

## Int/External Splice only Flexibox - Installation

### Description

The Flexibox is for Fibre to the Premises [FTTP] applications. The box houses splice and storage for excess fibre element lengths.

This version of the box can accept up to 24 cables via 8 entry ports using both the top and bottom faces of the box, with space for up to 144 fibre splices.

The box can be supplied with excess storage (when a loop through is not required) or a loop storage basket for a pass through and splice off scenario.

### Tools & Additional Items Required

**Tools:**

Cable /tube stripping tools, adjustable spanner (optional), electric drill, M5 drill bit, pozi screwdriver, fibre splicing equipment, hammer.

**Additional items**

**Part Number**

Splice protectors (12 x2.2mm)

XKTSC00050

Single way gland – 5 to 9mm

XKTSC02335

Single way gland – 6 to 12mm

XKTSC02471

Dual way gland – 4 to 6mm

XKTSC02542

3-way gland – 2.5 to 4.5mm

XKTSC02774

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- How to route the fibres around the box
- Adding a cable to a pre-existing cable gland

### 4. Fibre routing

- How to route fibres around the box for splicing
- How to store excess fibre lengths around the box

### 5. Box closedown and secure

- How to close and secure the box

## 1.0 BOX OPENING

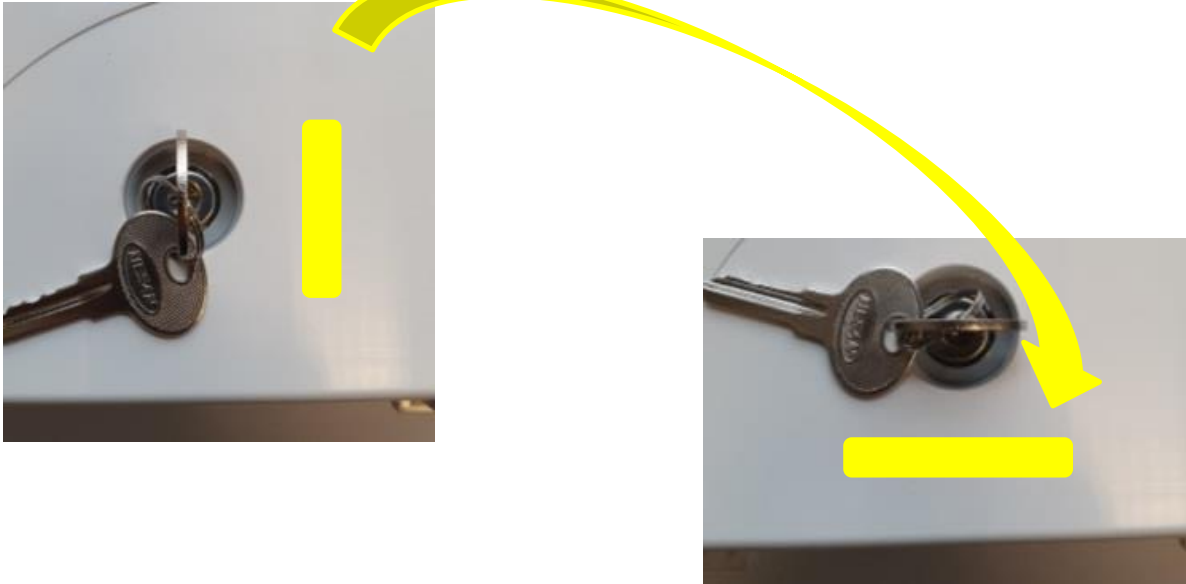
### Step 1



- If installing an external Flexibox (this will be black in colour) then using a flathead screwdriver, pivot the 4 toggles into the open position.
- For an internal Flexibox, skip to step 2.

## 1.0 BOX OPENING

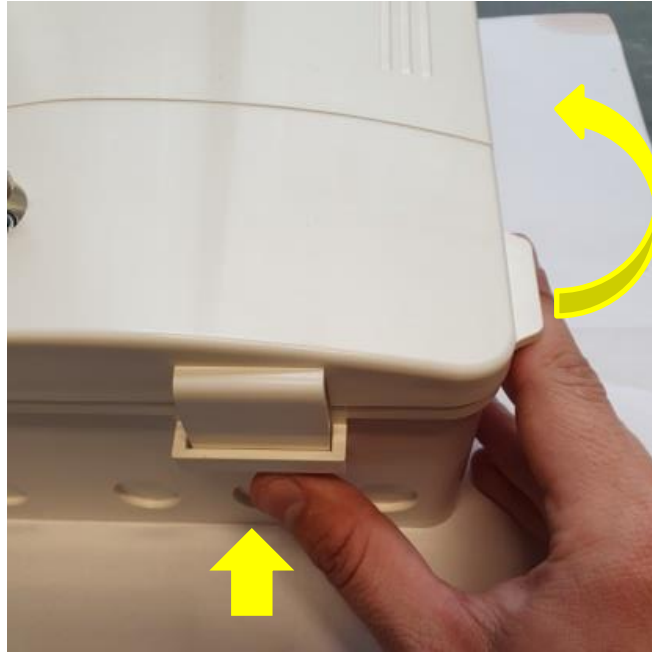
### Step 2



- If using a lock, use the key provided, insert into lock, and turn 90° clockwise so the key is in the horizontal unlock position.
- If not, skip to step 3.

## 1.0 BOX OPENING

### Step 3



With the key [and toggles] remaining in the **unlock** position:

- Simultaneously push the two clips on the bottom face and lift to open the cover using the small tabs on either side.

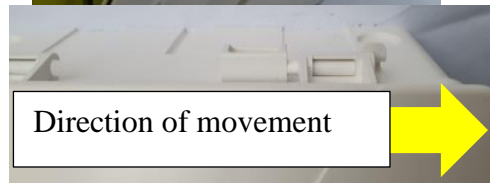
## 1.0 BOX OPENING

### Step 4

To remove cover, follow step 5, to retain cover in open position, follow step 6.

## 1.0 BOX OPENING

### Step 5



- With the cover open at around 90°, push the tab on the top face as indicated and slide the cover right horizontally to remove.
- Set cover aside until box needs to be closed and secured.

## 1.0 BOX OPENING

### Step 6



- If you are unable to remove cover and set aside, for example in aerial installations, push the cover to just over 180° where the cover will support itself.
- You will hear an audible click when the cover snaps over the bump on the base.

## 2.0 BOX WALL MOUNTING

### Step 1

**For mounting using INTERNAL mounting positions, follow section 1 to open box and remove cover, then follow steps 2 and 3.**

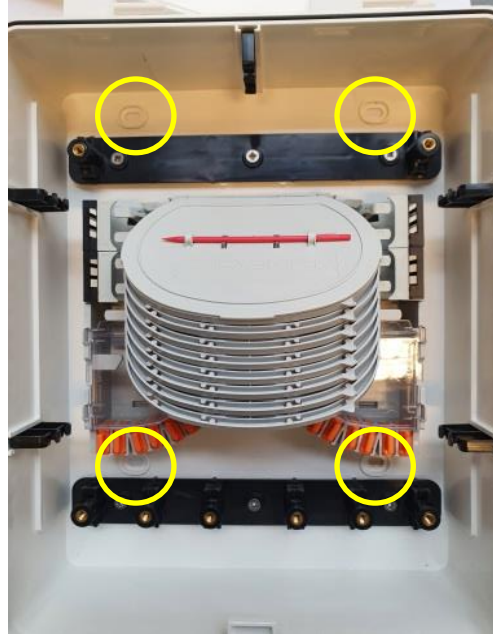
**For mounting using EXTERNAL mounting positions, follow steps 4 and 5.**

**Note: Internal mounting is only suitable for internal environments where moisture ingress is highly unlikely.**



## 2.0 BOX WALL MOUNTING

### Step 2



- Using the correct tools and practises, knockout the 4 plastic surfaces on the base as shown.
- Place the box in the desired position on the wall and mark all 4 knocked out positions with a marker.

**NOTE: mark the centre of the opening.**

## 2.0 BOX WALL MOUNTING

### Step 3



- Remove box and drill each marked position using an M5 drill bit.
- Fit a wall plug to each drilled hole.
- Place box back into position and use the M5 x 25 wood screws to secure box in all 4 positions.

**NOTE: Ensure box cover hinge is at the top of the box when secured in its final position.**

## 2.0 BOX WALL MOUNTING

Step 4



- Place the box in the desired position on the wall and mark all 3 external feet positions with a marker.

## 2.0 BOX WALL MOUNTING

### Step 5



- Remove box and drill each marked position using an M5 drill bit.
- Fit a wall plug to each drilled hole.
- Place box back into position and use the M5 x 25 wood screws to secure box in all 3 positions.

**NOTE: Ensure box cover hinge is at the top of the box when secured in its final position.**

## 3.0 CABLE/GLAND INSTALLATION

### Step 1

# Open box and remove cover

**To access box, follow all steps in section 1 to open and remove cover.**

## 3.0 CABLE/GLAND INSTALLATION

### Step 2



Single entry gland



Dual entry gland with & without blank

- Select gland as required for the cable being installed:

Single way gland – 5 to 9mm

Single way gland – 6 to 12mm

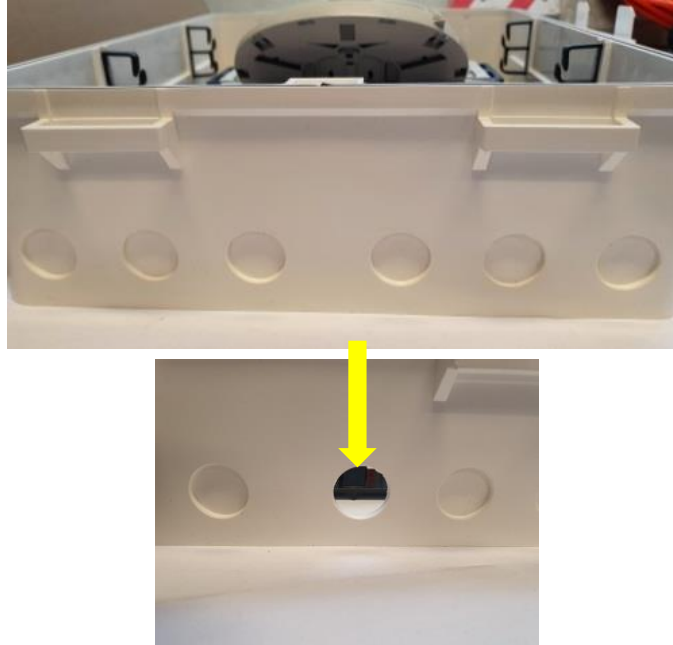
Dual way gland – 4 to 6mm

3-way gland – 2.5 to 4.5mm

- If installing an additional cable into a pre-existing gland, go to step 4.

### 3.0 CABLE/GLAND INSTALLATION

**Step 3**



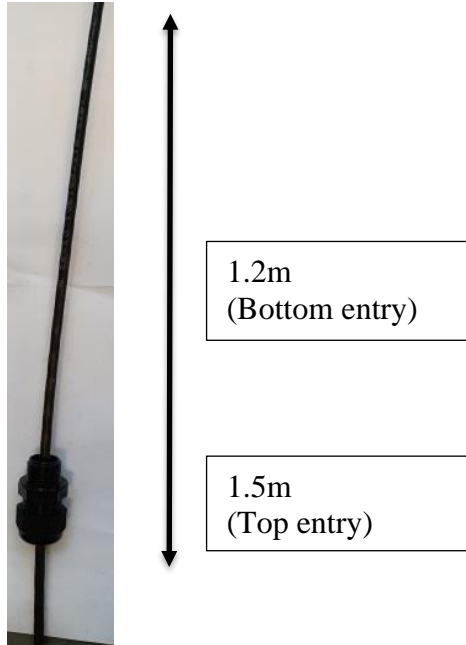
- Locate and select the required entry position to be used for installing the gland.

**NOTE: This can be on top or bottom face of the box.**

- Knockout the plastic from the selected position to allow the gland to be inserted using approved practises and tools.

### 3.0 CABLE/GLAND INSTALLATION

**Step 4**



- Remove any existing blanks if necessary and feed 1.2m (1.5m if using a top entry position) of cable through the gland and gland seal as indicated and tighten nut enough to stop cable slipping out.
- Add blank to empty cable position if required.
- Skip step 5 if installing an additional cable into a pre-existing gland.



### 3.0 CABLE/GLAND INSTALLATION

Step 5



- Push gland into knocked-out hole position and feed nut over cable on inside of the box. Ensure any rubber seal is securely on the thread of the gland.
- Securely tighten nut on inside of the box.

**NOTE: Use adjustable spanner to fully tighten if necessary.**

### 3.0 CABLE/GLAND INSTALLATION

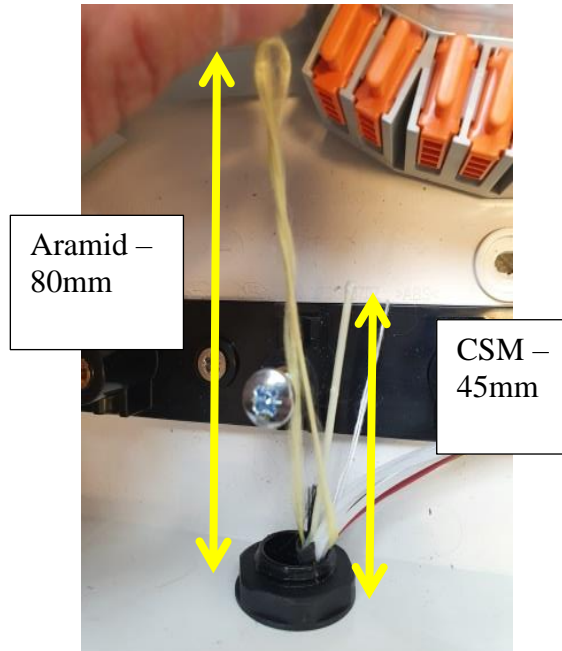
**Step 6**



- Mark the cable sheath in the position as indicated in the picture above. This is the total cable length to strip.
- Loosen the gland nut on the outside of the box and feed through an additional 15mm of cable.

## 3.0 CABLE/GLAND INSTALLATION

**Step 7**



- Strip the cable from open end to where the sheath is marked from step 6 down to fibre elements using approved practises, exposing the strength member as below:

CSM – 45mm

Aramid – 100mm

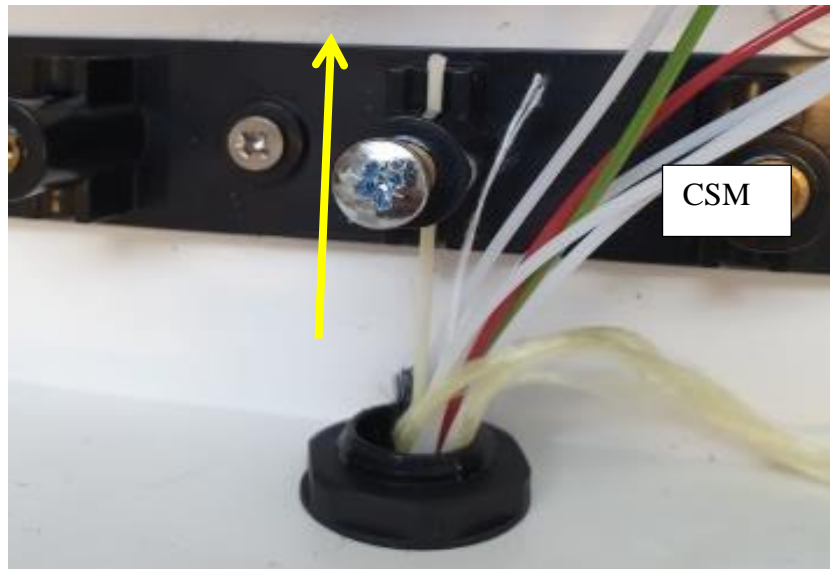
- Pull cable butt back in line with end of the cable gland once stripped.

**NOTE: if installing a cable with a CSM, thread this through the hole on the retention bracket at this point.**

### 3.0 CABLE/GLAND INSTALLATION

Step 8

Central strength member



- If the cable contains a CSM, already placed through the hole, tighten screw to clamp CSM.

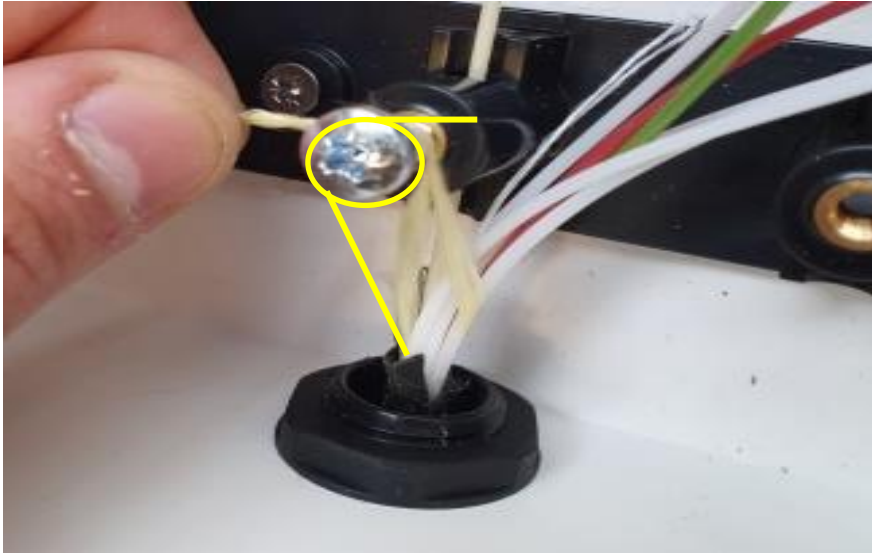
**NOTE: If installing a second cable into an existing entry, you should follow the same steps as above ensuring the original cable retention is not compromised.**

- Fully tighten the nut on the outside of the gland, ensuring any blanks are used at this point for any empty holes in gland seals.

### 3.0 CABLE/GLAND INSTALLATION

Step 9

Aramid strength member



- If the cable contains an aramid strength member, wrap the aramid around the screw thread as many times as possible and tighten screw.

**NOTE: If installing a second cable into an existing entry, you should follow the same steps as above ensuring the original cable retention is not compromised.**

- Fully tighten the nut on the outside of the gland, ensuring any blanks are used at this point for any empty holes in gland seals.

## 3.0 ROUTING FIBRES FOR SPLICING

### Step 1

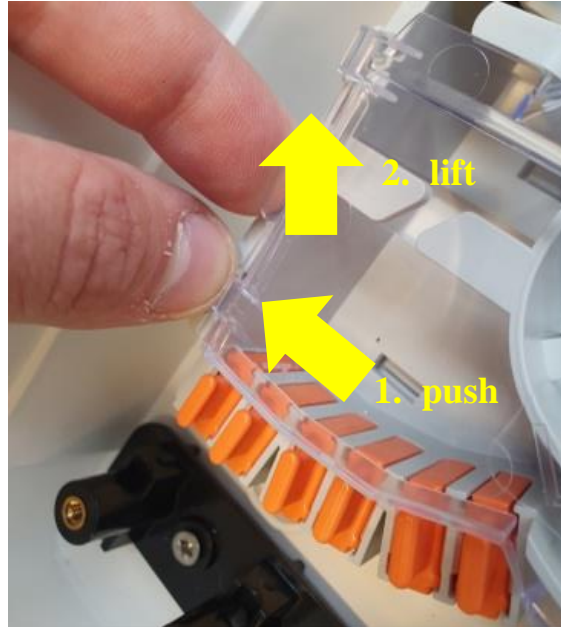
**For routing fibres to be spliced from inputs on the bottom face, go to step 2.**

**For routing fibres to be spliced from inputs on the top face, go to step 4.**

- Locate the fibre element(s) for splicing.

### 3.0 ROUTING FIBRES FOR SPLICING

**Step 2**



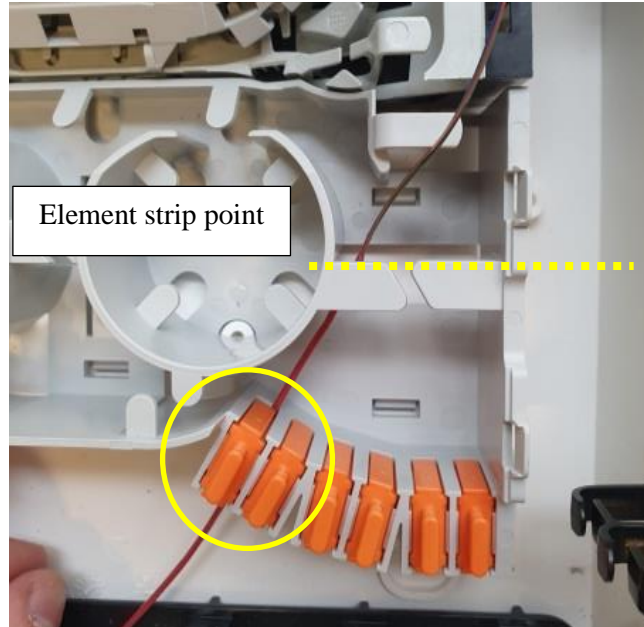
Installing fibre elements from the bottom input positions

- Remove manifold cover by unclipping one side and applicable orange tube retention block from manifold.

**NOTE: Use the tabs on the manifold to remove orange clips. Pliers if necessary.**

### 3.0 ROUTING FIBRES FOR SPLICING

**Step 3**



- Strip tube down to bare fibres up to point as marked, using approved practises.
- Repeat for all fibre element(s) to be spliced and replace orange tube retention blocks to hold tubes in position.
- Go to step 6.



## 3.0 ROUTING FIBRES FOR SPLICING

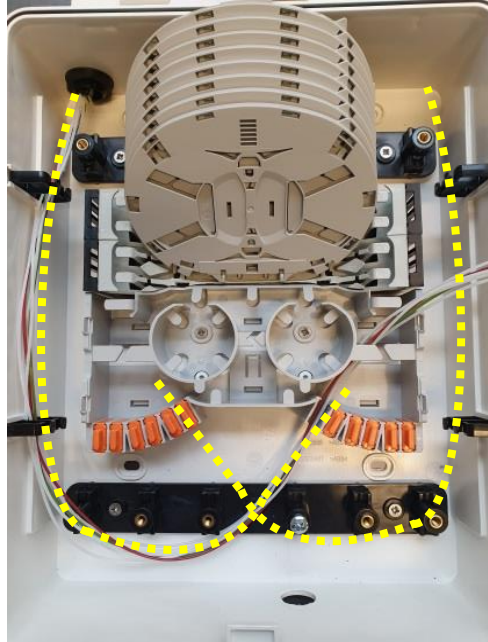
### Step 4

#### **Installing fibre elements from the top input positions**

- If installing fibre elements **AFTER** the excess fibre storage is already in place, follow section 4 step 3 prior to completing next step.
- If no excess storage in place, continue to step 5.

### 3.0 ROUTING FIBRES FOR SPLICING

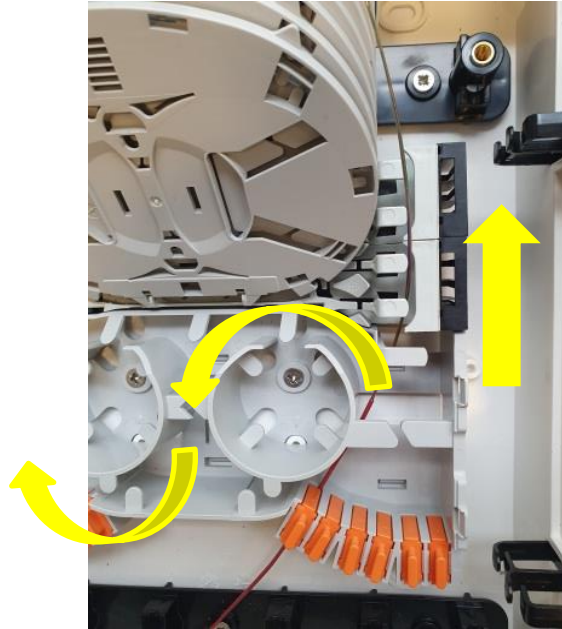
**Step 5**



- To route fibre element(s) from top input positions, follow picture above to correctly route fibres, holding fibres in place using the lower bung of the storage catches.
- Ensure minimum bend radii for the fibre elements are adhered to when laid in position.
- Continue from Step 2.

### 3.0 ROUTING FIBRES FOR SPLICING

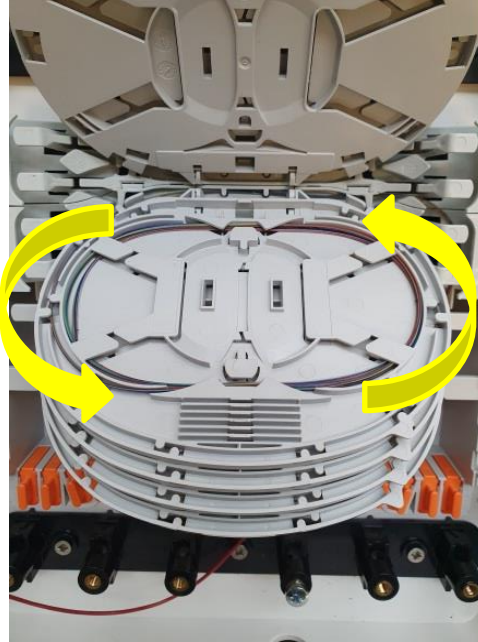
**Step 6**



- Route fibres to desired tray using raceways at sides of tray modules.
- Fibres can be routed to other side of manifold using mandrels in centre of manifold.

### 3.0 ROUTING FIBRES FOR SPLICING

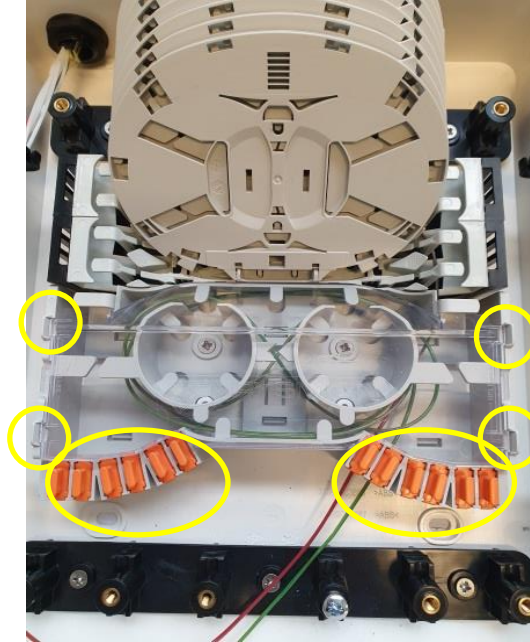
**Step 7**



- Route fibres onto trays as shown and splice.
- Repeat steps until all splicing is completed.

### 3.0 ROUTING FIBRES FOR SPLICING

**Step 8**



- Ensure all orange retention clips are placed back into the manifold to hold tubes in position.
- Replace manifold and tray cover once finished splicing.

## 4.0 ROUTING & STORING EXCESS/LOOP FIBRE

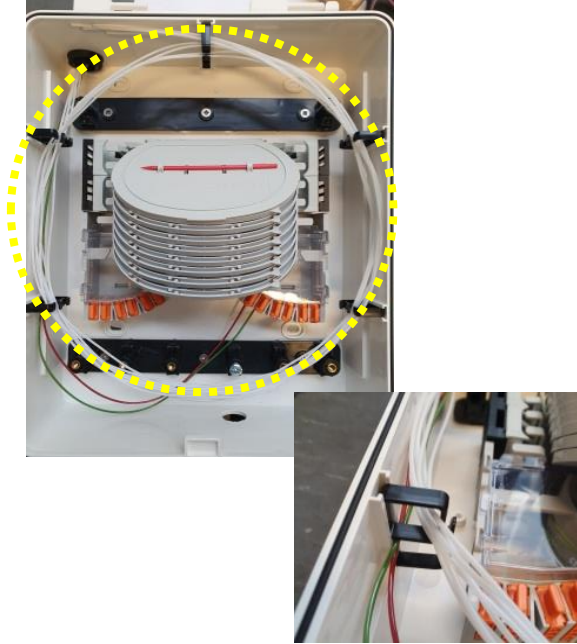
### Step 1

**If loop catches are included, follow steps 2 to 4.**

**If a loop storage basket is included, follow step 5.**

## 4.0 ROUTING & STORING EXCESS/LOOP FIBRE

### Step 2



- To store excess fibre lengths, group all fibre element(s) together and route as shown.
- Use the top section of the storage catches to avoid disturbing any live fibres routed from the top inputs.

## 4.0 ROUTING & STORING EXCESS/LOOP FIBRE

### Step 3



#### To remove a fibre element from excess storage for splicing

- Locate the end of the fibre element and carefully remove from the storage loop, working backwards and removing from one storage catches at a time.
- Go to section 3, step 2 to complete splicing process.



## 4.0 ROUTING & STORING EXCESS/LOOP FIBRE

### Step 4



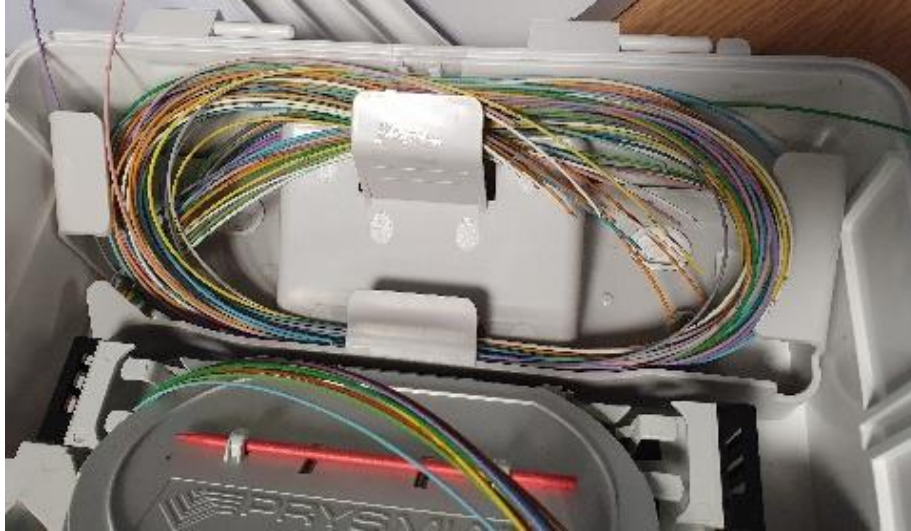
To remove all excess storage elements to input a cable from the top gland positions of the box

- Locate the end of the fibre elements and work backwards removing all elements from the storage catches one at a time.

Go back to section 3, step 5.

## 4.0 ROUTING & STORING EXCESS/LOOP FIBRE

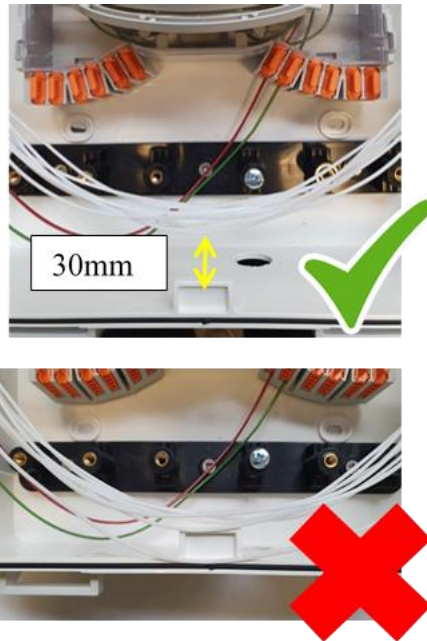
### Step 5



- To install a loop, route the fibres down the side of the trays and coil the fibre units around the loop storage area as shown.
- Hold the fibres in position with the Velcro.

## 5.0 BOX CLOSEDOWN AND SECURE

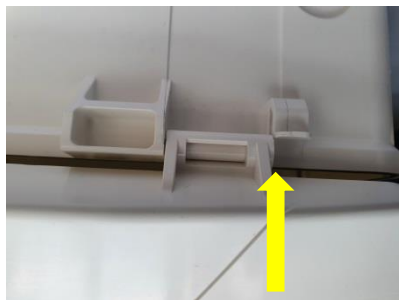
### Step 1



- To close box, first ensure all excess fibre elements are stored appropriately inside the storage catches particularly that the elements do not sit above the tab as indicated.
- Allow a minimum of 30mm distance between stored elements and end of tab.

## 5.0 BOX CLOSEDOWN AND SECURE

### Step 2



### **If cover was removed**

- To add cover, slide horizontally along hinge axis until an audible click is heard.
- Ensure the cover hinge has passed the base tab, as indicated.

## 5.0 BOX CLOSEDOWN AND SECURE

Step 3



### **If cover was not removed**

- Snap the cover over the bump on the base and gently bring down to the close position.

**Do not allow the cover to slam shut.**

## 5.0 BOX CLOSEDOWN AND SECURE

### Step 4



- Ensure the two clips are fully engaged at the front.

## 5.0 BOX CLOSEDOWN AND SECURE

Step 5



- If using a lock, turn the key 90° to secure and remove key.

## 5.0 BOX CLOSEDOWN AND SECURE

### Step 6



- If using an external box, ensure all 4 toggles are snapped into the close position. An audible click should be heard.

**Note: failure to do this may result in moisture ingress.**