

1. General Information

If cables are to be blocked in the FOSC 400 D/Gel closure, use the following instructions. Depending upon the application, additional kits may be required, including:

FOSC ACC CB Sleeve W: wraparound cable blocking sleeve for mid-span cable openings.

FOSC ACC TTube Ribn: ribbon-sized transportation tubes for ribbon cables.

FOSC ACC D/Gel Cable kit

2. Kit Components

- Adhesive rings
- Heat-shrink tubing (black with white stripe)
- Adhesive foam strip
- Cleaning tissues
- Abrasive strip
- Tie wraps
- Distribution funnels and caps for central stranded fiber
- Installation instructions

WARNING! Extreme caution should be used when installing the cable block on flexible buffer tube cable. Applying heat directly to the buffer tubes or overheating the cable block will cause buffer tube damage.

Note: Final cable block diameter cannot exceed 1".

Note: Refer to FOSC 400 D/Gel closure for cable installation.

Note: Transportation tubes are supplied with cable termination components in D/Gel closure kit.

3. Cable Preparation

These instructions address the cable blocking procedures for loose buffer tube and central core tube (stranded fiber or ribbon) cable, including both cable ends and mid-span cable entries. Refer to the appropriate section:

	Section Number	
Loose Buffer Tube Cable	Cable Ends	3.1
	*Mid Span	3.2
Central Core Cable	Cable Ends	3.3
	Cable Ends Dist. Funnel	3.4
	*Mid Span	3.5

*These applications require wraparound cable blocking sleeves available with some basket kits, or separately in the FOOSC ACC CB Sleeve W kit.

3.1 Loose Buffer Tube Cable Ends

To cable block the ends of loose buffer tube cable, follow these steps:

Note: Final cable block diameter cannot exceed 1".

1. Clean the cable and remove 70" of the outer cable sheath and shield if present. Remove the aramid and fiber yarns to the ring cut.
2. Cut central member off at the ring cut. (Figure 1)
3. If a shield is present in the cable, tab the cable 1" from the ring cut. Crimp the 3" alligator bond clamp to the tab in the sheath.
4. If you are using a B-Bond clamp on double-armored cable, remove a 1" square section of the outer cable sheath around the tab. (Figure 2) Slide the lower plate of the bond clamp under the inner shield so that the stud bolt sticks up through the tab.

Place the upper plate of the B-Bond clamp over the bolt. Place a double-eyelet bond wire over the bolt. Install the nut on the bolt and tighten it. Cut off the excess stud bolt and file it flush with the nut. (Figure 3)

5. Attach cable end to the FOOSC work stand using a tie wrap as shown. (Figure 4)

Figure 1

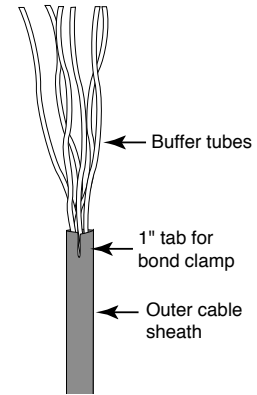


Figure 2

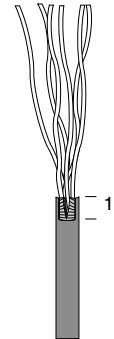


Figure 3

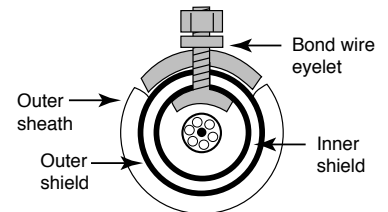
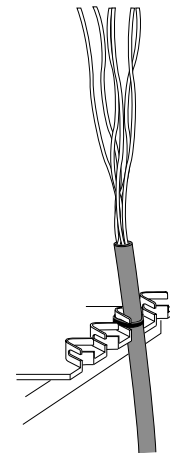


Figure 4



6. Carefully ring cut and remove all but three inches of each buffer tube. Clean the remaining buffer tubes, exposed fibers, and 6" of the cable sheath with a rag and company-approved cleaning solution. (Figure 5)

7. Install one transportation tube on each buffer tube and slide it down to within 1" of the sheath ring cut.

Note: Two sizes of transportation tubes are provided for six-fiber and twelve-fiber buffer tubes.

8. Place an identification marker on each transportation tube 6" above the ring cut.

9. Peel the backing off the foam strip. Gather all the transportation tubes together (excluding the bond wire, if present) and make one complete wrap of the foam strip, adhesive side down, 1" from the sheath ring cut. The ends of the transportation tube should extend slightly beneath the foam strip. Wrap the remaining foam strip around the bond wire and transportation tubes. (Figure 6)

10. If the cable is less than .50" in diameter, use 1 adhesive ring. Otherwise, use 2 rings. Wrap the yellow adhesive ring around the buffer tubes (and bond wire, if present) between the sheath ring cut and the foam strip. (Figure 6)

11. Clean 3" of the cable sheath below the ring cut with the provided cleaning tissue. Abrade the cleaned area with the abrasive strip. (Figure 6)

12. Place a white pencil mark on the cable sheath 2" below the ring cut.

Note: If the cable is less than 0.5" in diameter, use the smaller diameter plain black tubing included with the cable termination components of the D/Gel cable kit.

13. **Cut cable block heat-shrink tubing to 3.5" in length.** Place a tie wrap at the pencil mark on the sheath. Slide the appropriate heat-shrinkable tube over the adhesive rings. Let the tube slide down and rest on the tie wrap. (Figure 7, step 1, 2)

14. Place a tie wrap around all the transportation tubes (and bond wire if present) above the heat-shrinkable tube. (Figure 7, step 3)

15. Begin shrinking the tube with the CV1981 hot-air gun on setting 7. Start at the bottom of the tube, directing the air flow upward. (Figure 8) At the top of the tube, direct the air flow downward to avoid applying heat directly to the transportation tubes.

Figure 5

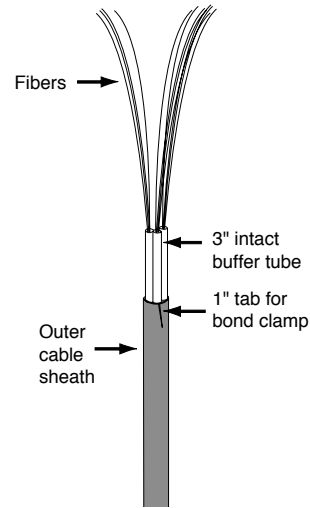


Figure 6

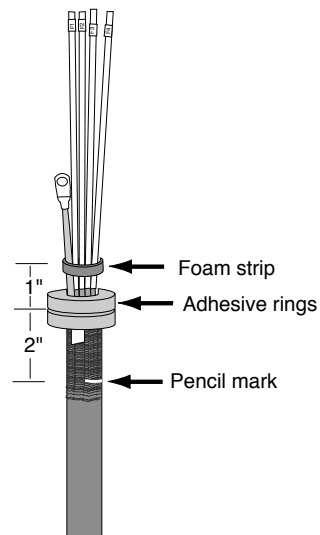


Figure 7

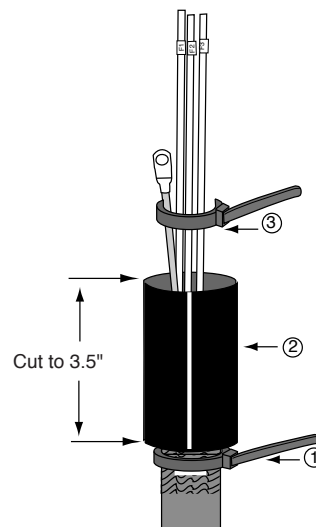
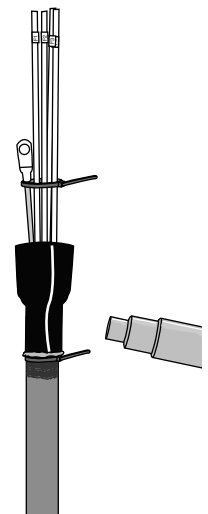


Figure 8



- Continue heating until the entire tube has shrunk, (Figure 9) then apply additional heat to the lump of adhesive in the middle of the tube. When the seal is complete, the tube should be smooth and the adhesive lump should be melted. (Figure 10) After the cable block has cooled, remove the tie wraps from the cable.

Note: Do not attempt to melt the adhesive rings until both ends of the tube have been recovered.

3.2 Loose Buffer Tube Cable - Midspan Cable Entry

Note: Final cable block diameter cannot exceed 1".

- Clean the cable and remove 102" of cable sheath and shield, if present.
- Prepare both sides of the midspan opening as described in section 3.1, steps 2-14, but do not remove buffer tubes from fibers that will be looped, uncut, through the closure. Instead, place a 1" length of slit transportation tube around each buffer tube 1" from the ring cut. (This is required to separate the buffer tubes.)
- Cut cable block heat shrinkable sleeves to 3.5" in length.** Place a tie wrap at the pencil mark on each cable sheath. (Figure 11, Step 1) Wrap the heat shrinkable sleeves (available in FOSC ACC CB Sleeve W kit) around the adhesive tubes. Slide the channels over the rails. (Figure 11, Step 2) Let the sleeves slide down and rest on the tie wraps. If a bond wire is present, rotate the channel at least 90° from the bond wire.
- Place another tie wrap around all tubes above the sleeve. (Figure 11, Step 3)
- Begin shrinking the sleeve with the CV1981 hot-air gun on setting 7. Start at the bottom of the sleeve, directing the air flow upward. At the top of the tube, direct the air flow downward. Direct additional heat to the channels.

Note: Avoid applying heat directly to the cable buffer tubes.

- Continue heating until the entire tube has shrunk, and the lump of adhesive in the middle of the tube is gone. When the seal is complete, the tube should be smooth and the adhesive lump should be melted. (Figure 12)
- After the sleeves have cooled, cut the channels off with a knife and remove the tie wraps from the cables.

Figure 9

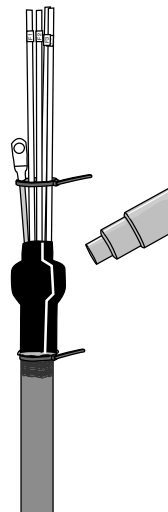


Figure 10



Figure 11

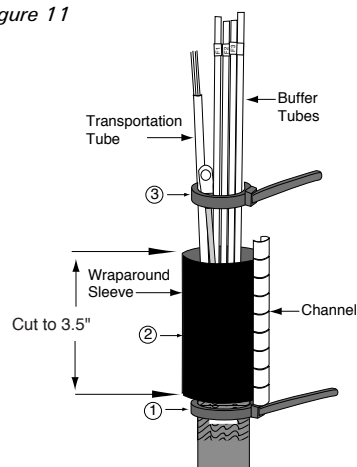
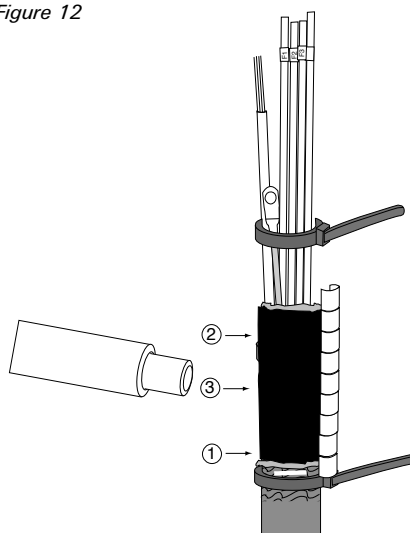


Figure 12



3.3 Central Core Tube Cable Ends

Note: Final cable block diameter cannot exceed 1".

1. Clean the cable and remove 70" of the outer cable sheath and shield, if necessary.
2. If dual strength members (e.g., LXE) or multiple metallic strength members (eg., crossply) are present, expose each strength member and cut it off at the ring cut. (Figure 13)
3. If multiple non-metallic strength members (eg., EST) are present, cut them off at the ring cut.
4. If metal shield is present, remove all but 3/4" of the metal shield. (Figure 13) Pry open a 3/4" tab in the exposed metal shield where the shield overlaps. Crimp the 3" bond clamp onto the edge of the shield.
5. Attach the cable to the FOSC Work Stand with a tie wrap. (See Figure 4)
6. Carefully cut the central core tube 12" from the sheath ring cut. (Figure 13)
7. Separate the fiber groups and clean the exposed components with a clean rag and company approved cleaning solution. If ribbon cable is used, stack the ribbons in the order in which they appear in the central core tube. Temporarily wrap a piece of vinyl tape around the ribbons about 1" from the tube to help keep the ribbons stacked.

Note: If central core dielectric cable is used, the adhesive rings and foam strip are not required as described in steps 8 and 9.

Note: If the ribbons are not stacked properly, or if they are twisted, light signals may be attenuated.

8. Peel the backing away from the foam adhesive strip. Wrap one layer of foam strip around the central core tube 1.5" above the sheath ring cut, excluding the bond wire (if present) and the strength members. Wrap the remainder of the foam strip around the central core tube, and bond wire (if present) over the previously placed foam strip, creating a foam collar. (Figure 14)
9. Install yellow adhesive ring(s) over the central core tube, and bond wire between the shield (if present) or the sheath ring cut and the foam collar. (Figure 14) (If cable is less than .5" in diameter, use 1 adhesive ring). (If cable is dielectric, no adhesive rings are needed).
10. Clean 3" of the cable sheath below the sheath ring cut with the provided cleaning tissue. Abrade the cleaned area with the abrasive strip.
11. Place a pencil mark on the cable sheath 1" below the ring cut.
12. **Cut cable block heatshrink tubing to 3.5" in length.** Place a tie wrap at the pencil mark on the cable sheath. Slide the heat-shrink tubing over the adhesive rings and let it rest on the tie wrap. (Figure 15)
13. Place another tie wrap around central tube and bondwire, if present. (Figure 15)

Figure 13

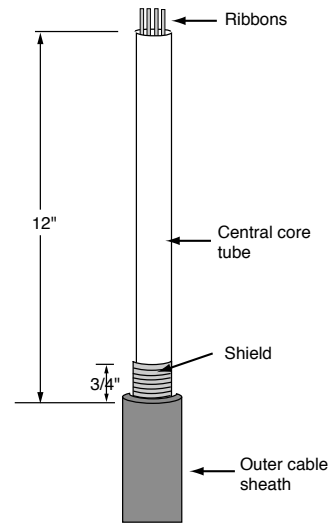


Figure 14

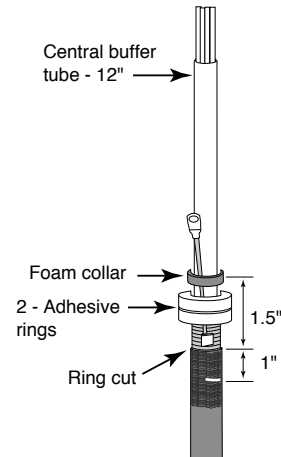
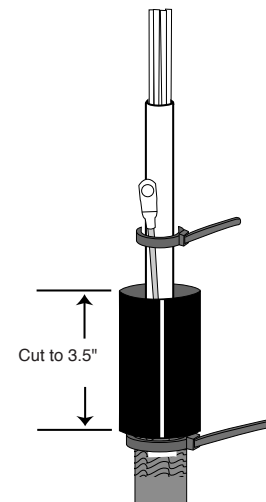


Figure 15



- With the CV1981 hot air gun on setting 7, start shrinking the bottom of the tube, directing the air flow upward. Continue heating until the entire tube has shrunk, then apply additional heat to the lump of adhesive in the middle of the tube. When the seal is complete, the tube should be smooth and the adhesive lump should be melted. (Figure 16)

Note: Avoid applying heat directly to central core tube.

Note: Do not attempt to melt the adhesive rings until both ends of the tube have been recovered.

- Central core tube needs to be routed directly to the slack basket using the bottom most ports.

3.4 Central Core Tube Stranded Fiber Cable Ends Using Distributor Funnel

Note: Final cable block diameter cannot exceed 1".

Note: For very small-diameter central core tube cables or drops, use one transportation tube to extend the central core tube directly to an organizer tray, and do not use the funnels and distribution caps mentioned in this section.

- Clean the cable and remove 70" of the outer cable sheath and shield, if present.
- If dual strength members (e.g., LXE) or multiple metallic strength members (eg., crossply) are present, expose each strength member and cut it off at the ring cut. (Figure 17)
- If multiple non-metallic strength members (eg., EST) are present, cut them off at the ring cut.
- If metal shield is present. remove all but 3/4" of the metal shield. (Figure 17) Pry open a 3/4" tab in the exposed metal shield where the shield overlaps. Crimp the 3" bond clamp onto the edge of the shield.
- Attach the cable to the FOSC Work Stand with a tie wrap. (See Figure 4)
- Cut the central core tube 1" from the ring cut and remove the excess tube. (Figure 17)
- Separate the fiber groups and clean the exposed components with a clean rag and company-approved cleaning solution.
- Slide the small end of the distributor funnel over the fiber groups, and slide it down over the central core tube.
- Place one fiber group in each hole of the distributor cap.
- Carefully slide the distributor cap down until it seats in the funnel. (Figure 18)
- Place the fiber groups from each distributor cap hole into a transportation tube, and slide the tube down into the hole.
- Place an identification marker on each transportation tube 6" above the ring cut.

Figure 16

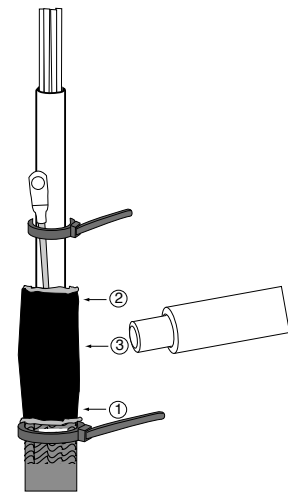


Figure 17

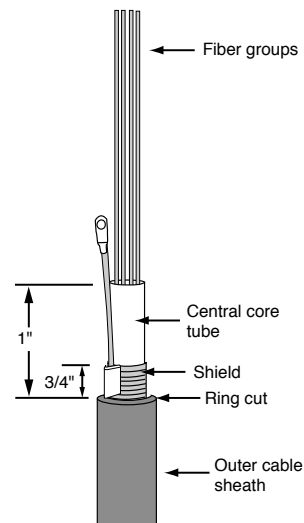
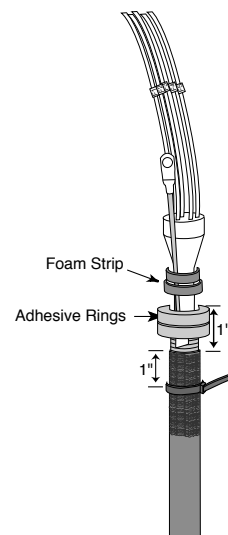
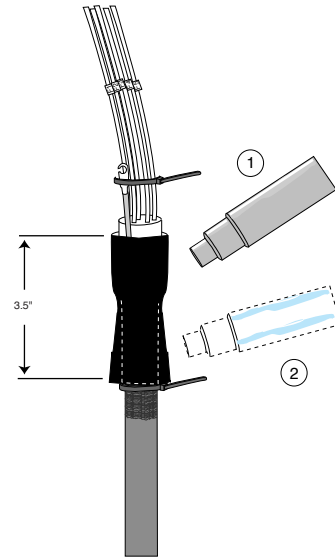


Figure 18



13. Peel backing from foam strip. Wrap foam around funnel base. (Figure 18)
14. Clean 3" of the cable sheath below the ring cut with the provided cleaning tissue. Abrade the cleaned area with the abrasive strip. Remove abraded material with a clean dry cloth.
15. If the cable is less than .5" in diameter, use 1 adhesive ring. Otherwise, use 2 rings. Wrap the yellow adhesive ring(s) around the buffer tubes (and bond wire, if present) between the sheath ring cut and the foam strip. (Figure 18)
16. **Cut cable block heatshrink tubing to 3.5" in length.** Place a tie wrap 1" below the ring cut. Slide the heat shrinkable tube without white line (included with cable termination components in cable seal and closure kits) over the cable and allow it to rest on the tie wrap. (Figure 19)
17. Place a tie wrap around the transportation tubes to hold them in place.
18. With the CV1981 hot-air gun on setting 7, begin shrinking the tube around the top of the funnel. After recovering 1" of tube on funnel, pause for 15 seconds to allow the adhesive to set on the funnel. Complete shrinking the tube and apply additional heat to the center of the tube to melt the adhesive rings. (Figure 20)

Figure 19



Note: Do not attempt to melt the adhesive rings until both ends of the tube have been recovered.

3.5 Central Core Tube Midspan Cable Entry

Note: Final cable block diameter cannot exceed 1".

1. For central core stranded fiber cable, clean the cable and remove 102" of midspan cable sheath.
2. For central core ribbon fiber cable, open 102" - 140" of midspan cable sheath. Follow Steps 2 - 15 in Section 3.3. Use wraparound heatshrinkable sleeves cut to 3.5" in length instead of the heatshrink tubing in Section 3.3, Step 12.

Note: For ribbon cable, stack the ribbons in the order in which they appear in the central core tube. If the ribbons are twisted, light signals may be attenuated.

3. Central core tubes need to be routed directly to the slack basket using the bottom most ports.

Figure 20



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