Assembly Instructions for cable gland: 501/453/UNIV

Cable Preparation

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

Gland Preparation

1. Backnut
2. Middle Nut
3. Reversible Armour Clamping Ring (RAC)
4. Diaphragm Seal / Armour Spigot
4.1 Cable Guide
5. Entry (with captive deluge seal)

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

Reversible Armour Clamping Ring (RAC)

General identification ring orientation for:

<table>
<thead>
<tr>
<th>Position</th>
<th>Ring</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SWA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flat Steel Wire ‘Y’</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Steel Tape ‘Z’</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

Certification Details

Gland Type: 501/453/UNIV
Exdib IIC Gb / Exeb IIC Gb / ExnR IIC Gc / Extb IIIC Db
Baseefa06ATEX0057X II 2 / 3G IP66
Baseefa09ATEX0233X II 2 / 3G IP66
IECEx BAS06.0014X
Ex 14.0272X
EAC TC RU C-Gb/T605.8.00750
c CSA us No: 1015065
Class 1 Zone 1 AExd IIC, AExe II, Zone 21 AExdD
Class 1 Div 2 ABCD, Class II Div 2 Groups EFG, Class III CNEEx12.3452X

Images are for illustration purposes only.
Product supplied may differ slightly from that shown.
**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.
- **Earthing tag**, to provide an external armour / braid bonding point.
- **Serrated washer**, to dampen any vibrations that may loosen the locknut or cable gland assembly.

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**CABLE GLAND SELECTION TABLE**

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Entry Thread</th>
<th>Inner Sheath</th>
<th>Outer Sheath</th>
<th>Armour Braid</th>
<th>Compressed Length</th>
<th>Maximum Length</th>
<th>Hexagon Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metric</td>
<td>Min.</td>
<td>Max.</td>
<td>Min.</td>
<td>Max.</td>
<td>Orientation 1</td>
<td>Orientation 2</td>
</tr>
<tr>
<td>Os</td>
<td>M20*</td>
<td>3.5</td>
<td>8.1</td>
<td>5.5</td>
<td>12.0</td>
<td>0.8/1.25</td>
<td>0/0.8</td>
</tr>
<tr>
<td>O</td>
<td>M20</td>
<td>6.5</td>
<td>11.4</td>
<td>9.5</td>
<td>16.0</td>
<td>0.8/1.25</td>
<td>0/0.8</td>
</tr>
<tr>
<td>A</td>
<td>M20</td>
<td>8.4</td>
<td>14.3</td>
<td>12.5</td>
<td>20.5</td>
<td>0.8/1.25</td>
<td>0/0.8</td>
</tr>
<tr>
<td>B</td>
<td>M25</td>
<td>11.1</td>
<td>19.7</td>
<td>16.9</td>
<td>26.0</td>
<td>1.25/1.6</td>
<td>0/0.7</td>
</tr>
<tr>
<td>C</td>
<td>M32</td>
<td>17.6</td>
<td>26.5</td>
<td>22.0</td>
<td>33.0</td>
<td>1.6/2.0</td>
<td>0/0.7</td>
</tr>
<tr>
<td>C2</td>
<td>M40</td>
<td>23.1</td>
<td>32.5</td>
<td>28.0</td>
<td>41.0</td>
<td>1.6/2.0</td>
<td>0/0.7</td>
</tr>
<tr>
<td>D</td>
<td>M50</td>
<td>28.9</td>
<td>44.4</td>
<td>36.0</td>
<td>52.6</td>
<td>1.8/2.5</td>
<td>0/1.0</td>
</tr>
<tr>
<td>E</td>
<td>M63</td>
<td>39.9</td>
<td>56.3</td>
<td>46.0</td>
<td>65.3</td>
<td>1.8/2.5</td>
<td>0/1.0</td>
</tr>
<tr>
<td>F</td>
<td>M75</td>
<td>50.5</td>
<td>65.3</td>
<td>57.0</td>
<td>78.0</td>
<td>1.8/2.5</td>
<td>0/1.0</td>
</tr>
</tbody>
</table>

* 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.

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

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**Diagram notes:**

- **D** Hold the entry \( \Theta \) in position with a spanner / wrench to prevent rotation. Hand tighten the middle nut \( \Theta \) to the entry \( \Theta \) 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 \( \Theta \) and visually inspect that the armour / braid has been successfully clamped between the diaphragm seal / armour spigot \( \Theta \) and the armour clamping ring \( \Theta \). If armour / braid not clamped, repeat assembly.

- **F** Reassemble middle nut \( \Theta \) onto the entry component \( \Theta \). Tighten up the middle nut \( \Theta \) until hand tight, then using a wrench / spanner, turn the nut through 1/4 turn. Tighten the backnut \( \Theta \) to form a seal around the cable, then tighten a further full turn using a wrench / spanner. Ensure that the middle nut \( \Theta \) does not rotate when tightening the backnut \( \Theta \).

- **5mm minimum recommended**

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**AI 300 - Issue W / Page 2 of 3**
**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 IEE45 / IEC 600092-353 Standards, or certified equivalent), for use on Shipboards and Offshore Rigs / Platforms.


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.

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**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 IIC Db, ExmR 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  

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