COMMSCOPE®

Installation Instructions

NOVUX™ Fiber Optic System
CC 150 Branch Application

About this manual

This manual describes the installation steps of the branch application of the Compact Closure 150 series. Installation steps in this document are limited to: branch cable installation, routing on and to the different trays and splicing on the different trays.

Installation steps of the feeder cables are explained in manual TC-1514-IP: CC 150 Basic Instructions.
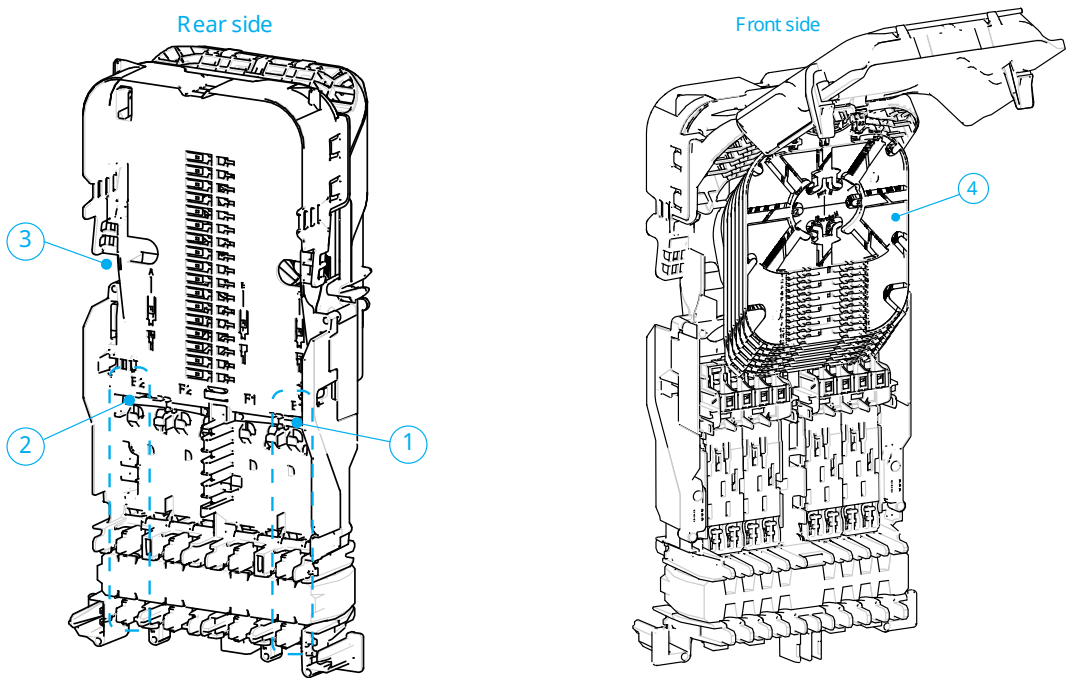
The document starts with providing an overview of the tools required to perform the installation. Also warnings and cautions are indicated, which should be observed before starting the product installation.

Images in this manual are for reference only and are subject to change.
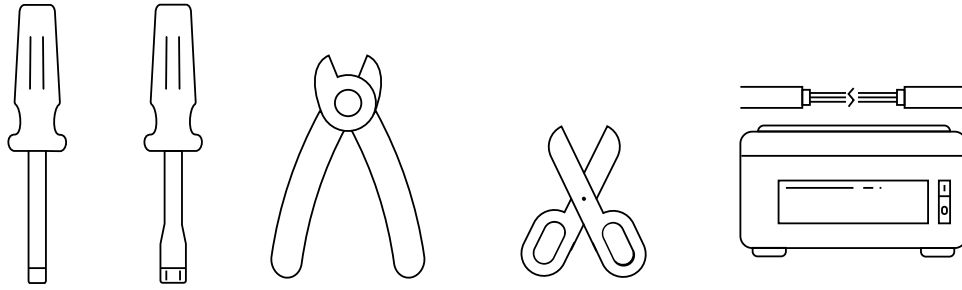
General product information

	Quantity
Branch cable entry ports	up to 2 (cable diameter 6-18 mm / 0.24-0.71 Inches) up to 4 (cable diameter ≤ 8 mm / 0.32 - 0.32 Inches)
Splice capacity (branch)	up to 72 splice protectors (splice protector length is up to 45 mm /1.77 Inches)

Organizer overview

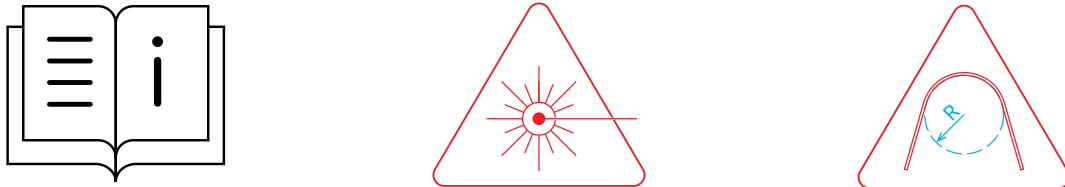Rear side   Front side

1   Branch cable position 1
2   Branch cable position 2
3   Transition zone subunit branch cable
4   Splice trays

1   Tools branch
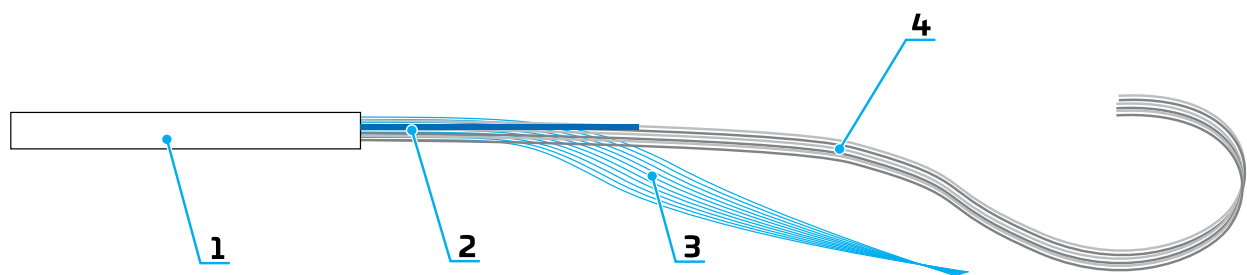
2   Warnings and Cautions

- Follow the installation instruction steps to ensure the performance of the closure. It is necessary to take precautions and keep the working space clean to protect the closure sealing materials and splices.
- Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fiber. Do not assume the laser power is turned off or that the fiber is disconnected at the other end. Looking into the ends of any optical fiber is entirely at your own risk. A protective cap or hood MUST be immediately placed over any radiating adapter or optical fiber connector to avoid the potential of dangerous amounts of radiation exposure. This practice also prevents dirt particles from entering the connector and adapter.
- Fiber optic cables may be damaged if bent or curved to a radius that is less than the recommended minimum bend radius. Always observe the recommended bend radius limit when installing fiber optic cables, subunits and patch cords.
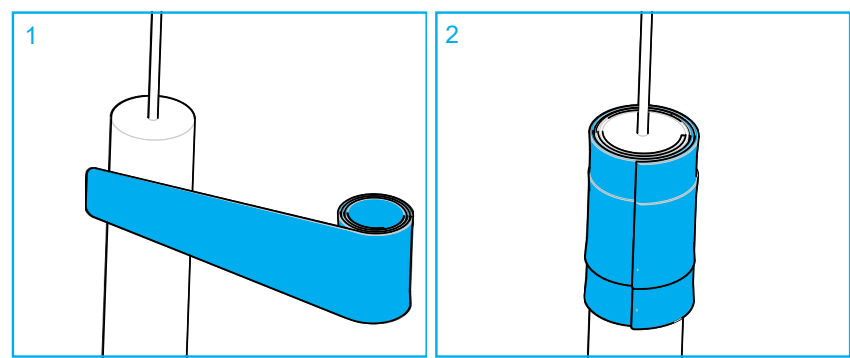
3 Install branch cable

3.1 Prepare cable (6 - 18 mm / 0.24 - 0.71 Inches)
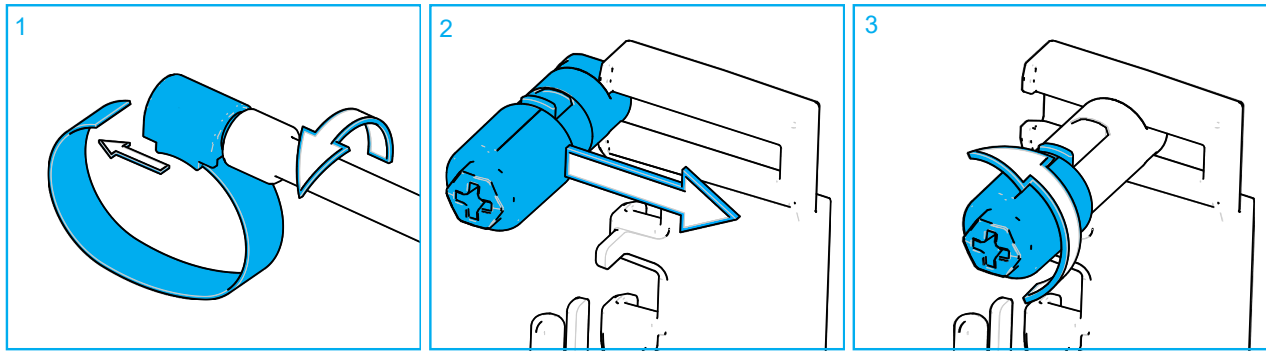
3.1.1 Prepare cable

N.°	Description	Preparation
1	Jacket	Remove the jacket over a distance of 135 ±2,5 cm / 53 ±1 Inch
2	Rigid Strength members	Leave 4,5 ±0,5 cm / 1.6 ±0.2 Inches. 📄 *Note:* Max diameter = 4 mm / 0.16 Inches. Minimum diameter = 1 mm / 0.04 Inches
3	Aramid yarn	Leave 20 ±1 cm / 7.9 ±0.4 Inches of aramid yarn.
4	Subunits	Clean the subunits, remove grease if present.

📄 *Note:* Make sure your hands are clean and degreased before preparing and installing the cables. Degrease the cable where the cable will enter the closure.
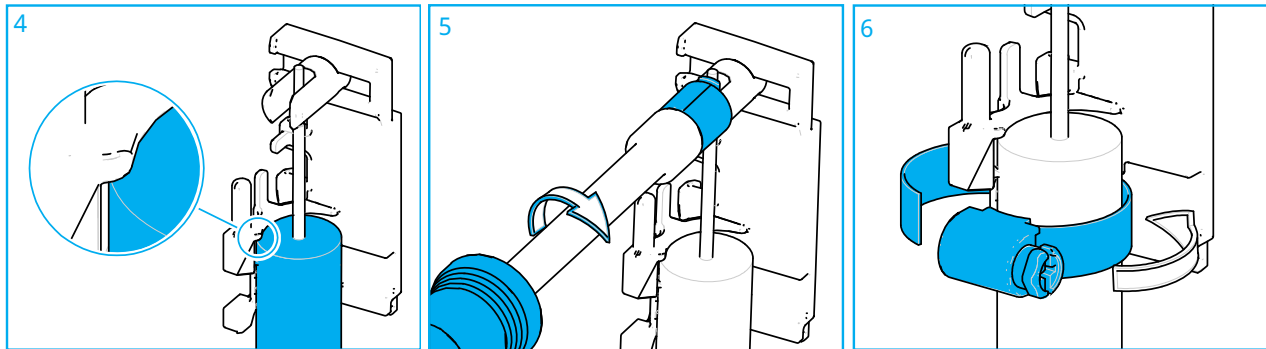

1   If the diameter is smaller than 9 mm / 0.35 Inches or if the jacket is a thin jacket, add 5 wraps of silicon tape (width 2,5 cm / 1 Inch).
2   Stretch the tape minimum 50% while wrapping the tape around the cable. Make sure the tape is wrapped where the hose clamp will be positioned.
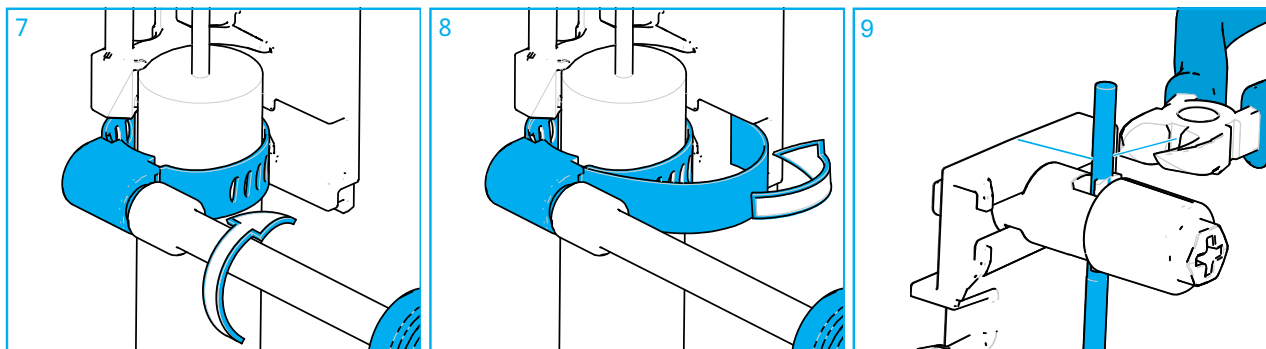
3.1.2 Rigid strength member

1 Open the hose clamp completely and put aside.
2 Slide the strength member fixation nut into the groove of the bracket.
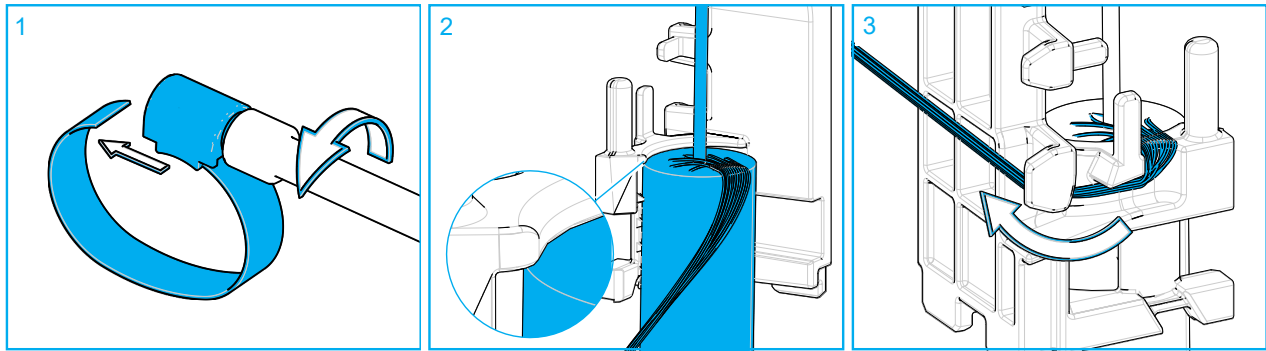3 Remove the top part of the strength member fixation nut.

4 Position the cable on the bracket (cable jacket positioned against the rib) and slide the rigid strength member into the opening of the strength member fixation nut.
5 Reposition the top part on the strength member fixation nut and secure using a socket wrench.
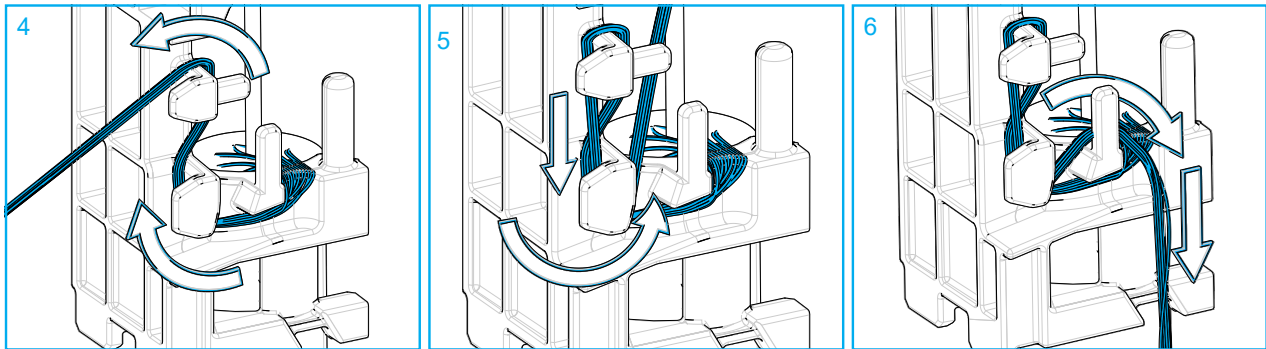6 Install the open hose clamp into the bracket.

7 Tighten the hose clamp with the hex 7 socket wrench.
8 Excess band must be pushed into the slot between the cable and the bracket.
9 Cut off excess rigid strength member at the bracket edge, if applicable.

3.1.3 Aramid yarn
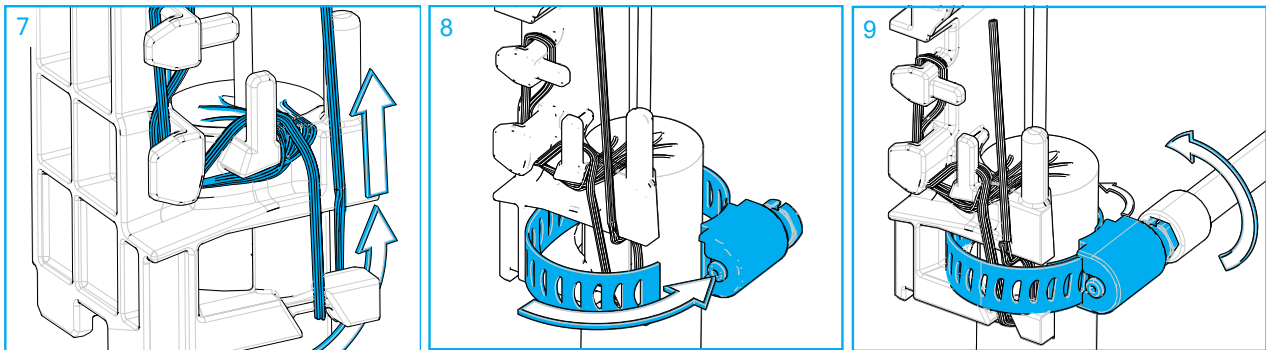

1 Open the hose clamp completely and put aside.
2 Position the cable on the bracket (cable jacket positioned against the rib).
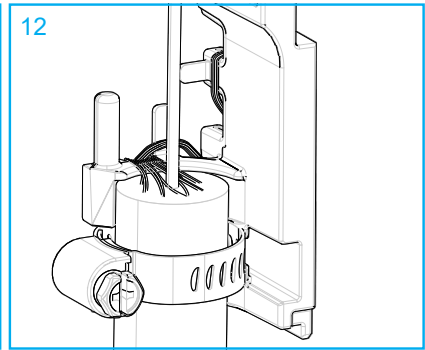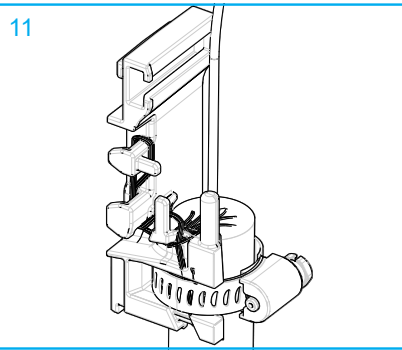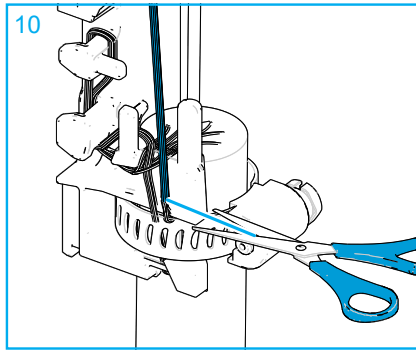3 Pull the aramid yarn to the side. For easier routing twist the yarn. Put the yarn under tension.

4 Route the yarn over the stud and around the first hook. Continue routing the yarn behind the second stud.

📑 *Note:* Keep the aramid yarn under tension during the routing.

5 Route the yarn down again, returning under the first hook.
6 Route the yarn over the stud further down.

7 Make a turn around the hook at the bottom and come back again. Keep the aramid yarn under tension.
8 Install the open hose clamp into the bracket around the cable and the aramid yarn, while keeping the aramid yarn under tension.
9 Tighten the hose clamp with the hex 7 socket wrench. Excess band must be pushed into the slot between the cable and the bracket.
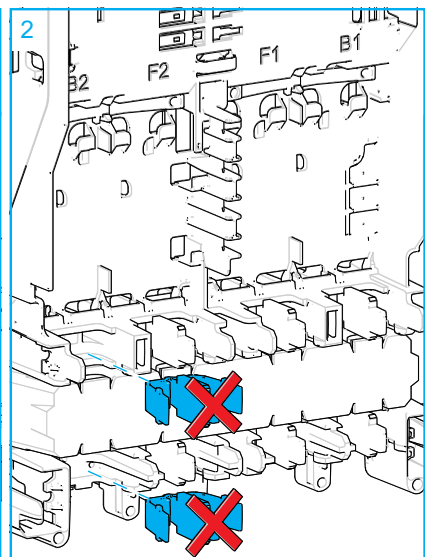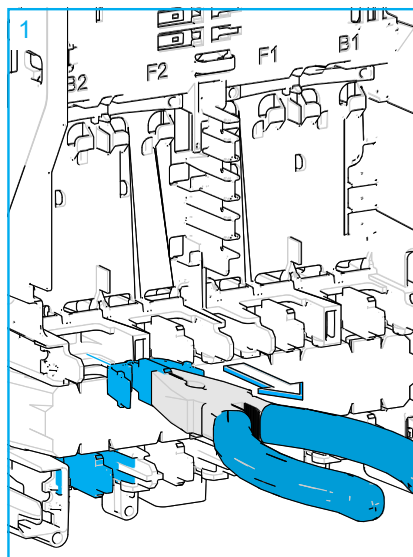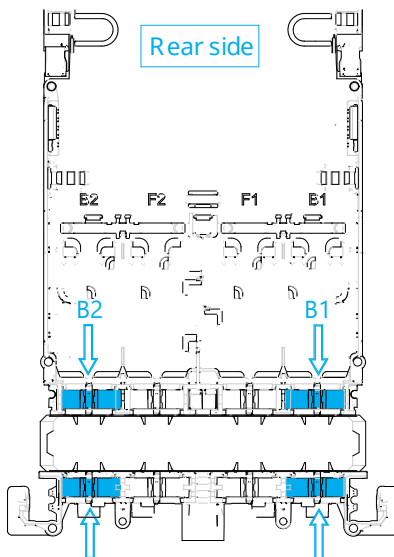
10 Cut off excess aramid yarn.
11 Installation completed.
12 Installation completed.
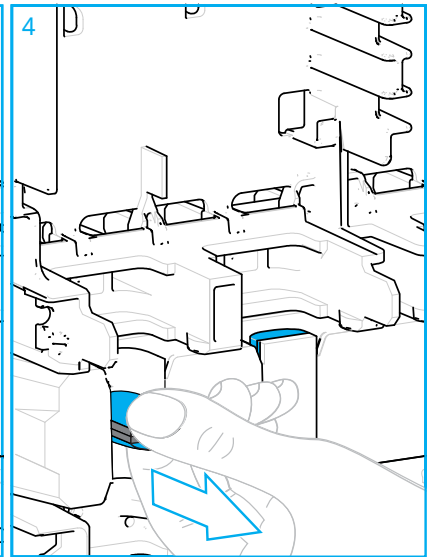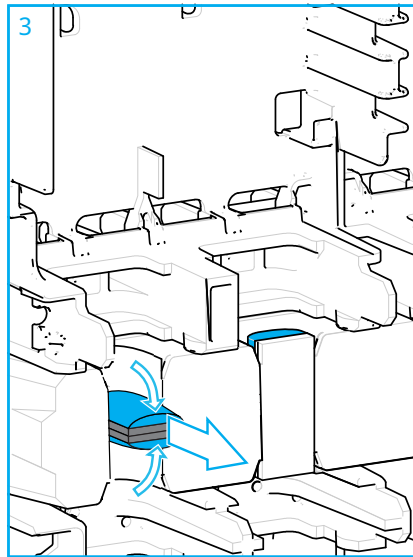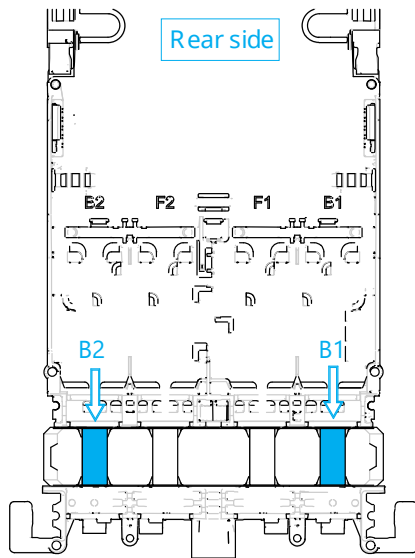
3.2 Port reducers and gel cups

Port reducers are installed above and below the Octopus™ gel seal. Depending on the cable diameter, the port reducers and gel cups should remain or need to be removed.
If the cable diameter is **less than or equal to 14 mm / 0.55 Inches**: keep the two port reducers and the gel cups in place. In this case, continue with the next section. Steps below are not applicable.
If the cable diameter is **more than 14 mm / 0.55 Inches**: remove the two port reducers and the gel cups of the respective port. In this case, continue with the steps below.
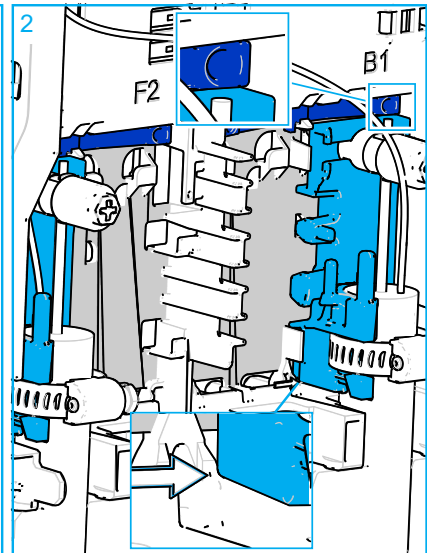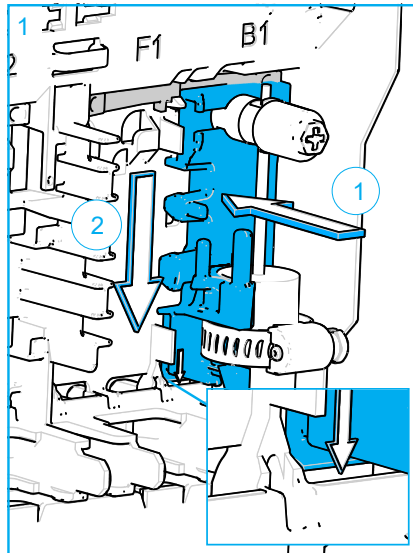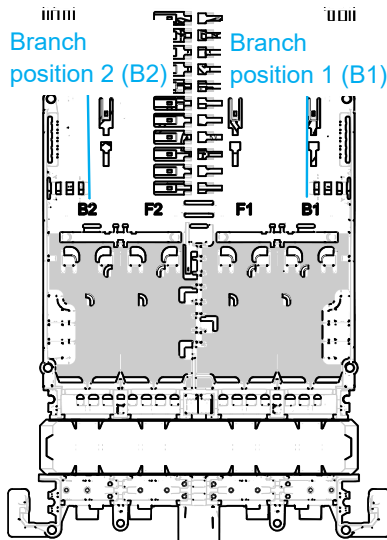

1 Lift up the two port reducers at the both sides of the Octopus™ gel seal with a pair of pliers.
2 Remove both parts of the respective port. (Example 2 parts for branch position B2)

3 To remove the gel cups, fold the top and bottom piece together.
4 Manually pull out the gel cups.

3.3   Install branch cable (6-18 mm/ 0.24-0.71 Inches)

1 Install the branch cable (with its cable retention) into the organizer. A branch cable will typically be installed in position B1 or B2.
2 The cable retention bracket snaps into the interface plate of the organizer.

📄 *Note:* Check that the bracket is correctly positioned behind all the locking features in the organizer. (See illustration 2.)

📄 *Note:* For a cable with diameter less than or equal to 14 mm / 0.55 Inches, install the cable at the left side of the port reducer middle flange, in line with the retention bracket. The middle flange of the port reducer will be pushed to the right side if needed.

3.4 Cable diameter up to 8 mm / 0.32 Inches

2 cables of a diameter up to 8 mm / 0.32 Inches can be installed in one branch position: 1 cable will be positioned at the left side of the middle flange of the port reducer and 1 at the right side. This provides a maximum capacity of in total 4 branch cables.

Note: Use in this case one of the following cable retention kits: NVX-CR-TI-SM-NN (Cable retention: Aramid), NVX-CR-MC-RD/FT-NN (Cable retention: Jacket (Mclip)) or NVX-CR-SA-SM-NN (Cable retention: Rigid strength member).

Important: Remove the jacket over a distance of 135 ±2,5 cm / 53 ±1 Inches. Prepare the cable as explained in the corresponding instructions.

Note: In all these cases, keep the port reducers and gel cups in place.

Note: The extra grid / interface plates are available as a separate accessory kit.

1 Slide the grid plate into the organizer. Position it above the tabs. Then slide the grid plate downwards until it snaps.
2 Grid plate fully installed.
3 Example of 2 NVX-CR-MC-RD-NN installed. (1 cable positioned at the left side of the middle flange of the port reducer and 1 at the right side.)

3.5   Routing to splice tray

3.5.1   Subunit stripping point

1   Route the branch subunits to the front side via the transition zone at the left side (B2) .
2   Mark the subunit at the stripping point and remove the tube per local practice.

3.5.2   Foam and cable tie

📋 *Note:* If the subunit is thicker than 2.7 mm / 0.1 Inches or if more than 6 subunits should be installed, use foam and cable tie. Foam not included.

1   Prepare all subunits, wrap a layer of foam around the bundle.
2   Slide the cable ties into the cavities under the foam.

📋 *Note:* Make sure that the cable tie head ends up on top of the foam bundle.

3   Secure the bundle with two cable ties. Cut off excess cable tie band.

4   To add a subunit, remove one cable tie.
5   Wrap a layer of foam around the subunit(s) to be added. Add the subunit(s) with foam to the bundle.
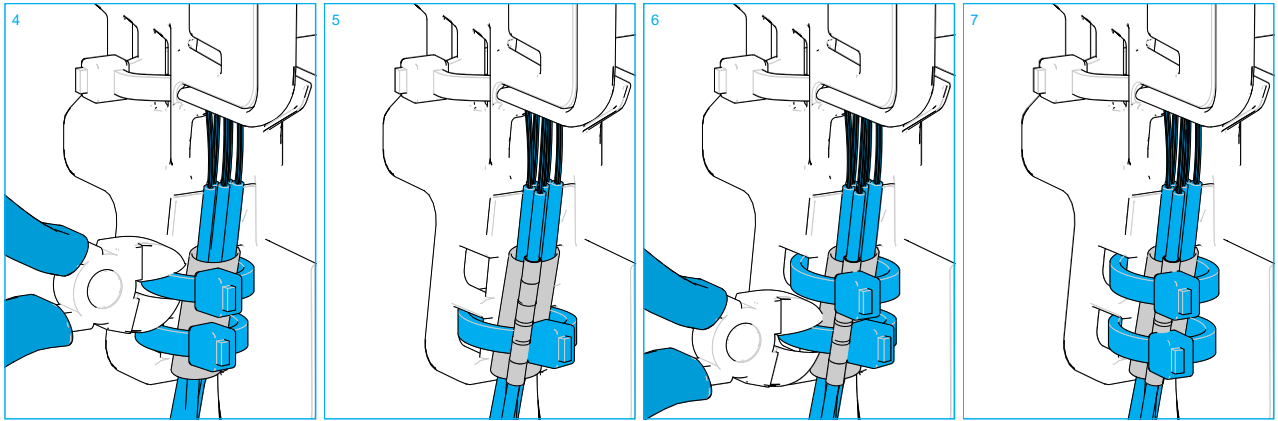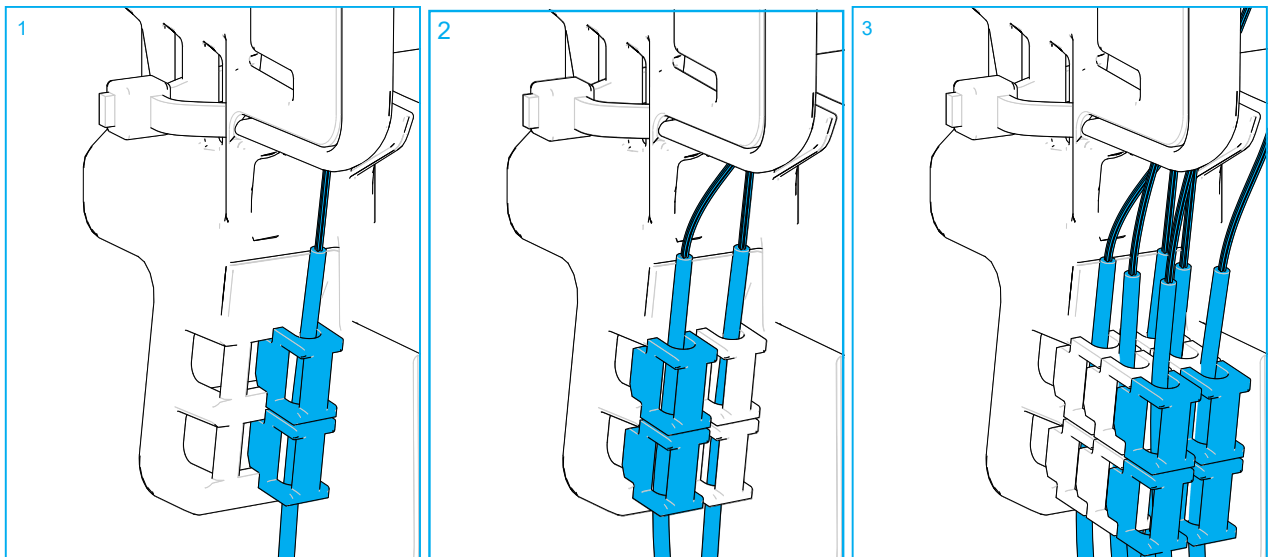6   Secure the new bundle with a new cable tie to the existing bundle and cut away the second existing cable tie.
7   Secure a second cable tie around the new and existing bundle.

3.5.3   Tube holder

1   Take the first subunit and secure it to the organizer with two tube holder clips. Start at the inside position.
2   To add the next subunit, take two new tube holder clips and install them on top of or next to the already installed subunit.

📒 *Note:* Maximum 2x3 subunits with a maximum diameter of 2.7 mm / 0.1 Inches can be installed per transition side.

4   Splice branch cable

4.1   Routing to splice tray

1   Route the fibers from the interface plate, under the lips, to the tray using the corresponding groove.
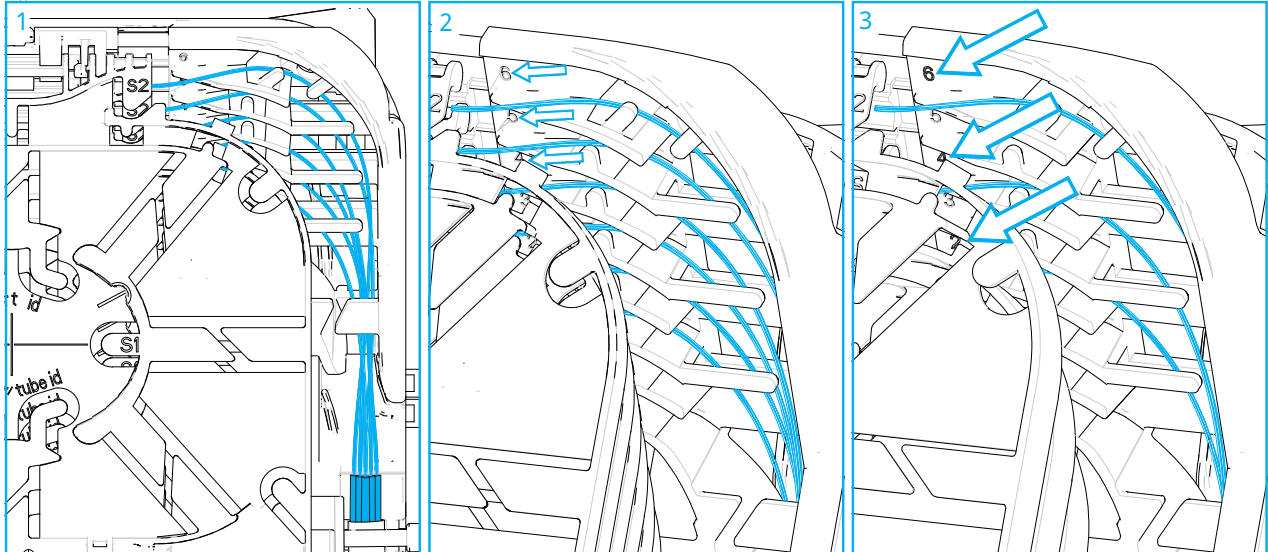2   For the 4 mm tray, use every groove. Groove 6 corresponds with the top tray, groove 5 with the tray below and so on.
3   For the 8 mm tray and the 8,5 mm tray, leave a groove open between two trays. Groove 6 corresponds with the top tray, groove 4 corresponds with the second tray and groove 2 corresponds with the third tray.

4   Overview of feeder fibers and branch fibers entering the top tray.

4.2 SF slim tray with island, inmolded splice protector holders (4 mm)

📄 *Note:* Two tray types are available: NVX-4H-SF-TRAY-S45 with integrated smouv45 holders and NVX-4H-SF-TRAYANT with integrated ANT holders. Figures below show the NVX-4H-SF-TRAY-S45.

1. Make splice per local practice and store the splice protector in the first splice protector holder location (top). Store the over lengths in loops in the over length storage area respecting following rules:
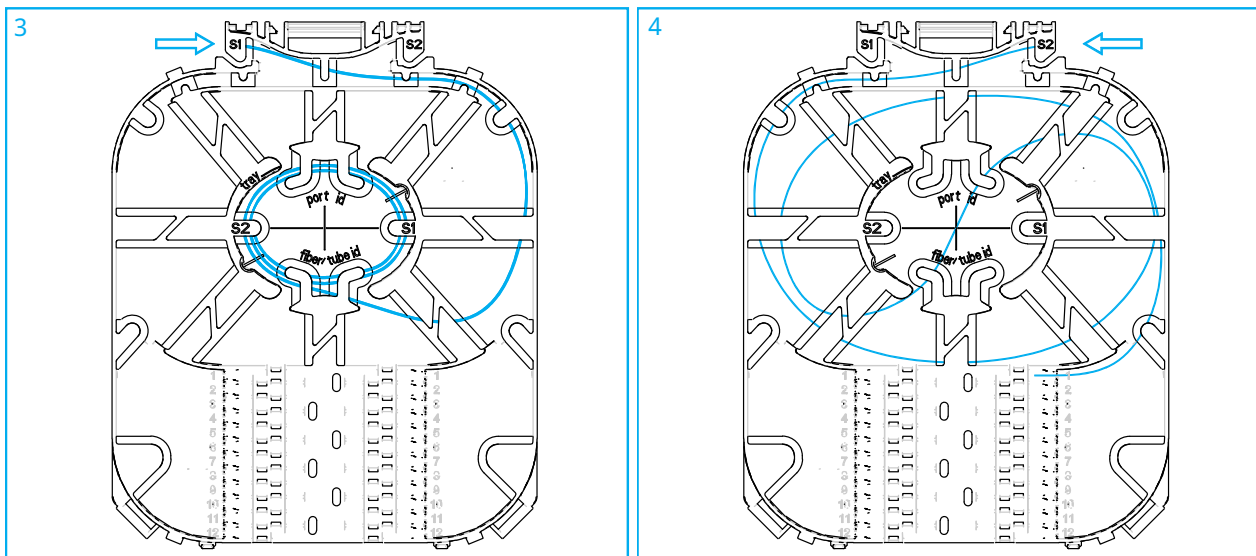
   - The fibers may not be routed too tightly around the middle circle.
   - Avoid bulging of the fiber.
   - Make sure all fibers are properly positioned under the lips.

2. This tray has following specifications:

   - The tray entrance can hold **maximum 2 900µm fibers**.
   - The tray can hold 1 layer of **12 splice protectors length 45 mm / 1.77 Inches**.
   - In the middle area of the over length storage there is the possibility **to mark port id and fiber/tube id** with a permanent marker.
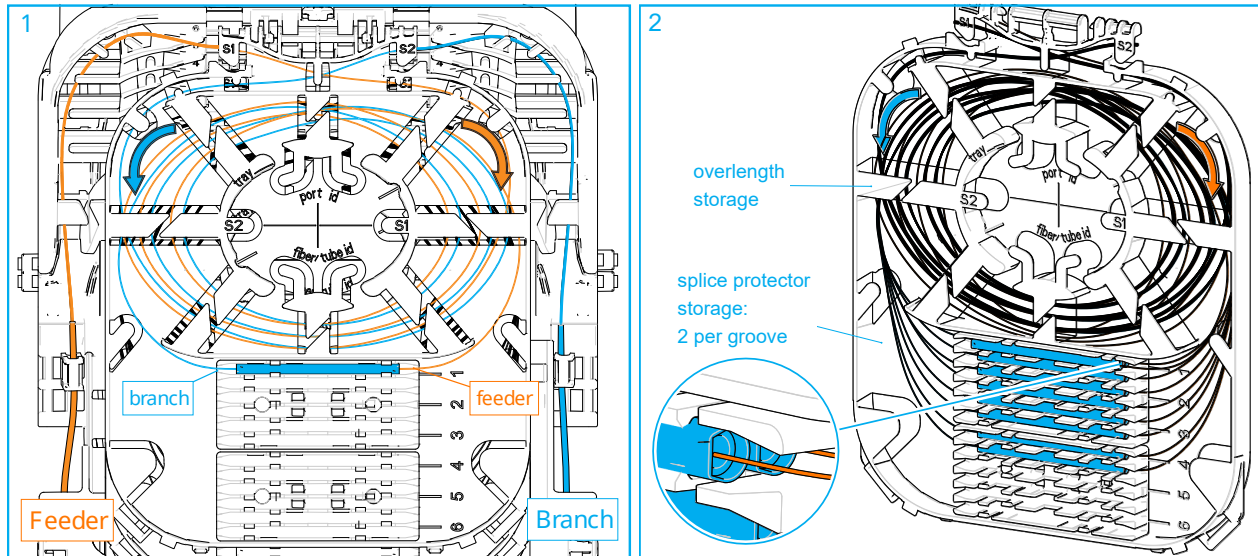

3. The middle circle can also be used to store dark fiber.
4. Crossings on the tray are possible as shown in illustration 4.

📄 *Note:* The fiber guidance pen can be used to position all the fibers under the lips.

4.3   SF tray with island, assembled splice protector holders (8 mm)

📄 *Note:* Two tray types are available: NVX-SF-TRAY-S45 with assembled smouv45 holders and NVX-SF-TRAY-ANT with assembled ANT holders. Figures below show the NVX-SF-TRAY-S45.
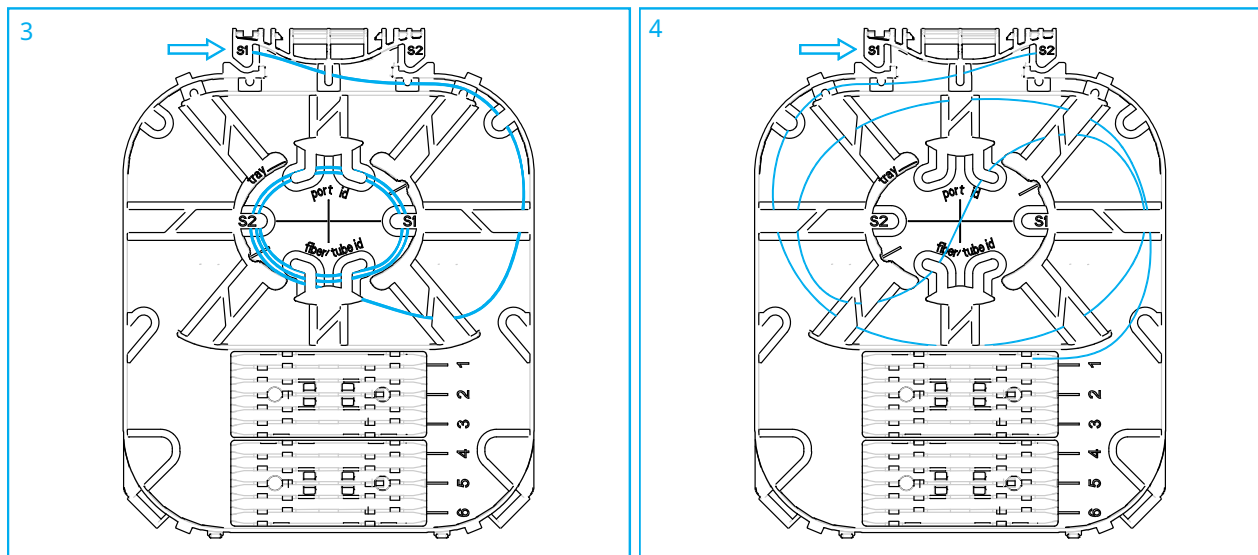

1. Make splice per local practice and store the splice protector in the first splice protector holder location (top). Store the over lengths in loops in the over length storage area respecting following rules:

   - The fibers may not be routed too tightly around the middle circle.
   - Avoid bulging of the fiber.
   - Make sure all fibers are properly positioned under the lips.

2. This tray has following specifications:

   - The tray entrance can hold **maximum 8 900μm fibers**.
   - The tray can hold **24 splice protectors length 45 mm / 1.77 Inches** (2 layers of each 12 splice protectors).
   - In the middle area of the over length storage, there is the possibility **to mark port id and fiber/tube id** with a permanent marker.
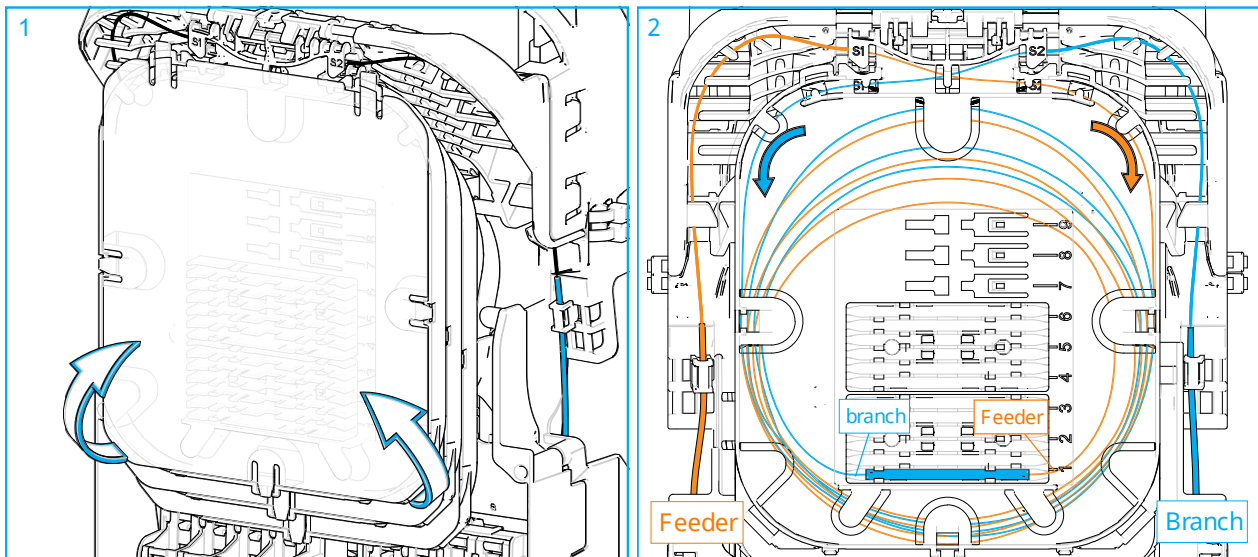

3. The middle circle can also be used to store dark fiber.
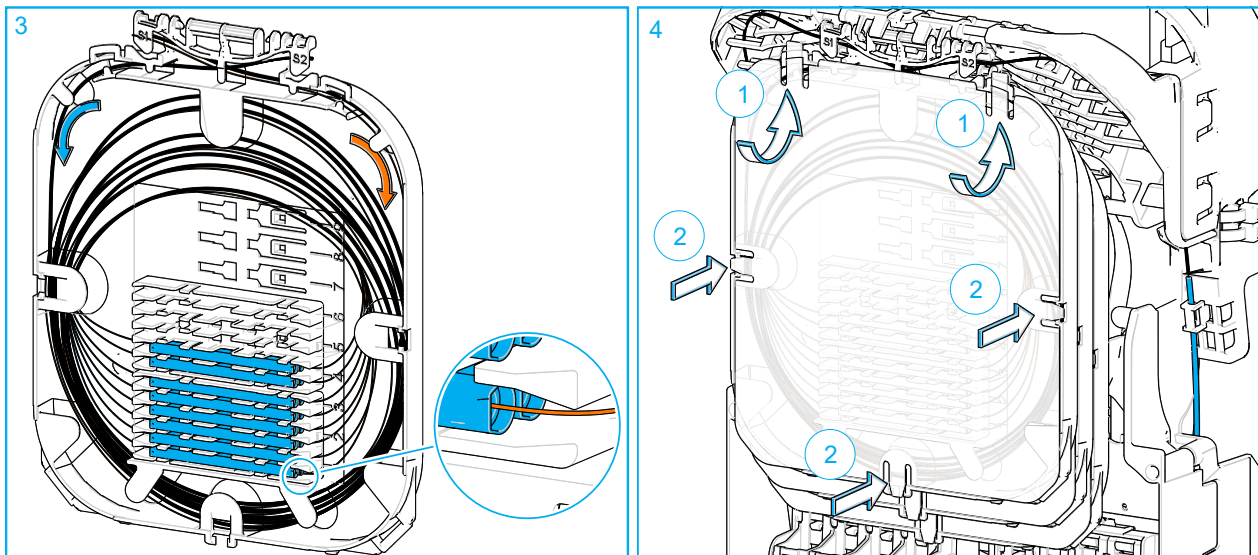4. Crossings on the tray are possible as shown in illustration 4.

📄 *Note:* The fiber guidance pen can be used to position all the fibers under the lips.

4.4 SF tray with open routing

1 These trays come with a protection cover. Remove the protection cover to access the splice area.
2 Make splice per local practice and store the splice protector in the first splice protector holder location (bottom). Store the over lengths in loops in the over length storage area respecting following rules:

- Make sure fibers are not routed too tightly around the splice protector holder.
- Avoid bulging of the fiber.
- Make sure all fibers are properly positioned under the lips.

📄 *Note:* The fiber guidance pen can be used to position all the fibers under the lips.

3 This tray has following specifications:

- The tray entrance can hold **maximum 8 900µm fibers**.
- The tray can hold up to **24 splice protectors length 45 mm / 1.77 Inches** (2 layers of each 12 splice protectors).

4 Reinstall the protection cover.

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