



INTERNATIONAL ELECTRICITY  
IEC Certification Scheme

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

Certificate No.: IECEx CML 18.0182X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-03-29\)](#)

Status: **Current**

Page 1 of 3

Date of Issue: **2019-03-29**

Applicant: **CMP Products Limited**  
Unit 36 Nelson Way,  
Nelson Park East,  
Cramlington,  
Northumberland NE23 1WH  
**United Kingdom**

Equipment: **Type PX\*\* Cable Glands**

Optional accessory:

Type of Protection: **flameproof, Increased Safety, Dust protection by enclosure**

Marking: Ex eb I Mb\*/Ex db I Mb\*/Ex eb IIC Gb/Ex db IIC Gb/Ex ta IIIC Da/Ex nR IIC Gc

\*Aluminium alloy is not acceptable for Group I applications

-60°C to 85°C

Approved for issue on behalf of the IECEx  
Certification Body:

H M Amos MIET

Position:

Certification Manager

Signature:  
(for printed version)

Date:

March 3, 2019

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](#).

Certificate issued by:

**Certification Management Limited**  
Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port, CH65 4LZ  
United Kingdom





# IECEx Certificate of Conformity

Certificate No: IECEx CML 18.0182X

Issue No: 0

Date of Issue: 2019-03-29

Page 2 of 3

Manufacturer: **CMP Products Limited**  
Unit 36 Nelson Way,  
Nelson Park East,  
Cramlington,  
Northumberland NE23 1WH  
**United Kingdom**

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 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 : 2017</b><br>Edition:7.0    | Explosive atmospheres - Part 0: Equipment - General requirements                     |
| <b>IEC 60079-1 : 2014-06</b><br>Edition:7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"    |
| <b>IEC 60079-15 : 2010</b><br>Edition:4     | Explosive atmospheres - Part 15: Equipment protection by type of protection "n"      |
| <b>IEC 60079-31 : 2013</b><br>Edition:2     | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" |
| <b>IEC 60079-7 : 2015</b><br>Edition:5.0    | 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/CML/ExTR19.0038/00](#)

Quality Assessment Report:

[GB/CML/QAR19.0001/00](#)



# IECEx Certificate of Conformity

Certificate No: IECEx CML 18.0182X

Issue No: 0

Date of Issue: 2019-03-29

Page 3 of 3

## Schedule

### EQUIPMENT:

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

The Type PX\*\* series 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.

**Refer to Annex for full description**

### SPECIFIC CONDITIONS OF USE: YES as shown below:

- i. The glands when used for terminating braided cables are only suitable for fixed installations.
- ii. Cables must be effectively clamped to prevent pulling or twisting. The PXB2K, PXB2KX and PXB2KW glands are to be protected from hydraulic fluids, oils, and greases when applied for Group I use.
- iii. When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.
- iv. The PX range of cable glands with entry threads smaller than a M25 (or equivalent) size shall not be used for Group I, EPL Mb applications where there is a 'high' risk of mechanical damage.

### Annex:

[Certificate Annex IECEx CML 18.0182X Issue 0.pdf](#)

**Annexe to:** IECEx CML 18.0182X Issue 0  
**Applicant:** CMP Products Limited  
**Apparatus:** Type PX\*\* Cable Glands



The Type PX\*\* series 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.

#### Materials of manufacture

- Brass to BS EN 12164:2011 / BS EN 12168:2011 Grade CuZn39Pb3 (CW614N)
- Mild Steel to BS EN 10277-2:2008 Grades 220M07, 230M07 (EN1A) / 220M07Pb, 230M07Pb (EN1APb)
- Stainless Steel to BS EN 10088-3:2014 GRADES 316S11, 316S13, 316S31, 316S33, 316L
- Aluminium to BS EN 573-3:2013 / BS EN 755-1-3:2008 Grade 6082 T6, 6262 T6 BS EN 1706:2010/ BS EN 1676:2010 Grade LM25 TF (Aluminium alloy is not acceptable for Group I applications)

#### **Note:**

- IECEx SIR 13.0027X / IECEx SIR 10.0094X and IECEx ITS 17.0046X are superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by the above certificates.
- Where the above are specified in other product certification, or other technical specifications, this certificate reference for the product shall be used in its place; updating of the other product certificate or technical specification is not required.

#### **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.
- Alternative entry component thread forms:

Unit 1, Newport Business Park  
New Port Road  
Ellesmere Port  
CH65 4LZ

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**E** info@cmllex.com

**www.cmllex.com**

Company Reg No. 8554022 · VAT No. GB163023642

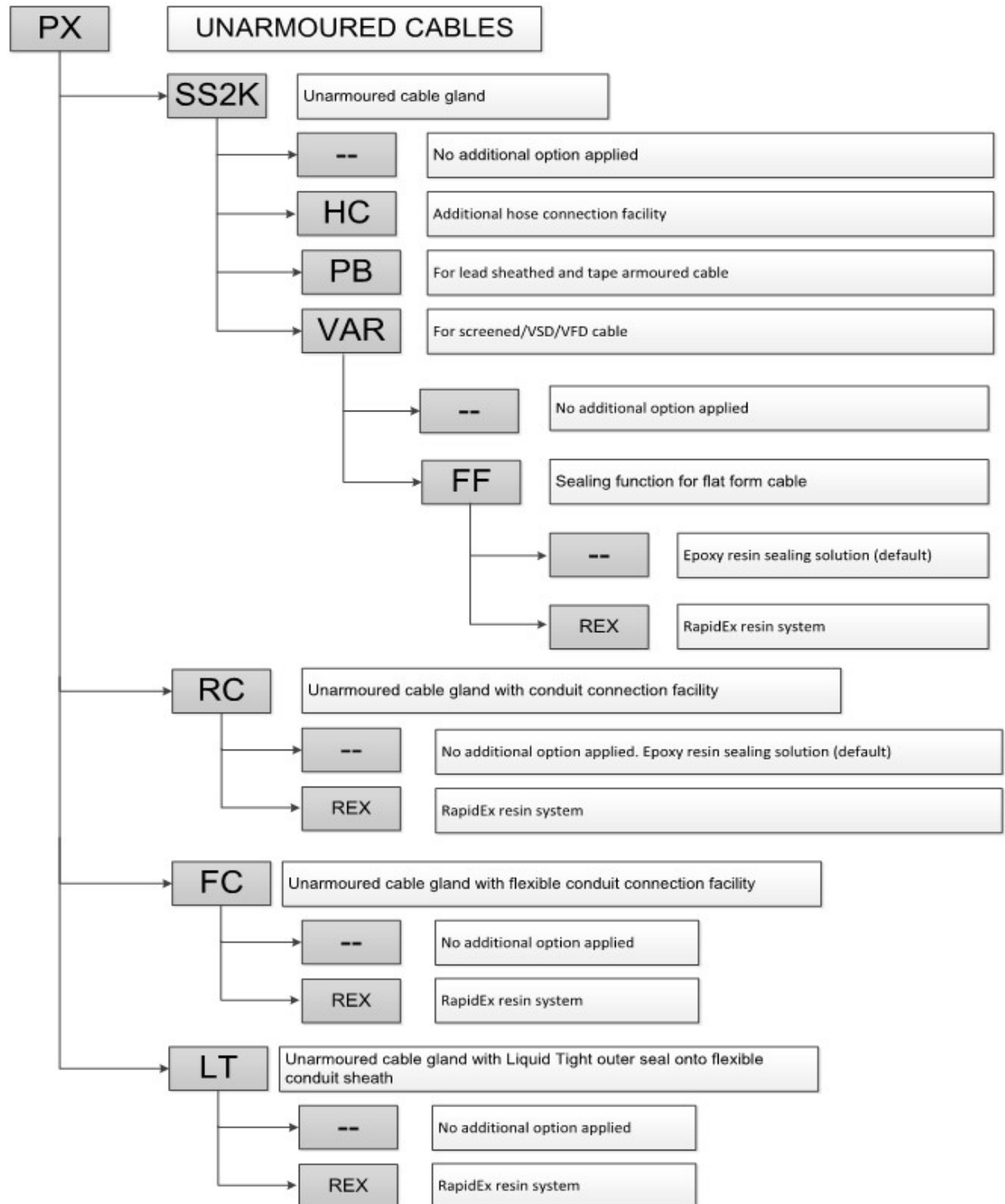


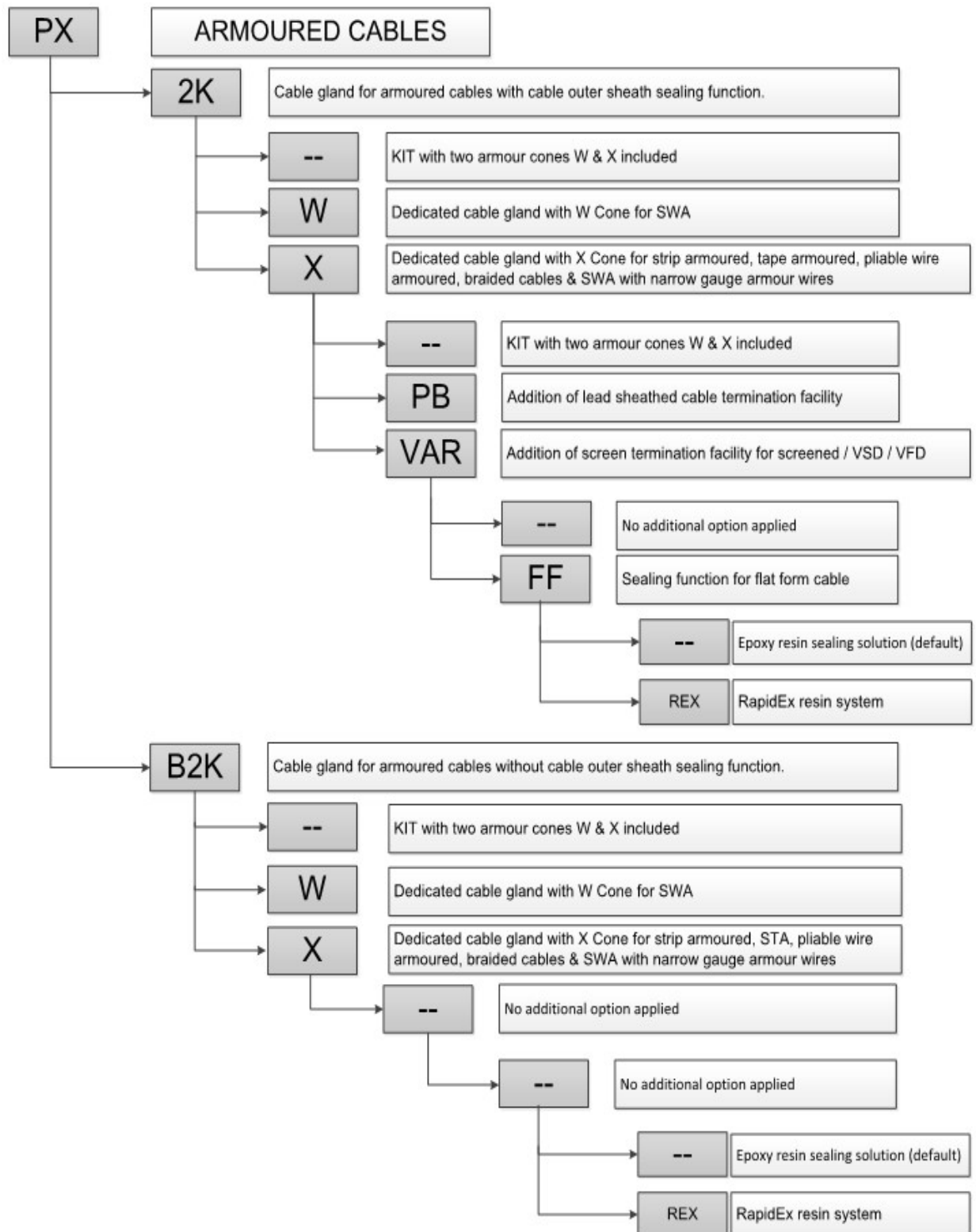


|             |                                                                                |
|-------------|--------------------------------------------------------------------------------|
| Metric      | ISO 965-1, ISO965-3 medium fit (6g) for external threads                       |
| ET(Conduit) | BS 31:1940 (1979), Table A                                                     |
| PG          | DIN 40430:1971                                                                 |
| BSPP        | BS 2779:1986 class A full form for external threads                            |
| BSPT        | BS 21:1985 standard threads only as clause 5.4, gauging to clause 5.2 system A |
| ISO         | ISO 7/1:1994, gauging to ISO 7/2 clause 6.3 for external threads               |
| NPT         | ANSI/ASME B1.20.1-2013 gauging to clause 3.2 for external threads              |
| NPSM        | ANSI/ASME B1.20.1-2013 gauging to clause 6.4 for external threads              |

- 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.
- 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.
- Cable glands can be supplied with larger entry threads than those detailed, provided the hexagon bar size and across corners dimensions of the entry item also step up to that of another size detailed in this drawing pack or certificate, when selecting larger entry threads, only the entry item can be changed.
- A slower curing RapidEx resin is available in a formulation which allows slower curing for use at higher ambient installation temperatures.

# Type designation code;





| Gland size | Entry thread | Max no. of cores (RAPIDEX) | Max. no. of cores (EP2122) | 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    | 21                         | 21                         | 12.6                  | 0.8      | 1.25 | 0                                                                          | 0.8 | 3.1                                                  | 8.7  | 6.1                                              | 13.2  |
| 20s        | M20 x 1.5    | 21                         | 21                         | 12.6                  | 0.8      | 1.25 | 0                                                                          | 0.8 | 6.1                                                  | 11.7 | 9.5                                              | 15.9  |
| 20         | M20 x 1.5    | 21                         | 21                         | 12.6                  | 0.8      | 1.25 | 0                                                                          | 0.8 | 6.5                                                  | 14.0 | 12.5                                             | 20.9  |
| 20L        | M20 x 1.5    | 21                         | 21                         | 12.6                  | 0.8      | 1.25 | 0                                                                          | 0.8 | 10.0                                                 | 15.9 | N/A                                              | N/A   |
| 25s        | M25 x 1.5    | 30                         | 30                         | 17.5                  | 1.25     | 1.6  | 0                                                                          | 1.1 | 11.1                                                 | 20.0 | 14.0                                             | 22.0  |
| 25         | M25 x 1.5    | 30                         | 30                         | 17.5                  | 1.25     | 1.6  | 0                                                                          | 1.1 | 11.1                                                 | 20.0 | 18.2                                             | 26.2  |
| 32         | M32 x 1.5    | 50                         | 38                         | 23.6                  | 1.6      | 2.0  | 0                                                                          | 1.2 | 17.0                                                 | 26.3 | 23.7                                             | 33.9  |
| 32L        | M32 x 1.5    | 50                         | 38                         | 23.6                  | 1.6      | 2.0  | 0                                                                          | 1.2 | 20.0                                                 | 27.4 | N/A                                              | N/A   |
| 40         | M40 x 1.5    | 59                         | 59                         | 30.0                  | 1.6      | 2.0  | 0                                                                          | 1.2 | 22.0                                                 | 32.1 | 27.9                                             | 40.4  |
| 50s        | M50 x 1.5    | 89                         | 89                         | 36.6                  | 2.0      | 2.5  | 0                                                                          | 1.2 | 29.5                                                 | 38.2 | 35.2                                             | 46.7  |
| 50         | M50 x 1.5    | 89                         | 89                         | 41.0                  | 2.0      | 2.5  | 0                                                                          | 1.5 | 35.6                                                 | 44.1 | 40.4                                             | 53.1  |
| 63s        | M63 x 1.5    | 115                        | 115                        | 47.9                  | 2.0      | 2.5  | 0                                                                          | 1.5 | 40.1                                                 | 50.1 | 45.6                                             | 59.4  |
| 63         | M63 x 1.5    | 115                        | 115                        | 53.7                  | 2.0      | 2.5  | 0                                                                          | 1.5 | 47.2                                                 | 56.0 | 54.6                                             | 65.9  |
| 75s        | M75 x 1.5    | 140                        | 140                        | 59.9                  | 2.0      | 2.5  | 0                                                                          | 1.5 | 52.8                                                 | 62.0 | 59.0                                             | 72.1  |
| 75         | M75 x 1.5    | 140                        | 140                        | 64.3                  | 2.5      | 3.0  | 0                                                                          | 1.5 | 59.1                                                 | 68.0 | 66.7                                             | 78.5  |
| 90         | M90 x 2.0    | 200                        | 200                        | 75.3                  | 3.0      | 3.5  | 0                                                                          | 1.6 | 66.6                                                 | 79.4 | 76.2                                             | 90.4  |
| 100        | M100 x 2.0   | 200                        | 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<sup>\*\*</sup> fitted with alternative outer nut as drawing GA273.

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

PX<sup>\*</sup>-FF in these sizes only.

| Gland size | Entry thread | Entry thread 'B' version | PXSS2K seal sheath range (mm) |            | Other PX <sup>*</sup> 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 | 20s                                          | M20 x 1.5 |
| 20         | M20 x 1.5    | M25 x 1.5                | 5.7 x 8.0                     | 8.7 x 13.5 | 20                                           | M20 x 1.5 |



### **Specific Conditions of Use**

The following conditions relate to safe installation and/or use of the components.

- i. The glands when used for terminating braided cables are only suitable for fixed installations.
- ii. Cables must be effectively clamped to prevent pulling or twisting. The PXB2K, PXB2KX and PXB2KW glands are to be protected from hydraulic fluids, oils, and greases when applied for Group I use.
- iii. When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.
- iv. The PX range of cable glands with entry threads smaller than a M25 (or equivalent) size shall not be used for Group I, EPL Mb applications where there is a 'high' risk of mechanical damage.

1 **CERTIFICATE OF CONFORMITY - Component**

2 Certificate Number: **Sira 10Y9148U** Issue: **3**

3 This Certificate is issued for the electrical component:

**Industrial cable gland types:**

A2, A2RC, C2K-GP, CXT, CW, CW CIEL, CX, E1W, E1W CIEL, E1X, E1U, E2W, E2W CIEL, E2X, E2U, SS2KGP, SS2KGP-PB, A324, A348, A367, A368, A327, A350, A323, A347, B324, B348, B367, B368, B327, B350, B323 and B347

4 Manufactured by:

**CMP Products**

36 Nelson Way  
Nelson Park East  
Cramlington NE23 1WH  
UK

5 This electrical component and any acceptable variation thereto is specified in the schedule to this Certificate and the documents therein referred to.

6 Sira Certification Service being an Approved Certification Body in accordance with Article 14 of Directive 76/117/EEC of the Council of the European Communities of 18 December 1975 certifies that the component has been found to comply with the following European Standards:

EN 62444:2013

IEC 62444:2010 Ed 1

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.

The assessment and test results are recorded in Sira Test Reports listed in the Certificate Schedule.

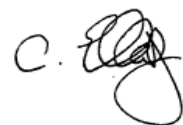
7 The component marking shall include the code:

EN 62444:2013 and/or IEC 62444  
Type designation  
Entry threadform and size

8 The manufacturer of the electrical component referred to in this Certificate has the responsibility to ensure that the component conforms to the specification laid down in the Schedule to this Certificate and has satisfied the routine verifications and tests referred to therein.

---

The use of this component will normally be the subject of National Legislation and/or Installation Codes.



**File No.** 70006933

**C Ellaby**  
**Deputy Certification Manager**

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## SCHEDULE

### CERTIFICATE OF CONFORMITY

**Sira 10Y9148U**  
**Issue 3**

### COMPONENT

Each gland type comprises a metallic threaded component for fitting to appropriate electrical enclosures. Entry threads are available in various thread forms and sizes as detailed in the manufacturer's published data. Glands are appropriate to specific cable applications as below:

| Gland type             | Seals                     | Designation of cable type<br>(see below) | Cable retention Class<br>(EN/IEC 62444) |                   |
|------------------------|---------------------------|------------------------------------------|-----------------------------------------|-------------------|
|                        |                           |                                          | Unarmoured<br>cable                     | Armoured<br>cable |
| A2                     | Outer                     | A & B                                    | B                                       |                   |
| A2RC                   | Outer                     | A (conduit connection)                   | B                                       |                   |
| C2K-GP                 | Outer                     | B, C, D, E & F                           |                                         | D                 |
| CXT                    | Outer                     | B                                        | B                                       |                   |
| CW & CW CIEL           | Outer                     | C                                        |                                         | D                 |
| CX                     | Outer                     | D, E & F                                 |                                         | D                 |
| E1W & E1W CIEL         | Inner & outer             | C                                        |                                         | D                 |
| E1X                    | Inner & outer             | B, D, E & F                              |                                         | D                 |
| E1U                    | Inner & outer             | C, D, E & F                              |                                         | D                 |
| E2W & E2W CIEL         | Inner & outer             | C & G                                    |                                         | D                 |
| E2X                    | Inner & outer             | B, D, E, F & G                           |                                         | D                 |
| E2U                    | Inner & outer             | B, C, D, E, F & G                        |                                         | D                 |
| SS2KGP                 | Inner & outer             | A                                        | B                                       |                   |
| SS2KGP-PB              | Dual seal with lead clamp | A & G                                    | B                                       |                   |
| B324, B348, A324, A348 | Outer                     | C                                        |                                         | D                 |
| B367, B368, A367, A368 | Outer                     | B,D,E                                    |                                         | D                 |
| B327, B350, A327, A350 | Outer                     | C                                        |                                         | D                 |
| B323, B347, A323, A347 | Outer                     | C                                        |                                         | D                 |

| Designation | Cable type          |
|-------------|---------------------|
| A           | Non-armoured        |
| B           | Braided             |
| C           | Single wire armour  |
| D           | Steel tape armour   |
| E           | Strip armour        |
| F           | Pliable wire armour |
| G           | Lead sheath         |

This certificate and its schedules may only be reproduced in its entirety and without change.

## SCHEDULE

### CERTIFICATE OF CONFORMITY

**Sira 10Y9148U**  
**Issue 3**

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

- i. The Cable Gland Designs were assessed against IEC 62444:2010 Ed 1, thereby permitting the inclusion of the insulated glands into the table above.

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

- i. The Cable Gland Designs C2K-GP, CW, CW CIEL, CX, E1W, E1W CIEL, E1X, E1U, E2W, E2W CIEL, E2X, and E2U utilising cable anchoring of armoured cables were tested against IEC 62444:2010 Ed 1 Type D, thereby permitting the armour clamping glands to be referenced as Type D in the table in the product description.
- ii. The Cable Gland Designs A2, A2RC, CXT, SS2KGP and SS2KGP-PB utilising cable anchoring of unarmoured cables were tested against IEC 62444:2010 Ed 1 Type B, thereby permitting the unarmoured clamping glands to be referenced as Type B in the table in the product description.

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

- i. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, the document previously listed in section 6, EN 50262: 1998 + Amendment 2001, was replaced by EN 62444:2013 Ed 1, the markings in section 7 were updated accordingly and the conditions of manufacture were amended to recognise the new standard.

### DESCRIPTIVE DOCUMENTS

There are no drawings associated with this Certificate.

### ASSOCIATED SIRA REPORTS AND CERTIFICATE HISTORY

| Issue | Date           | Report no. | Comment                               |
|-------|----------------|------------|---------------------------------------|
| 0     | 11 May 2010    | R21992A/00 | The release of the prime certificate. |
| 1     | 17 August 2011 | R25736A/00 | The introduction of Variation 1.      |
| 2     | 31 July 2013   | R28132A/00 | The introduction of Variation 2.      |
| 3     | 28 July 2014   | R70006933A | The introduction of Variation 3.      |

### CONDITIONS OF MANUFACTURE

- 1 The use of the Sira Certification Service Mark is subject to the Regulations applicable to the holders of SCS certificates.
- 2 This certificate relates only to the component specified herein as executed in the samples supplied for evaluation.
- 3 In affixing the Sira certificate number to the component the manufacturer attests on its own responsibility that the component conforms to the documents listed herein.  
If the marked component is found not to comply Sira Certification Service should be notified immediately at its office at Rake Lane, Eccleston, Chester CH4 9JN, England.
- 4 The component and that part of the manufacturer's quality management system controlling the production of the component covered by this certificate shall be subject to periodic surveillance by Sira in accordance with the Regulations applicable to the holders of SCS certificates.
- 5 Component shall be marked with the following text:  
EN 62444 and/or IEC 62444  
Type designation  
Entry threadform and size.

### SPECIAL CONDITIONS FOR SAFE USE (denoted by 'X' after certificate No.)

None

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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: [info@siracertification.com](mailto:info@siracertification.com)  
 Web: [www.siracertification.com](http://www.siracertification.com)



# 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 SIM 14.0008X

Issue No: 0

Certificate history:

Issue No. 0 (2014-07-18)

Status: **Current**

Page 1 of 3

Date of Issue: **2014-07-18**

Applicant: **CMP Products Ltd**  
Glasshouse Street  
St Peters  
NEWCASTLE UPON TYNE  
NE6 1BS  
United Kingdom

Electrical Apparatus: **Cable Glands Type PX\*\***

Optional accessory:

Type of Protection: **Flameproof, Increased Safety, Restricted Breathing and Dust Protection by Enclosure**

Marking:  
Ex e I Mb (Not applicable to PXRC for Gas Group I)  
Ex d I Mb (Not applicable to PXRC for Gas Group I)  
Ex e IIC Gb  
Ex d IIC Gb  
Ex nR IIC Gc  
Ex ta IIIC Da  
Ta = -60°C to +85°C

Approved for issue on behalf of the IECEx  
Certification Body:

Geoffrey Barnier

Position:

Principal Engineer - Certification

Signature:  
(for printed version)

Date:

18 July 2014

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:

**Safety in Mines Testing and Research Station (Simtars)**  
2 Smith Street  
REDBANK QLD 4301  
Australia





# IECEx Certificate of Conformity

Certificate No: IECEx SIM 14.0008X

Issue No: 0

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Page 2 of 3

Manufacturer: **CMP Products Ltd**  
3 Nelson Way  
Nelson Park East  
CRAMLINGTON  
NORTHUMBERLAND  
NE23 1WH  
United Kingdom

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><br>Edition:6.0  | Explosive atmospheres - Part 0: General requirements                                 |
| <b>IEC 60079-1 : 2007-04</b><br>Edition:6 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"    |
| <b>IEC 60079-15 : 2010</b><br>Edition:4   | Explosive atmospheres - Part 15: Equipment protection by type of protection "n"      |
| <b>IEC 60079-31 : 2008</b><br>Edition:1   | Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure "t" |
| <b>IEC 60079-7 : 2006-07</b><br>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/ExTR13.0066/00](#)

Quality Assessment Report:

[GB/SIR/QAR07.0009/05](#)



# IECEx Certificate of Conformity

Certificate No: IECEx SIM 14.0008X

Issue No: 0

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## Schedule

### EQUIPMENT:

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

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.

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

The glands when used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.

The PXB2KW gland is to be protected from hydraulic fluids, oils, and greases when applied for Group I use.

When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.

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.

### Annex:

[IECEx SIM 14.0008X-0 Annex.pdf](#)



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## Design options- Cable Gland Type PX\*\*

- 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  
BSPT BS 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  
NPSM ANSI/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.
- 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.

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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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The gland and seal sizes are determined by the entry thread and cable range take sizes:

| Gland Size | Entry Thread | Max. No. of Cores | Max. Ø over Cores (mm) | SWA (mm) |      | SWA, STA, strip armour, pliable wire armour <sup>1</sup> and wire braid (mm) |      | PXSS2K <sup>2,3</sup> Outer Seal Sheath Ø (mm) |      | PX <sup>**3</sup> Outer Seal Sheath Ø (mm) |       |
|------------|--------------|-------------------|------------------------|----------|------|------------------------------------------------------------------------------|------|------------------------------------------------|------|--------------------------------------------|-------|
|            |              |                   |                        | Min.     | Max. | Min.                                                                         | Max. | Min.                                           | Max. | Min.                                       | Max.  |
| 20s/16     | M20 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    | 11                | 12.6                   | 0.8      | 1.25 | 0                                                                            | 0.8  | 6.1                                            | 11.7 | 9.5                                        | 15.9  |
| 20         | M20 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    | 11                | 12.6                   | 0.8      | 1.25 | 0                                                                            | 0.8  | 10.0                                           | 15.9 | N/A                                        | N/A   |
| 25s        | M25 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    | 21                | 17.5                   | 1.25     | 1.6  | 0                                                                            | 1.1  | 11.1                                           | 20.0 | 18.2                                       | 26.2  |
| 32         | M32 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    | 38                | 23.6                   | 1.6      | 2.0  | 0                                                                            | 1.2  | 20.0                                           | 27.4 | N/A                                        | N/A   |
| 40         | M40 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    | 89                | 36.6                   | 2.0      | 2.5  | 0                                                                            | 1.5  | 29.5                                           | 38.2 | 35.2                                       | 46.7  |
| 50         | M50 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    | 115               | 47.9                   | 2.0      | 2.5  | 0                                                                            | 1.5  | 40.1                                           | 50.1 | 45.6                                       | 59.4  |
| 63         | M63 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    | 140               | 59.9                   | 2.0      | 2.5  | 0                                                                            | 1.5  | 52.8                                           | 62.0 | 59.0                                       | 72.1  |
| 75         | M75 x 1.5    | 140               | 64.3                   | 2.5      | 3.0  | 0                                                                            | 1.5  | 59.1                                           | 68.0 | 66.7                                       | 78.5  |
| 90         | M90 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   | 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<sup>\*\*</sup> fitted with alternative outer nut as drawing GA273.

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

PX\*-FF in these sizes only:

| Gland Size | Entry Thread | PXSS2K Seal Sheath (mm) |            | Other PX <sup>**</sup> Seal Sheath (mm) |            |
|------------|--------------|-------------------------|------------|-----------------------------------------|------------|
|            |              | Min.                    | Max.       | Min.                                    | Max.       |
| 20s        | M20 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    | 5.7 x 8.0               | 8.7 x 13.5 | 4.4 x 10.9                              | 8.7 x 16.0 |

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## Manufacturer's documents:

| Drawing No | Subject                                            | Rev. | Date       |
|------------|----------------------------------------------------|------|------------|
| GA352A     | PX2K, PX2KW, PX2KX GENERAL ARRANGEMENT - SIMTARS   | 00   | 21/05/2014 |
| GA353A     | PXRC GA DRAWING - SIMTARS                          | 00   | 21/05/2014 |
| GA354A     | PXSS2K AND PXSS2K-HC GENERAL ARRANGEMENT - SIMTARS | 00   | 21/05/2014 |
| SCH0322    | OUTER SEAL DETAILS                                 | 00   | 27/09/2012 |
| SCH0323    | TYPICAL ARMOUR CLAMP DETAILS                       | 00   | 27/09/2012 |
| SCH0324    | TYPICAL PX & C2K ARMOUR CLAMP DETAILS              | 00   | 27/09/2012 |
| SCH0325    | TYPICAL PX & PX-PB ARMOUR CONE                     | 00   | 02/10/2012 |
| SCH0326    | PXSS2K & SS2K OUTER SEAL DETAILS                   | 00   | 02/10/2012 |
| SCH0327    | PX & PXSS2K ENTRY ITEM DETAILS                     | 00   | 01/10/2012 |

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