INSTALLATION INSTRUCTIONS

AFL Apex® X-3 Sealed Splice Closure

TABLE OF CONTENTS

PACKAGE CONTENTS

Apex Closure
Cable Attachment Unit Kits - as ordered
Splice Trays installed with X-3 Tray Brake in Apex - as ordered
Installation Kit
3/8" Velcro®
Installation Instructions

REQUIRED TOOLS

216 can wrench
Tape measure
Tie wrap or Velcro for basket retention
Wire cutter for strength member
Splicer's scissors
Splice equipment and sleeves
Cable entry tools
Cable stripper
Cable splicer knife
9" Lineman's pliers

Optional Consumables
AFL Foam Retention Kit (pack of 25 - AFL no. HW000406)
Mesh transition tube, if desired (AFL no. AX-KIT-TUBE-014-XX*)
Silicone spiral wrap (AFL no. FC001657)
Applicable AFRS components

ADDITIONAL KITS

Kits and other accessories are available for the Apex X-3 Closures. See page 19 for ordering information.

APEX DEFINED

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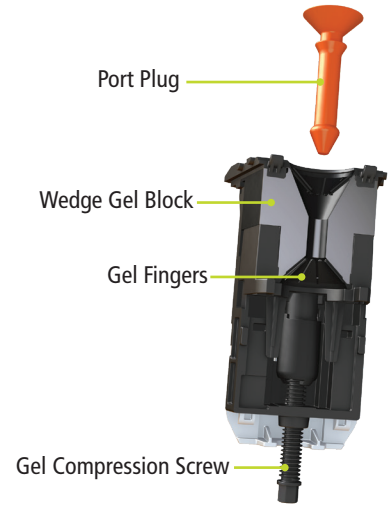
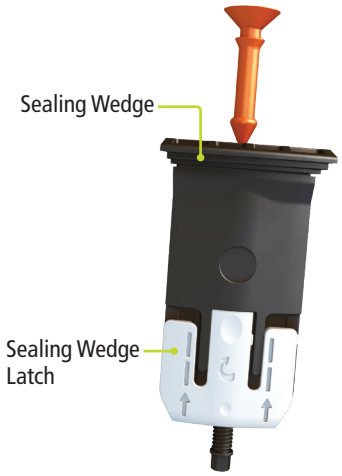
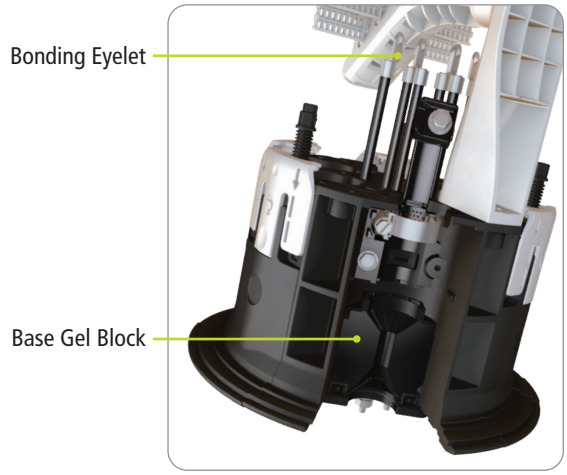
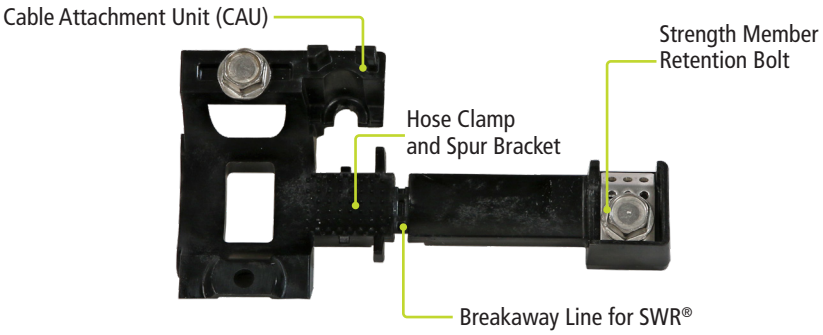
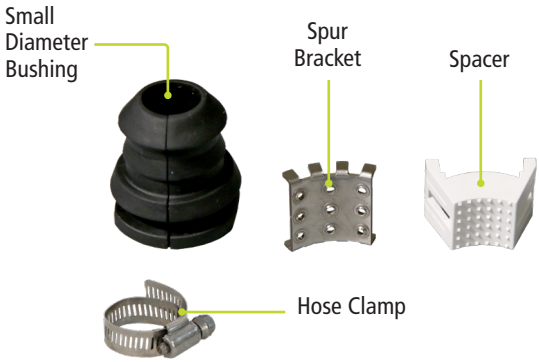
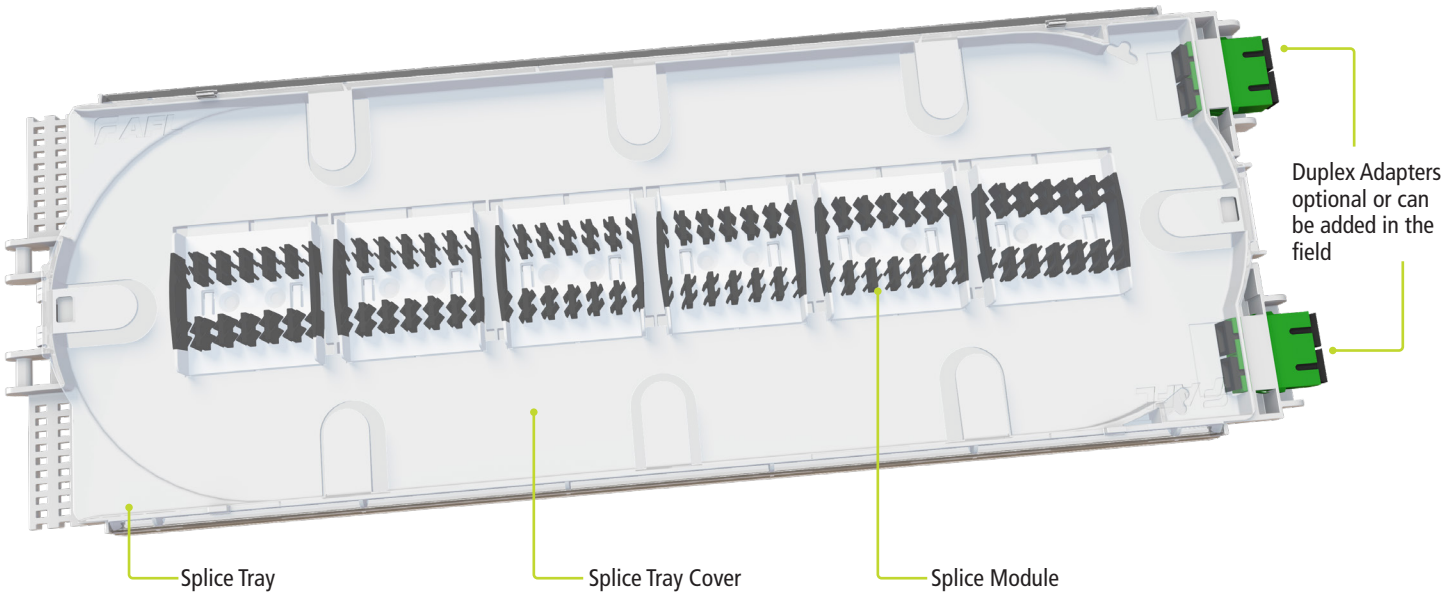












OPENING APEX

1. Release pressure valve to ensure no pressure or vacuum is present. **(Figure 1)**
2. Disengage locking ring.
3. Pull lock ring handle to disengage. **(Figure 2)**
4. Disengage lock ring latch.
5. Set aside Lock ring.
6. Orient Apex to have mount insert alignment tab up. **(Figure 3)**
7. Slide Apex dome off base and take care to keep attached dome O-ring seal area clean.
8. Install Apex into optional Universal Installation Stand. **(Figure 4)** *Skip to line 12 if not using installation stand.*
9. Ensure universal stand is configured for X-3. Align mount insert\alignment tab on top in center, basket down.
10. Set Apex on stand with base secured in stand.
11. Engage both retention clamps on base.
12. Undo splice tray retention straps.
13. Remove splice trays if installed at the factory.
14. If trays are installed from the factory, raise tray to a 45 degree angle. Gently rock the tray side-to-side until it releases from both hinges. Do not force it. It is designed to release at a certain angle. **(Figure 5)**
15. Using the same process, remove the inner basket if installed. **(Figure 6)**
16. Loosen stand retention clamps to install backbone cable in port 1 and port 2. Rotate Apex to have basket on top, mount insert at bottom, and re-engage stand retention clamps.

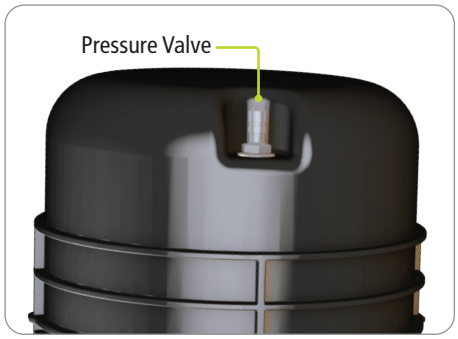
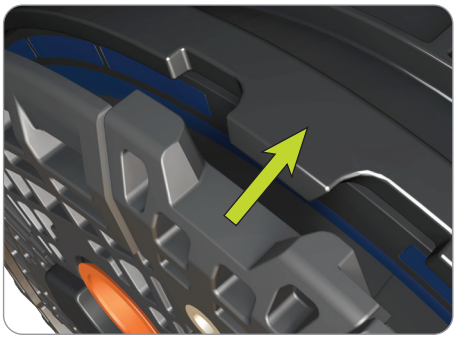


Figure 1


Figure 2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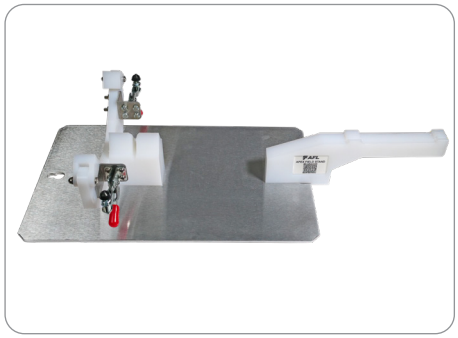


Figure 4


Figure 5

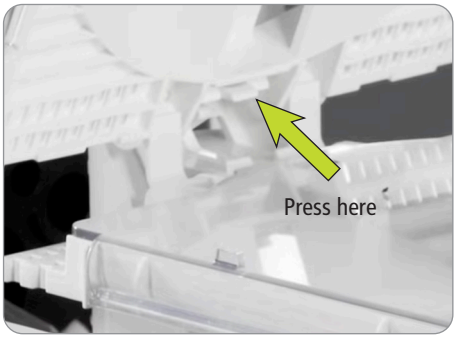


Figure 6

SEALING WEDGE REMOVAL

For the port to install a cable:

1. Confirm gel compression screw is not engaged. Then depress sealing wedge latch and slide fully-loosened wedge cover toward the base. **(Figure 7)**
2. Rotate wedge away from base pivoting at the base of the wedge.
3. Rotate until the wedge tabs disengage from the base.

✻ ***Tip: Hold tip of orange plug in base when opening wedge.***

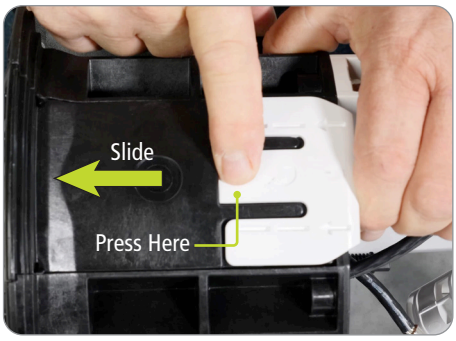
4. Take orange port plug and discard after installation is complete. **(Figure 8)**
5. Ensure the base gel remains secure in the base.

✻ ***If it becomes separated, simply re-install making sure the lower fingers engage properly in the base.***

6. Manually compress the base gel block. **(Figure 9)**
7. Confirm that sealing wedge gel compression screw is fully open.
8. Manually elongate wedge gel block. **(Figure 10)**
9. Set aside in a safe location.

✻ ***If either gel block is contaminated with dirt or debris, simply rinse gel block with water.***

✻ ***Do not close the Apex wedge to base and then insert orange port plug. The orange port plug must be in place when closing the wedge.***



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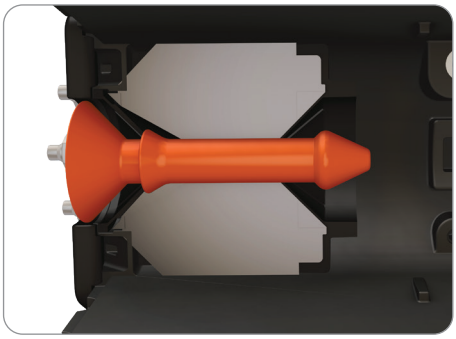


Figure 8


Figure 9


Figure 10

CABLE PREPARATION

Cable diameter, single port, in. (mm) 0.40" – 1.38" (10.16 – 35.052)
Cable diameter, multi-drop kit, in. (mm) 0.20" – 0.39" (5.0 – 9.9) or flat drop

LENGTH TABLE

CABLE/COMPONENT	TYPE OF OPENING	APEX X-3
Prep Length		**(in.)**
Wrapping Tube Cable (WTC)/Non Matrix Ribbon	Mid sheath	210-240
	End cut	110-125
Flat Matrix Ribbon	Mid sheath	148*-188
	End cut	74*-114
***Loose Tube fiber	Mid sheath	220-250
	End cut	110-125
All cable types	Sheath to tray	58
CSM or strength members (Non SWR®)		2 to 2 1/4
Storage		
Each additional basket storage loop		38-40
Each additional Splice tray service loop		39
Sheath to basket for tube retention		8-9
Definition		
Midsheath	Slack loop in basket, service loop in tray, center cut	
End cut	Slack loop in basket, service loop in tray, to far splice location	
Sheath to tray	Slack loop in basket	
* Ribbon minimum is slack loop in basket, no slack waterfall splicing in tray		
** Minimum. No service loop in splice tray – maximum allowing for service loop in splice tray		
*** LT storage max tubes	Additional tubes will decrease cable lengths	36 tubes

AFL Wrapping Tube Cable (WTC)

- No need to secure strength rods.
- Strength rods bound in place should be installed parallel to the basket in all ports.
- 8-11" of dielectric sheath or water block tape can be brought to basket.

Flat matrix ribbon

- Core tube or ribbon tube should extend from the sheath opening to be secured on the basket.
- Ribbon should be exposed from that point.

Loose tube and Jettable Micro Cable

- Tubes should end at the basket entrance after being secured and exposed or meshed ribbon should continue from there.
- Retained in basket. Loose tube stranding wherever possible in slack loop.

CABLE ATTACHMENT UNIT (CAU)

Parts of the CAU (Figure 11 and 12)

- Sheath end
- Hose clamp gear nest in CAU
- Strength member retention bolt
- Alignment tab on back
- SWR breakaway line
- Spur bracket and orientation small diameter cable bushing
- Small diameter cable (<0.55") Bushing and Spacer

Strength member (single or dual) trim to 2-2 ¼" as needed.

Cable must be clean and free of all tape, dirt or contamination for proper sheath retention and sealing.

For WTC/SWR

1. Remove by hand, the strength member retention from the CAU at the breakaway line by hand. **(Figure 11)**
2. Armored WTC sheath will end at the CAU sheath end location.
   - Armor bond tab should be at 90 degrees to the CAU. **(Figure 13)**
3. Dielectric WTC or water block tape may be brought all the way to the basket.

For Flat Matrix and LT

1. Sheath should be installed even with (or beyond) the breakaway line.
2. Secure strength members under retention bolt without trapping or pinching tubes. **(Figure 14)**

Bushing Test for Small diameter cable (<0.55")

1. Test if Spacer and Bushing are needed by putting the cable bushing on the fully-jacketed cable. **** NOTE:** A spacer and bushing are not needed when using a multi cable drop kit.
   a. If the seams touch, you will use both the Bushing and the Spacer (<0.55"). **(Figures 14A and 14B)**
   b. If the seams do NOT touch, the Spacer and the Bushing are not needed. **(Figure 14C)**
2. If the seams of the bushing meet, you will need to install a Spacer as well.
3. Simply snap the spacer on the CAU as shown in **Figure 14**. It is universal and may be installed in either direction. Ensure the spacer is secured and clipped on both sides of the CAU.
4. Continue with installation of Cable and utilize the small diameter cable bushing when directed.

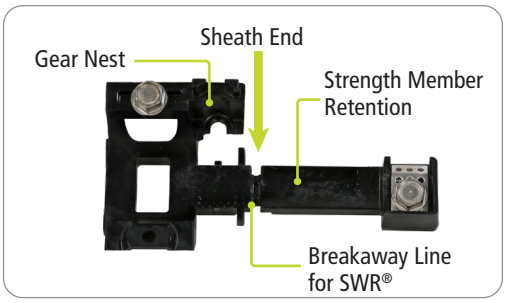
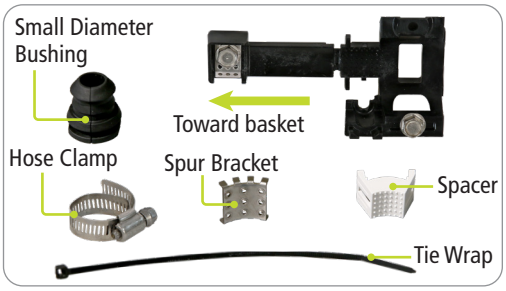


Figure 11



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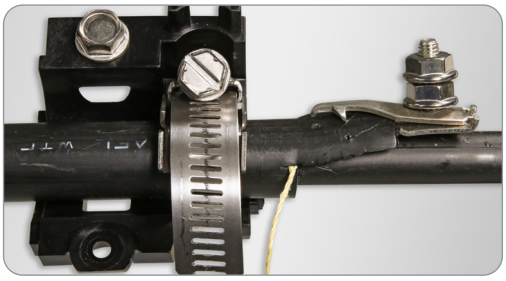


Figure 13

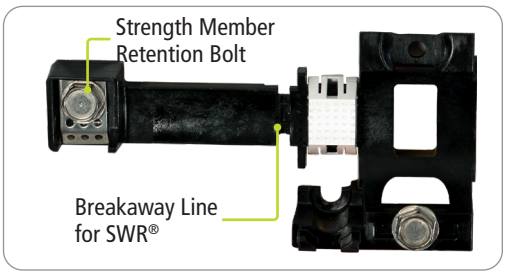


Figure 14

Figure 14A

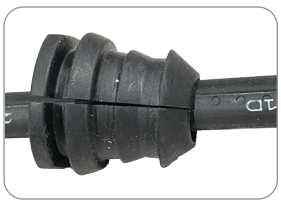


Figure 14B

Figure 14C

Spur Bracket Orientation under Hose Clamp

1. The spur bracket **MUST** be installed completely under the hose clamp ring at the top of the cable. This will be the same with or without a spacer. **(Figure 15A)**
   Figure 15B shows small diameter cable with the spacer installed , spur bracket at the top of the cable and the hose clamp.

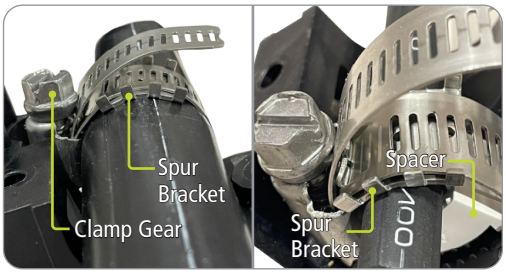


Figure 15A **Figure 15B**

For WTC/SWR or other preferential bend cable, the strength rods should be parallel to the basket for all cables entering the closure. This aids with the natural direction and ease of coiling all cables.

For mid-sheath on all WTC / SWR binders and tubed flat matrix ribbon, ensure there is no twisting in the mid sheath opening that occurs to trap groups in the splice basket.

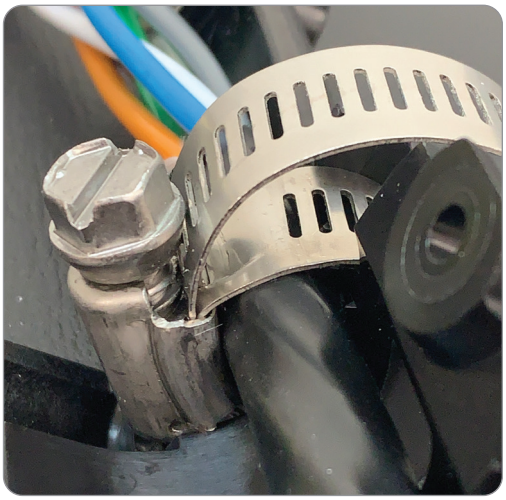


Figure 15C

For all Thin-Walled Jettable Micro Cable

1. Install hose clamp without the spur bracket on any jettable Micro Cable **(Figure 15C)**.

   - Bushing and spacer may be needed if not using a multi drop kit. If cable is over 0.40", add spacer to CAU if Bushing test shows it is "Small Diameter Cable" (<0.55"). Install the cable(s) so the sheath extends just past the breakaway slot on CAU allowing the hose clamp to fully engage on the cable.
   - Trim and secure all cable strength members under the Central Strength Member (CSM) retention bolt and tighten.
   - Install hose clamp WITHOUT spur bracket on all jettable Micro Cable and nest worm gear in CAU.
   - Tighten hose clamp to secure cable but not to the point of crushing the cable or attenuating the fiber.

If cable is less than 0.40" (0.20"- 0.39") a multidrop kit must be used. Blank inserts must be installed in all unused positions. Follow Apex multidrop instructions.

For traditional cable types

1. Secure hose clamp and install spur bracket making sure it is properly oriented (spur bracket on top of cable), but **do not fully tighten**.
2. If cable is armored a tab will be left for the ground stud, it should be oriented to the side of the CAU. **(Figure 16)**
3. Tighten hose clamp to tighten to 30-35 in-lb which is about the maximum you can get on a can wrench.

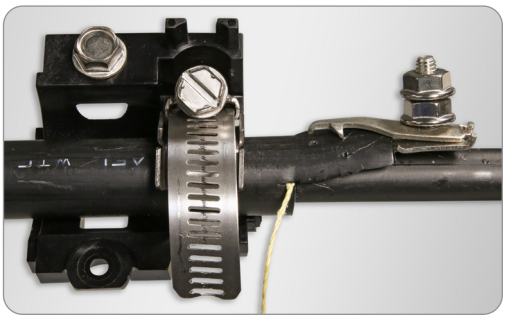


Figure 16

Cable must be clean and free of all tape, dirt or contamination for proper sheath retention and sealing.

CABLE GROUNDING

- Armored cables can be bonded using Apex ground clips. Simply slit cable armor on both sides at approximately 1" and install bonding hardware. **(Figure 17)**
- Bonding hardware is typically defined by local practice or end user. Apex offers a bonding eyelet for up to a ¼" ground stud. **(Figure 18)**

Installing the populated CAU into Apex base

1. Bring CAU and Cable to base and carefully guide the exposed fiber to the basket.
2. Lower CAU to base and engage alignment tab. **(Figure 19)**
3. Using 216 can wrench, begin to thread the CAU retention screw.
   - Confirm alignment of CAU and fiber cable orientation.
   - Confirm the tail of hose clamp is in position to be retained.
   - Fully tighten CAU retention bolt. **(Figure 20)**
4. If applicable, verify WTC cable rods are aligned in the same orientation parallel to the basket. This goes for all ports on Apex.
5. Tighten the hose clamp to 30-35 in.-lb. to secure cable.

⊛ ***Do not over tighten hose clamp. It may affect the optical characteristics of the cable.***

6. Secure inbound fibers or tubes with Velcro or tie wraps near spline of basket and outbound fibers should be secured closer to the outside of the basket. **(Figure 21)**

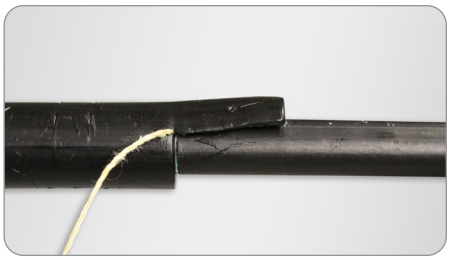
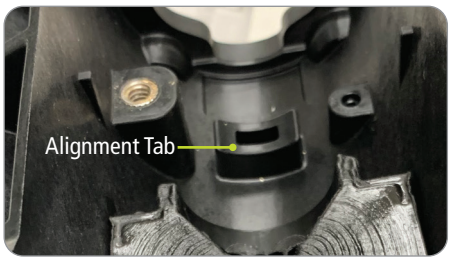


Figure 17

Figure 18



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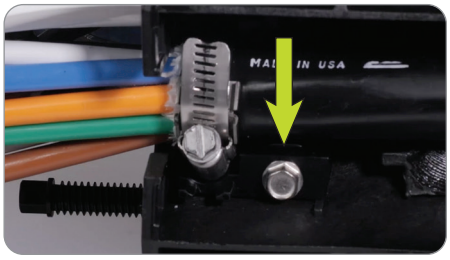


Figure 20

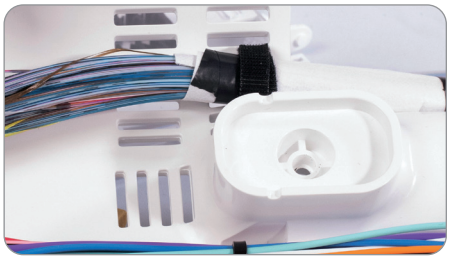


Figure 21

INSTALLING SEALING WEDGE

Make sure cable and ground are properly oriented and will not interfere with sealing wedge installation.

1. Depress base gel and elongate sealing wedge gel. **(Figures 8 and 9 — page 6)**
2. Ensure gel compression screw is in the relaxed position.
3. Engage sealing wedge pins into bottom of base. **(Figure 22)**
4. Rotate sealing wedge into place and depress the sealing wedge lock tab to engage latch and fully lock into place.
5. Inspect top and bottom of sealing wedge for complete engagement.
6. Attach bonding eyelet if applicable. **(Figure 23)**

SMALL DIAMETER CABLE BUSHING

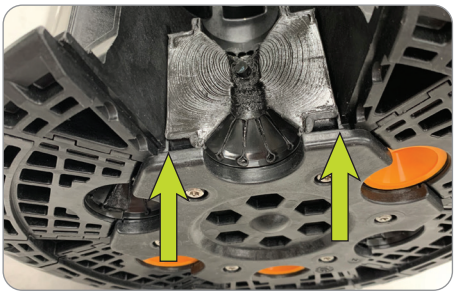
1. Open bushing and install over small diameter cable with the taper toward the base. **(Figure 24)**
   If the seam of the bushing closes, the grommet should be installed. The spacer should have been attached to the CAU with small cable installation
2. Take suppled tie wrap, begin to secure it within the groove.
3. Align head of tie wrap in opening of bushing slot. **(Figure 25)**
4. Pull tie wrap to cinch. Do not over tighten to deform bushing.
5. Slide bushing toward base port and firmly insert into wedge gel. **(Figure 26)**

⊛ ***This bushing MUST be installed prior to compression of the gel compression screw.***

6. Tighten gel compression screw with 216 can wrench or similar too (XX in.-lb). This will tighten to a positive stop; no need to tighten past that stop. **(Figure 27)**

⊛ ***Once all cables have been installed and the gel compression screws have been tightened, the remaining empty port gel compression screws must be tightened on the orange port plug to seal the closure.***

⊛ ***Do not close the Apex wedge to base and then insert orange port plug. The orange port plug must be in place when closing the wedge.***



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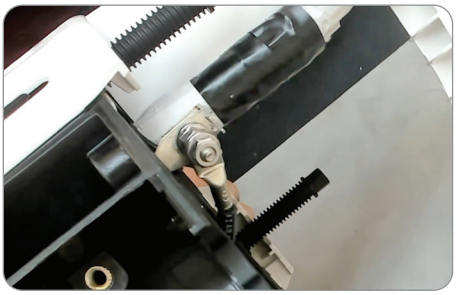

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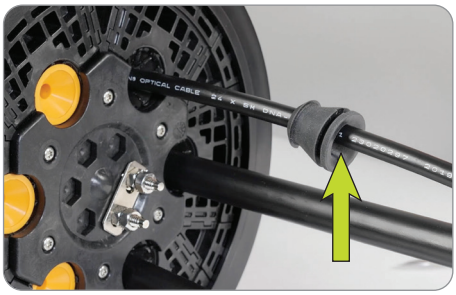

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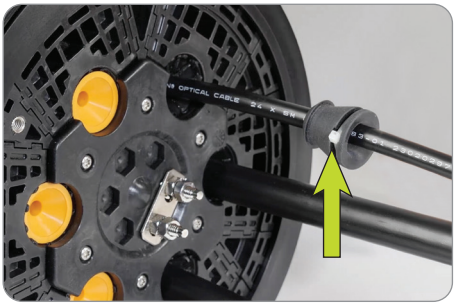


Figure 25

Figure 26

Figure 27

ROUTING IN SPLICE BASKET

All length cables include a storage loop in the basket. (Figure 28)

1. Rotate closure in stand to basket down position for the fiber to be routed and spliced.
2. Basket tabs or inner basket may be removed for ease of initial installation. Release the inner basket hinge to remove by squeezing and rotating the basket tab to remove.
3. These tabs may be replaced in the basket after initial installation.
4. Input cables are installed near the spline base and exit near the top edge of basket.
5. Secure units with supplied Velcro or tie wraps. **(Figure 29)**
6. When storing high count loose tube it is recommended to use the minimum lengths in the table. It is strongly recommended to keep the fiber cable stranded after removal of the central strength member Remove the fibers that will be spliced and secure any unused fiber lower in the Apex basket with Velcro or tie wraps. Run tubes that will be splice along the outer edge of the Apex basket
7. Transport ribbon fiber from basket to tray with or without additional protection. AFL AFRS, silicone spiral wrap, transition tubes or nylon weave may be used if desired.
8. Do not completely tighten the retention on fibers exiting to the tray. Basket fiber slack may need to be adjusted before final dressing.

⊛ ***SWR and ribbon fiber can be safely transported from the basket to the tray without any additional protection. Secured with AFL foam retention or AFL AFRS V Clip.*** **(Figure 30)**

9. Additional storage loops can be retained in the basket – see length table, page 7.
10. Ribbon fiber should be retained toward the center of the basket if Branch or Drop cables will be installed.
11. Branch or drop cables should be routed to the upper edge of the basket.

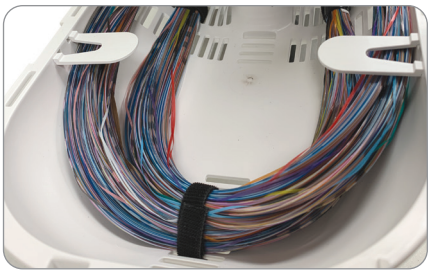


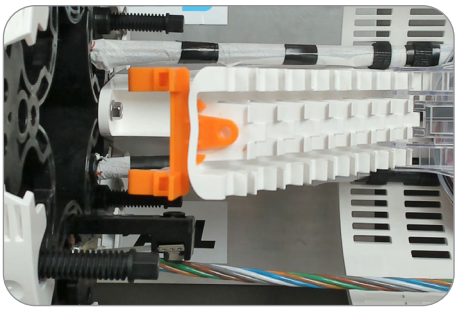
Figure 28

Figure 29

Figure 30

⊛ ***There is an Apex X-3 Tray Brake for splice tray or inner basket held in the top of the spline.***

1. The tray brake is stored at the top of the Splice Tray Spline. **(Figure 31)**
2. Make sure to orient the brake so "TOP" is on top. **(Figure 31)**
3. To use this brake, simply rock into place. **(Figure 32)**
4. To release, simply press down on the center of the brake and support the splice tray. **(Figure 33)**



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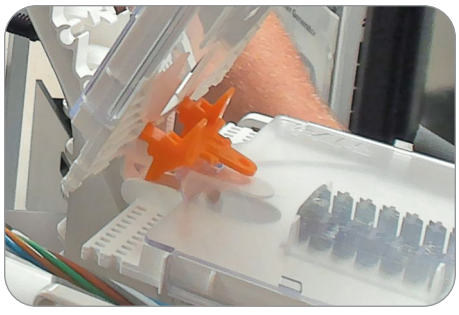


Figure 32

Figure 33

INNER BASKET APPLICATIONS

The optional Apex inner basket can be used to add additional protection to the backbone fiber when installing branched and drops.

The inner basket should be removed from the main basket for initial cable installation.

1. The Inner basket is released from the base by squeezing the two keyholes in the inner basket cover. **(Figure 34)**
2. Bring X-3 inner basket to 45 degrees and walk hinge pin from hinge. **(Figure 35)**
3. Rotate inner basket to remove from spline.
4. To replace the inner basket, simply address the tray to the #1 hinge position at 45 degrees and gently engage hinge pin into hinge. Raise and lower inner basket with two hands to utilize inner basket. Basket tabs must be removed (if present).
5. Secure tubes and fiber in inner basket with proper slack to open and close without pinching. **(Figure 36)**
6. Do not completely tighten the retention on fibers exiting to the tray. Basket fiber slack may need to be adjusted before final dressing.

Figure 34

Figure 35

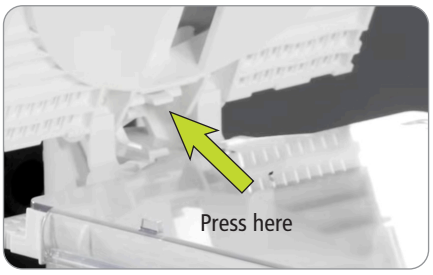


Figure 36

SPLICE TRAY OPTIONS AND ROUTING

Apex splice trays are universal for Loose tube, Ribbon and SWR® splicing applications.

Each Apex X-3 can hold up to 6 splice trays. Each Apex X-3 splice tray holds up to 6 modules. For "rollable" type ribbon such as AFL's SpiderWeb Ribbon®, trays can be fully loaded in six trays for 864 quad-stacked single fiber splices or 144 fibers per tray. For standard ribbon, AFL recommends half loaded for 18 mass splices single-stacked, or 216 fibers per tray.

FIBER	SLEEVES PER MODULE	X-3 SPLICE TRAY CAPACITY 6 MODULES
Single loose tube	18 Single splices triple stacked 24 Single with AFL Slim Splice Protection Sleeves	108 fibers/triple stacked 144 fibers/quad stacked
Flat matrix ribbon	Up to 12 double stacked	864 fibers
SWR/Non-matrix ribbon	Up to 12 double stacked	864 fibers

Splice trays can be shipped empty, partially loaded or fully loaded and splice modules are field movable. (Figure 37)

1. To add a splice module to Apex splice tray, simply align the latch tabs. **(Figure 38)**
2. Slide to engage. **(Figure 39)**
3. To remove a splice module simply disengage the locking tabs on the back with a pair of shears and slide module to release latch. **(Figure 40)**
4. SWR and Loose Tube fiber is spliced using slack storage in the tray. **(Figure 41)**
5. Avoid routing splice tray end fibers toward the closed end of the splice tray to prevent potential bend radius violation if pulled.
6. Flat matrix ribbon is typically waterfall spliced; but there is room for storage if desired. **(Figure 42)**

The openings between modules are designed to act as a fiber pathway if desired.

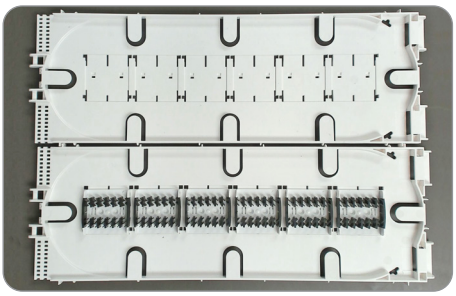


Figure 37

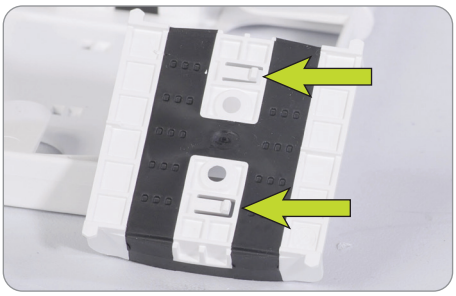


Figure 38

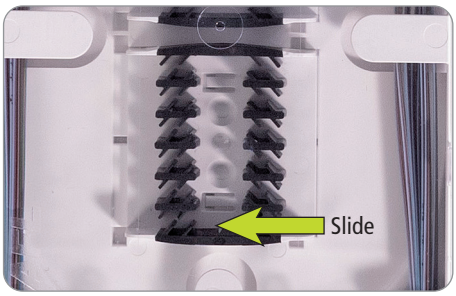


Figure 39

Figure 40

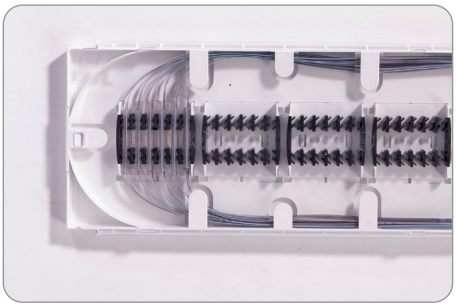


Figure 41

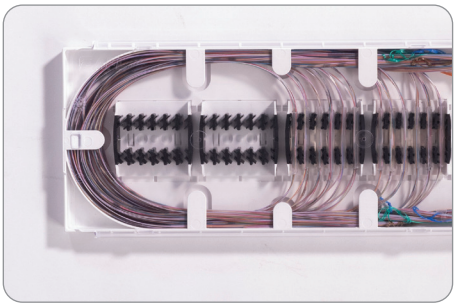


Figure 42

INSTALLING SPLICE TRAY

All types of splicing, loose tube or ribbon, can be done in the same splice tray and can coexist in the same tray if desired.

1. Splice trays should be installed from the bottom up without a gap.
2. Tubes should be attached to tray one layer at a time, bottom up to prevent trapping.
3. To install splice tray, bring X-3 splice tray to 45 degrees and walk hinge pin from hinge. **(Figure 43)**
4. Raise the tray to its upper locked position.
5. Secure the tray in the upper locked position with the X-3 Tray Brake. Simply rock in place from side to side until tray is fully supported. **(Figure 44)**
6. To lower tray simply depress the tab on the tray lock and roll it out from the hinge. Secure Tray Brake back on X-3 spline as shown. Then depress the hinge lock tab to lower splice tray.
   - For loose tube applications, use adhesive foam supplied in splice tray and use two tie wraps per bundle – supplied. **(Figure 45)**
   - Secure with optional AFL foam retention. **(Figure 46)**
   - Optional transition tube – not supplied. **(Figure 47)**
   - AFL AFRS system can be used for both Loose Tube and ribbon applications. AFRS system is sold separately, but no tie wraps needed.
   - For SWR® (up to 288 fibers), Ribbon (up to 144 fibers) or buffer tubes, AFL Foam Retention may be used. Make sure fiber is surrounded by foam retention and then secure with 2 tie wraps – not supplied. Fiber should have some movement after tie wraps are secured to ensure no attenuation.
7. Begin routing to splice.
   - Each bundle of fibers will make a full loop in the tray to splice to the furthest location.
8. Once all splices are complete, address the slack behind the spline in both open and closed positions. Adjust slack and secure both the tray and basket retention on the fibers.
9. At the ends of the splice tray, do not route fiber toward closest end of the tray. The three-end splice sleeve locations at each end should always route away from the tray end.
10. If the tray is not loaded to capacity, leave the end 3 slots open for future needs. This eliminates the bend radius concern at each end.

Figure 43

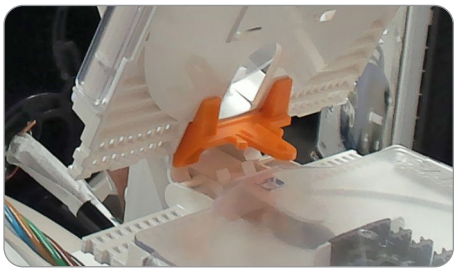


Figure 44

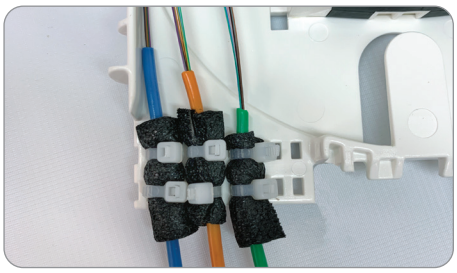


Figure 45

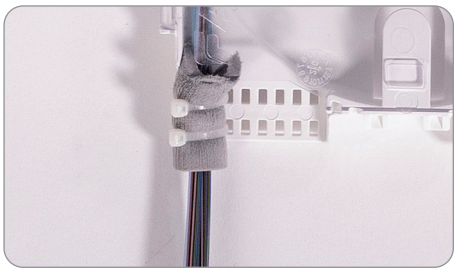


Figure 46

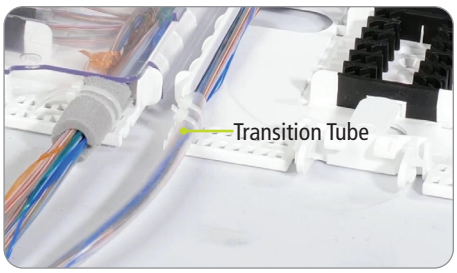


Figure 47

ALTERNATE SPLICING METHOD

Apex is designed for high-count fiber splicing. The following is a method where multiple splicers can work simultaneously on one case.

1. On the length table (page 7), use the "Sheath to Tray"distance.
2. Take fibers straight from CAU over the basket and mark fibers or tube at this distance.
   - Protect the fibers as they lay over the basket edge.
3. Secure fibers or tubes to tray at mark. **(Figure 48)**
4. Splice, route and close tray.
5. Figure-8 the fiber into the tray at the top of the basket and again under the spline. **(Figure 49)**
6. Install trays starting from the bottom (which is position 3 in the X-3) without skipping a slot.
7. Once all splices are complete, address the slack behind the spline in both open and closed positions. Adjust slack and secure both the tray and basket retention on the fibers.

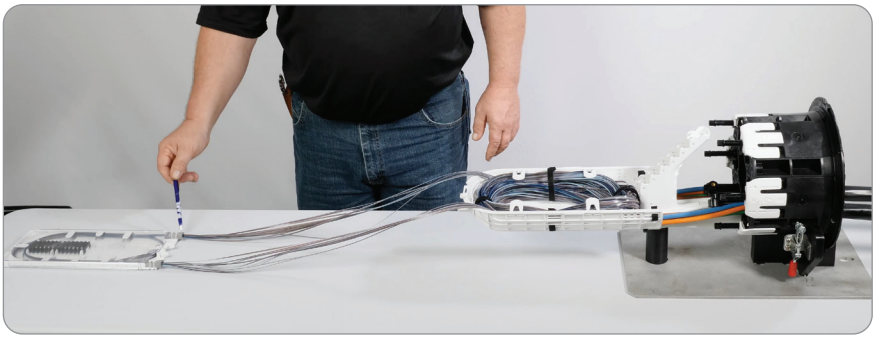


Figure 48

Figure 49

FINAL ASSEMBLY

1. Ensure all cables, tubes and fibers are secured on both tray and basket.
2. Ensure orange blank plugs are installed in every unused port.
3. Ensure small diameter bushings are fully seated on cables under ½".

⊛ ***The gel compression screw must be in the open position to install the small diameter bushing.***

4. Ensure all gel compression screws are fully engaged.
5. Pull the three Velcro straps through the horizontal strap slots soft side up. **(Figure 50)**
7. Secure 3 straps across the width of the tray. **(Figure 51)**
8. Clean O-ring of debris, with water if needed, and redistribute existing grease. Each time the closure is entered, apply a fresh thin coat of Apex grease on the top and inside of the O-ring to prevent sticking when installing Apex into dome. **(Figure 52)**

⊛ ***For MSDS of the grease, visit our Environment, Health and Safety section at www.AFLglobal.com.***

9. Align the tab and slip dome on.
10. Engage lock ring latch and secure lock ring.
11. Note orientation of lock ring so the handle or hinge will not interfere with mount insert if pole/wall mounting. **(Figure 53)**
12. Secure lock ring handle to lock ring with a sharp push from the palm of your hand to snap it in place.
13. Apply lock tag if desired.

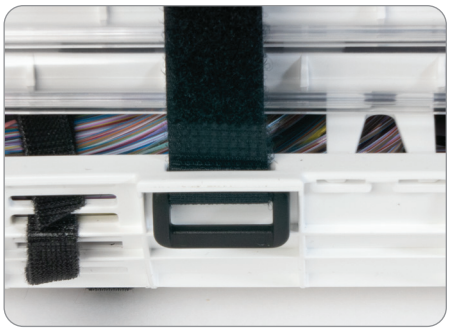


Figure 50

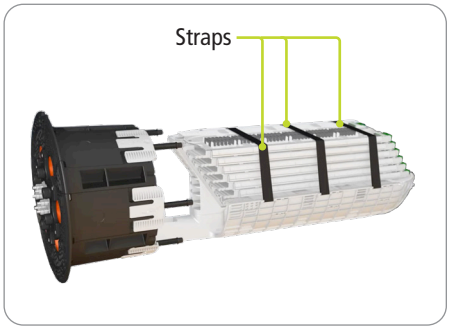


Figure 51

Figure 52

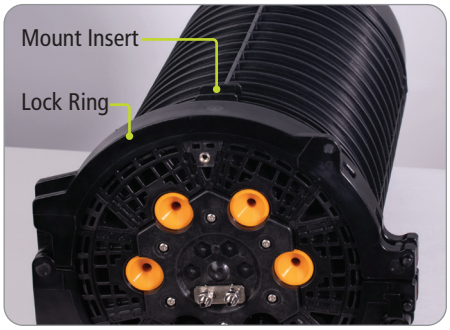


Figure 53

Flash test closure

1. Apply 5 PSI of air to the flash valve on dome. **(Figure 55)**
2. Inspect base for leaks with a spray of soapy water.
3. If there are no apparent bubbles, the closure passes.
4. If bubbling occurs:
   - Remove dome
   - Check sealing wedges
   - Check CAU brackets and hose clamps
   - Check the O-ring is clean and greased

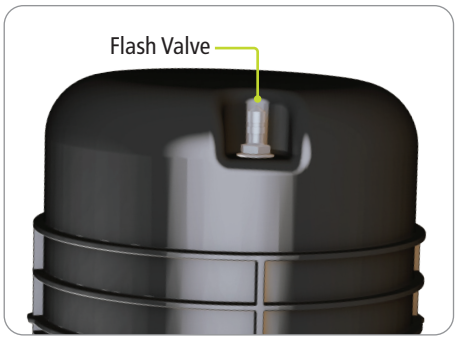


Figure 55

MOUNTING APEX

The Apex closure can be mounted to the strand using cable spacers and straps.

1. Align stack of cable spacers on the same side as the mount insert. **(Figure 56)**
2. Align strap with retention tabs on bottom of dome.
3. Secure straps and Apex to strand.

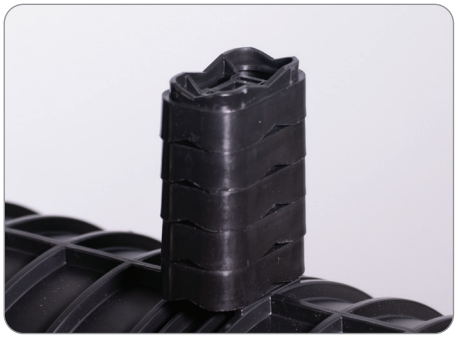


Figure 56

ADDITIONAL KITS

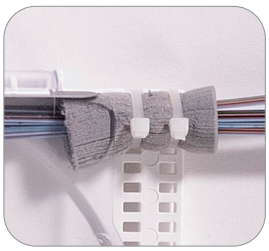
The AFL Apex closure line has a variety of installation accessories kits to fit many applications. Additional accessories may be available. Contact AFL.

CAU Kit

Ring Clamp Replacement Kit

O-Ring Grease Kit

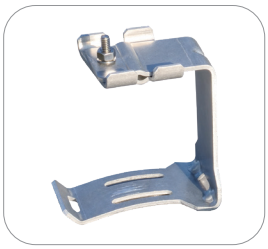
Wedge Replacement Kit



Foam Retention

Ordering Information — Replacement Kits

DESCRIPTION	AFL NO.
REPLACEMENT KITS	
X-3 and X-3H Single Cable Strain Relief/Cable Attachment Unit (CAU) Kit	AX-KIT-CBLSTRN-3
X-3 and X-3H Dome-to-Base Locking Ring Clamp Replacement Kit	AX-KIT-CLAMP-3
X-3 and X-3H Dome Replacement Kit	AX-KIT-DOME-3
X-3 and X-3H Inner Base Gel Replacement Kit	AX-KIT-GEL-3
X-3 Inner Basket Kit	AX-KIT-SBASKET-3
Apex O-Ring Grease, Pack of 10	AX-KIT-GREASE-10
X-3 and X-3H Dome to Base O-Ring Replacement Kit	AX-KIT-ORING-3
X-3 and X-3H Wedge Replacement Kit	AX-KIT-WEDGE-3
WTC-SWR Bundle Splice Tray Retention Kit - Includes 25 foam grommets for retaining SWR bundles to splice trays	HW000406
Velcro, 75 Foot Length Roll – For securing SWR bundles in the slack basket	FC001759



Apex Aerial Hanger Bracket

Apex Pole/Wall Mount

Adjustable Aerial Hanger Bracket

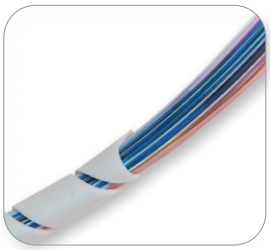
Ordering Information — Accessories

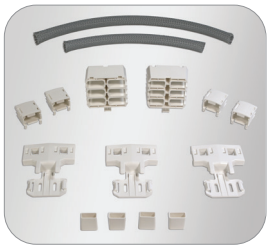
DESCRIPTION	AFL NO.
ACCESSORIES	
X-3 and X-3H Pole/wall mount kit	AX-BR33
Aerial strand mount hanger kit	AX-KIT-AERIAL-1
Adjustable Aerial Strand Mount Hanger kit	AX-KIT-AERIAL-ADJ
ADSS Aerial hanger brackets	AX-KIT-AERIAL-ADSS
X-3 and X-3H Multi-Drop Cable Entry Kit (fits up to 4 cables 0.20" to 0.39" in diameter or flat drop cable)	AX-KIT-DROP-4-3
Apex Internal Multiple Ground Bonding Kit	AX-KIT-GNDLD-5
Apex Cable Bonding Kit (Bonds armored cable sheath to ground) – Pack of 10	AX-KIT-GROUND-10

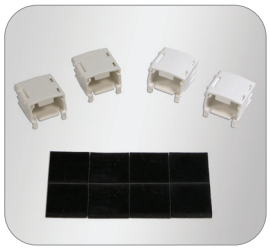
ADDITIONAL KITS (cont.)

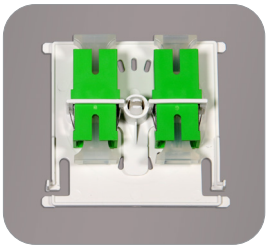

Mesh Transition Tubing


Universal Installation Stand


Silicone Spiral Wrap


AFRS Kit 1


AFRS Kit 2


SC Bulkhead Adapter Kit

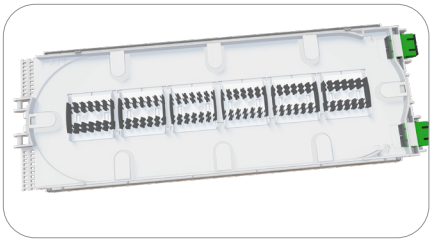

Replacement Slack Storage Basket Tabs

Ordering Information — Accessories

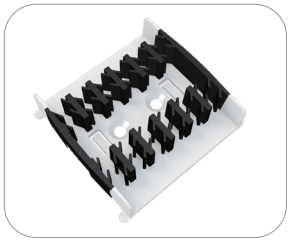
DESCRIPTION	AFL NO.
ACCESSORIES	
1/4" Colored Mesh Transition Tubing, 250' Spool (*Replace "XX" with color per TIA-598 color code - BL, OR, GR, BR, SL, WH, RD, BK, YL, VI, RS or AQ)	AX-KIT-TUBE-014-XX*
Apex Universal Installation Stand	AX-KIT-U-STAND
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Apex Advanced Fiber Retention System (AFRS) Kit 1 – Used for Ribbon Cable (Flat Matrix, SWR, Tubed, Central Core). Kit includes: Mesh Basket Adapter (2 ea.), Mesh Housing (2 ea.), Mesh Insert (24 ea.), V-Clips (12 ea.), and Clean Cut Gray Mesh (13 ft.).	AX-KIT-AFRSRBN
Apex AFRS Kit 2 – Used for Loose Tube Cable. Kit includes: V-Clip (24 ea.) and Retention Pads (6 sheets of 8 pads)	AX-KIT-AFRSLT
Apex AFRS Kit 3 – V-Clip bulk kit. Includes: V-Clips (120 ea.) and Mesh Inserts (120 ea.)	AX-KIT-AFRSVC-120
Apex AFRS Kit 4 – Mesh bulk kit. Includes: Clean Cut Gray Mesh (100 ft.)	AX-KIT-AFRSMESH-100FT
Apex AFRS Kit 5 – Mesh Housing bulk kit. Includes: Mesh Basket Adapter (10 ea.) and Mesh Housing (10 ea.)	AX-KIT-AFRSAH-10
Apex AFRS Kit 6 – Mesh Basket Adapter bulk kit. Includes: Mesh Basket Adapter (10 ea.)	AX-KIT-AFRSA-10
Apex Bulkhead Kit with Plate SC/APC Adapters, 1 kit	AX-TRAY-ASC
Apex Bulkhead Kit with Plate with SC/UPC Adapters, 1 kit	AX-TRAY-USC
Apex Bulkhead Kit with Plate SC/APC Adapters, 6 pc kit	AX-TRAY-ASC-6
Apex Bulkhead Kit with Plate SC/UPC Adapters, 6 pc kit	AX-TRAY-USC-6
Apex Replacement Slack Storage Basket Tabs – Pack of 25	AX-KIT-BTAB-25

ADDITIONAL SPLICE TRAYS AND MODULES

Splice trays and modules are also available. For more information, contact AFL's product sales team in your area.



Apex X-3 Splice Tray with Modules



Apex Splice Module

DESCRIPTION	TRAY CAPACITY		AFL NO.
	SINGLE	MASS	
X-3 Tray Fully Loaded with Six (6) Splice Modules (864 fibers per tray only recommended for rollable ribbon, e.g. AFL SWR)	108 triple stacked 144 quad stacked	864	AX-TRAY-3-S-6
Additional splice module (18 single fusion double/quad stacked, 12 mass fusion double stacked, 6 mechanical) Pack of 20	–	–	AX-TRAY-MOD-20
X-3 Square Tray Empty	–	–	AX-TRAY-3-S-E
Kit, Apex, C-D Tray Adapter, 1 Kit of 6 pieces	–	–	AX-ADPTR-CDTRAY-6
Kit, Apex, C-D Tray Adapter, 10 Kits of 6 pieces	–	–	AX-ADPTR-CDTRAY-60

*****864 fibers per tray with mass fusion (5184 total closure capacity) only recommended for 200 µm type rollable ribbon. For 250 µm, cut capacity in half with single-stacking.