



XAGA 1000

Pressurized Splice Closure

I N S T A L L A T I O N I N S T R U C T I O N S

1. General Product Information

This practice provides information regarding the description and use of CommScope XAGA 1000 pressurized splice closure.

The XAGA 1000 closure system provides a pressure-tight environmental seal on pressurized or non-pressurized polyethylene or lead-sheath cable.

The XAGA 1000 splice closure accommodates up to 3600-pair cable.

2. Warnings

1. To avoid risk of accidental fire or explosion when using gas torches, always check all connectors for leaks before igniting the torch and follow the torch manufacturer's safety instructions.
2. To minimize any effect of fumes produced during installation, always provide good ventilation of confined work spaces.
3. The alcohol cleaning tissue in this kit is **FLAMMABLE**. Keep away from heat, sparks, and flame. Remove from work area before igniting an open flame or hot-air source.

3. Cautions

1. The supplied vent tube must be used on all installations to allow venting of the splice area during sleeve application. In the heated soft state, the XAGA 1000 sleeve allows escaping air from the splice area to form holes and tunnels under the sleeve.
2. Do not place pressure plug or valve in vent tube until installation is complete. Installation is complete when the channel is cool to the touch of an ungloved hand.
3. Protect existing plant, such as poles and other cables, from the torch flame. An AD-1460 fiberglass heat-shield pad may be used for this protection.

4. Use temporary bonding procedures where required.
5. The XAGA 1000 closure should be installed when the work area is above 0°F (-18°C).
6. Do not place the XAGA 1000 closure on a wet splice. Thoroughly dry any wet splice as directed by approved practice. Take precautions to ensure that no water comes in contact with the splice work during closure installation.
7. Use only approved connectors and bonding hardware.
8. Remove rocks and sharp objects from backfill. Do not use creosote-treated material over or under the closure. The XAGA 1000 closure needs no permanent support attached.

4. Kit Contents

- Plastic mesh protector (not included in all kits)
- Abrasive strip
- Heat-shrinkable sleeve
- Branch-off clips
- Metal canister
- Installation instructions
- Pressure valve and plug
- Flexible metal channels and retention clip(s)
- Bond bar
- Cleaning tissue
- Aluminum tape
- Vent tube

| XAGA 1000 Part Description | Max. Splice (inches) | Diameter Min. Cable (inches) | Sheath Opening (inches) | Maximum Combined Cable & Vent Tube OD | | Approximate Cable Range (pair) |
|----------------------------------|-------------------------|------------------------------------|-------------------------------|--|-------|--------------------------------------|
| | | | | 2-out | 3-out | |
| A2 | 2.4 | .6 | 21 | 2.0 | 1.4 | 50 - 200 |
| B2 | 3.6 | 1.2 | 21 | 3.2 | 2.6 | 200 - 400 |
| C2 | 4.8 | 1.5 | 21 | 4.4 | 3.8 | 300 - 600 |
| D2 | 6.2 | 2.2 | 24 | 5.5 | 4.8 | 900 - 1,200 |
| D4 | 6.2 | 2.2 | 37 | 5.5 | 4.8 | 900 - 2,100 |
| E2 | 7.8 | 2.6 | 24 | 7.4 | 6.8 | 1,200 - 2,400 |
| E3 | 7.8 | 2.6 | 31 | 7.4 | 6.8 | 1,200 - 3,600 |
| E4 | 7.8 | 2.6 | 37 | 7.4 | 6.8 | 1,200 - 3,600 |

* If cable diameter is less than recommended, an end plug rod may be used as a shim to increase the effective diameter.

** Cable range will vary depending upon cable type, gauge, type of connector, and splice configuration.

5. General Installation

1. Clean cable sheath. Do not use cleaning tissue at this time. Using the provided bond bar, mark the cable at the outboard edge of the inner holes. Make appropriate sheath opening using these marks. (Figure 1)
2. Leave 1/2 inch of dielectric wrap inside the sheath opening.
3. When dual-jacketed cable is used, leave 1 inch of dielectric wrap and inner jacket extending into the sheath opening.
4. Install approved cable bond clamp and supplied bond bar.
5. If a branch cable exists, bond branch cable to a cut length of approved bond strap.
6. If an external ground is required, attach a solid bare wire to the bonding hardware.
7. To select the proper size closure, measure the diameter of the splice at its largest point. Also measure the cable for the minimum diameter requirement. (Refer to the Size Selection Chart on page 2 for the proper kit size.)

Note: *In the event of a branch or taper splice where the minimum cable diameter cannot be met, a 1-inch end-plug rod can be used as a shim with the supplied branch-off clip. (End-plug rods and extra branch-off clips can be ordered separately.)*

8. Complete splice work using approved procedures. Wrap entire splice with two half-lapped layers of muslin or other company-approved splice wrapping method. Use desiccant for pulp conductors. (Figure 2)
9. If included in the kit, wrap the plastic mesh protector around the splice and tape or tie-wrap in place. (Figure 3)
10. Place the metal canister over the splice area and mark the cable(s) at the end of the canister fingers where the vent tube will be installed. (Figure 4)
11. Position the tube underneath the cable(s) and line up the marks of the cable and vent tube as shown.

Note: *The non-threaded end of the tube should be toward the splice area.*

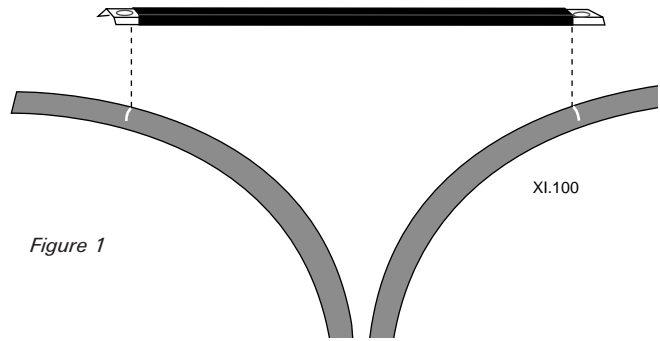


Figure 1

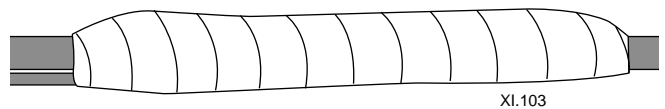


Figure 2

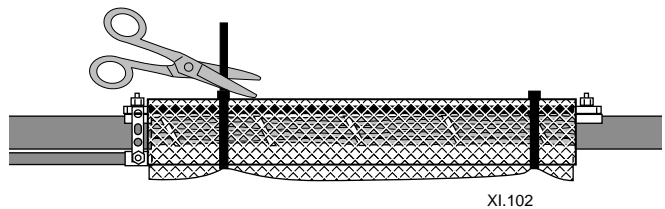


Figure 3



Figure 4

12. Using vinyl tape, wrap two laps tightly around the vent tube and cable to hold the tube in place as shown. If an external ground has been used, DO NOT tape over the external ground. (Figure 5)
13. Place the metal canister over the splice. Tape the seam of the canister using only the supplied aluminum tape. Smooth the tape with a blunt object. (Figure 6)
14. Align the canister fingers over the previous mark(s) and tape the fingers down to the cable using 2-inch DR tape, starting at the canister body and working down to the ends of the fingers.

Note: The DR tape should only be placed on the fingers of the canister and should not extend more than 1/4 inch over the ends of the fingers.

15. Using the supplied cleaning tissue, clean approximately 10 inches of cable sheath on each side of the canister and the vent tube.
16. Using the supplied abrasive strip, circumferentially abrade approximately 6 inches of cable sheath on each side of the canister fingers. Carefully inspect for complete scuffing.
17. For polyethylene cables, center the sleeve over the splice and mark the cables at the ends of the sleeve. For lead cables, proceed to step 20. (Figure 7)
18. Using 4-inch-wide aluminum tape, place one lap around each cable one inch inboard of the mark.

Note: The vent tube does not require 4-inch-wide aluminum tape.

19. Smooth sharp edges with a blunt instrument.
20. Observe proper safety precautions and use approved torch. Flame-brush the scuffed area of polyethylene cables and vent tube for about five seconds. Preheat lead cables to 140°F (hot to the touch). (Figure 8)
21. When an external ground wire is used, cut a 1-inch x 5-inch strip from the red AutoFit accessory adhesive (ordered separately) and position it under the external ground wire.

Note: Do not use the yellow ADP pads on XAGA 1000 closures.

22. Center the sleeve over the splice, covering the aluminum tape.
23. Place the retention clip on the rails in the center of the sleeve to hold the sleeve in place.

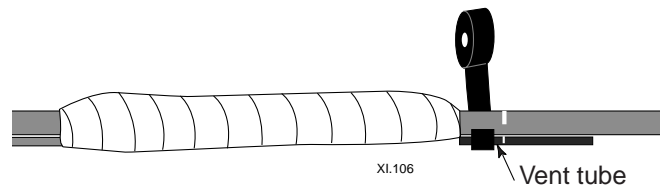


Figure 5

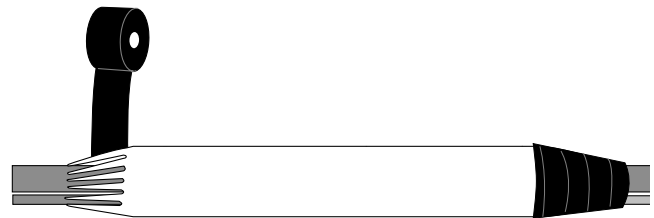


Figure 6



Figure 7

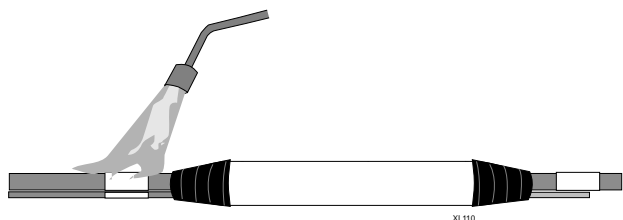


Figure 8

24. Slide a channel over the clip from each end of the closure. Both channels should meet at the center of the retention clip.
25. Check the position of the sleeve, making sure it is centered properly. Install branch-off clips between all cables and vent tube. (Figure 9)
26. Secure the branch ends with aluminum tape so that cables are parallel with each other.

Note: Do not place aluminum tape around the vent tube during sleeve recovery.

27. Ignite the torch and adjust the flame. Preheat along the rail/channel area until this area begins to shrink. Always keep the torch moving.
28. Start at the center and work out towards the ends, completely shrinking the sleeve as you move. However, if conditions such as obstructions or wind do not permit this method, start shrinking at one end and work towards the other. (Figure 10)

Note: Do not shrink sleeve from both ends working towards the center.

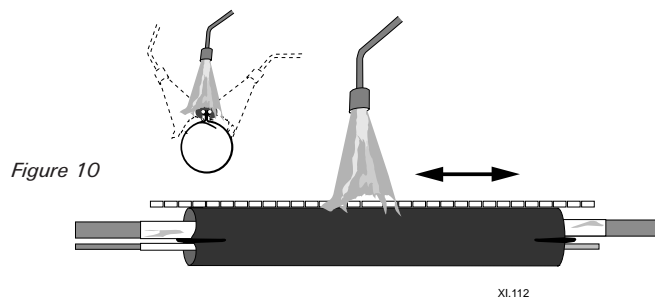
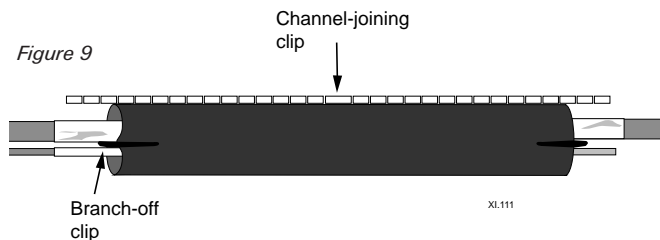
29. Apply heat until the sleeve is fully shrunk and the heat-sensitive paint is completely converted. Continue heating the rail/channel area for another 5 to 10 seconds per foot.

Note: Do not try to convert the heat-sensitive paint directly under the branch-off clip.

30. Two separate white lines should be visible underneath the channel. If at any point the two separate white lines are not visible, heat the area until they appear.
31. Position a tie wrap around the cable and vent tube to hold the cable straight while the adhesive is solidifying.

Note: Do not block end of vent tube.

32. While sleeve is still warm, use a blunt object to lightly press the channel to make it conform to the transition area at each end of the canister.
33. Inspect the closure for the following:
 - a. Full recovery
 - b. All heat-sensitive paint conversion (except directly under the branch-off clips)
 - c. Adhesive flow at both ends of the closure and from clip
 - d. White lines visible under channel. Place a tie wrap around the cable and vent tube to hold it straight while the adhesive is solidifying



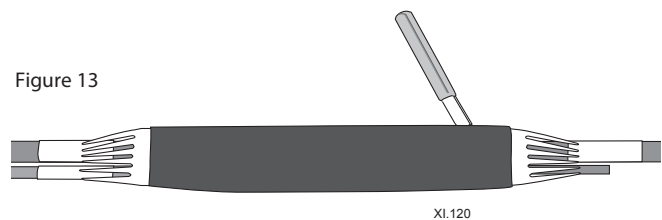
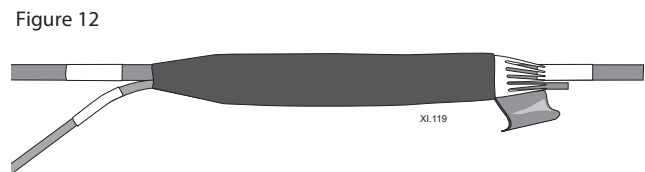
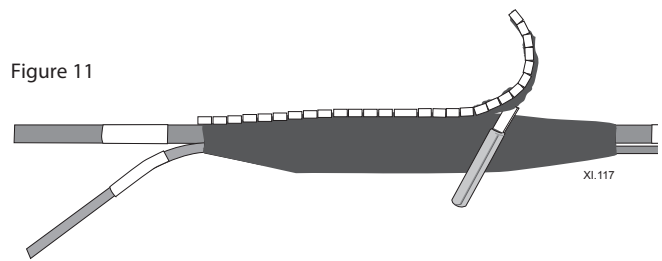
34. When sleeve is cool to the touch, install valve and flash test with a maximum 10 PSI. Remove valve and install plug in all buried applications and in all locations where a permanent valve will not remain.

6. Removal

1. Before applying heat to the closure, remove valve or plug. This will allow venting or bleeding of the closure.
2. Using proper safety precautions, heat entire rail and channel area. With a sheath knife, cut along the entire length of the metal channel.
3. With pliers, remove the entire channel. (Figure 11)
4. Thoroughly heat the branch end of the closure and remove the branch-off clip.
5. With a sheath knife, make a ring cut through the sleeve onto the metal canister on both ends.
6. With pliers, remove the heated sleeve ends. (Figure 12)
7. Remove tape from fingers of canister.
8. Locate the seam of the canister and cut the sleeve along the length of the seam. Remove the canister and rework the splice. (Figure 13)

7. Reclosure

Use a new XAGA 1000 kit and repeat general installation instructions. The remaining adhesive does not have to be removed from the cables, but it has to be kept clean and free of grease and dirt.



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