CraftSmart FiberFirst Pedestal
Installation Manual

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CraftSmart FiberFirst Pedestal
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Application

The CraftSmart® FiberFirst Pedestal provides a secure, above-ground access point for fiber-to-the-home (FTTH) networks. The internal components of the pedestal are optimized for fiber-only deployments and offer configuration flexibility to suit the needs of the network. The unique "open canvas" design provides mounting options for a wide range of Clearfield® products,supporting PON and splice only applications and YOURx® and MPT access terminals. The unique interlocking cover is designed to be free breathing to minimize condensation and allow any internal moisture to dissipate
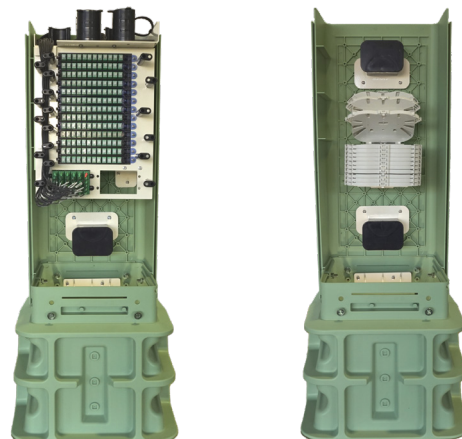
Description

Clearfield's CraftSmart product line provides physical fiber protection for delivering a turn-key passive solution from the central office/headend to the customer premises. The CraftSmart FiberFirst Pedestal provides the most cost-effective non-metallic enclosure in the industry - meeting and exceeding the industry standards for strength, reliability and environmental concerns.

Designed and tested to withstand the harshest of environmental conditions, including UV, chemical and impact resistance, the FiberFirst Pedestal consists of a base and 2-part interlocking removable cover measuring 14"W x 12"D x 30"H. The rear wall of the cover includes built in multi-use backplane for mounting various products inside of the pedestal. Two industry standard telco security screws (216) are used to attach and lock the cover to the base. The base of the pedestal includes a built-in feature that allows the customer to add a ground stake to the pedestal.

The FiberFirst Pedestal is designed for maximum flexibility and can be deployed in multiple applications. One pedestal for all applications, eliminating the need for multiple pedestals and reducing the SKU's, allowing the customer to reduce costs.

Technical Specifications

CraftSmart FiberFirst Pedestal	
Cover Only Dimensions	14"W x 12"D x 30"H
Base Only Dimensions	16 ¾"W x 16 ⬚"D x 11"H
Cover Material	High Impact Resistant Thermo Plastic Material
Base Material	High Impact Resistant Thermo Plastic Material
Mounting Options	Direct Buried
Security/Locking	2 – Cupped Telco Security (216) Screws Lock Cover to Base
Ground Bar	Included With Each Pedestal
Ground Stake	Bracket molded into base. Customer supplied ground stake.
Application	PON Option (up to 144 dist. ports), Splice Only Option, YOURx-Terminal, MPT Terminal

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Installing the Pedestal

These instructions provide general information useful for pedestal installation. This guide cannot anticipate all situations that could develop in the field. Rather, it represents information applicable to common installation conditions.

Site Preparation:
Ensure that national/local electrical and building codes, as well as OSHA and company safety work rules, are observed and provisions made for street flags, barricades, and cones. Secure permits as required by the city and company.

WARNING: Buried Telecommunications Cables - Call Before Digging

Excavation:
Measure the pedestal base from the bottom to the underside of the top ring of the pedestal base. You will want almost all of the top ring of the pedestal above ground level when installation is complete. Measure the diameter of the pedestal base. Excavate a hole with the depth you measured plus 4-6 inches, as well as the diameter plus 8 inches, to give 4 inches of room to work with on each side. Confirm the excavation floor is level.

Installation:
Tamp and level the floor of your excavated hole. Clearfield highly recommends the installation of a vapor barrier, which will go below the crushed rock floor of the excavated area. Once the vapor barrier is installed, place 4"-6" of crushed rock and level, then place the pedestal. Optionally, install the pedestal stake. Proceed to backfilling around the outside of the pedestal, tamping and leveling the earth once backfill is completed. Finally, fill the base of the pedestal with at least 6 inches of crushed rock.

Note: Base material shall be crushed rock 3/4" and smaller, and not "river rock" or "round stone." Desired compaction and equivalent resistance to lateral loading will not be achieved with round stone. The rock should be free of soil and organic material.

Pedestal Access

The FiberFirst Pedestal lid can be removed by loosening the two security bolts at the bottom from of the pedestal. Using a can wrench or a 7/16" socket, loosen the bolts and lift the lid away.

When reinstalling the cover, align the edges of both sides of the lid into the grooves on the sides of the pedestal. As you slide the cover into place, pay close attention to the fiber routing within, ensuring fibers are not caught up in the door placement. When fully closed, the back edge of the top of the cover must sit firmly within the metal clips on the pedestal. Tighten the security screws with your can wrench or 7/16" socket.

Grounding

Clearfield recommends that all grounding installations follow the "per local practice" guidelines for each application.

A ground bar is located on the inside of the base of the pedestal on the front wall.
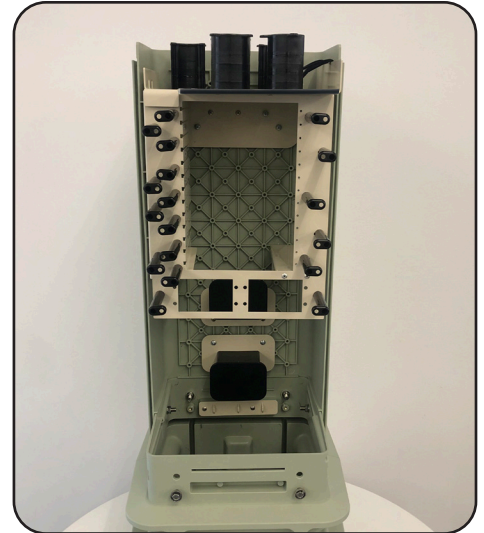
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PON Configuration - Cable Entrance and Splicing

1. If necessary, remove the cassettes from the PON insert. This is achieved by loosening the retaining screw's on the right side of the cassettes and sliding the cassettes out from the rails on the left.

2. Cables to be installed can be secured to the bracket of the pedestal using zip ties or hose clamps. When attaching the cables to the back plate using zip ties, it is very important to not fully tighten the zip ties around the cable. Each zip tie should allow at least 1/8" of clearance on all sides. This is important as the cable will need to piston or freely move inside the zip tie independently from the pedestal in the case of ground heave.

    Note: Clearfield recommends opening about 15 feet of cable for use in the FiberFirst Pedestal. 3 feet of fiber is needed inside the cassette for splicing, so be sure to include that in your total cable prep length.
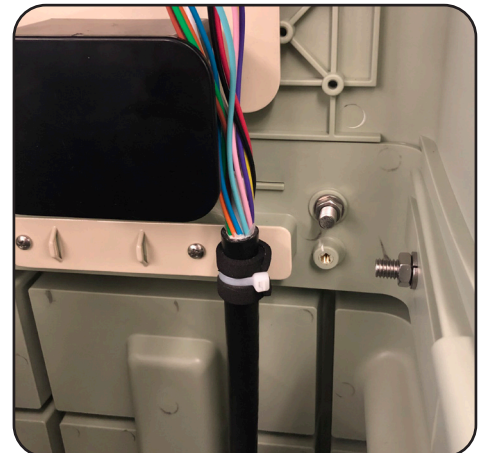
3. Route the fiber out around the outside of the PON insert.

4. After routing the fibers around the side of the PON insert, pass them through the back side of the bulkhead where the cassettes will be installed. Ensure that your cable goes around the outside of the back support on the right side, shown here.
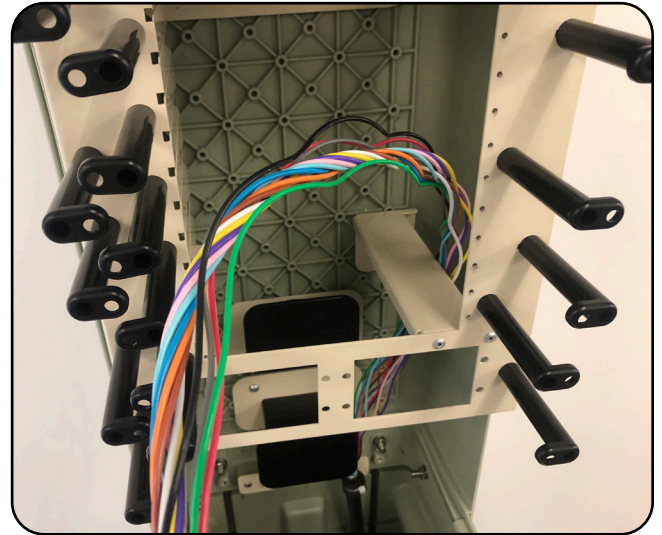
5. Proceed to splicing your fiber into the Clearview Blue Cassettes.

    Note: *Fibers must be spliced into the cassette in a LEFT EXIT configuration (exit is determined while looking from the back of the cassette).*
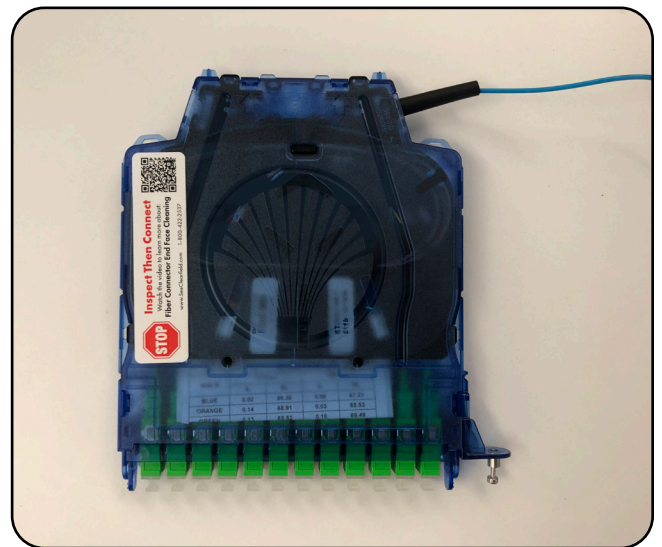
See the Clearview Blue Cassette Installation Manual for splicing instructions, located under the Resources tab of the Clearfield website, www.seeclearfield.com.

Viewable here:
https://www.seeclearfield.com/assets/documents/installation-manuals/clearview-blue-cassette-install-manual.pdf

6. After splicing is completed, pull the slack back through the pedestal and guide the cassettes up to their places on the PON insert. To install the cassettes back into the pedestal, engage the t-rails of the cassettes into place in their respective slide rails before securing the retaining screws.
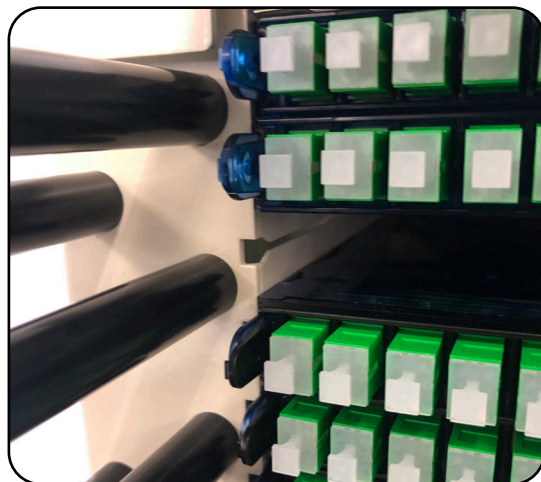
7. Manage the cable slack around the two radius limiters below the PON insert
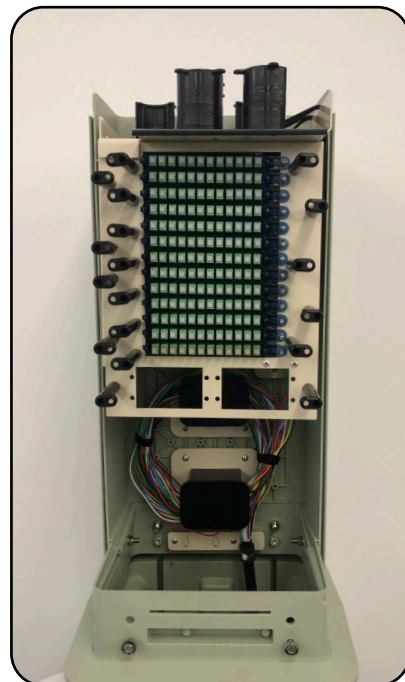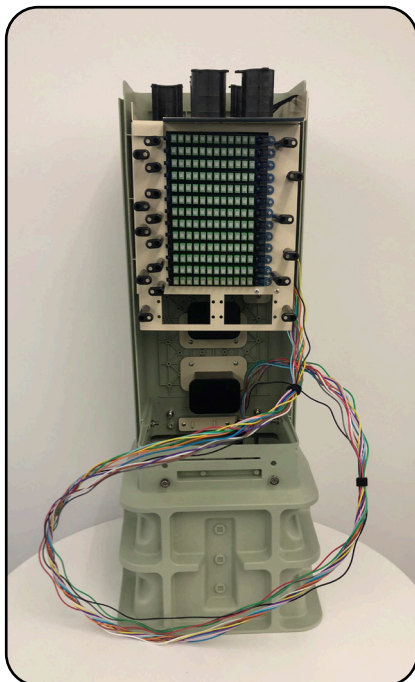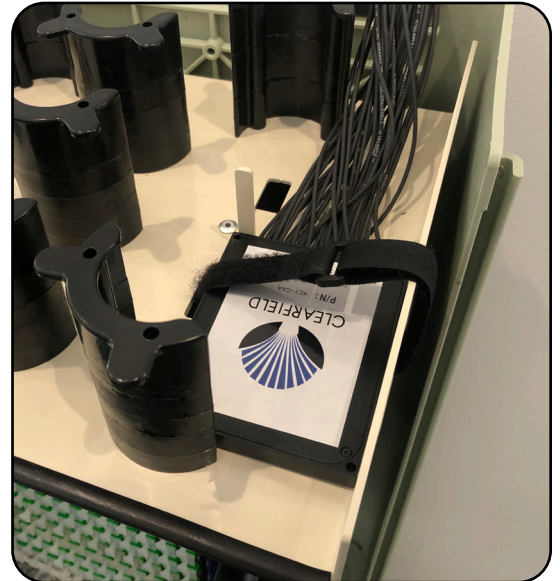
Installing Splitters

WaveSmart Ruggedized Splitters

1. Loosen the strap at the top of the PON insert.

2. Place the ruggedized splitter inside the strap with the splitter legs facing towards the back of the pedestal. Secure the splitter body by tightening the strap.

3. Route the splitter legs around the radius limiters as shown. Consult the routing diagram on the designation card located inside the lid of the pedestal if needed.
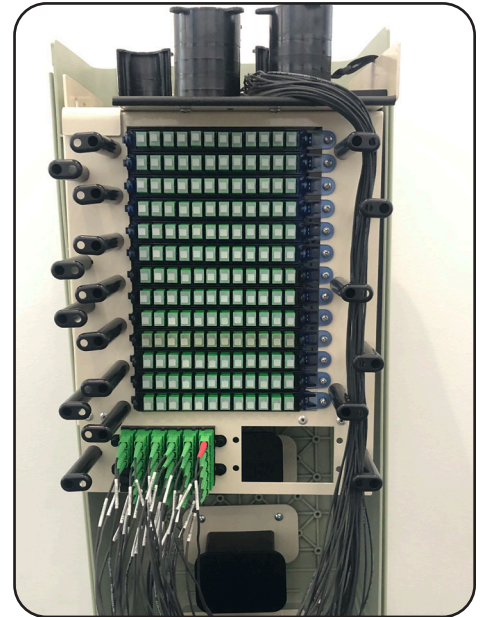
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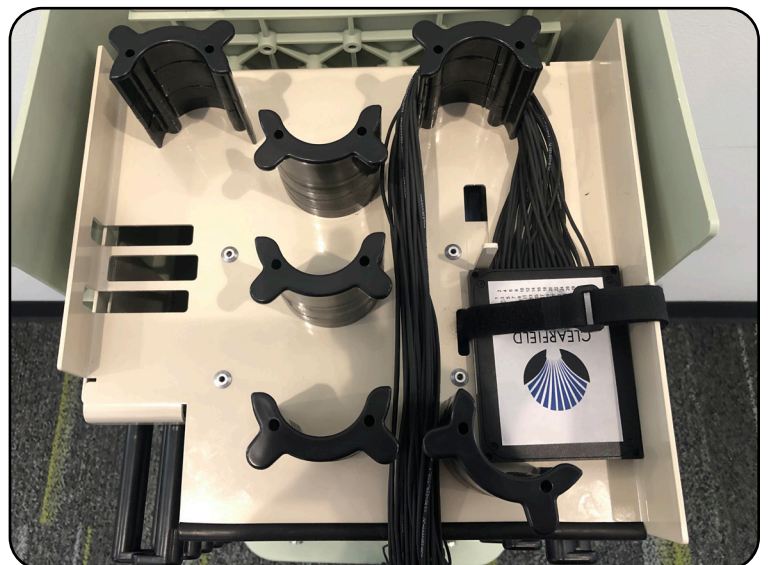
4. Route the splitter legs down between the radius fingers on the front right side of the PON insert.

5. Bring the splitter staging plate up to the left staging area located at the base of the PON insert. Place the push/pull plungers into the holes located at the staging area and push on the plunger to secure the staging plate to the bulkhead.

6. When making connections, remove connectors from the staging plate and route the splitter legs around the radius limiters on top of the pedestal as shown by the routing diagram. Different lengths of slack will be taken up depending upon the radius limiter chosen.
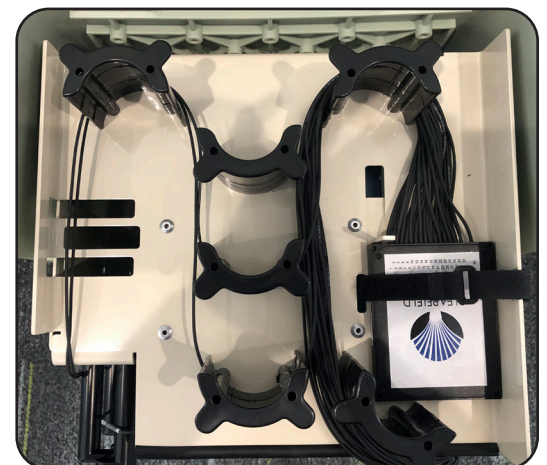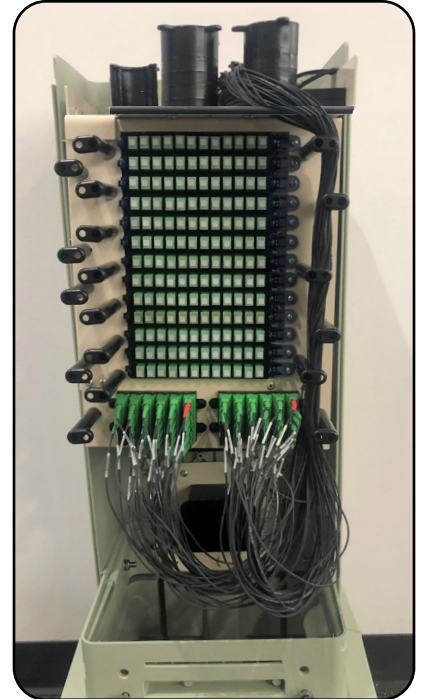
7. On the front of the bulkhead, route the splitter leg down on the outside of the radius fingers, turn up in between the radius fingers until reaching the desired row, then exit over the top of the radius finger to the right. Make the connection.

   Note: Inspect before you connect!
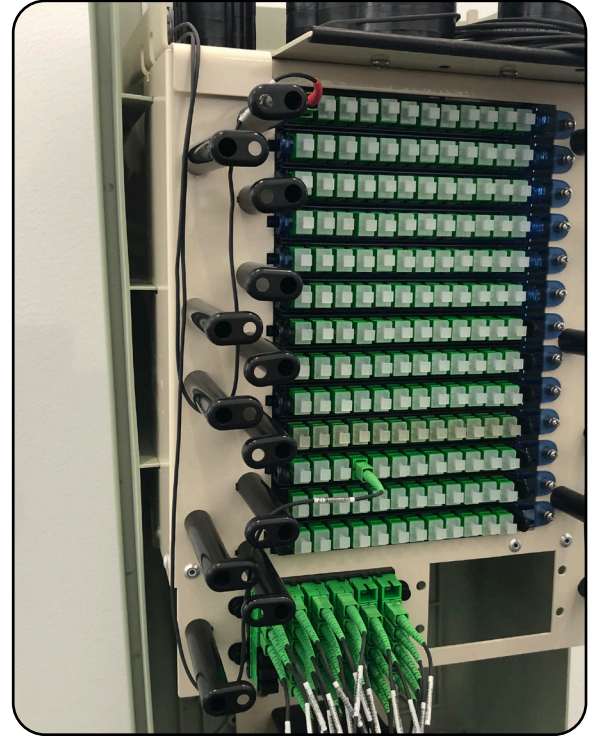
8. When installing additional WaveSmart Ruggedized Splitters, secure the splitter body on top of the previous one with the same strap. Route the fibers around the radius limiters on top of the PON insert and down the front right side of the bulkhead between the radius fingers as shown on the routing diagram.

9. Bring the staging plate to the open staging area on the bottom of the PON insert. Secure into place with the push/pull plungers.

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WaveSmart HD Splitters

1. Secure the splitter body in place at the top of the PON insert using the strap/velcro.
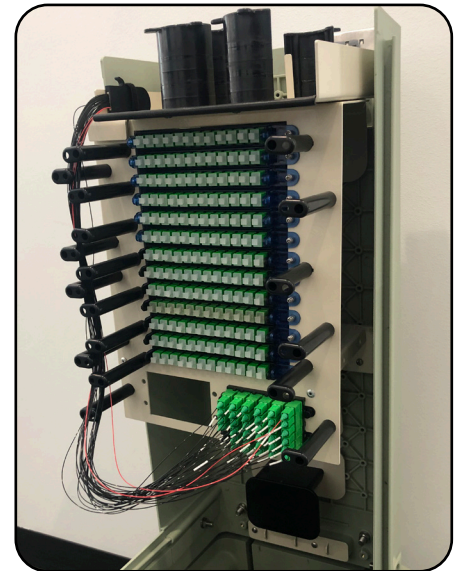
2. Route the splitter legs down the left side of the radius fingers on the front of the PON insert.

3. Bring the splitter staging plate up to the staging area located at the base of the PON insert. Place the push/pull plungers into the holes located at the staging area and push on the plunger to secure the staging plate to the bulkhead.


4. When making connections, remove connectors from the staging plate and route the splitter legs as shown by the routing diagram, traveling down on the outside of the radius fingers, then turning up in between the radius fingers until reaching the desired row, and exiting over the top of the radius finger to the right. Make the connection.

   Note: *Inspect before you connect!*

5. When installing additional WaveSmart HD Splitters, secure the splitter body next to the previous one with the same velcro strap. Route the fibers down the front of the bulkhead on the outside of the radius fingers and bring the staging plate to the open staging area on the bottom of the PON insert. Secure into place with the push/pull plungers.
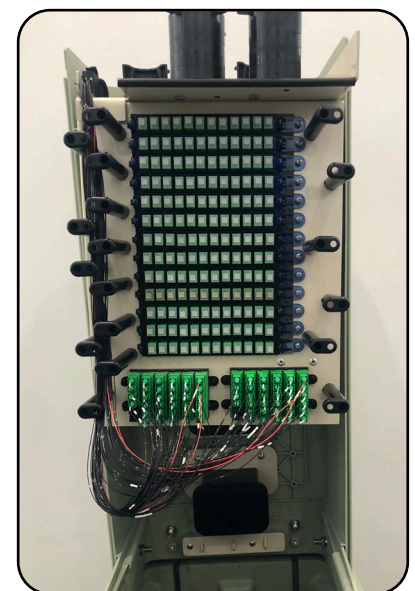
Mounting Terminals in the FiberFirst Pedestal

YOURx Terminal - Bottom Mount

Install the bottom mounting bracket onto the YOURx Terminal first, via the 4 screw locations. Then mount the terminal and bracket into the ped.

YOURx Terminal - Top Mount

First install the top mount bracket into the pedestal and the corresponding bracket onto the lid of the YOURx Terminal. The bolt can be slid into the gap in the top mounting bracket and the terminal secured in place by tightening the wing nut on the bolt.
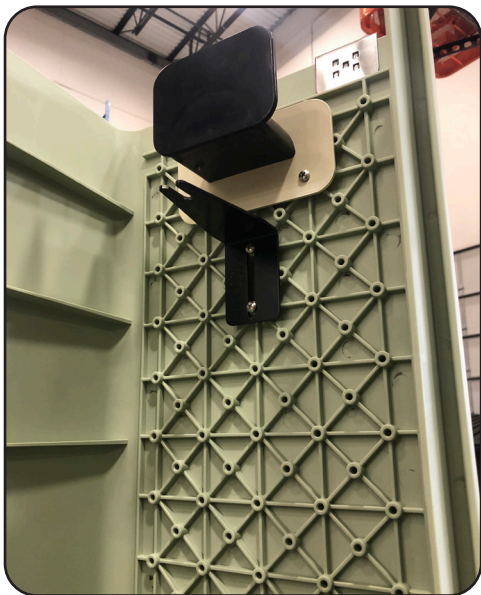
YOURx Multi-Purpose Terminal

The mounting bracket for the YOURx MPT must first be installed into the pedestal using the two elongated holes to find the best fit for your desired mounting height. Then install the MPT onto the mounting bracket via the 4 screw holes located underneath the terminal.

Note: Screw locations underneath the MPT shown here.

Splice Only Configuration - Ribbon
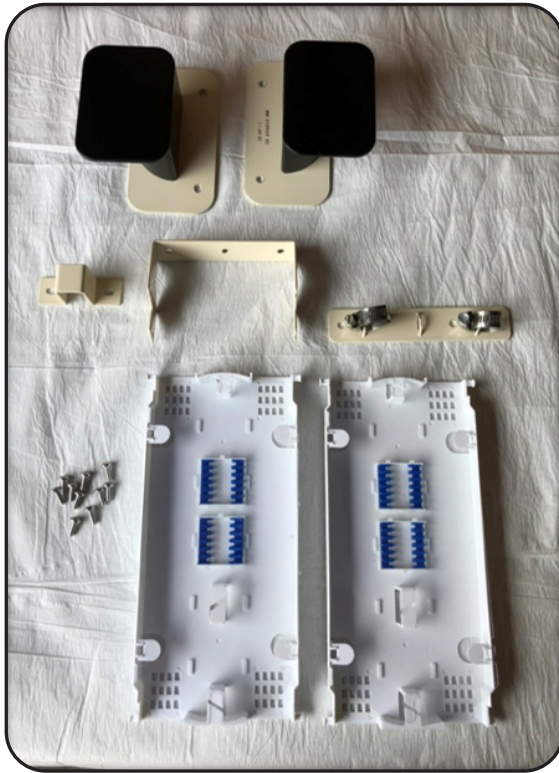
Parts:

- (2) Splice Trays
- Strain Relief Bracket
- (2) Hose Clamps
- (2) Radius Limiters
- Splice Tray Bracket
- Splice Tray Bumper

Mounting Bracket Included

1.   Install the top and bottom radius limiters.

2. Install the splice tray bracket into the pedestal below the top radius limiter.

3. Install the splice tray bumper into the pedestal below the splice tray bracket and above the bottom radius limiter.

4. Place the splice trays into the bracket. The tabs on the top of the splice tray will slot into the notches of the bracket when the tray is horizontal, but hold them in place when they are swung down into a vertical position.

Note: Cable entry into the splice trays will be at the top for this instruction.

5. Open and prep cable per local practice. Clearfield recommends opening 15ft of ribbon, which will be sufficient for roughly 2.5 laps around the radius limiters with the rest stored in the splice trays.

6. Secure the cables to the strain relief bracket with the hose clamps.

7. To manage the fibers, Clearfield recommends the use of paper tape spaced approximately 18" apart to keep the ribbons in order.

8. Prep to splice the fibers in the tray per local practice.

   Note: When using both splice trays, fibers 145-288 will be stored in the bottom tray and fibers 1-144 will be on top.

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9.   Wrap the slack around the radius limiters and bring the fibers into the tray to mark the desired tie-down location.

     Note: *In this instruction fibers will be tied down to the top of the tray.*

10. Mark the fibers according to layout. The cable that enters and is secured on the left side of the pedestal will enter the tray on the right, with slack stored in a clockwise direction. The cable that enters and is secured on the right side of the pedestal will enter the tray on the left, with slack stored in counter-clockwise direction.

11. Secure the left cable into the right side of the splice tray and the right cable into the left side per local practice. The tray will easily accommodate 1.5 laps of slack of 144 fibers, and 2.5 laps of 72 fibers or less.
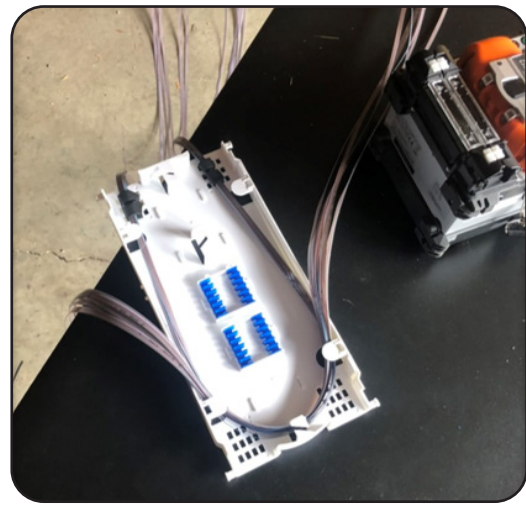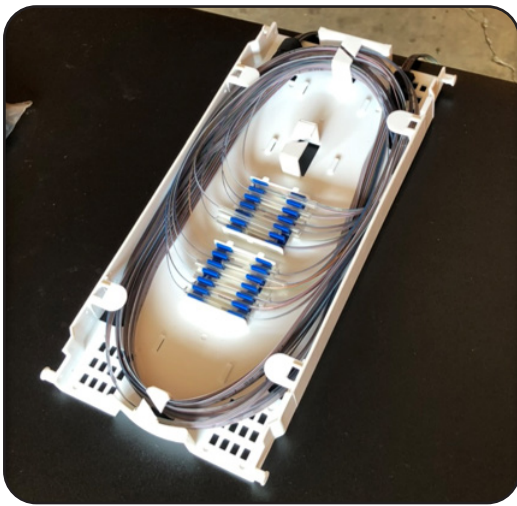
12. Store the slack, wrapping one side at a time. Store the left cable (when entering the pedestal) in clockwise wraps, and the right cable in counter-clockwise wraps.

Splice Only Configuration - Loose Tube

The pedestal is capable of holding up to 144 splices by adding up to eleven 12 fiber trays, one at a time to the included bracket.

Note: *If more than 6 trays are used, you will not be able to hinge the entire stack to access lower splices. Although the bracket will accomodate12 trays, Clearfield recommends only using 6 trays for 72 splices. Trays can be added by sliding the new tray onto the hinge pins and then folding it down to snap the tray in place.*

The first sacrificial splice tray is pre-installed.

Note: *The bottom tray is "sacrificial" because it must be screwed into place and cannot be removed for splicing as easily as the other trays.*
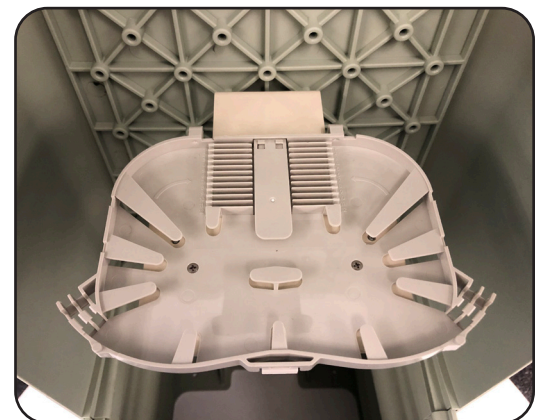
Cables to be installed can be secured to the bracket of the pedestal using zip ties or hose clamps. When attaching the cables to the back plate using zip ties, it is very important to not fully tighten the zip ties around the cable. Each zip tie should allow at least 1/8" of clearance on all sides. This is important as the cable will need to piston or freely move inside the zip tie independently from the pedestal in the case of ground heave.

The pedestal is designed to hold up to 20 feet of buffer tube from a 144 OSP cable, but most manufacturers recommend not exposing more than 20 feet in an OSP environment. This rule is especially true for ring cut/mid-span applications.

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Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance inspect, and if necessary, clean connectors and adapters prior to mating.

Inspect Then Connect

These are Clearfield recommended products/applications. Use the product you feel will complete your cleaning procedures. Create a "best practice" for your company and follow those procedures.

The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

Before cleaning any connector, be sure you know what type of contaminate you are cleaning (dry, fluidic, or combination). All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean "dirt" can lead to scratching of the end face. Learn the process of cleaning properly.

*Note: It is **NOT** recommended to use isopropyl alcohol to clean the end face.*

Figure 1

Cleaning an SC/LC Connector

Cleaning the End Face

* Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen. (**Figure 1**)

* Apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. (**Figure 2**)

* Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (**Figure 3**)

* Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

*Note: **DO NOT** retrace previous step.*

Figure 2

Figure 3

Cleaning the Ferrule

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. (**Figure 4**)
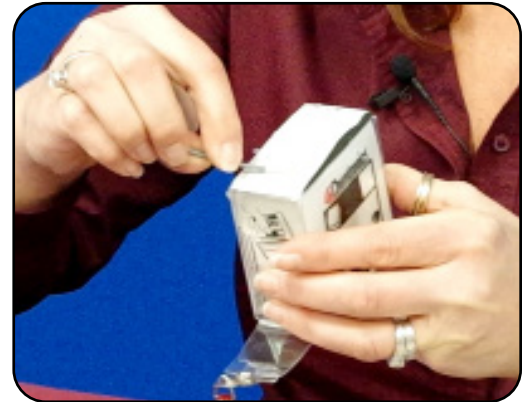

Figure 4

- Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. (**Figure 5**)

Figure 5

Cleaning the Mate Through an Adapter AND the Adapter Itself

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.

- Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.

- Dry with a second dry swab.

- Inspect, repeat cleaning if necessary, and test for signal strength.

- Use additional swabs to clean inside the actual adapter. Moisten swab, like above, and insert through hole and remove while twisting. (**Figure 6**)
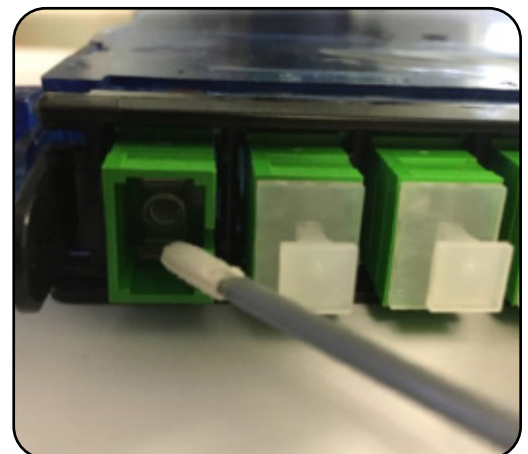

**Figure 6**

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Cleaning an MPO/MTP Connector

Male Connector

- Use of Chemtronics MTP Connector Cleaning Swabs (CC505F) is recommended. Even after cleaning with a probe cleaner, you should always clean the pins with this (or an equivalent) type swab. Cleans ALL MTP/MPO connector end faces. This swab also cleans the "pins" of the male connector

- Lightly "spot" a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, the FiberWash or MX Pen.

- Lightly touch short side of the MTP/MPO Connector Swab to the wetted area (3-5 secs) to absorb some cleaning solution (DO NOT over saturate the swab).

- Wipe connector areas to be cleaned, sliding pad from bottom of pad across and forward to tip of swab, from 1 side to the other, turn over and use long side to dry in same movement.
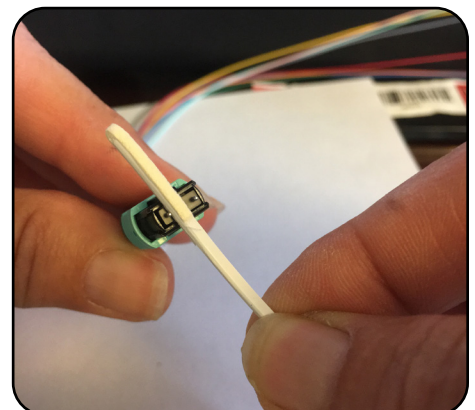
- Use the hole on end of pad to clean one alignment pin, then press the end of the swab into the other pin to clean.

- Check your work with a fiber scope. This can take several attempts to get the endface clean.
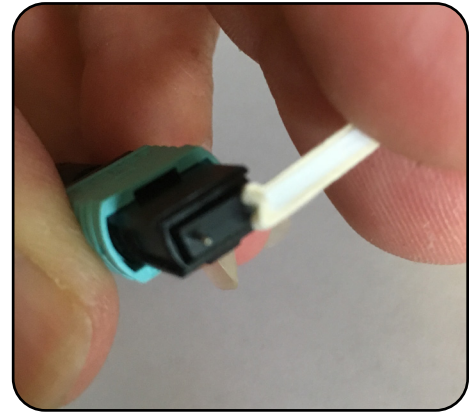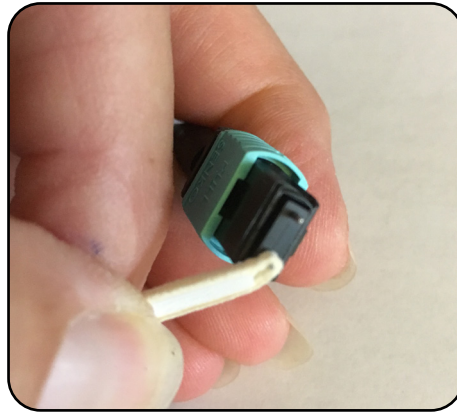
Female Connector (without pins)

- Cleaned like a single fiber connector, using a cleaning platform. The receptacles will be cleaned as long as you are using a combination cleaning process as recommended.

- Again, using a platen, moisten the platen with cleaning solvent on one end to accommodate 3 swipes of the MPO female endface.

- Holding the connector (If APC, slightly at an angle to accommodate for 8° angle) swiping with medium pressure, from the wet area into the dry area 3 times, without wiping over previous area.

- Inspect, and if clean, make the connection. If NOT, repeat above steps until clean or if determined that the end face is damaged (based on standards of 5 cleanings per connection), replace.
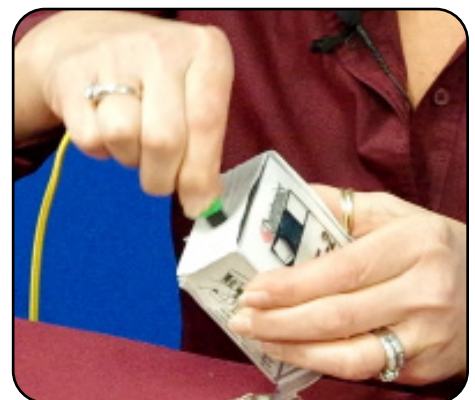
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Cleaning Using a Probe-Style Cleaning Tool

- The probe style cleaning tools are capable of cleaning a connector end face separately or through the adapter.

- Slightly engage probe by pulling back but do not allow to click. Lightly "spot" a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, this will help alleviate "over saturation" of the material.

- Lightly touch the tip of probe and release.
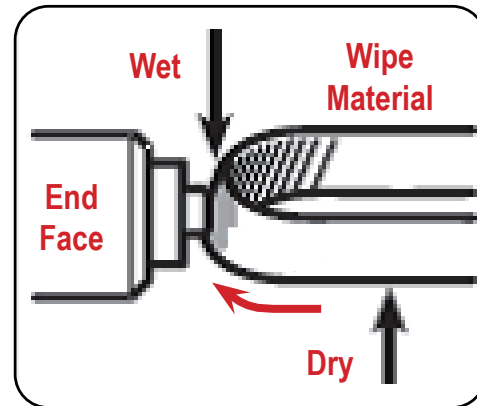
- Insert connector or insert probe though adapter and click 2-3 times to move past the wet area and allow material to dry wipe.
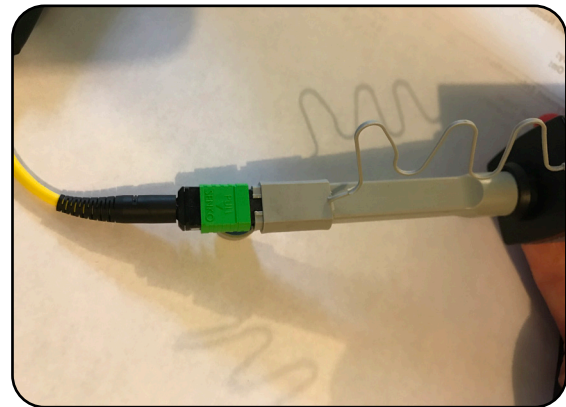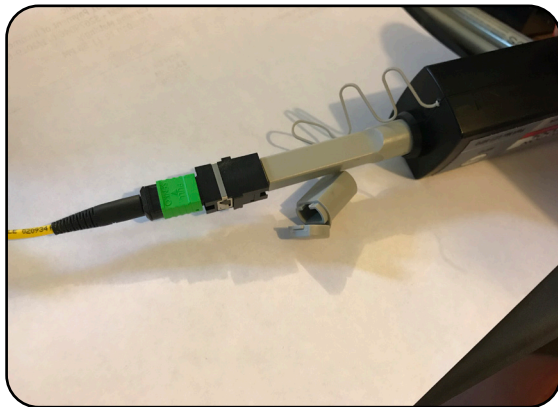
- Inspect connector, repeat if necessary (following standards)

- If cleaning a male connector, clean the pins (see above)

Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years: Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

1. Customer must contact Clearfield and obtain a Return Materials Authorization
2. Following authorization, the Customer ships the product-freight collect-to Clearfield's manufacturing facility
3. Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective by Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: https://www.seeclearfield.com/warranty.html

Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
2. Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
4. Customer's improper or negligent use or application of Product
5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product

Proprietary Notice

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Its purpose is to provide the user with adequately detailed documentation to efficiently install the equipment supplied. Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision.

However, no guarantee is given or implied that the document is error free or that it is accurate with regard to any specification.

Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

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