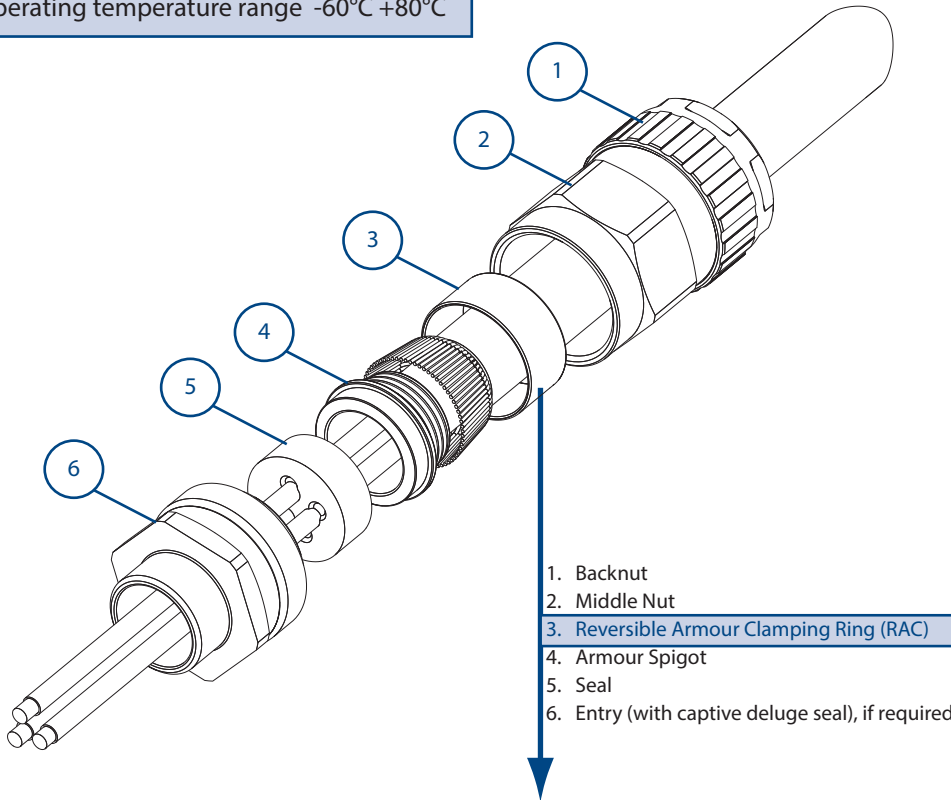


Assembly Instructions for cable gland: PSG 553/RAC

Operating temperature range -60°C +80°C



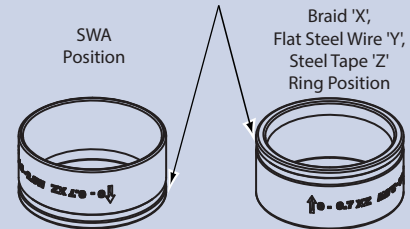
1. Backnut
2. Middle Nut
3. Reversible Armour Clamping Ring (RAC)
4. Armour Spigot
5. Seal
6. Entry (with captive deluge seal), if required

Certification Details

Gland Type: PSG 553/RAC
 Exdb IIC Gb, Exeb II Gb, Extb IIIC Db
 CML19ATEX1167X (Ex) II 2 GD IP66 CE
 IECEx CML19.0045X
 IEx 14.0272X
 EAC Pending
 CNEx07.0897X

Reversible Armour Clamping Ring (RAC)

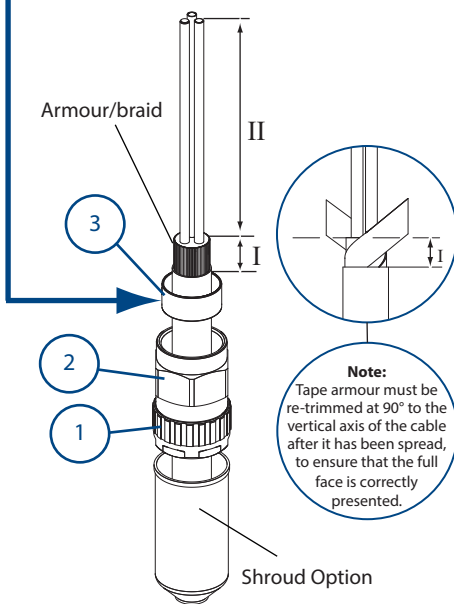
General identification ring orientation for:



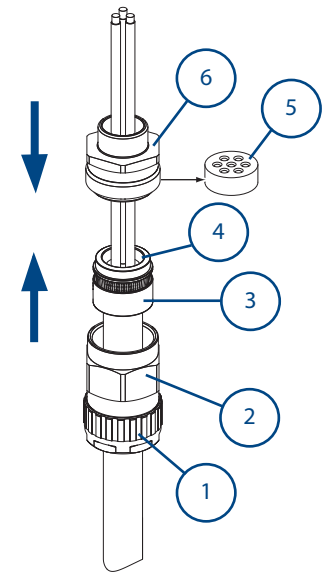
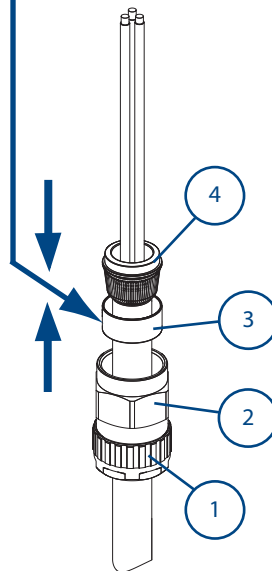
IMPORTANT: The arrowhead indicating the correct armour thickness or type should point towards the equipment

Note: Cable acceptance sizes are marked on the diaphragm seal, clamping ring and backnut.

Cable Preparation



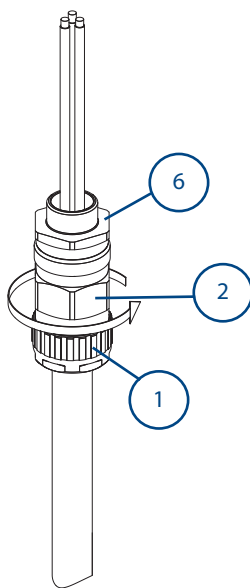
Gland Preparation



A Strip Cable to suit equipment as shown above and expose the armour/braid 'I' removing all cable fillers.
 'I' = 20mm for cable gland sizes Os to C
 'I' = 25mm for cable gland sizes C2 to F
 'II' = to suit equipment.
 If required, fit shroud.

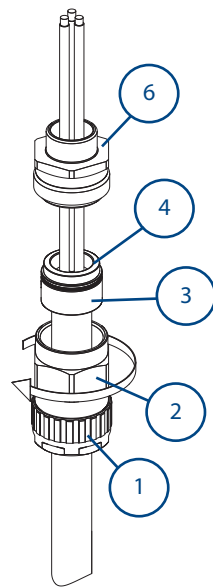
B Push the cable through the armour spigot ④. Spread armour/braid over the armour spigot ④ until the end of the armour/braid is up against the shoulder of the armour cone. Position the armour clamping ring ③.

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



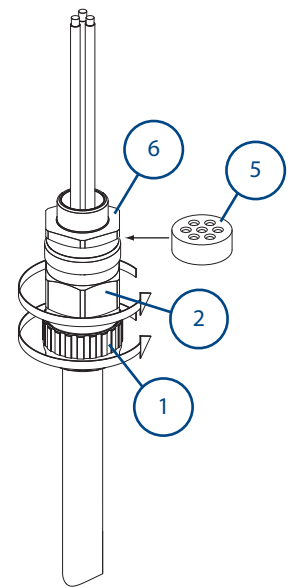
D
Hold the entry ⑥ in position with a spanner/wrench to prevent rotation. Hand tighten the middle nut ② to the entry ⑥ and turn a further ½ to ¾ of a turn with a spanner/wrench.

IMPORTANT: Support the cable to prevent it from twisting.



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

Note : If the equipment has a threaded entry, it may be advisable to screw the cable gland into the equipment to prevent twisting of the cable after Step E



F
Select the correct punch tool to suit the conductors sizes (see table) and cut out the required number of holes in the seal ⑤ using the indented positions as a guide. Remove the entry ⑥ and pass the individual conductors through the appropriately sized punched holes in the seal ⑤ ensuring they are not twisted or kinked, and slide the seal ⑤ down to the spigot ④.

Replace entry ⑥ and re-assemble middle nut ② onto the entry component ⑥.

Tighten up the middle nut ② until hand tight, then using a wrench/spanner turn the nut through a minimum of one full turn.

Hand 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 ①.

Use the middle nut guide as an indication to confirm the backnut is in the correct position relative to cable diameter.

Ensure that the deluge seal is pulled down into position, if fitted. Locate the shroud over the cable gland, if applicable.

CABLE GLAND SELECTION TABLE

Size Ref.	Male Entry Thread Size		Outer Sheath		Steel Wire Armour/Tape/Braid		Compressed Length	Maximum Length	Hexagon Dimensions	
	Metric	NPT	Min.	Max.	Orientation 1	Orientation 2			Across Flats	Across Corners
A	M20	½" - ¾"	12.5	20.5	0.8/1.25	0/0.8	53.0	80	30.0	32.5
B	M25	¾" - 1"	16.9	26.0	1.25/1.6	0/0.7	69.5	88	36.0	39.5
C	M32	1" - 1¼"	22.0	33.0	1.6/2.0	0/0.7	64.0	95	46.0	50.5

CABLE GLAND SIZE FOR CONDUCTOR

Maximum No. of Cores	Cores Cross Sectional Area mm ²				
	1.5	2.5	4.0	6.0	10.0
7	A & B	A & B	B & C	C	C
4	---	---	---	B	---
3	---	---	---	---	B

PUNCH TOOL SIZE DETAILS

Punch Ref.	No.1	No.2	No.3
Core C.S.A. mm ²	1.5 - 2.5	4.0 - 6.0	10.0

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.

SCHEDULE OF LIMITATIONS:

1. The cable glands when used with braided cable types are only suitable for use with fixed apparatus, the cable for which must be effectively clamped and cleated elsewhere.
2. This cable gland has an operating temperature range of -60°C to +80°C.
3. A seal must be formed between the equipment and the cable gland to maintain the appropriate degree of protection against ingress of dust, solid objects and water.

TORQUE VALUES

Assembly torque value of 15N/m was generated on metallic mandrels. For cable, it is recommended that the assembly instructions are followed.

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

DRAIN WIRE PREPARATION

1.0 INSULATING 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 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 drain wire until it comes into contact with the foils, then shrink the tubing evenly down onto the 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 drain wire, lay the armour / braid parallel to the cable, if applicable, then carry out instruction B.

2.0 INSULATING DRAIN WIRES / SCREENS WITH SEPARATE INSULATED CRIMPED CONDUCTORS OR SOLDERED CONNECTION

- 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 screen wires, then remove the remainder of the screen wires (See Fig. 2).
- 2.4 Twist the group of screen wires into a pigtail and cut to 15mm long.
- 2.5 Crimp an insulated conductor to the pigtail with a suitable insulated butt ferrule (or soldered connection), leaving enough length of the insulated conductor to enable the remote end to be connected to the earth terminal in the equipment. (See Fig. 3). Note: There shall be a minimum of 10mm of compound on both ends of the crimped /soldered joint.
- 2.6 To insulate the joint between the screen wires and the insulated conductor, place one lap of PVC insulating tape over the exposed metallic joint.
- 2.7 After completing 2.1 to 2.6 on each drain wire, lay the armour / braid parallel to the cable. Then carry out instruction B.

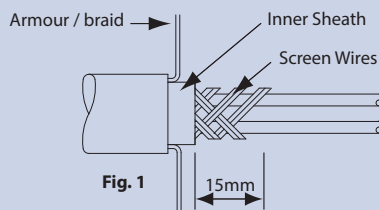


Fig. 1

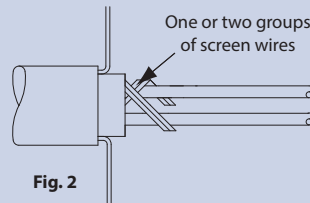


Fig. 2

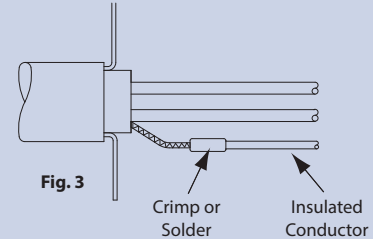


Fig. 3

3.0 INSULATING DRAIN WIRES WITH INSULATING VARNISH OR PAINT

- 3.1 Fold back the armour / braid and bend it at right angles from the inner sheath.
- 3.2 Remove the foil and tape level with the inner sheath exposing the drain wires and conductor pairs.
- 3.3 Cut back a further 10mm of inner sheath (See Fig. 4).
- 3.4 Spray or paint the drain wires with insulating varnish or paint, then leave to dry (See Fig. 5)
- 3.5 To insulate the foil ends a suitable piece of 10mm long shrink tubing or neoprene stretch tubing or a 10mm wide lap of PVC tape may be used (See Fig. 6).
- 3.6 After completing 3.1 to 3.5 on each drain wire, lay the armour / braid parallel to the cable. Then carry out instruction B.

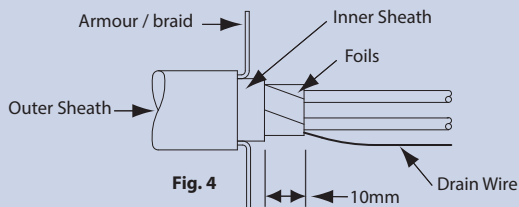


Fig. 4

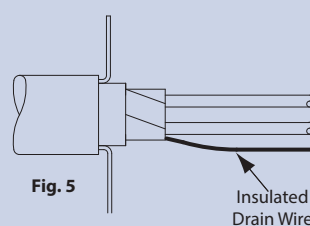


Fig. 5

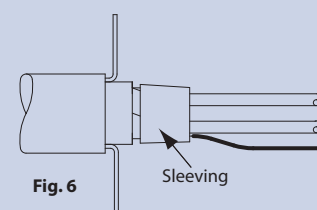


Fig. 6

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 Compression Cable Glands Type: PSG 553/RAC

Provisions of the Directive fulfilled by the Equipment:

Group II Category 2GD Exeb IIC Gb, Exdb IIC Gb, Extb IIIC Db – IP66

Notified Body for EU-Type Examination: CML 2776 Chester UK

EU-type Examination Certificate: CML19ATEX1167X

Notified Body for production: SGS-Baseefa 1180 Buxton UK

Harmonised Standards used:

EN60079-0:2018, EN60079-1:2014, EN60079-7:2015, 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