

# 1 EU - TYPE EXAMINATION CERTIFICATE

## 2 Component Intended for use on/in an Product or Protective System Intended for use in Potentially Explosive Atmospheres

Directive 2014/34/EU – Annex III

3 EU - Type Examination Certificate No.: **TRAC12ATEX0008U (incorporating variations V1 to V5)**

4 Product: **Component enclosures, GUB / GUBH Series Enclosures and GUF2 Enclosure (as detailed in the attached schedule).**

5 Manufacturer: **JCE (Europe) Ltd.,**

6 Address: **East Way, Lee Mill Industrial Estate, Ivybridge, Devon, PL21 9LL, United Kingdom**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Element Materials Technology, Notified Body number 2812, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in the confidential report **TRA-045428-33-00A**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

**EN 60079-0:2018**

**EN 60079-1:2014**

**EN 60079-31:2014**

Except in respect of those requirements listed at section 18 of the schedule.

10 The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as the basis for certification of an equipment or protective system.

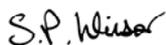
11 This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of this product shall include the following:

 **II 2 G Ex db IIC Gb Ta = -40 °C to +60 °C & Ta = -20 °C to +60 °C**

**II 2 D Ex tb IIIC Db**

This certificate and its schedules may only be reproduced in its entirety and without change. This certificate is issued in accordance with the Element Materials Technology Ex Certification Scheme.



S P Winsor, Certification Manager

Issue date: 2019-11-04

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13 SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE

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15 Description of Product

**GUB series enclosures**

The GUB series enclosures are component certified enclosures designed for use with a variety of internal equipment. They consist of a range of enclosures of varying sizes manufactured from LM25 aluminium alloy. The GUB designation denotes that the enclosures are fitted with solid aluminium threaded lids.

The GUBH designation denotes the use of lids with a cemented viewing window. These are designed to accommodate instrument type equipment.

The GUB3 / GUBH3 size enclosure can also be manufactured from stainless steel. This version enclosure is designated GUBS3 / GUBHS3. The enclosures may also be painted or powder coated.

Holes for cable entries in the size range M20 to M90 and 1/2" to 3" NPT may be drilled in the enclosure in the areas marked by the manufacturer and defined in the Installation, Operation and Maintenance manual.

The equipment was evaluated for use with gas group IIC and dust group IIIC within an ambient temperature range of -40 °C to +60 °C.

The GUBH3 / GUBHS3 can include a cover fitted with a Patol glazed window which is protected from impact by an aluminium guard that includes eight window apertures. The guard is secured to the front face of the GUBH3 cover with four M4 socket cap set screws.

The routine overpressure test requirements are a function of model, ambient temperature range and window glass material. See routine tests and table in manual for full details.

**The range assessed consists of the following**

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUB1	125x125x120	Aluminium LM25	Solid
GUB2	155x155x134	Aluminium LM25	Solid
GUB3	176x176x135	Aluminium LM25	Solid
GUB4	253x233x156	Aluminium LM25	Solid
GUB5	310x285x223	Aluminium LM25	Solid

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUBH1	125x125x120	Aluminium LM25	Windowed
GUBH3	176x176x130	Aluminium LM25	Windowed
GUBH4	253x233x175	Aluminium LM25	Windowed
GUBH5	310x285x240	Aluminium LM25	Windowed

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUBS3	176x176x135	Stainless Steel	Solid
GUBHS3	176x176x135	Stainless Steel	Windowed

The GUBH3 / GUBHS3 may also be fitted with a Patol glass window as an alternative to the plain sodalime glass. This version is fitted with an air curtain window guard. The guard is permanently fixed to the enclosure using four M4 socket cap head screws

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### GUFX2 enclosure

The GUFX2 enclosure is a component certified enclosure designed for use with a variety of internal equipment. The enclosure is made of LM25 aluminium alloy. The enclosure is fitted with a solid aluminium threaded lid.

Up to 4 holes for cable entries in the size range M20, M25, 1/2" NPT or 3/4" NPT may be drilled in the enclosure in the areas marked by the manufacturer and defined in the Installation, Operation and Maintenance manual.

The equipment was evaluated for use with gas group IIC and dust group IIIC within a temperature range of -40 °C to +60 °C.

Model Designation	Dimensions (External LxWxH)	Material	Lid Style
GUFX2	127x127x76	Aluminium LM25	Solid

16 **Test Report No. (as added for this issue of the certificate):** TRA-045428-33-00A.

### 17 **Schedule of Limitations**

1. No holes, whether blind or clear may be drilled in the Ex component enclosure other than those permitted and detailed on sheet two of the manual.
2. All blind holes shall have at least one thread remaining when screws are fully tightened without washers.
3. Rotating electrical machines or other devices which create turbulence shall not be incorporated.
4. Oil-filled circuit breakers and contactors shall not be used.
5. The enclosure is designed to be used in an ambient temperature range of -40 °C to +60 °C and -20 °C to +60 °C.
6. The limiting temperature for the window cement material is +100 °C.
7. The content of the Ex component enclosure may be placed in any arrangement providing that an area of at least 40% of each cross-sectional area remains free to permit unimpeded gas flow and unrestricted development of an explosion. Separate relief areas may be aggregated provided that each area has a minimum dimension in any direction of 12.5mm.
8. Only suitably ATEX/IECEx certified cable glands, conduit sealing devices and blanking elements shall be used.
9. When evaluating the component enclosure as equipment, apply the requirements of IEC 60079-1 Annex D.4.
10. Painted or powder coated versions may present an electrostatic hazard. These units should only be cleaned with a damp or anti-static cloth.
11. Where the GUBH3 / GUBHS3 is fitted with Patrol glass, a guard must be in place.
12. Flame path repair must not be carried out by the end user.



Attention is drawn to the operating and installation instructions which may contain useful information in relation to conditions of use.

### 18 **Essential Health and Safety Requirements (Directive Annex II)**

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

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### 19 Drawings and Documents

The list of controlled technical documentation is given in Appendix A to this schedule.

### 20 Routine Tests

1. The manufacturer shall perform a 1.5 x Routine Pressure Test in accordance with EN/IEC 60079-1 clause 16.1 at the following pressures:  
GUB4 / GUBH4 / GUB5 / GUBH5 – 17.5 bar.  
GUBH3 & GUBHS3 (for -40°C ambient rated types only).  
The GUB1, GUBH1, GUB2, GUB3 and GUFX units are exempt from routine pressure testing.  
The GUBH3 & GUBHS3 (-20 °C ambient rated types only) units are exempt from routine pressure testing.
2. The manufacturer shall perform a 1.5 x Routine Pressure Test in accordance with EN/IEC 60079-1 clause 16.1 on the GUBH3 / GUBHS3 cover with Patol window glass and guard at a pressure of 17.5 bar for the -40 °C ambient rated models and 11.25 bar for the -20 °C ambient models.

### 21 Specific Conditions for Manufacture

None.

### 22 Photographs

GUB 1



GUB 3



GUB5



GUFX



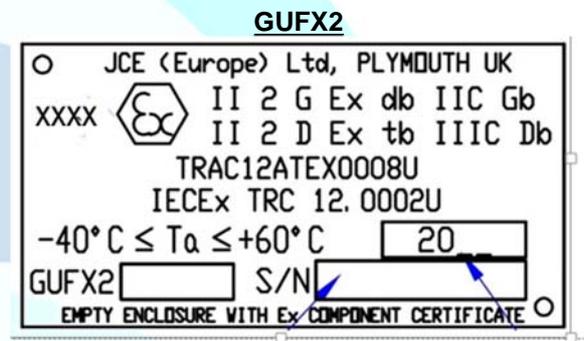
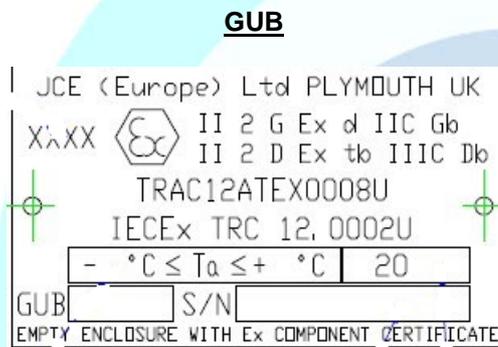
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### GUBH3 Cover with Patol® window glass and guard



#### 23 Details of Markings (internal to enclosure)



#### 24 Details of Variations to this Certificate

- Variation V1 – Addition of GUFX2 Enclosure.
- Variation V2 – To add new window configuration with guard.
- Variation V3 – a) To exempt the GUBH3 & GUBHS3 (standard cover) models rated for a minimum ambient of -20°C from routine overpressure testing. b) A reduced test pressure applied to the GUBH3 & GUBHS3 (Cover with Patol window glass) when routinely tested for the -20 °C rated ambient models.
- Variation V4 – Update to latest standards.
- Variation V5 – This certificate was originally issued by Notified Body number 0891 under Directive 2014/34/EU. The technical file has been transferred to Element Notified Body number 2812 without further assessment or evaluation

#### 25 Notes to CE marking

In respect of CE Marking, Element Materials Technology accepts no responsibility for the compliance of the product against all applicable Directives in all applications.

#### 26 Notes to this certificate

Element Materials Technology certification reference: NR-JCEQ-0004

Throughout this certificate, the date format yyyy-mm-dd (year-month-day) is used.

Notified Body number 2812 is the designation for Element Materials Technology Rotterdam BV.

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### 27 Conditions for the validity of this certificate

This certificate remains valid for so long as:

- (i) The equipment listed in section 4 is manufactured in accordance with the documents listed in Appendix A of this certificate.
- (ii) The standards listed in section 9 of this certificate continue to satisfy the Essential Health and Safety Requirements of Annex II of Directive 2014/34/EU and the generally acknowledged state of the art (e.g. as determined by the publishers of those standards).



**SCHEDULE TO EU - TYPE EXAMINATION CERTIFICATE****CERTIFICATE NUMBER TRAC12ATEX0008U (incorporating variations V1 to V5)****APPENDIX A - TECHNICAL DOCUMENTS**

<b>Title:</b>	<b>Drawing No.:</b>	<b>Rev. Level:</b>	<b>Date:</b>
Certification Drawing GUB Series Enclosures To Ex db IIC (9 pages)	A3C-3002	4	2019-05-31
Certification Drawing GUFX2 Series Enclosures To Ex db IIC (2 pages)	A3C-3004	2	2019-05-31
GUB(S) & GUBH(S) GUFX Series Empty Flameproof Enclosures Installation, Operation and Maintenance Manual (2 pages)	-	4	2019-06
Component Certification Drawing GUB series Enclosures to Ex db IIC	A3C-3023	1	2019-10-11