EU TYPE-EXAMINATION CERTIFICATE

1. **EU type-examination Certificate (Module B)**

2. **Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)**

3. **EU type examination certificate Nr** **ITS10ATEX36956X R.0**

4. **Product:** VFL-Ex, VTL-Ex & VRA-Ex and VFL2-Ex, VTL2-Ex & VRA2-Ex Electrical Duct Heaters

5. **Manufacturer:** VEAB Heat Tech AB **Applicant:** VEAB Heat Tech AB

6. **Address:** Stattenavägen 50, SE-28133 Hässleholm, Sweden **Address:** Stattenavägen 50, SE-28133 Hässleholm, Sweden

7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.

8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system intended for use in potentially explosive atmosphere, given in Annex II of the Directive.

   The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. 09041188A1 dated January 2012, 101933188MAN-001 dated January 2016, G102599932 dated June 2016 and 104695834CHE-001 dated 14 September 2021.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN IEC 60079-0:2018 and EN IEC 60079-7:2015+A1:2018 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 Special Conditions for 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 db eb mb IIC T3 Gb
Tamb: -20°C ≤ Ta ≤ +40°C (VFL-Ex & VTL-Ex and VRA-Ex)
Tamb: -50°C ≤ Ta ≤ +40°C (VFL2-Ex, VTL2-Ex and VRA2-Ex)

Certificate issue date

18th October 2021

Mark Newman
Certification Officer
Intertek Italia S.p.A. (NB 2575)

PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number.

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.

SCHEDULE

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13. **DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM**

The VFL-Ex, VTL-Ex & VRA-Ex and VFL2-Ex, VTL2-Ex & VRA2-Ex enclosures consist of a hinged enclosure and duct which varies from KB = 200mm, KH = 200mm, KD = 270mm to KB = 3000mm, KD = 2000mm. The enclosure is manufactured from stainless steel and is used to house suitably certified Ex e terminals and Ex d temperature control, anti-condensation heater including thermostat. In addition, the heater elements are partly housed inside the enclosure and electrical connections are made here.

Their elements protrude through the enclosure wall into the air flow.
Both internal and external earthing is provided.

“Ex db” and “Ex mb” are included in the coding as the equipment utilises “Ex db” and “Ex mb” certified parts.

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

SCHEDULE

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14. **DRAWINGS AND DOCUMENTS**

TITLE	DOCUMENT Nr	LEVEL	DATE
Heater Ex Type Lable layout	55323	10	2021-06-23
Duct heater VTL2-Ex General drawing	58208	3	2021-07-05
Duct heater VRA2-Ex General drawing	58207	3	2021-07-05
Duct heater VFL2-Ex General drawing	58206	3	2021-07-05
Duct heater Ex Junction box with Silicone rubber Subassembly drawing	57944	4	2021-07-05
Duct heater Ex Junction box with hinge general drawing	55910	1	2015-08-28
Duct heater VTL-Ex 0359 CE Ex II 2 G Ex de IIC T3 Gb General drawing	58218	1	2015-09-01
Duct heater VRA-Ex 0359 CE Ex II 2 G Ex de IIC T3 Gb General drawing	58217	1	2015-09-01
Duct heater VFL-Ex 0359 CE Ex II 2 G Ex de IIC T3 Gb General drawing	55902	4	2014-11-14
EX heater Wiring example	54134	6	160516
Dust heater ATEX approved Electrical connection heating element	54299	4	2021-06-28
Duct Heater VTL-Ex 0359 CE Ex II 2 G Ex de IIC T3 Gb General drawing	54742	7	2014-09-19
Duct Heater VRA-Ex 0359 CE Ex II 2 G Ex ed IIC T3 Gb General drawing	54743	7	2014-09-19
Duct Heater Ex Junction Box General drawing	55006	4	2011-12-19
Duct Heater Ex Sealing profile industrilas P/N 427051	55223	1	111017
Warning Lable “Do not open when energized”	58751	-	2016-07-15
Duct Heater EX placing of temperature controller Bulb	55689	3	210312
Duct heating EX resistance Heat elements (Ω) at 20C	55478	1	2012-01-25
INSTALLATION, OPERATION AND MAINTENANCE INSTRUCTION ATEX/UKEX approved electrical air heaters for explosive gas atmospheres.	173062-04	-	As Stamped

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

SCHEDULE

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15. **SPECIAL CONDITIONS FOR SAFE USE**

- All power supplies must be fed via an interlock as indicated in the wiring diagrams of the manual.
- The duct heater must never be mounted with the enclosure placed at the bottom.
- The maximum surface load on the heating elements is 1.0W/cm.
- The manufacturers operating, and maintenance instructions shall always be followed.
- Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
- No batteries or cells are to be fitted inside the enclosure.
- Heating elements shall be protected from mechanical impact.
- Suitably approved Ex eb IIC Gb -20°C ≤ Ta ≤ +40°C (V**2-Ex -50°C ≤ Ta ≤ +40°C), cable glands and blanking elements only to be used.
- The two over temperature sensors shall be fitted to power step 1. Power step 1 shall be the first to be energized when required for operation.
- Two over temperature sensors shall be fitted in the last row of the air flow direction.
- Unit to be fitted with a current or resistance safety device per clause 5.8.6.2 of EN IEC 60079-7:2015+A1:2018.

16. **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS**

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. 104695834CHE-001 dated 14 September 2021.

17. **ROUTINE (FACTORY) TESTS**

- A routine dielectric strength test in accordance with clause 6.1 of EN IEC 60079-7:2015+A1:2018 shall be carried out between the case and enclosure terminals. All results must be recorded.

18. **DETAILS OF CHANGE**

18th October 2021 (R.0):

- Initial release by Intertek Italia S.p.A. NB 2575 based on the assessment performed September 2021 and, on the certificate, legal ownership transferred from Intertek Testing & Certification Ltd. (NB 0359); the same issued original certificate number is used.
- Update to latest harmonized standards; EN 60079-0:2012+A11:2013 to EN IEC 60079-0:2018 and EN 60079-7:2015 to EN IEC 60079-7:2015+A1:2018.
- Addition of UKEX based off existing ATEX certification.
- Changing the placement of the capillary tube.
- Inclusion of a washer on the element electrical connection tips to comply with the creepage and clearance distances required by EN 60079-7. (Drawing number 54299 details that the distance is at least 6mm between the live and grounded section).