FieldShield YOURx-Aerial Terminal

Installation Manual

CLEARFIELD

Manual 019588 REV A - Feb 2018

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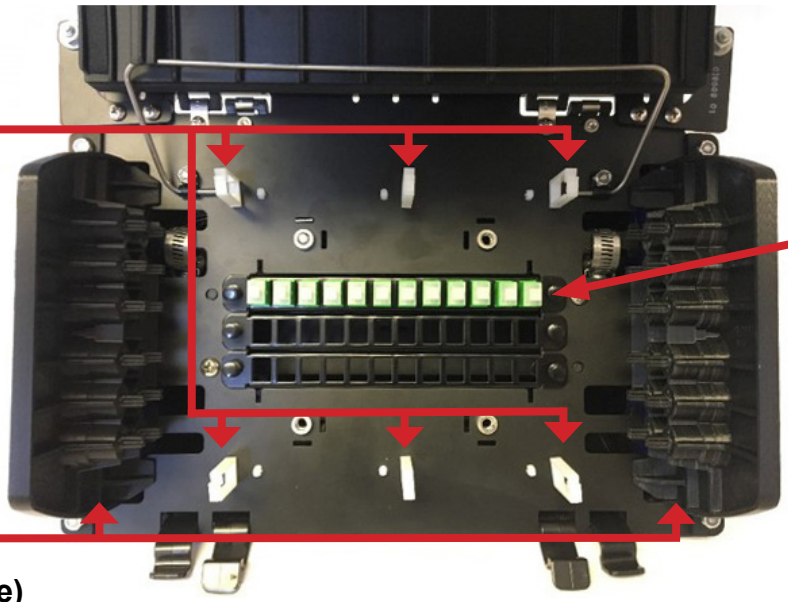
FieldShield YOURx-Aerial Terminal

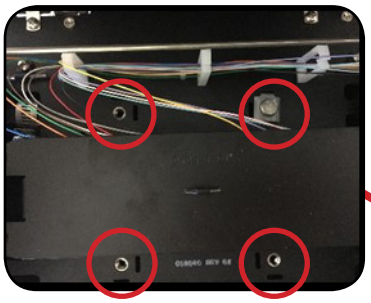
Installation Manual

An OSP "patch and splice" enclosure for aerial applications. OSP (up to 144) cable or Flat-Drop* feed

*Flat drop with FLEXconnector

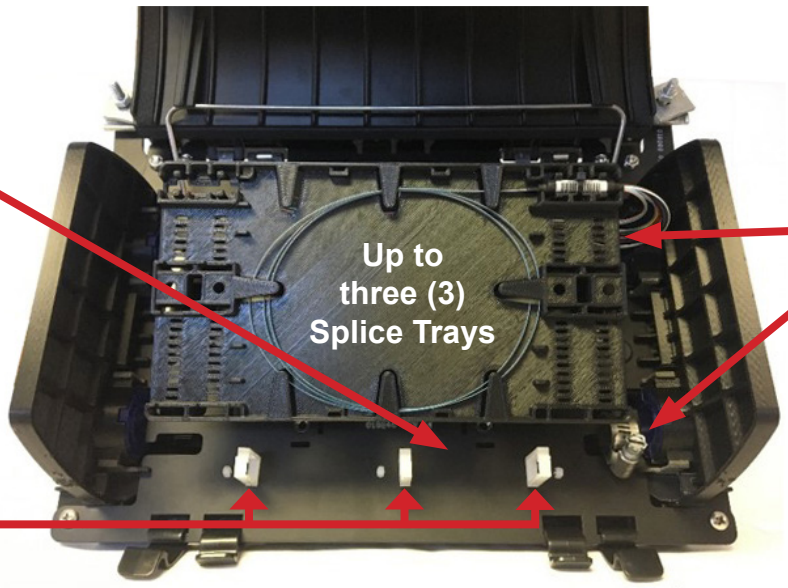


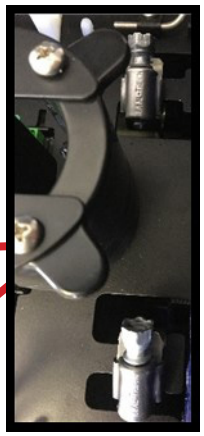
Street Side View



Four (4) Strength Member tie-down locations

(2 top, 2 bottom (under tray))





Cable attachment bracket (2 each per side)

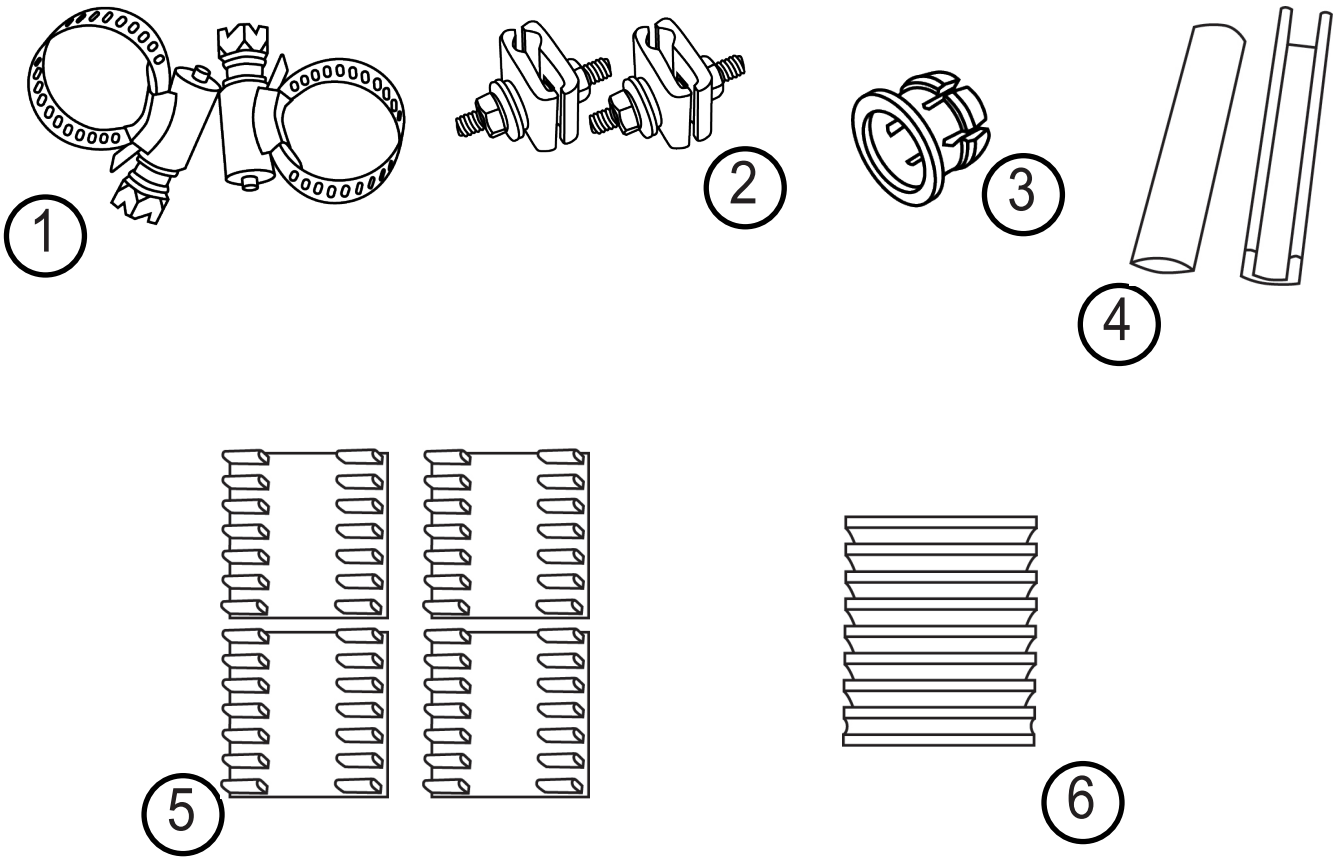
Field Side View

Slack Capacity:

- 12FT Loose Tube, max 144F
- 12FT Ribbon, max 144F
- Mid-Span Capable

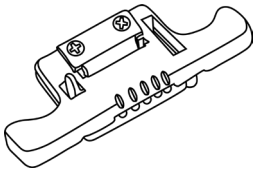
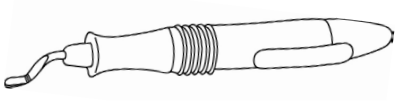
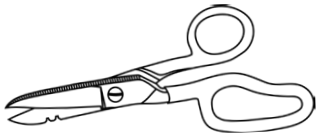
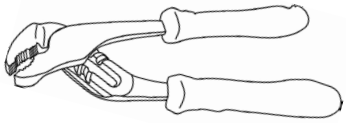
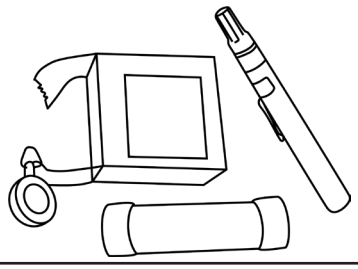
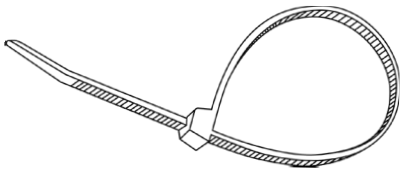
GROUNDING AND BONDING: PER LOCAL PRACTICE

Parts List



1. Pipe Clamps (2)
2. Bug Nuts (2)
3. FlexPort (1)
4. Ribbon Strain Relief (1)
5. Loose Tube Heat Sleeve Holder (2)
6. Ribbon Heat Sleeve Holder (1)

Recommended Tools

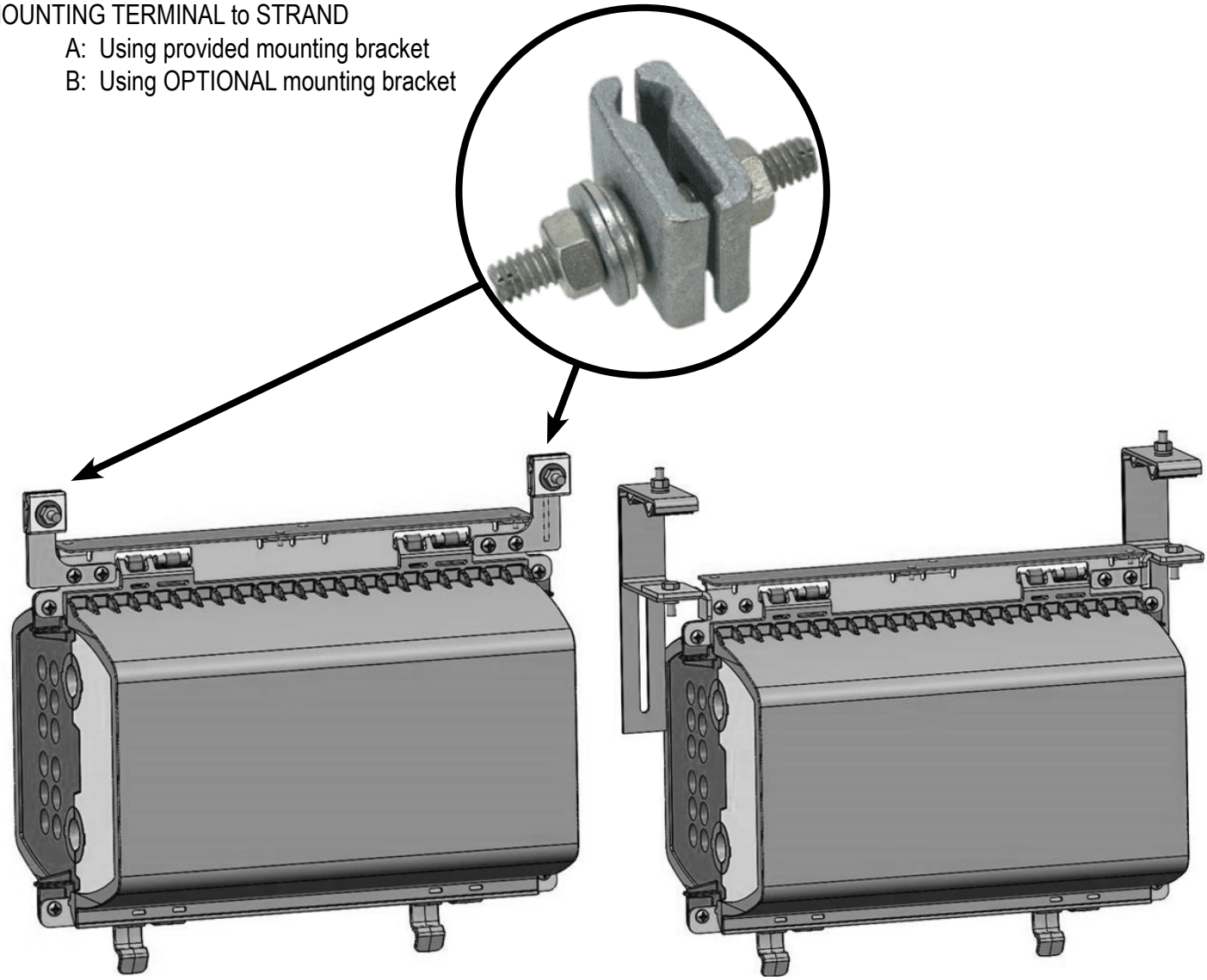
Find No.	Tool	Image
001	Mid-Span Access Tool	
002	De-burring Tool	
003	Snips	
004	Pliers	
005	Optical End Face Cleaning kit	
006	Small Cable Ties	

Strand Mounting

MOUNTING TERMINAL to STRAND

A: Using provided mounting bracket

B: Using OPTIONAL mounting bracket

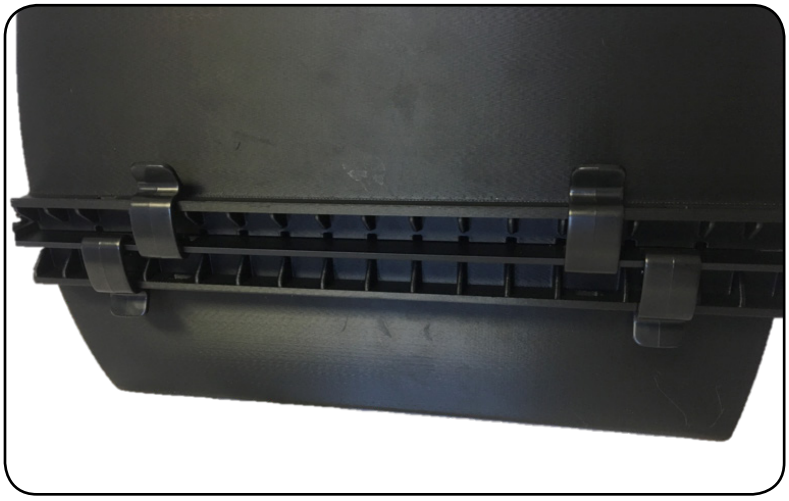


A: Provided mounting

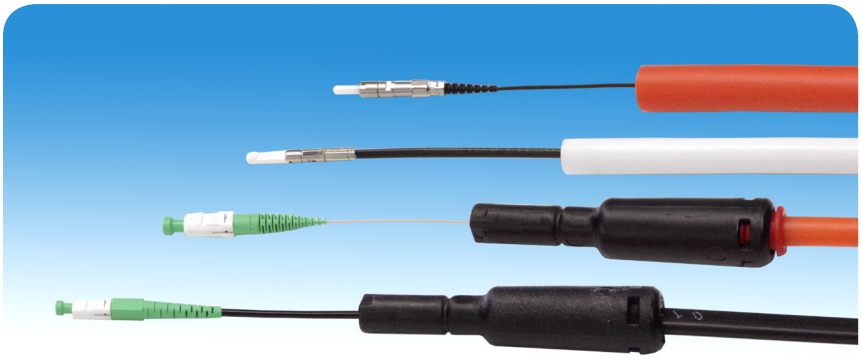
B: OPTIONAL BRACKET (part #: 019448)

Working in the Aerial Terminal

- Each side has (2) tabs.
- Release tabs to open.
- Snap tabs to close.



Supports all FieldShield Drop Options



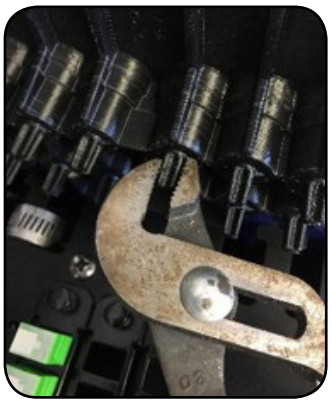


Figure 1

Preparing Terminal Ports

When needed for configurability, FlexPorts can be added in the field to allow the terminal to accept additional fiber drops, microduct or other options, when desired for a change needed.

STEP 1: Using pliers, remove tab from desired port (**Figure 1**).
STEP 2: De-burr (using a de-burring tool/snips/knife) the port hole for a smooth transition without damaging the fiber as it enters the port (**Figure 2**).

Figure 2

Installing FlexPorts in the Field

On outside of terminal, at desired port previously prepared, insert FlexPort as shown:

1. On bottom of terminal, place O-ring into desired port hole.
2. Next, place “Press-In” with teeth closest to you, into hole. Tap in so that it sits flush.
3. Install the “Clip” into the “Press-In.”

NOTE: *Clips should be loose, not springy. If springy, re-adjust the “O-ring”*

O-Ring

Press-In

Clip

Figure 3

Figure 4

Be sure that “Press-In” is placed as shown (**Figure 4**).

Figure 5

Completed FlexPort should appear as shown (**Figure 5**).

Installing Microduct and Push/Pull fiber

STEP 1: De-burr the microduct, using the de-burring tool or similar device (snips or cable knife). (**Figure 1**)

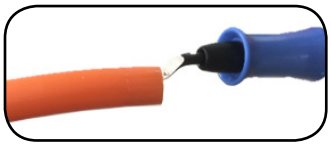


Figure 1

STEP 2: Push pull string, if utilizing, through the FlexPort, then firmly seat the microduct into the FlexPort. (**Figure 2**)

STEP 3: Tie pull string to bulkhead until ready to pull fiber.

Figure 2

Figure 3

STEP 4: After pulling fiber into terminal, complete the "Pushable Connector" housing as instructed with housing being utilized. (**Figure 3**)

STEP 5: **Inspect Then Connect!** Follow our recommended Connector Cleaning Procedures included in this manual for a reliable connection.

STEP 6: Make the connection to the assigned port.

STEP 7: Route slack around fiber management rings.

Installing Flat-SC and D-ROP with FlexConnector

STEP 1:Push assembly of SC connector (FLATdrop or D-ROP) into FlexPort. (**Figure 1**)

STEP 2: Continue to firmly seat the FlexConnector (FLATdrop or D-ROP) into the flex port. (**Figure 2**)

STEP 3: Follow instructions on installing connector housing provided. (**Figure 3**)

STEP 4: After pulling fiber into terminal, complete the "Pushable Connector" housing as instructed with housing being utilized.

STEP 5: **Inspect Then Connect!** Follow our recommended Connector Cleaning Procedures included in this manual for a reliable connection.

STEP 6: Route slack around fiber management rings.

Figure 2

Figure 2

Figure 3

Preparing End Plates for Splicing

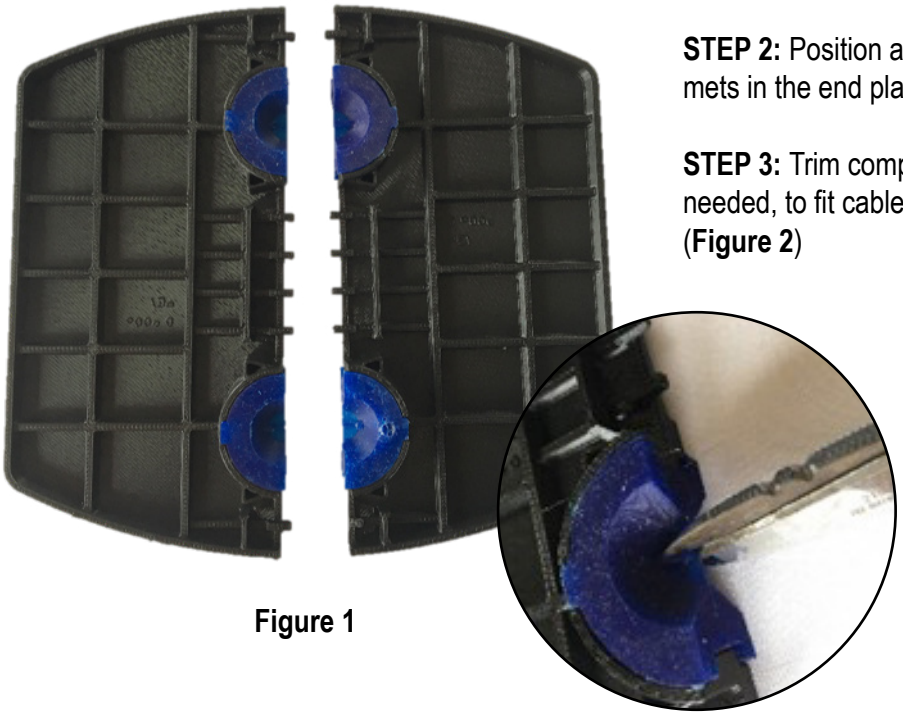


Figure 1

STEP 1: Locate the two (2) end plates.

STEP 2: Position all four (4) of the cable entrance ½ grommets in the end plates. (**Figure 1**)

STEP 3: Trim compression grommet, for each cable entrance needed, to fit cable being utilized (up to ¾" OD), as shown. (**Figure 2**)

Figure 2

Splicing in theYOURx-Aerial Terminal

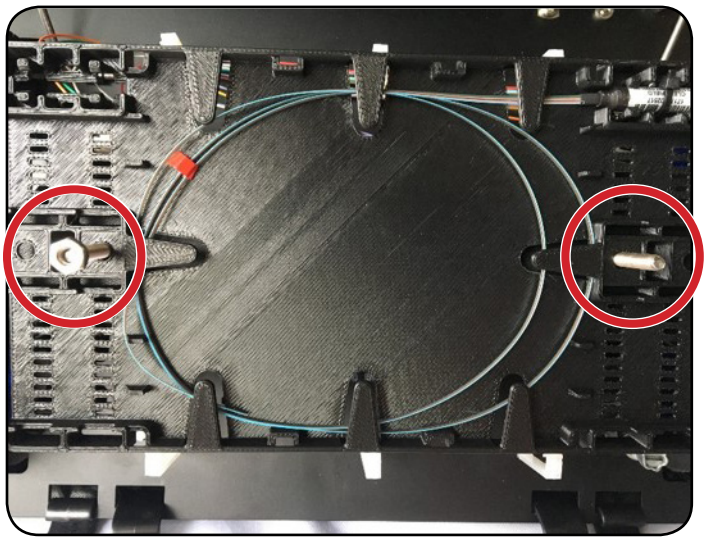


Figure 1

Up to 3 splice trays, depending upon needs, can be added to the terminal.

STEP 1:
Loosen and remove the two (2) locknuts from studs. (**Figure 1**)

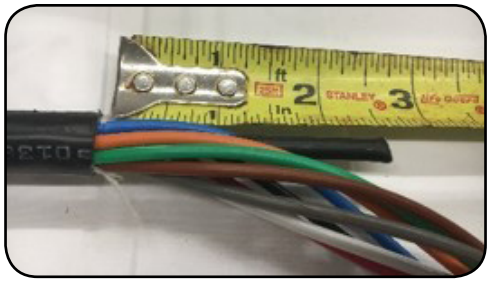


Figure 2

STEP 2: If mid-span, trim strength member on each end to approximately 3". (**Figure 2**)

STEP 3: Trim compression grommet to cable size, as shown. Place cable into terminal at chosen cable entrance/exit, being sure compression grommet is set into endplate, place hose clamp on cable, allowing cable to extend past cable tie-point and tighten. (**Figure 3**)

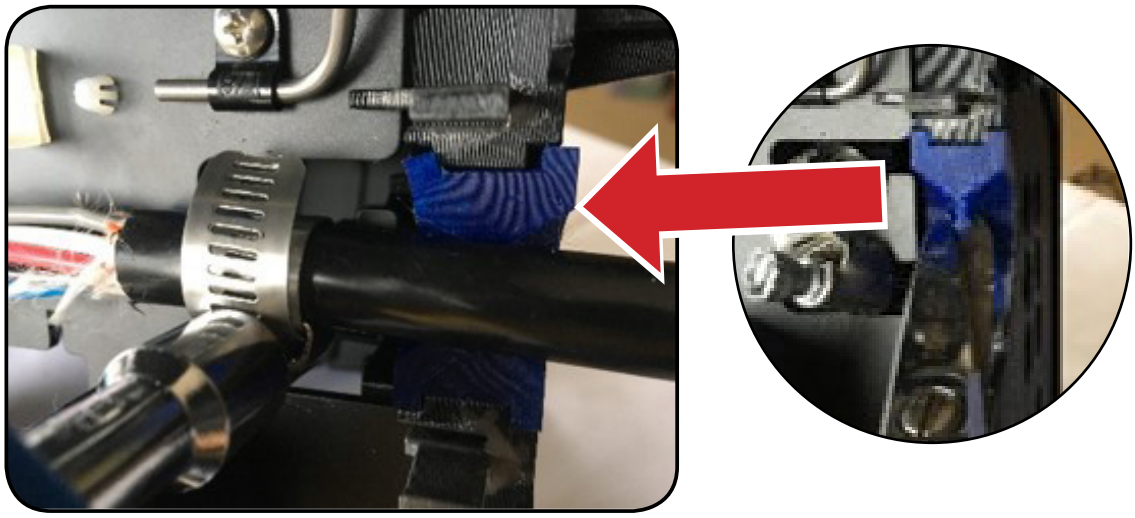


Figure 3

Figure 4

STEP 4: Slide strength member into clamp, tighten. (**Figure 4**)

NOTE: If mid-span/express, complete this step on the other end of cable opening.

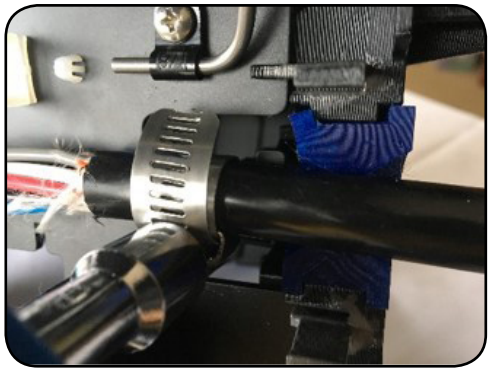


Figure 5

STEP 5: Once all cables are loaded into terminal, place the endplates (2) on each side of terminal.

Placing the ribbed side of plate to the inside, press the endplate until it locks into place, top and bottom grommets. (**Figure 5**)

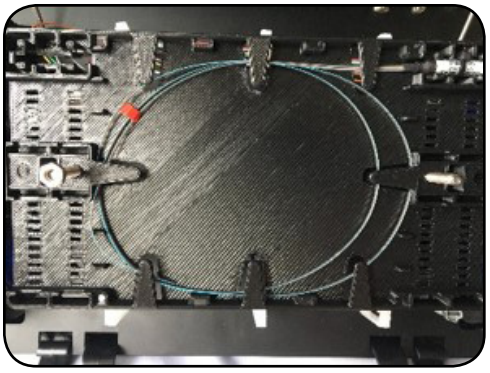


Figure 5

STEP 5: Place splice tray(s) back into terminal, tighten locknuts on studs. (**Figure 5**)

STEP 6: After removing Buffer Tube or Ribbon to be spliced, the remaining slack can be stored behind the splice trays, utilizing the fiber management spools. (**Figure 6**)

Slack store 1 lap of buffer tube/Ribbon to be spliced. The remaining will be used for splicing in the tray.

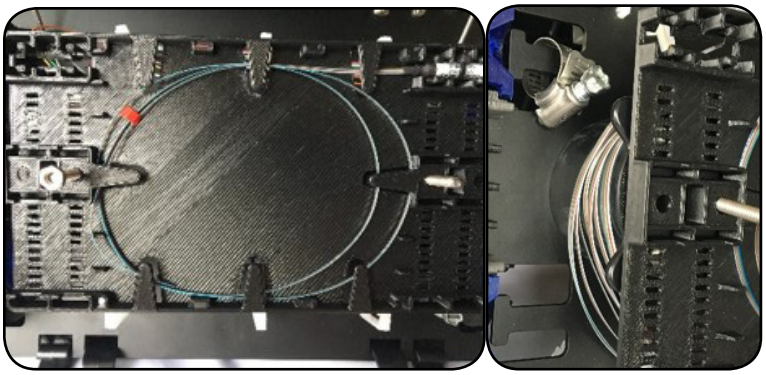


Figure 6

Splicing Loose Tube

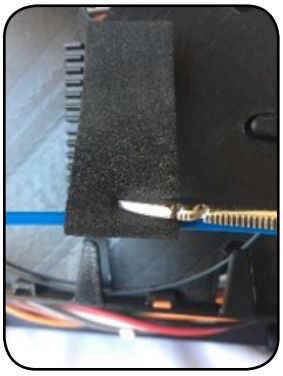


Figure 1

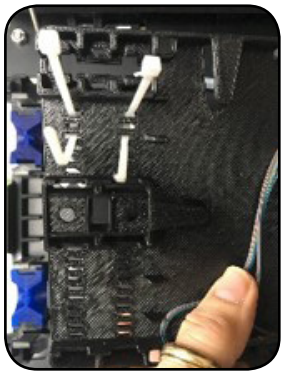


Figure 2

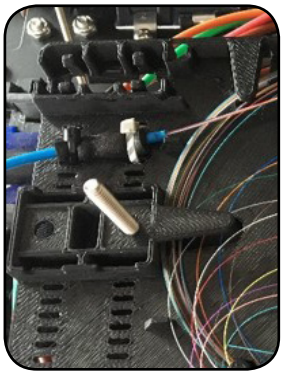


Figure 3

STEP 1: Wrap 1 lap of grommet tape around buffer tube, at tie down location, to protect the buffer tube. (**Figure 1**)

STEP 2: Place 2 cable ties into desired location as shown. (**Figure 2**)

STEP 3: Tie buffer tube into tray. (**Figure 3**)

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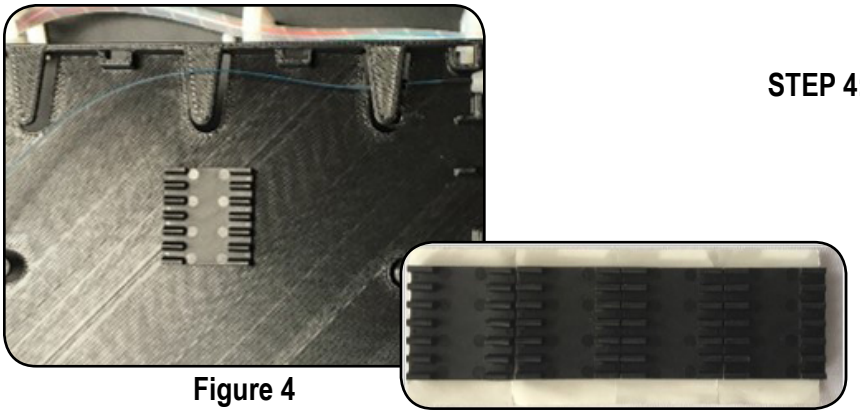

Figure 4

STEP 4: Place splice chip(s) into tray. (**Figure 4**)

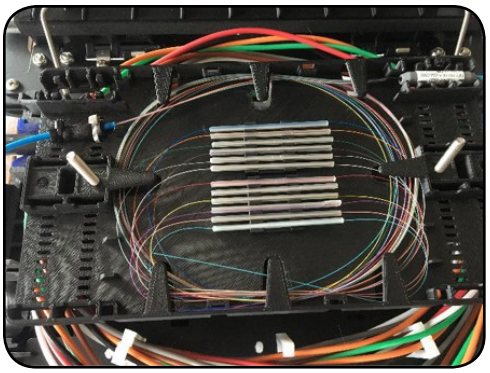

Figure 5

STEP 5: Complete the splicing of fiber. (**Figure 5**)

Splicing Ribbon

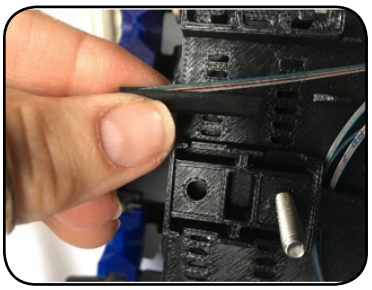

Figure 1

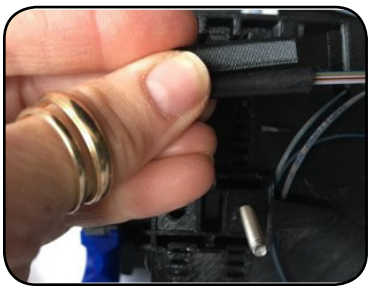

Figure 2

STEP 1: Place strain relief/fiber retention rubber grommet onto ribbon fiber to be splice. (**Figure 1**)

STEP 2: Then snap into plastic u-channel. (**Figure 2**)

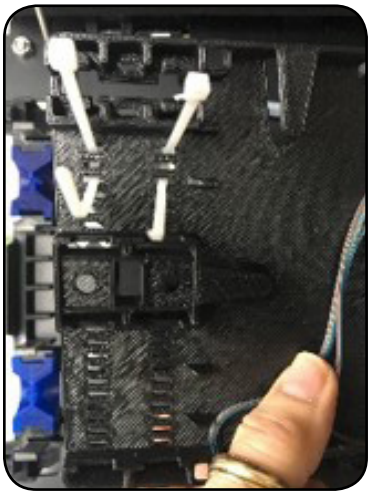

Figure 3

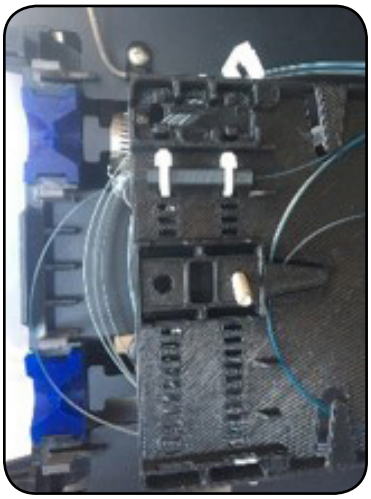

Figure 4

STEP 3: Place 2 cable ties into tray, at location desired. (**Figure 3**)

STEP 4: Lay strain relief/fiber retention at location and tighten cable ties. (**Figure 4**)

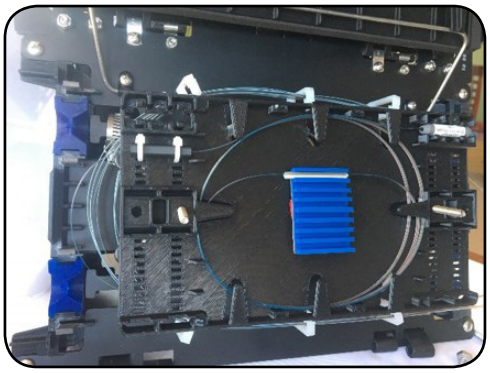

Figure 5

STEP 5: Place splice chip in desired location and complete the mass fusion splice. (**Figure 5**)

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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 all connectors and adapters prior to mating.

I.T.C…Inspect Then Connect!

ALWAYS inspect the connector first thing with a clean fiber scope inspect the pair. Three types of contamination require different cleaning techniques. The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

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

***NOTE: It is NOT recommended to use IPA to clean the end-face.**

Cleaning the end-face…but not just 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 90 degree. Adjust for APC connection by slightly tilting the container or end face. Angle is correct when no drag is left 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.

DO NOT retrace previous step.

Figure 1

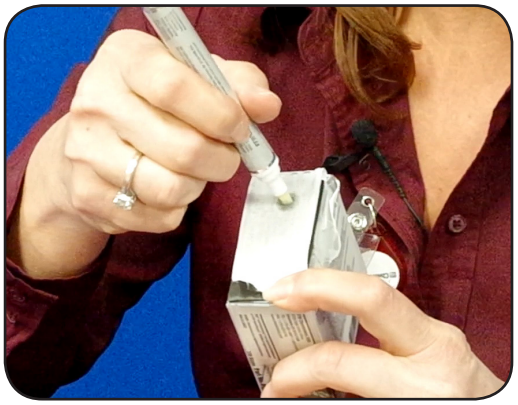

Figure 2

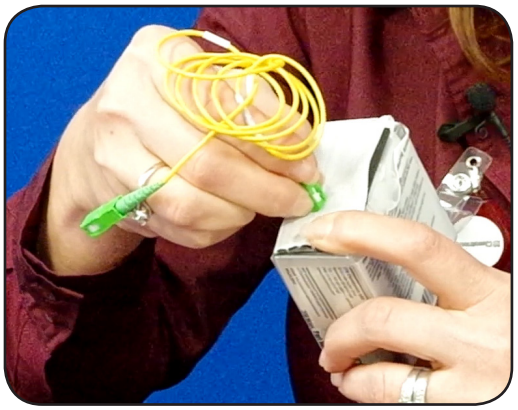

Figure 3

• **CLEAN 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-2. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. (**Figure 4)**

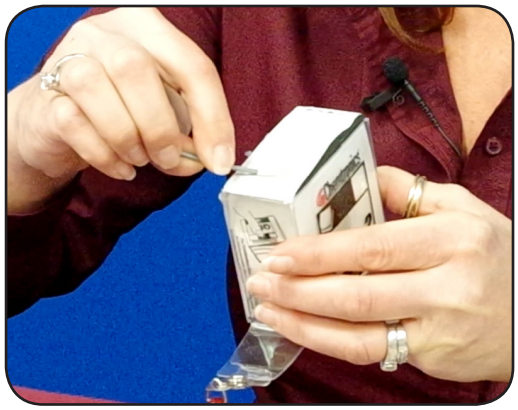

Figure 4

• 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)**

Cleaning the mate through a bulkhead 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-2. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.

Figure 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 (re-clean if necessary) and test for signal strength.

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

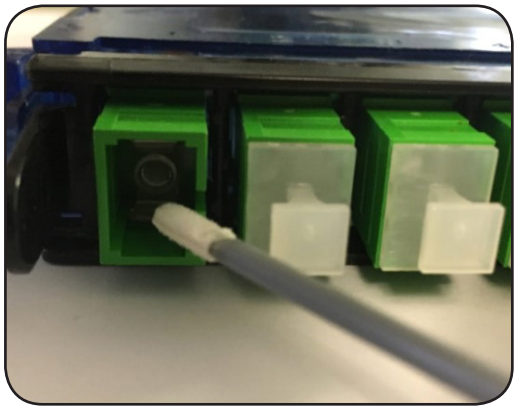

Figure 6

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Cleaning an MPO/MTP Connector

Female Connector

• Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen and apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. **Figure 1**

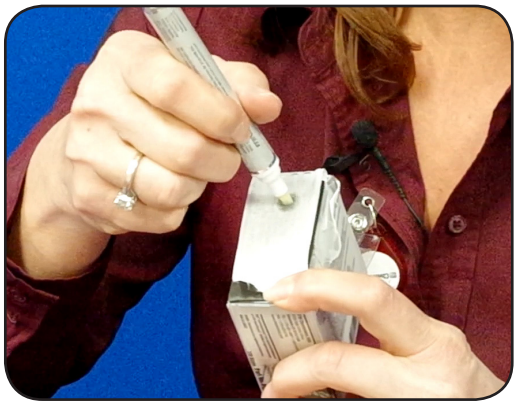

Figure 1

• Hold end face 90 degree. Adjust for APC connection by slightly tilting the container or end face. Angle is correct when no drag is left on the end face. **Figure 2**

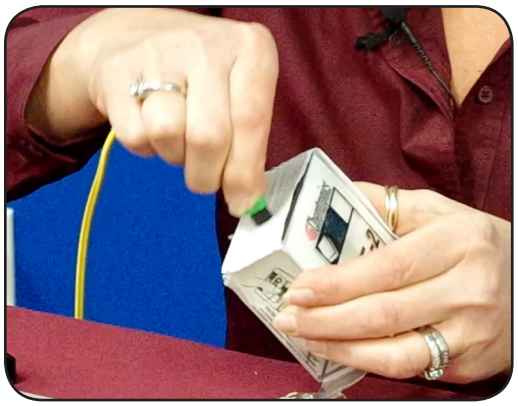

Figure 2

Male Connector

• Lightly moisten the fiber optic swab (CC505F) like above, moistening 1 side.

• Place swab, wet side down at one end of connector end-face and draw across in a diagonal sweep (ie: from fiber 1 up and across to fiber 12). Turn swab over to dry and draw back from fiber 12 to fiber 1. **Figure 3**

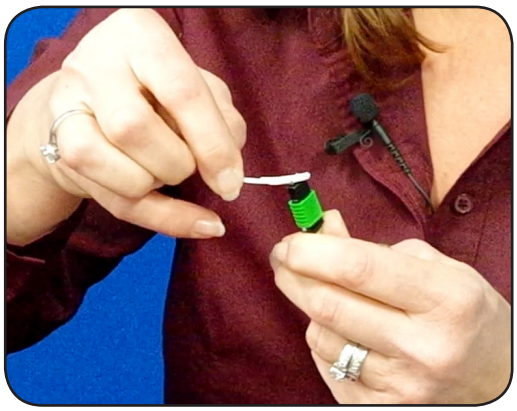

Figure 3

BEFORE cleaning any connector…be sure you know what type of contaminate you are cleaning…dry? Fluidic?...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!

DROP CABLE OPTIONS

Product Name	Cable Jacket	UV	Temperature	FieldShield Connector	Jacket Color	Can be stapled	Best Application
FieldShield FLATdrop 	Outdoor	Yes	-40° to 176°F	No	Black	Yes	For use when fast installation and low up-front cost is most desired feature.
FieldShield D-ROP 	Outdoor	Yes	-40° to 176°F	Yes	Black/ Orange	Yes	For use when a single pass and restorable solution at a competitive price is ideal.
FieldShield FLEXdrop 	Indoor (Plenum)/ Outdoor	Yes	-40° to 176°F	Yes	Black/ White	Yes	For use when a premium product that has maximum workability, flexibility and restorability is desired.
FieldShield (Classic) 	Outdoor in Duct	Yes in Duct	-40° to 176°F	Yes	Black	Yes	For use when the distance from the access point to the SFU/MDU is longer than normal and a more rigid solution is required to maintain restorability for drops longer than 300 feet.
FieldShield StrongFiber 	Indoor/ Outdoor in Duct	Yes in Duct	-40° to 176°F	Yes	Black	Yes in Duct	For use when a reusable pathway is needed and maximum slack storage is desirable.

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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

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.

Clearfield, Inc.
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Customer Support: sales@clfd.net
Technical Support: techsupport@clfd.net