

1. General Description

1. This practice provides information regarding the description and use of the XAGA 550/550-L aerial closure.
2. The XAGA 550/550-L aerial closure system incorporates a reinforced heat-shrinkable wraparound sleeve, coated internally with a hot-melt adhesive to provide a water tight seal to the cable jacket.
3. The XAGA 550/550-L aerial closure system is intended for use on unpressurized cables.
4. The XAGA 550/550-L aerial closure accommodates 6 to 1200 pair cable splices.

2. Warnings

1. To avoid risk of accidental fire or explosion when using gas torches, always check all connections 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.
4. MSDSs are available from CommScope Inc.
Call to Tel.: 800.830.5056.

3. Cautions

1. Protect existing plant, such as poles and other cables, from the torch flame. An AD-1460 fiberglass heatshield pad may be used for this protection.
2. Use temporary bonding procedures where required.
3. The XAGA 550/550-L aerial closure should be installed when the work area is above 0°F(-18°C).
4. Do not use the XAGA 550/550-L aerial closure on pressurized plant.

5. Do not place the XAGA 550/550-L closure on a splice suspected of being wet. Thoroughly dry any wet splice as directed by approved practice. Take precautions to insure that no water comes in contact with the splice work during closure installation.
6. Use only approved connectors and bonding hardware.

4. Kit Components and Size Selection

- Plastic mesh (550-L only)
- Abrasive strip
- Solvent wiping pad
- Branch-off clip
- Vent plugs (2)
- Adhesive pad
- Installation instructions
- Bond bar
- Metal channels
- Channel joining clip
- Ground wire (not included in all kits)
- Wraparound sleeve
- Aluminum canister
- Nylon sheet
- Sealant strips (not included in all kits)

XAGA 550/550-L Closure Size	Splice Opening (inches)	Min. Cable Diameter** (inches)	Maximum Splice Diameter (inches)	Approximate Cable Range*(pairs) (pair)
A	12.0	0.35	1.70	6 - 25
A1	17.0	0.35	1.70	6 - 50
B1	17.0	0.48	3.00	50 - 300
B2	21.0	0.48	3.00	50 - 300
B+1	17.0	1.00	3.70	100 - 400
B+2	21.0	1.00	3.70	100 - 400
C1	17.0	1.10	4.90	200 - 600
C2	21.0	1.10	4.90	200 - 600
D2	21.0	1.85	5.95	600 - 1200
A4	37.0	0.35	1.70	6 - 100
B4	37.0	0.48	3.00	50 - 600
B+4	37.0	1.00	3.70	100 - 600
C4	37.0	1.10	4.90	200 - 1200

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

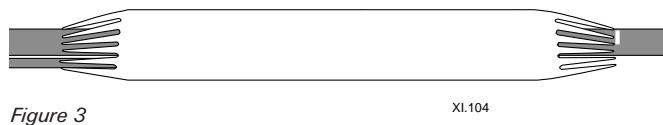
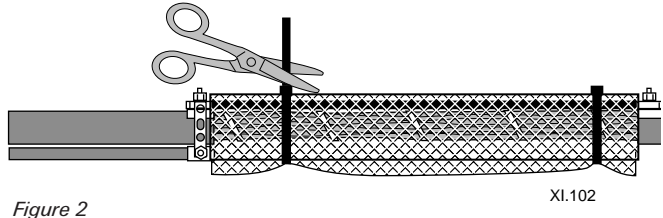
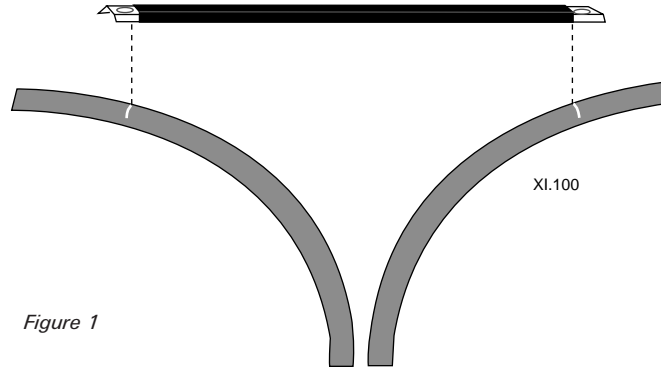
** If cable diameter is less than recommended, an end plug rod may be used as a shim to increase the effective diameter.

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. 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 for the proper kit size.)
5. Complete splice work using approved procedures.
6. If included in the kit, wrap the plastic mesh protector around the splice and tape or tie-wrap in place. (Figure 2)
7. Center the canister over the splice and mark the cables at the ends of the canister fingers. (Figure 3)
8. Center and place a wrap of 2 inch mastic or DR tape if supplied in kit or DR tape over the marks on each cable.
9. When an external ground is required, use the external ground wire (if supplied). Press external ground wire onto the mastic or DR tape and cover with an additional wrap of 2 inch mastic or DR tape.
10. To use the end plug rod as a shim, clean and scuff the entire surface of the end plug rod circumferentially. Place one lap of 2 inch mastic or DR tape around the end plug rod and tape to the main cable. Treat the end plug rod as a branch cable.
11. Center the canister over the mastic or DR tape. Locate the canister holes on the top and completely tape the fingers down with 2 inch DR tape **ONLY**. (Figure 4)

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.

12. Wrap the supplied nylon sheet around the canister. Use vinyl tape to hold in place.
13. If a hurricane vent is required, refer to Section 6.0 (Hurricane Vent Installation).
14. Using the supplied cleaning tissue, clean approximately 10 inches of cable sheath on each side of the canister fingers.
15. Using the supplied abrasive strip, circumferentially abrade approximately 6 inches of cable sheath on each side of the canister fingers. Carefully inspect for incomplete scuffing.



16. Center the sleeve over the canister and mark the cables at the edge of the sleeve. (Figure 5)
17. Using 4 inch aluminum tape, place one lap around each cable 1 inch inboard of the mark. Smooth sharp edges with a blunt instrument.
18. Observing proper safety precautions, adjust approved torch as per torch manufacturer's and/or your company's approved procedures. Flame treat the scuffed areas for 5 seconds.

Note: To prevent carbon deposits on the cable, do not reduce the flame.

Warning: Use adequate ventilation and avoid overheating when installing.

19. When an external ground wire is placed, cut a 1 x 3 inch strip from the supplied adhesive pad and place it under the ground wire.
20. Remove the plastic protective wrapper from the wrap-around sleeve before installing. Center the sleeve over the splice equally covering the aluminum tape.

Note: Did you flame brush the cable jacket?

21. Place the channel-joining clip in the center of the sleeve rail to hold the sleeve in place. Slide a channel over the rail from each end of the sleeve. The channels should equally cover the channel-joining clip, and should align evenly over the edges of the sleeve.

Note: If the channels fit very tightly and will not slide over the rail or over the clip, make sure that the sleeve's flap is not pinched between the rails (Figure 6). Then push the sleeve up from the bottom and down on the top while sliding the channels toward the middle of the sleeve. (Figure 7)

22. After making sure that the sleeve is centered properly, install the branch-off clip over the sleeve between the main cable and the branch cable. (Figure 8)
23. Secure the branch cable to the main cable with aluminum tape or a tie wrap so that the cables are parallel.
24. Adjust the torch flame and preheat both sides of the channel evenly until both sides begin to shrink. Keep the torch moving at all times. To heat the channel uniformly, move the flame in a zig-zag motion along both sides of the channel and along the length of the sleeve. (Figure 9)

Note: Use adequate ventilation and avoid overheating during installation.

25. Start shrinking at the center of the sleeve, completely shrinking the sleeve as you work toward the ends. (Figure 10)



Figure 5

XI.109

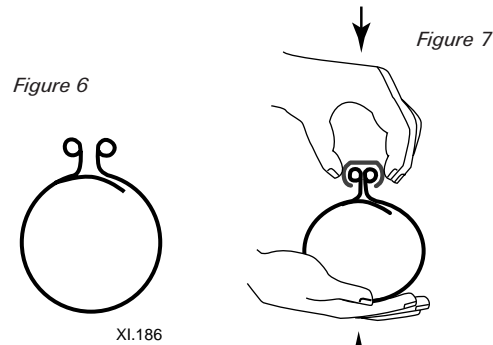


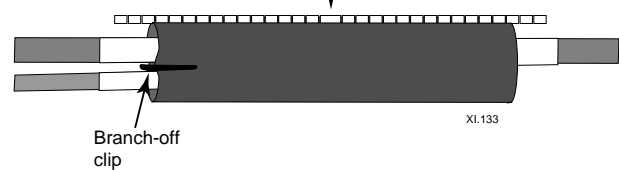
Figure 6

Figure 7

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Figure 8

Channel-joining clip



Branch-off clip

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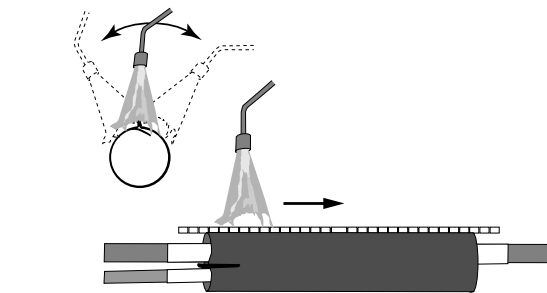


Figure 9

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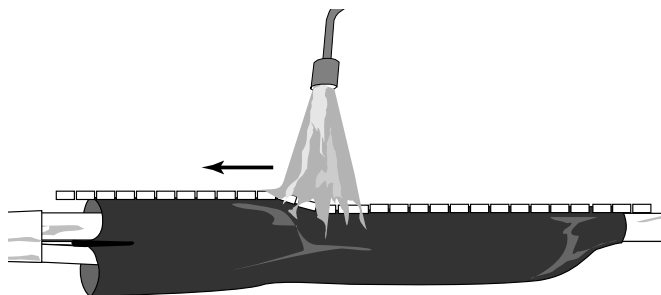


Figure 10

XI.176

Note: If obstructions or wind make this method impossible, start shrinking the sleeve at one end, and shrink the sleeve completely as you work toward the opposite end. Do not shrink the sleeve from the ends toward the center.

26. Continue heating the sleeve until it is completely shrunk and the heat-sensitive paint has converted to black. Continue heating the channel for an additional 5 to 10 seconds per foot.

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

27. While the sleeve is still hot, lightly press the channel into the sleeve with a blunt object at each end of the closure.
28. The closure is correctly installed when:
 - a. Smooth, wrinkle-free surface
 - b. All heat-sensitive paint is converted (except at clip)
 - c. Adhesive flow is seen at both ends and at clip
 - d. White line is visible under the channel.
29. When venting is required, wait until the sleeve is cool and then locate recessed holes on the bottom of closure. Cut out sleeve in area of holes.
30. Place vent plugs into hole(s).

6. Hurricane Vent Installation

1. Prepare the splice as shown in section 5, steps 5.1 through 5.11.
2. Install a Pressure Access Flange (PAF II) by inserting the flange into hole of canister. Position the PAF II so that the long side of the flange runs in the direction of the cable. The PAF II is ordered separately. (Figure 11)
3. Tape down the PAF II using vinyl or 3/4 inch DR tape, covering only 1/4 inch of the PAF II.
4. Clean, abrade, and flame treat the PAF II when preparing the cable as shown in steps 5.14, 5.15, and 5.18.
5. Continue with the installation of closure as shown in steps 5.12 through 5.27.
6. Following local safety procedures and while sleeve is still hot, locate the recessed hole on the bottom of the PAF II with a blunt object. Cut out sleeve in area of hole.
7. Allow the closure to cool completely before installing a hurricane vent into the PAF II. (Figure 12)

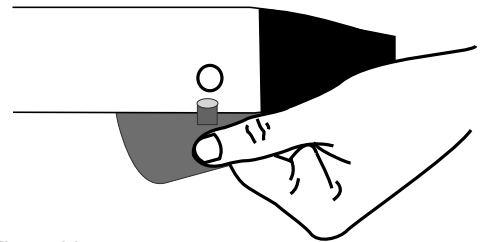


Figure 11

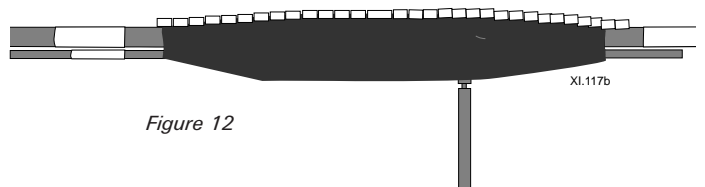


Figure 12

7. Butt Splice

1. Prepare the splice as shown in section 5, steps 5.1 through 5.10.
2. Center the canister over the mastic or DR tape and completely tape the fingers down with 2 inch DR tape ONLY . Cable side only.

Note: Do not tape over cable more than 1/4 inch.

3. Size Selection Chart

End Plug Rod Selection Chart	
Closure Size	End Plug Rod Size
XAGA 550/550-L A, A1, A4 B1, B2, B+1, B+2, B4, B+4	EPR-1
XAGA 550/550-L C1, C2, C4, D2	EPR-2



Figure 13

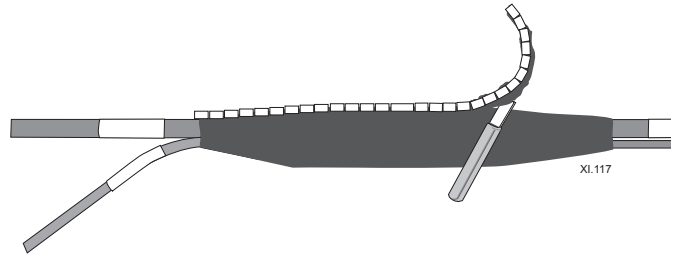


Figure 14

4. Clean and thoroughly scuff the entire rod in a circumferential direction using the supplied abrasive strip or a carding brush.
5. Place one lap of 2 inch mastic or DR tape around one end of the end plug rod.
6. Place the end plug rod into the canister such that the fingers meet the center of the mastic or DR tape and tape in place with 2 inch DR tape ONLY . (Figure 13)
7. Prepare the cable and install the sleeve as outlined in section 5, steps 5.12 through 5.27.



Figure 15

8. Removal

1. Using proper safety precautions, heat entire rail and channel area. With a sheath knife, cut along the entire length of the metal channel. (Figure 14)
2. With pliers, remove the entire channel.
3. Thoroughly heat the branch end of the closure and remove the branch-off clip.
4. With a sheath knife, make a ring cut through the sleeve onto the metal canister on both ends. (Figure 14)
5. With pliers, remove the heated sleeve ends.
6. Remove tape from fingers of canister. (Figure 15)
7. Locate the seam of the canister and cut the sleeve along the length of the seam. Remove the canister and rework the splice. (Figure 16)



Figure 16

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