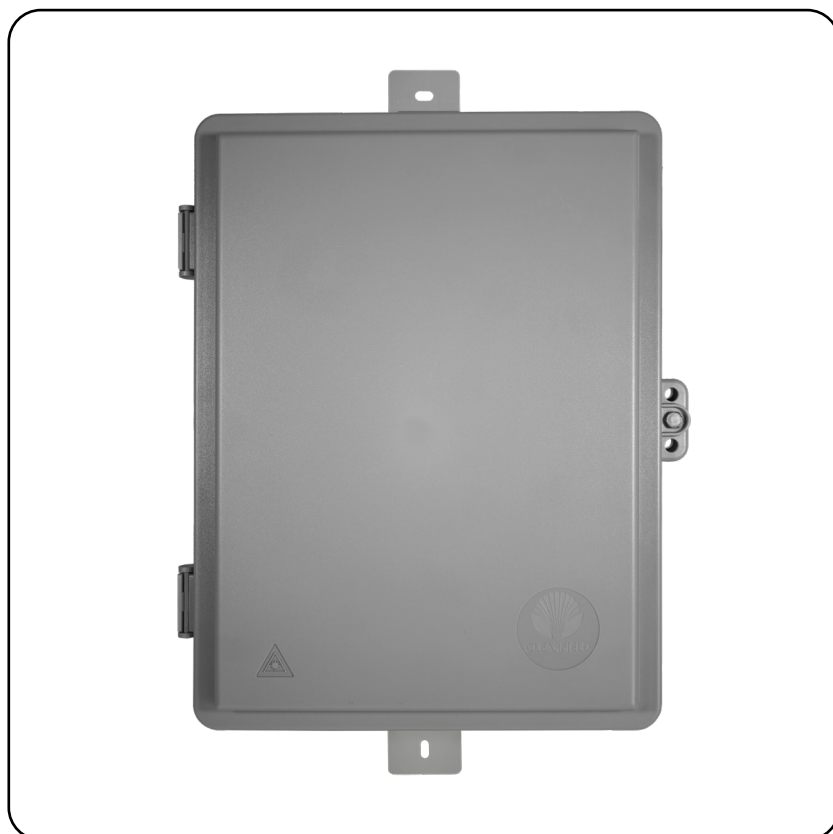


YOURx Flex Box

Installation Manual



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Application

Carriers are faced with many challenges when cabling MDUs in both existing (brownfield) and new construction (greenfield). One such challenge is how to manage incoming duct, while supporting varying number of subscribers in different configurations with slack management while also reducing installation time. Clearfield's patent-pending YOURx Flex Box addresses these challenges with a flexible and scalable solution all within a single wall box.



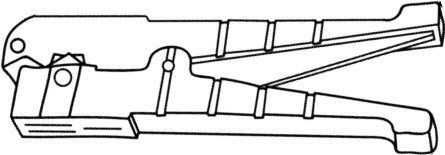
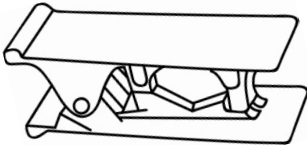
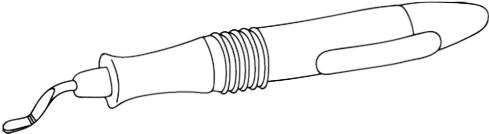
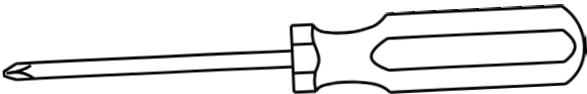
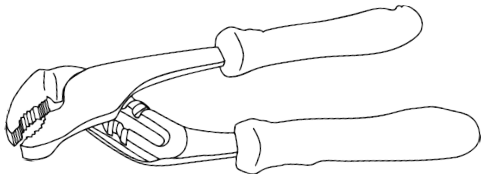
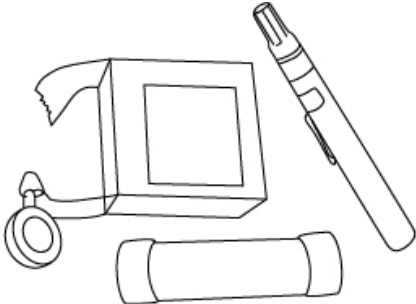
Description

The YOURx Flex Box is a secure, modular wall box with slide-in aggregator plate that supports multiple cable entries like, individual fiber cables, conduit and microduct in an organized matter. Installers simply push the microduct into the aggregator plate and they are ready to pull fiber. Slack storage is provided for both incoming and outgoing fiber in separate areas to reduce service interruptions when turning up additional subscribers. The drop wheel feature accommodates up to 16 individual drop wheel assemblies with each drop wheel supporting up to 200ft of FieldShield StrongFiber storage. Using the Clearview Cassette, Drop Wheel assembly or SmartRoute Plate allows for a plug-and-play concept which reduces installation time.

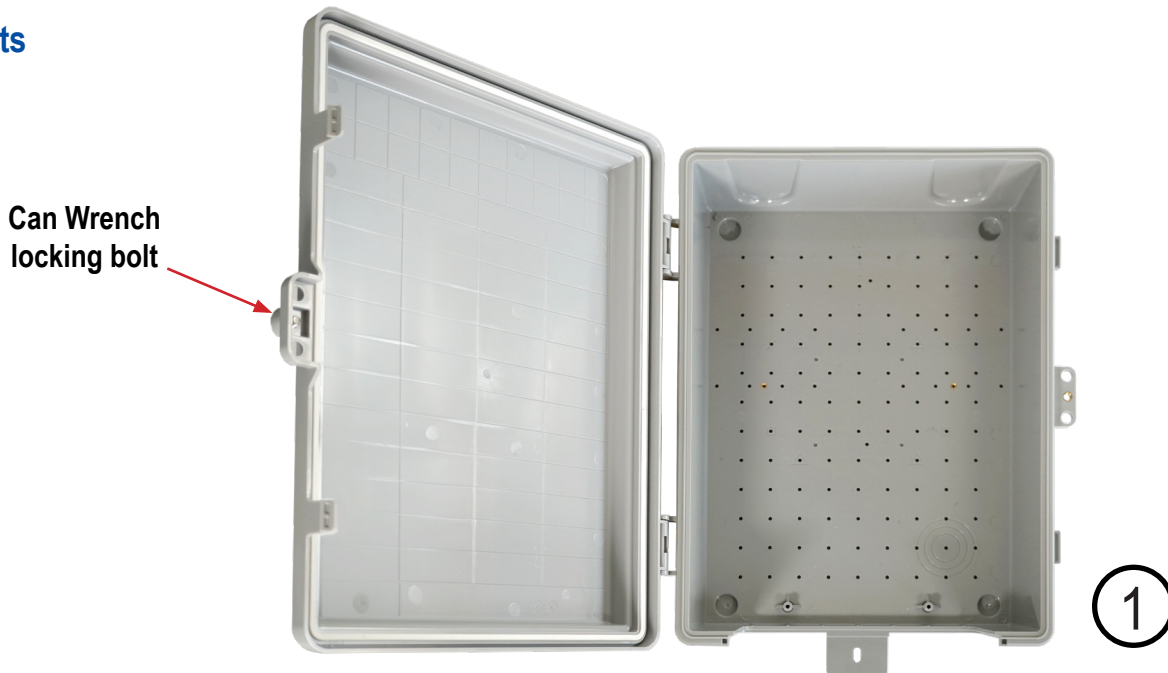
Technical Specifications

YOURx Flex Box	
Dimensions	18.24" H x 12.00" W x 5.38" D with mounting tabs, 15.66" H without mounting tabs
Material	UV rated, flame retardant
Port Density	Four cassettes (48 ports), up to 16 in drop wheel, SmartRoute 24 port
Connectivity Types	Clearview Blue, Clearview xPAK, Drop Wheel, SmartRoute Plate
Aggregator Plate	Blank, Universal, Universal Combo, Combo, and PON Aggregator Plates
Drop Wheel	Fiber type - FieldShield StrongFiber (must be supported by microduct)
Drop Wheel Connector	Pullable SC/APC to Standard SC/APC
Drop Cable Length	200 feet FieldShield StrongFiber
Drop Wheel Material	Black Thermoplastic

Recommended Tools

Tool	Image
Rotary Cutter	
Flat Cutter	
Deburring Tool	
Phillips Screwdriver	
Pliers	
Optical End Face Cleaning kit	

Parts



1. Flex Box

Dimensions: 18.24"H X 12"W X 5.38"D

Port Density: Four Cassettes (48 ports) or up to 16 drop wheels

Notes:

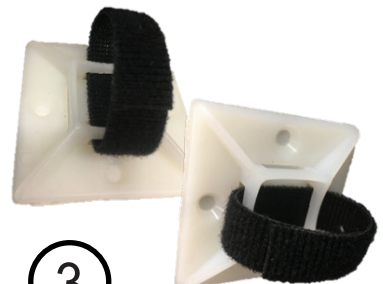
- Mounting hardware NOT included
- Bond/ground per local practices

Ship-along Items

2. Ground Lug



3. Qty 5 Adhesive backed Fiber Management blocks w/Velcro



4. Qty 4 Fiber management radius limiters with mounting screws



5. Qty 2 Threaded rod with nylon nuts



6. Door Mount Designation Sticker

YOURx Flex Box

Installation Manual



Configurations

The YOURx Flex Box can be configured in one of two ways, both of which allow for plug-and-play connectivity:

1. With up to four Clearview Blue Cassettes (48 ports) (**Figure 1**)
2. With a drop wheel cradle, which accommodates up to 16 individual drop wheel assemblies with each drop wheel supporting up to 200ft of FieldShield StrongFiber storage. Available in 4 wheel increments (mounting screws included):
 - 4 count
 - 8 count (**Figure 2**)
 - 12 count
 - 16 count



Figure 1

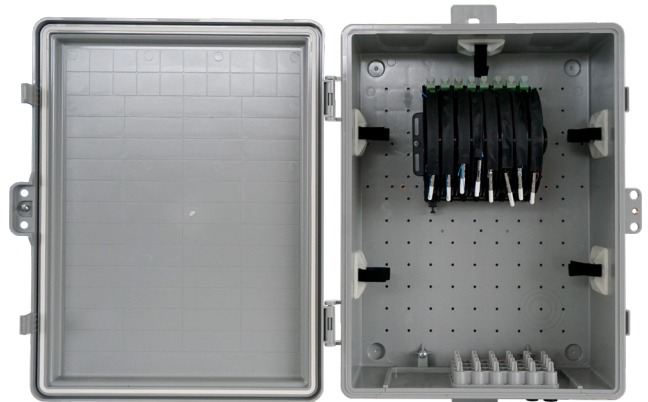
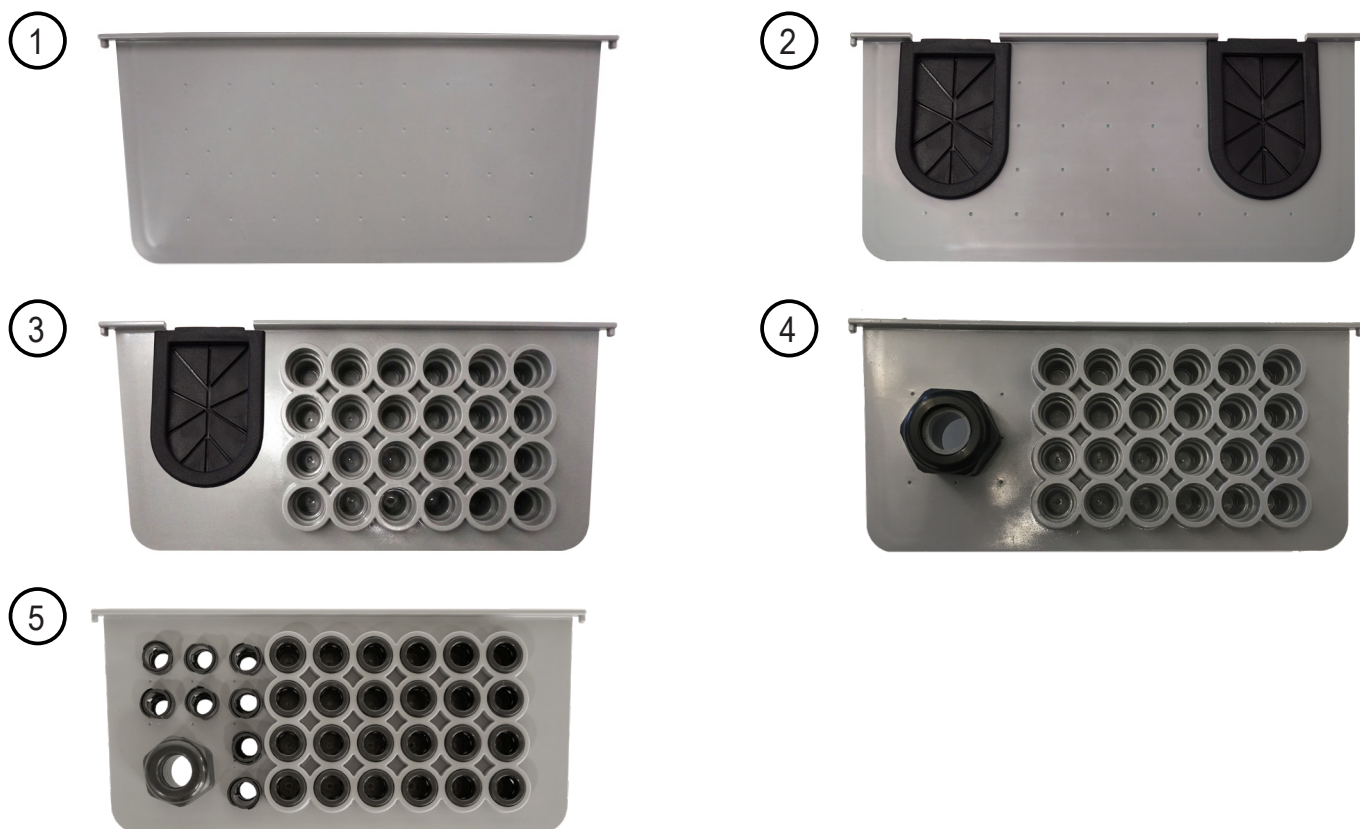


Figure 2

Aggregator Plates

Slide-in aggregator plates support multiple cable entries (individual fiber cables, conduit and microduct) in an organized manner. Technicians can simply snap off a tab to a FlexPort, deburr the port, push in microduct and proceed to pulling fiber. When extra ports are needed, additional FlexPorts can easily be installed in the field.



1. **Blank Plate:** Can support up to a 2 inch conduit fitting. Drill points added for easy drilling.
2. **Universal Plate:** Rubber grommets support variety of lay-in cable applications.
3. **Universal Combo Plate:** Supports up to 24 10/6mm or 8.5/6mm microducts. Also, rubber grommet supports a variety of lay-in cable options.
4. **Combo Plate:** Supports up to 24 10/6mm or 8.5/6mm microducts and a 3/4 inch sealcon.
5. **PON Plate:** Supports a 1/2 inch sealcon and 32 10/6mm or 8.5/6mm microducts.

YOURx Flex Box

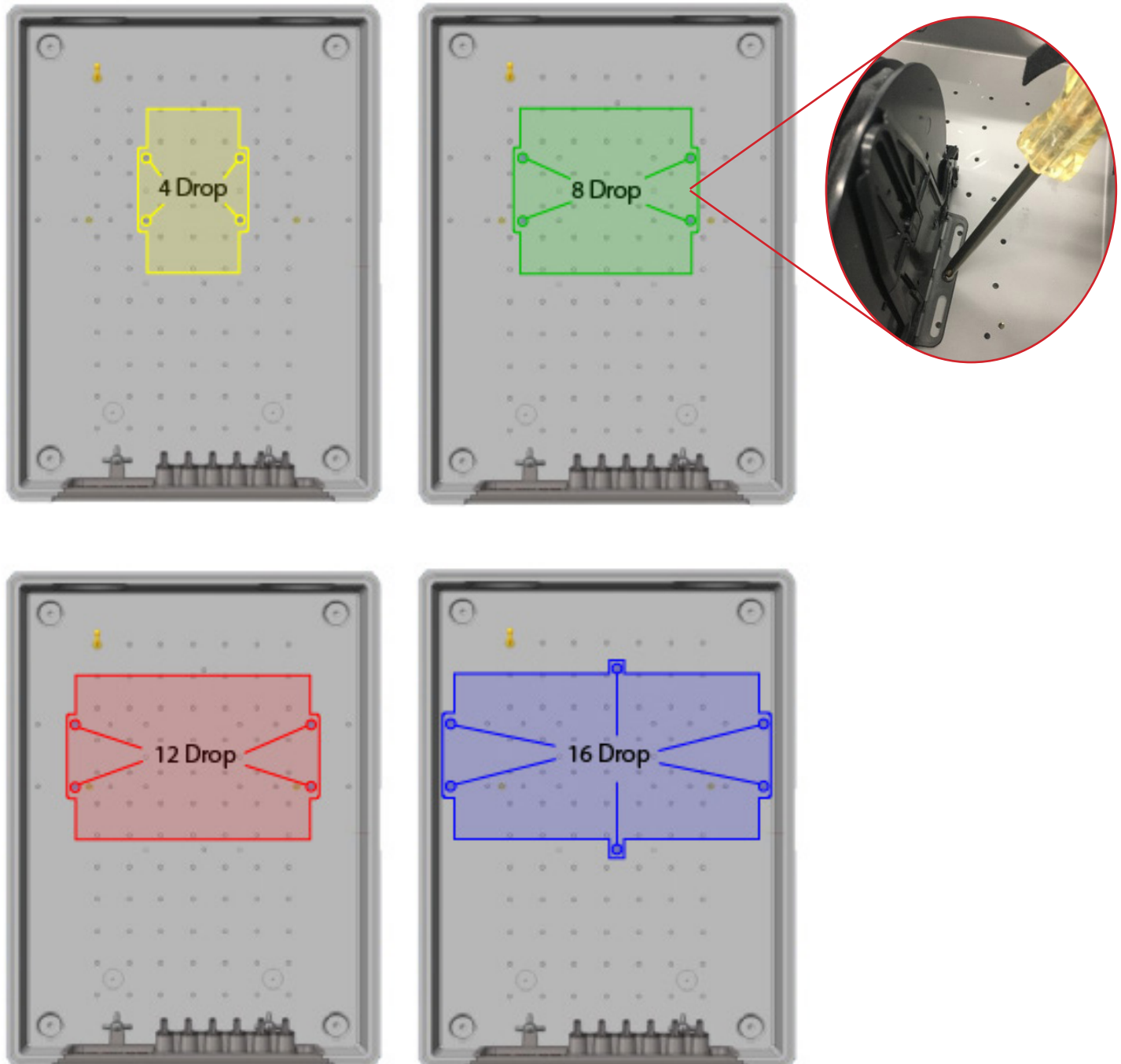
Installation Manual



Installing Drop Wheel Cradles

Secure the drop wheel cradles with the provided screws following the provided hole diagram. Drop wheel applications require the Combo, Universal Combo, or PON plate.

Note: In earthquake regions, the drop wheel cradle requires three screws per side.



Deploying StrongFiber Drop Wheels

Characteristic	Specification
Material	Black Thermoplastic
Fiber	200 Feet of FieldShield StrongFiber
Connectors	Pullable SC/APC to Standard SC/APC

Drop Wheels easily deploy by extending the wheel from the mounting cradle, pulling the fiber through the microduct, and then assembling the pulled connector.

1. Mount the Drop Wheel cradle into appropriate mounting holes (previous page) with the fiber termination ports oriented at the top of the Drop Wheel cradle (**Figure 1**).

Note: Fiber peels off to the back of the wheel.

2. Pull/extend desired wheel forward (**Figure 2**), carefully remove tape holding the fiber in place (**Figure 3**).
3. Tie the microduct pull string to the connector pulling eye (**Figure 4**).
4. Feed the connector into the microduct, and with the drop wheel extended, carefully pull the fiber through the microduct (**Figure 5**).

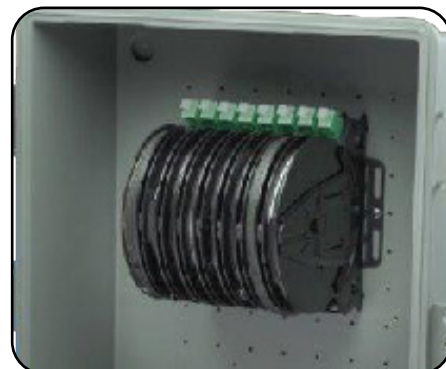


Figure 1

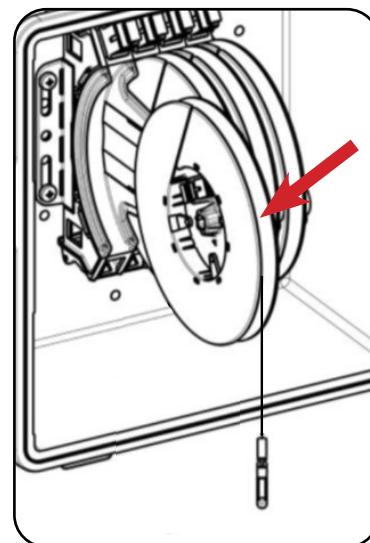


Figure 2

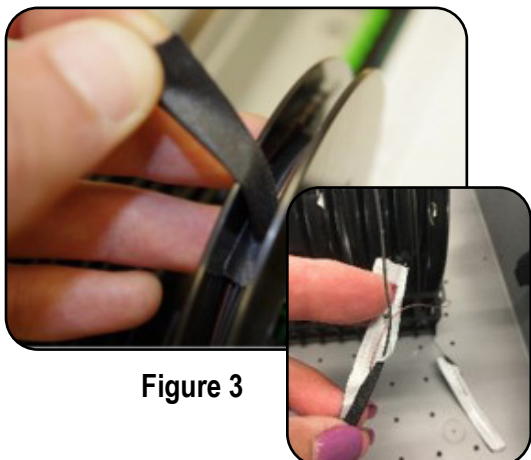


Figure 3

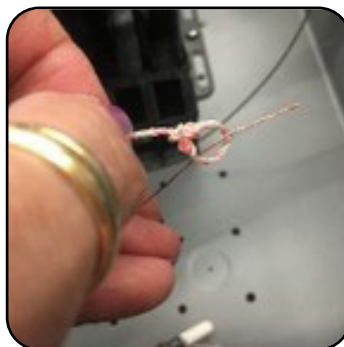


Figure 4



Figure 5

YOURx Flex Box

Installation Manual



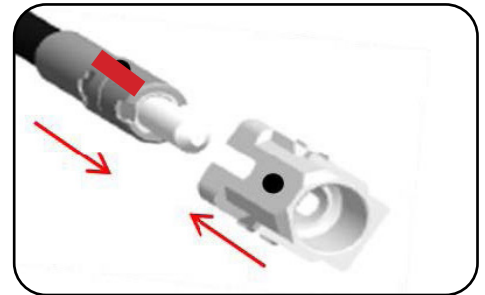
5. Assemble the connector, following instructions on the package or the steps below:

- a. Remove the white protective dust cap from the unassembled connector

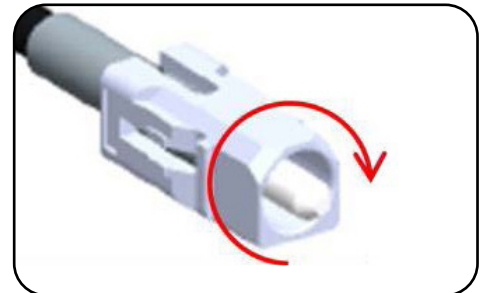
Note: The SC Pushable Connector has a keyed locking feature that holds the inner housing to the connector and aligns the ferrule when the two are correctly mated. To properly mate the connector, the key on the inner housing must bypass the ferrule alignment notch to properly lock into place.



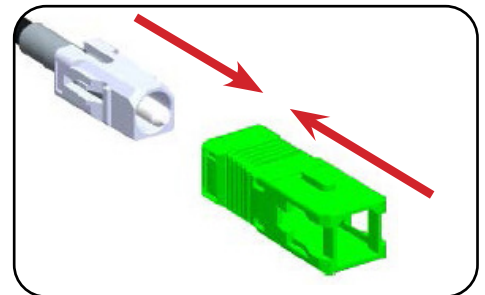
- b. Align the black mark on the inner housing with the black line on the connector, then rotate the inner housing 45 degrees to offset the lock and slide the inner housing half way over the connector.



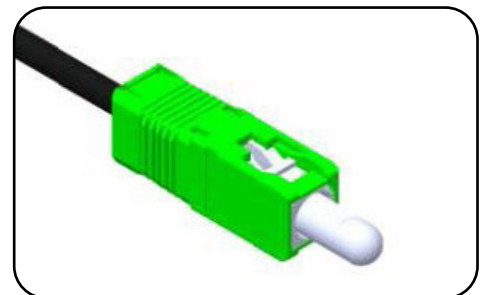
- c. Rotate counter-clockwise 45 degrees to realign the inner housing and connector and push the inner housing onto the connector until it snaps into place.



- d. Align the key on the outer housing with the black line on the connector, then slide the outer housing over the entire assembly until it snaps into place.



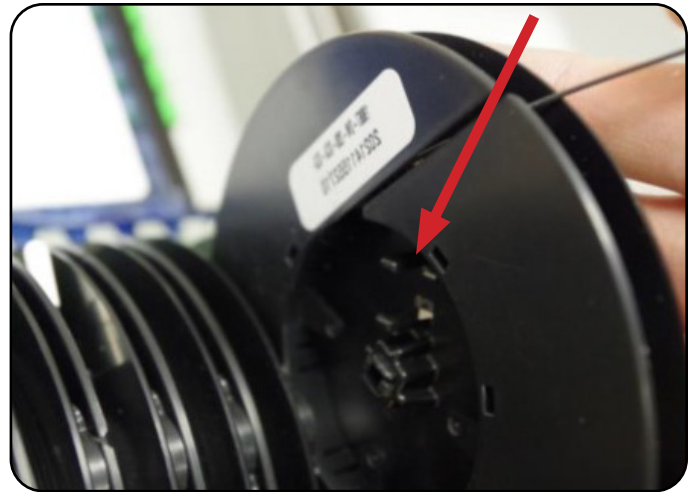
- e. Re-install the white protective dust cap.



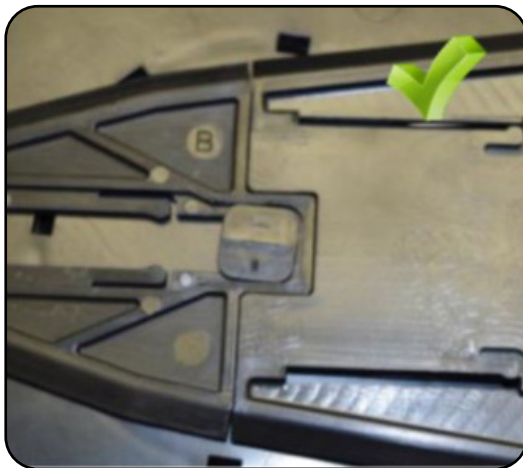
- At the Drop Wheel, route the standard connector from the center of the Drop Wheel through the access slot on the side of the Drop Wheel to the appropriate port on Drop Wheel cradle.

Note: Additional slack can be stored in the connector access slot in the middle of the drop wheel

Additional Slack Storage



- Reinsert the drop wheel into the mounting bracket. Make sure that the slide is properly aligned when reinserting the drop wheel.



Note: Incorrect Position

YOURx Flex Box

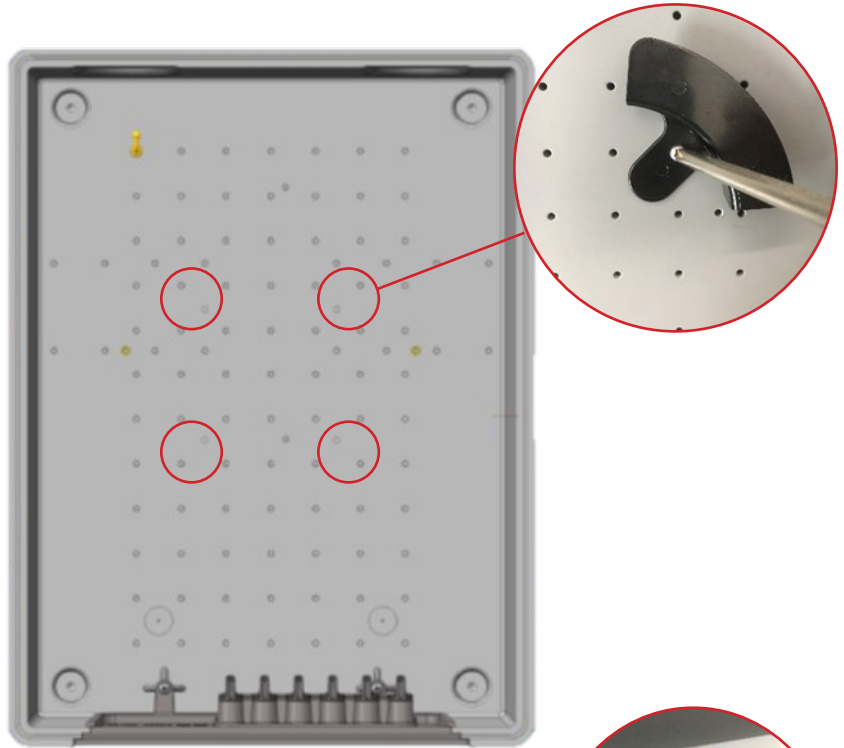
Installation Manual



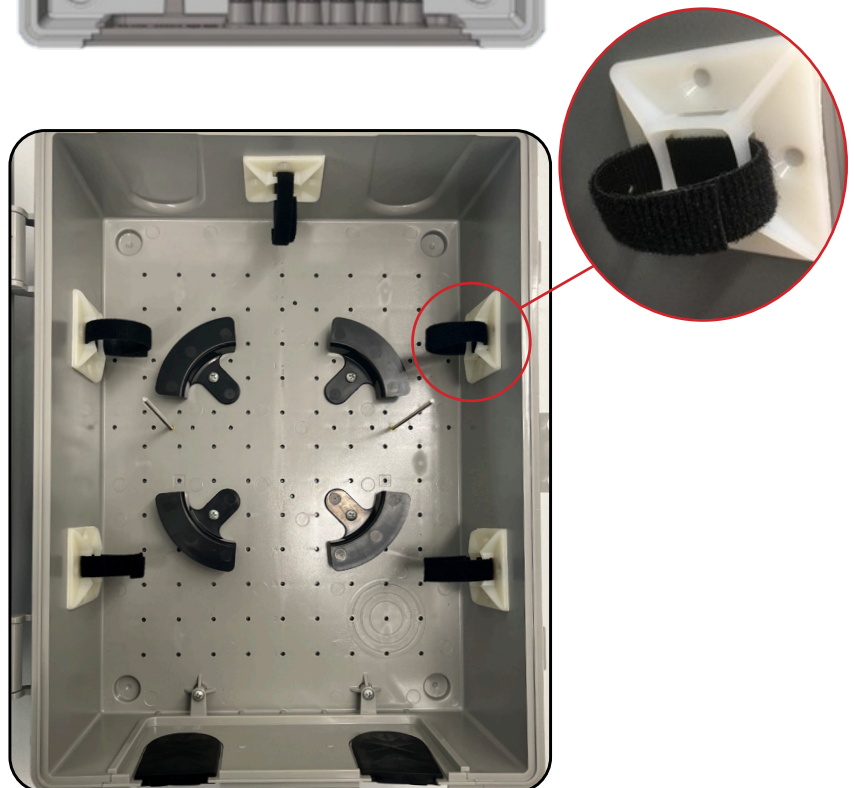
Installing Clearview Blue Cassettes

Fiber management is provided for both incoming and outgoing fiber in separate areas to reduce service interruptions when turning up additional subscribers.

1. Place all 4 of the fiber management radius limiters onto the Flex Box, in the designated holes as shown.



2. Place the 5 fiber management blocks as shown.



3. Screw the two threaded rods into the pems, located in base of wall box (**Figure 3**).
4. Slide cassettes onto threaded rods, utilizing the holes in side rail of cassettes and place nylon nuts to secure (**Figure 4**).

Note: If configuration includes “In-Cassette” Splicing, follow procedures outlined in Clearview Blue Cassette Manual for preparing and splicing, then complete step 4 above.

5. If needed, up to 40 feet of 3mm jacket incoming fiber can be stored within the fiber management radius limiters, as shown in (**Figure 5**), then slide cassettes onto rods to secure into Flex Box (**Figure 6**).

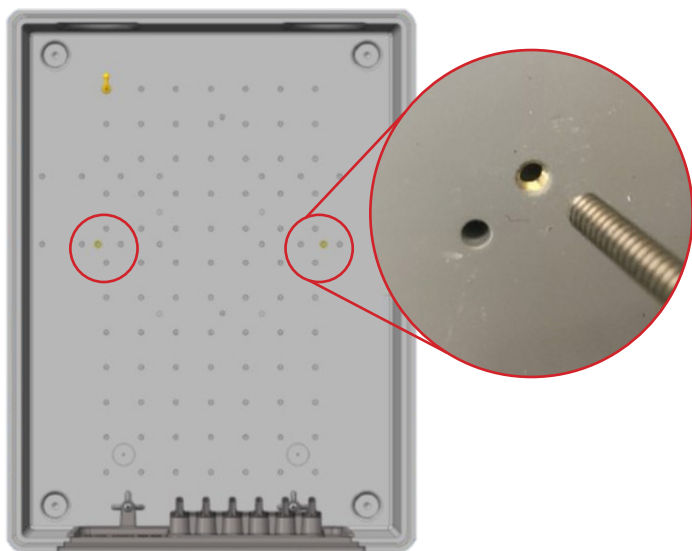


Figure 3

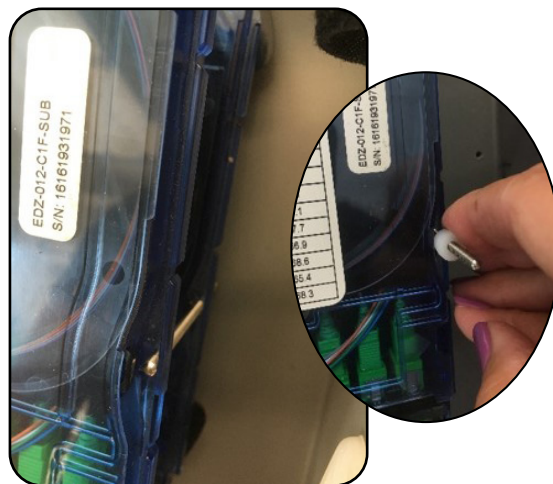


Figure 4

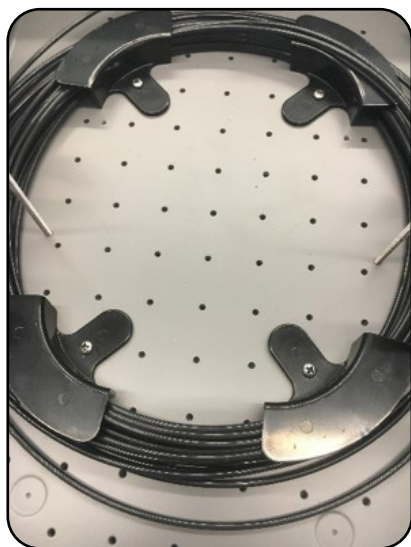


Figure 5

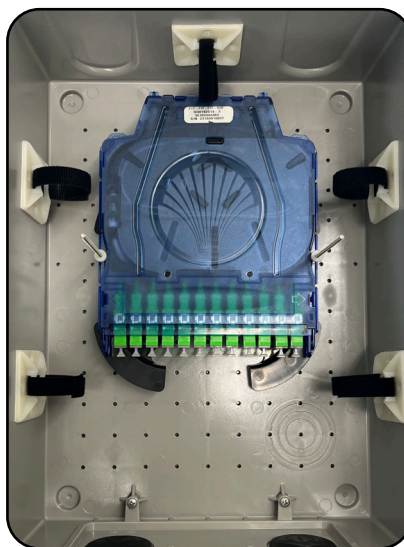


Figure 6

Installing Aggregator Plates

Depending on the configuration, the Flex Box is available with 5 different style slide-in aggregator plates, supporting multiple cable entries.

1. Slide the plate into the base of the Flex Box, aligning into the groove as shown (**Figure 1**).
2. Using the provided screws, secure the plate into the box as shown (**Figure 2**).

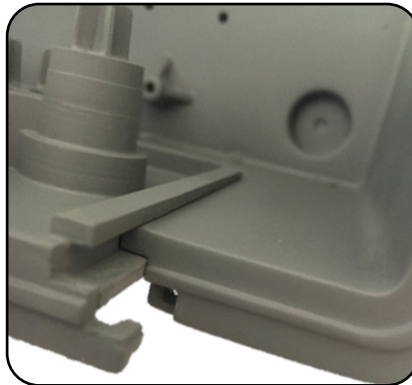


Figure 1



Figure 2

The Combo Plate (**Figure 3**) arrives from the factory with a pre-drilled 3/4" sealcon hole and the appropriate number of 10/6mm or 8.5/6mm FlexPorts pre-installed, matching port count.

These FlexPorts will be marked on the opposite side with tabs featuring a black "X", indicating that the port has a FlexPort installed to accept microduct.

Clearfield recommends the following port assignment, working from back (bottom in **Figure 3**) to front: 1-6, then moving up to next row, 7-12, etc.

Note: ***DO NOT** place microduct into port **WITHOUT** a FlexPort installed or this box will not be water tight.*

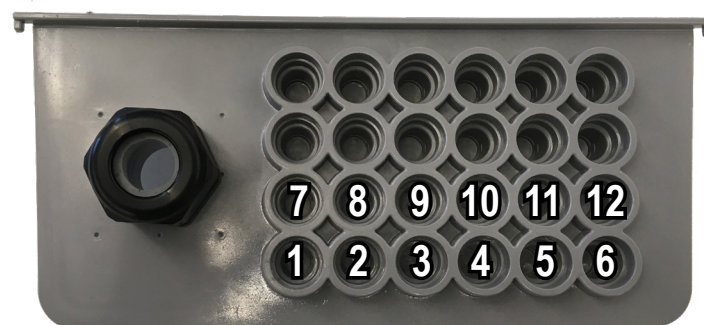


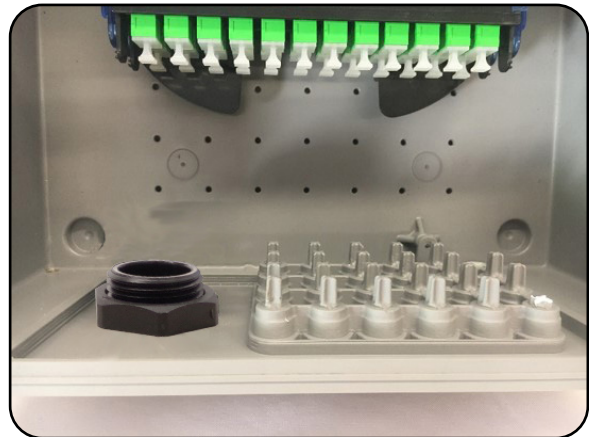
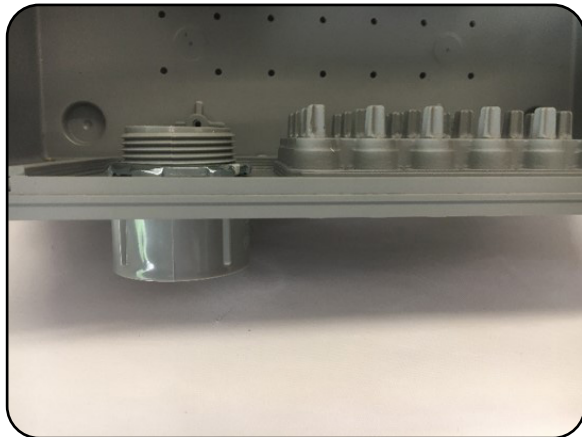
Figure 3

Using the Combo Aggregator Plate

The Combo Plate features ports for up to 24 10/6mm or 8.5/6mm FlexPorts and a pre-drilled hole for a 3/4" sealcon. FlexPorts will come pre-installed by ordered port count, and the sealcon will be an included ship-along item. Additional FlexPorts may be field installed.

To install the sealcon or another conduit fitting into the Combo Plate, insert from below and tighten into place with the locking nut.

Note: Max hole size is 2 3/8" (to keep integrity of the plate intact).



Installing Microduct into Aggregator Plates



Figure 1

1. Using a pair of pliers, snap off the tab of the desired FlexPort (marked with black "X") (**Figure 1**).
2. De-burr the port, using the de-burring tool as shown, or a snips/ knife to remove any sharp edges (**Figure 2**).
3. Push the pull string through the port (**Figure 3**).
4. Properly prepare microduct (flush cut and de-burr), then insert the duct into the FlexPort until snug (**Figure 4**).

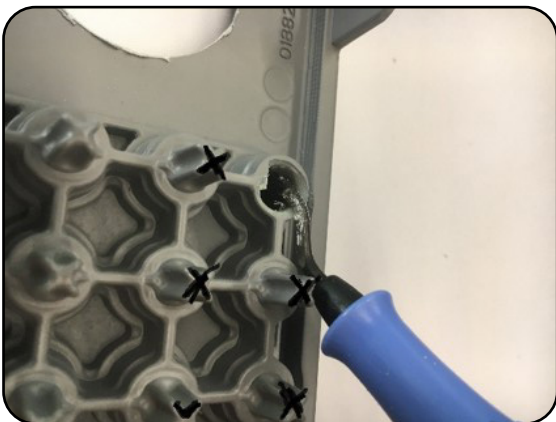


Figure 2



Figure 4

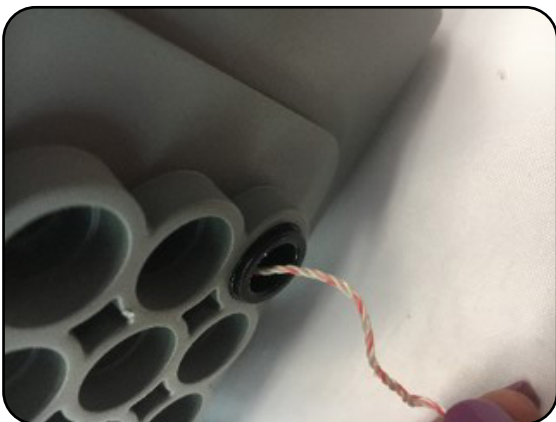


Figure 3

Installing Additional FlexPorts

FlexPorts are pre-installed into aggregator plates that come from the factory based on the port count specified at time of order.

When needed, FlexPorts can be added in the field to allow the terminal to accept additional microducts.

1. Using pliers, remove the tab associated with the FlexPort that you will use. (Figure 1)



Figure 1

2. De-burr (using a de-burring tool or snips/knife) the port hole for a smooth transition, preventing damaging the fiber as it enters the port. (Figure 2)

Note: Must be FULLY DE-BURRED for MPO.

3. Locate the components of a FlexPort. (Figure 3)
4. Place the O-ring into the desired port (Figure 4).
5. Place the shark tooth ring (tooth side up) into the port. Firmly press the shark tooth ring into the port until it is fully seated (Figure 5 & 6).
6. Insert the collar into the port, completing the FlexPort (Figure 7).



Figure 2



Figure 4



Figure 5



Figure 6



Figure 7

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.

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 1



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**)

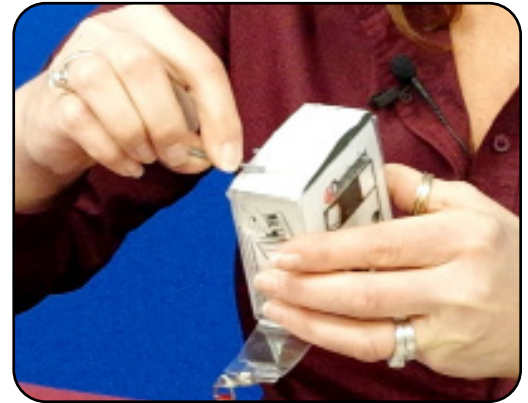


Figure 4

- 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**)

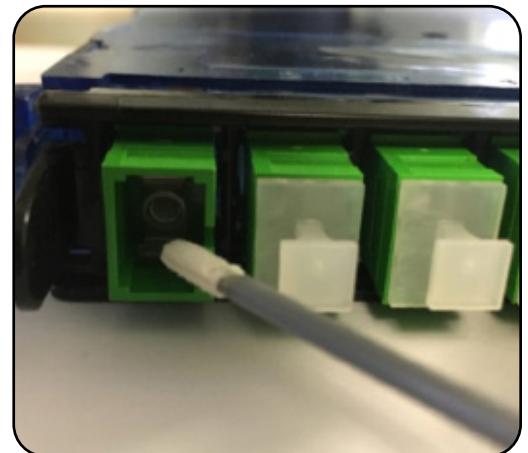
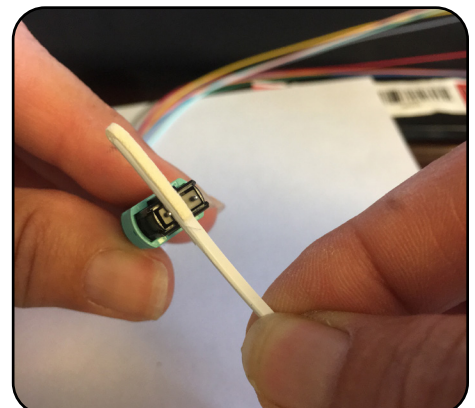


Figure 6

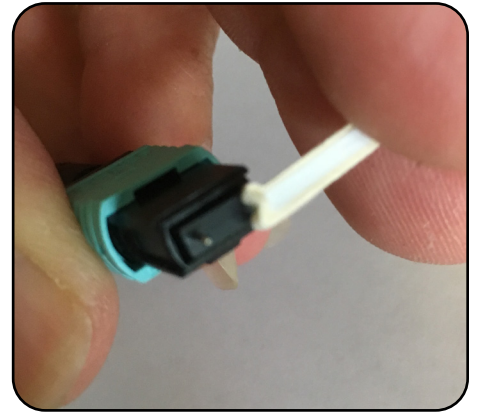
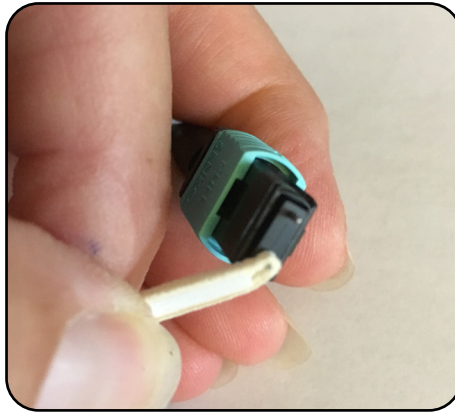
Cleaning an MPO/MTP Connector

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.



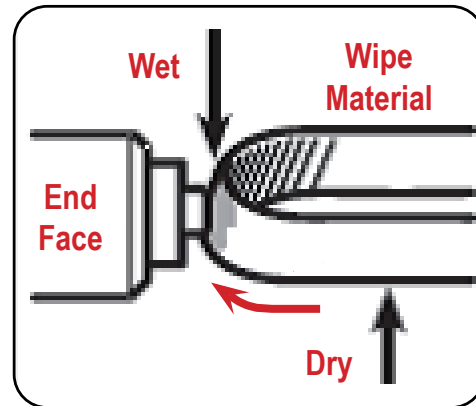
Female Connector (without pins)

- 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.

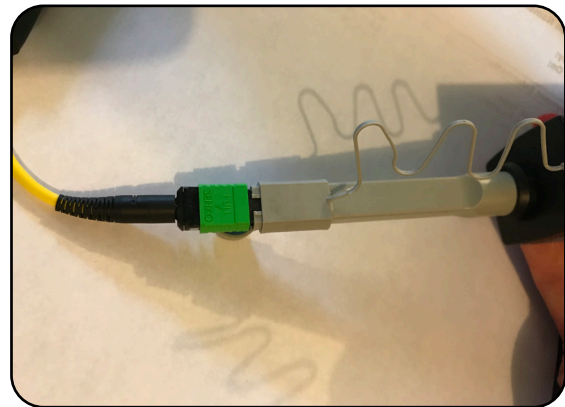


Cleaning Using a Probe-Style Cleaning Tool

- 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 through 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.

YOURx Flex Box

Installation Manual



Proprietary Notice

Information contained in this document is copyrighted by Clearfield, Inc. and may not be duplicated in full or part by any person without prior written approval of Clearfield, Inc.

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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Phone: 763.476.6866
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