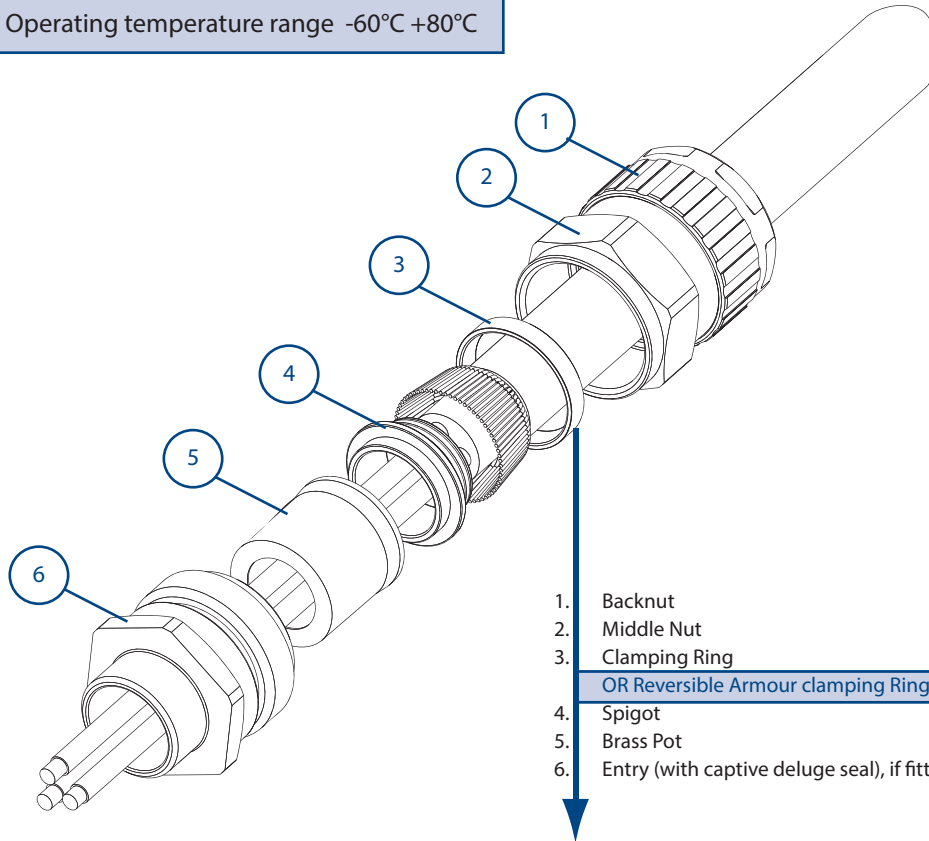


Assembly Instructions for cable gland: 753 - ATEX / IECEx Certified

Operating temperature range -60°C +80°C



1. Backnut
2. Middle Nut
3. Clamping Ring
OR Reversible Armour clamping Ring (RAC)
4. Spigot
5. Brass Pot
6. Entry (with captive deluge seal), if fitted

Certification Details

Gland Type: 753

Exdb IIC Gb / Exeb IIC Gb / ExnR IIC Gc / Extb IIIC Db

SIRA06ATEX1295X (Ex) II 2 GD IP66 CE

SIRA07ATEX4330X (Ex) II 3 GD IP66 CE

IECEX SIR06.0082X

EAC RU C-GB.ГБ05.В.00750

Standards:

IEC 60079-0:2011 Ed 6 EN 60079-0:2012+A11:2013

IEC 60079-1:2014 Ed 7 EN 60079-1:2014

IEC 60079-7:2015 Ed 5 EN 60079-7:2015

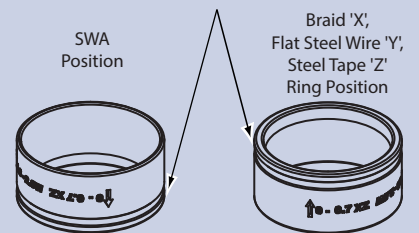
IEC 60079-15:2010 Ed 4 EN 60079-15:2010

IEC 60079-31:2013 Ed 2 EN 60079-31:2014

Note: ExnR II and Cat 3 marking is optional.

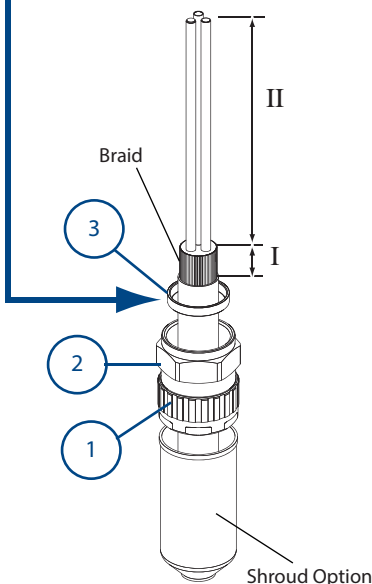
Reversible Armour Clamping Ring (RAC)

General identification ring orientation for:



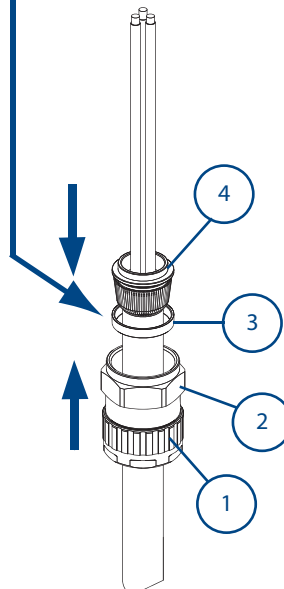
IMPORTANT: The arrowhead indicating the correct armour thickness or type should point towards the equipment

Cable Preparation



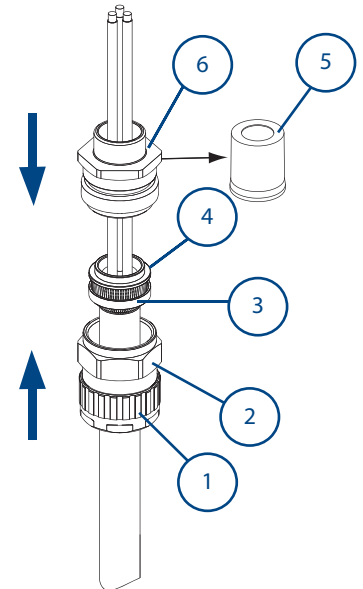
A Strip cable to suit equipment as shown above and expose the braid 'I' removing all cable fillers.
'I' = 13/16" (20mm) for cable gland sizes Os to A
'I' = 1" (25mm) for cable gland sizes B to C2
'I' = 1 1/4" (32mm) for cable gland sizes D to H
'II' to suit equipment.
If required, fit shroud.

Cable Gland Preparation



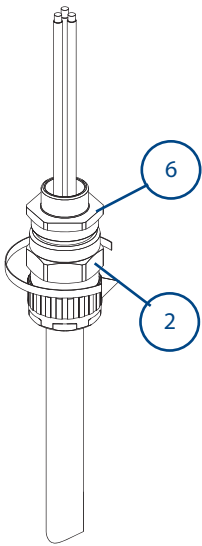
B Push the cable through the spigot ④. Spread braid over the spigot ④ until the end of the braid is up against the shoulder of the spigot. Position the clamping ring ③.

Note: Armour cable acceptance sizes are marked on the clamping ring.

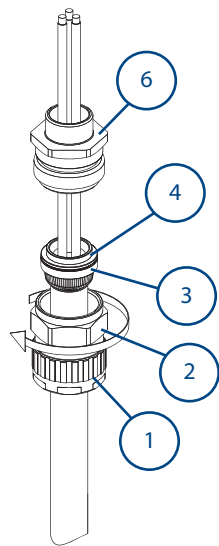


C Remove the brass pot ⑤ from the entry ⑥. Place the entry ⑥ over the spigot ④. Move the sub-assembly ① and ② up to meet the entry ⑥.

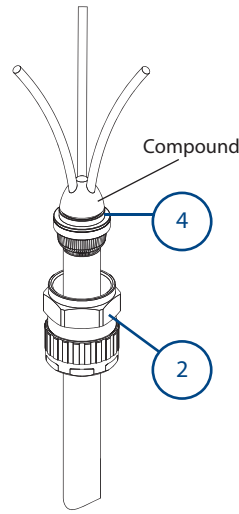
Note: If the equipment has a threaded entry it may be advisable to screw the entry component into the equipment to prevent twisting of the cable after step D



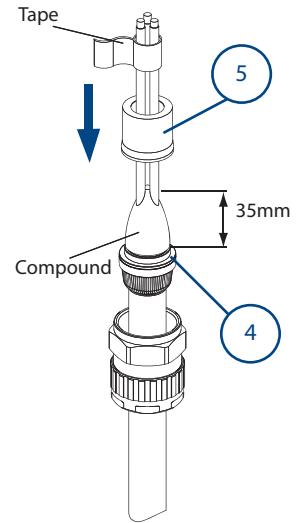
D Unless already screwed into the equipment hold the entry ⑥ in position with a spanner/wrench to prevent rotation. Hand tighten the middle nut ② onto the entry ⑥ and turn a further half to three quarters of a turn with a spanner/wrench.



E Unscrew the middle nut ② and visually inspect that the braid has been successfully clamped between the spigot ④ and the clamping ring ③. If braid is not clamped repeat assembly.



F Remove the entry ⑥ spread out the cable cores and the individual strands of uninsulated conductors for the compound packing. Pack the compound between the cores and strands shown. See notes below and Fig. 7 for compound preparation.

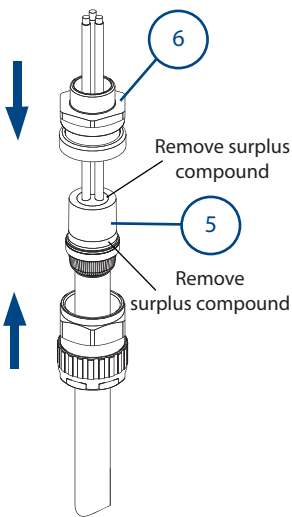


G With all gaps and voids filled, bring the conductors back together and pack more compound around the outside of the conductors. Tape the conductors together to prevent disturbance of the compound seal. Pass the brass pot ⑤ over the spigot ④ and remove any surplus compound from the top of brass pot ⑤ and the joint face as indicated.

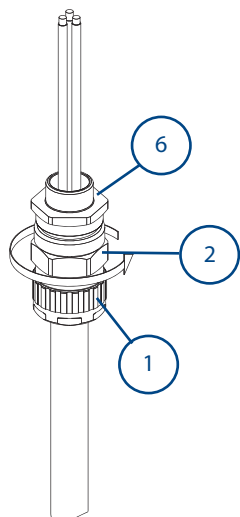
EPOXY COMPOUND PREPARATION AND HEALTH & SAFETY INFORMATION

When handling this material, the gloves supplied must be worn. The epoxy compound is supplied in the form of a two part package. These should be mixed into the ratio of 1:1 until both colours have blended into one, without any streaks. Rolling and folding is the most effective method of obtaining an even blend. Once mixed, the compound must be used within 30 minutes. After this time it will begin to stiffen. The compound should be kept at an ambient temperature of no less than 20°C prior to using. At lower temperatures it becomes difficult to mix. Should any compound come into contact with the skin it should be cleaned off with skin cleaner and not allowed to dry on the skin. Only compound for immediate terminations should be mixed.

The mixing and installation of the compound at an ambient temperature below 4°C is not recommended due to extended curing periods.

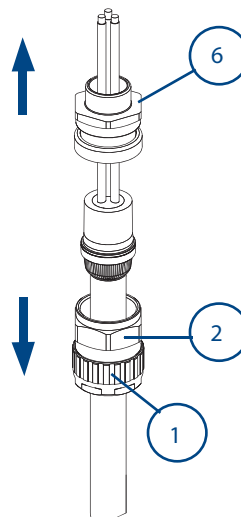


H Replace the entry ⑥ over the brass pot ⑤ ensuring that compound does not cover the end of ⑤.

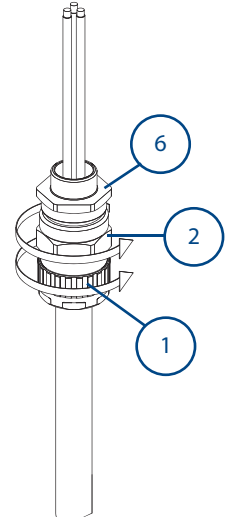


I Locate and hand tighten the sub-assembly ① and ② onto the entry ⑥. Unscrew the sub-assembly ① and ② from the entry ⑥ then remove any surplus compound from the gland components. Again locate and hand tighten the sub-assembly ① and ② onto the entry ⑥.

IMPORTANT NOTE: The conductors must not be moved for a minimum of four hours.



J Allow the compound to cure. (See Fig. 7 for Curing Times). Untighten the sub-assembly ① and ② from the entry ⑥. Check that the compound has cured.



K Hand tighten the sub-assembly ① and ② onto the entry ⑥ and add half to three quarters of a turn with a spanner/wrench. Tighten the backnut ① to form a seal around the cable, then tighten a further full turn using a wrench/spanner. Ensure that the middle nut ② does not rotate when tightening the backnut. Ensure that the deluge seal is pulled down into position, if fitted. Locate the shroud over the cable gland, if applicable.

The following instructions are the approved methods of passing drain wires etc. through the compound barrier and should be followed if permitted by cable installation specifications.

UNINSULATED EARTH OR DRAIN WIRE PREPARATION

1.0 INSULATING EARTH OR DRAIN WIRES WITH HEAT SHRINK OR COLD SHRINK TUBING

- 1.1 Fold back the armour / braid and bend it to right angles from the inner sheath.
- 1.2 Remove foils and tape level with the outer sheath, exposing the uninsulated earth or drain wires and insulated conductors. Cut back a further 10mm of inner sheath.
- 1.3 Pass 100mm length of heat shrink or cold shrink tubing over the uninsulated earth or drain wire until it comes into contact with the foils, then shrink the tubing evenly down onto the uninsulated earth or drain wire so that no air pockets occur.
- 1.4 To insulate the joint between the foils and the tubing a suitable piece of 10mm long shrink tubing or neoprene stretch tubing or a 10mm wide lap of PVC tape may be used.
- 1.5 After completing 1.1 to 1.4 on each earth or drain wire, lay the armour / braid parallel to the cable, if applicable, then carry out instruction B.

2.0 INSULATING SCREENS WITH HEAT SHRINK OR COLD SHRINK TUBING

- 2.1 Fold back the armour / braid and bend to right angles from the inner sheath.
- 2.2 Remove a further 15mm of inner sheath (See Fig. 1).
- 2.3 Unravel one or two groups of wires from the individual shielding or screen wires, then remove the remainder of the individual shielding or screen wires (See Fig. 2) and twist the wires along their full length.
- 2.4 Pass 100mm length of heat shrink or cold shrink tubing over the individual shielding or screen until it comes into contact with the foils, then shrink the tubing evenly down onto the individual shielding or screen so that no air pockets occur.
- 2.5 To insulate the joint between the individual shielding or screen wires and the tubing, place one lap of PVC insulating tape over the exposed metallic joint.
- 2.6 After completing 2.1 to 2.5 on each individual shielding or screen, lay the armour / braid parallel to the cable. Then carry out instruction B.

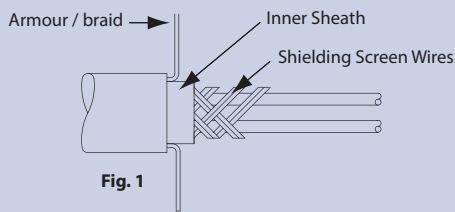


Fig. 1

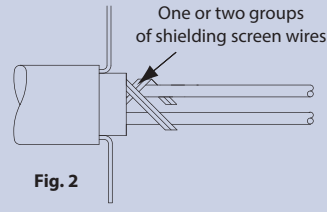


Fig. 2

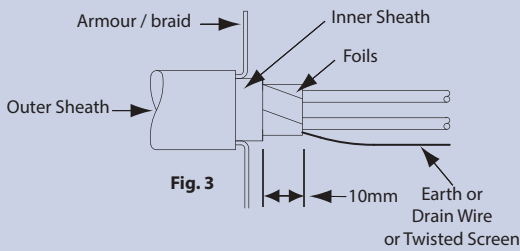


Fig. 3

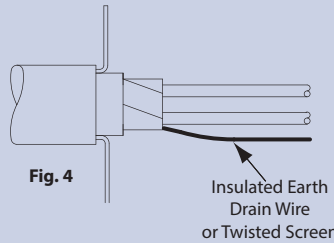


Fig. 4

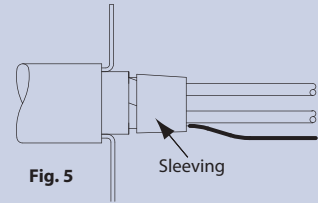


Fig. 5

Epoxy Compound Cure Time Vs. Temperature

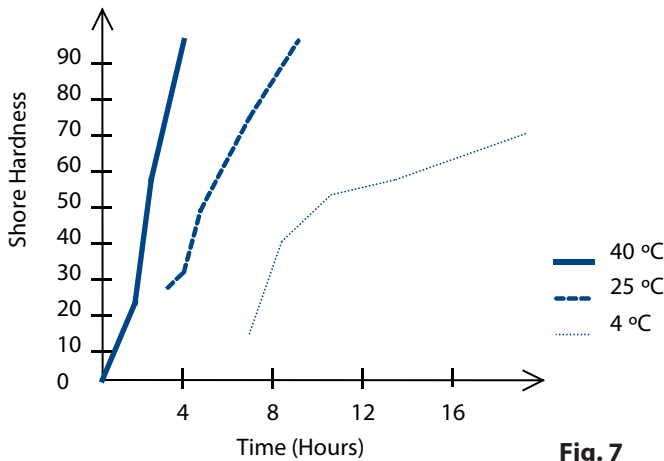


Fig. 7

- The compound may be adversely affected by some solvent vapours. If such vapours are likely to be present in the vicinity of the cable gland in service, suitable precautions may be necessary. (Contact Hawke's Technical Dept).

- The compound cures at a Shore D hardness of 85, when it can be handled. The compound when fully cured is suitable for use at a temperature range of -60°C to +80°C.

CABLE GLAND SELECTION TABLE													
Size Ref	Entry Thread Size		Cable Acceptance Details							Braid Dedicated 'X'	Max. Length	Hexagon Dimensions	
			Inner Sheath/Cores			Outer Sheath		RAC Steel Wire Armour/Tape/Braid					
	Metric	NPT	Max. Over Cores	Max. Inner Sheath	Max. No. of Cores	Min.	Max.	Orientation 1	Orientation 2			Across Flats	Across Corners
Os	M20	½"	8.9	10.0	12	5.5	12.0	0.8/1.25	0/0.8	0/0.8	83.0	24.0	27.7
O	M20	½"	8.9	10.0	12	9.5	16.0	0.8/1.25	0/0.8	0/0.8	83.0	24.0	27.7
A	M20	½" - ¾"	11.0	12.5	15	12.5	20.5	0.8/1.25	0/0.8	0/0.8	84.0	30.0	34.6
B	M25	¾" - 1"	16.2	18.4	30	16.9	26.0	1.25/1.6	0/0.7	0/0.7	91.0	36.0	41.6
C	M32	1" - 1¼"	21.9	24.7	42	22.0	33.0	1.6/2.0	0/0.7	0/0.7	98.0	46.0	53.1
C2	M40	1¼" - 1½"	26.3	29.7	60	28.0	41.0	1.6/2.0	0/0.7	0/0.7	100.0	55.0	63.5
D	M50	1½" - 2"	37.1	41.7	80	36.0	52.6	1.8/2.5	0/1.0	0/1.0	116.0	65.0	75.1
E	M63	2" - 2½"	47.8	53.5	100	46.0	65.3	1.8/2.5	0/1.0	0/1.0	124.0	80.0	92.4
F	M75	2½" - 3"	59.0	65.3/66.2	120	57.0	78.0	1.8/2.5	0/1.0	0/1.0	122.0	95.0	109.6

ADDITIONAL INSTRUCTIONS

- The equipment may be used with flammable gases and vapours with apparatus group(s) IIA, IIB and IIC.
- Installation and cable selection shall be carried out by suitably trained personnel in accordance with the applicable code of practice e.g. EN 60079-14 (IEC 60079-14).
- The cable glands contain no serviceable parts and spare parts are not allowed to be supplied under the certification.
- The certification of this equipment relies upon the following materials used in its construction:
Brass, Nickel Plated Brass, Aluminium, Stainless Steel metallic body and armour clamping components, Epoxy Compound and Silicon Rubber seals (back seal and optional deluge seal) and Acetal for the rear seal clamp. The user is responsible in ensuring that the materials listed are suitable for their intended application in both normal and hostile atmospheres. Particular attention should be paid to aggressive substances e.g. acids and alkalis or gases that may attack metals, or solvents or other liquids that may affect polymeric material.
- Inspection and maintenance of these cable glands shall be carried out by suitably trained personnel in accordance with the applicable code of practice e.g. EN 60079-17 (IEC 60079-17). During periodic inspections the cable glands should be checked externally for tightness and visually inspected for any harmful corrosion.
- Cable gland installation work should not be carried out on live circuits.

ACCESSORIES:

Before cable gland assembly or stripping of the cable gland assembly, consideration should be given to any cable gland accessories that may be required, such as: -

- Shroud, to offer additional corrosion protection.
- Locknut, to secure cable glands into position.
- Sealing washer, to offer additional ingress protection of the enclosure at the cable gland entry.
- Earthtag, to provide an external armour / braid bonding point.
- Serrated washer, to dampen any vibrations that may loosen the locknut or cable gland assembly.

SPECIFIC CONDITIONS OF USE:

- The entry thread shall be suitably sealed, in accordance with the applicable installation code of practice, to ensure that the ingress protection and restricted breathing sealing standards are maintained.
- The flameproof joints shall not be repaired.

EU Declaration of Conformity in accordance with European Directive 2014/34/EU

Manufacturer: Hawke International

Address: Oxford Street West, Ashton-under-Lyne, OL7 0NA, United Kingdom

Equipment: Group II Barrier Cable Glands Types 753

Provisions of the Directive fulfilled by the Equipment: Group II Category 2/3GD Exeb IIC Gb, Exdb IIC Gb, ExnRc IIC Gc, Extb IIIC Db – IP66

Notified Body for EU-Type Examination: SIRA Certification 0518 Chester UK

EU-type Examination Certificate: Sira 06ATEX1295X, ExnR covered on Sira 07ATEX4330X.

Notified Body for production: SIRA Certification 0518 Chester UK

Harmonised Standards used: EN 60079-0:2012+A11:2013, IEC60079-1:2014, EN60079-7:2015, EN60079-15:2010, EN60079-31:2014

On behalf of the above named company, I declare that, on the date the equipment accompanied by this declaration is placed on the market, the equipment conforms with all technical and regulatory requirements of the above listed directives.



A. Tindall
Technical Manager