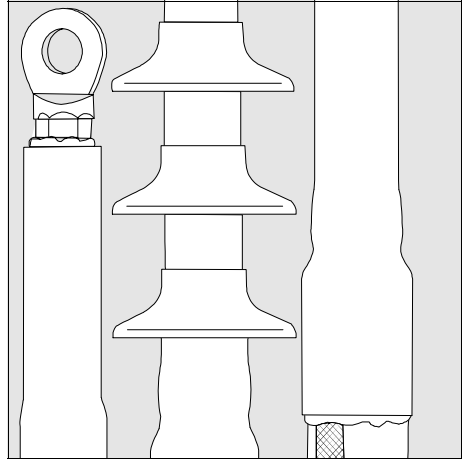


**Raychem**



**Installation Instruction  
EPP-0403-6/00**

**Terminations for  
Polymeric Insulated  
Cables 72 kV**

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## **Before Starting**

**Check to ensure that the kit you are going to use fits the cable.**

**Refer to the kit label and the title of the installation instruction.**

**Components or work steps may have been improved since you last installed this product.**

**Carefully read and follow the steps in the installation instruction.**

## **General Instructions**

**Use a propane (preferred) or butane gas torch.**

**Ensure the torch is always used in a well ventilated environment.**

**Adjust the torch to obtain a soft blue flame with a yellow tip.**

**Pencil-like blue flames should be avoided.**

**Keep the torch aimed in the shrink direction to preheat the material.**

**Keep the flame moving continuously to avoid scorching the material.**

**Clean and degrease all parts that will come into contact with adhesive.**

**If a solvent is used follow the manufacturer's handling instructions.**

**Tubing should be cut smoothly with a sharp knife leaving no jagged edges.**

**Start shrinking the tubing at the position recommended in the instruction.**

**Ensure that the tubing is shrunk smoothly all round before continuing along the cable.**

**Tubing should be smooth and wrinkle free with inner components clearly defined.**

The Information contained in these installation instructions is for use only by installers trained to make electrical power installations and is intended to describe the correct method of installation for this product. However, Tyco Electronics has no control over the field conditions which influence product installation.

It is the user's responsibility to determine the suitability of the installation method in the user's field conditions. Tyco Electronics' only obligations are those in Tyco Electronics' standard Conditions of Sale for this product and in no case will Tyco Electronics be liable for any other incidental, indirect or consequential damages arising from the use or misuse of the products.

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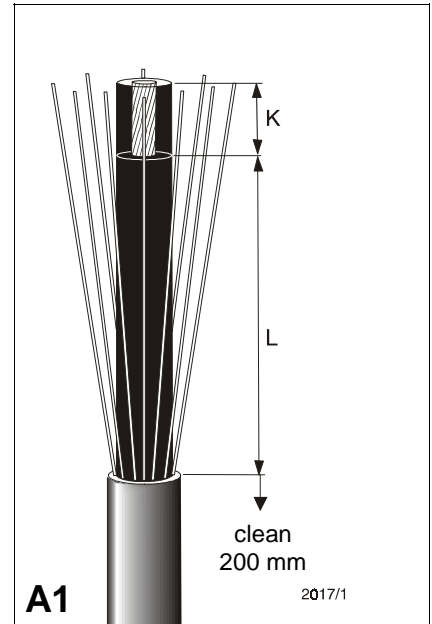
## Cable Preparation

For cables with metal laminated polymer overshooth follow the cutback and stripping dimensions as described in the separate instruction EPP-0742.

### A. Cable with wire shield

Table 1

L Indoor mm	L Outdoor mm	K Crimped Connection	K Mechanical Connection
750	1000	according to cable lug barrel + 5 mm	according to cable lug barrel - 5 mm



#### A. Cable with wire shield

Remove the overshooth to dimension L + K given in table 1. Clean the end of the overshooth for up to 200 mm.

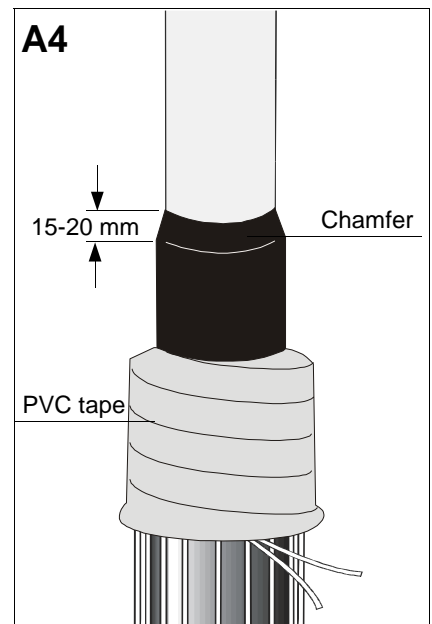
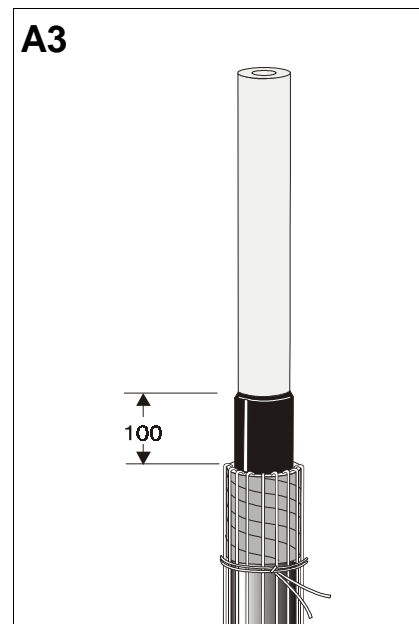
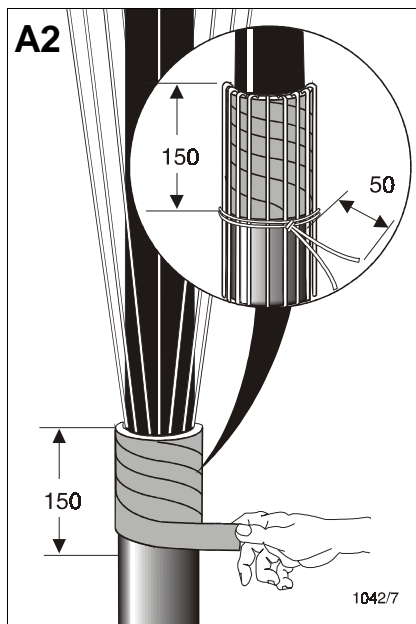
Apply sealant tape (red ) with slight tension over 150 mm of the overshooth. Bend back the shield wires. Tie the wires with a wire binder to the overshooth just below the sealant tape. Leave wire ends 50 mm long.

Thoroughly remove the core screen to within 100 mm of the overshooth cut. The surface of the insulation should be free from all traces of conductive material.

**Chamfer the core screen for 15-20 mm.** Abrade and smooth out the insulation up to 150 mm from the screen cut. **Note:** Do not nick the insulation. Protect the mastic tape below with PVC tape from contamination.

When completed **remove** the PVC tape.

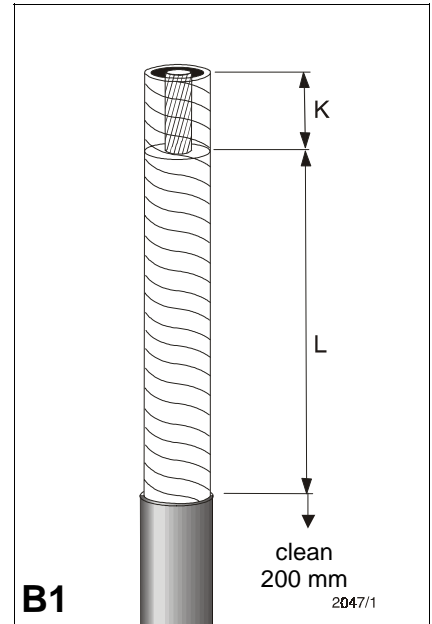
**Continue with step 5.**



## B. Cable with tape shield

**Table 1**

L Indoor mm	L Outdoor mm	K Crimped Connection	K Mechanical Connection
750	1000	according to cable lug barrel + 5 mm	according to cable lug barrel - 5 mm



Remove the oversheath to dimension  $L + K$  given in table 1.  
Clean the end of the oversheath for up to 200 mm.

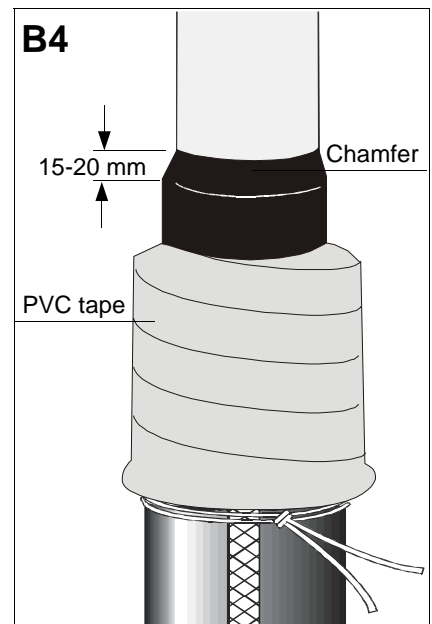
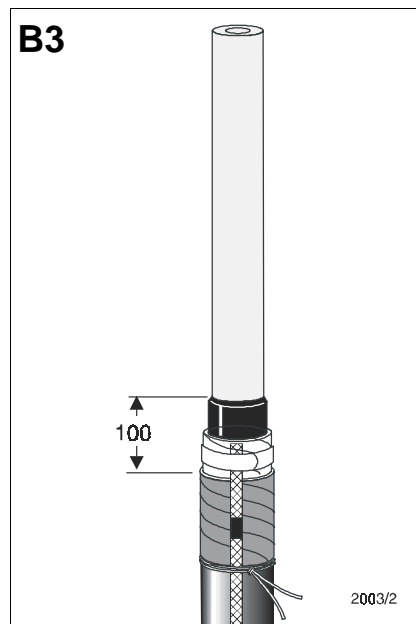
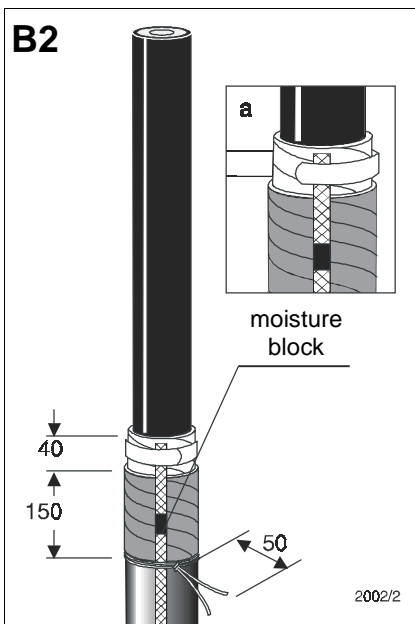
Remove the tape shield to within 40 mm of the oversheath cut.  
Apply red tape with slight tension over 150 mm of the oversheath.  
Place the earth lead onto the metal tape shield (**detail a**).  
Fix the earth lead to the tape shield with the roll spring.  
Tie the earth lead with a wire binder to the oversheath just below the sealant tape leaving wire ends of 50 mm long.

Thoroughly remove the core screen to within 100 mm of the oversheath cut.  
The surface of the insulation should be free from all traces of conductive material.

**Chamfer the core screen for 15-20 mm.**  
Abrade and smooth out the insulation up to 150 mm from the screen cut.

**Note:** Do not nick the insulation.  
Protect the mastic tape below with PVC tape from contamination.  
When completed **remove** the PVC tape.

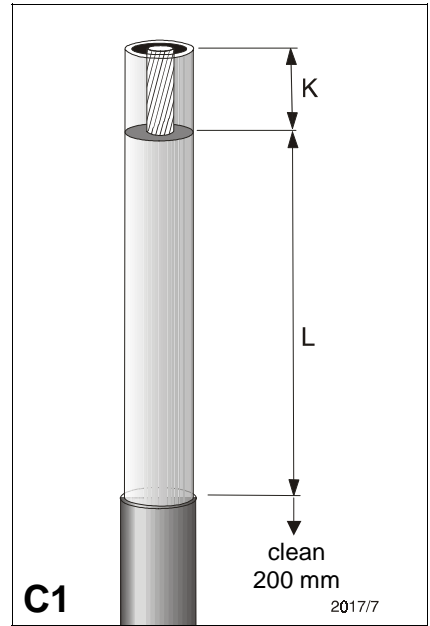
**Continue with step 5.**



**C. Cable with lead sheath**

**Table 1**

L Indoor mm	L Outdoor mm	K Crimped Connection	K Mechanical Connection
750	1000	according to cable lug barrel + 5 mm	according to cable lug barrel - 5 mm



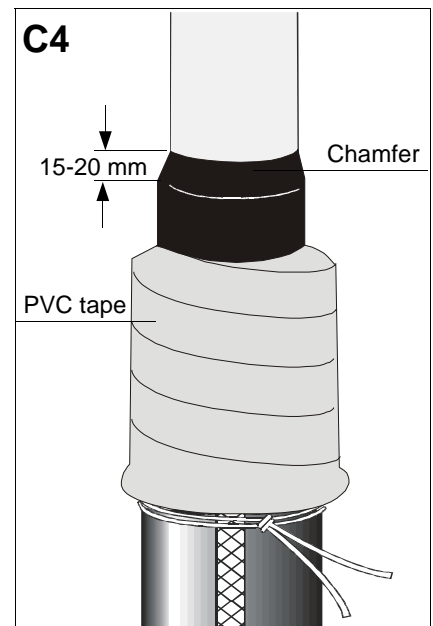
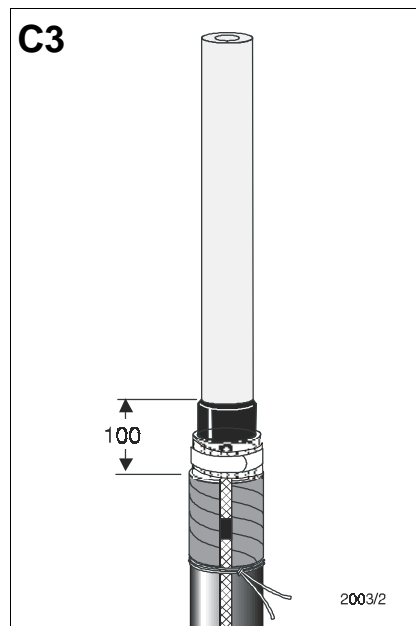
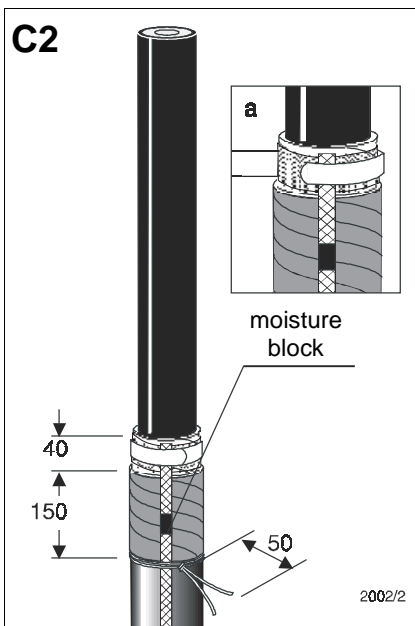
Remove the overshooth to dimension L + K given in table 1.  
Clean the end of the overshooth for up to 200 mm.

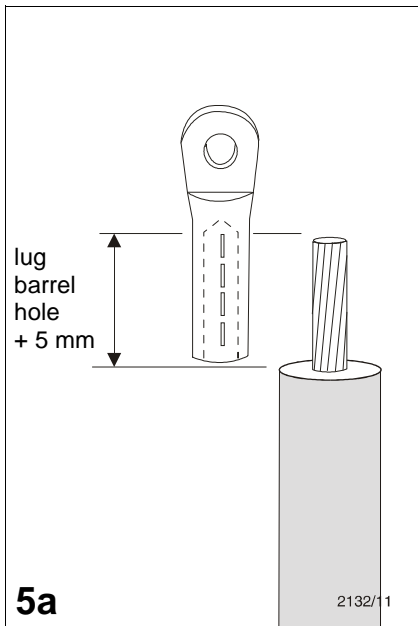
Remove the lead sheath to within 40 mm from the overshooth. Apply sealant tape (red ) with slight tension over 150 mm of the overshooth. Position the copper braid around the lead sheath. Place the earth lead onto the copper braid (**detail a**). Fix the earth lead to the copper braid with the roll spring. Tie the earth lead with a wire binder to the overshooth just below the sealant tape. Leave wire ends of 50 mm long.

Thoroughly remove the core screen to within 100 mm of the overshooth cut. The surface of the insulation should be free from all traces of conductive material. .

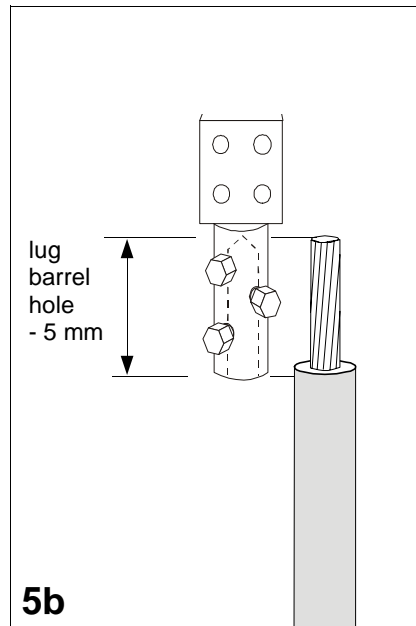
**Chamfer the core screen 15-20 mm.** Abrade and smooth out the insulation up to 150 mm from the screen cut. **Note:** Do not nick the insulation. Protect the mastic tape below with PVC tape from contamination. When completed **remove** the PVC tape.

**Continue with step 5.**

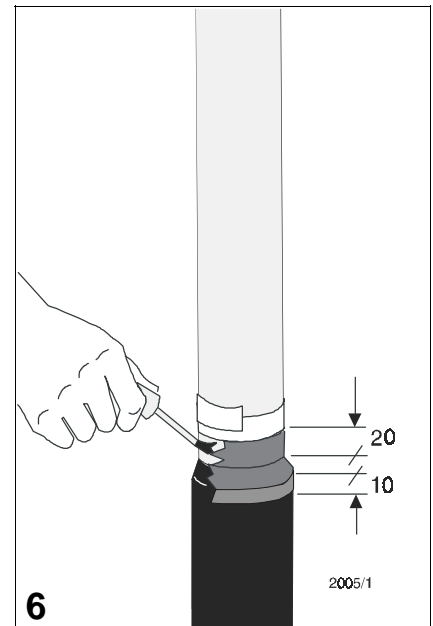




5a  
Cut back the insulation according to cable lug barrel hole + 5 mm.

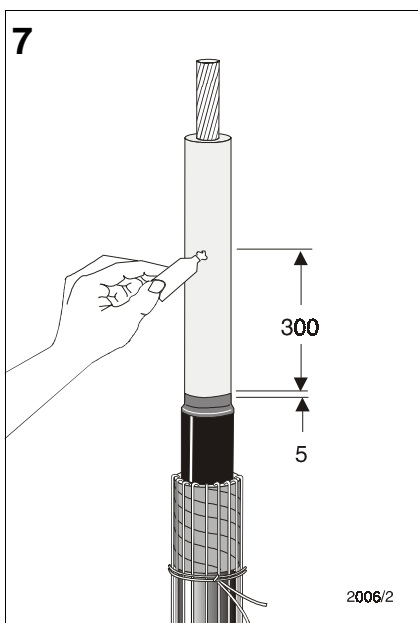


5b  
Cut back the insulation according to cable lug barrel hole - 5 mm.

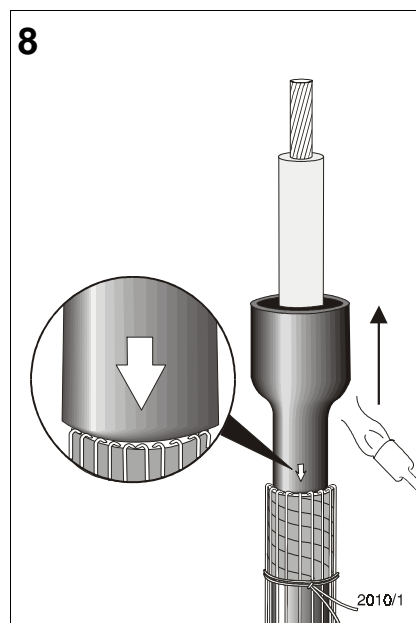


6  
Prewarm the insulation. Apply a PVC tape (adhesive side up) on the core insulation to leave a distance of approx. 20 mm between the tape and core screen. Shake the bottle of conductive paint thoroughly. Apply the conductive paint onto 20 mm of the insulation, continue onto the screen for approx. 10 mm. **When dry remove the PVC tape.**

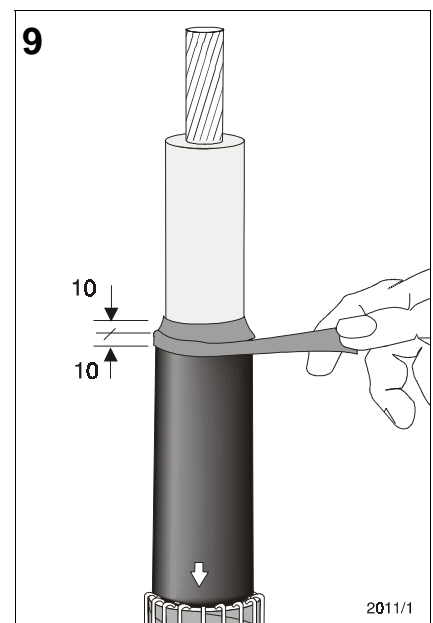
Apply a thin film of silicone grease. Cover 5 mm of the conductive paint and 300 mm of the insulation.

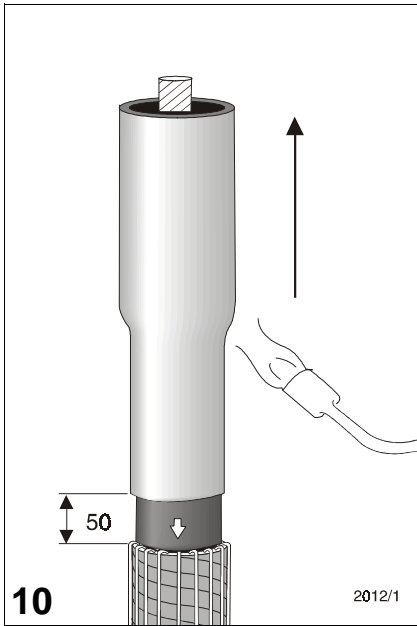


Place the long stress control tubing (black) with the arrow pointing downwards over the core against the overseath cut. Shrink down starting at the bottom and working upwards.

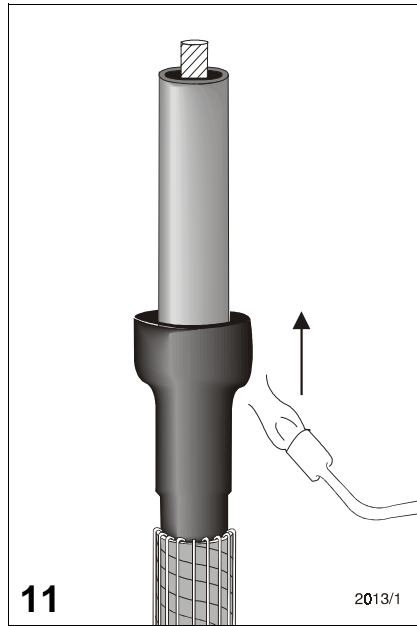


Apply red mastic using only slight tension and a small overlap. Cover 10 mm of the stress control tubing and 10 mm of the insulation.

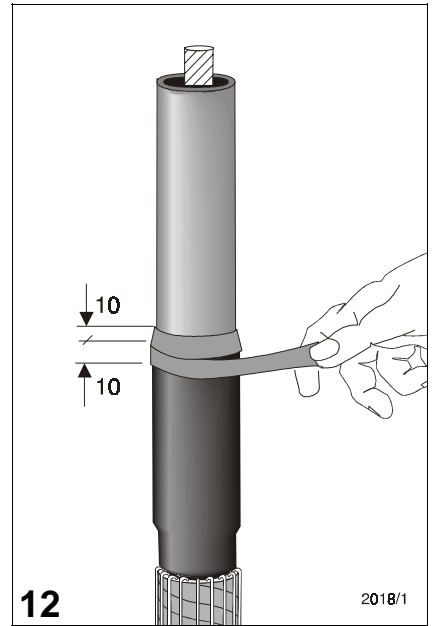




**10**  
Place the short tubing (red) over the core 50 mm above the overshath cut. Shrink down starting at the bottom and working upwards.

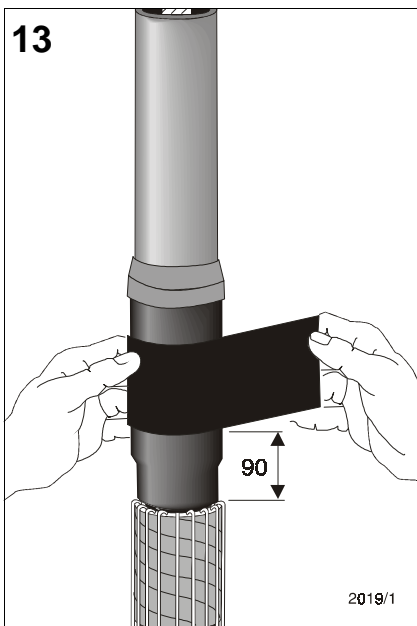


**11**  
Place the short stress control tubing over the core against the overshath cut. Shrink down starting at the bottom and working upwards.

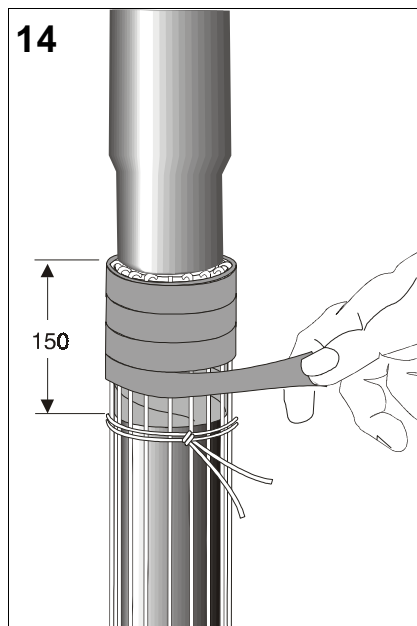


**12**  
Apply red mastic using only slight tension and a small overlap. Cover 10 mm of the stress control tubing and 10 mm of the red tubing.

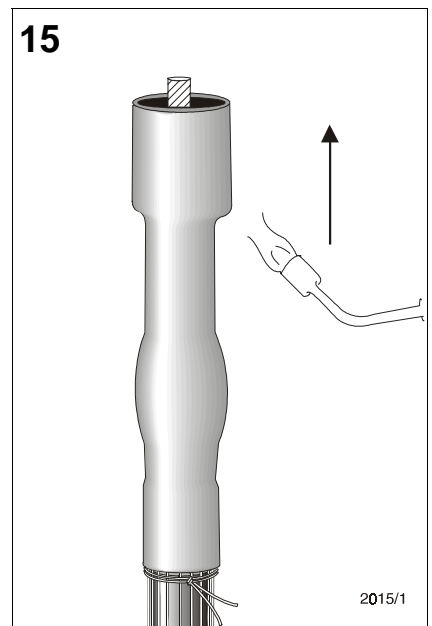
Wrap the insulating profile over the stress control tubing starting 90 mm above the overshath cut.

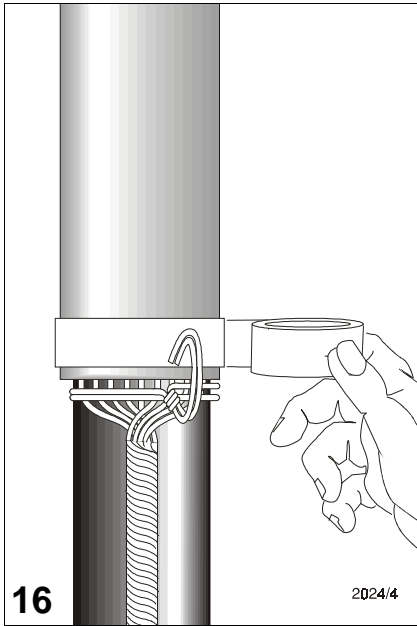


Wrap a layer of red mastic using only slight tension over the earth lead or shield wire. Cover 150 mm of the overshath end.



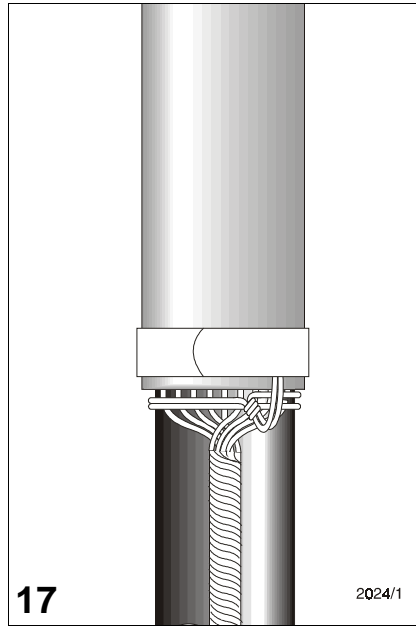
Place the long red tubing over the cable, completely covering the mastic. Shrink down starting at the bottom and working upwards.





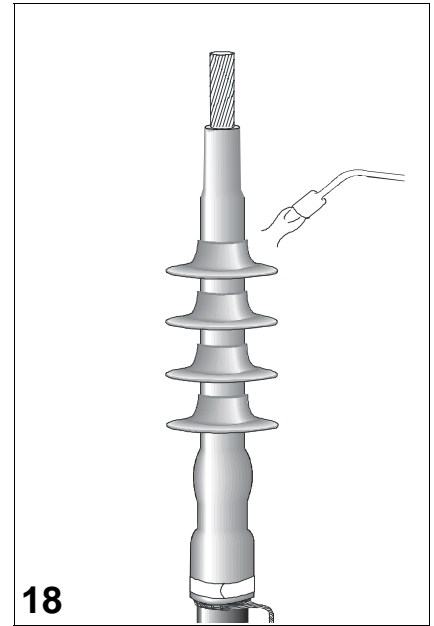
16  
2024/4

Wrap the roll spring twice over the tubing (red). Position two ends of the wire binder onto the roll spring. Wire ends should not overlap the roll spring.



17  
2024/1

Fold the wires back and wrap the rest of the roll spring over the wire binder. Tighten the roll spring with a twisting action.

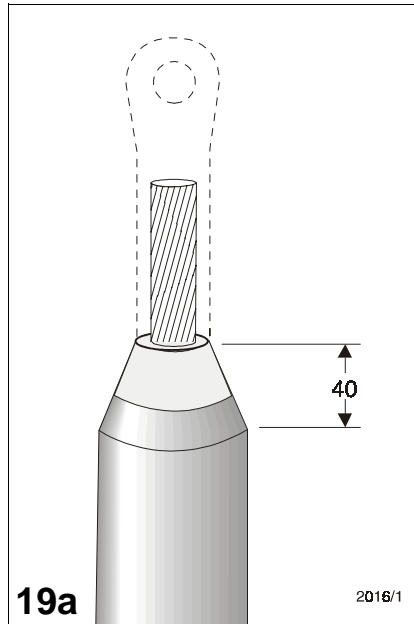


18

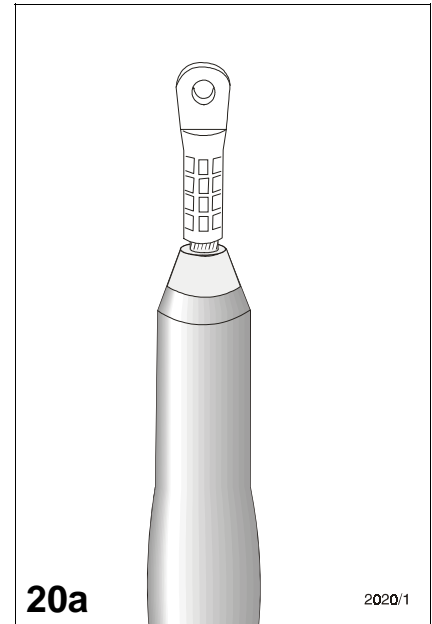
Shrink the skirts into place according to dimension in following page.



**Termination with crimp connector**



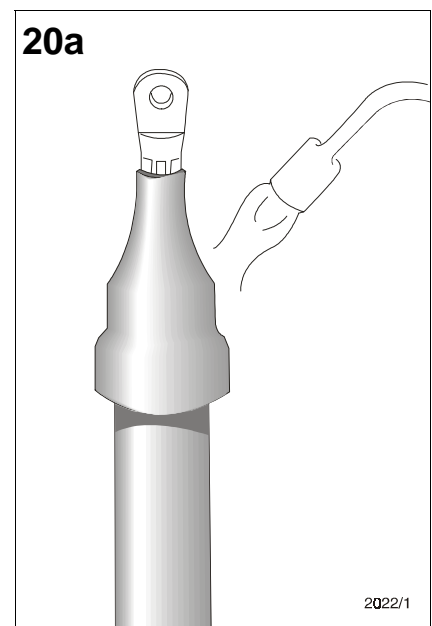
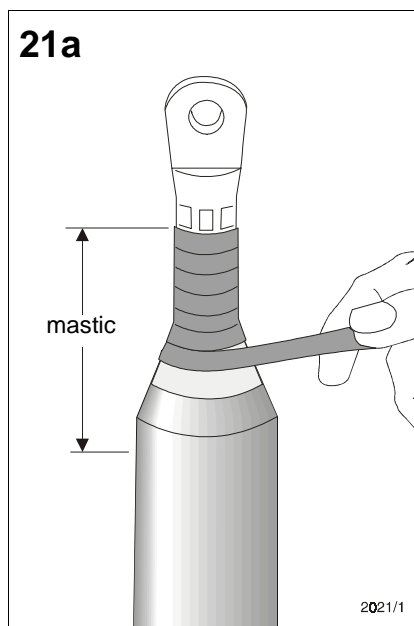
Cut back the tubing onto the insulation. Chamfer the insulation to the diameter of the cable lug to achieve a smooth transition.



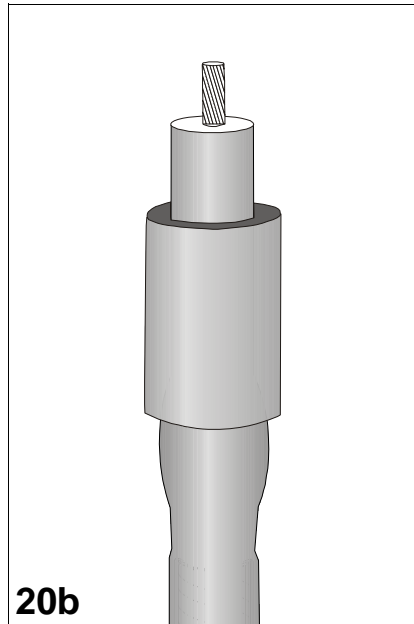
Install, clean and degrease the cable lug.

Wrap red mastic with slight tension around the insulation and connector. Fill up any gaps between insulation and cable lug.

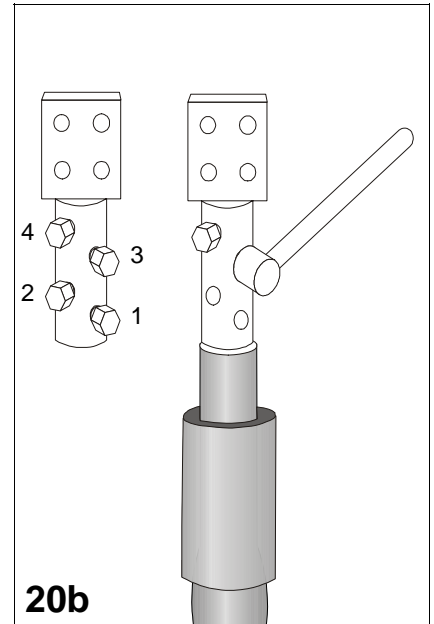
Position the sealing boot so that it covers the core and connector equally and shrink it into place, starting at the top.



**Termination with mech. connector**



**20b**  
Position the short sealing sleeve over the cable.

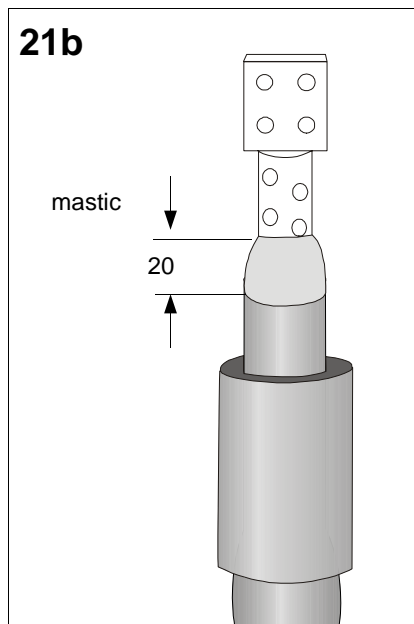


**20b**  
Insert the conductor completely into the lug barrel hole.  
Tighten all screws by hand.  
Tighten all screws with the right tool, according to the sequence given in the drawing, until the screwheads shear off.  
Clean and degrease the cable lug.

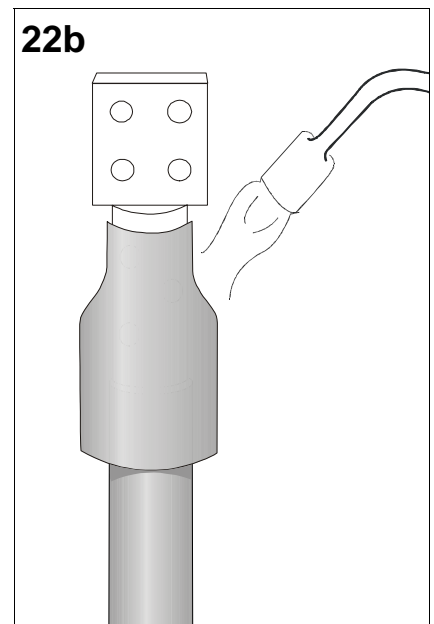
**For connections with cable lug diameter smaller than cable core only.**

Wrap red mastic with slight tension around the insulation and connector to achieve a smooth transition.

Preheat the cable lug.  
Position the sealing sleeve so that it covers the connector barrel. Shrink it into place, starting at the top.

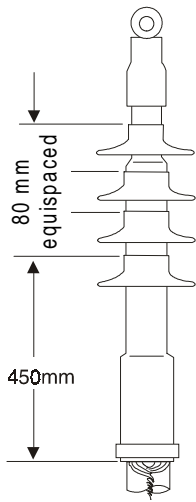


**21b**



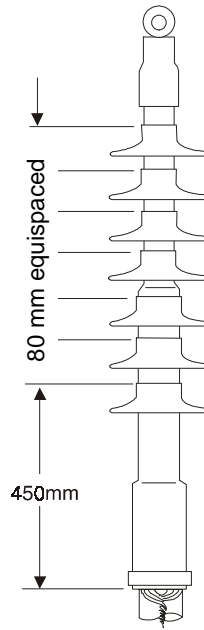
**22b**

**Indoor**



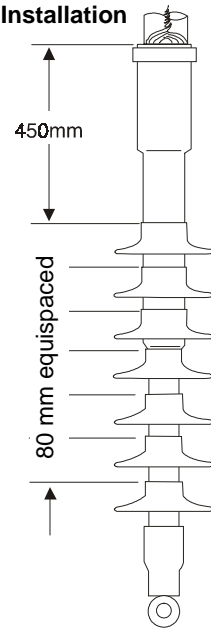
2470/3

**Outdoor**

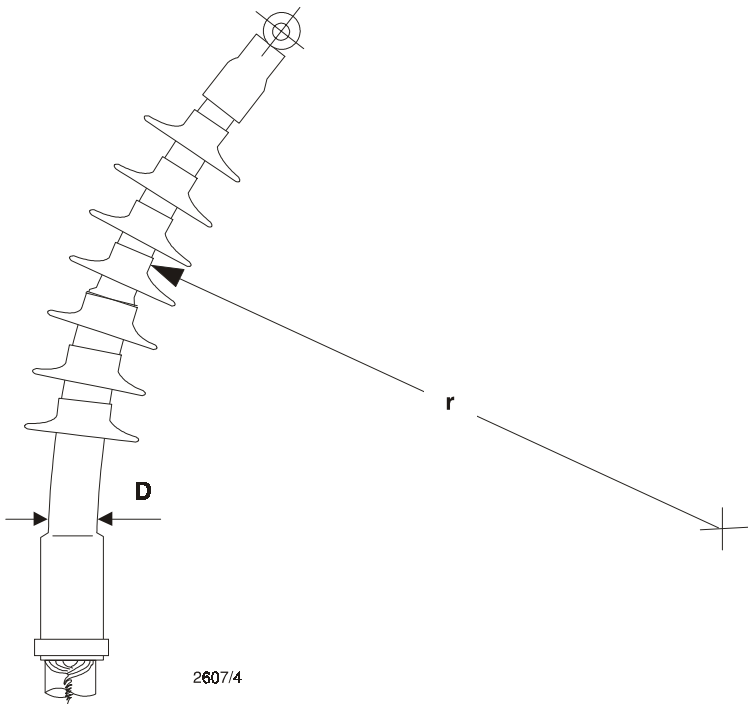


2470/4

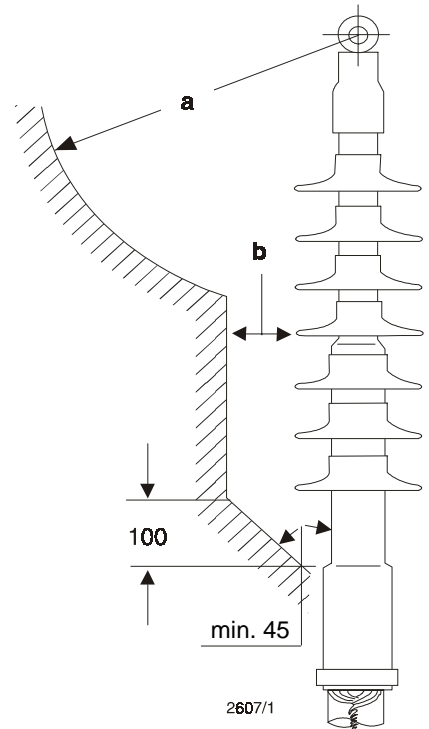
**Reversed Installation**



2470/4



2607/4



2607/1

Min. clearances	Max. system voltage 72 kV
a air clearance	according to local specifications
b between ph/ground [mm]	100
r min. bending radius $10 \times D$ , before bending heat cores up to approx. 70° C	

Please dispose of all waste according to environmental regulations.

