



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX CML 21.0109X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: 2022-05-09

Applicant: **EXHEAT LIMITED**
Threxton Road Industrial Estate
Watton, Thetford, Norfolk
IP25 6NG
United Kingdom

Equipment: **Miniature Tank Heater (MTH)**

Optional accessory:

Type of Protection: **Flameproof "db", Dust Ignition "tb"**

Marking: Ex db IIC T6...T3 Gb
Ex tb IIIC T85°C...T200°C Db
IP66/IP68
 $T_a: -40^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$
 $T_a: -30^{\circ}\text{C} \leq T_{amb} \leq +60^{\circ}\text{C}$, when button thermostat used

Approved for issue on behalf of the IECEx
Certification Body:

L A Brisk

Position:

Certification Officer

Signature:
(for printed version)

Date:
(for printed version)

2022-05-09

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

Eurofins E&E CML Limited
Unit 1, Newport Business Park
New Port Road
Ellesmere Port, CH65 4LZ
United Kingdom





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Manufacturer: **EXHEAT LIMITED**
Threxton Road Industrial Estate
Watton, Thetford, Norfolk
IP25 6NG
United Kingdom

Manufacturing locations: **EXHEAT LIMITED**
Threxton Road Industrial Estate
Watton, Thetford, Norfolk
IP25 6NG
United Kingdom

EXHEAT INDUSTRIAL LIMITED
EXHEAT LIMITED
Threxton House
Threxton Road Industrial Estate
Watton, Thetford
IP25 6 NG
United Kingdom

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-1:2014-06](#) Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

[IEC 60079-31:2013](#) Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

[GB/CML/ExTR21.0161/00](#)

Quality Assessment Report:

[GB/ITS/QAR21.0009/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Miniature Tank Heater (MTH) is a plug and play immersion heater. The MTH consists of a flameproof enclosure with an M16 cable entry at one end, and an M32 thread adapter at the process fixing end.

Refer to Certificate Annex for full Product Description and Conditions of Manufacture.

SPECIFIC CONDITIONS OF USE: YES as shown below:

Refer to Certificate Annex for Specific Conditions of Use.

Annex:

[IECEX CML 21.0109X Issue 0 Certificate Annex.pdf](#)

Annexe to: IECEx CML 21.0109X Issue 0
Applicant: EXHEAT LIMITED
Apparatus: Miniature Tank Heater (MTH)

Description

The Miniature Tank Heater (MTH) is a plug and play immersion heater. The MTH consists of a flameproof enclosure with an M16 cable entry at one end, and an M32 thread adapter at the process fixing end. The enclosure is made from anodised aluminium, whilst the heating element and threaded process fixing are made from either stainless steel or Incoloy 800 or 825. An over temperature trip device is also incorporated to cut out the process heating in the case of an over temperature fault. The MTH is designed to work within a vessel or tank to heat water, oils and any other medium depending upon its design. The MTH has the option to be used with a button type thermostat or without.

Conditions of Manufacture

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

- i. 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.
- ii. In order to check the fillet weld, each unit shall be subjected to a routine overpressure test in accordance with the requirements of EN 60079-1:2014 clause 16. The test shall be conducted at a pressure of at least 15.45 bar for at least 10 seconds. There shall be no permanent damage or deformation that would invalidate the type of protection observed as a result of the test.
- iii. The maximum set point of the thermal cut out inside the Ex d enclosure must be 75°C.
- iv. The length of the process fixing between the Ex d enclosure and the process fluid shall be changed so that the temperature at the O-ring cannot exceed the COT of the O-rings (200°C) or the designated temperature class.

Specific Conditions of Use

The following conditions relate to safe installation and/or use of the equipment.

- i. In accordance with clause 5.1 of EN 60079-1, the flameproof joints of the equipment as well as of the Ex db parts fitted on the enclosure shall not be repaired or modified. For maintenance and/or repairs and information on the dimensions of the flameproof joints contact the original equipment manufacturer.
- ii. The equipment must be mounted horizontally.
- iii. The heating element of the equipment shall be fully immersed in the process fluid before switching on the power supply and at all times when in operation.



- iv. The process temperature of the fluid that the heater is immersed in must not exceed the temperatures listed in the table below when assigned to the corresponding temperature classes:

Process Fluid Temperature	Temperature Class
195°C	T3
130°C	T4
95°C	T5
80°C	T6