MFPS splice-patch shelves

1 General product information

MFPS is a family of pivoting front patching panels addressing the specific needs of fiber access networks (POP houses and cabinets).
The MFPS series offers best-in-class density. Due to its modular, layered design, MFPS shelves can be configured to match the fiber count of most common fiber cables used in the access networks (48, 96, 144, 192, 216 or 288 fibers) while preserving excellent fiber organization and management. The MFPS series is offered in patch-only, splice/patch and pre-cabled versions.

This document describes the MFPS splice-patch shelves for 1, 2 and 3 HU versions.

Left oriented versions: jumpers are leaving on the left front side.
Right oriented versions: jumpers are leaving on the right front side.
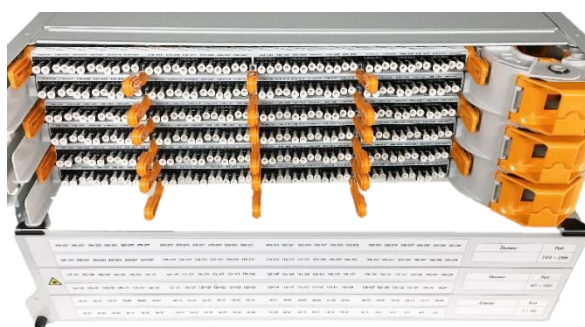
2 Product image and dimensions

XD-LC version 1HU, right out.

Width: 19", Height 1 HU, Depth 280 mm, 290 mm incl. locker

XD-LC version 2HU, right out.

Width: 19", Height 2 HU, Depth 280 mm, 290 mm incl. locker

XD-LC version 3HU, right out.

Width: 19", Height 3 HU, Depth 280 mm, 290 mm incl. locker

CONTENTS

3   General safety precautions

3.1   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 and patch cords.

3.2   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.

4   Installation conditions

The shelf should be installed at temperature between 0°C and 45°C.

5   Tools required

Standard installation and stripping tooling for fiber optic cables.
Mini Allen key is provided in the standard MFPS kit.

6   List of acronyms and abbreviations

MFPS   -   Modular Fiber Patch Shelf
POP   -   Point Of Presence
CTU-L   -   Cable Termination Unit - Large
FOPT   -   Fiber optic protection tube
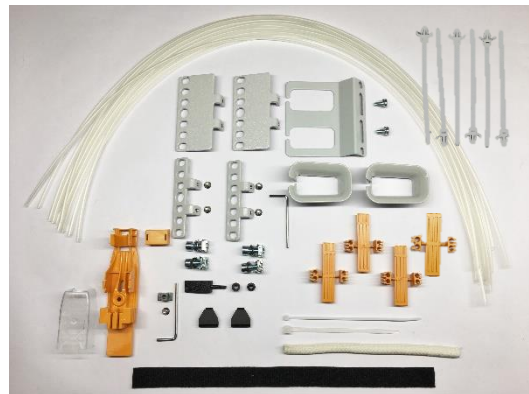
7 Kit content

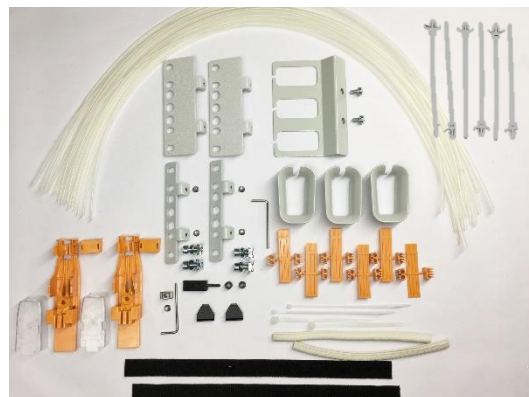| N°	Description
1	Shelf with front cover, latch and hinges
2	Pre-installed splice tray's, adapters and pigtails
3	Small Allen key
4	Foam tape(s) & tie-wraps(s)
5	M6 screw and cage nuts
6	MFPS-CABLE-KIT-L CTU-L cable termination
7	Jumper guiding trumpet(s)
8	Edge protection
9	FOPT tubes
10	FOPT tube holders

Kit content 1HU version.
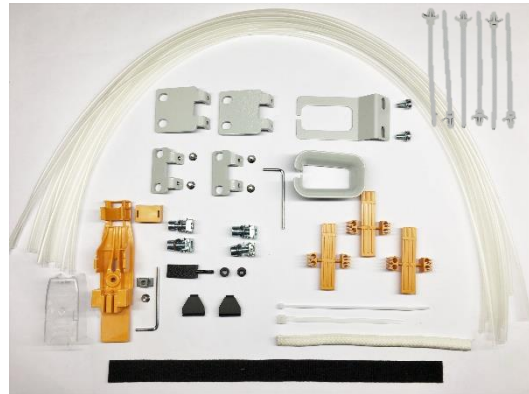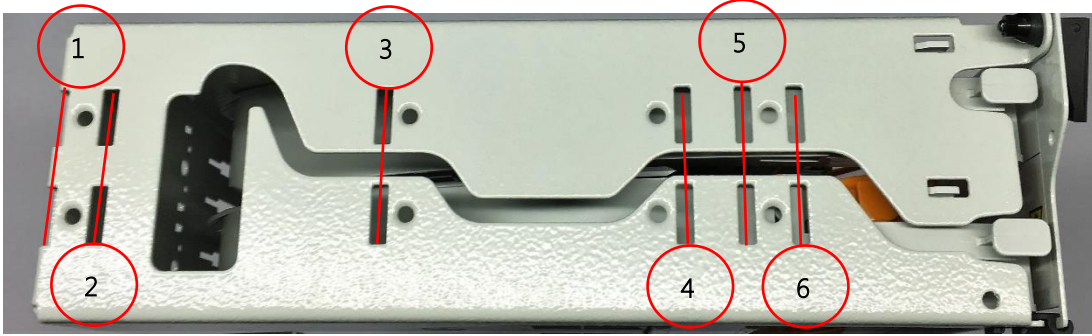

Kit content 2HU version.

Kit content 3HU version.

Pictures of the shelves are XD version.

8 Mounting positions

Position 1	-	0 mm from backside	
Position 2	-	20 mm from backside	
Position 3	-	185 mm from frontside	

Position 4	-	100 mm from frontside
Position 5	-	85 mm from frontside
Position 6	-	70 mm from frontside

9 Port numbering and colors

| Fiber	MFPS- EIA/TIA 598 Color-code
1	Blue
2	Orange
3	Green
4	Brown
5	Grey
6	White
7	Red
8	Black
9	Yellow
10	Purple
11	Pink
12	Turquoise

9.1.1   MFPS standard color-code prefibered pigtails MFPS EIA/TIA 598.

9.1.2   MFPS standard port numbering; starting from the **hinge** side, bottom is the first port (right side for a right orientated MFPS version, left side for a left orientated MFPS version). The opposite side on the top is the last port.

# 10 Installation

10.1 Front cover & hinges & latch
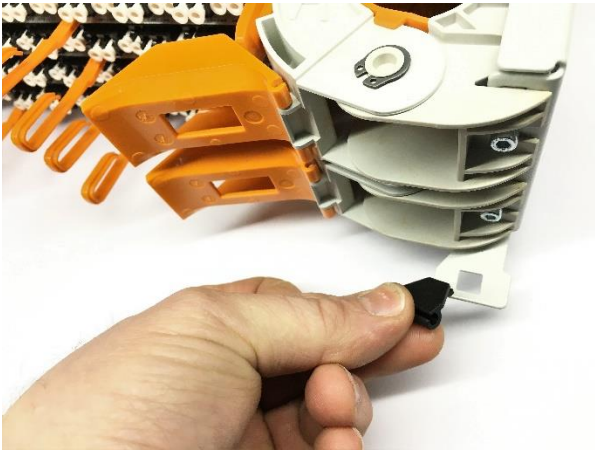
10.1.1   Install the hinge on right side of the shelf by first inserting the narrow end of the hinge into the hinge slot and then snap it into place.
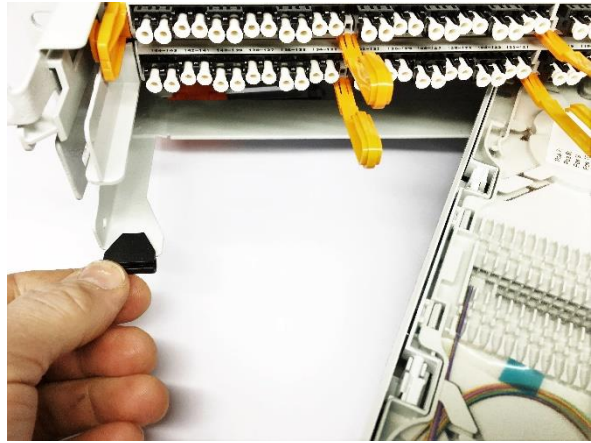
10.1.2   Open the subunit and place the hinge on the left side.

10.1.3   Take the front cover, place it into the slot of the hinges under an angle of 45°, push until the cover is fixed. Repeat on the other side.
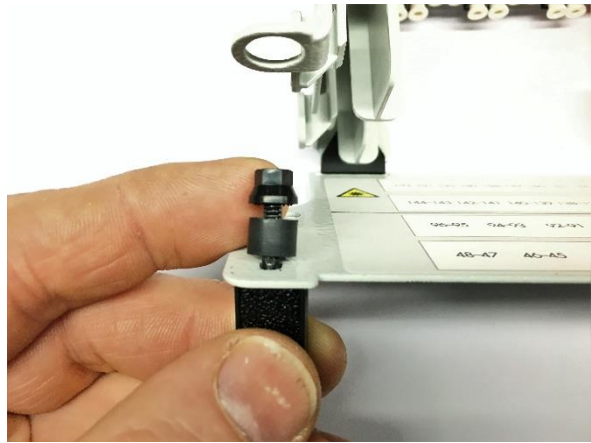
10.1.4   Install the latch, bushing and nut as shown in the picture.

10.1.5   For locking the cover, push the latch down.

10.1.6   Option; to secure the cover together with the panel (when taken of) install a rope between the cover and shelf.

(Not included in the standard kit)

10.2 Mounting brackets & edge protection & trumpets

10.2.1   Select the preferred mounting position. Mount the 19" bracket with the 2 small provided screws. Open the shelf for gaining space to mount the left and or right side.

10.2.2   Example with ETSI bracket

10.2.3   Install the edge protection if the feeder cable is entering the shelf from the side.

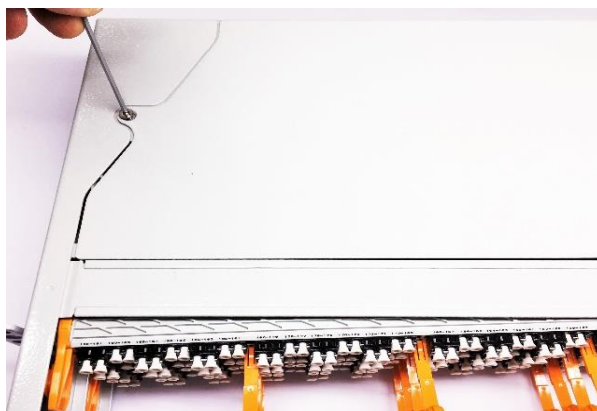Shelves front mounted: Shelves back mounted:

10.2.4   Install trumpets in brackets and install brackets in one of the three possible positions as shown in the pictures.
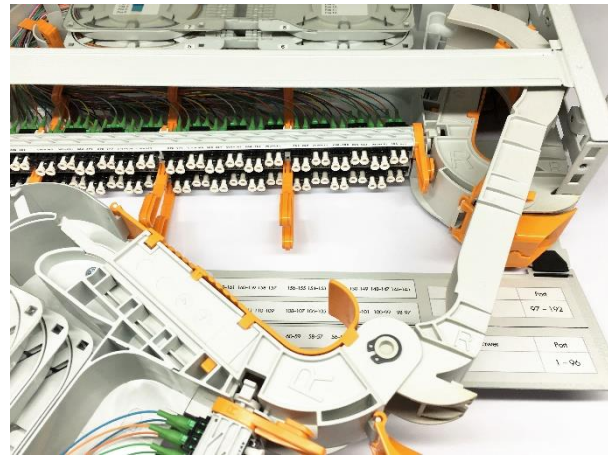
10.3 Opening & access

10.3.1   Open one subunit by pressing the locker insides and slide open the subunit.
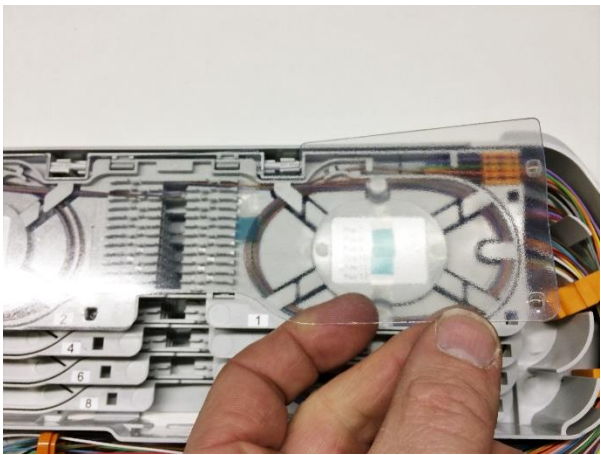
10.3.2   Top cover can take off by removing the screw on top.

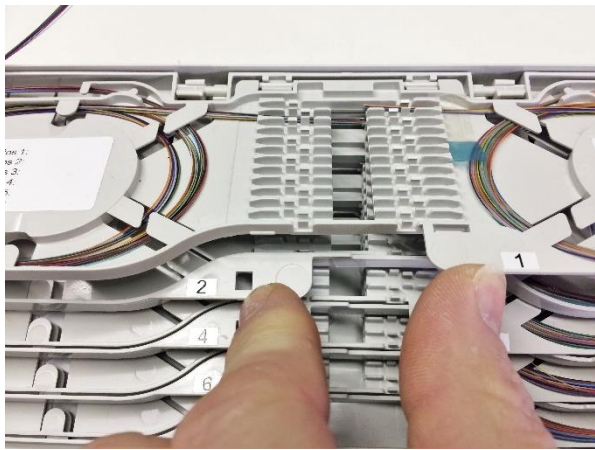10.3.3   To remove a complete subunit; remove the screw on the front side.

10.3.4   Slide out the subunit.

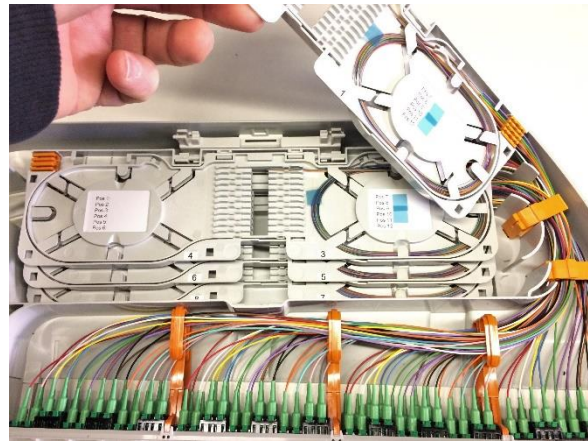## 10.4 **Splice trays**

10.4.1   When fully loaded there are four dual splice trays in each subunit. The upper splice tray is pre-installed with a transparent protection cover. The splice capacity of each single splice tray is 12 and capable to hold smouvs 45mm or ANT.
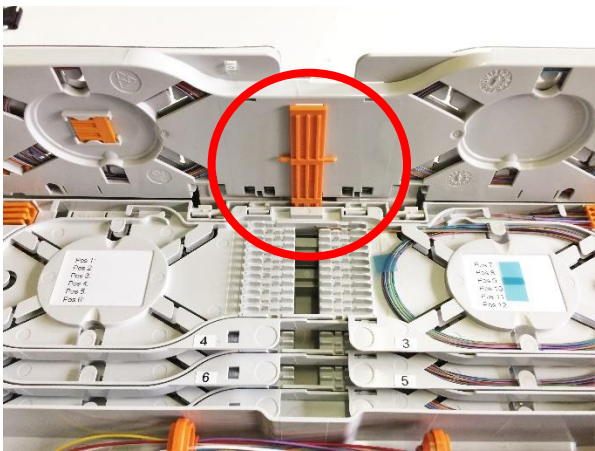
10.4.2   To open a dual splice tray; snip the trays from each other to access the bottom tray.

The advised 250µ incoming fiber length to store is 1,2 Mtr. The stripped pre-installed pigtails are 1.2Mtr.
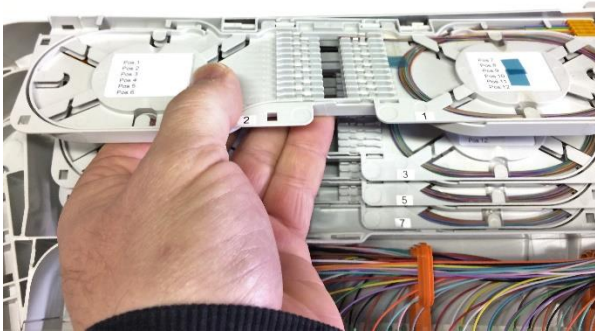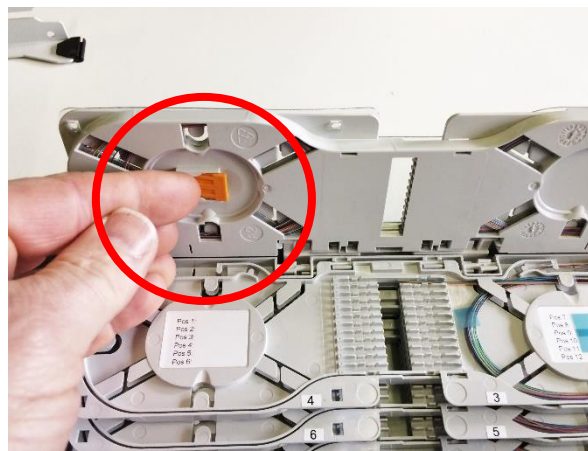
10.4.3   Option: To remove a splice tray, open 45°.

10.4.4   Click out of the hinge on the left and right side.

10.4.5   Use the provided 900μ insert tool to hold the splice tray in the open position.

10.4.6   On each backside of a dual splice tray a spare 900μ inserting tool is stored. (for replacing pigtails see 10.7)

10.5 Cable & FOPT tube

NOTE:

- The loose-tube cable termination unit is designed to accommodate 1x fiber-cable with a maximum cable diameter of Ø 15mm or 1x flex-tube Ø 16mm.

- The cable needs to be flexible enough to allow a bend radius less than 75mm for loose-tubes and strength members with a diameter less than Ø 2.5 mm.

- The 1 and 2 HU versions kit contains all parts to install 1 piece of fiber-cable/flex-tube and supports max. 12 pcs. of FOPT tubes/cable tubes. The 3 HU versions kit contains all parts to install 2 pieces of fiber-cable/flex-tube and supports max. 24 pcs. of FOPT tubes/cable tubes

- If the 2HU version is used with more than 1 cable with 12 tubes order an extra MFPS-CABLE-KIT-L CTU-L cable kit.
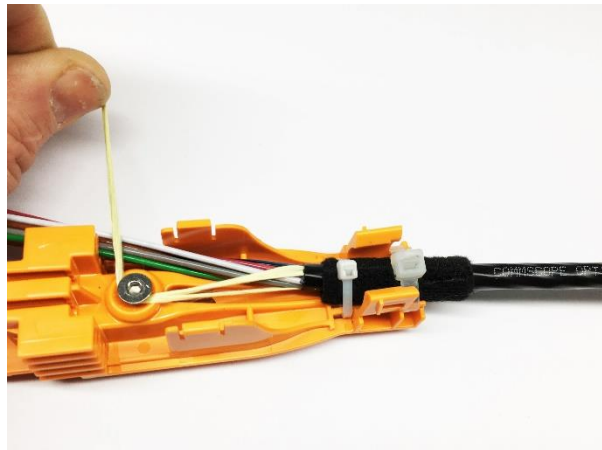
10.5.1   Install screw and strength member connector.
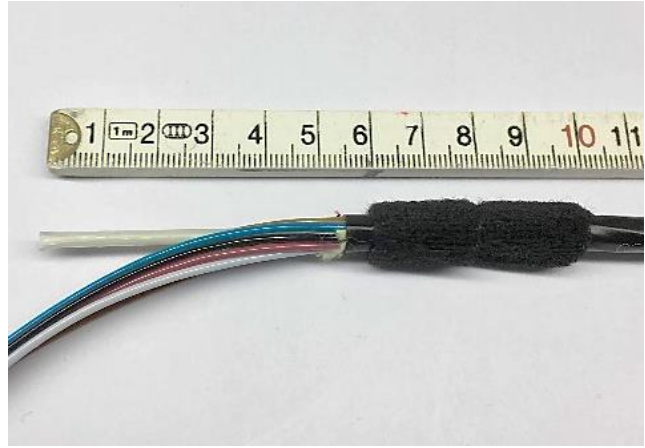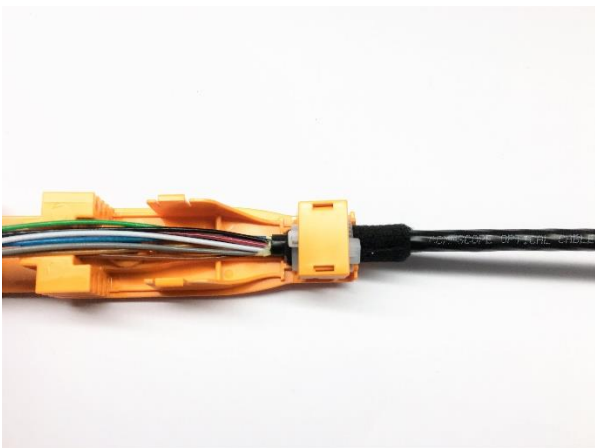
10.5.2   Strip the cable and apply two pcs. of foam. Cut strength member on +/- 5 cm.
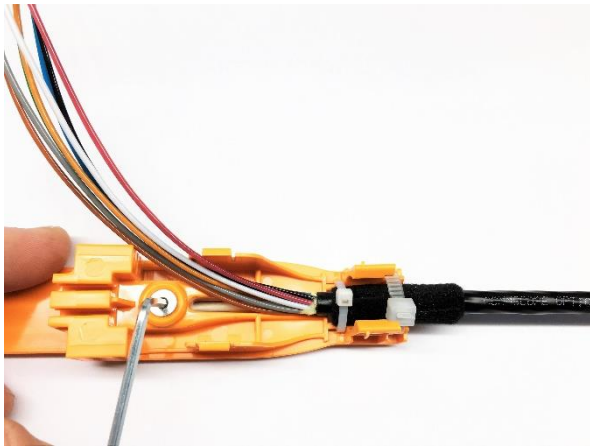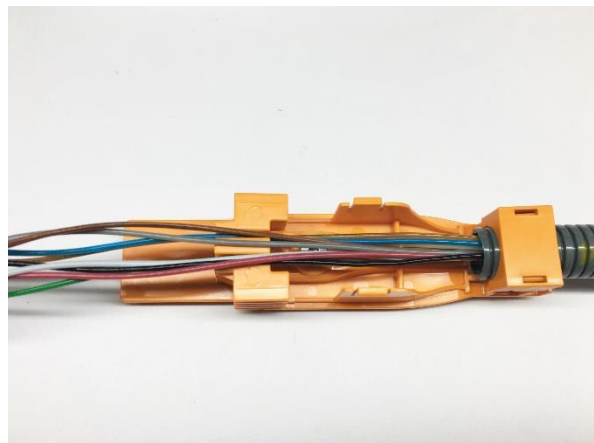

10.5.3   Fix the cable with two tie-wraps. Fix the strength member by using the Allen key.
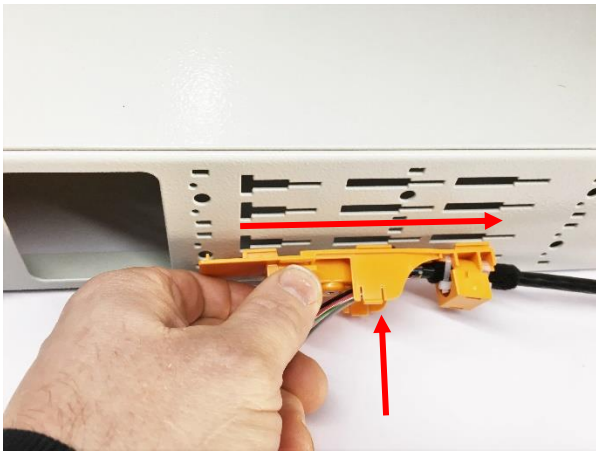
10.5.4   In case of aramid yarn; turn aramid yarn several times around screw for strength member fixation, and fix screw with Allen key.
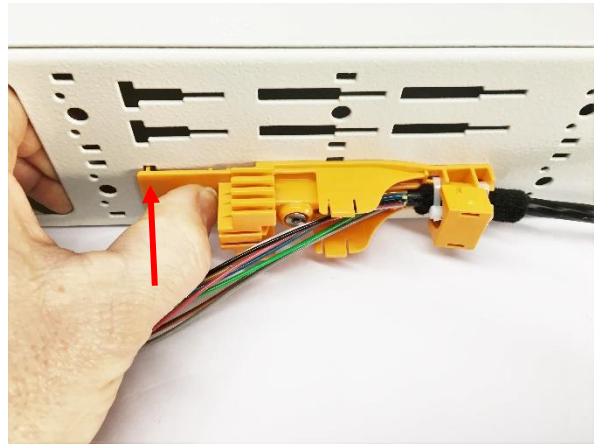

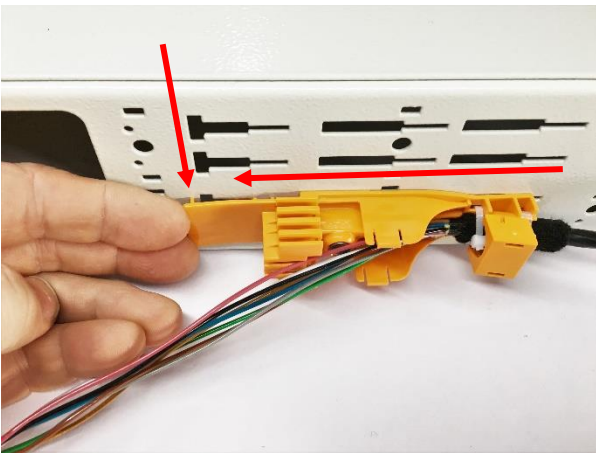10.5.5   Install the cover.

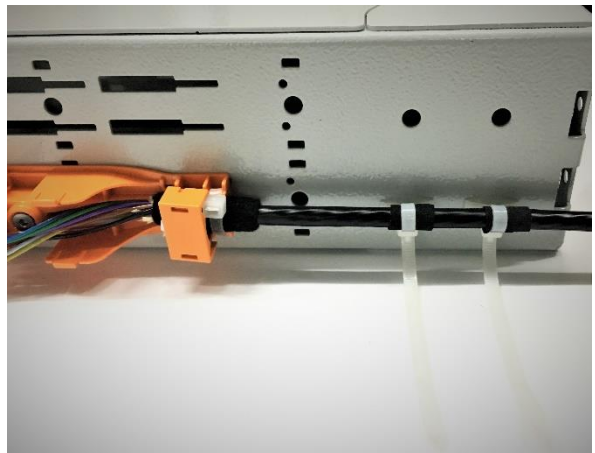10.5.6   In case of flex install the flex and cover.

10.5.7   Slide in the CTU-L bracket.
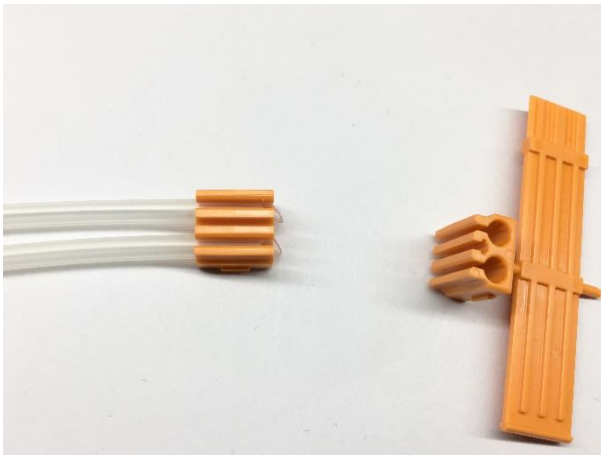

10.5.8   Slide until the CTU-L bracket clicks into position.
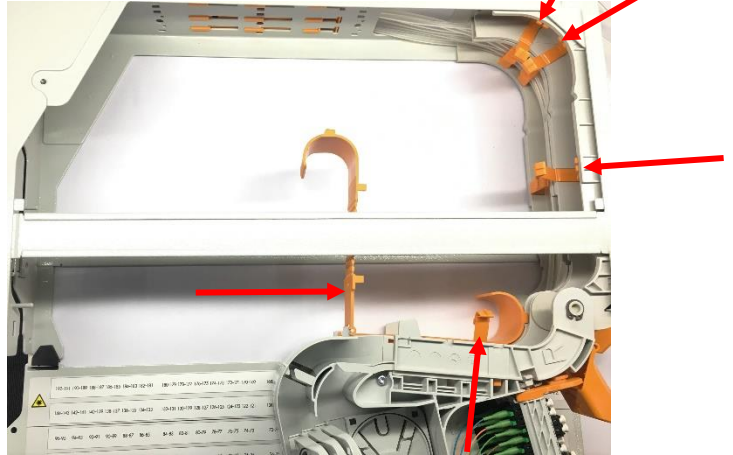

10.5.9   To remove bracket, lift up the lip of the CTU-L bracket.

10.5.10   Place push tie-wraps on the backside of the panel. Secure the cables with foam and close the tie-wraps.
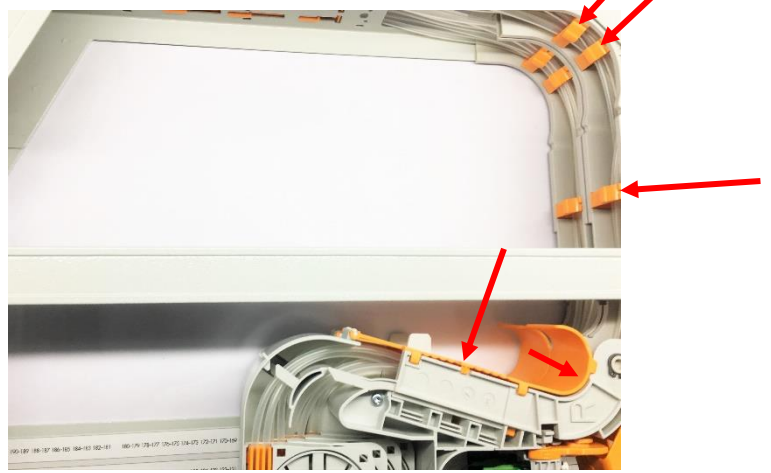

10.5.11   Break-of a tube holder and push the FOPT tubes in the holder. Make sure the FOPT tube is pushed to the end of the tube holder.
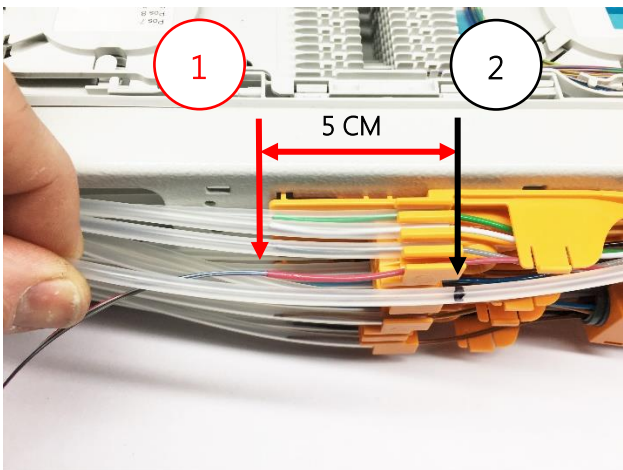

10.5.12   Open all four internal cable/tube clips and inner bend control in the shelf.

10.5.13   Remove the splice tray cover. Push the tube holders into the splice trays, follow the correct slot for guiding the FOPT tubes.
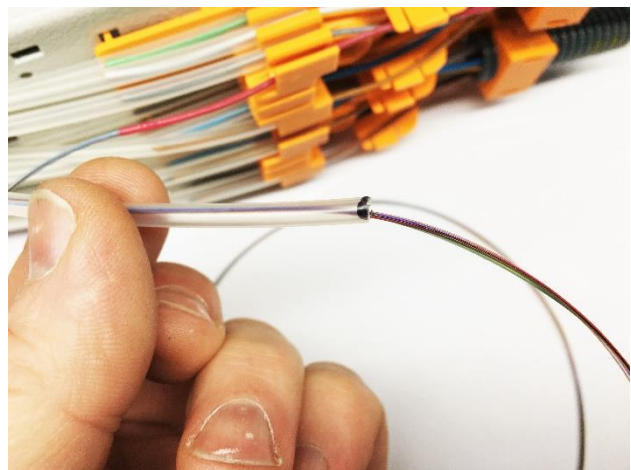
10.5.14   Guide the FOPT tubes towards the CTU cable bracket. Close all four internal cable/tube clips and inner bend control in the shelf.

10.5.15   Route and strip the loose tube at the mark of the red arrow (1).

10.5.16   Guide and mark the FOPT tubings at the end of the tube holder of the CTU-L bracket, black arrow (2).
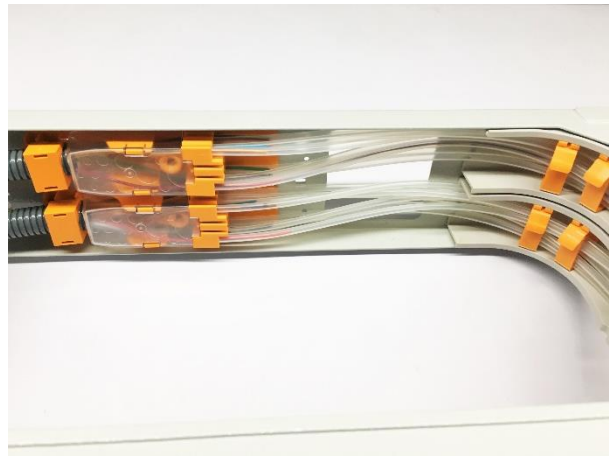
10.5.17   Cut the FOPT tubes at the marked (2) position.

10.5.18   Clean the fibers and feed the fibers via the FOPT tube to the splicetray. Push the FOPT tubes in the tubeholder of the CTU-L bracket. Make sure the FOPT tube is pushed to the end of the tube holder.
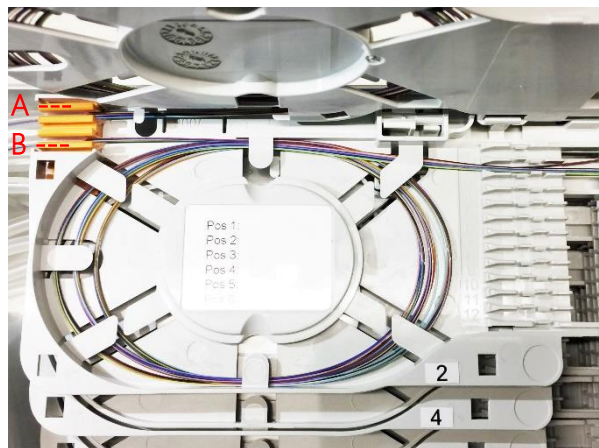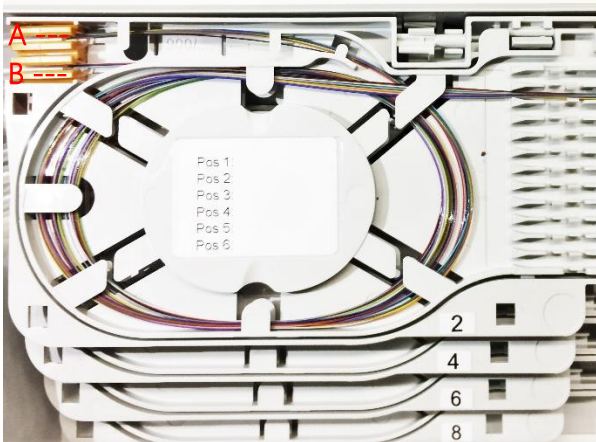
10.5.19 Place the covers on the CTU-L brackets.

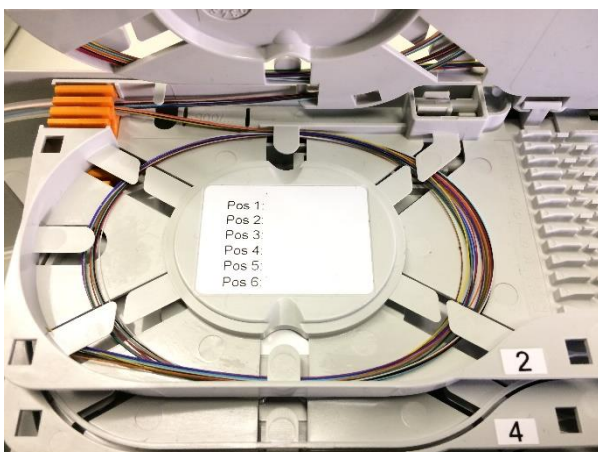10.5.20 CTU-L bracket installed inside MFPS shelf.

10.6 Fiber routing & splicing

10.7 Pigtail replacement

10.6.1   Route the fiber towards the splice tray, use the upper FOPT tube (A) for fiber 1 to 12 to splice in tray 1.
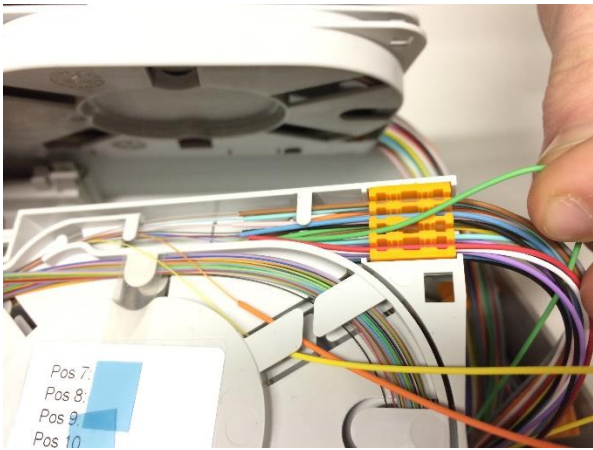
10.6.3   Route the fiber towards the splice tray, use the lower FOPT tube (B) for fiber 13 to 24 to splice in tray 2.

10.6.4   Repeat above steps for the rest of the fibers and splice trays. Splice the fibers and store the splice protectors into the 45mm. smouv / ANT holders.
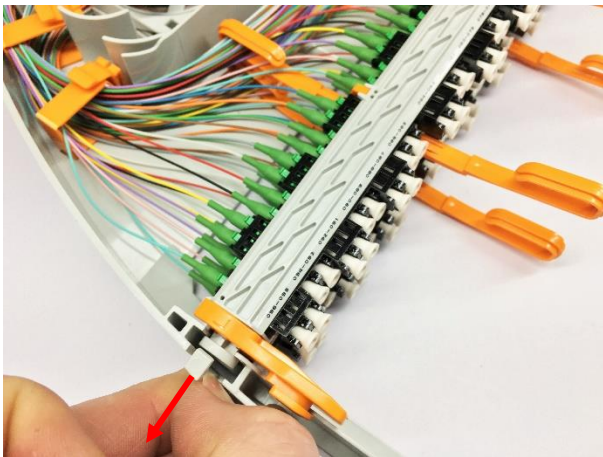

10.6.2   When using more than 12 fibers per tube, split the fibers to the upper and lower splice tray.

10.7.1 Example of a replacement of the green 900µ pigtail. First, remove the upper pigtails and place them carefully aside.

10.7.2 Replace the pigtail for a new one and insert all pigtails back into the 900µ holder and push them down with the 900µ insertion tool.

10.7.3 To access the bottom row of the pigtails lift the top row of the adaptor holders by pressing the lip outwards.
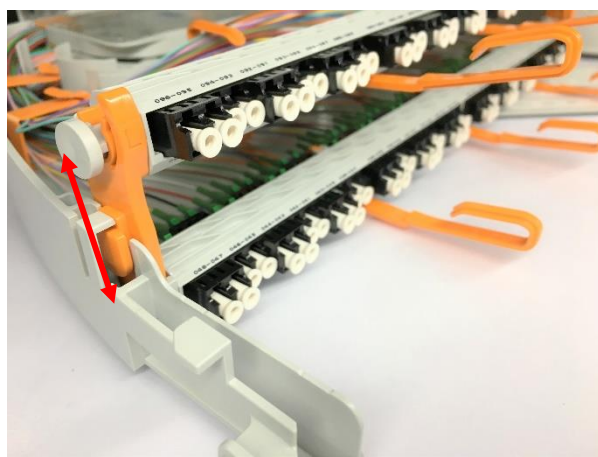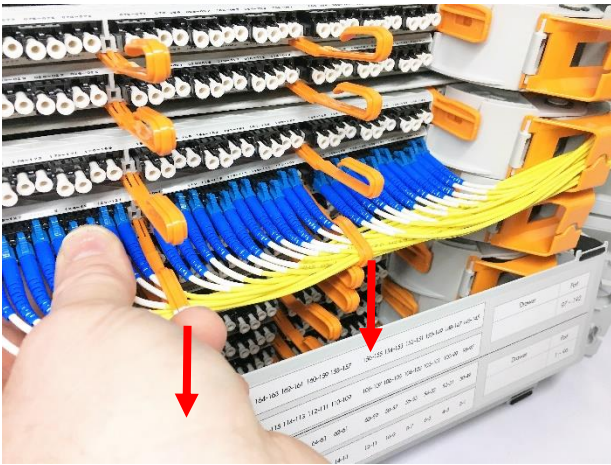
10.7.4 Place the distance holder into the slot; repeat this at the other side.

11 Jumper patch

Note:
- Advised jumper jacket diameter 1.2mm when MFPS XD version is used and fully populated.
- Advised connector boot: 20mm length.

11.1.1   Clean the connectors before making a patch. Route the jumpers via the trumpet and jumper guiding towards the adaptor. To gain more access push the adaptor holders down.

Tip: When the 1HU version is used, remove the front cover for more access.

12 Trade–marks

All trademarks identified by ® or ™ are registered trademarks or trademarks, respectively, of CommScope, Inc. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services. CommScope is committed to the highest standards of business integrity and environmental sustainability, with a number of CommScope's facilities across the globe certified in accordance with international standards, including ISO 9001, TL 9000, and ISO 14001.

Further information regarding CommScope's commitment can be found at
www.commscope.com/About-Us/Corporate-Responsibility-and-Sustainability.

13 Contact information

Visit our website or contact your local CommScope representative for more information.

For technical assistance, customer service, or to report any missing/damaged parts, visit us at:
http://www.commscope.com/SupportCenter

This product is covered by one or more U.S. patents or their foreign equivalents. For patents, see
www.commscope.com/ProductPatent/ProductPatent.aspx