

(1) EU-TYPE EXAMINATION CERTIFICATE



- (2) Equipment and Protective Systems intended for use in Potentially Explosive Atmosphere - **Directive 2014/34/EU**
- (3) EU-Type Examination Certificate Number

TÜV 19 ATEX 8331 X

Issue: 00

- (4) Equipment: **Zonerite Range of Compressors**
- (5) Manufacturer: **Oceania Engineering Services**
- (6) Address: **Unit 1 / 46 Mullingar Way
Landsdale, WA, 6065
Australia**

- (7) This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- (8) The TÜV Rheinland Zertifizierungsstelle für Explosionsschutz of TÜV Rheinland Industrie Service GmbH, Notified Body No. 0035 in accordance with Article 21 of the Council Directive 2014/34/EU of 26th February 2014, certifies this product which has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmosphere, given in Annex II to the Directive. The examination and test results are recorded in the confidential report 557/Ex8331.00/19
- (9) Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule of this certificate, has been assessed by reference to:

EN 60079-0:2012/A11:2013, EN 60079-2:2014/AC:2015 EN 60079-18:2015/A1:2017

- (10) If the sign "X" is placed after the certificate number, it indicates that the equipment 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 specification for construction of the equipment or protective system. It does not cover the process for actual manufacture or supply of the equipment or protective system, for which further requirements of the directive are applicable.
- (12) The marking of the equipment shall include the following:

When installed with two low pressure sensors :

- II 2 G Ex mb pxb IIC T4 Gb
- II 2 G Ex mb pxb IIB+H₂ T4 Gb (Untreated copper piping)

When installed with one low pressure sensor :

- II 2 G Ex mb pzc IIC T4 Gc
- II 2 G Ex mb pzc IIB+H₂ T4 Gc (Untreated copper piping)

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

Cologne, 2019-02-15

Dipl.-Ing. Klaus Peter Graff



This EU-Type Examination Certificate without signature and stamp shall not be valid.

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(13)

Annex

(14)

EU Type Examination Certificate

TÜV 19 ATEX 8331 X

Issue: 00

(15)

Description of equipment

15.1 Equipment and type:

Zonerite Range of Compressors

15.2 Description / Details of Change

General product information

The Zonerite range of compressors are intended for Heating, Ventilation, Air Conditioning and Refrigeration (HVAC&R) applications in explosive gas atmospheres for onshore and offshore installations. Explosive dust atmospheres are not considered.

The Zonerite range of compressors shall only use refrigerant types as nominated by the OEM for their specific compressor selection, with the overriding note that the refrigerant shall be inert and non-flammable and therefore in itself not present an ignition risk

Compressors

The Zonerite range of compressors are hermetic and semi-hermetic compressors for HVAC&R applications. The compressor casing houses the motor, winding and all rotating / moving parts of the compressor.

The motor terminal box contains the electrical connections for the motor terminals. The compressors are delivered to the customer pre-terminated at the compressor end and fitted with a flying lead for field connection.

Due to the nature of the applied protection method, once delivered, it is not possible to open the terminal enclosure of the Zonerite range of compressors.

A compressor draws refrigerant vapour from the evaporator and delivers it to the condenser. The operating medium of the compressors is a closed loop mixture of refrigerant and refrigerant oil under pressure within the compressor casing. The

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driving motor is sealed inside the compressor housing, with the refrigerant acting to cool the motor windings.

Hermetically sealed compressors ("hermetic compressor") are compressors which are manufactured in a one-piece welded steel casing that is never intended to be opened, ie non-field serviceable. Failure of any part within the compressor will require the entire compressor be replaced.

Semi-hermetically sealed compressors ("semi-hermetic compressor") are compressors which can be opened for field service of some internal parts when de-energised and evacuated of refrigerant, however remain hermetically sealed during normal operation.

Hermetically and semi-hermetically sealed compressor casings are, by design, IP66 minimum. During normal operation and all expected malfunctions, the compressor casing will remain under pressure.

Type code:

Not relevant

Technical Data

Up to 690Vac

(16) Test-Report No. 557/Ex8331.00/19

(17) Special Conditions for safe use

1. The externally installed protection devices shall not be easily defeated and shall be suitably protected using one or more methods as listed in clause 1 of EN60079-0:2012/A11:2013.
2. The thermal protection device of the discharge gas is to be set at maximum of 125°C. The tolerance of the protection system is not to exceed $\pm 4.4^{\circ}\text{K}$. If the discharge gas thermal protection device is fitted externally it is to be located along the straight or bended pipe a maximum of 120mm from the compressor shell.
3. Low pressure protective devices will be fitted and set to no less than 20kPa. A minimum of two low pressure sensors or switches shall be installed when protected by level of protection 'pxb' and one for the when the level of protection is 'pzc'. The devices shall be capable of being reset only by the use of a tool or a key.

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4. An over pressure protective device shall be fitted to ensure that the system cannot achieve a pressure high enough to damage any part of the refrigeration circuit. Refer to the user manual for details regarding the required settings.
5. The cable is to be terminated outside of the hazardous zone or shall be terminated using a method of protection listed in clause 1 of EN60079-0:2012/A11:2013.
6. The compressor is to be installed in a manner that protects it from direct impact damage.
7. Functional tests of the protective devices are required prior to putting the equipment into use.
8. Over-current protection shall be provided for the compressor motor.
9. When installing the compressor in an enclosed space entries are to be fitted with warnings to the effect of "WARNING – THIS ENCLOSURE CONTAINS EQUIPMENT USING INERT GAS, AN ASPHYXIATION HAZARD MAY BE PRESENT."

(18) Basic Safety and Health Requirements

Covered by afore mentioned standard

TÜV Rheinland Zertifizierungsstelle für Explosionsschutz

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