

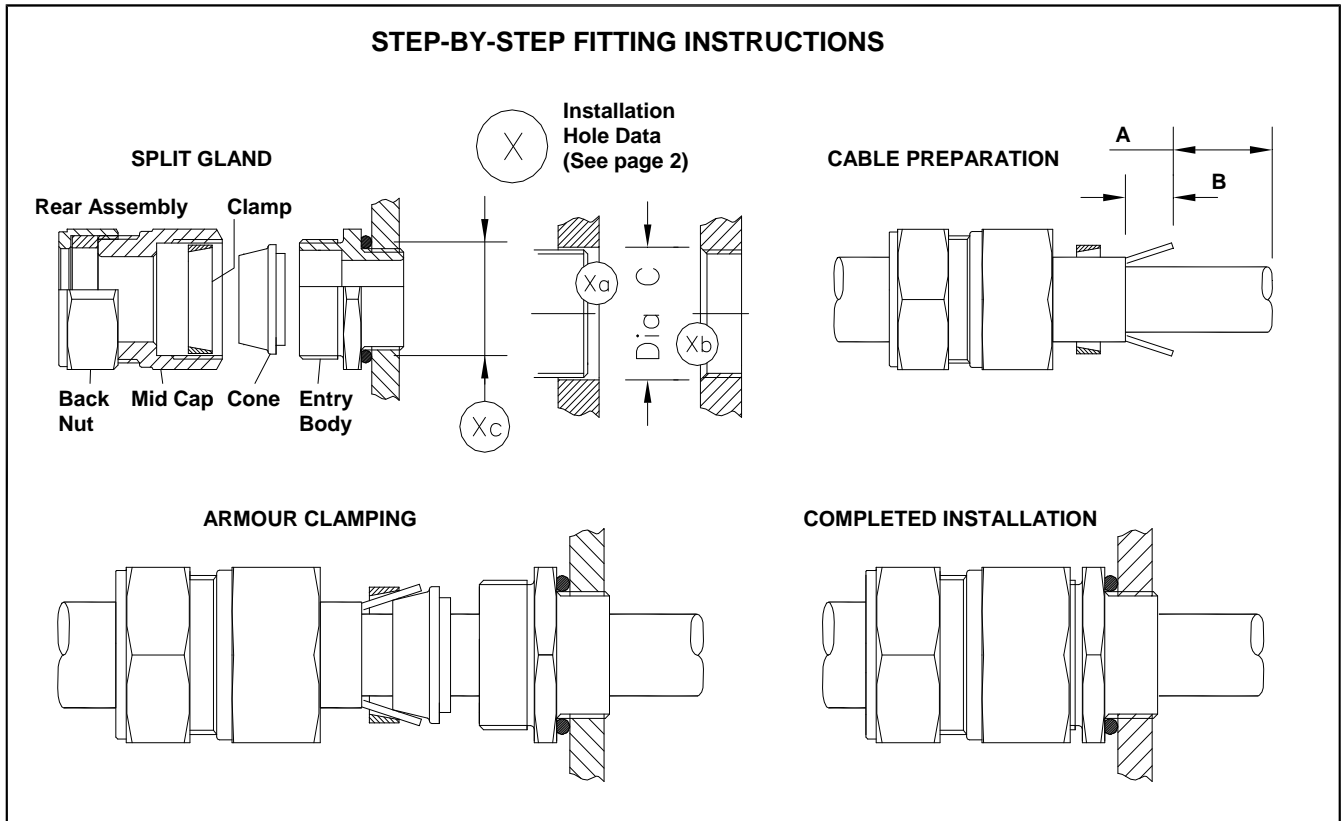
**Brief Description**

The Peppers C\*\*L\*\*E\* type cable gland is for outdoor use in the appropriate Hazardous Areas with armoured cable. It provides environmental protection to IP66. The 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. Clamp options allow woven steel wire and steel tape armours.



**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**

- 1 Split gland as shown.
- 2 Check Clamp:- FOR KITS CLL ETC:- Use PLAIN Clamp ring for wire armour. Use GROOVED Clamp ring IN BAG for woven steel wire or tape armour.
- 3 Fit Entry Body. For correct torque see page 2. DO NOT EXCEED MAX TORQUE FOR ENCLOSURE.
- 4 Slide Rear Assembly and Clamp onto cable as shown.
- 5 Prepare cable as shown in diagram.
  - A Strip outer jacket and armour, length to suit installation.
  - B Expose armour approx. 20mm long.
- 6 Slide Cone over end of cable then insert cable through Entry Body. Slide Clamp onto exposed armour.
- 7 Tighten Mid Cap to Entry Body to lock onto armour. FOR CORRECT TORQUE SEE PAGE 2.
- 8 Loosen off Mid Cap to visually check armour is securely locked.
- 9 Re-tighten Mid Cap to correct torque.
- 10 Hold Mid Cap with wrench and tighten Back Nut onto cable. Ensure seal makes full contact with cable sheath, then tighten Back Nut 1 extra turn.

**X INSTALLATION HOLE DATA**

- Xa** Diameter for clearance holes
- Xb** Diameter of countersink for threaded holes
- Xc** Diameter 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					
Dia Xc	Dia Xa/Xb			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 Classification of Hazardous Areas</li> <li>◆ BS EN 60079-14 Electrical Installations in hazardous areas (other than mines)</li> <li>◆ BS 6121, Part 5 Selection, Installation and Maintenance of Cable Glands</li> <li>◆ IEC 61241-0:2004 and IEC 61241-1:2004 Ignitable dust – Protection by enclosure</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	To maintain Ingress Protection ratings above IP54, use IP washers or O-rings for parallel threads. For taper threads use thread sealant. Also see page 1 diagram and Hole Data above.
5	To ensure the stated IP rating is maintained, at the point of interface the surface of the enclosure should be flat, free from debris and rigid with the hole drilled straight and to an appropriate diameter.
6	Where an earth contact is required the surface of the enclosure should be sufficiently flat and rigid. With painted enclosures a serrated star washer should be fitted to break through the paint and make a satisfactory earth contact.
7	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.
8	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 C**L**E* Gland?</th> </tr> </thead> <tbody> <tr> <td>II</td> <td>YES</td> <td>Any</td> <td>Zone 1 or 2</td> <td>YES</td> </tr> </tbody> </table>	Gas Group?	Increased Safety "e" installation?	Enclosure Volume?	Which Zone?	Use Type C**L**E* Gland?	II	YES	Any	Zone 1 or 2	YES
	Gas Group?	Increased Safety "e" installation?	Enclosure Volume?	Which Zone?	Use Type C**L**E* Gland?						
II	YES	Any	Zone 1 or 2	YES							

**Interpretation of Markings.** Markings on the outside of this gland carry the following meanings:

**Cable Gland Type & Size C-a-b-L-IE-c-E-R-ddd-eee-IP66-nn**

- a = Seal Type 1 = Neoprene (black - temp range -20° to +85°C) 3 = Silicone (white or red - temp range -60° to +180°C) ;
- b = Armour clamping W = single wire armour XZ = woven steel wire/tape L =
- IE = Integral Earth stud option
- c = Main component material none = brass S = stainless steel ;
- R = Optional reduced bore outer seal (red silicone)
- ddd = Gland size ;
- eee = Entry thread type and size ;
- IP66 = Ingress Protection code
- nn = year of manufacture

**Protection Concept and Gas Groups Ex e II / Ex tD A21 IP66;** Ex e = Increased Safety ; II = combined Gas Group ; Ex tD = Ignitable dust protection by enclosure

- Certificate Numbers** (ATEX) **SIRA 01ATEX1271X** The 'X' suffix denotes 'Special Conditions for Safe Use' (see below)
- (IEC) **IECEx SIR 07.0097X** The 'X' suffix denotes 'Conditions of Certification' (see below)

**ATEX (EU Directive 94/9/EC) Markings** **II 2 GD** - Equipment Group II (Non-Mining) for Category 2 (Zone 1) with potentially explosive gas mixtures or combustible dusts

**ATEX Special Conditions for Safe Use**

- (1) These glands must not be used with enclosures where the temperature at the point of mounting exceeds -20°C to +85°C using neoprene seals, or -60° to +180°C using silicone seals.

**IEC Ex Conditions of Certification**

- (1) These glands must not be used with enclosures where the temperature at the point of mounting exceeds -20°C to +85°C using neoprene seals, or -60° to +180°C using silicone seals.
- (2) The interfaces between the male thread of the products and an associated enclosure cannot be defined. Therefore it is the user's responsibility to ensure that the appropriate Ingress Protection level is maintained at these interfaces.