



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

Certificate No.: IECEx SIM 14.0006 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 A** and Type SS2K****
Optional accessory:

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

Marking:
Ex e I Mb (Not applicable to A2FRC)
Ex d I Mb (Not applicable to A2FRC)
Ex e IIC Gb
Ex d IIC Gb
Ex nR IIC Gc
Ex ta IIIC Da
Ta = -60 °C to +130 °C (When fitted with the standard seal)
Ta = -20 °C to +200 °C (When fitted with the high temperature seal)

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
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Manufacturer: **CMP Products Ltd**
Units 03 and 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 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:

IEC 60079-0 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-15 : 2010 Edition:4	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
IEC 60079-7 : 2006-07 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](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The A2F range of cable glands are metallic and are intended to terminate circular braided or unarmoured cables into a threaded entry point within enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component and a seal actuation nut. The front entry component fitted with an elastomeric displacement sealing ring, and nylon 6 stepped skid washer, is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath.

The SS2K range of cable glands are intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component, a main body component and an outer seal actuation nut. The front entry component, fitted with an elastomeric sealing ring and a Nylon 6 skid washer, is intended to screw into an entry point of its associated enclosure. The main body component, fitted with a locking ring, threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable inner sheath. The outer seal actuation nut, fitted with an elastomeric sealing ring and a Nylon 6 skid washer, threads into the main body component thereby effecting environmental sealing onto the cable outer sheath. Two versions of the outer seal nut are available to allow alternative sizes of outer sheath to be gripped.

Type description: Refer Annex.

CONDITIONS OF CERTIFICATION: NO

Annex:

[IECEx SIM 14.0006-0 Annex.pdf](#)



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Equipment:

Type designation A2E Range

The A2E range of cable glands are identical to the A2F range but with entry thread engagement lengths minimised.

Type designation A2FRC Range

The A2FRC range of cable glands are intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component, a seal actuation nut and either an outer captivated or running coupling. The front entry component, fitted with an elastomeric displacement sealing ring is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath. The outer running coupling is retained in the seal actuation nut using the carbon steel 'C' clip, or a similar arrangement to allow free running thread connection to conduit.

Type designation A2F-FC Range

The A2F-FC range of cable glands is intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They also provide an anchor for a flexible metallic conduit which can protect the cable from damage. They consist of a male-threaded front entry component, a seal actuation nut and a conduit anchor element that screws into the inside of the conduit. The front entry component, fitted with an elastomeric displacement sealing ring is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath. The conduit anchor is secured between the seal actuation nut and seal to form a skid washer.

Type designation A2F-HC Range

The A2F-HC range of cable glands is intended to terminate circular braided or unarmoured cables into enclosures without compromising the explosion protection provided by the enclosures in accordance with the relevant codes of practice. They also provide an anchor for a flexible hose which can protect the cable from damage. They consist of a male-threaded front entry component, a seal actuation nut with a hose anchor to which a hose can be attached using a jubilee clip or similar. The front entry component, fitted with an elastomeric displacement sealing ring and skid washer is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath.

Type designation A2F-FF Range

The A2F-FF range of cable glands are intended to terminate flat braided or unarmoured cables into a threaded entry point within enclosures without compromising the explosion protection provided by the enclosures in accordance with relevant codes of practice. They consist of a male-threaded front entry component and a seal actuation nut. The front entry component fitted with an

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elastomeric displacement sealing ring, and nylon 6 stepped skid washer, is intended to screw into an entry point of its associated enclosure. The seal actuation nut threads into the front entry component thereby effecting flameproof and environmental sealing onto the cable outer sheath.

Type designation A2E-FF Range

The A2E-FF range of cable glands is identical to the A2F-FF range but with entry thread engagement lengths minimised

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. 25RA2F
- **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 404 30:1971
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
- Alternative material of manufacture of the skid washer to be the same as the gland material.
- **Alternative 'C' clip plate finish (where applicable):**
 - Stainless steel
 - Phosphor bronze
 - Beryllium copper
- The option to fit a flat blanking disc between the seal and the skid washer to maintain a minimum IP66 ingress protection. The disc to be marked 'Exe only' to indicate that the gland is not suitable for use in Ex d applications when it is fitted.

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

Gland Size	Entry Thread	Cable Sheath Ø (mm)	
		Min.	Max.
16	M16 x 1.5	3.2	8.7
20s/16	M20 x 1.5	3.2	8.7
20s	M20 x 1.5	6.1	11.7
20	M20 x 1.5	6.5	14.0
25	M25 x 1.5	11.1	20.0
32	M32 x 1.5	17.0	26.3
40	M40 x 1.5	23.5	32.2
50s	M50 x 1.5	31.0	38.2
50	M50 x 1.5	35.6	44.1
63s	M63 x 1.5	41.5	50.0
63	M63 x 1.5	47.2	56.0
75s	M75 x 1.5	54.0	62.0
75	M75 x 1.5	61.1	68.0
90	M90 x 2.0	66.6	80.0
100	M100 x 2.0	76.0	91.0
115	M115 x 2.0	86.0	98.0
130	M130 x 2.0	97.0	115.0

A2F-FF and A2E-FF in these sizes only:

Gland Size	Entry Thread	Cable Sheath Ø (mm)	
		Min.	Max.
20s	M20 x 1.5	4.0 x 6.2	6.8 x 11.7
20	M20 x 1.5	5.7 x 8.0	8.7 x 13.5

Type designation SS2K/PB Range

The SS2K/PB range of cable glands is the same as the SS2K range but the front entry component is fitted with an electrical continuity device for use with lead sheathed cable.

Type designation SS2K/TA Range

The SS2K/TA range of cable glands is identical to the SS2K/PB range but is used to terminate circular cables with a tape armour sheath. It is for use in Ex e applications only.

Type designation SS2K-FF

The SS2K-FF range of cable glands is the same as the SS2K range, but it is fitted with seals suited for use with flat form cables. For use only in Group II applications.

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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. 25RSS2K.
- **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
- Alternative material of manufacture of the skid washer to be the same as the gland material.
- The front entry component may additionally be fitted with a metallic continuity diaphragm and skid washer for use with lead sheathed cable.
- The main body component may additionally be fitted with an electrical continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.
- The option to fit a flat blanking disc between the outer seal and the main body to maintain a minimum IP66 ingress protection. The disc to be marked 'Exe only' to indicate that the gland is not suitable for use in Ex d applications when it is fitted.
- An optional outer seal nut with an anchor to which hose can be connected by a jubilee clip or similar

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Type designation code

SS2K

	VAR	=	Fitted with an additional metallic continuity device for use with variable speed drive (VSD) / variable frequency drive (VFD) cables
	PB	=	Fitted with a metallic continuity diaphragm and skid washer for use with lead sheathed cable.
	TA	=	Fitted with a metallic continuity diaphragm and skid washer for use with tape armoured cable.
	FF	=	Fitted with seals suitable for use with flat form cables.
	HC	=	Fitted with an outer seal nut with an anchor to which a hose can be connected by a jubilee clip or similar.

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

Gland Size	Entry Thread	Cable Inner Seal Sheath Ø (mm)		Cable Outer Seal Sheath Ø (mm)		Alternative Outer Seal Sheath Ø (mm)	
		Min.	Max.	Min.	Max.	Min.	Max.
16	M16 x 1.5	3.2	8.7	3.1	8.7	6.1	13.2
20s/16	M20 x 1.5	3.2	8.7	3.1	8.7	6.1	13.2
20s/16/20s	M20 x 1.5	3.2	8.7	6.1	11.7	9.5	15.9
20s	M20 x 1.5	6.1	11.7	6.1	11.7	9.5	15.9
20s/20	M20 x 1.5	6.1	11.7	6.5	14.0	12.5	20.9
20	M20 x 1.5	6.5	14.0	6.5	14.0	12.5	20.9
20/25	M20 x 1.5	6.5	14.0	11.1	20.0	18.2	26.2
25	M25 x 1.5	11.1	20.0	11.1	20.0	18.2	26.2
25/32	M25 x 1.5	11.1	20.0	17.0	26.3	23.7	33.9
32	M32 x 1.5	17.0	26.3	17.0	26.3	23.7	33.9
32/40	M32 x 1.5	17.0	26.3	22.0	32.2	27.9	40.4
40	M40 x 1.5	23.5	32.2	22.0	32.2	27.9	40.4
40/50s	M40 x 1.5	23.5	32.2	29.5	38.2	35.2	46.7
50s	M50 x 1.5	31.0	38.2	29.5	38.2	35.2	46.7
50s/50	M50 x 1.5	31.0	38.2	35.6	44.1	40.4	53.1
50	M50 x 1.5	35.6	44.1	35.6	44.1	40.4	53.1
50/63s	M50 x 1.5	35.6	44.1	40.1	50.1	45.6	59.4
63s	M63 x 1.5	41.5	50.0	40.1	50.1	45.6	59.4
63s/63	M63 x 1.5	41.5	50.0	47.2	56.0	54.6	65.9
63	M63 x 1.5	47.2	56.0	47.2	56.0	54.6	65.9
63/75s	M63 x 1.5	47.2	56.0	52.8	62.0	59.0	72.1
75s	M75 x 1.5	54.0	62.0	52.8	62.0	59.0	72.1
75s/75	M75 x 1.5	54.0	62.0	59.1	68.0	66.7	78.5
75	M75 x 1.5	61.1	68.0	59.1	68.0	66.7	78.5
75/90	M75 x 1.5	61.1	68.0	66.6	79.4	76.2	90.4
90	M90 x 2.0	66.6	80.0	66.6	79.4	76.2	90.4
90/100	M90 x 2.0	66.6	80.0	76.0	91.0	86.1	101.5
100	M100 x 2.0	76.0	91.0	76.0	91.0	86.1	101.5
100/115	M100 x 2.0	76.0	91.0	86.0	98.0	101.5	110.3
115	M115 x 2.0	86.0	98.0	86.0	98.0	101.5	110.3
115/130	M115 x 2.0	86.0	98.0	97.0	115.0	110.2	123.3
130	M130 x 2.0	97.0	115.0	97.0	115.0	110.2	123.3

Cable sizes for the SS2K-FF range only

Gland Size	Entry Thread	Cable Inner Seal Sheath Ø (mm)		Cable Outer Seal Sheath Ø (mm)	
		Min.	Max.	Min.	Max.
20s	M20 x 1.5	4.0 x 6.2	6.8 x 11.7	4.0 x 6.2	6.8 x 11.7
20	M20 x 1.5	5.7 x 8.0	8.7 x 13.5	5.7 x 8.0	8.7 x 13.5

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Manufacturer's documents:

Drawing No	Subject	Rev.	Date
GA177A	A2FRC GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
GA325A	A2F-HC GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
GA208A	A2F-FC GA DRAWING - SIMTARS	00	21/05/2014
GA348A	A2F/A2E (& VARIANTS) GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
GA184A	SS2K GENERAL ARRANGEMENT - SIMTARS	00	21/05/2014
SCH0321	INNER SEAL DETAILS	00	27/09/2012
SCH0326	PXSS2K & SS2K OUTER SEAL DETAILS	00	02/10/2012

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