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GOVERNMENT APPROVED TEST LABORATORY

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE

Date Issued: 19 Mar 2024 26 Jan 2027 *Expiry date:

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Ex – Type Examination Certificate

Certificate Number: MS-XPL/21.0010 X Equipment: **Cable Gland**

Model / Type:

CMP Products Limited Applicant:

Glasshouse Street

St Peters

Newcastle Upon Tyne

NE6 1BS

United Kingdom

Manufacturer: **CMP Products Limited**

Serial No: All serial numbers imported between issued- and expire date and all serial

numbers covered by a valid report or acceptable product certification mark.

Supplied by

CMP Products Limited

Identified by Inspection Authority number

MS-XPL/21.0010 X

And as described in the Explolabs file number XPL/21804/21.0010 is hereby certified "Explosion Protected" (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of South African Standards.

SANS 60079-0: 2019 Ed 6

Explosive atmospheres Part 0: Equipment — General requirements IEC 60079-0: 2017 Ed 7

SANS 60079-1: 2015 Ed 5

Explosive atmospheres Part 1: Equipment protection by flameproof

enclosures "d" IEC 60079-1: 2014 Ed 7

SANS 60079-7: 2023 Ed 4.1 Explosive atmospheres Part 7: Equipment protection by increased safety

IEC 60079-7: 2017 Ed 5.1

SANS 60079-15: 2022 Ed 5 Explosive atmospheres Part 15: Equipment protection by type of protection IEC 60079-15: 2017 Ed 5

SANS 60079-31: 2014 Ed 2

Explosive atmospheres Part 31: Equipment dust ignition protection by

enclosure "t" IEC 60079-31: 2013 Ed 2

Risk of ignition provided

Protection afforded			Conditions of operation	T class or Max Surface Temp (°C)	
High	Mb Group I	Suitable for normal operation and severe operating conditions	Equipment de-energized when explosive atmosphere present	Not Applicable	
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	Not Applicable	
Enhanced	d Gc Suitable for normal operation		Equipment remains functioning in zone 2	Not Applicable	
Very high	Da Group III	Two independent means of protection or safe even when two faults occur independently of each other	Equipment remains functioning in zones 20, 21 and 22	Not Applicable	

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GENERAL

The marking of the Cable Gland shall include the following:

Ex eb I Mb Ex eb IIC Gb Ex ta IIIC Da

Ex db I Mb Ex db IIC Gb

Ex nR IIC Gc

Ta = -60° C to $+130^{\circ}$ C* Ta = -20° C to $+200^{\circ}$ C**

* When fitted with the standard seal

**When fitted with the high temperature seal

The E** series Type ranges of cable glands consist of a male-threaded front entry component containing an elastomeric sealing ring and a Nylon 6 skid washer which effect flameproof sealing onto the cable inner sheath and is intended to screw into an entry point of its associated enclosure in accordance with relevant codes of practice. The flameproof seal is actuated by an adjoining coupling component. The coupling component is attached to a main body. Their mating thread may be fitted with an optional 'O' ring seal to provide increased ingress protection. Clamping of the armoured or braided cable is affected by a combination of the coupling component, main body and the different optional armour cone and armour sleeve combinations being fastened together. An outer seal nut, containing an elastomeric sealing ring and a Nylon 6 ferrule, threads onto the main body and effects environmental sealing onto the cable outer sheath.

Notes:

- •Sira certificate IECEx SIR 13.0026X is superseded by CML certificate IECEx CML 18.0181X.
- •The product covered by Issue 0 of this certificate remains identical to that previously covered by IECEx SIR 13.0026X.
- •Where IECEx SIR 13.0026X is 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 option for metric threaded cable entry spigots of all cable gland model series to be manufactured with a thread pitch between 0.7mm and 2.0mm.
- 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.
- 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.
- The use of alternative armour clamping components specified by the cable gland type designation.
- The various arrangements vary the cable gland suitability for differing armour or braided type cables.

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- The use of a component having an alternative profile allowing an integral earthing facility The type designation identifying the cable gland being fitted with this option.
- The use of metallic continuity diaphragm component specified by the cable gland type designation for use when terminating lead sheathed cables.
- The use of an earthing device component specified by the cable gland type designation for use with variable speed drive (VSD) / variable frequency drive (VFD) cables.
- Alternative material of manufacture of the ferrule to be the same as the gland material.
- The use of seals suitable for flat form cables.
- The use of an O ring seal between the body and the entry item to provide a deluge seal.
- Alternative outer seal arrangement to allow the glands to be fitted to flexible conduit.
- The option to fit a blanking disc between the outer seal and the main body to maintain a minimum IP66 rating. The disc is to be marked 'Ex e only' to indicate that the gland is not suitable for Ex d applications when the disc is fitted.

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

Gland Size	Entry Thread	Entry Thread "B" version	sheath	Seal range nm)	SWA, STA, strip armour, pliable wire armour &wire		SWA (mm)		Outer seal sheath range Ø (mm)	
					braid (mm)					
			Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.
16	M16 x 1.5	-	3.1	8.6	0	8.0	0.8	1.25	6.1	13.2
20S/16	M20 x 1.5	M25 x 1.5	3.1	8.6	0	8.0	0.8	1.25	6.1	13.2
20S16/20S	M20 x 1.5	M25 x 1.5	3.1	8.6	0	8.0	0.8	1.25	9.5	15.9
20S	M20 x 1.5	M25 x 1.5	6.1	11.6	0	8.0	0.8	1.25	9.5	15.9
20S/20	M20 x 1.5	M25 x 1.5	6.1	11.6	0	8.0	0.8	1.25	12.5	20.9
20	M20 x 1.5	M25 x 1.5	6.5	13.9	0	8.0	0.8	1.25	12.5	20.9
20/25S	M20 x 1.5	M25 x 1.5	6.5	13.9	0	1.1	1.25	1.6	14.0	22.0
20/25	M20 x 1.5	M25 x 1.5	6.5	13.9	0	1.1	1.25	1.6	18.2	26.2
25S	M25 x 1.5	M32 x 1.5	11.1	19.9	0	1.1	1.25	1.6	14.0	22.0
25	M25 x 1.5	M32 x 1.5	11.1	19.9	0	1.1	1.25	1.6	18.2	26.2
25/32	M25 x 1.5	M32 x 1.5	11.1	19.9	0	1.2	1.6	2.0	23.7	33.9
32	M32 x 1.5	M40 x 1.5	17.0	26.2	0	1.2	1.6	2.0	23.7	33.9
32/40	M32 x 1.5	M40 x 1.5	17.0	26.2	0	1.2	1.6	2.0	27.9	40.4
40	M40 x 1.5	M50 x 1.5	22.0	32.1	0	1.2	1.6	2.0	27.9	40.4
40/50S	M40 x 1.5	M50 x 1.5	22.0	32.1	0	1.5	2.0	2.5	35.2	46.7
50S	M50 x 1.5	M63 x 1.5	29.5	38.1	0	1.5	2.0	2.5	35.2	46.7
50S/50	M50 x 1.5	M63 x 1.5	29.5	38.1	0	1.5	2.0	2.5	40.4	53.1
50	M50 x 1.5	M63 x 1.5	35.6	44.0	0	1.5	2.0	2.5	40.4	53.1
50/63S	M50 x 1.5	M63 x 1.5	35.6	44.0	0	1.5	2.0	2.5	45.6	59.4
63S	M63 x 1.5	M75 x 1.5	40.1	49.9	0	1.5	2.0	2.5	45.6	59.4
63S/63	M63 x 1.5	M75 x 1.5	40.1	49.9	0	1.5	2.0	2.5	54.6	65.6
63	M63 x 1.5	M75 x 1.5	47.2	55.9	0	1.5	2.0	2.5	54.6	65.9
63/75S	M63 x 1.5	M75 x 1.5	47.2	55.9	0	1.5	2.0	2.5	59.0	72.1
75S	M75 x 1.5	M90 x 2.0	52.8	61.9	0	1.5	2.0	2.5	59.0	72.1
75S/75	M75 x 1.5	M90 x 2.0	52.8	61.9	0	1.5	2.5	3.0	66.7	78.5
75	M75 x 1.5	M90 x 2.0	59.1	67.9	0	1.5	2.5	3.0	66.7	78.5
75/90	M75 x 1.5	M90 x 2.0	59.1	67.9	0	1.6	3.0	3.5	76.2	90.4
90	M90 x 2.0	M100 x 2.0	66.6	79.9	0	1.6	3.0	3.5	76.2	90.4
90/100	M90 x 2.0	M100 x 2.0	66.6	79.9	0	1.6	3.15	4.0	86.1	101.5
100	M100 x 2.0	M115 x 2.0	76.0	90.9	0	1.6	3.15	4.0	86.1	101.5
100/115	M100 x 2.0	M115 x 2.0	76.0	90.9	0	1.6	3.15	4.0	101.5	110.3
115	M115 x 2.0	M130 x 2.0	86.0	97.9	0	1.6	3.15	4.0	101.5	110.3
115/130	M115 x 2.0	M130 x 2.0	86.0	97.9	0	1.6	3.15	4.0	110.2	123.3
130	M130 x 2.0	N/A	97.0	114.9	0	1.6	3.15	4.0	110.2	123.3

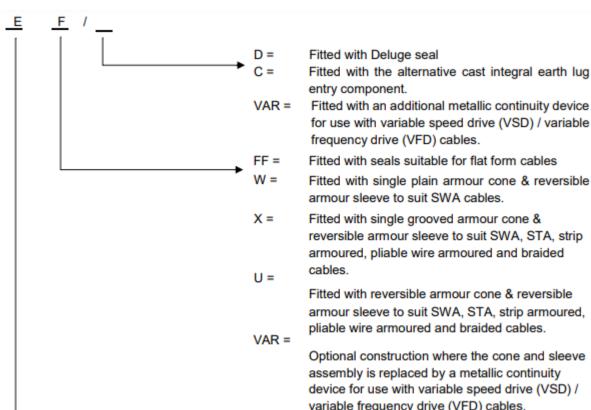
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E*-FF in these sizes only:

Gland size	Entry thread	Entry thread 'B'	Cable in sheath ran	ner seal ge (mm)	Cable or sheath ran	uter seal ge (mm)
		version	Min.	Max.	Min	Max
20s	M20 x1.5	M25 x1.5	4.0 x 6.2	6.8 x 11.7	4.4 x 7.8	6.8 x 11.7
20	M20 x1.5	M25 x1.5	5.7 x 8.0	8.7 x 13.5	4.4 x 10.9	8.7 x 16.0

Type designation code:



variable frequency drive (VFD) cables. Standard circular armoured and braided cables. 2 =

Fitted with additional metallic continuity diaphragm for the use with inner lead sheathed SWA, strip armoured and braided cables.

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Based on the following documentation: IECEx CML 18.0181X. Issue 0.

INSTALLATION INSTRUCTIONS

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale as required by IEC/SANS 60079-0 Clause 30.

SPECIAL CONDITIONS FOR SAFE USE (denoted by "X" after certificate number)

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

- The E**-Type cable glands shall not be used to terminate on braided cables in group I applications.
- The glands when used for terminating braided cables are only suitable for fixed installations. Cables must be effectively clamped to prevent pulling or twisting.
- iii. 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.
- iv. When assembled for fitting to flexible conduit, the conduit shall be effectively clamped to prevent twisting and pulling.

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SCHEDULE OF LIMITATIONS (denoted by "U" after certificate number) None.

CONDITIONS OF CERTIFICATION

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

MARKING

iv)

The following (or similar) information have to be clearly and permanently marked on all units:

: CMP Products Limited Supplier Manufacturer : CMP Products Limited

Equipment : Cable Gland

: E* Model/Type Serial No.

Ex Rating : Ex eb I Mb Ex eb IIC Gb Ex ta IIIC Da

Ex db I Mb Ex db IIC Gb

Ex nR IIC Gc

 $Ta = -60^{\circ}C \text{ to } +130^{\circ}C^{*}$ $Ta = -20^{\circ}C \text{ to } +200^{\circ}C^{**}$

* When fitted with the standard seal

**When fitted with the high temperature seal

IA Certificate No : MS-XPL/21.0010 X

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

SANS 10086 and IEC/SANS 61241-14 requirements as applicable;

Any conditions mentioned in the above report:

Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act;

Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.

A revision certificate replaces all previous version of the certificate.

- Only covers equipment Imported between the "Issued" and "Expire" dates.

If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd.

Responsible Testing Officer:

D Maree

Testing Officer

EXPLOLABS EXPLOSION PREVENTION SERVICES

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