



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 SIR 06.0040X** issue No.:5
Status: **Current**
Date of Issue: **2011-02-08** Page 1 of 5
Applicant: **CMP Products Limited**
Glasshouse Street
St Peters, Newcastle-upon-Tyne
Tyne and Wear NE6 1BS
United Kingdom

Certificate history:
Issue No. 5 (2011-2-8)
Issue No. 4 (2009-11-25)
Issue No. 3 (2009-1-19)
Issue No. 2 (2008-12-1)
Issue No. 1 (2007-6-25)
Issue No. 0 (2006-9-20)

Electrical Apparatus: **A2FRC, A4ERC and A2F - FC Ranges of Cable Glands**
Optional accessory:

Type of Protection: **Flameproof, Type n, Increased Safety and Dust**

Marking: **A2FRC and A2F - FC Ranges**
Ex d IIC/Ex e II /Ex nR II or Ex d IIC or Ex e II or
Ex tD A21 IP66
A4ERC
Ex e II
Ex tD A21 IP66

Approved for issue on behalf of the IECEx Certification Body: D R Stubbings BA MIET

Position: Certification Manager

Signature:
(for printed version)

Date:

2011-02-08

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:

SIRA Certification Service
Rake Lane
Eccleston
Chester
CH4 9JN
United Kingdom

sira
CERTIFICATION



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Manufacturer: **CMP Products Limited**
Glasshouse Street
St Peters, Newcastle-upon-Tyne
Tyne and Wear NE6 1BS
United Kingdom

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 : 2004 Edition: 4.0	Electrical apparatus for explosive gas 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 : 2005-03 Edition: 3	Electrical apparatus for explosive gas atmospheres Part 15: Construction, test and Marking of Type of Protection "n" electrical apparatus
IEC 60079-7 : 2006-07 Edition: 4	Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
IEC 61241-0 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
IEC 61241-1 : 2004 Edition: 1	Electrical apparatus for use in the presence of combustible dust - Part 1: Protection by enclosures "tD"

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/ExTR06.0061/00
GB/SIR/ExTR07.0042/00
GB/SIR/ExTR08.0126/00
GB/SIR/ExTR09.0004/00
GB/SIR/ExTR10.0317/00

Quality Assessment Report:

GB/SIR/QAR06.0011/00



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

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 and a carbon steel 'C' clip or pressed-over section 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 to allow free running thread connection to conduit.

For more information refer to Annex.

CONDITIONS OF CERTIFICATION: YES as shown below:

1. The cable glands shall only be used where the temperature, at the point of entry, is between -60°C to $+130^{\circ}\text{C}$.
2. The cable glands are certified with one specific size of FLP sealing ring per gland size as supplied.
3. The cable gland entry component threads may need additional sealing to maintain the ingress protection rating as applicable to the associated equipment in which it will be attached.



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EQUIPMENT(continued):

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.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Issue 1 – this Issue introduced the following changes:

- 1 The introduction of Ex nR II and Ex tD marking
The removal of the manufacturer's name and address from the product marking

Issue 2 – this Issue introduced the following changes:

- 1 The introduction of the A2F-FC range of cable glands for use where cables are enclosed in flexible metallic conduit. The option for the glands to be manufactured with an entry thread that is one size up from the nominal gland size.

Issue 3 – this Issue introduced the following changes:

- 1 The introduction of the A4ERC range of cable glands, refer to the Annexe for description.

Issue 4 – this Issue introduced the following changes:

- 1 The addition of the size 16 gland to the A2FRC, A4ERC and A2F-FC ranges
The introduction of an alternative skid washer to the glands covered by this certificate

Issue 5 – this Issue introduced the following changes:

- 1 Following appropriate re-assessment to demonstrate compliance, the originally listed standards IEC 60079-1:2003 and IEC 60079-7:2001 were replaced by IEC 60079-1:2007 and IEC 60079-7:2006 respectively.

Annexe to: IECEx SIR 06.0040X Issue 5
Applicant: CMP Products Ltd
Apparatus: A2FRC, A4ERC and A2F - FC Ranges
of Cable Glands



Description (continued):

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. 25RE1FW.
- Alternative materials of manufacture:
 - Brass to BS2874:1986 Grade CuZn39Pb (CW614N)
 - Mild steel to BS970 Pt1:1991 Grade 220M07Pb
 - Stainless steel to BS970 Pt1:1991 Grades 316S11, 316S13, 316S31 or 316S33
 - Aluminium alloy to BS1474:1987 Grade 6082 or BS1490 Grade LM25 TF (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
 - ISOISO 7/1:1982, gauging to ISO 7/2 clause 6.3 for external threads
 - NPTANSI/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 E-Type range of cable gland entry threads are to maintain compliance with the requirements of EN 60079-1:2004 Clause 5.3 Tables 3 and 4 and clause C.2.2 as applicable.
- 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 skid washer to be the same as the gland material.
- Alternative 'C' clip plate finish:
 - Stainless steel
 - Phosphor bronze
 - Beryllium copper
- The introduction of an alternative skid washer to all glands covered by this certificate

Date: 28 January 2011

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Sira Certification Service

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Annexe to: IECEx SIR 06.0040X Issue 5
Applicant: CMP Products Ltd
Apparatus: A2FRC, A4ERC and A2F - FC Ranges of Cable Glands



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

Gland Size	Entry Thread	Entry thread 'B' version	Cable Outer Sheath Ø (mm)	
			Min.	Max.
16	M16 x 1.5	-	3.2	8.7
20s/16	M20 x 1.5	M25 x 1.5	3.2	8.7
20s	M20 x 1.5	M25 x 1.5	6.1	11.7
20	M20 x 1.5	M25 x 1.5	6.5	14.0
25	M25 x 1.5	M32 x 1.5	11.1	20.0
32	M32 x 1.5	M40 x 1.5	17.0	26.3
40	M40 x 1.5	M50 x 1.5	23.5	32.2
50s	M50 x 1.5	M63 x 1.5	31.0	38.2
50	M50 x 1.5	M63 x 1.5	35.6	44.1
63s	M63 x 1.5	M75 x 1.5	41.5	50.0
63	M63 x 1.5	M75 x 1.5	47.2	56.0
75s	M75 x 1.5	M90 x 2.0	54.0	62.0
75	M75 x 1.5	M90 x 2.0	61.1	68.0
90	M90 x 2.0	M100 x 2.0	66.6	80.0
100*	M100 x 2.0	M115 x 2.0	76.0	91.0
115*	M115 x 2.0	M130 x 2.0	86.0	98.0
130*	M130 x 2.0	Not available	97.0	115.0

Note * A2FRC and the A4ERC range of cable glands do not consist of these sizes.

Type designation A4ERC Range

Coded: Ex e II
Ex tD A21 IP66

The A4ERC range of cable glands are intended to terminate tape armour 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 front seal, a main body component, a rear seal, an actuating nut and a rear running coupling. The front entry component is intended to screw into an entry point of its associated enclosure. The seals are compressed onto the cable when the body component and actuating nut are tightened. A continuity diaphragm and skid washer are fitted behind the front seal. The outer running coupling is retained in the seal actuation nut using the carbon steel 'C' clip to allow free running thread connection to conduit.

Cable clamping is achieved with the outer seal arrangement compressed onto the outer sheath of the cable.