

1 **EC TYPE EXAMINATION CERTIFICATE**

2 Equipment or protective system intended for use in potentially explosive atmospheres –  
Directive 94/9/EC – Annex III

3 EC Type Examination **TRAC12ATEX0013X (incorporating variation V1)**  
Certificate No.:

4 Equipment: **Flameproof Enclosures – GUBC, GUBT, GUBHC, GUF2C and GUF2T  
Series Enclosures**

5 Manufacturer: **JCE Group,**

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

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

8 TRaC Global Ltd, Notified Body number 0891 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment or protective system 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 **TES-004699-33-01A, TES-004699-33-03A.**

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in section 18 of the schedule to this certificate, has been assured by compliance with:

**EN 60079-0:2009**

**EN 60079-1:2007**

**EN 60079-31:2009**

10 If the sign “X” is placed after the certificate number then this indicates that the equipment or protective system is subject to special conditions of safe use specified in the schedule to this certificate.

11 This EC-Type Examination certificate relates only to the design and construction of the specified equipment in accordance with Directive 94/9/EC. Further requirements of this Directive apply to the manufacture and supply of this equipment.

12 The marking of this equipment or protective system shall include the following:

**⊕ Ex II 2 G Ex d IIC T4 / T5 / T6 Gb  
II 2 D Ex tb IIIC T130°C / T95°C / T80°C Db**

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

*S.P. Winsor*

S P Winsor, Certification Officer

Issue date: 2012-10-05

Copy No.: 1e

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13 **SCHEDULE TO EC TYPE EXAMINATION CERTIFICATE**

14 **TRAC12ATEX0013X (incorporating variation V1)**

15 **General description of equipment or protective system included within the scope of this certificate**

**General product information:**

The GUB Series enclosures are flameproof enclosures designed to be fitted with a variety of internal equipment. Typical equipment fitted is detailed on drawing A3C-3003.

The equipment model designations are as follows:

GUB (H) (S) (T) (C) 1-5

Where:

H - Windowed Lid (not present – solid lid).

S - Stainless Steel enclosure (GUBS3/GUBHS3 only).

T - Terminal enclosure.

C - Equipment enclosure.

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 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 a temperature range of -40°C to +40°C and -40°C to +60°C (or any temperature within these limits).

**Table 1 - Thermal Data**

Enclosure Type	Power Dissipation (W)	Temperature Class	
		Ambient Temperature (°C)	
		+40	+60
GUB1/ GUBH1	15	T6	T5
	30	T5	T4
GUB2	15	T6	T5
	30	T5	T4
GUB3/ GUBH3	20	T6	T5
	40	T6	T5
	50	T5	T4
GUB4/ GUBH4	20	T6	T5
	40	T6	T5
	50	T5	T4
GUB5/ GUBH5	40	T6	T6
	80	T6	T5

**CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0013X V1**

The GUFX2 enclosure is a flameproof enclosure designed for use with a variety of internal equipment (GUFX2C) or terminals (GUFX2T). The enclosure is manufactured from LM25 aluminium alloy. The enclosure is fitted with a solid aluminium threaded lid. Typical equipment fitted is detailed on drawing A3C-3005.

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 or -40°C to +40°C.

**Table 2 - Thermal Data**

Enclosure Type	Power Dissipation (W)	Temperature Class	
		Ambient Temperature (°C)	
		+40	+60
GUFX2	10	T6	T6

*A list of controlled Manufacturer's Documents is given in Appendix A to this schedule.*

16 **Test report No.:** **TES-004699-33-01A, TES-004699-33-03A**

17 **“Special Conditions of Safe Use” for Ex Equipment, if any:**

1. Where painted or powder coated, the enclosures could present an electrostatic hazard. Clean only with a damp or anti-static cloth.
2. For equipment with temperature class T5 or T4, cables must be suitable for use at temperatures of 100°C (T5) or 135°C (T4).
3. Only suitably ATEX certified cable glands and blanking elements shall be used.
4. As part of the routine maintenance schedule, the condition of the window cement shall be periodically inspected for any degradation or discolouration of the cement that may compromise the explosion protection.
5. The enclosure is also to be earthed externally using the earth point provided.
6. Where internal intrinsically safe equipment is fitted, refer to the instructions for permitted category, equipment protection level and gas group.

18 **Essential health and safety requirements**

Covered by application of the standards listed in section 9 of this certificate and the assessment conducted in the test report listed in section 16 of this certificate.

19 **Additional information**

**“Routine tests”, if any:**

None (these are addressed by the component certifications).

**“Special conditions for manufacture”, if any:**

1. Sources of ultrasonic radiation may not be fitted.
2. Sources of optical radiation may only be fitted in non-window versions where the optical energy is completely contained within the enclosure.
3. The content of the Ex component enclosure maybe 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.
4. Where fuses are fitted, the enclosure shall be marked with the warning “DO NOT OPEN WHEN ENERGISED”.
5. Where switchgear is fitted to the GUBC equipment the conditions stated on drawing A3C-3003 Sheet 1 Note 2 shall be adhered to.
6. Where power supply conductors for GUBC equipment are greater than 16mm<sup>2</sup>, a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors shall be fitted. The corresponding earth conductor shall also be of an equivalent or greater size as the incoming power conductors.
7. Where Intrinsically Safe equipment is fitted internally to the enclosures, the maximum power dissipation is limited to 1/3rd of the lowest values listed in Table 1 and the maximum permitted ambient temperature of the overall equipment is limited to +40°C. The manufacturer shall perform a thermal test to ensure that in the location where the Intrinsically Safe equipment is fitted, the internal ambient temperature does not exceed the maximum permitted ambient temperature of the Intrinsically Safe equipment.
8. The GUBT series equipment shall include a dedicated earth terminal with dimensions equal to or greater than the terminals for connection of supply conductors.
9. Earth wiring shall have a cross sectional area in accordance with EN 60079-0 Table 10.
10. Separations between bare live parts of intrinsically safe equipment and non-intrinsically safe equipment shall conform to the requirements of EN 60079-11:2012 Clause 6.2.
11. Maximum number of terminals for GUBT shall be calculated as defined on JCE Drawing no. A3C-3011. The manufacturer shall ensure that the power dissipation for the relevant temperature class / ambient temperature does not exceed that permitted.

**Other information, if any:**

None.

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0013X V1

Photographs

GUB 1



GUBH 1



GUB 3



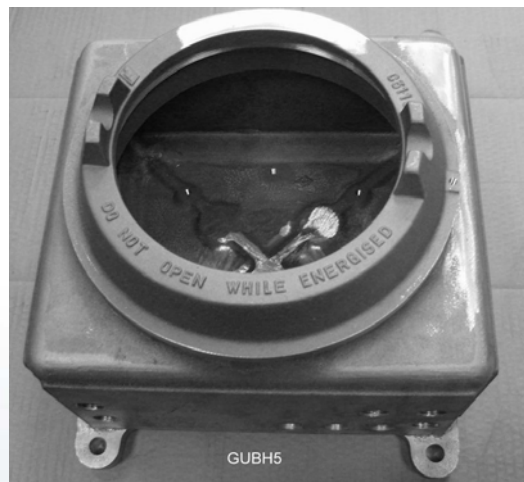
GUBH 3



GUB 5



GUBH 5



CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0013X V1

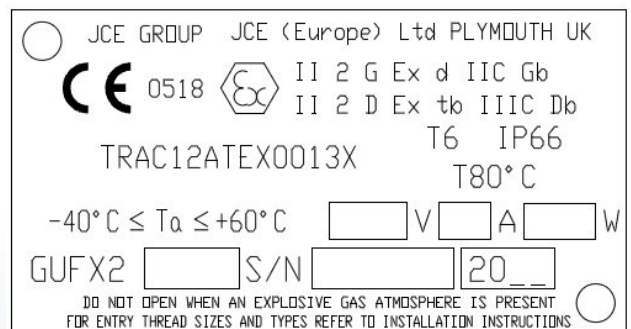
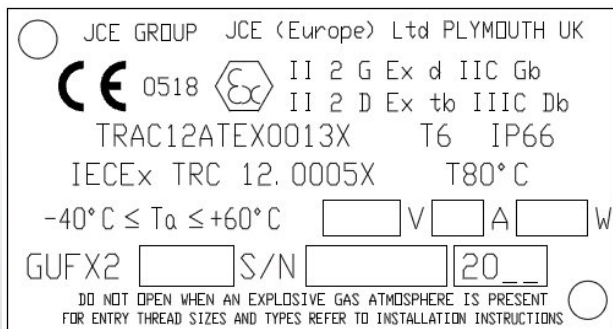
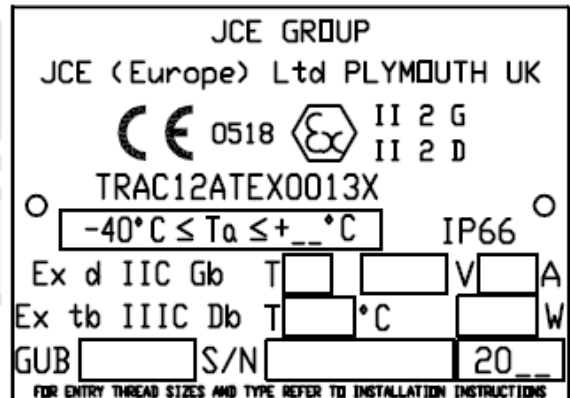
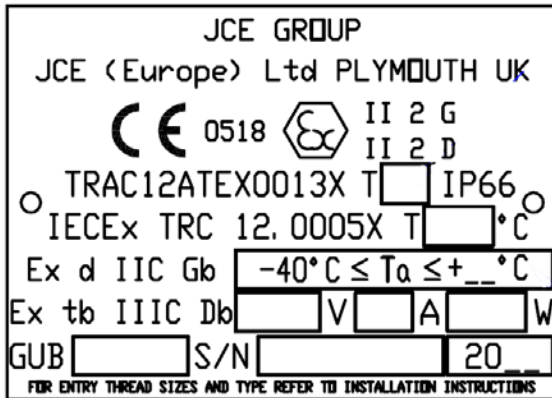
GUFX



Details of markings

IECEX Registered Companies

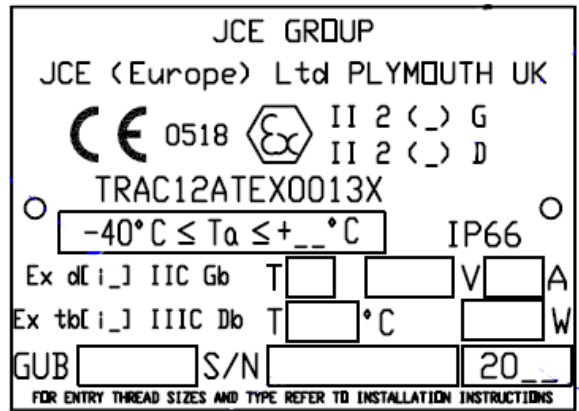
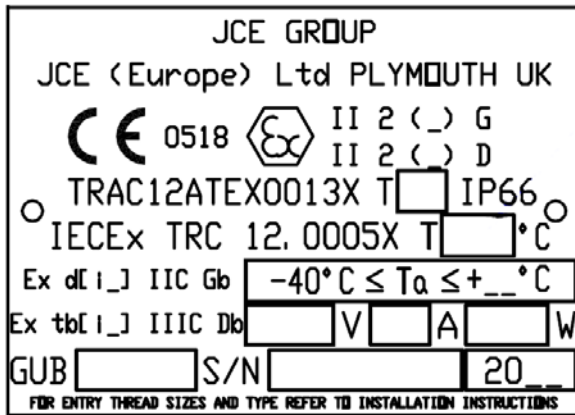
Non-IECEX registered companies



**CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0013X V1**

IECEX Registered Companies (internal intrinsically safe equipment fitted)

Non-IECEX registered companies (internal intrinsically safe equipment fitted)



Note: The manufacturer's name and address marked above (i.e. JCE (Europe) Ltd) may be replaced by the following in accordance with the manufacturer's ATEX accreditations:

JCE (Europe) Ltd.,  
East Way, Lee Mill Industrial Estate, Ivybridge, Devon, PL21 9LL, United Kingdom.

JCE (Aberdeen) Ltd.,  
Blackburn Business Park, Aberdeen, AB21 0PS, United Kingdom.

JCE Group Ltd.,  
Blackburn Business Park, Aberdeen, AB21 0PS, United Kingdom.

JCE (Asia Pacific) Pte Ltd.,  
51 Boon Lay Way, Trade Hub 21, #01-55 Singapore 6099657.

JCE Group USA Inc.

Also the notified body number marked adjacent to the CE mark above may be replaced with the applicable notified body number responsible for issue of the Quality Assurance Notification.

**Details of variations to this certificate**

- Variation V1 – GUFX addition.

**Notes to CE marking**

In respect of CE Marking, TRaC Global Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

**Notes to this certificate**

TRaC certification reference: **TES-004699-32-00.**

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

CONTINUATION OF SCHEDULE TO CERTIFICATE TRAC12ATEX0013X V1

**APPENDIX A - LIST OF CONTROLLED MANUFACTURER'S DOCUMENTS**

Title:	Drawing No.:	Rev. Level:	Date:
Certification Drawings – GUB Series Equipment Enclosures	A3C-3003 (Sheets 1-6)	2	2012-09-27
Installation, Operation and Maintenance Manual (Sheets 1-3)	*	1	2012-05
Terminal Calculation Spreadsheet	A3C-3011	1	2012-05-23
Adhesive Datasheet	10-1096G-01	*	2008-11-21
Certification Drawings – GUF2 Enclosures to Exd IIC	A3C-3005 (Sheets 1-2)	1	2012-09-12
Installation, Operation and Maintenance Manual	*	1	2012-06

\* Information not available

