



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx UL 19.0034X** Page 1 of 4 [Certificate history:](#)
Issue 0 (2019-07-10)

Status: **Current** Issue No: 1

Date of Issue: 2020-12-14

Applicant: **Algas-SDI**
151 South Michigan St.
Seattle, WA, 98108
United States of America

Equipment: **ZIMMER LPG or Propane Vaporizer, Model Z**

Optional accessory:

Type of Protection: **Flameproof "db"**

Marking: Ex db IIA T3 Gb
-20°C to +50°C

Approved for issue on behalf of the IECEx
Certification Body:

Katy A. Holdredge

Position:

Senior Staff Engineer

Signature:
(for printed version)

Date:

2020-12-14

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 www.iecex.com or use of this QR Code.



Certificate issued by:

UL LLC
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





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Manufacturer: **Algas-SDI**
151 South Michigan St.
Seattle, WA, 98108
United States of America

Additional
manufacturing
locations:

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 equipment 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

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

This Certificate **does not** indicate compliance with 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 Reports:

[US/UL/ExTR19.0039/00](#)

[US/UL/ExTR19.0039/01](#)

Quality Assessment Report:

[NO/PRE/QAR17.0007/01](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The ZIMMER Vaporizer is a dry electric LPG or Propane Vaporizer intended for use in conjunction with a gas storage container for converting liquified petroleum to vapor by means of an electrical heater/heat exchanger. The device is constructed of three different parts consisting of a capacity control valve, flameproof heater with an integral heat exchanger, and an optional aluminum shell. This certification covers the flameproof enclosure and aluminum shell. The capacity control valve is purely mechanical in function and has no electrical parts. Heat is provided by a Positive Temperature Coefficient (PTC) heater assembly. The heat exchanger is integrally extruded into the walls of the flameproof enclosure.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- Flameproof joints are other than those specified in IEC 60079-1 Cl. 5.1. Installation Instructions state "Any repairs internal to the flameproof enclosure must be made by the manufacturer or its authorized service center."
- Enclosure fasteners must be bolts of M10x1.5x50 mm, Class 8.8, min. yield strength 640 MPa.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Revised schedule drawing.

Annex:

[Annex to IECEx UL 19.0034X Issue 1.pdf](#)



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TYPE DESIGNATION

Nomenclature:

ZAAB-V1-R3

Z – Z Series

AA – Gas Capacity

25 – 25 kg/h

40 – 40 kg/h

50 – 50 kg/h

100 – 100 kg/h

150 – 150 kg/h

B – Gas Type

P – Propane

L – LPG (Liquified Petroleum Gas)

S – LPG (50/50)

V1 – Voltage Configuration

V1 – Standard Configuration

R3 – Revision

R3 – Third Generation

PARAMETERS RELATING TO THE SAFETY

Gas Capacity 25, 40, 50: 1 phase, 100-277 V AC, 50/60 Hz, 3.3 5.8 kW

Gas Capacity 100, 150: 3 phase: 240-480 V AC, 50/60 Hz, 11.5 17.3 kW; 1 phase: 100-277 V AC, 50/60 Hz



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MARKING

Marking has to be readable and indelible; it has to include the following indications:

 <p>1818 Middleburg Street Spartanburg, SC, 29308 USA www.algas-sdi.com</p> <p>DEMKO 19 ATEX 2083X II 2 G Ex db IIA T3 Gb IECEx UL19.0034X Ex db IIA T3 Gb</p> <p>LPG VAPORIZER FOR HAZARDOUS LOCATIONS 2P/AS CLASS I, DIV. 1, GROUP D T3</p>	MODEL:	RATED CAPACITY:	<p>CAUTION: TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES:</p> <ol style="list-style-type: none"> THIS EQUIPMENT SHALL BE INSTALLED SO THAT THE FLAME JOINTS ARE NOT WITHIN 10MM OF A SOLID OBJECT THAT IS NOT PART OF THIS EQUIPMENT TO REDUCE RISK OF FIRE OR EXPLOSION, DO NOT INSTALL WHERE THE MARKED OPERATING TEMPERATURE EXCEEDS THE IGNITION TEMPERATURE OF THE HAZARDOUS ATMOSPHERE <p>ATTENTION: POUR PRÉVENIR L'ALLUMAGE D'ATMOSPHÈRES DANGEREUSES:</p> <ol style="list-style-type: none"> CET APPAREIL EST INSTALLÉ DE MANIÈRE À CE QUE LE JOINT DE FLAMME NE SOIT PAS DANS UN MAXIMUM DE 10 MM. UN OBJET SOLIDE QUI NE FAIT PAS PARTIE DE CET ÉQUIPEMENT AFIN DE RÉDUIRE LES RISQUES D'INCENDIE OU D'EXPLOSION, NE PAS INSTALLER OÙ LE FONCTIONNEMENT MARGUÉ LA TEMPÉRATURE DÉPASSE LA TEMPÉRATURE D'ALLUMAGE DE L'ATMOSPHÈRE DANGEREUSE <p>WARNING: DO NOT OPEN ENCLOSURE. FACTORY SEALED</p> <p>AVERTISSEMENT: NE PAS OUVRIR LE BOÎTIER SCELLÉ EN USINE</p>
	SERIAL NO:	YEAR BUILT:	
	FOR USE WITH LPG/PROPANE		
	HEAT EXCHANGER AREA: 1,303CM ² (202IN ²) VOLUME 574CM ³ (35IN ³)		
	MAWP: 17.24 BARG AT 149°C (250PSIG AT 300°F)		
	MDMT:-29°C AT 17.24BARG (-20°F AT 250 PSIG)		
	HYDROSTATIC TEST PRESSURE 25.86 BARG (375 PSIG)		
	AMBIENT TEMPERATURE -20°C TO 50°C		
	ELECTRICAL: 100-277 VOLT AC, 1 PHASE, 50/60 Hz, 3.3-5.8kW		
	HORIZONTAL OR VERTICAL WALL MOUNT, USE WIRING ASSEMBLY PROVIDED		
	SEE INSTALLATION INSTRUCTION DOCUMENT		

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	SERIAL NO:	YEAR BUILT:	
	FOR USE WITH LPG/PROPANE		
	HEAT EXCHANGER AREA: 3,606CM ² (559IN ²) VOLUME 1,606CM ³ (98IN ³)		
	MAWP: 17.24 BARG AT 149°C (250PSIG AT 300°F)		
	MDMT:-29°C AT 17.24BARG (-20°F AT 250 PSIG)		
	HYDROSTATIC TEST PRESSURE 25.86 BARG (375 PSIG)		
	AMBIENT TEMPERATURE -20°C TO 50°C		
	ELECTRICAL: 100-277 VOLT AC, 1 PHASE, 50/60 Hz, 11.5-17.3kW		
	240-480 AC, 3 PHASE, 4 WIRE WYE,50/60Hz		
	HORIZONTAL OR VERTICAL WALL MOUNT, USE WIRING ASSEMBLY PROVIDED		
	SEE INSTALLATION INSTRUCTION DOCUMENT		