



1 **TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres 2014/34/EU

3 Certificate Number: **Sira 09ATEX4124X** Issue: **4**

4 Equipment: **CR\*\*\*\* Range of cable glands and stopping boxes and  
UL Range of Barrier Cable Glands**

5 Applicant: **Peppers Cable Glands Ltd.**

6 Address: Stanhope Road  
Camberley  
Surrey GU15 3BT  
UK

7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

8 Sira Certification Service certifies that this equipment has been found to comply with the Essential Health and Safety Requirements that relate to the design of Category 3 equipment, which is intended for use in potentially explosive atmospheres. These Essential Health and Safety Requirements are given in Annex II to European Union Directive 2014/34/EU of the European Parliament and of the Council, 26 February 2014.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-0:2012/A11:2013

EN 60079-15:2010

EN 60079-31:2014

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

11 This TYPE EXAMINATION CERTIFICATE relates only to the design of the specified equipment, and not to specific items of equipment subsequently manufactured.

12 The marking of the equipment shall include the following:



II 3GD

Ex nR IIC Gc

Ex tc IIIC Dc

Ta = -60°C to +135°C

Project Number 70058330

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N Jones  
Certification Manager

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## SCHEDULE

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#### 13 DESCRIPTION OF EQUIPMENT

The **CR\*\*\*\* Range of Barrier Cable Glands & Stopper Boxes** are metallic and are intended for use with differing cables or conductors dependent on their type. They allow the entry of the cable or conductors into flameproof, increased safety, restricted breathing and dust protected enclosures without compromising the explosion protection provided by the enclosure, in accordance with relevant codes of practice. All types comprise of various entry thread sizes, which are dependent upon gland size and their cable sealing ability range.

The CR\*\*\*\* Range of Barrier Cable Glands & Stopper Boxes, when installed with the silicone O-ring provided by the manufacturer, have an ingress protection rating of IP66 and IP68 (tested at a depth of 100 m for 7 days).

#### **Design Options for all CR\*\*\*\* Range of Barrier Cable Glands & Conduit Stopper Boxes**

##### **Entry component and CR\*\*\*\* conduit nut internal thread forms:**

ISO Metric to BS3643:1981 6g fit (male) 6H (female)

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

All entry and conduit threads are within the dimensional parameters of the gland body and comply with clause 5.3 of EN 60079-1:2007 and Clause C.2.2.

**Alternative metallic materials of manufacture** (the asterisk in the type number is replaced with a letter designation for one of the material types below):

Brass to BS 2874:1986 grades CZ121 (3Pb), or CZ121 (4Pb) or CZ122

Stainless Steel to BS 970:Part 1:1991 grades 316S11, 316S31, 316L 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.



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The **CR-U\*\* Range of Barrier Cable Glands** are suitable for use with unarmoured cables; they comprise:

- a threaded entry body to tighten into an associated enclosure; this is fitted with a silicone O-ring and internally coated with a release agent
- a ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part "PEPPERS T1000" epoxy putty setting compound is applied to provide an inner seal around the conductors
- a union nut that couples the entry body and ferrule together
- a seal housing, enclosing a white silicone, elastomeric, cable outer sheath seal and a plastic skid washer, that is screwed and secured into the ferrule with adhesive
- a back nut that screws into the seal housing to compress the outer sheath seal

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. number of cores	Outer sheath seal range Ø (mm)	
				Min.	Max.
M20 x 1.5	16	10.4	15	3.4	8.4
M20 x 1.5	20S	10.4	35	4.8	11.7
M20 x 1.5	20	12.5	40	9.5	14.0
M25 x 1.5	25	17.8	60	11.7	20.0
M32 x 1.5	32	23.5	80	18.1	26.3
M40 x 1.5	40	28.8	130	22.6	32.2
M50 x 1.5	50S	34.2	200	28.2	38.2
M50 x 1.5	50	39.4	400	33.1	44.1
M63 x 1.5	63S	44.8	400	39.3	50.1
M63 x 1.5	63	50.0	425	46.7	56.0
M75 x 1.5	75S	55.4	425	52.3	62.0
M75 x 1.5	75	60.8	425	58.0	68.0
M80 x 2.0	80	64.4	425	61.9	72.0
M85 x 2.0	85	69.8	425	69.1	78.0
M90 x 2.0	90	75.1	425	74.1	84.0
M100 x 2.0	100	80.5	425	81.8	90.0

#### Design option:

- A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.

Additional assembly options are described by the following designation coding:

Gland Type: **CR-U**

Available Part No's.: **C R U \* \***  
2 B S

Options: 2 Lead Sheath Cable Continuity Washer  
B Brass material  
S Stainless Steel material

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

**Sira 09ATEX4124X**  
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The **CR-X\*\* Range of Barrier Cable Glands** are suitable for use with, unarmoured, braided and screened cables. They may also be used as a line bushing for terminating flying leads or for the direct inter-connection of associated enclosures; they comprise:

- a threaded entry body to tighten into an associated enclosure; this is fitted with a silicone O-ring and internally coated with a release agent
- a ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part "PEPPERS T1000" epoxy putty setting compound is applied to provide an inner seal around the conductors.
- a union nut that couples the entry body and ferrule together
- a back nut that is screwed and secured into the ferrule with adhesive.

Standard thread size	Entry	Gland size	Max. Ø over cores (mm)	Max. no. of cores	Max. outer sheath Ø (mm)
M20 x 1.5		20S	10.4	35	11.7
M20 x 1.5		20	12.5	40	14.0
M25 x 1.5		25	17.8	60	20.0
M32 x 1.5		32	23.5	80	26.3
M40 x 1.5		40	28.8	130	32.2
M50 x 1.5		50	39.4	400	44.1
M63 x 1.5		63	50.0	425	56.0
M75 x 1.5		75	60.8	425	68.0
M80 x 2.0		80	64.4	425	72.0
M85 x 2.0		85	69.8	425	78.0
M90 x 2.0		90	75.1	425	84.0
M100 x 2.0		100	80.5	425	90.0

#### Design option:

- A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.

Additional assembly options are described by the following designation coding:

Gland Type:	<b>CR-X</b>				
Available Part No's.:	<b>C</b>	<b>R</b>	<b>X</b>	<b>*</b>	<b>*</b>
				2	B
					S
Options:	2	Lead Sheath Cable Continuity Washer			
	B	Brass material			
	S	Stainless Steel material			

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### TYPE EXAMINATION CERTIFICATE

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The **CR-C\*\*\* Range of Barrier Cable Glands** are suitable for use with circular, pliable wire, single wire and steel tape armoured cables along with braided/screened and unarmoured cables; they comprise:

- a threaded entry body to tighten into an associated enclosure, this fitted with a silicone O-ring and internally coated with a release agent.
- a cone, fitted with an external nitrile O-ring, which fits into the entry component to make a part chamber into which a two part "PEPPERS T1000" epoxy putty setting compound is applied to provide an inner seal around the conductors.
- a clamp ring that secures cable armour to the cone and also provides earth protection.
- a mid-cap component that fastens to the entry body to captivate the clamp ring, cone and epoxy putty.
- a back nut, enclosing a white, silicone, elastomeric, cable outer sheath seal and skid washer, that screws onto the external thread of the mid cap.

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. number of cores	Max. inner sheath Ø (mm)	Outer sheath Ø (standard) (mm)		Outer sheath Ø (Reduced bore) (mm)		Max. armour Ø /thickness	
					Min.	Max.	Min.	Max.	Min.	Max.
M20 x 1.5	16	10.4	15	11.7	8.4	13.5	6.7	10.3	0.15	1.25
M20 x 1.5	20S	10.4	35	11.7	11.5	16.0	9.4	12.5	0.15	1.25
M20 x 1.5	20	12.5	40	14.0	15.5	21.1	12.0	17.6	0.15	1.25
M25 x 1.5	25	17.8	60	20.0	20.3	27.4	16.8	23.9	0.15	1.6
M32 x 1.5	32	23.5	80	26.3	26.7	34.0	23.2	30.5	0.15	2.0
M40 x 1.5	40	28.8	130	32.2	33.0	40.6	28.6	36.2	0.2	2.0
M50 x 1.5	50S	34.2	200	38.2	39.4	46.7	34.8	42.4	0.2	2.5
M50 x 1.5	50	39.4	400	44.1	45.7	53.2	41.1	48.5	0.2	2.5
M63 x 1.5	63S	44.8	400	50.1	52.1	59.5	47.5	54.8	0.3	2.5
M63 x 1.5	63	50.0	425	56.0	58.4	65.8	53.8	61.2	0.3	2.5
M75 x 1.5	75S	55.4	425	62.0	64.8	72.2	60.2	68.0	0.3	2.5
M75 x 1.5	75	60.8	425	68.0	71.1	78.0	66.5	73.4	0.3	2.5
M80 x 2.0	80	64.4	425	72.0	77.0	84.0	71.9	79.4	0.45	3.15
M85 x 2.0	85	69.8	425	78.0	79.6	90.0	75.0	85.4	0.45	3.15
M90 x 2.0	90	75.1	425	84.0	88.0	96.0	82.0	91.4	0.45	3.15
M100 x 2.0	100	80.5	425	90.0	92.0	102.0	87.4	97.4	0.45	3.15

#### Design options:

- A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.

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- The CR-C\*\* size 20s and 20 cable glands to be used with an alternative, cone component; in this form, the glands are designated CX-C\*\* (see details below) and are only suitable for braided cables:

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. number of cores	Max. inner sheath Ø (mm)	Outer sheath Ø (standard) (mm)		Braid Ø (mm)	
					Min.	Max.	Min.	Max.
M20 x 1.5	20S	10.4	35	11.7	11.5	16.0	0.15	0.35
M20 x 1.5	20	12.5	40	14.0	15.5	21.1	0.15	0.5

Additional assembly options are described by the following designation coding:

Gland Type: **CR-C**

Available Part No's.: **C R C \* \* \***  
2 B S R

Options:

2	Lead Sheath Cable Continuity Washer
B	Brass material
S	Stainless Steel material
R	Reduced Bore option



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The **CR-C\*\*R Range of Barrier Cable Glands** are suitable for circular, pliable wire, single wire and steel tape armoured cables along with braided/screened and unarmoured cables.

The same components as the CR-C\*\*\* range, however, the cable outer sheath seal has a reduced bore size to accommodate an alternative range of outer sheath cable sizes and is red in colour.

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. number of cores	Max. inner sheath Ø (mm)	Outer sheath Ø (standard) (mm)		Outer sheath Ø (Reduced bore) (mm)		Max. armour Ø /thickness	
					Min.	Max.	Min.	Max.	Min.	Max.
M20 x 1.5	16	10.4	15	11.7	8.4	13.5	6.7	10.3	0.15	1.25
M20 x 1.5	20S	10.4	35	11.7	11.5	16.0	9.4	12.5	0.15	1.25
M20 x 1.5	20	12.5	40	14.0	15.5	21.1	12.0	17.6	0.15	1.25
M25 x 1.5	25	17.8	60	20.0	20.3	27.4	16.8	23.9	0.15	1.6
M32 x 1.5	32	23.5	80	26.3	26.7	34.0	23.2	30.5	0.15	2.0
M40 x 1.5	40	28.8	130	32.2	33.0	40.6	28.6	36.2	0.2	2.0
M50 x 1.5	50S	34.2	200	38.2	39.4	46.7	34.8	42.4	0.2	2.5
M50 x 1.5	50	39.4	400	44.1	45.7	53.2	41.1	48.5	0.2	2.5
M63 x 1.5	63S	44.8	400	50.1	52.1	59.5	47.5	54.8	0.3	2.5
M63 x 1.5	63	50.0	425	56.0	58.4	65.8	53.8	61.2	0.3	2.5
M75 x 1.5	75S	55.4	425	62.0	64.8	72.2	60.2	68.0	0.3	2.5
M75 x 1.5	75	60.8	425	68.0	71.1	78.0	66.5	73.4	0.3	2.5
M80 x 2.0	80	64.4	425	72.0	77.0	84.0	71.9	79.4	0.45	3.15
M85 x 2.0	85	69.8	425	78.0	79.6	90.0	75.0	85.4	0.45	3.15
M90 x 2.0	90	75.1	425	84.0	88.0	96.0	82.0	91.4	0.45	3.15
M100 x 2.0	100	80.5	425	90.0	92.0	102.0	87.4	97.4	0.45	3.15

#### Design option:

- A brass continuity washer may be fitted in the 20S to 100 sizes that are used with lead inner sheathed cables, glands with this modification are designated with a '2' in their type number.
- The CR-C\*\* may be used with of an alternative outer sheath seal that is red in colour and has a reduced bore size that accommodates an alternative range of outer sheath cable sizes; in this form, the glands are designated CX-C\*\*R\*\* (see details below):

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. number of cores	Max. inner Sheath Ø (mm)	Outer sheath Ø (standard) (mm)		Braid Ø	
					Min.	Max.	Min.	Max.
M20 x 1.5	20S	10.4	35	11.7	9.4	12.5	0.15	0.35
M20 x 1.5	20	12.5	40	14.0	12.0	17.6	0.15	0.5

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The **CR-S\* Range of Conduit Stopper Boxes** are suitable for use with conductors carried in conduit, providing a flameproof barrier entry into enclosures and as reversible bushings for terminating flying leads; they comprise:

- a threaded entry body to tighten into an associated enclosure, this is fitted with a silicone O-ring and internally coated with a release agent
- a ferrule, fitted with an external nitrile O-ring, which fits into the entry body to make a part chamber into which a two-part "PEPPERS T1000" epoxy putty setting compound is applied to provide an inner seal around the conductors or flying leads.
- a union nut that couples the entry body and ferrule together
- a conduit nut that is screwed and secured into the ferrule with adhesive.

Standard Entry thread size	Gland size	Max. Ø over cores (mm)	Max. no. of cores	Max. Outer Ø sheath (mm)
M20 x 1.5	20	12.5	40	14.0
M25 x 1.5	25	17.8	60	20.0
M32 x 1.5	32	23.5	80	26.3
M40 x 1.5	40	28.8	130	32.2
M50 x 1.5	50	39.4	400	44.1
M63 x 1.5	63	50.0	425	56.0
M75 x 1.5	75	60.8	425	68.0
M80 x 2.0	80	64.4	425	72.0
M85 x 2.0	85	69.8	425	78.0
M90 x 2.0	90	75.1	425	84.0
M100 x 2.0	100	80.5	425	90.0

Additional assembly options are described by the following designation coding: -

Gland Type: **CR-S**

Available Part No's.: **C R S \* | \***  
B F  
S M

Options: B Brass material  
S Stainless Steel material  
F \*Female Back End Configuration  
M \*Male Back End Configuration  
\*above applicable for CR-S range only.

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The **UL-\* Range of Barrier Cable Glands** are metallic and are intended for use with armoured, unarmoured, braided, tape or screened cables. They allow the entry of the cable or conductors into enclosures without compromising the explosion protection provided by the enclosure, in accordance with relevant codes of practice.

The UL-\* Range of Barrier Cable Glands, when installed with or without a sealing ring in threaded holes and in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66. The UL-\* Range of Barrier Cable Glands fitted with sealing rings, when installed in threaded holes or clearance holes with a lock nut and in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP66 and IP68 to 100 metres for 7 days.

The UL-\* range comprises:

- UL-U cable glands comprising a range of sizes between 16 and 75.
- UL-X cable glands comprising a range of sizes between 20s and 75.
- UL-C cable glands comprising a range of sizes between 16 and 75.

Each size has a specified cable diameter range.

#### **UL-U\* Range of Barrier Cable Glands**

The UL-U\* Range of Barrier Cable Glands are suitable for use with circular, unarmoured, braided or screened cables; they comprise from front (enclosure side) to rear (incoming cable side):

#### **Sizes 16, 20S and 20**

- Entry body to tighten into an associated enclosure which is fitted with an optional sealing ring. The front and rear having male threads.
- Front ferrule that fits into the entry body. The ferrule body is one part of a two part chamber where a two-part "PEPPERS T-1000" epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- O-ring fitted over the rear of the front ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule.
- Rear ferrule, second part of a two part compound chamber, unthreaded flamepath between the entry body and front ferrule.
- Middle cap that has female thread at the front and secures ferrules in place within the entry body; the rear of the middle cap has a male thread to accept the back nut
- Elastomeric, cable outer sheath seal, fitted within the middle cap
- Stainless steel skid washer, fitted to back of outer sheath seal.
- Back nut with male thread that screws into the seal housing to compress the outer sheath seal.



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#### Sizes 25 and above

- Entry body to tighten into an associated enclosure which is fitted with an optional sealing ring. The front and rear have male threads.
- Front ferrule that fits into the entry body, the ferrule body is one part of a two part chamber where a two-part "PEPPERS T-1000" epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- O-ring fitted over the rear of the front ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule.
- Rear ferrule, second part of a two part compound chamber, unthreaded at front female thread to accept seal housing at rear.
- Union nut that secures ferrules together within the rear of the entry body.
- Seal housing, has male thread at front which is screwed and secured with adhesive into the rear ferrule. Rear of seal housing contains outer sheath seal and skid washer.
- Elastomeric, cable outer sheath seal, fitted within the seal housing.
- Stainless steel skid washer, fitted to back of outer sheath seal.
- Back nut with male thread that screws into the seal housing to compress the outer sheath seal.

The following table details the available thread sizes, maximum number of cores that the gland can accept and the range of acceptable cable sizes for the UL-U range.

Entry thread size metric	Entry thread size NPT	Gland size	Max. Ø over cores (mm)	Max. number of cores	Outer sheath seal range (mm)	
					Min.	Max.
M20 x 1.5	½"	16	10.4	15	3.4	8.4
M20 x 1.5	½"	20S	10.4	35	4.8	11.7
M20 x 1.5	½"	20	12.5	40	9.5	14.0
M25 x 1.5	¾"	25	17.8	60	11.7	20.0
M32 x 1.5	1"	32	23.5	80	18.1	26.3
M40 x 1.5	1 ¼"	40	28.8	130	22.6	32.2
M50 x 1.5	2"	50S	34.9	200	28.2	38.2
M50 x 1.5	2"	50	39.4	400	33.1	44.1
M63 x 1.5	2 ½"	63S	44.8	400	39.3	50.1
M63 x 1.5	2 ½"	63	50.0	425	46.7	56.0
M75 x 1.5	3"	75S	55.4	425	52.3	62.0
M75 x 1.5	3"	75	60.8	425	58.0	68.0

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#### UL-X\* Range of Barrier Cable Glands

The UL-X\* Range of Barrier Cable Glands are suitable for use with unarmoured, braided and screened cables; they comprise:

##### Sizes 20S and 20

- Entry body to tighten into an associated enclosure which is fitted with an optional sealing ring. The front and rear having male threads.
- Front ferrule that fits into the entry body, the ferrule body is one part of a two part chamber where a two-part "PEPPERS T-1000" epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- O-ring fitted over the rear of the front ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule
- Rear ferrule, second part of a two part compound chamber, unthreaded flamepath between the entry body and front ferrule.
- Union nut that secures front and rear ferrules together with the rear of the entry body.

##### Sizes 25 and above

- Entry body to tighten into an associated enclosure which is fitted with an optional sealing ring. The front and rear having male threads.
- Front ferrule that fits into the entry body, the ferrule body is one part of a two part chamber where a two-part "PEPPERS T-1000" epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- O-ring fitted over the rear of the front ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule.
- Rear ferrule, second part of a two part compound chamber, unthreaded at front female thread to accept seal housing at rear.
- Union nut that secures ferrules together within the rear of the entry body.
- Union retaining cap, male thread which is screwed and secured with adhesive into rear ferrule thread.

The following table details the available thread sizes, maximum number of cores that the gland can accept and the range of acceptable cable sizes

Entry thread size metric	Entry thread size NPT	Gland size	Max. Ø over cores (mm)	Max. number of cores	Outer sheath range (mm)	
					Min.	Max.
M20 x 1.5	½"	20S	10.4	35	-	11.7
M20 x 1.5	½"	20	12.5	40	-	14.0
M25 x 1.5	¾"	25	17.8	60	-	20.0
M32 x 1.5	1"	32	23.5	80	-	26.3
M40 x 1.5	1 ¼"	40	28.8	130	-	32.2
M50 x 1.5	2"	50	39.4	400	-	44.1
M63 x 1.5	2 ½"	63	50.0	425	-	56.0
M75 x 1.5	3"	75	60.8	425	-	68.0

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## SCHEDULE

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#### UL-C\* Range of Barrier Cable Glands

The UL-C\* Range of Barrier Cable Glands are suitable for use with circular, pliable wire, single wire and steel tape armoured cables along with braided/screened and un-armoured cables; they comprise:

- Entry body to tighten into an associated enclosure which is fitted with an optional sealing ring. The front and rear having male threads.
- Front ferrule that fits into the entry body, the ferrule body is one part of a two part chamber where a two-part "PEPPERS T-1000" epoxy putty setting compound is applied to provide an inner seal around the conductors. The external face when fitted into the entry body makes an unthreaded cylindrical flamepath.
- O-ring fitted over the rear of the front ferrule to provide an ingress seal to the unthreaded flamepath between the entry body and front ferrule
- Rear ferrule/ cone, second part of a two part compound chamber at front and cone for clamping cable armour at rear.
- Clamp ring that secures cable armour to the cone and also provides earth protection
- Middle cap that has female thread at the front and secures ferrules in place within the entry body; the rear of the middle cap has a male thread to accept the outer cap
- Elastomeric, cable outer sheath seal, fitted into outer cap
- Nylon 66 skid washer, fitted into outer cap
- Outer cap, female thread, containing cable outer sheath seal and skid washer; outer cap is screwed on to the middle cap to compress the outer sheath seal

Entry thread size metric	Entry thread size NPT	Gland size	Max Ø over cores (mm)	Max. number of cores	Outer sheath range (mm)			
					Standard seal		Reduced bore	
					Min.	Max.	Min.	Max.
M20 x 1.5	½"	16	8.4	15	9.2	13.5	6.7	10.3
M20 x 1.5	½"	20S	11.7	35	11.5	16	9.4	12.5
M20 x 1.5	½"	20	14.0	40	15.5	21.1	14.3	17.6
M25 x 1.5	¾"	25	20.0	60	20.3	27.4	17.5	23.9
M32 x 1.5	1"	32	26.3	80	26.7	34.0	25.0	30.5
M40 x 1.5	1 ¼"	40	32.2	130	33.0	40.6	29.3	36.2
M50 x 1.5	2"	50S	38.2	200	39.4	46.7	38.1	42.4
M50 x 1.5	2"	50	44.1	400	45.7	53.2	41.1	48.5
M63 x 1.5	2 ½"	63S	50.1	400	52.1	59.5	46.9	54.8
M63 x 1.5	2 ½"	63	56.0	425	58.4	65.8	53.8	61.2
M75 x 1.5	3"	75S	62.0	425	64.8	72.2	62.7	68.0
M75 x 1.5	3"	75	68.0	425	71.1	78.0	66.5	73.4

#### Alternative metallic materials of manufacture:

The UL-\* Range of Barrier Cable Glands may be manufactured from the following materials:

Brass grade CW614 (CuZn 39Pb3)/ CZ121 3Pb

Brass grade CW617N (CuZn 40Pb2)/ CZ122

Brass grade CW614N (CuZn 38Pb4)/ CZ121 4Pb

Stainless Steel 1.4401/ 316 S31

Stainless Steel 1.4404/ 316 S11/316L

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Additionally, all metallic materials may be surface coated to limit electrolytic reaction between dissimilar materials, as long as they do not dimensionally alter the components.

#### Product Type Ref:

**The product type is derived from the following options:**

#### UL-abc-ddd-eee

- a Product Type
  - X = For use with unarmoured cable, no outer seal
  - U = For use with unarmoured cable and fitted with elastomeric outer seal
  - C = For use with cables utilising SWA armour, braid, tape or screen and fitted with elastomeric outer seal
- b Material of manufacture
  - B = Brass
  - S = Stainless steel
- c Bore (UL-C only)
  - Blank = Standard bore
  - R = Reduced bore
- d Gland size  
16, 20S, 20, 25, 32, 40, 50S, 50, 63S, 63, 75S, 75
- e Thread type and size  
Mxx, x" NPT

**Variation 1** - This variation introduced the following changes:

- i. The addition of the UL Range of Compound Filled Cable Glands. As a result of this variation, the product description has been amended to include the UL range of compound filled cable glands.
- ii. A special condition for safe use was added, see clause 15.3.

**Variation 2** - This variation introduced the following changes:

- i. It was recognised that the IP rating for the CR\*\*\*\* Range has been increased to IP68 at 100 m for 7 days, previously IP68 (tested at a depth of 100 m for 24 hours), the description was modified accordingly.
- ii. The maximum number of cores permitted was increased for the CR\*\*\*\* Range and the description modified accordingly.
- iii. Following appropriate re-assessment to demonstrate compliance, assessment standard EN 60079-15:2005 was replaced by IEC 60079-15:2010 Ed 4.
- iv. The CR-X Range can now be used as a Line Bushing for terminating flying leads or for the direct inter-connection of associated enclosures.

**Variation 3** - This variation introduced the following changes:

- i. Clarification of the optional O-ring entry thread seals fitted to metric entry thread sizes only.
- ii. Clarification of the clamping test values applied permitting suitability for Group I applications.
- iii. An update to the current material grades and standard designations of the materials of manufacture.

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- iv. Clarification that the cable glands can be manufactured with larger entry thread sizes than the standard sizes listed in the product descriptions, dimensionally only differing in their outer hexagon bar dimensions, as necessary, and detailed on drawing number PCG/ETDUL.
- v. The introduction of an alternative material for the O-ring on drawing number PCGETOR for the optionally fitted interface O-ring on the cable gland entry body.
- vi. Minor design modifications and editorial changes to the existing manufacturer's documentation that does not affect the explosion concept of safety applied to the product.

CR\*\*\*\* Range of cable glands and stopping boxes

- vii. Minor design modifications and editorial changes to the existing manufacturer's documentation that does not affect the explosion concept of safety applied to the product.

Inclusive of the following significant changes:

- CR-C Gland size 16 'standard' outer sheath seal amended from 9.0 mm MIN. to 8.4 mm MIN.
- CR-C Gland size 80 'reduced bore' outer sheath seal range 71.9 mm MIN. to 79.4 mm MAX. added.
- CR-C Gland size 90 'reduced bore' outer sheath seal range 82.0 mm MIN. to 91.4 mm MAX. added.
- CR-U Gland size 63S maximum quantity of cores amended from 425 to 400.

The product description has been updated accordingly to reflect these changes

- viii. The introduction of an alternative skid washer drawing number PCG/ATX/91V.
- ix. Following appropriate assessment to demonstrate compliance with the latest technical knowledge EN 60079-0:2009, IEC 60079-15:2010 Ed 4 and IEC 60079-31:2008 Ed 1 were replaced by EN 60079-0:2012/A11:2013, EN 60079-15:2010 and EN 60079-31:2014, and the special conditions for safe use were amended as applicable to recognise the new standards.

## 14 DESCRIPTIVE DOCUMENTS

### 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	16 April 2010	R19249A/00	The release of the prime certificate.
1	7 February 2011	R19248B/00 R23283A/00	The introduction of Variations 1 and 2.
2	12 September 2011	R25954A/00	Typographical errors were corrected.
3	03 June 2015	R70010486A	The introduction of Variation 3.

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## SCHEDULE

### TYPE EXAMINATION CERTIFICATE

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**Issue 4**

Issue	Date	Report number	Comment
4	26 April 2016	R70058330A	<p>This Issue covers the following changes:</p> <ul style="list-style-type: none"><li>• Type Examination Certificate in accordance with 94/9/EC updated in accordance with Directive 2014/34/EU.</li><li>• <i>(In accordance with Article 41 of Directive 2014/34/EU, Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such Type Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)</i></li></ul>

#### 15 SPECIFIC CONDITIONS OF USE

- 15.1 The cable glands/stopper boxes shall not be used in enclosures where the temperature, at the point of entry/mounting, is outside of the range -60°C to +135°C.
- 15.2 The Ingress Protection rating that is required to ensure compliance with the standards used in this certificate was determined by testing the devices fitted into a representative enclosure having a smooth flat mounting surface. In practice, the interface between the male thread of the glands and their 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.
- 15.3 The parallel threaded entry component threads will be suitably sealed using a method that is applicable to the associated equipment to which the gland will be attached. This will be in accordance with the relevant installation code of practice and will ensure that any ingress protection and restricted breathing sealing requirements are maintained.
- 15.4 The threaded entry component threads without interface o-ring seals installed in an explosive dust atmosphere, within threaded entries, shall only be fitted into enclosures that have either:
- parallel entries that will ensure that a minimum of 5 full threads of contact will be maintained, this is in accordance with clause 5.1.2 of IEC 60079-31:2013,
  - tapered entries that will ensure that a minimum of 3 ½ full threads of contact will be maintained, this is in accordance with clause 5.1.2 of IEC 60079-31:2013.

#### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed reports listed in Section 14.2.

#### 17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of Type Examination Certificates are required to comply with the production control requirements defined in Article 13 of Directive 2014/34/EU.

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# Certificate Annexe



**Certificate Number:** Sira 09ATEX4124X.

**Equipment:** CR\*\*\*\* Range of cable glands and stopping boxes and UL Range of Compound Filled Cable Glands

**Applicant:** Peppers Cable Glands Ltd.

## Issue 0

Drawing	Sheets	Rev	Date (Sira stamp)	Title
PCG/ATX/CR-S	1 of 1	4	09 Apr 10	Conduit stopper box CR-S family
PCG/ATX/CR-U	1 of 1	6	09 Apr 10	Barrier glands for armoured and unarmoured cable, CR-C family
PCG/ATX/CR-U	1 of 1	6	09 Apr 10	Barrier glands for unarmoured cable, CR-U and CR-X FAMILIES
PCG/ATX/35VT	1 of 1	3	09 Apr 10	Conduit nut, NPT thread part 35V
PCG/LW2	1 of 1	7	09 Apr 10	Continuity washer part LW2
PCG/MATS/SB	1 of 1	3	09 Apr 10	Standard materials
PCG/ATX/88NMM	1 of 1	1	12 Apr 10	Conduit nut, male part 88NMM

## Issue 1

### Drawings associated with Variation 1

Drawing	Sheets	Rev	Date (Sira stamp)	Title
PCG/ATX/ULC	1 of 1	1	09 Aug 10	UL-C** barrier gland general arrangement
PCG/ATX/ULU	1 of 1	1	09 Aug 10	UL-X* and UL-U* barrier gland general arrangement
PCG/5UL	1 of 1	2	09 Aug 10	Middle cap for UL-C sizes 16, 20S, 20, 63S, 63, 75S and 75
PCG/31UL	1 of 1	5	10 Aug 10	Entry body (all types)
PCG/32UL	1 of 1	2	09 Aug 10	Front ferrule (all types)
PCG/33UL	1 of 1	1	09 Aug 10	Cone for UL-C
PCG/34UL	1 of 1	1	09 Aug 10	Rear ferrule for UL-X and UL-U
PCG/35UL	1 of 1	1	09 Aug 10	Middle cap for UL-U
PCG/36UL	1 of 1	1	09 Aug 10	Union nut for UL-X and UL-U
PCG/38UL	1 of 1	1	09 Aug 10	Union retaining cap for UL-U
PCG/39UL	1 of 1	1	09 Aug 10	Seal housing for UL-U
PCG/ATX/2M	1 of 1	2	09 Aug 10	Outer sheath seal for UL-C
PCG/ATX/5V	1 of 1	3	09 Aug 10	Middle cap for UL-C sizes 25-50
PCG/ATX/6M	1 of 1	1	09 Aug 10	Outer cap for UL-C
PCG/ATX/10V	1 of 1	3	09 Aug 10	Clamp ring for UL-C
PCG/ATX/11M	1 of 1	1	09 Aug 10	Skid washer for UL-C
PCG/ATX/36V	1 of 1	3	09 Aug 10	Alternative union nut for UL-U
PCG/ATX/82N	1 of 1	3	09 Aug 10	Seal for UL-U
PCG/ATX/88N	1 of 1	4	09 Aug 10	Nut for UL-U
PCG/ATX/91A	1 of 1	1	09 Aug 10	Skid washer for UL-U
PCG/OR	1 of 1	1	09 Aug 10	Internal O-ring (all types)
PCG/ETOR	1 of 1	1	09 Aug 10	Entry thread O-ring (all types)
PCG/MATS/UL	1 of 1	1	09 Aug 10	Materials for UL glands
PCG/ETDUL	1 of 1	1	09 Aug 10	Entry thread and hexagon size options for component PCG/31UL
PCG/ATX/PEXMP	1 of 1	1	09 Aug 10	Marking plan

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## Sira Certification Service

Unit 6, Hawarden Industrial Park,  
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# Certificate Annexe



**Certificate Number:** Sira 09ATEX4124X.

**Equipment:** CR\*\*\*\* Range of cable glands and stopping boxes and UL Range of Compound Filled Cable Glands

**Applicant:** Peppers Cable Glands Ltd.

## Drawings associated with Variation 2

Drawing	Sheets	Rev	Date (Sira stamp)	Title
PCG/ATX/CR-S	1 of 1	5	21 Dec 10	Conduit stopper box CR-S family
PCG/ATX/CR-C	1 of 1	7	21 Dec 10	Barrier glands for armoured and unarmoured cable, CR-C family
PCG/ATX/CR-U	1 of 1	7	21 Dec 10	Barrier glands for unarmoured cable, CR-U AND CR-X families
PCG/ATX/36V	1 of 1	3	7 Feb 11	ATEX Component Union Nut Part 36V
PCG/ATX/81AN	1 of 1	2	7 Feb 11	ATEX Component Entry Body Part 81AN

**Issue 2** (No new drawings were introduced.)

## Issue 3

Drawing	Sheets	Rev	Date (Sira stamp)	Title
PCG/ATX/CR-C	1 of 1	8	14 May 15	Barrier Glands for armoured and unarmoured cable, CR-C Family
PCG/ATX/CR-S	1 of 1	6	14 May 15	Conduit Stopper Box CR-S Family
PCG/ATX/CR-U	1 of 1	8	14 May 15	Barrier Glands for unarmoured cable, CR-U AND CR-X Families
PCG/ATX/ULC	1 of 1	3	20 May 15	UL- C** barrier gland general arrangement
PCG/ATX/ULU	1 of 1	3	20 May 15	UL-X* and UL-U* barrier gland general arrangement
PCG/5UL	1 of 1	6	14 May 15	Middle cap for UL-C sizes 16, 20S, 20, 63S, 63, 75S and 75
PCG/31UL	1 of 1	9	14 May 15	Entry body (all types)
PCG/32UL	1 of 1	3	14 May 15	Front ferrule (all types)
PCG/33UL	1 of 1	3	14 May 15	Cone for UL-C
PCG/36UL	1 of 1	2	14 May 15	Union nut for UL-X and UL-U
PCG/39UL	1 of 1	2	14 May 15	Seal housing for UL-U
PCG/ATX/2M	1 of 1	9	14 May 15	Outer sheath seal for UL-C
PCG/ATX/5V	1 of 1	6	14 May 15	Middle cap for UL-C sizes 25-50
PCG/ATX/6M	1 of 1	5	14 May 15	Outer cap for UL-C
PCG/ATX/10V	1 of 1	4	14 May 15	Clamp ring for UL-C
PCG/ATX/11M	1 of 1	3	14 May 15	Skid washer for UL-C
PCG/ATX/36V	1 of 1	4	14 May 15	Alternative union nut for UL-U
PCG/ATX/82N	1 of 1	6	14 May 15	Seal for UL-U
PCG/ATX/88N	1 of 1	8	14 May 15	Nut for UL-U
PCG/ATX/91A	1 of 1	3	14 May 15	Skid washer for UL-U
PCG/ATX/91V	1 of 1	5	18 May 15	Skid washer – CR-C
PCG/OR	1 of 1	12	14 May 15	Internal O-ring (all types)
PCG/ETOR	1 of 1	12	18 May 15	Entry thread O-ring (all types)
PCG/ETRO	1 of 1	2	14 May 15	Entry thread run out spec
PCG/MATS/UL	1 of 1	2	14 May 15	Standard materials for UL certified glands
PCG/MATS/SB	1 of 1	5	14 May 15	Standard materials for UL certified glands
PCG/ETDUL	1 of 1	3	14 May 15	Entry thread and hexagon size options for component PCG/31UL
PCG/ORGD	1 of 1	5	14 May 15	Entry thread O-ring groove detail (all types)

**Issue 4** No new drawings were introduced

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