A: Component Parts

B: Cable Preparation

Slide shroud (if included), backnut ☻, middlenut ☻ and armour clamp ring ☻ onto cable.
Confirm orientation of armour clamp ring is correct (see table below).
Cut cable length, strip outer sheath and cut armour to lengths as shown in table below.

<table>
<thead>
<tr>
<th>Strip Lengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dim</td>
</tr>
<tr>
<td>------</td>
</tr>
<tr>
<td>x</td>
</tr>
<tr>
<td>y</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Armour Clamp Ring Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gland Size</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>Os-A</td>
</tr>
<tr>
<td>B</td>
</tr>
<tr>
<td>C-C2</td>
</tr>
<tr>
<td>D-F</td>
</tr>
</tbody>
</table>

Tape Armour
After tape is spread, ensure ends are trimmed at 90° as shown
C: Installing Cable Gland

STEP 1: Fit Armour To Spigot
Slide spigot ③ over cable.
Push armour/braid up to spigot shoulder.
Slide clamping ring ④ up to the armour/braid by hand.

STEP 2: Prepare to Clamp Armour/Braid
Ensure inner seal ② is removed from assembly.
Slide Entry ① over cable.

STEP 3: Clamp Armour/Braid
Slide middlenut ⑤ up to entry and hand tighten.
If not already screwed into equipment, grip the entry ① with a spanner/wrench.
Use a second spanner/wrench to tighten half to three quarters of a turn.

NOTE: Support the cable to prevent it twisting. To aid wiring inside the enclosure, it may be beneficial to strip the inner sheath as shown above.

STEP 4: Inspect Armour/Braid
Unscrew the middlenut ⑤. The armour clamp ring ④ should now be locked in place.
Visually inspect that the armour/braid has been successfully clamped between the spigot ③ and the armour clamp ring ④.
If clamping is not satisfactory, repeat step 3.
STEP 5: Install inner seal
Remove entry ① and refit inner seal ②. Replace entry ① to enclosure. If required, use the appropriate IP washer.

STEP 6: Compress Inner Seal
With inner seal properly seated into the entry, tighten up the middle nut by hand. Using a wrench/spanner tighten a further 1-2 turns until fully tight.

STEP 7: Install Backnut
Tighten the backnut ⑤ until a seal is formed around the cable. Use a wrench/spanner to grip the middle nut ⑤. While preventing the middle nut ⑤ turning, use a second wrench to apply one further full turn to the backnut ⑥.

STEP 8: Inspect Backnut
Use the middle nut ⑤ guide as an indication that the backnut ⑥ is in the correct position to suit cable diameter. A diameter scale below is provided to assist this process. Slide shroud over cable gland if applicable.
**Technical Information**

**501 453 RAC X**

**TECHNICAL DATA**

- **Cable Gland Type:** 501 453 RAC X
- **Equipment Type:** Group II Compression Cable Glands
- **Ingress Protection:** IP66, IP67, IP68*, NEMA 4X
- **Operating Temp:** -60°C to +100°C

**CERTIFICATION DETAILS**

- Ex db IIC Gb / Ex tb IIC Db / Ex tb IIIC Db
- **Class I Div 2 ABCD, Class II Div 2 EFG, Class III**
- **CSA:** No1015065
- **EAC:** Pending
- **IEx:** 14.0272X
- **IECEx:** CML19ATEX1167X

**CABLE GLAND SELECTION TABLE**

<table>
<thead>
<tr>
<th>Metric</th>
<th>Entry Thread Size</th>
<th>Standard Seal</th>
<th>Inner Sheath</th>
<th>Alternative Seal</th>
<th>Stee Wire Armour / Tape/Braid</th>
<th>Compressed Length</th>
<th>Maximum Length</th>
<th>Hexagon Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>O</td>
<td>M20 * 1/4”</td>
<td>3.2</td>
<td>8.0</td>
<td>---</td>
<td>5.5</td>
<td>12.0</td>
<td>0.8/1.25</td>
<td>0.8/0.8</td>
</tr>
<tr>
<td></td>
<td>O</td>
<td>6.5</td>
<td>11.9</td>
<td>9.0</td>
<td>9.5</td>
<td>16.0</td>
<td>0.8/1.25</td>
<td>0.8/0.8</td>
</tr>
<tr>
<td>A</td>
<td>M20 1/2” - 3/4”</td>
<td>10.0</td>
<td>14.3</td>
<td>9.0</td>
<td>13.4</td>
<td>20.5</td>
<td>0.8/1.25</td>
<td>0.8/0.8</td>
</tr>
<tr>
<td>B</td>
<td>M25 1/4” - 1”</td>
<td>13.0</td>
<td>20.2</td>
<td>9.5</td>
<td>15.4</td>
<td>16.9</td>
<td>1.25/1.6</td>
<td>0.7/0.7</td>
</tr>
<tr>
<td>C</td>
<td>M32 1” - 1.5”</td>
<td>19.5</td>
<td>26.5</td>
<td>15.5</td>
<td>21.2</td>
<td>22.0</td>
<td>1.6/2.0</td>
<td>0.7/0.7</td>
</tr>
<tr>
<td>D</td>
<td>M40 11/4” - 11/2”</td>
<td>25.0</td>
<td>32.5</td>
<td>22.0</td>
<td>28.0</td>
<td>28.0</td>
<td>1.6/2.0</td>
<td>0.7/0.7</td>
</tr>
<tr>
<td>E</td>
<td>M50 1 1/2” - 2”</td>
<td>31.5</td>
<td>42.3/44.4</td>
<td>27.5</td>
<td>34.8</td>
<td>36.0</td>
<td>1.8/2.5</td>
<td>0.7/0.7</td>
</tr>
<tr>
<td>F</td>
<td>M63 2” - 2 1/2”</td>
<td>42.5</td>
<td>54.3/56.3</td>
<td>39.0</td>
<td>46.5</td>
<td>46.0</td>
<td>1.8/2.5</td>
<td>0.7/0.7</td>
</tr>
<tr>
<td>G</td>
<td>M75 2 1/2” - 3”</td>
<td>54.5</td>
<td>65.3/68.2</td>
<td>49.5</td>
<td>58.3</td>
<td>57.0</td>
<td>1.8/2.5</td>
<td>0.7/0.7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Orientation 1</th>
<th>Orientation 2</th>
<th>Compressed Length</th>
<th>Maximum Length</th>
<th>Hexagon Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>52.0</td>
<td>81.0</td>
<td>24.0</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>52.0</td>
<td>81.0</td>
<td>24.0</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>58.3</td>
<td>95.0</td>
<td>30.0</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
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<td>95.0</td>
<td>36.0</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>64.0</td>
<td>98.0</td>
<td>46.0</td>
</tr>
<tr>
<td>6</td>
<td>2</td>
<td>68.3</td>
<td>105.0</td>
<td>55.0</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>73.0</td>
<td>130.0</td>
<td>60.0</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

Hawke offer the following accessories to enable correct sealing and ground of cable gland.

- **Shroud:** For additional corrosion protection
- **Locknut:** To secure gland into position
- **Sealing Washer:** For additional ingress protection
- **Earth Tag:** For external bonding point
- **Serrated Washer:** To prevent vibration loosening locknuts

**INSTALLATION NOTES**

1. All cable glands must be installed by a suitably trained and competent individual.
2. Entry threads are in accordance with Metric BS3643 or NPT B1.20.1
3. Installer must check material compatibility with enclosure and environment.
4. To maintain IP66/IP67, Hawke certified sealing washer or other approved sealing method must be used.
5. Sealing face surface must be smooth and free from damage.
6. Wall thicknesses depend on thread length or retention type (locknut etc.)
7. Exd must maintain the requirements of IEC/EN 60079-1

**CABLE GLAND SELECTION TABLE**

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Across Flats</th>
<th>Across Corners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

**SCHEDULE OF LIMITATIONS**

1. These cable glands are designed for use with unarmoured or appropriate Steel Tape Armour (STA), Steel Wire Armour (SWA), and appropriate braided cable. These cables must be with 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. Entry threads are in accordance with Metric BS3643 or NPT B1.20.1
3. Installer must check material compatibility with enclosure and environment.
5. Hawke offer the following accessories to enable correct sealing and ground of cable gland.
6. Only used with unarmored or braided cables are only suitable for use with cables glands the maximum cable inner sheath diameter is limited to 10.9mm.

**EU Declaration of Conformity**

Provisions of the Directive fulfilled by the Equipment:

- Group II Category 2GD Ex eb IIC Gb, Ex tb IIC Db - IP66/IP67

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

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

**Harmonised Standards used:** EN 60079-0:2018, EN60079-1:2014, EN60079-7:2015, EN60079-31:2014

On behalf of the aforementioned 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

**www.ehawke.com**

**For EAC countries contact**

**MACDEM**

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A. Tindall
Technical Manager

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A member of the Hawke Group of Companies

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