

# POSI GRIP® VX

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

**VORTEX® BARRIER GLAND for Unfilled Unarmoured Cable**

## Features and Benefits

- For highly corrosive Group II, III, Zone 1, 2, 20, 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.
- Complete with a gripper seal, deluge proof O-Ring and elastomeric inner seal for complete explosion and ingress protection IP65/66/68.
- Brass parts are encapsulated in and protected by a corrosion-resistant material.
- Marine-grade electroless nickel plated entry threads.
- 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.
- Precision manufactured from high-quality brass (Marine Grade Electroless Nickel Plated™).
- Supplied with a thread sealing gasket.

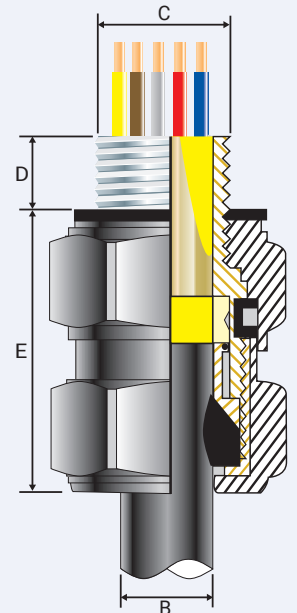


## Technical Data

Type:	Posi Grip®-VX (VORTEX®)
Gland Material:	Brass (Marine Grade Electroless Nickel Plated™) encapsulated in Glass Reinforced Polyester/PBT
Seal Material:	Thermoset Elastomer, Quick setting Barrier Resin
Cable Type:	Unarmoured
Sealing Area:	Outer Sheath and VORTEX® Resin around Cable Conductors
Optional Accessories:	Locknut
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 nR IIC Gc, Ex ta IIIC Da ATEX/UKEX: II 2/3G 1D, Ex db IIC Gb, Ex eb IIC Gb, Ex nR IIC Gc, Ex ta IIIC Da TR CU: I 1Ex d IIC Gb X / 1Ex e IIC Gb X / 2Ex nR IIC Gc X / Ex tb IIIC Db X	
Continuous Operating Temp:	-20°C to +95°C	
Conformance:	Standard:	Certificate:
IEC/BS EN	IEC/BS EN 62444	CML 14CA364
IECEX	IEC 60079 Part 0, 1, 7, 15, 31	IECEX CML 18.0018X
ATEX	EN 60079 Part 0, 1, 7, 31	CML 16ATEX1001X
	EN 60079 Part 0, 15	CML 16ATEX4002X
UKEX	BS EN 60079 Part 0, 1, 7, 31	CML 21UKEX1011X
	BS EN 60079 Part 0, 15	CML 21UKEX4006X
INMETRO (Brazil)	ABNT NBR IEC 60079 Part 0, 1, 7, 15, 31	TÜV 15.0483X
TR CU (Russia)	ГОСТ 31610-0, 15, ГОСТ IEC 60079-1 ГОСТ P MЭК 60079-7, 31	EAЭC RU C-ZA.HA91.B.00245/21
SANS	SANS/IEC 60079 Part 0, 1, 7, 15, 31	MASC MS/22-9001X
IP66/68 100m - Parallel	IEC 60529	CML 15Y728
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	ABS 20-1952706-1-PDA
DNV-GL	IEC 60079 Part 0, 1, 7, 15, 31, IEC 60529	DNV-GL TAE0000010



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## Conditions for Safe Use - X

- The cable glands shall only be used where the temperature, at the point of entry, is between -20°C to +95°C.
- The gland may only be used on fixed installations where the cable is clamped or stress applied to the cable is prevented.
- The gland may only be installed / dismantled using the tool provided by CCG (CCG Posi™ Spanner).
- Only Resin supplied by CCG may be used in the glands.

Product Code	Gland Size Reference	Metric Entry Thread		Cable Detail		Maximum Length 'E'	Max. Dia. Over Cores	Max. No. of Cores	Hexagonal Detail		*Installation Torque Value Nm
		'C'	Min 'D'	Min 'B'	Max 'B'				Max 'Flats'	Max 'Cms'	
056900-VX	00-20ss	M20x1.5	15	3.0	8.5	42.0	10.9	6	30.0	34.0	13.5
05690-VX	0-20s	M20x1.5	15	7.0	12.0	42.0	10.9	10	30.0	34.0	13.5
056901-VX	1-20	M20x1.5	15	9.0	15.0	46.0	12.5	13	34.0	38.0	13.5
056902-VX	2-25	M25x1.5	15	14.0	20.0	51.0	15.5	20	42.0	47.0	20.0
056903-VX	3-32	M32x1.5	15	19.0	26.5	60.0	21.7	40	52.0	59.0	27.0
056904-VX	4-40	M40x1.5	15	26.0	34.0	65.0	30.0	60	62.0	70.0	33.5
056905-VX	5-50	M50x1.5	15	34.0	44.5	75.0	36.3	80	74.0	83.0	40.0
056906-VX	6-63	M63x1.5	15	44.0	56.5	107.0	47.9	100	95.0	107.0	40.0
056907-VX	7-75	M75x1.5	15	56.0	67.5	107.0	58.2	120	111.0	125.0	40.0
056908-VX	8-80	M80x2.0	20	65.0	74.0	128.0	61.5	140	117.0	132.0	40.0
056909-VX	9-90	M90x2.0	20	74.0	81.5	133.0	70.5	160	130.0	146.0	40.0
056910-VX	10-100	M100x2.0	20	81.0	91.0	170.0	79.0	180	140.0	158.0	50.0
056911-VX	11-110	M110x2.0	20	86.0	98.0	170.0	-	-	150.0	169.0	50.0

All dimensions are in mm.

\* Only CCG Posi™ Spanner to be used for installation torque.

# POSI GRIP® VX (VORTEX®) Barrier 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 <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.

### MUST HAVE THREADED ENTRIES

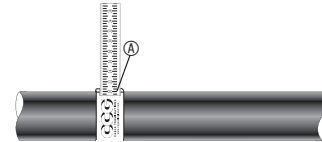
- The same thread size as the cable gland. (Thread adapters should be used to correct any mismatch).

- 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)

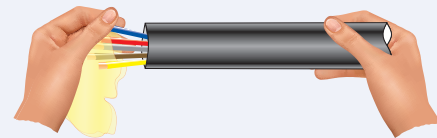
- Where the hole size is the thread nominal size with a tolerance of +0.1 to +0.7mm. (e.g. the clearance hole for an M20 thread will have a diameter between 20.1mm and 20.7mm).
- Through material that is between 1mm and 12mm thick. (Thicker materials can be accommodated using glands with extended entry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

1. For accurate sizing, use a CCG Dimension Tape <sup>Ⓐ</sup> on the outer cable sheath.

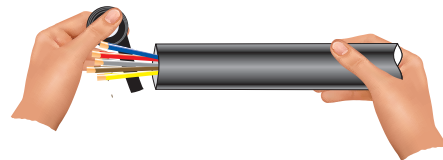


2. Strip back the outer sheath to expose the inner cable cores. Using a clean cloth, clean the cable cores insulation.

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.

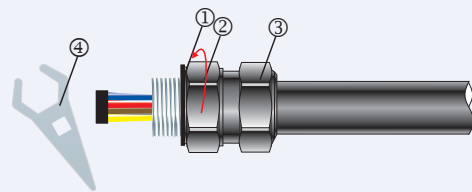


3. Using insulation tape, bundle the cores together at the end.

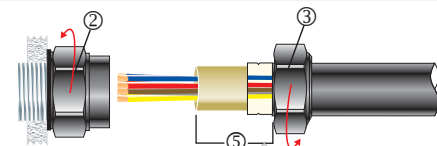


4. To maintain IP66/68, ensure the thread gasket <sup>Ⓛ</sup> is in place. Screw the gland unit into the apparatus. Tighten the nipple nut <sup>Ⓜ</sup> as per torque value using a CCG Posi Spanner <sup>Ⓟ</sup>. If the apparatus is untapped use a locknut. Pass the cable end through the outer nut <sup>Ⓝ</sup> and push the bundled cable cores through the nipple nut <sup>Ⓜ</sup> diaphragm and seal.

\* Only CCG Posi™ Spanner to be used for installation torque.



5. Unscrew the outer nut <sup>Ⓝ</sup>. Withdraw the cable and barrier pot sub-assembly <sup>Ⓟ</sup>. Remove the insulation tape.



6. Remove the cap <sup>Ⓢ</sup> from resin applicator and attach the mixing nozzle <sup>Ⓣ</sup> (use extension nozzle for small multicore cables). Whilst holding the barrier pot sub-assembly <sup>Ⓟ</sup> 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 <sup>Ⓠ</sup> all the way to the top of the protective resin pot <sup>Ⓡ</sup> and wipe any excess resin away.

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

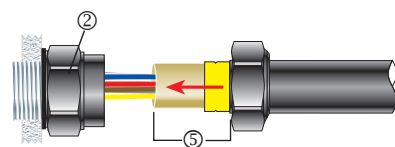
- 15 minutes at 10°C
- 7 minutes at 20°C
- 6 minutes at 30°C
- 5 minutes at 40°C

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 <sup>Ⓣ</sup> and replace the cap <sup>Ⓢ</sup> for use with the next gland.

\* The installation is acceptable if the cable sheath is pushed 2mm or 3mm into the resin seal.



7. Re-insert the barrier pot sub-assembly <sup>Ⓟ</sup> back into the nipple nut <sup>Ⓜ</sup>.



8. Tighten the outer nut <sup>Ⓝ</sup> to the installation torque using a CCG Spanner <sup>Ⓟ</sup> to produce a seal and grip on the cable.

\* Only CCG Posi Spanner to be used for installation torque.

