



E1EX-D-QS

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

BARRIER GLAND WITH DELUGE SEAL for Unfilled Multi Armoured and Marine Cables

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 on steel wire armour, aluminium wire armour, tape armour, braid wire armour cables and NEK 606 marines cable susceptible to cold flow.
- Precision manufactured from high quality brass (Marine Grade™ Electroless Nickel Plated) available in Stainless Steel 316/316L on request.
- Internal deluge seal as standard.
- 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 the cable.
- Complete with thread sealing gasket.

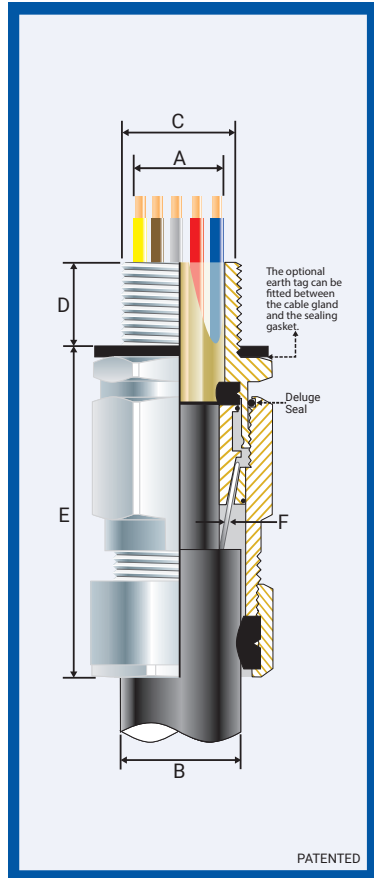


Technical Data

Type:	E1EX-D-QuickStop-Ex™	
Gland Material:	Brass (Marine Grade™ Electroless Nickel Plated) or Stainless Steel 316/316L	
Seal Material:	Standard Thermoset Elastomer or Extreme Temperature Seals, Quick setting Injection Resin Barrier Seal	
Cable Type:	Steel, Aluminium, Tape, Braid Armour and Cables Susceptible to Cold Flow	
Armour Clamping:	Rotating Captive Cone and Inspectible Cone Ring	
Sealing Area:	Outer Sheath, QuickStop™ Resin around Cable Conductors 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 db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex tb IIIC Db ATEX: Ⓜ II 2GD, II 3G, Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex tb IIIC Db	
Operating Temperature:	-20°C to +95°C Standard Seals or -50°C to +120°C Extreme Temp. Seals (continuous)	
Conformance:	Standard:	Certificate:
IEC/BS EN	IEC/BS EN 62444, 6121	IEC Ex CML 18.0018X
IECEX	IEC 60079 Parts 0, 1, 7, 15, 31	CML 16ATEX1001X
ATEX	EN 60079 Parts 0, 1, 7 and 31 EN 60079 Parts 0 and 15	CML 16ATEX4002X IEC Ex CML 18.0018X
IP66/68 - Parallel	IEC 60529	
IP65/66 - Tapered	IEC 60529	
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, EN 55022:2010	



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 -50°C to +120°C (extreme temp. seal) depending on seal and gasket used.
- Braided cables must only be used on fixed installations where the cable is clamped or stress applied to the cable in the gland is prevented.
- 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		Hex Detail		Install. TRQ Value
		'C'	Min 'D'	'C'	Min 'D'	Min 'A'	Max 'A'	Min 'B'	Max 'B'				Min 'F'	Max 'F'	Max 'Flats'	Max 'Crns'	
055500S-16	00s-16ss	M16x1.5	12	-	-	3.0	8.5	5.0	10.5	62.0	8.0	6	0.2	0.9	24.0	27.0	21.0
055500S	00s-20ss	M20x1.5	12	1/2/3/4	15	3.0	8.5	5.0	10.5	62.0	10.9	6	0.2	0.9	24.0	27.0	21.0
055500	00-20ss	M20x1.5	12	1/2/3/4	15	3.0	8.5	8.0	14.0	61.0	10.9	6	0.2	0.9	24.0	27.0	21.0
0555-0S-16	0s-16s	M16x1.5	12	-	-	7.0	12.0	8.0	14.0	64.0	8.0	6	0.2	1.25	24.0	27.0	21.0
0555-0S	0s-20s	M20x1.5	12	1/2/3/4	15	7.0	12.0	8.0	14.0	64.0	10.9	6	0.2	1.25	24.0	27.0	21.0
0555-0	0-20s	M20x1.5	12	1/2/3/4	15	7.0	12.0	11.5	16.0	64.0	10.9	6	0.2	1.25	24.0	27.0	21.0
055501	1-20	M20x1.5	12	1/2/3/4	15	9.0	15.0	12.5	20.5	76.0	11.0	10	0.2	1.25	27.0	30.0	21.0
055522	2s-25s	M25x1.5	12	3/4/1	15/19	11.0	17.5	16.0	24.5	90.0	15.5	20	0.2	1.60	35.0	39.0	30.0
055502	2-25	M25x1.5	12	3/4/1	15/19	14.0	20.0	18.0	27.0	90.0	15.5	20	0.2	1.60	35.0	39.0	30.0
055533	3s-32s	M32x1.5	12	1/1 1/4	19	15.0	22.0	20.0	30.5	103.0	21.7	40	0.2	2.00	42.0	47.0	42.0
055503	3-32	M32x1.5	12	1/1 1/4	19	19.0	26.5	23.0	33.5	103.0	21.7	40	0.2	2.00	42.0	47.0	42.0
055544	4s-40s	M40x1.5	12	1 1/4/1 1/2	19/21	22.0	31.5	26.5	39.0	105.0	30.0	60	0.3	2.00	52.0	59.0	52.0
055504	4-40	M40x1.5	12	1 1/4/1 1/2	19/21	26.0	34.0	28.0	40.0	110.0	30.0	60	0.3	2.00	52.0	59.0	52.0
055555	5s-50s	M50x1.5	12	1 1/2/2	21	29.0	38.0	35.2	47.5	129.0	36.3	80	0.4	2.50	65.0	73.0	57.0
055505	5-50	M50x1.5	12	1 1/2/2	21	34.0	44.5	44.4	52.8	129.0	36.3	80	0.4	2.50	65.0	73.0	57.0
055566	6s-63s	M63x1.5	12	2/2 1/2	21/30	38.0	50.0	45.5	60.5	137.0	47.9	100	0.4	2.50	80.0	90.0	66.0
055506	6-63	M63x1.5	12	2/2 1/2	21/30	44.0	56.5	54.6	65.9	137.0	47.9	100	0.4	2.50	80.0	90.0	66.0
055577	7s-75s	M75x1.5	12	2 1/2/3	30/32	50.0	62.0	59.0	72.5	157.0	58.2	120	0.4	3.15	96.0	108.0	72.0
055507	7-75	M75x1.5	12	2 1/2/3	30/32	56.0	67.5	65.0	78.0	157.0	58.2	120	0.4	3.15	96.0	108.0	72.0
055508	8-80	M80x2.0	16	3	32	59.0	69.0	65.0	77.5	156.0	61.5	140	0.4	3.15	96.0	108.0	80.0
055599	9s-90s	M90x2.0	16	3/3 1/2	32/33	66.0	75.0	73.0	86.5	174.0	70.5	160	0.4	3.50	111.0	125.0	89.0
055509	9-90	M90x2.0	16	3/3 1/2	32/33	74.0	81.5	82.0	91.0	174.0	70.5	160	0.4	3.50	111.0	125.0	89.0
055510	10-100	M100x2.0	16	3 1/2/4	33/34	81.0	91.0	90.0	100.0	193.0	79.0	180	0.4	3.50	125.0	141.0	98.0

All dimensions except NPT are in mm.

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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

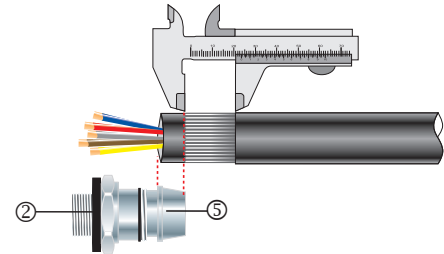
OR CLEARANCE HOLES (not Ex d)

- 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.)

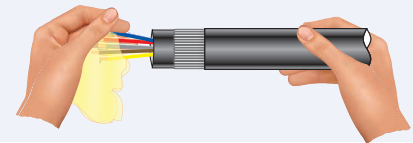
1. Separate the inner ② from the body ③. Cut back the cable outer sheath to expose the armour to a length as per the table below. Strip back the inner bedding to expose the inner cable cores using the cone ⑤ as a gauge.

Gland Size	Armour Length	Gland Size	Armour Length	Gland Size	Armour Length	Gland Size	Armour Length
00-16ss	20.0	3s-32s	30.0	6s-63s	45.0	9-90	50.0
00-20ss	20.0	3-32	30.0	6-63	45.0	10-100	60.0
0-20s	20.0	4s-40s	30.0	7s-75s	50.0	11-115	60.0
1-20	25.0	4-40	30.0	7-75	50.0	12-120	60.0
2s-25s	25.0	5s-50s	35.0	8-80	50.0	13-130	60.0
2-25	25.0	5-50	35.0	9s-90s	50.0		

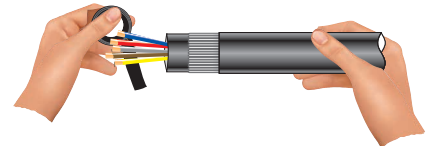
If the cable cores have screens these should be cut away or twisted together into a single core. This single core should be insulated with heat shrink tubing or coated with insulating varnish. Any drain wires should also be insulated with heat shrink tubing or coated with insulating varnish.



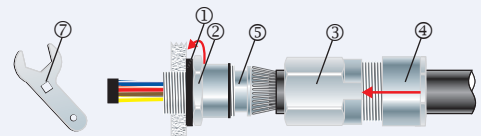
2. Using a clean cloth, clean the cable cores.



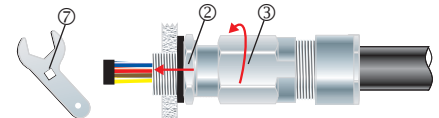
3. Using the insulation tape, bundle the cores together at the end.



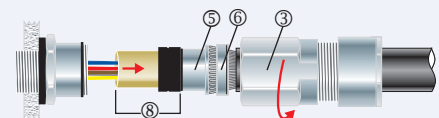
4. Ensure the thread gasket ① is in place. Screw the inner ② into the apparatus and tighten to the installation torque using a CCG Spanner ⑦. If the apparatus is untapped use a locknut. Pass the bundled cable cores through the outer nut ④ and the body ③. Pass the bundled cables cores through the inner ② and inner diaphragm seal and splay the armour wires over the cone ⑤.



5. Tighten the body ③ onto the inner ② until hand tight, then tighten with a CCG Spanner ⑦ with ¼ turn to lock the armour between the cone ⑤ and the cone ring ⑥.



6. Unscrew the body ③. Check that the armour has locked between the cone ⑤ and the cone ring ⑥ (O-Ring on the cone ring ⑥ is sacrificial). Withdraw the barrier pot sub-assembly ⑧ and bundled cables. Remove the insulation tape.

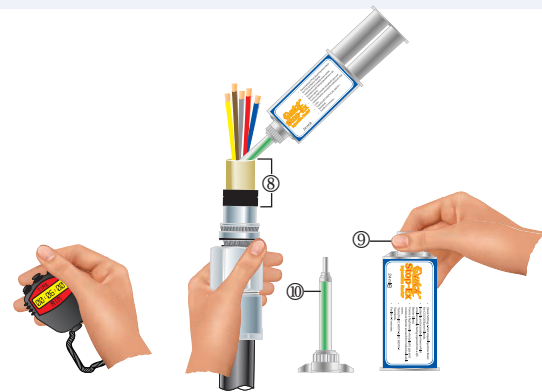


7. Remove the cap ⑨ from resin applicator and attach the mixing nozzle ⑩ (use extension nozzle for small multicore cables). Whilst holding the barrier pot sub-assembly ⑧ upright and holding the diaphragm seal firmly against the cable sheath inject the resin into the resin chamber. Make sure the resin fills all the way to the top of the resin chamber and wipe any excess resin away.

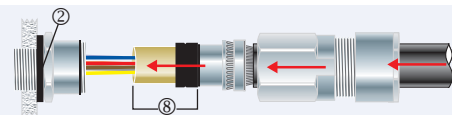
Wait for the resin to set from a liquid to a gel, this should take:

- 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 ⑩ and replace the cap ⑨ for use with the next gland.



8. Re-insert the barrier pot sub-assembly ⑧ back into the inner ②.



9. Tighten the body ③ onto the inner ② to the required torque using a CCG Spanner ⑦. Tighten the outer nut ④ 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. The deluge seal will engage automatically as the body is tightened onto the inner ②.

