

CAUTION : Read instructions thoroughly and completely prior to beginning installation.

## Installation instructions for separable coupling connector

EUROMOLD®



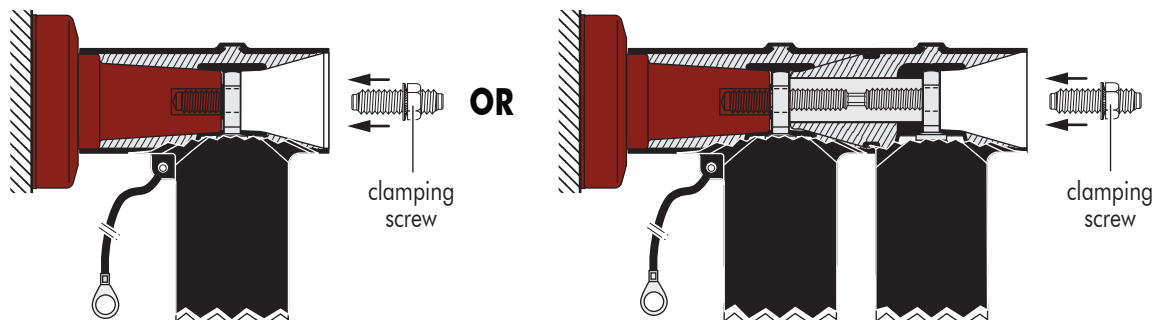
# (K),(M),(P)800PB/G

Up to 20.8/36 (42) kV

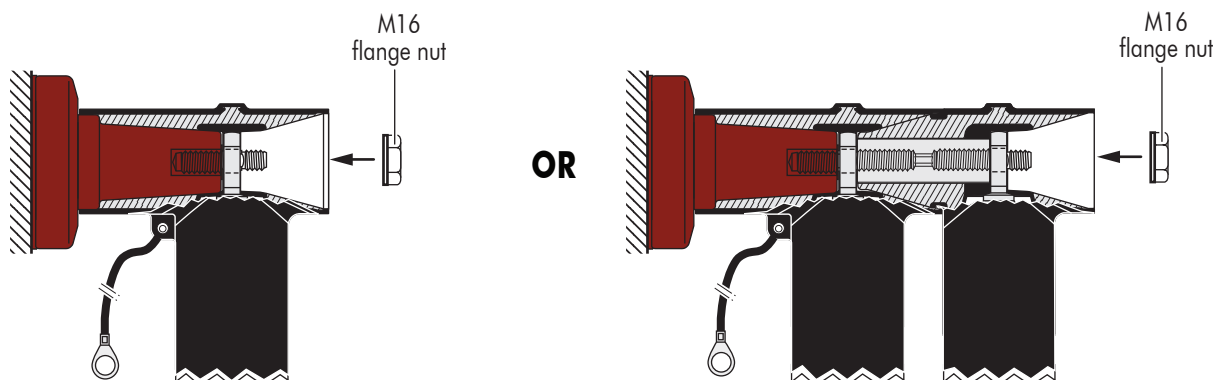
**WARNING :**  
**NEW TYPE STRESS CONE**

Only to be used on copper wire screened cable with extruded semi-conductive screen and conductors of copper or aluminium.

For installation on a 480TB, 484TB or 489TB tee connector or a 800PB, 804PB or 809PB coupling connector tightened with a clamping screw **(type 1)**



OR tightened with a stud and flange nut or tightened with a stud, washer and nut **(type 2)**



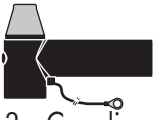
**Nexans**

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices. These instructions do not attempt to provide for every possible contingency. Failure to follow these instructions could result in damage to the product and serious or fatal injury. **IMPORTANT :** Cable and associated apparatus must be de-energised, locked out, and tagged prior to product installation.


Check if the diameter over cable core insulation is in accordance with the cable reducer range as indicated in table below:

Cable reducer size (see label on cable reducer)	Dia. over core insulation (mm)	
	min	max
CA0-15	16.0	26.5

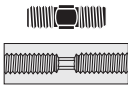
Required components for the connector installation :




3 x Coupling connector housing 800BP




3 x Cable reducer CA0-W




3 x Contact rod and stud




3 x Conductor contact TMBC-X




Water sealing mastic, type MWS (optional)




1 x Installation rod  
(for conductor sizes 185 up to 300 mm²)




Roll adhesive tape




Silicone grease + wipers



Gloves



Nylon vent rod



Installation instructions

Risk assessment :

Hazard	Cause	Precaution
Cut fingers or hands	Sharp ends of Cu wire screens. Sharp edges of knives, or blades of cable preparation tools.	Tape ends of Cu wire screens down to the sheath. Use gloves. Take extra care handling sharp items.
Back, arm or wrist strain	Installation of cable adapter.	Ensure you position yourself comfortably over/around the cable adapter when installing to ensure no unnecessary strain.

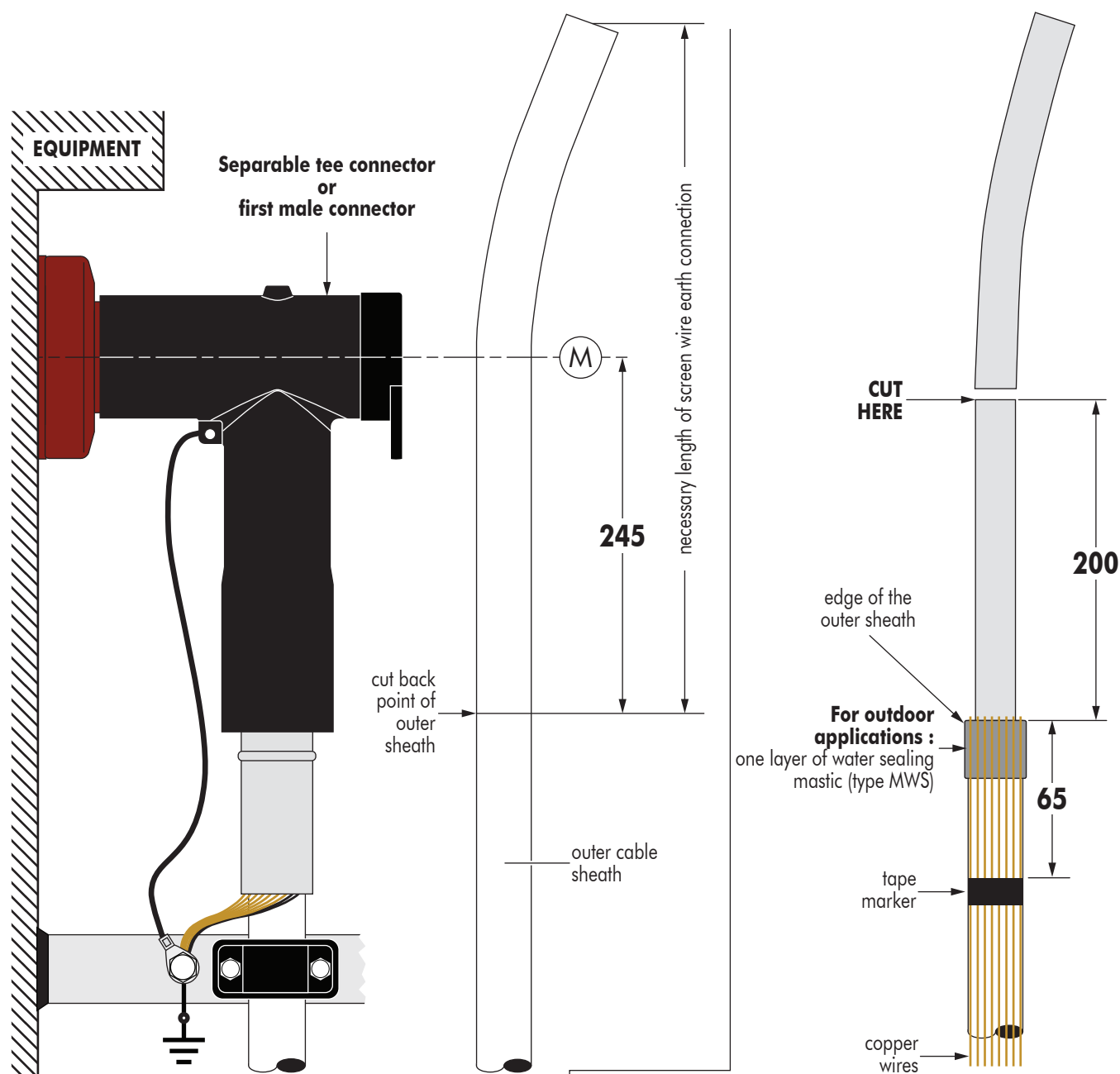
Before Starting

- Ensure the components in the kit are correct for the cable. The cable adapter and cable lug have the ranges on the label.
- Cross check the label on the box with the title of the instruction.
- Some procedures may have changed since you last installed the product. Ensure you read the instruction thoroughly.

**Sheath test all cables prior to all jointing work. Megger all cables (5 kV).**

<b>Route km</b>	<b>Screen to earth Minimum values</b>		<b>Core to earth Minimum values</b>	
<b>km</b>	<b>Giga Ohms</b>	<b>Micra Amps</b>	<b>Giga Ohms</b>	<b>Micra Amps</b>
0.25	1	5	4	1.25
0.5	1	5	3	1.66
	<b>Mega Ohms</b>		<b>Mega Ohms</b>	
0.5-1	500	10.0	2000	2.5
2	500	10.0	2000	2.5
3	340	14.7	1332	3.75
4	260	19.2	1000	5.0
5	200	25.0	800	6.25
6	166	30.7	666	7.5
7	142	35.2	572	8.7
8	124	40.3	500	10.0
9	110	45.4	444	11.2
10	100	50.0	400	12.5
11	90	55.5	364	13.7
12	82	60.9	334	14.9
13	76	65.7	308	16.2
14	72	69.4	286	17.4
15	66	75.7	266	18.7
16	62	80.6	250	20.0
17	58	86.2	236	21.1
18	54	92.5	222	22.5
19	52	96.1	210	23.8

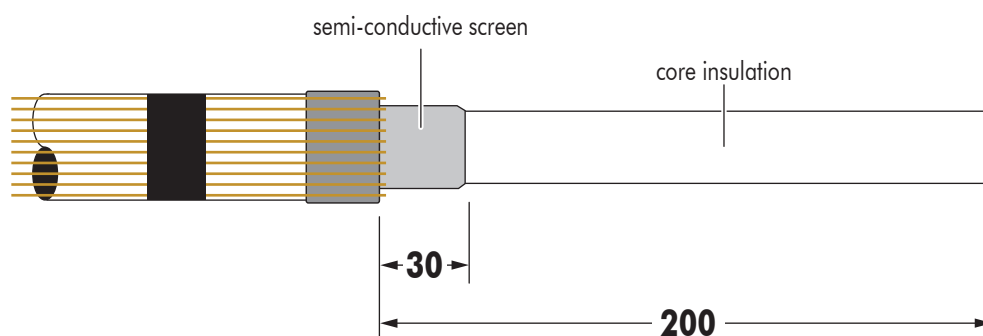
**NB : Only one phase is shown in these instructions. Make off all three phases the same way. Use a cable conversion kit for 3-core cables.**



- 1** Train the cable into the approximate finished position next to the equipment bushing. Be sure to allow enough extra length of screen wires to connect to earth.
- 2** Mark centre line « M » of the bushing.
- 3** Remove the outer cable sheath to a point **245** mm from the centre line « M » of the bushing.

- 4** For indoor applications, bend the screen wires back over the outer sheath and proceed to step no. 5.  
**For outdoor applications:**
  - Wrap one layer of water sealing mastic (type MWS) around the outer sheath, flush with the end (**25** mm minimum width). Completely encircle the cable.
  - Bend the screen wires back over the mastic and along the outer sheath, pressing them into the mastic.
  - **Important:** screen wires should not touch each other when pressed into the mastic to prevent water ingress.
- 5** Apply a tape marker around the outer sheath **65** mm from the edge.
- 6** Cut the cable to a point **200** mm from the outer sheath.

## CABLE PREPARATION



- 1 Check distance of **200** mm.
- 2 Remove the semi-conductive screen to a point **30** mm from the outer sheath.

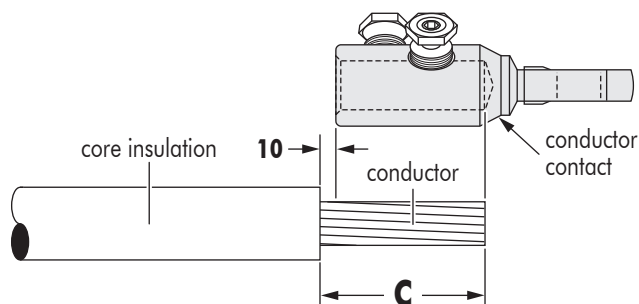
### **For extruded easy strip semi-conductive screen:**

Cut squarely taking care not to cut the core insulation.

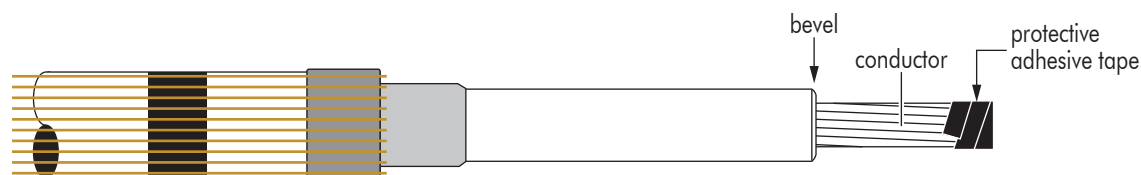
### **For bonded extruded semi-conductive screen:**

Use an appropriate pencilling tool. Make a clean transition between core insulation and semi-conductive screen.

## REMOVAL OF THE CORE INSULATION

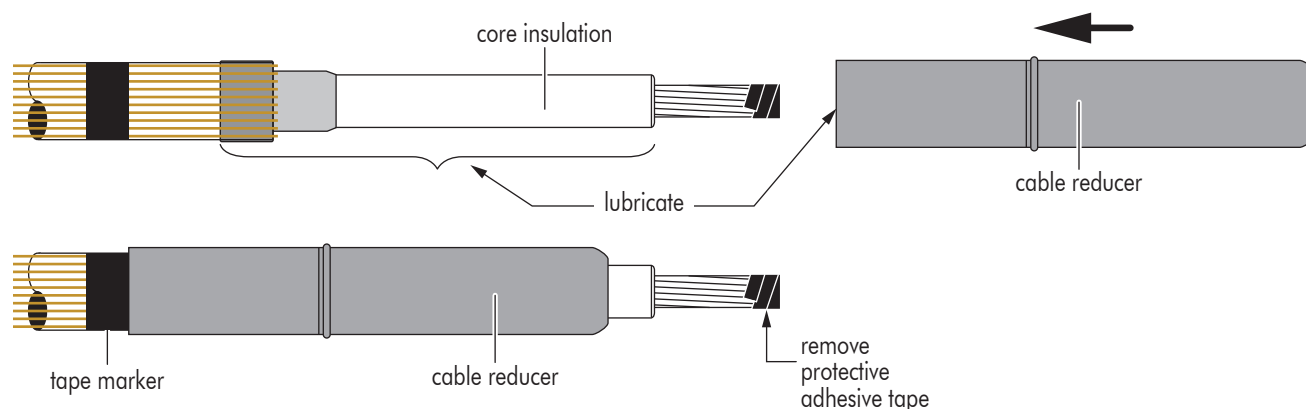


- 1 Remove the core insulation from the conductor for a distance « **C** » mm (**C** = depth of contact bore + **10** mm).



- 2 Slightly bevel the edge of the core insulation (max 2 mm).
- 3 **Thoroughly clean core insulation.** Always wipe towards the screen wires.
- 4 As a protection, wrap a few turns of adhesive tape around the conductor end.

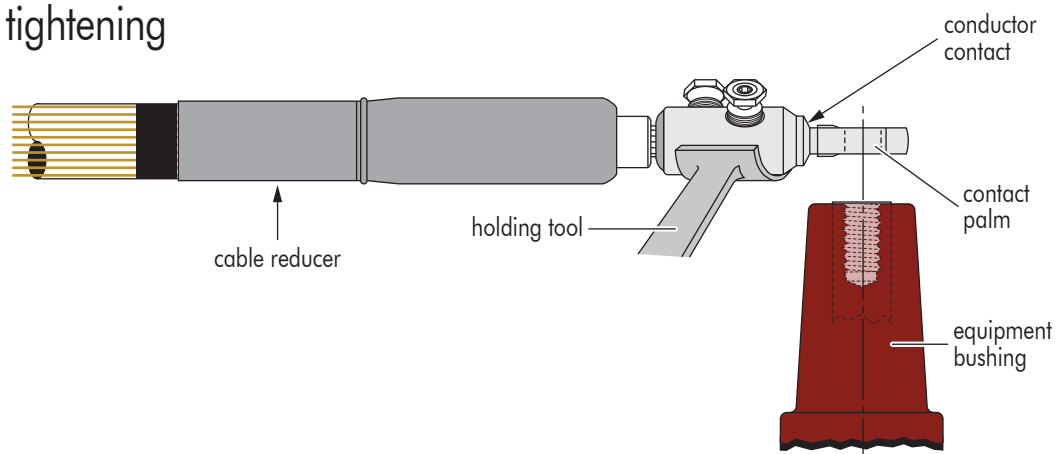
## INSTALLATION OF THE CABLE REDUCER



- 1 Lubricate\* the indicated area: core insulation, semi-conductive screen, water sealing mastic and inner surface of the reducer.
- 2 Slide the reducer down the cable until flush with the tape marker.
- 3 Remove the protective adhesive tape from the conductor.

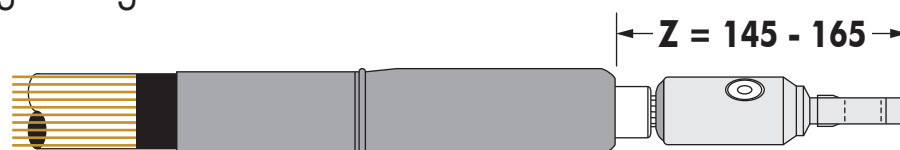
## TIGHTENING OF THE CONTACT

### Before tightening



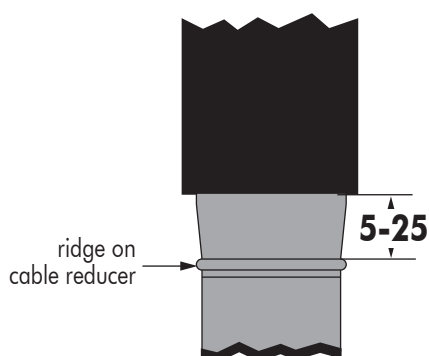
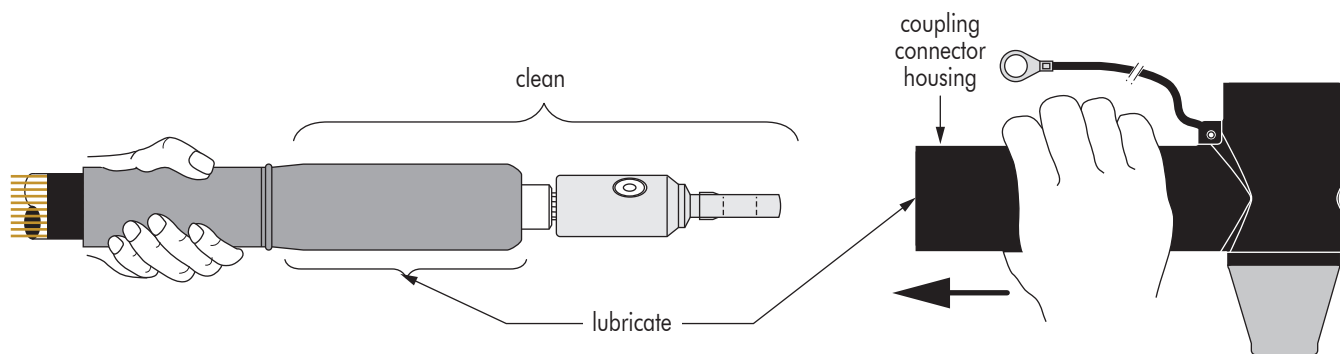
- 1 For aluminium conductors : before installing the conductor contact, wire brush the conductor.
- 2 Insert, if necessary, the centre ring into the contact barrel according to the table in the contact installation instruction.
- 3 Position the contact so that the contact hole aligns with the bushing hole.
- 4 Tighten the contact. Please refer to the installation instruction included with the contact.  
It is recommended to use a holding tool for ease of installation.

### After tightening



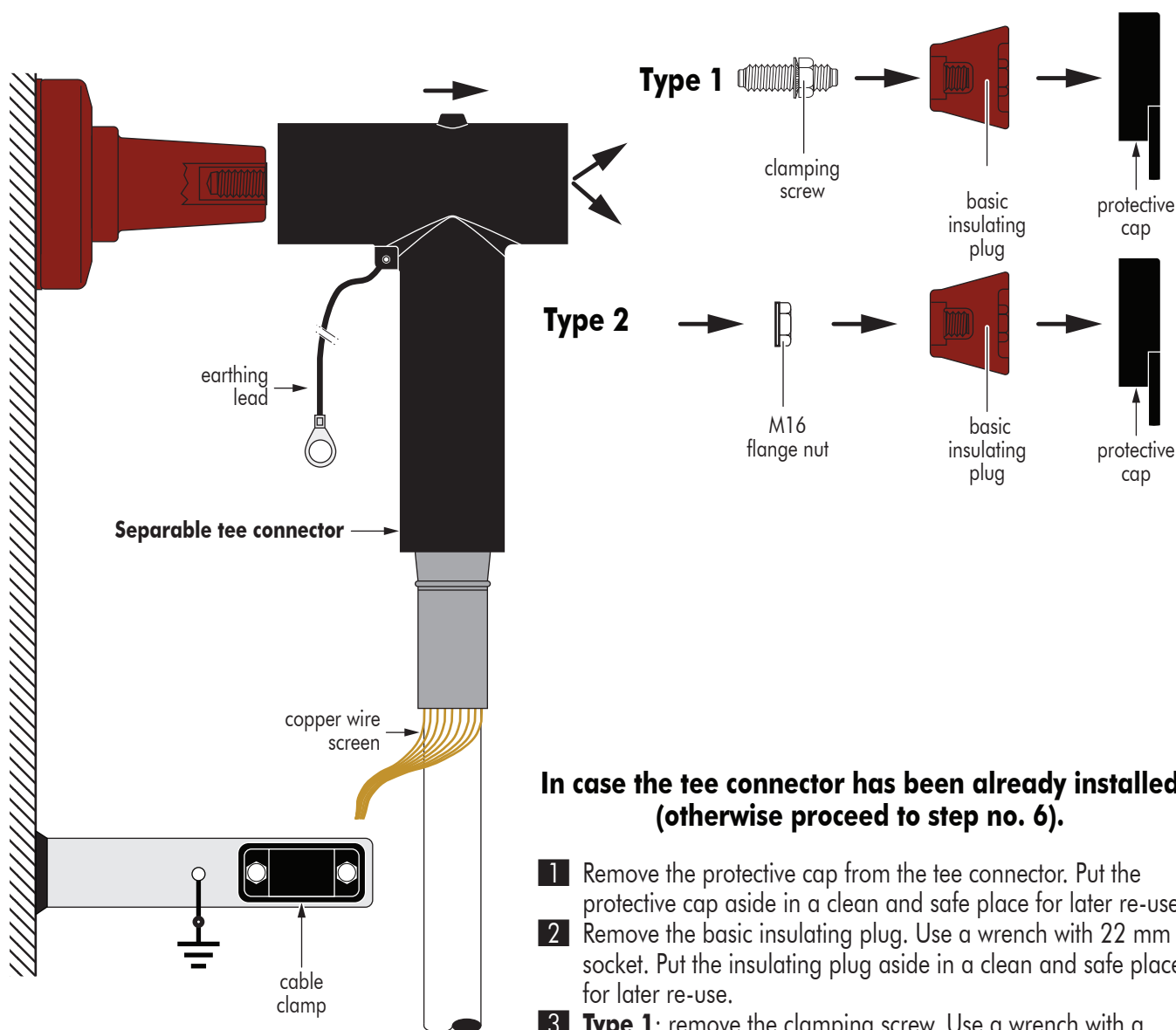
- 5 After tightening, distance « **Z** » must be between **145** and **165** mm.  
If necessary, adjust the position of the cable reducer until distance « **Z** » is within the tolerance range.

## COUPLING CONNECTOR INSTALLATION ON CABLE



- 1 Clean cable reducer, core insulation and contact.**
- 2** Lubricate\* the inside of the connector housing and outer surface of the cable reducer.
- 3** Check if the **outer cone interface is pointed towards the bushing**. Whilst preventing the cable reducer from further movement down the cable gently slide the housing on the cable. Its final position is reached when the centre of the contact spade is along the axis of the interfaces of the connector.
- 4 The cable reducer must stay in place during installation.**
- 5** Make sure the contact spade locks into the connector's housing.
- 6** Check that the ridge on the cable adapter is sitting at **5-25** mm below the connector housing.

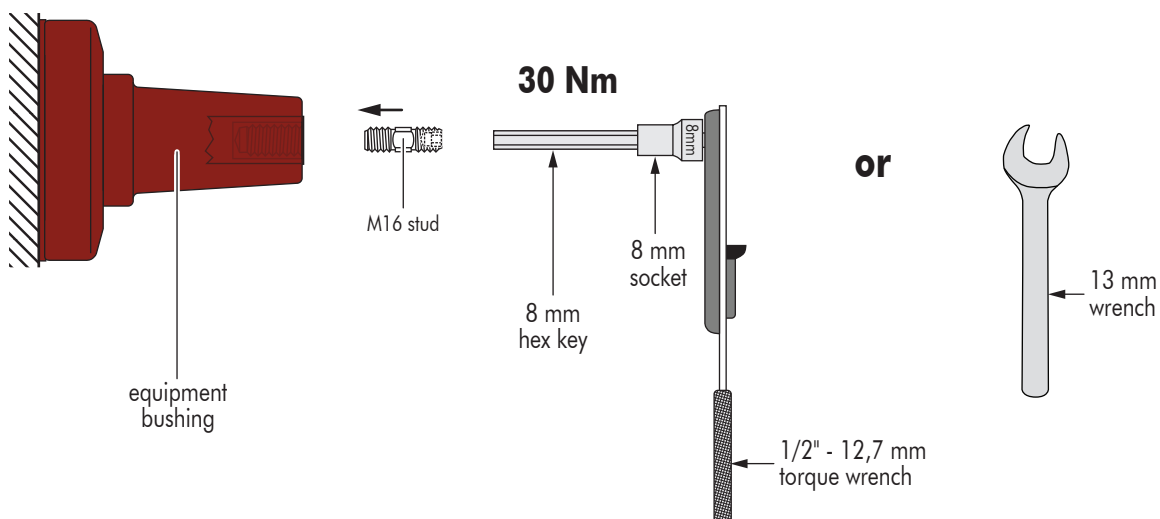
## COUPLING CONNECTOR INSTALLATION ON TEE CONNECTOR



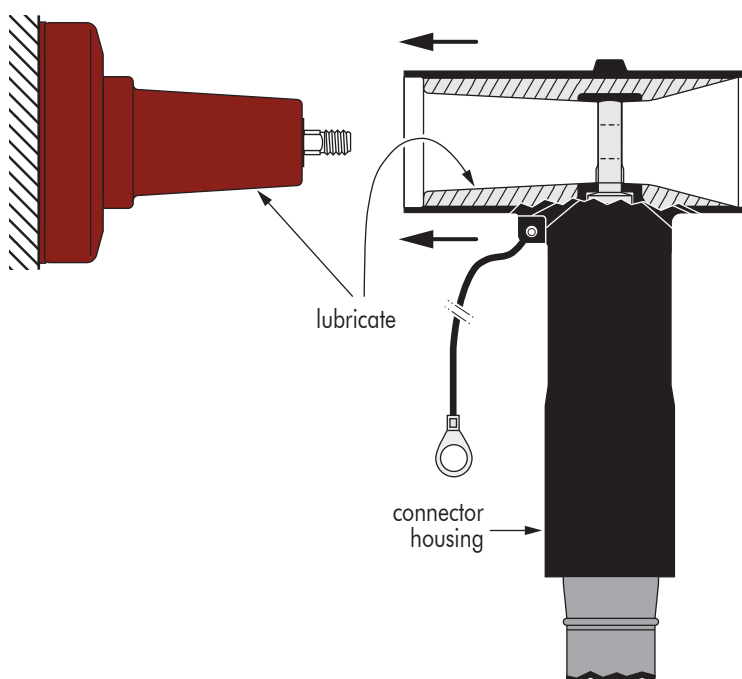
**In case the tee connector has been already installed (otherwise proceed to step no. 6).**

- 1** Remove the protective cap from the tee connector. Put the protective cap aside in a clean and safe place for later re-use.
- 2** Remove the basic insulating plug. Use a wrench with 22 mm socket. Put the insulating plug aside in a clean and safe place for later re-use.
- 3** **Type 1:** remove the clamping screw. Use a wrench with a 22 mm socket and an extension. Put the clamping screw aside in a clean and safe place for later re-use.  
**Type 2:** remove the flange nut. Use a wrench with a 22 mm socket and an extension. Put the flange nut **or** washer and nut aside in a clean and safe place for later re-use. Check that M16 stud is still mounted correctly. Re-tighten to 30 Nm if required. **Proceed with step 10 on page 10.**
- 4** Disconnect the earthing lead, copper wire screen and cable clamps.
- 5** Disconnect the tee connector from the bushing. The bushing should be free.



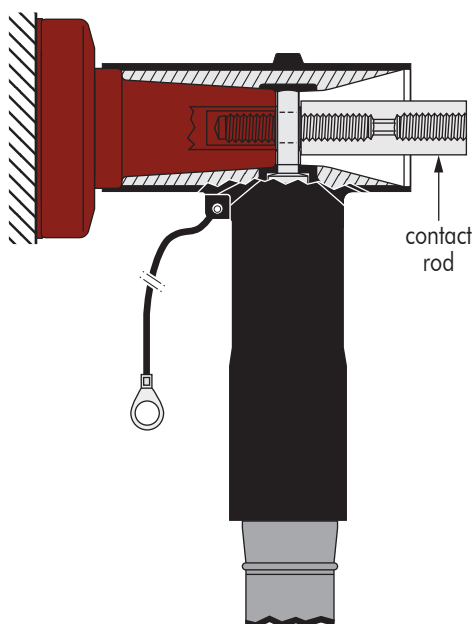
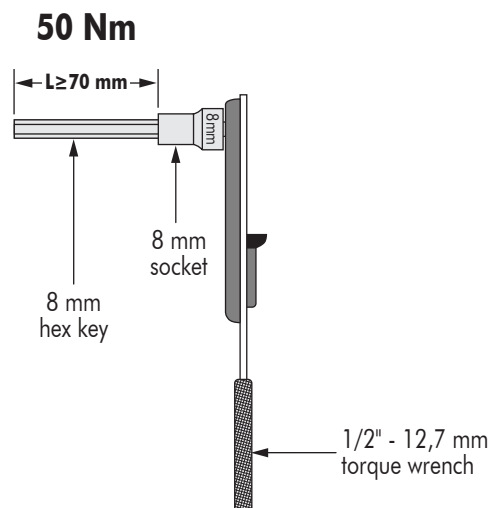
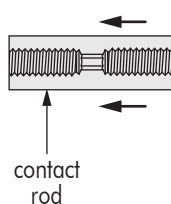
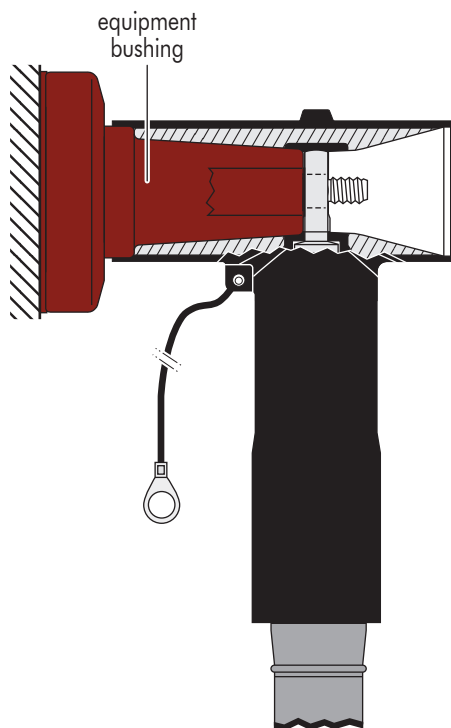


- 6** Install M16 threaded stud into the bushing interface.
- 7** Using a 13 mm wrench or a hex key of 8 mm, tighten the stud exerting **30 Nm** (3 kgm or 22,1 foot-pounds).



- 8** Clean and lightly lubricate\* both connector and bushing interface.
- 9** Push the tee connector on to the bushing.

\* USE ONLY THE SILICONE LUBRICANT SUPPLIED



**10** Insert the contact rod on to the threaded stud.

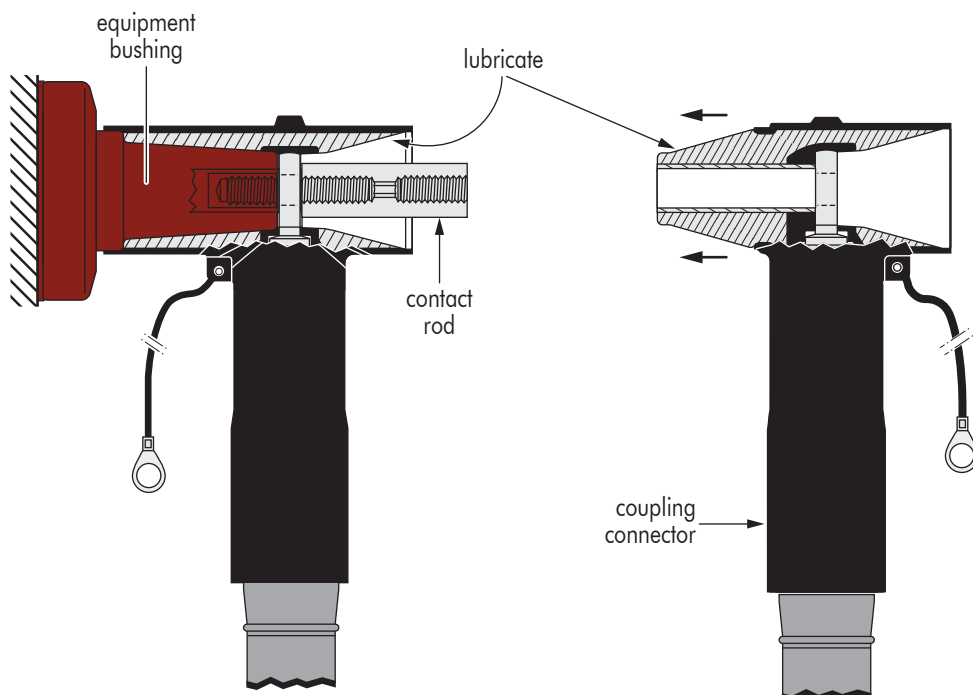
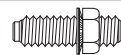
**11** Use a torque wrench with a 8 mm socket and an hex key of 8 mm and tighten exerting **50 Nm** (5 kgm or 36,9 foot-pounds) of torque.

**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

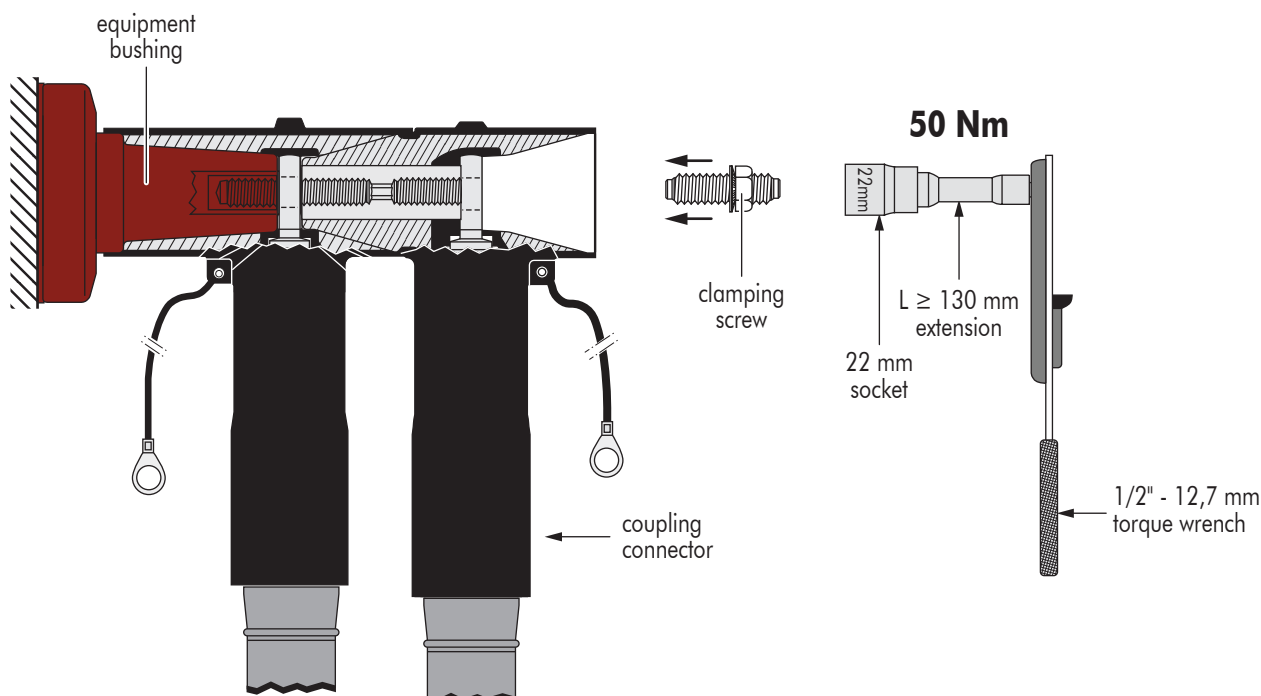
**For type 1 systems, using a clamping screw**  **: proceed with step no 12 on page 11.**

**For type 2 systems, using a flange nut OR spring washer and nut**  **: proceed with step no 16 on page 12.**

## Type 1: clamping screw



- 12 Clean and lubricate\* both female tee connector interface and male interface of the coupling connector.
- 13 Push the coupling connector on to the contact rod of the tee connector. Take care not to damage the contact rod during installation of the coupling connector.



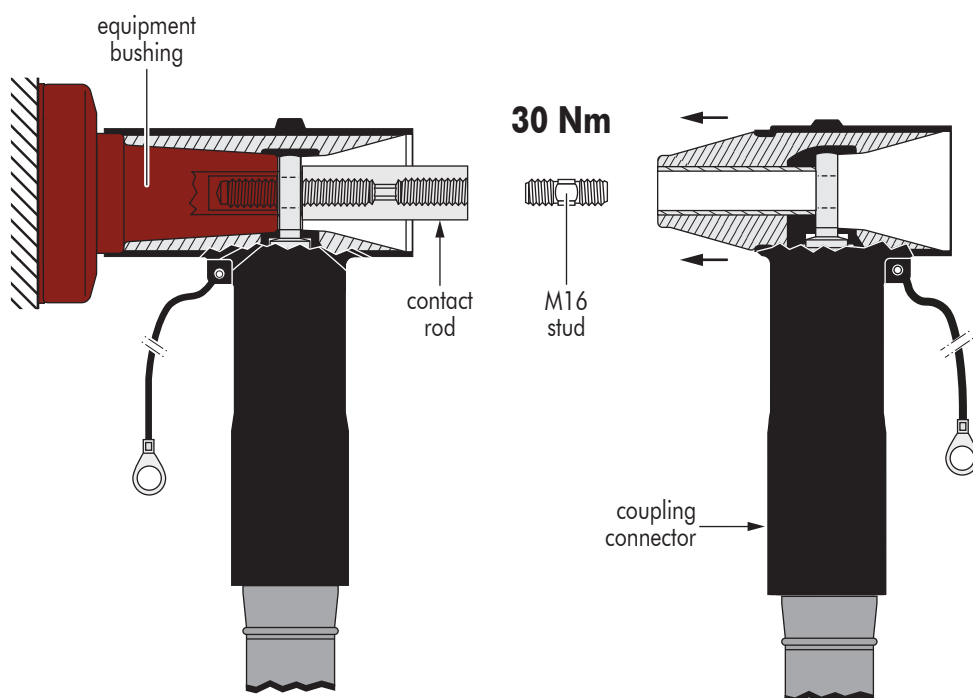
- 14 Insert the clamping screw into the threaded hole of the contact rod **by hand**.
- 15 Use torque wrench with extension and a 22 mm socket and tighten exerting **50 Nm** (5 kgm or 36,9 foot-pounds) of torque.

**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

**Proceed with installing the basic insulation plug on page 13.**

**\* USE ONLY THE SILICONE LUBRICANT SUPPLIED**

## Type 2: flange nut



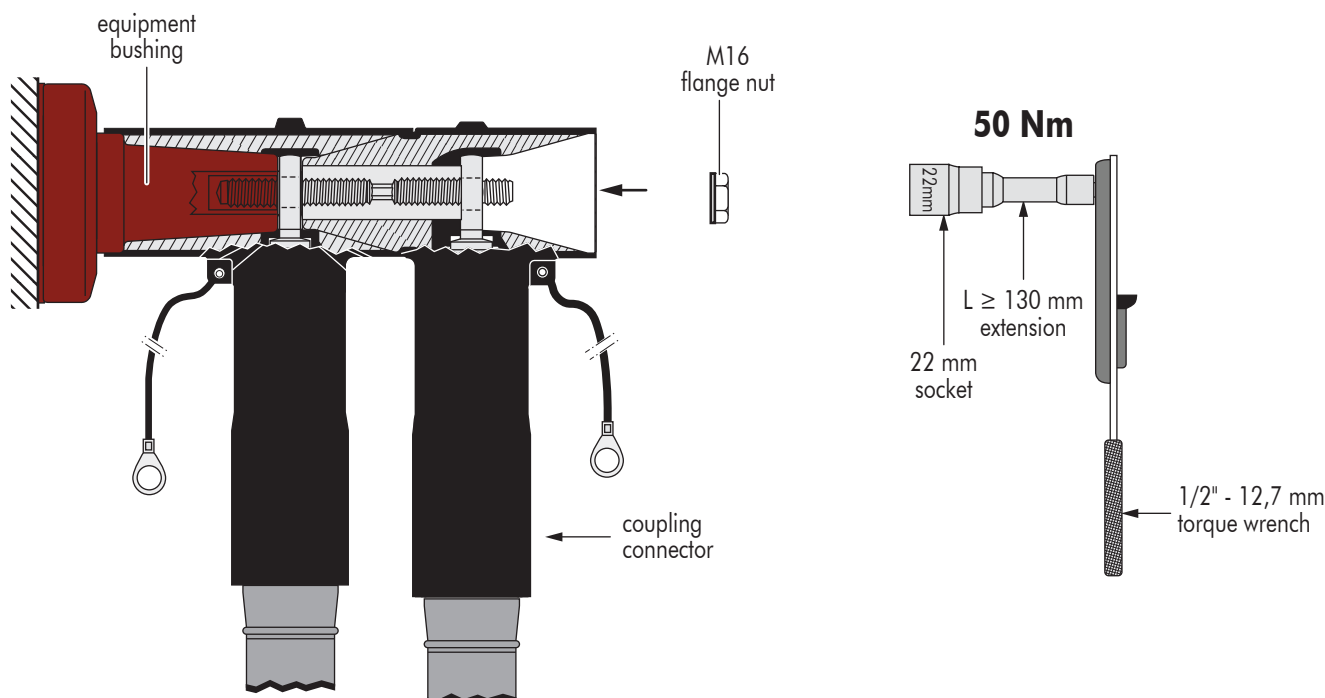
16 Install the M16 threaded stud into the contact rod.

17 Using a 13 mm wrench or a hex key of 8 mm, tighten the stud exerting **30 Nm** (3 kgm or 22,1 foot-pounds).

**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

18 Clean and lubricate\* both female tee connector interface and male interface of the coupling connector.

19 Push the coupling connector on to the contact rod of the tee connector. Take care not to damage the contact rod during installation of the coupling connector.



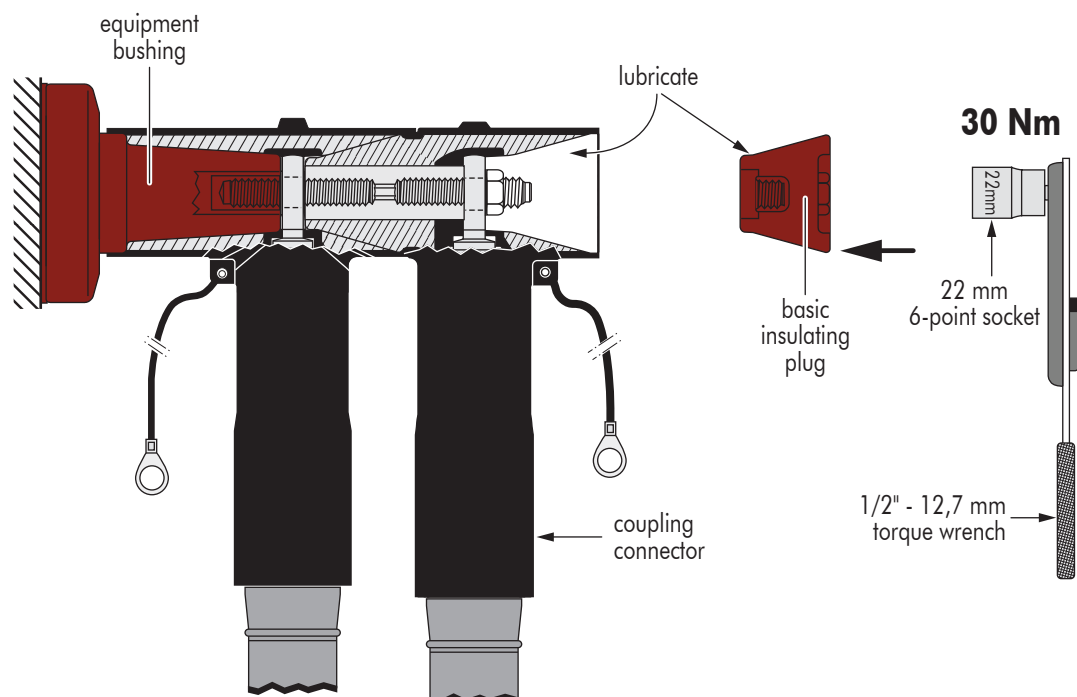
20 Install the flange nut onto the threaded stud.

21 Use torque wrench with extension and a 22 mm socket and tighten exerting **50 Nm** (5 kgm or 36,9 foot-pounds) of torque.

**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

\* USE ONLY THE SILICONE LUBRICANT SUPPLIED

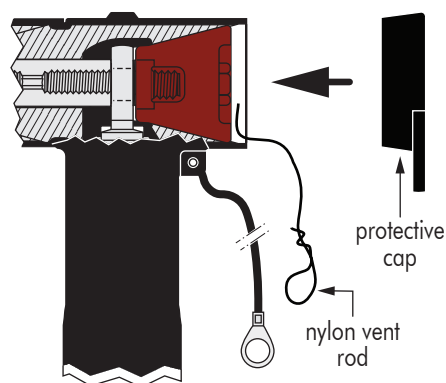
## INSTALLATION OF INSULATING PLUG



- 1 Clean and lubricate\* the insulating plug and the female interface of the coupling connector.
- 2 Insert the plug into the connector and tighten assembly: use a torque wrench with a 6-point socket of 22 mm and tighten exerting **30 Nm** (3 kgm or 22,1 foot-pounds) of torque.

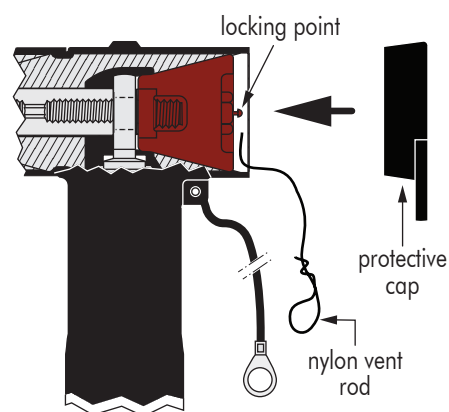
**In order to achieve the correct applied torque ensure that there is no lubricant on the threaded parts.**

## INSTALLATION OF THE CAP



### Installation on insulating plug BIPR without voltage detection point:

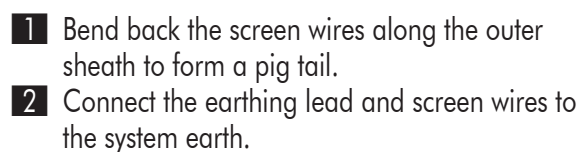
- Clean the inside of the cap and the outside surface of the connector and insulating plug.
- Place the nylon vent rod along the insulating plug (see fig.) to exhaust the air during assembly of the cap.
- Push the cap **firmly** over the connector and onto the insulating plug.
- Press the cap on all sides to make sure it is well positioned over the connector. Position the cap with the pulling tab pointing downwards.
- Remove the nylon vent rod.



### Installation on insulating plug BIPA with voltage detection point:

- Clean the inside of the cap and the outside surface of the connector and insulating plug.
- Place the nylon vent rod along the insulating plug (see fig.) to exhaust the air during assembly of the cap.
- Push the cap **firmly** over the connector and onto the insulating plug.
- **Press the centre of the cap onto the locking point until it snaps into place.** Press the cap on all sides to make sure it is well positioned over the connector. Position the cap with the pulling tab pointing downwards.
- Remove the nylon vent rod.

\* USE ONLY THE SILICONE LUBRICANT SUPPLIED



**A connector/bushing mated combination should not be allowed to carry the full weight of the cable. Therefore clamp the cable as close as possible to the connector.**

- **Never disconnect connectors from energised equipment nor energise disconnected connectors without previously installing on their appropriate corresponding mating part.**
- **Do not allow hydrocarbon oils or solvents to contaminate the E.P.D.M. rubber.**  
**In the event of contamination, wipe the surface clean with a dry cloth.**