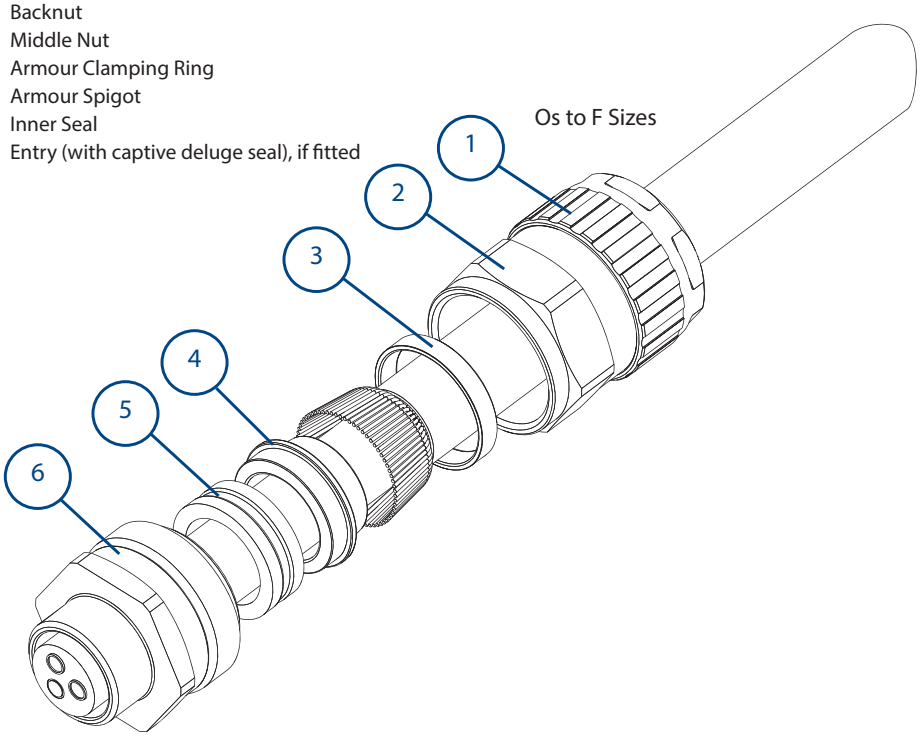
Assembly Instructions for cable gland: 501/453 Exd IIC Gb, Exe IIC Gb, Extb IIIC Db

HAWKE International

AI 303 / Issue T - 03/16

Operating temperature range -60°C +100°C

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



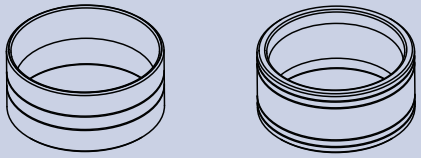
Certification Details

Gland Type: 501/453 Exd IIC Gb, Exe II Gb, Extb IIIC Db
Baseefa06ATEX0056X Ex II 2 GD IP66 CE
IECEx BAS06.0013X
IEx No: 14.0272X
EAC TC RU C-GB.ГБ05.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 Div2 Groups EFG, Class III
CNEx12.3449X

Armour Clamping Ring

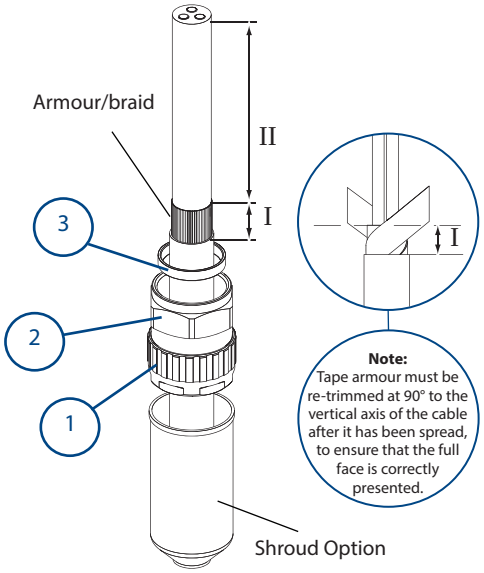
3341 SWA Position

3342 Braid 'X', Flat Steel Wire 'Y', Steel Tape 'Z' Ring Position

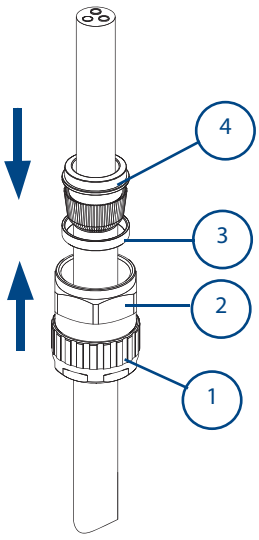


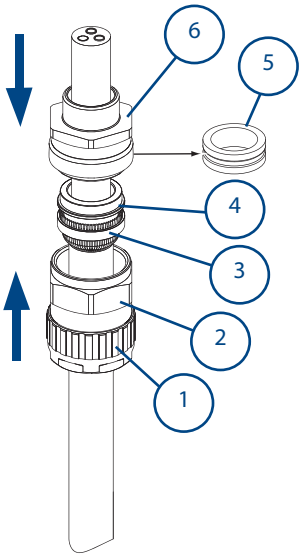
NOTE: Ring may be used in either orientation

Cable Preparation



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 H & J
'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.

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*

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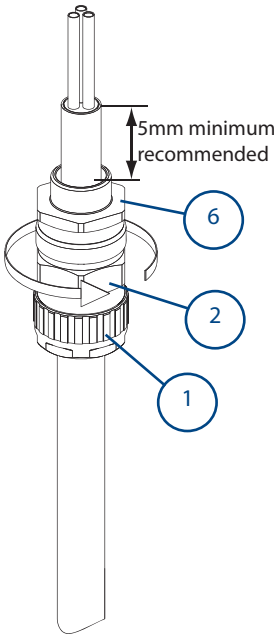
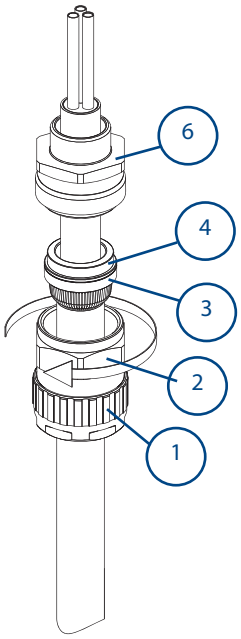


D

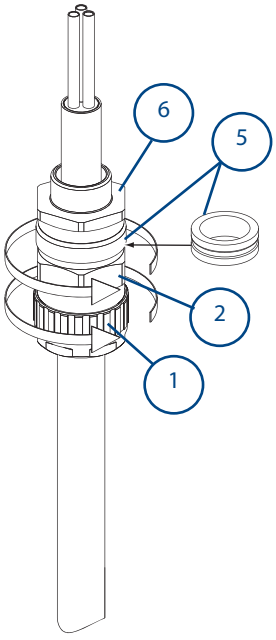
Unless already screwed into the equipment hold the entry ⑥ in position with a spanner/wrench to prevent rotation. Hand tighten the middle nut ② to the entry ⑥ and turn a further half to one full turn with a spanner/wrench.

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 armour spigot ④ and the armour clamping ring ③. If armour/braid not clamped, repeat assembly.



F

Remove entry ⑥ and refit inner seal ⑤, replace entry ⑥ and re-assemble middle nut ② onto the entry component ⑥. Tighten up the middle nut ② using a wrench/spanner until resistance is felt between the seal and cable, then turn the middle nut through a further half a full turn to complete the inner seal.

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. 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.	Entry Thread Size		Cable Acceptance Details									Max Length	Hexagon Dimensions	
			Inner Sheath				Outer Sheath		Standard Steel Wire 'W'	Wire Braid 'X'	Strip / Tape 'Z'			
			Standard Seal		Alternative Seal (S)									
	Metric	NPT	Min.	Max.	Min.	Max.	Min.	Max.					Across Flats	Across Corners
Os	M20 •	½"	3.2	8.0	---	---	5.5	12.0	0.8/1.25	0.2/0.35	0.2 - 0.8	76	24.0	27.7
O	M20 •	½"	6.5	11.9	---	---	9.5	16.0	0.8/1.25	0.2/0.35	0.2 - 0.8	76	24.0	27.7
A	M20	½" - ¾"	10.0	14.3	9.0	13.4	12.5	20.5	0.8/1.25	0.2/0.35	0.2 - 0.8	78	30.0	34.6
B	M25	¾" - 1"	13.0	20.2	9.5	15.4	16.9	26.0	1.25/1.6	0.2/0.45	0.2 - 1.0	83	36.0	41.6
C	M32	1" - 1¼"	19.5	26.5	15.5	21.2	22.0	33.0	1.6/2.0	0.2/0.45	0.2 - 1.4	87	46.0	53.1
C2	M40	1¼" - 1½"	25.0	32.5	22.0	28.0	28.0	41.0	1.6/2.0	0.3/0.45	0.2 - 1.8	94	55.0	63.5
D	M50	1½" - 2"	31.5	42.3/44.4	27.5	34.8	36.0	52.6	2.0/2.5	0.4/0.45	0.2 - 1.8	114	65.0	75.1
E	M63	2" - 2½"	42.5	54.3/56.3	39.0	46.5	46.0	65.3	2.5	0.4/0.45	0.2 - 1.8	110	80.0	92.4
F	M75	2½" - 3"	54.5	65.3/68.2	49.5	58.3	57.0	78.0	2.5	0.4/0.45	0.2 - 1.8	115	95.0	109.6

• 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.

CABLE GLAND SELECTION TABLE

Size Ref.	Entry Thread Size		Cable Acceptance Details					Max Length	Hexagon Dimensions	
			Inner Sheath		Outer Sheath		Steel Wire Armour/ Tape/Braid			
	Metric	NPT	Min.	Max.	Min.	Max.			Across Flats	Across Corners
G	M80	3½"	67.0	73.0	75.0	89.5	#	114	106.4	123.0
H	M90	3½"	67.0	77.6	75.0	89.5	#	114	115.0	132.8
J	M100	4"	75.0	91.6	88.0	104.5	#	114	127.0	146.7
* K	M110	4"	91.9	95.9	104.7	107.7	#	132.5	150.0	168.0

\# Dedicated armour clamping rings are fitted to order.

* Industrial gland only.

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 +100°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 +100°C.

EC Declaration of Conformity in accordance with European Directive 94/9/EC (until 19th April 2016) and
EU Declaration of Conformity in accordance with European Directive 2014/34/EU (from 20th April 2016)
Manufacturer: Hawke International
Address: Oxford Street West, Ashton-under-Lyne, OL7 0NA, United Kingdom.

Equipment: Group II Compression Cable Glands Type: 501/453 Dedicated

Provisions of the Directive fulfilled by the Equipment: Group II Category 2GD Exe IIC Gb, Exd IIC Gb, Extb IIIC Db – IP66
Notified Body for EC-Type Examination: SGS-Baseefa 1180 Buxton UK
EC-type Examination Certificate: Baseefa06ATEX0056X
Notified Body for production: SGS-Baseefa 1180 Buxton UK
Harmonised Standards used:
EN 60079-0:2012+A11:2013, 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.

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A. Tindall
Technical Manager

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