



**EC TYPE-EXAMINATION CERTIFICATE**

Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

Certificate Number: Sira 02ATEX3091X

Equipment: C1W, C1X & C1Z Ranges of Cable Glands

Applicant: Pirelli Cables Ltd  
Components Unit (trading as BICON)

Address: Hall Lane  
Prescot  
Merseyside  
L34 5UR  
UK

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

Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report number R51A8796A.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 (amendments 1 and 2)  
EN 50019:2000  
EN 50281-1-1:1998

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.

This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:



II 2GD  
EEx e II

M D Shearman  
Certification Manager

Project Number 51A8796  
Date 7 August 2002  
C, Index 07

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**Sira Certification Service**

Rake Lane, Eccleston, Chester, CH4 9JN, England  
Tel: +44 (0) 1244 670900 Fax: +44 (0) 1244 681330  
Email: exhazard@siratc.co.uk



## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

Sira 02ATEX3091X

#### 13 DESCRIPTION OF EQUIPMENT

The C1W, C1X & C1Z ranges of compression seal cable glands are manufactured from brass to BS 2874:1986 grades CZ121 or 122 or better. The glands are intended to terminate circular cables into increased safety enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They are used with the following cable forms:

- C1W types - either steel wire armoured or aluminium wire armoured cables
- C1X types - wire braided cables
- C1Z types - steel tape armoured cables

The glands consist of a male-threaded front entry component, designated the gland body, which is intended to screw into an entry point of its associated enclosure. In the case of non-threaded entry points, the glands are fitted with the use of a locking nut. The gland barrel threads onto the gland body and houses an armour-clamping ring. The armour ring effects clamping of the cable armour or braid when the gland barrel is tightened onto the gland body. An outer seal gland nut, fitted with a polychloroprene outer seal and a fibre skid washer, screws onto the gland barrel effecting environmental sealing onto the outer sheath of the cable.

Design options:

Alternative metallic materials of manufacture:	Mild steel to BS 970 Part 1:1991 Stainless steel to BS 970 Part 4:1987 Aluminium to BS 1471:1972 or better Aluminium to BS 1472:1987 or better
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Alternative skid washer materials of manufacture:	Nylon 6 The same material as the gland
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All metallic materials may additionally be surface coated to limit any electrolytic reaction between dissimilar materials.

Alternative entry threadforms that are within its dimensional parameters and that maintain compliance with the requirements of clause 5.3 of EN 50018:2000.

Alternative profiles of construction of the gland nut, gland barrel and gland body components with the minimum wall sections, the number of threads engaged and the thread engagement length maintained.

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#### C1W range for circular steel wire armoured & aluminium wire armoured cable

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Armour Range (mm)	
			Min	Max	Min	Max	Min	Max
C1W	16	M16	-	8.74	7.0	13.2	0.9	-
C1W	20ss	M20	-	8.74	7.0	13.2	0.9	-
C1W	20s	M20	-	11.79	8.0	15.8	0.9	1.4
C1W	20	M20	-	14.15	10.35	20.8	0.9	1.4
C1W	25	M25	-	20.12	17.0	27.2	1.25	1.6
C1W	32	M32	-	26.55	19.0	33.5	1.6	2.0
C1W	40	M40	-	32.42	26.5	39.9	1.6	2.0
C1W	50	M50	-	44.33	36.0	52.6	2.0	2.5
C1W	63	M63	-	56.24	46.5	65.3	2.5	-
C1W	75	M75	-	68.13	58.0	78.0	2.5	-
C1W	85	M85	-	74.00	67.5	88.0	3.15	-

#### C1X range for circular wire braided cable

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Braid Range (mm)	
			Min	Max	Min	Max	Min	Max
C1X	16	M16	-	8.74	7.0	13.2	0.2	0.3
C1X	20ss	M20	-	8.74	7.0	13.2	0.2	0.3
C1X	20s	M20	-	11.79	8.0	15.8	0.2	0.3
C1X	20	M20	-	14.15	10.35	20.8	0.2	0.3
C1X	25	M25	-	20.12	17.0	27.2	0.2	0.45
C1X	32	M32	-	26.55	19.0	33.5	0.3	0.45
C1X	40	M40	-	32.42	26.5	39.9	0.3	0.45
C1X	50	M50	-	44.33	36.0	52.6	0.3	0.45
C1X	63	M63	-	56.24	46.5	65.3	0.3	0.45
C1X	75	M75	-	68.13	58.0	78.0	0.3	0.45
C1X	85	M85	-	74.00	67.5	88.0	0.3	0.45

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## SCHEDULE

### EC TYPE-EXAMINATION CERTIFICATE

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#### C1Z range for steel tape armoured cable

Gland Title	Gland Size	ISO Entry Thread	Under Armour Diameter (mm)		Outer Sheath Diameter (mm)		Steel Tape Range (mm)	
			Min	Max	Min	Max	Min	Max
C1Z	16	M16	-	8.74	7.0	13.2	0.15	0.35
C1Z	20ss	M20	-	8.74	7.0	13.2	0.15	0.35
C1Z	20s	M20	-	11.79	8.0	15.8	0.15	0.35
C1Z	20	M20	-	14.15	10.35	20.8	0.15	0.5
C1Z	25	M25	-	20.12	17.0	27.2	0.15	0.5
C1Z	32	M32	-	26.55	19.0	33.5	0.2	0.55
C1Z	40	M40	-	32.42	26.5	39.9	0.2	0.6
C1Z	50	M50	-	44.33	36.0	52.6	0.2	0.8
C1Z	63	M63	-	56.24	46.5	65.3	0.2	0.8
C1Z	75	M75	-	68.13	58.0	78.0	0.2	1.0
C1Z	85	M85	-	74.00	67.5	88.0	-	-

#### 14 DESCRIPTIVE DOCUMENTS

Drawing	Sheet	Rev	Date	Title
SIRA003	1 of 1	1	11 Mar 02	ATEX CERTIFIED C TYPE CABLE GLANDS
SIRA41003	1 of 1	1	11 Mar 02	C TYPE GLAND BODY FOR S.W.A/A.W.A
SIRA41039	1 of 1	1	11 Mar 02	C TYPE GLAND BODY FOR BRAID/S.T.A
SIRA41401C	1 of 1	1	11 Mar 02	C TYPE GLAND ARMOUR RINGS FOR S.W.A/A.W.A
SIRA41413C	1 of 1	1	11 Mar 02	C TYPE GLAND ARMOUR RINGS FOR STEEL TAPE
SIRA41414C	1 of 1	1	11 Mar 02	C TYPE GLAND ARMOUR RINGS FOR WIRE BRAID
SIRA41504C	1 of 1	1	11 Mar 02	C TYPE GLAND BARREL
SIRA41605C	1 of 1	1	11 Mar 02	C TYPE GLAND OUTER SEALS
SIRA41701C	1 of 1	1	11 Mar 02	C TYPE GLAND SKID WASHERS
SIRA41806C	1 of 1	1	11 Mar 02	C TYPE GLAND NUT

14.2 Report No. R51A8796A

#### 15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 The cable glands shall only be used where the temperature at the point of mounting is within the range -20°C to +90°C.

#### 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 in Report No. R51A8796A.

#### 17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of SCS Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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## EC TYPE-EXAMINATION CERTIFICATE VARIATION

<b>CERTIFICATE NUMBER</b>	Sira 02ATEX3091X	<b>Dated</b>	7 August 2002
<b>VARIATION NUMBER</b>	1 (ONE)	<b>Dated</b>	16 May 2006

### VARIATION TO EQUIPMENT

To permit:

- 1 A change of the Applicant's name on the certificate:  

<b>From:</b> Pirelli Cables Limited (Using the registered trademark of BICON)	<b>To:</b> Prysmian Cables & Systems Limited (Using the registered trademark of BICON)
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- 2 The Applicant to substitute, on the label affixed to the package containing the product, the name Prysmian Cables & Systems Limited for Pirelli Cables Limited Components Unit (trading as BICON), as reduced marking criteria are applicable to this equipment.

### DESCRIPTIVE DOCUMENTS

None

### ADDITIONAL CONDITIONS OF CERTIFICATION

None

**File No.** 51A14278

**Report No.** R51A14278A

**D R Stubbings BA MIEE**  
**Certification Manager**

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