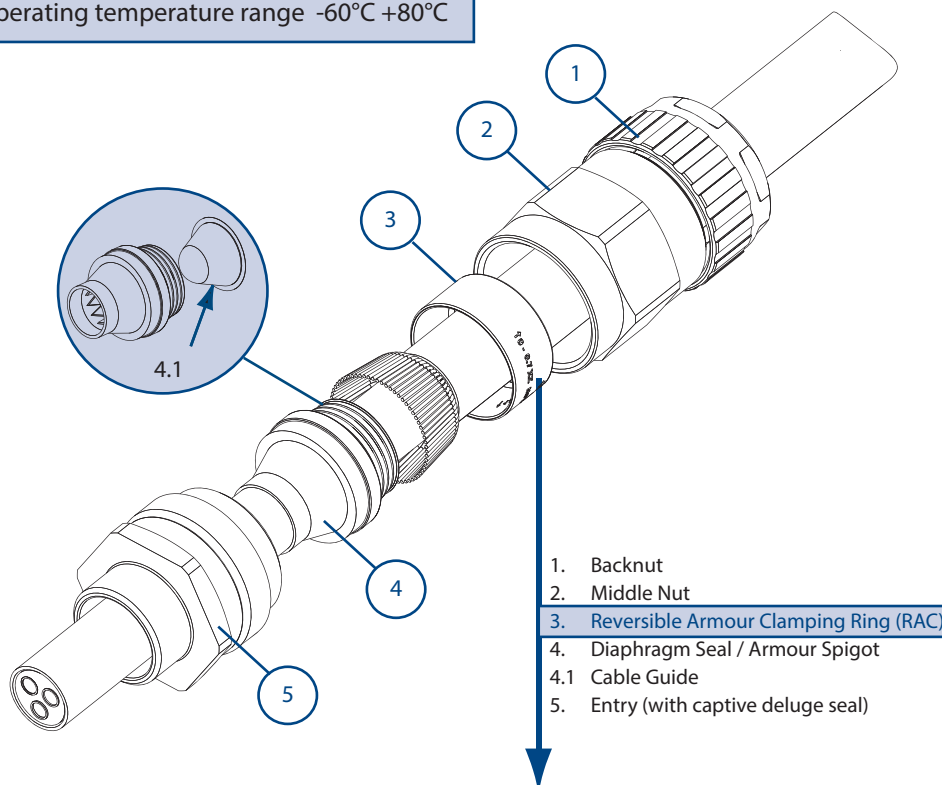


# Assembly Instructions for cable gland: 501/453/UNIV

# HAWKE International

AI 300 / Issue W - 06/17

Operating temperature range -60°C +80°C

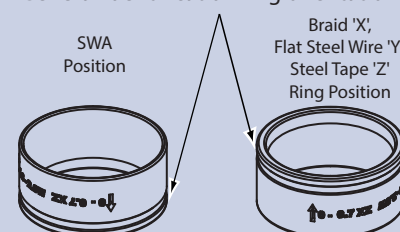


## Certification Details

Gland Type: 501/453/UNIV  
Exdb IIC Gb / Exeb IIC Gb / ExnR IIC Gc / Extb IIIC Db  
Baseefa06ATEX0057X  $\text{Ex}$  II 2 / 3GD IP66  $\text{CE}$   
Baseefa09ATEX0233X  $\text{Ex}$  II 2 / 3G IP66  $\text{CE}$   
IECEx BAS06.0014X  
IEEx 14.0272X  
EAC TC RU C-GB, I 605.B.00750  
c CSA us No: 1015065  
Class 1 Zone 1 AExd IIC, AExe II, Zone 21 AExTD  
Class 1 Div 2 ABCD, Class II Div 2 Groups EFG, Class III  
CNEEx12.3452X

## Reversible Armour Clamping Ring (RAC)

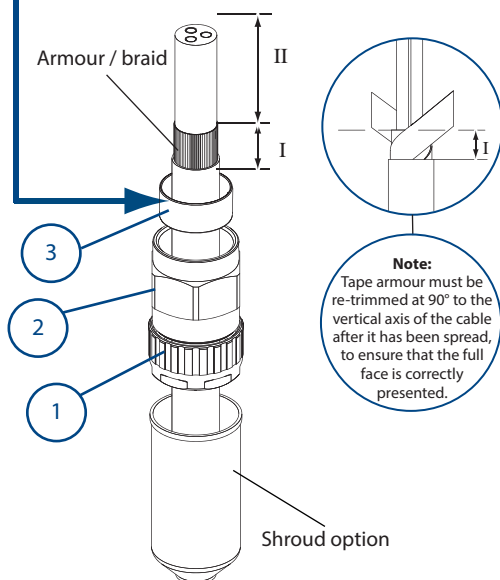
General identification ring orientation for:



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

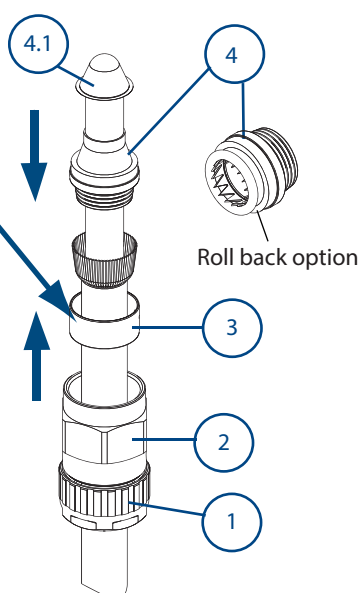
**Note:** Cable acceptance sizes are marked on the diaphragm seal, clamping ring and backnut.

## Cable Preparation



**Note:** Tape armour must be re-trimmed at 90° to the vertical axis of the cable after it has been spread, to ensure that the full face is correctly presented.

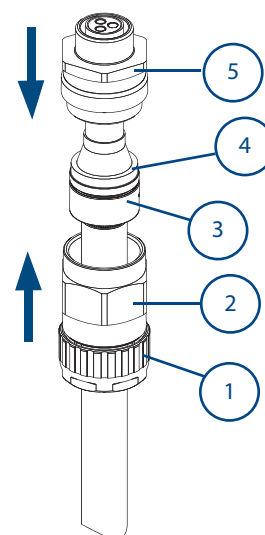
## Gland Preparation



**A**  
Strip cable to suit equipment as shown above and expose the armour / braid 'I'.  
'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 diaphragm seal / armour spigot ④. Pre-fitted cable guide ④.1 can now be discarded. The diaphragm seal can be rolled back to ease assembly if required. Spread armour / braid over the diaphragm seal / 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.

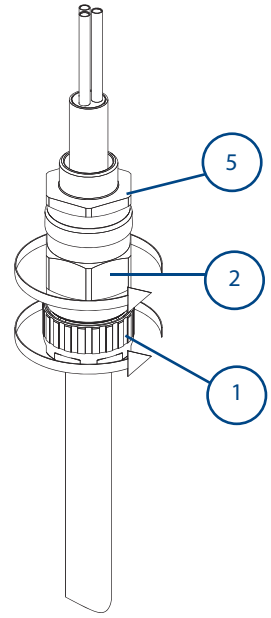
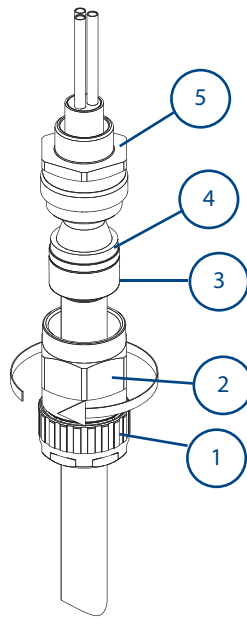
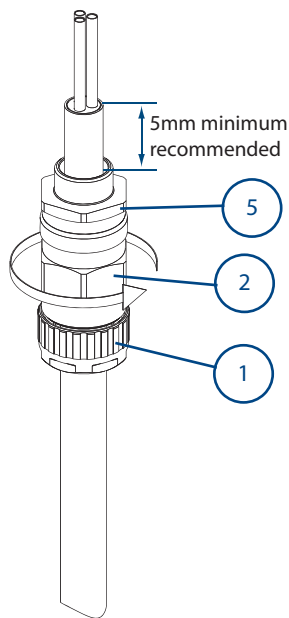
**C**  
Place the entry ⑤ and position over the diaphragm seal / armour spigot ④. Move the sub-assembly ① and ② up to meet the entry ⑤.



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slightly from that shown.



**D**  
Hold the entry ⑤ in position with a spanner / wrench to prevent rotation. Hand tighten the middle nut ② to the entry ⑤ and turn a further 1/2 to 3/4 of a turn with a spanner / wrench.

**IMPORTANT:** Support the cable to prevent it from twisting. To ease wiring inside the enclosure, it may be beneficial to strip the inner sheath of the cable as shown above.

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

**F**  
Reassemble middle nut ② onto the entry component ⑤. Tighten up the middle nut ② until hand tight, then using a wrench / spanner, turn the nut through 1/4 turn. 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.

**Note:** The deluge seal on this gland locates on assembly and requires no further action. Locate shroud over cable gland, if applicable.

**CABLE GLAND SELECTION TABLE**

Cable Gland Selection Table												
Size Ref.	Entry Thread Size		Cable Acceptance Details						Compressed Length	Maximum Length	Hexagon Dimensions	
			Inner Sheath		Outer Sheath		Armour Braid					
	Metric	NPT	Min.	Max.	Min.	Max.	Orientation 1	Orientation 2			Across Flats	Across Corners
Os	M20 <sup>•</sup>	½"	3.5	8.1	5.5	12.0	0.8/1.25	0/0.8	61.6	72.8	24.0	26.5
O	M20 <sup>•</sup>	½"	6.5	11.4	9.5	16.0	0.8/1.25	0/0.8	61.6	72.8	24.0	26.5
A	M20	½" - ¾"	8.4	14.3	12.5	20.5	0.8/1.25	0/0.8	63.0	74.2	30.0	32.5
B	M25	¾" - 1"	11.1	19.7	16.9	26.0	1.25/1.6	0/0.7	69.9	79.7	36.0	39.5
C	M32	1" - 1¼"	17.6	26.5	22.0	33.0	1.6/2.0	0/0.7	73.2	83.7	46.0	50.5
C2	M40	1¼" - 1½"	23.1	32.5	28.0	41.0	1.6/2.0	0/0.7	77.9	90.6	55.0	60.6
D	M50	1½" - 2"	28.9	44.4/42.3	36.0	52.6	1.8/2.5	0/1.0	93.5	112.6	65.0	70.8
E	M63	2" - 2½"	39.9	56.3/54.3	46.0	65.3	1.8/2.5	0/1.0	94.0	110.2	80.0	88.0
F	M75	2½" - 3"	50.5	65.3/68.2	57.0	78.0	1.8/2.5	0/1.0	103.0	119.7	95.0	104.0

\* Sizes Os and O are available with an M16 thread size. If M16 entry is used on O size cable glands the maximum cable inner sheath diameter is limited to 10.9mm.

#### 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 - Baseefa ATEX / IECEx:**

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.

#### **NOTES - c CSA us:**

1. The cable used must have extruded sealing (solid polymeric) completely surrounding the "core" (insulation and conductor), allowing for no holes or ventilation through the inner jacket or along the cores.
2. The 501/4\*\* series cable gland connectors, when used in Class 1 Division 2 Classified areas, are not suitable to be interfaced with an explosion proof enclosure containing arcing and sparking devices, unless installed in conjunction with an approved explosion proof sealing fitting.
3. These glands are suitable for use with Certified Marine Shipboard armoured / unarmoured cables constructed to CSA Standard 245 and IEEE45 / IEC 600092-353 Standards, or certified equivalent), for use on Shipboards and Offshore Rigs / Platforms.
4. Must comply with Canadian Electrical Code and National Electric Code requirements for threaded entries.
5. For Exe applications, a sealing washer or thread sealant may be required between the enclosure and the gland to maintain the IP rating of the enclosure.
6. When used with unarmoured or braided cables the glands are only suitable for use with fixed apparatus and the cable must be effectively clamped and cleated elsewhere.
7. This cable gland may only be installed when temperature is above -5°C. After completion of the installation, the assembly is then suitable for -60°C to +80°C.

**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 Universal Cable Glands Type: 501/453/UNIV**

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

**Notified Body for EU-Type Examination:** Baseefa 1180 Buxton UK

**EU-type Examination Certificate:** Baseefa06ATEX0057X, ExnR covered on Baseefa 09ATEX0233X

**Notified Body for production:** SGS-Baseefa 1180 Buxton UK

**Harmonized Standards used:** EN 60079-0:2012+A11:2013, EN60079-1:2014, 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



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