



# 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](http://www.iecex.com)

Certificate No.: IECEx ITS 17.0012X

Issue No: 1

Certificate history:

Issue No. 1 (2018-06-11)

Issue No. 0 (2017-10-13)

Status: **Current**

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Date of Issue: **2018-06-11**

Applicant: **ExHeat Industrial Ltd**  
Thexton House,  
Thexton Road Industrial Estate,  
Walton,  
Thetford,  
Norfolk,  
IP25 6NG  
**United Kingdom**

Equipment: **MFH T3 & MFH T4 Portable Fan Heater**

Optional accessory: *Ducting*

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

Marking:

Ex db eb IIB+H2\* T3...T4 Gb

Ex tb IIIC T200°C...T135°C Db IP65

-40°C ≤ Ta ≤ +40°C

\*Can be marked IIB only

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](http://www.iecex.com).

Certificate issued by:

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





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Certificate No: IECEX ITS 17.0012X Issue No: 1

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Manufacturer: **ExHeat Industrial Ltd**  
Thexton House,  
Thexton Road Industrial Estate,  
Walton,  
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:

<b>IEC 60079-0 : 2011</b> Edition:6.0	Explosive atmospheres - Part 0: General requirements
<b>IEC 60079-1 : 2014-06</b> Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2013</b> Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
<b>IEC 60079-7 : 2015</b> Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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/ExTR16.0053/00](#)

[GB/ITS/ExTR16.0053/01](#)

[GB/ITS/ExTR16.0053/02](#)

#### Quality Assessment Report:

[FR/LCI/QAR06.0005/10](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The MFH Portable 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 for operating ratings in Appendix).

The MFH portable fan heater consists of a polymer outer housing, manufactured from either Durafide 2130A1 PPS 30% or Latishield 66-08A G/25-VOKB1, 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 550 x 500x 500mm. 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 MFH portable fan heater is electrically rated up to 6000W, 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.

The MFH portable fan heater has the option to include their multipurpose enclosure, which is covered by certificate IECEx ITS 17.0025X.

Non-Electrical assessment completed for the MFH Portable Fan Heater does not cover ISO 80079-36 or ISO 80079-37.

### 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  $\geq 450$ MPa.
- Joints on flameproof enclosure are not to be repaired.
- Line bushing cable shall be suitably rated to -40°C or better.
- Line bushing cable shall be suitably rated for +50.2°C or better



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

Issue 01 -

Variation to remove limit of 32A from the equipment description. This has no effect on the technical aspect of the certification due to the thermal rise tests being conducted using the maximum power range.

No change to controlled documents.

Added 2 Specific Conditions of Use which were missing off Issue 00.

**Annex:**

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



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<b>Certificate No:</b>	<b>IECEX ITS 17.0012X</b>	<b>Issue No. 0</b>
<b>Annex No. 1</b>		

## 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 times the test voltage, maintained for at least 100ms.  
Results must be recorded.

<b>Manufacturer's documents</b>			
Title:	Drawing No.:	Rev. Level:	Date:
MFH Portable Fan Heater General Arrangement ATEX & IECEx Certification Drawing	2004-99-01	2	21/06/17
MFH Portable Fan Heater Earthing Diagram ATEX & IECEx Certification Drawing	2004-99-05	2	21/06/17
MFH Portable Fan Heater Connection Data	2004-99-06	2	21/06/17
MFH Portable Fan Heater Impeller Fitting Diagram ATEX & IECEx Certification Drawing	2004-99-07	2	21/06/17
MFH Portable Fan Heater EXD Enclosure Housing ATEX & IECEx Certification Drawing	2004-99-24	2	21/06/17
MFH Portable Fan Heater EXE Enclosure Housing ATEX & IECEx Certification Drawing	2004-99-25	2	21/06/17
MFH Portable Fan Heater EXD Enclosure Housing ATEX Certification Drawing	2004-99-26	2	21/06/17
MFH Portable Fan Heater Nameplate Drawing ATEX & IECEx Certification Drawing	2004-99-42	2	21/06/17
Installation, Operation and Maintenance Manual	2004-99-IOM	2	21/06/17

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<b>Certificate No:</b>	<b>IECEX ITS 17.0012X</b>	<b>Issue No. 0</b>
<b>Annex No. 1</b>		

Table 1 – Operating Parameters

Table 1			
MFH Portable Fan Heater Range			
The Heater Range	Temperature Classification		
	T4		T3
	Voltage	Duty	Voltage Duty
	110	2.5kW	220
	220	2.75kW	240
	240		380
	380		415
	415		5.5kW
	120	3kW	230
	230		254
	254		277
	277		400
	400		440
	440		480
	480		6kW
	600	3.7kW	600
	690		690
Performance Data		50 Hz	60 Hz
	Air Flow	1050 m <sup>2</sup> /hr	1260 m <sup>2</sup> /hr
	Face Air Velocity	3.6 m/s	4.3 m/s
	Fan Speed	1380 rpm	1460 rpm
	Motor Rating	0.09 kW	0.09 kW

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