

Field Installation Guide

HARDENED CONCAT II

Step-by-step field procedures for preparing, sealing, grounding, and mounting the Hardened CONCAT II closure across multiple cable types. Includes strand, pole, and pedestal mounting plus hardened-drop connection steps.



Hardened CONCAT II Installation Guide

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1.1 Prepare 24-fiber Flat IBR



Fig. 8a



Fig. 8b

Mid-span of 96-inches

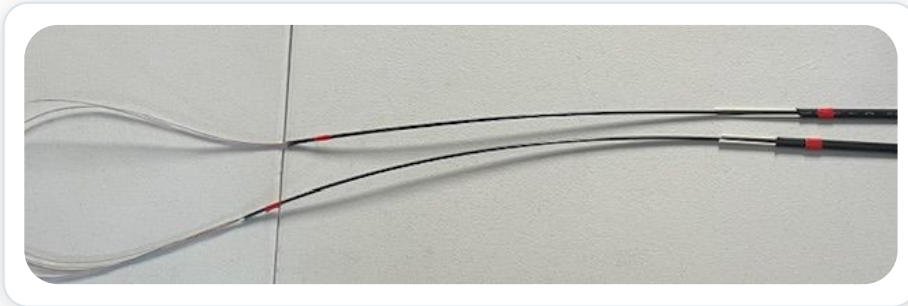
- For aerial and pedestal installation, it is recommended that a loop of 18-feet be left for mid-span cable access and splicing when cable is placed.
- This allows for 120-inches of slack stored on the aerial mount bracket or inside the pedestal and 96-inches for routing internally and splicing.
- Locate center point of slack loop and mark 48 inches in each direction for a 96-inch mid-span opening.



Fig. 8c

- Cut GRP strength members to 2-inches.

1.2 Remove Buffer Tube



18-inches buffer tube on each side - Fig. 8d

- Measure and mark 16-inches from each end of the mid-span opening. Use a 3mm cable splitter to remove the 3mm buffer tube between the 2 marks.

1.3 Install Prepared Cable Into Closure



Fig. 8e

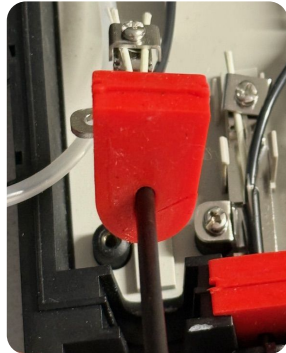


Fig. 8f



Fig. 8g



Fig. 8h

- Secure GRP strength members into strength member bracket as shown in Fig.8e. Place cable in grommet as shown in Fig.8f.
- Insert Grommet in closure and use cable retention hardware to secure cable as shown in Fig.8g and 8h.

1.4 Route Buffer Tube to Splice Tray

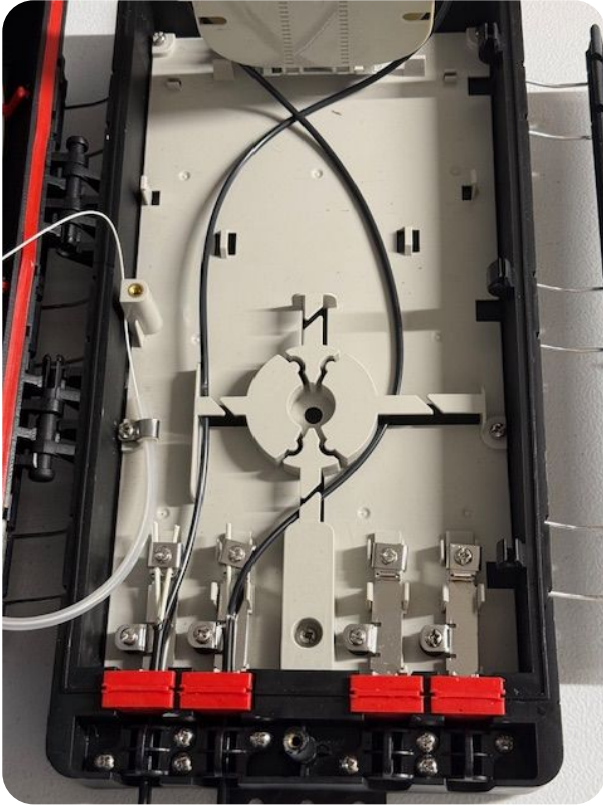


Fig. 8i

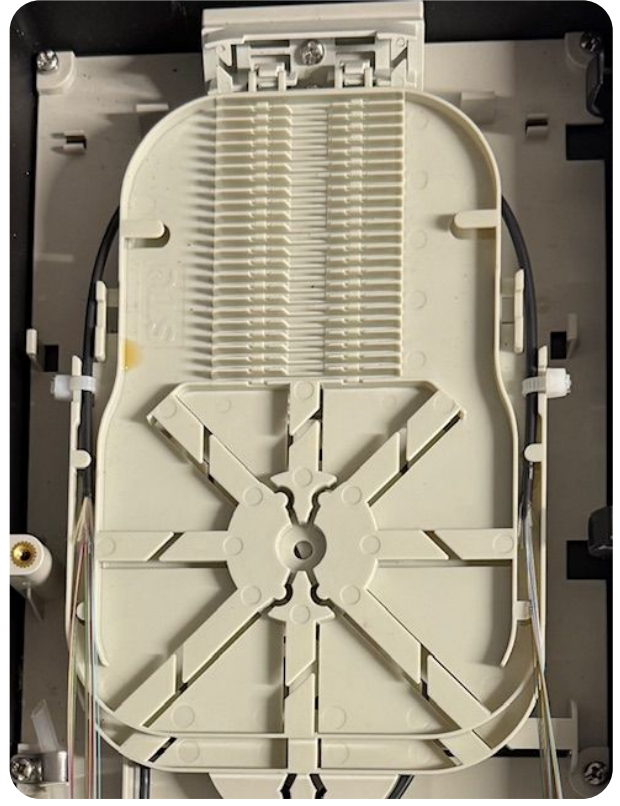


Fig. 8g

- Route buffer tubes as shown – Note buffer tubes cross as shown in Fig. 8i. Buffer tubes should extend onto the splice tray and be secured with a tie wrap as shown in Fig. 8j.

1.5 Prepare Fiber to Splice

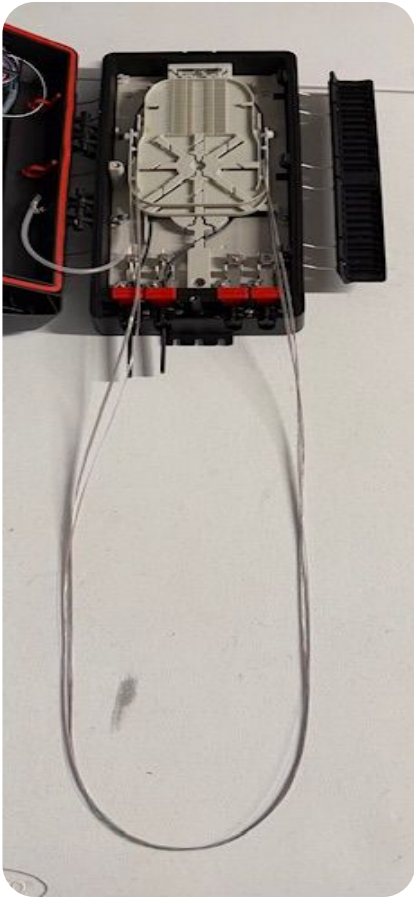


Fig. 8k

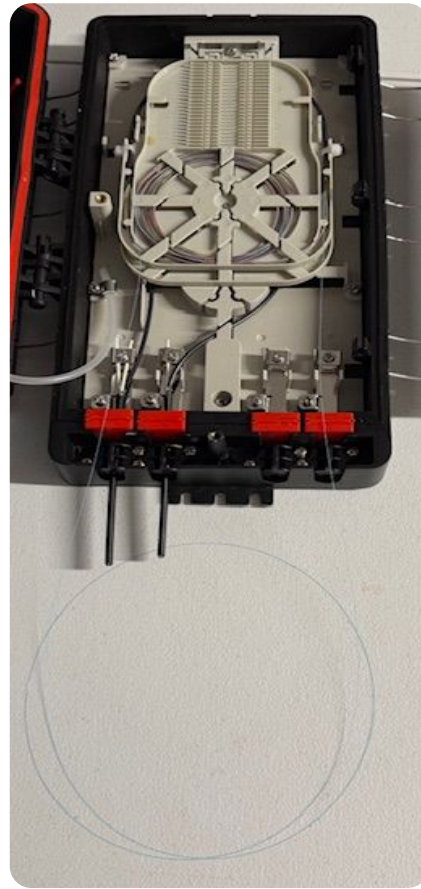


Fig. 8l

- Separate fiber to be spliced (to input of drop splitter) and store the fibers that will pass through as shown in Fig. 8k and Fig. 8l.

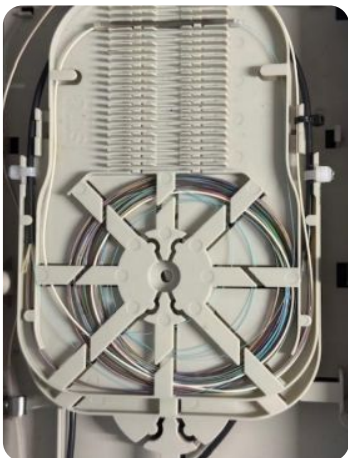


Fig. 8m

- Splice fiber selected to 900-micron pigtail as shown in Fig. 8m.

2.1 Prepare Round 48f Armored or Dielectric Loose Tube Cable

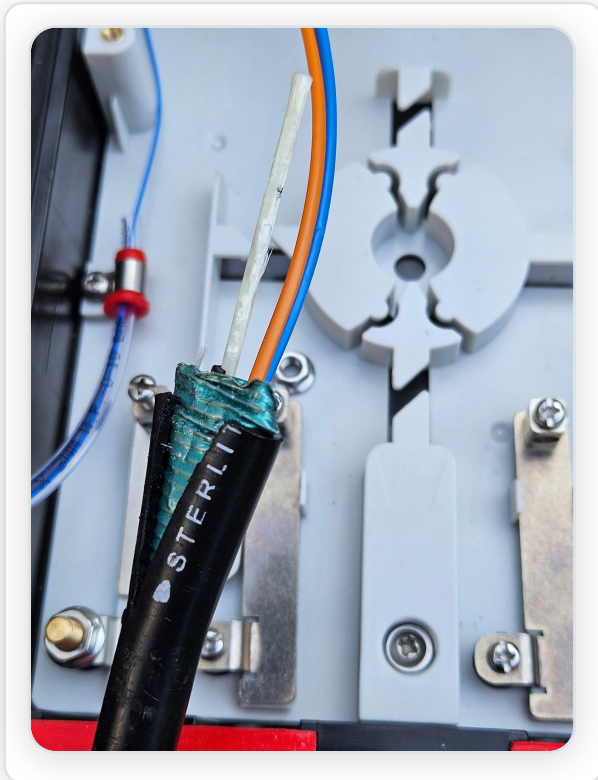


Fig. 1

- Expose the armored sheath per local practices as shown in Fig. 1.

2.2 Install Ground

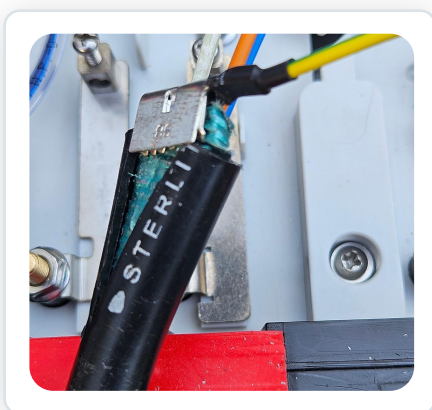


Fig. 2a

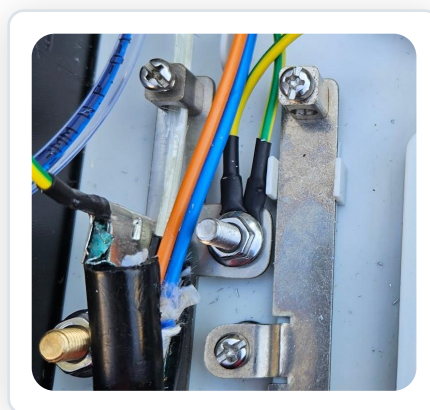


Fig. 2b

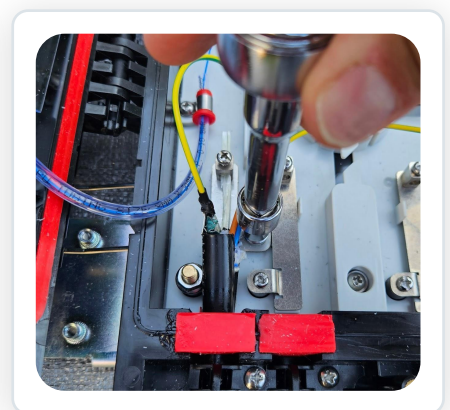


Fig. 2c

- Place the grounding clip in the armored sheath as shown in Fig. 2a.
- Place the eyelet on the grounding stud as shown in Fig. 2b.
- Use an 8mm socket/driver to tighten the grounding lug as shown in Fig. 2c.

2.3 GRP Rod Fixation

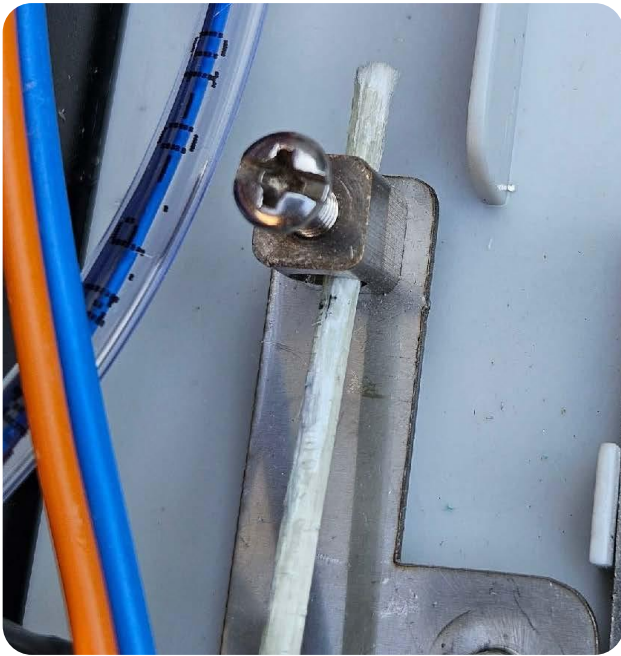


Fig. 3a

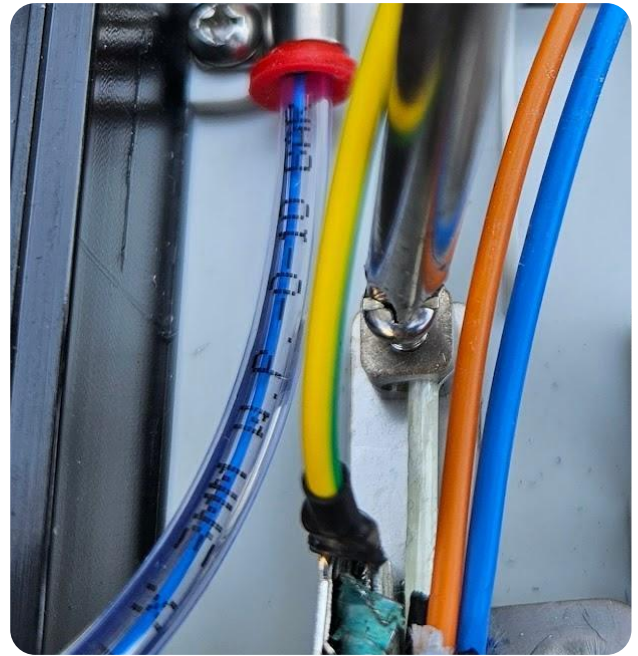


Fig. 3b

- Expose 1-2 inches of the GRP rod
- Insert GRP rod onto the retention bracket as shown in Fig. 3a
- GRP rod should extend 0.5-1.0 inches past screw tie down
- Tighten using a phillips head screw driver as shown in Fig. 3b.

2.4 Cable Sealing

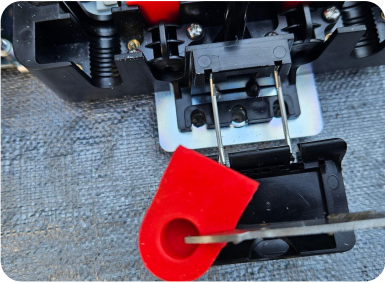


Fig. 4a

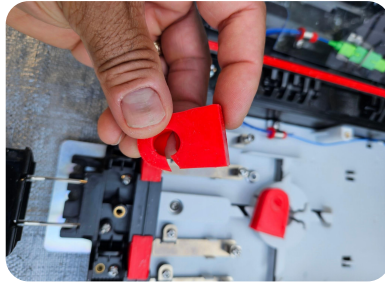


Fig. 4b

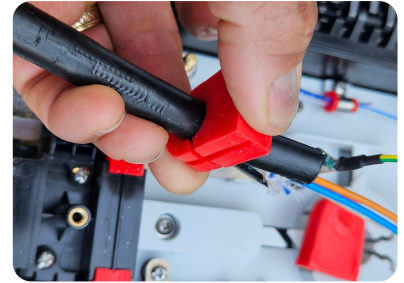


Fig. 4c

- Cut a slot on one side of the cable grommet as shown in Fig. 4a and 4b.
- Note: Use loose tube cable grommet with larger hole see Fig. 4e below
- Wrap grommet around cable
- Be sure port area is clean of mud or grit for proper sealing



Fig. 4d



Fig. 4e

Note: All grommets will come from the factory with silicone grease added to help facilitate proper seating on the grommets in the closure (see Fig. 4d). An additional 5gm pack of silicone grease shall be included in the kit.

2.5 Loose Tube Cable Jacket Retention

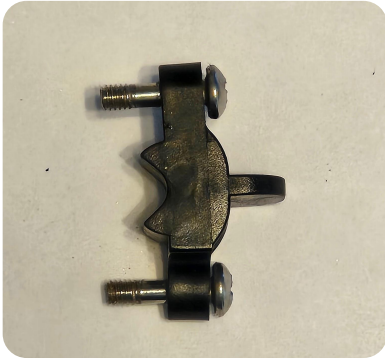


Fig. 5a

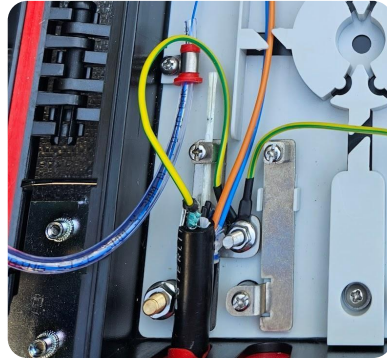


Fig. 5b

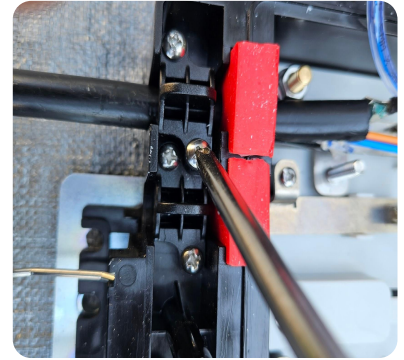


Fig. 5c

- Use the round cable jacket retention bracket shown in Fig. 5a
- Place the jacket at least 1" (25mm) from the closure wall as shown in Fig. 5b
- Evenly tighten the retention screws on both sides of the retention bracket as shown in Fig. 5c.
- **Note: Be sure to properly seat the grommet in the base to insure proper sealing**

2.6 Buffer Tube Storage

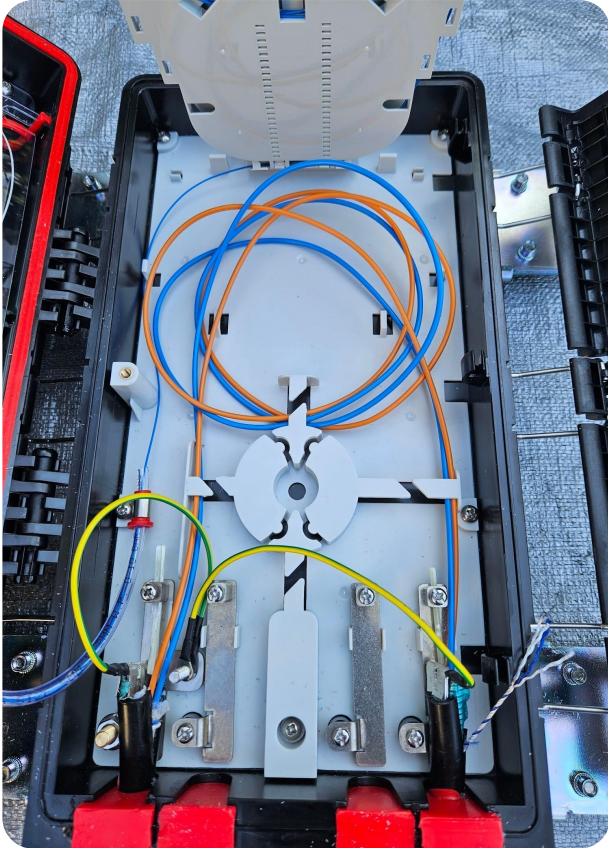


Fig. 6a

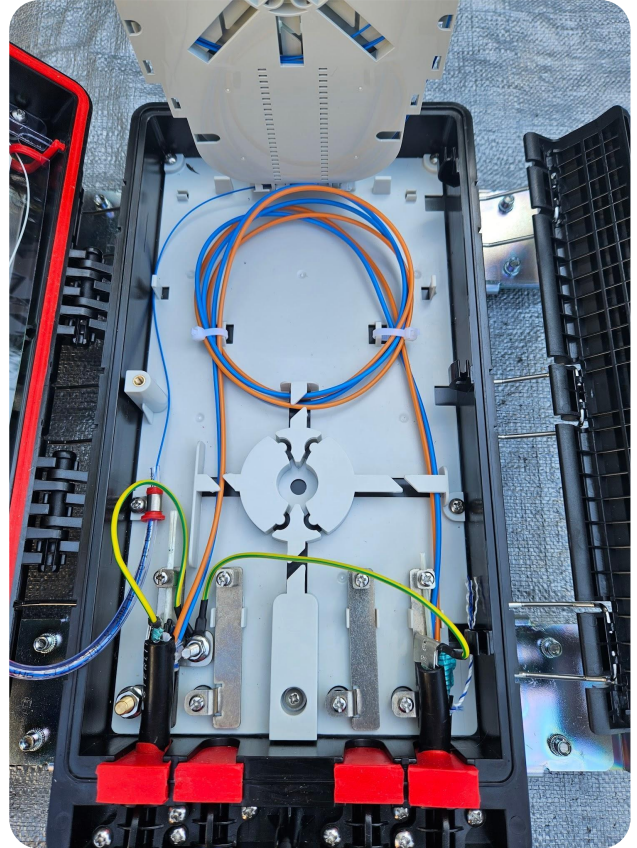


Fig. 6b

- Route loose buffer tubes as shown in Fig. 6a
- Utilize tie wraps to secure buffer tube bundles as shown in Fig. 6b
- Care should be taken to not overtighten tie wraps.
- ***Note: Recommended mid-span length is 10ft of four, 2.0mm diameter buffer tubes.***

2.6 Buffer Tube Storage

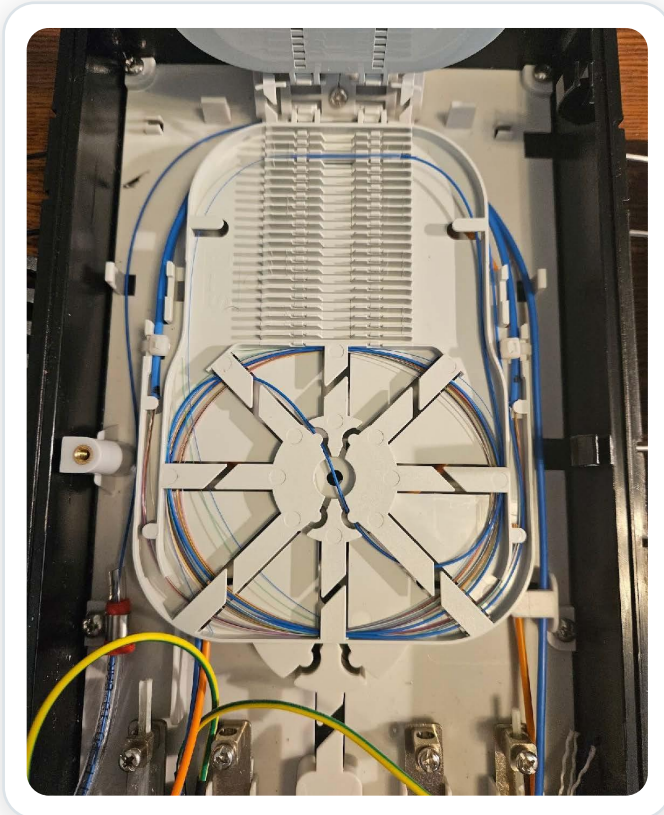


Fig. 6c

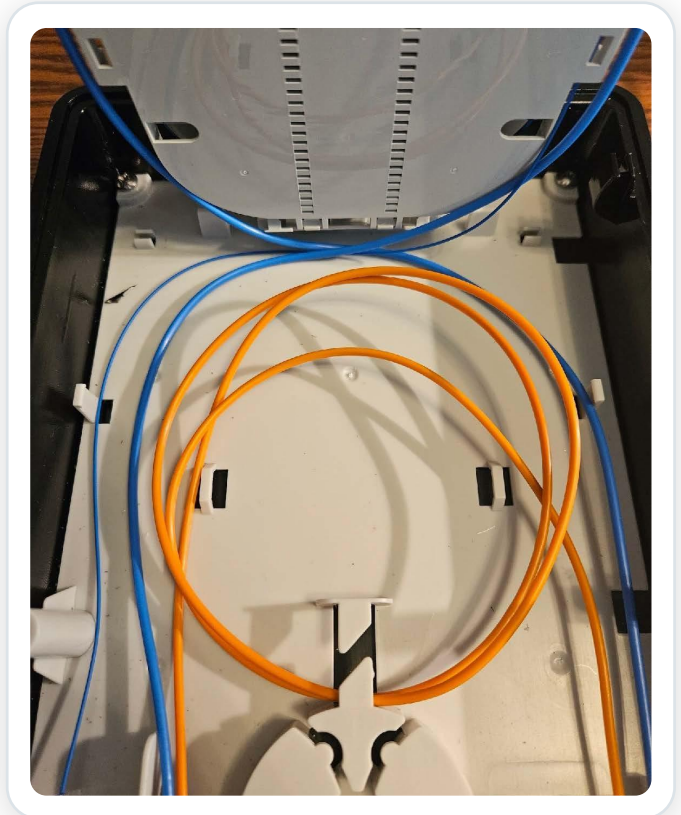


Fig. 6d

Fig. 6c illustrates the spliced splitter input fiber to the blue fiber from the blue buffer tube while the remaining fibers are stored and pass through the splice tray. Note that the splitter input fiber routes through the "S" path such that the fiber is positioned on the right side of the splice sleeve.

Fig. 6d shows how the buffer tubes cross beneath the tray hinge and attach to the tray.

3.1 Prepare Round Microcable

- Prepare cable for mid-span access by removing a 12-inch section of cable jacket at the center point of desired cable opening. Remove the outer jacket and locate where the buffer tubes switchback. From this switchback measure 5-feet in either direction for a 10-foot opening (switchback will be in the center).
- Working at one end of the cable opening, cut each aramid yarn binder being careful not to loosen the bind beyond the area where the cutting is being done.
- Slide the binders just enough to create a space where a band of tape can be wrapped around the cable's buffer tubes. Now continue sliding the binders until the first switchback is exposed. Being careful to keep the buffer tubes in their proper switchback positions, place a band of tape around the buffer tubes at each switchback.
- Carefully cut away all the binders.
- At one end of the cable, gently untwist the buffer tubes just enough to access the central strength member and cut to approx. 2-inches. Repeat at the other end of the cable and carefully remove the central strength member.

3.2 GRP Rod Fixation

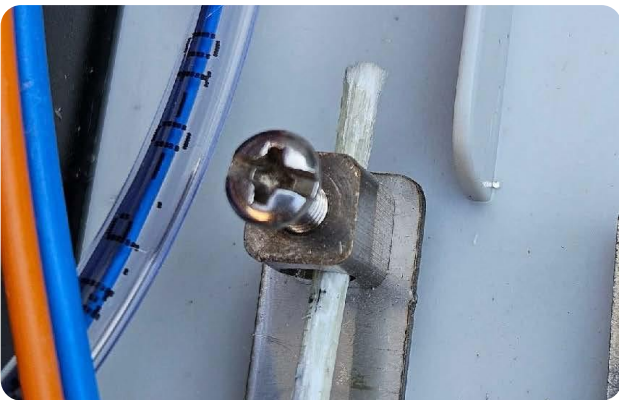


Fig. 7a

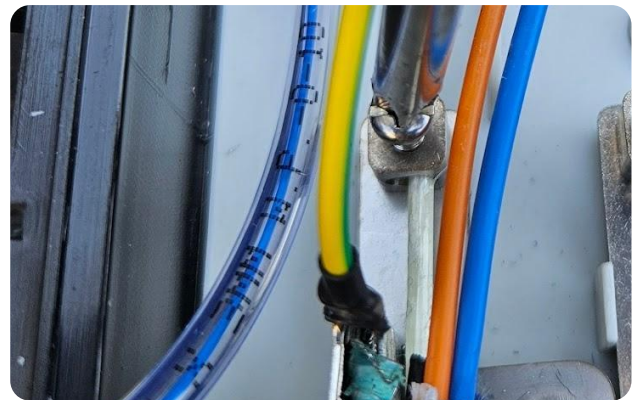


Fig. 7b

- Expose 1-2 inches of the GRP rod
- Insert GRP rod onto the retention bracket as shown in Fig. 7a
- GRP rod should extend 0.5-1.0 inches past screw tie down
- Tighten using a phillips head screw driver as shown in Fig. 7b.

3.3 Cable Sealing

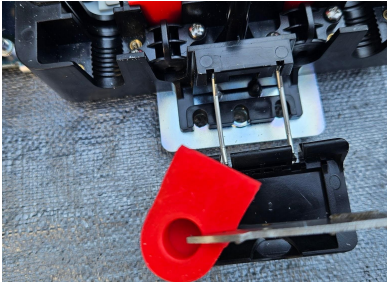


Fig. 8a

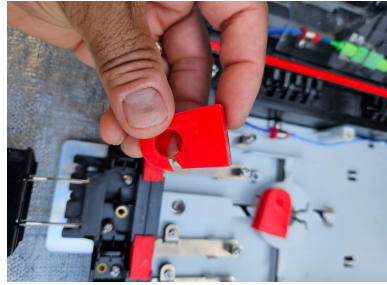


Fig. 8b

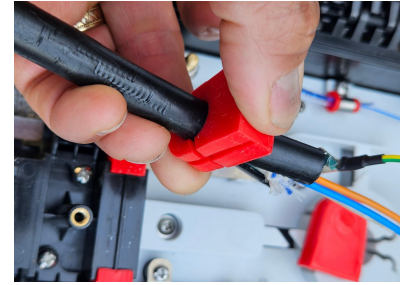


Fig. 8c

- Cut a slot on one side of the cable grommet as shown in Figures. 8a and 8b.
- Note: Use microcable grommet with smaller hole — see Fig. 8e below
- Wrap grommet around cable.
- Be sure port area is clean of mud or grit for proper sealing.



Fig. 8d

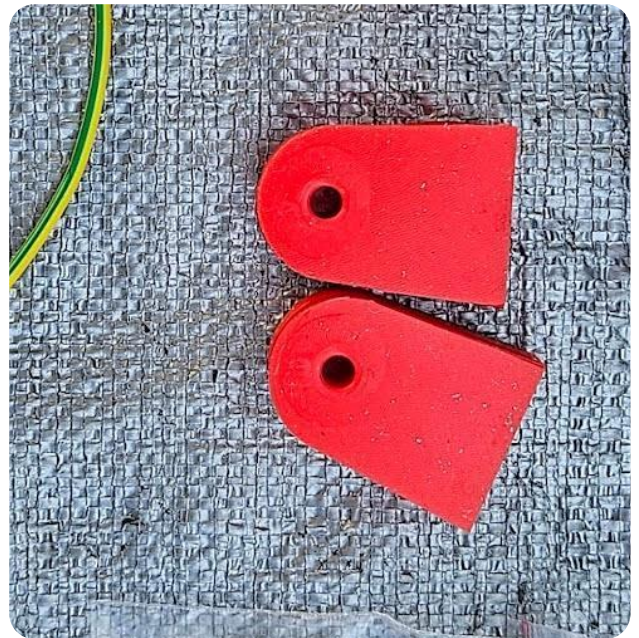


Fig. 8e

Note: All grommets will come from the factory with silicone grease added to help facilitate proper seating on the grommets in the closure (see Fig. 4d). An additional 5gm pack of silicone grease shall be included in the kit.

3.4 Microcable Jacket Retention



Fig. 9a



Fig. 9b

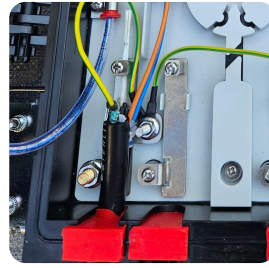


Fig. 9c

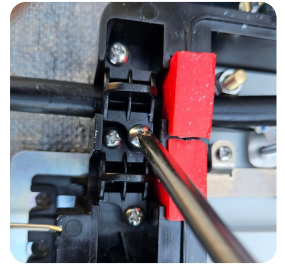


Fig. 9d

- Use the round cable jacket retention bracket shown in Fig. 9a
- Wrap 1 layer of the protective tape approximately 1-2 inches around the microcable jacket as shown in Fig. 9b
- Place the jacket at least 1" (25mm) from the closure wall as shown in Fig. 9c
- Evenly tighten the retention screws on both sides of the retention bracket as shown in Fig. 9d.
- ***Note: Be sure to properly seat the grommet in the base to insure proper sealing***

3.5 Fiber Storage

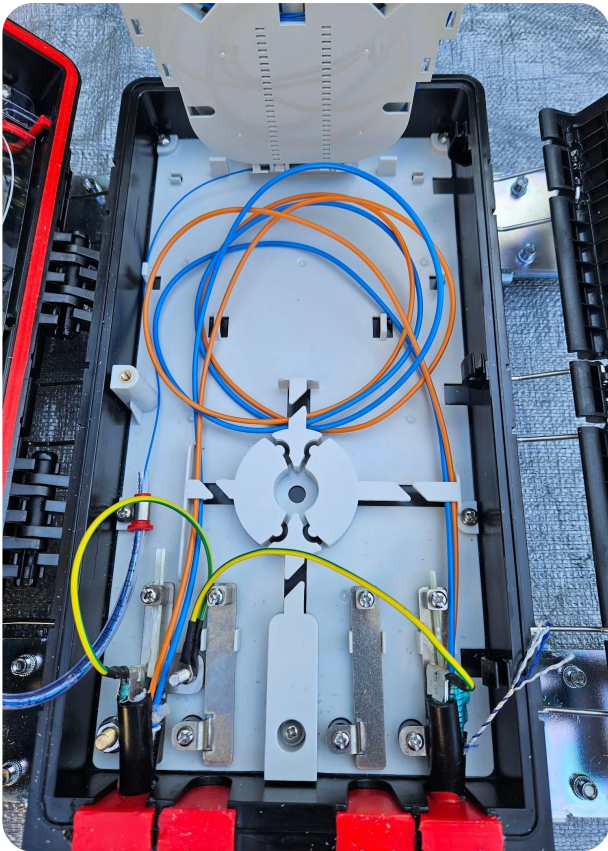


Fig. 10a

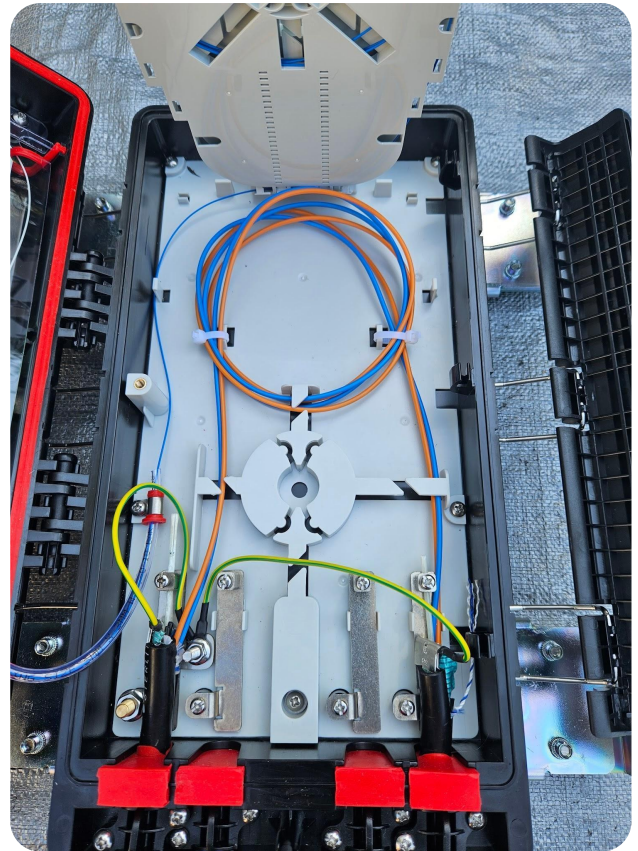


Fig. 10b

- Route buffer tubes from the microcable as shown in Fig. 10a.
- Utilize tie wraps to secure buffer tube bundles as shown in Fig. 10b.
 - Care should be taken not to overtighten tie wraps.
- Select the buffer tube to be accessed for splicing and begin untwisting it from the core, keeping the remaining buffer tubes in their wrapped position. This starts at the center switchback and requires the tape to be loosened; separate the buffer tube from the core and replace the band of tape around the switchback.

4.1 Bracket Assembly

Attachment



Fig. 11a



Fig. 11b

- Use the packaging insert to protect the adapters and stabilize the closure while attaching the hanging brackets as shown in figures 11a-11b

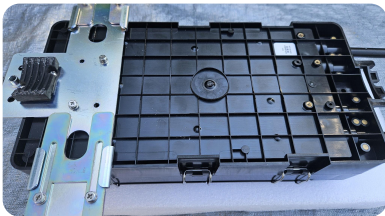


Fig. 11c



Fig. 11e



Fig. 11f

- Use the supplied screws to attach each bracket directly to the housing as shown in Fig. 11c
- Tighten screws using a 7mm socket/driver or Phillips screwdriver as shown in Figures 11e & 11f

Adjustment

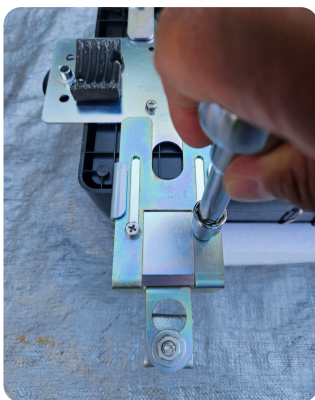


Fig. 11g



Fig. 11i

- Adjust either bracket leg to the desired length
- Tighten the screw using an 8mm socket/driver or phillips screwdriver as shown in Figures 11g & 11i

4.1 Bracket Assembly

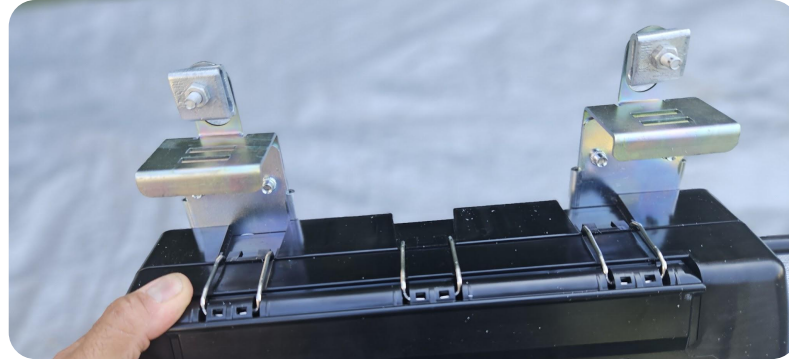


Fig. 11h

- Install lashing clamps as shown
- Lashing clamp securing nut should face the technician

5.1 Bracket Installation: Pole Application

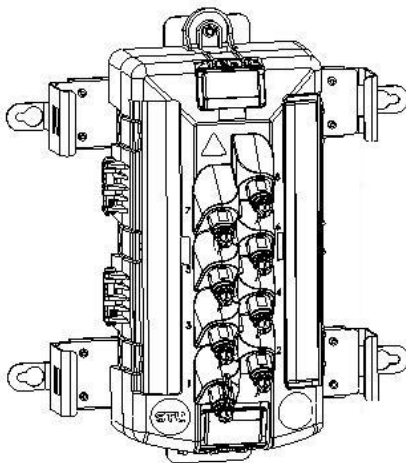


Fig. 12a

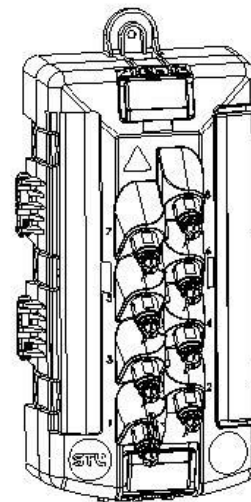


Fig. 12b

- Install with brackets as shown in Fig. 12a using the mounting features at the top and bottom of the closure
- Install without brackets as shown in Fig. 12b using the mounting features at the top and bottom of the closure
- Use at least two standard $\frac{1}{4}$ -20 hex head lag bolts. One bolt at the top and one or two bolts at the bottom.

7.1 Pedestal Installation

(Pedestal shown: 10" CPLM Charles Pedestal)



Fig. 13a

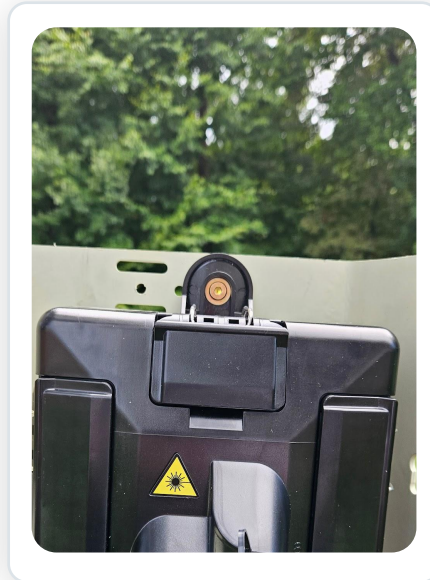


Fig. 13b



Fig. 13c

- Locate the closure to the right of the panel center to allow for lid opening as shown in Fig. 13a.
- Install one bolt in the top center mount as shown in Fig. 13b.
- Install one or two bolts/screws on the bottom mount as shown in Fig. 13c.

8.1 Hardened Drop Installation (1 of 2)

Use the following procedure to connect a drop cable to an optical port on the CONCAT closure:



Fig. 14a

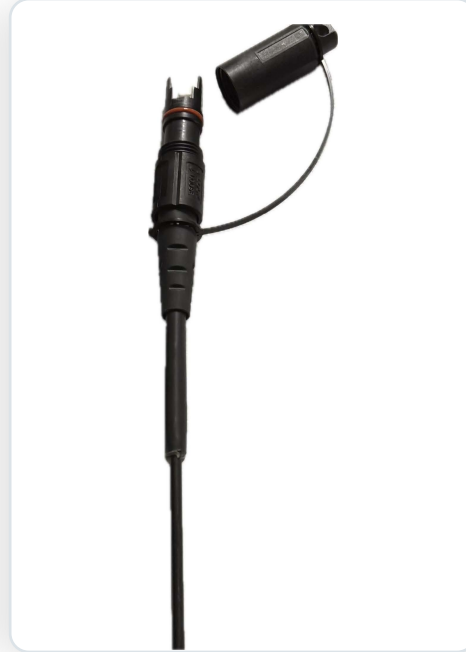


Fig. 14b

- Before removing the connector dust cap, clean any debris from around the drop cable connector housing, preferably using compressed air, to minimize contaminants from being introduced onto the ferrule.
- Note: Never use compressed air to clean the connector end-face.
- Unscrew the coupling nut from the drop cable connector dust cap as shown in Fig. 14a&b



Fig. 14c



Fig. 14d

8.1 Hardened Drop Installation (2 of 2)



Fig. 14e

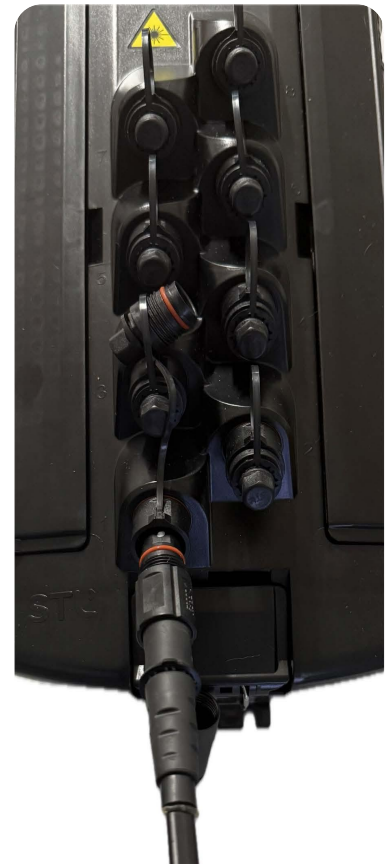


Fig. 14f

- Insert the drop cable connector into the optical port until the threads of the connector and port are engaged.
- Thread the drop cable connector coupling nut into the optical port and tighten until finger tight.
- Thread the optical port dust cap into the drop cable dust cap as shown in Fig. 14f, then tighten both dust caps finger tight – this keeps both dust caps clean when not in use.
- Align the drop cable connector with the optical port as shown in Fig 14e. The Flat surface of the Drop cable connector with arrow and white dot should be aligned with the notch of the adaptor (Strip holding area) as in Fig14e



About STL – Sterlite Technologies Ltd:

STL is a global leader in advanced connectivity solutions, providing end-to-end solutions for building AI-ready infrastructure, FTTx, Rural, Enterprise and Data Center networks. With manufacturing facilities in North America, Europe and Asia, we deliver our solutions in more than 100 countries. Data Center & Cloud companies, Telecom operators, Internet service providers and Large enterprises collaborate with STL to build their future-ready digital infrastructure. STL's business goals are driven by customer-centricity, R&D and sustainability.