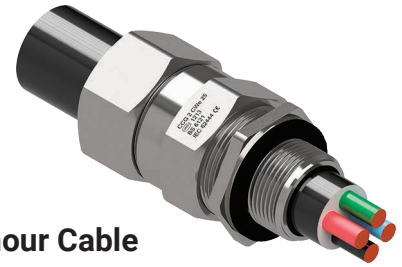
CCG CABLE TERMINATIONS

# CWe

## Ex eb IIC, Ex tb IIIC

### CABLE GLAND WITH DELUGE SEAL for Steel Wire and Aluminium Armour Cable



## Features and Benefits

- For indoor, outdoor Group II and III, Zone 1, 2, 21 and 22 hazardous areas.
- Two-piece handling, no loose parts.
- Freely rotating captive cone and inspectible cone ring provides an armour clamp and earth bond without twisting the armouring.
- Deluge seal fitted as a standard.
- Provides a seal on the outer sheath of the cable sealing to IP68.
- Patented disconnect armoured clamp system for ease of inspection.
- Precision manufactured from high quality brass (Marine Grade™ Electroless Nickel Plated) available in stainless steel 316/316L on request.
- Complete with thread sealing gasket.

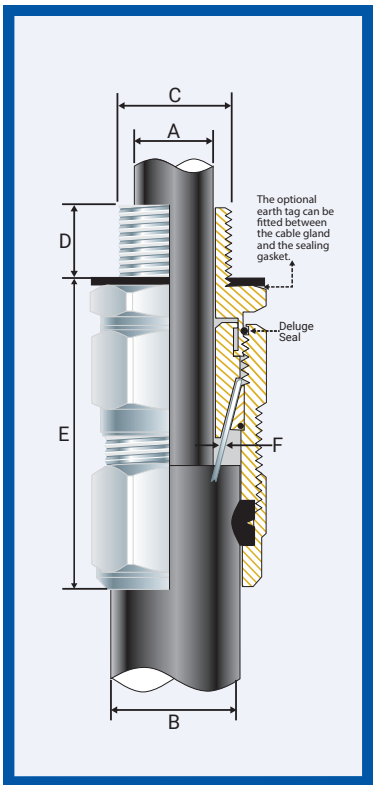
IP68 2 meters

## Technical Data

| | |
|---|---|
| Type: | CWe |
| Gland Material: | Brass (Marine Grade™ Electroless Nickel Plated) BS 2874, EN 12164, Aluminium ASTM B221, Stainless Steel 316/316L |
| Seal Material: | Thermoset Elastomer or Silicon on request |
| Cable Type: | Steel Wire Armour, Aluminium Armour Wire |
| Armour Clamping: | Rotating Captive Cone and Inspectible Cone Ring |
| Sealing Area: | Outer Sheath and Deluge Seal |
| Optional Accessories: | Adaptor, Reducer, Earth Tag, Locknut, Serrated Washer and Shroud |
| | Note: The installer should ensure that the materials are suitable for the installation environment. |

## Standards and Certifications

| | | |
|---|---|---|
| Equipment Protection Levels: | IECEx: Ex eb IIC Gb, Ex tb IIIC Db<br>ATEX: Ⓔx II 2 G D, Ex eb IIC Gb, Ex tb IIIC Db | |
| Operating Temperature: | -20°C to +95°C Standard Seals or -60°C to +160°C Extreme Temp. Seals (continuous) | |
| Conformance: | Standard: | Certificate: |
| IEC/BS EN | IEC/BS EN 62444 | CML 14CA364 |
| IECEx | IEC 60079 Parts 0, 7, 31 | IECEx CML 18.0018X |
| ATEX | EN 60079 Parts 0, 7, 31 | CML 16ATEX1001X |
| INMETRO (Brazil) | ABNT NBR IEC 60079 Parts 0, 1, 7, 15, 31 | TÜV 15.0483X |
| IP66/68 2m - Parallel<br>IP65 - Tapered | IEC 60529<br>IEC 60529 | IEC Ex CML 18.0018X |
| Deluge Protection | DTS-01 | CML 14CA370-2 |
| Corrosion Protection | ASTM B117-11, BS EN ISO 3231 | EXOVA N968667 |
| EMC Compatible | EN 55011:2009 + A1:2010,<br>EN 55022:2010 | SGS EMC197708/1 |




## Conditions for Safe Use - X

- The cable glands shall only be used where the temperature, at the point of entry, is between -20°C and +95°C (standard seal) or -60°C to +160°C (extreme temp. seal) depending on seal and gasket used.

| Product Code | Gland Size Reference | Metric Entry Thread | | NPT Entry Thread | | Cable Detail | | | Max Length 'E' | Armour Dia | | Hexagonal Detail | | Install Torque Value Nm |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 'C' | Min 'D' | 'C' | Min 'D' | Max 'A' | Min 'B' | Max 'B' | | Min 'F' | Max 'F' | Max 'Flats' | Max 'Crns' | |
| 055700-16 | 00-16ss | M16x1.5 | 12 | - | - | 8.5 | 8.0 | 13.5 | 41.0 | 0.90 | 0.90 | 24.0 | 27.0 | 35.0 |
| 055700 | 00-20ss | M20x1.5 | 12 | ½/¾ | 15 | 8.5 | 8.0 | 13.5 | 41.0 | 0.90 | 0.90 | 24.0 | 27.0 | 35.0 |
| 0557-0-16 | 0-16s | M16x1.5 | 12 | ½/¾ | 15 | 10.5 | 11.5 | 16.0 | 43.0 | 0.90 | 1.25 | 24.0 | 27.0 | 35.0 |
| 0557-0 | 0-20s | M20x1.5 | 12 | ½/¾ | 15 | 12.0 | 11.5 | 16.0 | 43.0 | 0.90 | 1.25 | 24.0 | 27.0 | 35.0 |
| 055701 | 1-20 | M20x1.5 | 12 | ½/¾ | 15 | 15.0 | 14.5 | 20.5 | 47.0 | 0.90 | 1.25 | 27.0 | 30.0 | 35.0 |
| 055722 | 2s-25s | M25x1.5 | 15 | ¾/1 | 15/19 | 17.5 | 16.0 | 24.5 | 56.0 | 1.25 | 1.60 | 35.0 | 39.0 | 50.0 |
| 055702 | 2-25 | M25x1.5 | 15 | ¾/1 | 15/19 | 20.0 | 20.5 | 26.5 | 56.0 | 1.25 | 1.60 | 35.0 | 39.0 | 50.0 |
| 055733 | 3s-32 | M32x1.5 | 15 | 1/1¼ | 19 | 22.0 | 23.0 | 30.5 | 57.0 | 1.60 | 2.00 | 42.0 | 47.0 | 70.0 |
| 055703 | 3-32 | M32x1.5 | 15 | 1/1¼ | 19 | 26.5 | 26.5 | 33.5 | 57.0 | 1.60 | 2.00 | 42.0 | 47.0 | 70.0 |
| 055744 | 4s-40s | M40x1.5 | 15 | 1¼/1½ | 19/21 | 31.5 | 30.0 | 39.5 | 68.0 | 1.60 | 2.00 | 52.0 | 59.0 | 90.0 |
| 055704 | 4-40 | M40x1.5 | 15 | 1¼/1½ | 19/21 | 34.0 | 33.0 | 42.5 | 68.0 | 1.60 | 2.00 | 52.0 | 59.0 | 90.0 |
| 055755 | 5s-50s | M50x1.5 | 15 | 1½/2 | 21 | 38.0 | 34.0 | 47.5 | 72.0 | 2.00 | 2.50 | 65.0 | 73.0 | 100.0 |
| 055705 | 5-50 | M50x1.5 | 15 | 1½/2 | 21 | 38.0/44.5 | 42.5 | 52.5 | 72.0 | 2.00 | 2.50 | 65.0 | 73.0 | 100.0 |
| 055766 | 6s-63s | M63x1.5 | 15 | 2/2½ | 21/30 | 50.0 | 45.5 | 60.5 | 89.0 | 2.00 | 2.50 | 80.0 | 90.0 | 120.0 |
| 055706 | 6-63 | M63x1.5 | 15 | 2/2½ | 21/30 | 50.0/56.5 | 52.5 | 65.5 | 89.0 | 2.00 | 2.50 | 80.0 | 90.0 | 120.0 |
| 055777 | 7s-75s | M75x1.5 | 15 | 2½/3 | 30/32 | 62.0 | 57.0 | 72.5 | 97.0 | 2.50 | 3.15 | 96.0 | 108.0 | 120.0 |
| 055707 | 7-75 | M75x1.5 | 15 | 2½/3 | 30/32 | 62.0/67.5 | 65.5 | 78.0 | 97.0 | 2.50 | 3.15 | 96.0 | 108.0 | 120.0 |
| 055788 | 8s-80s | M80x2.0 | 20 | 3 | 32 | 69.0 | 65.0 | 77.5 | 98.0 | 2.50 | 3.15 | 96.0 | 108.0 | 120.0 |
| 055708 | 8-80 | M80x2.0 | 20 | 3 | 32 | 74.0 | 78.0 | 82.0 | 98.0 | 2.50 | 3.15 | 96.0 | 108.0 | 120.0 |
| 055799 | 9s-90s | M90x2.0 | 20 | 3/3½ | 32/33 | 75.0 | 73.0 | 86.5 | 123.0 | 3.00 | 3.50 | 111.0 | 125.0 | 120.0 |
| 055709 | 9-90 | M90x2.0 | 20 | 3/3½ | 32/33 | 75.0/81.5 | 82.0 | 91.0 | 123.0 | 3.00 | 3.50 | 111.0 | 125.0 | 120.0 |
| 055710 | 10-100 | M100x2.0 | 20 | 3½/4 | 33/34 | 91.0 | 90.0 | 100.0 | 124.0 | 3.00 | 3.50 | 125.0 | 141.0 | 120.0 |
| 055711 | 11-115 | M115x2.0 | 20 | 4 | 34 | 98.0 | 100.0 | 114.0 | 134.0 | 3.00 | 4.00 | 135.0 | 152.0 | 120.0 |
| 055712 | 12-120 | M120x2.0 | 20 | - | - | 103.0 | 103.0 | 118.0 | 136.0 | 3.00 | 4.00 | 140.0 | 158.0 | 120.0 |
| 055713 | 13-130 | M130x2.0 | 20 | - | - | 115.0 | 113.0 | 124.0 | 140.0 | 3.00 | 4.00 | 146.0 | 164.0 | 120.0 |

All dimensions except NPT are in mm.

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# FITTING INSTRUCTIONS
## Metric Illustration

CABLE TERMINATIONS

# CWe CABLE GLAND Ex eb IIC, Ex tb IIIC

**ENCLOSURES AND EQUIPMENT TO WHICH CABLE GLANDS ARE FITTED:-**

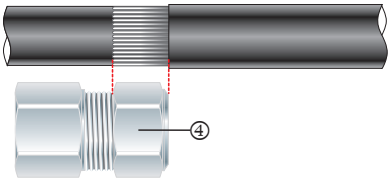
- Must be made from materials which are compatible with the cable gland materials.
- Have a sealing area around the cable gland entry point with a surface roughness < Ra 6.3 µm.
- Have entries that are perpendicular to the enclosure face in the area where the cable gland will seal to within 2.5°.
- Are sealed using the supplied sealing gasket (parallel threads) or by fully tightening into a threaded entry (tapered threads). Note that for tapered threads the IP rating can be improved to IP68 with the use of a suitable thread sealant.

**MUST HAVE THREADED ENTRIES**

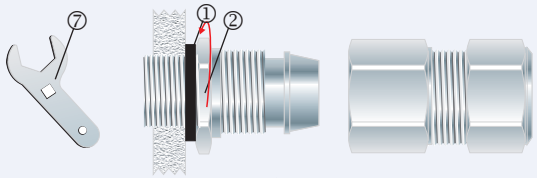
- The same thread size as the cable gland. (Thread adapters should be used to correct any mismatch).
- With a thread tolerance of metric class '6H' or equivalent.
- Where the thread length is a minimum of 10mm for Ex d applications or 3mm for all other applications

**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.)

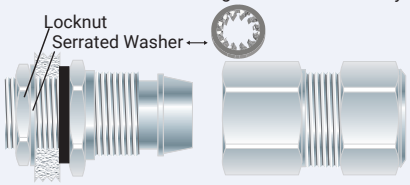



1. Cut back the cable outer sheath to expose the armour to a length not more than the outer nut ④.

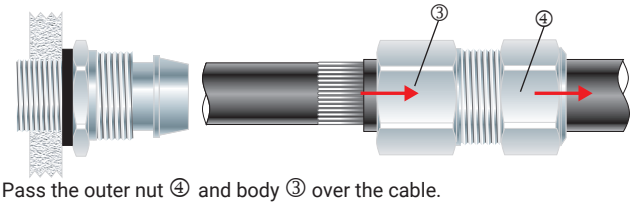



2. To maintain IP68 ensure gasket ① is in place. Screw the inner ② into the apparatus. Tighten the inner ② to the installation torque using a CCG Spanner ⑦.

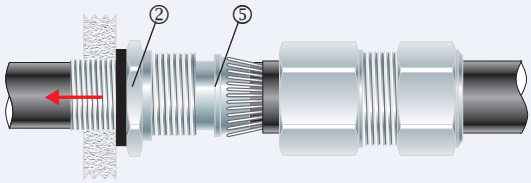
*Alternative installation through an unthreaded entry.*



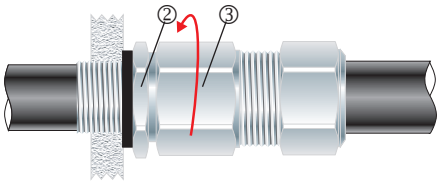

If the apparatus is untapped use a locknut.



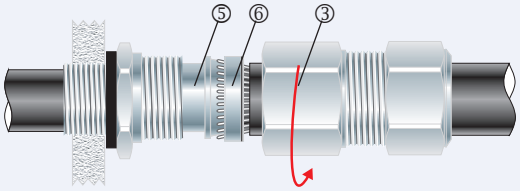

3. Pass the outer nut ④ and body ③ over the cable.



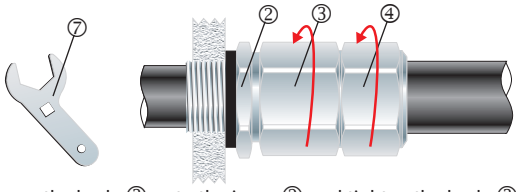

4. Pass cable end through the inner ② and splay the armour wires over the cone ⑤.




5. Screw the body ③ onto the inner ② to lock the armour between the cone ⑤ and the cone ring ⑥. The deluge seal will engage automatically as the body is tightened onto the inner ②.




6. Unscrew the body ③. Check that the amouring has locked between the cone ⑤ and the cone ring ⑥. (O-Ring on the cone ring ⑥ is sacrificial).




7. Screw the body ③ onto the inner ② and tighten the body ③ to installation torque using a CCG Spanner ⑦. Tighten outer nut ④ to produce a moisture proof seal by turning until the seal makes contact with outer sheath of cable and make one full turn.