AUSPROOF

11kV 800 AMP 4 Bolt KA Style Coupler

114BKA - Range

Pioneering the Difference.

The AusProof high voltage coupler and adaptor system demonstrates state of the art technology with an innovative design which becomes homogeneous with the cable when terminated. The design offers a continued earth shield, segregating the three phases and maintains the same
Symmetrical radial distribution of voltage stress, as in the cable design. This eliminates the risk of a phase to phase fault.

The face profile and silicon rubber connector expels all air when connected, eliminating condensation, dust and corona. The type tests performed were all based on high voltage, cable specification requirements, and the results prove;
that the coupler is as good as the cable.

Electrical Type Test Results

11kV 800A Coupler

Through Fault Current
20kA for 0.3 seconds
20kA for 0.3 seconds
20kA for 1.0 seconds
At 10 minute intervals

Impulse Voltage
95 kV 10 pos and 10 neg
110kV 10 pos and 10 neg

A/C High Voltage Withstand
24kV for 1 minute
50kV for 1 minute
35kV for 6 hours

Partial Discharge
Prior to 6 hour
High voltage withstand 10pC
After 6 hour
High voltage withstand 0.6pC

22kV 425A Coupler

Through Fault Current
20kA for 0.3 seconds
20kA for 0.3 seconds
20kA for 1.0 seconds
at 10 minute intervals

Impulse Voltage
125 kV 10 pos and 10 neg

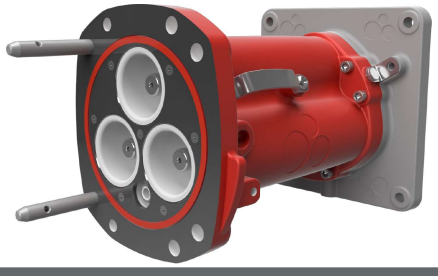
A/C High Voltage Withstand
50kV for 1 minute

High Voltage Cable Coupler System

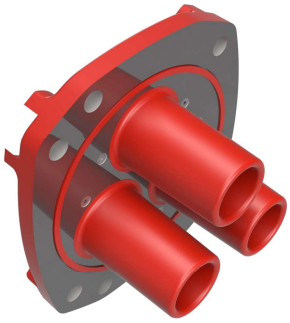
Technical Guide

Stock No: (see page 4 breakdown)
Description: Half Coupler for Trailing Cable
Rating: 11kV 800A
Material: Aluminium
LOA: 665mm
Mass: 16kg
Volume: 4 litres

Stock No: (see page 4 breakdown)
Description: Half Coupler for Armoured Cable
Rating: 11kV 800A
Material: Aluminium
LOA: 665mm
Mass: 16kg
Volume: 4 litres



Stock No: (see page 4 breakdown)
Description: KA Adaptor
Rating: 11kV Adaptor
Material: Aluminium
LOA: 480mm
Mass: 16kg
Volume: 4 litres



Stock No: RS2131
Description: Insulated End Cover
Rating: 11kV
Material: Aluminium
Mass: 5kg

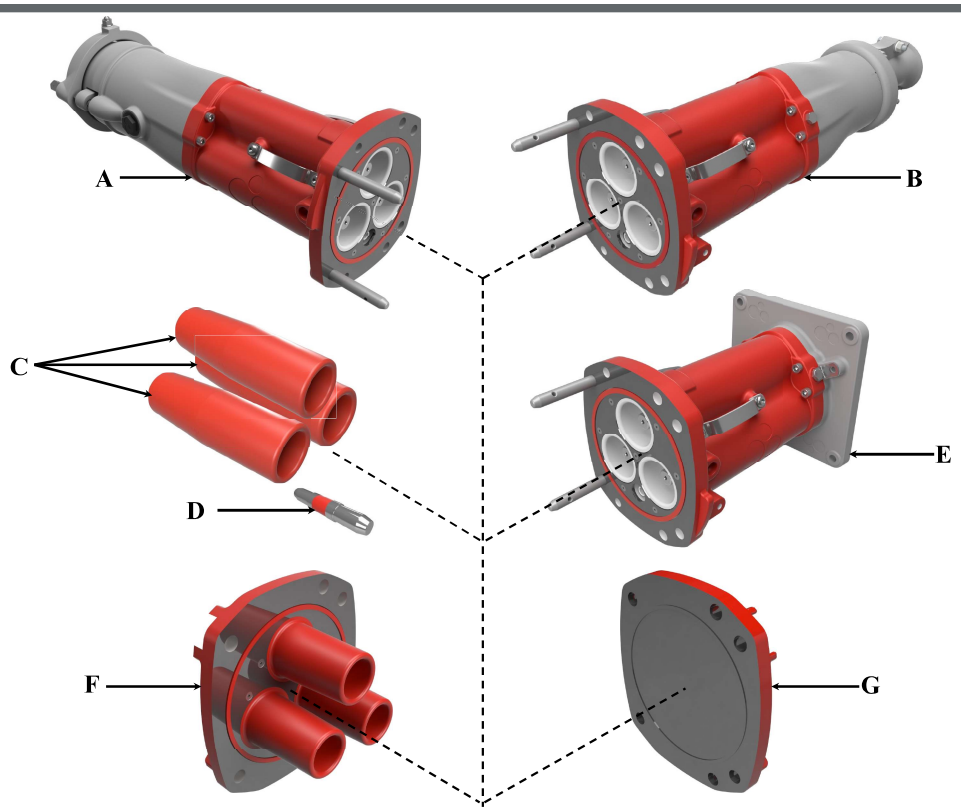
Stock No: RS112 (3 required per joint)
Description: Phase Connectors
Rating: 11kV 800A

Stock No: 2555
Description: Cast Protection Cover
Rating: 11kV
Material: Aluminium
Mass: 3kg

Stock No: RS113
Description: Earth Pilot Connector
Rating: 11kV 800A

High Voltage Cable Coupler System

Model No Selection Guide - 11kV 800A

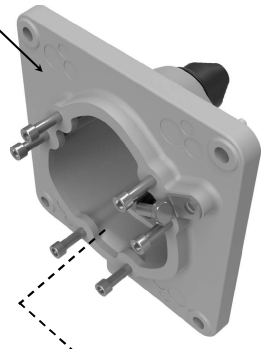


*Gland Reference Letter

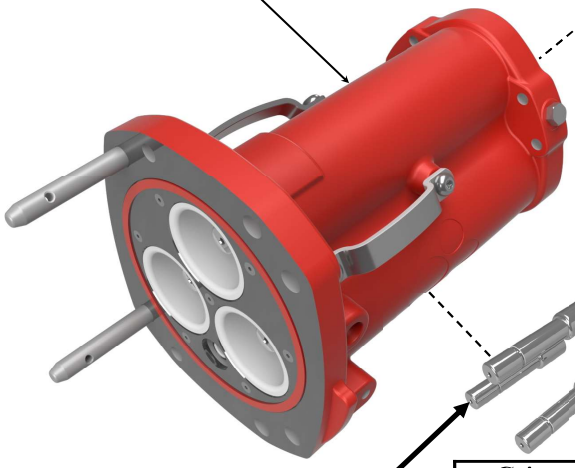
High Voltage Cable Coupler System

Stock Selection Guide - 11kV 800A

Gear Mount Flange
Stock No: RS1773



Coupler
Stock No: RS1357



KAN SWA Cable Gland			
Cable OD Under Armour	Stock No	Cable OD Under Armour	Stock No
105 – 110mm	RS1343	70 – 75mm	RS1350
100 - 105mm	RS1344	65 -70mm	RS1351
95 - 100mm	RS1345	60 - 65mm	RS1352
90 - 95mm	RS1346	55 - 60mm	RS1353
85 - 90mm	RS1347	50 - 55mm	RS1354
80 - 85mm	RS1348	45 - 50mm	RS1323
75 - 80mm	RS1349	40 - 45mm	RS1355

Soldered Contact (Set of 3)	
Conductor	Stock No
35mm sq	Stock No: RS067
50mm sq	Stock No: RS068
70mm sq	Stock No: RS069
95mm sq	Stock No: RS070
120mm sq	Stock No: RS071
150mm sq	Stock No: RS072
185mm sq	Stock No: RS073
240mm sq	Stock No: RS074
300mm sq	Stock No: RS075

Crimpable Contact (Set of 3)	
Conductor	Stock No
25mm sq	Stock No: RS866
35mm sq	Stock No: RS076
50mm sq	Stock No: RS077
70mm sq	Stock No: RS078
95mm sq	Stock No: RS079
120mm sq	Stock No: RS080
150mm sq	Stock No: RS081
185mm sq	Stock No: RS082
240mm sq	Stock No: RS083
300mm sq	Stock No: RS084

KA Trailing Cable Gland			
Cable OD	Stock No	Cable OD	Stock No
117mm	RS1867	80mm	RS1875
115mm	RS1868	75mm	RS1876
110mm	RS1869	70mm	RS1877
105mm	RS1870	65mm	RS1878
100mm	RS1871	60mm	RS1879
95mm	RS1872	55mm	RS1880
90mm	RS1873	50mm	RS1881
85mm	RS1874	45mm	RS1882

High Voltage Cable Coupler System

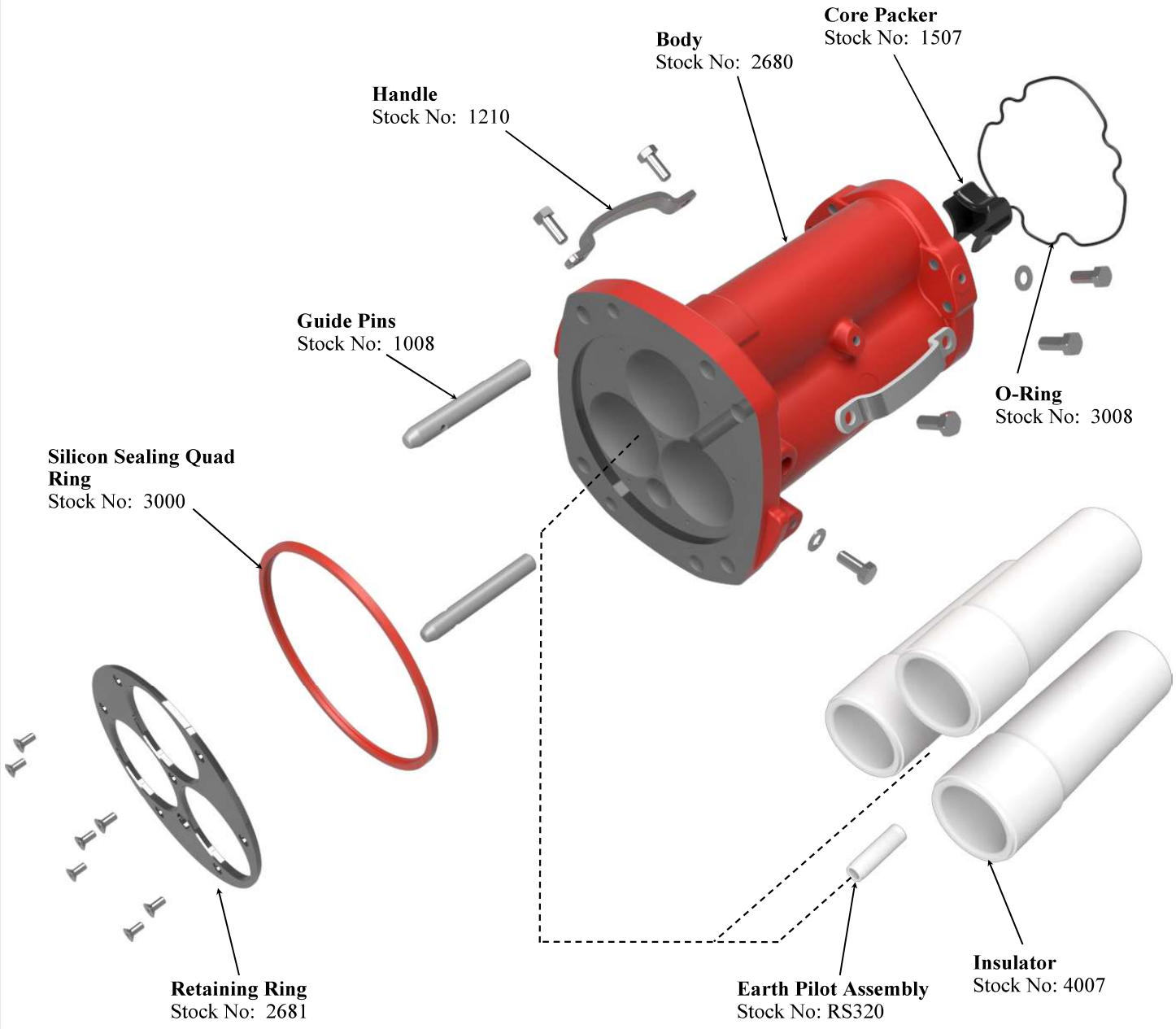
Body Assembly

Stock No: RS1357— 11kV KA 4 Bolt Body

Amps: 800 Volume: 4 Litres

Volts: 11000 LOA: 840mm

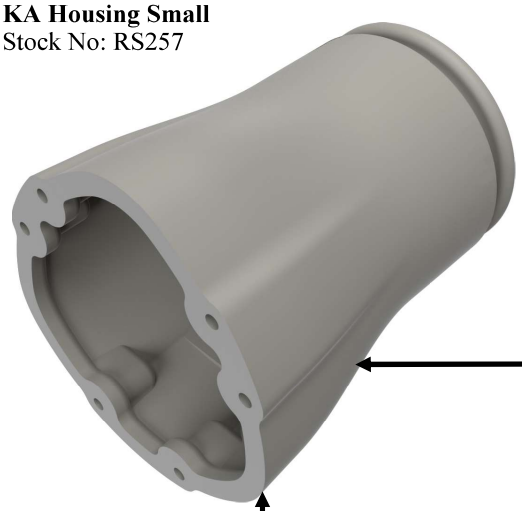
Material: Aluminum



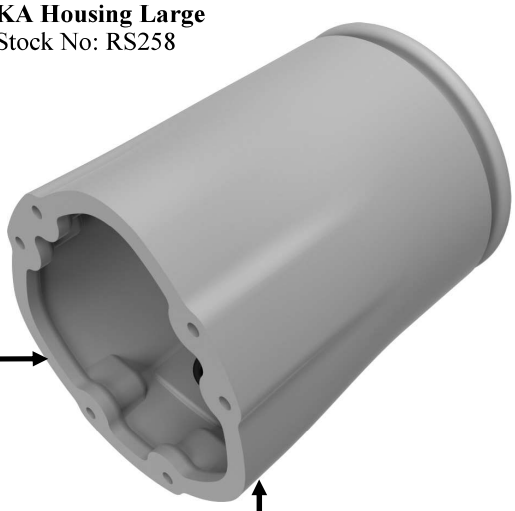
High Voltage Cable Coupler System

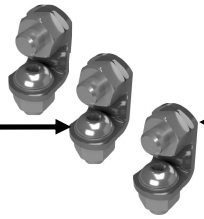
Unarmoured Gland Assembly

KA Housing Small
Stock No: RS257

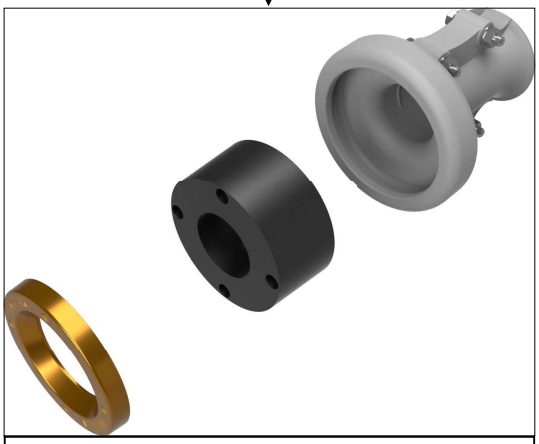


KA Housing Large
Stock No: RS258

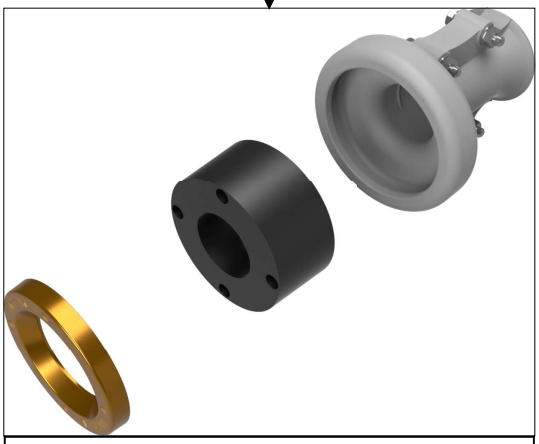




Earth Brackets
Stock No: RS899



Alum Unarmoured Compression Clamp Kit	
Cable OD	**Stock No**
90mm	RS294
85mm	RS295
80mm	RS296
75mm	RS297
70mm	RS298
65mm	RS299
60mm	RS300
55mm	RS301
50mm	RS578
45mm	RS579



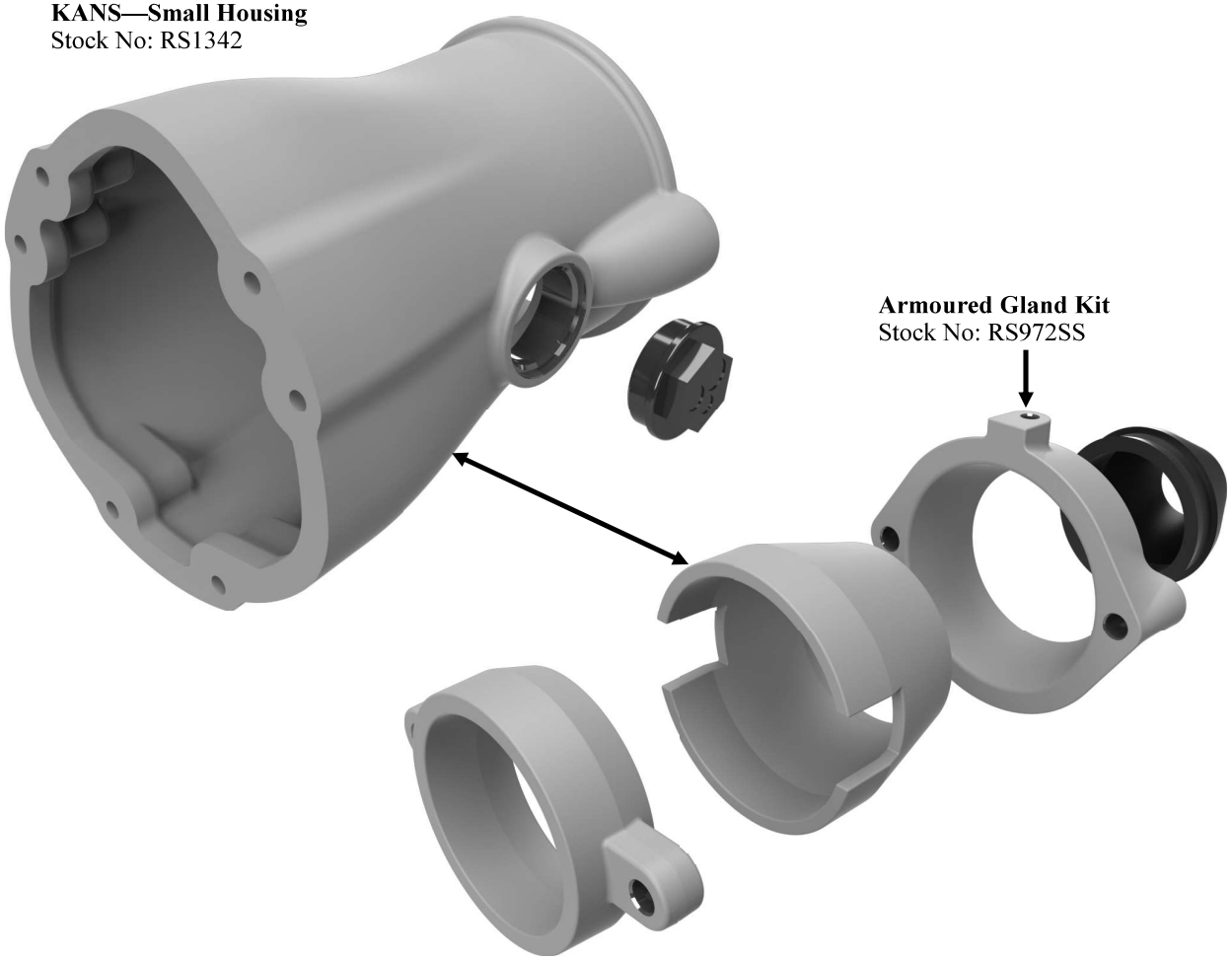
Alum Unarmoured Compression Clamp Kit	
Cable OD	**Stock No**
95mm	RS293
100mm	RS292
105mm	RS291
110mm	RS290
115mm	RS289
117mm	RS288

High Voltage Cable Coupler System

Armoured Gland Assembly

KANS—Small Housing
Stock No: RS1342

Armoured Gland Kit
Stock No: RS972SS



Panel Mount Adaptor Body Assembly

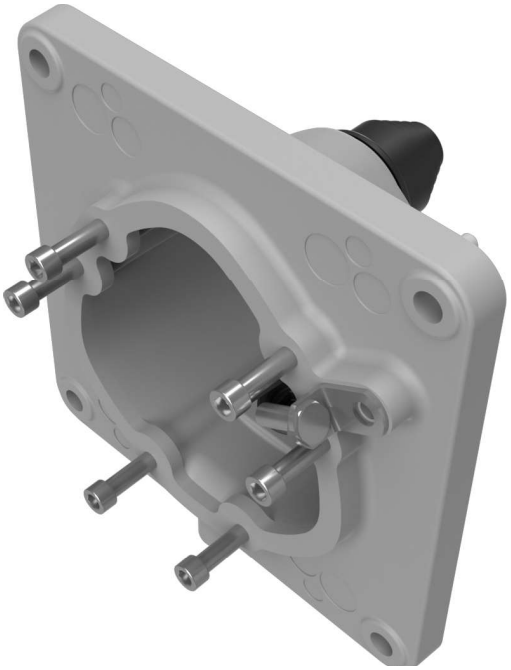
To Fit to New Switch Gear Stations

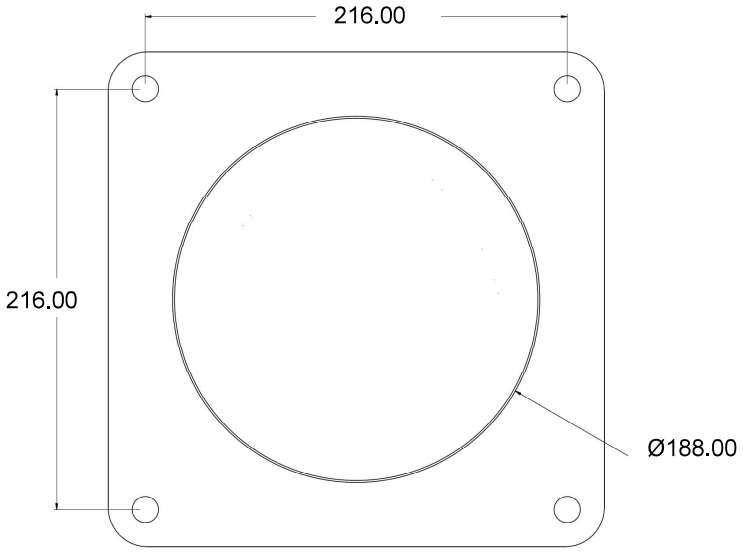
Stock No: RS1773—11kV KA Adaptor Flange

Mass: -

Volts: 11000

Material: Aluminium





Insulated End Cover Assembly

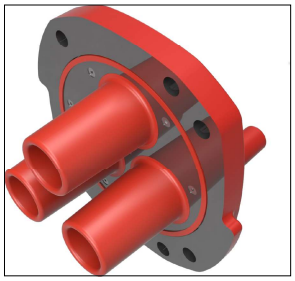
Accessories

Stock No: RS2131—11kV KA 4B Insul. End Cover

Mass: -

Volts: 11000

Material: Aluminium



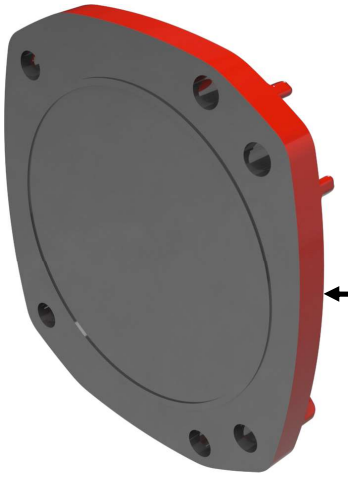
Termination Kits for Unarmoured Cable

Stock No: 2555 — 11kV KA 4B Cast Pro Cover

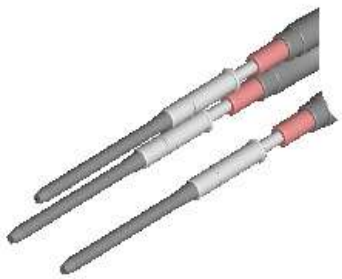
Mass: -

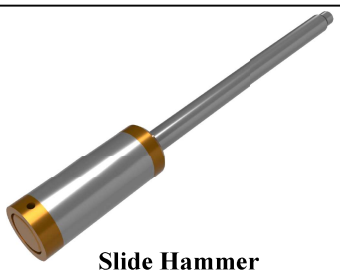
Volts: - 11000

Material: - Aluminium



Cast Pro Cover
Part No: 2555

RS178
 **Phase Guide Stick Set for Assembly** 3 Included

RS177
 Slide Hammer

Coupler Tool Kit (All Voltages) Part No. RS284
 1246 (Spanners) x 2 RS325 (Coupling Tool) x 1 RS177 (Slide Hammer) x 1 1278 (High Voltage Cleaning tissues x 15 1274 (Tool Box) x 1

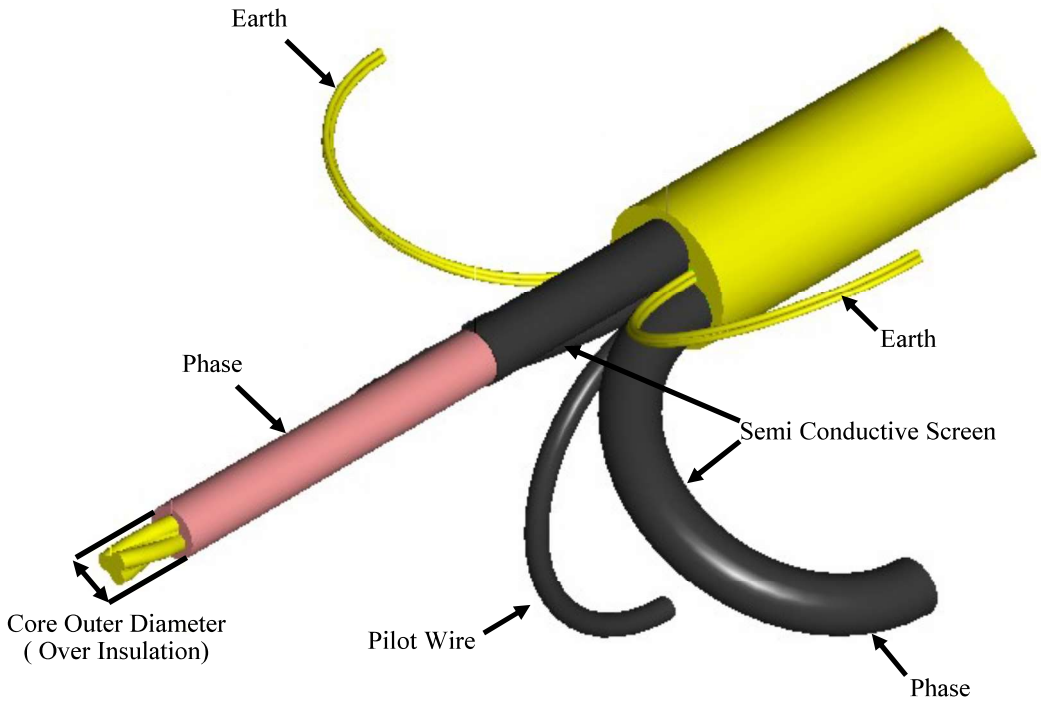
Termination Kits for Unarmoured Cable

11kV Termination Kit Large
24mm-48mm

RS323
(To suit core outer diameter 24mm-48mm)
 4L Compound
 3 x QT5672
 1 x CC2
 1 x 13 Tape

11kV Termination Kit Small
16mm-28.5mm

RS406
(To suit core outer diameter 16mm-28.5mm)
 4L Compound
 3 x QT5672
 1 x CC2
 1 x 13 Tape



Termination Kits for Armoured Cable

11kV Termination Kit Large 24mm-48mm

RS552SWA
(To suit core outer diameter 24mm-48mm)
4L Compound
QT5672 x 3
CC2 x 1
13 Tape x 1
Heat Shrink x 1
Steel Cable Ties x 2

11kV Termination Kit Small 16mm-28.5mm

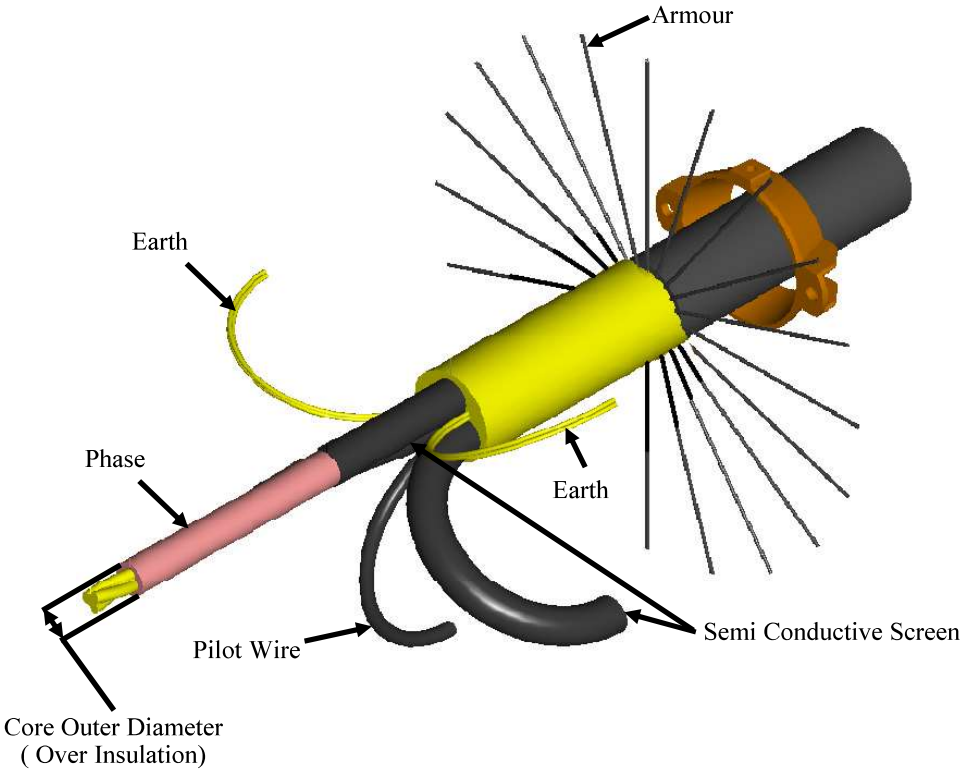
RS551
(To suit core outer diameter 16mm-28.5mm)
4L Compound
QT5671 x 3
CC2 x 1
13 Tape x 1
Heat Shrink x 1
Steel Cable Ties x 2

11kV Termination Kit Small 16mm-28.5mm

RS917
(To suit core outer diameter 16mm-28.5mm)
4L Compound
QT5662 x 3
CC2 x 1
13 Tape x 1
Heat Shrink x 1
Steel Cable Ties x 2

11kV Termination Kit PILC 24mm-48mm

RS687
4L Compound
23 Tape x 2
Heat Shrink x 1
Steel Cable Ties x 2



Open Cut Bolted Coupler Skid for 11kV

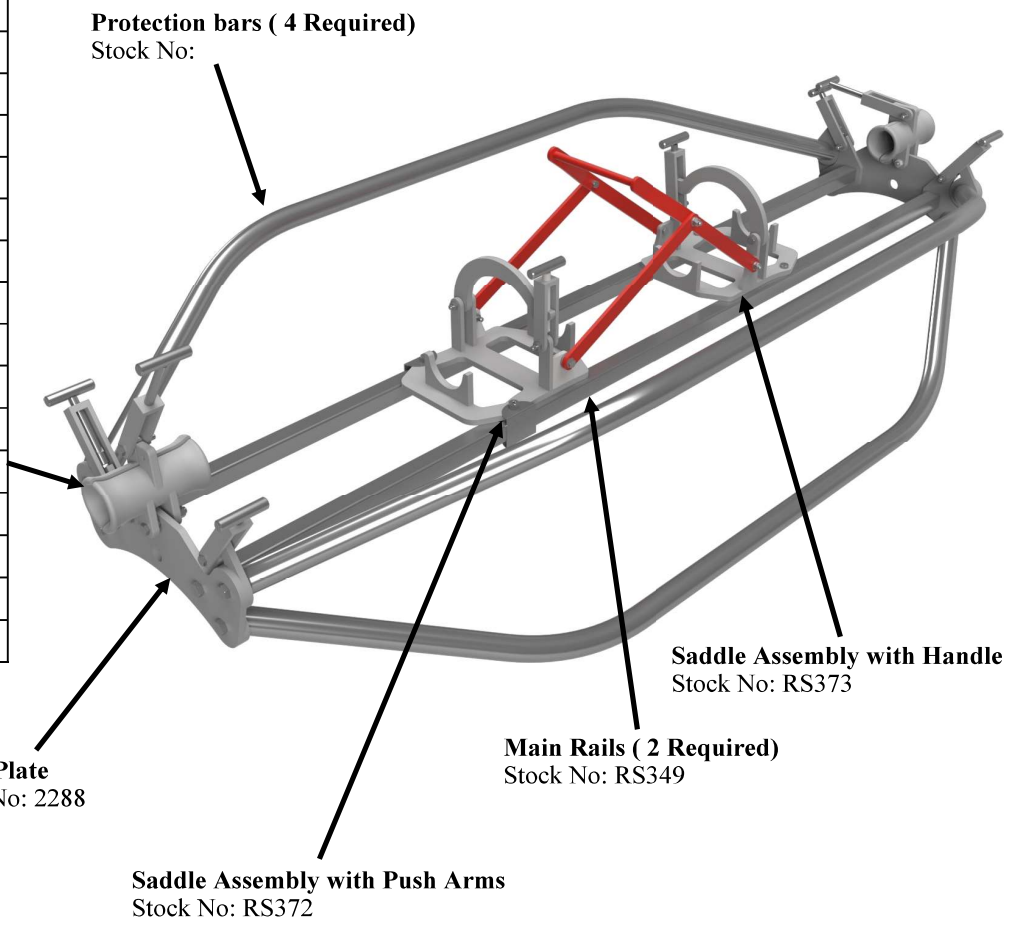
Stock No: RS186—11kV 4 Bolt Standard Skid

Mass: -

Volts: - 11000

Material: - Aluminium

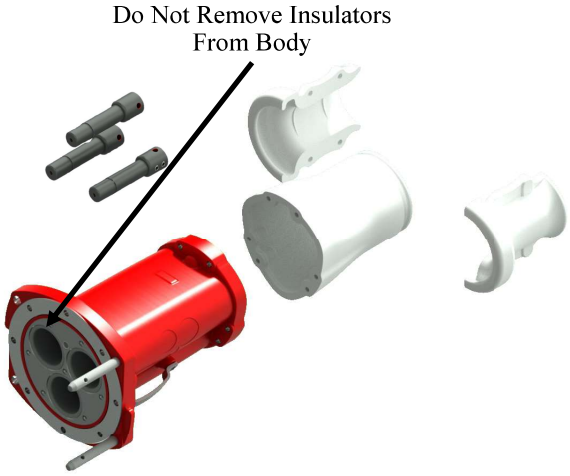
Cable Clamp	
ID Sizes	**Stock No**
120mm	RS326
115mm	RS327
110mm	RS328
105mm	RS329
100mm	RS330
95mm	RS331
90mm	RS332
85mm	RS333
80mm	RS334
75mm	RS335
70mm	RS336
65mm	RS337
60mm	RS338
55mm	RS339
50mm	RS480
45mm	RS481



KA 11kV 800A Unarmoured

Termination Procedure

1



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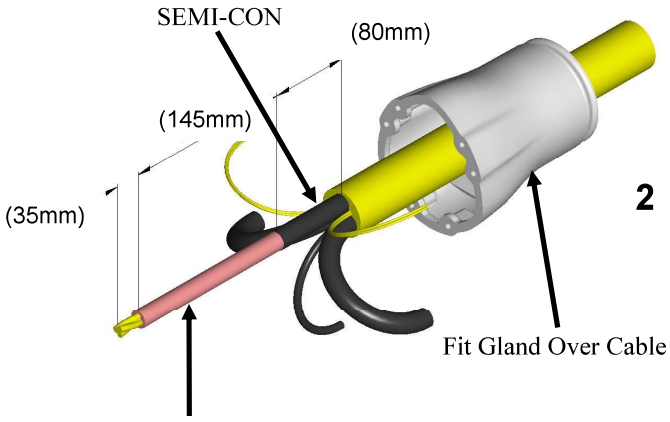

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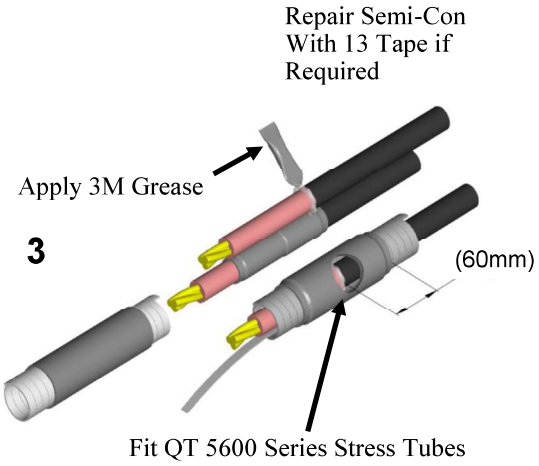

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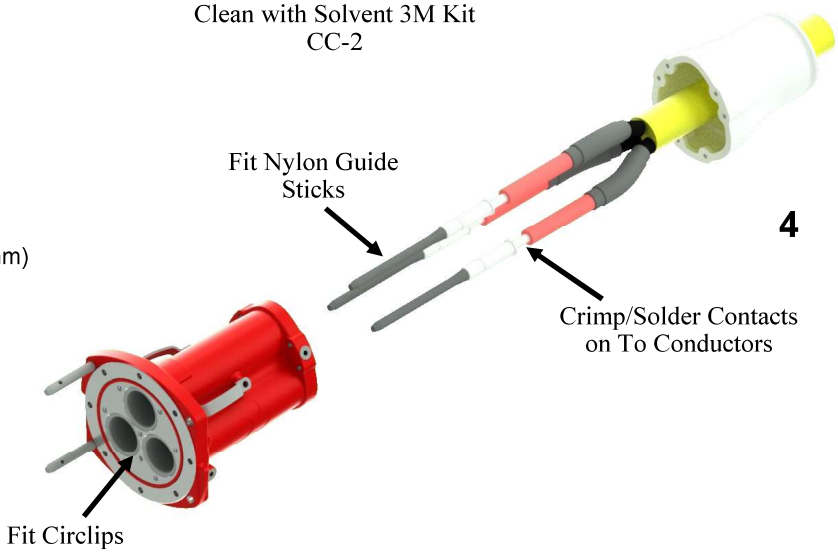

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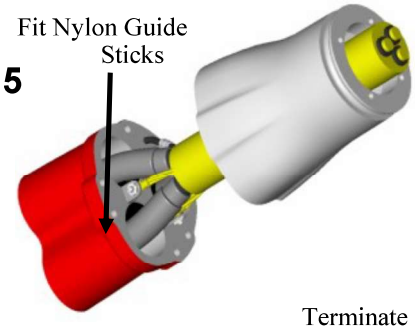
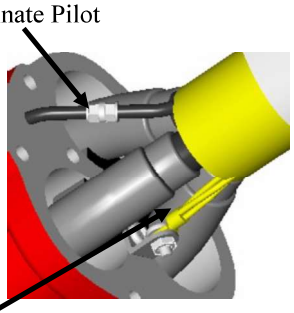


5A



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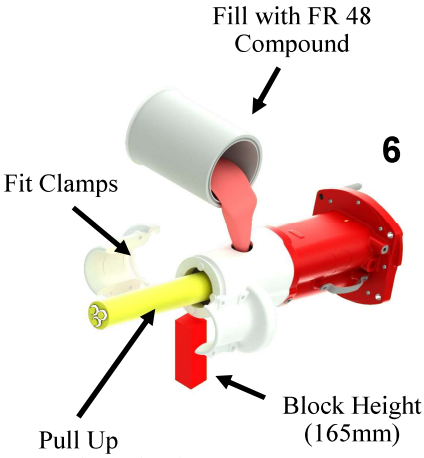
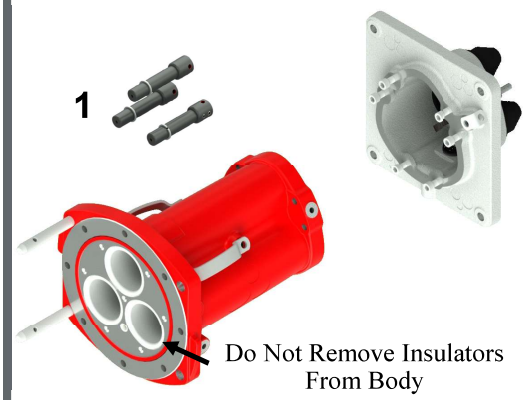
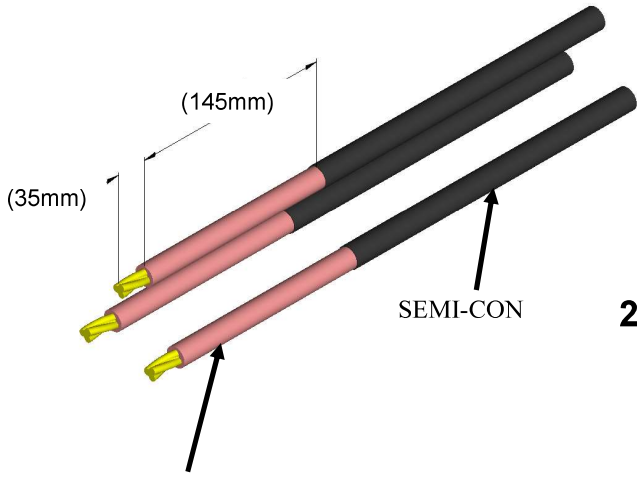


KA 11kV 800A Gear Mount Adaptor

Termination Procedure

1





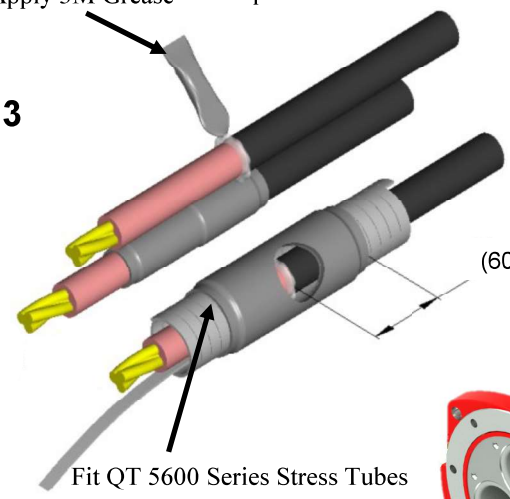
2

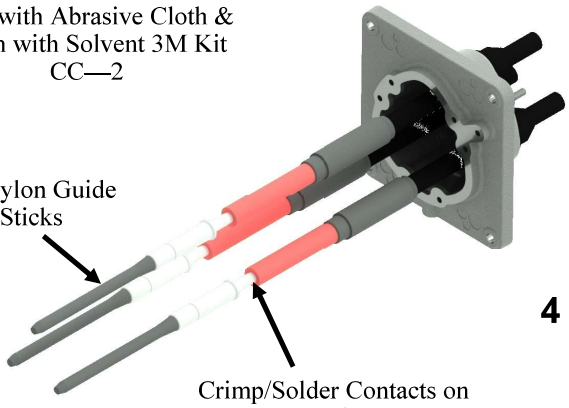
Sand with Abrasive Cloth &
Clean with Solvent 3M Kit
CC—2

Repair Semi-Con
With 13 Tape if
Required

Apply 3M Grease

3





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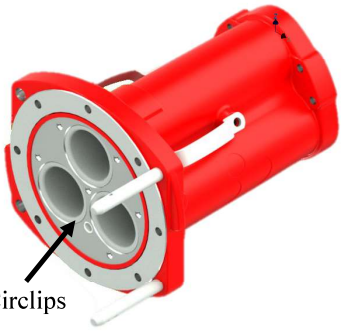

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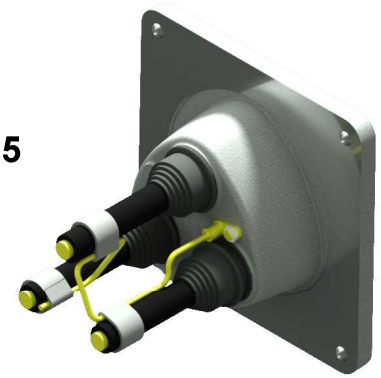
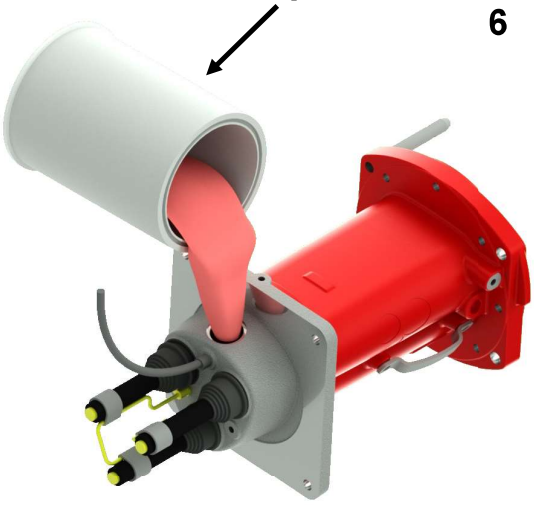


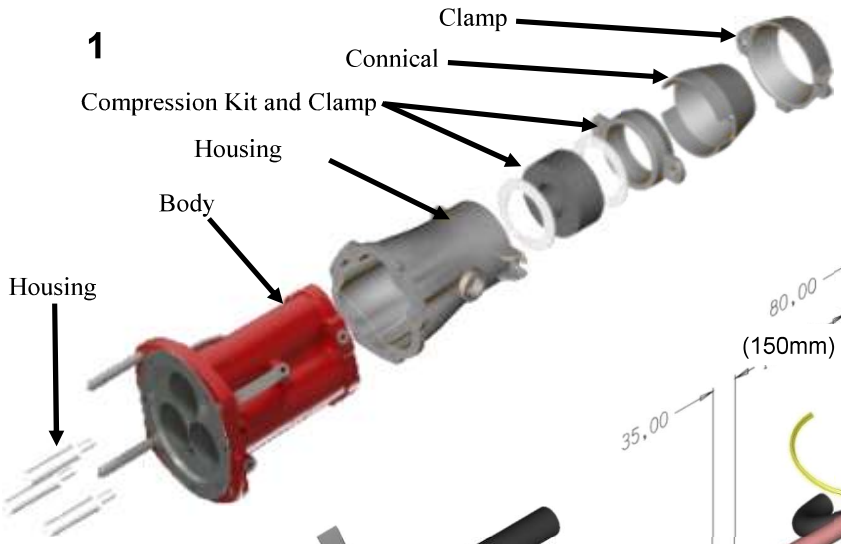
Fill with FR 48
Compound

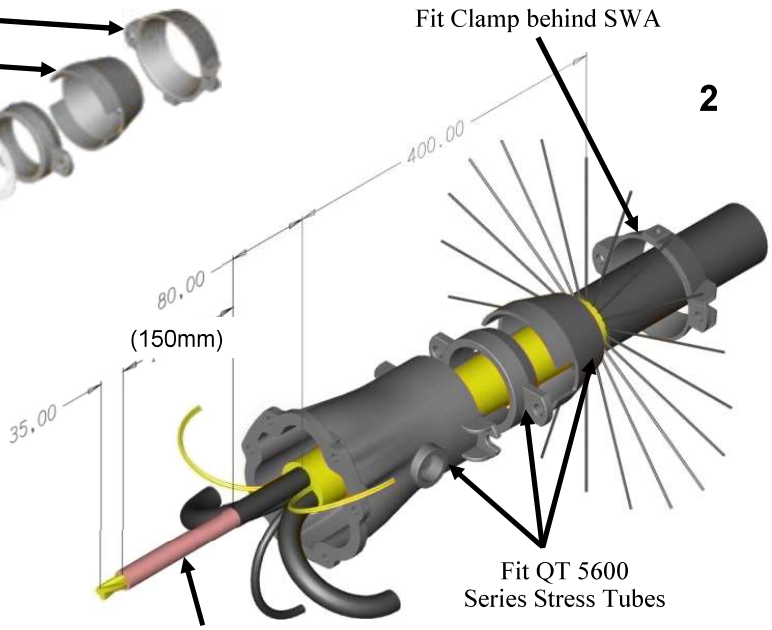
6

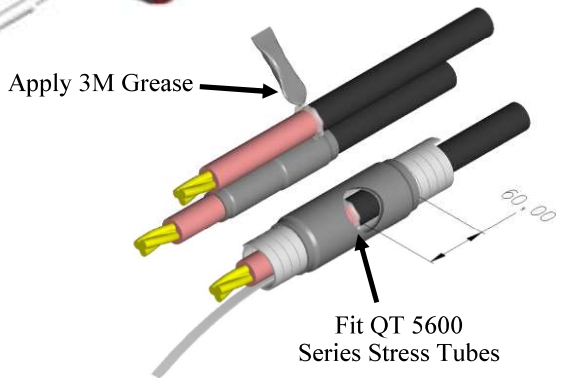


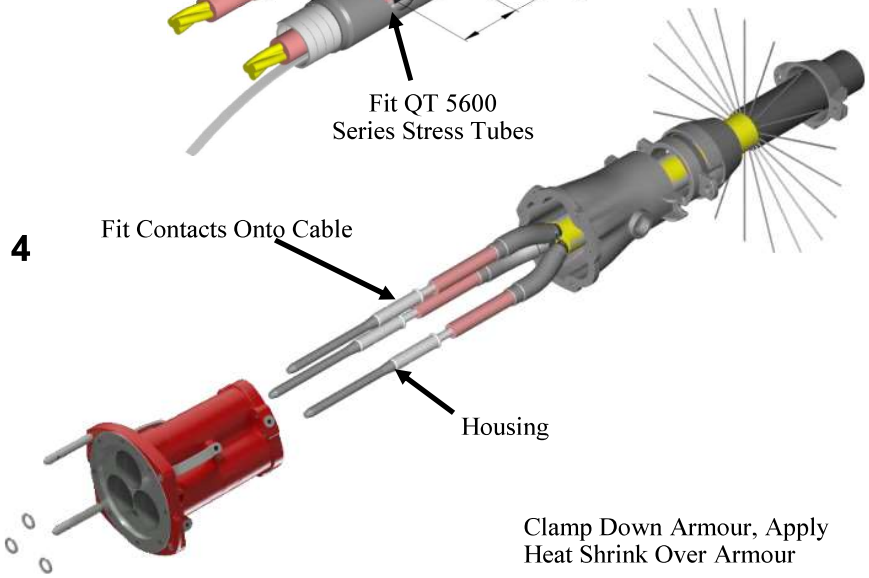
KA 11kV 800A Armoured

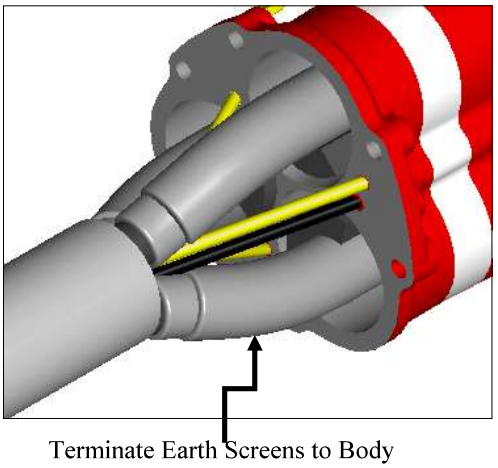
Termination Procedure

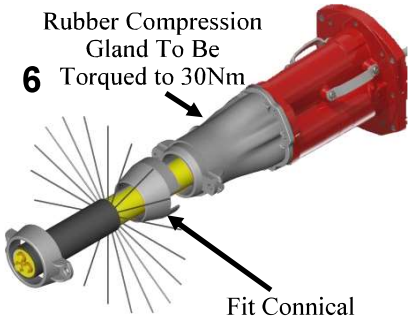


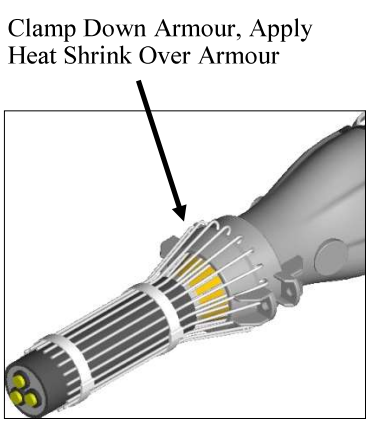


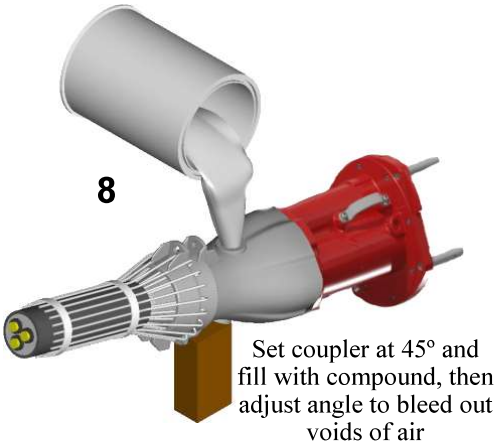




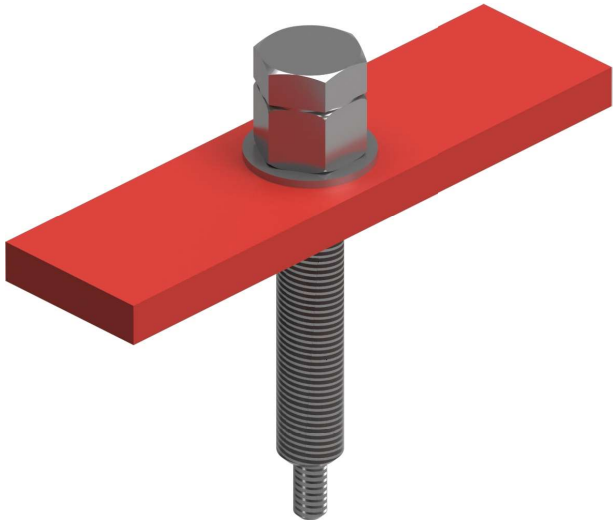








Contact Pulling Tool Operation



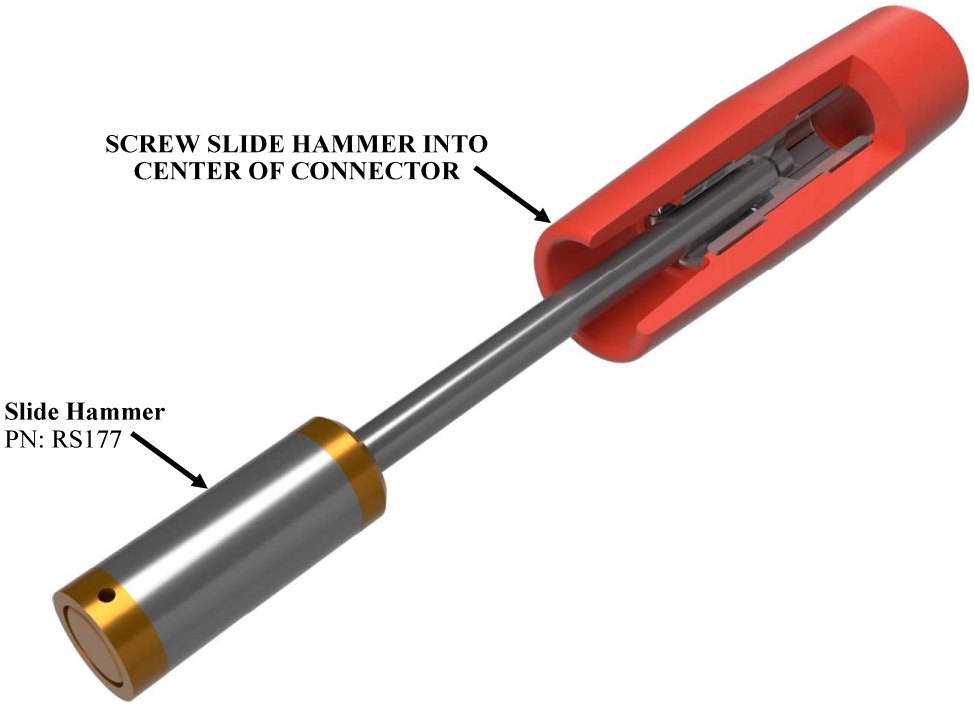
Observation

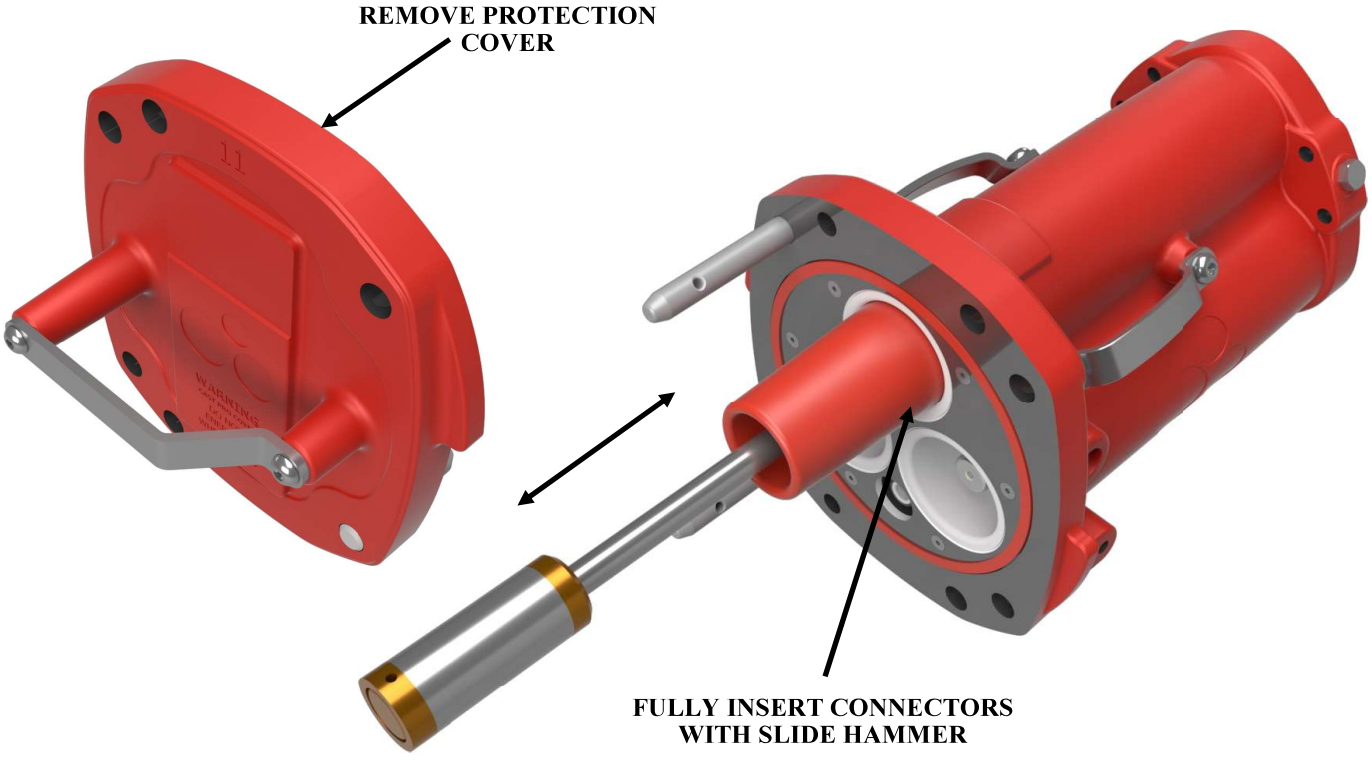
Inspect the front end of the coupler or adaptor, paying special note to the condition of the circlip on each phase. Each circlip should be sitting evenly on the contact. If more of the circlip protrudes out of one side, then the circlip needs to be replaced.

If the circlip needs to be adjusted or replaced, the following will need to be performed

- Ensure power is not connected.
- For a coupler, loosen the clamp on the gland to slightly release the grip on the cable.
- Clean out threaded hole in end of contact with air or cloth
- Place a new circlip over the end of the contact.
- Screw the bolt of the assembled pulling tool into the end of the contact
- Push the steel plate up against the face of the coupler.
- Tighten the nut and washer up to the steel plate.
- Using a spanner, tighten the nut against the steel plate to pull the contact back into place.
- Whilst in this position, replace the circlip.
- After all three contacts are satisfactory, retighten the gland.

Inserting Connectors and Coupling Operation





To compliment existing procedures and practices currently existing in cable repair workshop, the following is designed to be completed as a minimum to ensure the safe and long operation of the AusProof coupler system

Routine Checks and Inspection

- When cables are not in use or stored, ensure that a cast protection end cover is fitted that provides adequate sealing against moisture.
- Ensure that witness marks are brightly painted on the sheath, located where the cable enters the gland. This needs to be routinely inspected to check if a gap appears between the end of the gland and the witness mark.
    - A gap may indicate that the cable has been under tension and that the termination in the coupler may have moved.
- Inspect the male pin in the coupler for obvious signs of damage. Also inspect the location of the nylon locking circlip to ensure that it Is evenly fitted onto the contact.
    - If the circlip appears dislocated or damaged then repairs are necessary. This event indicates that the termination in the coupler has been under tension as a result of handling.
- Ensure the tension on the gland housing compression ring is maintained. This process requires that the four compression ring bolts are tensioned.
- Check silicon seals are clean and are fully intact.
- Thoroughly clean the insulators and face of the coupler with suitably approved solvent.

Testing Precautions

- During cable testing and fault location, high voltage withstand and impulse technologies are used. When the voltage is applied to a cable with couplers fitted then both ends of the phases being tested needs to be connected to the source.

For high voltages this is necessary to prevent an uncontrolled escalation of voltage at the end of the conductor being tested.

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Notes

6 Shona Avenue
Gladstone
Queensland 4680
Phone: +61 7 49784000
Facsimile: +61 7 49785685