

D1EX QuickStop-Ex[®]

Ex db IIC, Ex eb IIC, Ex tb IIC, Ex nR IIC

BARRIER GLAND for Unfilled Steel Wire Armoured Cable



Features and Benefits

- For indoors, outdoors, Group II, III, Zone 1, 2, 21 and 22 hazardous areas.
- For unfilled hygroscopic multicore cables refer to IEC 60079-14; 9.3.2 and 10.6.2a, IEC 61892-7, 10.6 and 10.7
- Freely rotating captive cone and inspectible cone ring provides an armour clamp and earth bond on steel wire armour.
- Instantly mixed and injected Resin forms a 100% barrier seal around the individual cores of the cable.
- Prevents explosive gases and/or liquids transmitting down cable.
- Precision manufactured from high-quality brass (Marine Grade Electroless Nickel Plated™).
- Complete with thread sealing gasket.

Technical Data

| | |
|-----------------------|---|
| Type: | D1EX-QuickStop-Ex [®] |
| Gland Material: | Brass (Marine Grade Electroless Nickel Plated™) |
| Seal Material: | Standard Thermoset Elastomer or Extreme Temperature Seals, Quick setting Barrier Resin |
| Seal Gasket Material: | HDPE, Nylon 66 or PTFE |
| Cable Type: | Steel Wire Armour with unfilled hygroscopic multicores |
| Armour Clamping: | Rotating Captive Cone and Inspectible Cone Ring |
| Sealing Area: | Inner Sheath and QuickStop [®] Resin around Cable Conductors |
| 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. |

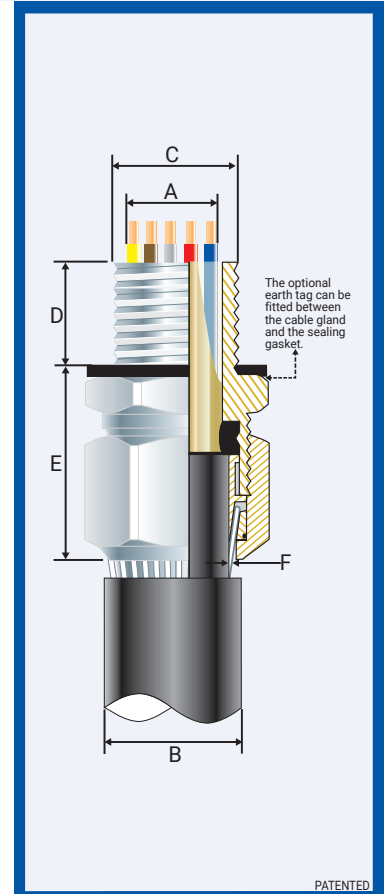
Standards and Certifications

| | | |
|------------------------------|---|------------------------------------|
| Equipment Protection Levels: | IECEX: Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex tb IIC Db ATEX: Ⓜ II 2GD, II 3G, Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc TR CU: 1Ex d IIC Gb X / 1Ex e IIC Gb X / 2Ex nR IIC Gc X / Ex tb IIC Db X | |
| Continuous Operating Temp: | Standard Seals -50°C to +95°C/100°C (HDPE/Nylon Sealing Gasket) Extreme Temp. Seals: -50°C to +120°C (PTFE) | |
| Conformance: | Standard: Certificate: | |
| IEC/BS EN | IEC/BS EN 62444, 6121 | CML 14CA364 |
| IECEX | IEC 60079 Parts 0, 1, 7, 15, 31 | IEC Ex CML 18.0018X |
| ATEX | EN 60079 Parts 0, 1, 7, 31 EN 60079 Parts 0, 15 | CML 16ATEX1001X CML 16ATEX4002X |
| INMETRO (Brazil) | ABNT NBR IEC 60079 Parts 0, 1, 7, 15, 31 | TÜV 15.0483X |
| TR CU (Russia) | ГОСТ Р МЭК 60079-0, 7, 15, 31, ГОСТ IEC 60079-1 | RU C-ZA.ME92.B.00690 |
| SANS | SANS 60079 Parts 0, 1, 7, 15, 31 | MASC MS/13-028X CML 15V728 |
| IP66/68 100m - Parallel | IEC 60529 | |
| IP65/66 - Tapered | IEC 60529 | |
| Corrosion Protection | ASTM B117-11, BS EN ISO 3231 | EXOVA N968667 |
| EMC Compatible | EN 55011:2009 + A1:2010, 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 -50°C and +95°C (standard seal & HDPE sealing gasket), +100°C (standard seal and Nylon sealing gasket) or +120°C (extreme temp. seal & PTFE sealing gasket) depending on seal and gasket used.
- Only Resin supplied by CCG may be used in the glands.



| Product Code | Gland Size Reference | Metric Entry Thread NPT Entry Thread | | | | Cable Detail | | | Max Length 'E' | Max Dia. Over Cores | Max No. of Cores | Armour Dia | | Hexagonal Detail | | Install. Torque Value Nm |
|--------------|----------------------|--------------------------------------|---------|-------------|---------|--------------|---------|---------|----------------|---------------------|------------------|------------|---------|------------------|------------|--------------------------|
| | | 'C' | Min 'D' | 'C' | Min 'D' | Min 'A' | Max 'A' | Max 'B' | | | | Min 'F' | Max 'F' | Max 'Flats' | Max 'Crns' | |
| 056700-16 | 00-16ss | M16x1.5 | 15 | - | - | 3.0 | 8.5 | 13.5 | 53.0 | 8.0 | 6 | 0.20 | 0.90 | 24.0 | 27.0 | 21.0 |
| 056700 | 00-20ss | M20x1.5 | 15 | 1/2/3/4 | 15 | 3.0 | 8.5 | 13.5 | 53.0 | 10.9 | 6 | 0.20 | 0.90 | 24.0 | 27.0 | 21.0 |
| 0567-0 | 0-20s | M20x1.5 | 15 | 1/2/3/4 | 15 | 7.0 | 12.0 | 16.0 | 53.0 | 10.9 | 6 | 0.20 | 1.25 | 24.0 | 27.0 | 21.0 |
| 056701 | 1-20 | M20x1.5 | 15 | 1/2/3/4 | 15 | 9.0 | 15.0 | 20.5 | 56.0 | 12.5 | 13 | 0.20 | 1.25 | 27.0 | 30.0 | 21.0 |
| 056722 | 2s-25s | M25x1.5 | 15 | 3/4/1 | 15/19 | 11.0 | 17.5 | 24.5 | 60.0 | 15.5 | 20 | 0.20 | 1.60 | 35.0 | 39.0 | 30.0 |
| 056702 | 2-25 | M25x1.5 | 15 | 3/4/1 | 15/19 | 14.0 | 20.0 | 26.5 | 60.0 | 15.5 | 20 | 0.20 | 1.60 | 35.0 | 39.0 | 30.0 |
| 056733 | 3s-32s | M32x1.5 | 15 | 1/1 1/4 | 19 | 15.0 | 22.0 | 30.5 | 66.0 | 21.7 | 40 | 0.20 | 2.00 | 42.0 | 47.0 | 42.0 |
| 056703 | 3-32 | M32x1.5 | 15 | 1/1 1/4 | 19 | 19.0 | 26.5 | 33.5 | 66.0 | 21.7 | 40 | 0.20 | 2.00 | 42.0 | 47.0 | 42.0 |
| 056744 | 4s-40s | M40x1.5 | 15 | 1 1/4/1 1/2 | 19/21 | 22.0 | 31.5 | 39.5 | 78.0 | 30.0 | 60 | 0.30 | 2.00 | 52.0 | 59.0 | 52.0 |
| 056704 | 4-40 | M40x1.5 | 15 | 1 1/4/1 1/2 | 19/21 | 26.0 | 34.0 | 42.5 | 78.0 | 30.0 | 60 | 0.30 | 2.00 | 52.0 | 59.0 | 52.0 |
| 056755 | 5s-50s | M50x1.5 | 15 | 1 1/2/2 | 21 | 29.0 | 38.0 | 47.5 | 87.0 | 36.3 | 80 | 0.40 | 2.50 | 65.0 | 73.0 | 57.0 |
| 056705 | 5-50 | M50x1.5 | 15 | 1 1/2/2 | 21 | 34.0 | 44.5 | 52.5 | 87.0 | 36.3 | 80 | 0.40 | 2.50 | 65.0 | 73.0 | 57.0 |
| 056766 | 6s-63s | M63x1.5 | 15 | 2/2 1/2 | 21/30 | 38.0 | 50.0 | 60.5 | 110.0 | 47.9 | 100 | 0.40 | 2.50 | 80.0 | 90.0 | 66.0 |
| 051606 | 6-63 | M63x1.5 | 15 | 2/2 1/2 | 21/30 | 44.0 | 56.5 | 65.5 | 110.0 | 47.9 | 100 | 0.40 | 2.50 | 80.0 | 90.0 | 66.0 |
| 056777 | 7s-75s | M75x1.5 | 15 | 2 1/2/3 | 30/32 | 50.0 | 62.0 | 72.5 | 118.0 | 58.2 | 120 | 0.40 | 3.15 | 96.0 | 108.0 | 72.0 |
| 056707 | 7-75 | M75x1.5 | 15 | 2 1/2/3 | 30/32 | 56.0 | 67.5 | 78.0 | 118.0 | 58.2 | 120 | 0.40 | 3.15 | 96.0 | 108.0 | 72.0 |
| 056708 | 8-80 | M80x2.0 | 20 | 3 | 32 | 59.0 | 69.0 | 77.5 | 175.0 | 61.5 | 140 | 2.50 | 3.15 | 96.0 | 108.0 | 80.0 |
| 056799 | 9s-90s | M90x2.0 | 20 | 3/3 1/2 | 32/33 | 66.0 | 75.0 | 86.5 | 184.0 | 70.5 | 160 | 3.00 | 3.50 | 111.0 | 125.0 | 89.0 |
| 056709 | 9-90 | M90x2.0 | 20 | 3/3 1/2 | 32/33 | 74.0 | 81.5 | 91.0 | 184.0 | 70.5 | 160 | 3.00 | 3.50 | 111.0 | 125.0 | 89.0 |
| 056710 | 10-100 | M100x2.0 | 20 | 3 1/2/4 | 33/34 | 81.0 | 91.0 | 100.0 | 189.0 | 79.0 | 180 | 3.00 | 3.50 | 125.0 | 141.0 | 89.0 |
| 056711 | 11-115 | M115x2.0 | 20 | 4 | 34 | 86.0 | 98.0 | 114.0 | 189.0 | - | - | 3.00 | 4.00 | 135.0 | 152.0 | 175.0 |
| 056712 | 12-120 | M120x2.0 | 20 | - | - | 95.0 | 103.0 | 118.0 | 189.0 | - | - | 3.00 | 4.00 | 140.0 | 158.0 | 175.0 |
| 056713 | 13-130 | M130x2.0 | 20 | - | - | 100.0 | 115.0 | 124.0 | 189.0 | - | - | 3.00 | 4.00 | 146.0 | 164.0 | 175.0 |

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

CCG reserves the right to make alterations to the technical data, dimensions, designs and products available without notice. The illustrations cannot be considered binding. Please contact CCG for assistance.

D1EXQS-BG100619

D1EX QS BARRIER GLAND™ Ex db IIC, Ex eb IIC, Ex tb IIIC, Ex nR IIC

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 <math>< Ra 6.3 \mu m.</math>
- 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).

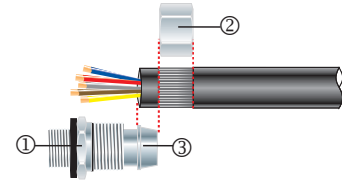
- With a thread tolerance of metric class '6H' or equivalent.
- Where the thread length is a minimum of 10mm for Ex d applications or 3mm for all other applications

OR CLEARANCE HOLES (not Ex d)

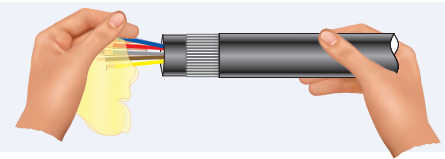
- Where the hole size is the thread nominal size with a tolerance of +0.1 to +0.7mm. (e.g. the clearance hole for an M20 thread will have a diameter between 20.1mm and 20.7mm).
- Through material that is between 1mm and 12mm thick. (Thicker materials can be accommodated using glands with extended entry threads.)

1. Separate the inner ① from the outer ②. Prepare the cable cutting back the outer sheath to expose the armour to the length of the outer ②. Strip back the inner bedding to expose the inner cable cores using the cone ③ as a gauge.

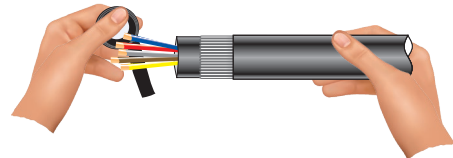
If the cable cores have screens these should be cut away or twisted together into a single core. This single core should be insulated with heat shrink tubing or coated with insulating varnish. Any drain wires should also be insulated with heat shrink tubing or coated with insulating varnish.



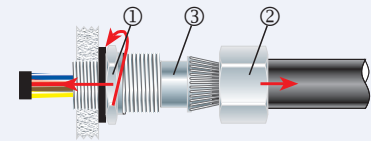
2. Using a clean cloth, clean the cable cores.



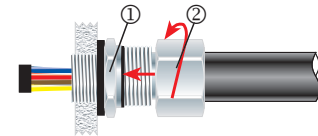
3. Using the insulation tape bundle the cores together at the end.



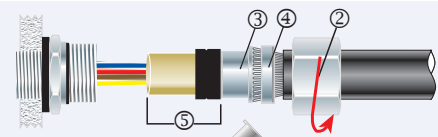
4. Screw inner ① into apparatus. Tighten inner ① to installation torque using a CCG Spanner. Pass the cable end through the outer ②. Pass the bundled cable cores through the inner diaphragm seal. Splay the armouring over the cone ③.



5. Tighten the outer ② onto the inner ① to lock the armour is locked between cone ③ and the cone ring ④.



6. Unscrew the outer ②. Check that the armour is locked between cone ③ and the cone ring ④ (O-Ring on the cone ring ⑥ is sacrificial). Withdraw the cable and barrier pot sub-assembly ⑤. Remove insulation tape.



7. Remove the cap ⑥ from resin tube and attached the mixing nozzle ⑦ (use extension nozzle for small multicore cables). Whilst holding the barrier pot sub-assembly ⑤ upright and holding the diaphragm seal firmly against the cable sheath inject the resin into the resin chamber. Make sure the resin fills all the way to the top of the resin chamber and wipe any excess resin away.

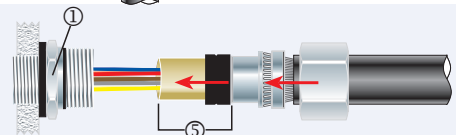
Wait for the resin to set from a liquid to a gel, this should take:

- 15 minutes at 10°C
- 7 minutes at 20°C
- 6 minutes at 30°C
- 5 minutes at 40°C

For installations in less than 5°C Ambient, warm the Resin tube in warm water at ± 50°C. If there is still Resin left in the tube, discard the mixing nozzle ⑦ and replace the cap ⑥ for use with the next gland.



8. Re-insert the barrier pot sub-assembly ⑤ back into the inner ①.



9. Tighten the outer ② to installation torque using a CCG Spanner to produce a moisture proof seal by turning until the seal makes contact with the outer sheath of cable and then make one full turn.

