Date Printed:

CABLE GLAND TYPE INGRESS PROTECTION

DESIGN STANDARDS : BS 6121:1989, EN 62444:2013 PROCESS CONTROL SYSTEM

INSTALLATION INSTRUCTIONS

Installation should only be performed by a competent person using the correct tools. Read all instructions before beginning installation.

The following accessories are available from CMP Products, as optional extras, to assist with fixing, sealing and earthing:

Locknut, Earth Tag, Serrated Washer, Entry Thread (I.P.) Sealing Washer, Shroud

| | Outer Seal Tightening Guide | | | | | | | | | | | | | | |
|-----------------|-----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|--|--|
| Number of turns | GLAND SIZE | | | | | | | | | | | | | | |
| to tighten | 20516 | 205 | 20 | 255 | 25 | 32 | 40 | 50\$ | 50 | 63S | 63 | 755 | 75 | | |
| | CABLE DIAMETER | | | | | | | | | | | | | | |
| 0.5 | 13.2 | 15.9 | 20.9 | 22.0 | 26.2 | 33.9 | | | | | | | | | |
| 1 | 12.5 | 15.3 | 20.0 | 21.2 | 25.4 | 32.9 | 40.4 | 46.7 | 52.8 | 59.2 | 65.9 | 72.1 | 78.5 | | |
| 1.5 | 11.9 | 14.7 | 19.0 | 20.4 | 24.6 | 31.9 | 39.0 | 45.4 | 51.4 | 57.7 | 64.6 | 70.6 | 77.2 | | |
| 2 | 11.2 | 14.2 | 18.1 | 19.6 | 23.8 | 30.8 | 37.6 | 44.1 | 50.0 | 56.2 | 63.4 | 69.2 | 75.9 | | |
| 2.5 | 10.5 | 13.6 | 17.2 | 18.8 | 23.0 | 29.8 | 36.2 | 42.9 | 48.7 | 54.7 | 62.1 | 67.7 | 74.6 | | |
| 3 | 9.8 | 13.0 | 16.2 | 18.0 | 22.2 | 28.8 | 34.8 | 41.6 | 47.3 | 53.2 | 60.9 | 66.3 | 73.3 | | |
| 3.5 | 9.2 | 12.4 | 15.3 | 17.2 | 21.4 | 27.8 | 33.5 | 40.3 | 45.9 | 51.6 | 59.6 | 64.8 | 71.9 | | |
| 4 | 8.5 | 11.8 | 14.4 | 16.4 | 20.6 | 26.8 | 32.1 | 39.0 | 44.5 | 50.1 | 58.4 | 63.4 | 70.6 | | |
| 4.5 | 7.8 | 11.2 | 13.4 | 15.6 | 19.8 | 25.7 | 30.7 | 37.8 | 43.2 | 48.6 | 57.1 | 61.9 | 69.3 | | |
| 5 | 7.1 | 10.7 | 12.5 | 14.8 | 19.0 | 24.7 | 29.3 | 36.5 | 41.8 | 47.1 | 55.9 | 60.5 | 68.0 | | |
| 5.5 | 6.5 | 10.1 | 12.0 | 14.0 | 18.2 | 23.7 | 27.9 | 35.2 | 40.4 | 45.6 | 54.6 | 59.0 | 66.7 | | |
| 6 | 5.8 | 9.5 | | | | | | | | | | | | | |

| Cable Gland Size | Entry Thread | Thread Length | Cable Bedding Diameter | overall Cable | | Armour Range | | Across Flats | Across Corners Protrusion Length | Nominal Radius Dimension | | CIEL Earth | Earth Fault Current Rating | Combined Ordering Reference (*Brass Metric) | | | Cable Gland Weight | |
|------------------------|-----------------|------------------|------------------------------|---------------|-------|-----------------|------|-----------------|----------------------------------|--------------------------------|---------|---------------|----------------------------------|---|------|--------------------|--------------------------|-------|
| | | | Max | Min | Max | Min | Max | Max | Max | zengui | "H" "G" | Bolt Size | (kA) | Size | Туре | Ordering Suffix | (Kgs) | |
| 205 | M20 | 10.0 | 11.7 | 9.5 | 15.9 | 0.8 | 1.25 | 24.0 | 26.4 | 48.0 | 28.6 | 38.6 | M8 | 26.0 | 205 | CWC | 1RA | 0.195 |
| 20 | M20 | 10.0 | 14.0 | 12.5 | 20.9 | 0.8 | 1.25 | 30.5 | 33.6 | 48.0 | 31.8 | 41.3 | M8 | 26.0 | 20 | CWC | 1RA | 0.276 |
| 25S | M25 | 10.0 | 20.0 | 14.0 | 22.0 | 1.25 | 1.6 | 37.5 | 41.3 | 56.0 | 38.1 | 50.8 | M8 | 26.0 | 255 | CWC | 1RA | 0.436 |
| 25 | M25 | 10.0 | 20.0 | 18.2 | 26.2 | 1.25 | 1.6 | 37.5 | 41.3 | 56.0 | 38.1 | 50.8 | M8 | 26.0 | 25 | CWC | 1RA | 0.435 |
| 32 | M32 | 10.0 | 26.2 | 23.7 | 33.9 | 1.6 | 2.0 | 46.0 | 50.6 | 54.0 | 41.3 | 54.0 | M8 | 26.0 | 32 | CWC | 1RA | 0.506 |
| 40 | M40 | 15.0 | 32.2 | 27.9 | 40.4 | 1.6 | 2.0 | 55.0 | 60.5 | 58.0 | 50.8 | 68.3 | M10 | 26.0 | 40 | CWC | 1RA | 0.802 |
| 50S | M50 | 15.0 | 38.2 | 35.2 | 46.7 | 2.0 | 2.5 | 60.0 | 66.0 | 61.0 | 57.2 | 74.6 | M12 | 43.0 | 505 | CWC | 1RA | 0.883 |
| 50 | M50 | 15.0 | 44.1 | 40.4 | 53.0 | 2.0 | 2.5 | 70.1 | 77.1 | 60.0 | 60.3 | 79.4 | M12 | 43.0 | 50 | CWC | 1RA | 1.088 |
| 635 | M63 | 15.0 | 50.0 | 45.6 | 59.4 | 2.0 | 2.5 | 75.0 | 82.5 | 74.0 | 70.0 | 90.5 | M12 | 43.0 | 635 | CWC | 1RA | 1.636 |
| 63 | M63 | 15.0 | 56.0 | 54.6 | 65.8 | 2.0 | 2.5 | 80.0 | 88.0 | 71.0 | 70.0 | 90.5 | M12 | 43.0 | 63 | CWC | 1RA | 1.597 |
| 75S | M75 | 15.0 | 62.0 | 59.0 | 72.0 | 2.0 | 2.5 | 90.0 | 99.0 | 86.0 | 76.2 | 98.5 | M12 | 43.0 | 755 | CWC | 1RA | 2.310 |
| 75 | M75 | 15.0 | 68.0 | 66.7 | 78.4 | 2.5 | 3.0 | 100.0 | 110.0 | 82.0 | 82.6 | 108.0 | M12 | 43.0 | 75 | CWC | 1RA | 2.717 |
| 90 | M90 | 24.0 | 79.0 | 76.2 | 90.3 | 3.15 | 4.0 | 114.3 | 125.7 | 95.0 | 95.3 | 107.1 | M12 | 43.0 | 90 | CWC | 1RA | 4.417 |
| 100 | M100 | 24.0 | 90.0 | 86.1 | 101.4 | 3.15 | 4.0 | 123.0 | 135.3 | 95.0 | 101.6 | 139.7 | M12 | 43.0 | 100 | CWC | 1RA | 4.820 |
| 115 | M115 | 24.0 | 98.0 | 101.5 | 110.2 | 3.15 | 4.0 | 133.4 | 146.7 | 107.5 | 112.0 | 138.5 | M12 | 43.0 | 115 | CWC | 1RA | 6.191 |
| 130 | M130 | 24.0 | 115.0 | 110.2 | 123.2 | 3.15 | 4.0 | 152.4 | 167.6 | 110.0 | 112.0 | 138.5 | M12 | 43.0 | 130 | CWC | 1RA | 8.388 |

*For material options add the following suffix to the Ordering Reference; Brass (no suffix required); Nickel Plated Brass '5'; 316 Grade Stainless Steel '4'; Copper Free Aluminium '1 For NPT options add the following digits to the material suffix; 1/2" = 31; 3/4" = 32; 1" = 33; 1 1/4" = 34; 1 1/2" = 35; 2" = 36; 2 1/2" = 37; 3" = 38; 3 1/2" = 39; 4" = 310 (Brass requires prefix '0')

Examples: 32CWC1RA534 = Nickel Plated Brass 1-1/4" NPT, 50SCWC1RA035 = Brass 1-1/2" NPT, 25CWC1RA432 = Stainless Steel 3/4" NPT, 20CWC1RA5 = Nickel Plated Brass M20

Dimensions are displayed in millimetres unless otherwise stated

NOTE: *CMP SOLO LSF Halogen Free Shrouds also available for the full range on request. + Alternative armour clamping range available for non-standard armour sizes. Marine Approvals including Lloyds & ABS are also available from CMP Products.

INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES CW & CX

FOR TERMINATION OF CABLES WITH WIRE BRAID, TAPE ARMOUR (STA/DSTA), STRIP ARMOUR USING GLAND TYPE CX OR SINGLE WIRE ARMOUR (SWA) USING GLAND TYPE CW.

CABLE GLAND TYPES CW CIEL & CX CIEL



CW CIEL = SWA Armour CX CIEL = Braid, Tape, etc armour

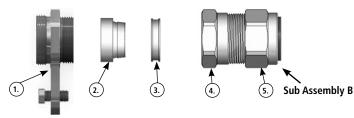


Glasshouse Street • St. Peters • Newcastle upon Tyne • NE6 1BS Tel: +44 191 265 7411 • Fax: +44 191 265 0581 E-Mail: customerservices@cmp-products.co.uk • Web: www.cmp-products.com

INSTALLATION INSTRUCTIONS FOR CMP CABLE GLAND TYPES CW & CX

CABLE GLAND COMPONENTS - It is not necessary to dismantled the cable gland any further than illustrated below

- 1. Entry Component
- 2. Detachable Armour Cone
- 3. AnyWay Clamping Way
- 4. Body
- 5. Outer Seal Nut



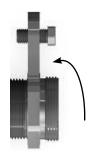
PLEASE READ ALL INSTRUCTIONS CAREFULLY BEFORE BEGINNING THE INSTALLATION

1. Separate components (1), (2) and (3) from Sub-Assembly B. If required, fit a shroud over the cable outer sheath. Prepare the cable by removing the cable outer sheath and the braid/armour to suit the geometry of the equipment. Remove a further 18mm (max) of outer sheath to expose the armour. If applicable remove any tapes or wrappings to expose the

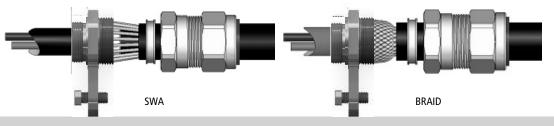
inner sheath. NOTE: On maximum size cables the clamping ring may only pass over the armour.



2. Secure the Entry Component (1) into the equipment as indicated.

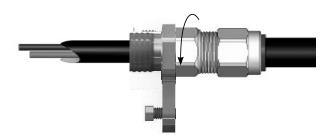


3. Locate the Detachable Armour Cone (2) into the Entry Component. Pass the cable through the entry item and evenly space the braid/armour around the cone.



4. While continuing to push the cable forward to maintain contact between the braid armour and the Cone (2), tighten the Body (4) by hand until the AnyWay Clamping Ring (3) is felt to have engaged the braid/armour.

Hold the Entry Component (1) with a spanner and tighten the Body (4) using a spanner until all available threads are used.



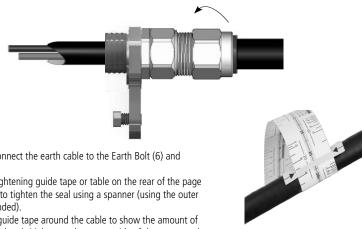
5. Ensure the Entry Item (1) and Body (4) are fully tightened together



6. Tighten the Outer Seal Nut (5) until it comes to an effective stop. This will occur when:-

A) The Outer Seal Nut (5) has clearly engaged the cable and cannot be further tightened without the use of excessive force by the installer.

B) The Outer Seal Nut (5) is metal to metal with the body of the gland (4).



7. Only using finger pressure, Connect the earth cable to the Earth Bolt (6) and

Then either use the outer seal tightening guide tape or table on the rear of the page to determine how much further to tighten the seal using a spanner (using the outer seal tightening guide is recomended).

Wrap the outer seal tightening guide tape around the cable to show the amount of spanner turns needed (as shown here). Make sure the correct side of the outer seal tightening guide tape is used depending on the cable gland size.