



TE'S RAYCHEM SCREENED T-CONNECTORS RSTI-X9

FOR LARGE CROSS SECTIONS, INTERFACE C, RATED UP TO 1250A/42 kV

KEY FEATURES

- Screened connector does not need to be removed for over sheath testing
- Wide application range covers cable cross sections from 400 mm² to 1000 mm²
- Easy access rear plug with capacitive test point
- Insulation made of highly modified silicone rubber
- Compact design supports use of double "T" connections inside standard terminal boxes
- Unlimited shelf-life

TE Connectivity's (TE) Raychem Screened separable T-connectors RSTI-x9 are designed to connect single and three-core polymeric cables to medium voltage gas insulated switchgear and other equipment using bushings type "C" (EN50180/EN50181) specified for 630/1250A up to 42 kV.

Made of a highly modified silicone rubber and screened by a thin-walled, grounded outer conductive screen, TE's Raychem RSTI-x9 connectors are equally suited for indoor and outdoor application.

Supporting a wide application range, the design incorporates one body and three stress cone adapters to cover any cross-sections from 400 mm² to 1000 mm² and any voltage classes from 12 kV to 42 kV. The conductor connection will be provided with mechanical lugs. The overall and cut-back dimensions are designed to take up minimum space in the terminal box.

TE's Raychem RSTI-x9 connectors are equipped with a capacitive test point for determining whether the circuit is energised. A conductive cap protects this test point.

The RSTI-x9 connectors exceeds CENELEC HD 629.1 S2 requirements, which includes BS; VDE and other international specifications. Our kits include high performance mechanical lugs.

Customers can count on consistent, high quality products, driven by TE's proven innovation and backed by our extraordinary customer support.

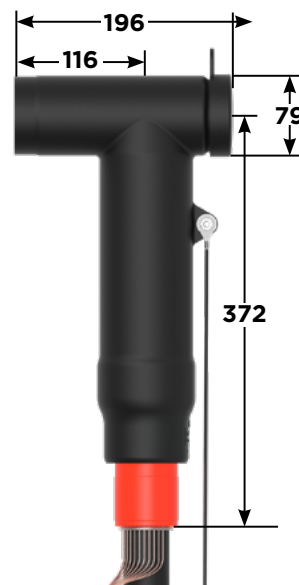
TE's Raychem Screened T-Connectors RSTI-x9



The RSTI-x9 screened cable connectors meet CENELEC HD 629.1 S2 requirements, which includes BS, VDE and other international specifications.

TECHNICAL DATA	
Cable insulation diameter range	28.9 mm - 59.0 mm
Connector cross-section range	400 mm ² - 1000 mm ²
Maximum system voltage	42 kV
Continuous current rating	1250A*
Basic impulse level	200 kV
Partial discharge at 2 U ₀	< 2 pC
AC voltage withstand, 5 min.	93.5 kV
DC voltage withstand, 15 min.	125 kV
Thermal short circuit, 1 s	74.5 kA
Thermal short circuit, 3 s	43 kA
Dynamic short circuit	125 kA

* 1250 A is relevant for upgraded bushing C2 and cables with copper conductors. The adapters meet the international CENELEC HD 629.1 S2 specification.



PRODUCT SELECTION INFORMATION			
Description	Diameter Core Insulation (mm)		Cross Section (mm ²)
	min	max	
12 kV with mechanical lugs			
RSTI-3951 (Al or Cu)	28.9	36.4	400
RSTI-3952 (Al or Cu)	28.9	36.4	500
RSTI-3953 (Al or Cu)	34.0	45.4	630
RSTI-3954 (Al or Cu)	34.0	45.4	800
RSTI-3955 (Al or Cu)	39.1	59.0	1000
24 kV with mechanical lugs			
RSTI-5951 (Al or Cu)	34.0	45.4	400
RSTI-5952 (Al or Cu)	34.0	45.4	500-630
RSTI-5953 (Al or Cu)	39.1	59.0	630
RSTI-5954 (Al or Cu)	39.1	59.0	800
RSTI-5955 (Al or Cu)	39.1	59.0	1000
36 and 42 kV with mechanical lugs			
RSTI-6951 (Al or Cu)	34.0	45.4	400
RSTI-6952 (Al or Cu)	39.1	59.0	500 - 630
RSTI-6953 (Al or Cu)	39.1	59.0	800

TEST REPORT

PPR-2704

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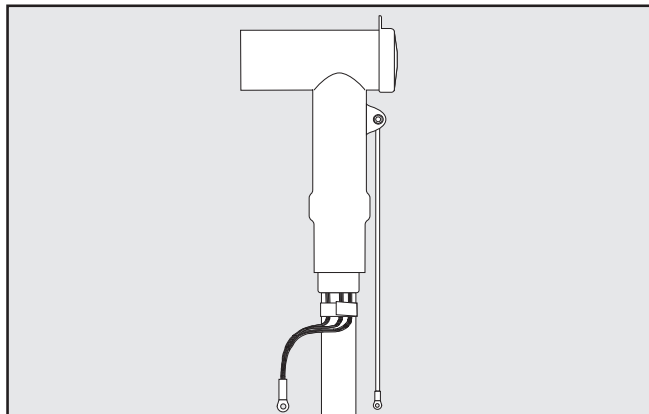
INSTALLATION INSTRUCTIONS

EPP-1719-9/22

**Screened Separable
Connector 800 to 1250 A for
Bushing Profile “C”
in Accordance to EN 50181,
and Single Core Polymeric
Insulated Cable up to
42 kV**

TE's Raychem Cable Accessories

RSTI-x95x



SAFETY WARNING

It is essential to observe the applicable safety regulations for working with high voltage equipment.

For precise safety information please contact the responsible authority.

Please dispose of all waste according to environmental regulations.



For more information: te.com/energy

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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, TE Connectivity 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.

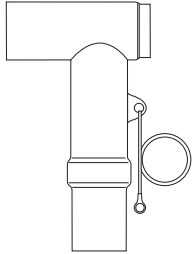






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Before Starting

- 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 instructions.
- Components or working steps may have been modified since you last installed this product.
- Carefully read and follow the steps in the installation instructions.

Kit Contents

S. N.	Contents	Product Images	Qty.
1.	Connector body		3
2.	Back plug		3
3.	Gloves		3
4.	Covering cap		3
5.	Stress cone		3
6.	Main cable lug		3
7.	Binding wire		1

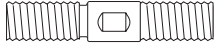
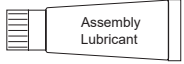


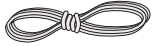





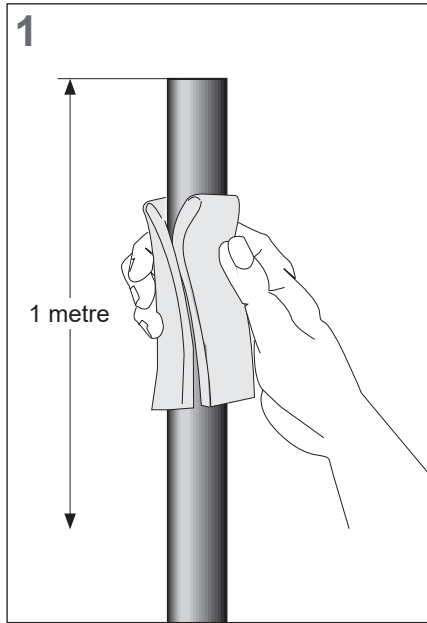
S. N.	Contents	Product Images	Qty.
8.	Threaded pin M16		3
9.	Assembly lubricant		2
10.	PVC tape		1
11.	Cable lug (16 - 70)		3
12.	String		1
13.	Screen cable lug		3
14.	Wave type washer & Nut M16 or Combinut M16 (alternative)	 	3
15.	Protective bag		3
16.	Sealing tape (grey)		6

Table 1

Cross Section	Voltage Class (U_m) / kV	Ø Core Insulation		Reference No. Al or Cu
		min	max	
400	12	28.9	36.4	RSTI-3951
500		28.9	36.4	RSTI-3952
630		34.0	45.4	RSTI-3953
800		34.0	45.4	RSTI-3954
400	24	34.0	45.4	RSTI-5951
500 - 630		34.0	45.4	RSTI-5952
630		39.1	59.0	RSTI-5953
800		39.1	59.0	RSTI-5954
400	36 & 42	34.0	45.4	RSTI-6951
500 - 630		39.1	59.0	RSTI-6952
800		39.1	59.0	RSTI-6953

Cable Preparation

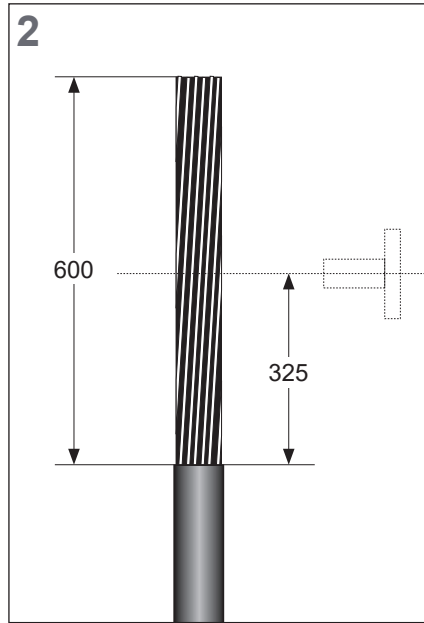
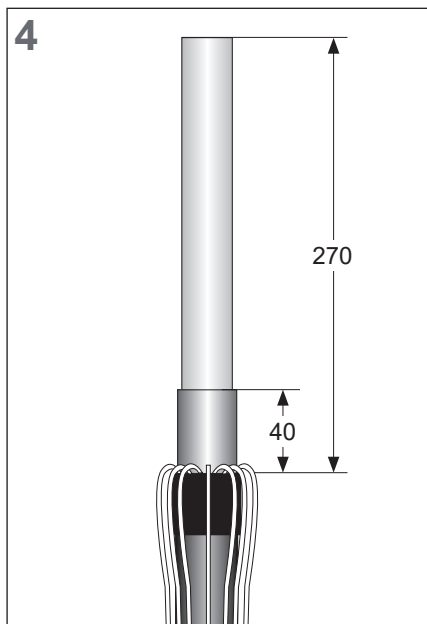


Preheat the cable and use appropriate devices to straighten the cable.

Clean and degrease the end of the oversheath for a length of 1 metre with solvent wipe.

Cut the core with a hacksaw according to the dimension given in the drawing. Remove the core screen with appropriate screen cutting tool according to the drawing. The surface of the insulation should be free from all traces of conductive material. Compare the diameter over insulation with application range as shown in **Table 1** as well as with marking of supplied stress cone.

Application Check!



Cable with wire shield

Position the cable with sufficient overlap to the bushing centre.

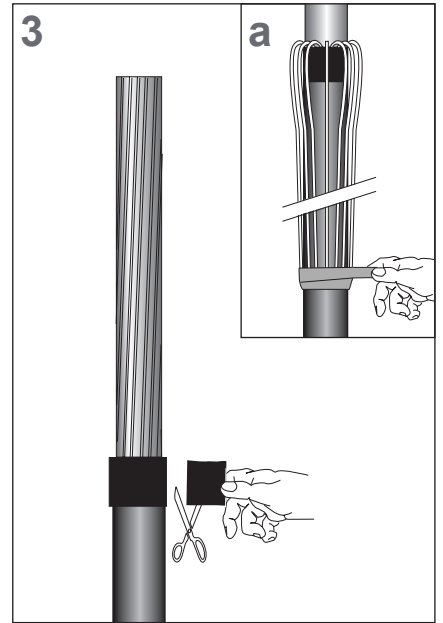
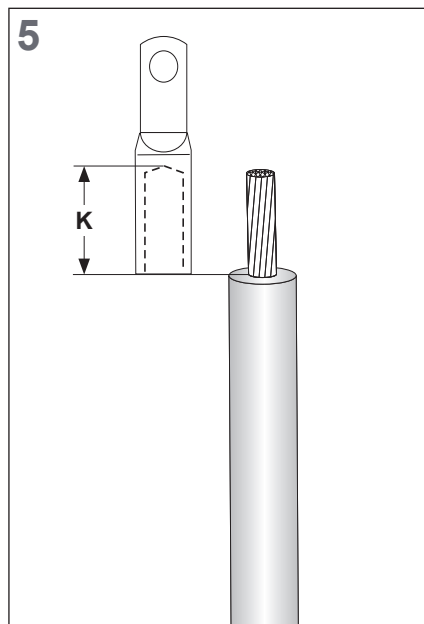
Mark the oversheath 325 mm below the bushing centre.

Cut the cable 600 mm above the mark and remove the oversheath over this distance. Cut off Cu-spiral screening tape flush with end of outer sheath.

Edges projecting beyond the outer sheath **must be avoided**, so that the stress cone can not be damaged during push on procedure.

Cut back the insulation according to dimension **K** given in **drawing details**.

Dimension **K** is identical to depth of bore. Barrel butts against insulation!



Wrap one turn of sealant tape (grey) with no overlap and slight tension around the end of the oversheath.

Cut the tape and push ends together.

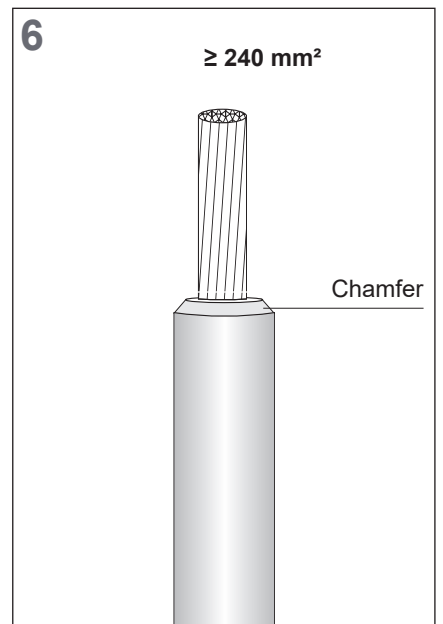
Bend the shielding wires back onto the oversheath.

Avoid crossing the individual wires.

Temporarily secure the wires with a tape or wire binder (see detail **a**).

Recommendation for large cross sections

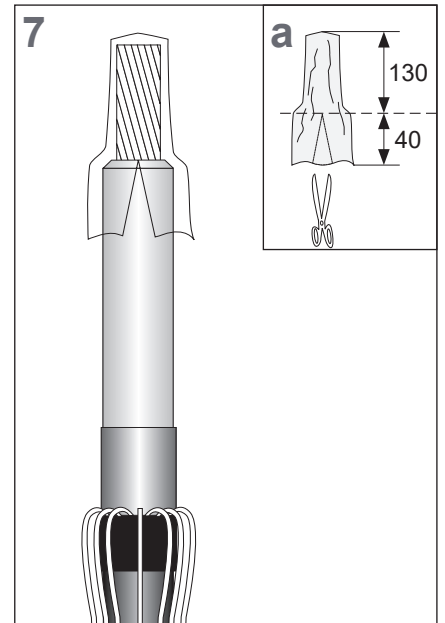
Convenient push on process of the stress cone requires chamfering of the insulation for cross section 240 mm² and above. See drawing!



Core Preparation

Table 2 - Application Range of Mechanical Lugs

Part number	Cross section (mm ²)	Ø over round stranded Al or Cu conductors (mm)	Ø over round solid Al conductors (mm)
BLMC-400-16-1250A	400	19.7 - 24.6	19.8 - 22.2
BLMC-500/630-16-1250A	500 - 630	25.3 - 32.5	24.0 - 28.3
BLMC-800-16-1250A	800	32.5 - 35.3	30.9 - 32.1



Cut the small protective bag (assembly aid) at the bottom end at a length of 40 mm on one side (see detail a).

Slide the protective bag over the exposed conductor as shown.

Apply onto the inner surface of the stress cone at the bottom end a 5 cm long sausage of assembly lubricant and spread it evenly over the inner surface.

Use assembly lubricant without sponge top. Push the stress cone in one sequence with a twisting movement over the assembly aid completely onto the insulation until the inner collar of the stress cone stops at the oversheath cut back of the cable.

Tie the assembly aid down with a PVC tape as shown in the drawing.

Gently lubricate the outer surface of the protective bag and the core insulation with a thin layer of assembly lubricant.

Apply the lubricant layer with the sponge top as shown.

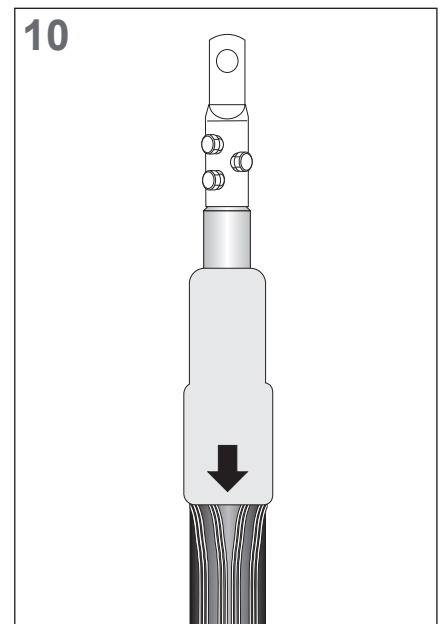
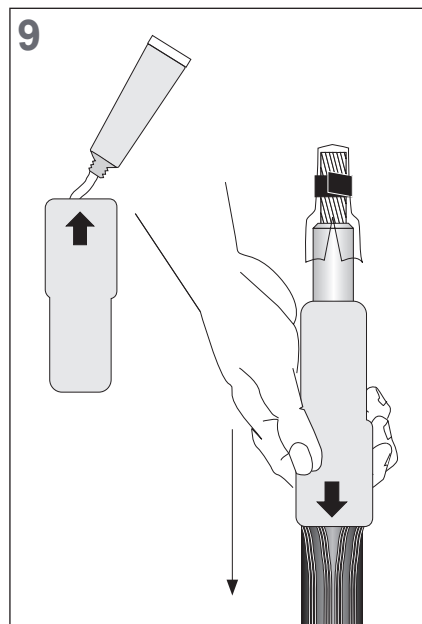
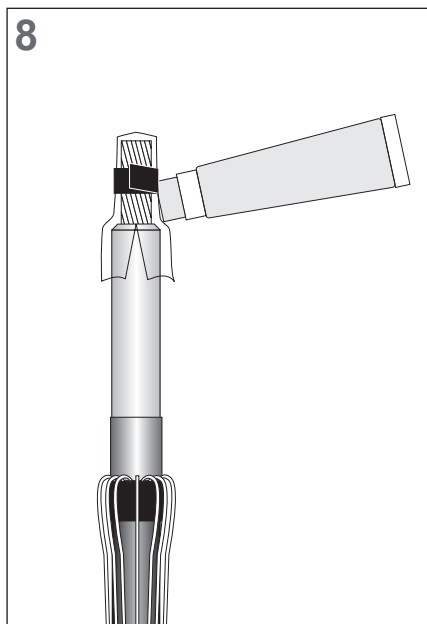
NOTE

The arrow on the stress cone should point onto the cable sheath.

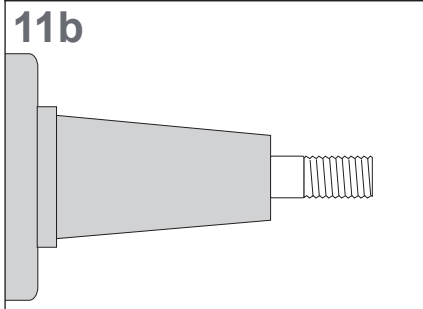
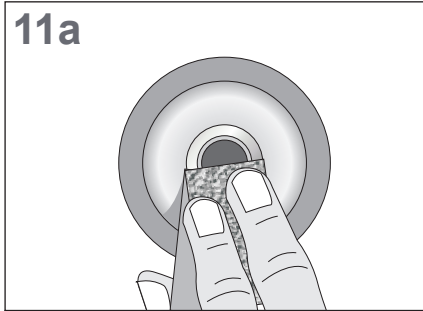
Remove the assembly aid from the conductor.

Install the cable lug using a lug fixture. Tighten the bolt set alternately in several equal steps until the heads shear off.

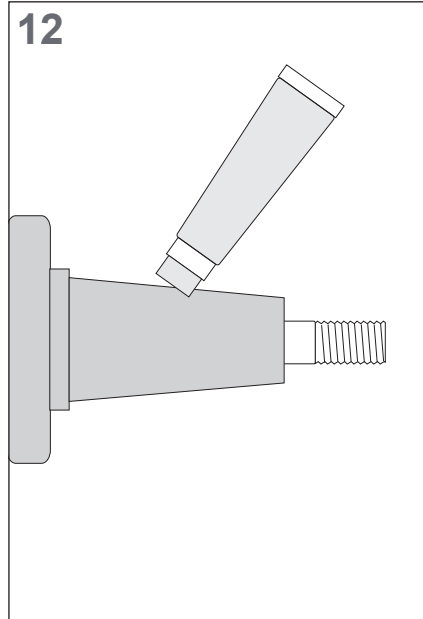
Remove any sharp edges.



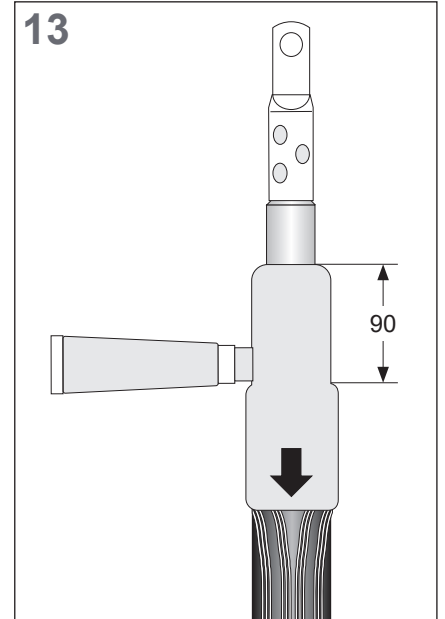
Installation of Connector Body



- a. Abrade and clean the contact ring of the bushing thread from residuals such as resin or varnish if any.
- b. Insert the threaded stud into the bushing and tighten it up with an allen key (8 mm). Maximum torque: **35 Nm**.



Clean the conical surface of the bushing and lubricate it with the assembly lubricant as shown.



Clean the surface of stress cone and apply a thin layer of lubricant onto the outer surface over a length of 90 mm with the sponge top as shown in the drawing.

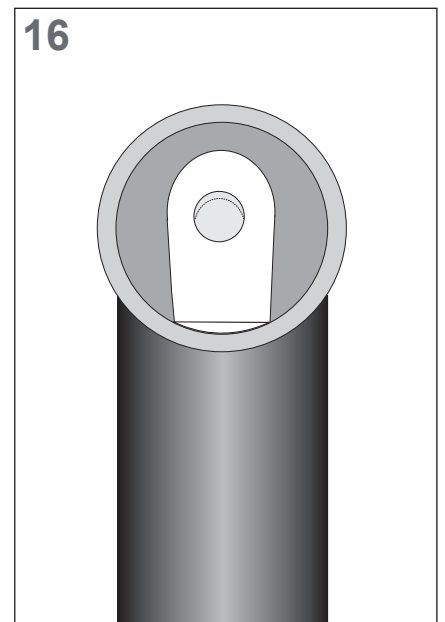
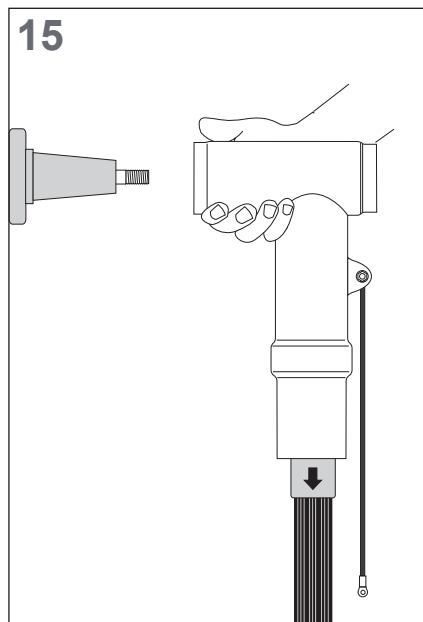
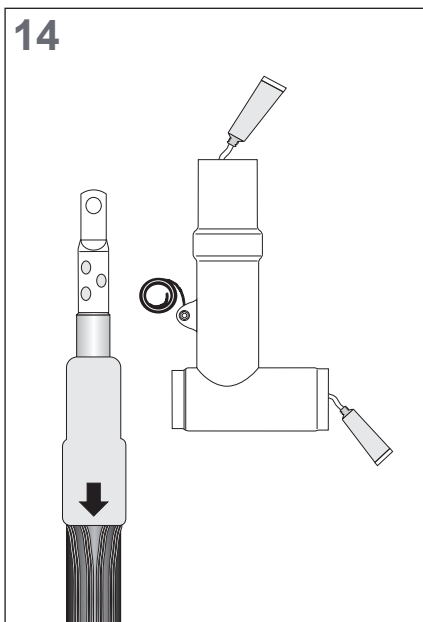
Clean and degrease the bottom and front end of the screened connector body and apply a thin layer of lubricant onto the inner surface without the sponge top as shown.

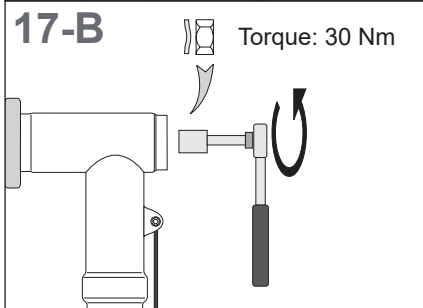
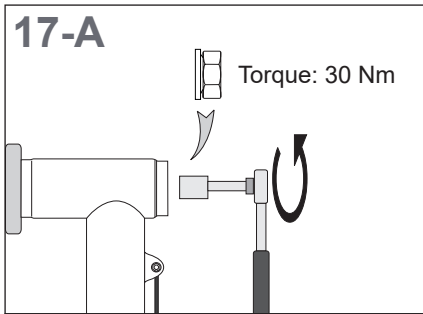
NOTE

Use one way glove to evenly lubricate the inner surface at a length of approximately 50 mm.

Push screened connector body with no interruption onto the stress cone and hold it. Continue **immediately** with the next step.

Align the eye of the cable lug with the threaded pin and push the screened connector onto the bushing.



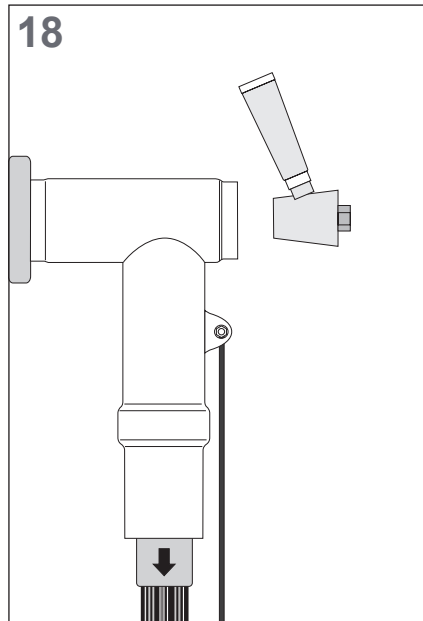


If using a Combinut:

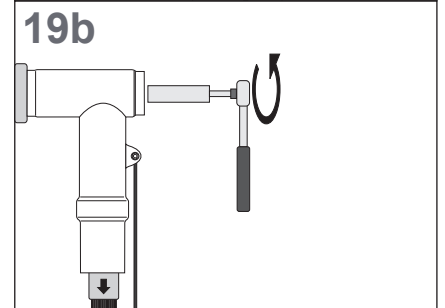
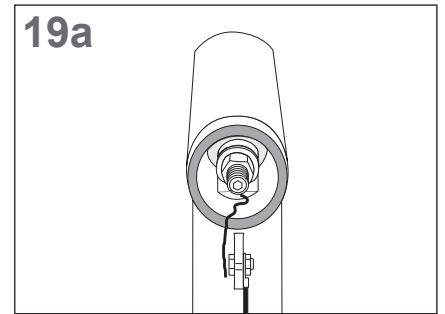
- a. Insert the combinut.
Tighten it onto the stud with a spanner (24 mm) at a torque of **30 Nm**.

If using a washer and hex nut:

- b. Insert the spring washer and hex nut.
Tighten the hex nut onto the stud with a spanner (24 mm) at a torque of **30 Nm**.



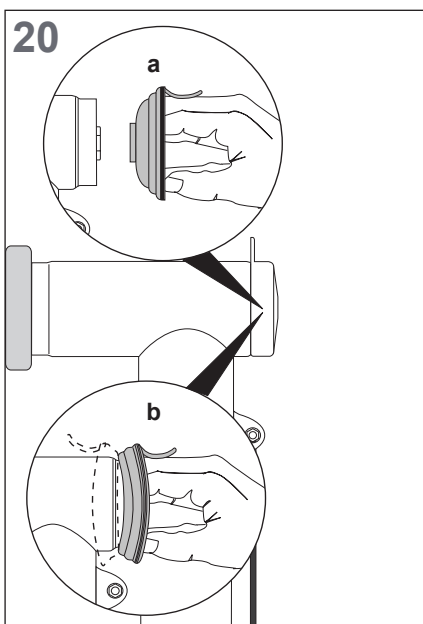
Clean the inner surface of connector back end and apply a thin layer of assembly lubricant. Do the same with the conical interface of the back plug as shown.



- a. Place a string into the rear entry of the connector as shown.
- b. Insert the back plug and screw it into place using a spanner (19 mm) at a torque of **30 Nm**.

Remove the string prior to the last two turns.

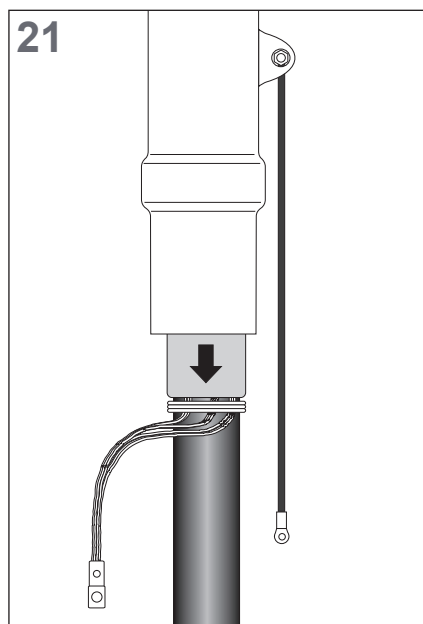
- a. Flip-back the endcap as shown in **detail a**. Position the protruding ring onto test point.
- b. Flip the endcap into final position with your finger as shown in **detail b**.



Ensure that the grounding lead is fastened tightly.

Fix the shielding wires with a wire binder (four layers) at the end of the stress cone. Gather the wires together to form an earth lead. Install at the end of the shielding wires the connection lugs supplied in the kit.

Perform connection to ground.



Screened separable connector completed.

