COMMSCOPE®

VCKT

INSTALLATION INSTRUCTION

TC-181-IP
Rev A, Oct 2017
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Heat-shrinkable Vault Closure System

Kit content

- Distribution outlet
- Splice protection sheet
- Metal canister with adhesive strips
- Self adhering aluminum strip
- Heat-shrinkable wraparound sleeve
- Channels with underclip
- Heat-shrinkable tubes
- PVC tape
- Closing caps
- Silicagel
- Cleaning tissue
- Abrasive paper
- Cable aluminum foil
- Earthing wire (1 clip only)
- Slitted adhesive tube
- Installation instruction

Safety rules

- Check environment for presence of gas and follow locally prescribed precautions.
- When working with open flame, use standard safety equipment such as gloves, safety glasses etc. as required by local practices.

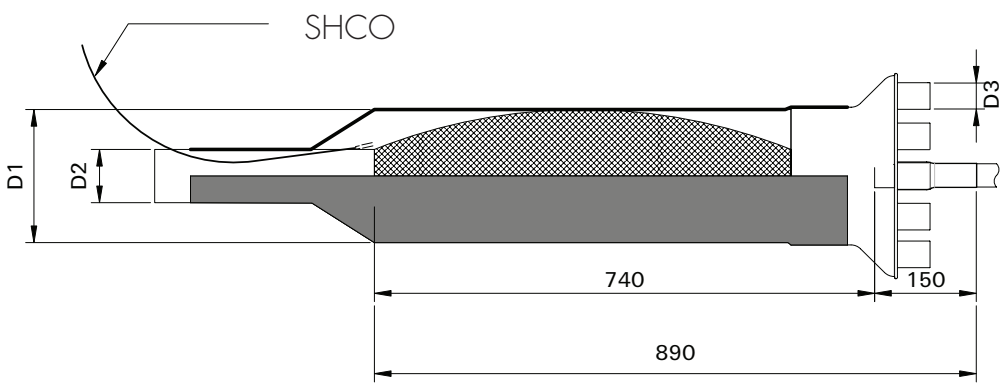
Recommended torch

1 Torch: FH-T001-0005-TORCH-HANDLE
Nozzle: FH-T001-0030 (for sleeve)
FH-T001-0005 nozzle 5 mm (for outlets)

2 Torch: FH-1630-PIE
Nozzle: FH-1630-BN38 (for sleeve)
Nozzle: FH-T001-PP14 (for outlets)

Closure selection table (all dimensions in mm)

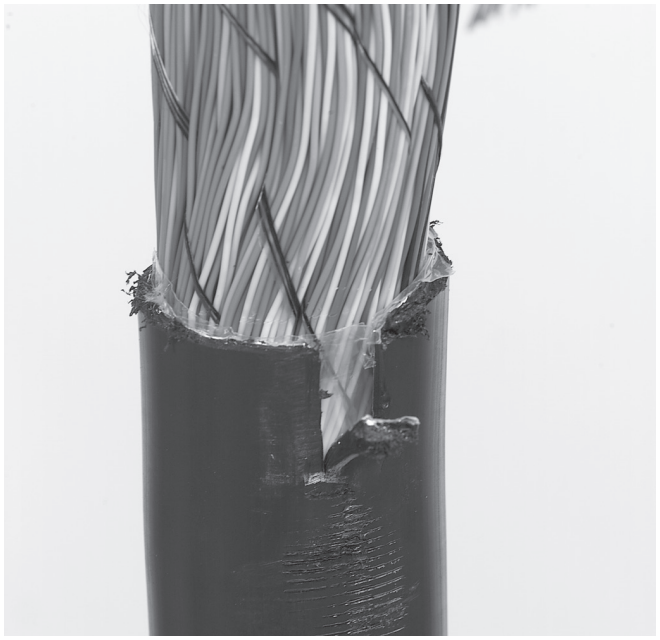
VCKT size	Joint length Max. L1	Outer Ø splice protection Max. D1	Cable Ø Min. D2	Sleeve length	Inner Ø D3 Min.	Inner Ø D3 Max.	MDF cable outlet
125- 9	740	120	30	950	12	36	9
160-12	740	158	42	950	12	36	12
200-24	740	196	50	950	12	36	24



1 Main cable preparation

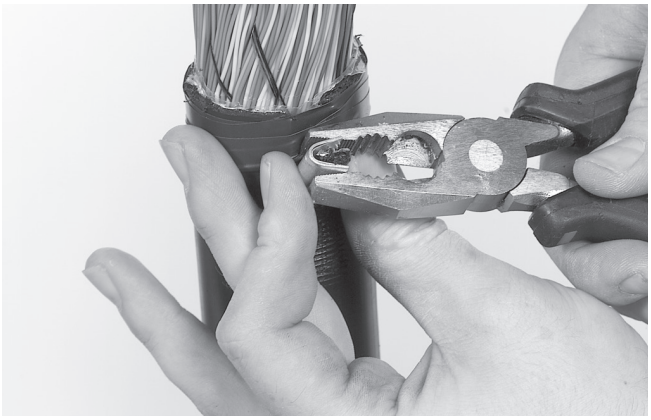
1.1 Organize the main cable and the MDF cables at the jointing place. Remove all dirt from the cable sheaths over a length of 1500 mm.

1.2 Bring the main cable in its final position and remove the jacket.

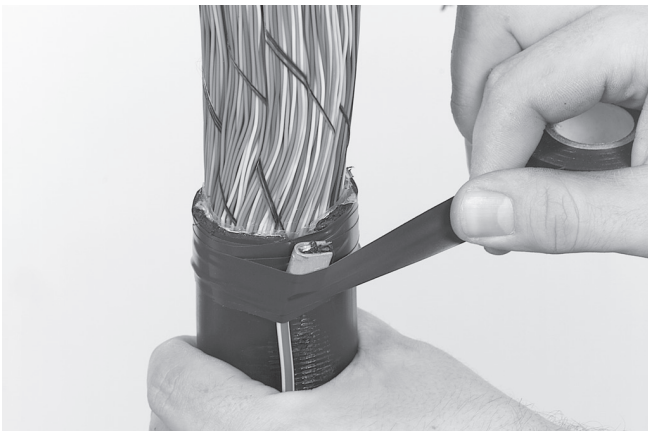


1.3 In order to install the earthing wire on the main cable, use a cable sheath slitter to cut the cable jacket over a length of 25 mm and a width of 15 mm.

1.4 Wrap a layer of a PVC tape underneath the cable sheath strip.



1.5 Install the clip on the main cable with a standard pair of pliers, the wire away from the joint.



1.6 Tape the connector down with PVC tape.

2 Installation of the MDF cables in the distribution outlet

2.1 Line up the MDF cables with the main cable and mark all the MDF cables at 890 mm from the jacket of the main cable.

2.2 Clean and abrade the MDF cables over a distance of 150 mm from the mark downwards.

2.4 Measure 150 mm down from the blue line of the aluminum cable foil down to the cable end, mark and remove the MDF cable jacket starting from the mark (jacket to jacket opening should be 740 mm).

2.3 Apply cable aluminum foil on all MDF cables, matching the blue line with the mark on the cable. Install the foil upwards from the cable mark.

2.5 Slide the heat shrinkable tube over the MDF cable and put it in holding position.

2.6 Insert the MDF cable (one by one) in the dedicated port starting in the middle.

2.7 Position the heat-shrinkable tube over the dedicated port and line up the top of the tube with the base till the top of the tube matches with the blue line of the aluminium cable foil.

Note: - move the flame continuously during shrinking to avoid local overheating;
- heat until the temperature indicating paint has changed from green to black; for high capacity cables it is advisable to install the MDF cables one by one and splice them accordingly to avoid mismatches with the different cable bundles.

2.8 Shrink the heat-shrinkable tube with an appropriate nozzle (FH-T001-PP14). Start on the metal ports of the distribution outlet in order to fix the tube and continue shrinking up to the MDF cable jacket.

2.9 Place metal cover caps over the unused ports.

2.10 Position a heat-shrinkable tube over the metal cap and shrink it down, starting from the distribution outlet.

3 Preparation of the joint

3.1 Splicing according to local practice.

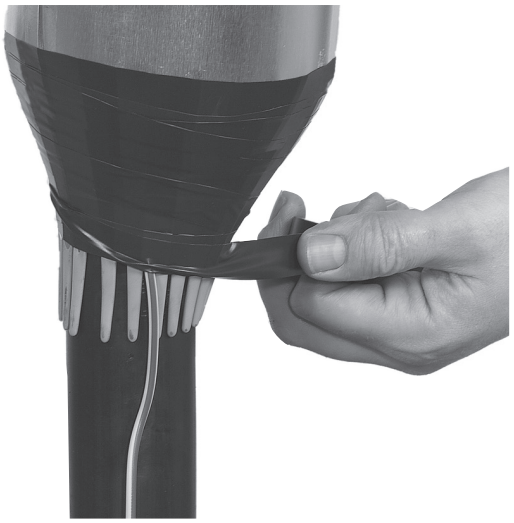
3.2 Remove the silicagel from its package and place it within the joint. Bundle the connectors of the joint.

3.3 Wrap the splice protection sheet tightly around the splice. Slide the protection sheet into the distribution outlet.

4 Installation of the metal canister

4.1 Assemble the two half shells to form a hinged canister and secure the seams with self adhering aluminum tape. Smooth the tape with a blunt tool.

4.2 Remove the protective paper from the adhesive strips on the canister. Insert the canister into the distribution outlet until the adhesive strips stick onto the distribution outlet.



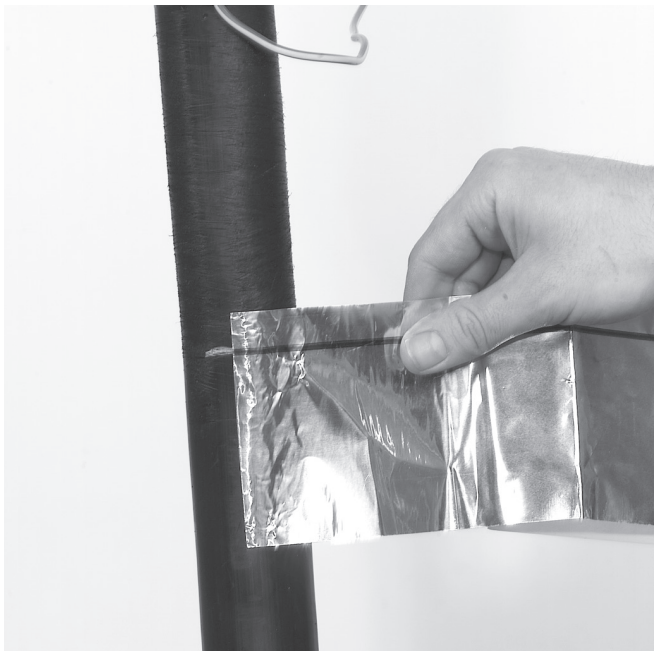
4.3 Tape the crowns of the metal canister down onto the main cable, using PVC tape. Start from the canister body downwards to the main cable with 50% overlap. Tape maximum 5 mm onto the cables.

5 Installation of the heat-shrinkable sleeve

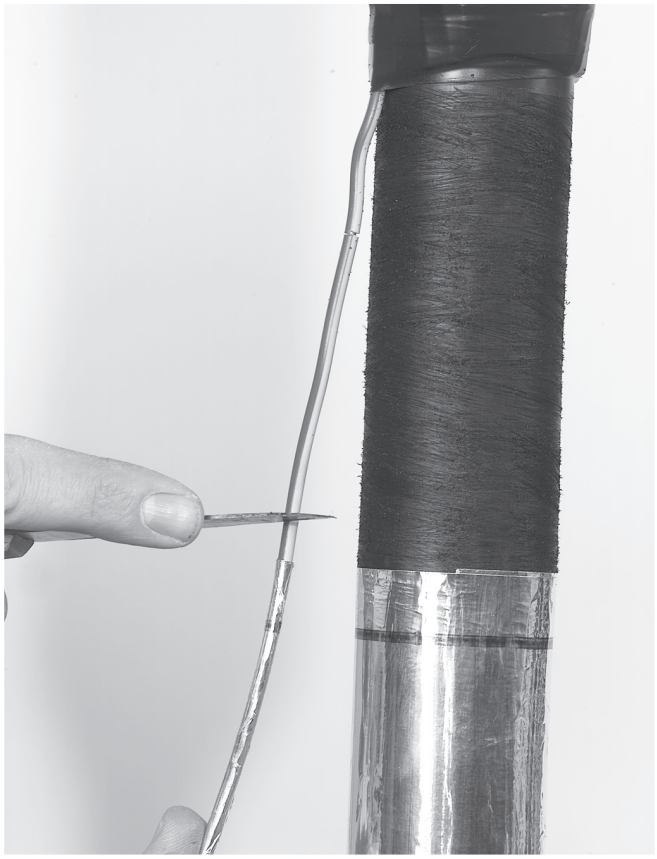
5.1 Clean the main cable jacket with a cleaning tissue over a distance of ca. 250 mm.

5.2 Abrade the cable jacket with an abrasive strip over ca. 200 mm.

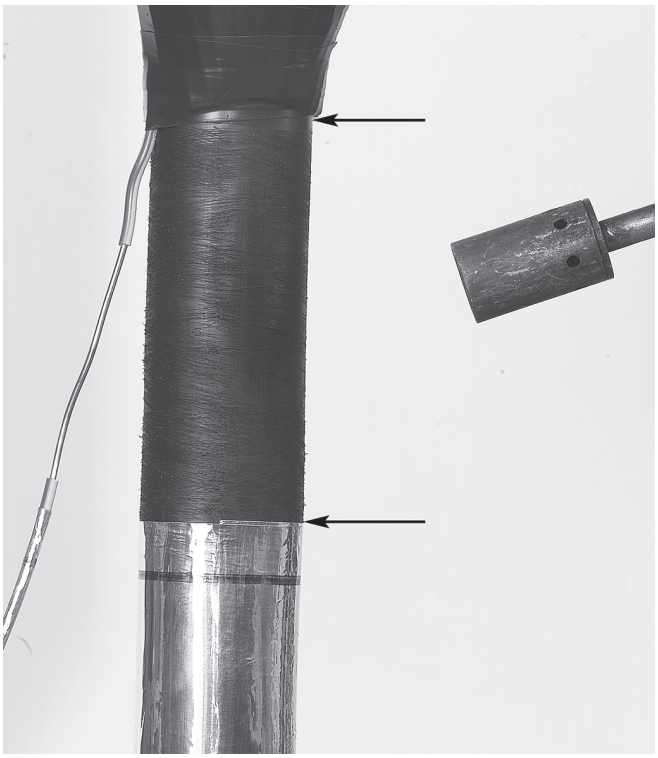
5.3 Center the sleeve over the joint, upper sleeve end positioned over the cylindrical part up to the conical shape of the distribution outlet. Mark the sleeve length on the main cable.



5.4 Wrap cable aluminum foil around the cable jacket, positioning the blue line on the mark. Smooth the aluminum foil with a blunt tool.

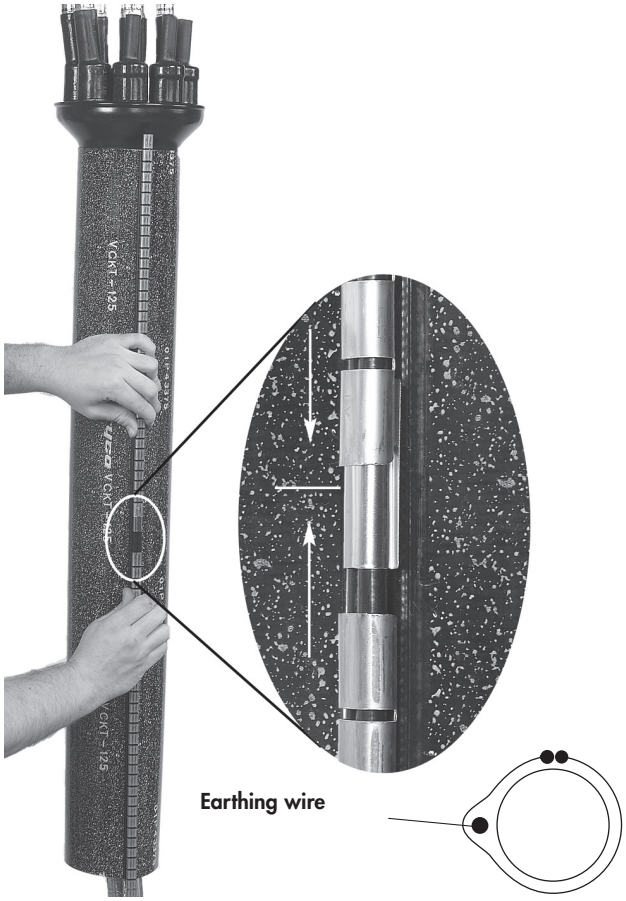


5.5 Wrap also aluminum foil around the earthing wire at the same position as on the main cable. Remove the insulation of the earthing wire over a length of 75 mm, starting 10 mm from the aluminum foil: **direction joint**.



5.6 Flame brush the bond length of the main cable:
- for PE jacketed cables: flame brush during 10 seconds;
- for lead jacketed cables: preheat up to 60°C (hot to the touch).

5.7 Install the slitted adhesive tube around the earthing wire over the stripped area of earthing wire.

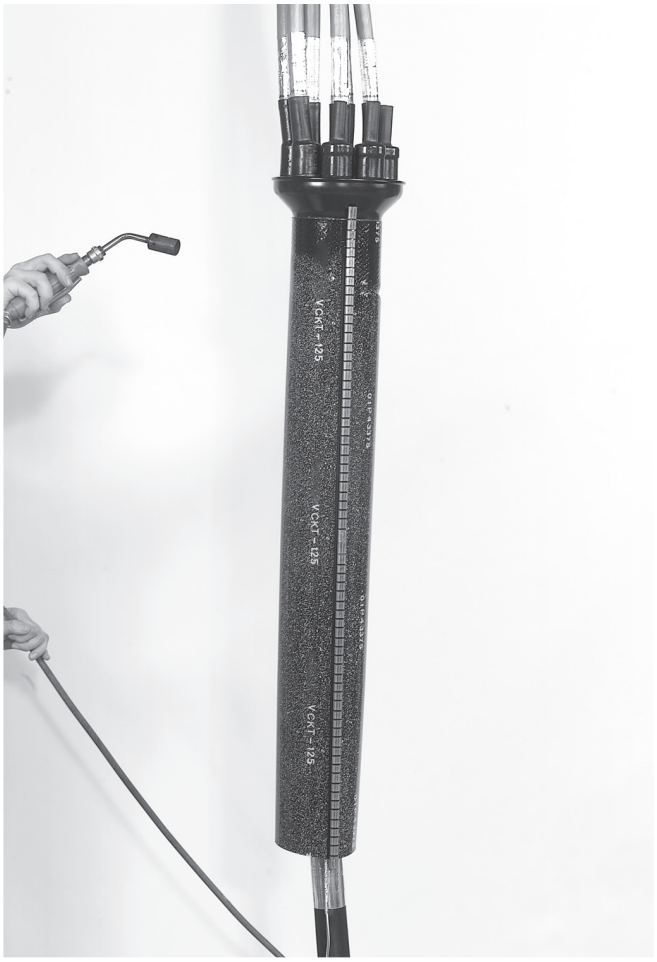


5.8 Wrap the heat-shrinkable sleeve around the joint. Slide the flexible channels over the sleeve rails leaving a small gap at the center for the retention clip. Position the retention clip in the opening between the channels and slide the channels evenly over the clip.
Important: the earthing wire should never be located under the channel of the heat-shrinkable sleeve.

5.9 **IMPORTANT : the channel should only extend ca.5 mm from the rail zone at the upper side of the heat-shrinkable sleeve. Hold the sleeve in this position so that the upper edge is in line with the cylindrical part of the distribution outlet.**

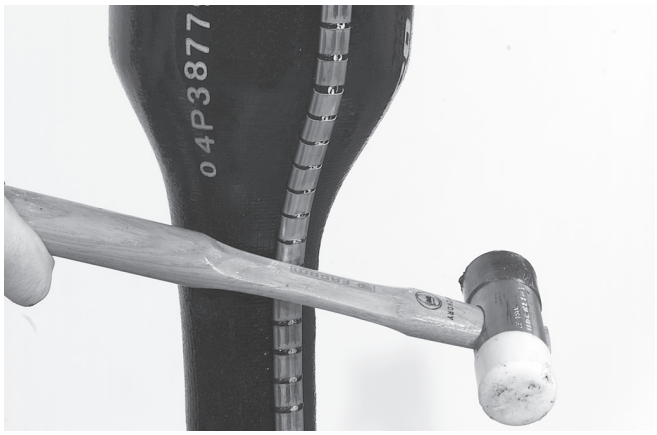
5.10 **Notes for heating**

- Regulate the flame to a total length of 300 mm with a yellow tip of approximately 100 mm.
- During shrinkage, move the flame continuously to avoid local overheating.
- Apply heat until the temperature indicating paint has changed completely from green to black.



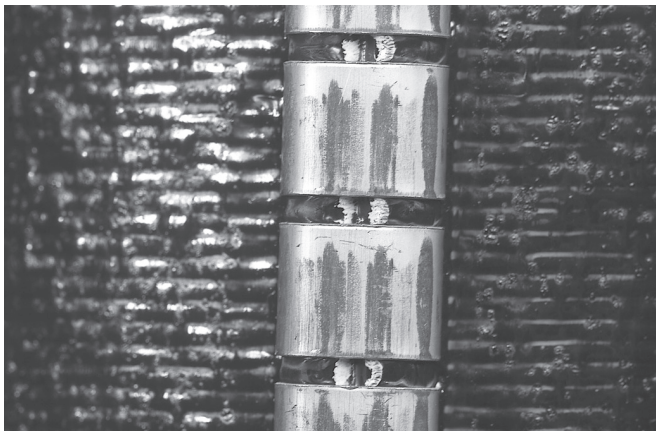
5.11 Start shrinking the heat-shrinkable sleeve at the side of the distribution outlet part. Apply heat evenly along the circumference until the color of the thermo-indicating paint has changed from green to black.

5.12 Gradually and progressively shrink the sleeve towards the main cable end.



5.13 Press the channel gently down with a blunt tool to give it the shape of the canister transition.

5.14 Apply 10 seconds post heating at the main cable end to ensure a good adhesive flow.

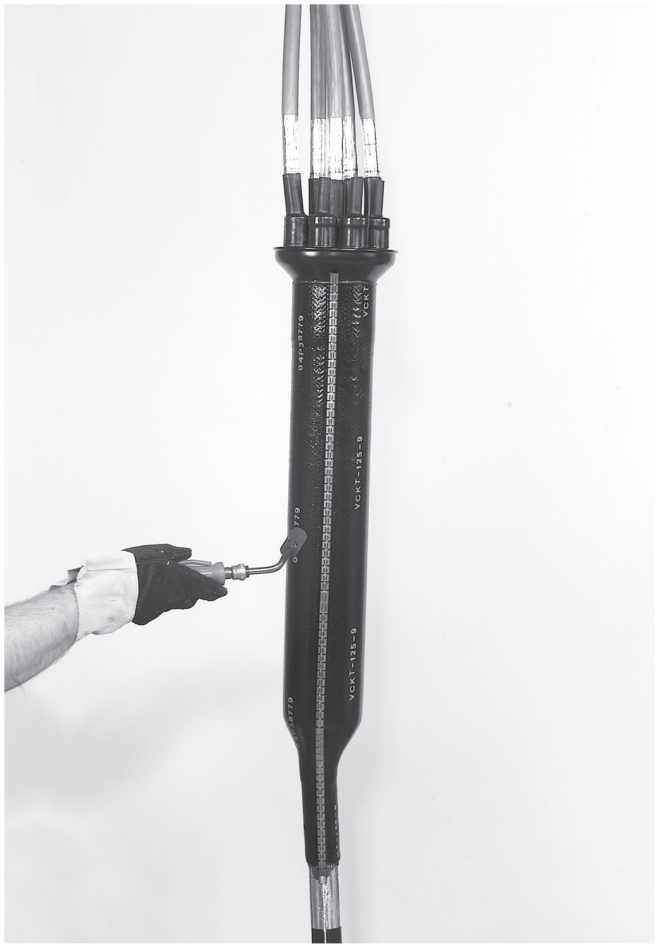


5.15 When all temperature paint has changed from green to black, white lines should be visible in the slots of the channel. If the lines are not visible apply more heat at that point until the white lines appear.

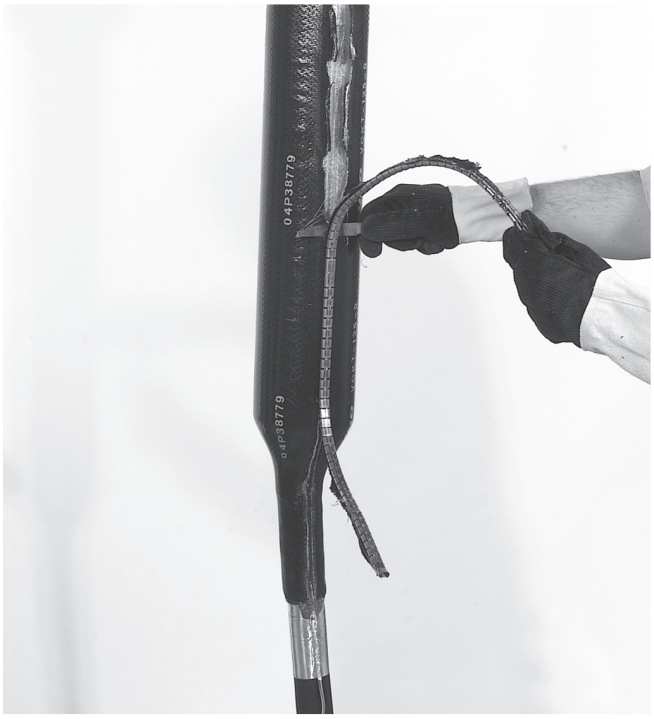
5.16 Allow the complete joint to cool down to ambient temperature

6 Re-entry procedure

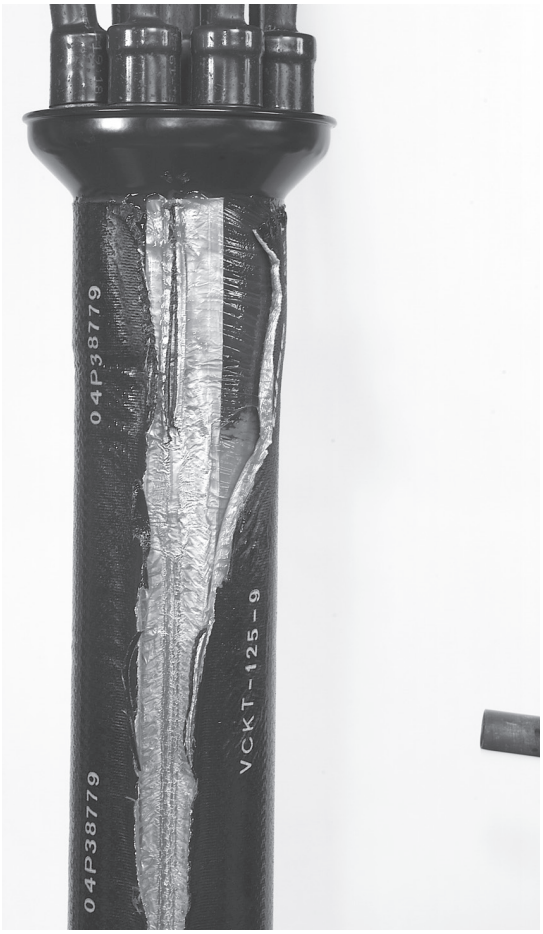
Recommendation: it is recommended to use protective gloves.



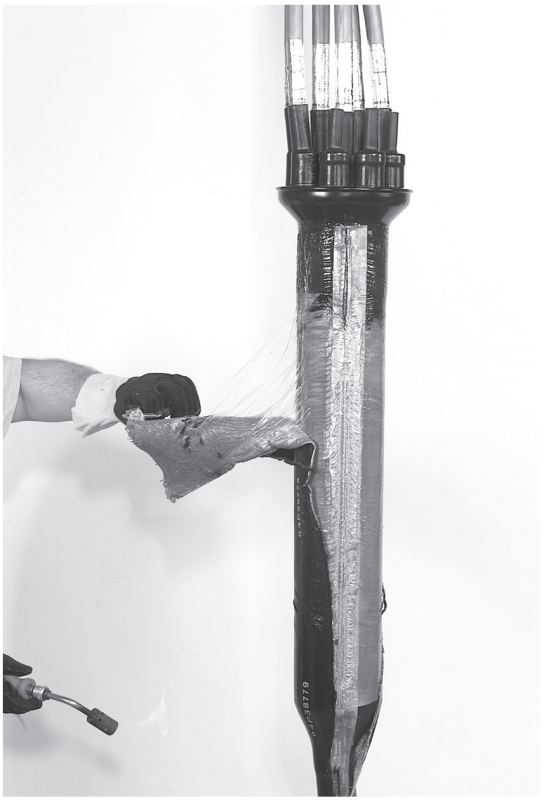
6.1 Heat the channel area.



6.2 Cut off the channel, starting from the ends up to the center of the joint.



6.3 Heat the sleeve circumferentially until it opens at the channel area.



6.4 Remove the sleeve gently from the canister with a pair of pliers. Apply more heat if necessary.

6.5 Remove the flap of the sleeve with a pair of pliers.

6.6 Remove the PVC tape from the crowns of the canister.

6.7 Cut the self adhering aluminum tape away from one of the canister seams and remove the canister.

Note

- Remaining adhesive does not need to be removed. However, make sure that the adhesive is protected from grease or dirt during re-work.
- For re-closing use an appropriate kit.

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