

Optical Splice Enclosure (OSE-1440-BA)

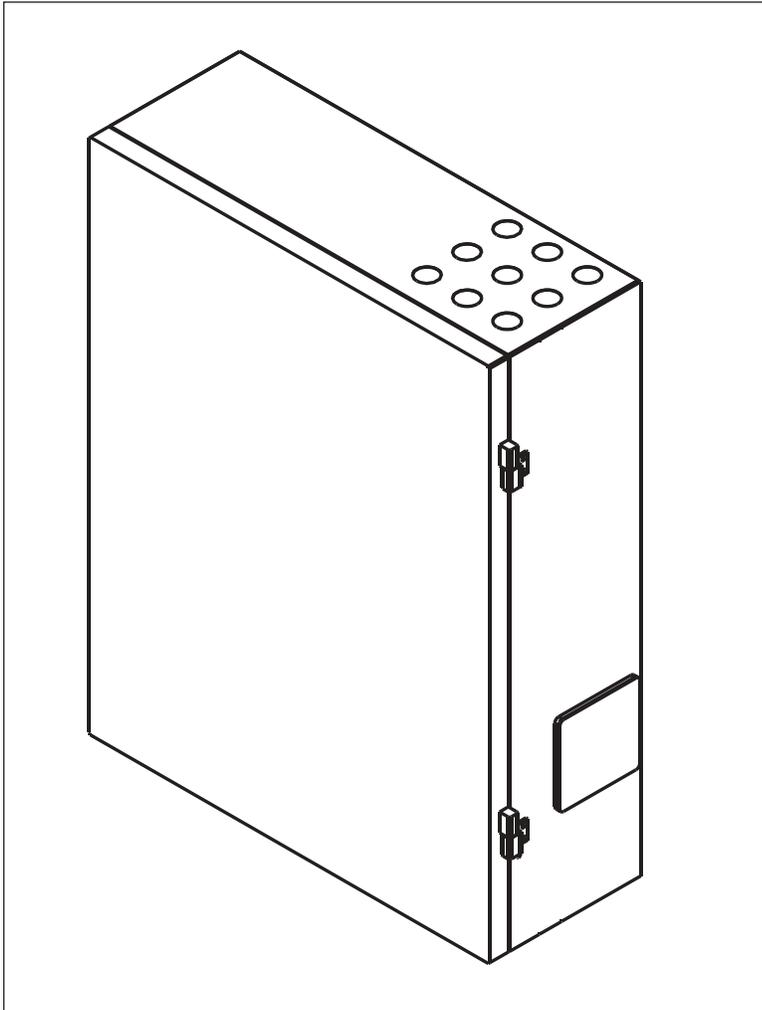


Figure 1

1. General

- 1.1 This document describes the installation of an Optical Splice Enclosure (OSE-1440-BA) manufactured by Corning Cable Systems (Figure 1).
- 1.2 This document should be used in conjunction with any other instructions received with the cable or splice components used.
- 1.3 This document is being reissued to remove customer-specific information.

2. Description

- 2.1 The OSE-1440-BA is a cabinet designed to hold cable slack and 20 individually accessible splicing cassettes. Each cassette accommodates 24 single fiber fusion splices (480 fibers) or 6 mass fusion splices (1440 fibers).
- 2.2 Contents of the unit are protected by a removable door mounted on two lift-off hinges. The door is secured by two spring latches that accept padlocks for additional security.
- 2.3 The unit provides nine cable entry ports on the bottom and nine on the top. All cable entry ports are accessible through knockouts.

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3. Components

Figure 2 shows the components of an OSE-1440-BA. The following hardware is also included:

- T-Slot mounting hardware (2 brackets, four #10-32 screws, and four #1/4-20 screws),
- six liquid-tight connectors for .675-.750 inch cables,
- six liquid-tight connectors for .875-1.00 inch cables.

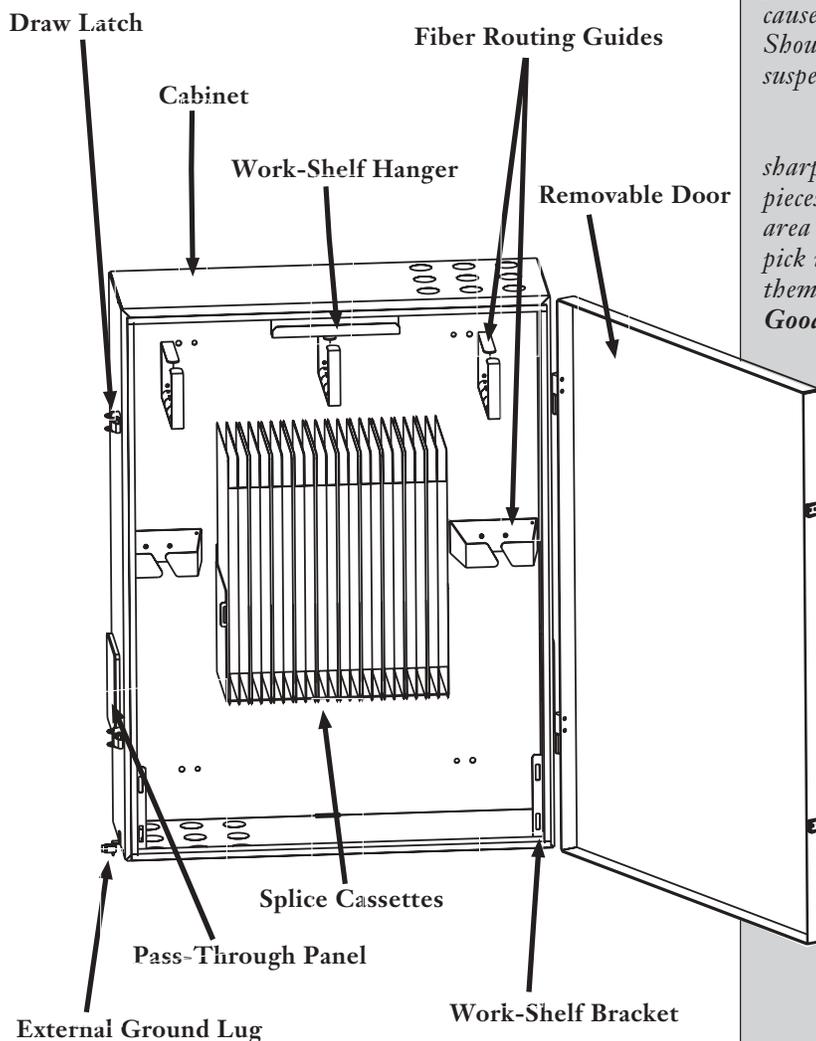


Figure 2

4. Precautions

⚠ WARNING: *Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible. Laser light can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.*

⚠ WARNING: *DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.*

⚠ WARNING: *Cleaved glass fibers are very sharp and can pierce the skin easily. Do not let cut pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cut or broken pieces of the glass fibers and place them on a loop of tape kept for that purpose alone. Good housekeeping is very important.*

The wearing of safety glasses to protect the eyes from accidental injury is strongly recommended when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the cornea easily.

NOTICE: *Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend cable more sharply than the minimum recommended bend radii. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink. Doing so may cause damage that can alter the transmission characteristics of the cable — the cable may have to be replaced.*

5. T-Slot Rack Mounting

5.1 Hang T-slot mounting brackets to rack as shown in Figure 3.

IMPORTANT: *Ensure there is adequate space above and below the unit to route cables. Observe the minimum bend radius for each cable being installed.*

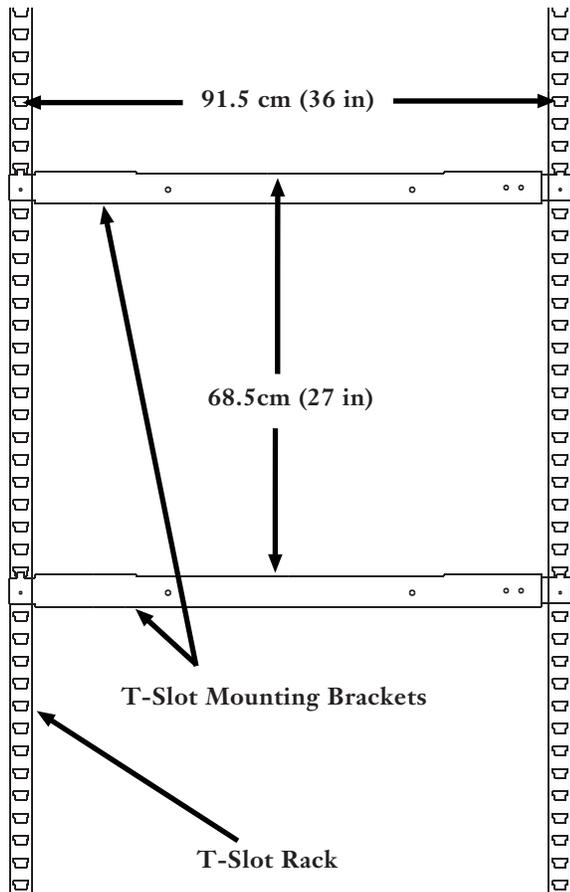


Figure 3

5.2 Install and tighten four #10-32 screws from the hardware kit at each end of the T-slot mounting brackets to lock them in place.

5.3 Hang unit onto T-slot mounting brackets as shown in Figure 4. If required, remove pass-through panels before mounting unit.

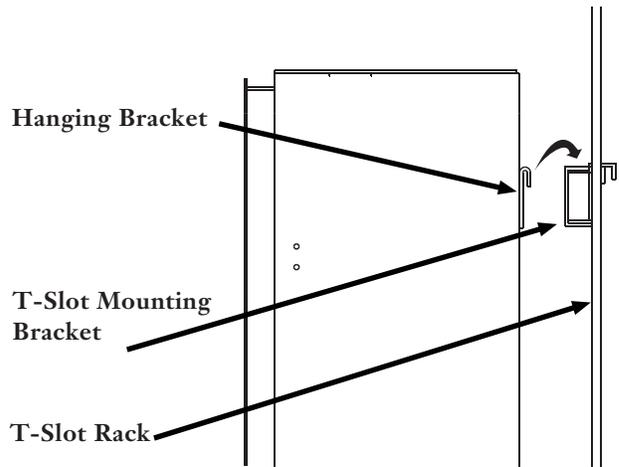


Figure 4

5.4 Install and tighten four #1/4-20 screws from the hardware kit to secure unit to mounting brackets (Figure 5).

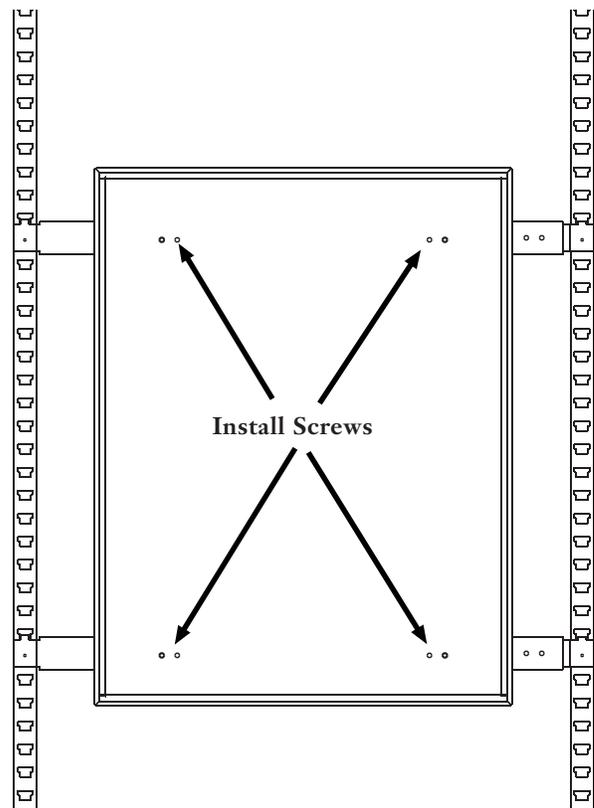


Figure 5

6. Work Shelf

6.1 A work shelf for the OSE-1-440-BA can be ordered separately. When mounted, the work shelf will conveniently support the splicing equipment.

6.2 To install, simply hook the four work-shelf flanges into the mounting brackets attached to the unit (Figure 6).

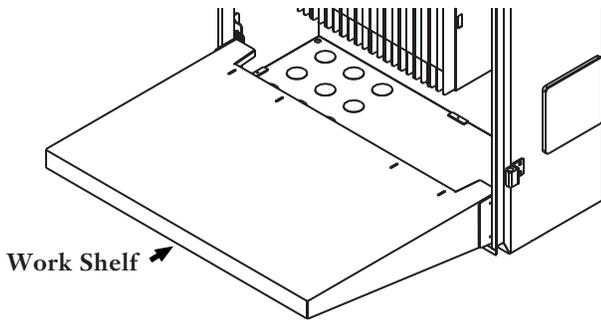


Figure 6

6.3 When not in use, the work shelf can be stored inside the unit on the hanger bracket (Figure 7).

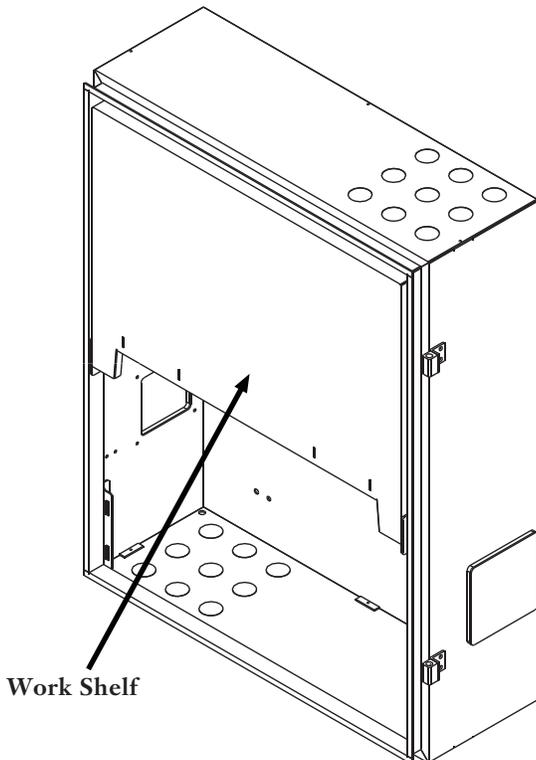


Figure 7

7. Cable Installation

7.1 Remove required knockouts. Start at rear corner and work to front then center (Figure 8).

Start Here — Follow Arrows

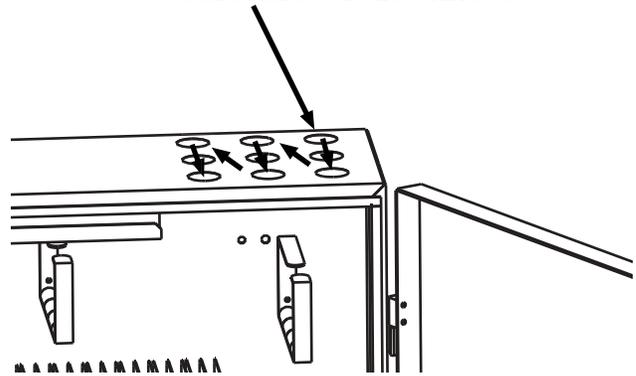


Figure 8

7.2 Select the proper cable entry hardware for the cable being installed.

NOTE: Selected liquid-tight connectors are included with the unit. Other strain-relief and grounding hardware is ordered separately.

7.3 Install the liquid-tight connector and strain-relief bracket into the cabinet (Figure 9). Leave the knurled nut on the connector loose so cable can pass through the assembly and into the cabinet.

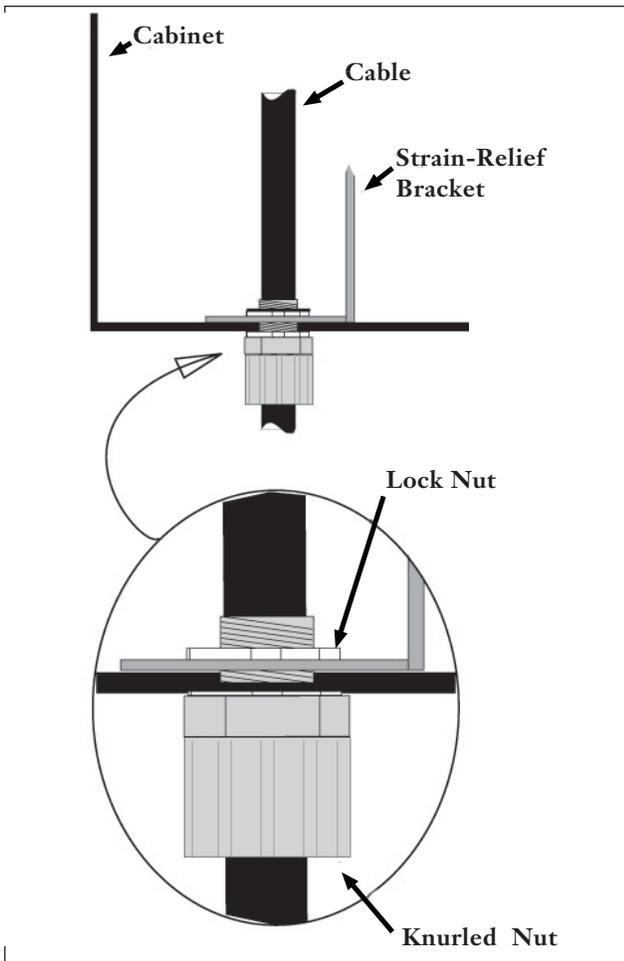


Figure 9

7.4 Thread cable through liquid-tight connector and prepare as shown in Figure 10. Suggested lengths can be altered for particular preferences or specific applications.

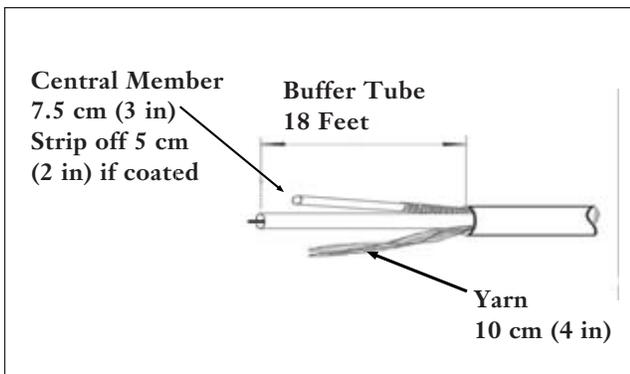
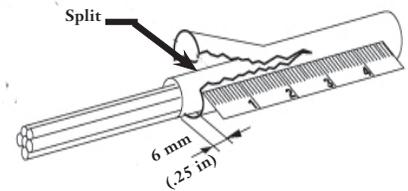


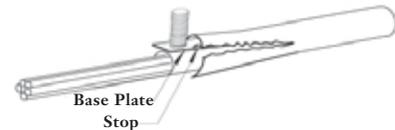
Figure 10

7.5 If required, ground armored cable as illustrated in Figure 11.

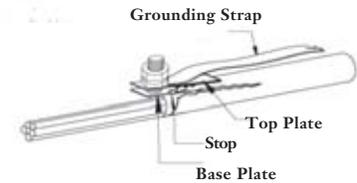
Grounding Clamp Installation



Cut a slit into opposite sides of the outer sheath and armor about 3 cm long. To do this, score the armor with a cable knife (being careful not to damage the inner sheath) and split the sheath by flexing it.



Position the base of the grounding clamp under the armor. The stops of the clamp should just touch the outside of the armor and sheath.



Position the top plate and a lock nut on the stud. Tighten the lock nut with a 10-mm wrench so that the teeth on the upper plate are driven into the sheath. Next, place the grounding strap on top of the lock nut and secure it with a second lock nut. Tighten the assembly with a 10-mm wrench.



Cover the completed assembly and the slit with a few wraps of vinyl tape.

Figure 11

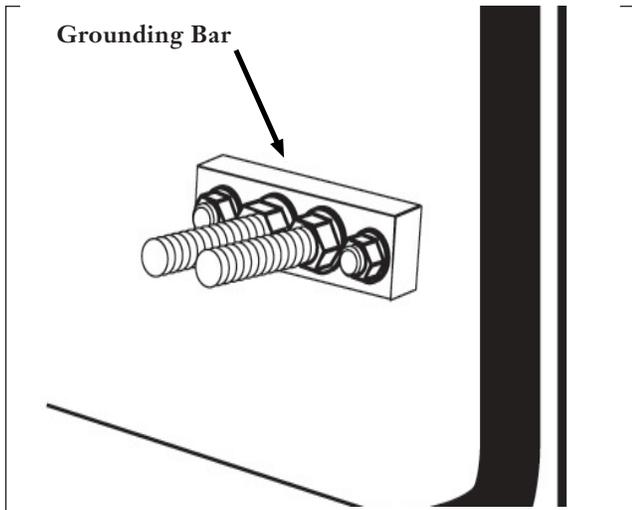


Figure 12

7.6 Terminate grounding straps to grounding bar inside the unit after cables are completely installed (Figure 12).

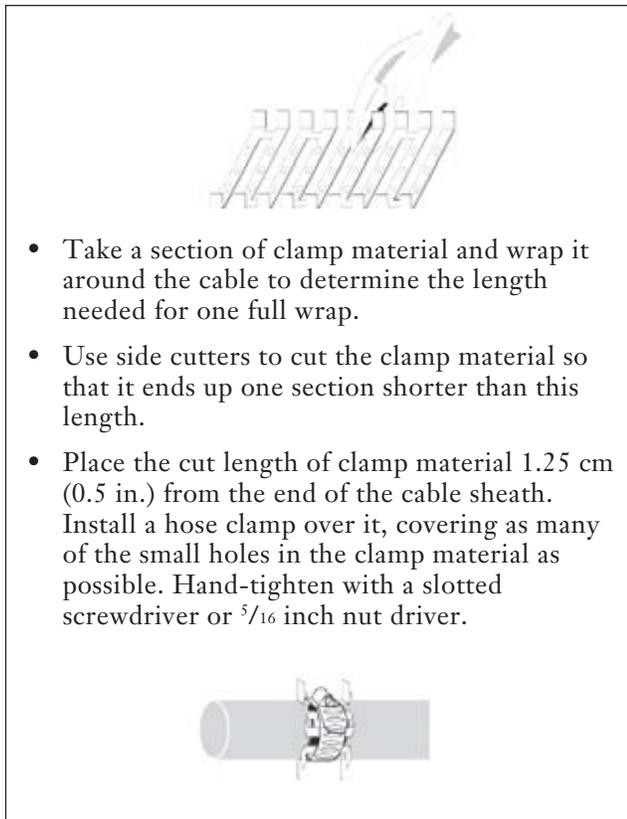


Figure 13

7.7 Install a sheath retention clamp to loose-tube cable as illustrated in Figure 13.

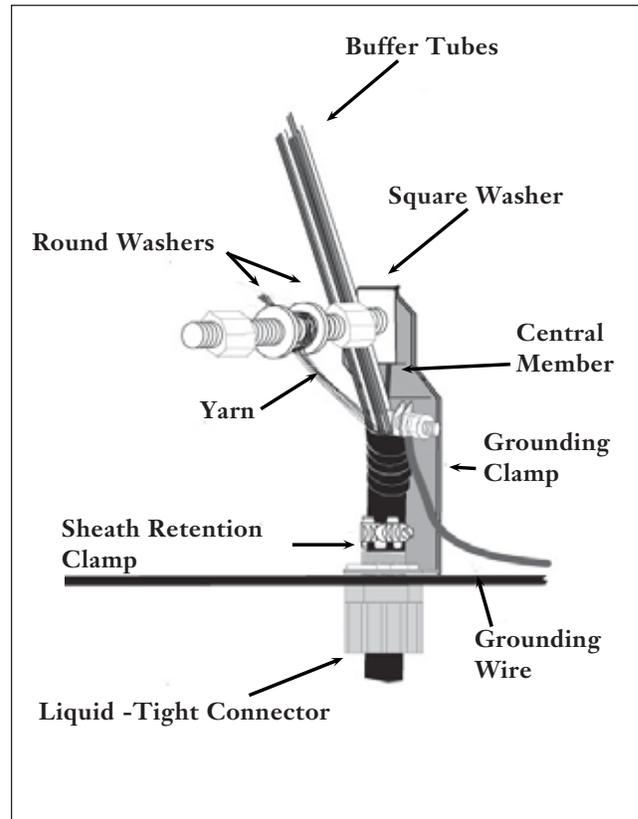


Figure 14

7.8 Secure cable to strain-relief bracket as illustrated in Figure 14 and tighten liquid-tight connector.

8. Fiber Routing

8.1 Fiber routing and subsequent splicing should start at the left splice cassette and proceed to the right.

8.2 Route fibers around unit and into splice cassettes as shown in Figures 15 or 16. Ensure routing does not violate minimum bend radius of the fiber or prevent the removal of the splice cassettes.

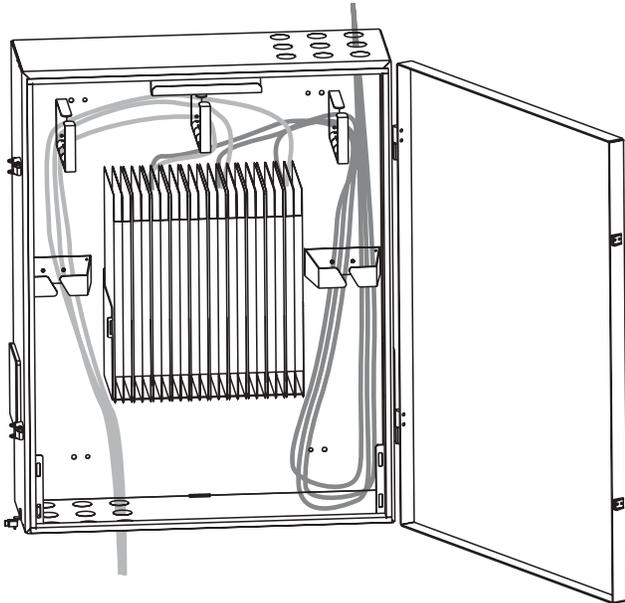


Figure 15

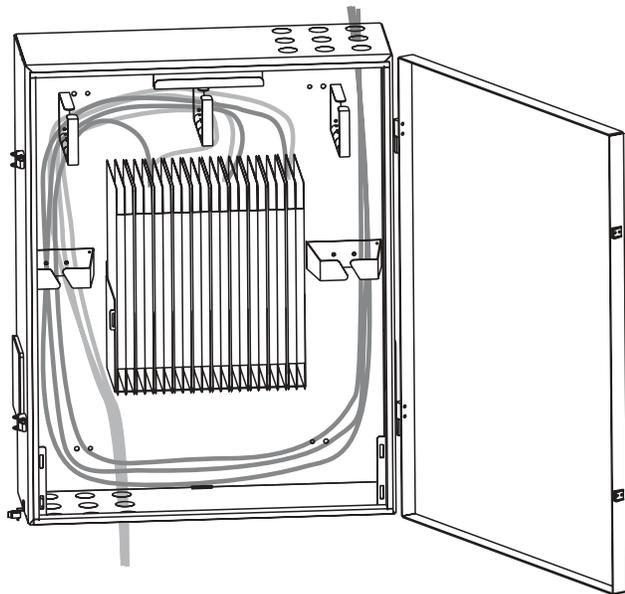


Figure 16

8.3 Remove splice cassette and secure fiber or tubing using cable ties (Figure 17). Vinyl tape should be placed on buffer tubes or spiral wrap where cable ties are secured. A foam strip or slit grommet should be used for securing ribbon fibers. **DO NOT OVERTIGHTEN CABLE TIES.**

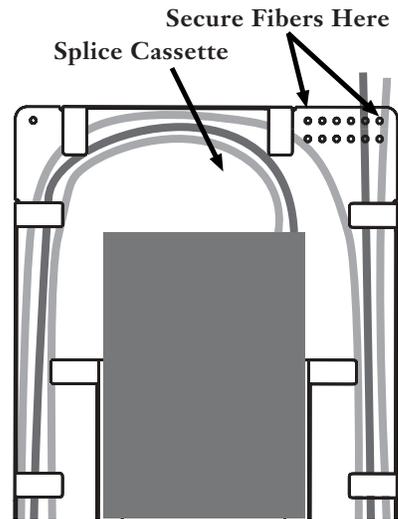


Figure 17

9. Fiber Splicing

9.1 Splice cassettes included with the unit will accommodate standard splice trays (sold separately). Route fibers around cassette as shown in Figure 18 and splice fibers as described in the splice tray instructions.

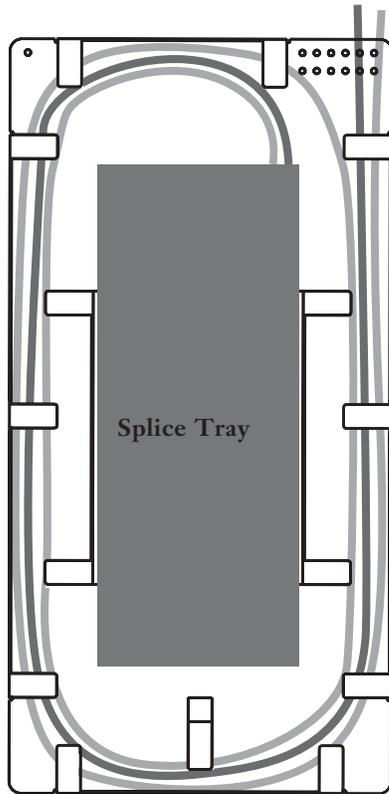


Figure 18

9.2 As an optional method, splice organizers can be secured to the center of the splice cassette. This eliminates the need for additional splice trays. If using this method, route fibers as shown in Figure 19.

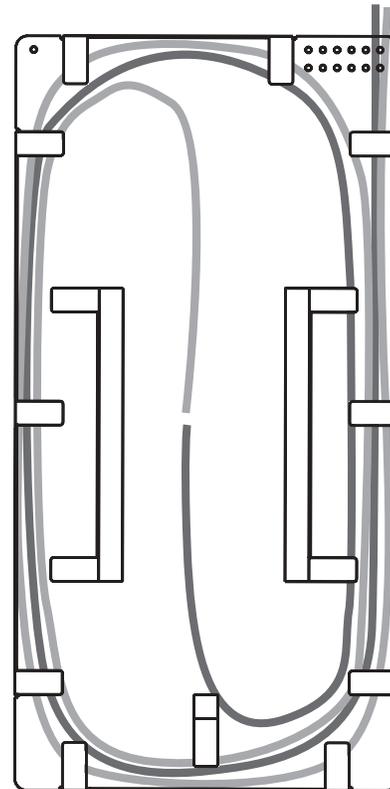


Figure 19

10. Specifications

Product Number: OSE-1440-BA

- Height: 35 inches
- Width: 27 inches
- Depth: 10 inches
- T-Slot Rack Width: 36 inches
- Shipping Weight: 68 pounds