



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx ITS 18.0040X

Issue No: 0

Certificate history:

[Issue No. 0 \(2019-01-31\)](#)

Status: **Current**

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Date of Issue: **2019-01-31**

Applicant: **EXHEAT Ltd**

Thrextton House, Thrextton Road Industrial Estate, Watton, Thetford, Norfolk, IP25 6NG
United Kingdom

Equipment: **LFH and XLFH Fixed Convectional Heater Fan**

Optional accessory:

Type of Protection: **Flameproof, Increased Safety and Constructional Safety**

Marking:

Ex db eb h IIB+H2 T2...T4 Gb

Ex tb IIIC T300°C...T135°C Db

-40°C to +40°C

IECEX ITS 18.0040X

*Approved for issue on behalf of the IECEx
Certification Body:*

P Moss

Position:

Certification Officer

*Signature:
(for printed version)*

Date:

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 the [Official IECEx Website](#).

Certificate issued by:

Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SA
United Kingdom



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Manufacturer:

EXHEAT Ltd

Thrextton House, Thrextton Road Industrial Estate, Watton, Thetford, Norfolk, IP25 6NG
United Kingdom

Additional Manufacturing location(s):

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 apparatus 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 Edition:7.0 | Explosive atmospheres - Part 0: Equipment - General requirements |
| IEC 60079-1 : 2014-06 Edition:7.0 | Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d" |
| IEC 60079-31 : 2013 Edition:2 | Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t" |
| IEC 60079-7 : 2017 Edition:5.1 | Explosive atmospheres - Part 7: Equipment protection by increased safety "e" |
| ISO 80079-36 : 2016 Edition:1.0 | Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements |
| ISO 80079-37 : 2016 Edition:1.0 | Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k" |

*This Certificate **does not** indicate compliance with electrical 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/ITS/ExTR17.0044/00](#)

Quality Assessment Report:

[FR/LCI/QAR06.0005/11](#)



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Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The XLFH / LFH Fan Heater is to be used to raise the temperature within a room or local area, by operating at its rated voltage and duty when required (see Table 1 operating ratings).

The XLFH/ LFH fan heater consists of a stainless steel housing, which protects a motor with impeller, flameproof enclosure, increased safety enclosure and electric heater elements. The overall dimensions of the fan casing are no greater than 550x630x550mm (LFH) and 650x730x650mm (XLFH). The impellers are built up with an epoxy coated cast aluminium hub with Latishield 66-08A G/25-VOKB1 PA66 blades.

Certified Finned tubular type heating elements are positioned in the air flow and are energised only when the motor is in operation.

The XLFH / LFH fan heater is electrically rated up to 40000W, 690VAC, 4 wire Poly-phase & 277VAC 2 wire single Phase. The equipment has a balance grade of BV3 and is designed to operate in an ambient temperature range of -40°C to +40°C.

Table 1

XLFH & LFH Fan Heater Range

| The Heater Range | LFH-T2 | | |
|-----------------------------|---|-------------|-------------|
| | Up to 690V | 30 kW max | |
| | XLFH-T2 | | |
| | Up to 690V | 40 kW max | |
| | LFH -T3 | | |
| | Up to 690V | 18 kW max | |
| | LFH -T4 | | |
| | Up to 690V | 10.8 kW max | |
| | XLFH -T3 | | |
| | Up to 690V | 24 kW max | |
| | XLFH -T4 | | |
| | Up to 690V | 14.5 kW max | |
| | XLFH with EXHEAT Advanced Controls | | |
| | Up to 690V | 40kW | (T3) |
| | Up to 690V | 24kW | (T4) |
| Performance Data LFH | | 50Hz | 60Hz |



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| | | |
|------------------------------|-------------|-------------|
| Air Flow | 2120 m/hr | 2240 m/hr |
| Face Air Velocity | 6m/s | 6.3m/s |
| Fan Speed | 1380 rpm | 1460 rpm |
| Motor Rating | 1.1 kW | 1.1 kW |
| Performance Data XLFH | 50Hz | 60Hz |
| Air Flow | 3560 m/hr | 3760 m/hr |
| Face Air Velocity | 7.5m/s | 7.9m/s |
| Fan Speed | 1380 rpm | 1460 rpm |
| Motor Rating | 1.1 kW | 1.1 kW |

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Use only suitably approved Ex db eb IIB+H2 Gb/Ex tb IIIC Db minimum rated cable glands with a minimum ambient range of -40°C to +40°C.
- Yield stress of the fasteners used on the flameproof enclosure shall be ≥ 450 MPa.
- Joints on flameproof enclosure are not to be repaired.

Annex:

[Annex doc for IEC Ex C of C or TR.pdf](#)



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| | | |
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| Annex No. 1 | | |

Routine testing:

- Each Fan heater Ex e enclosure shall be subjected to a dielectric strength test of 1000V + (2xRated Voltage (rms)) applied between Live/Neutral and Case and Element Connections and Case for a period of 60s each. Alternatively, a test shall be carried out at 1.2 time the test voltage, maintained for at least 100ms.
Results must be recorded.
- Line bushing cable shall be suitably rated to -20°C or better.
- Line bushing cable shall be suitably rated for +50.2°C or better

| Manufacturer's documents | | | |
|---|---------------------|--------------------|---------------------------------|
| Title: | Drawing No.: | Rev. Level: | Date: |
| LFH Fan Heater General Arrangement ATEX & IECEx Certification Drawing | 2004-97-01 | 1 | 20/06/18 |
| LFH Fan Heater Earthing Diagram ATEX & IECEx Certification Drawing | 2004-97-05 | 1 | 20/06/18 |
| LFH Fan Heater Impeller Fitting Diagram ATEX & IECEx Certification Drawing | 2004-97-07 | 1 | 20/06/18 |
| LFH Fan Heater EXE Enclosure Housing ATEX & IECEx Certification Drawing | 2004-97-25 | 1 | 20/06/18 |
| LFH Fan Heater EXD Enclosure Housing ATEX & IECEx Certification Drawing | 2004-97-26 | 1 | 20/06/18 |
| LFH Fan Heater Nameplate Drawing ATEX & IECEx Certification Drawing | 2004-97-42 | 1 | 20/06/18 |
| Installation, Operation & Maintenance Instructions Manual FUH Static Air Warmer | 3099-02-IOM_REV1 | 1 | As Stamped 05 September 2018 |

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