OAsys® EXTERNAL PLANT

NJ4A B/FIBRE PORT KIT

Part Number: XKTSC00018 BT Item Code: 009472

Description

- The NJ4A B/Fibre Port Kit is used to install a Blown Fibre Cable into an OTIAN Node Joint 4A.
- The kit contains all the components required to prepare and install one Blown Fibre Cable into the joint.
- The joint can accommodate up to six cables. If one input (COF) cable is used, up to five Blown Fibre Cables can be installed.
- A NJ4A B/Fibre Dist Kit 4A (BT Item Code: 009474) is required to install Blown Fibre Bundles into the Blown Fibre Cable

Tools Required

Additional Items Required:	**Prysmian Part No.**	**BT Item Code**
Water Blocking Kit 5mm 2A	XAPSC00531	075692
Resin Funnel 2A	XAPSC00533	075694
Closure sealant 10B	XKTSC00094	039962

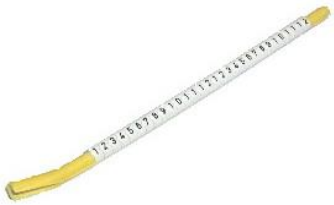
Optional Items:	**Prysmian Part No.**	**BT Item Code**
NJ4A B/Fibre Dist Kit 4A	XKTSC00019	009474

Tools:	Cutter Cable Hand No.5A Stripper Sheath No.7 Gas Torch 'D' Type Nozzle Tube Cutter 2A

Component Parts (pictures not to scale)

1 Heat Shrink Sleeve Qty 1

2 Tube Marker Collets Qty 1



3 Cable Breakout Unit Qty 1

4 Installation Guide Qty 1

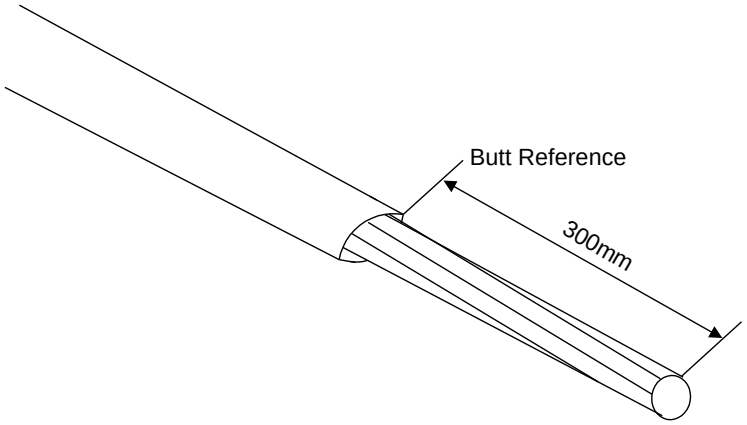
Blown Fibre Cable Preparation

Step 1

- Remove the cables from the footway box and apply butt marks to cables in the appropriate positions.
- Apply reference marks 500mm from the butt marks for the jointing allowance.
- Cut away any excess cable length using Cutters Cable Hand No.5A.

Blown Fibre Cable Preparation

Step 2



- Circumferentially cut the sheath at the reference mark using a Stripper Cable Sheath No.7
- Obtain access to the ripcords by removing a small section from the end of the cable sheath.
- Longitudinally split the sheath section from the cable back to the cable butt using the ripcords.

Blown Fibre Cable Preparation

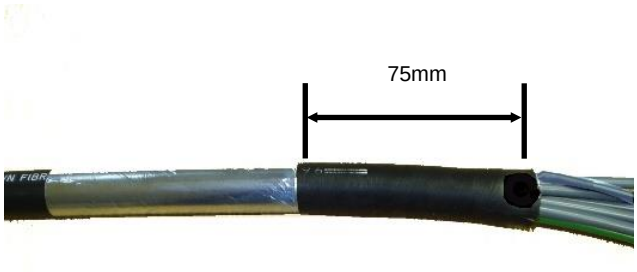
Step 3

- Clean the cable sheath using the alcohol wipe supplied with the Heat Shrink Kit **(1)**.
- Circumferentially abrade the sheath 100mm back from the cable butt using the abrading strip provided.

NOTE: SCOP Protection sleeves are not to be fitted to any Blown Fibre cables unless a single tube Blown Fibre cable is being installed.

Blown Fibre Cable Preparation

Step 4



Apply foil.

- Re-clean the sheath and apply 1¼ turns of self-adhesive aluminium foil, 75mm back from the cable butt.
- Use a smooth tool handle to flatten the foil evenly over the surface of the cable sheath.

Blown Fibre Cable Preparation

Step 5

- Identify the required port using the numbers marked on the inside of the joint base.
- Knock out the end of the ports from the inside using a blunt instrument.
- Remove any burrs using a file.

Note: It is recommended that port 2 is used first where possible, as this simplifies fibre routing.

Blown Fibre Cable Preparation

Step 6

WARNING: Protective gloves should be worn for the following operations when using a gas torch.

- Clean the outer surface of the ports using an alcohol tissue, supplied with the Heat Shrink Kit (1).
- Assemble Heat Shrink Sleeves over the ports and pre-shrink 40mm of the sleeve onto the port using a gas torch with a D type nozzle. Do not shrink the sleeve past the end of the port.
- Allow 10 minutes for the sleeves to cool.

Blown Fibre Cable Preparation

Step 7

- Obtain the prepared cable and temporarily tape the ends of the tube elements together using PVC tape. This will assist in feeding the cable up through the port.

Blown Fibre Cable Preparation

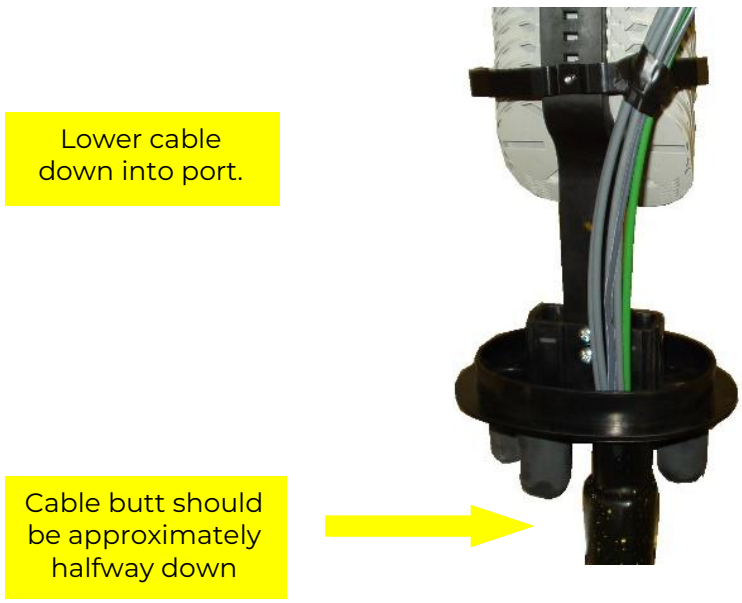
Step 8

Feed Cable up through port.

- Carefully feed the cable up through the port. Push the cable up until the butt position is accessible.

Blown Fibre Cable Preparation

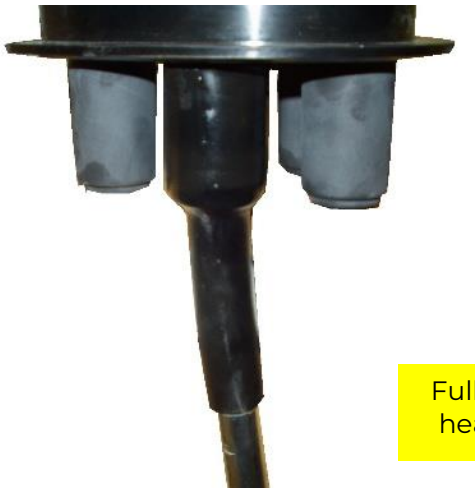
Step 9



- Lower the cable back into the port until the cable butt is approximately halfway down the port.
- Hold the cable in place by taping the tubes to the Tube Retention Cradle.

Blown Fibre Cable Preparation

Step 10



Fully convert heat shrink.

WARNING: Protective gloves should be worn for the following operations when using a gas torch.

- Complete the shrinking of the Heat Shrink Sleeve **(1)** onto the cable using a gas torch with a D type nozzle.
- Starting from the base of the port, evenly heat each sleeve, working radially, until full recovery is complete.
- Ensure that a good flow of adhesive is visible from the base of the sleeve.
- Allow 10 minutes for the Heat Shrink Sleeve to cool before handling.

Blown Fibre Cable Installation continued

Step 11

Use a CBU as a tool to space tubes.

- Remove the taped tubes from the Tube Retention Cradle and separate out the tubes.
- Apply Tube Marker Collets **(3)** to each of the tubes.
- Slide a Cable Breakout Unit **(4)** between the tubes so that they are evenly spaced at the port.

NOTE: The Cable Breakout Unit is only used as a tool to place between the tubes.

Blown Fibre Cable Installation continued

Step 12

- Fill the port using the closure sealant 10B.
- Wait several minutes for sealant to set.

Blown Fibre Cable Installation continued

Step 13

Cut tubes to length.

- Cut the tubes to length using a Tube Cutter 2A. To obtain an even cut length, rest the cutter sideways on the lip of the joint base during cutting.
- Ensure that the Tube Marker Collets **(3)** remain on the tubes.

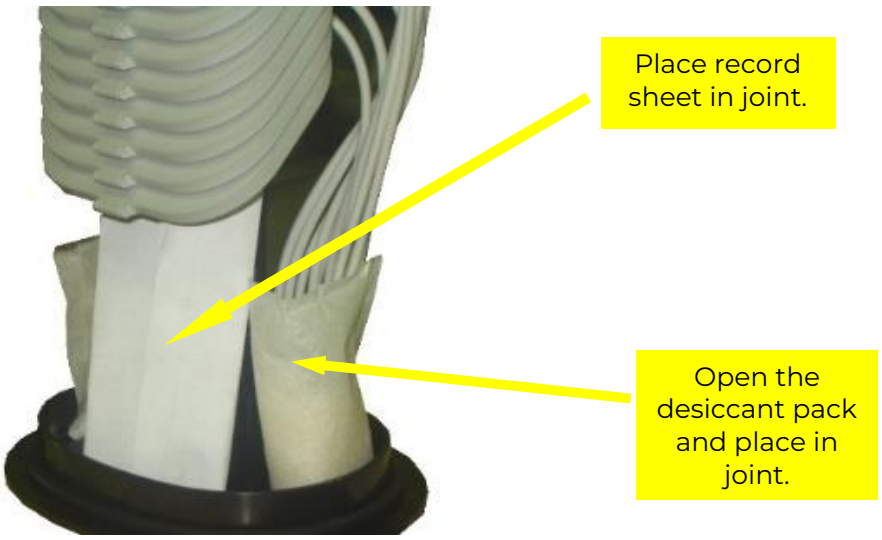
Blown Fibre Cable Installation continued

Step 14

- Install Tube Water Blocking Connectors (BT Item Code: 075692) to each of the tubes.

Joint Closedown

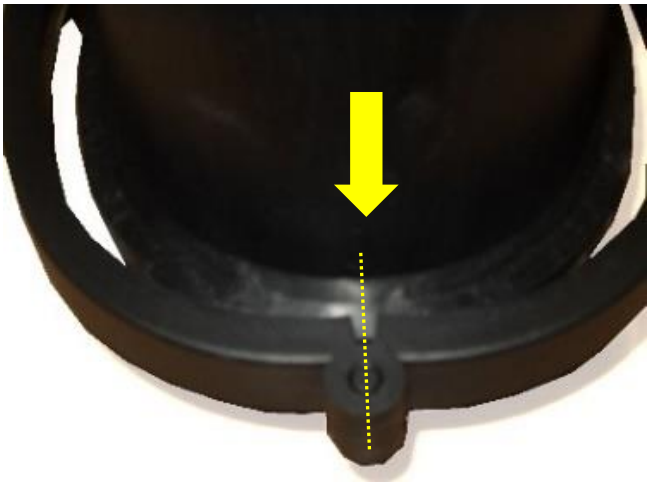
Step 15



- Fill out the local record sheet and place it in the plastic wallet. Fold the wallet and place it in the joint as shown.
- Obtain the desiccant Pack **(9)** and open. Place the pack in the vacant ports or chassis area.

Joint Closedown

Step 16



Roughly align the arrow on the cap with the centre of the clamp post to ease installation of the clamp.

- 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 ensuring that the indication arrow on the cap is roughly aligned with the centre of the clamp post.

Joint Closedown

Step 17

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.
- Mark the cables and restrain the joint in accordance with ISIS practice EPT COF D525.

Joint Re-Entry / Re-Closedown

Step 21

When entering the Node Joint 4A it is very important to pull the pressure relief valve located on the base of the joint to ensure the enclosure is fully vented and is not pressurised before removing the Cap.

When closing the joint assembly, it is important to check the following points have been completed:

1. Check the general condition of the enclosure for any sign of damage,
2. Ensure that the 'O' seal and the mating surfaces of the enclosure are clean and free from debris,
3. Replace the Desiccant pack and dispose of the old one in the appropriate manner,

Once completed, ensure the clamp is correctly located onto the assembly as per step 38.

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