# **Assembly Instructions for cable gland:** 501/421

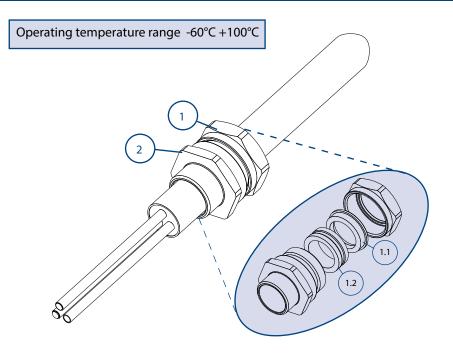








AI 307 / Issue AE - 12/21



## **Certification Details**

Gland Type: 501/421 Ex db IIC Gb, Ex eb II Gb, Ex tb IIIC Db CML19ATEX1167X (Ex) II 2 GD IP66/67 IECEx CML19.0045X CML21UKEX1161X IEx 14.0272X EAC No EA3C RU C-GB.HA91.B.00264/21

c CSA us No: 1015065 Ex db IIC Gc CI Zn1 (A)Ex eb IIC Gb, Zn 21 AEx tb IIC Db

1. Backnut

1.1 **Compression Spigot** 

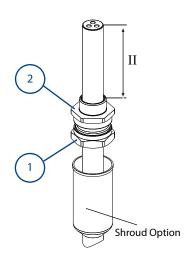
1.2 Seal

Entry



421/2K size only. View for clarity only, do not disassemble ① & ②.

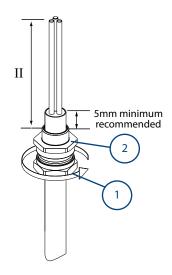
# **Cable Preparation**



Allow sufficient length of cable, II, to suit equipment. If required, fit shroud. Pass cable through the cable gland as shown above.

**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 B

# **Gland Preparation**



Unless already screwed into the equipment, hold the entry ② in position with a spanner/wrench to prevent rotation and tighten the backnut ① using a wrench/spanner until resistance is felt between the seal and cable. Then turn the back nut through a further half to one full turn to complete the inner seal. Locate the shroud over the cable gland, if applicable.

To ease wiring inside the equipment it may be beneficial to strip the outer sheath of the cable as shown above.

**IMPORTANT:** Support the cable to prevent it from twisting

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CABLE GLAND SELECTION TABLE												
Size Ref.	Entry Thread Size		Cable Acceptance Details				mpressed Length	Maximum Length	Hexagon Dimensions			
			Outer Sheath									
		NPT	Standard Seal		Alternative Seal (S)		Compress Length	Maxi Ler	Across	Across		
	Metric		Min.	Max.	Min.	Max.	O		Flats	Corners		
2K	M16		3.2	8.0			23.5	39	19.0	21.2		
Os	M20°	1/2"	3.2	8.0			23.8	38	24.0	26.5		
0	M20°	1/2"	6.5	11.9			23.8	39	24.0	26.5		
Α	M20	1/2" - 3/4"	10.0	14.3	9.0	13.4	24.8	38	30.0	32.5		
В	M25	3⁄4" - 1"	13.0	20.2	9.5	15.4	25.8	41	36.0	39.5		
С	M32	1" - 11/4"	19.5	26.5	15.5	21.2	28.2	43	46.0	50.5		
C2	M40	11⁄4" - 11⁄2"	25.0	32.5	22.0	28.0	29.5	44	55.0	60.6		
D	M50	1½" - 2"	31.5	42.3/44.4	27.5	34.8	40.4	61	65.0	70.8		
Е	M63	2" - 2½"	42.5	54.3/56.3	39.0	46.5	38.2	59	80.0	88.0		
F	M75	2½" - 3"	54.5	65.3/68.2	49.5	58.3	40.5	60	95.0	104.0		
G	M80	3½"	67.0	73.0			41.0	54	106.4	115.0		
Н	M90	3½"	67.0	77.6			41.0	54	115.0	130.0		
J	M100	4"	75.0	91.6			41.0	54	127.0	142.0		

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.

#### **IMPORTANT NOTE:**

When used in Increased Safety applications, these cable glands may be used with braided cables where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated within the enclosure. Braided cable is classed as unarmoured cable in the EN/IEC 60079 series standards for Exe applications.

### **SCHEDULE OF LIMITATIONS - ATEX / IECEx:**

- The cable glands are only suitable for use with fixed apparatus, the cable for which must be effectively clamped and cleated elsewhere.
- This cable gland has an operating temperature range of  $-60^{\circ}$ C to  $+100^{\circ}$ C.
- 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**

All torque values below were generated on metallic mandrels. For cable, it is recommended that the assembly instructions are followed.

Torque Figures N/m											
Gland Size	Os	0	Α	В	С	C2	D	Е	F		
BacknutTorque	30	30	32.5	47.5	55	65	82.5	97.5	115		

## **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.
- 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.
- 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.
- Must comply with Canadian Electrical Code and National Electric Code requirements for threaded entries.
- 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.
- 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
- 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.

EU Declaration of Conformity in accordance with European Directive 2014/34/EU and UK Statutory Instrument 2016/1107

Manufacturer: Hawke International, Oxford Street West, Ashton-under-Lyne, OL7 0NA, United Kingdom

Provisions of the Directive fulfilled by the Equipment: Group II Category 2GD Ex db eb IIC Gb, Ex nR IIC Gc, Ex tb IIIC Db – IP66 67 Harmonized Standards used: EN 60079-0:2018, EN60079-1:2014, EN60079-7:2015+A1:2018, EN60079-15:2019, EN60079-31:2014

Notified Body for EU-Type Examination: CML B.V. 2776 Amsterdam, NLD EU-type Examination Certificate: CML18ATEX1167X, CML19ATEX4507X (Ex nR) EU-type Examination Certificate: Cl Notified Body for production: 0598

Approved Body for UK-Type Examination: CML B.V. 2503 Chester, UK UK-type Examination Certificate: CMI Approved Body for production: 1180 tion Certificate: CML21UKEX1161X, CML21UKEX4133X (Ex nR)

Andrew Reid

Technical Manager

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.