CCG CABLE TERMINATIONS

# Ex Corrosion Guard®

## Ex db IIC, Ex eb IIC, Ex ta IIIC, Ex nR IIC

### CABLE GLAND for Steel Wire and Aluminium Armoured Cable

## Features and Benefits

- For highly corrosive, wet locations, Group II, III, Zone 1, 2, 20, 21 and 22 hazardous areas.
- Freely rotating captive cone and inspectible cone ring provides an armour clamp and earth bond on steel wire armour and aluminium armour. Two-part handling, freely rotating captive cone and inspectible cone ring provides an armour clamp and earth bond on steel wire armour.
- Corrosion Guard® screws onto the gland body and seals over the outer sheath of the cable giving an IP68 and deluge proof seal protecting the armour and metal parts of the gland.
- Precision manufactured from high-quality brass (Marine Grade Electroless Nickel Plated™).
- Supplied with a thread sealing-gasket (parallel threads only).

## Technical Data

| | |
|---|---|
| Type: | Ex Corrosion Guard® |
| Gland Material: | Brass (Marine Grade Electroless Nickel Plated™) |
| Corrosion Guard Material: | Glass Reinforced Polyester Compound / PBT |
| Seal Material: | Standard Thermoset Elastomer |
| Sealing Gasket Material: | HDPE, Nylon 66 or PTFE |
| Cable Type: | Steel Wire Armour, Aluminium Armour |
| Armour Clamping: | Captive Rotating Cone and Inspectible Cone Ring |
| Sealing Area: | Inner Sheath, Outer Sheath and total enclosure of gland |
| Optional Accessories: | Adaptor, Reducer, Locknut and Serrated Washer |
| Note: | The installer should ensure that the materials are suitable for the installation environment. |

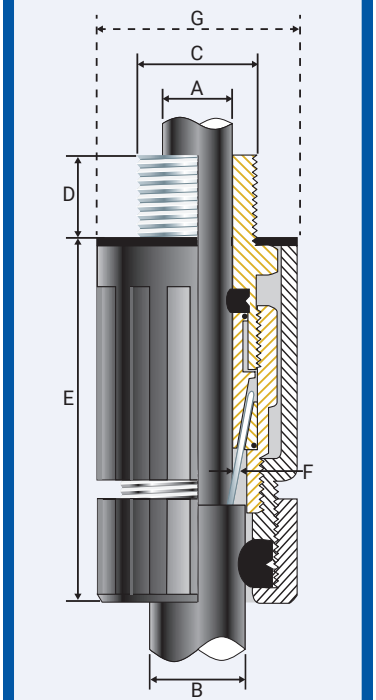
## Standards and Certifications

| | | |
|---|---|---|
| Equipment Protection Levels: | IECEx/INMETRO: Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da<br>ATEX/UKEX: Ⓔx II 2/3G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, Ex nR IIC Gc<br>TR CU: Ⓔx 1Ex d IIC Gb X / 1Ex e IIC Gb X / 2Ex nR IIC Gc X / Ex tb IIIC Db X | |
| Continuous Operating Temp: | Standard Seals: -60°C to +95°C /100°C (HDPE/ Nylon Sealing Gasket)<br>Extreme Temp. Seals: -60°C to +120°C (PTFE Sealing Gasket) | |
| Conformance: | Standard: | Certificate: |
| IEC/BS EN | IEC/BS EN 62444 | CML 14CA364 |
| IECEx | IEC 60079 Part 0, 1, 7, 15, 31 | IECEx CML 18.0018X |
| ATEX | EN 60079 Part 0, 1, 7, 31<br>EN 60079 Part 0, 15 | CML 16ATEX1001X<br>CML 16ATEX4002X |
| UKEX | BS EN 60079 Part 0, 1, 7, 31<br>BS EN 60079 Part 0, 15 | CML 21UKEX1011X<br>CML 21UKEX4006X |
| INMETRO (Brazil) | ABNT NBR IEC 60079 Part 0, 1, 7, 15, 31 | TÜV 15.0483X |
| TR CU (Russia) | ГОСТ 31610-0, 15, ГОСТ IEC 60079-1<br>ГОСТ Р МЭК 60079-7, 31 | ЕАЭС RU C-ZA.HA91.B.00245/21 |
| SANS | SANS/IEC 60079 Part 0, 1, 7, 15, 31 | MASC MS/22-9001X |
| IP66/68 100m - Parallel | IEC 60529 | CML 15Y728 |
| Deluge Protection | DTS-01 | CML 14CA370-2 |
| Corrosion Protection | ASTM B117-11, BS EN ISO 3231 | EXOVA N968667 |
| Marine ABS | IEC 60079 Part 0, 1, 7, 15, 31, IEC 60529 | 25-0164964-PDA |
| DNV | IEC 60079 Part 0, 1, 7, IEC 60529 | TAE0000010 |
| EMC Compatible | EN 55011, + A1, EN 55022 | SGS EMC305079/1 |

## Conditions for Safe Use - X

- The cable glands shall only be used where the temperature, at the point of entry, is between -60°C to +95°C (standard seals & HDPE sealing gaskets), -60°C to +100°C (standard seal and nylon sealing gasket) or -60°C to +120°C (extreme temp. seal & PTFE sealing gasket) depending on seal and gasket used.

Note: According to IEC 60079-14, 10.6.2: An Ex d gland will only maintain Ex d integrity when used with substantially round, compact and filled cable. If not a CCG VORTEx® barrier gland should be used.




PATENTED

| Product Code | Gland Size Reference | Metric Entry Thread | | Cable Detail | | | | Max Length 'E' | Armour Dia | | Max Dia 'G' | Hexagonal Detail | | Install. Torque Value Nm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 'C' | Min 'D' | Min 'A' | Max 'A' | Min 'B' | Max 'B' | | Min 'F' | Max 'F' | | Max 'Flats' | Max 'Crns' | |
| 054700-16 | 00-16ss | M16x1.5 | 15 | 3.0 | 8.5 | 8.0 | 13.5 | 46.0 | 0.20 | 0.90 | 33.0 | 24.0 | 27.0 | 21.0 |
| 054700 | 00-20ss | M20x1.5 | 15 | 3.0 | 8.5 | 8.0 | 13.5 | 46.0 | 0.20 | 0.90 | 33.0 | 24.0 | 27.0 | 21.0 |
| 0547-0 | 0-20s | M20x1.5 | 15 | 7.0 | 12.0 | 11.5 | 16.0 | 46.0 | 0.20 | 1.25 | 33.0 | 24.0 | 27.0 | 21.0 |
| 054701 | 1-20 | M20x1.5 | 15 | 9.0 | 15.0 | 14.5 | 20.5 | 51.0 | 0.20 | 1.25 | 36.0 | 27.0 | 30.0 | 21.0 |
| 054722 | 2s-25s | M25x1.5 | 15 | 11.0 | 17.5 | 16.0 | 24.5 | 58.0 | 0.20 | 1.60 | 46.0 | 35.0 | 39.0 | 30.0 |
| 054702 | 2-25 | M25x1.5 | 15 | 14.0 | 20.0 | 20.5 | 26.5 | 58.0 | 0.20 | 1.60 | 46.0 | 35.0 | 39.0 | 30.0 |
| 054733 | 3s-32s | M32x1.5 | 15 | 15.0 | 22.0 | 23.0 | 30.5 | 67.0 | 0.20 | 2.00 | 53.0 | 42.0 | 47.0 | 42.0 |
| 054703 | 3-32 | M32x1.5 | 15 | 19.0 | 26.5 | 26.5 | 33.5 | 67.0 | 0.20 | 2.00 | 53.0 | 42.0 | 47.0 | 42.0 |
| 054744 | 4s-40s | M40x1.5 | 15 | 22.0 | 31.5 | 30.0 | 39.5 | 74.0 | 0.30 | 2.00 | 68.0 | 52.0 | 59.0 | 52.0 |
| 054704 | 4-40 | M40x1.5 | 15 | 26.0 | 34.0 | 33.0 | 42.5 | 74.0 | 0.30 | 2.00 | 68.0 | 52.0 | 59.0 | 52.0 |
| 054755 | 5s-50s | M50x1.5 | 15 | 29.0 | 38.0 | 34.0 | 47.5 | 89.0 | 0.40 | 2.50 | 84.0 | 65.0 | 73.0 | 57.0 |
| 054705 | 5-50 | M50x1.5 | 15 | 34.0 | 44.5 | 42.5 | 52.5 | 89.0 | 0.40 | 2.50 | 84.0 | 65.0 | 73.0 | 57.0 |
| 054766 | 6s-63s | M63x1.5 | 15 | 38.0 | 50.0 | 45.5 | 60.5 | 102.0 | 0.40 | 2.50 | 110.0 | 80.0 | 90.0 | 66.0 |
| 054706 | 6-63 | M63x1.5 | 15 | 44.0 | 56.5 | 52.5 | 65.5 | 102.0 | 0.40 | 2.50 | 110.0 | 80.0 | 90.0 | 66.0 |
| 054777 | 7s-75s | M75x1.5 | 15 | 50.0 | 62.0 | 57.0 | 72.5 | 106.0 | 0.40 | 3.15 | 124.0 | 96.0 | 102.0 | 72.0 |
| 054707 | 7-75 | M75x1.5 | 15 | 56.0 | 67.5 | 65.5 | 78.0 | 106.0 | 0.40 | 3.15 | 124.0 | 96.0 | 102.0 | 72.0 |
| 054708 | 8-80 | M80x2.0 | 20 | 59.0 | 69.0 | 65.0 | 77.5 | 117.0 | 2.50 | 3.15 | 124.0 | 96.0 | 102.0 | 80.0 |
| 054799 | 9s-90s | M90x2.0 | 20 | 66.0 | 75.0 | 73.0 | 86.5 | 117.0 | 3.00 | 3.50 | 124.0 | 111.0 | 125.0 | 89.0 |
| 054709 | 9-90 | M90x2.0 | 20 | 74.0 | 81.5 | 82.0 | 91.0 | 117.0 | 3.00 | 3.50 | 140.0 | 111.0 | 125.0 | 89.0 |
| 054710 | 10-100 | M100x2.0 | 20 | 81.0 | 91.0 | 90.0 | 100.0 | 117.0 | 3.00 | 3.50 | 140.0 | 125.0 | 141.0 | 98.0 |

All dimensions are in mm. Intermediate thread sizes are available on request.

# FITTING INSTRUCTIONS
## Metric Illustration

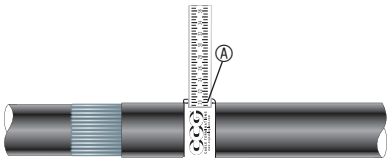
CCG CABLE TERMINATIONS

# Ex Corrosion Guard® Gland

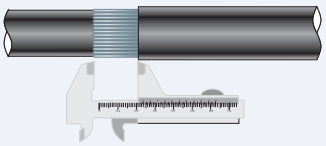
**ENCLOSURES AND EQUIPMENT TO WHICH CABLE GLANDS ARE FITTED:-**
- Must be made from materials which are compatible with the cable gland materials.
- Have a sealing area around the cable gland entry point with a surface roughness < Ra 6.3 µm.
- Have entries that are perpendicular to the enclosure face in the area where the cable gland will seal to within 2.5°.
- Are sealed using the supplied sealing gasket .

**MUST HAVE THREADED ENTRIES**
- The same thread size as the cable gland. (Thread adapters should be used to correct any mismatch).
- With a thread tolerance of metric class '6H' or equivalent.
- Where the thread length is a minimum of 10mm for Ex d applications or 3mm for all other applications

**OR CLEARANCE HOLES** (not Ex d)
- Where the hole size is the thread nominal size with a tolerance of +0.1 to +0.7mm. (e.g. the clearance hole for an M20 thread will have a diameter between 20.1mm and 20.7mm).
- Through material that is between 1mm and 12mm thick. (Thicker materials can be accommodated using glands with extended entry threads).

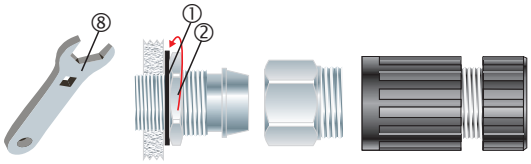



1. For accurate sizing, use a CCG Dimension Tape Ⓐ on the inner and outer cable sheath.



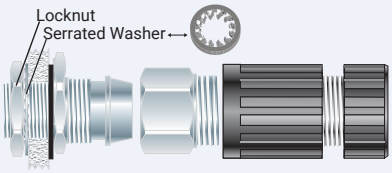
| Gland Size | Armour Length | Gland Size | Armour Length | Gland Size | Armour Length | Gland Size | Armour Length |
|---|---|---|---|---|---|---|---|
| 00-16ss | 20.0 | 2-25 | 25.0 | 5s-50s | 35.0 | 7-75 | 50.0 |
| 00-20ss | 20.0 | 3s-32s | 30.0 | 5-50 | 35.0 | 8-80 | 50.0 |
| 0-20s | 20.0 | 3-32 | 30.0 | 6s-63s | 45.0 | 9s-90s | 50.0 |
| 1-20 | 25.0 | 4s-40s | 30.0 | 6-63 | 45.0 | 9-90 | 50.0 |
| 2s-25s | 25.0 | 4-40 | 30.0 | 7s-75s | 50.0 | 10-100 | 60.0 |

2. Cut back the cable outer sheath to expose the armour to a length as per the table above.

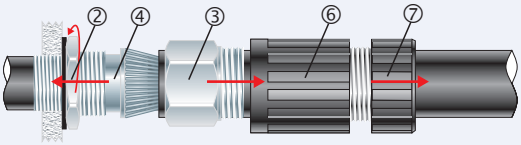



3. To maintain IP66/68, ensure gasket ① is in place. Screw the inner ② into apparatus. Tighten the inner ② to installation torque using a CCG Spanner ⑧.

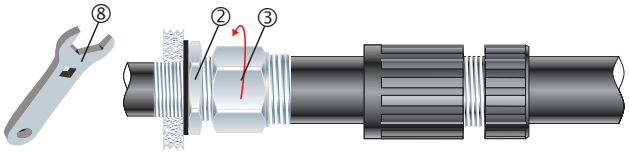
*Alternative installation through an unthreaded entry.*



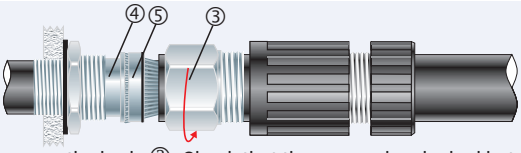

If the apparatus is untapped use a locknut.



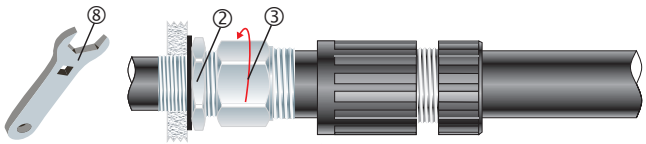

4. Pass the corrosion guard outer nut ⑦, corrosion guard body ⑥ and the gland body ③ over the cable. Pass the cable end through the inner ② and splay the armour wires over the cone ④.



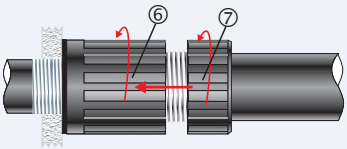

5. Screw the gland body ③ onto the inner ② and tighten the gland body ③ using a CCG Spanner ⑧ to lock the armour between the cone ④ and the cone ring ⑤.




6. Unscrew the body ③. Check that the armour has locked between the cone ④ and the cone ring ⑤. (O-Rings on the cone ④ and cone ring ⑤ are sacrificial).




7. Tighten the body ③ onto the inner ② until hand tight, then tighten with a CCG Spanner ⑧ with ¾ turn to lock the armour between the cone ④ and the cone ring ⑤.




8. Slide the corrosion guard body ⑥ and the corrosion guard outer nut ⑦ over the assembled gland then screw the corrosion guard body ⑥ onto the gland. **Hand tighten** the corrosion guard body ⑥ and the corrosion guard outer nut ⑦ to produce the required dust and waterproof seal IP66/68.

YouTube Instruction Video: http://youtu.be/HWTJRdh_438

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