

Rea No: 1999/027771/07

(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: 02 Jun 2021 \*Expiry date: 05 Jul 2028

Page 1 of 4 Issue: 6

Ex - Type Examination Certificate

Certificate Number: MS-XPL/18.0355 X

Equipment: Flameproof Cable Glands
Model / Type: Refer to certification schedule

Applicant: Pratley Manufacturing and Engineering (Pty) Ltd

14 Jackson Street Krugersdorp

Manufacturer: Pratley Manufacturing and Engineering (Pty) Ltd

Serial No: All serial numbers of equipment covered by a valid report or acceptable

product certification mark.

Supplied by

Pratley Manufacturing and Engineering (Pty) Ltd

Identified by Inspection Authority number

MS-XPL/18.0355 X

And as described in the Explolabs file number XPL/19447/18.0355 Issue 6 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: 2012 Ed 5

SANS 60079-1: 2015 Ed 5

IEC 60079-0: 2011 Ed 6 Explosive atmospheres Part 0: Equipment — General requirements

120 00073-0. 2011 24 0

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

SANS 60079-7: 2007 Ed 3 Explosive atmospheres Part 7: Equipment protection by increased safety

IEC 60079-7: 2006 Ed 4 "e"

SANS 60079-31: 2009 Ed 1 Explosive atmospheres Part 31: Equipment dust ignition protection by

IEC 60079-31: 2008 Ed 1 enclosure "t"

# SANS 808:2013 Ed 1.3 Cable glands for use on flameproof enclosures (Ex d)

# Not SANAS Accredited





The South African National Accreditation System (SANAS) is a member of the International Laboratory Accreditation Cooperation (ILAC) Mutual Recognition Arrangement (MRA). This Arrangement allows for the mutual recognition of technical test and calibration data by the member accreditation bodies worldwide. For more information on the Arrangement please consult www.ilac.org

Explosive atmospheres Part 1: Equipment protection by flameproof

PAGE 2 OF 4

### ANNEX TO CERTIFICATE NO MS-XPL/18.0355 X

Risk of ignition provided:

| Protection afforded | Equipment<br>Protection<br>Level (EPL)<br>Group | Performance of protection   | Conditions of operation                                  | T class or<br>Max Surface<br>Temp (°C) |
|---------------------|---|---|--|--|
| Very high           | Da<br>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     |  |
| High                | Mb<br>Group I                                   | Suitable for normal operation and severe operating conditions   | Equipment de-energized when explosive atmosphere present | Not Applicable                         |
| High                | Gb<br>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           |  |

#### 1. DESCRIPTION OF EQUIPMENT

The marking of the Flameproof Cable Glands shall include the following: Ex db I Mb, Ex db IIC Gb, Ex e I Mb, Ex e IIC Gb, Ex ta IIIC Da IP68 (2m cont.)

The cable glands were manufactured by Pratley Maunfacturing (Pty) Ltd and are certified for both surface and mining use.

The Model Codes are as follows:

- Gland for Armoured Cable Size: 0S, 0L, 1S, 1L, 2S, 2L, 3S, 3L, 4S, 4L, 5S, 5L, 6S and 6L
- Glands for Unarmoured Cable Size: 0S, 0L, 1, 2S, 2L, 3S, 3L, 4S, 4L, 5S, 5L, 6S and 6L
- Hoseback Compression Glands Size: 0S, 0L, 1, 2S, 2L, 3S, 3L, 4S, 4L, 5S, 5L, 6S and 6L

The glands consists of brass or 314/304 stainless steel components; a sealing washer, synthetic rubber sealing rings and (for armoured cable glands) a synthetic rubber shroud. The gland is intended to connect armoured or unarmoured cable to a certified Ex 'd' or 'e' enclosure to form an Ex 'd' or 'e' assembly.

The range of cable glands consisted of a total of three configurations as detailed below.

<u>Table 1</u> Configuration A : Armoured (SWA)

| Size | Cable Outer Sheath (D2) |      | Armour<br>(D3) |      | Entry Thread<br>"C" |                |
|------|-------------------------|------|----------------|------|---------------------|----------------|
|      | Min                     | Max  | Min            | Max  | Metric              | NPT            |
| 0S   | 12.0                    | 18.6 | 0.9            | 1.25 | M20                 | 1/2"           |
| 0L   |                         |      |                |      | M20                 | 1/2"           |
| 1S   | 18.0                    | 22.0 | 0.9            | 1.25 | M20                 | ½" or ¾"       |
| 1L   |                         |      |                |      | M20                 | ½" or ¾"       |
| 2S   | 21.0                    | 27.2 | 1.25           | 1.6  | M25                 | 3⁄4" or 1"     |
| 2L   |                         |      |                |      | M25                 | 3⁄4" or 1"     |
| 3S   | 26.0                    | 33.2 | 1.6            | 2.0  | M32                 | 1" or 11/4"    |
| 3L   |                         |      |                |      | M32                 | 1" or 11/4"    |
| 4S   | 33.0                    | 43.2 | 1.6            | 2.0  | M40                 | 11/4" or 11/2" |
| 4L   |                         |      |                |      | M40                 | 11/4" or 11/2" |
| 5S   | 43.0                    | 54.0 | 2.0            | 2.5  | M50                 | 1½" or 2"      |
| 5L   |                         |      |                |      | M50                 | 1½" or 2"      |
| 6S   | 53.5                    | 67.1 | 2.5            | 3.0  | M63                 | 2" or 21/2"    |
| 6L   |                         |      |                |      | M63                 | 2" or 21/2"    |

## ANNEX TO CERTIFICATE NO MS-XPL/18.0355 X

**PAGE 3 OF 4** 

Table 2

Configuration B : Unarmoured

Configuration C: Unarmoured Hose-tail

| Size | Configuration | Cable Diameter "D1" |      | Entry Thread<br>"C" |                |
|------|---------------|---------------------|------|---------------------|----------------|
|      |               | Min                 | Max  | Metric              | NPT            |
| 0s   | B & C         | 8.0                 | 10.9 | M20                 | 1/2"           |
| 0L   | B&C           | 11.0                | 13.5 | M20                 | 1/2"           |
| 1    | B&C           | 13.6                | 14.5 | M20                 | ½" or ¾"       |
| 2s   | B&C           | 14.6                | 17.5 | M25                 | 3⁄4" or 1"     |
| 2L   | B&C           | 17.6                | 20.0 | M25                 | 3⁄4" or 1"     |
| 3s   | B&C           | 20.1                | 23.0 | M32                 | 1" or 11/4"    |
| 3L   | B&C           | 23.1                | 26.2 | M32                 | 1" or 11/4"    |
| 4s   | B & C         | 26.3                | 30.1 | M40                 | 11/4" or 11/2" |
| 4L   | B&C           | 30.2                | 34.0 | M40                 | 11/4" or 11/2" |
| 5s   | B&C           | 34.1                | 38.7 | M50                 | 1½" or 2"      |
| 5L   | B & C         | 38.8                | 43.2 | M50                 | 1½" or 2"      |
| 6s   | B&C           | 43.3                | 49.3 | M63                 | 2" or 21/2"    |
| 6L   | B&C           | 49.4                | 55.5 | M63                 | 2" or 21/2"    |

# 2. SPECIAL CONDITIONS FOR SAFE USE (denoted by X after certificate number)

- -An IP rating of IP68 must be upheld after installation.
- -The temperature at the point of mounting shall be in the range -20°C to +100°C.

### 3. 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.

### 4. CONDITIONS OF CERTIFICATION

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

DOCUMENT No: XPL0105 | RELEASE DATE: 02/10/2018 | REV : 6

### ANNEX TO CERTIFICATE NO MS-XPL/18.0355 X

PAGE 4 OF 4

### 5. MARKING

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

Supplier : Pratley Manufacturing and Engineering (Pty) Ltd Manufacturer : Pratley Manufacturing and Engineering (Pty) Ltd

Equipment : Flameproof Cable Glands Model/Type : Refer to certification schedule

Serial No. : ---

Ex Rating : Ex db I Mb, Ex db IIC Gb, Ex e I Mb, Ex e IIC Gb, Ex ta IIIC Da IP68 (2m cont.)

IA Certificate No : MS-XPL/18.0355 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;

i) 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;

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

v) 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:** 

Reviewed by:

D. Maree M. Lategan
SANAS Technical Signatory Technical Specalist
EXPLOLABS EXPLOSION PREVENTION SERVICES

This report/certificate shall not be reproduced except in full without the written approval of the company Explolabs (Pty) Ltd shall not be liable for any losses or damages sustained on account of any failure or omission to properly perform our duties in terms of any contract undertaken by us. This disclaimer is immutable and automatically incorporated in any contract undertaken by us; notwithstanding anything to the contrary, save for the express written waiver of our managing director. By marking the equipment in accordance with the documentation/standard, the manufacturer attests on his own responsibility that the equipment has been constructed in accordance with the applicable requirements of the relevant standards and that the routine verifications and tests have been successfully completed and that the product complies with the documentation and standard(s). The contents of electronic reports/certificates cannot be guaranteed. Original certification documents will be kept on file at Explolabs (Pty) Ltd

DOCUMENT No: XPL0105 | RELEASE DATE: 02/10/2018 | REV : 6