

GOVERNMENT APPROVED TEST LABORATORY
IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

IA CERTIFICATE

Date Issued: **19 Mar 2024**
*Expiry date: **25 Jan 2027**
Page 1 of 5
Issue: 2

Ex – Type Examination Certificate

Certificate Number: **MS-XPL/21.0004**
Equipment: **Cable Glands**
Model / Type: **A2e100, RA2e100, A2e100HC, RA2e100HC, A2e100/M, RA2e100/M, A2e100HC/M, Ra2e100HC/M Series**
Applicant: **CMP Products Limited**
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/21.0004

And as described in the Explolabs file number **XPL/21804/21.0004** 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 60079-7: 2023 Ed 4.1** Explosive atmospheres Part 7: Equipment protection by increased safety "e"
- IEC 60079-7: 2017 Ed 5.1**
- SANS 60079-15: 2022 Ed 5** Explosive atmospheres Part 15: Equipment protection by type of protection "n"
- 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 | Equipment Protection Level (EPL) | Performance of protection | Conditions of operation | T class or Max Surface Temp (°C) |
|---------------------|----------------------------------|---|--|----------------------------------|
| | Group | | | |
| 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 | Gc Group II | 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 |

| Gland Size | Entry Thread | | | Cable Outer Sheath | |
|------------|-------------------|----------|----------------|--------------------|-----------|
| | Standard (Metric) | Standard | Optional (NPT) | Min. (mm) | Max. (mm) |
| 20L | M20 x1.5 | 1/2" | 3/4" | 8.7 | 14 |
| 25 | M20 x1.5 | 3/4" | 1" | 11.5 | 19.5 |
| 25L | M20 x1.5 | 3/4" | 1" | 14.0 | 20.0 |
| 32 | M32 x1.5 | 1" | 1 1/4" | 19.0 | 25.5 |
| 32L | M32 x1.5 | 1" | 1 1/4" | 20.2 | 26.3 |
| 40 | M40 x1.5 | 1 1/4" | 1 1/2" | 25.0 | 32.2 |
| 50S | M50 x1.5 | 1 1/2" | 2" | 31.0 | 38.2 |
| 50 | M50 x1.5 | 2" | 2 1/2" | 35.6 | 44.0 |
| 63S | M63 x1.5 | 2" | 2 1/2" | 41.5 | 49.9 |
| 63 | M63 x1.5 | 2 1/2" | 3" | 48.2 | 54.9 |
| 75S | M75 x1.5 | 2 1/2" | 3" | 54.0 | 61.9 |
| 75 | M75 x1.5 | 3" | 3 1/2" | 61.1 | 67.9 |
| 90 | M90 x 2.0 | 3 1/2" | 4" | 66.6 | 79.9 |
| 100 | M100 x 2.0 | 3 1/2" | 4" | 76.0 | 89.0 |
| 115 | M115 x 2.0 | 4" | 5" | 86.0 | 97.9 |
| 130 | M130 x 2.0 | 5" | - | 97.0 | 114.9 |

Design Options

The front threaded entry item may be manufactured with a profiled groove to captivate an 'O' ring seal which locates on the mating face of the associated enclosure. This option having the cable gland type designation prefixed with the letter R, e.g., RA2e100 Series.

The front threaded entry item may be manufactured with any larger metric or NPT thread form size from the sizes certified.

The front threaded entry item may be manufactured with an alternative nearest equivalent recognised thread type and size to the metric thread sizes certified.

Metric threaded cable entry spigots of all cable gland model series to be manufactured with a thread pitch between 0.7mm and 2.0mm, with 1.5mm as standard.

The optional use of an internally fitted brass or brass plated ingress disc between the seal and the stepped washer component parts within 'A2e100' Series & 'RA2e100' Series cable glands.

The following low profile 'across corners' envelope cable gland sizes, with the cable gland size suffix code designation 'P':

| | | | | | | |
|------------|-----|--------|------|------|------|-------|
| Gland Size | 16P | 20S16P | 20SP | 20LP | 25P* | 25LP* |
|------------|-----|--------|------|------|------|-------|

(* not available in aluminium)

The differences to the standard cable gland sizes, are-

- The entry item component is machined from round bar, equal to the standard gland size across corners dimensions, with a central portion machined to a hexagonal profile, having reduced across flats from the standard gland size. Along with a minor increase in length resulting from an increase to the conical wall thickness.
- The gland nut component (dependent upon model series and gland size), having reduced across flats and across corners dimensions from the standard gland size. Along with their maximum inner most bore dimension being reduced.

Materials of manufacture:

The standard material supplied is:

| | |
|-------|--|
| Brass | BS EN 12164:2011/ BS EN 12168:2011 Grade CuZn39Pb3 (CW614N) All brass manufactured component parts can be optionally nickel plated to a maximum of 0.008mm |
|-------|--|

Alternate materials are:

| | |
|-----------------|---|
| Stainless steel | BS EN 10088-3:2014 Grades 316S11, 316S13, 316S31, 316S33, 316L |
| Mild steel | BS EN 10277-2:2008 Grades 220M07, 230M07 (EN1A) / 220M07Pb, 230M07Pb (EN1APb) |
| Aluminium | BS EN 573-3:2013 / BS EN 755-1-3:2008 Grade 6082 T6, 6262 T6 / BS EN 1676:2010 Grade LM25 TF Aluminium will contain less than 6% magnesium |

Alternative entry component thread forms:

| | |
|--------------|---|
| ET (Conduit) | BS31:1940 (1979), Table A |
| PG | DIN 40430:1971 |
| BSPP | BS2779:1986 class A full form for external threads |
| BSPT | BS21:1985 standard threads only as clause 5.4, gauging to clause 5.2 system A |
| ISO | ISO 7/1:1994, gauging to ISO 7/2 clause 6.3 for external threads |
| NPSM | ANSI/ASME B1.20.1-2013 gauging to clause 6.4 for external threads |

Notes:

- Sira 16ATEX3165 and IECEx SIR 16.0053 are superseded by this certificate.
- The product covered by Issue 0 of this certificate remains identical to that previously covered by Sira 16ATEX3165 and IECEx SIR 16.0053.
- Where Sira 16ATEX3165 and IECEx SIR 16.0053 are 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.

Based on the following documentation: IECEx CML 18.0174. Issue 0

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)

None.

4. SCHEDULE OF LIMITATIONS (denoted by "U" after certificate number)

Not Applicable

5. CONDITIONS OF CERTIFICATION

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

The following are conditions of manufacture:

- Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- The front threaded entry item may be provided with, but not limited to, an alternative nearest equivalent recognised thread type and size to the metric thread, whilst maintaining a tolerance of fit, equal or better than, a medium fit to ISO 965-1 & ISO 965-3.

For example:

- ET - BS 31:1940 (1979) Table 'A'
- PG - DIN 40430:1971
- BSPP - BS2279:1986 class A full form for external threads
- BSPT - BS21:1985 standard threads only as clause 5.4, gauging to clause 5.2, system A.
- ISO - ISO 7/1:1994 gauging to ISO 7/2 clause 6.3 for external threads.

- NPSM - ANSI/ASME B1.20.1:1983 B1.20.1-1983 gauging to clause 9 for external threads.
- iii. Cable gland metallic parts are to be supplied in alike materials, alternatively a brass or nickel-plated brass stepped skid washer may be used within steel and stainless-steel glands.
- iv. The front threaded entry item of any model series, when manufactured with a larger thread size to the standard metric or NPT sizes approved and detailed on the certification documentation will only differ as follows:
 - These entry item dimensions must remain the same:
 - o The front bore diameter and profile and sealing ring taper angle.
 - o Outer seal engagement thread diameter and length.
 - All other dimensions may be altered to match those of the larger approved cable gland size, provided that the overall cable gland protrusion length (whichever is greater between the original cable gland size or the larger approved cable gland size) is not exceeded.
- v. Cable gland model code series suffixed 'HC' manufacturer with a 3/8" NPT threaded spigot shall not be marked suitable for Group I applications.
- vi. Cable gland sizes 25P and 25LP shall not be manufactured in aluminium.
- vii. Aluminium cable glands shall not be marked suitable for Group I applications.
- viii. Cable Glands supplied with ingress discs shall not be marked suitable for Group I applications.
- ix. Cable Glands supplied with ingress discs shall not be marked suitable for IPX7 or IPX8 applications.

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 Glands
 Model/Type : A2e100, RA2e100, A2e100HC, RA2e100HC, A2e100/M, RA2e100/M, A2e100HC/M, Ra2e100HC/M Series
 Serial No. : ---
 Ex Rating : Ex eb I Mb
 Ex eb IIC Gb*
 Ex nR IIC Gc*
 Ex ta IIIC Da*
 IP66 IP67 IP68 (30m for 12 hours)
 Ts: -60°C to +130°C
 * Not A2e100/M, RA2e100/M, A2e100HC/M, RA2e100HC/M Series
 IA Certificate No : MS-XPL/21.0004

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:

- i) SANS 10086 and IEC/SANS 61241-14 requirements as applicable;
- ii) 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; and
- 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.
- vi) * - Only covers equipment Imported between the "Issued" and "Expire" dates.
- vii) 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

Technical Specialist

EXPLOLABS EXPLOSION PREVENTION SERVICES

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