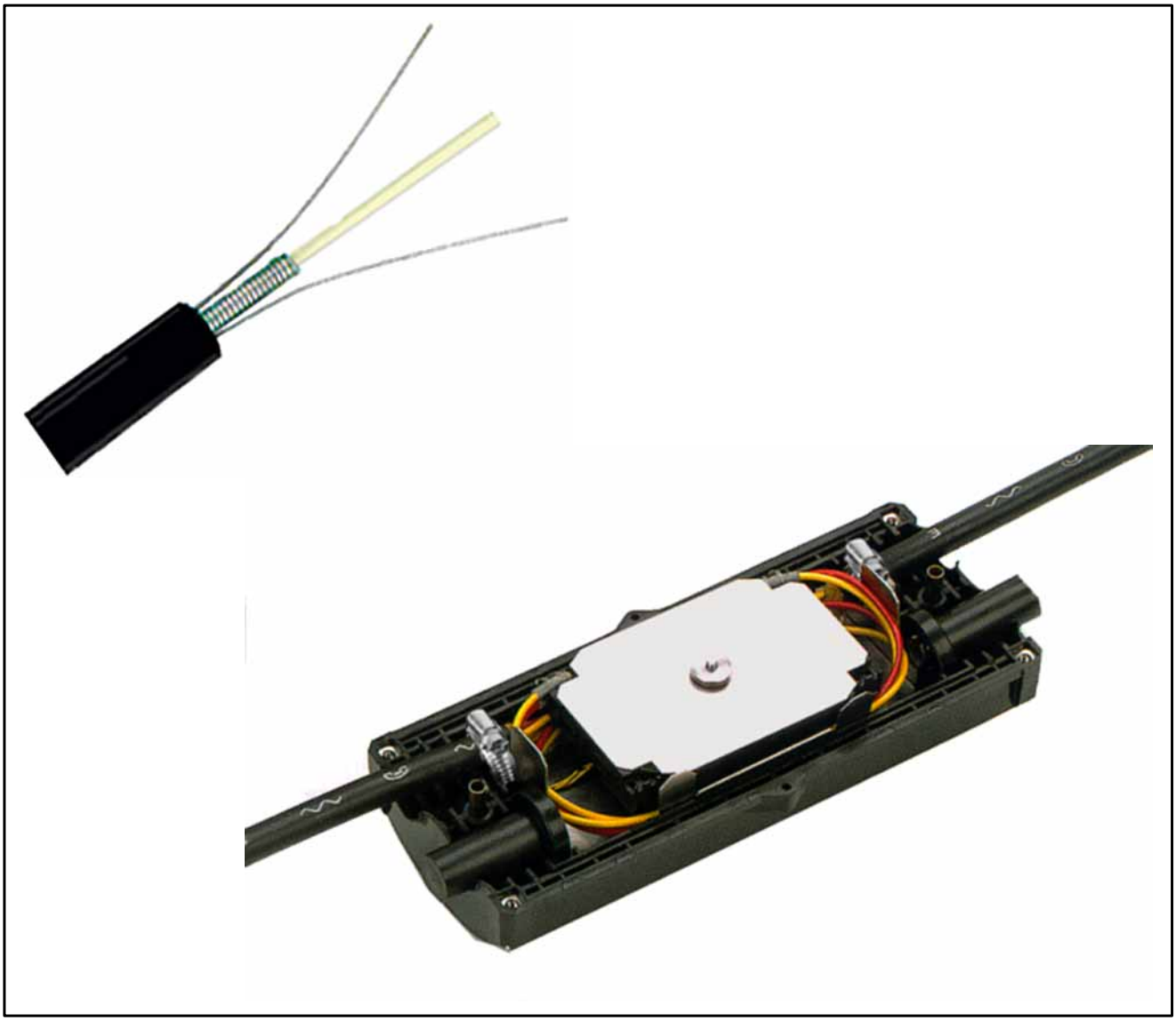
Installation Instructions

UCSO 4-6 as a Straight and Branching Closure for Optical Cable A-D(ZM)(SR)2Y....



1. Installation Material

UCSO 4-6
Reclosing kit
Central tube adapter for multiple fanout
Splice tray
Splice organizer
Hose clips
Splice protection compound
Crimp splice protector

1.1 Auxiliary Materials

White spirit
Alcohol
Lint-free paper tissues and cleaning cloth
Adhesive numbers
Cleaning and accessories kit for fiber splices

2. Introduction

The universal screw-clamping closure UCSO 4-6 is suitable for use as a straight, branching and distribution closure.
It can be used for buried, ducted and aerial cables.
It provides capacity for 24 fibers, i.e. two splice trays for 12 fibers each.
The permissible ambient temperatures during installation are -5ºC to +50ºC.

Caution: Observe the accident prevention regulations!

Dimensions in mm

3. Required Installation Instructions and Operating Instructions

Microprocessor-controlled splicer e.g.: X60.....S46999-L6018-P451
Cleaver for optical fibers e.g. X6.....S46999-L6014-P252

4. Equipment and Tools

Microprocessor-controlled splicer e.g. B60
Cleaver for optical fibers e.g. B6
Holder for splice tray
Assembly bench
Tool case for optical fiber jointing
Cable sheath cutter

5. Cable Design

5.1 Cable Cross Section (Optical Cable)

Example: Optical cable type A-D(ZM)(SR)2Y....

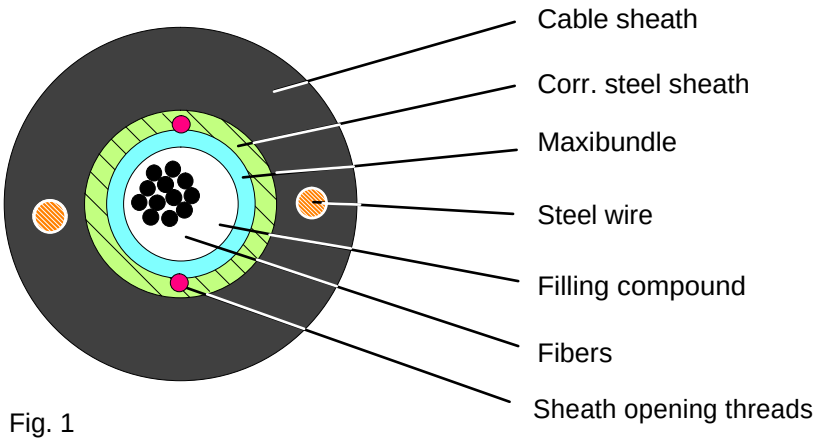


Fig. 1

6. View of Closure Pack

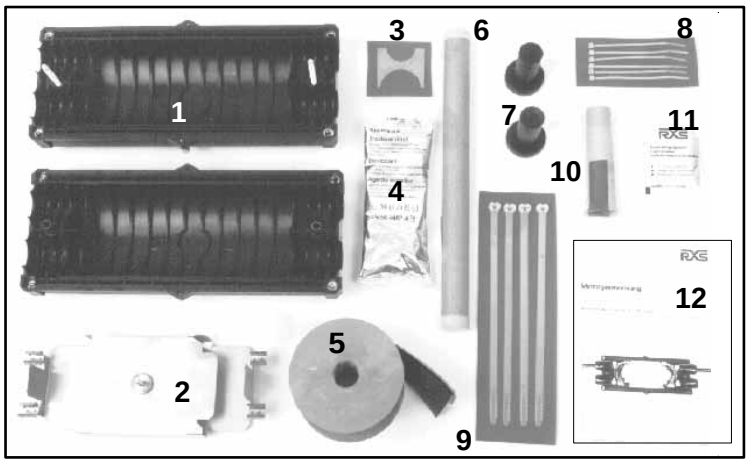


Fig. 2

No.	Qty.	Designation
1	2	Closure half shell
2	1	Fiber insert with mod.cov.
3	1	Gage
4	1	Desiccant
5	1	Sealing tape
6	2	Sealing cord
7	2	Dummy plug
8	6	Cable tie 2.4 x 92mm
9	4	Cable tie 7.6 x 203mm
10	1	Sealing compound
11	1	Cleaning cloth
12	1	Installation instructions

Table 1

7. Assembly Sequence

7.1 Stripping Dimensions

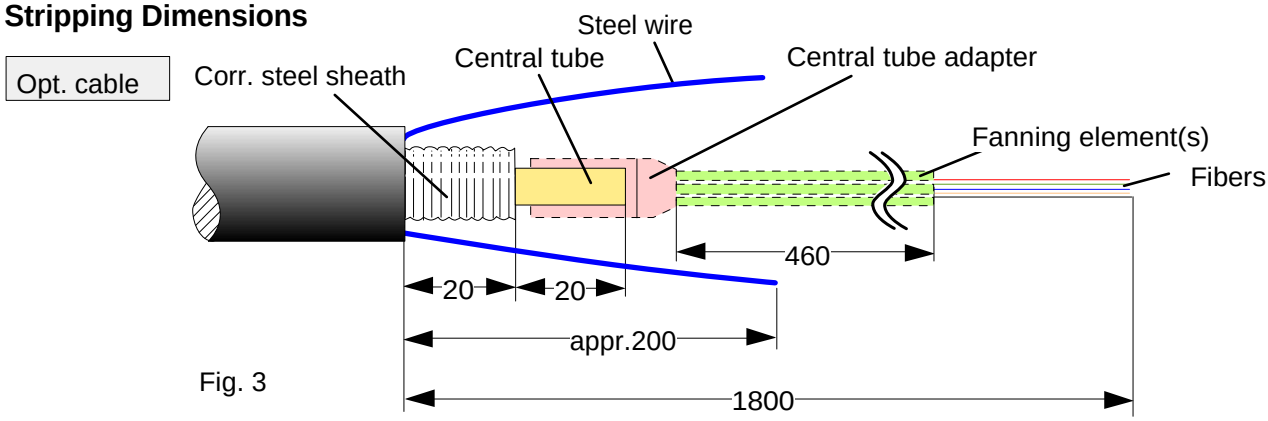
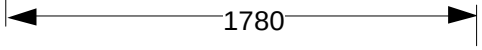


Fig. 3

7.2 Stripping Optical Cable

The numbers (1)... in the Figs. refer to the sequence of installation steps.

Fig. 4



(1) Straighten and clean cable sheath, and mark stripping dimension 1780 mm , Shorten cable end to stripping length.

(2) Expose the two steel wires at the cable end to about 100mm.

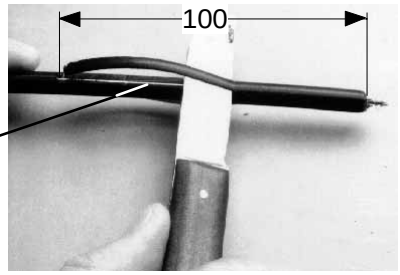


Fig. 5

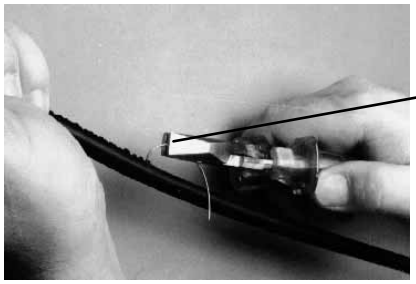


Fig. 6

(3) With the two steel wires, rip open the cable sheath up to the marking, using the combination pliers.

(4) Cut off both steel wires about 200 mm from the stripping edge marking.

(5) Make a ring cut at the marking on the cable sheath.

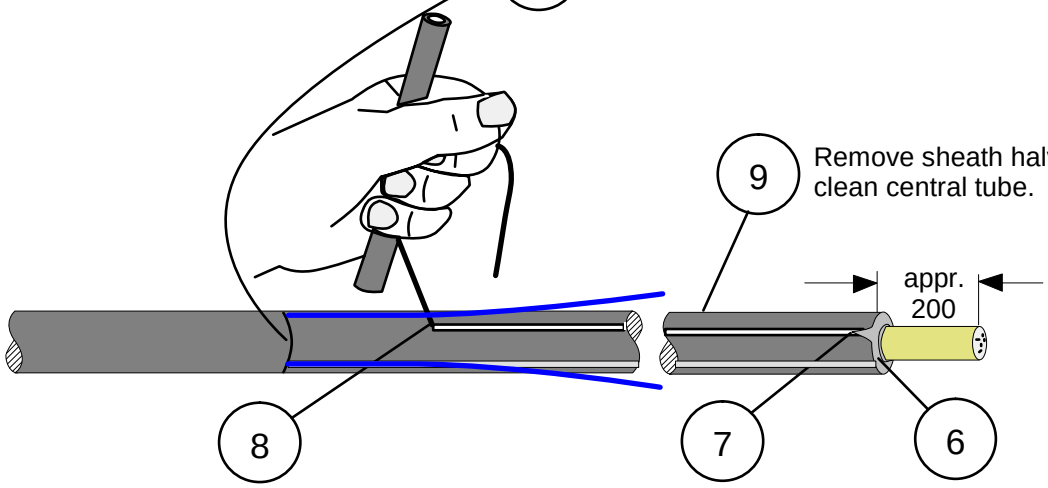


Fig. 7

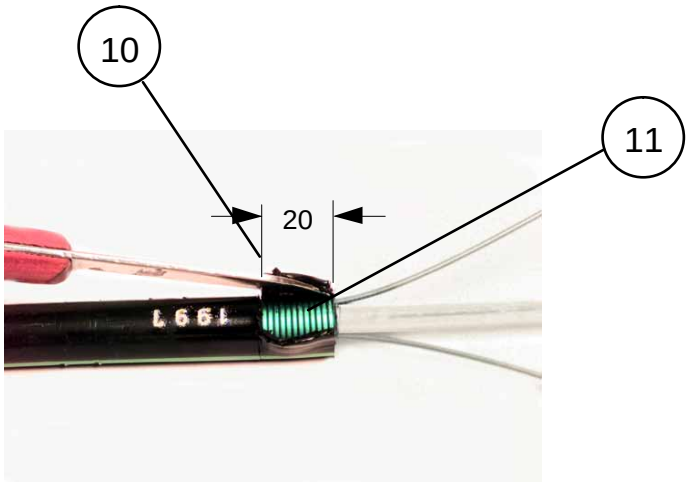
(8) Place rip cords in cut and wrap it round the removed section of sheath. Rip open cable sheath and corrugated steel sheath up to the ring cut.

(7) Cut into cable sheath and corr. steel sheath over the rip cords with side-cutting pliers (cutting length 5mm). Do not position cut in the lapped seam of the corr. sheath.

(6) To expose the rip cords, remove approx. 200 mm of cable and corr. steel sheath (use cable sheath cutter or Jokari knife).

Make mark on cable sheath
20 mm from stripping edge

Pull steel wires out of sheath
up to this marking.



Use e.g. a hot-air blower to warm the
the cable sheath in this area.
Protect central tube against hot air.
Make radial and axial cut and
peel off cable sheath

Fig. 8

With cable sheath cutter, make
3-4 longitudinal cuts into corr.
steel sheath and fold back
flaps.

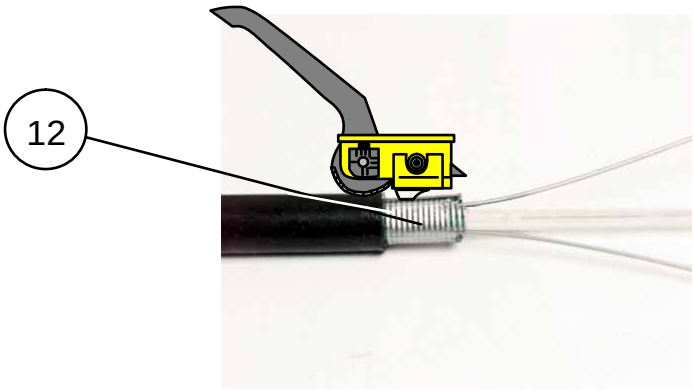
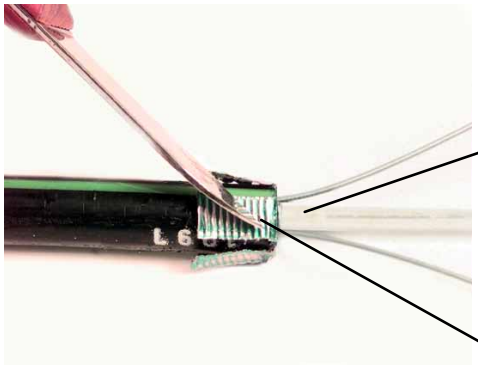


Fig. 9



Clean exposed area with white spirit.

Scrape off coating on rear of
the corr. steel sheath.

Fig. 10

7.3 Central Tube Adapter for Multiple Fanout

7.3.1 Central Tube Adapter View

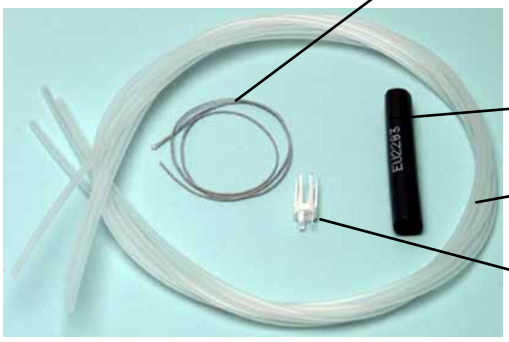
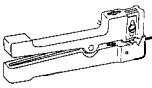


Fig. 11

7.3.2 Fitting Central Tube Adapter

Mark central tube stripping edge approx. 40 mm from corrugated steel sheath stripping edge

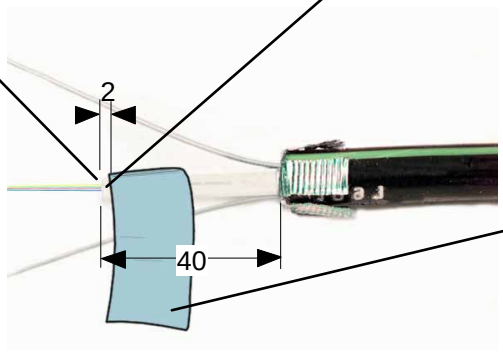


2

Strip central tube back in lengths of approx. 300 mm starting from the end and clean fibers with white spirit

Fig. 12a

1



3

Wrap Scotchtape No. 27 or Coroplast onto central tube about 2mm from the stripping edge to 7 mm ∅ and leave a 50-mm long strip hanging

Fig. 12

Shorten buffer tubes as required using stripping tool for multifiber buffer tubes and slide them onto mating sleeves of central tube adapter, see 7.6.1

4

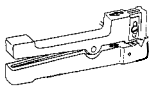


Fig. 13a

Fig. 13

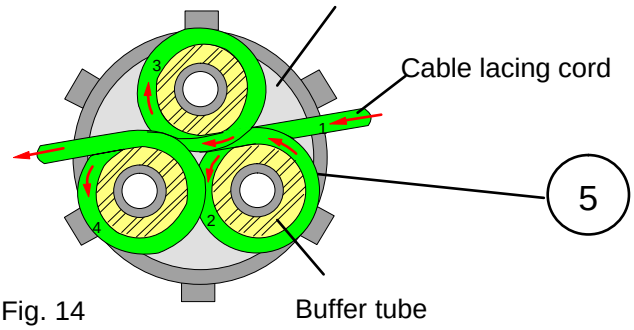


Fig. 14

For strain-relieving to the adapter, wrap cable lacing cord once round each buffer tube

Slide fibers through central tube adapter and buffer tube.
Push central tube adapter onto central tube and secure it with rest of Scotch or Coroplast tape (2 layers)

6

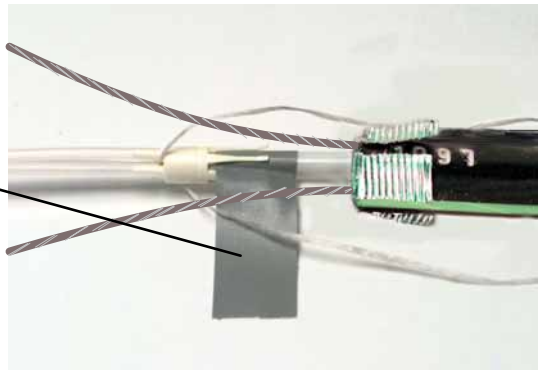


Fig. 15

Pull lacing cord rearward onto cable sheath. Push on heatshrink tube up to corr. steel sheath stripping edge

7

8

Shrink down heatshrink tube, laying both ends of the lacing cord towards the rear.

Fig. 16

7.4 Cable and Buffer Tube Routing

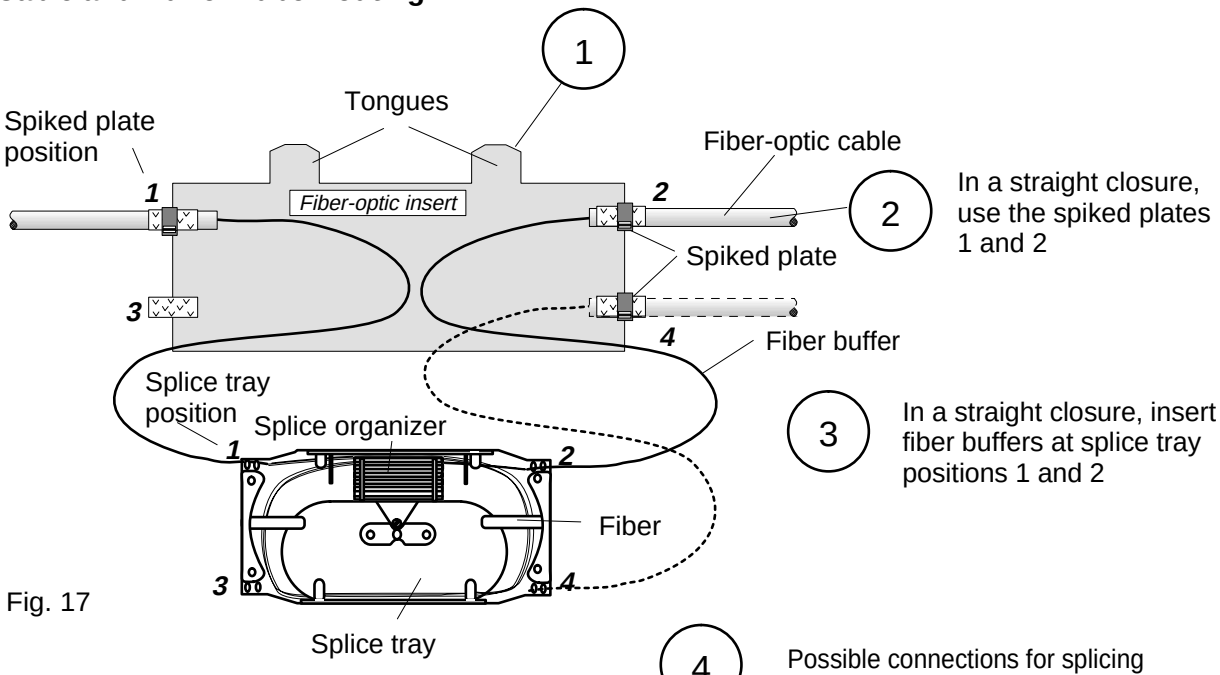
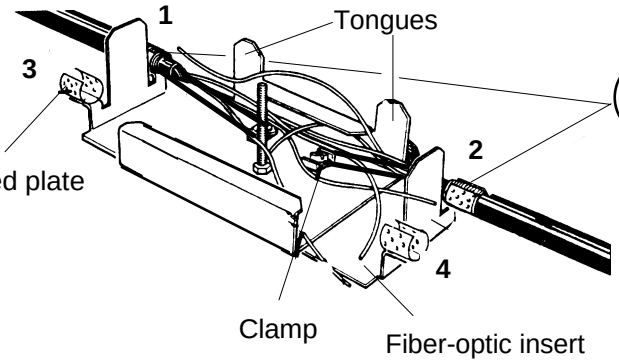


Fig. 17

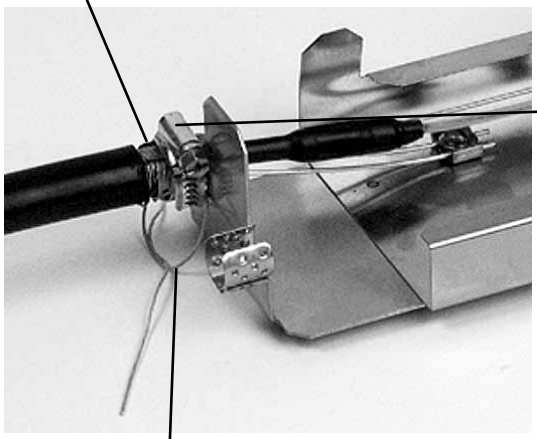
7.5 Securing Fiber-optic Cable



1 Insert straight cables into spiked plates 1 and 2, branch cables in 3 and 4

Fig. 18

2 Adapt spiked plate to cable sheath using pliers



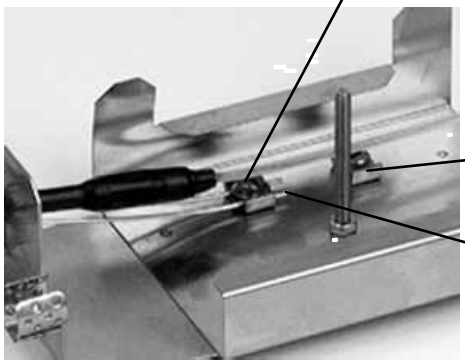
3 Secure cable in spiked plate using hose clip

Fig. 19

4 Double-knot the cable lacing cord (strain relief) of the central tube adapter under spiked plate

Release clamp belonging to the relevant cable 5

6 Press both steel wires into the clamp, fit washer and tighten screw



Clamp

7 Cut off steel wires

Fig. 20

7.6 Fiber Buffers

7.6.1 Stripping Dimensions

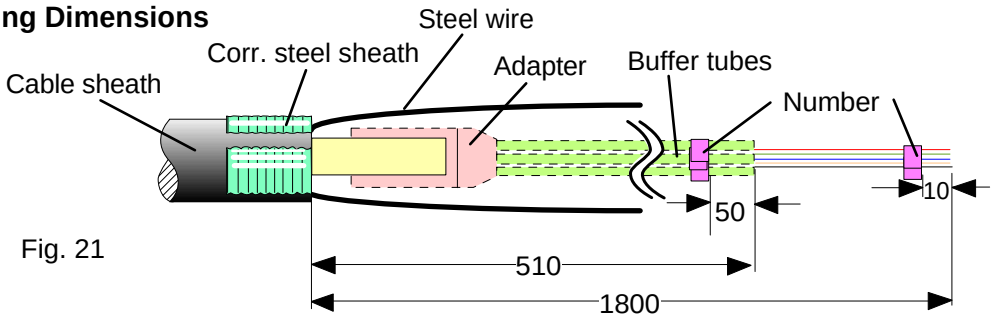


Fig. 21

7.6.2 Marking Fiber Buffers

1 Mark fiber buffers and fibers at the end, see Fig. 21

7.7 Splice Tray

7.7.1 Preparing Splice Tray

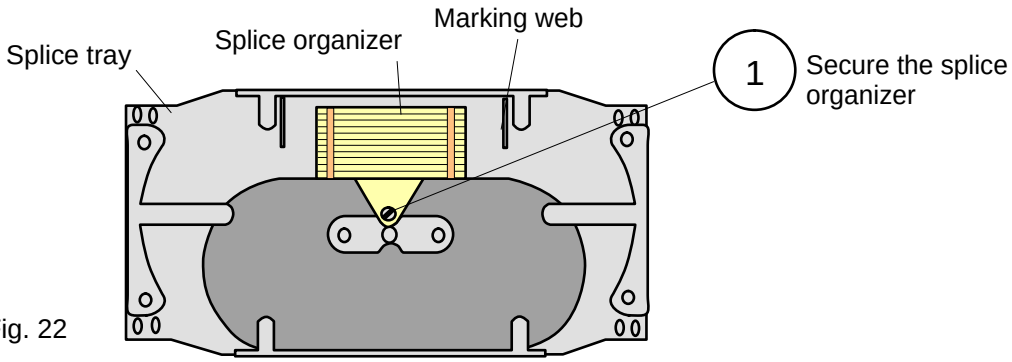


Fig. 22

7.7.2 Securing Fiber Buffers in Splice Tray

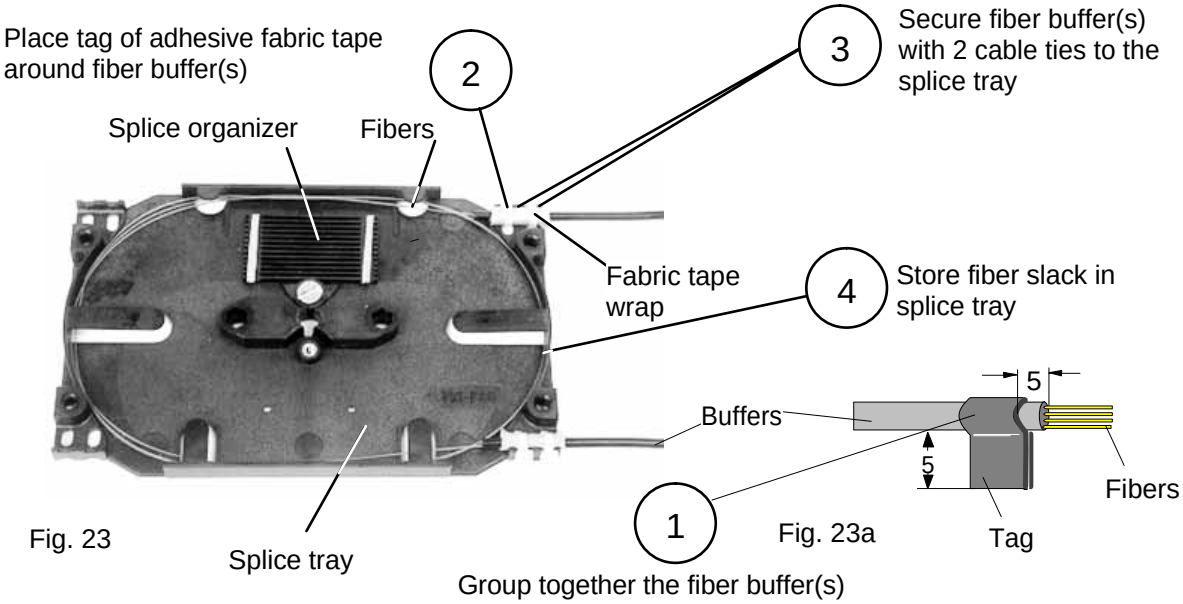


Fig. 23

Fig. 23a

Group together the fiber buffer(s) with adhesive fabric tape or wrap it around one fiber buffer

7.8 Splicing Fibers

7.8.1 Silicone splice

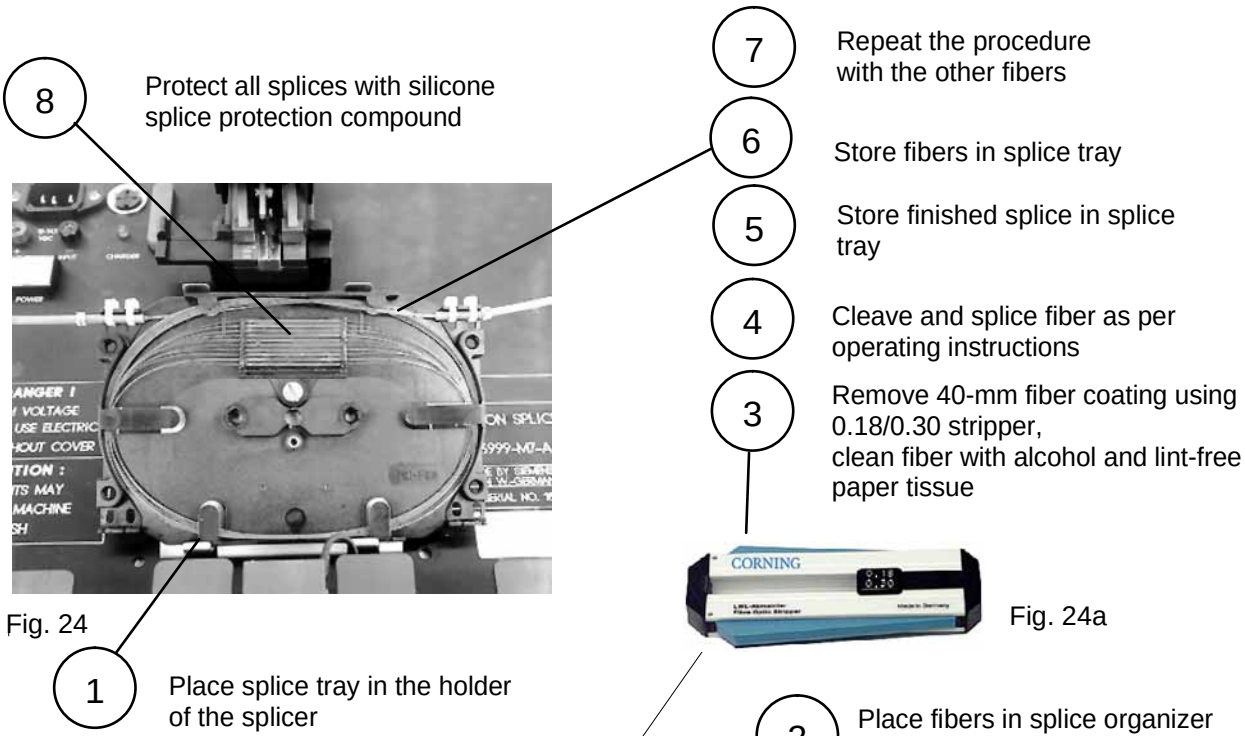


Fig. 24

Fig. 24a

Fig. 25

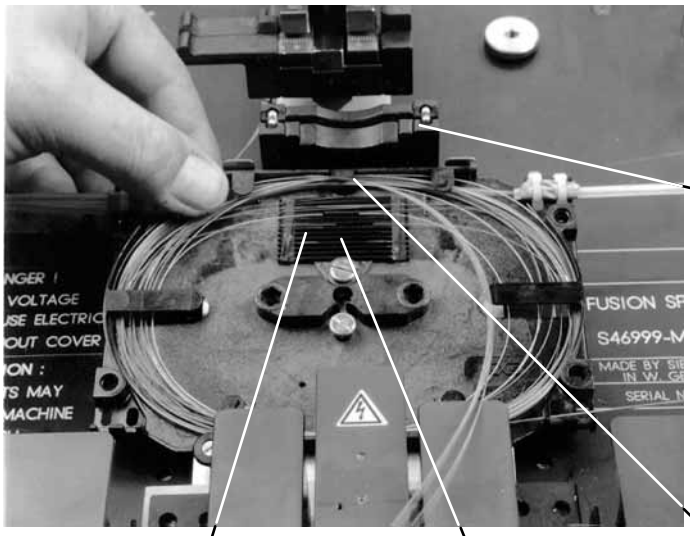
7.8.2 Crimp splice

Using precision 0.18/0.30 stripper, remove 40 mm of fiber coating. Clean fiber with alcohol and lintfree paper tissue.

3

Fig. 26

4 Cut fiber with cleaver and insert it in splicer. Do same with fiber on other side. Splice fibers.



5 Insert splice protector in crimp tool.

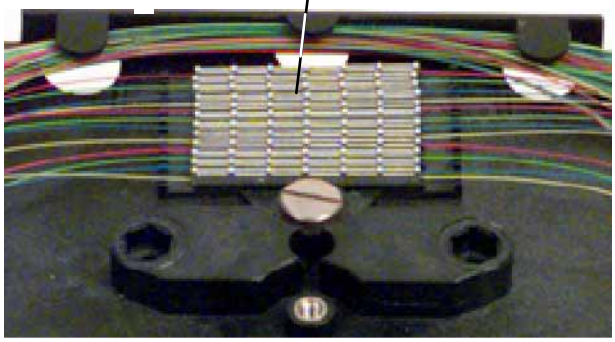
6 Place spliced fiber in splice protector and close protector.

Fig. 27

1 Place splice tray into the holder of the splicer.

7 Place splice protector in splice organizer and fibers in splice tray.

2 Insert fibers in splice organizer and cut off in line with the marking rib. Clean fiber coating with alcohol and lintfree paper tissue.

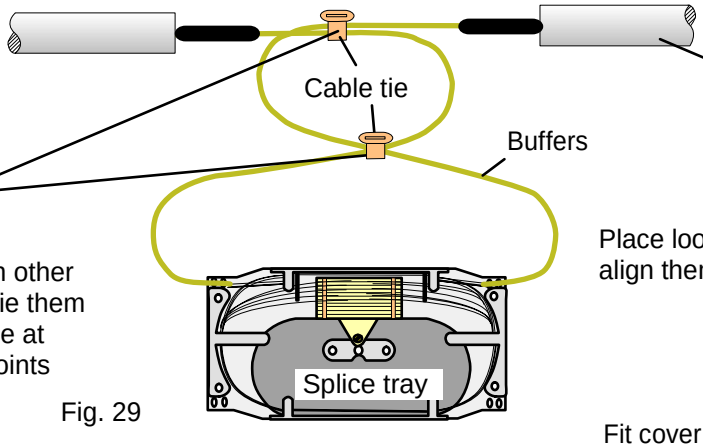


Do the same with the other fibers.

8

Fig. 28

7.9 Storing Splice Tray



1 Slide buffers over each other as in Fig. and loosely tie them together with a cable tie at each of the crossing points

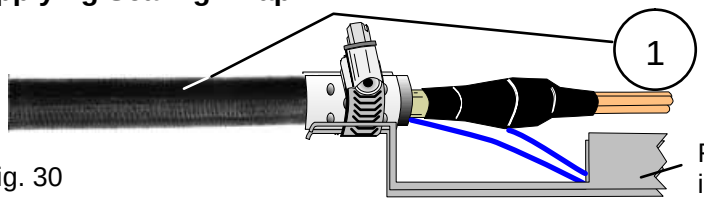
2 Place loops in fiber optic insert, align them and fit splice tray

3 Fit cover for splice tray and secure it

Fig. 29

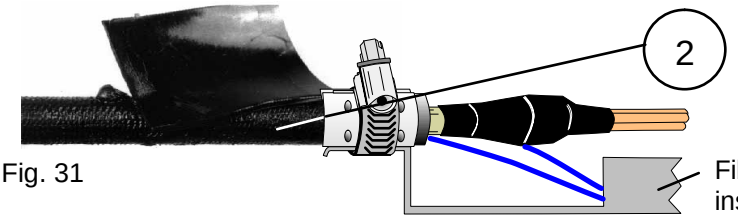
7.10 Assembling Closure

7.10.1 Applying Sealing Wrap



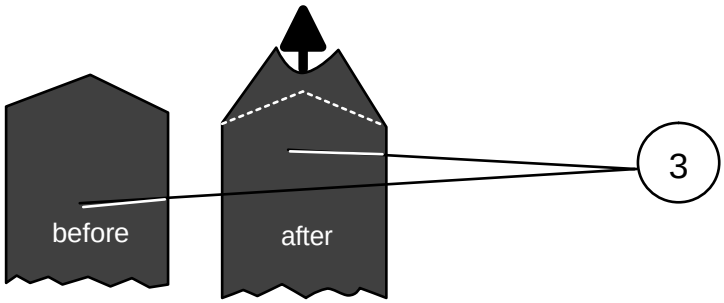
1 Clean cable sheath in closure entrance area thoroughly with white spirit and roughen it with back of knife

Fig. 30



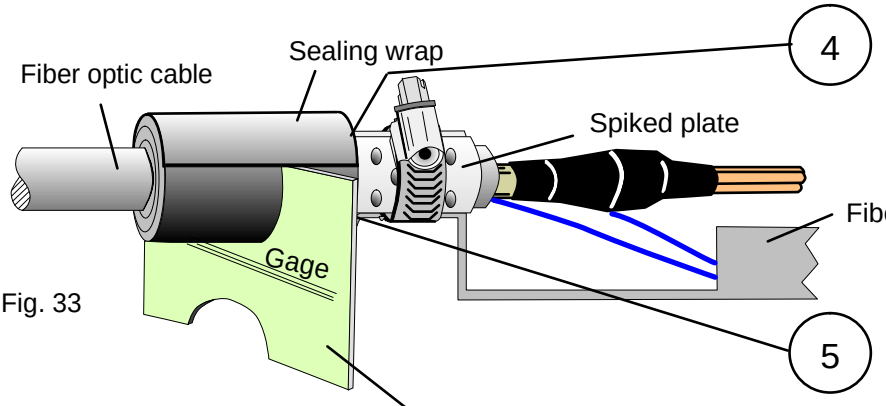
2 In the entrance area of the closure, apply sealing compound to the cable sheath in a uniformly thin layer and allow to dry

Fig. 31



3 Trim sealing tape to a point and pull point lengthwise until it tears off

Fig. 32



4 Allow sealing tape to close up flush with the spiked plate of the fiber-optic insert

5 Wrap sealing tape tightly round cable sheath but without stretching it

6 Check wrap diameter with gage positioned at the end of the sealing tape wrap

Fig. 33

7.10.2 Preparing and Inserting Dummy Plugs

Fig. 34

1 Prepare dummy plugs for entrances which are unused

2 Check wrap diameter with gage, see Fig. 33

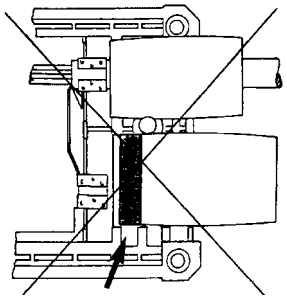


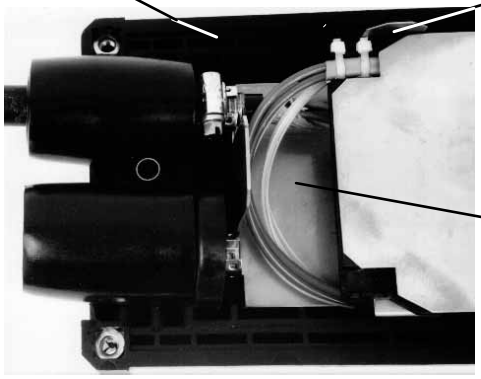
Fig. 35

3 Fit dummy plug on spiked plate and insert it in lower half shell

7.10.3 Closing the Closure

1 Insert sealing cord in axial groove of the lower half shell

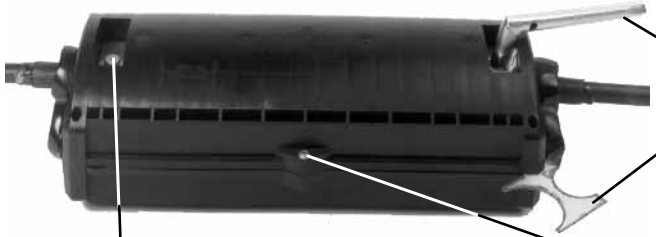
2 Bend tongues of the fiber-optic insert slightly inwards



Caution: Closure top must not rest on the tongues of the fiber optic insert

3 Unpack desiccant and put it in place

Fig. 36



4 Put top half shell in position and press it on

5 Tighten hex. screws alternately until the half shells make contact at the 4 closure corners. Check with gage (it should no longer be possible to push gage in)

6 Drive in screws on the long sides of the closure and check condition using gage

Fig. 37

7 Cover openings for hex. screws with plastic tape to keep out dirt

7.11 Open Closure Type UCSO 4- 6

1 Remove screws on the long sides of closure and the two hex. screws

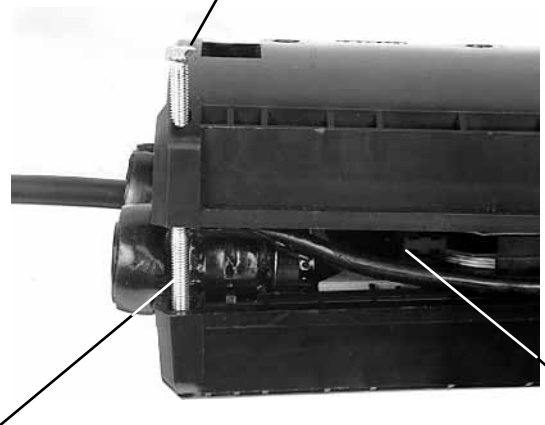


Fig. 38

2 Drive the two hex. screws in uniformly at one end of the closure and force the half shells far enough apart to allow the upper half shell to removed by hand

3 Cut through remains of sealing material with cutter

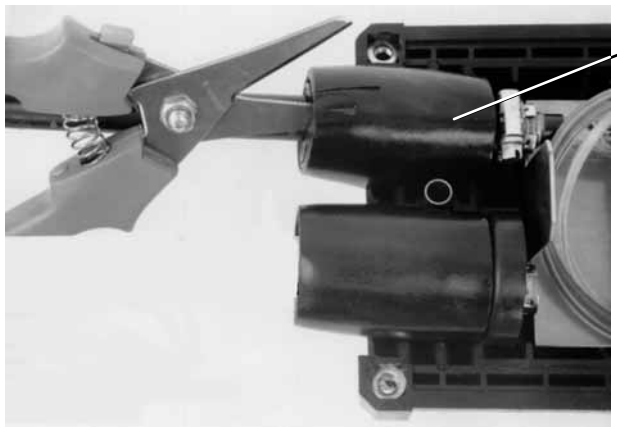


Fig. 39

4 Open sealing wrap with cutter

5 Lift cable carefully out of sealing wrap and remove lower half shell

7.12 Re-closing the Closure

1 Clean half shells and cables again

2 Renew sealing wrap, sealing cord and dessicant

3 Assemble closure as per section 7.10

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