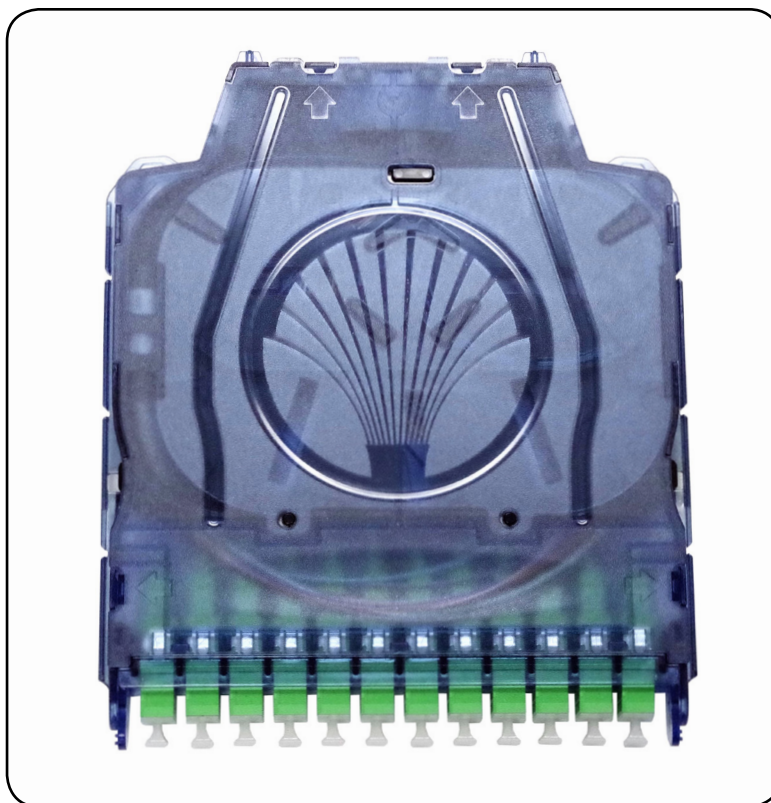


Clearview Blue Cassette

Installation Manual



Clearview Blue Cassette

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Application

Deployed with SC or LC connectors for 12-24 ports of connectivity, a single the Clearview Blue Cassette provides for patch and splice (Clearfield's in-cassette splicing solution), patch only (stubbed) or plug-and-play (MPO/MTP) configurations in any network environment. A dual high 24 fiber Cassette offers additional splicing capacity for SC port count requirements greater than 12, utilizing the Clearview Expansion Ring to provide further flexibility and scalability within the same footprint. Dual MPO/MTP access is available on either side of the cassette. Additional optical components integrate into the cassette housing, supporting any input/output combination of splitting, mux, and demux strategies desired.



Deployed with the CS® Connector, the Clearview Blue Cassette provides 48 ports of ultra high-density connectivity. Using the same 1.25mm ferrules, this adapter configuration provides 33% more density than the traditional LC connector cassette, doubling the density for Clearview-enabled wall boxes, panels, cabinets and pedestals. Providing a plug-and-play (MPO/MTP) configuration for any network environment, dual MPO/MTP access is available on either side of the cassette.

Description

Clearview Blue Cassettes are a core building block of every product within the FieldSmart® fiber management system. Clearview Blue continues to incorporate flexibility and scalability, now with enhanced configuration options including tool-less installation, in-cassette buffer tube/ribbon slack storage, and front access-only designs. Reducing the overall footprint of the fiber management element reduces real estate costs and improves density without compromising critical design elements of access, bend-radius protection, physical fiber protection and route-path diversity.

Clearview Blue is a six component tool-less system made up of a top cover, expansion ring, splice tray, buffer tube/ribbon slack storage, cable assembly tray and 12-pack adapter plate. Parts snap together to support desired application requirements. All types of fiber cable construction can be integrated within the cassette to support all patch and splice, patch only, passive optical component hardware and plug-and-play scenarios.

Technical Specifications

Clearview Blue Cassette	
Dimension	Without Mounting Ears: 0.81" H x 6.03" W x 8.28" D With Mounting Ears: 0.81" H x 8.66" W x 8.28" D
Ratings	Terminations are designed and tested to Telcordia GR-326; Tested to GR-63 NEBS 3 and UL94 V-0; Clearfield FiberDeep Guarantee: 0.2 dB insertion loss or less, exceeding industry standards
Backwards Compatible	Optional mounting ears for backwards compatibility to FieldSmart inside plant (FxDS), OSP and access product lines
Material	Polycarbonate
Connector Types	Supports industry standard SC, LC, ST, FC and MPO singlemode and multimode connectors
Meters/Feet of Slack Storage	Up to 10 feet of buffer tube storage in the bottom of the cassette; one meter of 250 µm used for internal splicing
Mounting Options	Clearview Building Block or Clearview Mounting Ears

Clearview Blue Cassette

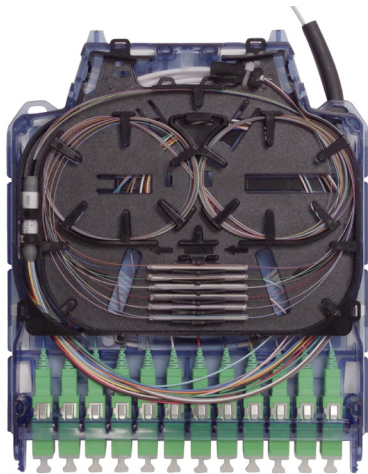
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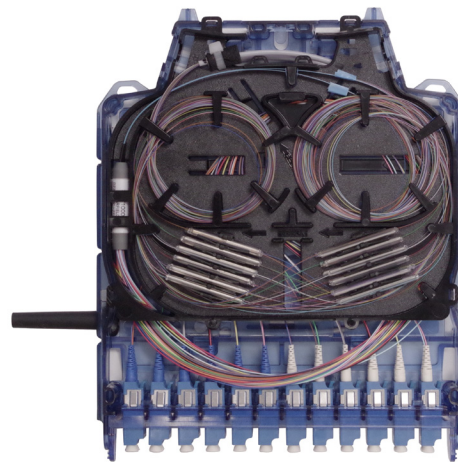
Configurations

Patch and Splice: Loose Tube

The Clearview Blue cassette offers integrated patch and splice applications via a built-in splice tray. The cassette is pre-loaded with a one meter 250µm loose tube fiber assembly which is pre-terminated and slack stored inside the cassette for splicing. Utilizing the dual snap-in splice chip option, 24 splices can be performed inside the cassette. Additionally, there is area to store up to 10 feet of buffer tube storage with 8 cable entry/exit locations for the maximum in flexibility.



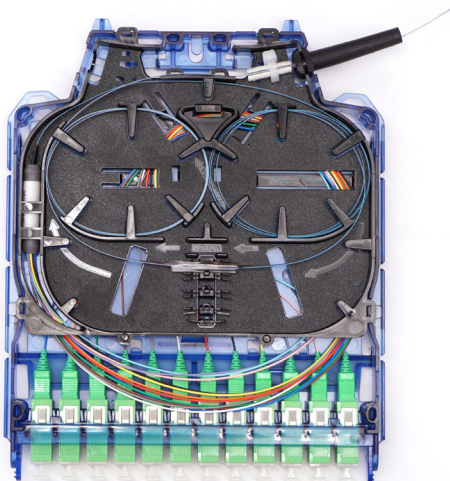
12 Fiber Loose Tube Patch and Splice



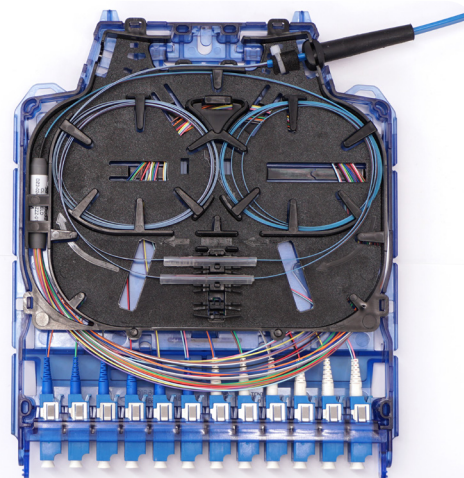
24 Fiber Loose Tube Patch and Splice

Patch and Splice: Ribbon

The Clearview Blue cassette offers integrated patch and splice applications via a built-in splice tray. The cassette is pre-loaded with a one meter 250µm ribbon fiber assembly which is pre-terminated and slack stored inside the cassette for splicing.



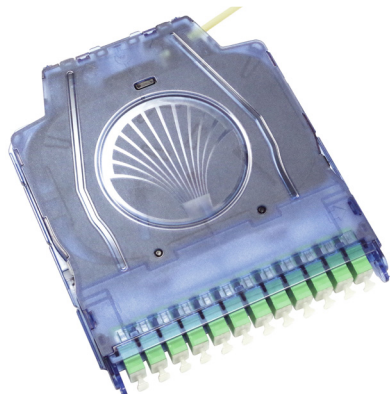
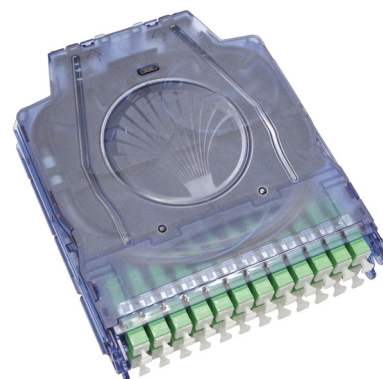
Single Ribbon Patch and Splice



Dual Ribbon Patch and Splice

Patch and Splice - 2 High

For port count requirements greater than 12, the 24 port SC Expansion cassette allows 24 splices to be performed in a single modular unit, while using non-LC connectors. Utilizing the Clearview Expansion Ring, the cassette is doubled in height allowing for 24 ports of connectivity.



Patch Only

Regardless of the industry standard adapters or cable construction, the Clearview Blue handles all patch only applications using the lower tray, top cover, built in radius limiter and removable adapter plate.

Optical Components

Clearview Blue integrates optical components into the identical cassette, allowing service providers to mix and match fiber modules with optical components in the same chassis. The front faceplate is secured to reduce chance of accidental damage to the optical component.



Plug-and-Play

MPO to 12-fiber 900 μ m assembly allows for plug-and-play by mating MPO to MPO with pre-terminated multi-fiber OSP or IFC. Also available in dual-MPO, 24 fiber configurations.

CS[®] Connector

48 ports of ultra high-density connectivity, with 33% more density than the traditional LC connector cassette. Providing a plug-and-play (MPO/MTP) configuration for any network environment, dual MPO/MTP access is available on either side of the cassette.



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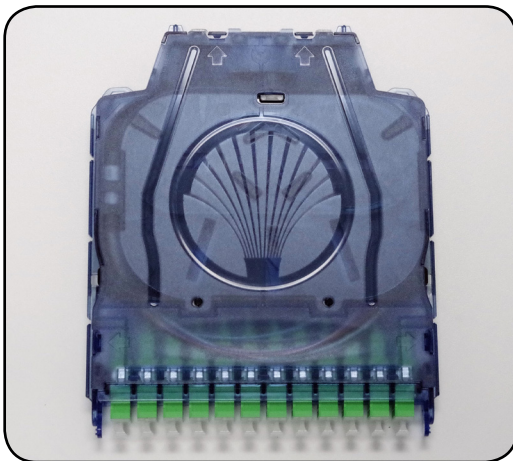


Accessing the Cassette

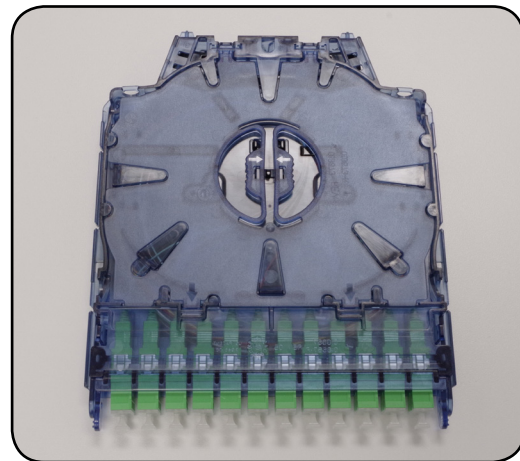
The Clearview Blue Cassette is capable of being used in a multitude of applications. Based on each individual application, the cable entrance points and method of slack storage are different.

- Splicing loose tube or ribbon utilizing the standard entrance
- Splicing loose tube fiber utilizing the lower level buffer tube storage
- Splicing ribbon fiber utilizing lower level ribbon storage

The Clearview Blue Cassette will arrive as shown, including a strain relief boot, as well as mounting ears and retaining screws/plungers depending upon the configuration.

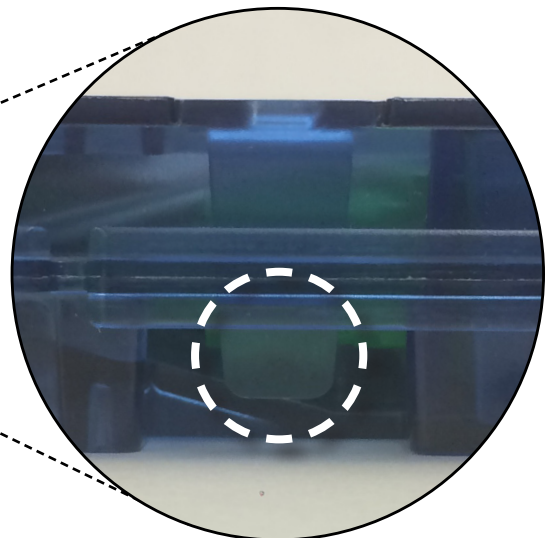
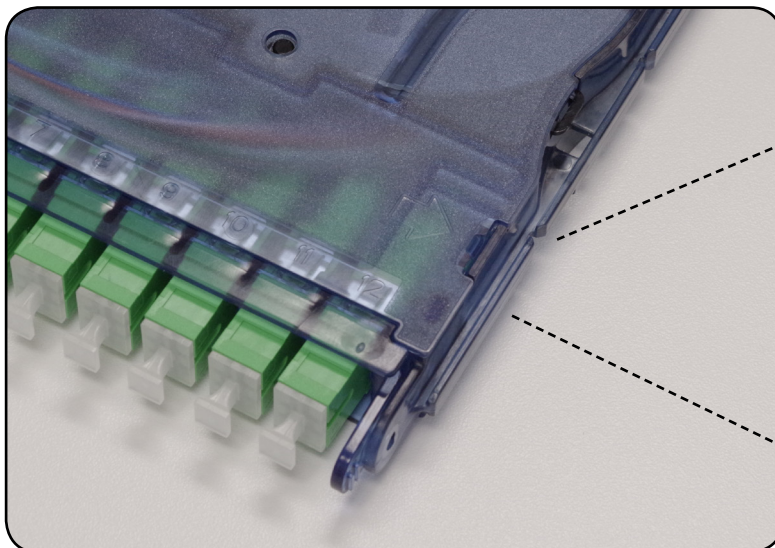


Top View



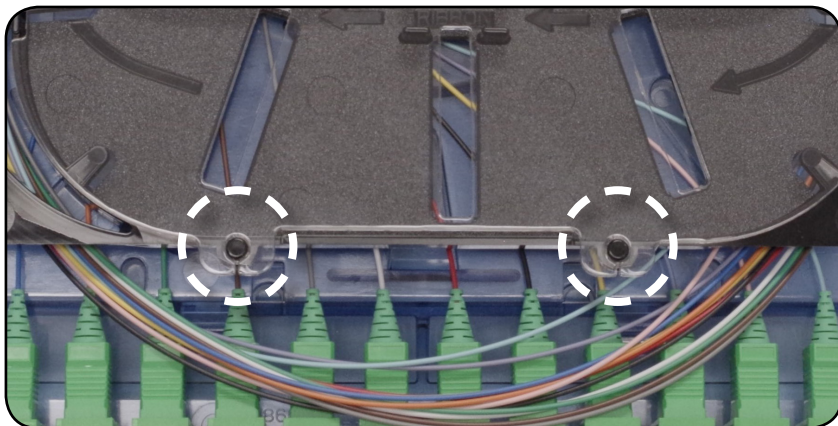
Bottom View

1. Remove the top cover by pressing the locking tabs underneath the arrows on both sides of the cover, and lifting away.



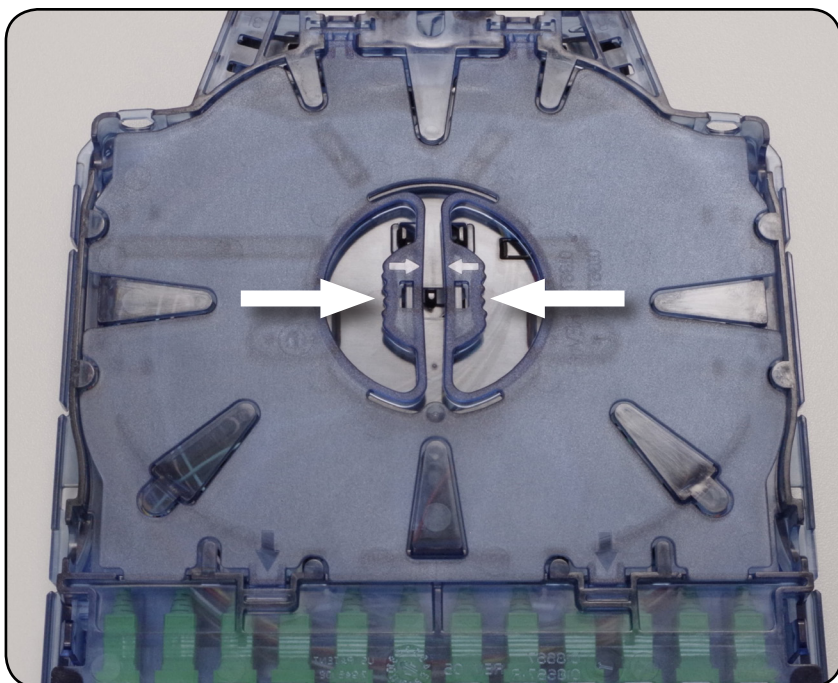
2. The splice tray cover can be removed by lifting on the two ears at the bottom of the splice tray cover.

Note: For loose tube cassettes the fiber pigtail inside is composed of a ribbon that has been delaminated and fanned out.

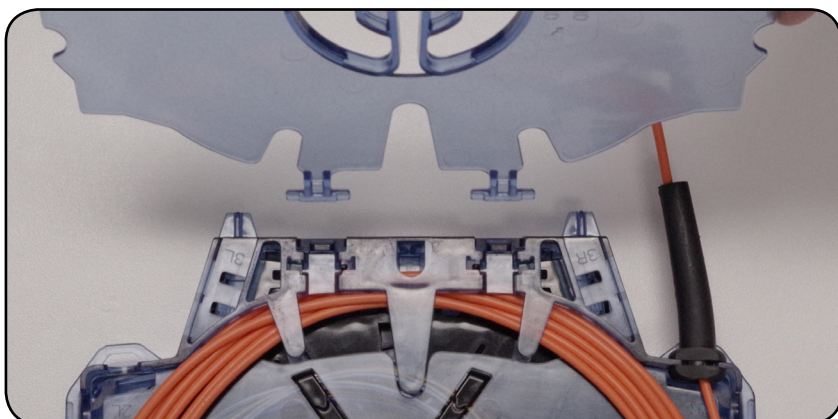


3. You must remove the bottom slack storage cover in order to access the back of the tie down locations for the standard entrances, as well as for access to the slack storage entrances.

The bottom slack storage cover is opened by squeezing the center section and pulling up.



4. Opening the lower slack storage cover to 90 degrees will allow you to lift the door away from the base.

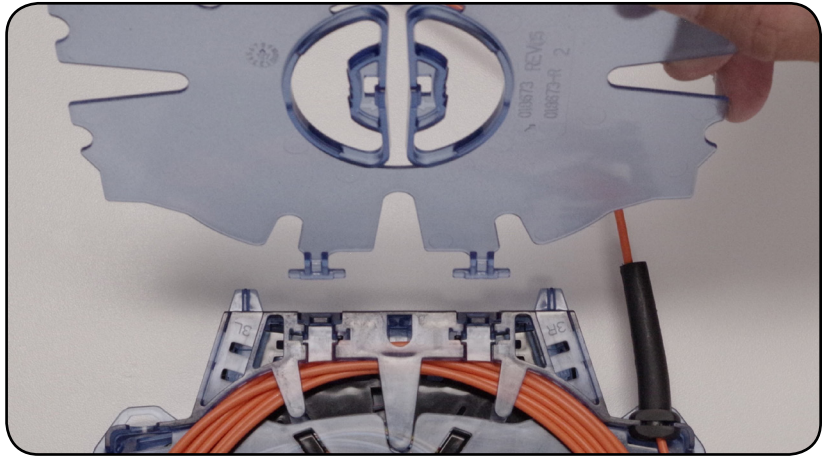


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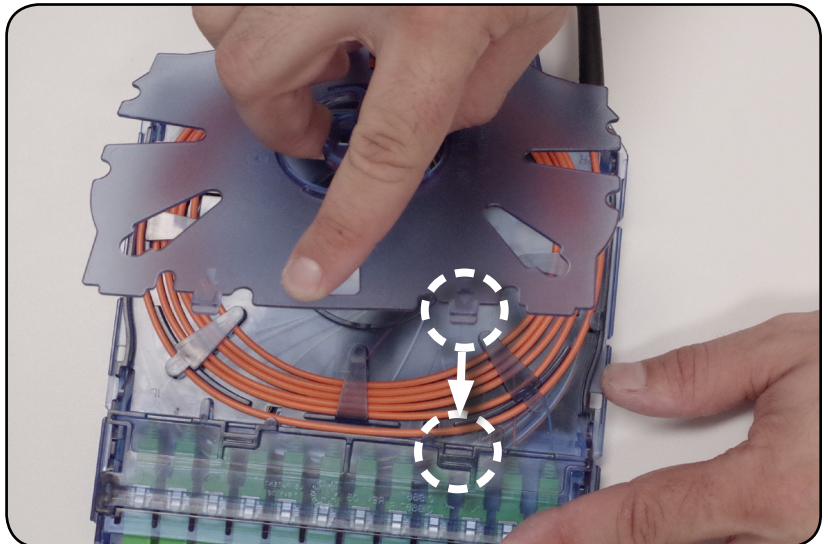
Installation Manual



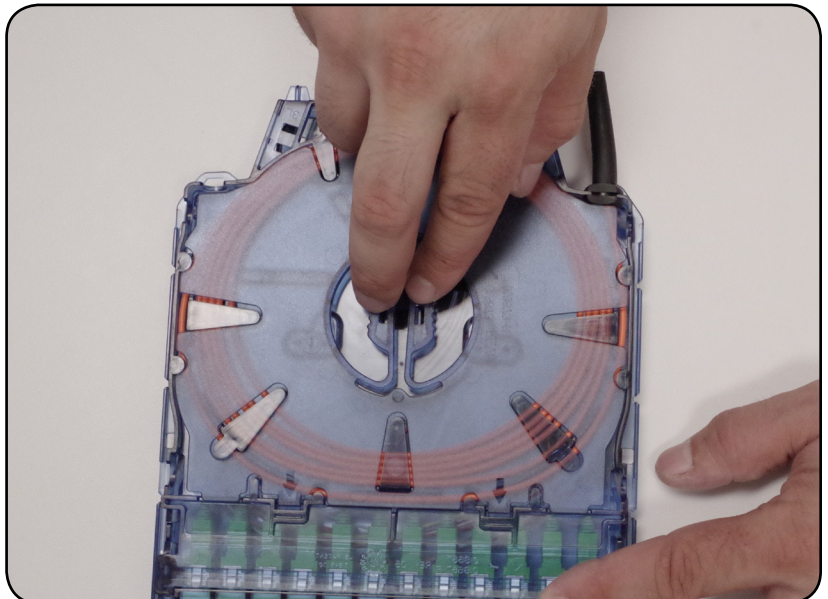
5. In order to reinstall the bottom slack storage cover, hold the slack storage cover at 90 degrees and re-insert the slack storage cover's hinges into the slots on the back of the cassette.



6. Grab the slack storage cover by the center section and use a finger to bend the cover towards the cassette, sliding the tabs on the end of the slack storage tray cover into their places at the bottom of the cassette base, highlighted here.



7. Push down on the center to click the cover into place.



Cable Entrance Method: Standard Entrance

Loose Tube

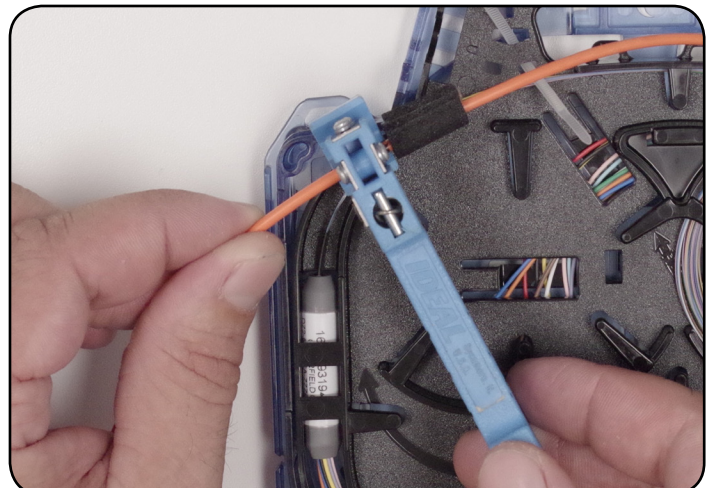
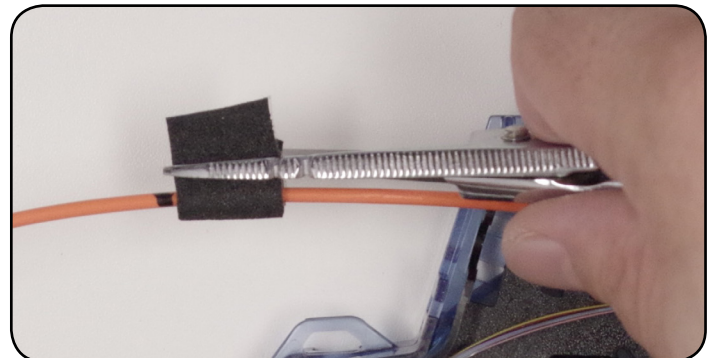
In a situation where the lower slack storage is not desired, buffer tube can be brought into the top of the splice tray. Shown below is a “left exit” configuration. Simply secure the buffer tube to the other side of the splice tray for a “right exit”.

Note: Standard exit/entrance is determined looking from the back of the cassette.

1. Slide the strain relief boot over the end of the buffer tube and push it down the tube over 3 feet.
2. Measure 3 feet back from the end of the buffer tube and mark the tube with a permanent marker.
3. Wrap one layer of grommet tape around the buffer tube behind your mark, and trim the excess. This will help protect the buffer tube when it is secured into the cassette.

Note: More than one lap of grommet tape may not allow the cover to close properly and lie flat.

4. Remove the outer jacket of the buffer tube at the mark you made.

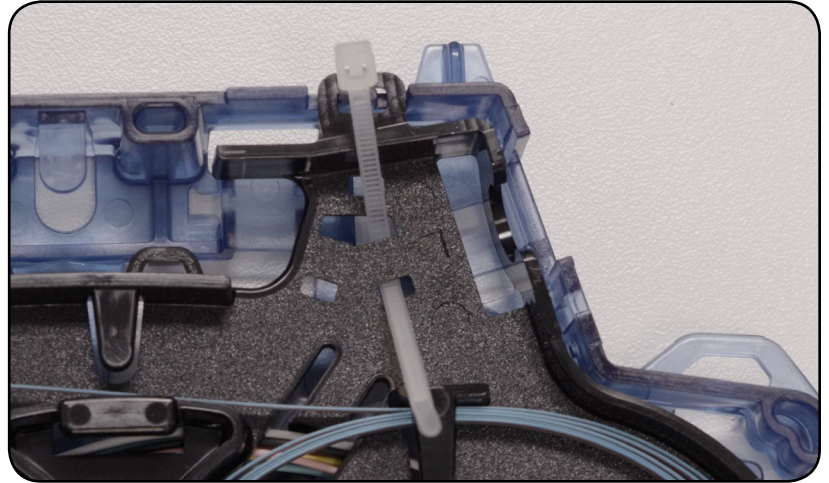


Clearview Blue Cassette

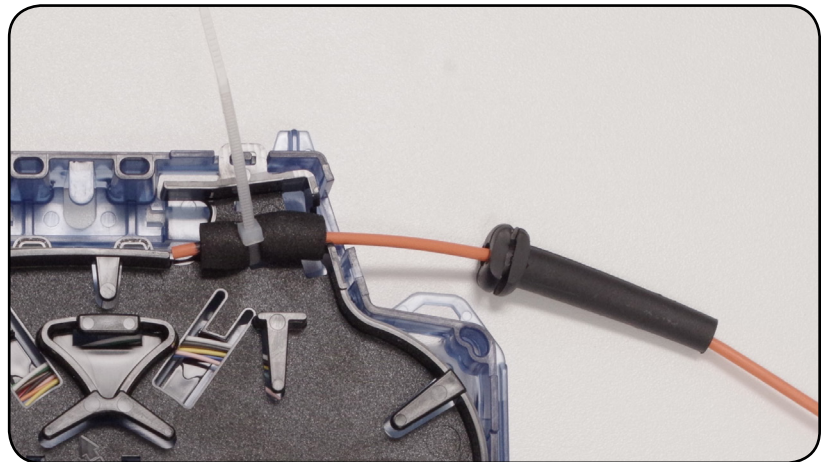
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5. Insert a cable tie (or piece of wax string) into the desired tie-down holes at the top of the cassette.



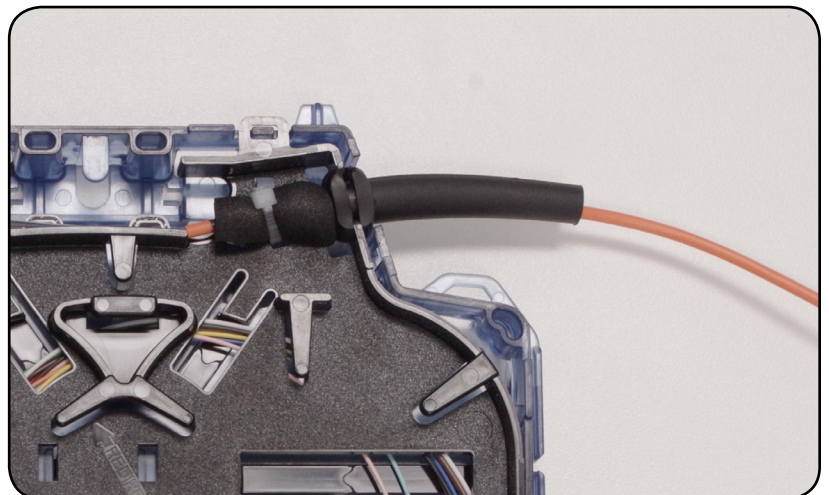
6. Slide up the boot and push it into the boot retainer at the standard entrance.



7. Secure the buffer tube down with the cable tie. Trim the excess.

Note: If using the “right” exit, the fiber will need to be redirected. Refer to the Right Rear Redirect section on page 27 for special routing instructions.

8. Proceed to the loose tube splicing section of this manual.



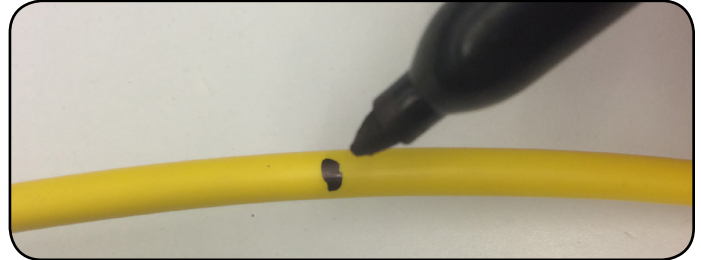
Tight Buffer

Tight buffer cable will be secured into the cassette in a similar manner to loose tube fiber. Shown below is a “left exit” configuration. Simply secure the tight buffer cable to the other side of the splice tray for a “right exit”.

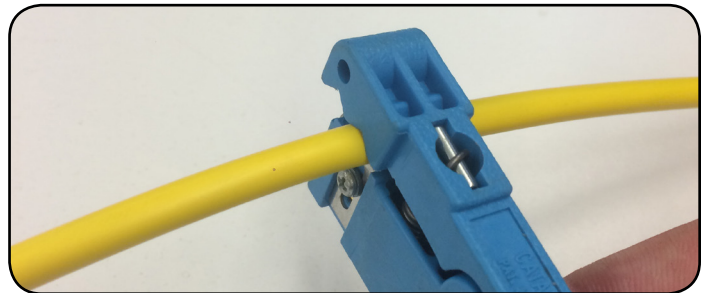
Note: Standard exit/entrance is determined looking from the back of the cassette.

1. Measure 30 inches back from the end of the tight buffer cable and mark the cable with a permanent marker.

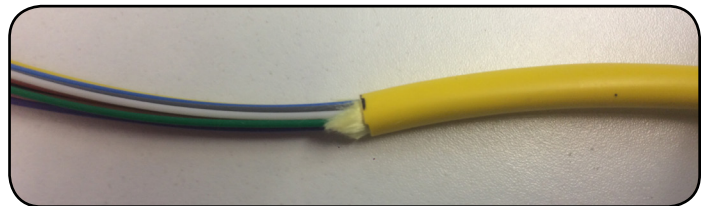
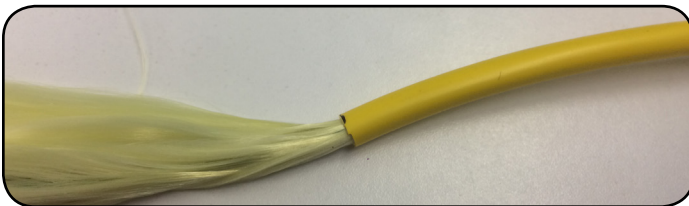
Note: Due to the size of the cable, a strain relief boot will not be used with tight buffer cable.



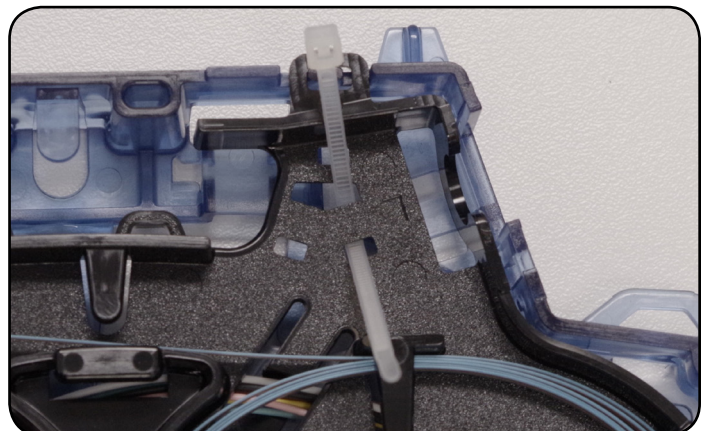
2. Remove the outer jacket from the cable at the mark you made by carefully cutting a ring around the outside.



3. Remove any extra material inside the cable until all that remains are the 900 micron tight buffer fibers.



4. Insert a cable tie (or piece of wax string) into the desired tie-down holes at the top of the cassette.



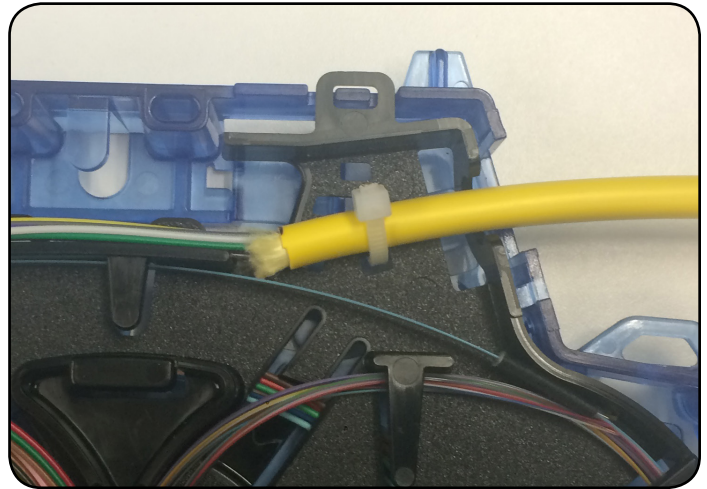
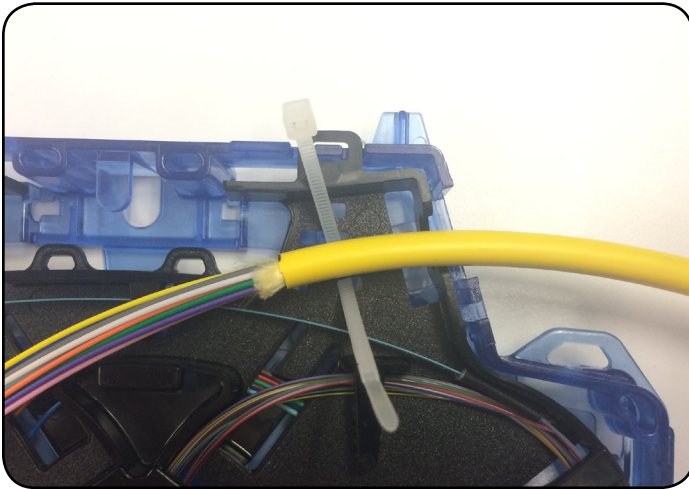
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5. Gently secure the cable into the cassette using the cable tie/wax string, trimming the excess.

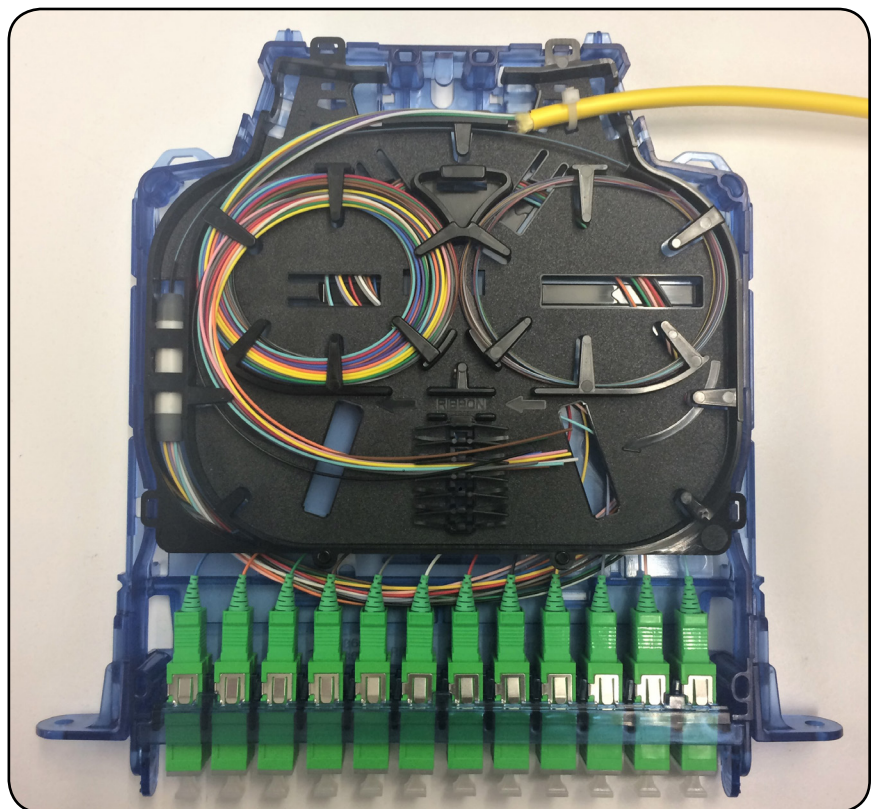
Note: Take extra care not to secure the cable too tightly, as fibers could be damaged.



6. After the cable is secured to the cassette, coil the tight buffer fibers in the cassette and proceed to the loose tube splicing section of this manual.

Note: Of the 30 inches of 900 micron tight buffer fiber exposed, 2 inches will be stripped and used for splicing. The other 28 inches will be stored in the slack storage chamber of the splice tray. Otherwise, splicing will be performed in the same manner as with loose tube fiber.

Note: If using the “right” exit, the fiber will need to be redirected. Refer to the Right Rear Redirect section on page 27 for special routing instructions.



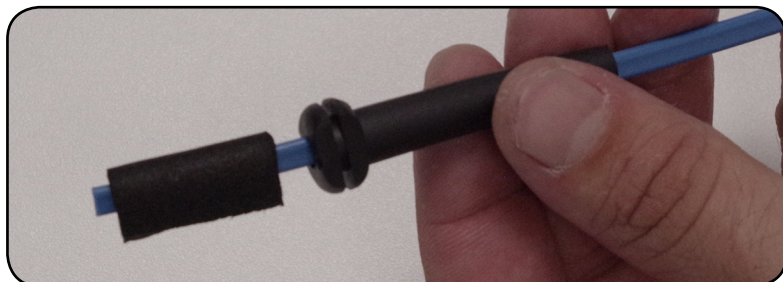
Ribbon

Furcation Tubing

Clearfield recommends the use of furcation tubing to protect bare ribbon fibers to be spliced into the cassette. Shown below is a “left exit” configuration. Simply secure the furcation tube to the other side of the splice tray for a “right exit”.

Note: Standard exit/entrance is determined looking from the back of the cassette.

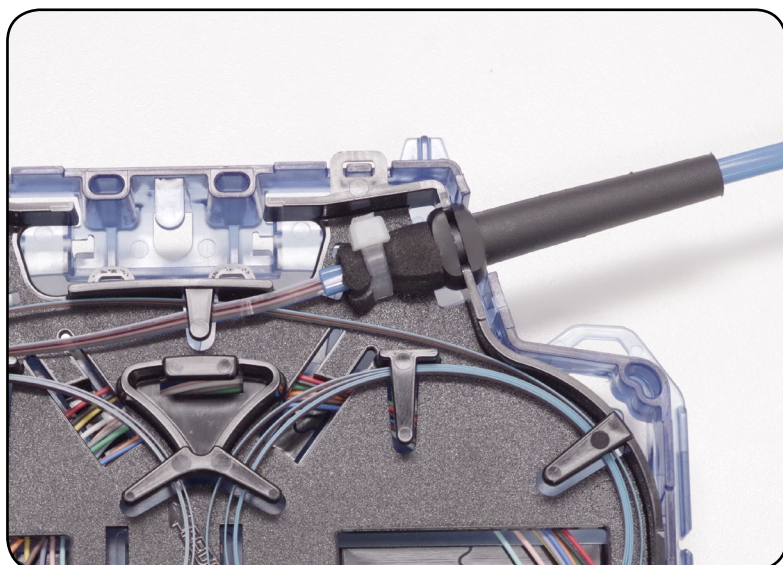
1. Slide the strain relief boot over the end of the furcation tube.
2. Fold a piece of grommet tape over the tube just behind the end, and trim the excess.



3. Feed 3 feet of ribbon fiber out of the end of the furcation tubing.
4. Insert a cable tie (or piece of wax string) into the desired tie-down holes at the top of the cassette



5. Slide up the boot and push it into the boot retainer at the standard entrance
6. Secure the furcation tubing down with the cable tie/wax string. Trim the excess.
7. Proceed to the ribbon splicing section of this manual.



Note: If using the “right” exit, the fiber will need to be redirected. Refer to the Right Rear Redirect section on page 27 for special routing instructions.

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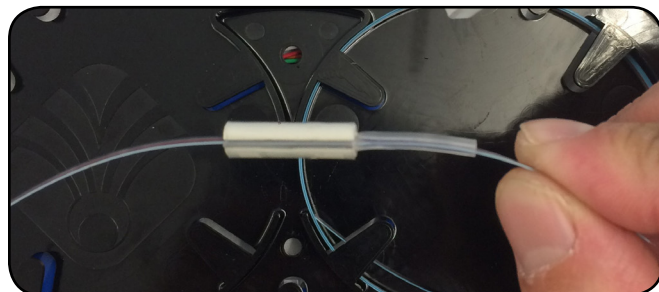
Bare Ribbon

If you are bringing bare ribbon fiber into the cassette, it will be secured into place using the provided ribbon tie-down. Shown below is a “left exit” configuration. Simply secure the ribbon tie-down to the other side of the splice tray for a “right exit”.

Note: Standard exit/entrance is determined looking from the back of the cassette.

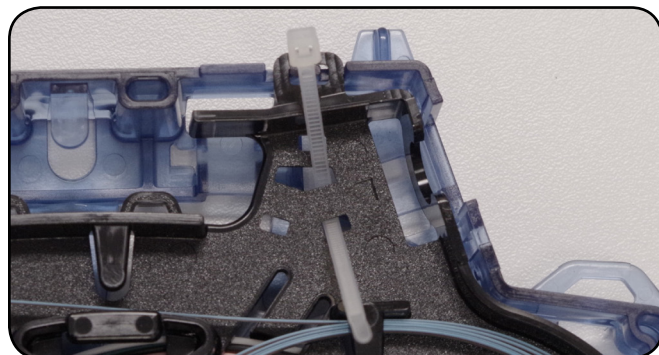
1. Place the strain relief boot over the end of the ribbon fiber, and slide the boot over 3 feet down the length of the fiber.
2. Slide the provided ribbon tie-down, soft tube side first, over the end of the ribbon.
3. Heat the ribbon tie-down into place 3 feet back from the end of the ribbon.

Note: Never tie down bare, unprotected ribbon fiber.



4. Insert a cable tie (or piece of wax string) into the desired tie-down holes at the top of the cassette
5. Slide up the boot and push it into the boot retainer at the standard entrance
6. Secure the ribbon tie-down with the cable tie/wax string. Trim the excess.
7. Proceed to the ribbon splicing section of this manual.

Note: If using the “right” exit, the fiber will need to be redirected. Refer to the Right Rear Redirect section on page 27 for special routing instructions.



Cable Entrance Method: Slack Storage

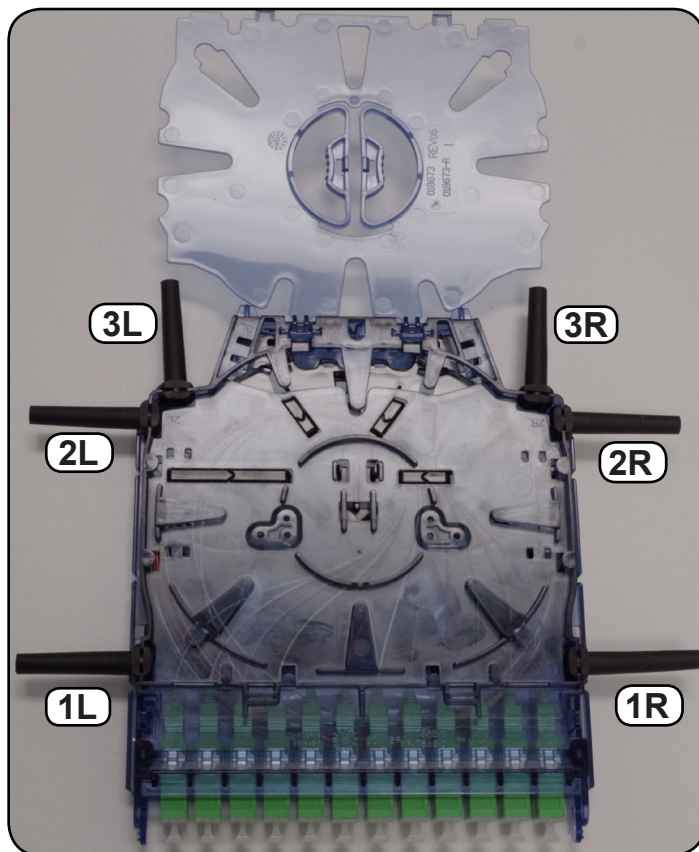
The Clearview Blue Cassette allows for roughly 8 feet of slack storage in its lower chamber. The pictures shown in this section will mostly feature buffer tube as that is the most visible of the options. While ribbon can be stored in the slack storage chamber, the use of furcation tubing up to the cassette entrance is required. Tight buffer cable will not be able to be slack stored in the cassette due to the increased cable diameter.

Loose Tube

1. Open the bottom slack storage cover, and identify which entrance port is to be used.
 - Entrances 1L and 1R are used for the right and left hand sides of the FxHD frame, respectively.
 - Entrances 2L and 2R work well for the right and left hand sides, respectively, of FxDS panels with no rear protection.
 - Entrances 3L and 3R are used in some wallboxes and for special needs.
 - Entrances 1L, 3L and 2R require the use of the Right Rear Redirect in the splice tray, detailed on page 27.

Note: A strain relief boot is shown in every location, but the cassette will include only one.

Opening the lower slack storage door to 90 degrees will allow you to lift the door away from the base.



2. Slide the included rubber strain relief boot onto the buffer tube to be spliced as shown. Push the boot down the tube and out of the way, it will be utilized later in the process.



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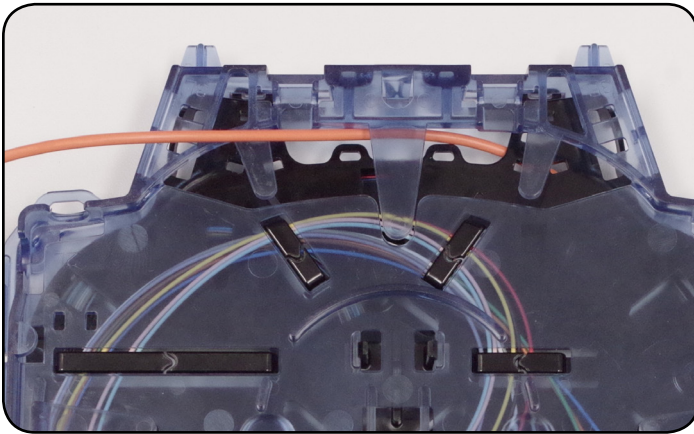
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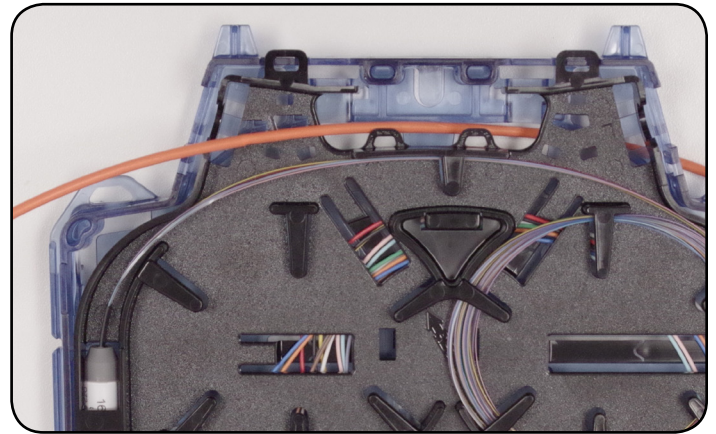
3. Pass the buffer tube up through the bottom of the transition hole at the top of the cassette, pulling over 3 feet through.

Entrances 2L, 1R, 3R:

For cable entrances 2L, 1R, and 3R, insert the buffer tube to be spliced into the bottom of the cassette as shown. The buffer tube will extend into the splice tray through the transition hole in the splice tray.



Bottom View



Top View

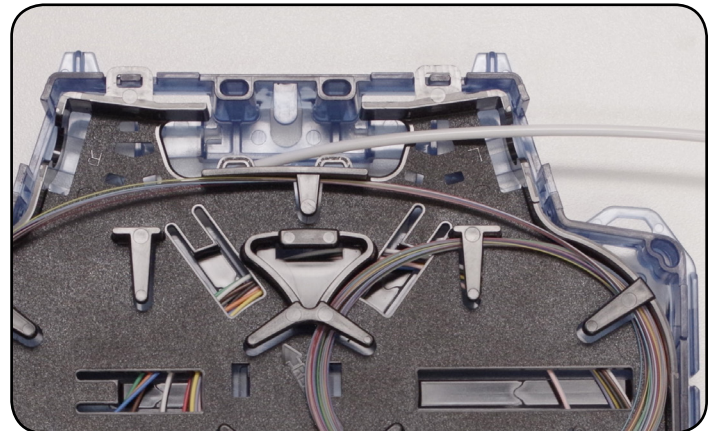
Entrances 1L, 3L, 2R:

For cable entrances 1L, 3L, and 2R, insert the buffer tube to be spliced into the bottom of the cassette as shown. The buffer tube will extend into the top of the splice tray through the transition hole in the splice tray.

Note: The fiber will need to be redirected during splicing, refer to the *Right Rear Redirect* section on page 27 for special routing instructions.



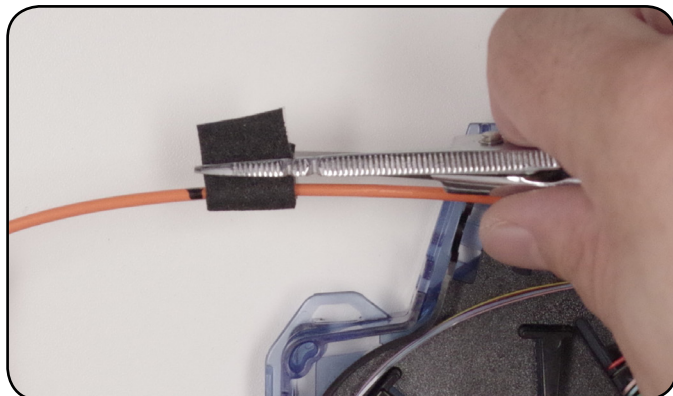
Bottom View



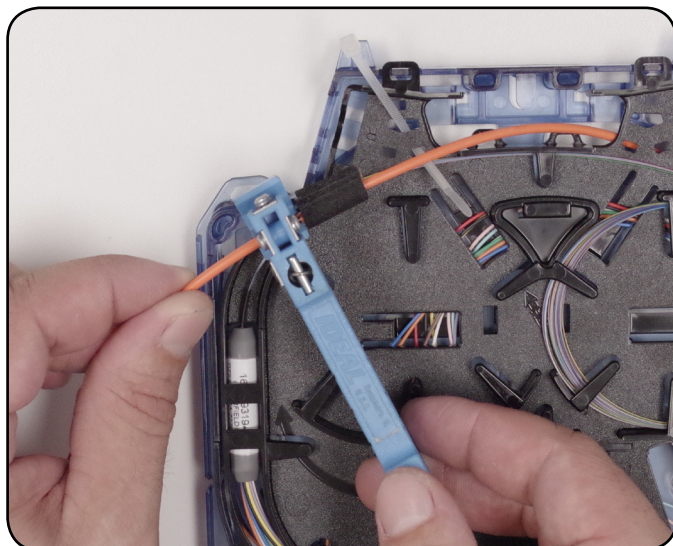
Top View

4. Measure three feet from the end of the buffer tube and mark the jacket with a permanent marker.
5. Behind your mark, wrap one layer of grommet tape around the buffer tube, and trim the excess. This will help protect the buffer tube.

Note: More than one lap will not allow the cover to close properly and lie flat.



6. Insert a cable tie (or length of wax string) into the tie-down holes at the top of the cassette which best fit your routing scheme.
7. Remove the outer jacket of the buffer tube at the mark you made.



8. Secure the buffer tube with the cable tie and trim the excess.

Note: Push the cable tie head down to the side so it doesn't stick straight up and prevent the covers from closing properly.

9. Proceed to the loose tube splicing section of this manual and return to the next step once you are ready to store the remaining slack inside the cassette.



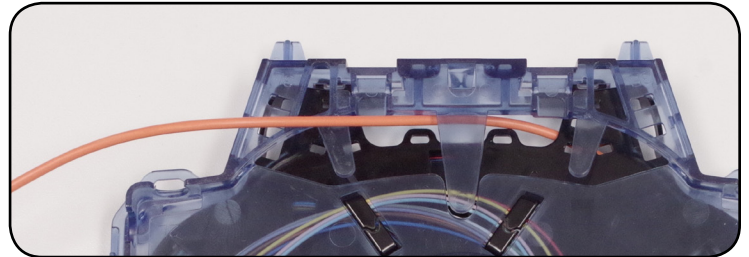
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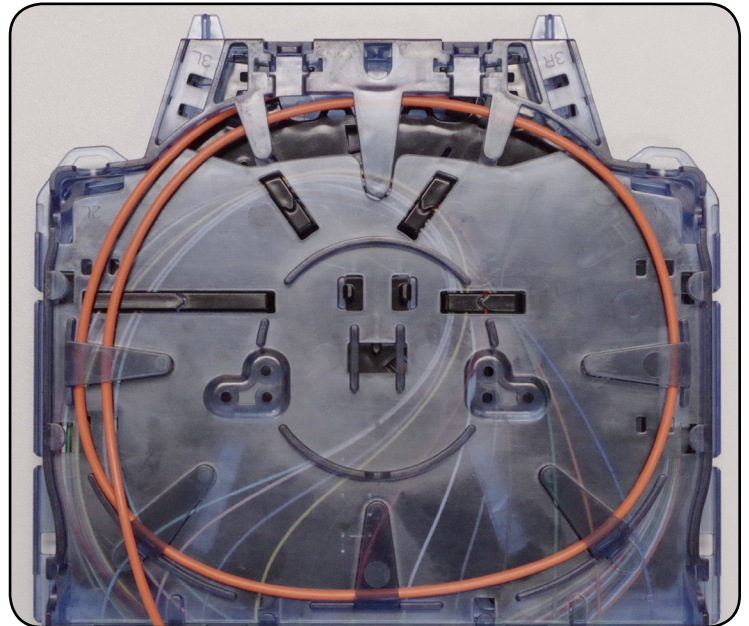


Entrances 2L, 3R, 1R:

10. After splicing in the cassette, you will store your buffer tube slack in the base of the cassette.

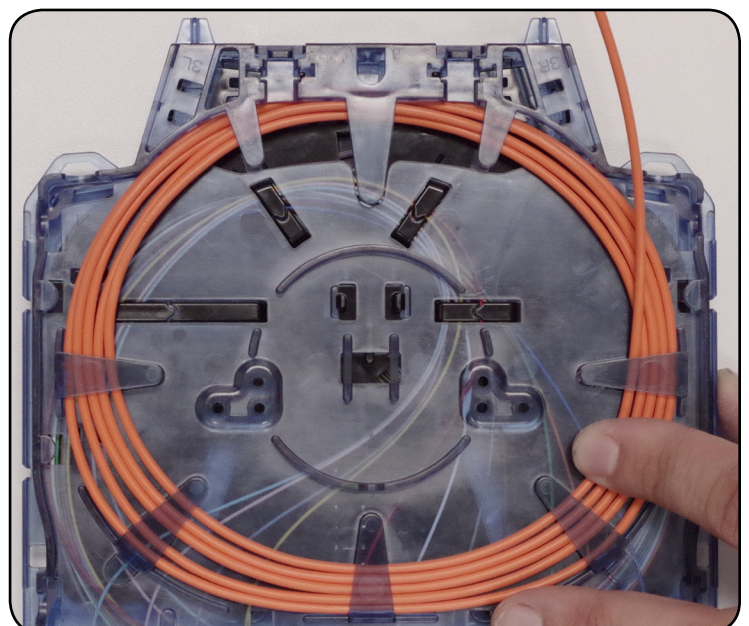


11. Begin by routing the buffer tube in a counter-clockwise spiral pattern, feeding the buffer tube in as you go around to ensure the buffer tube is pushed up flat against the previous layer. The slack storage tray can store up to 8 feet of buffer tube.

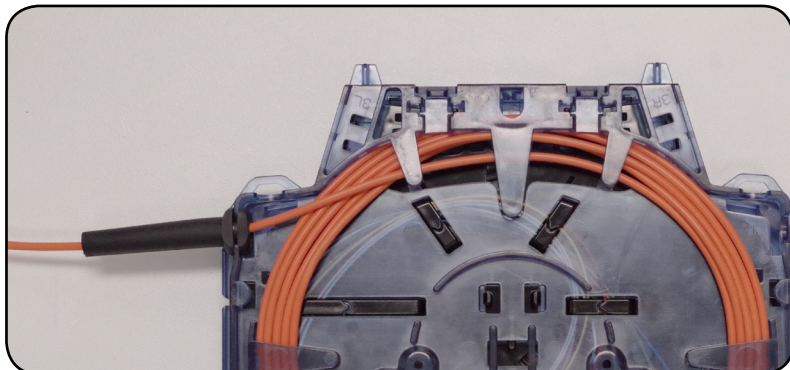


12. Continue routing the buffer tube until you have stored the desired amount.

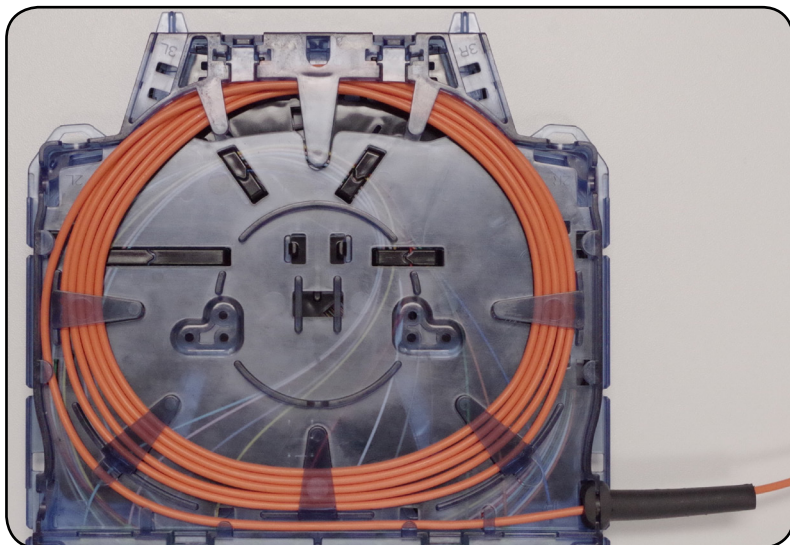
Note: *The buffer tube should lie flat as it is stored, try to prevent it from stacking on top of itself.*



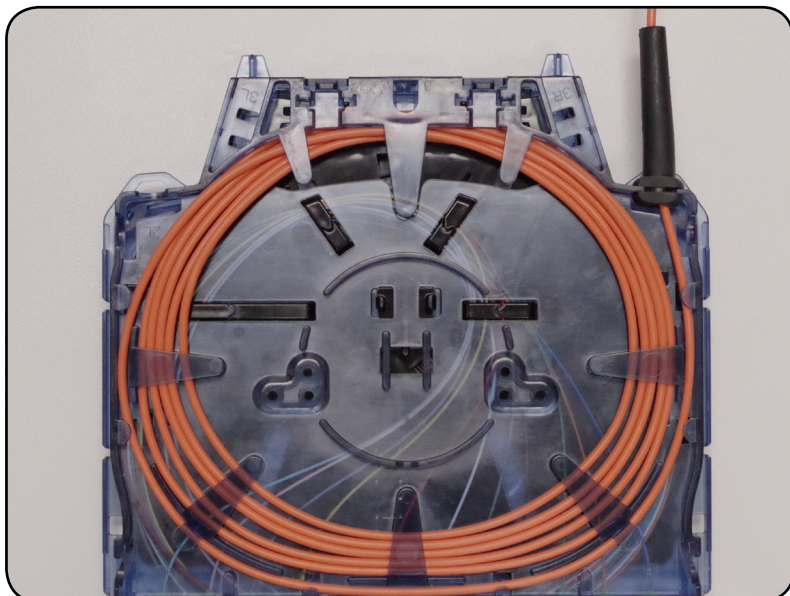
13. After the desired amount of slack has been stored, cross the buffer tube over the coil at the top of the cassette and transition to the outside track of the buffer tube storage tray.
14. For entrance **2L**, the boot can then be slid up and inserted into the boot retainer.



15. For entrance **1R**, continue around the outside exit track and place the boot in the retainer at the exit.



16. For entrance **3R**, continue further around the exit track and place the boot in the retainer at the exit.
17. Re-install the slack storage cover.



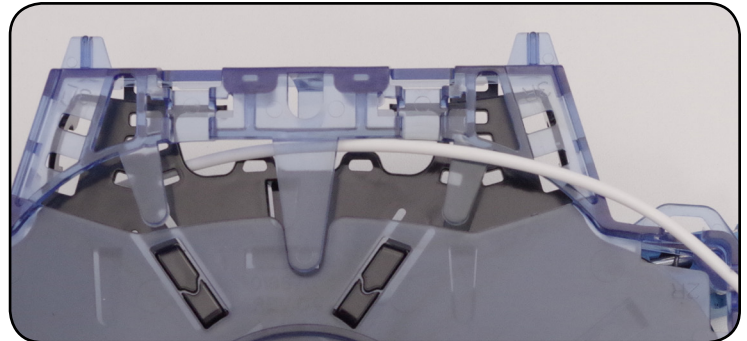
Clearview Blue Cassette

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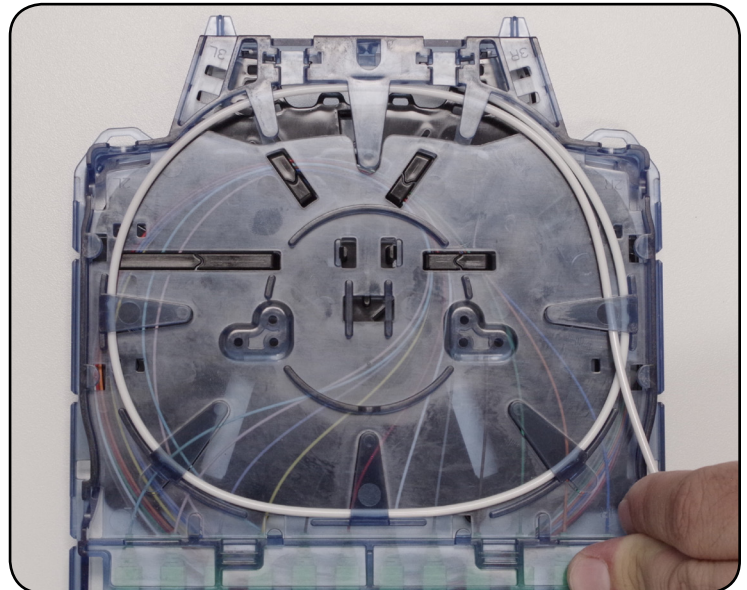


Entrances 1L, 3L, 2R:

10. After splicing in the cassette, you will store your buffer tube slack in the base of the cassette.

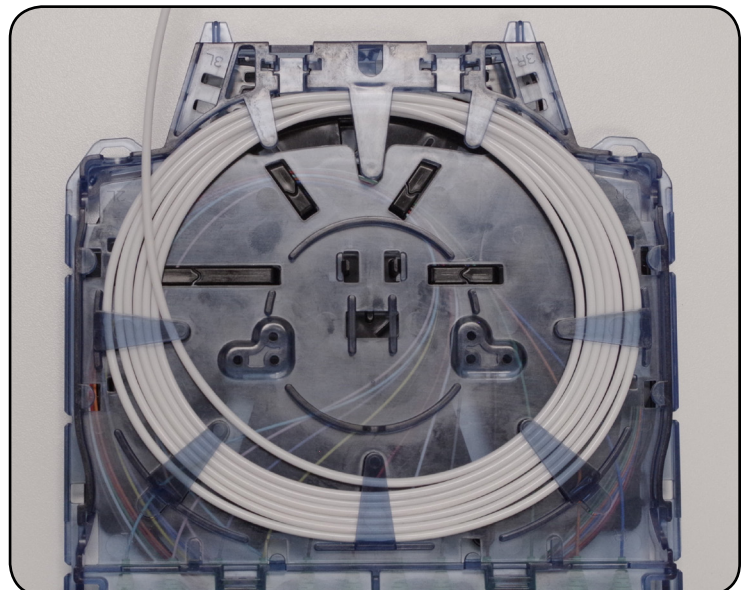


11. Begin by routing the buffer tube in a clockwise spiral pattern, feeding the buffer tube in as you go around to ensure the buffer tube is pushed up flat against the previous layer. The slack storage tray can store up to 8 feet of buffer tube.

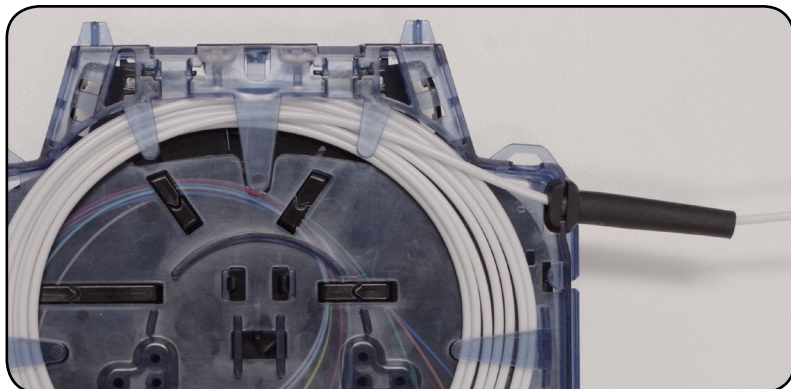


12. Continue routing the buffer tube until you have stored the desired amount.

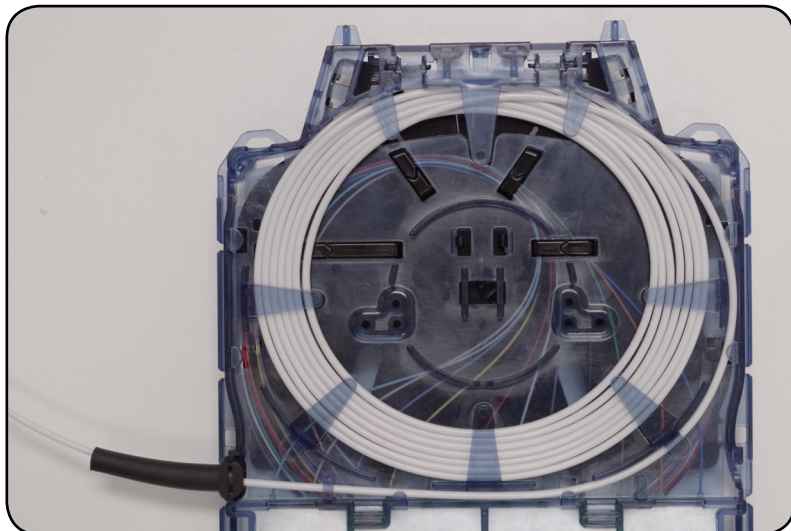
Note: The buffer tube should lie flat as it is stored, try to prevent it from stacking on top of itself.



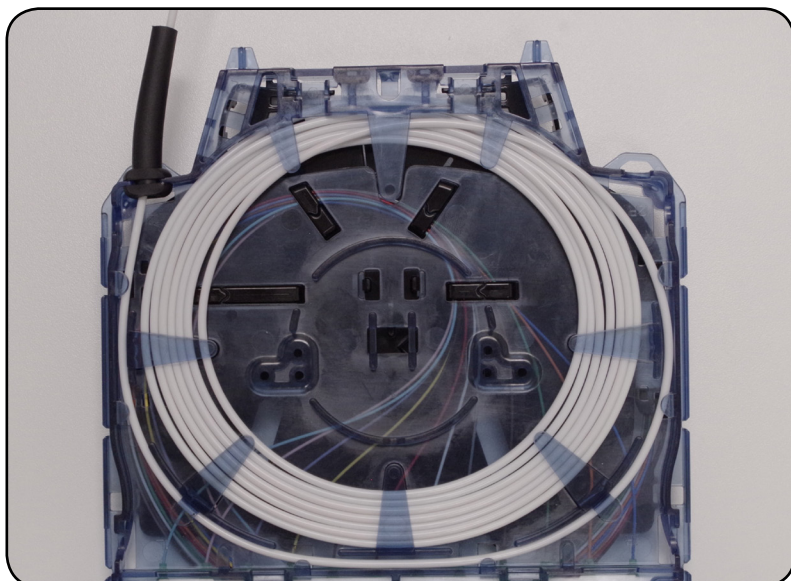
13. After the desired amount of slack has been stored, cross the buffer tube over the coil at the top of the cassette and transition to the outside track of the buffer tube storage tray.
14. For entrance **2R**, the boot can then be slid up and inserted into the boot retainer.



15. For entrance **1L**, continue around the outside exit track and place the boot in the retainer at the exit.



16. For entrance **3L**, continue further around the exit track and place the boot in the retainer at the exit.
17. Re-install the slack storage cover.



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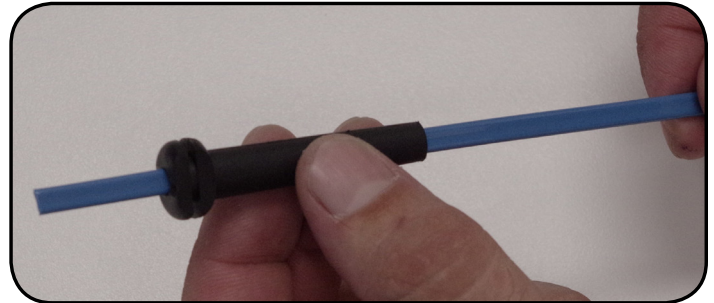


Ribbon

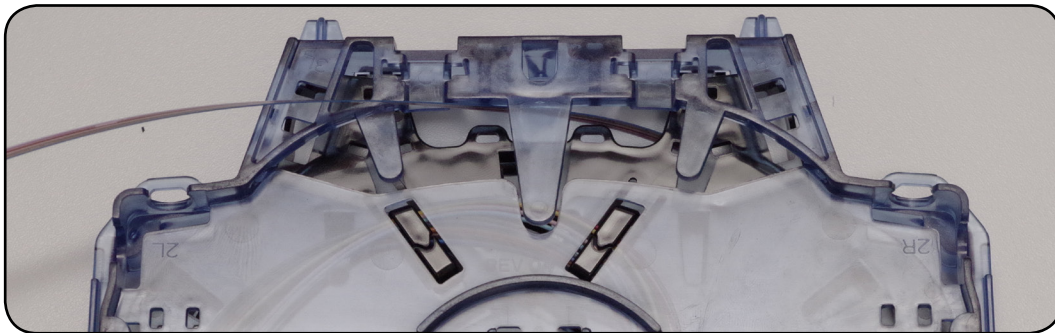
1. Choose the entrance that best fits your needs. Refer to the diagram on page 15 for entrance designations.

Note: If you are planning to use the storage tray for storing ribbon, you will need to expose 3 feet of ribbon in addition to whatever length you desire to store.

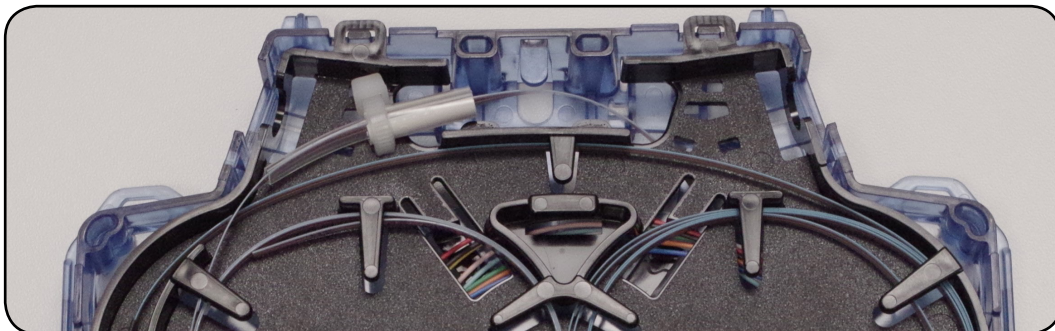
2. Slip the boot over the end of the furcation tubing.
3. Feed your ribbon out of the end of the furcation tubing. This length of exposed ribbon must include 3 feet for splicing in the cassette splice tray, as well as whatever amount of slack you wish to store.



4. Bring the ribbon through the transition hole in the splice tray. Consult the loose tube storage section for information on which direction to route the ribbon depending upon your desired entrance.



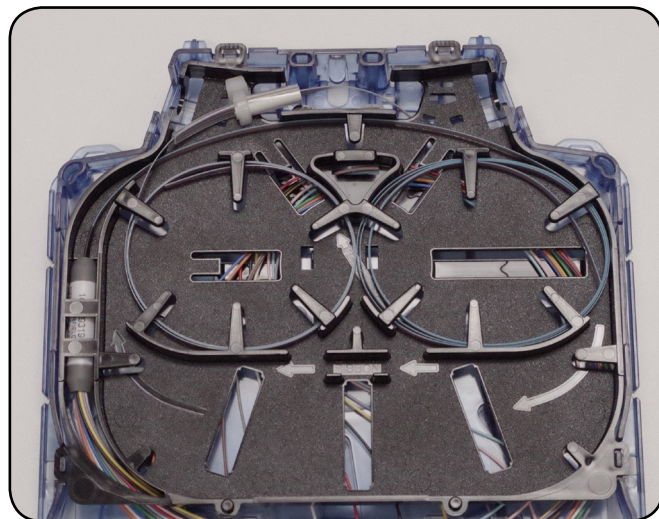
5. Insert the ribbon through the ribbon tie-down provided with the cassette. Slide the ribbon into the long side of the soft tube in the space between the two thick white fiberglass pieces of the ribbon tie-down.
6. 3 feet from the end of your ribbon, heat down the ribbon tie-down onto your ribbon. Using a cable tie or wax string, secure the ribbon tie-down into the cassette at the tie-down holes at the top of the splice tray.



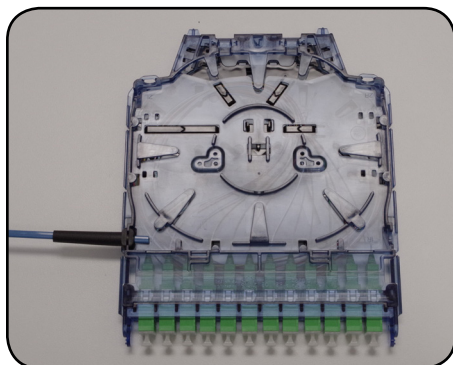
7. Store your 3 feet of slack in the appropriate slack storage chamber of the splice tray, under the slack management tabs.

Note: Exits 1L, 3L and 2R will require a Right Rear Redirect in the splice tray. Refer to the Right Rear Redirect section on page 27 for special routing instructions.

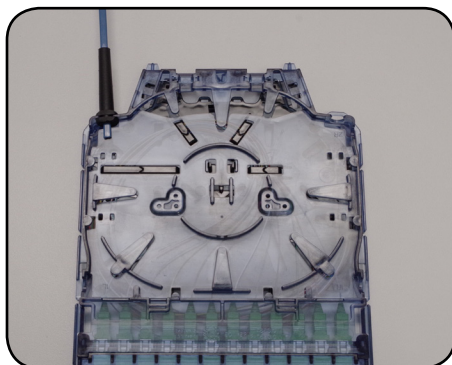
8. Refer to the ribbon splicing section of this manual, and return to the next step once you are ready to store the remaining slack inside the cassette.



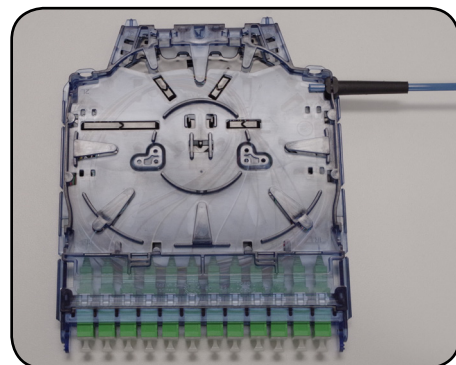
9. After you have spliced in the cassette and are ready to store your ribbon in the storage tray, consult page 18 or page 20, depending upon entrance used, for storage instructions. Ribbon will store in much the same way as buffer tube, and the images of buffer tube storage are easier to use for visibility reasons.
10. Once routed, push the strain relief boot into the boot retainer at the exit.



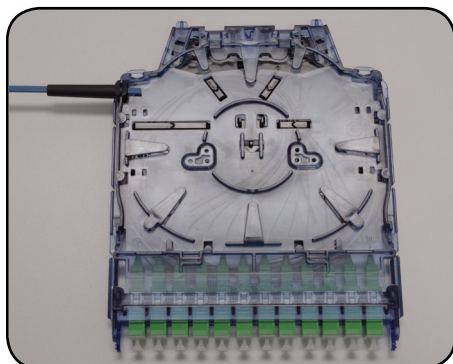
Exit 1L



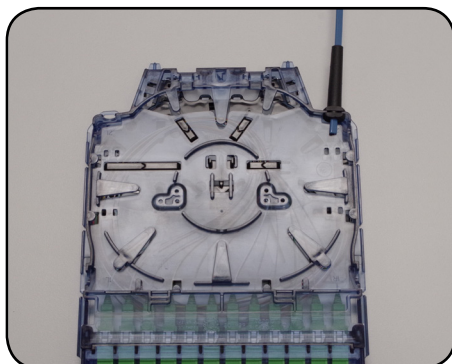
Exit 3L



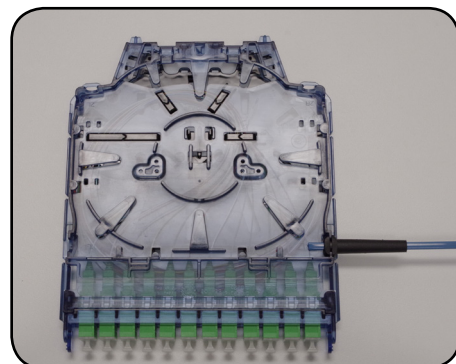
Exit 2R



Exit 2L



Exit 3R



Exit 1R

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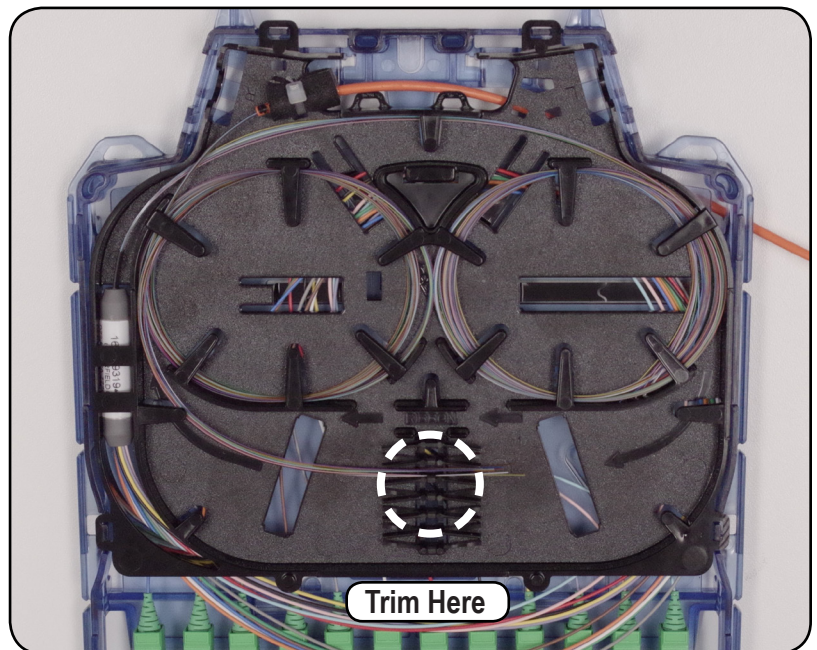
Splicing in the Cassette: Loose Tube

12 Fiber Loose Tube Splice

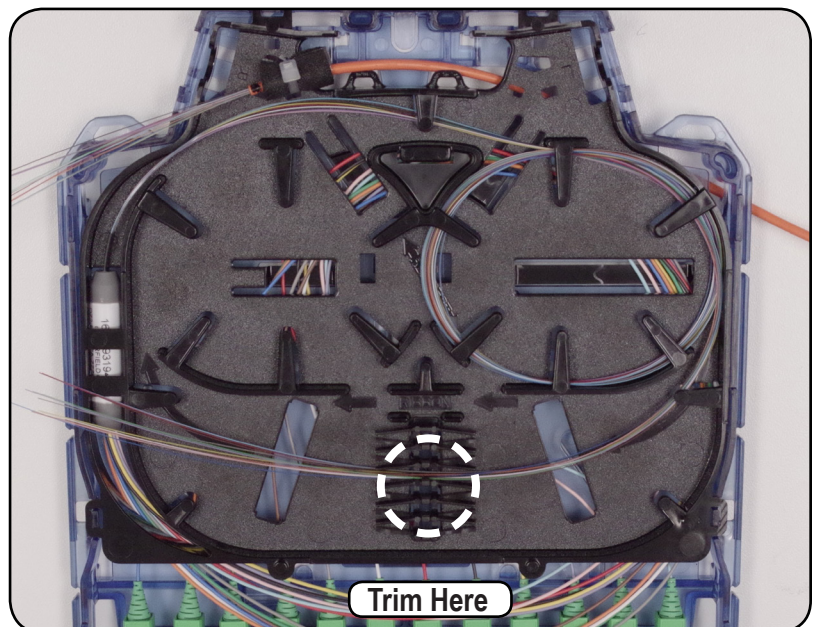
For cassettes using the “left exit” standard entrance or slack storage entrances 2L, 1R, or 3R, begin the splicing process as shown. For “right exit” standard entrance cassettes or ones using slack storage entrances 1L, 3L, or 2R, refer to the Right Rear Redirect section on page 27 for special routing instructions.

Note: Standard exit/entrance is determined looking from the back of the cassette.

1. Route the incoming fibers in the left chamber of the splice tray, under the fiber management tabs.
2. Bring the ends of the fibers into the splicing area from the left side, and trim to length.
3. Pull the fibers out of the splice tray.

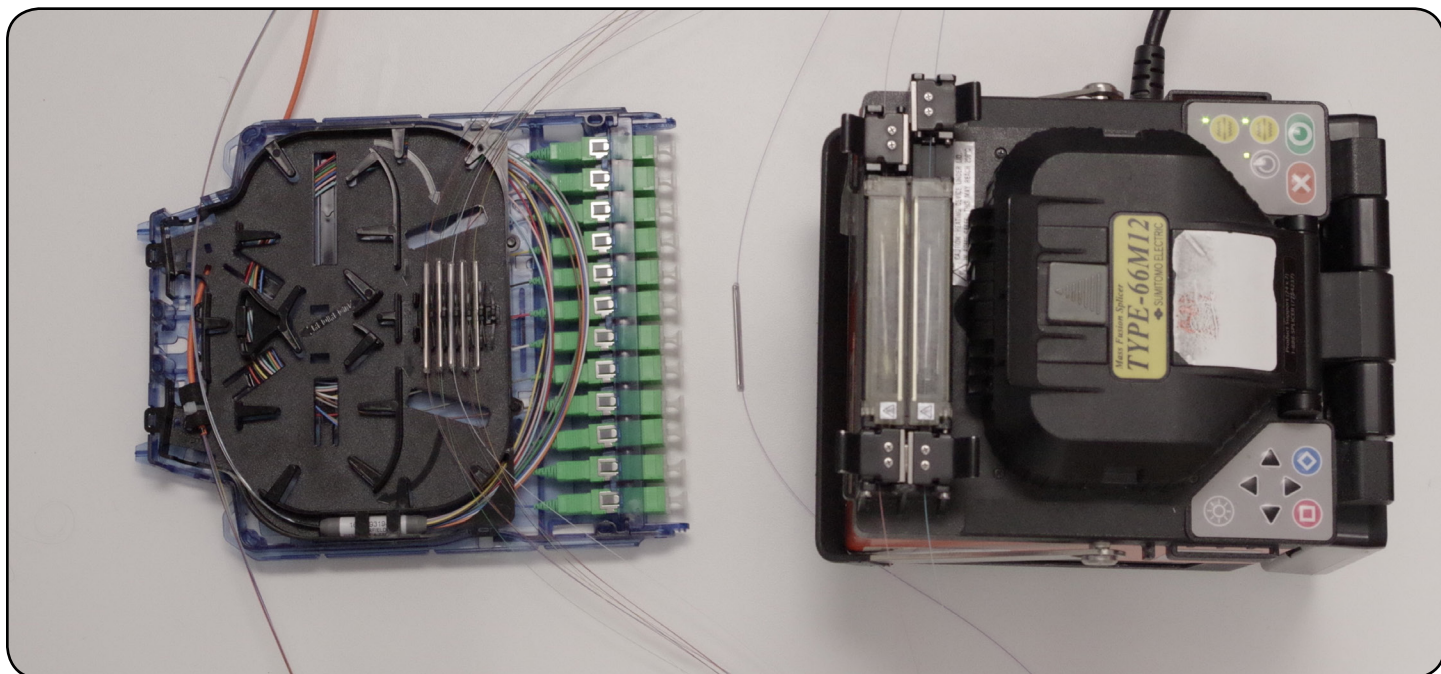


4. Bring the fibers of the pre-loaded fiber pig-tail into the splice tray from the right side.
5. Trim to length and pull the fibers out of the tray.
6. Begin splicing your fibers, per your local practice.

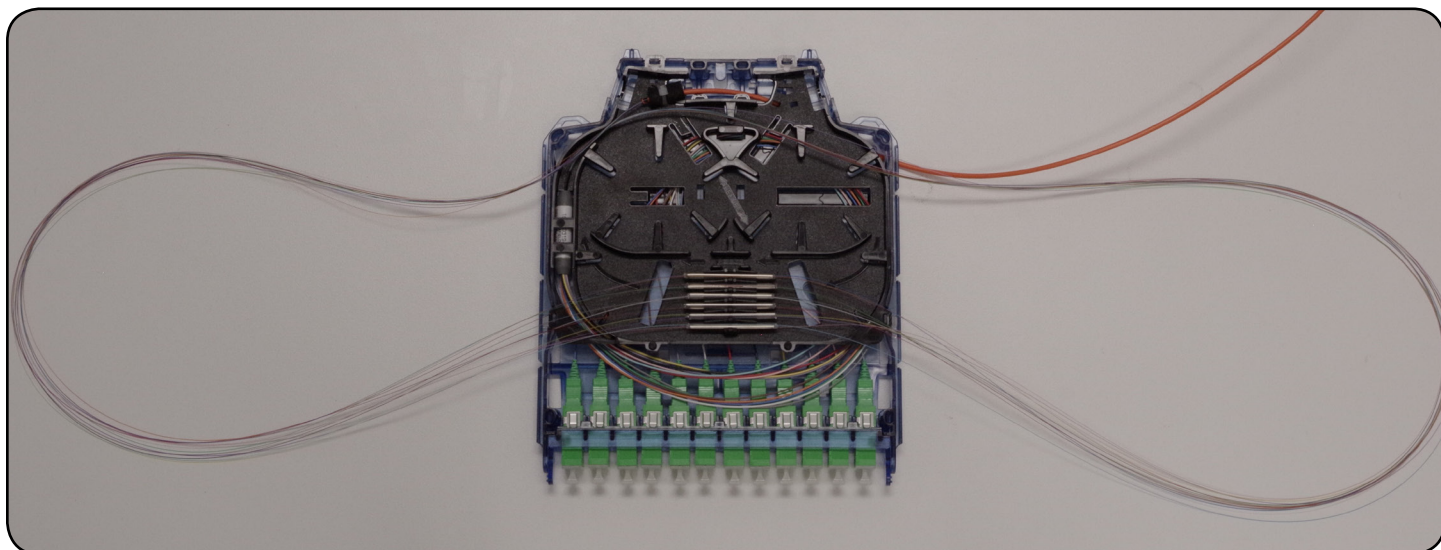


7. Insert the splice sleeves into the 2 x 6 splice chip (six slots that hold two sleeves each, one on top of the other) as you proceed.

Note: Clearfield recommends 40mm splice sleeves for the Clearview Blue Cassette, especially when splicing 24 fibers.



8. Continue until all 12 fibers are spliced and loaded into the cassette.



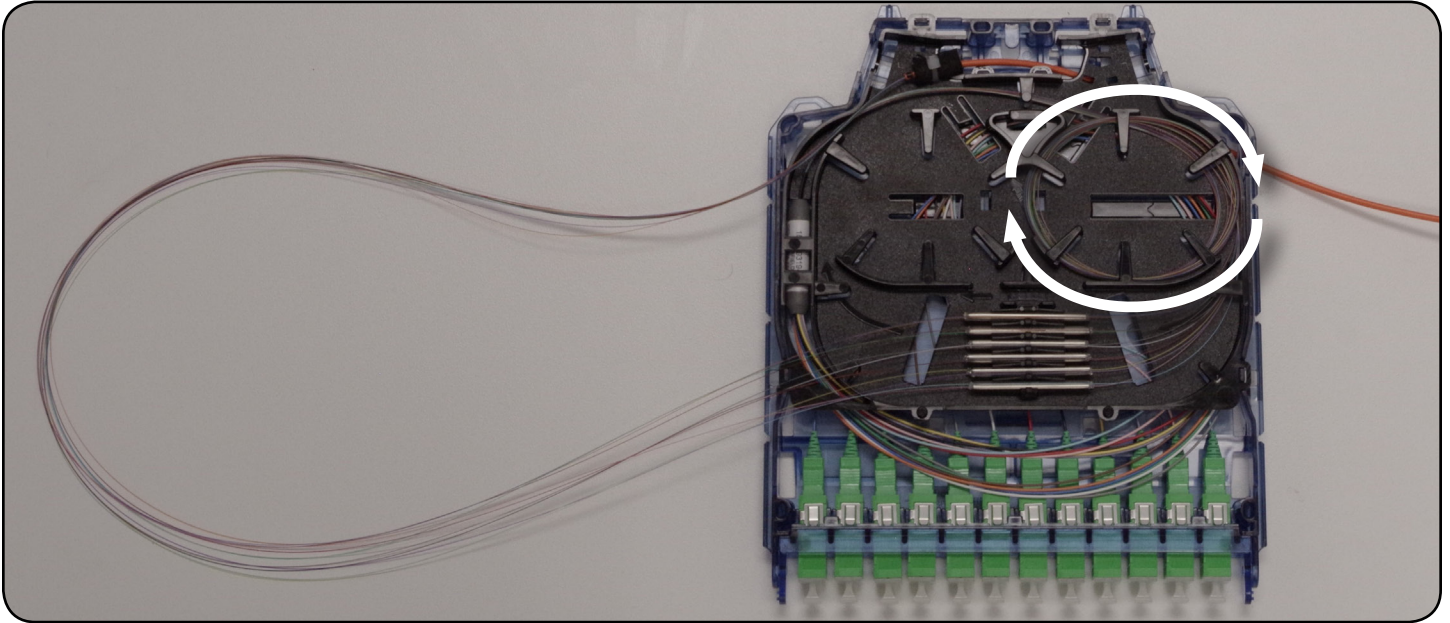
Clearview Blue Cassette

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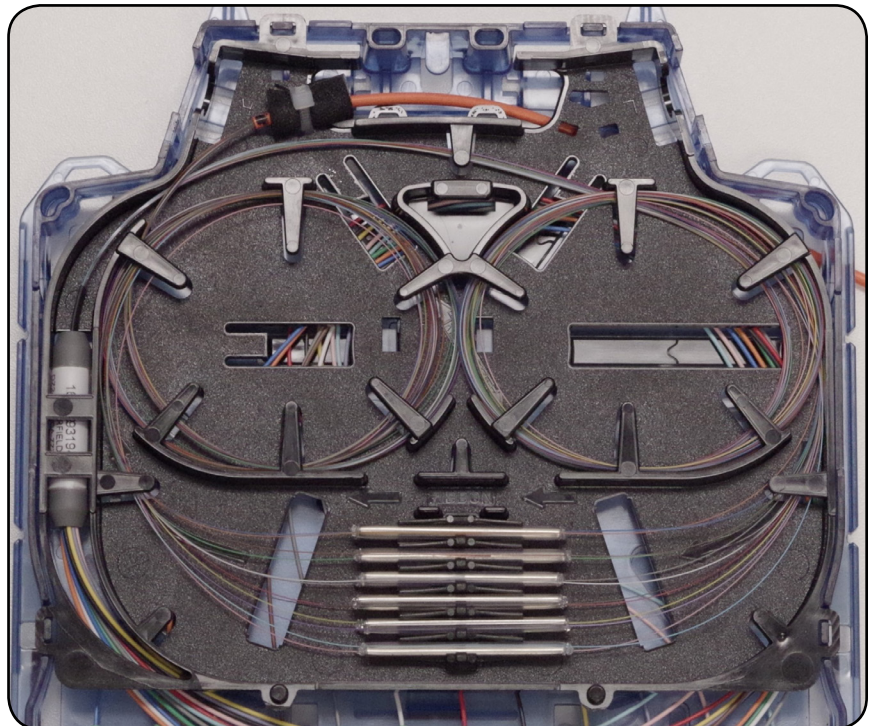


9. Next, route the extra fiber slack into the splice tray. Starting with the fibers coming out of the right side of the splice sleeves, route the slack back into the right side of the splice tray. The fiber will naturally cross over itself.
10. Continue routing the fiber until all the slack is properly stored.

Note: Ensure the fiber is routed underneath all the fiber management tabs of the splice tray.



11. Proceed to routing the extra fiber slack on the left side into the splice tray in the same manner as the other side.
12. Replace the splice tray cover and cassette cover.
13. If utilizing the cassette's slack storage capabilities, refer back to the slack storage section.



Right Rear Redirect

For cassettes utilizing slack storage entrances 1L, 3L and 2R, as well as the “right exit” standard entrance, the incoming fiber will travel in the same direction as the pre-loaded fiber pigtail. This fiber will need to be redirected in order to allow the ends of the incoming fiber and the pre-loaded fiber pigtail to meet end-to-end in the splicing area of the splice tray.

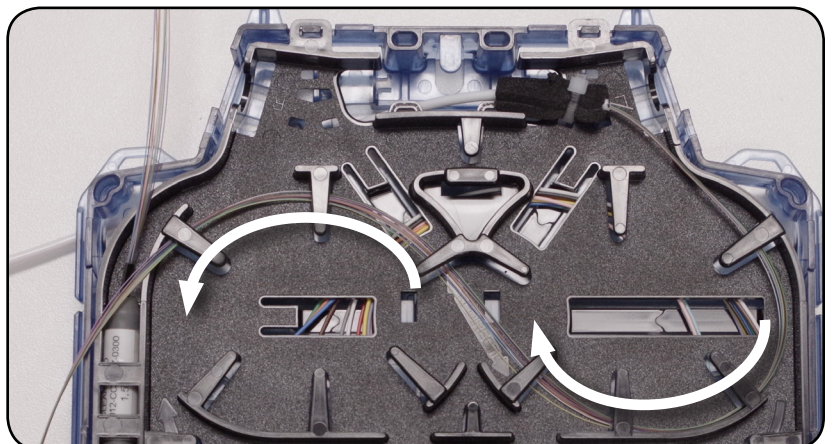
1. Begin by pulling the pre-loaded fiber pigtail out of the right side of the splice tray.



2. Following the arrows printed on the splice tray, route the incoming fiber down into the right side of the tray, and proceed to loop up and to the left through the middle of the splice tray storage area, keeping the fibers underneath the fiber management tabs.



3. Turn the fiber downwards and begin to route inside the left side of the splice tray.



Clearview Blue Cassette

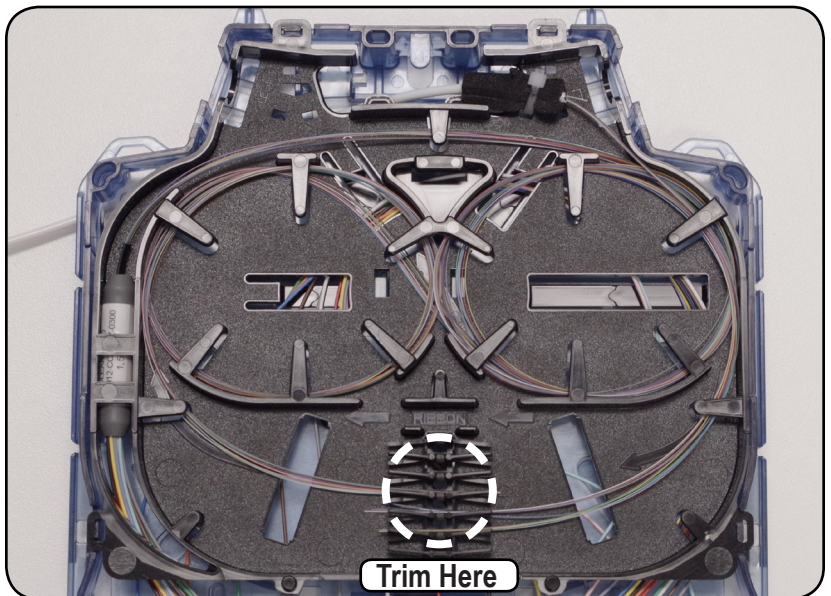
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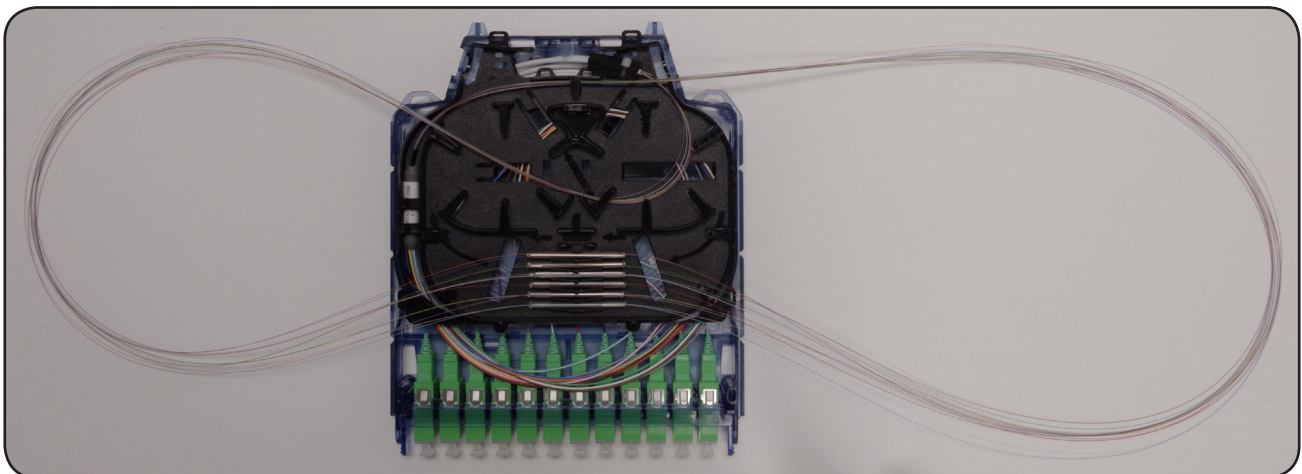
4. Store a few loops of the fiber inside the left side of the splice tray.



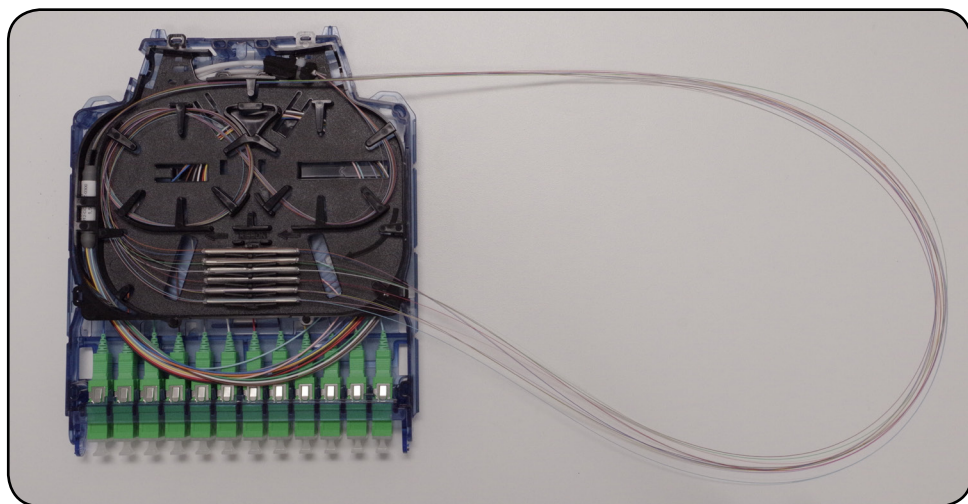
5. Bring the incoming fiber into the splicing area from the left and trim to length.
6. Store the pre-loaded fiber pigtail back in the right side of the cassette.
7. Bring the pre-loaded fiber into the right side of the splicing area and trim to length.
8. Pull both sets of fibers out of the tray.



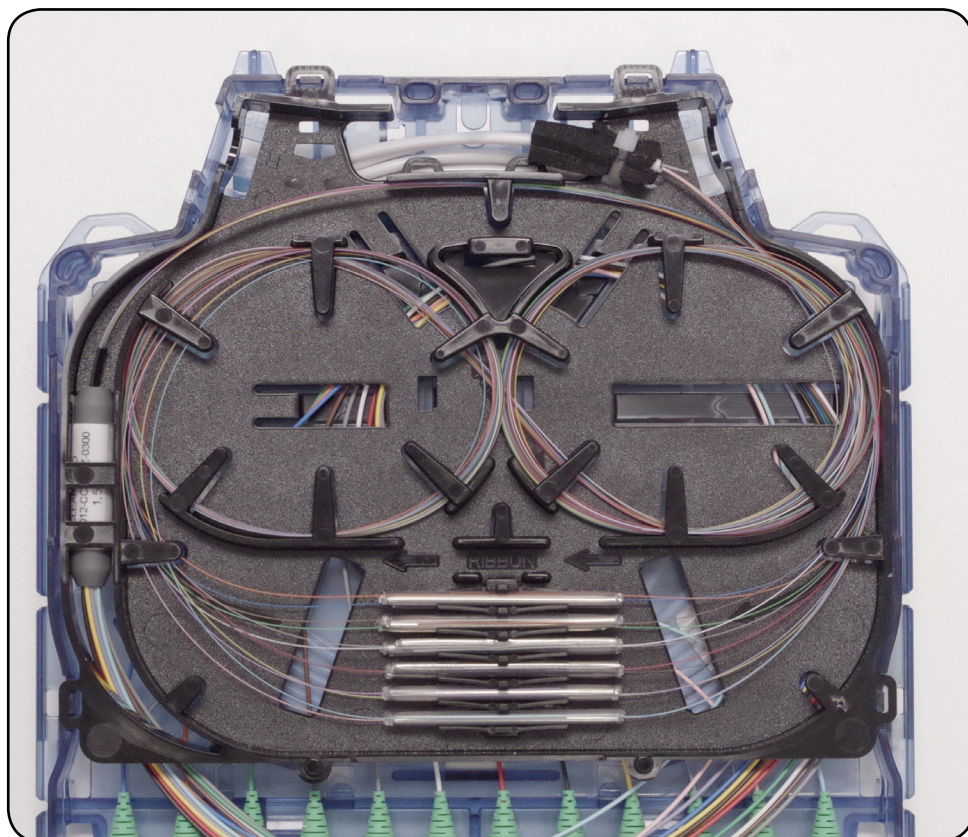
9. Perform your splices as normal, stacking the splice sleeves two high in the 6 slots of the splice sleeve chip. After you've spliced all twelve fibers, your cassette should look like this.



10. Route the fibers on the left hand side of the cassette into the splice tray first, being careful to keep all fibers underneath the fiber management tabs.



11. Proceed to routing the extra fiber slack on the right side into the splice tray in the same manner as the other side.
12. Replace the splice tray cover and cassette cover.
13. If utilizing the cassette's slack storage capabilities, refer back to the slack storage section



Clearview Blue Cassette

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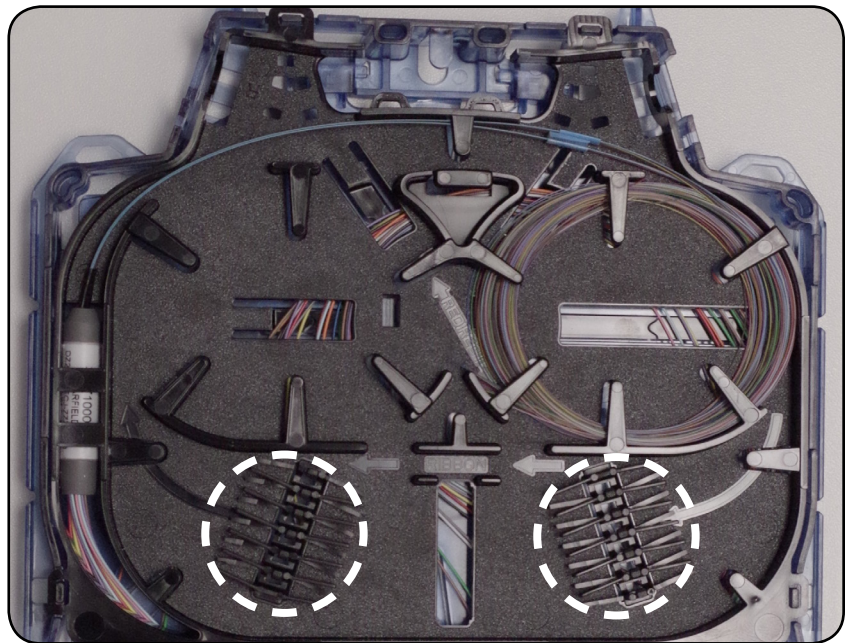
24 Fiber Loose Tube Splice

For cassettes using the “left exit” standard entrance or slack storage entrances 2L, 1R, or 3R, begin the splicing process as shown. For “right exit” standard entrance cassettes or ones using slack storage entrances 1L, 3L, or 2R, refer to the Right Rear Redirect section for special routing instructions.

Note: Standard exit/entrance is determined looking from the back of the cassette.

The cassette, when configured for 24 loose tube fiber splices, comes with two splice sleeve chips - highlighted here.

Note: Splice sleeves of 40mm length are required for splicing 24 fibers in the Clearview Blue.

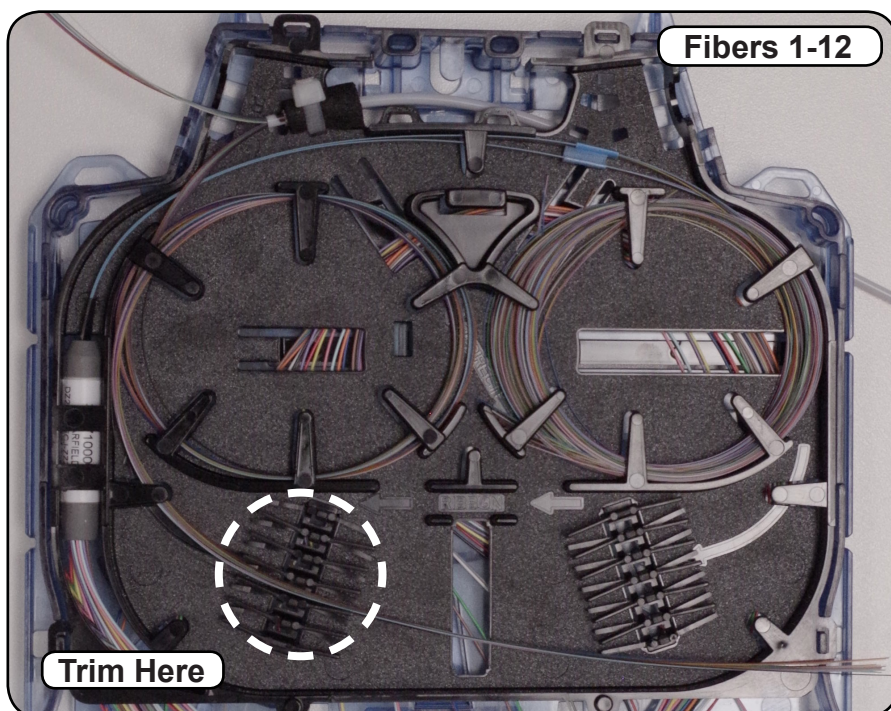


1. Bring your buffer tube into the cassette, per one of the entrance methods described previously.
2. Remove the pre-loaded fiber pigtail from the splice tray.

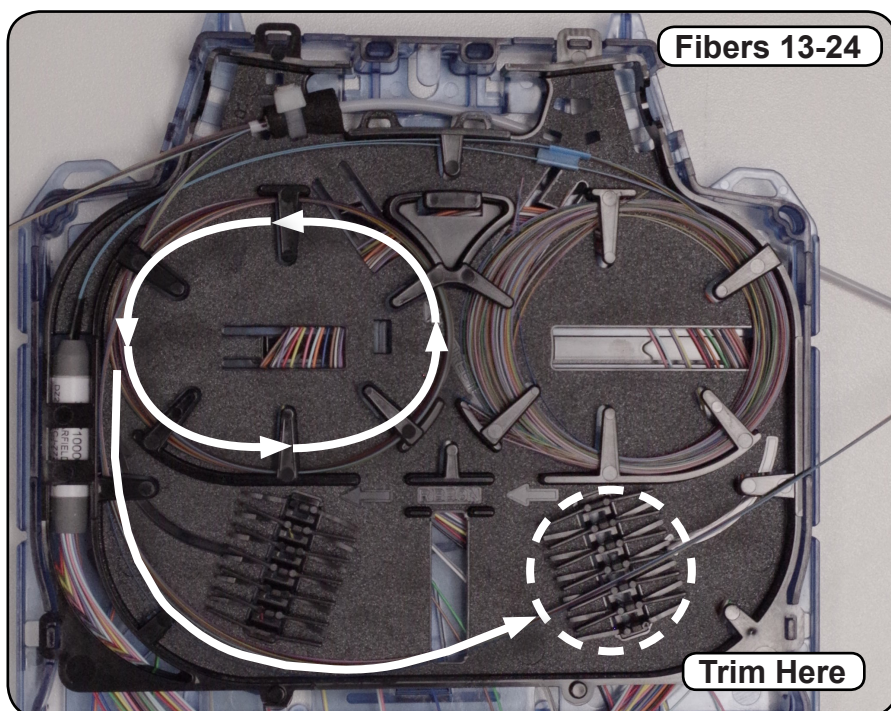


3. Route the first 12 fibers from your incoming buffer tube into the left slack storage chamber of the splice tray.
4. Route the fibers to the left splice sleeve chip and trim to length.
5. Remove the fiber from the tray.

Note: Clearfield recommends to splice fibers 1-12 in the left splice sleeve chip. However, the placement of the 24 splices is up to you. Just be careful to keep track of which fibers are going to which splice sleeve chip.



6. Route the second group of 12 fibers into the left slack storage chamber of the splice tray.
7. Bring them into splicing area from the left, routing down and around the left splice sleeve chip, and cut them to length at the right splice sleeve chip.
8. Remove the fibers from the tray.



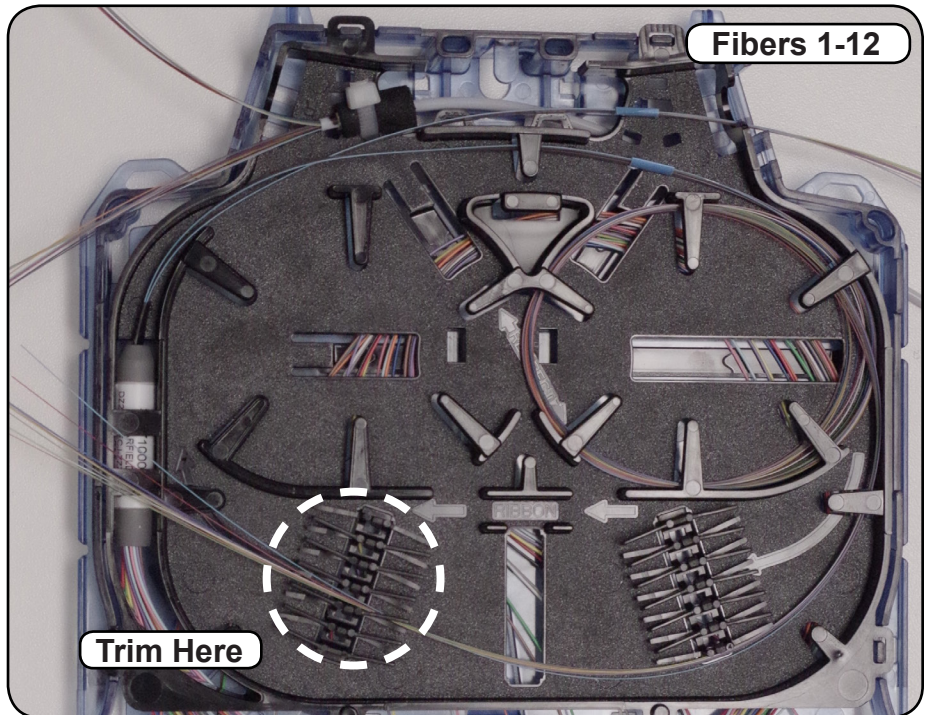
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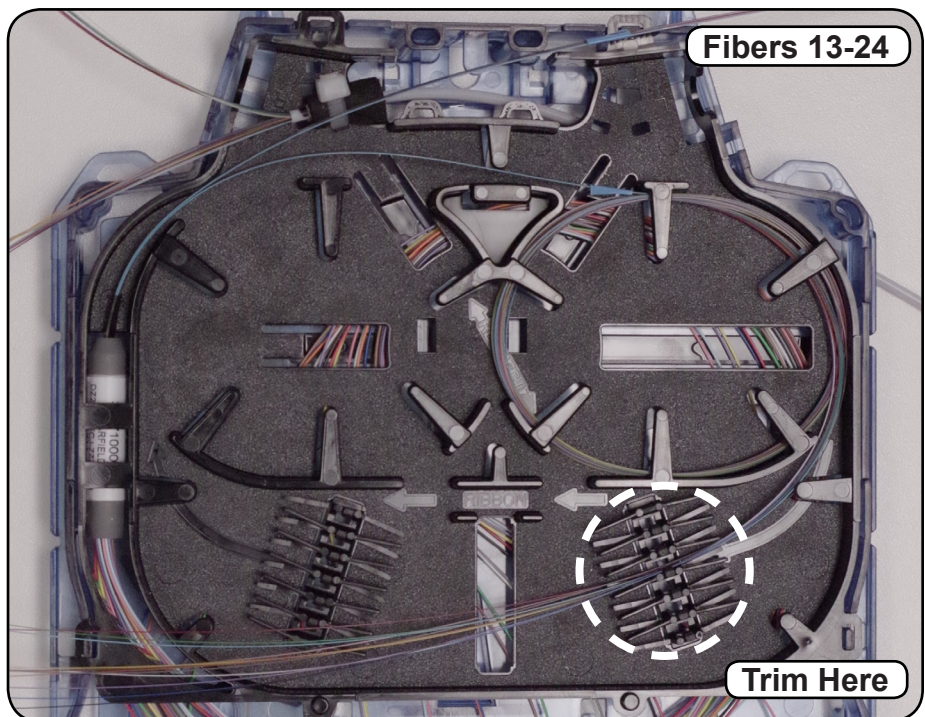


Repeat the process on the right side with the two sets of twelve fibers from the pre-loaded fiber pigtail.

9. Route the first twelve fibers into the right slack storage chamber of the splice tray.
10. Bring the fibers into splicing area from the right, routing down and around the right splice sleeve chip, and cut them to length at the left splice sleeve chip, so that they match them up with your first twelve fibers from the incoming buffer tube.
11. Remove the fibers from the tray

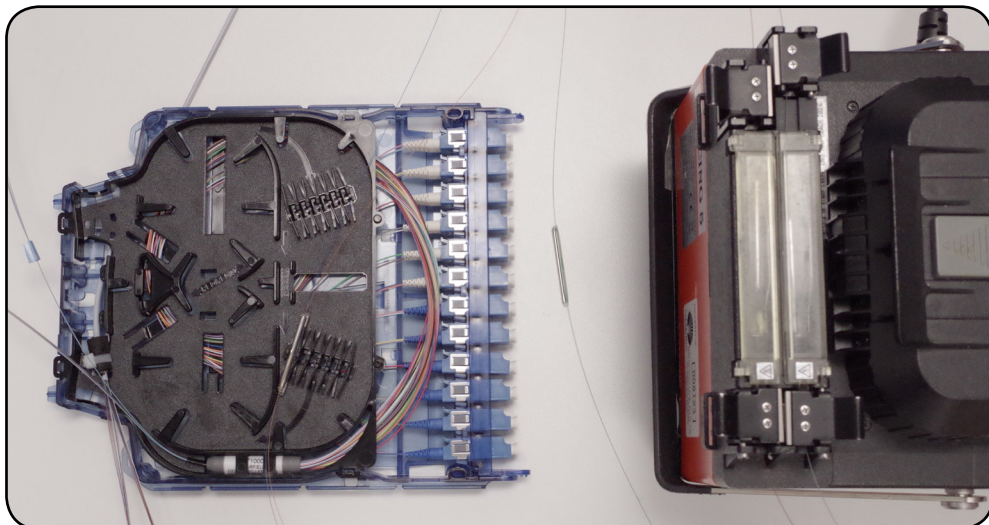


12. Route the second group of twelve fibers into the right slack storage chamber of the splice tray.
13. Bring the fibers into splicing area from the right, routing to the right splice sleeve chip and trim to length.
14. Remove the fibers from the tray.

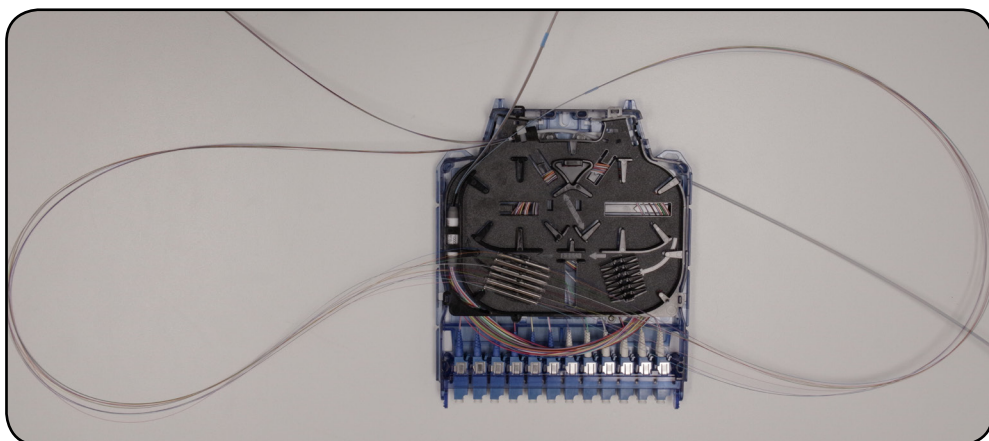


15. Once all fibers are trimmed to the correct lengths and pulled from the tray, begin splicing fibers 1-12 and loading the corresponding splice sleeve chip.

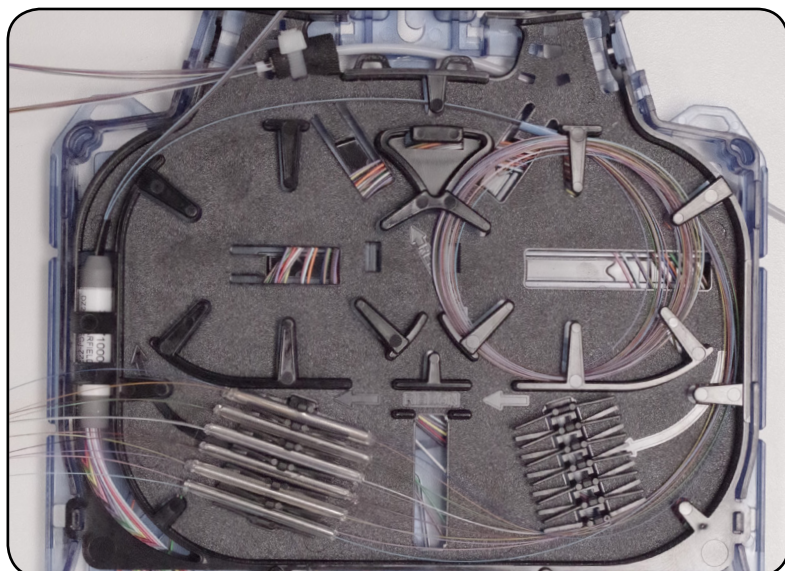
Note: Each splice sleeve chip features 6 slots which will hold 2 splice sleeves in each slot.



16. Once fibers 1-12 have been spliced and the splice sleeves placed in their holding location, the cassette should look like the image shown.



17. Route the fibers on the right side, coiling them into the right slack storage chamber of the splice tray.

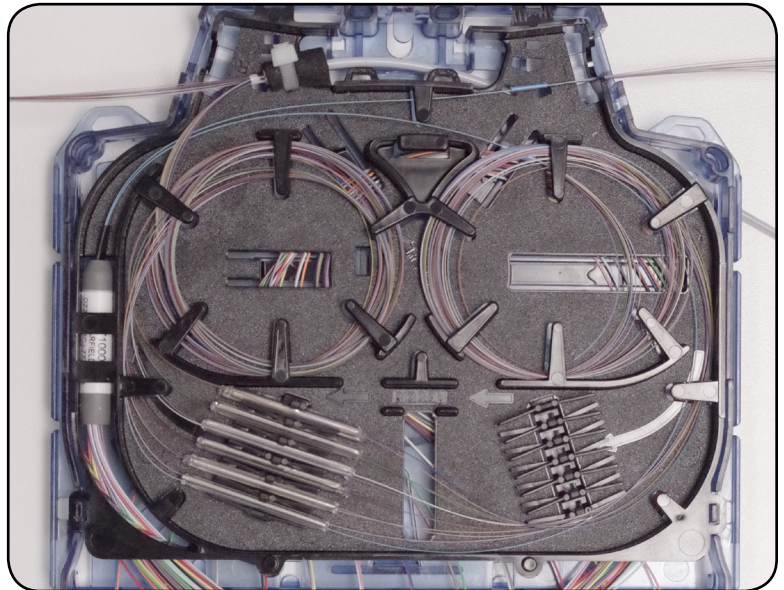


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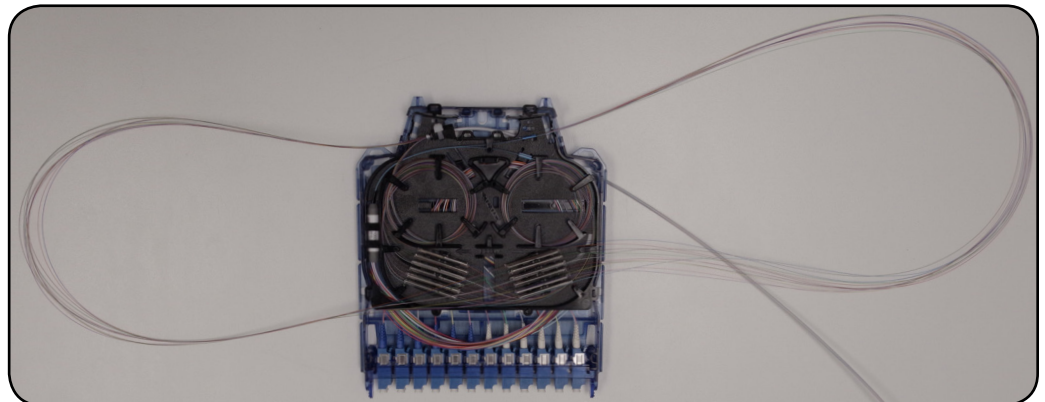
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18. Next, route the fibers on the left side of the cassette into the left slack storage chamber of the splice tray.



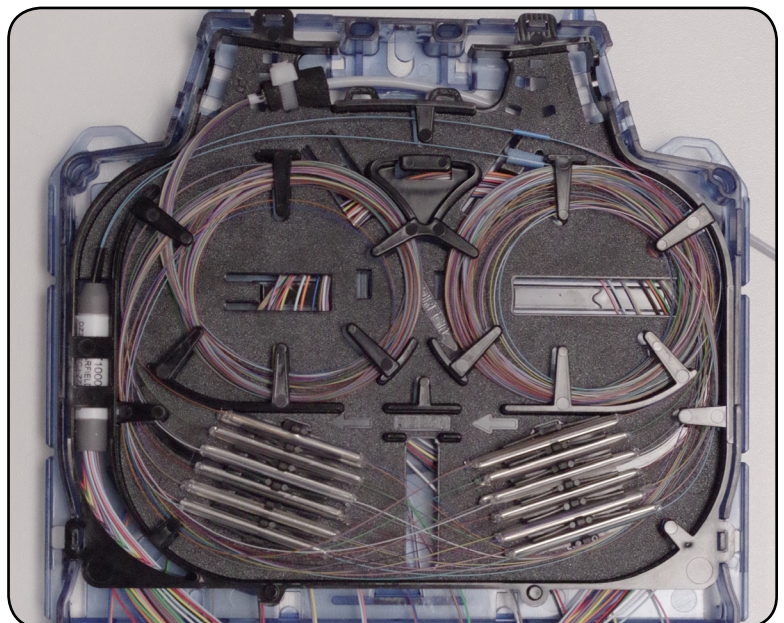
19. Splice fibers 13-24 in the same way, placing the sleeves in the right splice sleeve chip.



20. Route the fibers on the left and right sides into their respective slack storage chambers.

Note: Ensure that fibers do not cross over the adjacent splice sleeves as they travel to the slack storage chamber to avoid pinching fibers when the splice tray cover is installed.

21. Replace the splice tray cover and cassette cover.
22. If utilizing the cassette's slack storage capabilities, refer back to the slack storage section.

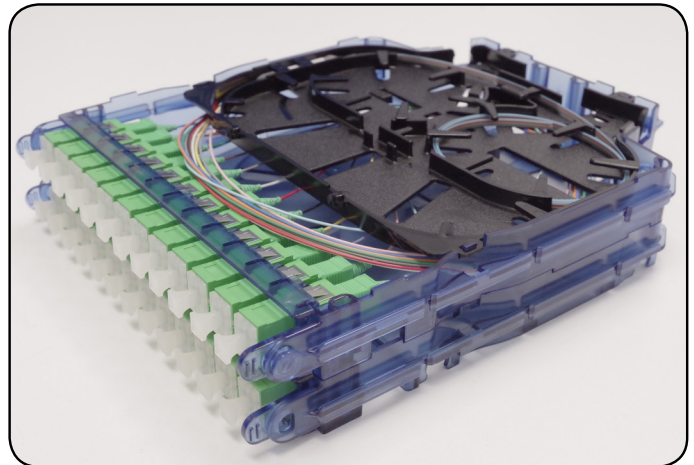
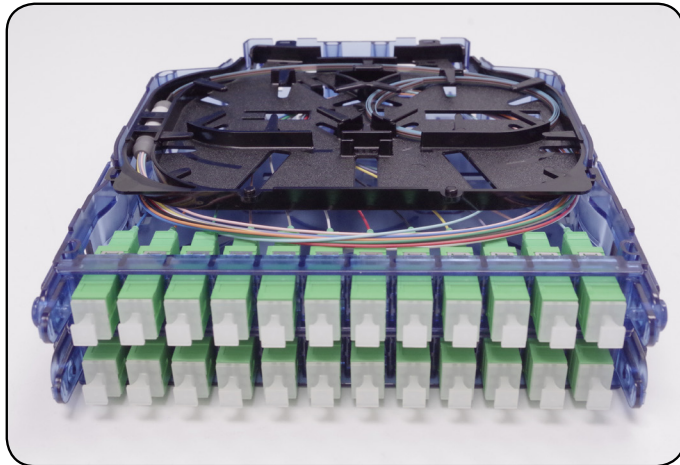


Expansion Ring

The Clearview Blue Cassette has an optional Expansion Ring, which increases the size of the cassette, allowing for more connections in one modular unit.

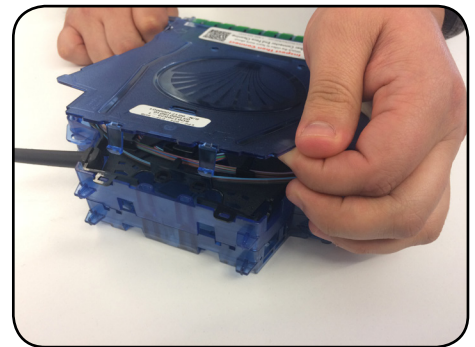
The expansion ring is utilized in our optical component cassettes which include splits greater than 1x8, up to a max of 1x32, which requires two expansion rings.

The expansion ring is also available for in-cassette splicing (patch and splice) methods. If you wish to perform a 24 fiber splice in the Clearview Blue Cassette, loose tube or ribbon, while utilizing SC connectors, the expansion ring makes that option available.



Note: If your cassette features an expansion ring, be careful when tipping the cassette without the top cover on, as the splice tray is simply resting on top of the expansion ring and will fall out.

In order to remove the top cover from the 24 SC Expansion Cassette, grab the top cover in the opening on the side that doesn't feature the strain relief boot. Lift to remove the cover.



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Splicing in the Cassette: Ribbon

12 Fiber Single Ribbon Splice

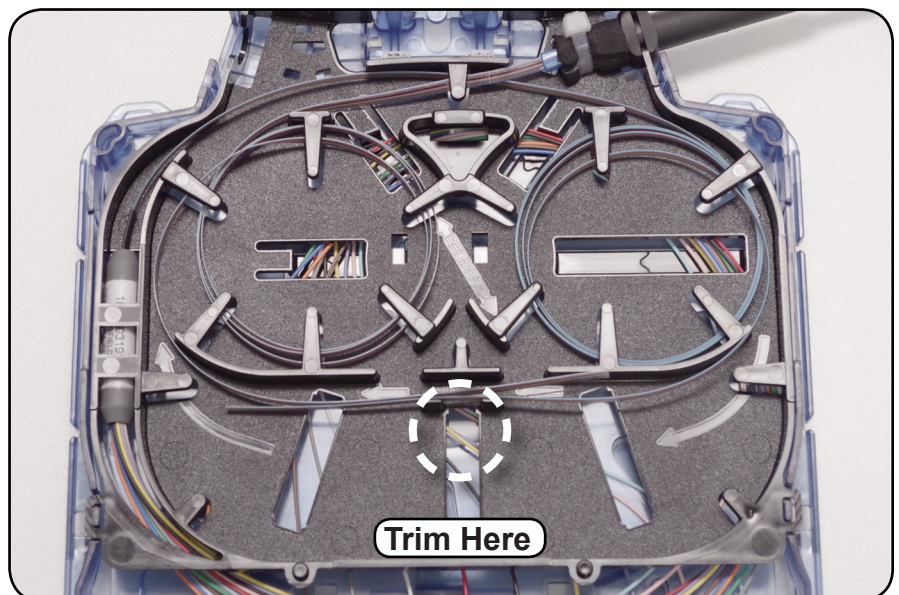
For cassettes using the “left exit” standard entrance or slack storage entrances 2L, 1R, or 3R, begin the splicing process as shown. For “right exit” standard entrance cassettes or ones using slack storage entrances 1L, 3L, or 2R, refer to the Right Rear Redirect section for special routing instructions.

Note: Standard exit/entrance is determined looking from the back of the cassette.

1. Route the incoming ribbon in the left chamber of the splice tray, under the fiber management tabs.
2. Bring the incoming ribbon into the splicing area from the left side.
3. Trim to length at the ribbon splice sleeve chip.



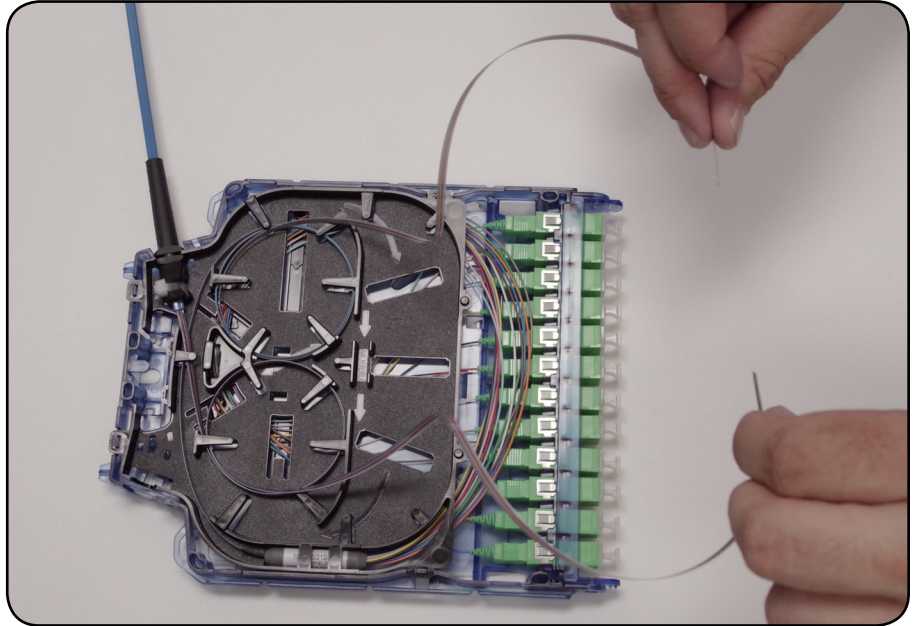
4. Bring the pre-loaded ribbon fiber pigtail into the splicing area from the right side
5. Trim to length at the ribbon splice sleeve chip.



6. Once both ribbons are trimmed, you are now ready to splice. Pull the fiber out of the cassette.

Note: *It is important to maintain the twists in the ribbons that made up the loops while the ribbons were stored in the left and right chambers of the splice tray. This will allow for the ribbons to be routed back inside the tray and under the fiber management tabs with ease after splicing.*

7. Proceed to splicing.

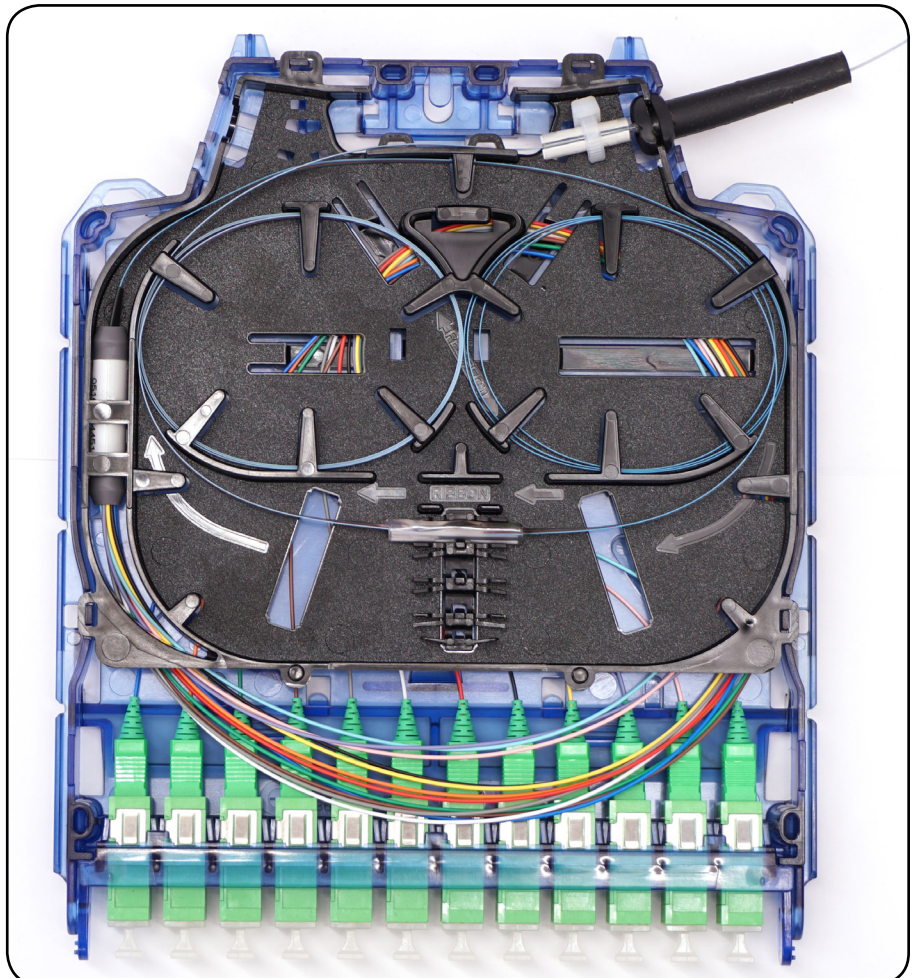


8. Place the ribbon splice sleeve into the ribbon splice sleeve chip, again being careful to maintain the twists in the now spliced ribbons.

9. Route the two sides of the ribbons back into the left and right slack storage chambers. You may need to flip over the ribbons to get the twists back to the correct orientations to coil nicely back into the tray.

Note: *Make sure the fiber is routed fully underneath the splice tray fiber management tabs as shown.*

10. Replace the splice tray cover and cassette cover.
11. If utilizing the cassette's slack storage capabilities, refer back to the slack storage section.



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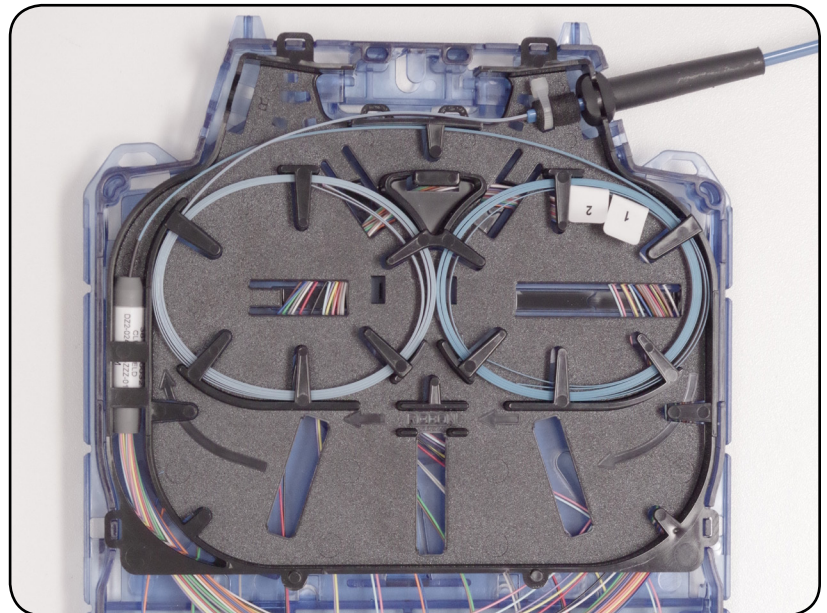


24 Fiber Double Ribbon Splice

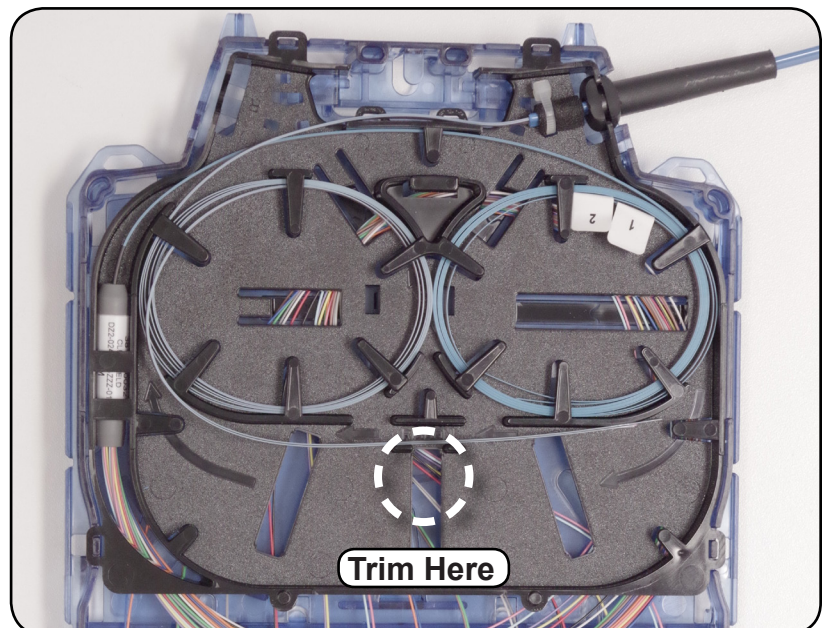
For cassettes using the “left exit” standard entrance or slack storage entrances 2L, 1R, or 3R, begin the splicing process as shown. For “right exit” standard entrance cassettes or ones using slack storage entrances 1L, 3L, or 2R, refer to the Right Rear Redirect section for special routing instructions.

Note: Standard exit/entrance is determined looking from the back of the cassette.

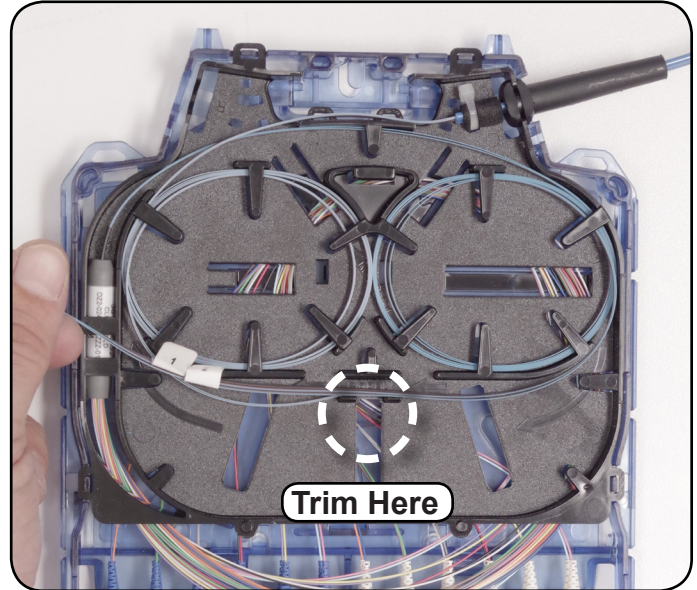
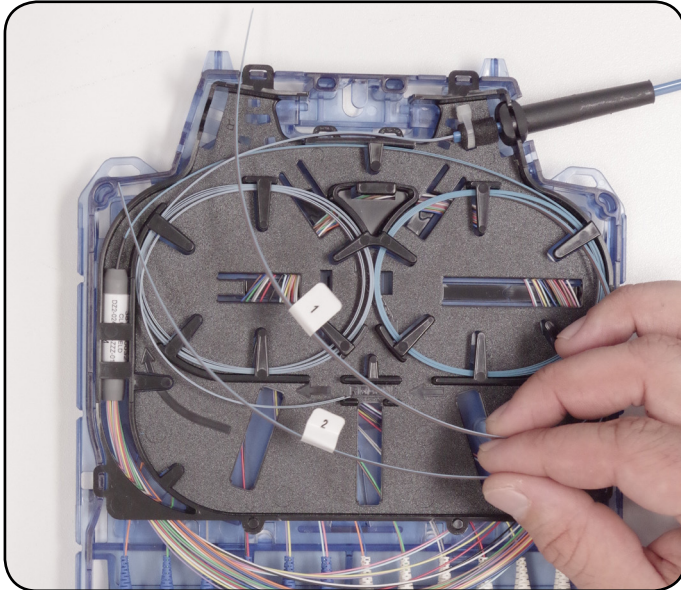
1. The Clearview Blue Cassette configured for a double ribbon splice will come pre-loaded with a double ribbon assembly, flagged ribbons 1 and 2. Bring in your ribbons in the method of your choice.



2. Route the incoming ribbons in the left chamber of the splice tray, under the fiber management tabs.
3. Bring the incoming ribbons into the splicing area from the left side.
4. Trim both to length at the ribbon splice sleeve chip.



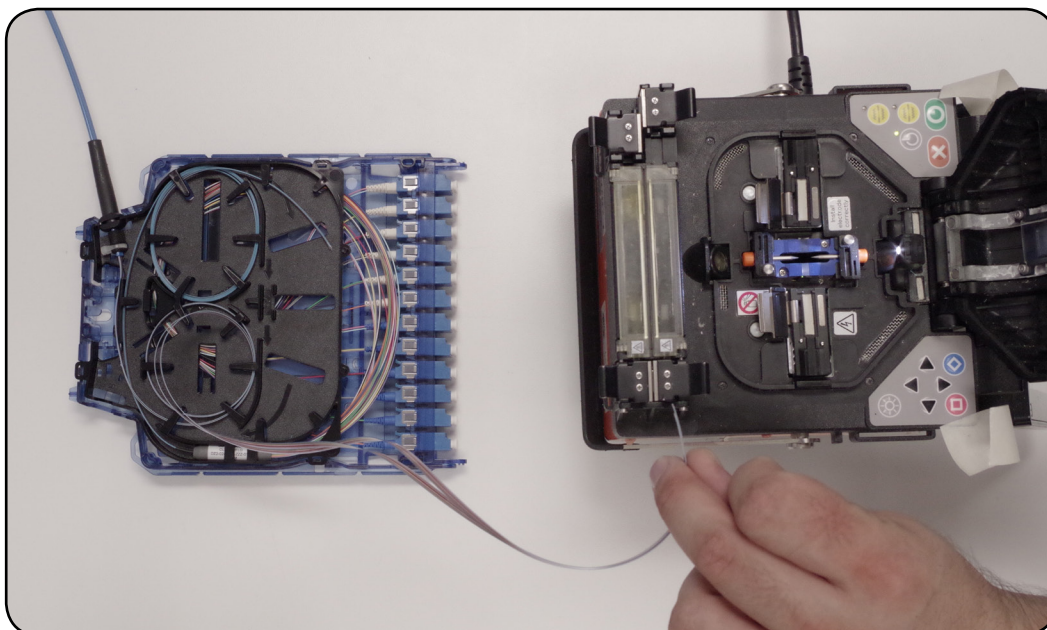
4. Bring the pre-loaded ribbons into the splicing area from the right side, and trim to length at the ribbon splice chip.



Note: Pay attention to which ribbon is flagged #1 and #2. The innermost ribbon will be flagged #1.

5. Pull the incoming ribbons out of the left splice stray slack storage chamber.

Note: It is important to maintain the twists in the ribbon that made up the loops while the ribbon was stored in the left chamber of the splice tray. This will allow for the ribbon to be routed back inside the tray and under the fiber management tabs with ease after splicing.

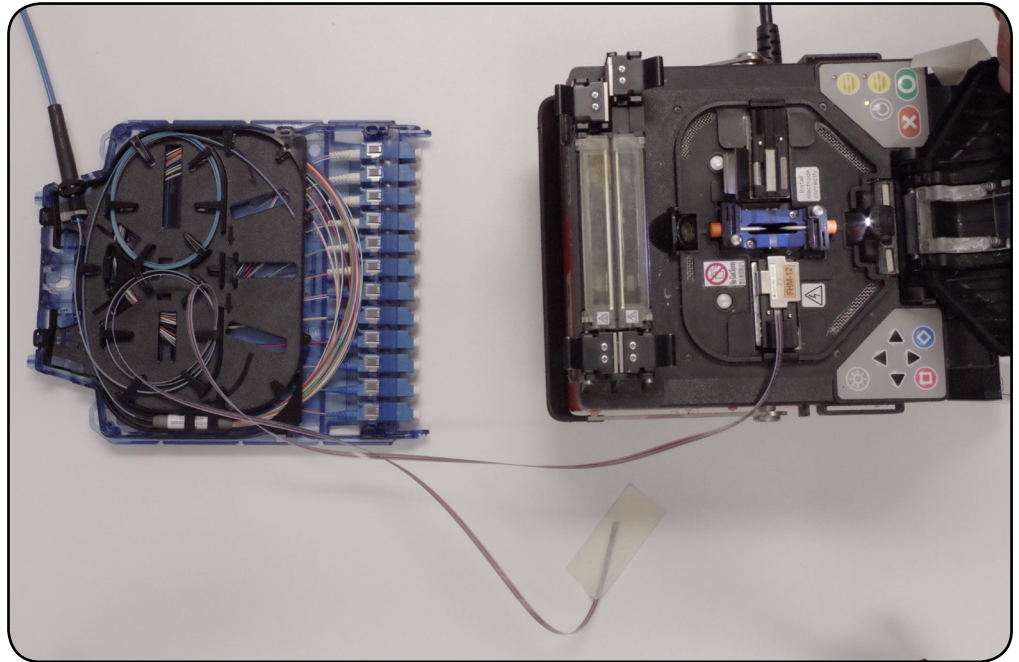


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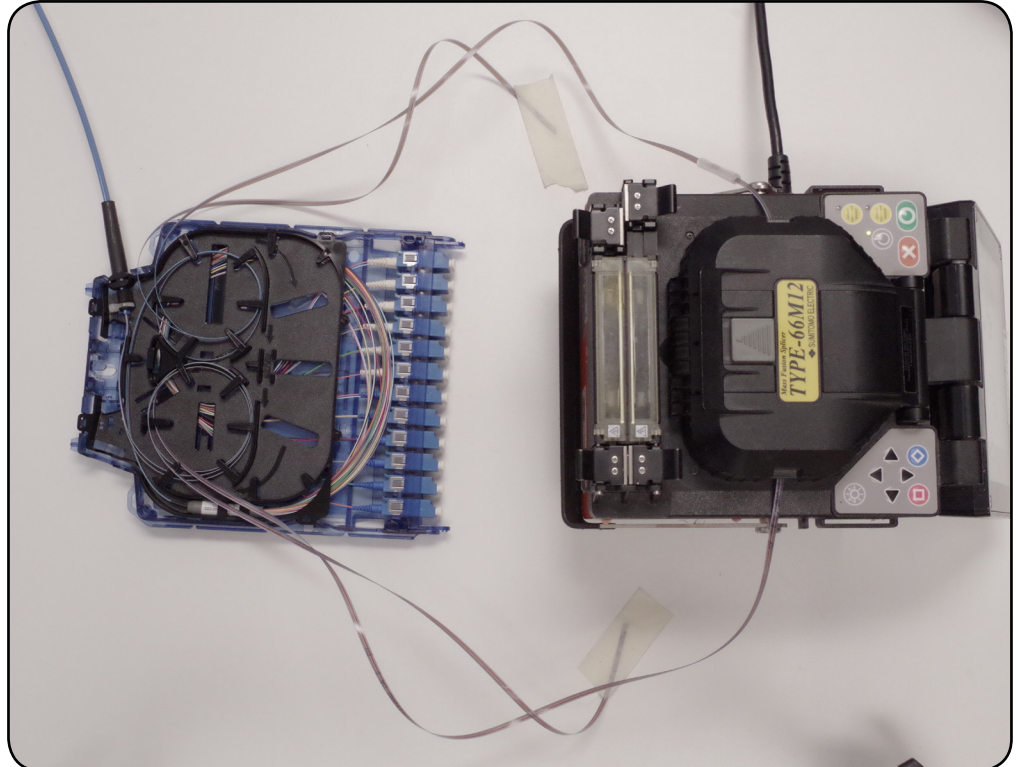
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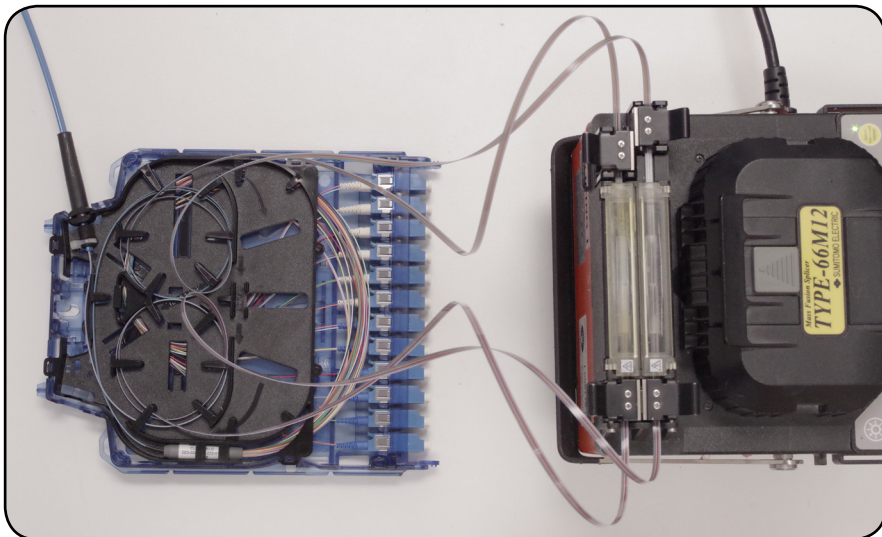
6. Separate the ribbons, taping ribbon #2 (fibers 13-24) down to the table. **Make sure to maintain the correct number of twists in the ribbon.**
7. Prep ribbon #1 (fibers 1-12) and place it in the splicer to hold it in place.



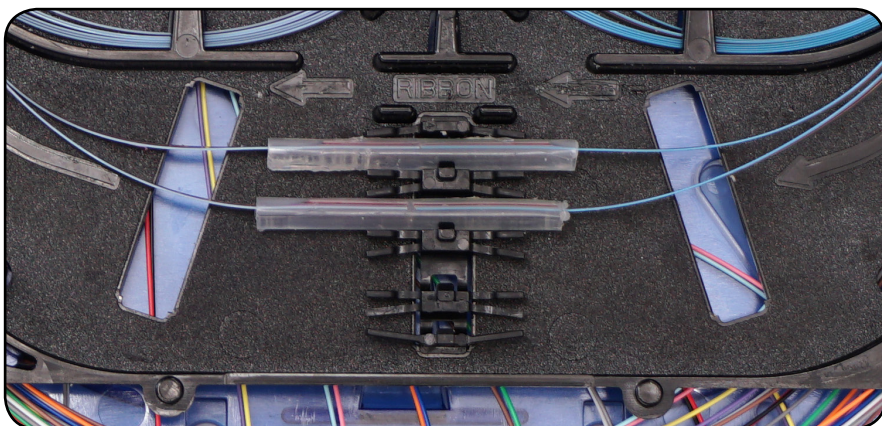
8. Repeat the process on the other side with the pre-loaded ribbons, remembering to maintain the twists in both ribbons



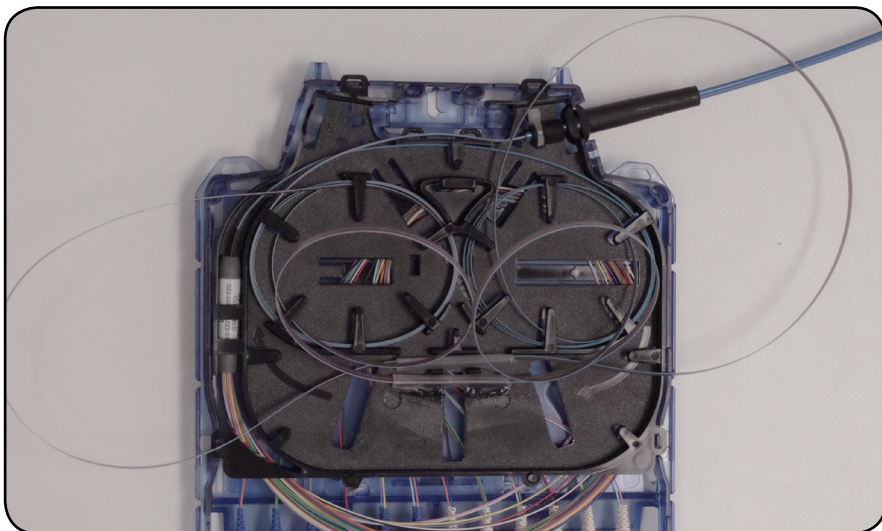
9. Once you have performed your splice, secure the splice sleeve to prevent it from flipping over, either by placing it in the ribbon splice sleeve chip or the splicer's splice sleeve oven.
10. Proceed to splicing the two #2 ribbons together, maintaining the twists.



11. Place both splice sleeves in the ribbon splice sleeve chip.



12. Prepare to route the ribbons into the two slack storage chambers of the splice tray. On each side, it is recommended to keep the two ribbons together and start routing from the end of the ribbon furthest from the splice.



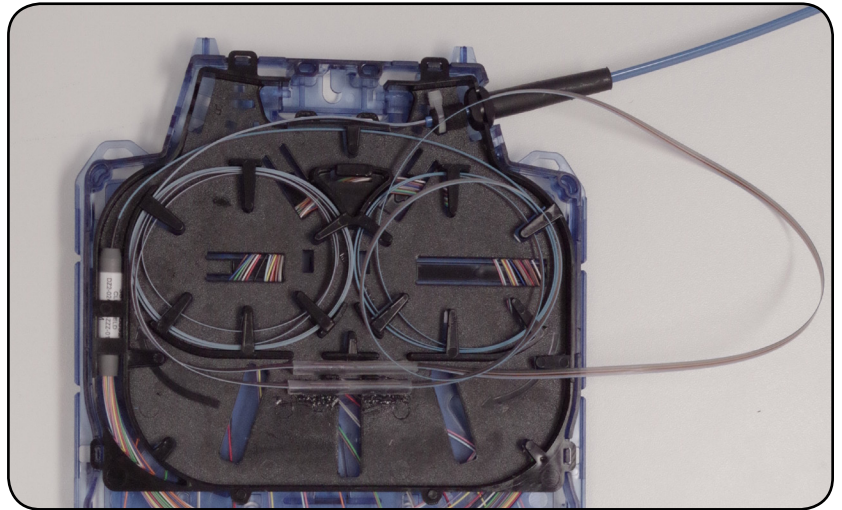
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13. Starting from the end of the ribbon coil furthest from the splice, work to coil the ribbons back into the slack storage chamber.

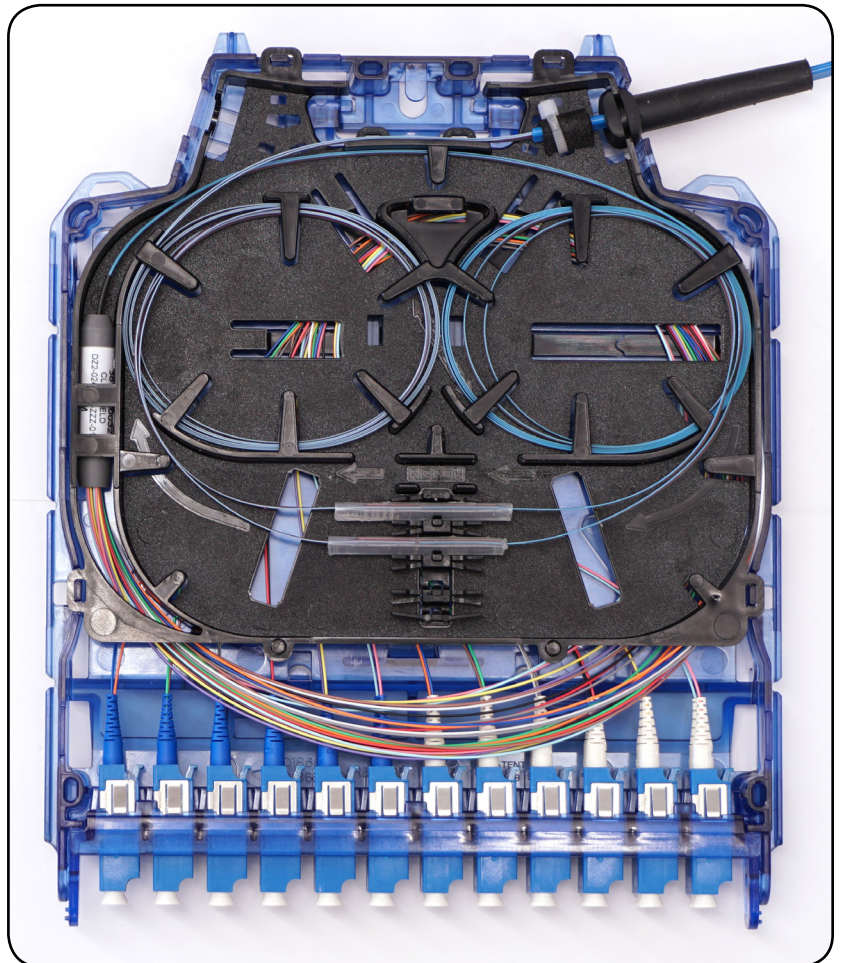
Note: You may need to flip over the ribbons to get the twists back to the correct orientations to coil nicely back into the tray.



14. Repeat the process for the other side.

Note: Make sure the fiber is routed fully underneath the splice tray fiber management tabs as shown.

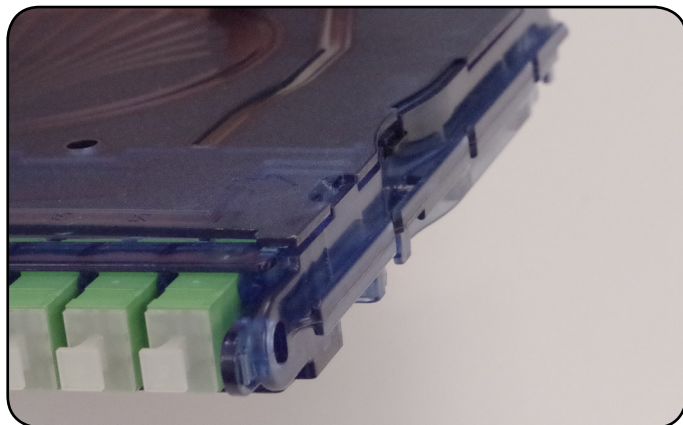
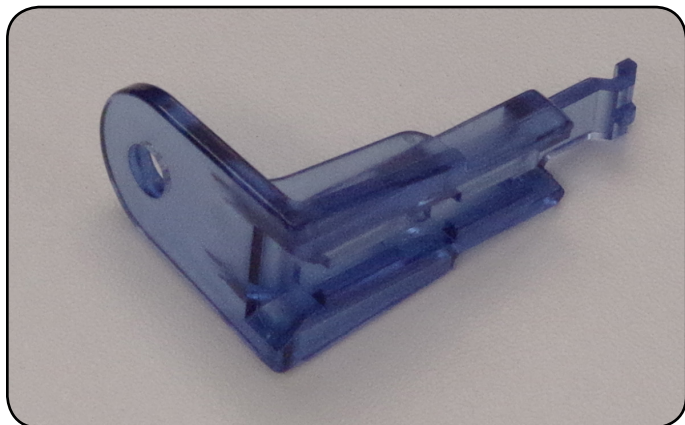
15. Replace the splice tray cover and cassette cover.
16. If utilizing the cassette's slack storage capabilities, refer back to the slack storage section.



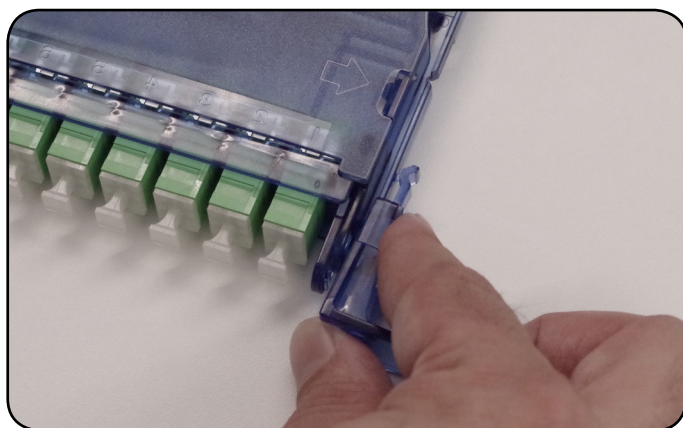
Mounting Options

Mounting Ears

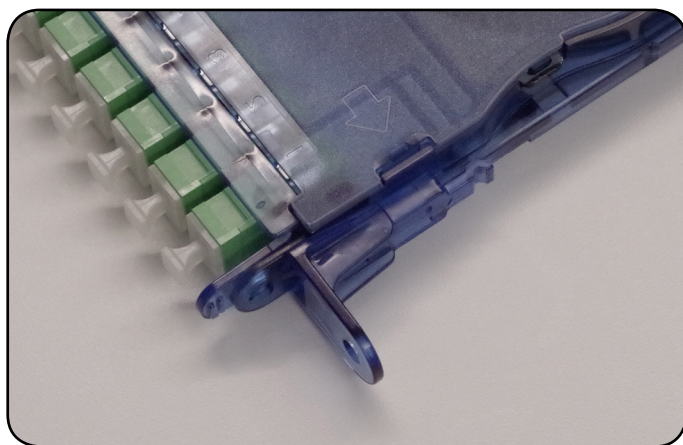
1. The mounting ears will attach to the Clearview Blue Cassette by sliding into place along the t-rails on the sides of the cassette.



2. To attach the mounting ear onto the cassette, align the channel on the side of the mounting ear with the t-rail on the side of the cassette.
3. Press the mounting ear firmly against the t-rail, allowing the lever to flex back and the t-rail to engage with the channel on the mounting ear.



4. Slide the mounting ear up to the t-rail until it comes to a stop and the lever is fully seated into place in the first notch on the t-rail.
5. Repeat for the other side.



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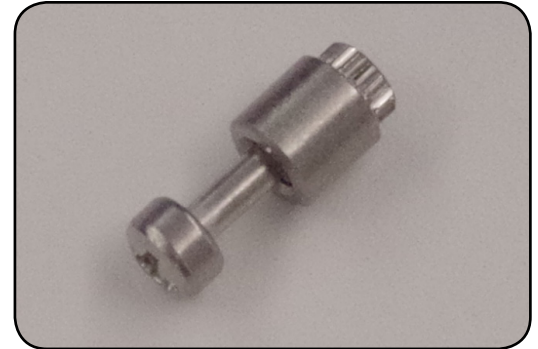
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Retaining Screws

1. Place the retaining screws into the correct side of the mounting ears depending upon which product the cassette will be installed into.

Note: For use in some products, such as cabinets, screws will be mounted into the back of the mounting ears.



2. The ridged front edge of the retaining screw will push into place in the hole located on the tab of the mounting ear.

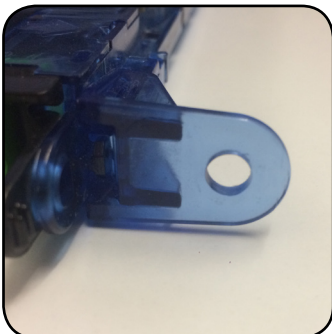
Note: Do not twist the retaining screw into place, push the screw straight in.

3. Repeat the process for the other side and proceed to mounting the cassette.



Push/Pull Plungers

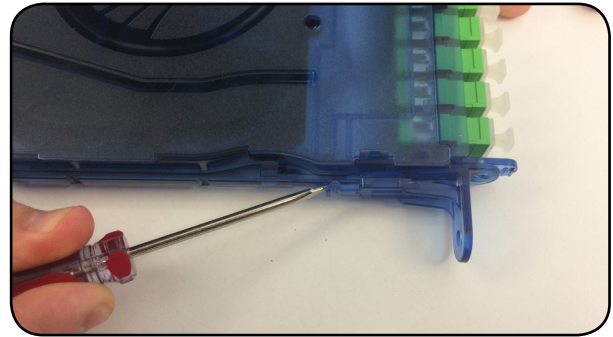
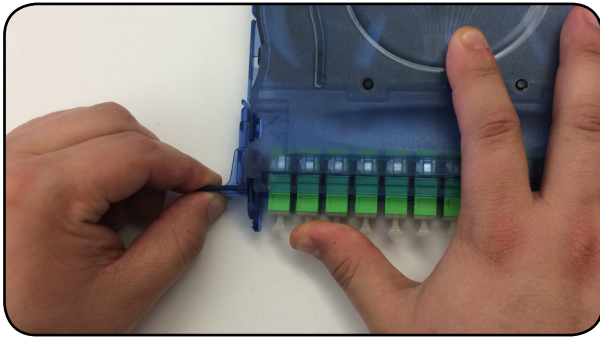
1. If the push/pull plunger is not already installed, insert the first piece of the push/pull plunger (grommet) into the hole in the mounting ear.
2. Follow that by installing the second piece (plunger) of the push/pull plunger into the hole of the first piece.
3. Push the plunger in until it clicks into place, then pull back until the expansion of the grommet disengages.
4. If necessary, repeat the process for the other side.



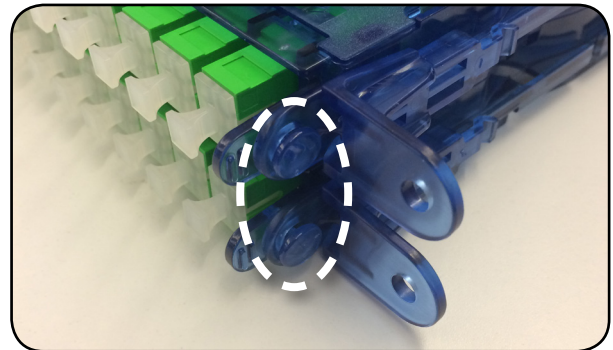
Removing Mounting Ears

1. In order to remove the mounting ears from the Clearview Blue Cassette, grab the mounting ear by the tab and pull in a straight line along the t-rail towards the front of the cassette.

Note: This will take some force, which is intentional. If you are unable to remove it simply by pulling, you may use a tool to release the lever from its notch and then proceed to pulling the mounting ear off the cassette.

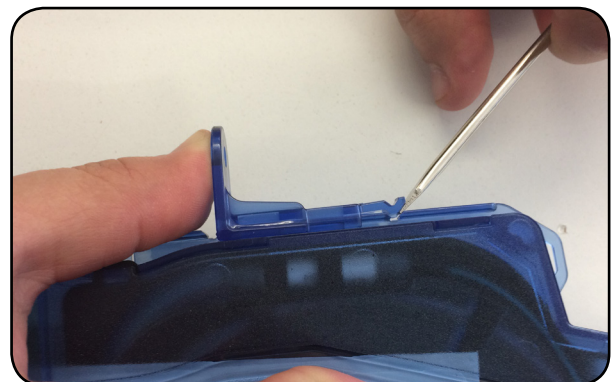
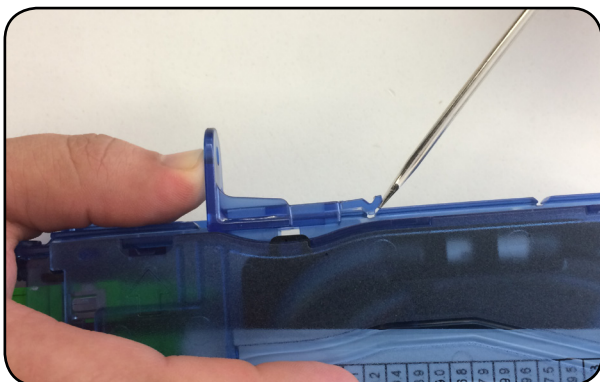


2. If you are attempting to remove the mounting ears from an Optical Component Cassette, or any cassette which uses the Expansion Ring to increase its height, such as the 24 SC Expansion Cassette, the adapter plate will be held into place via locking pins. These will prevent you from removing the mounting ears off the front of the cassette.



3. In order to remove the mounting ears from cassettes which feature locking pins, you will have to pull them off of the back side of the cassette. Use a tool to release the lever from each of the 3 notches in the t-rails along the way as you slide the mounting ear towards the back of the cassette.

Note: Clearfield does not recommend removing the locking pins from these cassettes.



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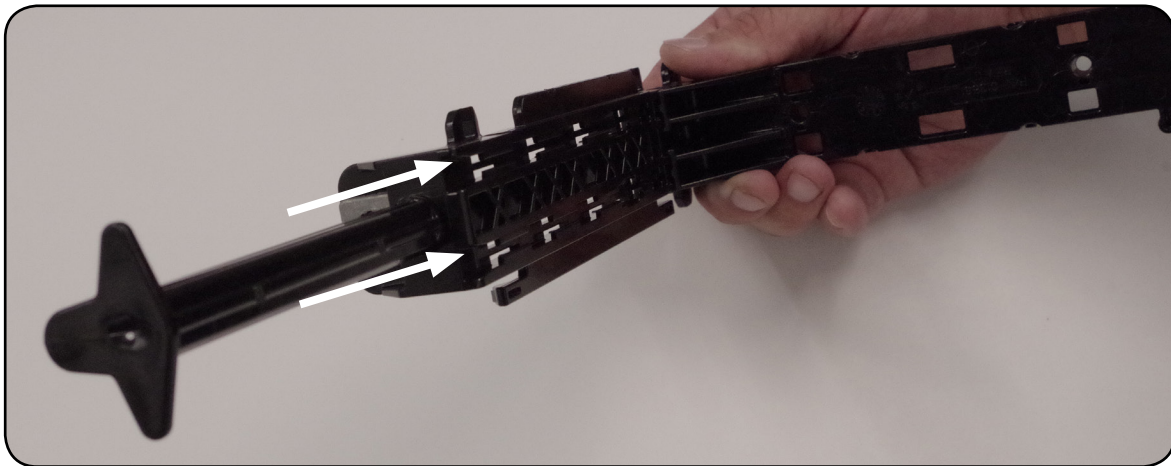


Ganging Bracket

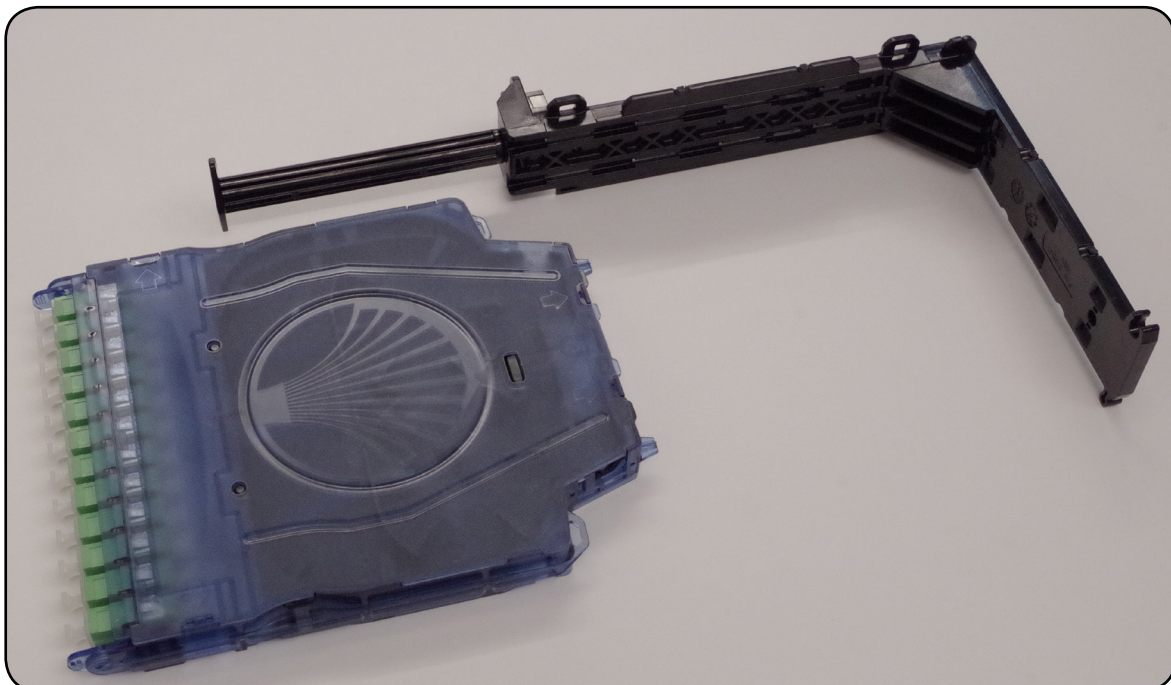
In select products, such as the FxHD Frame, the Clearview Blue Cassette will mount into place with a ganging bracket. Each section of ganging bracket, which are stackable, can hold two Clearview Blue Cassettes and are removable.

The ganging bracket utilizes the cassette's t-rail to hold the cassette in place in conjunction with connection points on the back of the cassette.

Notice the channel on the inside of the ganging bracket, meant for sliding the t-rail of the cassette into.



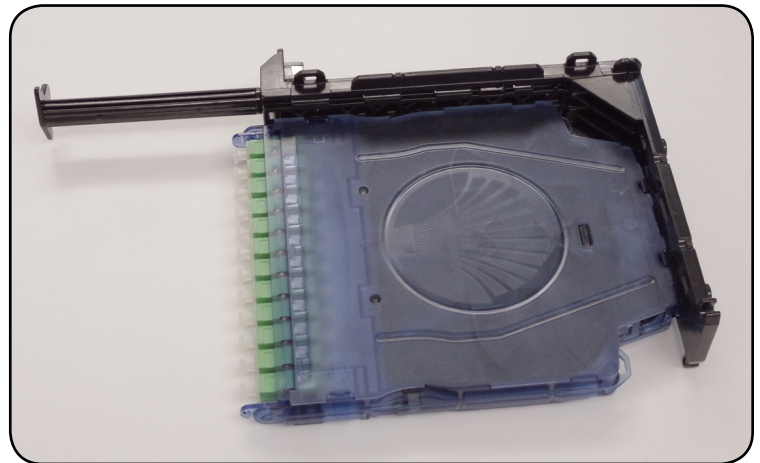
1. Line up the cassette with the ganging bracket.



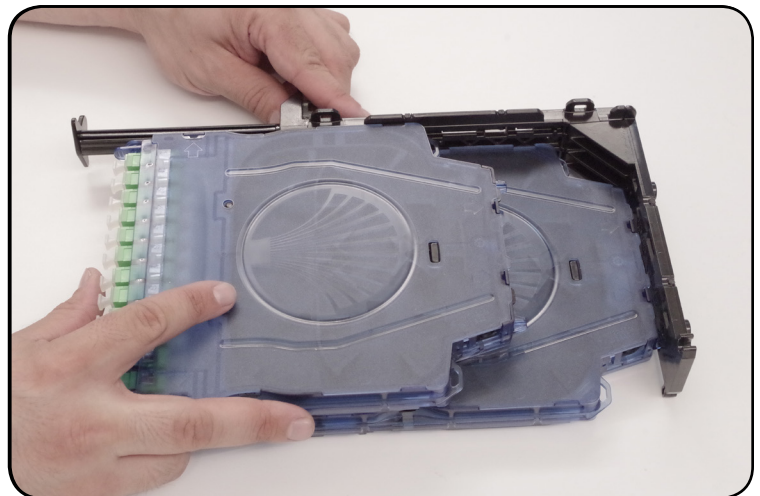
2. Engage the cassette's t-rail with the channel in the ganging bracket, and slide the cassette forward.



3. Push until the cassette snaps into place.



4. A second cassette will slide into place in the remaining slot of the ganging bracket.



Clearview Blue Cassette

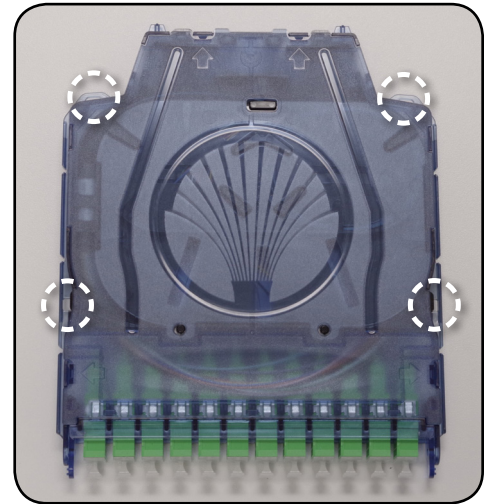
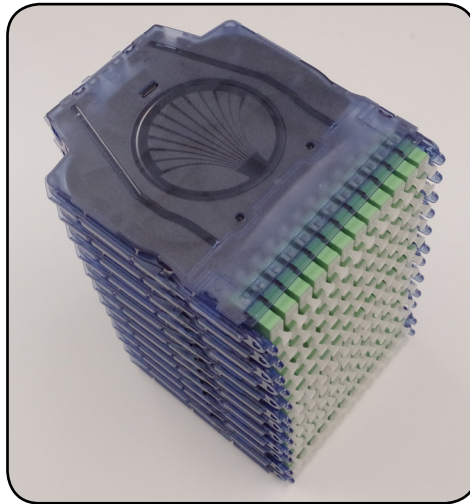
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Ganging Cassettes

The Clearview Blue Cassette has the ability to be ganged together with multiple other cassettes with cable ties to create a single block that is easier to handle. You can create blocks of any size, though 12 is typical and what will be shown here.

1. Stack the cassettes you wish to gang together.
2. The Clearview Blue Cassette has four points along the outside of the cassette meant for securing the cassettes together, one on each side behind the t-rail and two on the back.



3. Align the cassettes as best as possible and feed a cable tie up through all the cassettes you wish to gang together.
4. Using another cable tie, secure the first cable tie in place.



5. Trim the excess from both cable ties.
6. Repeat these steps for the other 3 cable tie locations to completely secure the block of cassettes.

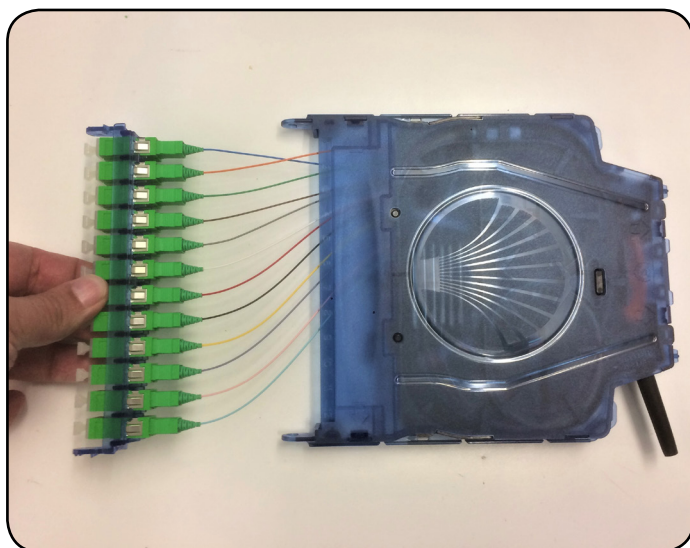
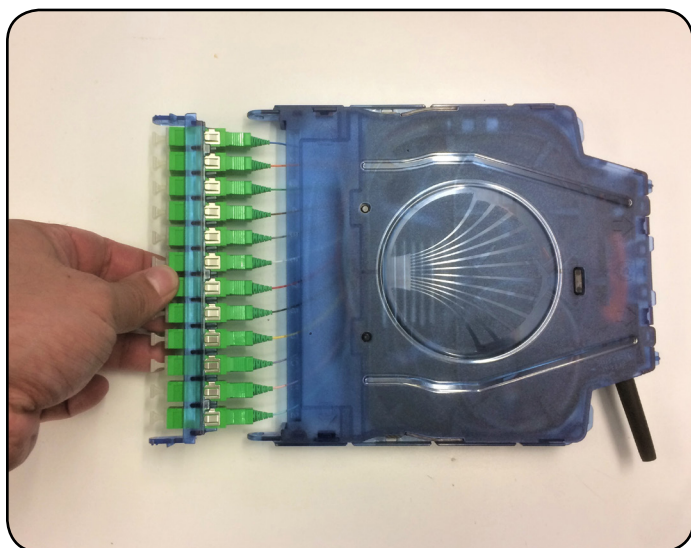
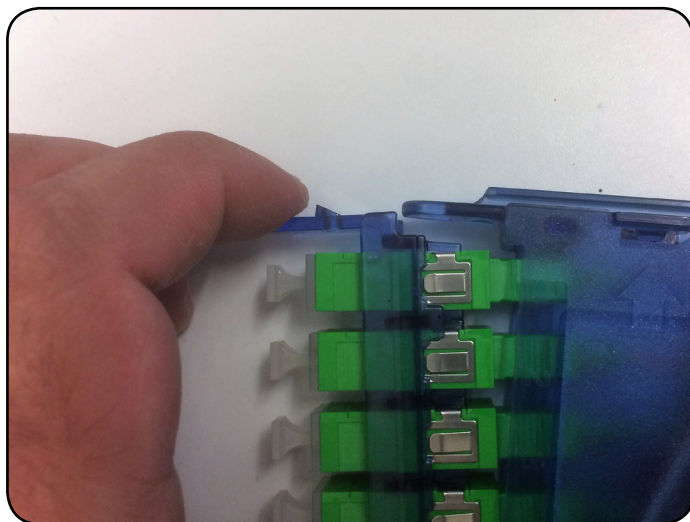
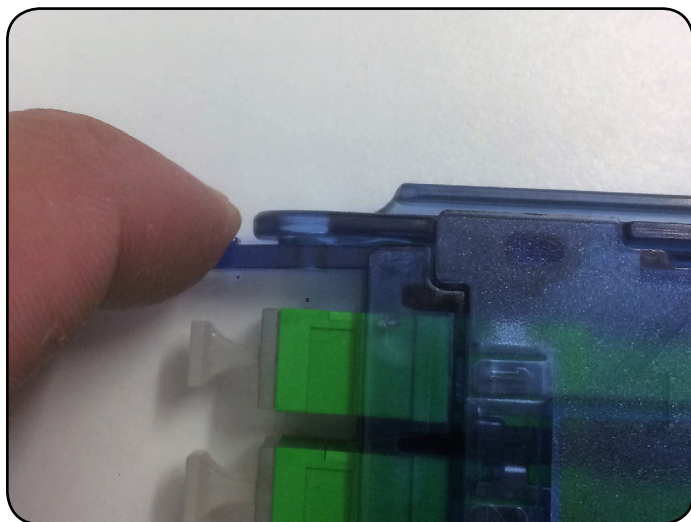


Removing the Adapter Plate/Testing

To release the adapter plate from the cassette base, press on one of the tabs on the side of the adapter plate to release the notch from the cassette base, and pull away.

In the event that you need to remove the adapter plate to access the connectors inside the cassette or the back side of the adapters, Clearfield recommends only pulling the adapter plate out a maximum of four inches.

Note: When reinstalling the adapter plate into the cassette, take care not to push the fiber slack back into the cassette too quickly. If necessary, pull back slightly and then resume pushing as needed, in order to prevent slack buildup.



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Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance inspect, and if necessary, clean connectors and adapters prior to mating.

Inspect Then Connect

These are Clearfield recommended products/applications. Use the product you feel will complete your cleaning procedures. Create a “best practice” for your company and follow those procedures.

The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

Before cleaning any connector, be sure you know what type of contaminate you are cleaning (dry, fluidic, or combination). All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean “dirt” can lead to scratching of the end face. Learn the process of cleaning properly.

Note: It is **NOT** recommended to use isopropyl alcohol to clean the end face.

Cleaning an SC/LC Connector

Cleaning the End Face

- Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen. (Figure 1)
- Apply small amount of precision cleaner (about 1” in diameter) with Electro-Wash MX pen on to one end of the wipe. (Figure 2)
- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (Figure 3)
- Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

Note: **DO NOT** retrace previous step.



Figure 1



Figure 2



Figure 3

Cleaning the Ferrule

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. **(Figure 4)**

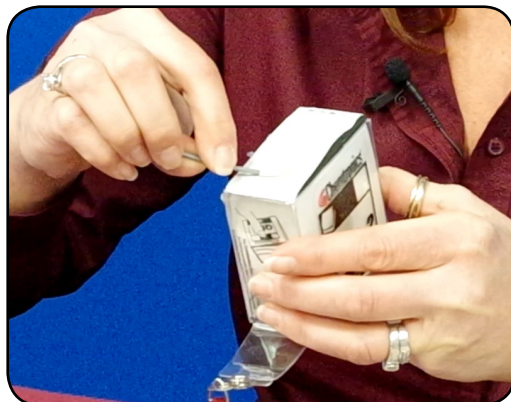


Figure 4

- Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. **(Figure 5)**



Figure 5

Cleaning the Mate Through an Adapter AND the Adapter Itself

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.
- Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.
- Dry with a second dry swab.
- Inspect, repeat cleaning if necessary, and test for signal strength.
- Use additional swabs to clean inside the actual adapter. Moisten swab, like above, and insert through hole and remove while twisting. **(Figure 6)**

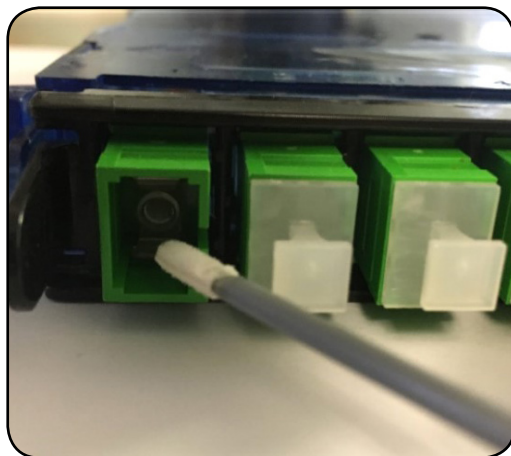


Figure 6

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Cleaning an MPO/MTP Connector

Female Connector

- Place one wiping paper on QbE-2 FiberSafe™ Cleaning Platen and apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. **(Figure 1)**



Figure 1

- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. **(Figure 2)**

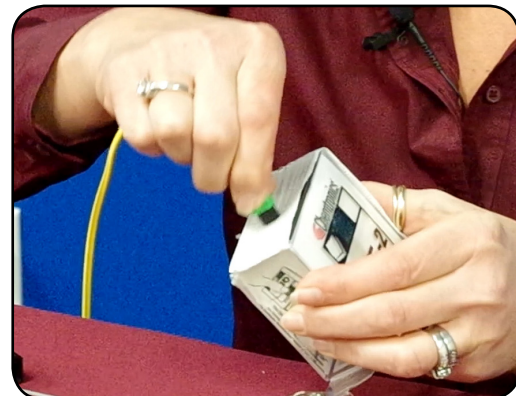


Figure 2

Male Connector

- Lightly moisten one side of the fiber optic swab (CC505F) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5.
- Place swab, wet side down, at one end of connector end face and draw across in a diagonal sweep; i.e., from fiber 1 up and across to fiber 12. Turn swab over to dry and draw back from fiber 12 to fiber 1. **(Figure 3)**



Figure 3



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Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years; Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

1. Customer must contact Clearfield and obtain a Return Materials Authorization
2. Following authorization, the Customer ships the product-freight collect to Clearfield's manufacturing facility
3. Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective at Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: <https://www.seeclearfield.com/warranty.html>

Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
2. Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
4. Customer's improper or negligent use or application of Product
5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product

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Its purpose is to provide the user with adequately detailed documentation to efficiently install the equipment supplied. Every effort has been made to keep the information contained in this document current and accurate as of the date of publication or revision.

However, no guarantee is given or implied that the document is error free or that it is accurate with regard to any specification.

Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

Clearfield, Inc.
7050 Winnetka Ave N
Minneapolis, MN 55428

Toll Free: 800.422.2537
Phone: 763.476.6866
Fax: 763.475.8457

Customer Support: sales@clfd.net
Technical Support: techsupport@clfd.net