COMMSCOPE®

FOSC-100 B/H
FOSC-100 B2/H

INSTALLATION INSTRUCTION

Fiber Optic Splice Closure with integrated organizer system
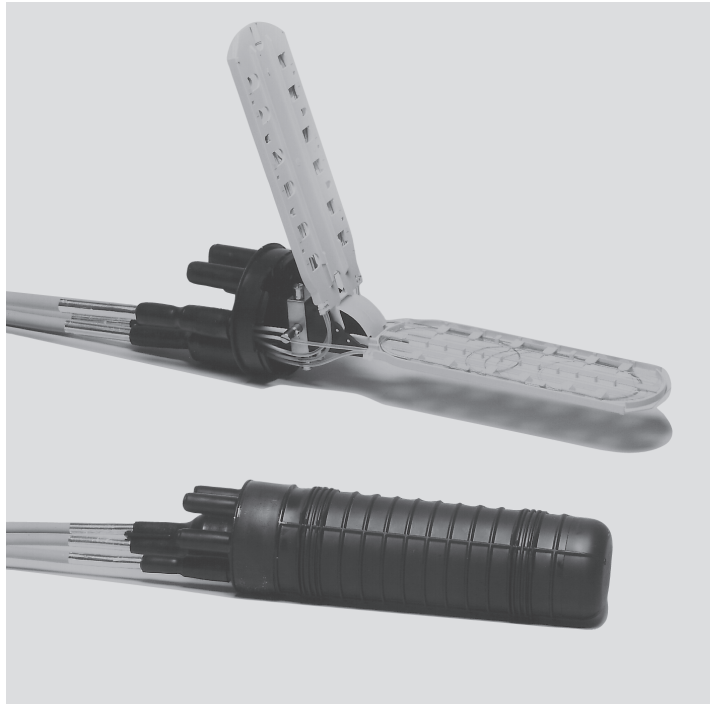
1   General

1.1   The installation instruction describes the necessary steps to install the FOSC-100B/H . The product may be used on an optical fiber cable using loose tube, slotted or central core construction.
Illustrated are the fusion splices protected by heat-shrinkable splice protections.

1.2   The FOSC-100B/H kit is supplied with one splice tray organizer. Each tray can accommodate up to12 fiber splices max. Supplementary tray kits may be used (up to 3 extra trays maximum per closure).

1.3   The splice tray accommodates fusion splice protection types such as CommScope SMOUV-1120-serie and most common types of mechanical splices.
(GTE, FIBRLOK or other similar products).

1.4   FOSC-100B/H closure system has one oval cable entry port which can handle 2 cables e.g. looped cable. The four circular ports will handle one cable each.

1.5   The seals may only be installed with hot air (hot-air temperature should be at least 350°C). An open flame is not allowed.

1.6   The kit contents listed in this installation instruction reflect the standard contents. Alternative configurations are possible.

# 2   Product description

2.1   Product designation

FOSC-100   B / H

H = hot-air activated seals
B = size indication
= family name
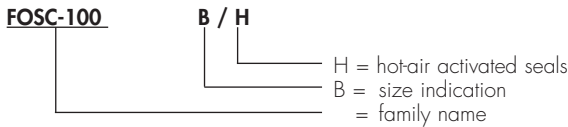
FOSC sizing information

CommScope description	Total length L (mm)	Outer dia. D (mm)	Oval Port Cable capacity		Circular port Cable capacity	
			Min. dia	Max. dia	Min. dia	Max. dia
FOSC-100B/H	520	140	2x10	2x25	5	18

2.2 Content of FOSC-100B/H closure
- Dome
- Locking ring
- Base with strength member connections and one tray assembly (see section 2.3.1. for tray assembly)
- Velcro strip
- Tray support wedge
- 1 Oval outlet seal (see sect. 2.3.4.)
- Dome seal kit (see sect. 2.3.3.)
- Shield continuity wires
- Shield continuity connector
- Installation instruction

2.3 Supplementary kits
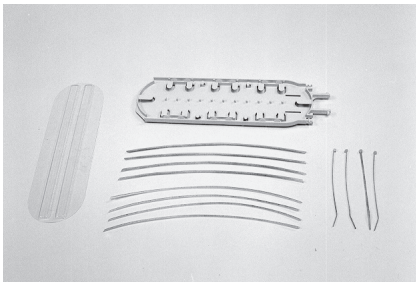
2.3.1 Tray kit-FOSC-100/TK-B
- 1 Tray for 12 fusion splices
- Tray lid
- Tie-wraps
- Transportation tubes

2.3.2 Cable seal kit-FOSC-100B/H/DK
- Aluminium cable protection tape
- Heat-shrinkable cable sleeves
- Cleaning tissue
- Abrasive strip
- Shield continuity wire*
- Shield continuity connector*
- Installation instruction *

2.3.3 Dome/base seal FOSC-100B/H/DSK
- Heat-shrinkable sleeve
- Adhesive strip
- Cleaning tissue
- Abrasive strip
- Silicagel
- Locking ring*
- Installation instruction*

* Only included if the seal kits are ordered separately.

2.3.4 Oval outlet cable seal kit
FOSC-100B/H/2CK

- Heat shrinkable sleeve
- Branch-off clip
- Aluminium cable protection tape
- Abrasive strip
- Cleaning tissues
- Shield continuity wires*
- Shield continuity connector*
- Installation instruction*

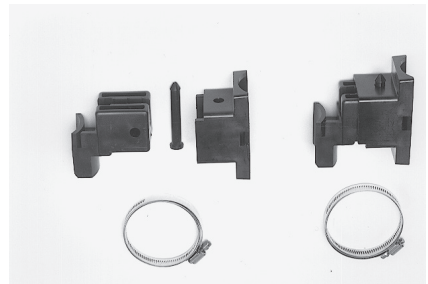* Only included if the seal kits are ordered separately.

2.4 Accessory kits

2.4.1 Hot air gun CV 1981 (1460 Watt)
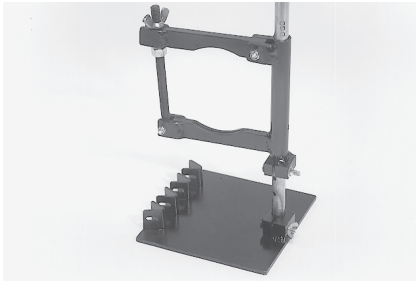Min. required hot-air temperature: 350°C.
Reflector PR 26
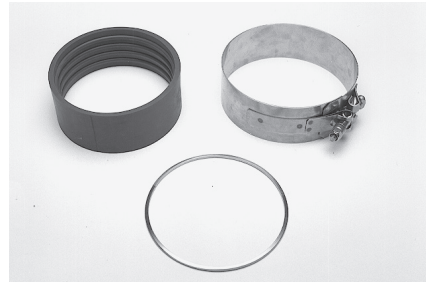
2.4.2 Temporary seal kit FOSC-100B/TS
One temporary sealing kit for dome base seal

2.4.3 Mounting kit FOSC-100B/MK
Accessories for pole mounting or wall fixing

2.4.4 Slack tray FOSC-100B/SK-B
Accessory to store uncut or extra length loose buffer tube.

2.4.5 FOSC holder device
FOSC-100 STAND

3   General precautions

3.1   Do not use damaged sleeve nor trim heat-shrinkable sleeve before installation.

**3.2**   The FOSC-100B/H closures can be installed at temperatures between - 5°C and + 45°C.

3.3   Generators used should have enough capacity for the hot air gun utilisation.

Optical fiber infrastructure network elements may contain end of optical fiber attached to the optical output when the device is operational. Laser radiation can seriously damage your eyesight. Please follow your local safety guidelines.

4   Cable installation in oval outlet
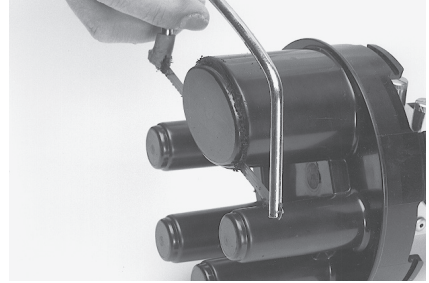
4.1   Open the port for cable entry by cutting the port at the ridge with a hacksaw. Deburr the inner edge of the port opening with abrasive strip.
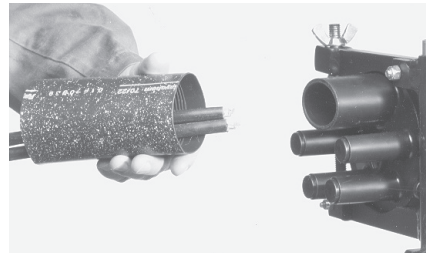

4.2   Remove any dirt, mud or other contaminants from the cable sheath for approximately 2 meters with a clean cloth. Take the oval cable seal and slide it over the cables. The non-coated edge of the sleeve and the arrows should be pointed to the base of the closure.
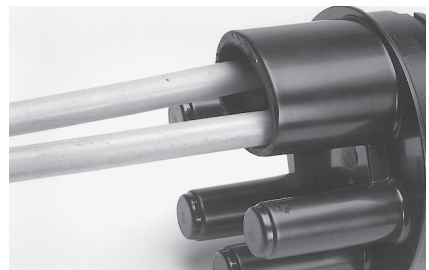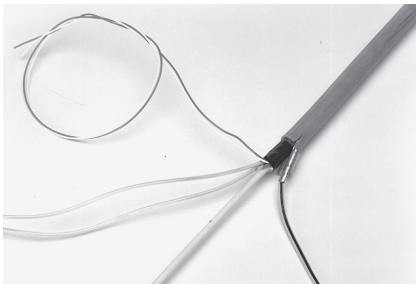

4.3   Slide the cables through the opened oval port. Prepare cables as described in section 5 (cable preparation).

5   Cable preparation
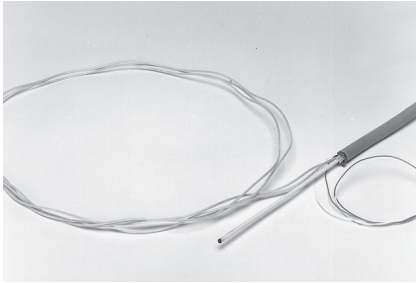
5.1   Remove the cable sheath (and shield if present) over a length as required by locally approved practice (e.g. 1,2 meters). Clean filling compound from fiber tubes and cut central strength member at a distance of 75 mm from outer jacket.


5.2   If a shield continuity is required, cut cable sheath axially for 25 mm from cable ring cut. Crimp shield clip on cable sheath with pair of pliers.
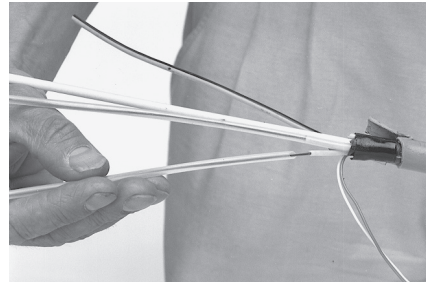

5.3   Cut the loose tube, at a distance of ± 35 mm from the cable ring cut and remove and degrease fiber bundle. Select a transportation tube which fits over the loose tube.
Slip transportation tube over fibers and the loose tube.
Note: for slotted core cable: use a appropriate kit which converts the slotted cable construction into a loose tube construction.
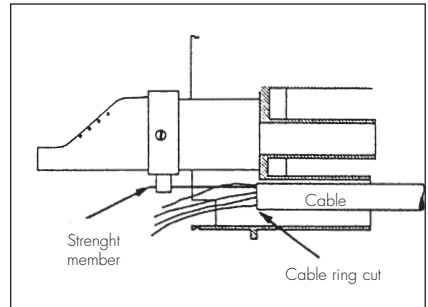
5.4   Align cable ring cuts with edge of base. Slide strength members into clamps and tighten. Cut away the excessive length of strength member.
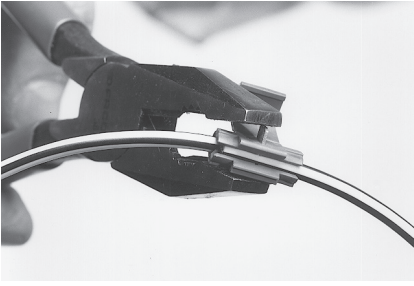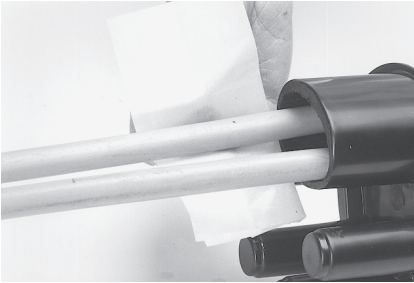
5.5 If required, connect shield continuity wire of both cables with shield continuity clip. Talk pairs, if present, will be connected together according to the local procedures.
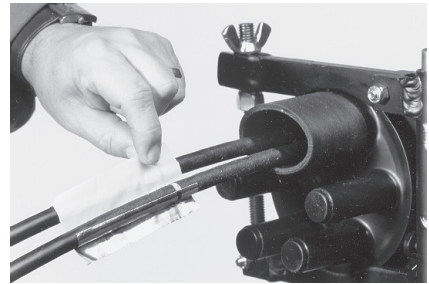
6 Sealing of oval outlet

6.1 Thoroughly clean oval port and cable sheath with the cleaning tissue over a distance of 100 mm from the edge of the port.

6.2 Abrade oval port and cable sheath circumferentially on the cleaned area with the abrasive strip. Remove any abraded material with a clean cloth.

6.3 Place oval seal kit over the oval part and cable. Mark the sleeve length onto the cable.
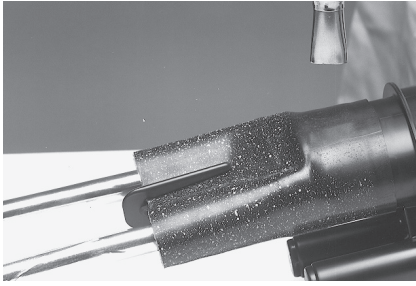

6.4 Match the blue line of the aluminium cable protection foil with the marks on the cables. Wrap aluminium cable protection foil around cable.

6.5 Slide the oval cable seal over the oval part. Install the branch-off clip. Check that the heat-shrinkable sleeve butts up against the FOSC-base and the branch-off clip is completely inserted.

6.6 Shrink the oval cable seal on the FOSC-base side with the recommended hot air gun device and reflector. Shrink sleeve until the green thermochromic paint is converted to black. (Make sure the hot-air temperature is at least 350°C.)
(If a CV 1981 - 1460 W - 220 V is used, position on scale 10).

6.7 Shrink down the end of the sleeve on the cable side. Heat until the sleeve shrinks down on the cables and take care that the green thermochromic paint is converted to black.
Postheat the clip on both sides till the adhesive shows a proper flow on the clip between the two cables.

WAIT UNTIL THE SLEEVE IS COOL TO THE TOUCH BEFORE MOVING THE CABLES.

7 Position transportation tubes and fibers
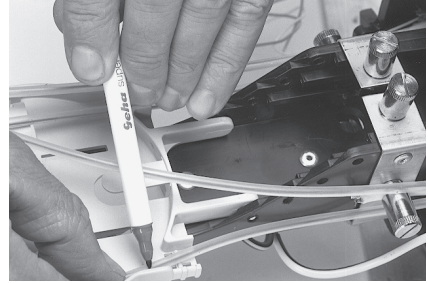
7.1 Each splice tray accommodates 12 fiber splices maximum and each side of the tray holds a maximum of 4 big transportation tubes or 6 small transportation tubes. Position the transportation tubes on bottom tray and align the tubes along the tray. Place a mark on each tube on tray side at 15 mm from tray edge.
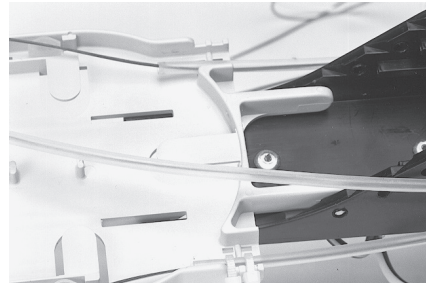

7.2 Carefully cut the transportation tubes at the mark and secure to splice tray with two tie wraps. The transportation tube may not be in contact with fibers stored in the organiser. Other tubes should be laid out of the way of the bottom tray. Alternatively, additional trays may be installed to store the fibers (see section 9). Cut the transportation tubes in the organiser/tray. Always place transparent cover over tray.

8 Splicing and fiber storage

8.1 Position the FOSC-100 B by the splicing machine in a convenient location, and secure the closure.

8.2 Slide the heat-shrinkable splice protection over one fiber and fuse fibers according to local recommendations and procedures. After the fusion splice is made, install the heat-shrinkable splice protection (e.g. SMOUV) with appropriate heating source. Allow the splice protection to cool down to the ambient temperature.
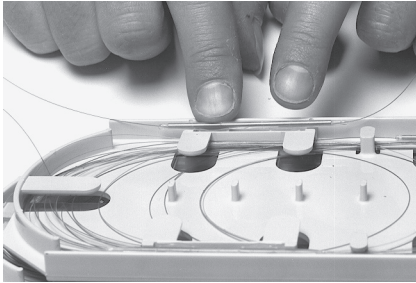
8.3 After each splice is made, the splice should be stored in the splice holder. Do not deform the splice protector during insertion. The fiber slack should be coiled into the tray.
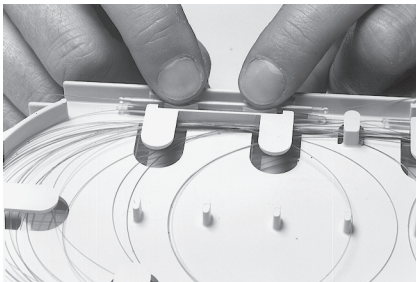
8.4 For 12 fiber capacity on tray, two fusion protection sleeves should be installed on top of one another in one splice holder.
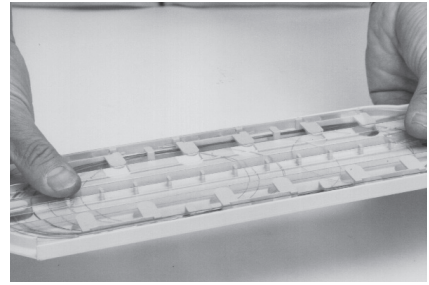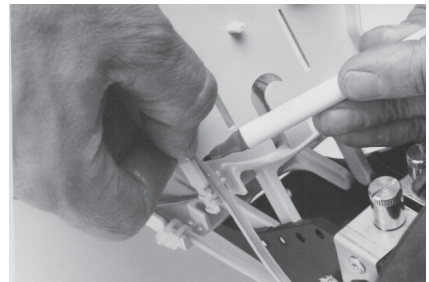

8.5 Upon completion of splicing.Install the clear protective cover on the tray. Secure cover by installing the velcro strip around the trays and cover.
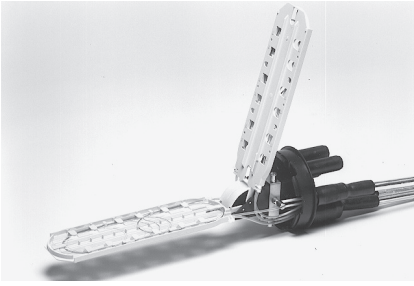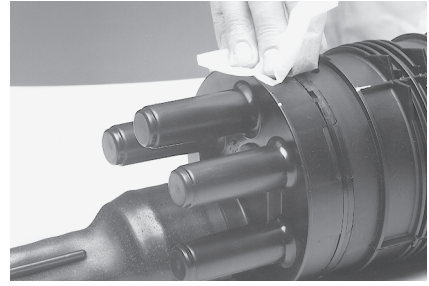
9 Tray kit

9.1 If additional trays are to be used, align the tray pins with the holes on base bracket. Squeeze tray pins and slip tray into bracket.

9.2 Proceed for fiber splicing as described from point 8. However, provide enough slack on transportation tube such that no severe bending or kinking of tube may occur during hinging.
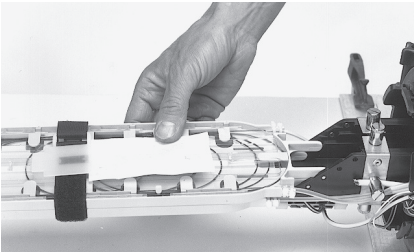
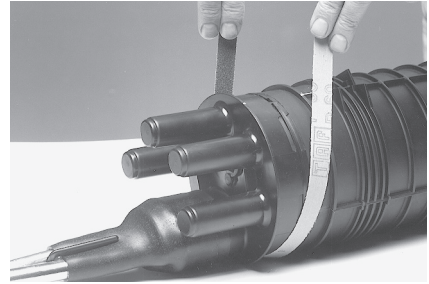**9.3** Use tray wedge to keep the tray in upward position.
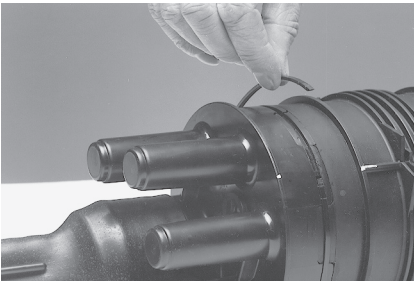
10 Dome installation

10.1 Open the dome sealing kit and remove the desiccant package. Open and remove desiccant bag from its package and place the bag on the tray. Secure with vinyl tape.


10.2 Carefully slide the FOSC-100 B/H dome onto the base. Align the white dot of the dome with the white dot of the base. Install the split plastic locking ring over the transition holding the dome and base together. The split ring should fit completely into the groove.

10.3 Thoroughly clean the sealing area with the cleaning tissue.

10.4 Abrade the base and dome circumferentially on the cleaned area, abrade till the moulding marks are removed. Remove any abraded material with a clean dry cloth.
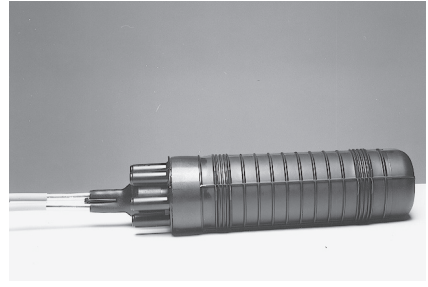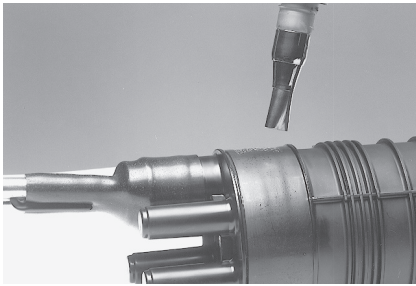

10.5 Remove the protective layer of the tape in the middle of the adhesive strip.
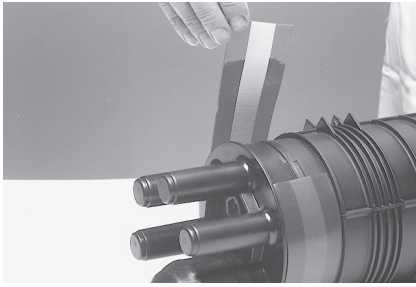
**10.6** Wrap adhesive strip around dome and base interconnection with tacky side towards base and dome.

10.7 Slide heat-shrinkable sleeve dome to base over the closure and position the sleeve over the dome/base transition. Shrink the sleeve till the edges of the sleeve have come down and the green thermochromic paint is converted to black. The flow of red adhesive should be visible at the edges of the sleeve. Make sure the hot air temperature is at least 350°C.
(If a CV 1981 - 1460W - 220V is used, position on scale 10.)

10.8 Allow the heat-shrinkable sleeve to cool down before moving the closure.
FOSC-100 B/H is now ready to be mounted for storage.

11 Re-entry and reclosing
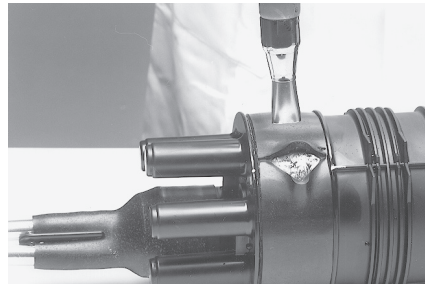
11.1 Heat the sleeve locally, cut gently in the soft heat-shrinkable sleeve on the dome and base transition, **taking care not to cut into the base or dome**. Heat the cut line till the sleeve starts to open over its entire width.

11.2 Using a pair of pliers, peel the band from the dome and base transition. It is not necessary to remove any adhesive left from the original adhesive strip. The adhesive will melt and flow together with the adhesive from the new heat-shrinkable sleeve adhesive strip.
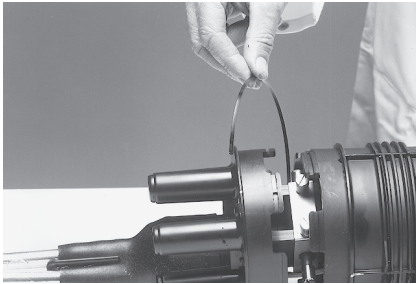

11.3 Remove the plastic split locking ring and slide dome from base. DO NOT RE-USE THE SPLIT RING. Protect dome/base transition from dirt, moisture or other contamination.
Note: remove the existing silicagel bag. DO NOT RE-USE.

11.4 The dome may be reinstalled by using the FOSC-100 B/H/DSK kit. Follow the procedure as described in section 10.

12 Cable installation in circular outlet
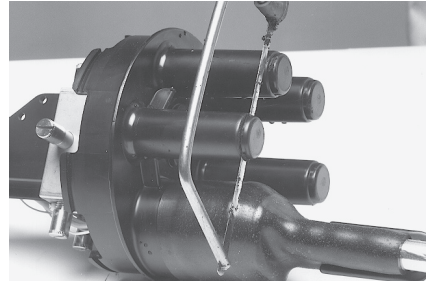
12.1 Open the port for cable entry by cutting the port at the ridge with a hacksaw. Deburr the inner edge of the port opening with abrasive strip.
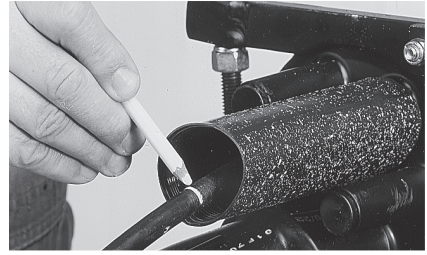

12.2 Remove any dirt, mud or other contaminants from the cable sheath for approximately 2 meters with a clean cloth. Take the cable seal sleeve and slide it over the cable. The non-coated edge of the sleeve and the arrows should pointed to the base of the closure.

12.3 Prepare the cable as outlined in section 5; "Cable preparation" points 5.1. and 5.2.
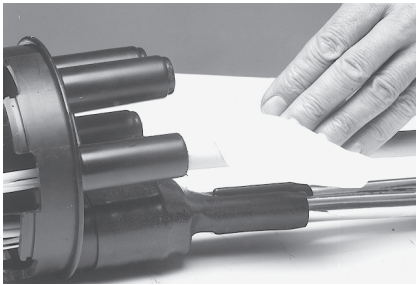
12.4 Slide the prepared cable through the opened entry port and install the transportation tubes described in section 5, point 5.3.
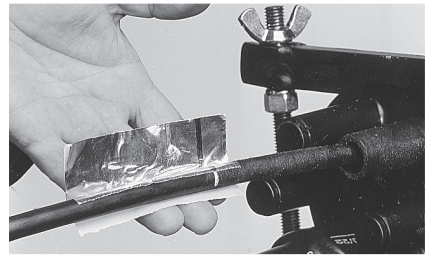
12.5 Align cable ring cut with the edge of the base. Slide strength member into clamp and tighten the nut. Cut away the excessive length of strength member.
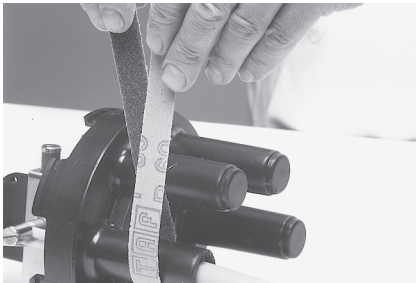
12.6. Thoroughly clean port and cable sheath with the cleaning tissue over a distance of 100 mm from the edge of the port.

12.7 Abrade port and cable sheath circumferentially on the cleaned area with the abrasive strip. Remove any abraded material with a clean cloth.

12.8 Place cable seal over the drop outlet of FOSC-100B base when cable seals butts against the base. Mark the sleeve length on cable sheath.
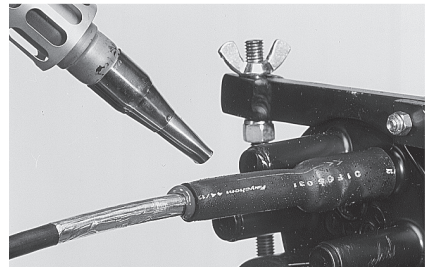
12.9 Match the blue line of the aluminium cable protection foil with the marks on the cables. Wrap the aluminium cable protection foil around cable.
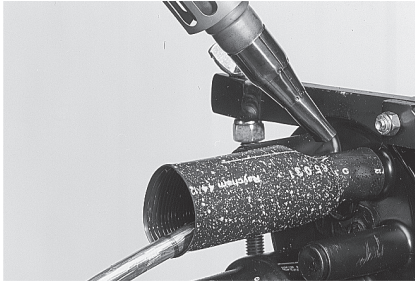
12.10 Shrink the cable sleeve on the base side with the recommended hot air gun device. Use the reflector to ensure heat distribution around the outlet. Shrink sleeve until the green thermochromic paint is converted to black. **Note:** setting thermogun: CV 1981 position 10. Minimum hot air temperature should be 350°C.

12.11 Shrink down the end of the sleeve on the cable side. Heat till the sleeve shrinks down onto the cable and the green thermo-chromic paint is converted to black. A ring of red adhesive should be visible at the cable on the end of the sleeve.

**12.12** WAIT UNTIL THE SLEEVE IS COOL TO THE TOUCH BEFORE MOVING THE CABLES.

13   Additional cableinstallation

13.1 For each added cable use a FOSC-100B/H/DK kit.

13.2 Open a new port with a hacksaw taking care not to damage any of the cables already installed in the other ports. Smooth the rough edges of the port.
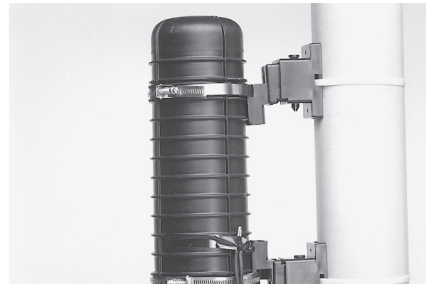
13.3 Install and prepare the cables as described in section 5. Complete splicing, install cable seal and re-install dome and seal closure.

14   Other capabilities of splice holder
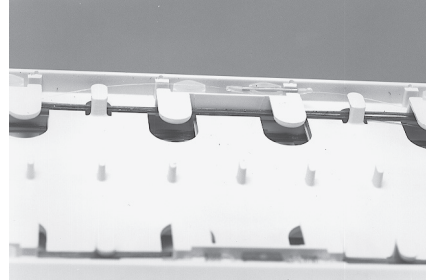
14.1 Short splices
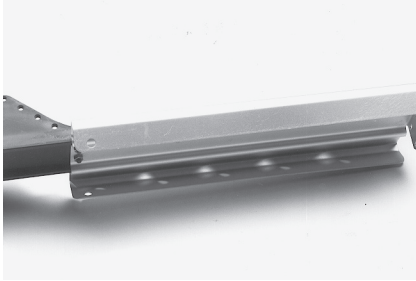(e.g. TE Connectivity SMOUV 1120-02 and -03)

15   Mounting kit

15.1 Position the two dome mounting brackets on the dome of FOSC-100B/H. Clamp the brackets into the pole mounting brackets and secure it with the locking pin.

16   Slack Tray

16.1 Detach the organiser tray from the FOSC base by squeezing the tray prins and slip the tray out of the bracket.

16.2 Turn the closure on its side and install the loose tube slack tray with the open side downwards. The ribs of the base are positionned in the grooves of the slack tray and the holes of the bracket are matching the holes of the slack tray.
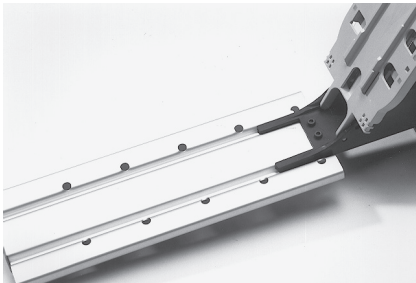

16.3 Attach the slack tray with the nuts and bolts. Thighten the nuts. Re-install the bottom tray by aligning the tray pins with the bottom holes of the bracket. Squeeze tray pins and slip tray into the bracket.

16.4 For storing the uncut loose buffer tubes, slide the loose tubes through the oval port, being careful not to kink the tubes. Store the loose tube into the black tray and secure in place with tie-wraps.

17   Intertray jumpers

17.1 When it is necessary to splice fibers that are placed on different splice organiser trays an intertray jumper may be used to route one or more fibers to the desired tray.

17.2 Secure one end of intertray transportation tube to the splice tray and secure with two tie-wraps.
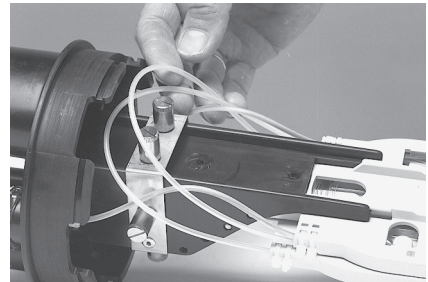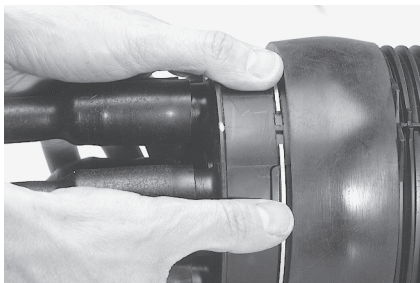

17.3 Define the length of intertray jumpering tube and mark. Proceed in the same way as per point 8.2.

**17.4** Route the fibers in the jumpering transportation tube.

17.5 Carefully bend the intertray jumpering transportation tube to the appropriate tray and secure to the splice tray with two tie-wraps.

17.6 The fibers may now be splices or stored.
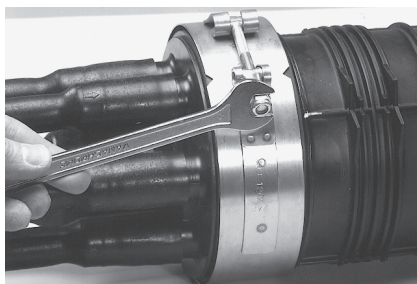
18   Temporary Seal

18.1 Slide the dome onto the base. Align the white dot of the dome with the white dot of the base. Install the metal locking ring over the transition holding the dome and base together. The split ring should fit completely into the groove.
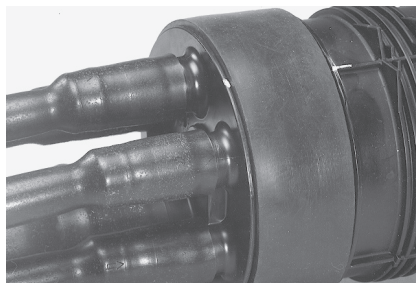
18.2 Slide the temporary rubber sealing ring over the dome/base interface.

18.3 Install the temporary metallic clamp over the sealing ring and screw in place.