Cable Glands - Group II
1 Unique Rear Sealing System
This arrangement offers IP66, IP67, IP68 (30 metres for 7 days), NEMA 4X and Deluge (DTS01) Ingress Protection. The seal is manufactured from a silicone material, has LSFZH properties, is ozone and oil resistant and is suitable for use at both high and low temperatures. The Rear Sealing System covers the entire range of cable diameters with out the need for special seals and the cable acceptance range is stamped on the backnut for ease of inspection. The backnut can be hand tightened, with only one further spanner turn required to ensure IP66, IP67, IP68 and NEMA 4X.

2 Unique Inspectable Compound Chamber
The revolutionary Hawke compound chamber has been designed with inspectability in mind. The pre-lubricated compound chamber can be removed once the compound has fully cured, allowing full inspection of the flameproof seal. If required, minor surface voids can be repaired in-situ. This unique patented compound chamber now forms the compound as well as providing a flameproof seal.

3 Zero Cable Damage
The unique Hawke diaphragm sealing system does not damage cable which exhibit 'Cold Flow' characteristics. The diaphragm type seal is the only elastomeric seal to comply fully with IEC/EN 60079-14 and is therefore suitable on effectively filled 'cold flow' cables which would otherwise require barrier style cable glands. The Hawke diaphragm seal is also unique in that it is the only flameproof elastomeric seal that can be visually inspected in operation – a real benefit to inspectors.

4 The Original Reversible Armour Clamp
The original RAC clamping system was invented by Hawke over 10 years ago and is a well established proven performer in all conditions. Simply by reversing the clamping ring, the cable gland can adjust to accommodate all types of cable armour or braid. Unlike many of our competitors, the correct stamping orientation is marked clearly with the armour size and backed up by the presence of a groove in the component. Hawke’s RAC clamping system is also fully Inspectable when positioned on the cable.

5 Inspectable Deluge Seal
Hawke’s Inspectable deluge seal offers IP66 and IP67 sealing and is certified as ‘deluge proof’ by ITS in accordance with DTS01. Indeed, Hawke’s deluge seal is so good that it exceeds the expectations of the offshore industry by not only preventing ingress into the equipment, but also into the cable gland, which prevent corrosion of the cable armour.
Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe
Dual Certified ATEX / IECEx

Application
The 501/421 cable gland provides a seal on the outer cable sheath and is intended for use on non-armoured elastomer and plastic insulated cables. The cable gland is dual certified Exd and Exe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.

Technical Data
- Flameproof Exd and Increased Safety Exe II 2 GD ExdT A21.
- Certificate No’s: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 307.
- Alternative certification options available:
  - Exe II
  - BR-Exd IIC / Exe II
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval
  - KTL – Approved for use in Korea

Features
- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information
Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

CABLE GLAND SELECTION TABLE

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Entry Thread Size</th>
<th>Metric NPT Standard or Option</th>
<th>Cable Acceptance Details</th>
<th>Hexagon Dimensions</th>
<th>Across Flats</th>
<th>Across Corners</th>
</tr>
</thead>
<tbody>
<tr>
<td>2K</td>
<td>M16</td>
<td></td>
<td>Standard Seal</td>
<td>'G'</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Os</td>
<td>M20²</td>
<td>1/4&quot; or 5/8&quot;</td>
<td>Min. Max. Min. Max.</td>
<td>23.5</td>
<td>19.0</td>
<td>21.2</td>
</tr>
<tr>
<td>O</td>
<td>M20³</td>
<td>1/2&quot; or 3/4&quot;</td>
<td>23.8</td>
<td>24.0</td>
<td>26.5</td>
<td></td>
</tr>
<tr>
<td>A</td>
<td>M20²</td>
<td>7/16&quot; or 1/2&quot;</td>
<td>24.8</td>
<td>30.0</td>
<td>32.5</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>M25</td>
<td>1&quot; or 5/8&quot;</td>
<td>25.8</td>
<td>36.0</td>
<td>39.5</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>M32</td>
<td>1/4&quot; or 1&quot;</td>
<td>28.2</td>
<td>46.0</td>
<td>50.5</td>
<td></td>
</tr>
<tr>
<td>C²</td>
<td>M40</td>
<td>1/2&quot; or 1 1/4&quot;</td>
<td>29.5</td>
<td>55.0</td>
<td>60.6</td>
<td></td>
</tr>
<tr>
<td>D</td>
<td>M50</td>
<td>7/16&quot; or 1/2&quot;</td>
<td>30.8</td>
<td>65.0</td>
<td>70.8</td>
<td></td>
</tr>
<tr>
<td>E</td>
<td>M60</td>
<td>1/2&quot; or 5/8&quot;</td>
<td>31.8</td>
<td>65.0</td>
<td>78.0</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>M75</td>
<td>3/8&quot; or 7/16&quot;</td>
<td>32.8</td>
<td>80.0</td>
<td>88.0</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>M80</td>
<td>1/2&quot; or 5/8&quot;</td>
<td>33.8</td>
<td>100.0</td>
<td>110.0</td>
<td></td>
</tr>
<tr>
<td>H</td>
<td>M90</td>
<td>3/8&quot; or 7/16&quot;</td>
<td>34.8</td>
<td>110.0</td>
<td>130.0</td>
<td></td>
</tr>
<tr>
<td>J</td>
<td>M100</td>
<td>1&quot; or 5/8&quot;</td>
<td>35.8</td>
<td>120.0</td>
<td>140.0</td>
<td></td>
</tr>
</tbody>
</table>

1 Smaller value is applicable when selecting reduced NPT entry option.
2 Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

Ordering Information
Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

Cable Gland Type | Size | Thread (Optional) | Cable Gland Type | Size | Thread (Optional) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>501/421</td>
<td>C</td>
<td>M32</td>
<td>501/421</td>
<td>C</td>
<td>1 1/4&quot; NPT S</td>
</tr>
</tbody>
</table>

All dimensions in millimetres (except * where dimensions are in inches). 2K - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, 2 mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.
### Technical Data
- **Flameproof Exd and Increased Safety Exe II 2 GD Extd A21.**
- **Certificate No:** Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- **Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- **Construction and Test Standards:** IEC/EN 60079-0, IEC/EN 60079-1, IEC/EN 60079-7, IEC/EN 61241-0 and IEC/EN 61241-1.
- **Ingress Protection:** IP66, IP67 and IP68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- **Deluge Protection to DTS01.**
- **Operating Temperature Range:** -60°C to +100°C.
- **Assembly Instruction Sheet:** AI 306.
- **Alternative certification options available:**
  - Exe II
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval

### Features
- **Provides superior cable retention to standard unarmoured cable glands, with a seal at two independent points.**
- **When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the outer sheath pass into the enclosure. The braid must then be suitably terminated inside the enclosure.**
- **Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.**
- **Brass NPT entries are nickel plated as standard.**

### Ordering Information
Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

### Cable Gland Selection Table

<table>
<thead>
<tr>
<th>Size</th>
<th>Metric</th>
<th>NPT * Standard or Optional</th>
<th>Cable Acceptance Details</th>
<th>Hexagon Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Os</td>
<td>M20²</td>
<td>½&quot;</td>
<td>Standard Seal</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>M20²</td>
<td>½&quot;</td>
<td>Alternative Seal (S)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A</td>
<td>⅜&quot; or ½&quot;</td>
<td>Min.</td>
<td>Max.</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>⅝&quot;</td>
<td>13.0</td>
<td>20.2</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>⅞&quot;</td>
<td>19.0</td>
<td>26.5</td>
</tr>
<tr>
<td></td>
<td>D</td>
<td>1¼&quot; or 1¾&quot;</td>
<td>25.0</td>
<td>32.5</td>
</tr>
<tr>
<td></td>
<td>E</td>
<td>2&quot; or 1½&quot;</td>
<td>31.5</td>
<td>44.4</td>
</tr>
<tr>
<td></td>
<td>F</td>
<td>2¼ or 2²&quot;</td>
<td>42.5</td>
<td>56.3</td>
</tr>
<tr>
<td></td>
<td>G</td>
<td>3&quot; or 2½&quot;</td>
<td>54.5</td>
<td>68.2</td>
</tr>
<tr>
<td></td>
<td>H</td>
<td>3¼&quot;</td>
<td>67.0</td>
<td>73.0</td>
</tr>
<tr>
<td></td>
<td>J</td>
<td>4&quot;</td>
<td>75.0</td>
<td>91.6</td>
</tr>
</tbody>
</table>

All dimensions in millimetres (except * where dimensions are in inches). Os - F size metric entry threads are 1.5mm pitch as standard, 15mm length of thread. For G size glands and above, a 2mm pitch is supplied as standard, 20mm length of thread (1.5mm pitch with 15mm length of thread can be supplied) please specify when ordering.

1. Smaller value is applicable when selecting reduced NPT entry option.
2. Sizes Os and O are available with an M16 thread size. For O size with M16 thread, the maximum cable outer sheath diameter is 10.9mm

### Application
The 501/423 cable gland provides two independent seals on non-armoured elastomer and plastic insulated cables. The first is a flameproof seal on the inner or outer cable sheath, with an additional IP seal on the outer sheath. The cable gland is dual certified Exd and Exe and is suitable for installation in Zone 1 (21) and Zone 2 (22) hazardous areas.
Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe
Dual Certified ATEX / IECEx

Application
• Outdoor or indoor use.
• For use with single wire armour W, wire braid X, steel tape armour Z, elastomer and plastic insulated cables.
• See technical section for installation rules and regulations.

Technical Data
• Flameproof Exd and Increased Safety Exe II 2 GD ExdA21.
• Certificate No’s: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
• Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
• Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
• Deluge protection option available, contact Hawke Technical Sales for details.
• Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
• Brass NPT entries are nickel plated as standard.

Features
• Provides armour clamping using one clamping arrangement for all armour / braid types.
• Provides a seal on the cables inner sheath.
• Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
• Deluge protection option available, contact Hawke Technical Sales for details.
• Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
• Brass NPT entries are nickel plated as standard.

Cable Gland Type

<table>
<thead>
<tr>
<th>Size</th>
<th>Thread</th>
<th>(Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>501/453/RAC</td>
<td>C</td>
<td>M32</td>
</tr>
<tr>
<td>501/453/RAC</td>
<td>C</td>
<td>1 ½ NPT</td>
</tr>
<tr>
<td>501/453/RAC</td>
<td>C</td>
<td>M32</td>
</tr>
<tr>
<td>501/453/RAC</td>
<td>C</td>
<td>1 ½ NPT</td>
</tr>
</tbody>
</table>
**Cable Glands**

**Hazardous Area**

Flameproof Exd & Increased Safety Exe & Restricted Breathing ExnR Dual Certified ATEX / IECEx

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### Technical Data

- Flameproof Exd and Increased Safety Exe II 2 GD ExtD A21 and Restricted Breathing ExnR II 3G.
- Certificate No's: For sizes Os to F: Baseefa06ATEX0057X and IECEx BAS 06.0014X. For sizes G to J: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 300 (Sizes Os to F) and AI 303 (Sizes G to J).

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### Features

- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a diaphragm seal on inner sheath of cable which will not damage cables that exhibit 'Cold Flow' characteristics.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

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### Alternative Reversible Armour Clamping Rings (RAC)

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Steel Wire Armour / Braid / Tape</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation 1</td>
<td>Orientation 2</td>
</tr>
<tr>
<td>B</td>
<td>0.9 - 1.25</td>
</tr>
<tr>
<td>C</td>
<td>1.2 - 1.6</td>
</tr>
<tr>
<td>C2</td>
<td>1.2 - 1.6</td>
</tr>
<tr>
<td>D</td>
<td>1.45 - 1.8</td>
</tr>
<tr>
<td>E</td>
<td>1.45 - 1.8</td>
</tr>
<tr>
<td>F</td>
<td>1.45 - 1.8</td>
</tr>
</tbody>
</table>

---

### Ordering Information

Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information.

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>(Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>501/453/UNIV</td>
<td>C</td>
<td>M32</td>
<td>AR</td>
</tr>
</tbody>
</table>

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**Connection Solutions**

www.ehawke.com

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**UPD 170610**
Cable Glands

Hazardous Area

Flameproof Exd & Increased Safety Exe
Dual Certified ATEX / IECEx

Application

- Outdoor or indoor use.
- For use with single wire armour 'W', wire braid 'X', steel tape armour 'Z', elastomer and plastic insulated cables with a lead inner sheath.
- See technical section for installation rules and regulations.

¹ Smaller value is applicable when selecting reduced NPT entry option.
² Size O is available with an M16 thread size. For O size with M16 thread, the maximum cable inner sheath diameter is 10.9mm

Ordering Information

Format for ordering is as follows: Standard Inner Seal + Bond, add suffix L to ordering information. Alternative Inner Seal + Bond, add suffix K to ordering information. Alternative Clamping Ring (AR), add suffix AR to ordering information.

Features

- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a seal and an electrical bond to the cables lead inner sheath.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Deluge protection option available, contact Hawke Technical Sales for details.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

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HPG01

UPD 170610
Technical Data
- Flameproof Exd and Increased Safety Exe II 2 GD ExtD A21.
- Certificate No’s: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01 (Deluge Seal Optional).
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 312.
- Alternative certification options available:
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval

Features
- Provides a barrier seal to the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
- The required number of holes for the cores are punched in the seal by means of a special tool to suit the core size.
- Provides armour clamping using one clamping arrangement for all armour / braid types.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Deluge protection option available, contact Hawke Technical Sales for details.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Application
- Outdoor or indoor use.
- For particular use with:
  - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
  - Cables that exhibit ‘Cold Flow’ characteristics.
  - Enclosures for gas group IIC, under 2 litres in volume and containing an ignition source.
  - Enclosures for gas groups IIA or IIB, which are greater than 2 litres in volume and contain an ignition source.
- See technical section for installation rules and regulations.

Connection Solutions
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ICG 623

Technical Data

- Flameproof Exd and Increased Safety Exe II 2 GD Exd A21.
- Certificate No's: Basefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 305.
- Alternative certification options available:
  - Exe II
  - Exd IIC / Exe II
  - GOST R-Exe IIC
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval

Features

- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- The compound chamber may be separated from the cured compound to ensure that the chamber has been effectively filled. If required, external voids can be repaired.
- Provides a cable retention seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information

Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICG 623</td>
<td>C</td>
<td>M32</td>
</tr>
</tbody>
</table>

Connection Solutions

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UPD 090610

87
Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe & Restricted
Dual Certified ATEX / IECEx

ICG 653/UNIVERSAL

Technical Data
• Flameproof Exd and Increased Safety Exe II 2 GD Extd A21.
• Certificate No’s: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
• Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
• Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
• Deluge Protection to DTS01.
• Operating Temperature Range: -60°C to +80°C.
• Assembly Instruction Sheet: AI 301.
• Alternative certification options available:
  - Exe II
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval

Features
• Provides a barrier seal to the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
• Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
• The compound chamber may be separated from the cured compound to ensure that the chamber has been effectively filled. If required, external voids can be repaired.
• Provides armour clamping, using one clamping arrangement for all armour / braid types.
• Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
• Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
• Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
• Brass NPT entries are nickel plated as standard.

Application
• Outdoor or indoor use.
• For use with single wire armour ‘W’, wire braid ‘X’, steel tape armour ‘Z’, elastomer and plastic insulated cables.
• For particular use with:-
  - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
  - Cables that exhibit ‘Cold Flow’ characteristics.
  - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
• See technical section for installation rules and regulations.

Ordering Information
Format for ordering is as follows: Alternative Clamping Ring (AR), add suffix AR to ordering information.

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>(OPTIONAL)</th>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>(OPTIONAL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICG 653/UNIV</td>
<td>C</td>
<td>M32</td>
<td>AR</td>
<td>ICG 653/UNIV</td>
<td>C</td>
<td>1 1⁄4&quot;NPT</td>
<td>AR</td>
</tr>
</tbody>
</table>

Two part sealing compound and assembly instructions are supplied with the cable gland.

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SELECTION TABLE

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Steel Wire Armour / Braid / Tape</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>Orientation 1</td>
</tr>
<tr>
<td>0.9 - 1.25</td>
<td>0.5 - 0.9</td>
</tr>
<tr>
<td>C</td>
<td>1.2 - 1.6</td>
</tr>
<tr>
<td>C2</td>
<td>1.2 - 1.6</td>
</tr>
<tr>
<td>D</td>
<td>1.45 - 1.8</td>
</tr>
<tr>
<td>E</td>
<td>1.45 - 1.8</td>
</tr>
<tr>
<td>F</td>
<td>1.45 - 1.8</td>
</tr>
</tbody>
</table>
Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe
Dual Certified ATEX / IECEx

Application
- Outdoor or indoor use.
- For use with single wire armour ‘W’, wire braid ‘X’, steel tape armour ‘Z’, elastomer and plastic insulated cables with a lead inner sheath.
- For particular use with:
  - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
  - Cables that exhibit ‘Cold Flow’ characteristics.
  - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area.
- See technical section for installation rules and regulations.

Technical Data
- Flameproof Exd and Increased Safety Exe II 2 GD Exd A21.
- Certificate Nos: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 301 and AI 336.
- Alternative certification options available:
  - Exe II
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan
  - DNV Marine Approval
  - ABS Marine Approval

Features
- Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable.
- Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
- The compound chamber may be separated from the cured compound to ensure that the chamber has been effectively filled. If required, external voids can be repaired.
- Provides armour clamping, using one clamping arrangement for all armour / braid types.
- Provides a seal and an electrical bond on the cables lead inner sheath.
- Provides an outer deluge seal to prevent moisture ingress to the cable armour / braid.
- Provides a cable retention and low smoke and fume, zero halogen seal onto the cables outer sheath.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Ordering Information
Format for ordering is as follows: Standard Inner Seal + Bond, add suffix L to ordering information. Alternative Clamping Ring (AR), add suffix AR to ordering information.

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>Lead (Optional)</th>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>Lead (Optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICG 653/UNIV</td>
<td>C</td>
<td>M32</td>
<td>L AR</td>
<td>ICG 653/UNIV</td>
<td>C</td>
<td>L</td>
<td>1 1/4&quot; NPT AR</td>
</tr>
</tbody>
</table>

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CABLE GLAND SELECTION TABLE

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Os M20</td>
<td>1/2”</td>
<td>8.5</td>
<td>4.0</td>
<td>10.0</td>
<td>6</td>
<td>5.5</td>
<td>12.0</td>
<td>0.8 / 1.25</td>
<td>0.0 / 0.8</td>
<td>67.0</td>
<td>24.0</td>
<td>26.5</td>
</tr>
<tr>
<td>O M20</td>
<td>1/2”</td>
<td>8.5</td>
<td>4.0</td>
<td>10.0</td>
<td>6</td>
<td>9.5</td>
<td>16.0</td>
<td>0.8 / 1.25</td>
<td>0.0 / 0.8</td>
<td>67.0</td>
<td>24.0</td>
<td>26.5</td>
</tr>
<tr>
<td>A M20</td>
<td>3/4” or 1/2”</td>
<td>10.8</td>
<td>7.4</td>
<td>12.5</td>
<td>10</td>
<td>12.5</td>
<td>20.5</td>
<td>0.8 / 1.25</td>
<td>0.0 / 0.8</td>
<td>67.0</td>
<td>30.0</td>
<td>32.5</td>
</tr>
<tr>
<td>B M25</td>
<td>1” or 1/4”</td>
<td>16.2</td>
<td>11.0</td>
<td>18.4</td>
<td>21</td>
<td>16.9</td>
<td>26.0</td>
<td>1.25 / 1.6</td>
<td>0.0 / 0.7</td>
<td>73.6</td>
<td>36.0</td>
<td>39.5</td>
</tr>
<tr>
<td>C M32</td>
<td>1 1/4” or 1”</td>
<td>21.9</td>
<td>14.0</td>
<td>24.7</td>
<td>42</td>
<td>22.0</td>
<td>33.0</td>
<td>1.6 / 2.0</td>
<td>0.0 / 0.7</td>
<td>78.0</td>
<td>46.0</td>
<td>50.0</td>
</tr>
<tr>
<td>C2 M40</td>
<td>1 1/4” or 1/2”</td>
<td>26.3</td>
<td>21.0</td>
<td>29.7</td>
<td>60</td>
<td>28.0</td>
<td>41.0</td>
<td>1.6 / 2.0</td>
<td>0.0 / 0.7</td>
<td>82.4</td>
<td>55.0</td>
<td>60.0</td>
</tr>
<tr>
<td>D M50</td>
<td>2” or 1½”</td>
<td>37.1</td>
<td>27.0</td>
<td>41.7</td>
<td>80</td>
<td>36.0</td>
<td>52.6</td>
<td>1.8 / 2.5</td>
<td>0.0 / 1.0</td>
<td>88.7</td>
<td>65.0</td>
<td>70.8</td>
</tr>
<tr>
<td>E M63</td>
<td>2 1/2” or 2”</td>
<td>47.8</td>
<td>39.0</td>
<td>53.3</td>
<td>100</td>
<td>46.0</td>
<td>65.3</td>
<td>1.8 / 2.5</td>
<td>0.0 / 1.0</td>
<td>92.7</td>
<td>80.0</td>
<td>88.0</td>
</tr>
<tr>
<td>F M75</td>
<td>3” or 2½”</td>
<td>59.0</td>
<td>51.0</td>
<td>64.0</td>
<td>120</td>
<td>57.0</td>
<td>78.0</td>
<td>1.8 / 2.5</td>
<td>0.0 / 1.0</td>
<td>99.4</td>
<td>95.0</td>
<td>104.0</td>
</tr>
</tbody>
</table>

All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

Alternative Reversible Armour Clamping Rings (RAC)

SELECTION TABLE

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Steel Wire Armour / Braid / Tape</th>
<th>Orientation 1</th>
<th>Orientation 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>0.9 - 1.25</td>
<td>0.5 - 0.9</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>1.2 - 1.6</td>
<td>0.6 - 1.2</td>
<td></td>
</tr>
<tr>
<td>C2</td>
<td>1.2 - 1.6</td>
<td>0.6 - 1.2</td>
<td></td>
</tr>
<tr>
<td>B</td>
<td>1.45 - 1.8</td>
<td>1.0 - 1.45</td>
<td></td>
</tr>
<tr>
<td>C</td>
<td>1.45 - 1.8</td>
<td>1.0 - 1.45</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>1.45 - 1.8</td>
<td>1.0 - 1.45</td>
<td></td>
</tr>
</tbody>
</table>

Two part sealing compound and assembly instructions are supplied with the cable gland.
Cable Glands

Hazardous Area

Flameproof Exd & Increased Safety Exe

Dual Certified ATEX / IECEx

Technical Data

- Flameproof Exd and Increased Safety Exe II 2 GD ExdA1.
- Certificate No’s: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +100°C.
- Assembly Instruction Sheet: AI 310.
- Alternative certification options available:
  - GOST R-Exe IIC
  - GOST K- Approved for use in Kazakhstan

Features

- Provides a cable retention seal onto the cables outer sheath.
- When used in Increased Safety applications, this cable gland may be used with braided cable where the braid and the cables outer sheath pass into the enclosure. The braid must be suitably terminated into the enclosure.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

Application

- Outdoor or indoor use.
- For use with non-armoured elastomer and plastic insulated cables installed in conduit.
- See technical section for installation rules and regulations.

Cable Gland Type | Size | Thread  | (OPTIONAL) |
------------------|------|---------|------------|
S01/414          | C    | M32     | S          |

Ordering Information

Format for ordering is as follows: Alternative Seal (S), add suffix S to ordering information.

Cable Gland Type | Size | Thread  | (OPTIONAL) |
------------------|------|---------|------------|
S01/414          | C    | 1 ¼"NPT | S          |

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Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe
Dual Certified ATEX / IECEx

Application
- Outdoor or indoor use.
- For particular use with:
  - Cables that are not effectively filled, compact and/or circular,
    have tape bedding or have hygroscopic fillers.
  - Cables that exhibit ‘Cold Flow’ characteristics.
  - Enclosures for gas group IIC, under 2 litres in volume and
    containing an ignition.
  - Enclosures for gas groups IIA and IIB, which are greater than
    2 litres in volume and contain an ignition source.
- See technical section for installation rules and regulations.

Technical Data
- Flameproof Exd and Increased Safety Exe II 2 GD ExtD A21.
- Certificate No’s: Baseefa06ATEX0056X and IECEx BAS 06.0013X.
- Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas
  Groups IIA, IIB and IIC.
- Construction and Test Standards: IEC/EN 60079-0, IEC/EN 60079-1,
- Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to
  IEC/EN 60529 and NEMA 4X.
- Deluge Protection to DTS01.
- Operating Temperature Range: -60°C to +80°C.
- Assembly Instruction Sheet: AI 309.
- Alternative certification options available:
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan

Features
- Provides a barrier seal between the individual insulated cores
  within the cable and prevents entry of the products of an explosion
  into the cable.
- The required number of holes for the cores are punched in the
  seal by means of a special tool to suit the core size.
- Provides female running coupler for cable gland or conduit entry.
- Manufactured in Brass (standard), Nickel Plated Brass,
  316 Stainless Steel or Aluminium.
- Brass NPT entries are nickel plated as standard.

CABLE GLAND SELECTION TABLE

<table>
<thead>
<tr>
<th>Size Ref.</th>
<th>Male Entry Thread Size</th>
<th>Female Entry Thread Size</th>
<th>‘G’</th>
<th>Hexagon Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metric</td>
<td>NPT Standard or Option</td>
<td>Metric</td>
<td>NPT Standard or Option</td>
</tr>
<tr>
<td>A</td>
<td>M20</td>
<td>¾” or ½”</td>
<td>M20</td>
<td>-</td>
</tr>
<tr>
<td>B</td>
<td>M25</td>
<td>1” or ¾”</td>
<td>M25</td>
<td>-</td>
</tr>
<tr>
<td>C</td>
<td>M32</td>
<td>1¼” or 1”</td>
<td>M32</td>
<td>-</td>
</tr>
</tbody>
</table>

All dimensions in millimetres (except * where dimensions are in inches). Metric entry threads are 1.5mm pitch as standard, 15mm length of thread.

PUNCH TOOL SIZE DETAILS

<table>
<thead>
<tr>
<th>Punch Ref.</th>
<th>No. 1</th>
<th>No. 2</th>
<th>No. 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cores C.S.A.mm²</td>
<td>1.5 - 2.5</td>
<td>4.0 - 6.0</td>
<td>10.0</td>
</tr>
</tbody>
</table>

Ordering Information
Format for ordering is as follows: To obtain punch tool required, refer to tables.

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>Punch Tool Required</th>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Thread</th>
<th>Punch Tool Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>SB 474</td>
<td>C</td>
<td>M32</td>
<td>Punch Tool No.1</td>
<td>SB 474</td>
<td>C</td>
<td>1¼” NPT</td>
<td>Punch Tool No.1</td>
</tr>
</tbody>
</table>
Cable Glands
Hazardous Area
Flameproof Exd & Increased Safety Exe & Restricted
Dual Certified ATEX / IECEx

CSB 656 N

Application
• Outdoor or indoor use.
• For use with conduit incorporating individual insulated conductors.
• For particular use with:-
  - Cables that are not effectively filled, compact and/or circular, have tape bedding or have hygroscopic fillers.
  - Cables that exhibit ‘Cold Flow’ characteristics.
  - Enclosures containing an ignition source in gas group IIC areas or containing an ignition source in a Zone 1 area and exceeding 2 litres in volume.
• See technical section for installation rules and regulations.

Features
• Provides a barrier seal between the individual insulated cores within the cable and prevents entry of the products of an explosion into the cable or conduit.
• Seals conductors at entry to enclosure via conduit or enables an existing cable gland to be converted to a barrier type cable gland.
• The device is fitted with a simple compound filled chamber which permits packing around individual insulated conductors.
• Assembly of the cable gland compresses and distributes the compound evenly to create a barrier seal at the point of entry into the enclosure.
• If required, external voids can be repaired.
• Provides female running coupler for cable gland or conduit entry.
• Manufactured in Brass (standard), Nickel Plated Brass, 316 Stainless Steel or Aluminium.
• Brass NPT entries are nickel plated as standard.

Technical Data
• Flameproof Exd and Increased Safety Exe II 2 GD Extd A21.
• Certificate No’s: Baseefa06ATEX0058X and IECEx BAS 06.0015X.
• Suitable for use in Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC.
• Ingress Protection: IP66, IP67 and IP 68 (30 metres for 7 days) to IEC/EN 60529 and NEMA 4X.
• Deluge Protection to DTS01.
• Operating Temperature Range: -60°C to +80°C.
• Assembly Instruction Sheet: AI 375.
• Alternative certification options available:
  - Exd IIC / Exe II
  - GOST R-Exe IIU
  - GOST K- Approved for use in Kazakhstan

Ordering Information
Format for ordering is as follows:

<table>
<thead>
<tr>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Male Thread</th>
<th>Female Thread</th>
<th>Cable Gland Type</th>
<th>Size</th>
<th>Male Thread</th>
<th>Female Thread</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSB 656 N</td>
<td>C</td>
<td>M32</td>
<td>M32</td>
<td>CSB 656 N</td>
<td>C</td>
<td>1½&quot;NPT</td>
<td>M32</td>
</tr>
</tbody>
</table>

Two part sealing compound and assembly instructions are supplied with the cable gland.

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