



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx SIR 07.0099X issue No.:2  
Status: **Current**  
Date of Issue: **2012-12-20** Page 1 of 4

Certificate history:  
Issue No. 2 (2012-12-20)  
Issue No. 1 (2012-1-13)  
Issue No. 0 (2007-11-21)

Applicant: **Peppers Cable Glands Limited**  
Stanhope Road  
Camberley  
Surrey GU15 3BT  
United Kingdom

Electrical Apparatus: **CR-\*\*\*, CR-D\*\* and CR-O\*\*\* Cable Gland Ranges**  
Optional accessory:

Type of Protection: **Flameproof, Increased Safety and Dust Protection**

Marking: The CR-O\*\*\*  
Ex e IIC Gb  
Ex ta IIIC Da  
CR-\*\*\* and CR-D\*\*  
Ex d IIC Gb  
Ex e IIC Gb  
Ex ta IIIC Da

Approved for issue on behalf of the IECEx  
Certification Body:

C Ellaby

Position:

Deputy Certification Manager

Signature:  
(for printed version)

Date:

2012-12-20

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
United Kingdom

**sira**  
CERTIFICATION



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Page 2 of 4

Manufacturer: **Peppers Cable Glands Limited**  
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#### Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2011</b> Edition: 6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-7 : 2006-07</b> Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

[GB/SIR/ExTR07.0132/00](#)

[GB/SIR/ExTR12.0005/00](#)

[GB/SIR/ExTR12.0253/00](#)

#### Quality Assessment Report:

[GB/SIR/QAR06.0018/00](#)  
[GB/SIR/QAR06.0018/03](#)

[GB/SIR/QAR06.0018/01](#)  
[GB/SIR/QAR06.0018/04](#)

[GB/SIR/QAR06.0018/02](#)



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Certificate No.: IECEx SIR 07.0099X

Date of Issue: 2012-12-20

Issue No.: 2

Page 3 of 4

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

All cable gland families and stopper box ranges manufactured by Pepper's Cable Gland's Limited have type code designations. These are shown in a matrix detailed in the manufacturer's documents, they are also shown in the manufacturer's instruction leaflets for the end user. These codes are unique to each and every cable gland and stopper box, and identify the various design options applicable to each cable gland family and stopper box range. A full description of the CR-\*\*\*, CR-D\*\* and CR-O\*\*\* Cable Gland Ranges can be found in the Annexe to this Certificate.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. The CR-\*\*\* and CR-D\*\* ranges of cable glands are certified with one specific size of FLP sealing ring per gland size as supplied.
2. The ranges of cable glands shall not be used in enclosures where the temperature, at the point of entry/mounting is outside the range:  
-35°C to +90°C for neoprene (black) seal variants  
-60°C to +180°C for the silicone (white or red) seal variants
3. If the CR-\*\*\* and CR-D\*\* types of cable glands only grip the outer sheath of the cable and do not clamp the cable armour or if they are used to terminate unarmoured, braided or screened cables, then they shall only be used for fixed installations, hence, the cables shall be effectively clamped to prevent pulling or twisting.
4. The CR-\*\*\* and CR-D\*\* cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 metres 7 days).
5. The CR-O\*\*\* range of cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure, on which they are fixed, are capable of providing an ingress protection of IP66.
6. Where glands without sealing rings are installed in protection by enclosure (Ex t) equipment for use in explosive dust atmospheres, they may only be fitted into enclosures offering a minimum of 5 full threads, in accordance with IEC 60079-31:2008 clause 5.1.1.



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Certificate No.: IECEx SIR 07.0099X

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Page 4 of 4

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

<b>Issue 1 – this Issue introduced the following change:</b>	
1	The introduction of the size 110 to the Type CR**** Cable Glands as approved
<b>Issue 2 – this Issue introduced the following changes:</b>	
1	Following appropriate reassessment to demonstrate compliance with the requirements of the latest editions of the IEC 60079 series of standards, the documents previously listed, IEC 60079-0:2004, IEC 60079-1:2003, IEC 60079-7:2001, IEC 61241-0:2004 and IEC 61241-1:2004 were replaced by those currently listed, the markings were updated accordingly, the Conditions of Manufacture were also amended. Size 110 has not been included in this upgrade, and is removed from the current certification
2	Type of protection Ex t is upgraded from EPL Db to EPL Da. Following appropriate reassessment to demonstrate compliance with the additional requirements for Ex ta, the markings were updated accordingly.
3	The introduction of an alternative silicone and neoprene seal material was endorsed.
4	The service temperature range of the glands fitted with a neoprene seal was extended to -35°C to +90°C.
5	The CR-*** and CR-D** cable glands, when installed in accordance with the manufacturer's instructions and with an appropriate enclosure on which they are fixed, are capable of providing an ingress protection of IP66 and IP68 (50 metres 7 days).
6	The description for the certificates have been amended to clarify that the CR**** Cable Gland Ranges are clarified as: CR-***, CR-D** and CR-O***.
7	The application of the cable gland with lead sheathed cables has been clarified.

**Annexe to:** IECEx SIR 07.0099X Issue 2  
**Applicant:** Peppers Cable Glands Limited  
**Electrical Apparatus:** CR\*, CRO\* and CRD\* Cable Gland Ranges



The **CR-\*\*\*, CR-D\*\* and CR-O\*\*\* Cable Gland Ranges** are intended for use with effectively filled and circular armoured, unarmoured, braided, tape or screened sheathed cables. The CR-\*\*\* and CR-D\*\* type glands provide an ingress protection rating of IP66 and IP68 (50 metres for 7 days) and the CR-O\*\*\* type glands provide an ingress protection rating of IP66.

**Design Options:**

**Alternative nearest equivalent and recognised Entry body component thread forms:**

NPT to ANSI/ASME B1.20.1:1983, gauging to clause 8  
NPSM to ANSI/ASME B1.20.1:1983, gauging to clause 9  
BSPT to BS 21:1985 (ISO 7/1) standard threads only clause 5.4, gauging to clause 5A, system A  
BSPP to BS 2779:1986 (ISO 228/1) class A full form external threads  
PG to DIN 40430:1971  
ET to BS 31:1940 (1979) Table A

**Alternative metallic materials of manufacture:**

Brass to BS 2874:1986 grades CZ121 (3Pb), or CZ121 (4Pb) or CZ122  
Stainless Steel to BS 970:Part 1:1991 grades 316S11 (316L), 316S31, 303 or 304  
Additionally, all metallic materials may be surface coated to limit electrolytic reaction between dissimilar materials, providing the coating does not alter the dimensions of the component part.

**The CR-\*\*\* range are suitable for armoured or unarmoured cables and comprise:**

- A threaded entry body, including a groove to accommodate an optional O-ring seal, which tightens into an associated enclosure.
- A silicone or neoprene elastomeric sealing ring, which fits into the entry body to provide a flameproof seal around the inner sheath of the cable.
- An armour ring and armour cone to clamp onto armour/screen/braid (when applicable to installation), compression nut and skid washer. The compression nut with the skid washer compressing the seal onto the inner sheath of the cable, minimising cable twist upon assembly.
- A mid-cap for coupling internal locking mechanisms onto the entry body.
- An outer cap, skid washer and silicone or neoprene elastomeric sealing ring. The cap tightens onto the mid-cap whilst compressing the seal onto the outer sheath of the cable and a skid washer minimising cable twist upon assembly. The elastomeric sealing ring also being available in red with a reduced bore.

Glands are available in the size range 16 to 110 mm with ISO metric preferred size entry threads of M20 to M110.

**Specific type design option:**

- Cable glands fitted with neoprene flameproof elastomeric sealing rings may be fitted with a brass continuity washer in the 20S to 100 sizes that are for use with lead inner sheathed cables. With this modification glands are designated with a '2' in their type number.
- The cable glands whether fitted with either a neoprene or silicone seal have an option to be fitted with a continuity washer for lead sheathed cable.

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**Electrical Apparatus:** CR\*, CRO\* and CRD\* Cable Gland Ranges



**The CR-D\*\* range are suitable for armoured or unarmoured cables and vary from the CR-\*\*\* by:**

- The replacement of outer cap, skid washer and outer sheath elastomeric seal with an alternative cap tightening onto the entry body component.
- This gland type does not have the option to be fitted with brass continuity washer.

**The CR-O\*\*\* range are suitable for armoured cables and vary from the CR-\*\*\* by:**

- The removal of the inner sheath elastomeric seal and skid washer.
- This gland type does not have the option to be fitted with brass continuity washer.

The CR glands part numbering system is clarified as follows:

Gland Type: **CR-\*\*\***

Available Part No's.:	<b>C</b>	<b>R</b>	<b>*</b>	<b>*</b>	<b>*</b>
			1	B	R
			2	S	
			3		
			4		

Options:	1	Neoprene Seals
	2	Neoprene Seals with Lead Sheath Cable Continuity Washer
	3	Silicone Seals
	4	Silicone Seals with Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material
	R	Reducer Bore option

Gland Type: **CR-D\*\***

Available Part No's.:	<b>C</b>	<b>R</b>	<b>D</b>	<b>*</b>	<b>*</b>
				1	B
				2	S
				3	
				4	

Options:	1	Neoprene Seal
	2	Neoprene Seal with Lead Sheath Cable Continuity Washer
	3	Silicone Seal
	4	Silicone Seal with Lead Sheath Cable Continuity Washer
	B	Brass material
	S	316 Stainless Steel material

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**Electrical Apparatus:** CR\*, CRO\* and CRD\* Cable Gland Ranges

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Gland Type: CR-O\*\*\*

Available Part No's.: C R O \* \* \*  
1 B R  
3 S

Options:  
1 Neoprene Seal  
3 Silicone Seal  
B Brass material  
S 316 Stainless Steel material  
R Reducer Bore option