CMJ & MMJ – COMPACT / MEDIUM MULTI FUNCTION JOINT

Description	Tools Required
The Compact/Medium Multi-Function Joint (CMJ/MMJ) is for jointing optical fibre cables. The joint is ideal for use as a Cable Chamber Joint, Track Joint, Spur Joint or Distribution Joint due to its capacity and compact size. The CMJ has a maximum capacity of 144 fibres and the MMJ has a maximum capacity of 288 fibres.	**Tools:** Large Screwdriver, File, Cable Sheath Stripper, Fibre stripping tools, Splicing machine.

CONTENTS

1. Cable Installation & Fibre Routing
   - How to install OVAL/CIRCULAR cables.
   - How to splice a fibre on a SINGLE ELEMENT or SINGLE CIRCUIT tray.
   - How to route and splice a ribbon fibre onto a RIBBON tray

2. Installation of Splitters
   - How to install a splitter into the manifold.

3. Splice Tray Cover Installation
   - How to install the splice tray cover onto the top tray.
   - How to remove the splice tray cover from the top tray.

4. Termination of Copper Wires
   - How to terminate the copper wires within the joint.

5. Joint Close Down
   - How to close the joint & install the cap and clamp.

1.0 Cable Installation and Fibre Routing

Step 1

Oval Port Cable Installation

- To install cables into the oval port of the closure follow the instructions supplied with the oval port kit.

  IP347 – for heat shrink oval installation
  IP292 – for mechanical oval installation

1.0 Cable Installation and Fibre Routing

Step 2

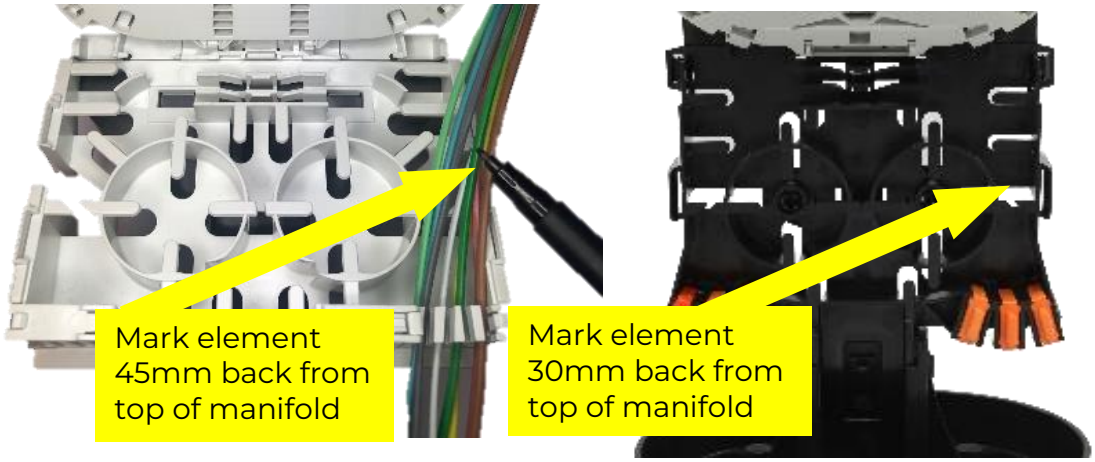
Circular Port Cable Installation

- To install cables into the circular port of the closure follow the instructions supplied with the appropriate port kit.

  IP258 – for 4 Way gland
  IP272 – for Single Entry Gland
  IP337 – for 8 Way Flat Drop Gland

1.0 Cable Installation and Fibre Routing

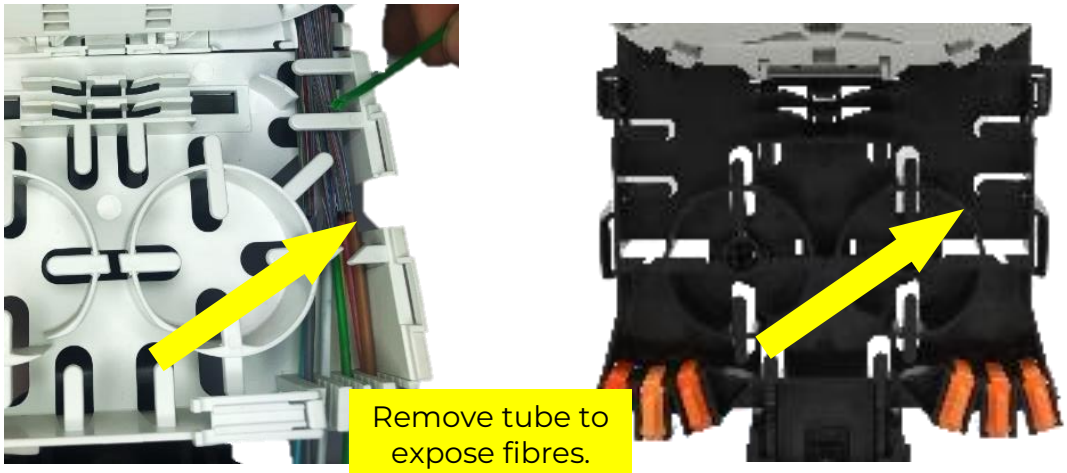
Step 3



- Remove the manifold cover by un-clipping 2 tabs from one side and slide out of other side.
- Route the required cable element through and mark a butt position on the element approximately 30/45mm back from top of manifold.

1.0 Cable Installation and Fibre Routing

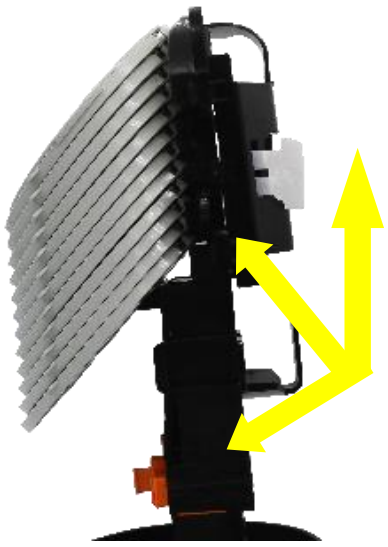
Step 4



- Remove the tube to expose the fibres using approved practices.

1.0 Cable Installation and Fibre Routing

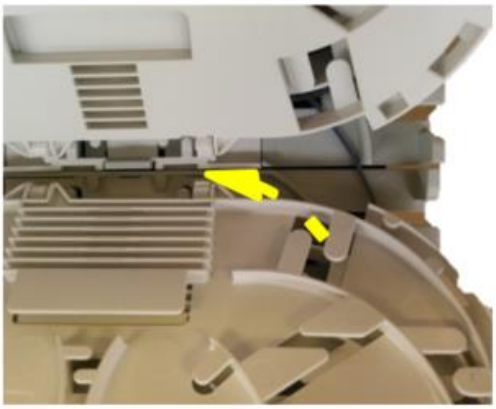
Step 5

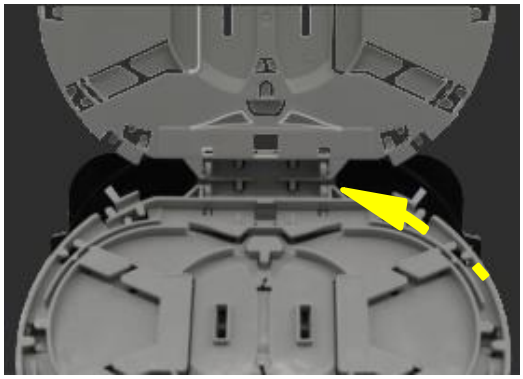


- Route the fibres up to the appropriate splice tray by running the fibre along the track besides the trays.
- Ensure that the fibres are routed beneath the tabs in the track and manifold.

1.0 Cable Installation and Fibre Routing

Step 6



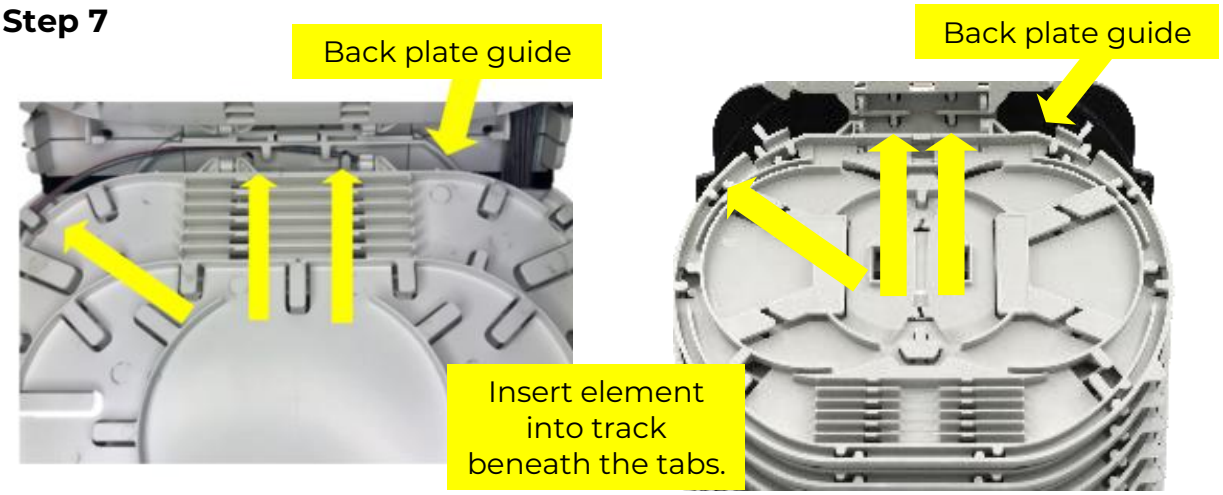


- Once the correct tray is reached, route the fibres into the track at the back of the back plate.

Note: To release the tray cover and open the trays go to step 13.

1.0 Cable Installation and Fibre Routing

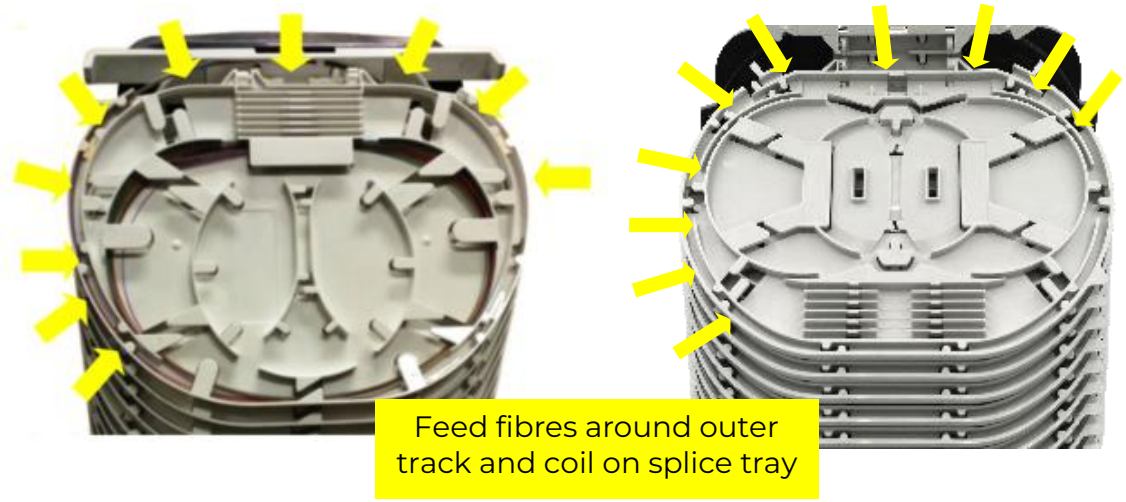
Step 7



- Feed the element underneath the tabs on the back of the manifold and route through the side channel to desired splice tray.
- Ensure the fibres are fed beneath the back-plate guide first and then secured on the back plate using the tabs.

1.0 Cable Installation and Fibre Routing

Step 8

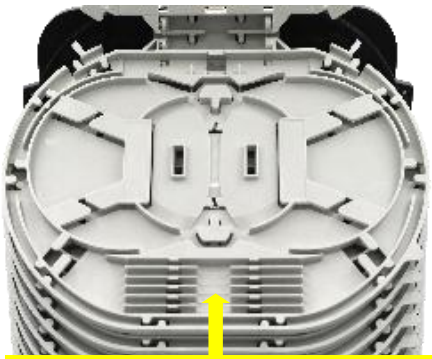


- Route the fibres onto back plate and then around the outside channel of the splice tray and temporarily store them on the splice tray by coiling beneath the tabs of the central storage area.

- Ensure all of fibres are underneath the tabs of the side channel and the splice trays.

1.0 Cable Installation and Fibre Routing

Step 9



- Route the fibres from other elements by repeating steps 9 to 12.
- Route fibres from the drop cables or other input cables following the same procedure but from the other direction.
- Splice the fibres and store the splice protectors as shown above. Ensure the correct splice protectors for the tray type are installed.
- Ensure all fibres are routed beneath the tray tabs.

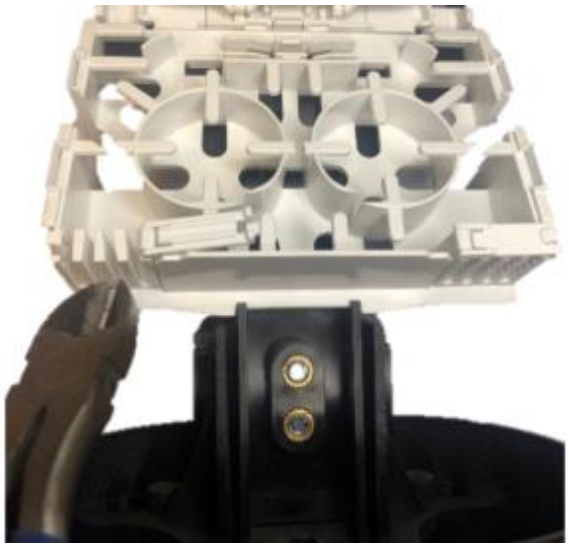
Ribbon Cable Installation and Ribbon Fibre Routing

Step 1

- Remove the manifold cover by un-clipping 2 tabs from one side and slide out of other side.
- Route the required cable element through and mark a butt position on the element approximately 45mm back from top of manifold.

Ribbon Cable Installation and Ribbon Fibre Routing

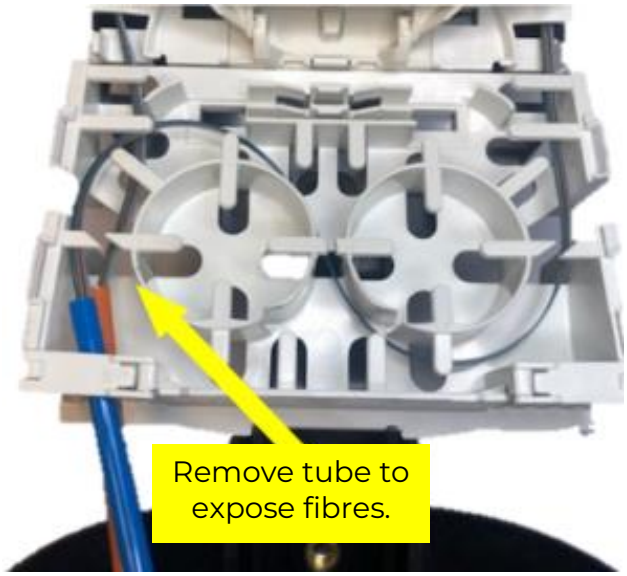
Step 2



Note: If the cable elements are larger than 3.5mm in diameter then remove walls as required so that the element is held in the manifold without force.

Ribbon Cable Installation and Ribbon Fibre Routing

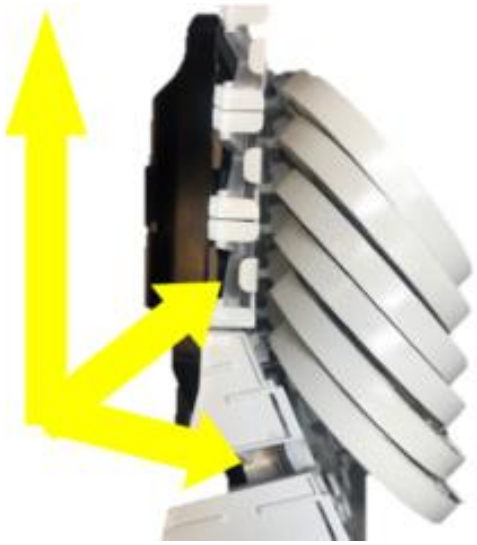
Step 3



- Remove the tube to expose the fibres using approved practices.
- When routing the ribbon fibres through the closure ensure that they are kept on the same plane to minimise fibre stress.

Ribbon Cable Installation and Ribbon Fibre Routing

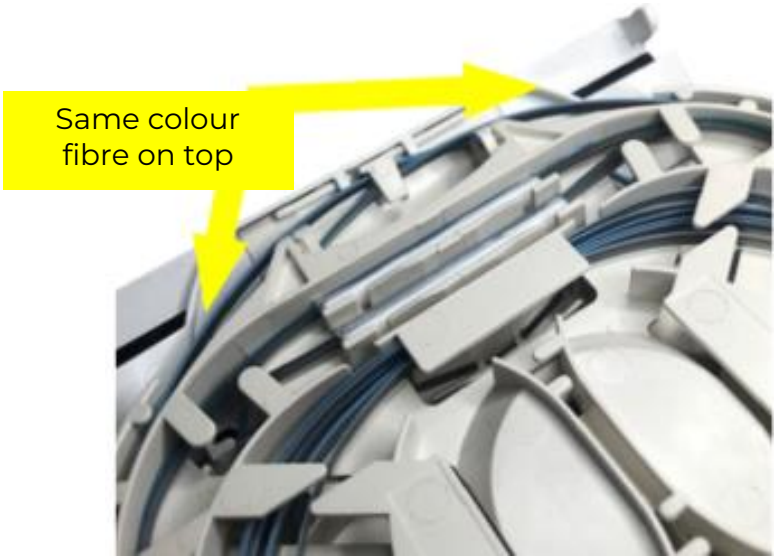
Step 4



- Route the fibres up to the appropriate splice tray by running the fibre along the track besides the trays.
- Ensure that the fibres are routed beneath the tabs in the track and manifold.

Ribbon Cable Installation and Ribbon Fibre Routing

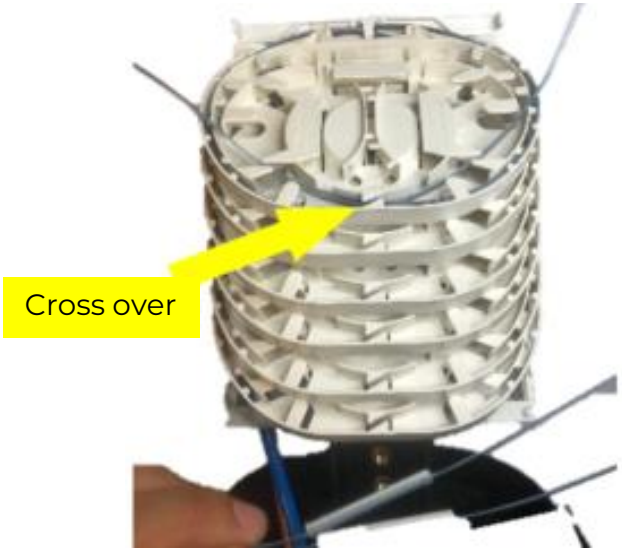
Step 5



- Ensure that the ribbon fibres enter the tray in the same orientation, this will minimise twists/crossovers in the tray.

Ribbon Cable Installation and Ribbon Fibre Routing

Step 6

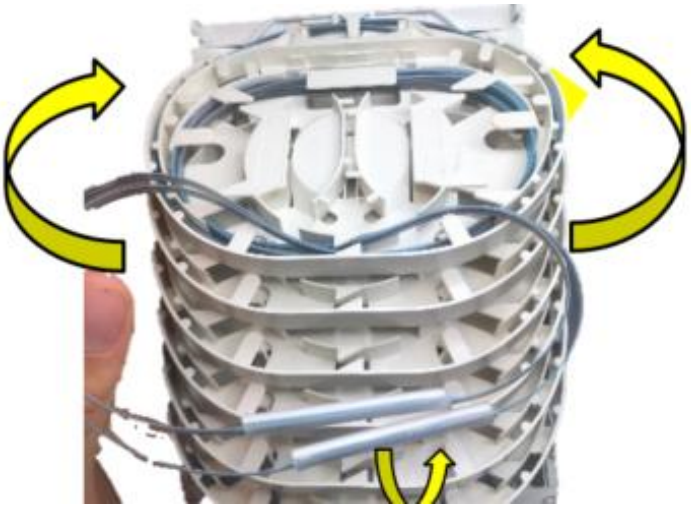


- Create a cross over at the bottom of the tray and splice the fibres together.
- Splice and store all ribbon modules at the same time.

Note: ensure that there are no twists in the ribbon fibre before splicing.

Ribbon Cable Installation and Ribbon Fibre Routing

Step 7



- Route one rotation of the ribbon fibres, one side after the other.
- After one rotation of each, rotate the splice protectors so that the twist and tension is taken out of the ribbon fibres.
- Repeat this step until all fibres stored.

Ribbon Cable Installation and Ribbon Fibre Routing

Step 8

- Route the fibres towards the splice bays at the top of the splice tray.
- Rotate both splice protectors to take the tension and twist out of the ribbon fibre.

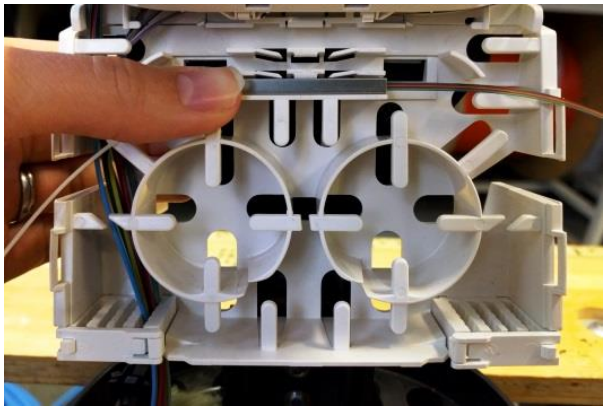
Ribbon Cable Installation and Ribbon Fibre Routing

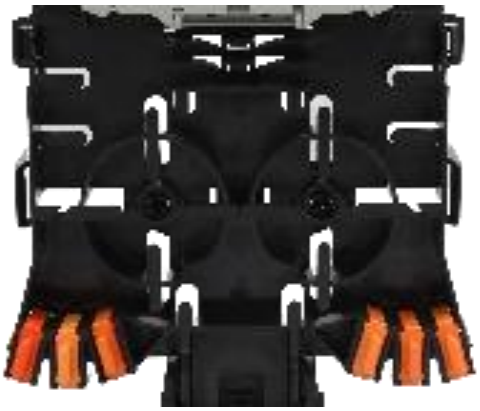
Step 9

- Store the Ribbon splice protectors in the splice bays at the top of the tray by pushing them to the base of the bay.
- If you need to re splice one fibre element, both splices will have to be removed and rerouted.

2.0 Installation of Splitters

Step 1





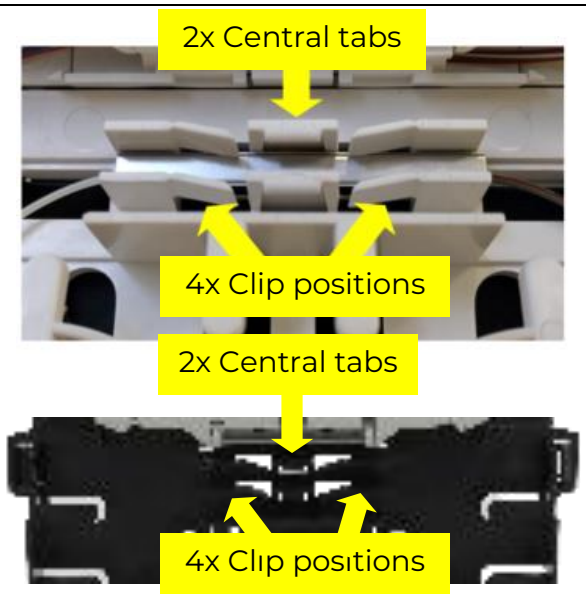
- Locate the splitter to be installed.
- Using the bottom slot first push the splitter into place, ensuring it is 'clicked' into place securely.
- See step 2 & 3 on how to secure splitters.

NOTE: use table to identify suitable splitters.

TOP SLOT	BOTTOM SLOT
2X 4x4 40mm OR 1X 4x8 70mm	2X 4x4 40mm OR 1X 4x8 70mm

2.0 Installation of Splitters

Step 2

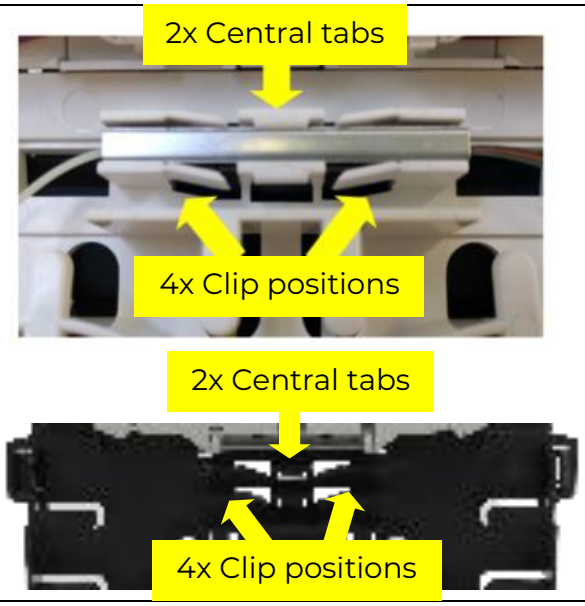


- If using a 4x4 splitter, ensure the first splitter is pushed right to the back of the slot underneath the clips.
- The second 4x4 splitter will sit on top. Ensure this is secure by the central tab.

NOTE: for illustration purposes only.

2.0 Installation of Splitters

Step 3

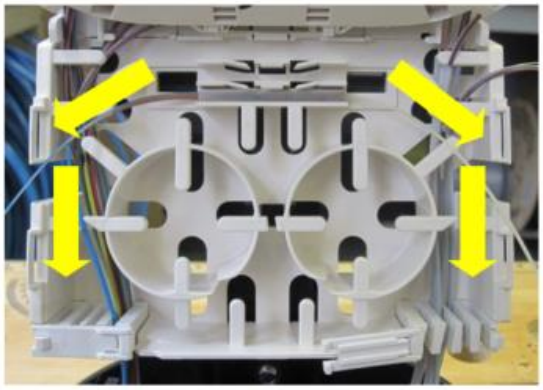


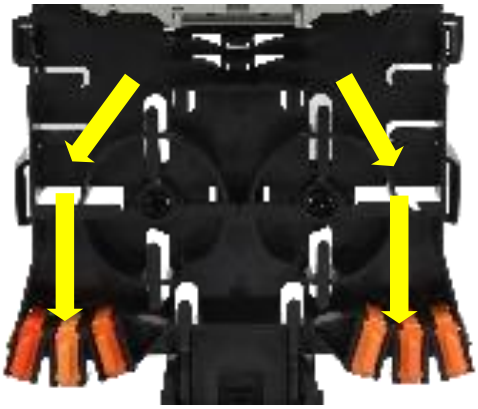
- The second 4x4 splitter secured by the central tab.
- The 4X8 splitter is also secured using the central tab only.

NOTE: for illustration purposes only.

2.0 Installation of Splitters

Step 4

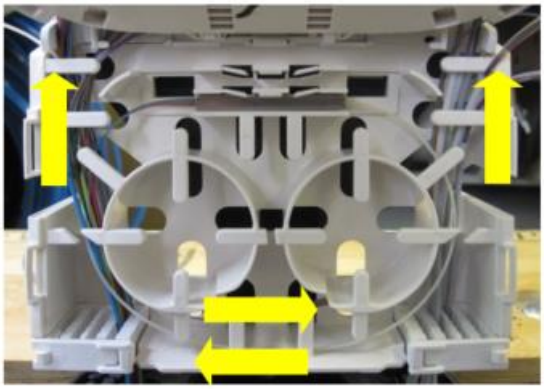


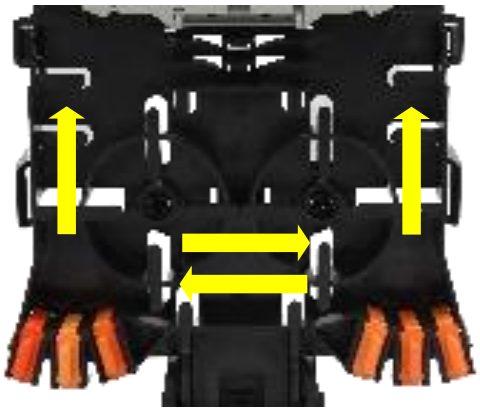


- Route the fibre around the mandrels in the directions shown.

2.0 Installation of Splitters

Step 5



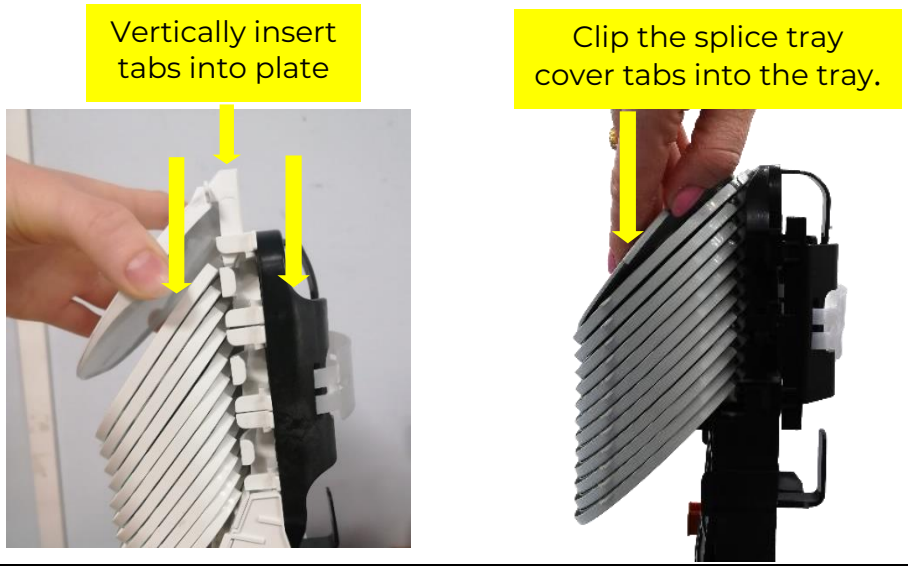


- Cross the fibres at the bottom and route the fibre up to the tray which is to require the splitter.

NOTE: Go to Section 1 cable installation and fibre routing for splicing onto a tray.

3.0 Splice Tray Cover Installation

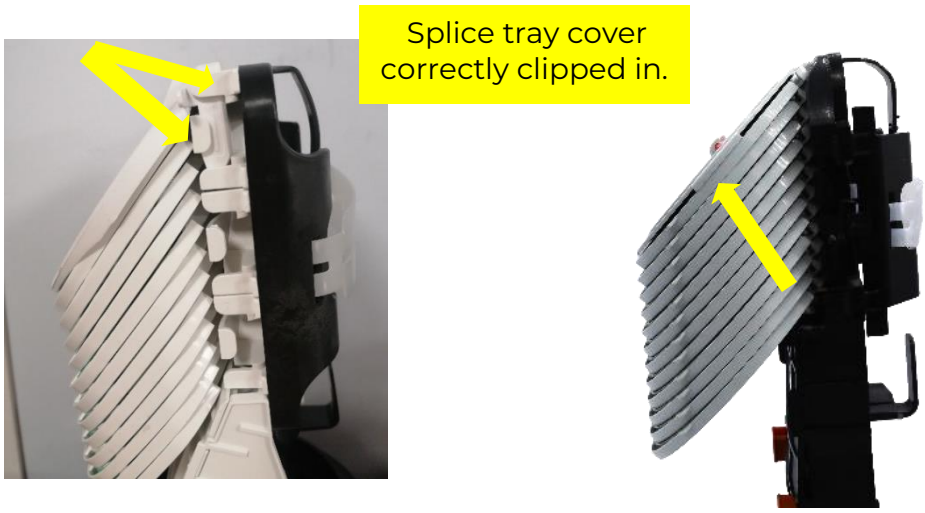
Step 10



- Align the splice tray cover with the back plate and insert the tabs into the slots.
- Ensure the tabs remain parallel, as shown in the photo above.

3.0 Splice Tray Cover Installation

Step 11



- Slide the splice tray cover vertically into the slots until an audible click it heard on both sides.
- Ensure the cover or secured in the slots by gently pulling vertically.

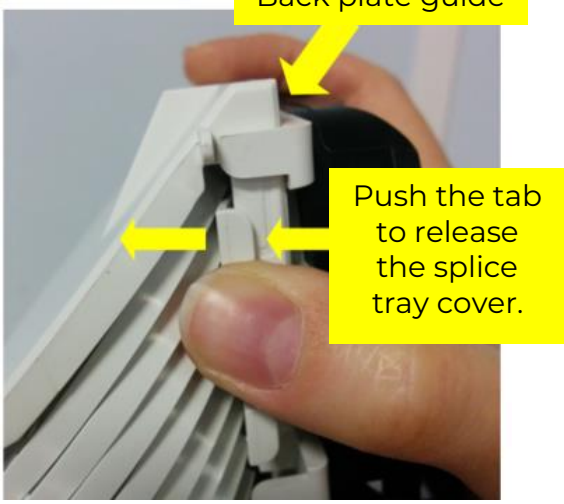
3.0 Splice Tray Cover Installation

Step 12

- Correctly installed splice tray cover.

Splice Tray Cover Removal

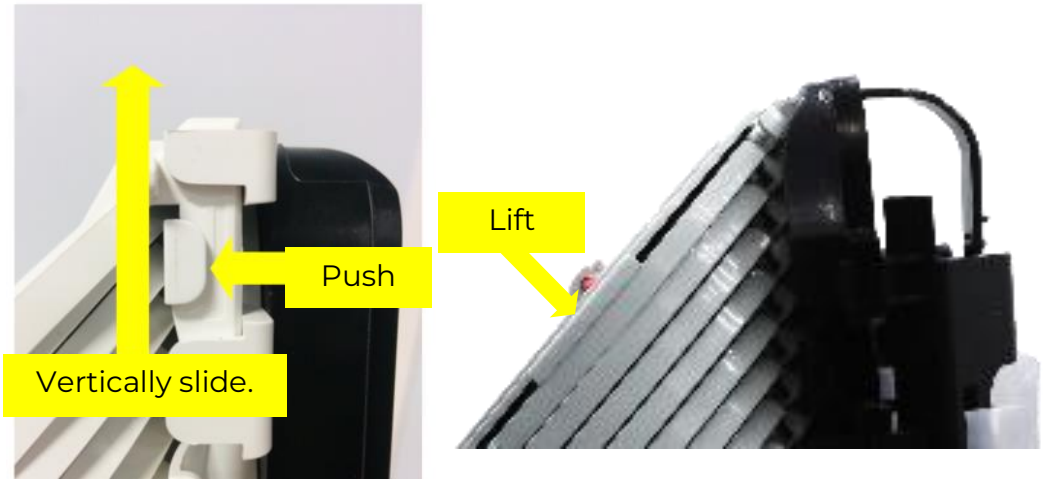
Step 13



- Flex the back-plate tab on both sides using your thumb and fingers at the same time.
- This will release the splice tray cover tabs.

Splice Tray Cover Removal

Step 14



- Ensure to push with one hand and slide the splice tray cover up with the other hand.

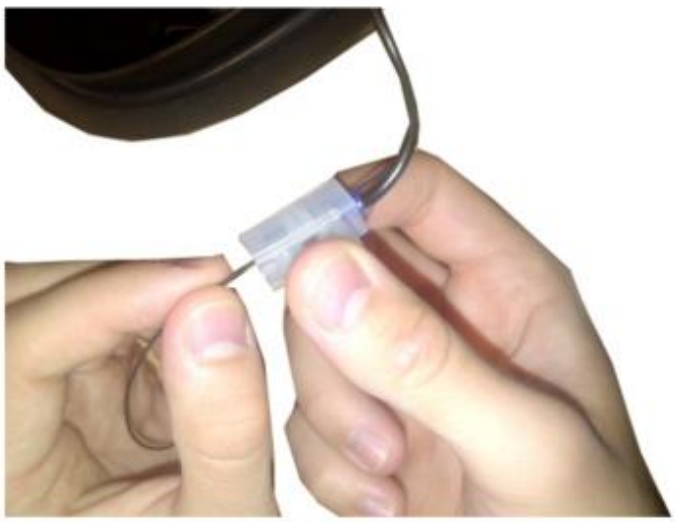
Splice Tray Cover Removal

Step 15

- With the other hand slide your thumb and fingers underneath the tab.

4.0 Termination of Copper Wires

Step 16



- If the cable contains copper conductors that need to be terminated and the joint is fitted with a pressure tests valve, route the copper conductors to the terminal block fitted to the valve.

- Strip the wires and secure into the terminal block as shown.

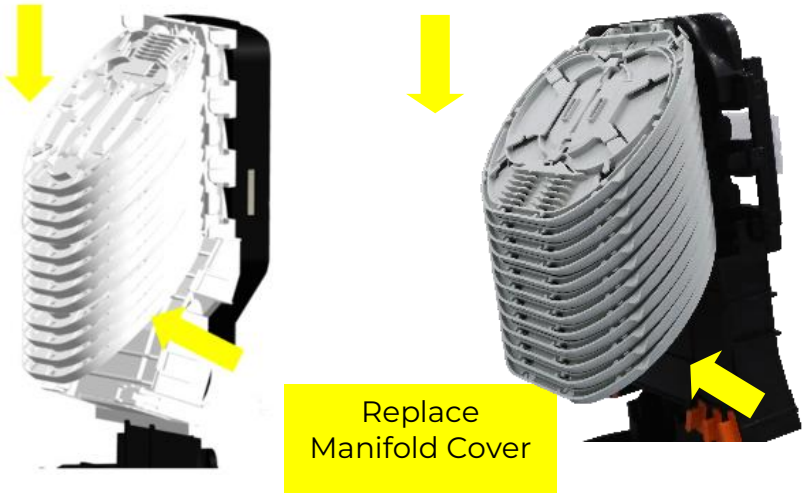
4.0 Termination of Copper Wires

Step 17

- Store the terminal block into the centre of the joint.

5.0 Joint Closedown

Step 21



- Replace the manifold cover and ensure all splice trays are lying flat.

5.0 Joint Closedown

Step 22

- Ensure that the ‘O’ seal and adjacent surfaces of the base and cap are clean. Lower the cap onto the base.
- Assemble the clamp around the base.

5.0 Joint Closedown

Step 23

Push the toggle arm to lock the clamp.

- Squeeze the clamp together and engage the toggle arm. Push the toggle arm into the clamp to lock and seal.

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