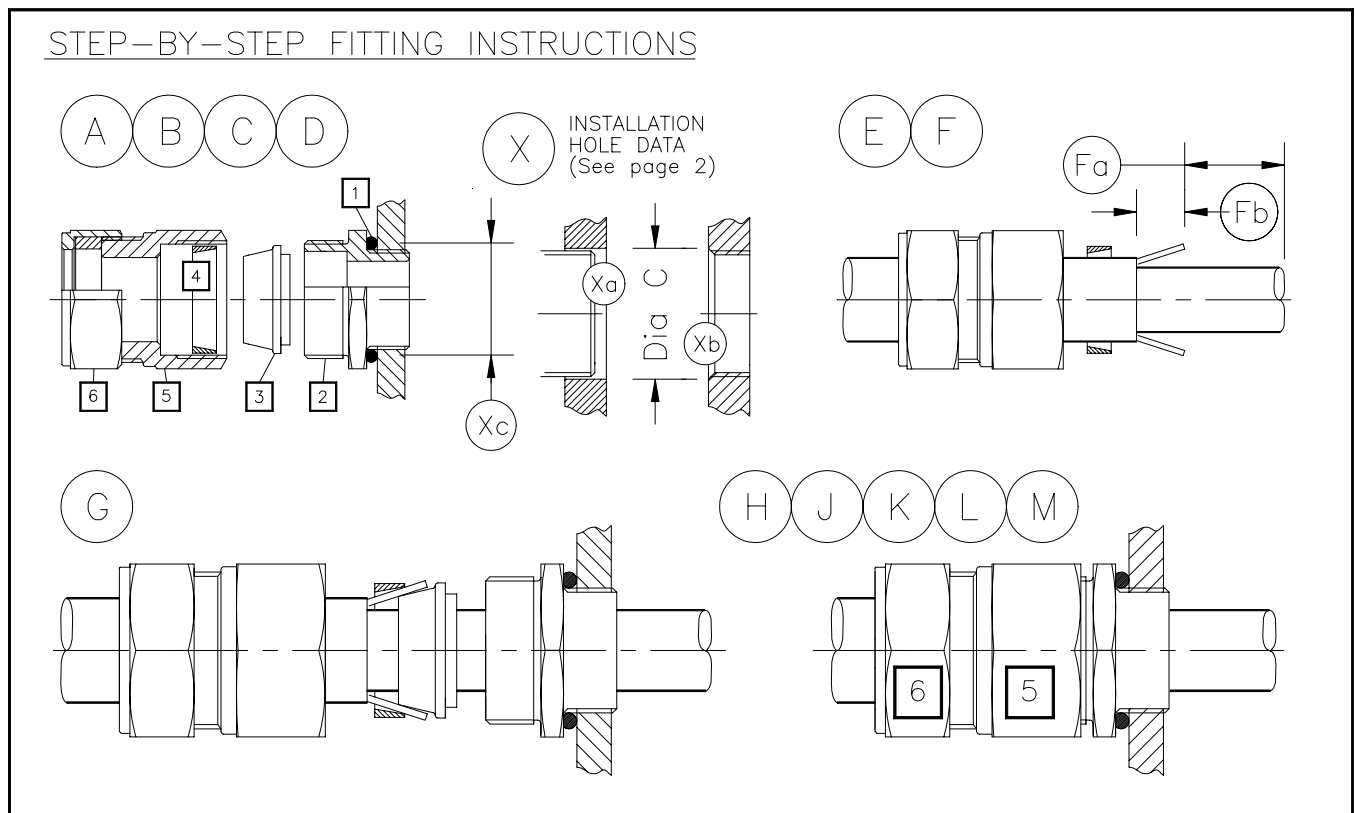




**Brief Description** The Peppers CWLe type cable gland is for outdoor use in the appropriate Hazardous Areas with armoured cable. It gives environmental protection to IP66. The CWLe type IE option has an earth stud on the entry body. A termination suitable for EMC protection can be made using armoured cables with these glands. All are supplied with loose armour clamp rings – basic types CWLe, CXLe and CXZLe. CLLe types are kits including W & XZ clamps. They are suitable for normal industrial environments of temperature, humidity and vibration. Construction materials include steel, brass, aluminium alloy and neoprene, nitrile and silicone rubbers. To minimise galvanic corrosion, the metallic gland components are made from similar materials. Material compatibility under chemical corrosion or attack by aggressive substance must be considered before installation.

**Warning**

PLEASE STUDY CAREFULLY BOTH PAGES OF THESE INSTRUCTIONS BEFORE INSTALLATION. These glands should not be used in any application other than those mentioned here or in our Data Sheets, unless Peppers states in writing that the product is suitable for such application. Peppers can take no responsibility for any damage, injury or other consequential loss caused where the glands are not installed or used according to these instructions. This leaflet is not intended to advise on the selection of cable glands. Further guidance can be found in the standards listed overleaf.



**STEP-BY-STEP FITTING INSTRUCTIONS**

- A** Split gland as shown.
- B** Check [4]:- FOR KITS CLL ETC:- Use PLAIN clamp ring for wire armour. Use GROOVED clamp ring IN BAG for woven steel wire or tape armour.
- C** O-ring [1] with special orders only. Fit sealing washer if required.
- D** Fit [2]. For correct torque see page 2. **DO NOT EXCEED MAX TORQUE FOR ENCLOSURE.**
- E** Slide [4], [5] & [6] onto cable as shown.
- F** Prepare cable as shown in diagram.
  - Fa** Strip outer jacket and armour, length to suit installation.
  - Fb** Expose armour approx. 20mm long.
- G** Slide [3] over end of cable then insert cable through [2]. Slide [4] onto exposed armour.
- H** At all stages, if necessary use 2nd spanner on [2] to avoid stripping enclosure thread.
- J** Tighten [5] to [2] to make-off armour. **FOR CORRECT TORQUE SEE PAGE 2.**
- K** Loosen off [5] to visually check armour is securely locked.
- L** Re-tighten [5] to correct torque.
- M** Hand-tighten [6] to close seal onto cable. **DO NOT TORQUE.**

**\* CWLe Cable Glands for armoured cable - ASSEMBLY INSTRUCTIONS FOR SAFE USE**

**X INSTALLATION HOLE DATA**

Xa Diameter C for clearance holes (NOT EExd)

Xb Diameter C countersink for threaded holes (EExd)      Xc Diameter O of O-ring seat

X Hole data (see overleaf)		Cable Sizes (mm), Armour Acceptance (mm) & Assembly Torques (Nm)													
		Gland Size	Torque Settings	Inner Sheath		Outer Sheath		Reduced Bore		Armour Acceptance Ranges					
				Min	Max	Min	Max	Min	Max	Wire		Tape Armour	Woven steel wire		
22.2	20.5	16	32.5	-	8.4	8.4	13.5	4.9	10.0	0.9		0.15	0.35	0.2	0.3
22.2	20.5	20S	32.5	-	11.7	12.9	16.0	9.4	12.5	0.9	1.25	0.15	0.35	0.2	0.3
22.2	20.5	20	32.5	-	14.0	15.5	21.1	12.0	17.6	0.9	1.25	0.15	0.5	0.2	0.3
27.9	25.5	25	47.5	-	20.0	20.3	27.4	16.8	23.9	1.25	1.6	0.15	0.5	0.2	0.45
35.5	32.5	32	55.0	-	26.3	26.7	34.0	23.2	30.5	1.6	2.0	0.15	0.55	0.3	0.45
43.5	40.5	40	65.0	-	32.2	33.0	40.6	28.6	36.2	1.6	2.0	0.2	0.6	0.3	0.45
53.5	50.5	50S	80.0	-	38.2	39.4	46.7	34.8	42.4	2.0	2.5	0.2	0.6	0.3	0.45
53.5	50.5	50	80.0	-	44.1	45.7	53.2	41.1	48.5	2.0	2.5	0.5	0.8	0.3	0.45
66.5	63.5	63S	95.0	-	50.1	52.1	59.5	47.5	54.8	2.5		0.5	0.8	0.3	0.45
66.5	63.5	63	95.0	-	56.0	58.4	65.8	53.8	61.2	2.5		0.5	0.8	0.3	0.45
78.5	75.5	75S	110.0	-	62.0	64.8	72.2	60.2	68.0	2.5		0.5	1.0	0.3	0.45
78.5	75.5	75	110.0	-	68.0	71.1	78.0	66.5	73.4	2.5		0.5	1.0	0.3	0.45
83.5	80.5	80	150.0	-	72.0	77.0	84.0	N/A	N/A	3.15		0.5	1.0	0.45	
83.5	80.5	80H	150.0	-	72.0	79.6	90.0	N/A	N/A	3.15		0.5	1.0	0.45	
88.5	85.5	85	150.0	-	78.0	79.6	90.0	75.0	85.4	3.15		0.5	1.0	0.45	
93.5	90.5	90	225.0	-	84.0	88.0	96.0	N/A	N/A	3.15		0.5	1.0	0.45	
93.5	90.5	90H	225.0	-	84.0	92.0	102.0	N/A	N/A	3.15		0.5	1.0	0.45	
103.5	100.5	100	225.0	-	90.0	92.0	102.0	87.4	97.4	3.15		0.5	1.0	0.45	

**Installation Guidance**

Point	Advice
1	<ul style="list-style-type: none"> <li>◆ BS EN 60079-10:1996 Classification of Hazardous Areas</li> <li>◆ BS EN 60079-14:1997 Electrical Installations in hazardous areas (other than mines)</li> <li>◆ BS 6121, Part 5:1993 Selection, Installation and Maintenance of Cable Glands</li> </ul>
2	Installation should only be carried out by a competent electrician, skilled in cable gland installation.
3	NO INSTALLATION SHOULD BE CARRIED OUT UNDER LIVE CONDITIONS.
4	An O-ring or sealing washer should always be used with enclosures rated at above IP54. If a star washer is used, it should not be installed in such a way that it reduces the IP rating.
5	The surface of the enclosure should be sufficiently flat and rigid to make both the IP joint, and (where necessary) a suitable earth contact. In the case of painted enclosures, a star washer should be fitted to break through the paint and make a satisfactory earth contact.
6	Once installed do not dismantle except for occasional inspection. If necessary, dismantle by reversing the Fitting Instructions given above. The gland is not serviceable and spare parts are not supplied.
7	Parts are not interchangeable with any other design. If manufacturers' parts are mixed, certification will be invalidated.

**Limitations on Usage.** Be sure your installation complies with the following:-

Feature	Comment										
Cable construction	The glands should only be used with substantially round and compact cables with extruded bedding (i.e. effectively filled cables).										
Installation conditions	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Gas Group?</th> <th>Increased Safety "e" installation?</th> <th>Enclosure Volume?</th> <th>Which Zone?</th> <th>Use Type CWLe Gland?</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">II</td> <td style="text-align: center;">YES</td> <td style="text-align: center;">Any</td> <td style="text-align: center;">Zone 1 or 2</td> <td style="text-align: center;">YES</td> </tr> </tbody> </table>	Gas Group?	Increased Safety "e" installation?	Enclosure Volume?	Which Zone?	Use Type CWLe Gland?	II	YES	Any	Zone 1 or 2	YES
	Gas Group?	Increased Safety "e" installation?	Enclosure Volume?	Which Zone?	Use Type CWLe Gland?						
II	YES	Any	Zone 1 or 2	YES							

**Interpretation of Markings.** Stampings on the outside of this gland carry the following meanings (See also 'Brief Description' page 1): -

Cable Gland Type & Size	
<b>C</b>	Gland type provides sealing to outer cable sheath & clamps armour
<b>3</b>	Seal Type :- 3 = Silicone (Temp range -60 to +180C) No number given = Neoprene (Temp range -20 to +80C)
<b>W</b>	Clamps wire armour. XZ = woven steel wire/tape. X = woven steel wire. L = kit for W & XZ
<b>L</b>	Gland has loose armour clamp ring
<b>e</b>	Protection type code :- e = Increased Safety
<b>20S</b>	Gland size (typical example)   <b>IE</b>   Has integral earth stud
<b>PG16</b>	Entry thread type and size (typical example)

CENELEC Certification Markings	
<b>E</b>	Conformity with European Standard
<b>Ex</b>	Explosion Protection symbol
<b>e</b>	Protection type code :- e = Increased Safety
<b>II</b>	Gas Group Code :- II = non-ignitable (with e-protection code).
<b>SIRA</b>	Certifying Body
<b>01</b>	Year of Certification
<b>ATEX</b>	Certified compliant with ATEX Directive 94/9/EC
<b>1271</b>	Certificate Serial Number
<b>X</b>	<b>Special Conditions for Use :-</b> These glands must not be used with enclosures where the temperature at the point of mounting exceeds -20° to +80°C using neoprene seals, or -60° to +180°C using silicone seals.

ATEX (EU Directive 94/9/EC) Markings	
<b>Ex</b>	EU Explosive Atmosphere Symbol
<b>II</b>	Equipment Group ( II = Non-Mining )
<b>2</b>	Equipment Category for Zones 1, 2, 21 and 22
<b>G</b>	For use with potentially explosive gas mixtures
<b>D</b>	For use with combustible dusts

Other Markings	
<b>IP66</b>	Ingress protection Rating
<b>Year Code:</b>	XX