

(Pty) Ltd

7 Spanner Rd / PO Box 467 Olifantsfontein

1665

Tel: +27 (11) 316 4601 Fax: +27 (11) 316 5670

E-mail: admin-mgr@explolabs.co.za

## **GOVERNMENT APPROVED TEST LABORATORY**

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

# IA CERTIFICATE

Date Issued: 26 Jan 2021 26 Jan 2024 \*Expiry date:

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Issue: 0

Ex – Type Examination Certificate

Certificate Number: MS-XPL/21.0007 X Equipment: Cable Gland Types SS2K\*\* 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/21.0007 X

And as described in the Explolabs file number XPL/21804/21.0007 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

IEC 60079-1: 2014 Ed 7

Explosive atmospheres Part 1: Equipment protection by flameproof enclosures "d"

SANS 60079-7: 2019 Ed 4

Explosive atmospheres Part 7: Equipment protection by increased safety "e" IEC 60079-7: 2015 Ed 5

SANS 60079-15: 2010 Ed 4

Explosive atmospheres Part 15: Equipment protection by type of protection "n" IEC 60079-15: 2010 Ed 4

SANS 60079-31: 2014 Ed 2

Explosive atmospheres Part 31: Equipment dust ignition protection by enclosure "t" IEC 60079-31: 2013 Ed 2

FIGURES	Risk of ignition provided:  Protection		Performance of protection	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	150°C	
MAIS (EPHOLAIS (EPH	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	150°C	
	Enhanced	Dc Group III	Suitable for normal operation	Equipment remains functioning in zone 22	150°C	
	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	150°C	





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### **GENERAL**

The marking of the Cable Gland shall include the following:

Ex db I Mb

Ex eb I Mb

Ex db IIC Gb

Ex eb IIC Gb

Ex nR IIC Gc

Ex ta IIIC Da

Ta -60°C to +130°C (standard seal) / -20°C to +200°C (high temperature seal)

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.

# 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.

### 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.

### SS2K-FF Range

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.

# **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:

SS2K/PB, SS2K/TA, and SS2K-FF Ranges of Cable Glands are manufactured in brass, stainless steel, mild steel & aluminium. All brass manufactured component parts can be optionally nickel plated. All mild steel manufactured components can be optionally zinc plated

## **Examples of alternative entry component thread forms:**

- ET(Conduit)
- PG
- BSPP
- BSPT
- ISO
- NPT
- NPSM

Metric entry threads of all model ranges to be manufactured with a pitch between 0.7 mm and 2.0 mm, with 1.5 mm as standard.

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The option to manufacture glands with entry threads that are one size up from the nominal quoted gland size.

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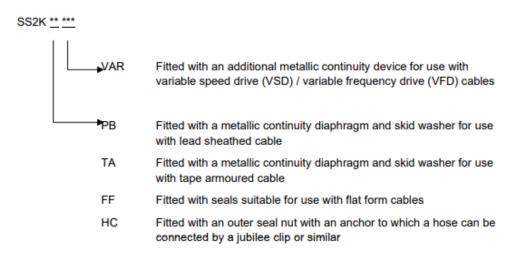
Alternative material of manufacture of the skid washer to be the same as the gland material.

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 'Ex e only' is 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



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

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Gland Size	Entry threaded	Entry thread 'B' version	Cable inner seal sheath range Ø (mm)		Cable outer seals heath range Ø(mm)		Alternative outer seal sheath range	
16			Min.	Max.	Min.	Max	Min	Max
16	M16 x 1.5	-	3.2	8.7	3.1	8.7	6.1	13.2
200/16	M20 x 1.5	M25 x 1.5	3.2	8.7	3.1	8.7	6.1	13.2
20s/16 20s16/20s 20s 20s/20	M20 X 1.5	M25 x 1.5	3.2	8.7	6.1	11.7	9.5	15.9
20s	M20 X 1.5	M25 x 1.5	6.1	11.7	6.1	11.7	9.5	15.9
203/20	M20 X 1.5	M25 x 1.5	6.1	11.7	6.5	14.0	12.5	20.9
20	M20 X 1.5	M25 x 1.5	6.5	14.0	6.5	14.0	12.5	20.9
20 20/25 25	M20 X 1.5	M25 x 1.5	6.5	14.0	11.1	20.0	18.2	26.2
25	M25 X 1.5	M32 x 1.5	11.1	20.0	11.1	20.0	18.2	26.2
25/32	M25 X 1.5	M32 x 1.5	11.1	20.0	17.0	26.3	23.7	33.9
32 32/40	M32 x 1.5	M40 x 1.5	17.0	26.3	17.0	26.3	23.7	33.9
32/40	M32 x 1.5	M40 x 1.5	17.0	26.3	22.0	32.2	27.9	40.4
40	M40 x 1.5	M50 x 1.5	23.5	32.2	22.0	32.2	27.9	40.4
40/50s 50s 50s/50	M40 x 1.5	M50 x 1.5	23.5	32.2	29.5	38.2	35.2	46.7
50s	M50 x 1.5	M63 x 1.5	31.0	38.2	29.5	38.2	35.2	46.7
50s/50	M50 x 1.5	M63 x 1.5	31.0	38.2	35.6	44.1	40.4	53.1
	M50 x 1.5	M63 x 1.5	35.6	44.1	35.6	44.1	40.4	53.1
50/63s 63s	M50 x 1.5	M63 x 1.5	35.6	44.1	40.1	50.1	45.6	59.4
63s	M63 x 1.5	M75 x 1.5	41.5	50.0	40.1	50.1	45.6	59.4
038/03	M63 x 1.5	M75 x 1.5	41.5	50.0	47.2	56.0	54.6	65.9
63	M63 x 1.5	M75 x 1.5	47.2	56.0	47.2	56.0	54.6	65.9
63 63/75s 75s	M63 x 1.5	M75 x 1.5	47.2	56.0	52.8	62.0	59.0	72.1
75s	M75 x 1.5	M90 x2.0	54.0	62.0	52.8	62.0	59.0	72.1
DOCUMENT No. VDI 0040 DELEASE DATE: 20/05/2040 DELV. 7								

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3	75s/75	M75 x 1.5	M90 x2.0	54.0	62.0	59.1	68.0	66.7	78.5
21	75	M75 x 1.5	M90 x2.0	61.1	68.0	59.1	68.0	66.7	78.5
	75/90	M75 x 1.5	M90 x2.0	61.1	68.0	66.6	79.4	76.2	90.4
	90	M90 x 2.0	M100 x 2.0	66.6	80.0	66.6	79.4	76.2	90.4
<b>y</b>	90/100	M90 x 2.0	M100 x 2.0	66.6	80.0	76.0	91.0	86.1	101.5
	100	M100 x 2.0	M115 x 2.0	76.0	91.0	76.0	91.0	86.1	101.5
2	100/115	M100 x 2.0	M115 x 2.0	76.0	91.0	86.0	98.0	101.5	110.3
•	115	M115 x 2.0	M130 x 2.0	86.0	98.0	86.0	98.0	101.5	110.3
3:	115/130	M115 x 2.0	M130 x 2.0	86.0	98.0	97.0	115.0	110.2	123.3
	130	M130 x 2.0	Not available	97.0	115.0	97.0	115.0	110.2	123.3

Cable sizes for the SS2K-FF range only

Gland Size	Entry threaded	Entry thread 'B' version		nner seal nge Ø (mm)	Cable outer seals heath range Ø(mm)		
Size			Min.	Max.	Min.	Max	
20s	M20 x 1.5	M25 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	M25 x 1.5	5.7 x 8.0	8.7 x 13.5	5.7 x 8.0	8.7 x 13.5	

Based on the following documentation: IECEx CML 18.0178X. Issue 1.

### 2. 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.

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

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

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

### 5. CONDITIONS OF CERTIFICATION

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

### 6. MARKING

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

Supplier : CMP Products Limited
Manufacturer : CMP Products Limited

Equipment : Cable Gland Model/Type : Types SS2K\*\*

Serial No. : ---

Ex Rating : Ex db I Mb Ex eb I Mb

Ex db IIC Gb Ex eb IIC Gb Ex nR IIC Gc Ex ta IIIC Da

Ta -60°C to +130°C (standard seal) / -20°C to +200°C (high temperature seal)

IA Certificate No : MS-XPL/21.0007 X

DOCUMENT No: XPL0213 RELEASE DATE: 29/05/2018 REV : 7

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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;

iii)

- 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

A revision certificate replaces all previous version of the certificate v) vi)

- 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:

## M Lategan **Testing Officer** EXPLOLABS EXPLOSION PREVENTION SERVICES

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