MOFLASH SIGNALLING
BIRMINGHAM, ENGLAND

A2EX VX

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



VORTEx® BARRIER COMPRESSION GLAND for Single or Multi-Core Unfilled Unarmoured Cable

Features and Benefits

- For indoor, outdoor, Group II, III, Zone 1, 2, 20, 21 and 22 hazardous areas.
- For unfilled and multicore cables in Ex d applications. See IEC 60079-14 and IEC 61892-7.
- Instantly mixed and injected Resin forms a 100% barrier seal around the individual cores of the cable.
- Prevents explosive gases and/or liquids from transmitting down the cable.
- Precision manufactured from high-quality brass (Marine Grade Electroless Nickel Plated™), available in aluminium or stainless steel 316/316L on request.
- Supplied with a thread-sealing gasket (parallel threads only).

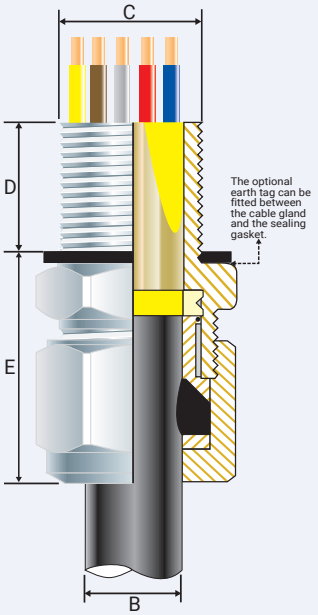
100m IP68 | Ex 30 BAR SEAL

Technical Data

Type:	A2EX VX (VORTEx®)
Gland Material:	Brass (Marine Grade Electroless Nickel Plated™), Aluminium, Stainless Steel 316/316L
Seal Material:	Standard Thermoset Elastomer, Quick Setting Injection Barrier Resin
Sealing Gasket Material:	HDPE, Nylon 66 or PTFE
Cable Type:	Single or Multi-Core Unarmoured
Sealing Area:	Outer Sheath and VORTEx® Resin around Cable Conductors
Optional Accessories:	Adaptor, Reducer, Earth Tag, Locknut, Serrated Washe and Shroud
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 ta IIIC Da, Ex nR IIC Gc ATEX/UKEX: Ⓔx II 2/3G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da, Ex nR IIC Gc CCC: Ex db IIC Gb, Ex eb IIC Gb, Ex ta IIIC Da	
Continuous Operating Temp:	-60°C to +100°C	
Conformance:	Standard:	Certificate:
IEC/BS EN	IEC/BS EN 62444, 6121	CML 14CA364
IECEx	IEC 60079 Part 0, 1, 7, 15, 31	IECEx CML 20.0011
ATEX	EN 60079 Part 0, 1, 7, 31 EN 60079 Part 0, 15	CML 20ATEX1026 CML 22ATEX4116
UKEX	BS EN 60079 Part 0, 1, 7, 31 BS EN 60079 Part 0, 15	CML 21UKEX1013 CML 22UKEX4117
INMETRO (Brazil)	ABNT NBR IEC 60079 Part 0, 1, 7, 15, 31	TÜV 24.0267
CCC/CNEx (Chinese)	GB/T3836.1, 2, 3, 31-2021	CNEx 21.3386X CCC 2021312313000395
SANS	SANS/IEC 60079 Part 0, 1, 7, 15, 31	MASC S/20-9022
IP66/68 100m - Parallel	IEC 60529	CML 15Y728
IP65/66 - Tapered	IEC 60529	
IP68 - Tapered and approved grease	IEC 60529	IECEx CML 20.0011
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/EN 60079 Part 0, 1, 7, 15, 31	TAE0000010



PATENTED

Conditions for Safe Use - X

None.

MOFLASH Product Code	Material	Gland Size Reference	Metric Entry Thread 'C'	Metric Entry Thread Min 'D'	NPT Entry Thread 'C'	NPT Entry Thread Min 'D'	Cable Detail Min 'B'	Cable Detail Max 'B'	Max Length 'E'	Max Dia. Over Cores	Max No. of Cores	Hexagonal Detail Max 'Flats'	Hexagonal Detail Max 'Crns'	Install. Torque Value Nm
50267	Brass	00-20ss	M20x1.5	15	½/¾	15	3.0	8.5	25.0	10.7	10	24.0	27.0	32.5
50268	Brass	0-20s	M20x1.5	15	½/¾	15	7.0	12.0	25.0	10.9	10	24.0	27.0	32.5
50269	Brass	1-20	M20x1.5	15	½/¾	15	11.0	15.0	30.0	12.5	25	27.0	30.0	32.5
50270	Brass	2-25	M25x1.5	15	¾/1	15/19	15.0	20.0	30.0	16.5	48	35.0	39.0	47.5
50271	Stainless Steel	00-20ss	M20x1.5	15	½/¾	15	3.0	8.5	25.0	10.7	10	24.0	27.0	32.5
50272	Stainless Steel	0-20s	M20x1.5	15	½/¾	15	7.0	12.0	25.0	10.9	10	24.0	27.0	32.5
50273	Stainless Steel	1-20	M20x1.5	15	½/¾	15	11.0	15.0	30.0	12.5	25	27.0	30.0	32.5

All dimensions except NPT are in mm. Intermediate thread sizes are available on request. NPT threads should be tightened 'wrench tight'

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FITTING INSTRUCTIONS
Metric Illustration

MOFLASH SIGNALLING
BIRMINGHAM, ENGLAND

A2EX VX (VORTEx®) BARRIER COMPESSION 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 (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.)

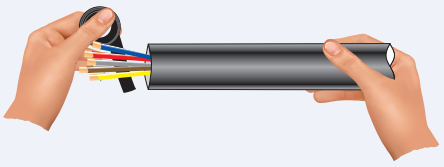
1. Strip back the outer sheath to expose the inner cable cores. Using a clean cloth, clean the cable cores insulation. Remove al exposed tapes and foils on the mulitcore cables.

   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.

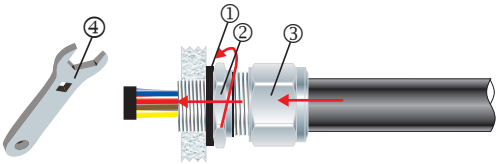


2. Using insulation tape, bundle the cores together at the end.

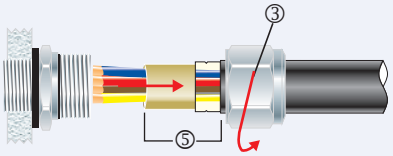
   If the gland has NPT entry threads fitted to a threaded entry then IP68 (2m) can be achieved by applying one of the following tested and approved grease types to the thread:- Renolit Lubrene CA700 or LX220 EP2, Renolit LC-WP2 or Moly LX2, or Dow Corning 4 Electrical Compound.



3. To maintain IP66/68, ensure the gasket ① is in place. Screw the gland unit into the apparatus. Tighten the inner ② using a CCG Spanner ④. Pass the cable end through the outer nut ③ and push the bundled cable cores through the inner ② diaphragm and seal.



4. Unscrew the outer nut ③. Withdraw the cable and barrier pot sub-assembly ⑤. Remove the insulation tape.



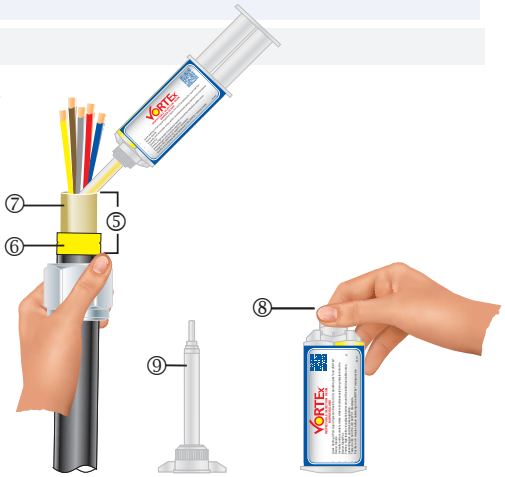
Only Resin supplied by CCG may be used in the glands.

5. Remove the cap ⑧ from resin applicator and attach the mixing nozzle ⑨ (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*. Ensure the resin fills the inspectible resin seal pot ⑥ all the way to the top of the protective resin pot ⑦ and wipe any excess resin away.

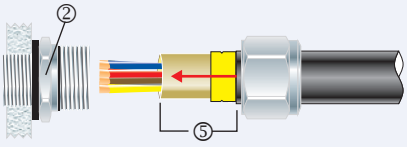
   Wait for the resin to change from a liquid to a solid state, this should take:
   - 15 minutes at 10°C
   - 7 minutes at 20°C
   - 6 minutes at 30°C
   - 5 minutes at 40°C



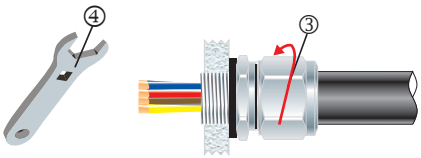
   The cable gland can now be handled safely, and the resin will continue to cure until it reaches its full hardness. For installations in less than 5°C Ambient, warm the Resin tube in warm water at ± 50°C. If there is Resin left in the tube, discard the mixing nozzle ⑨ and replace the cap ⑧ for use with the next gland.
   * The installation is acceptable if the cable sheath is pushed 2mm or 3mm into the resin seal.



6. Re-insert the barrier pot sub-assembly ⑤ back into the inner ②.



7. Tighten the outer nut ③ to the installation torque using a CCG Spanner ④ to produce a seal and grip on the cable.



YouTube Instruction Video: http://www.youtube.com/watch?v=TeoCqRgCk3k

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