

1.0 General Product Information

The FIBRBox narrow and standard fiber optic splice enclosures provide maximum flexibility in cable splicing needs. The closures can accommodate loop-through and stub distribution cables, ribbon or loose buffer tube cable types. The recommended max. diameter for the main (or loop-through) cable is 0.86". The recommended max. diameter for the drop cable is 0.50". The cable seal area will accommodate #6 insulated ground wires positioned with the drop cables.

The bonding/grounding bar allows the user to test the cable without opening the splice enclosure. The FIBRBox narrow fiber optic splice enclosure will fit into 8" pedestals, while the FIBRBox standard fiber optic splice enclosure will fit into 10" and 12" pedestals. Furthermore, the FIBRBOX splice closure can be mounted on poles or walls. Accessory kits are available to facilitate pedestal, pole, and wall mounting.

The FIBRBox narrow enclosure can accommodate five standard FOSC style "A" trays or two ribbon "A" trays plus one standard "A" tray. The FIBRBox standard enclosure can accommodate four standard FOSC style "A" trays or two ribbon "A" trays.

The maximum splice capacity for the narrow FIBRBox enclosure is 120 single fusion splices stored on five trays, or 288 mass fusion splices stored on two trays. The maximum splice capacity for the standard FIBRBox enclosure is 96 single fusion splices stored on four trays, or 288 mass fusion splices of ribbon stored on two trays.

2.0 Kit Contents

- Transportation tubing
- Loose buffer tube wrap (LBT wrap is used to help protect fibers under tie wraps)
- 2 B-Bonds
- 8 Strength member attachment brackets & bolts (Narrow enclosure has 6 strength member brackets)
- 2 Strength member forks & lugs
- 2 Cable clamps
- Installation Instructions

2.1 Accessory Kits

- FIBRBox-PedMtgKt-UnivPF: Mounting bracket for use with pedestal perimeter frames.
- FIBRBox-PedMtgKt-UnivBP: Mounting bracket for use with pedestal backplanes or poles.
- Ribbon Tray A Kit: Required for ribbon cable, unless deribbonizing the fibers.
- 8-position ground bar

3.0 Installing the FIBRBox Enclosure

1. Install the FIBRBox enclosure into the pedestal using the appropriate mounting bracket kit. (Figure 1)
2. If using the Mounting Accessory Kit, place the FIBRBox splice enclosure onto the bracket and secure it in place at the mounting locations.
3. Using a 7/16" nut driver, turn the lid bolt counter clockwise to remove the lid.



Figure 1



Figure 2



Figure 3a

4. Loosen the 7/16" bolt and remove the bottom cable termination bracket. (Figure 2)
5. Using a 7/16" nut driver, remove the drop cable termination plate (Figure 3a)
6. Attach the eight strength member plates using the supplied bolts. (Figure 3b)

Note: *Narrow box will only have six strength member plates.*

Note: *If needed the tray can be removed by prying one end of the hinge out of the tray tower. (Figure 4a) Re-install tray up side down into the tray tower by placing one end of the hinge into the selected hole and rotating the other side of the hinge into place. (Figure 4b)*

4.0 Cable Preparation

4.1 Loose Buffer Tube or Central Core Tube Ribbon Cable

Recommended Cable Opening Lengths

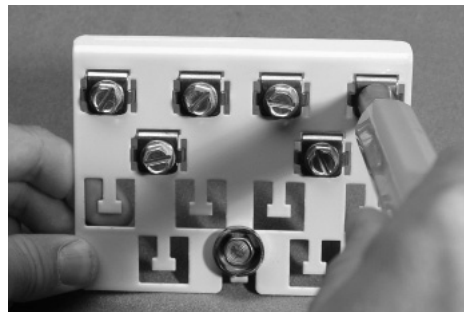
Narrow Enclosure (LBT or ribbon)	Mid-Span 75" - 106**	End 60" - 72"
Standard Enclosure (LBT or ribbon)	75" - 106**	60" - 72"

* 106" yields 4 loops in the basket.

1. Hold the cable in front of the FIBRBox enclosure and mark the cable 7-1/2" up from the bottom of the box. This will be the ring cut points. If there is slack: It is recommended to find the reverse point and split the length of the opening between this point.
2. Strip the outer cable sheath per lengths shown above. Cut each strength member 2-1/2" from the sheath ring cut. For central core tube cable, ring cut the core tube 3" from the cable sheath ring cut.
3. Bonding: Pull the cable rip cord or tab 1-1/2" beyond the ring cut to create a slit in the cable jacket and armor. Attach B-bond beneath the cable armor. (Figure 5)
Attach the plate and nut. The nut should be tightened to 40 inch-pounds for proper grounding.



Figure 3b
Standard
(above)



Narrow
(left)



Figure 4a

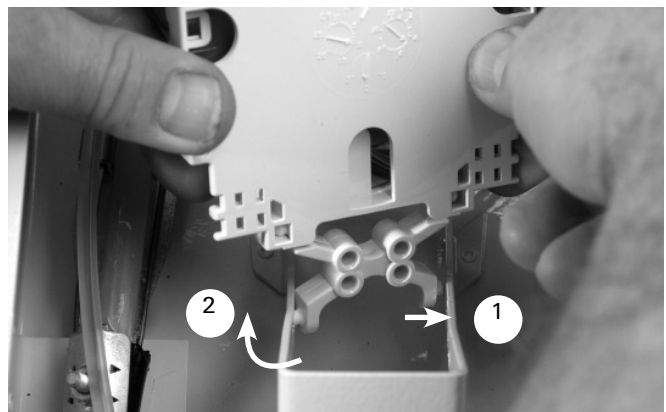


Figure 4b



Figure 5

4.2 Installing Cable In The FIBRBox Enclosure

Position the strength member bracket to the bottom of the cable with the tab facing down.

For Central Core Tube (Ribbon) Cable: Place the strength members against the two outer forks and secure with the lugs as shown in Figure 6.

Note: *Bend the middle fork out of the way if it interferes with the core tube.*

For Loose Buffer Tube: Place the strength member against the center fork and secure with a lug as shown in Figure 7.

Note: *Bend the two outer forks out of the way if they interfere with the buffer tubes.*

2. Place a cable clamp around the cable beneath the strength member fork.

3. Remove the 2 cable grommets from the box. For 1/2" or smaller diameter cable, cut a slit across the center of each grommet. (Figure 8)

For cable larger than 1/2" cut out the center section of each grommet (Figure 9). Place the grommet around the cable and position the cable and the grommet into the box.

Central Core Tube Cable

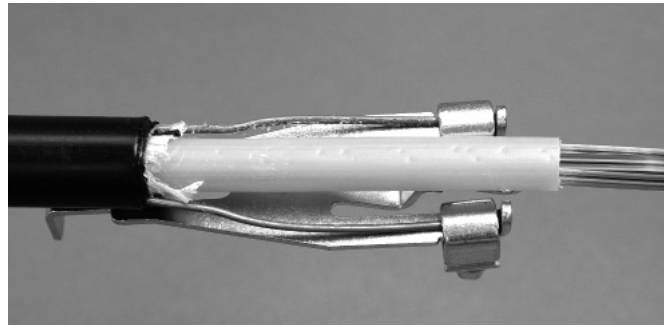


Figure 6

Loose Buffer Tube Cable

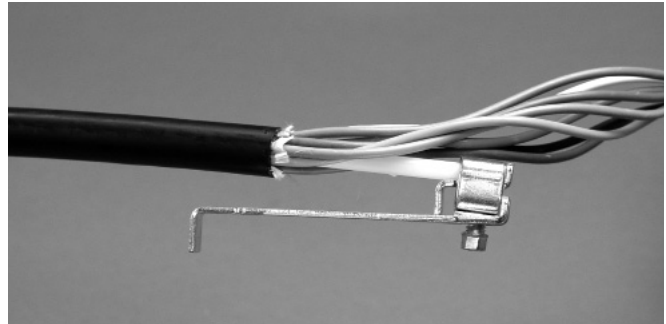


Figure 7



Figure 8



Figure 9

4. Place the tab of the strength member bracket into the slot in the box. (Figure 10)

Note: *The strength member(s) may need to be trimmed if the cable length is off.*

5. Slide the cable clamp under the tab bracket and tighten. (Figure 11)



Figure 10



Figure 11

6. **For common grounding**, use a locally approved solid ground wire (cut to 10" length) or RUS approved ground wire. For isolated grounding, the ground wire will have to be insulated. Insert the ground wire through the round grommet in the bottom of the box. Attach it to the ground bar. (Fig. 12)

Drop cable with a toning or ground wire is split outside of the box and terminated to the ground bar. Disconnect wire for toning.

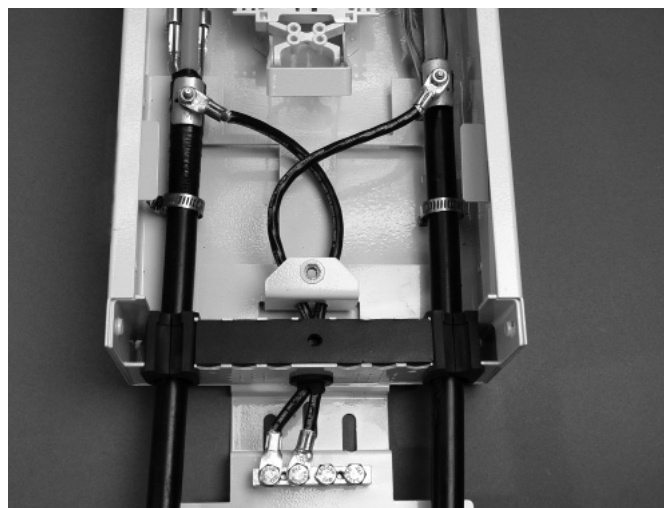


Figure 12

7. Sort out the ribbon(s) or buffer tube(s) to be spliced and set to the side. Store the remaining unused fibers in the storage area. It is recommended to place fiber storage in front of the tray tower. (Figure 13)
8. Install the drop cable plate and secure with the 7/16" nut driver.

5.0 Buffer Tube Routing (Loop or Midspans)

- 1a. **Loose Buffer Tube - Straight Splice (cutting all 12 fibers):** Pull back the buffer tube(s) to be spliced and cut the buffer tubes in the middle of the mid-span opening. Tubes may need to be cut longer to the distribution side, if longer lengths are needed on the tray. Store the distribution side tubes in the storage area. Loop the feeder side tubes to the opposite side of the box and go behind the tray tower.
- 1b. **Loose Buffer Tube Midspan (If not cutting all 12 fibers):** Cross the buffer tube(s) in front of the tray tower and cross again behind the tower.
- 1c. **Central Core Tube (Ribbon) Midspan:** Select the ribbon(s) to be spliced and cut in the middle. If more length is required, cut the ribbon(s) off to one side (distribution). Use ribbon transportation or spiral tubing to route ribbons to the splice area.

Note: Arrange the order of ribbons before inserting them into the transportation tubes. This will eliminate crossing of ribbons on the tray.

Ribbon(s) to be spliced will be directed to the other side of the storage area and routed behind the tray tower. Attach the transport tubes to the storage area tabs. (Figure 14) If using a single tray, the ribbons should be pulled through the tubing to reach the splicing machine. After splicing, pull excess ribbon back into storage area.

Note: For single trays, only 6 ribbons per tray are recommended.

Use an A/B ribbon tray if the ribbon(s) will be stored on the tray. This will require 24" of ribbon on the tray. Each tray will hold 12 ribbons. Expressed and cut distribution ribbons are to be stored in the storage area in the bottom of the box.

Note: If tray was removed: Insert the tray up side down into the tray tower by placing one end of the hinge into the selected hole and rotating the other side of the hinge into place (see Figure 4b).

2. Remove the tray cover.

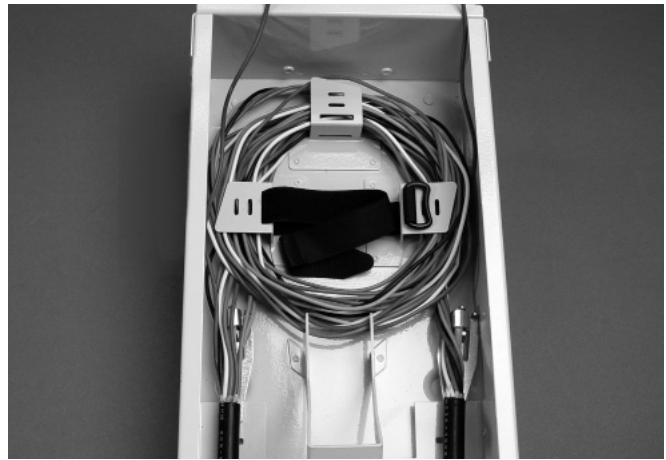


Figure 13

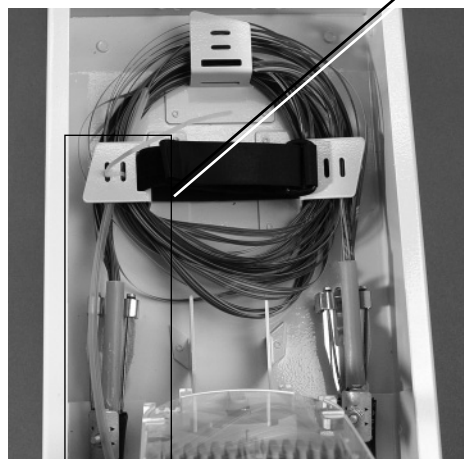
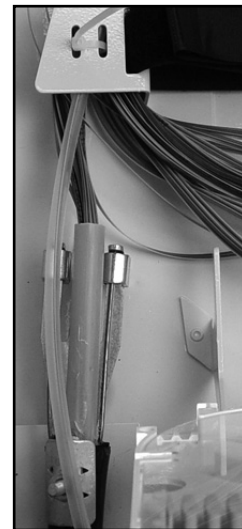


Figure 14

- Place buffer tube(s) onto trays and make a mark 1" past the bottom of the tray. Ring cut and remove buffer tube(s) and clean fibers. (Figure 15)
- Cut a 1" piece of LBT felt wrap. Position the tube on the tray and install LBT wrap around buffer tube(s) where it will align with the two tie-wrap holes on the tray. Use two tie wraps to secure the buffer tube(s) to the tray. Two tubes can be wrapped together.
- Lay the fibers around the perimeter of the tray for future splicing.

5.1 Drop Cables

Note: Refer to bonding and cable lengths in Section 4.1.
Note: The drop cable diameter should not exceed .50" plus a #6 insulated ground wire with the drop cable.

- Remove the cable jacket.
- Cut the strength member(s) 1-1/2" from the ring cut. In some cases, the strength members in flat drops can be cut off, contact your local cable manufacturer for a recommendation.
- Starting on the opposite side of the feeder cable, place a cable tie loosely around the cable and slide the strength member under the cable attachment plate and tighten. (Figure 16) Position the cable tie under the dog bone and tighten.

Note: For large round drop with the #6 ground wire, position bond on top and cable tie around both cable and ground. (Figure 17) Wrap the bond clamp and ground wire connection with vinyl tape to provide isolation from the enclosure's metal brackets and housing.

- Make one full loop inside the storage area, then route the buffer tube(s) behind the tray tower and up onto the splice tray. Place a mark on the tube 1-1/2" past the end of the tray and remove tubing and clean fibers.
- Wrap the end of the tube with about 1" of Loose Buffer Tube wrap (LBT wrap)
- Attach the tube to the tray with two tie wraps.

Note: Drop cables 1 and 6 (narrow enclosure) or 1 and 8 (standard enclosure) enter the main cable ports on the far sides of the plate as shown in Figure 17.

- Reinstall bottom cable termination plate.

Note: B-bonds and grounds must be inside the Fibrbox for the cable termination plate to properly sit flush.

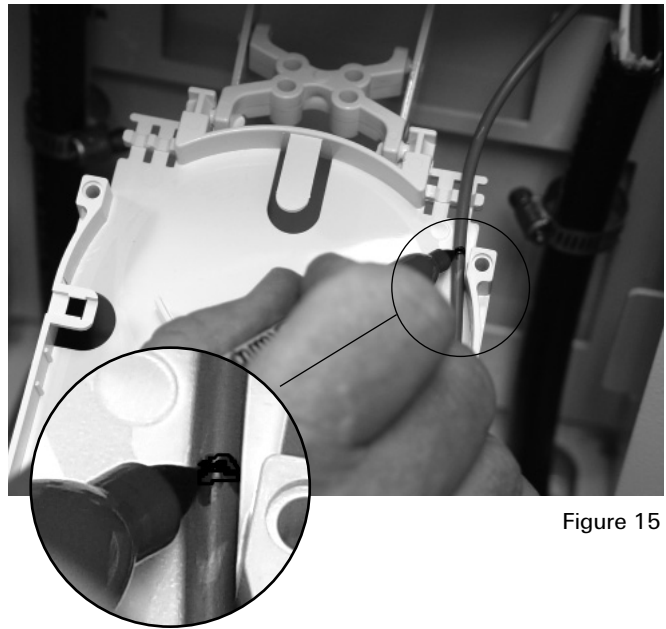


Figure 15

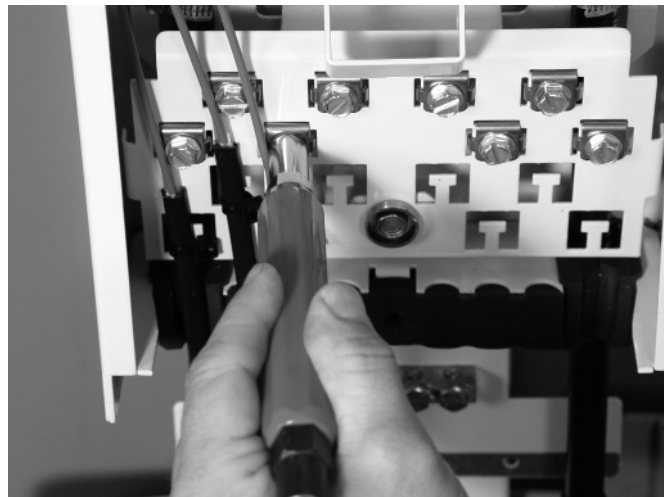


Figure 16

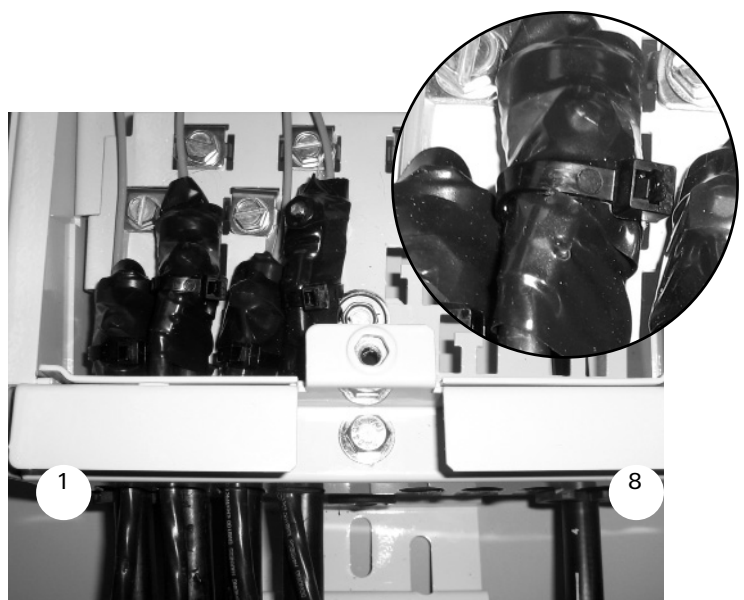


Figure 17

6.0 Splicing & Fiber Routing on "A" Trays

The first illustrations of the trays indicate proper fiber routing and splice storage for the standard FOSC A closure trays. Proper ribbon routing and splice storage for the FOSC Ribbon A/B trays are shown to the right in the bottom four illustrations/photos.

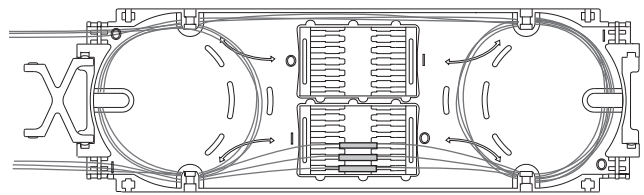
1. Place the unspliced fibers onto the tray per one of the routing diagrams.

Note: If the buffer tubes are placed on the same side of the tray, follow the crossover routing diagram. (For ribbon fiber, refer to section 5.0, Step 1.)

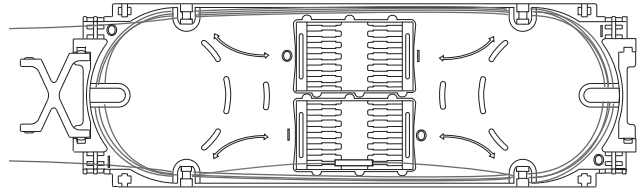
2. Lay the fibers on the tray as they will be positioned on the tray after splicing. After the length of the fibers to be spliced is determined, cut the fibers over the center of the splice holder if necessary.

Caution: Ribbon fiber stored on a single "A" or "C" tray may not need to be cut. Storage slack will be pulled back into the storage area.

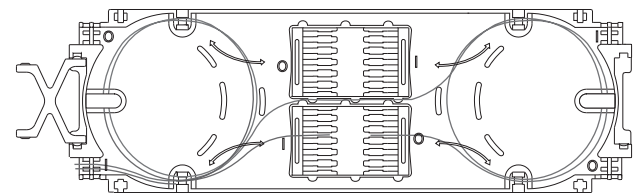
3. Splice the fibers per company approved practices. When all the splices in each tray are completed and stored, replace the tray cover.



End Storage Routing

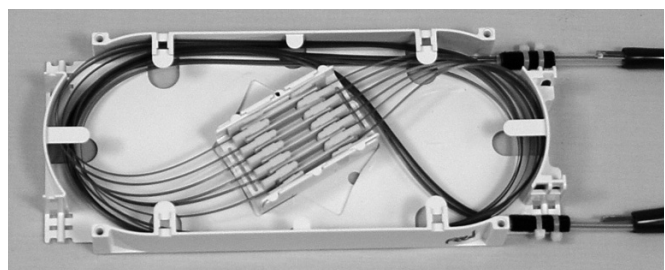
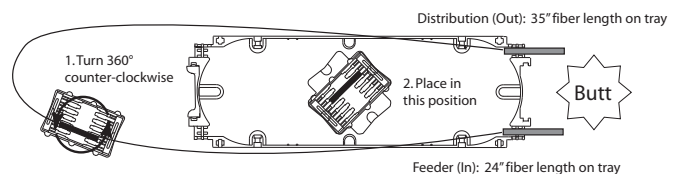
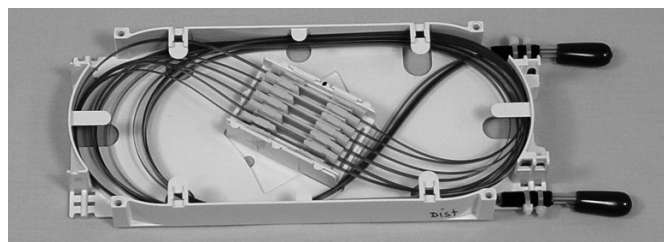
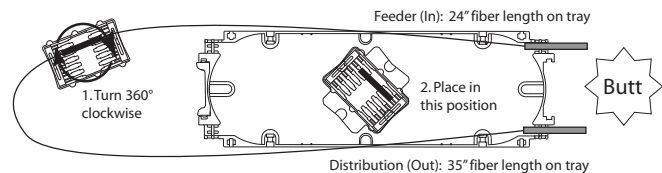


Perimeter Storage Routing



Crossover Routing (with End Storage)

Crossover Routing: Note that Feeder and Distribution fibers enter the tray at the same corner. This pattern is also required if fibers enter from diagonally opposite corners of the tray.



4. Lift the tray(s) against the storage area and secure with the hook and loop fastener strap. (Figure 18)

Note: Place extra components back into the FIBRBox enclosure for future use.

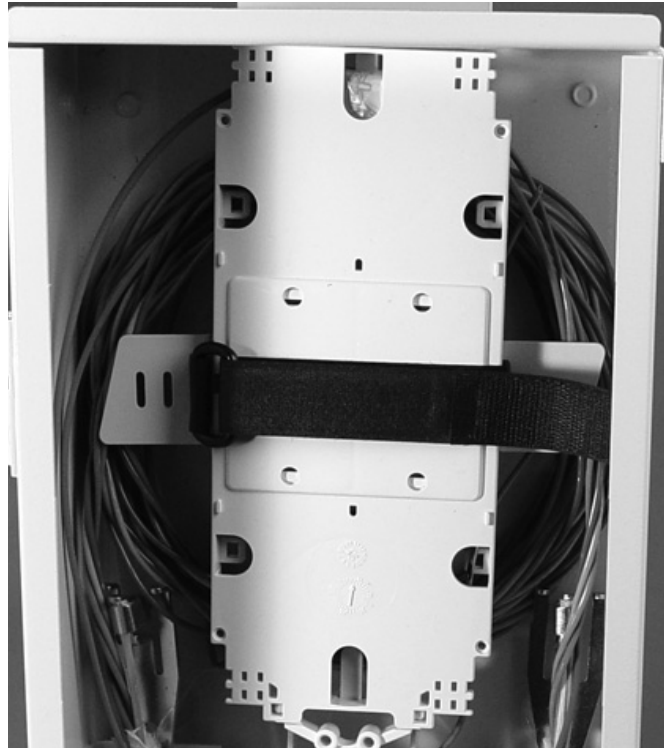


Figure 18

7.0 Closing the FIBRBox Enclosure

1. Re-install the lid. (Figure 19)
2. Close the lid by turning the bolt clockwise using 7/16" nut driver.



Figure 19

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