COMMSCOPE®

Mini-OTE 200

INSTALLATION INSTRUCTION

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www.commscope.com

Mini-OTE 200

Content

1 General

1.1 General Product Information

CommScope's Mini-OTE 200 closure is a gel sealed fiber optic enclosure designed for splicing, termination and pass-through cable requirements in fiber-to-the-X (FFTx) architectures.
The closure is available in 4,6, and 8 port versions DLX and 4 and 6 port versions full size hardened adapters; the housing is available in 2 colors, black and gray.
The terminal is designed for use in wall, pole or handhole applications.
The closure has a maximum capacity of 24 splices, 2 trays of 12 splices each and contains an additional tray for fiber storage. The terminal housing provides loop storage for microsheath or loose tube cable.
The Mini-OTE 200 allows for butt configurations with 4 wrap-around ports for multiple combinations of looped feeder cable (Ø 4 - 15 mm) and branch-off cable (Ø 4 - 9 mm) where the feeder cables are positioned at the outside ports and the branch-off cables at the inside ports. TENIO cable attachment is included as well as an external cable fixation integrated on the housing to absorb external forces on the cable.

1.2 Cable types

The Mini-OTE 200 is designed for microsheath or loose tube cables with an outside diameter up to 15 mm, and flat cable:

Feeder cable	Ø 4 -15 mm
Branch off cable	Ø 4 - 9 mm and flat (4.5x8.1 mm)

Fiber types include single fiber 250micron.

1.3 Symbols for this guide

	**Note**	Presents useful information related to Installation Guide contents, the references and data related to the product's use, etc.
	**Caution**	Describes situations where data loss and incorrect product operation may occur, and provides proper actions to take in these situations.
	**Warning**	Describes a situation where product damage and user injury may occur, and provides proper actions to take in these situations.

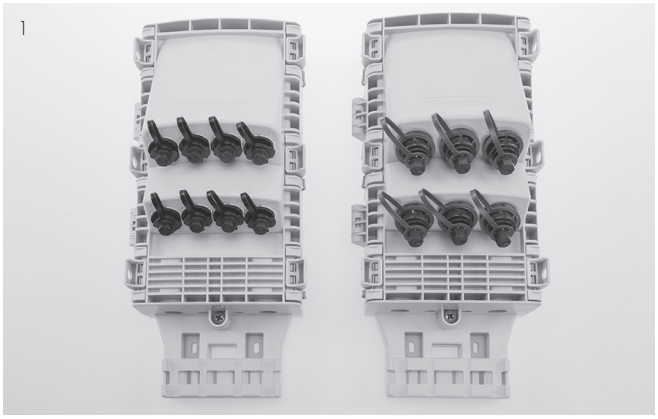
2 Tools required

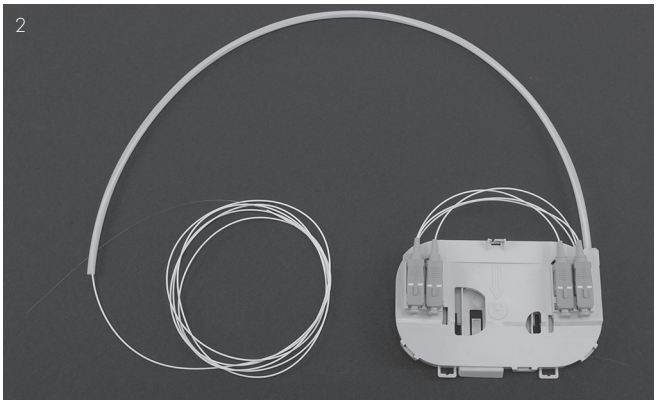
Socket wrench 8 (maximum outside Ø15mm) (mounting closure to wall)
Socket wrench 1/4'' (hose clamps)
Phillips screw driver
Scissors, Cutting pliers
Stripping tools, shaving tools, cleaning alcohol and other tools required to prepare cables

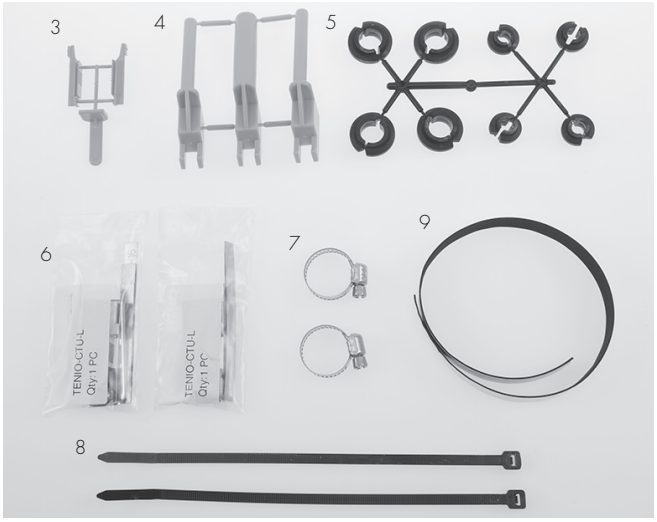
3 Part list

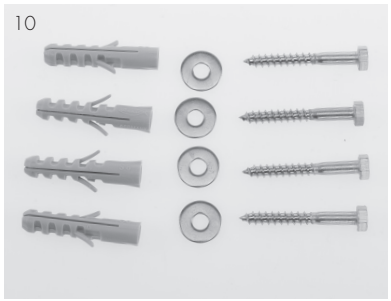
Item #	Description
1	Mini-OTE200 enclosure: DLX or full size hardened adapters
2	Point-to-point module Splitter module (More details, check ordering guide/ kit content)
3	Raster with tube guidance + storage lip
4	Raster with 3 blind plugs
5	Raster with rings

Item #	Description
6	CTU
7	Hose clamps
8	Tie wrap
9	Foam strip
10	Wall mounting kit









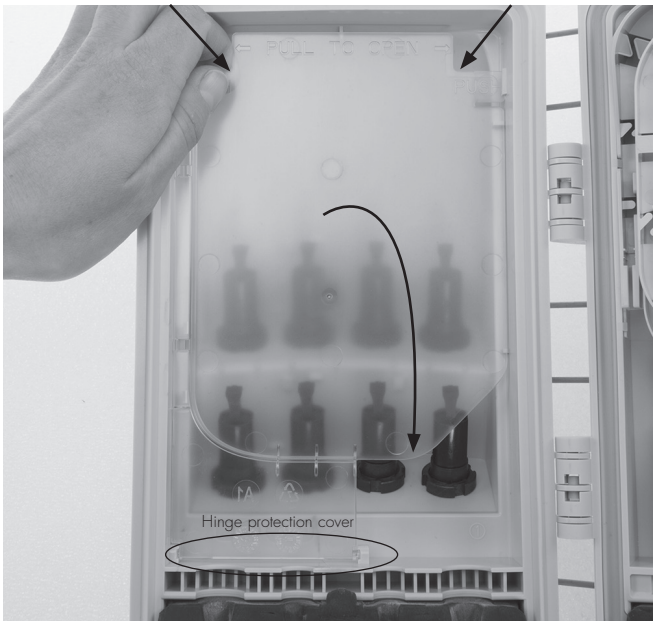
4 Supplementary kit

Item #	Description
1	Extra CTU
2	Gel inlet
3	Pole mounting kit

5 Installation splitter/point-to-point module

5.1 Slide in module

Open protection cover by pulling (see arrows) and hinge protection cover downwards.
Locking features to lock the module in the top cover are encircled on the picture.

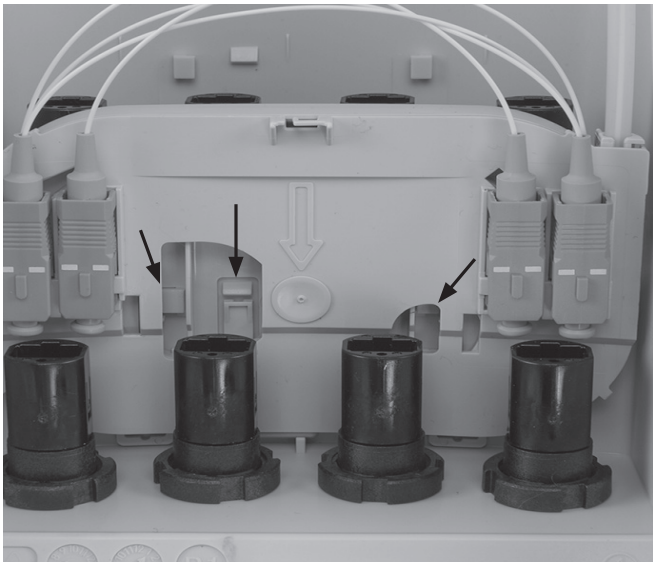


Visually check through openings in the cover of the module if hooks are well locked. Check during and after installation of the module.

DLX		Full size hardened adapters	
Front position	Back position	Front position	Back position
Point-to-point module (port 1-4)	Point-to-point module (port 5-8)	Point-to-point module (port 1-3)	Point-to-point module (port 4-6)
Splitter module (1x4) (port 1-4)	Point-to-point module (port 5-6)	Splitter module (1x4) (port 1-4)	
	Splitter module (1x4) (port 5-8)		
	Splitter module (1x8) (port 1-8)		

Fiber color code (standard international sequence):
Port 1: blue - port 2: orange - port 3: green - port 4: brown - port 5: slate - port 6: white - port 7: red - port 8: black
In some countries coding can differ in which case refer to standard practice at customer.

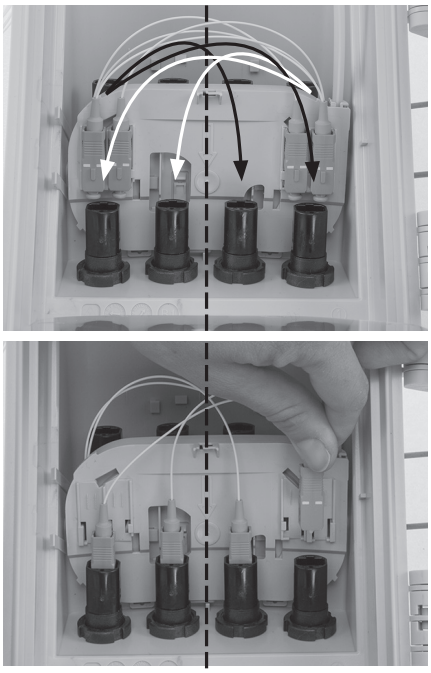
Slide module in top cover on the position (front or back) corresponding to the ports need to be connected (see table).



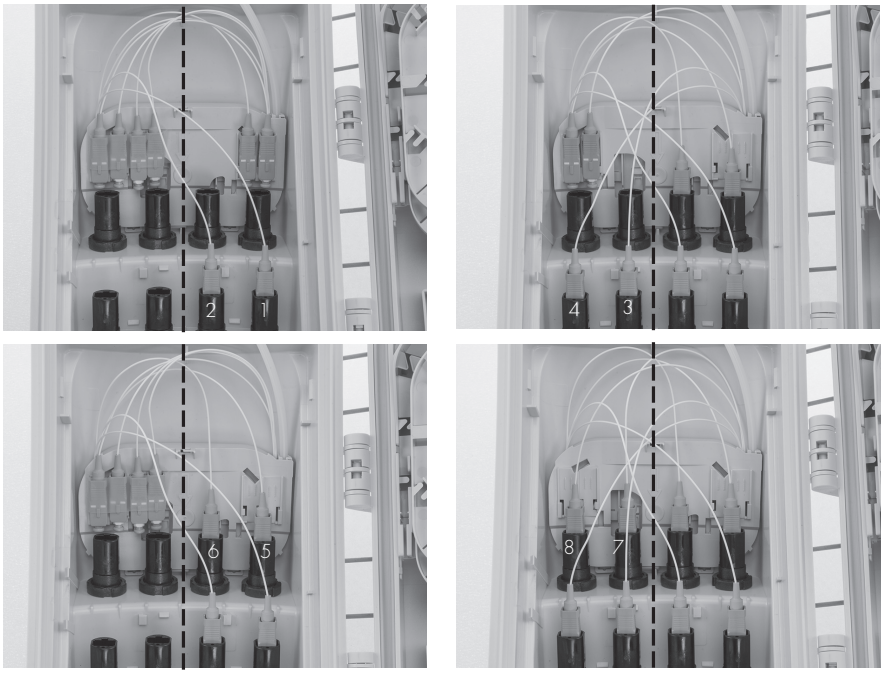
5.2 Connect connectors to DLX adapters

Remove the dust caps of the adapters and the connectors that need to be connected. Connect the connectors to the corresponding adapters respecting the color code and cross-over bend: connectors coming from the left side of the module go to the adapters on the right side (black arrow). Connectors coming from the right side of the module go to adapters on the left side (white arrow). Make sure the orientation of the connector is correct: rib on the connector pointing to the back.

Point to point module or 1x4 splitter



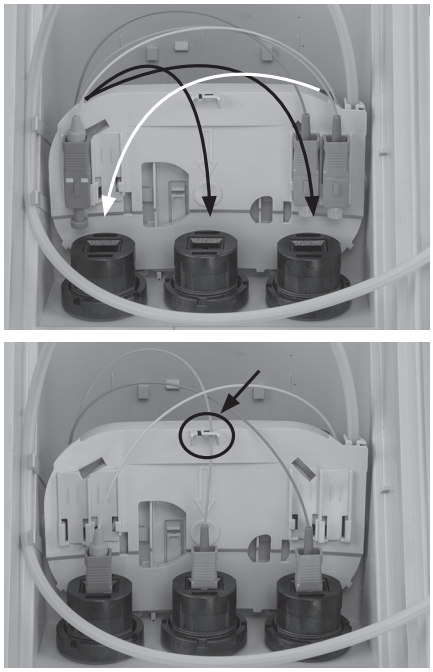
1x8 splitter



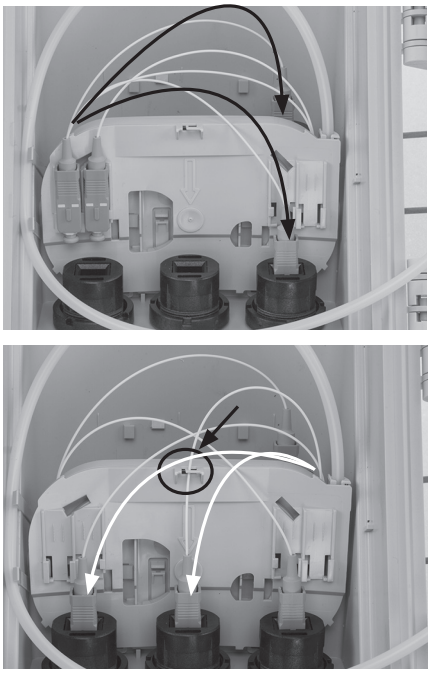
5.3 Connect connectors to full size hardened adapters

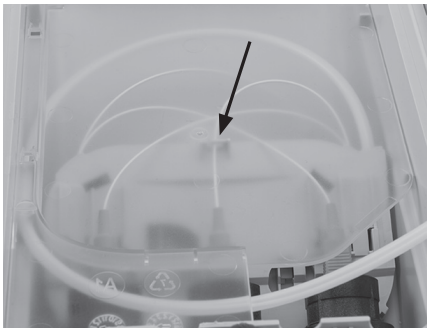
Remove the dust caps of the adapters and the connectors that need to be connected. Connect the connectors to the corresponding adapters respecting the color code and cross-over bend: connectors coming from the left side of the module go to the adapters on the right side (black arrow). Connectors coming from the right side of the module go to adapters on the left side (white arrow). Make sure the orientation of the connector is correct: rib on the connector pointing to the front.

Point to point module



1x4 splitter

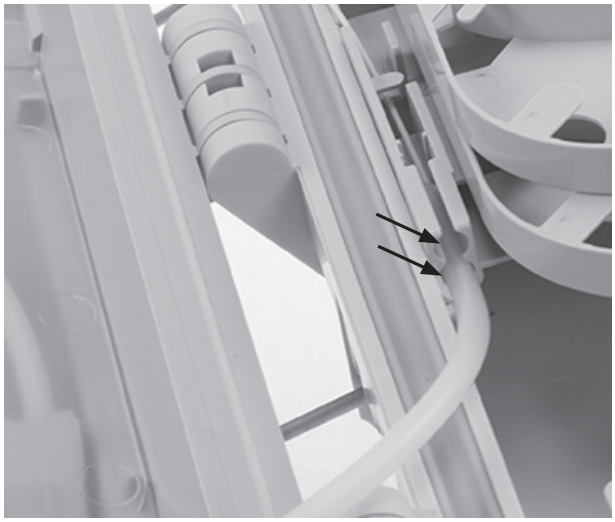


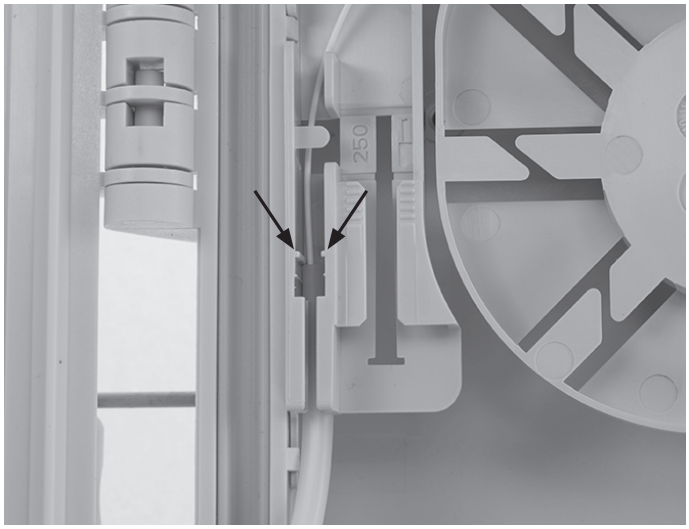


Make sure the pigtail attached to the central adapter is positioned under the hook on the module. Otherwise, the pigtail can be squeezed between the hook on the module and the protection cover when closing the protection cover.

5.4 Bring fibers to the organizer

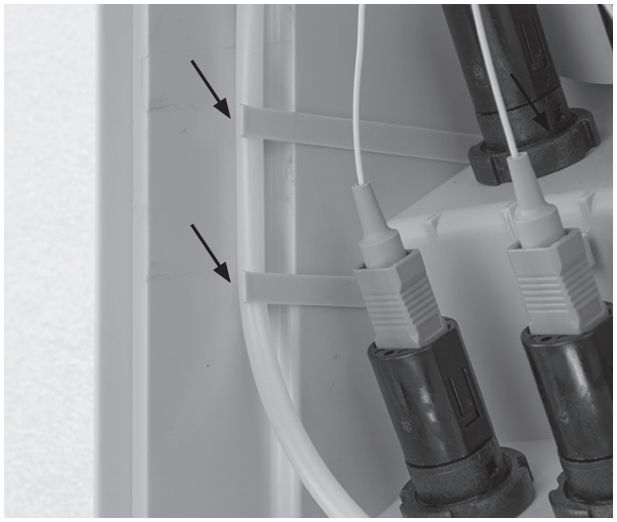
Feed pigtails through slit in the organizer and push tube until the stop. There are 2 positions for the tubes on top of each other. First, use bottom position, secondly use top position.

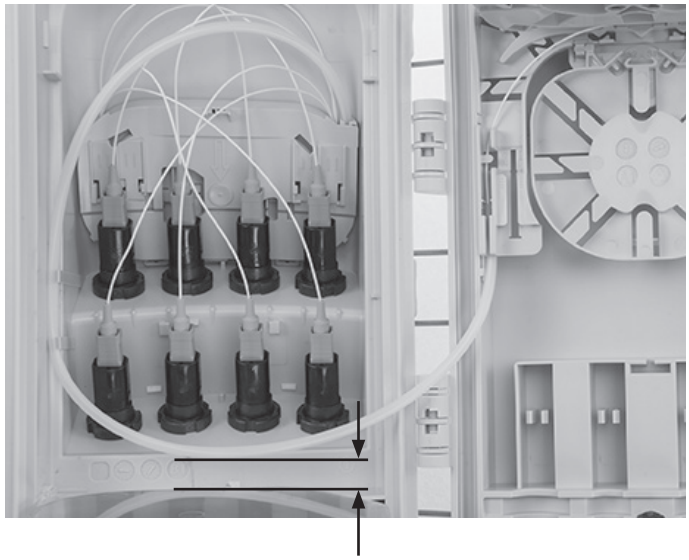




Then click tube in holder at the left side of the top cover.

Take care tube is well positioned above hinge protection cover so it is not squeezed when you close the cover.

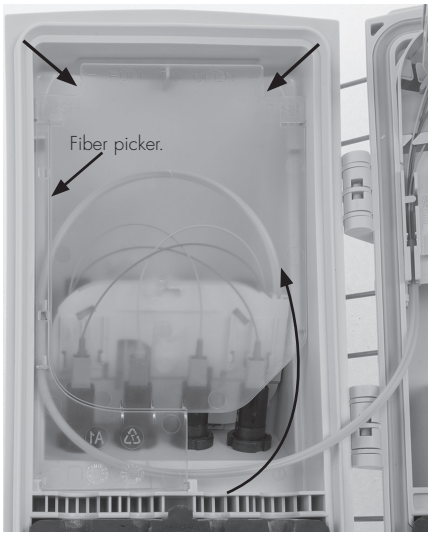




5.5 Close protection cover

Close protection cover. Snap hooks.

Strip pigtails as marked on picture (2-3 cm above tube end/stop) and route 250µ fiber to top splice tray in the other part of the closure. Fiber picker available in protection cover.



6 Cable preparation

6.1 Loop capacity

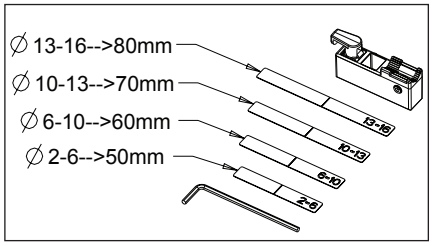
Make a window cut (see table). Make sure oscillation point is in the middle. Take out feeder tube and store other tubes in basket under organizer as described in section 6.4.

It is recommended to straighten the loose tubes.

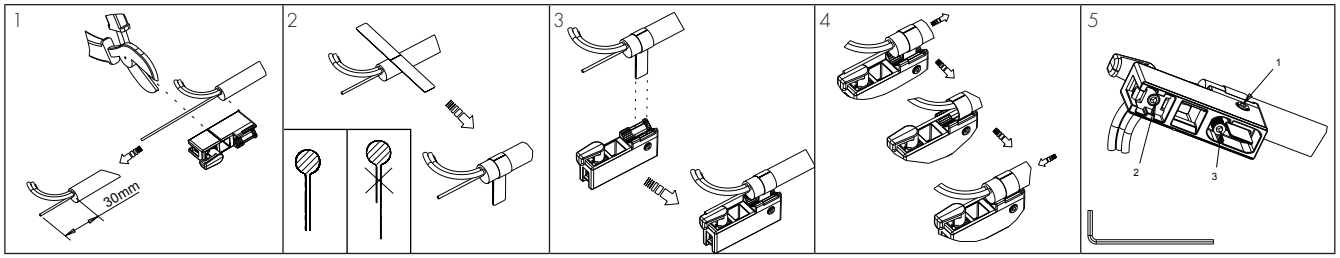
#LT (to store)	Ø LT (mm)	Window cut (m)
4	3	1.35
<= 5	2.4	2.1
7	2.4	1.7
11	2.3	1.5
Microsheath	-	2.1

6.2 Cable retention (TENIO CTU)

6.2.1 CTU kit content

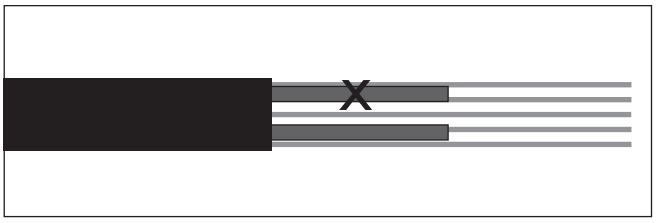


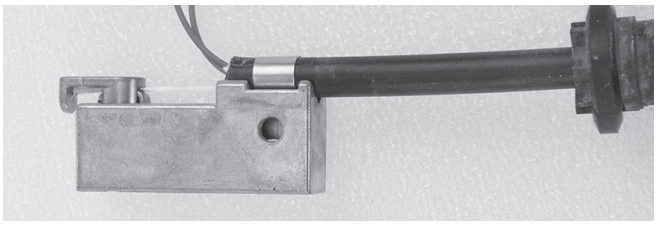
6.2.2 Central strength member



6.2.3 Dual strength member

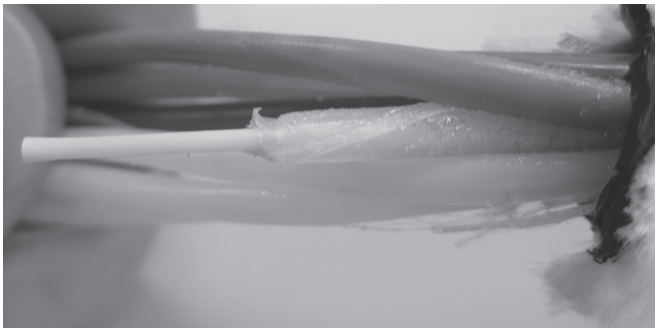
Remove one strength member and attach CTU to the side of the remaining strength member. Follow the same instructions to attach the CTU as describe under 6.2.2 Central strength member.





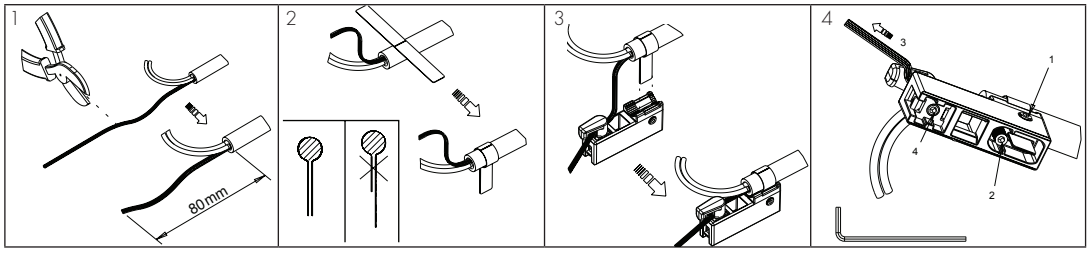
6.2.4 Coated strength member

Remove coating around strength member over a length between 15mm and 20mm and follow the same instructions to attach the CTU as describe under 6.2.2 Central strength member



Clean strength member, remove all grease.

6.2.5 Aramid yarn

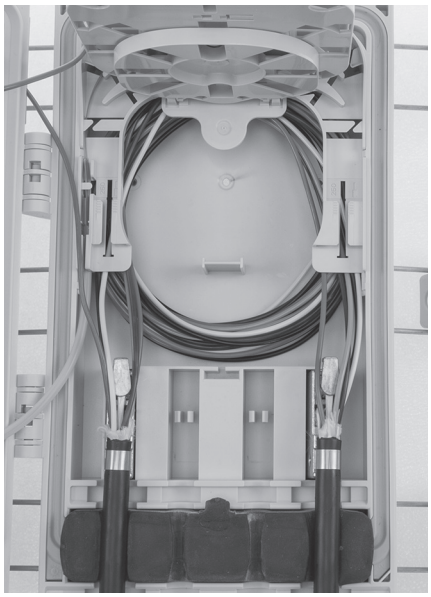


6.3 Insert feeder loop to storage area

Push one CTU in the holder (left position), take out feeder tube and roll up feeder loop under organizer. Push other CTU in the holder (right position). Other option is to make a loop of Ø130 mm (use tie wraps) and push loop under organizer.

Feeder cables are positioned on the outside gel ports. Branch cables on the inside gel ports.

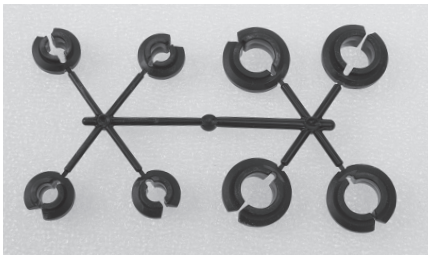
Do not insert both CTU's before loop is stored under the basket. Kinks in the tubes can occur.



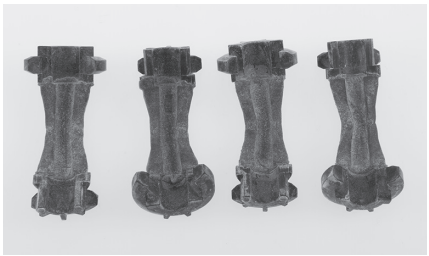
6.4 Gel containment

Containment rings are required to contain gel properly. If the cable is too small, the gel inlet needs to be used instead of the rings. For flat cable no containment rings nor gel inlet is required. See table to select proper containment:

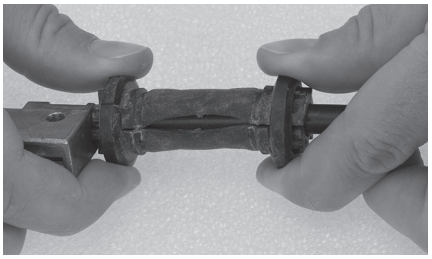
	None	Small containment rings	Large containment rings	Gel Inlet
Feeder cable (Ø 4-15 mm)	Ø 12.1 - 15 mm	-	Ø8.5 - 12 mm	Ø4 - 8.4 mm
Branch off cable (Ø 4-9 mm)	Ø 7.1 - 9 mm	Ø 4 - 7 mm	-	-
Flat cable (4.5x8.1 mm)	4.5x8.1 mm	-	-	-



Small containment rings Large containment rings



Gel Inlet



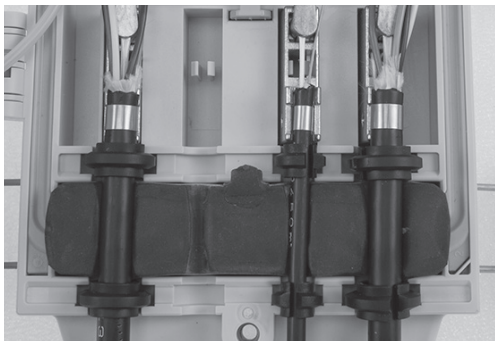
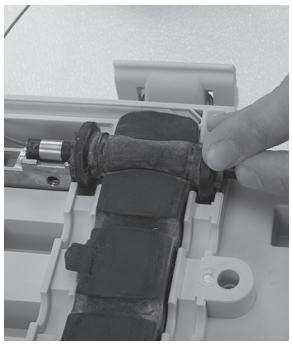
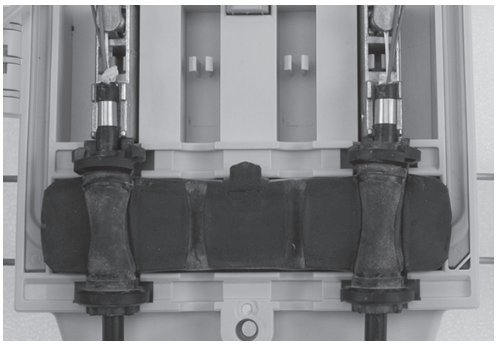
Click gel inlet around the cable

Containment rings

Break off small containment rings to contain branch off cables with a diameter of Ø 4 - 7 mm or break off large containment rings to contain feeder cables with a diameter of Ø 8.5 - 12 mm. Push ring over the cable in cavity above and under gel.

Gel Inlet

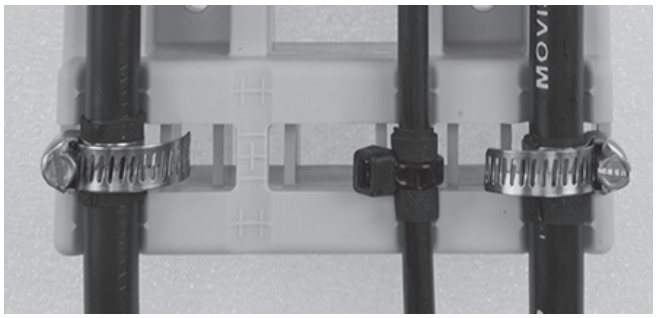
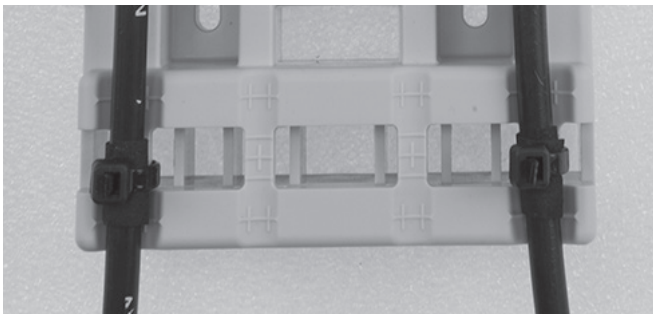
Use gel inlet for feeder cables with diameter Ø 4 - 8.4 mm. Click gel inlet around the cable. Click hard plastic ring in cavity above and under gel.

6.5 Securing cable

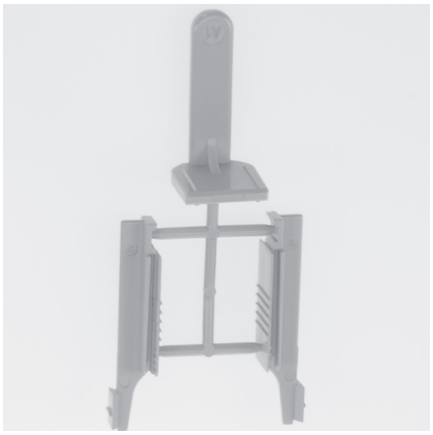
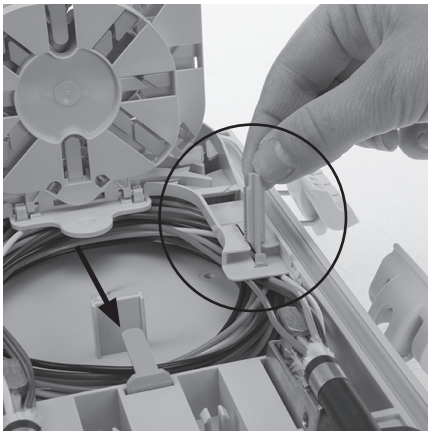
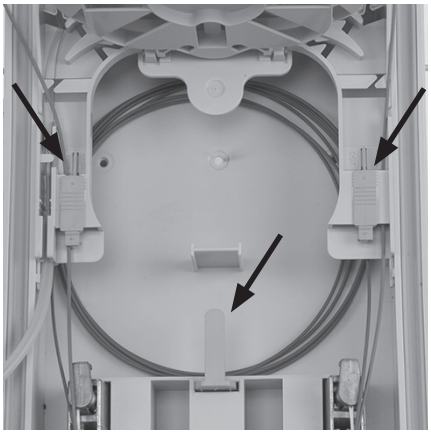
Cut a piece of foam (enough to make 1 tour around the cable). If cable is thicker than Ø10 mm, secure the cable to the closure with a hose clamp, if the cable is smaller than Ø10 or if it is a flat cable, secure the cable to the closure with a tie wrap.

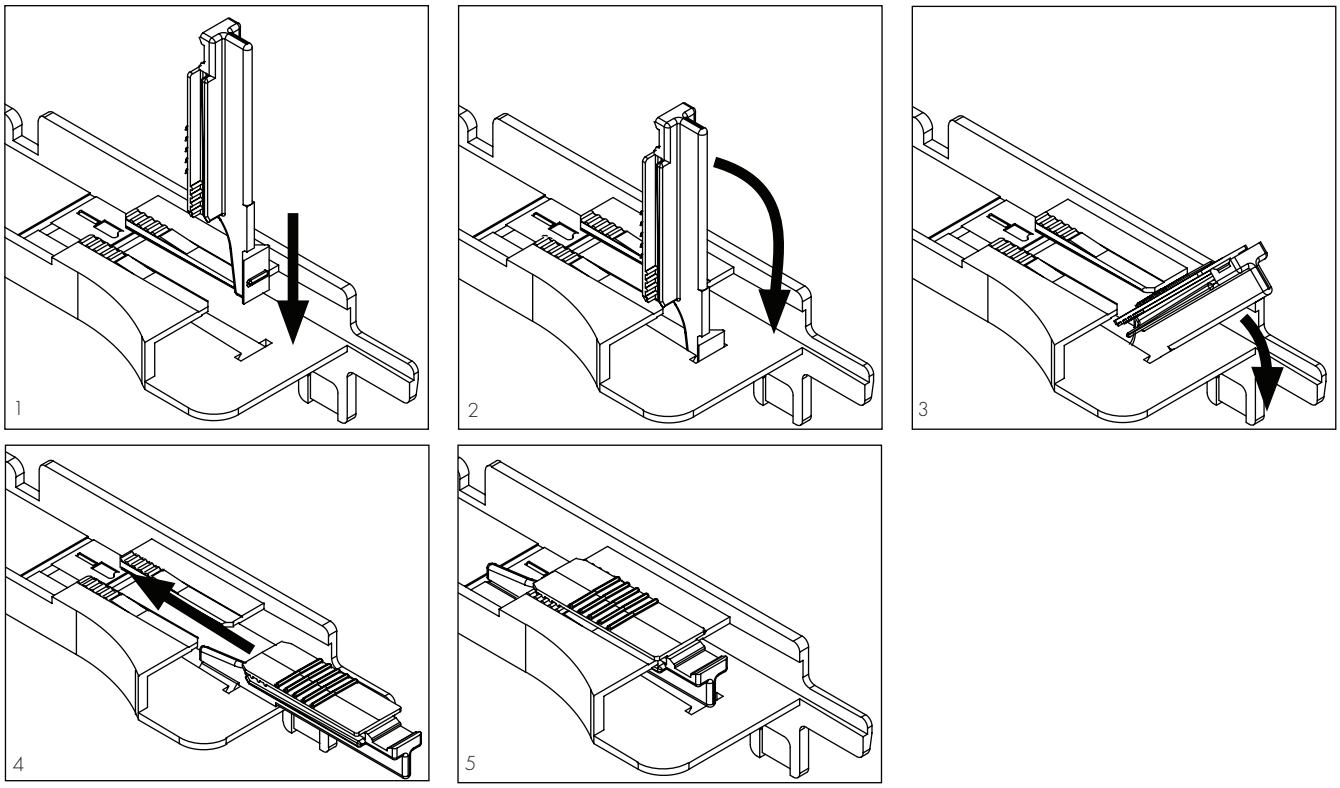
Hose clamp	Tie wrap
> Ø10 mm	< Ø10 mm Flat Cable

6.6 Install tube guidance

Break off tube guidance clips and install one for the loop (for microsheaths and for loose tubes) and put the two others in the organizer as tube holder.

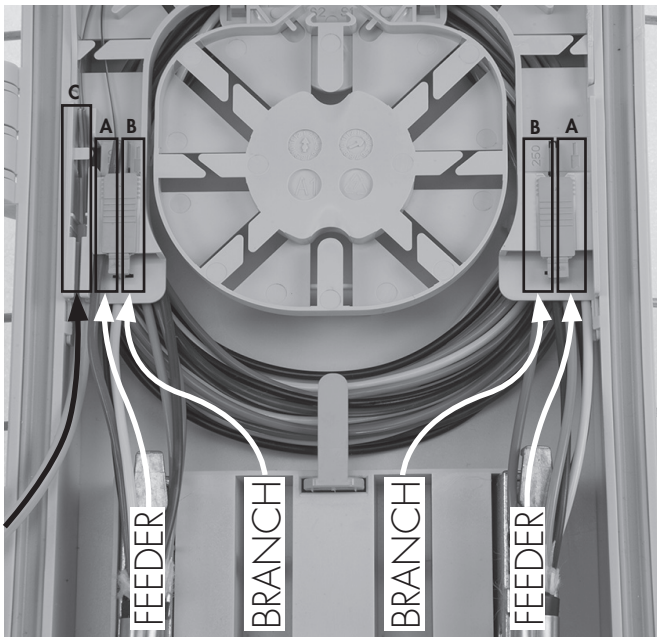




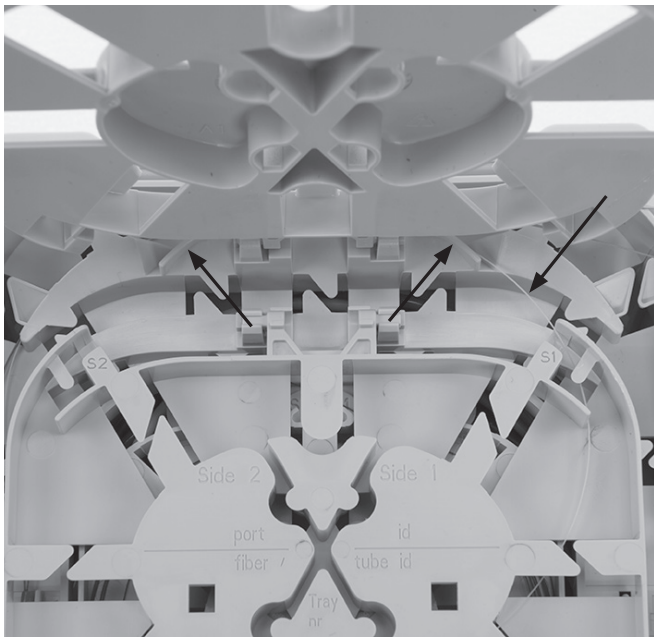


7 Splice feeder to splitter/point to point module

7.1 Organizer

Tubes from feeder cable are routed in the outside slots [A]. Tubes from branch cables are routed in the inside slots [B] as shown on picture below. Pigtails from the modules in the top cover are routed in slot [C].



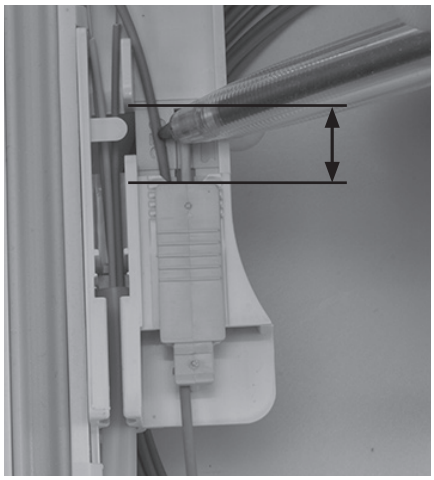
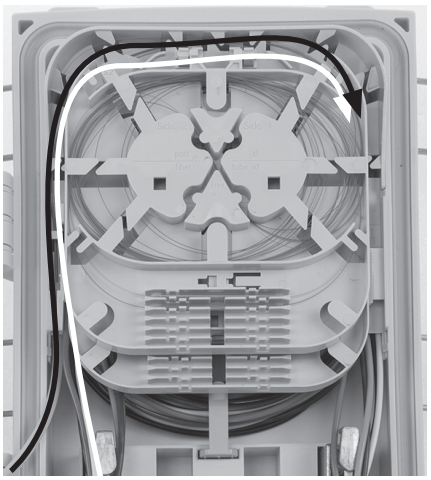
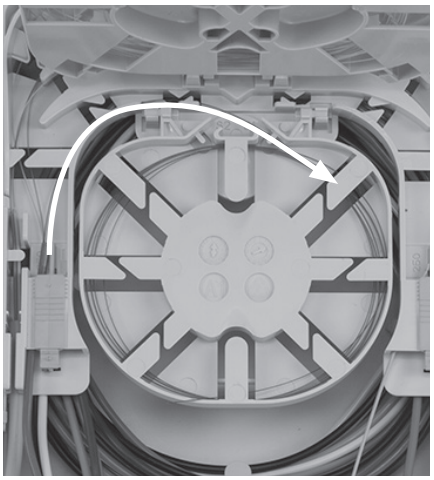


There is a possibility to route fibers from the first tray to the second and vice versa trough special designed slots in the tower.

7.2 End cut

Take out 1 tube before storing the loop under the basket and cut the feeder tube at 1 end (right side). Put a mark on the tube in the marking area (250 area) and strip tube to this point (10 -11cm from jacket end). Bring feeder fibers to the tray where the fibers from the connectors are stored and make fusion splice. Store fiber over-length and store SMOUV(S) as standard practice.

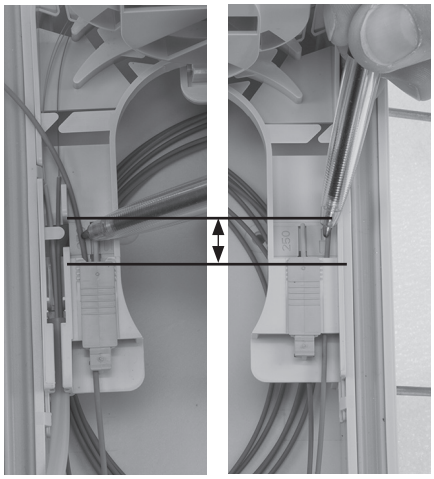
- Both fibers comes from the same side, make cross on tray (black=pigtail hardened ports, white=feeder fiber)
- Store unused fiber in small storage tray. In case of shaved fiber already stored in storage tray, store dark fiber on the splice tray.

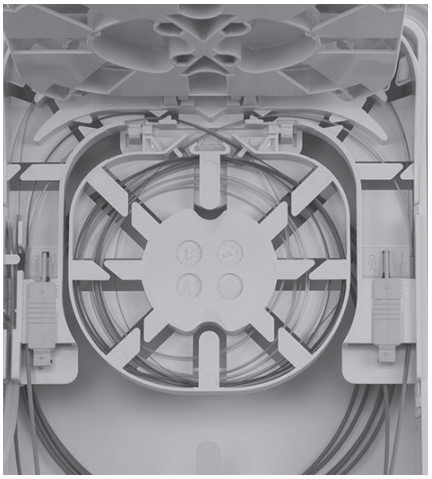




7.3 Mid cut

Put a mark on both sides of the tube in the marking area (250 area) and shave the tube up to both marks (10 - 11 cm from jacket end). Take out required feeder fibers and cut in the middle. Bring feeder fibers to the tray where the fibers from the connectors are stored and make fusion splice. Store fiber over-length and store SMOUV(S) as standard practice.

- Store uncut fibers in small storage tray. Store dark fiber on the splice tray.





8 Branch cable

8.1 Prepare cable

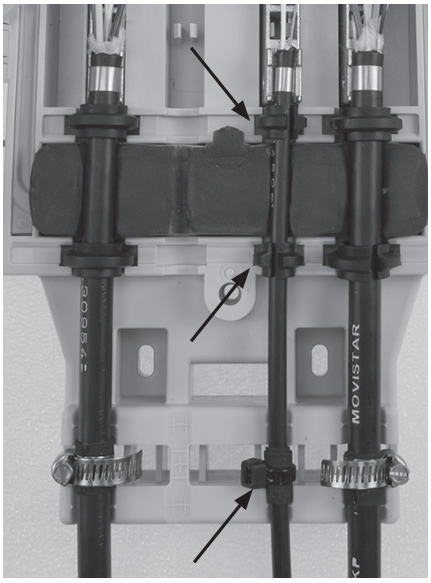
Remove jacket over 1m30 (1m fiber on tray). Install cable termination unit (CTU) as described in section 6.2 and attach in closure. Add containment following table in section 6.4. Secure cable with foam and tie-wrap or hose clamp to closure (section 6.5).

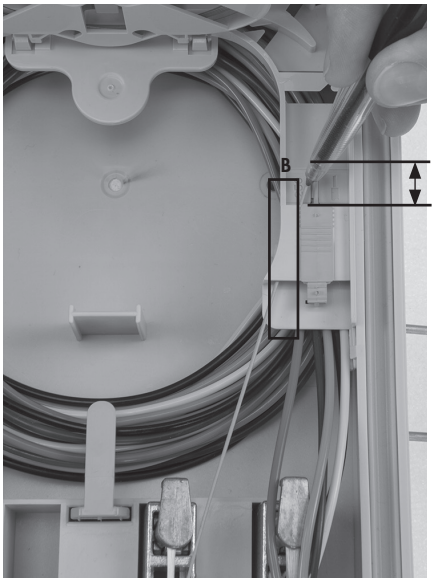
▶ Maximum diameter of the tube is Ø3mm.

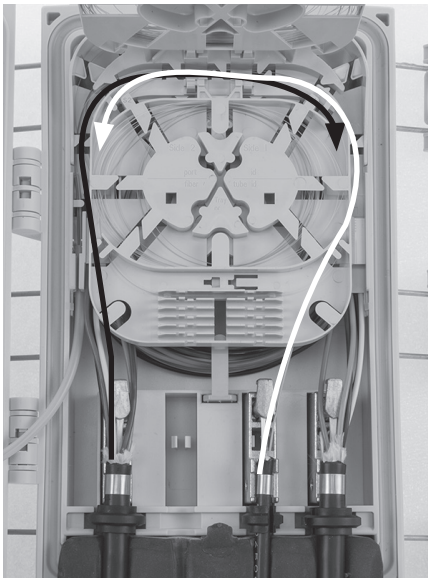
8.2 Connect branch cable to feeder cable

Strip tubes in marked area (250 area) and bring required fibers to second tray. Use inside slots [B] for branch cable. Bring feeder fibers (tubes already taken out before storing loop under basket) to second tray. Make fusion splice, store SMOUV(S) and over-length as standard practice.

Store unused fibers in storage tray, unless uncut shaved fibers are stored on the storage tray, then unused fibers must be stored on the splice tray.

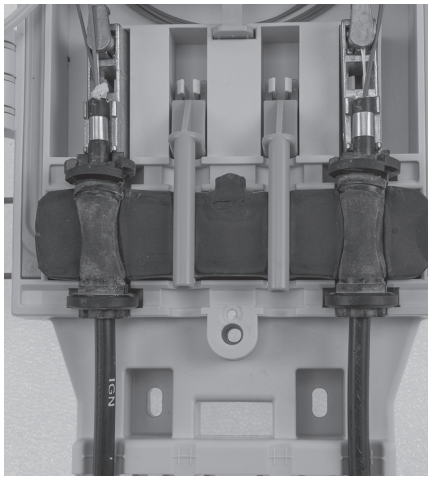


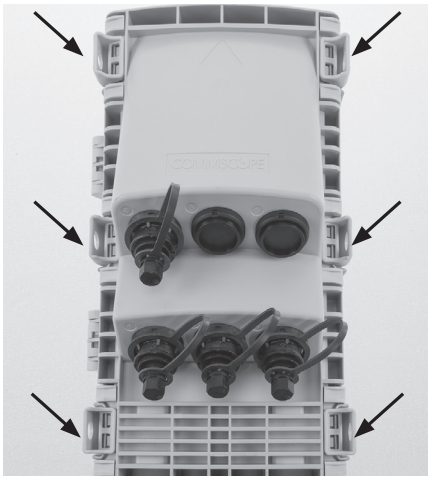


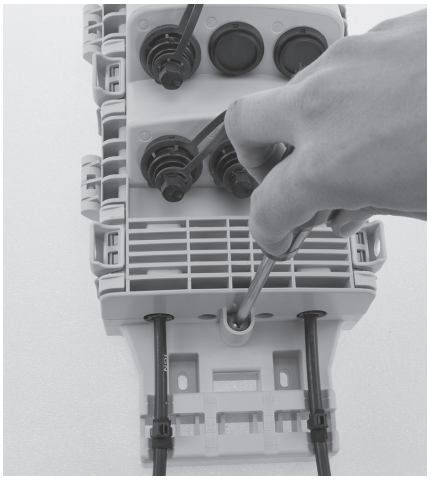


9 Close the closure

Insert blind plugs in empty gel ports. Small blind plugs are for the 2 gel ports in the middle. Thick blind plug is for empty gel ports at the outside.
Store fiber picker back at location in protection cover.
Make sure the seal area is clean and close the 6 latches.
Secure bolt between cables.



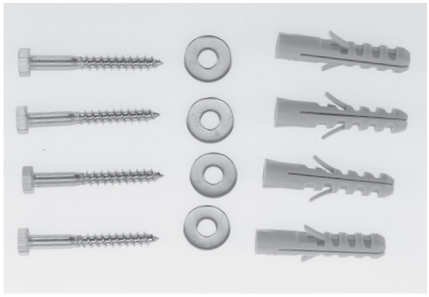


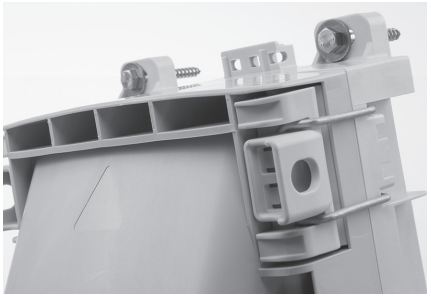


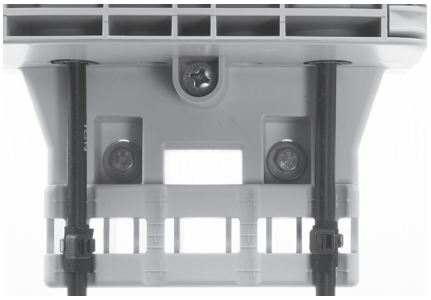
10 Mounting the closure

10.1 Wall mounting

Use wall mounting kit to mount closure to the wall. Use a socket wrench (8) to secure bolts. Attention: socket wrench outside diameter can only be 15mm to make sure it fits trough the holes between the cables.







10.2 Pole mounting

Use supplementary pole mounting kit for pole mounting. Secure brackets with a Phillips screw driver. Pull a strap through the openings and mount the closure to the pole.

▶ Use the holes in the bracket that are out of the center.
Use plastic rib on the closure as guidance to fix the bracket to the closure.