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 LCIE 19.0016X**	Page 1 of 4	Certificate history:
Status:	**Current**	Issue No: 1	Issue 0 (2019-05-10)
Date of Issue:	2025-08-04		
Applicant:	**Fonteck Industries B.V.** Glasblazerstraat 12E 2984 BL, Ridderkerk **Netherlands**		
Equipment:	**Hermetic Refrigeration Compressor - Type: HMRC**		
Optional accessory:			
Type of Protection:	**Ex db px, Ex tb**		
Marking:	Ex db px IIC T4 Gb Ex tb IIIC T130°C Db IP66 IECEx LCIE 19.0016X (See Annex for complete marking)		

Approved for issue on behalf of the IECEx Certification Body: **Julien GAUTHIER**

Position: **Certification Officer**

Signature: (for printed version)

LABORATOIRE CENTRAL DES INDUSTRIES ELECTRIQUES
S.A.S au capital de 15.745.984 €
RCS Nanterre B 408 363 174
33 avenue du Général Leclerc
F - 92266 FONTENAY AUX ROSES

Date: (for printed version) 2025-08-04

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:

Laboratoire Central des Industries Electriques (LCIE)
33 Avenue du General Leclerc
FR-92260 Fontenay-aux-Roses
France

IECEx Certificate of Conformity

Manufacturer: **BoxFonteck B.V.**
Glasblazerstraat 12E
2984 BL, Ridderkerk
Netherlands

Manufacturing locations: **BoxFonteck B.V.**
Glasblazerstraat 12E
2984 BL, Ridderkerk
Netherlands

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 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-2:2014 Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"
Edition:6

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

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 Report:

FR/LCIE/ExTR19.0038/00

Quality Assessment Report:

GB/CSAE/QAR24.0021/00

IECEx Certificate of Conformity

EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Type HMRC hermetic refrigeration compressor is designed to be used in the refrigeration cycle for air conditioning and refrigeration systems.

Type HMRC hermetic refrigeration compressor comprises compressor main body and a terminal box.

The enclosure of the compressor main body is protected by static pressurization.

The enclosure of the terminal box is flameproof and dust protected.

The material for the compressor main body is carbon steel.

The material for the terminal box is stainless steel or carbon steel.

The possible refrigerants for type HMRC hermetic refrigeration compressor are: R134a, R404A, R407A, R407C, R407F, R410A, R448A, R449A, R450A, R452A, R452B, R507A, R513A or R22.

See attachment for more details.

SPECIFIC CONDITIONS OF USE: YES as shown below:
Full Specific Conditions of Use are given in the Annex.

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1:

Update of Quality Assessment Report (LCIE File #27252891).

Annex:

Annex 01 to Certificate IECEx LCIE 19.0016X issue 1.pdf

Annex 01 to Certificate
IECEx LCIE 19.0016X issue 1

MARKING

BoxFonteck B.V.
Address: …
Type: HMRC
Serial number: …
Year of construction: …
Ex db px IIC T4 Gb
Ex tb IIIC T130°C Db IP66

IECEx LCIE 19.0016X

-50°C ≤ T_{amb} ≤ +85°C

Cable heat resistance requirement ≥ 120°C

WARNING –

DO NOT OPEN WHEN ENERGIZED.

DO NOT OPEN WHEN AN EXPLOSIVE ATMOSPHERE MAY BE PRESENT.

THE COMPRESSOR MAIN BODY ENCLOSURE IS PROTECTED BY STATIC PRESSURIZATION.

THE COMPRESSOR MAIN BODY ENCLOSURE SHALL BE FILLED ONLY IN A NON-HAZARDOUS AREA ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.

THE COMPRESSOR MAIN BODY ENCLOSURE CONTAINS INERT GAS AND MAY BE AN ASPHYXIATION HAZARD.

THE COMPRESSOR MAIN BODY ENCLOSURE ALSO CONTAINS A FLAMMABLE SUBSTANCE THAY MAY BE WITHIN THE FLAMMABLE LIMITS WHEN EXPOSED TO AIR.

RANGE DETAILS

Type identification:

HMRC -	S	L1	057	E	60	CS
Product type	Compressor type	Flameproof terminal box size	Max power consumption	Voltage range	Frequency	Flameproof terminal box material

Model reference / Ordering:

Type	Compressor type	Flameproof terminal box size	Max power consumption (kW)			Voltage range (VAC)	Frequency (Hz)	Flameproof terminal box material
			Hundreds	Tens	Ones			
HMRC	S-Scroll Type	L1-Large 1	0	0	0	A-110-115	50-50	SS-Stainless Steel
				1	1			
		L2-Large 2		2	2	B-200-240		
				3	3			
		M1-Medium 1		4	4	C-380-420		
				5	5			
	R-Reciprocating Type	M2-Medium 2			6	D-440-480	60-60	CS-Carbon steel
					7			
		S1-Small 1			8	E-500-575		
					9			
		S2-Small 2						

This Annex is valid only in combination with certificate mentioned above and may only be reproduced in its entirety and without any change.

RATINGS

Voltage:	Max. 575 VAC 50/60 Hz
Power:	Max. 57 kW
Minimum overpressure:	50 Pa
Maximum overpressure for scroll type:	4.9 MPa (R410A) or 3.2MPa
Maximum overpressure for reciprocating type:	3.0 MPa

FULL SPECIFIC CONDITIONS OF USE

- Field repairs of flameproof joints should not be undertaken by the end user. In the event that flameproof joint must be repaired, contact the manufacturer. Repairs of flameproof joints must be made in compliance with the structural specifications in manufacturer's drawings. Repairs must NOT be made on the basis of values specified in tables 3 and 4 of IEC 60079-1 standard.

- Two automatic safety devices shall be provided to operate when the overpressure falls below the minimum value. They shall be capable of being reset only by the use of a tool or a key. All safety devices have to be certified.

- The mechanical properties of fasteners must meet the requirements in the table below.

Fastener Material	Property Class	Minimum Tensile Strength (MPa)	Minimum Yield Stress (MPa)
Stainless Steel (austenitic)	A2-70	700	450

ROUTINE TESTS

According to clause 16.1 of standard IEC 60079-1, the flameproof terminal box enclosure shall be submitted to an overpressure test for at least 10 seconds.
- The test pressure for flameproof terminal box L1 and L2 is 1.29 MPa.
- The test pressure for flameproof terminal box M1 and M2 is 1.16 MPa.
- The test pressure for flameproof terminal box S1 and S2 is 0.83 MPa.

According to clause 17.1 of standard IEC 60079-2, each safety device shall be submitted to a functional test of the performance of safety devices.

According to clause 17.2 of standard IEC 60079-2, the leakage of protection gas shall be tested for the compressor main body enclosure.

This Annex is valid only in combination with certificate mentioned above and may only be reproduced in its entirety and without any change.