

Rea No: 1999/027771/07

(Pty) Ltd

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Issue: 0

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### **GOVERNMENT APPROVED TEST LABORATORY**

IN TERMS OF ARP 0108: "REGULATORY REQUIREMENTS FOR EXPLOSION PROTECTED APPARATUS"

## IA CERTIFICATE

Date Issued: 28 Oct 2019 \*Expiry date: 28 Oct 2022 Page 1 of 3

Ex – Type Examination Certificate

Certificate Number: S-XPL/19.1642 X

Equipment: **ZIMMER LPG or Propane Vaporizer** 

Model / Type: Model Z

Eyona Gas Equipment cc Applicant:

PO Box 36798 Chempet 7442

Manufacturer: Algas-SDI

Serial No: All serial numbers imported between issued- and expire date and all serial

numbers covered by a valid report or acceptable product certification mark.

Supplied by

Eyona Gas Equipment cc Identified by Inspection Authority number

S-XPL/19.1642 X

And as described in the Explolabs file number XPL/20982/19.1642 is hereby certified "Explosion Protected (Refer to clause 1, for Ex Rating)", having been examined and inspected in accordance with the relevant requirements of South African Standards.

SANS 60079-0: 2012 Ed 5

Explosive atmospheres Part 0: Equipment — General requirements IEC 60079-0: 2011 Ed 6

SANS 60079-1: 2015 Ed 5 Explosive atmospheres Part 1: Equipment protection by flameproof

IEC 60079-1: 2014 Ed 7 enclosures "d"

Risk of ignition provided:

iv)

Protection afforded	Equipment Protection Level (EPL) Group	Performance of protection	Conditions of operation	T class or Max Surface Temp (℃)
High	Gb Group II	Suitable for normal operation and frequently occurring disturbances or equipment where faults are normally taken into account	Equipment remains functioning in zones 1 and 2	T3 (200 °C)

This certification indicates compliance with R10.1 of the Mines Health and Safety Act and/or EMR 9(2) of the Occupational Health and Safety Act, provided that the apparatus is used as relevant in accordance with:

SANS 10086 and IEC/SANS 61241-14 requirements as applicable; Any conditions mentioned in the above report;

Any relevant requirements and codes of practice enforced in terms of the Mine Health and Safety Act or Occupational Health and Safety Act; 🚾

Any restrictions and conditions enforced by the Chief Inspector of Mines or the Principal Inspector or the Chief Inspector: Occupational Health and Safety.

A revision certificate replaces all previous version of the certificate.

\* - Only covers equipment Imported between the "Issued" and "Expire" dates.

If and when your QAN (Quality Assurance Notification) Certificate for your equipment manufacturer expires during the valid period of the IA Certification (issued for your equipment) and a new certificate is not submitted the existing IA Certification will then be cancelled. It is thus the client's responsibility to always submit the updated and valid QAN certificate(s) to Explolabs (Pty) Ltd

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## ANNEX TO CERTIFICATE NO S-XPL/19.1642 X

The marking of the ZIMMER LPG or Propane Vaporizer shall include the following: Ex db IIA T3 Gb -20°C to +50°C

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.

#### TYPE DESIGNATION

Nomenclature: ZAAB-V1-R3

**GENERAL** 

1.

Ζ Z Series

AA Gas Capacity

> 25 - 25 kg/h40 - 40 kg/h50 - 50 kg/h

100 - 100 kg/h150 - 150 kg/h

В 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

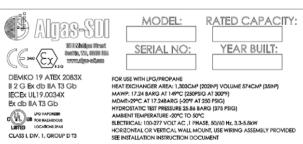
Gas Capacity 25, 40, 50: 1 phase, 100-277 V AC, 50/60 Hz, 3.3 5.8 kW

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

## **MARKING**

CLASS I. DIV. 1. GROUP D T3

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



CAUTION: TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES

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

PAGE 2 OF 3

TO REDUCE RISK OF FIRE OR EXPLOSION, DO NOT INSTALL WHERE THE MARKED OPERATING TEMPERATURE EXCEEDS THE IGNITION TEMPERATURE OF THE HAZARDOUS ATMOSPHERE

TEMPERATURE EXCEEDS THE KONTION TEMPERATURE OF THE HAZARDOUS ATMC
ATTEMION POR PRÉVENIR L'ALLIMAGE D'ATMOSPHÈRIS DANGERIUSS:

1. CET APPAREIL EST INSTALLÉ DE MANIÈRE À CE QUE LE JOINT DE PLAMME NE
SOIT PAS DANS UN MAXIMUM DE 10 MM. UN OBJET SOUDE QUI NE PAIT PAS
PARTIE DE CET GUIPPEMENT

2. AFIN DE RÉDUIRE LES RISQUES D'INCENDIE OU D'EXPLOSION, NE PAS INSTALLER

O LE FONCTIONNEMENT MARQUÉ LA TEMPÉRATURE DÉPASSE

LA TEMPÉRATURE D'ALLUMAGE DE L'ATMOSPHÈRE DANGEREUSE WARNING: DO NOT OPEN ENCLOSURE, FACTORY SEALED AVERTISSEMENT: NE PAS OUVRIR LE BOÎTIER SCELLÉ EN USINE

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STATIONAR

RATED CAPACITY:

## ANNEX TO CERTIFICATE NO S-XPL/19.1642 X

180 S Continuen Street Specially, VVA, SHEER USA **DEMKO 19 ATEX 2083X** IECEx UL19.0034X Ex db IIA T3 Gb

CUL US POR HAZARDOUS

CLASS I, DIV. 1, GROUP D T3

YEAR BUILT: SERIAL NO: FOR USE WITH LPG/PROPANE

MODEL:

SEE INSTALLATION INSTRUCTION DOCUMENT

FOR USE WITH LPG/PROPANE
HAT EXCHANGER AREA: 3,00GCM\* (559R\*)\* VOLUME 1,606CM\* (98IR\*)
MAWP: 1724 BARG AT 149\*C (260PSIG AT 300°P)
MAWP: 1724 BARG AT 149\*C (270°FAT 250 PSIG)
HYDROSTATIC TEST PRESSURE 25.86 BARG (375 PSIG)
AMBIENT TEMPERATURE: 20°C TO 50°C
ELECTRICAL: 10°C27 VOLT AC 1, PHASE, 50/40 Hz, 11.5-17.3KW
240-830 AC, 3 PHASE, 4 WIRE WYE.50/40Hz, 11.5-17.3KW
PARPENATURE OVERPTICAL WAIL ACCURT LISE WIPING ASSEALING PROP HORIZONTAL OR VERTICAL WALL MOUNT, USE WIRING ASSEMBLY PROVIDED AVERTISSEMENT: NE PAS OUVRIR LE BOÎTIER SCELLÉ EN USINE

CAUTION: TO PREVENT IGNITION OF HAZARDOUS ATMOSPHERES

CAUTION: TO PREVENT IONITION OF HAZARDOUS ATMOSPHERES:

1. THIS EQUIPMENT SHALL BE INSTALLED SO THAT THE FLAME JOINTS ARE NOT WITHIN 10MM OF

A SOULD OBJECT THAT IS NOT PART OF THIS EQUIPMENT

2. TO REDUCE RISK OF FIRE OR EMPLOSION, DO NOT INSTALL WHERE THE MARKED OPERATING

TEMPREATURE EXCRESS THE IONITION TEMPREATURE OF THE HAZARDOUS ATMOSPHERE

ATTENTION: POUR PRÉVENIR L'ALLUMAGE D'ATMOSPHÈRES DANGEREUSES: 1. CET APPARBL 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 EQUIPEMENT 2. AFIN DE RÉDUIRE LES RISQUES D'INCENDIE OU D'EXPLOSION, NE PAS INSTALLER

O LE FONCTIONNEMENT MARQUÉ LA TEMPÉRATURE DÉPASSE LA TEMPÉRATURE D'ALLUMAGE DE L'ATMOSPHÈRE DANGEREUSE WARNING: DO NOT OPEN ENCLOSURE. FACTORY SEALED

Based on the following documentation: IECEx UL 19.0034X Issue No.: 0

#### 2. INSTALLATION INSTRUCTIONS

It is the manufacturer's responsibility to supply installation instructions with each unit offered for sale as required by IEC/SANS 60079-0 Clause 30.

#### SPECIAL CONDITIONS FOR SAFE USE (denoted by "X" after certificate number) 3.

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.

# **SCHEDULE OF LIMITATIONS** (denoted by "U" after certificate number)

None.

#### CONDITIONS OF CERTIFICATION 5.

All production units must be covered by a QAN (Quality Assurance Notification), Product Mark Scheme or batch evaluation.

### **MARKING**

The following (or similar) information have to be clearly and permanently marked on all units:

: Eyona Gas Equipment cc Supplier

Manufacturer : Algas-SDI

Equipment : ZIMMER LPG or Propane Vaporizer

Model/Type : Model Z Serial No.

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

IA Certificate No : S-XPL/19.1642 X

## **Responsible Testing Officer:**

P van Staden Technical Specialist

EXPLOLABS EXPLOSION PREVENTION SERVICES

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