



# Shrink Polymer Systems

**Cable Installation Materials – 24 volts to 36 kV**



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**DERRICK**  
INTERNATIONAL

Thorne & Derrick  
+44 (0) 191 410 4292  
[www.powerandcables.com](http://www.powerandcables.com)

## INSTALLATION INSTRUCTION ZERO HALOGEN LIMITED FIRE HAZZARD HEATSHRINK JOINT TO SUIT 3-4 CORE XLPE OR EPR ARMoured/SCREENED CABLES 0.6/1kV TYPE SPA NH AND SPA NHF

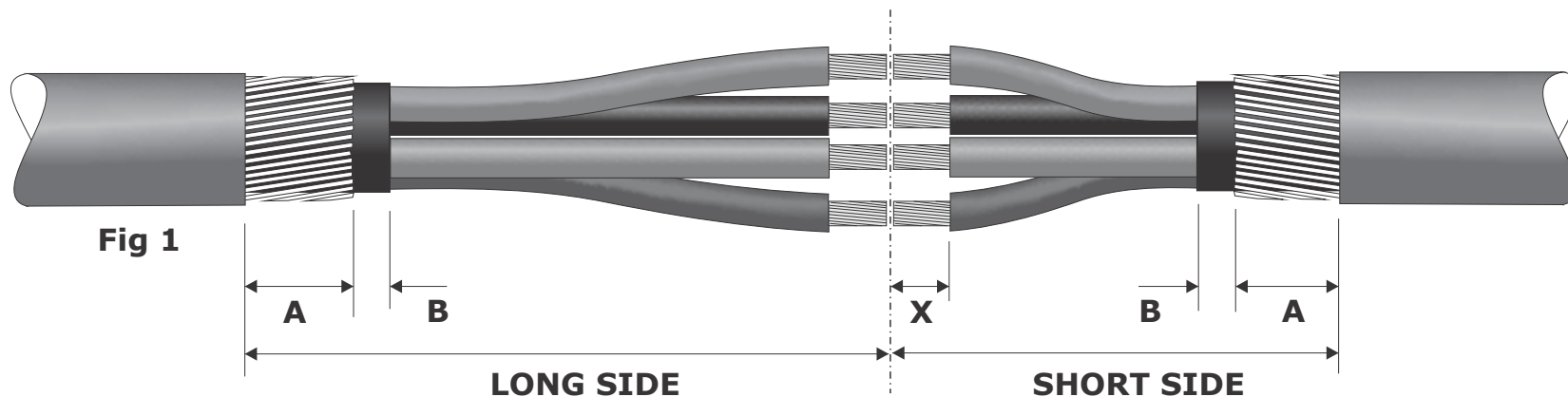


Use free software on your smart phone to scan the QR code below to watch an installation video

- THESE INSTRUCTIONS SHOULD BE FOLLOWED BY A TRAINED COMPETENT JOINTER
- A PROPANE GAS TORCH IS THE PREFERRED METHOD FOR SHRINKING THESE MATERIALS
- ENSURE THAT THE MATERIALS ARE KEPT CLEAN AND DRY AND ARE FREE FROM DUST, SAND AND GREASE
- PLEASE CALL SHRINK POLYMER SYSTEMS FOR ANY ADVICE



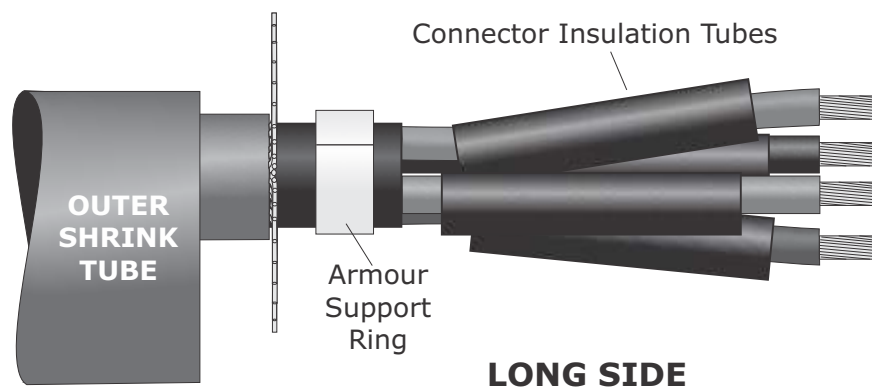
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1. Ensure that the cables overlap and prepare as above using the dimensions given in Table 1 below.
2. Slide the outer shrink tube, worm drive clamps and fire barrier tube (if supplied) over the cable end/s.

CONDUCTOR SIZE (mm <sup>2</sup> )	LONG SIDE (mm)	SHORT SIDE (mm)	BEDDING B (mm)	ARMOUR A (mm)	X
1.5-6	120	80	10	30	HALF CONNECTOR LENGTH
10-16	150	120	20	35	
25-50	215	135	20	45	
70-95	280	180	20	50	
120-185	400	300	20	60	
185-400	530	390	30	70	

**Table 1**



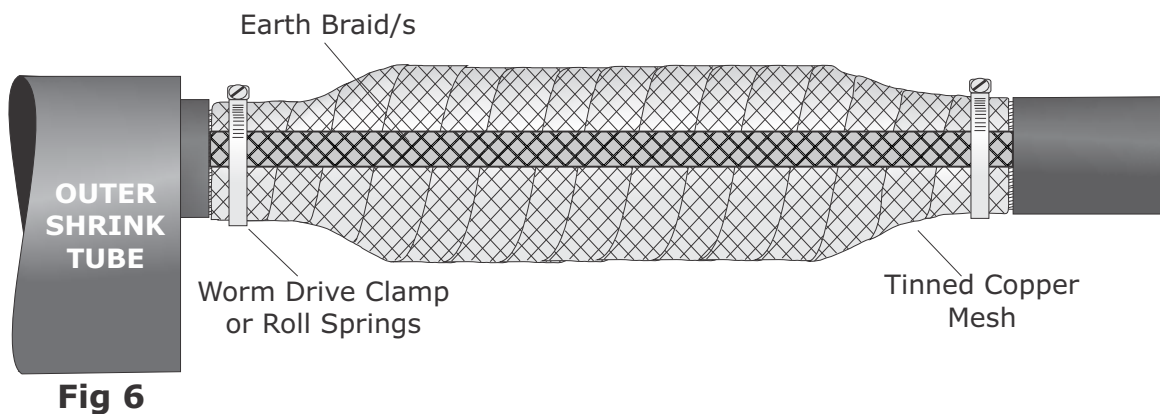
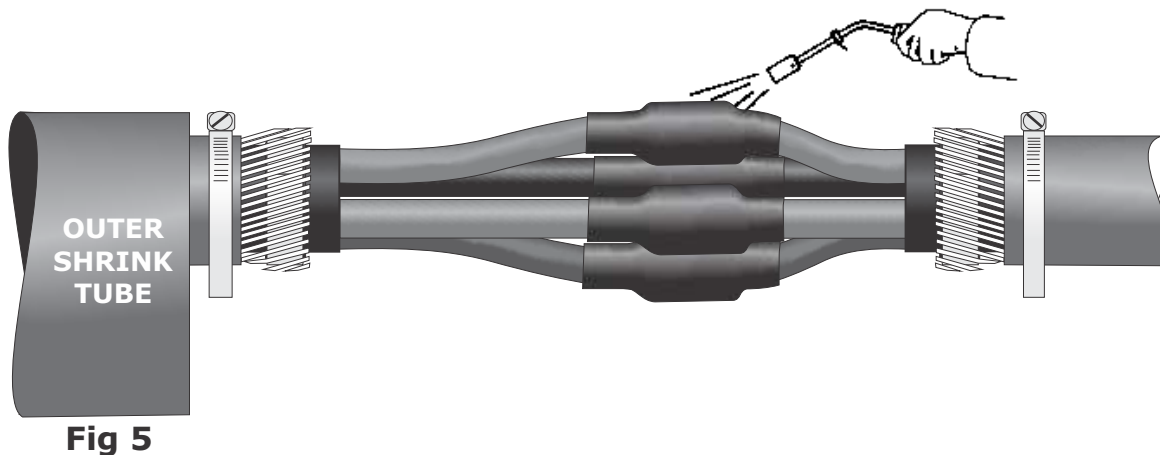
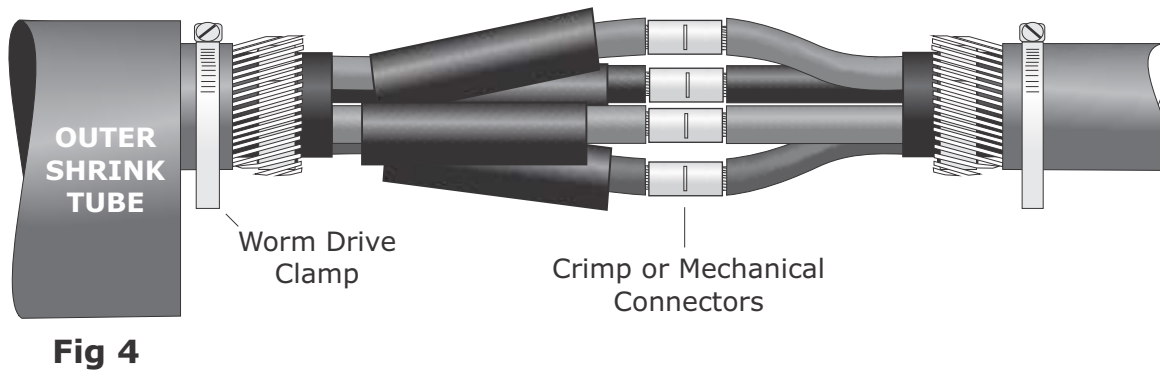
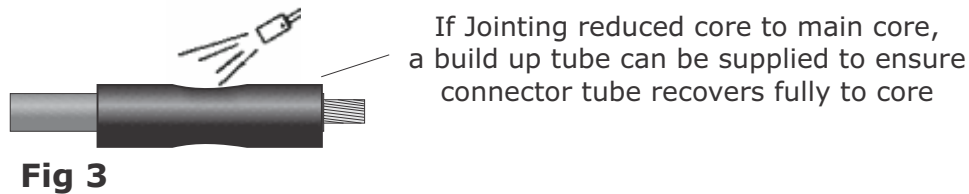
**Fig 2**

3. Bend back the armour wires and fit the armour support ring towards the end of the bedding. Fold back the armour wires upon it. No need to fit this if steel tape armoured or on cable sizes up to 16mm<sup>2</sup>. If braid screened cables, trim to same dimension "A".

Position the connector insulation tubes down the longer cores.

**Note:** For the very largest joint it is advisable to stagger the connectors across the joint gap to achieve a lower joint profile. Be careful not to exceed the total of the long and short dimensions shown, otherwise the outer tube maybe too short.

It also recommended to stagger the connections when mechanical connectors are used.



4. Before proceeding, ensure the outer shrink tube is over the outer sheath and the connector insulation tubes are positioned down the longer of the prepared Cores as shown in Fig 4 (or staggered if user wishes).

5. Using an approved method, connect the individual cores and clean and de-grease the Connectors.

**Notes:** If using mechanical connectors, use low profile medium voltage type which will help keep the overall joint diameter down. Split type connectors are also available. Please advise if mechanical type used as tubes may need to be increased in size.

If jointing 3 and 1/2 core cables, a smaller connector insulation tube may be supplied or if jointing reduced core to main core, a build up tube may be needed to increase core diameter as shown in Fig 3 above.

6. Centralise the individual connector insulation tubes over the connectors. Using a suitable heat source, start shrinking from the centre working to one end at a time. Keep the flame on the move all around the tube to ensure even shrinkage and adhesive flow.

**Note:** Due to the zero halogen tubes being a softer compound than normal tubes, allow them to cool before pulling the cores together to avoid damage.

7. Wrap the tinned copper mesh tightly around the joint with 50% overlap and extend onto the armours or braid screen at both ends. Lay the earth braid/s across the joint and use the worm drive clamps (or roll springs) to make a firm connection to the armour supporting ring as shown in Fig 6.

Trim any excess braid and apply a small amount of tape over any sharp areas.

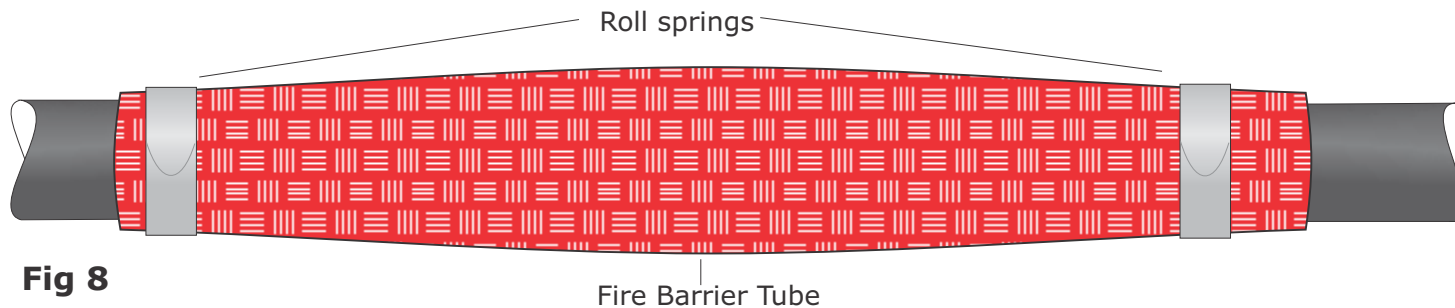


**Fig 7**

8. Clean, de-grease and abrade outer cable sheath before centralising the outer shrink tube over the joint gap. Using a suitable heat source, shrink from the centre to one end at a time. Keep the flame on the move all around the tube to ensure an even wall thickness.

Once fully recovered, sealant should be visible at each end.

9. Allow the completed joint to cool before applying any mechanical strain.



**Fig 8**

10. If Joint type SPA NHF is supplied, this incorporates a fire barrier tube. Joint type SPA NH is supplied without it. Position the red silicone coated fire barrier tube across the joint gap so that it overlaps equally distant at both sides. Secure at each side with a stainless steel roll spring as shown in Fig 8.



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