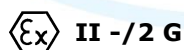


EU-TYPE EXAMINATION CERTIFICATE

- [2] EQUIPMENT OR PROTECTIVE SYSTEM INTENDED FOR USE IN POTENTIALLY EXPLOSIVE ATMOSPHERES DIRECTIVE 2014/34/EU
- [3] EU-Type Examination Certificate Number: **Presafe 17 ATEX 9447X** **Issue 3**
- [4] Product: **TORREXX Vaporizer**
- [5] Manufacturer: **Algas-SDI International LLC**
- [6] Address: **151 South Michigan Street
Seattle, WA 98108**
- [7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] DNV GL Presafe AS, notified body number 2460, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this 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 reports listed in section 16.
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012/A11:2013, EN 60079-1:2014, EN IEC 60079-7:2015/A1:2018, EN 60079-18:2015.
- [10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of 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 mb IIB T2 Gb, Tamb -20°C to +60°C

Ex db mb IIA T2 Gb, Tamb -20°C to +60°C

Ex db eb mb IIA T2 Gb, Tamb -20°C to +60°C

Date of issue:
2021-01-20



Bjørn Spongsveen
For DNV GL Presafe AS
The Certificate has been digitally signed.
See www.dnvgl.com/digitalsignatures for info



This certificate may only be reproduced in its entirety and without any change, schedule included.

DNV GL Presafe AS, Veritasveien 3, 1363 Høvik, Norway, Tel +47 67 57 88 00, www.dnvgl.com

[13] **Schedule**[14] **EU-Type Examination Certificate No:** Presafe 17 ATEX 9447X Issue 3[15] **Description of Product**

The TORREXX is vertical electric single core vaporizer is intended for liquefied petroleum gas and ammonia evaporation. The heater casing made from aluminium includes process (pressure) vessel for process fluid evaporation and box with electrical heater which are welded together and form the flameproof enclosure. Ex certified magnetic valve, cable glands, thread adapters and additional junction box with union for regulation of the liquefied gas flow is evaluated as parts of the assembly. The process vessel is coated with non-conductive material.

The inside of the pressure vessel considered as (process) non-hazardous area.

Alternative versions include an additional Ex certified flameproof enclosure assembled (see picture 2 below).

Equipment is delivering with one free threaded hole intended for appropriate certified cable entry. Use of one Ex certified thread adaptor is allowed. The threaded openings which are not in use are provided closed with appropriate Ex certified blanking elements.

Type identification: TORREXX

Applicable models:

LPG models (gas group IIB): TX25, TX50, TX100, TX160, TX240, TX320,

NH₃ models(gas group IIB): TX19AA, TX38AA, TX75AA, TX120AA, TX180AA, TX240AA

LPG models with additional Ex d box (gas group IIA): TX25S, TX50S, TX100S, TX160S, TX240S, TX320S.

NH₃ models with additional Ex d box (gas group IIA): TX19SA, TX38SA, TX75SA, TX120SA, TX180SA, TX240SA.

Electrical data and principal characteristics:

Supply voltage: 120–480V AC 50/60Hz

Supply current: 10-60 A

Power: 2.9-39.4 kW

Ambient temperature:

-20°C to +60°C

Routine tests

Each enclosure must be submitted to routine overpressure test of 11 bar according to Cl. 16 of EN 60079-1:2014.

Each additional flameproof enclosure must be submitted to routine overpressure test of 13.4 bar according to Cl. 16 of EN 60079-1:2014.

[16] **Report No.:** SC182906
Project No.: PRJN-182906-2020-PA-NOR

[17] **Specific Conditions of Use**

"X" - The flameproof joints not intended to be repaired.

"X" - Ambient temperature: -20°C to +60°C

- “X” – Minimum yield stress of the fasteners (screws) used for enclosure is 646 Mpa.
- “X” – The instruction indicates all the necessary information to ensure the installation and use minimize the risk from electrostatic discharge.
- “X” –The cable glands provided are suitable only for fixed applications and the cable must be effectively clamped and cleated to prevent pulling and twisting.

[18] **Essential Health and Safety Requirements**

Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

[19] **Drawings and documents**

| Number | Title | Rev. | Date |
|-----------|------------------------|------|------------|
| 5001-2025 | TX cert.dwg ATEX/IECEX | F | 2020-08-04 |

[20] **Certificate History**

| Issue | Description | Issue date | Report no. |
|-------|--|------------|-------------|
| 0 | Original issue | 2017-12-22 | D0002575 |
| 1 | Ambient temperature range extended (-20°C to +60°C) | 2018-09-28 | D0002575/01 |
| 2 | Alternative solenoid valve with union and additional junction box included as part of the product. | 2020-04-23 | SC182906/02 |
| 3 | Alternative configuration introduced (with assembled additional flameproof enclosure and accessories). | 2021-01-20 | SC182906/03 |

END OF CERTIFICATE