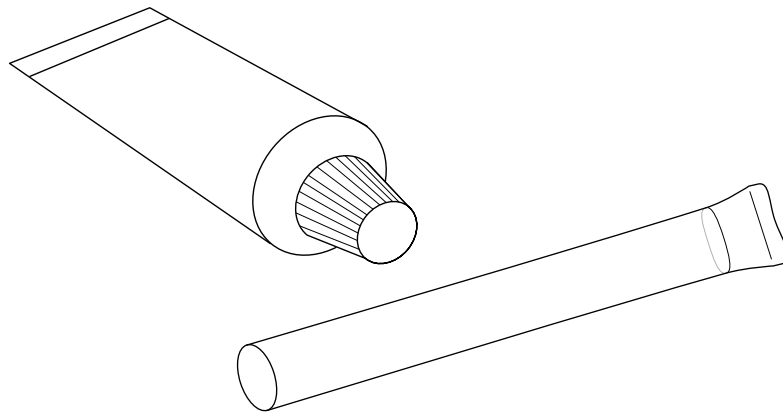


ASSEMBLY INSTRUCTIONS



EL-EC Ex

Ex End termination set for ELSR & ELP/PFA
in hazardous areas

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ATTENTION

Refers to a potentially dangerous situation.
If it is not prevented, there is a risk of damage or malfunction.



DANGER

Refers to an extremely dangerous situation. If it is not prevented there is risk of death or at least a high risk of serious injuries.



NOTE

Important information and instructions for safe, effective and environmentally compatible usage.



WARNING

Refers to a dangerous situation. If it is not prevented there is risk of injury or at least a high risk of material damage.

Proviso
We reserve the right to make technical changes. Changes, errors or misprints shall not form the basis for any claim to compensation for damages. Comply with the applicable and currently valid standards and regulations for safety-related components and systems.

eltherm GmbH Ernst-Heinkel-Str. 6-10 57299 Burbach T.: +49 2736 4413-0 F.: +49 2736 4413-50 info@eltherm.com	Document: 8643040X81EXX		Assembly instructions Ex EL-EC for ELSR & ELP	
	Author:	Peter Schmidt	Datum:	30.06.2020
	Revision: 08	Julian Engel	Datum:	18.06.2024

IMPORTANT INFORMATION

- RETAIN FOR LATER USE



For orderly and safe use of the Ex EL-EC termination set, please follow these instructions.
Please retain these instructions for later reference purposes (for example in the system documentation).

- FOR DISPOSAL



The WEEE logo indicates that this product must not be disposed of with residential waste.
Further information about disposal and recycling of old electrical and electronic devices and where to find collection points is available from your local disposal company or from the manufacturer from which you bought the product.



DANGER

- The cable must be approved according to Directive 2014/34/EU.
- Special conditions mentioned in the relevant ATEX certificate shall be observed.

APPLICATION

The termination is used for the connection of parallel heating cable with ranges of circumference **22-29 mm (ELSR-LS) for EL-ECL**, **30-36 mm (ELSR-N) for EL-ECN**, **26 – 34 mm (ELSR-H, -H+, SH, -SH+ & -SHH) for EL-ECSH** and **20-22 mm (ELP/PFA) for EL-ECP**. It is suitable for outer jackets of **Fluoropolymer** as well as **PP** and **TPE**.

The termination **EL-ECL** is marked in the following way:

eltherm EL-ECL-Ex <Lot No.> 22 - 29 mm
⊕ Ex II 2G Ex 60079-30-1 IIC Gb ⊕ Ex II 2D Ex 60079-30-1 IIIC Db
EPS 19ATEX1214 U IP65

The termination **EL-ECN** is marked in the following way:

eltherm EL-ECN-Ex <Lot No.> 30 - 36 mm
⊕ Ex II 2G Ex 60079-30-1 IIC Gb ⊕ Ex II 2D Ex 60079-30-1 IIIC Db
EPS 19ATEX1012 U IP65 IECEx EPS 19.0005 U

The termination **EL-ECSH** is marked in the following way:

eltherm EL-ECSH-Ex <Lot No.> 26 - 34 mm
⊕ Ex II 2G Ex 60079-30-1 IIC Gb ⊕ Ex II 2D Ex 60079-30-1 IIIC Db
EPS 17ATEX1146 U IP65 IECEx EPS 17.0063 U

The termination **EL-ECP** is marked in the following way:

eltherm EL-ECP-Ex <Lot No.> 20 - 22 mm
⊕ Ex II 2G Ex 60079-30-1 IIC Gb ⊕ Ex II 2D Ex 60079-30-1 IIIC Db
EPS 17ATEX1146 U IP65 IECEx EPS 17.0063 U

Required additional information according to regulation 2014/34/EU:

Manufacturer: eltherm GmbH, 57299 Burbach, Germany

The nominal voltage is 300 V.



ATTENTION

The operating temperature ranges from -60°C to +135°C for type EL-ECL and -ECN, and from -60°C to +250°C for type EL-ECSH and EL-ECP.



WARNING

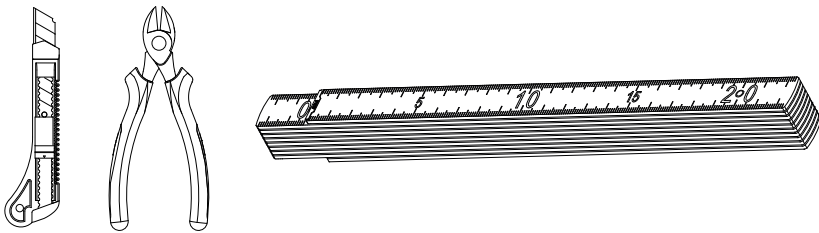
Proper assembly is shown on the following pages. Special care shall be taken of the appropriate creeping distances and of the integrity of the end cap.



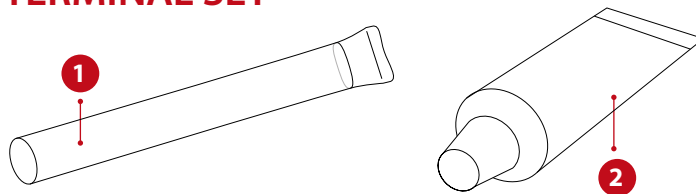
WARNING

For the use of the end cap outside of "System ELSR" or "System ELP", a separate permission by local authorities (e.g. given at final inspection of the heating system) is required.

RECOMMENDED TOOLS



CONTENTS OF TERMINAL SET



ELSR

Type EL-ECL Ex (0X81EL1) termination for self-regulating heating cables ELSR-LS	No.	Quantity
End cap EL-ECL, Silicone, black	1	1 Unit
Silicone adhesive; „EC“ blue, 5 gr.	2	1 Unit
Type EL-ECN Ex (0X81EN1) termination for self-regulating heating cables ELSR-N	No.	Quantity
End cap EL-ECN, Silicone, black	1	1 Unit
Silicone adhesive; „EC“ blue, 5 gr.	2	1 Unit
Type EL-ECSH Ex (0X81EH2) termination for self-regulating heating cables ELSR-H, -H+, -SH, -SH+ & -SHH	No.	Quantity
End cap EL-ECSH, Silicone, red	1	1 Unit
Silicone adhesive; „ECH“ red, 5 gr.	2	1 Unit

ELP

Type EL-ECP Ex (0X81EP1) termination for parallel heating cables ELP/PFA up to 260°C	No.	Quantity
End cap, Silicone, red	1	1 Unit
Silicone adhesive; „ECH“ red, 5 gr.	2	1 Unit



ATTENTION

- Termination to be done only by personnel that is trained, qualified and knowledgeable in trace heating installations in Hazardous Areas!
- After installation inspect visually to ensure tight fit and for leaks.
- After the termination set is installed, the heating circuit is ready for operation immediately (no drying time required).
- After completion check insulation resistance (min. 500VDC, recommended 2500VDC => min. 20 MOhm) and heater resistance!



NOTE

An end termination set does not include an connection set. If a connection set is needed, it must be ordered separately.

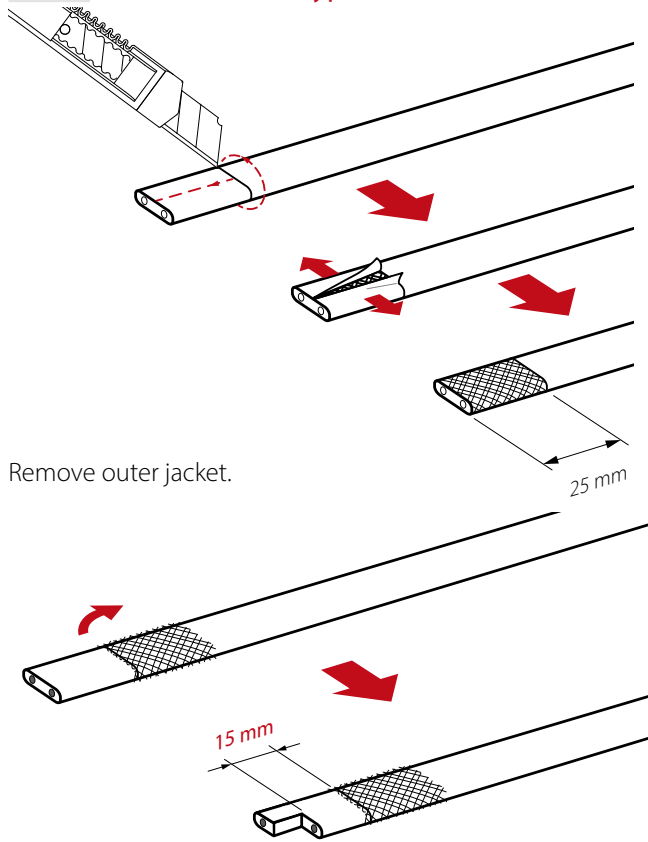


WARNING

De-energize trace heater prior to termination work!

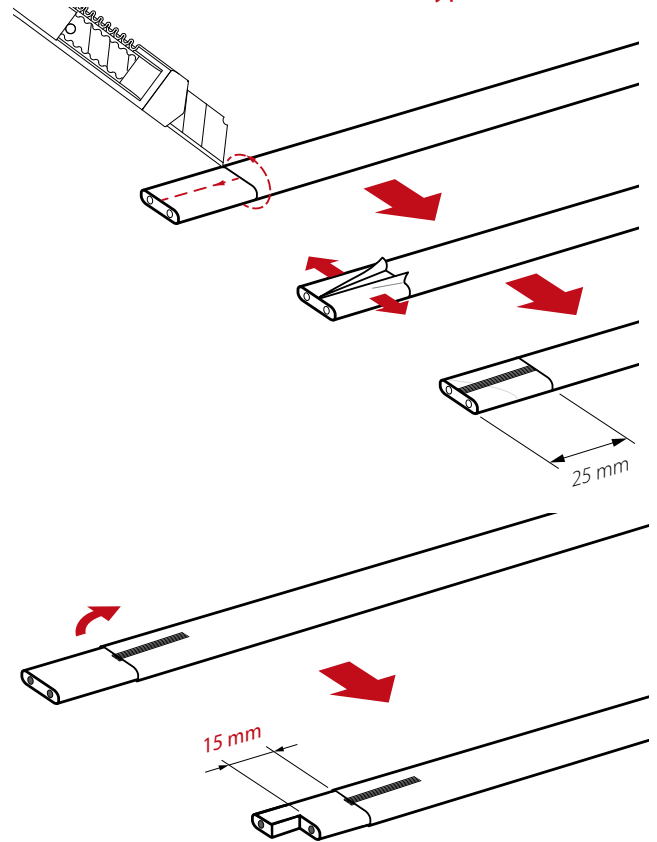
Preparation of ELSR (except -H+ & -SH+)

1.1 ELSR with braid (type "BO" & "BOT")



Turn braid / turn earthing wire and remove aluminium foil.
Shorten matrix & supply conductors on one side.

ELSR with aluminium foil (type "AO")

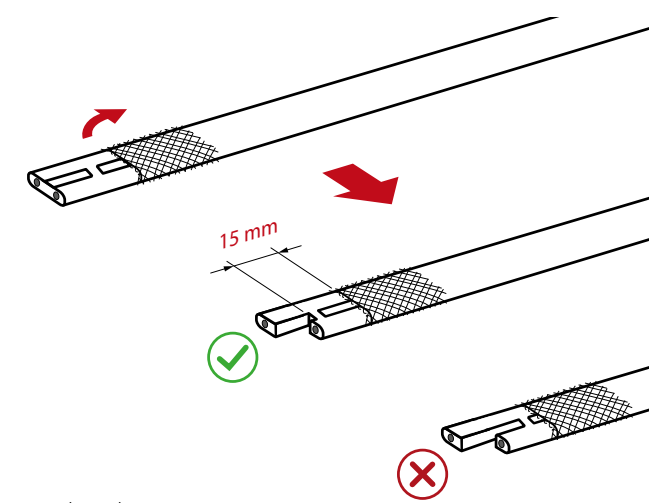
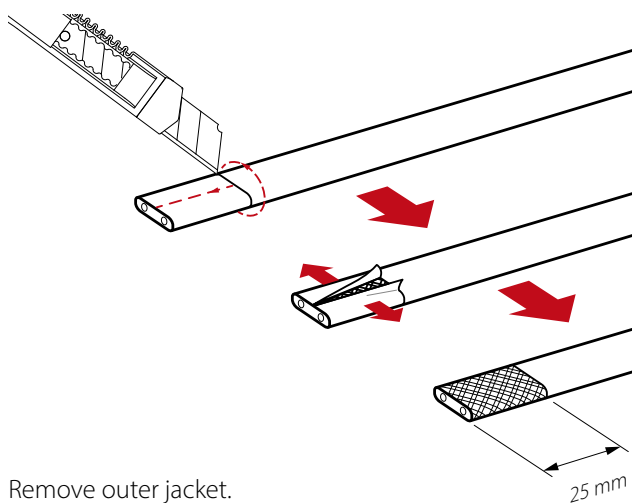


ATTENTION

Keep clean and dry!

Preparation of ELSR-H+ & -SH+

1.2



Turn braid.
Shorten matrix & supply conductors at the start of a cut-out on one side. The cut must not be made in the middle.



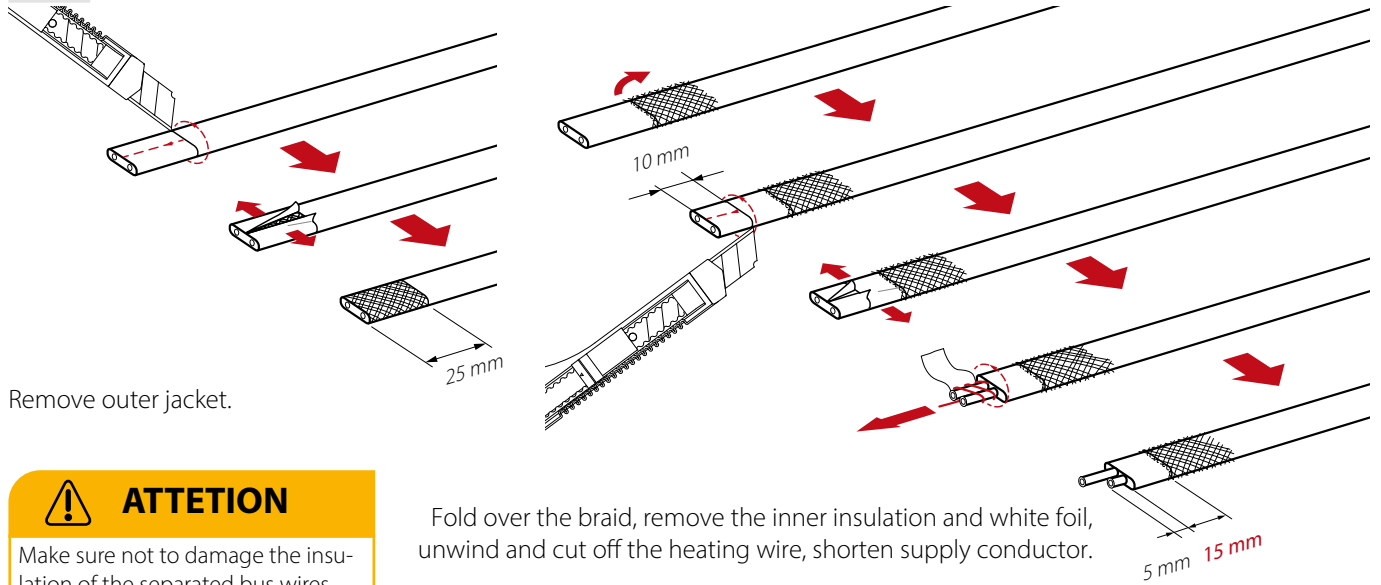
DANGER

The 15 mm must be kept as **minimum creeping distance!**

All wires of the braid need to be bent back. Otherwise there is a **risk of short circuit!**

Preparation of ELP

1.3

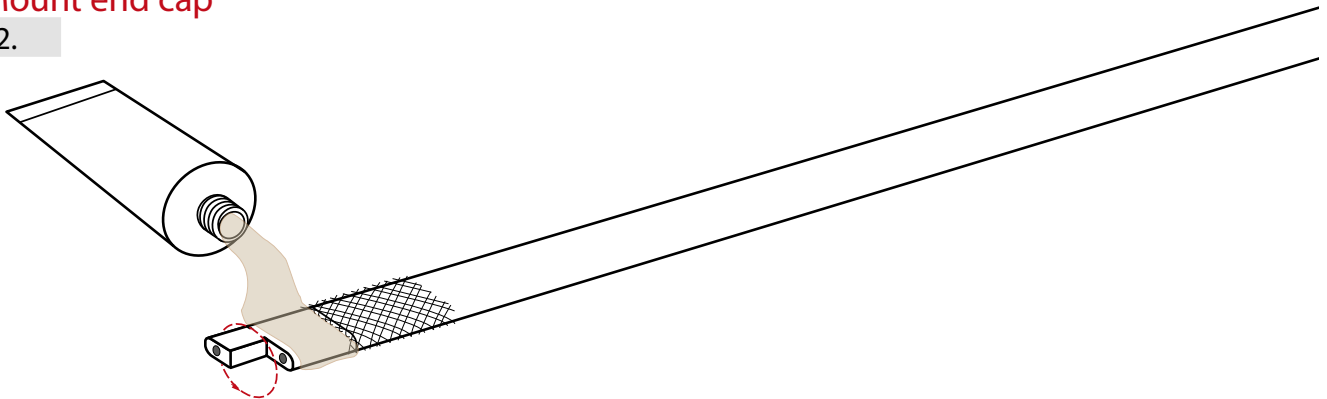


ATTENTION

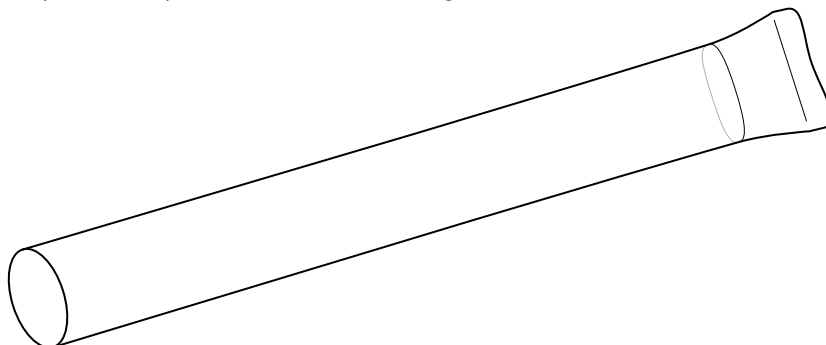
Make sure not to damage the insulation of the separated bus wires.

Mount end cap

2.



Distribute silicone completely and evenly on the end of the heating cables.



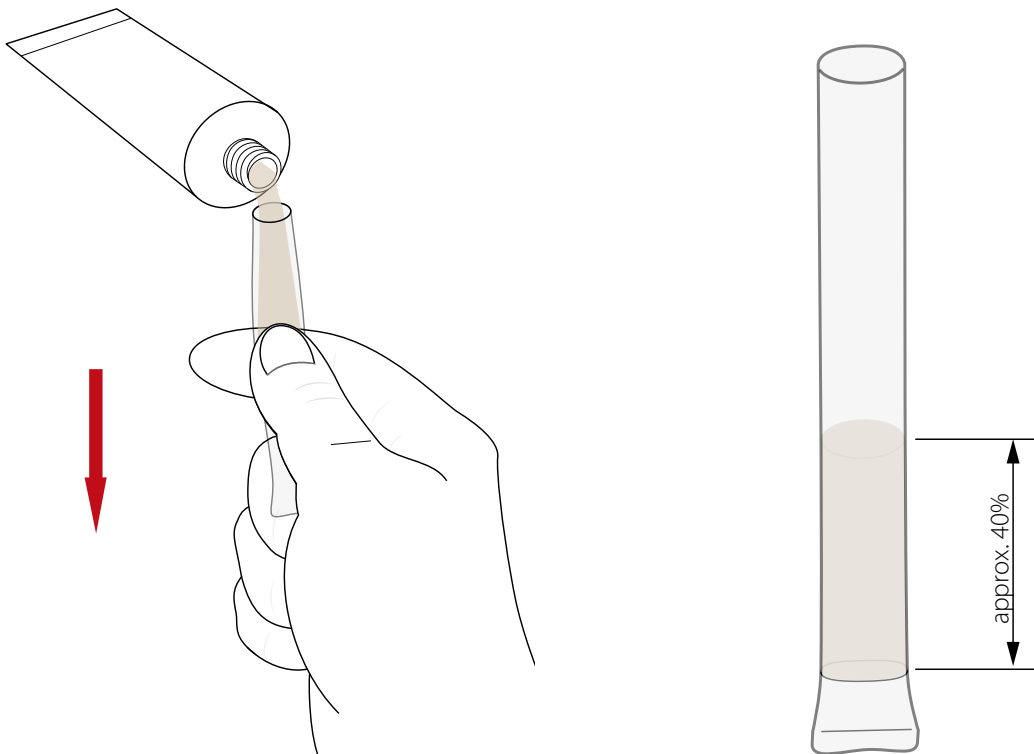
Check end cap to ensure it is not damaged.



NOTE

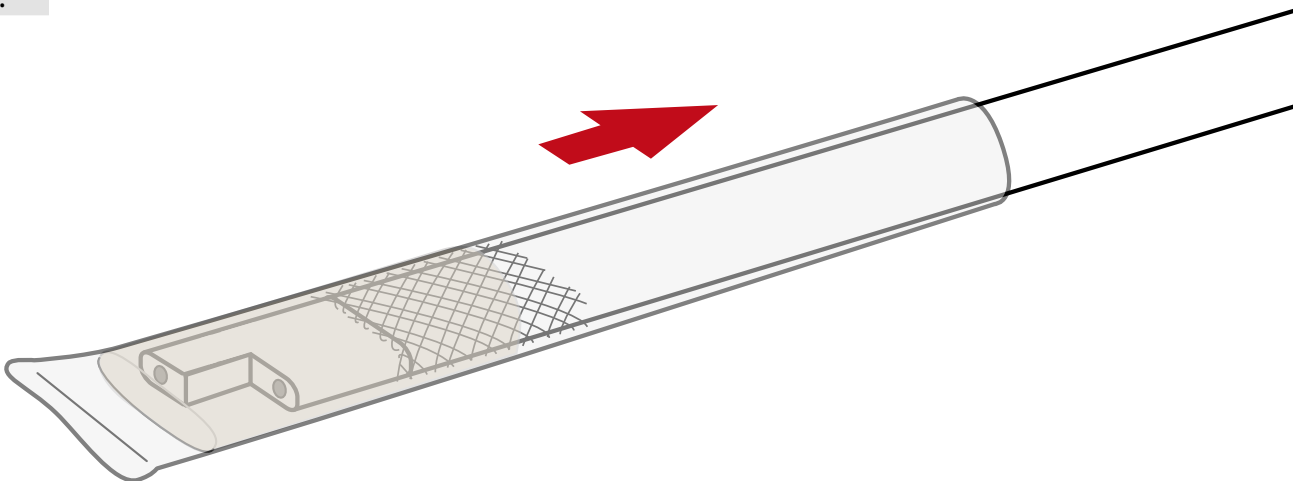
The end cap is **black** (EL-ECL-Ex & EL-ECN-Ex) or **red** (EL-ECSH-Ex & EL-ECP-Ex) and is shown transparent to simplify the illustration of the assembly step.

3.



To fill the silicone, squeeze the end cap so that the silicone is drawn into the end cap by the suction effect.

4.



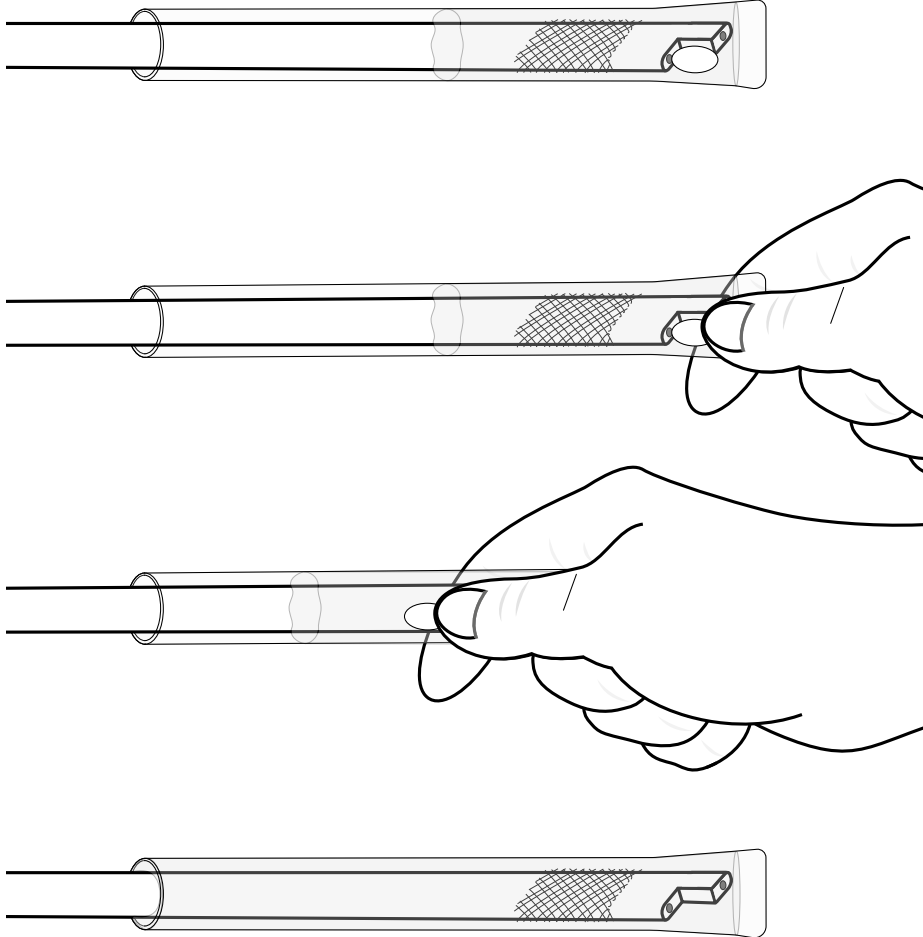
Push the end cap as far as it will go onto the end of the heating tape.



WARNING

Installation of a termination set by sliding on the silicone end cap **without** adhesive is not permitted!

5.



Press out any air pockets in the silicone adhesive by hand and spread the silicone adhesive in the end cap. Inspect visually to ensure tight fit and for leaks. Then the heating tape is ready for operation immediately.



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Visit our download area.