

#### UNITED KINGDOM CONFORMITY ASSESSMENT

# 1 UK TYPE EXAMINATION CERTIFICATE

2 Equipment or Protective System Intended for use in Potentially Explosive Atmospheres

UKSI 2016:1107 (as amended) - Schedule 3A, Part 1

3 Certificate Number: CSAE 21UKEX1070X Issue: 1

4 Product: RGM Range of Cable Glands

5 Manufacturer: Wrexham Mineral Cables

6 Address: Wynnstay Technology Park

Ruabon Wrexham LL14 6EN UK

- 7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- CSA Group Testing UK Limited, Approved Body number 0518, in accordance with Regulation 42 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations. The examination and test results are recorded in the confidential reports listed in Section 14.2.
- 9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018+AC:2020

EN 60079-1:2014

EN 60079-31:2014

Except in respect of those requirements listed at Section 16 of the schedule to this certificate. The above standards may not appear on the UKAS Scope of Accreditation, but have been added through flexible scope of accreditation, which is available on request.

- If the sign 'X' is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Use identified in the schedule to this certificate.
- This UK TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.
- 12 The marking of this product shall be in accordance with Regulation 41 and include the following:



II 2G 1D Ex db IIC Gb Ex ta IIIC Da

Name: M Halliwell

Title: Director of Operations





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#### 13 DESCRIPTION OF PRODUCT

The RGM range of compression seal cable glands are manufactured from brass to BS2874 Grade CZ121. The glands are intended to terminate circular, copper sheathed, mineral insulated cable into flameproof enclosures without compromising the explosion protection provided by the enclosures in accordance with the relevant codes of practice. The glands consist of a male-threaded front entry component designated the gland body, a back nut and a compression ring. The gland body has a hexagonal centre portion that enables it to be screwed into the entry point of its associated enclosure; it also has a mating thread spigot to attach the gland nut. The gland nut has a plain portion to allow product marking and a hexagonal portion for tightening purposes. The compression ring is housed between the gland body and the gland and is compressed onto the cable when the back nut is tightened. The compression ring provides sealing, clamping and earthing arrangements.

# **Design options**

Each one of four metric entry thread forms, M20, M25, M32 and M40, can accommodate various sizes of copper sheathed, mineral insulated cable. This is achieved by enlarging the minor bore of the gland body and nut, and introducing another size sensitive, compression ring. The combinations are as follows:

| RGM Gland Size 20, with M20 x 1.5 entry thread form |                  |  |  |  |
|---|------------------|--|--|--|
| Gland Type  | To Suit Cable    |  |  |  |
| Number  | Diameter ±0.5 mm |  |  |  |
| 2L1   | 5.1              |  |  |  |
| 2L1.5   | 5.7              |  |  |  |
| 2L2.5   | 6.6              |  |  |  |
| 2L4   | 7.7              |  |  |  |
| 3L1   | 5.8              |  |  |  |
| 3L1.5   | 6.4              |  |  |  |
| 3L2.5   | 7.3              |  |  |  |
| 4L1   | 6.3              |  |  |  |
| 4L1.5   | 7.0              |  |  |  |
| 4L2.5   | 8.1              |  |  |  |
| 2H1.5   | 7.9              |  |  |  |
| 2H2.5   | 8.7              |  |  |  |
| 2H4   | 9.8              |  |  |  |
| 2H6   | 10.9             |  |  |  |
| 3H1.5   | 8.3              |  |  |  |
| 3H2.5   | 9.3              |  |  |  |
| 3H4   | 10.4             |  |  |  |
| 4H1.5   | 9.1              |  |  |  |
| 4H2.5   | 10.1             |  |  |  |
| 5L1.5   | 10.1             |  |  |  |

| RGM Gland Size 25, with M25 x 1.5 |                  |  |  |  |  |  |
|-----------------------------------|------------------|--|--|--|--|--|
| entry thread form                 |                  |  |  |  |  |  |
| Gland Type                        | To Suit Cable    |  |  |  |  |  |
| Number                            | Diameter ±0.5 mm |  |  |  |  |  |
| 2H4                               | 9.8              |  |  |  |  |  |
| 2H6                               | 10.9             |  |  |  |  |  |
| 2H10                              | 12.7             |  |  |  |  |  |
| 2H16                              | 14.7             |  |  |  |  |  |
| 3H2.5                             | 9.3              |  |  |  |  |  |
| 3H4                               | 10.4             |  |  |  |  |  |
| 3H6                               | 11.5             |  |  |  |  |  |
| 3H10                              | 13.6             |  |  |  |  |  |
| 3H16                              | 15.6             |  |  |  |  |  |
| 4H2.5                             | 10.1             |  |  |  |  |  |
| 4H4                               | 11.4             |  |  |  |  |  |
| 4H6                               | 12.7             |  |  |  |  |  |
| 4H10                              | 14.8             |  |  |  |  |  |
| 5L1.5                             | 10.1             |  |  |  |  |  |
| 7H1.5                             | 10.8             |  |  |  |  |  |
| 7H2.5                             | 12.1             |  |  |  |  |  |
| 7L1                               | 7.6              |  |  |  |  |  |
| 7L1.5                             | 8.4              |  |  |  |  |  |
| 7L2.5                             | 9.7              |  |  |  |  |  |
|                                   |                  |  |  |  |  |  |





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| RGM Gland Size 32, with M32 x 1.5 entry thread form |                  |  |  |  |
|---|------------------|--|--|--|
| Gland Type No.                                      | To Suit Cable    |  |  |  |
|   | Diameter ±0.5 mm |  |  |  |
| 2H10  | 12.7             |  |  |  |
| 3H10  | 13.6             |  |  |  |
| 4H6   | 12.7             |  |  |  |
| 4H10  | 14.8             |  |  |  |
| 4H16  | 17.3             |  |  |  |

| RGM Gland Size 40, with M40 x 1.5 entry thread form |                              |  |  |  |
|---|------------------------------|--|--|--|
| Gland Type No.                                      | Gland Type No. To Suit Cable |  |  |  |
|   | Diameter ±0.5 mm             |  |  |  |
| 2H16  | 14.7                         |  |  |  |
| 3H16  | 15.6                         |  |  |  |
| 4H16  | 17.3                         |  |  |  |

|                   | e 20, with M20 x 1.5 |
|-------------------|----------------------|
| entry thread form |                      |
| Gland Type No.    | To Suit Cable        |
|                   | Diameter ±0.5 mm     |
| 1H2.5             | 5.3                  |
| 1H4               | 5.9                  |
| 1H6               | 6.4                  |
| 1H10              | 7.3                  |
| 1H16              | 8.3                  |
| 1H25              | 9.6                  |
| 1H35              | 10.7                 |

| *RGM Gland Size 25, with M25 x 1.5 entry thread form |                  |  |  |  |
|--|------------------|--|--|--|
| Gland Type No.                                       | To Suit Cable    |  |  |  |
|  | Diameter ±0.5 mm |  |  |  |
| 1H10   | 7.3              |  |  |  |
| 1H16   | 8.3              |  |  |  |
| 1H50   | 12.1             |  |  |  |
| 1H70   | 13.7             |  |  |  |
| 1H95   | 15.4             |  |  |  |

| *RGM Gland Size 32, with M32 x 1.5 entry thread form |                  |  |  |  |
|--|------------------|--|--|--|
| Gland Type No.                                       | To Suit Cable    |  |  |  |
|  | Diameter ±0.5 mm |  |  |  |
| 1H25   | 9.6              |  |  |  |
| 1H35   | 10.7             |  |  |  |
| 1H120  | 16.8             |  |  |  |
| 1H150  | 18.4             |  |  |  |
| 1H185  | 20.4             |  |  |  |
| 2H25   | 17.1             |  |  |  |
| 12H1.5   | 14.1             |  |  |  |
| 12H2.5   | 15.6             |  |  |  |

| *RGM Gland Size 40, with M40 x 1.5 entry thread form |                  |  |  |  |
|--|------------------|--|--|--|
| Gland Type No.                                       | To Suit Cable    |  |  |  |
|  | Diameter ±0.5 mm |  |  |  |
| 1H50   | 12.1             |  |  |  |
| 1H240  | 23.3             |  |  |  |
| 2H25   | 17.1             |  |  |  |
| 3H25   | 18.2             |  |  |  |
| 4H25   | 20.1             |  |  |  |
| 19H1.5   | 16.6             |  |  |  |

# Incorporating the following changes:

- i. Reduction in width of the hexagonal portion of the gland body by a maximum of 2.9 mm to increase the number of threads available for securing into associated enclosure threaded entries. Detailed on drawing numbers ACC 002, ACC 004, ACC 006 and ACC 008.
- ii. The introduction of the following new cable gland size were recognised, see Part Number tables marked \* above.
- iii. The removal of the following gland sizes from the range.





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| RGM Gland Size entry thread form | 20, with M20 x 1.5 |
|----------------------------------|--------------------|
| Gland Type No.                   | To Suit Cable      |
|                                  | Diameter ±0.5 mm   |
| 5L1.5                            | 10.1               |

| RGM Gland Size 25, with M25 x 1.5 entry thread form |                  |  |
|---|------------------|--|
| Gland Type No.                                      | To Suit Cable    |  |
|   | Diameter ±0.5 mm |  |
| 5L1.5   | 10.1             |  |

- iv. The material of construction was updated from brass standard BS 2874:1986 to BS EN 12164:2011.
- v. Removal of some of the drawings, which additionally included references to RPA / RPAL seal pots which the cable glands can be used with (to aid manufacturing), and inclusion of the angular tolerance to the tapers on the gland bodies and nuts for clarification.

### Variation 1 - This variation introduced the following changes:

- i. Drawings as listed in report to be up issued to latest revisions.
- ii. Update standards to the latest revisions.
- iii. Accept minor changes to four drawings that are not of a technical nature.

#### 14 DESCRIPTIVE DOCUMENTS

## 14.1 Drawings

Refer to Certificate Annexe.

### 14.2 Associated Reports and Certificate History

|   | Issue | Date           | Report number | Comment                               |
|---|-------|----------------|---------------|---------------------------------------|
|   | 0     | 11 August 2021 | R80078918A    | The release of the prime certificate. |
| ſ | 1     | 14 August 2024 | R80219270A    | The introduction of Variation 1.      |

# 15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 The cable gland shall not be used where the temperature, at the point of mounting, is outside the range -20°C to 450°C. However, the user/installer shall address the following issues:
  - The gland is normally used with a cable seal that will govern the upper temperature limit.
  - If the gland is used above 250°C, then the user/installer shall confirm with the manufacturer that the cable and the cable seal are both suitable for the intended application.

#### 16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS (REGULATIONS SCHEDULE 1)

In addition to the Essential Health and Safety Requirements covered by the standards listed in Section 9, all other requirements are demonstrated in the relevant reports.

# 17 PRODUCTION CONTROL

17.1 Holders of this certificate are required to comply with production control requirements defined in Schedule 3A, as applicable, and CSA Group Testing UK Regulations for Certificate Holders





# **Certificate Annexe**

Certificate Number: CSAE 21UKEX1070X

Product: RGM Range of Cable Glands
Manufacturer: Wrexham Mineral Cables

#### Issue 0

| Drawing | Sheets | Issue | Rev. | Date (Stamp) | Title   |
|---------|--------|-------|------|--------------|---|
| ACC001  | 1 of 1 | D     | 2    | 07 Dec 16    | Back Nut & Compression Ring & marking details M20 |
| ACC002  | 1 of 1 | D     | 2    | 07 Dec 16    | Gland Body M20                                    |
| ACC003  | 1 of 1 | D     | 2    | 07 Dec 16    | Back Nut & Compression Ring & marking details M25 |
| ACC004  | 1 of 1 | D     | 2    | 07 Dec 16    | Gland Body M25                                    |
| ACC005  | 1 of 1 | D     | 2    | 07 Dec 16    | Back Nut & Compression Ring & marking details M32 |
| ACC006  | 1 of 1 | D     | 2    | 07 Dec 16    | Gland Body M32                                    |
| ACC007  | 1 of 1 | D     | 2    | 07 Dec 16    | Back Nut & Compression Ring & marking details M40 |
| ACC008  | 1 of 1 | D     | 2    | 07 Dec 16    | Gland Body M40                                    |
| ACC019  | 1 of 1 | С     | 0    | 07 Dec 16    | General Arrangement                               |
| ACC163  | 1 of 1 | С     | 3    | 29 Jul 21    | Marking Information                               |

#### Issue 1

| Drawing | Sheets | Issue | Rev. | Date (Stamp) | Title   |
|---------|--------|-------|------|--------------|---|
| ACC 001 | 1 of 1 | D     | 4    | 26 Jul 24    | Back Nut & Compression Ring & marking details M20 |
| ACC 002 | 1 of 1 | D     | 3    | 26 Jul 24    | Gland BODY of 20mm ISO Compression Ring Gland     |
| ACC 003 | 1 of 1 | D     | 4    | 24 Jul 24    | Back Nut & Compression Ring & marking details M25 |
| ACC 004 | 1 of 1 | D     | 3    | 26 Jul 24    | Gland BODY of 25mm ISO Compression Ring Gland     |
| ACC 005 | 1 of 1 | D     | 4    | 25 Jul 24    | Back Nut & Compression Ring & marking details M32 |
| ACC 006 | 1 of 1 | D     | 3    | 26 Jul 24    | Gland BODY of 32mm ISO Compression Ring Gland     |
| ACC 007 | 1 of 1 | D     | 4    | 25 Jul 24    | Back Nut & Compression Ring & marking details M40 |
| ACC 008 | 1 of 1 | D     | 3    | 26 Jul 24    | Gland BODY of 40mm ISO Compression Ring Gland     |
| ACC 163 | 1 of 1 | С     | 0    | 13 Aug 24    | Marking Information                               |

