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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/21.0006 X

Equipment: Adaptors, Reducers, and Stopping Plugs

Model / Type: 737 & 797 Ranges of Adaptors & Reducers and 747, 757 & 767 Ranges

of Stopping Plugs

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/21.0006 X

And as described in the Explolabs file number XPL/21804/21.0006 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 60079-31: 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<br>Protection<br>Level (EPL) | Performance of protection   | Conditions of operation  | T class or Max<br>Surface<br>Temp (°C) |  |
|---------------------|--|---|--|--|--|
| Group  High Group I |  | Suitable for normal operation and severe operating conditions   | Equipment de-energized<br>when explosive<br>atmosphere present | 150°C                                  |  |
| 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                 | 150°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           | 150°C                                  |  |

#### ANNEX TO CERTIFICATE NO MS-XPL/21.0006 X

## **GENERAL**

The marking of the Adaptors, Reducers, and Stopping Plugs shall include the following:

**Metallic Versions Non-metallic Versions** 

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

Ex ta IIIC Da

(Note: Equipment marked with mining code are not available in Aluminium)

The Type 737 & 797 Ranges of Adaptors & Reducers and 747, 757 & 767 Ranges of Stopping Plugs are designed for explosive atmospheres, supplied in metallic and non-metallic (excluding 797 range) material options.

The Adaptor and Reducer product ranges convert an existing cable entry thread to another type and/or size. They comprise a hexagonal or cylindrical body - with machined flats - threaded from both ends providing the change required. These can be manufactured with equal threads or a combination of various sizes and types, unless otherwise stated.

- 737 Adaptor Comprises a male (M) entry thread, adapting to a female (F) thread of the same size or larger, and limited to a change of two 'standard' thread sizes, e.g. M16 x M25.
- 737 Reducer Comprises a male (M) entry thread, reducing to a female (F) thread of the same size or smaller and not limited by a specific number of thread sizes, e.g. M130 (M) x M10 (F) being acceptable.
- 797 Adaptor/Reducer Comprises M/M or F/F threads only and limited to a change of two 💰 'standard' thread sizes; with the exception of F/F thread options, where a change of three 'standard' thread sizes is allowed for M20 (F) x M10 (F) only.

Stopping Plug product ranges provide a means of blanking unused cable entries, giving Ex protection.

- 747 Stopping Plug Comprises a cylindrical body with an external male thread and socket head recess. Available in two options:
  - o Non-tamperproof socket head only accessible outside the enclosure.
  - o Tamperproof socket head only accessible inside the enclosure.
- 757 Stopping Plug Comprises a hexagonal head and cylindrical body with an external male thread.
- 767 Stopping Plug Comprises a cylindrical body with an external male thread and domed head with socket head recess.

## Materials of manufacture

Metallic:

· Brass; aluminium; stainless steel; mild steel.

Non-Metallic:

• Glass reinforced flame-retardant nylon (Excluded from Group I applications).

All brass manufactured component parts can be optionally nickel-plated. All mild steel manufactured components can be optionally zinc plated.

#### **Design Options**

- The front entry component can be fitted with an O-ring seal, which locates on the mating face with its associated enclosure. This option having the product type prefixed with the letter 'R'. Applicable to 737, 757, 767, and 797 (M/M only) product ranges.
- Alternative entry component thread forms; Metric, ET (conduit), PG, BSPP, BSPT, ISO, NPT, and NPSM. Refer to R12922A for thread specifications.
- Intermediate thread sizes permitted, e.g. M28.

# **Thread and Size Designations:**

Table 1 details the size reference and thread designation of the thread options covered. Table 2 details the products and their approved thread size ranges:

Table 1

| 737 / 747 / 757 / 767 / 797 Size Reference and Recognised Equivalent Threads |            |       |       |       |       |                 |       |  |
|--|------------|-------|-------|-------|-------|-----------------|-------|--|
| Size Ref.  | Metric     | NPT   | NPSM  | BSPP  | BSPT  | PG DIN          | E.T.  |  |
| 10   | M10 x 1.0  | 1/8   | 1/8   | 1/8   | 1/8   | -               | 3/8   |  |
| 12   | M12 x 1.5  | 1/4   | 1/4   | 1/4   | 1/4   | PG7             | 1/2   |  |
| 16   | M16 x 1.5  | 3/8   | 3/8   | 3/8   | 3/8   | PG9             | 5/8   |  |
| 20   | M20 x 1.5  | 1/2   | 1/2   | 1/2   | 1/2   | PG110<br>PG13.5 | 3/4   |  |
| 25   | M25 x 1.5  | 3/4   | 3/4   | 3/4   | 3/4   | PG16<br>PG21    | 1     |  |
| 32   | M32 x 1.5  | 1     | 1     | 1     | 1     | -               | 1-1/4 |  |
| 40   | M40 x 1.5  | 1-1/4 | 1-1/4 | 1-1/4 | 1-1/4 | PG29            | 1-1/2 |  |
| 50   | M50 x 1.5  | 1-1/2 | 1-1/2 | 1-1/2 | 1-1/2 | PG36            | 2     |  |
| 63   | M63 x 1.5  | 2     | 2     | 2     | 2     | PG42            | 2-1/2 |  |
| 75   | M75 x 1.5  | 2-1/2 | 2-1/2 | 2-1/2 | 2-1/2 | PG48            | 3     |  |
| 90   | M90 x 2.0  | 3     | 3     | 3     | 3     | -               | 3-1/2 |  |
| 100  | M100 x 2.0 | 3-1/2 | 3-1/2 | 3-1/2 | 3-1/2 | -               | 4     |  |
| 115  | M115 x 2.0 | 4     | 4     | 4     | 4     | -               | -     |  |
| 130  | M130 x 2.0 | 5     | 5     | 5     | 5     | -               | -     |  |

|                           | Table 2                              |                           |  |  |  |
|---------------------------|--------------------------------------|---------------------------|--|--|--|
| Product Range             | Metallic* Sizes                      |                           |  |  |  |
|                           | Male Thread (Size Ref.)              | Female Thread (Size Ref.) |  |  |  |
| 737 Adaptor               | 12 to 130                            | 12 to 130                 |  |  |  |
| 737 Reducer               | 16 to 130                            | 10 to 115                 |  |  |  |
| 797                       | 12 to 130                            | 10 to 130                 |  |  |  |
| 747 / 757 / 767           | 12 to 130                            | -                         |  |  |  |
| * Stainless Steel only, w | hen any thread size 10 or 12 is requ | uired                     |  |  |  |
| Product Range             | Non-metallic* Sizes                  |                           |  |  |  |
|                           | Male Thread (Size Ref.)              | Female Thread (Size Ref.) |  |  |  |
| 737 Adaptor               | 20 to 75                             | 20 to 90                  |  |  |  |
| 737 Reducer               | 20 to 90                             | 16 to 75                  |  |  |  |
| 747 / 757 / 767           | 20 to 100                            | -                         |  |  |  |
| * Excluded from Group     | applications                         | •                         |  |  |  |

# **Conditions of Manufacture**

The following conditions are required of the manufacturing process for compliance with the certification.

- Where the product incorporates certified parts or safety critical components, the i. 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.
- ii. Non-metallic and aluminium adaptors, reducers and stopping plugs shall not bear any group I marking.

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Based on the following documentation: IECEx CML 18.0177X. 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. For flameproof type "db" applications, only one adapter or reducer shall be used per cable entry.
- ii. The adaptors, reducers and stopping plugs shall be assembled in such a way that their protrusion from an associated enclosure is not increased.
- iii. The interfaces between a male thread of an adaptor/reducer and an associated enclosure, between a female thread of an adaptor/reducer and a cable entry device, and between a stopping plug and an associated enclosure cannot be defined. Therefore, it is the installer's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces.
- iv. Non-metallic adaptors, reducers and stopping plugs shall not be used in enclosures where the temperature, at the point of mounting, is outside the range of -20°C to +60°C.
- v. The installer shall refer to the manufacturer's instructions for the action necessary regarding the electrostatic risk associated with non-metallic adaptors, reducers and stopping plugs.
- vi. Any cable gland used with the non-metallic adaptors and reducers shall be non-metallic.
- **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.

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

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#### 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

: Adaptors, Reducers, and Stopping Plugs Equipment

: 737 & 797 Ranges of Adaptors & Reducers and 747, 757 & 767 Ranges o Model/Type

Stopping Plugs

Serial No.

Ex Rating : Metallic Versions Non-metallic Versions

> Ex db I Mb / Ex eb I Mb Ex eb IIC Gb Ex db IIC Gb / Ex eb IIC Gb Ex ta IIIC Da

Ex ta IIIC Da

(Note: Equipment marked with mining code are not available in Aluminium)

IA Certificate No : MS-XPL/21.0006 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;

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.

A revision certificate replaces all previous version of the certificate. V)

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

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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