

EC-TYPE EXAMINATION CERTIFICATE



[1]

[2]

**Equipment or Protective System intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

[3]

EC-Type Examination Certificate Number: **DEMKO 12 ATEX 1203758X Rev. 0**

[4]

Equipment or Protective System: **LPG Vaporizer**

[5]

Manufacturer: **Algas-SDI International LLC**

[6]

Address: **151 S. Michigan Street, Seattle, WA 98108 USA**

[7]

This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S, notified body number 0539 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. **12NK03758**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2009

EN 60079-1:2007

[10]

If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11]

This EC-Type examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by the certificate.

[12]

The marking of the equipment or protective system shall include the following:

 **II 2 G Ex d IIA T3 Gb**

Certification Manager

Jan-Erik Storgaard

Date of issue: 2012-10-26

Notified Body

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Schedule
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Report: 12NK03758

[15]

Description of Equipment or protective system

This device is a LPG Vaporizer and is intended for use in conjunction with an aboveground LP-Gas storage container for converting liquefied petroleum to vapor by means of an electrical heater/heat exchanger. The LPG Vaporizer is to be mounted on a wall next to multiple 100 lb or 50 kg LPG bottles. The device is constructed of three different parts consisting of a capacity control valve, flameproof heater with integral heat exchanger, and a plastic shell. This certification covers the flameproof heater and plastic shell. The capacity control valve is mechanical in function and has no electrical parts. Heat is provided by a Positive Temperature Coefficient (PTC) heater assembly. The heat exchanger is steel tubing and is cast into the walls of the flameproof enclosure.

Nomenclature:

Z	20	P	UL/CE	V	1	S
I	II	III	IV	V	VI	VII

I- Series

Z- Z Series

II_Capacity

- 14 - 14 Kg/hr
- 17 - 17 Kg/hr
- 20 - 20 Kg/hr
- 23 - 23 Kg/hr
- 26 - 26 Kg/hr
- 28 - 28 Kg/hr
- 31 - 31 Kg/hr
- 34 - 34 Kg/hr
- 37 - 37 Kg/hr
- 40 - 40 Kg/hr
- 50 - 50 Kg/hr

III-Gas Type

- P – Propane
- L – LPG (liquefied propane gas)
- S – 50/50 LPG (Liquefied propane gas)

IV- Approvals

UL/CE – UL, cUL, CE, ATEX, IECEx

V- Voltage Rating

V – 100-240V AC

VI- Phase

1 – 1 Phase

VII- Condition

S – Factory Seal

Temperature range

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range

-20 °C to +40 °C

Temperature class

T3

Electrical data

100-240 V, 50/60 Hz, 1.89-5.72 kW

Installation instructions

Each unit is provided with installation instructions indicating the following information.

- CAUTION: To prevent Ignition of Hazardous Atmosphere: Any repairs internal to flameproof enclosure must be made by the manufacturer. Return to manufacturer for service.
- Keep enclosure tightly Torqued to: 40,6 NM (30 Ft.lbs.) while in service and disconnect power before installing or removing unit for service.
- A metal terminal box, ATEX certified for protection type 'd' or 'e' suitable for making necessary wiring connections. Electrical wiring must be rated for -20°C (-4°F) +1 30°C (+266°F).
WARNING – Potential Electrostatic Charging Hazard - Clean with damp cloth.
-
- Connect only metal electrical conduit or armoured cable to the sealing fitting
- Do not install vaporizer in corrosive environments or expose to corrosive chemicals
- Only install vaporizer horizontally on a vertical surface

For ambient temperatures below –10 °C and above +40 °C use field wiring suitable for both minimum and maximum ambient temperature.



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[14]

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Mounting instructions

Refer to the Zimmer Electric Vaporizer Manual, Drawing 52690.

Routine tests

Routine tests according to EN 60079-1 cl. 16 are not required, as the enclosures have been successfully tested at four times the reference pressure.

[16]

Report No.

Project Report No.: 12NK03758 (Hazardous Location Testing)

Documents:

Description:

Zimmer LPG Vaporizer Certification Drawing
Operations and Maintenance Manual

Drawing No.:

0901-2002
52690

Rev. Level:

E
-

Date:

2012-09-28
2012-10-17

[17]

Special conditions for safe use:

- Flameproof joints are other than those specified in Table 1 of EN 60079-0. Contact Algas-SDI for joint dimensions.
- Only to be used with propane or LPG (liquefied propane gas)

[18]

Essential Health and Safety Requirements

Concerning ESR this Schedule verifies compliance with the Annex III of ATEX directive only. The manufacturer's Declaration of Conformity declares compliance with other relevant Directives.

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in ANNEX III to Directive 94/9/EC of the European Parliament and the Council of 23 March 1994.

