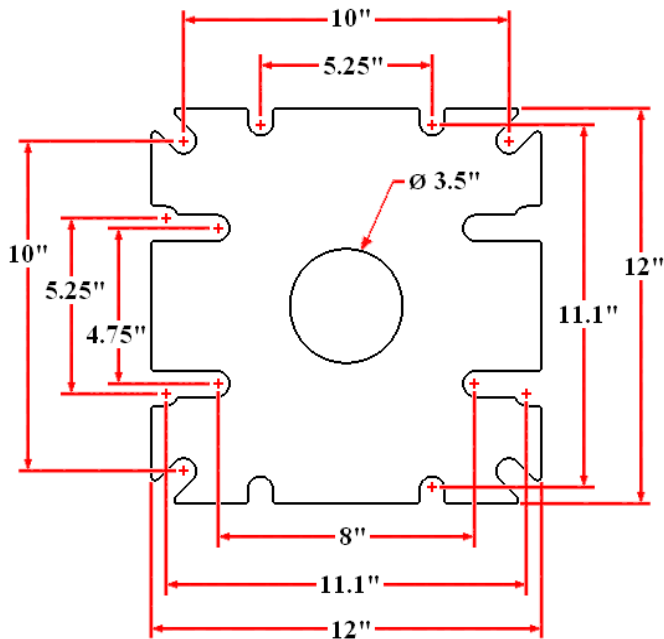


Figure 3: An Installation Cross-Section



Packing Lists**0300-00-024 HCS Pedestal Kit, Standard 4 Foot, Single-Mount**

Part Number	QTY	Description
1003-0014	1	Pedestal Metalwork, Cap with Rear Flange <u>NOTE:</u> this item may already be attached to the top of the pedestal.
1003-0023	2	Pedestal Metalwork, Base Cover
1003-0032	1	Pedestal Metalwork, 4-Foot Post
1003-0037	1	Pedestal Metalwork, Hole Cover Plate
1003-0039	1	Pedestal Metalwork, HCS Charger Mounting Plate
4000-0005	2	Machine Screw, Pan Head, 8-32, 1/2" Length, Phillips
4000-0010	4	Machine Screw, Tapered Flat Head, 6-32 Size, 3/8" Length, Phillips
4000-0011	3	Machine Screw, Tapered Flat Head, 1/4-20 Size, 3/4" Length, T27 Torx
4000-0012	2	Machine Screw, Button Head, 1/4-20 Size, 1" Length, T27 Torx
4000-0019	2	Machine Screw, Button Head, 1/4-20 Size, 2" Length, T27 Torx
4002-0001	2	Washer, #8, Zinc, 3/16" ID, 7/16" OD
4002-0002	4	Washer, Galvanized Steel, Neoprene Bonded Seal, 1/4" ID, 5/8" OD
4002-0004	1	Washer, Liquid Tight Sealing, Thermoplastic, 1/2"
4013-0009	1	Pedestal Conduit Assembly, Standard 90 degree 1/2" NPT Fitting
4015-0000	4	Plug, Plastic Push-In, 1-3/32" ID, 1-7/32" OD
4015-0001	2	Plug, Plastic Push-In, 1-3/8" ID, 1-1/2" OD
4015-0004	2	Plug, Plastic Push-In, 7/8" ID, 1-1/64" OD

Optional Orderable Items**0300-00-020 HCS Dual-Mount Kit for Standard 4 Foot Pedestal (Optional)**

Part Number	QTY	Description
1003-0015	1	Pedestal Metalwork, Cap without Rear Flange
1003-0039	1	Pedestal Metalwork, HCS Charger Mounting Plate
4000-0005	2	Machine Screw, Pan Head, 8-32, 1/2" Length, Phillips
4000-0011	1	Machine Screw, Tapered Flat Head, 1/4-20 Size, 3/4" Length, T27 Torx
4000-0012	2	Machine Screw, Button Head, 1/4-20 Size, 1" Length, T27 Torx
4000-0019	2	Machine Screw, Button Head, 1/4-20 Size, 2" Length, T27 Torx
4002-0001	2	Washer, #8, Zinc, 3/16" ID, 7/16" OD
4002-0002	4	Washer, Galvanized Steel, Neoprene Bonded Seal, 1/4" ID, 5/8" OD
4002-0004	1	Washer, Liquid Tight Sealing, Thermoplastic, 1/2"
4013-0009	1	Pedestal Conduit Assembly, Standard 90 degree 1/2" NPT Fitting

0300-06-000 120V Ground Fault Receptacle Kit*

Part Number	QTY	Description
4015-0002	1	Plug, Knockout Bushing, 1.109" OD, 3/4" Trade Size Aperture
4301-0000	1	GFCI Ground Fault Receptacle, 15A, 125V, NEMA 5-15R, Single Socket with Switch
4301-0001	1	Gang Box, Single, Silver Metal
4301-0002	1	Weatherproof Receptacle Cover, Clear, Single Gang, 2-3/4" Depth

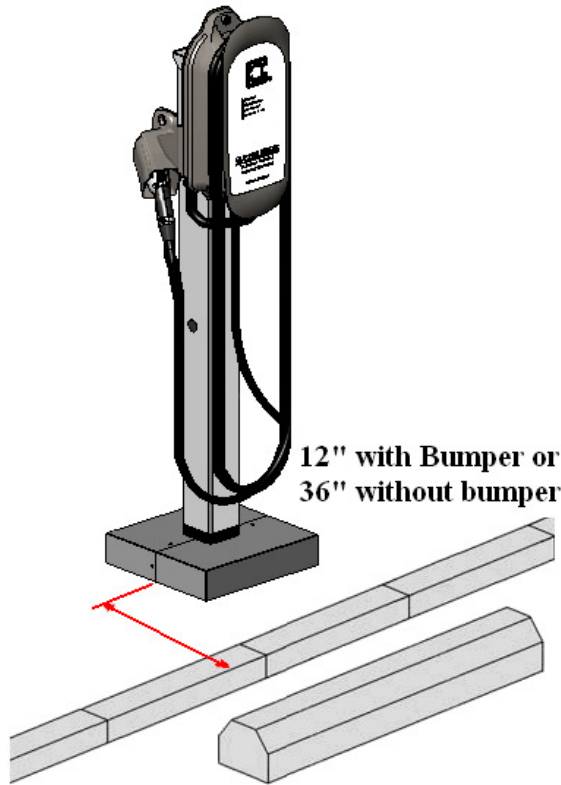
* The Ground Fault Receptacle Kit includes a 120VAC GFCI receptacle and housing. It may be installed at the knock-outs located 24 inches above the base on either side of the pedestal.

1. Concrete Pad Requirements

The location, dimensions, and composition of the concrete pad underlying the pedestal should always adhere to local building codes. The following dimensions are minimum recommended values. Always verify that installation plans adhere to local code requirements prior to proceeding.

- The pad area must be a minimum of 18" to a side.
- The concrete must be poured a minimum depth of 18".
- If there is no bumper block, the center of the pedestal base should be situated 36" behind the curb.
- If a bumper block is in place, the center of the pedestal base should be situated 12" behind the curb.

Figure 4: Proper Distance to the Curb



2. Anchor Bolt Placement

A minimum of four (4) anchor bolts must be embedded in the concrete pad for the purposes of securing the pedestal post. The pedestal base is designed to permit the anchor bolts to be arranged in many configurations, including the following:

For the Standard 10" Square Pattern:

- Arrange four (4) 1/2" or 3/8" anchor bolts in a 10" square pattern. This placement corresponds to the corner cutouts in the pedestal base.

For the Alternate 5.25" x 11.1" Rectangular Pattern:

- Arrange four (4) 3/8" anchor bolts in a 5.25" by 11.1" rectangular pattern. This placement corresponds to the short inner cutouts in the pedestal base.

For the Alternate 10" x 4.75" Rectangular Pattern:

- Arrange four (4) 1/2" anchor bolts in a 10" by 4.75" rectangular pattern. This placement corresponds to fall within the long inner cutouts in the pedestal base.

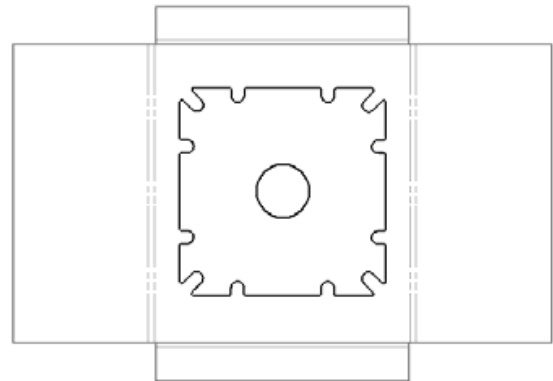
Maximum Anchor Bolt Height:

- The anchor bolts should not protrude more than 3" above the surface of the concrete pad.

Use the Pedestal Base Pattern Template:

To better facilitate the installation of the anchor bolts, a cardboard template in the shape of the pedestal base is included in the pedestal kit. This template is provided as a knock-out piece on the back of the cardboard box in which the cover plate is packaged. The template is specific for two bolt patterns: the standard 10" x 10" pattern and an alternate 5.25" x 11.1" rectangular pattern.

Figure 5: Bolt Pattern Template Knockout



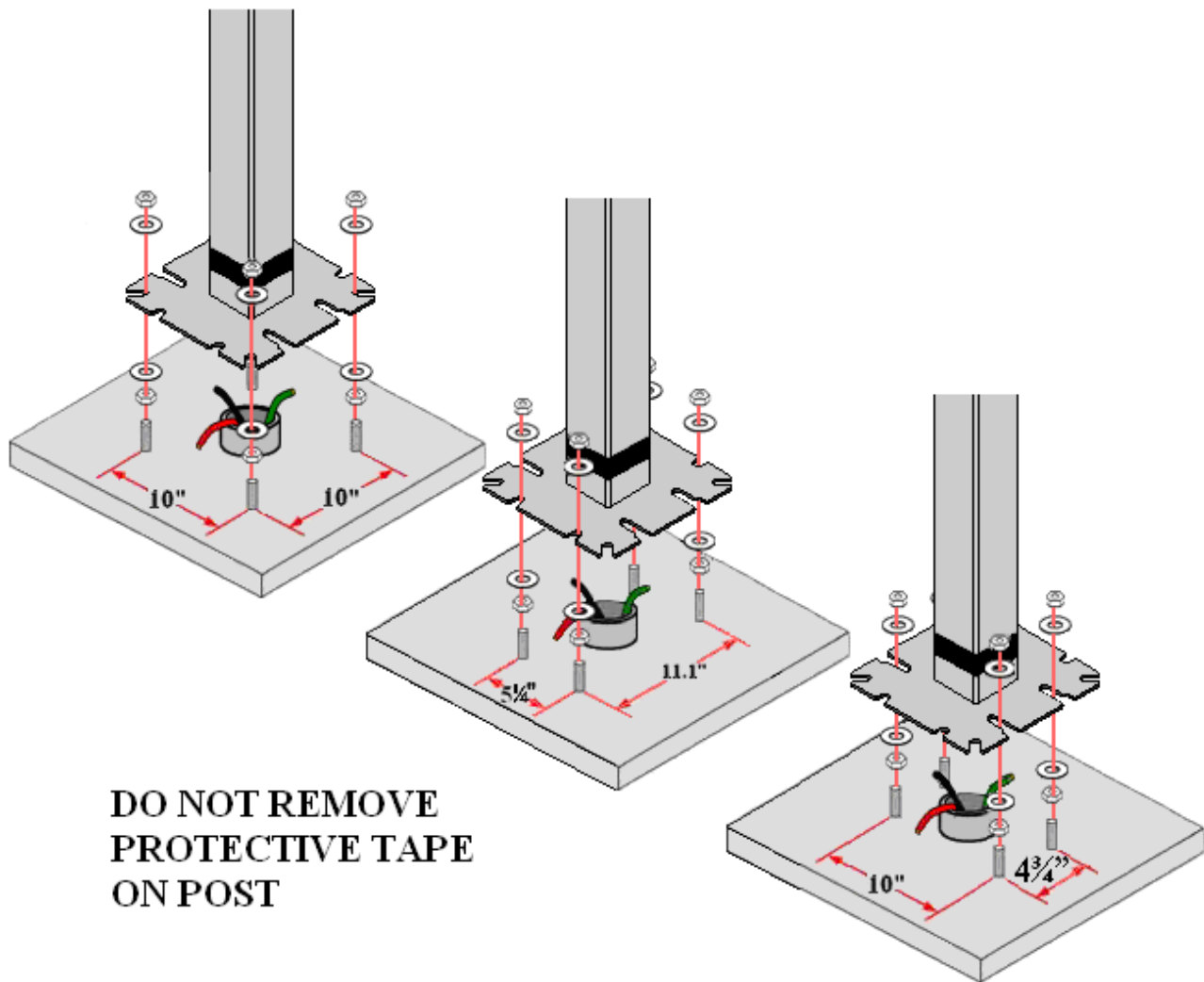
3. Mounting the Pedestal Post

Once the concrete pad with anchor bolts has been prepared and the three service conductors have been pulled through the underground conduit, the pedestal post may be placed.

Note: DO NOT remove the tape at the bottom of the pedestal. This tape is provided for finish and weather protection of the pedestal post.

- Feed the three service conductors up through the inside of the pedestal post. The conductors must be of sufficient length to pass beyond the top of the pedestal so that final connections can be worked with comfortably at a later step.
- Align the pedestal post base notches with the four anchor bolts and ease it into place.
- Nuts and washers may be used under the pedestal base to adjust the vertical alignment of the pedestal should the concrete pad not be level.
- Secure the pedestal post base to the concrete anchor bolts using appropriately sized nuts and washers.
- The anchor bolts, nuts and washers used for the installation of the pedestal base are not included in the pedestal kit and must be purchased separately.

Figure 6: Pedestal Post Mounting by Pattern

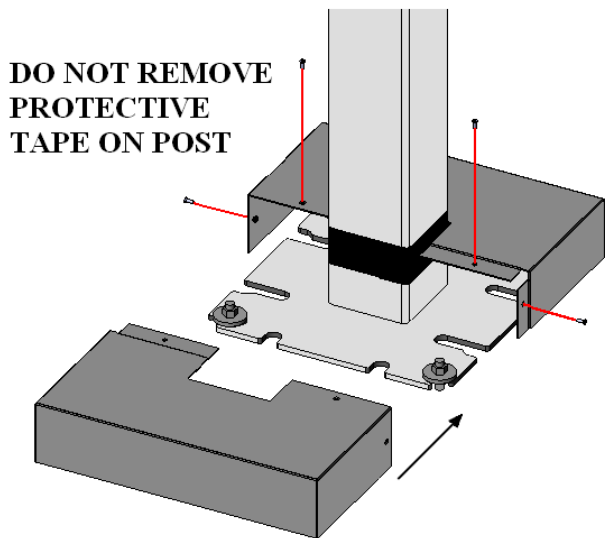


4. Install the Pedestal Base Cover

A two-piece pedestal base cover set is included in the pedestal kit. The purpose of the pedestal base cover is to beautify the installation and to protect against injury from protruding anchor bolts.

- The two covers are of an identical overlapping design.
- Slide one cover on the front side of the pedestal base until the center notch surrounds half of the pedestal post. Slide the other cover onto the rear side in the same manner. Ensure that the flanges of each cover piece are tucked inside of the opposite cover.
- Align the four screw holes of each cover piece with the corresponding screw holes on the opposite cover.
- Secure each cover piece to the other with four (4) #6-32 x 3/8" flat-head tapered screws using a #2 Philips- head screwdriver.

Figure 7: The Pedestal Base Covers

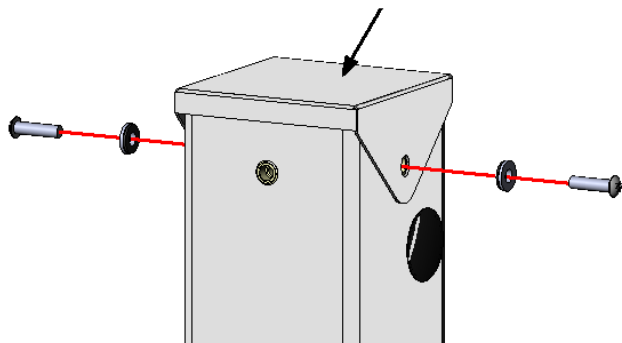


5. Remove the Pedestal Post Cap

A pedestal cap is provided to cover the opening to protect the conductors and inner pedestal from the elements. It may have already been assembled on the post for protection during shipping. Temporarily remove this cap for additional access to electrical connections.

Figure 8: Cap Removal

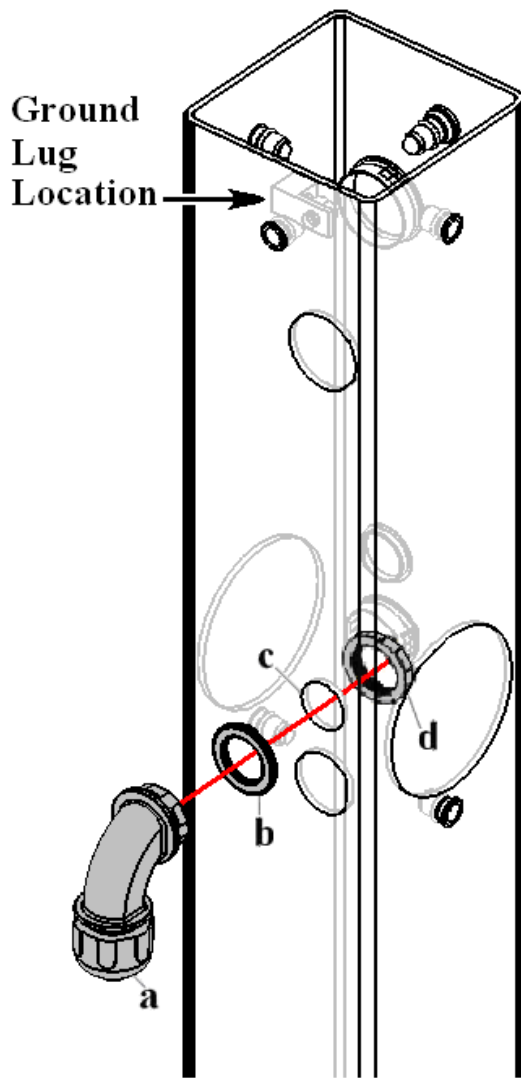
Remove this Cap and screws/washers



6. Install the Conduit Assembly

- Knock-out the 1 1/2" plastic plug located 10" down from the top of the pedestal on the left side.
- Connect the following to the Pedestal Post in the order as shown in Figure 9:
 - a) The Standard 90 degree 1/2" NPT Fitting
 - b) The 1/2" liquid tight sealing washer
 - c) The open pedestal hole
 - d) The first locknut from the NPT Fitting (inside of the pedestal)
- Tighten so that the bottom opening of the NPT Fitting is facing downward.
- For Dual-Mount Installations, repeat on the opposite side.

Figure 9: HCS Pedestal Conduit Assembly



7. Install the Charger Mounting Plate

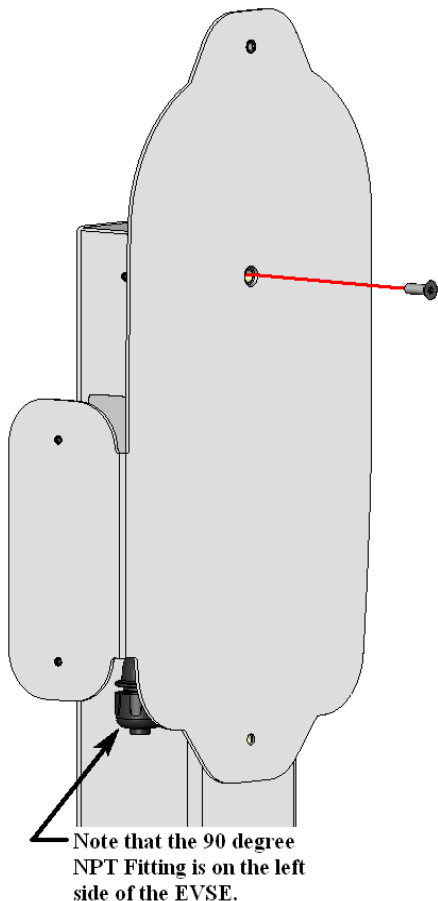
A charger mounting plate is affixed to the front of the pedestal post to provide a flat and rigid base on which the charger can be mounted. In the case of a Dual-Mount installation, a second mounting plate is affixed to the opposite side of the pedestal post.

- Hold the charger mounting plate against the front side of the pedestal post as shown in Figure 11.
- Align the center screw hole of the mounting plate with the corresponding top threaded insert on the front of the pedestal post.
- Secure the mounting plate to the pedestal with one (1) 1/4-20 x 3/4" Torx flat-head tapered screw using a T27 Torx driver. Tighten until the head of the screw is flush with the surface of the mounting plate.

For Dual-Mount Charger Installations:

- The Dual-Mount Kit includes a second charger mounting plate. This second mounting plate is affixed to the back side of the pedestal post, opposite of the first mounting plate.
- As with the first mounting plate, align the center screw hole of the mounting plate with the corresponding top threaded insert on the front of the pedestal post and tighten one (1) 1/4-20 x 3/4" Torx flat-head tapered screw using a T27 Torx driver until the screw head is flush with the surface of the mounting plate.

Figure 11: The Charger Mounting Plate

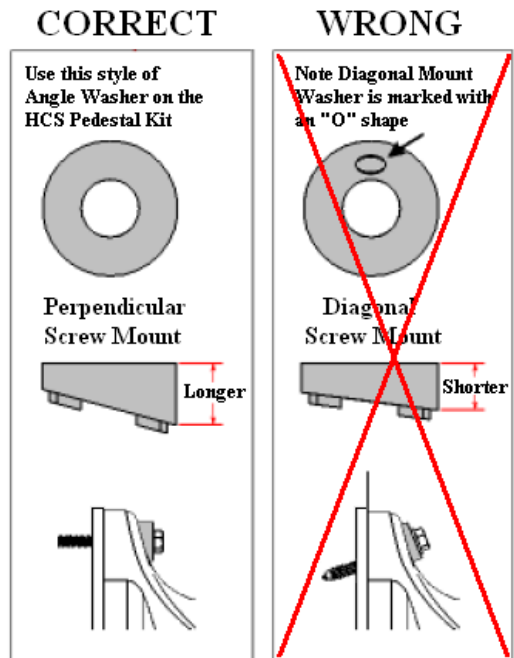


8. Mounting a Single Charger to the Pedestal

With the mounting plate in place, the pedestal is now ready for a single charger to be mounted.

- Place a 1/4" Neoprene-bonded sealing washer around the shaft of each of the two (2) 1/4-20 x 2" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- There are two different styles of HCS plastic angle washers. The correct style to use with the HCS Pedestal is the Perpendicular Screw Mount. These washers are included with the HCS Charging Station and do not accompany this kit. Refer to Figure 12.

Figure 12: HCS Plastic Angle Washers



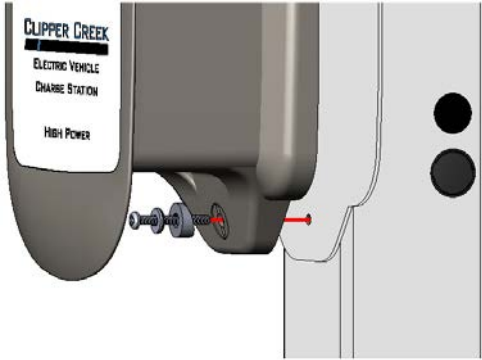
- Align the two screw holes on the top and bottom of the charger with the corresponding threaded inserts on the mounting plate.
- Use a T27 Torx driver to **secure the top of the charger first** using one (1) 1/4-20 x 2" Torx button-head screws with neoprene washer and HCS Plastic Angle Washer as shown in Figure 13. Do not over-tighten.

Figure 13: Mounting a Single HCS Charger:
Install Top screw FIRST



- Secure the bottom of the charger using one (1) 1/4-20 x 2" Torx button-head screws with neoprene washer and HCS Plastic Angle Washer as shown in Figure 14.
- For an installation with two chargers affixed to the same post, repeat the previous steps for the opposite side.

Figure 14: Mounting a Single HCS Charger:
Install bottom screw LAST



9. Connect the Wiring

The HCS has a flexible conduit extension with three conductors. These conductors must be routed through the side of the pedestal and the ninety-degree 1/2" NPT for connection.

- Trim the EVSE conduit to length. The recommended length to remain is 12 inches as measured from the bottom of the EVSE.
- Route the three conductors that come through the EVSE's flexible conduit through the NPT connection and into the Pedestal Post.
- No disassembly of the NPT Fitting is required. Push the conduit onto the NPT Fitting ferrule and then tighten the domed sealing nut on the NPT fitting.
- For Dual-Mount Installations, repeat on the opposite side.
- All conductor and ground lug connections inside the Pedestal Post must be completed at this time. **The top access hole will be blocked after this step.**

10. Re-Install the Pedestal Post Cap

The pedestal cap is provided to cover the opening to protect the conductors and inner pedestal from the elements. Install the appropriate pedestal cap for a single-mount or dual-mount charger installation as described below.

For Single-Mount Charger Installations:

- Single-mount charger installations utilize the standard post cap provided in the pedestal kit. This post cap includes a flange on one side. Place the post cap onto the top of the pedestal, with the flange facing the rear.
- Align the screw holes on each side of the post cap with the corresponding threaded inserts on the sides of the pedestal.
- Place a 1/4" Neoprene-bonded sealing washer around

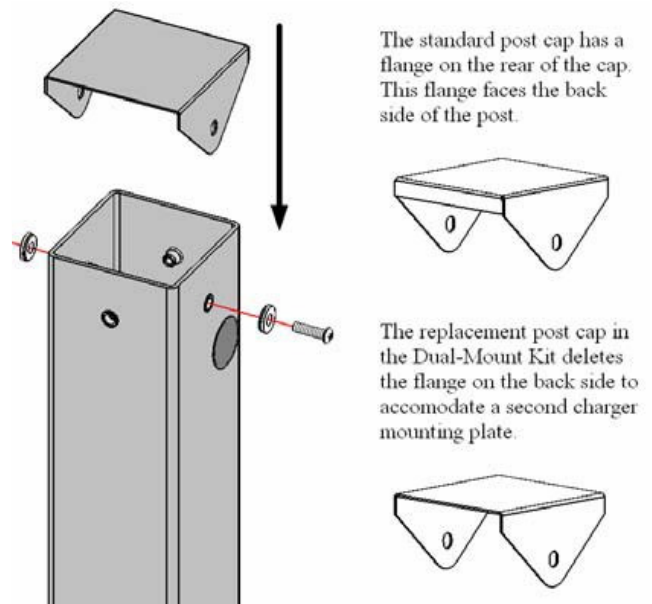
the shaft of two (2) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.

- Secure the cap to the pedestal with the two (2) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

For Dual-Mount Charger Installations:

- Dual-Mount charger installations utilize a *replacement* post cap provided in the Dual-Mount Kit. This post cap lacks a flange at the rear. Place the post cap onto the top of the pedestal.
- Align the screw hole on each side of the post cap with the corresponding thread insert on the side of the pedestal.
- Place a 1/4" Neoprene-bonded sealing washer around the shaft of two (2) 1/4-20 x 1" Torx button-head screws. The metal portion of the washer should face the head of the screw while the neoprene should face the tip of the screw.
- Secure the cap to the pedestal with the two (2) 1/4-20 x 1" Torx button-head screws (with washers) using a T27 Torx driver.

Figure 15: The Pedestal Post Cap

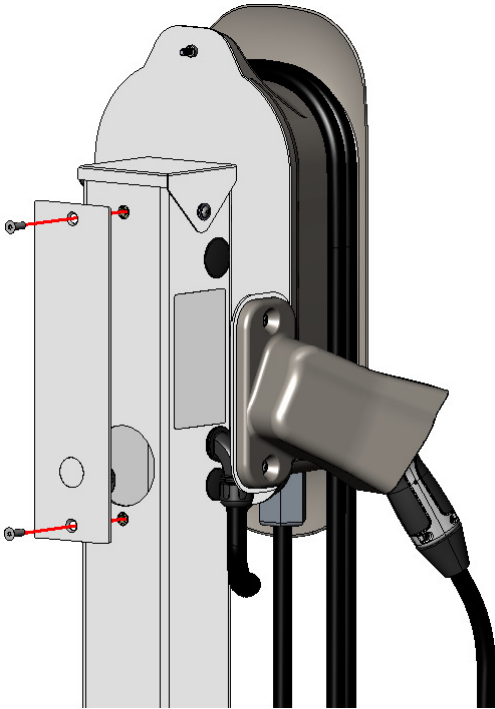


11. Install the Cover Plate

The cover plate is provided to cover the electrical access hole for Single-Mount Pedestals only. Skip this step if you are installing a Dual-Mount.

- Secure the cover plate to the Single-Mount Pedestal using two (2) 1/4-20 x 3/4" Torx flat-head tapered screws using a T27 Torx driver until the screw head is flush with the surface of the mounting plate.

Figure 16: Installing the Cover Plate

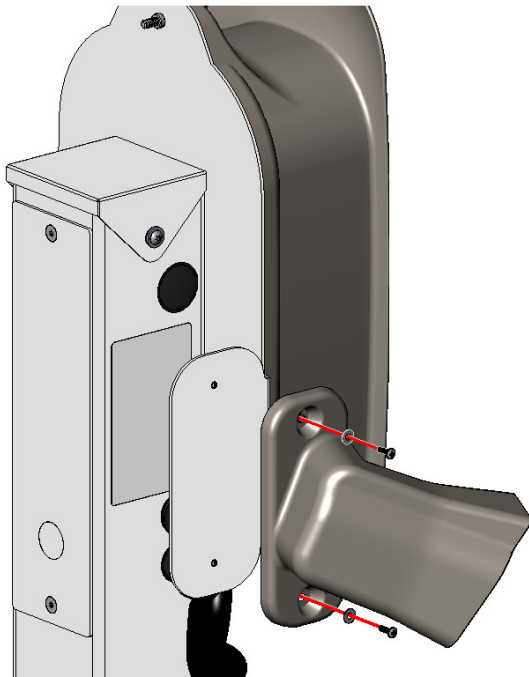


12. Install the Holster

The holster, which is included with the station, is to stow the vehicle connector. To install, follow the steps below.

- Place a #8 washer around the shaft of each of the two (2) 8-32 pan head screws.
- Secure the Holster to the Mounting Plate as shown.
- For an installation with two chargers affixed to the same post, repeat the previous steps for the opposite side.

Figure 17: Mounting the Holster



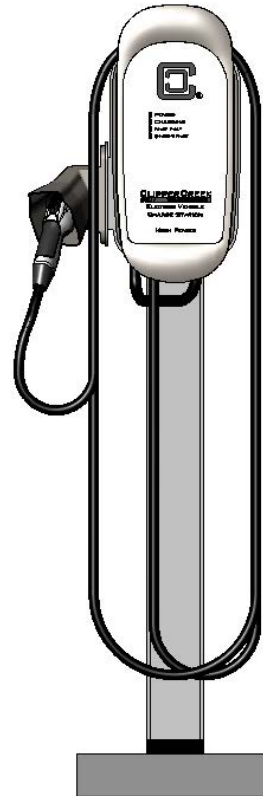
13. Mounting Two Chargers to the Pedestal

For an installation with two chargers affixed to the same post, repeat the previous steps 7 through 11 for the opposite side.

14. Wrap and Stow the Vehicle Connector

- Loosely wrap the cable around the HCS as shown in Figure 18.
- Stow the Vehicle Connector in the holster. The button does not need to be pressed, simply insert until you hear the click to lock in place.
- Verify the safety of the installation prior to turning on the circuit breaker.
- Refer to the Charging Station User's Guide for further operational and maintenance information.

Figure 18: Wrap and Stow the Connector



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 Version 4, April 2016