

# EU-Type Examination Certificate



1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**
3. **EU-Type Examination Certificate Number: ITS17ATEX101743X Issue 01**
4. **Product:** MFH Portable Fan Heater
5. **Manufacturer:** ExHeat Industrial Ltd
6. **Address:** Thexton House, Thexton Road Industrial Estate, Watton, Thetford, Norfolk, IP25 6NG. UK.
7. This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council dated 26 February 2014, certifies that the 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 confidential Intertek Report Ref 102594083CHE-008 dated April 2017, 102594083CHE-009 dated March 2017, 103116115CHE-002 dated September 2017 and 103116115CHE-001 dated October 2017.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2011+A11:2013, EN 60079-1:2014, EN 60079-7:2015, EN 60079-31:2014, EN 80079-36:2016, EN 80079-37:2016, EN 14986:2007 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign "X" is placed after the certificate number, it indicates that the product is subject to Specific Conditions of Safe Use specified in the Schedule to this certificate.
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 the product shall include the following:



II 2 G Ex h Ex db eb IIB+H2\* T3...T4 Gb  
II 2 D Ex tb IIIC T200°C...T135°C Db IP65  
-40°C ≤ Ta ≤ +40°C

\*Can also be marked IIB only.

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**P Moss**  
Certification Officer  
13 October 2017



## SCHEDULE

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#### 13. Description of Equipment or Protective System

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).

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 500 x 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 and up to 32A max for the range. The equipment has a balance grade of BV3 and is designed to operate in an ambient temperature range of -40°C to +40°C.

MFH Portable Fan Heater Range				
The Heater Range	Temperature Classification			
	T4		T3	
	Voltage	Duty	Voltage	Duty
110	2.75kW	2.5kW	220	5.5kW
220				
240				
380				
415				
120	3kW	3kW	230	6kW
230				
254				
277				
400				
440				
480				
600	3.7kW	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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### 14. Report Number

Intertek Report Ref 102594083CHE-008 dated April 2017, 102594083CHE-009 dated March, 103116115CHE-002 dated September 2017 and 103116115CHE-001 dated October 2017

### 15. Special Conditions of Certification

#### (a). Specific Conditions of Safe Use

- 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.

#### (b). Conditions of Manufacture

- 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 shall be recorded.
- 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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### 16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref: 102594083CHE-008 dated April 2017, 102594083CHE-009 dated March 2017 and 102594083CHE-008 dated April 2017, 102594083CHE-009 dated March 2017, 103116115CHE-002 dated September 2017 and 103116115CHE-001 dated October 2017.

### 17. Drawings and Documents

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

\* Denotes the drawings which have changed as part of this certificate issue.

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### 18. **Details of Certificate Change Issue 01**

To permit:

The use of ExHeat Industrials Ltd certified "Ex db" multipurpose enclosure on the MFH Portable Fan Heater covered by certificate number ITS17ATEX101944X; to update drawings to include the use of the "Ex d" multipurpose enclosure and also to include the option for ExHeat to supply IIB only rated MFH Portable Fan Heaters.

Drawing numbers have also been amended.

#### **Report Number**

Intertek Report Ref: 103116115CHE-001 Dated October 2017

This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification

This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.