



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 13ATEX1072X** Issue: **0**

4 Equipment: **Cable Gland Types PX\*\***

5 Applicant: **CMP Products Ltd**

6 Address: **Glasshouse Street  
St Peters  
Newcastle upon Tyne, NE6 1BS  
UK**

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

8 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 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 to this certificate, has been assured by compliance with the following documents:

EN 60079-0:2012      EN 60079-1:2007      EN 60079-7:2007      EN 60079-31:2009

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 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.

12 The marking of the equipment shall include the following:



IM2  
Ex e I Mb •  
Ex d I Mb •  
• Not applicable to PXRC



II 2G  
Ex e IIC Gb  
Ex d IIC Gb



II 1D  
Ex ta IIIC Da

Ta = -60°C to +85°C

Project Number 27765

P J Walsh  
Technical Advisor

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## SCHEDULE

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#### 13 DESCRIPTION OF EQUIPMENT

The PX\*\* series Type ranges of barrier cable glands consist of a male-threaded front entry component, fitted with a barrier tube such that a spigot/combination joint is formed, which is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The barrier tube is filled with a sealing material that creates a flameproof seal around the cable cores passing through it and is mechanically retained. The front entry component to main body mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armour or braid is effected by a combination of the front entry component and the different optional armour cone and reversible sleeve combinations within the main body being fastened together. An outer seal nut threads onto the main body and creates an environmental seal between the gland and cable outer sheath. The outer seal nut contains an elastomeric sealing ring and a Nylon 6 ferrule.

#### Design options

- The front entry component may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face with the associated enclosure. This option having the gland type designation prefixed with the letter R, e.g. 25RPX2KW.
- Materials of manufacture:  
Brass to EN12168:1998 Grade CuZn39Pb (CW614N)  
Mild steel to BS EN 10088-3:2005 Grade 220M07Pb  
Stainless steel to BS EN 10088-3:2005 Grade 316S11, 316S13, 316S31 or 316S33  
Aluminium alloy not inferior to grade 6082 to EN755,1-3:1996 or LM25 to BS EN 1676:2010 (Not Group I)
- Alternative entry component thread forms:  
Metric ISO 965-1, ISO965-3 medium fit (6g) for external threads  
ET(Conduit) BS 31:1940 (1979), Table A  
PG DIN 40430:1971  
BSPP BS 2779:1973 class A full form for external threads  
BSPTBS 21:1985 standard threads only as clause 5.4, gauging to clause 5.2 system A  
ISO ISO 7/1:1982, gauging to ISO 7/2 clause 6.3 for external threads  
NPT ANSI/ASME B1.20.1-1983 gauging to clause 8.1 for external threads  
NPSMANSI/ASME B1.20.1-1983 gauging to clause 9 for external threads
- The option to manufacture glands with entry threads that are one size up from the nominal quoted gland size.
- Alternative material of manufacture of the ferrule to be the same as the gland material.
- The removal of the outer seal, nut and ferrule, along with the body component manufactured without the external mating thread. The cable gland being suitable for S.W.A armoured cables and is identified within type designation coding.
- The use of the barrier tube and spacer along with the manufacture of the front entry component with a female mating thread, to couple to an alternative main body, skid washer, seal and nut. The latter replacing other component parts. This variant being identified within type designation coding.
- PXSS2K range can be fitted with the outer seal nut from the PX\*\* range as an alternative.

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- PX type glands may be fitted with armour cones with alternative diameters to allow the clamping of smaller or larger armour wires.
- Alternative outer seal arrangement to allow the glands to be attached to flexible conduit.
- PX2K\*\* range can be fitted with the outer seal nut assembly from the PKSS2K range as an alternative.

The gland and seal sizes are determined by the entry thread and cable range take sizes. In addition note that not all the information detailed in the table is applicable to both gland types. See individual approval drawings.

Gland size	Entry thread	Entry thread 'B' version	Max. no. of cores	Max. Ø over cores (mm)	SWA (mm)		SWA, STA, strip armour, pliable wire armour <sup>1</sup> & wire braid (mm)		PXSS2K <sup>2,3</sup> outer seal sheath range Ø (mm)		PX** <sup>3</sup> outer seal sheath range Ø (mm)	
					Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
20s/16	M20 x 1.5	M25 x 1.5	11	12.6	0.8	1.25	0	0.8	3.1	8.7	6.1	13.2
20s	M20 x 1.5	M25 x 1.5	11	12.6	0.8	1.25	0	0.8	6.1	11.7	9.5	15.9
20	M20 x 1.5	M25 x 1.5	11	12.6	0.8	1.25	0	0.8	6.5	14.0	12.5	20.9
20L	M20 x 1.5	M25 x 1.5	11	12.6	0.8	1.25	0	0.8	10.0	15.9	N/A	N/A
25s	M25 x 1.5	M32 x 1.5	21	17.5	1.25	1.6	0	1.1	11.1	20.0	14.0	22.0
25	M25 x 1.5	M32 x 1.5	21	17.5	1.25	1.6	0	1.1	11.1	20.0	18.2	26.2
32	M32 x 1.5	M40 x 1.5	38	23.6	1.6	2.0	0	1.2	17.0	26.3	23.7	33.9
32L	M32 x 1.5	M40 x 1.5	38	23.6	1.6	2.0	0	1.2	20.0	27.4	N/A	N/A
40	M40 x 1.5	M50 x 1.5	59	30.0	1.6	2.0	0	1.2	22.0	32.1	27.9	40.4
50s	M50 x 1.5	M63 x 1.5	89	36.6	2.0	2.5	0	1.5	29.5	38.2	35.2	46.7
50	M50 x 1.5	M63 x 1.5	89	41.0	2.0	2.5	0	1.5	35.6	44.1	40.4	53.1
63s	M63 x 1.5	M75 x 1.5	115	47.9	2.0	2.5	0	1.5	40.1	50.1	45.6	59.4
63	M63 x 1.5	M75 x 1.5	115	53.7	2.0	2.5	0	1.5	47.2	56.0	54.6	65.9
75s	M75 x 1.5	M90 x 2.0	140	59.9	2.0	2.5	0	1.5	52.8	62.0	59.0	72.1
75	M75 x 1.5	M90 x 2.0	140	64.3	2.5	3.0	0	1.5	59.1	68.0	66.7	78.5
90	M90 x 2.0	M100 x 2.0	200	75.3	3.0	3.5	0	1.6	66.6	79.4	76.2	90.4
100	M100 x 2.0	M115 x 2.0	200	85.6	3.15	4.0	0	1.6	76.0	90.9	86.1	101.5

<sup>1</sup> '2KX' and '2K' variants; see below.

<sup>2</sup> including PX\*\* fitted with alternative outer nut as drawing GA273.

<sup>3</sup> Not PXRC variant.

PX\*-FF in these sizes only.

Gland size	Entry thread	Entry thread 'B' version	PXSS2K seal sheath range (mm)		Other PX* seal sheath range (mm)	
			Min.	Max.	Min.	Max.
20s	M20 x 1.5	M25 x 1.5	4.0 x 6.2	6.8 x 11.7	4.4 x 7.8	6.8 x 11.7
20	M20 x 1.5	M25 x 1.5	5.7 x 8.0	8.7 x 13.5	4.4 x 10.9	8.7 x 16.0

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Type designation code

PX

- PB = Alternative cone assembly incorporating an additional metallic continuity diaphragm for the use with inner lead sheathed SWA and braided cables.
- VAR = Optional metallic continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.
- FF = Fitted with an outer seal suitable for flat form cables.
- HC = Fitted with an alternative outer seal nut that incorporates an anchor for a flexible hose.
- TA = Including an electrical continuity device for use with tape armoured cable.
- REX = Glands using the RapidEx resin system.
- 2KW = Fitted with single plain armour cone & reversible armour sleeve to suit SWA cables.
- 2KX = Fitted with single grooved armour cone & reversible armour sleeve to suit SWA, STA, strip armoured, pliable wire armoured and braided cables.
- 2K = Gland kit provided with 2 single armour cones (From the 2KW & 2KX) and reversible armour sleeve to suit SWA, STA, strip armoured, pliable wire armoured and braided cables.
- B2KW = Fitted with single plain armour cone & reversible armour sleeve, but has no outer seal, nut or ferrule. The body is also manufactured without the external mating thread. The cable gland is suitable for SWA cables.
- SS2K = Alternative manufactured front entry component coupled to an alternative main body, skid washer, seal and nut for use with unarmoured cables.
- SS2K-HC As the SS2K but with an alternative seal nut that incorporates a hose connection
- RC = Alternative manufactured front entry component attached to a fixed or running coupler (of the same construction as on the A2FRC) and skid washer. Used with unarmoured cables in conduit.
- VAR = Optional construction where the cone and sleeve assembly is replaced by a metallic continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.

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#### 14 DESCRIPTIVE DOCUMENTS

##### 14.1 Drawings

Refer to Certificate Annexe.

##### 14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	03 May 2013	R27765A/00	The release of the prime certificate.

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

- 15.1 The glands when used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
- 15.2 The PXB2KW gland is to be protected from hydraulic fluids, oils, and greases when applied for Group I use.
- 15.3 When the cable glands are supplied with an entry thread that is one size up from the nominal gland size, designated with the letter 'B' after the gland size, e.g. 32B\*\*\*\*, they shall not be used with any adaptor device.
- 15.4 When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.
- 15.5 The PX range of cable glands with entry threads smaller than a M25 (or equivalent) size shall not be used for Group I, Category M2 applications where there is a 'high' risk of mechanical damage.

#### 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 the reports listed in Section 14.2.

#### 17 CONDITIONS OF CERTIFICATION

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira 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.

# Certificate Annexe

Certificate Number: Sira 13ATEX1072X  
Equipment: Cable Gland Types PX\*\*  
Applicant: CMP Products Ltd



## Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
GA352	1 of 1	00	29 Apr 13	PX2K, PX2KW, PX2KX General arrangement & marking
GA353	1 of 1	00	29 Apr 13	PXRC General arrangement & marking
GA354	1 of 1	00	29 Apr 13	PXSS2K & PXSS2K-HC General arrangement & marking
SCH0322	1 of 1	00	13 Mar 13	Outer seal details
SCH0323	1 of 1	00	13 Mar 13	Armour clamp details
SCH0324	1 of 1	00	13 Mar 13	PX Armour clamp details
SCH0325	1 of 1	00	13 Mar 13	PX and PX-PB Armour cone
SCH0326	1 of 1	00	13 Mar 13	SS2K outer seal details
SCH0327	1 of 1	00	13 Mar 13	PX and PX-SS2K entry item details

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