



# 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](http://www.iecex.com)

Certificate No.: **IECEX EPS 21.0044X** Page 1 of 3 [Certificate history:](#)

Status: **Current** Issue No: 0

Date of Issue: **2023-06-28**

Applicant: **Bartec Benke GmbH**  
Borsigstraße 10  
21465 Reinbek  
Germany

Equipment: **Chiller for liquids FKS \*-KWS-\***

Optional accessory:

Type of Protection: **'60079-46', 'h'**

Marking: **Ex 60079-46 IIB+H2 T3/T4 Gb**  
**Ex h IIB+H2 T3/T4 Gb**

Approved for issue on behalf of the IECEx  
Certification Body:

Position:

Signature:  
(for printed version)

Date:  
(for printed version)



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**Bureau Veritas Consumer Products Services Germany GmbH**  
Businesspark A96  
86842 Türkheim  
Germany





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Manufacturer: **Bartec Benke GmbH**  
Borsigstraße 10  
21465 Reinbek  
**Germany**

Manufacturing  
locations: **Bartec Benke GmbH**  
Borsigstraße 10  
21465 Reinbek  
**Germany**

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 60079-0:2017** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0

**IEC 60079-7:2017** Explosive atmospheres - Part 7: Equipment protection by increased safety "e"  
Edition:5.1

**IEC TS  
60079-46:2017** Explosive atmospheres - Part 46: Equipment assemblies  
Edition:1.0

**ISO 80079-36:2016** Explosive atmospheres - Part 36: Non-electrical equipment for explosive atmospheres - Basic methods and requirements  
Edition:1.0

**ISO 80079-37:2016** Explosive atmospheres - Part 37: Non-electrical equipment for explosive atmospheres - Non electrical type of protection constructional safety "c", control of ignition source "b", liquid immersion "k"  
Edition:1.0

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 Report:

**DE/EPS/ExTR21.0045/00**

Quality Assessment Report:

**DE/TUN/QAR12.0009/10**



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## EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The chiller type FKS \*-KWS-\* is intended for the industrial cooling of flammable and non-flammable liquids in potentially hazardous areas of zone 1 and 2 environments.

The refrigerant of the chiller is driven by a reciprocating hermetic compressor with the electric motor being completely encapsulated by the refrigerant cycle. Because the refrigerant circuit is considered hermetically sealed, it does not require standardized ignition protection. Electrical connection to the compressor is made in type of protection "e".

The chiller can be operated indoors and outdoors, given that suitable weather protection exists.

The control unit for the cooler is separately certified and excluded from the scope of this type certification.

Allowed ambient temperatures:

Ta min °C	Ta max °C	FKS 0,5-KWS	FKS 1,4-KWS	FKS 2,4-KWS	FKS 4-KWS	FKS 6-KWS	FKS 10-KWS	
+5	+35	x						Standard
+5	+40		x	x	x	x	x	Standard
+5	+55		x	x	x	x	x	High temperature option
-20	+40		x	x	x	x	x	Low temperature option
-20	+55		x	x	x	x	x	High and low temperature option

## SPECIFIC CONDITIONS OF USE: YES as shown below:

The chiller shall only be operated with all safety covers closed.

Simple apparatus as part of the chiller shall be labeled as such and need to be supplied by a suitable intrinsically safe associated apparatus.

Non-metallic parts of the equipment shall be cleaned with a damp cloth only.

Electric motors need to be protected by a suitably certified safety device from exceeding the maximum surface temperature.

Pressure surges in the coolant cycle are to be avoided.

Installation and putting the chiller into service in combination with the already certified control unit shall be performed in accordance with the national regulations for the installation of equipment in potentially explosive atmospheres and EN 60079-14.

The operating instructions and conditions of use given in the respective type certificate of the incorporated equipment shall be followed as well as the operating documentation for the assembly.

## Annex:

[IECEX EPS 21.0044X - Annex to CoC.pdf](#)

### List of electrical equipment in scope of IECEx EPS 21.0044X certification:

Item number	Description	MANUFACTURER	MODEL NO	HAZARDOUS AREA CERT STANDARD	HAZARDOUS AREA CERT NUMBER	HAZARDOUS AREA PROTECTION (INSTALLED)
3	Electric motor (circulation pump)	Bartec-Varnost	4 KTC 71 A2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
3	Electric motor (circulation pump)	Bartec-Varnost	4 KTC 71 A4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
3	Electric motor (circulation pump)	Bartec-Varnost	4 KTC 71 B2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
3	Electric motor (circulation pump)	Bartec-Varnost	4 KTC 71 B4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
3	Electric motor (circulation pump)	Bartec-Varnost	4 KTC 80 A2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
3	Electric motor (circulation pump)	Orange1	OE 71 A2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX EUT 14.0001X	Ex db IIC T5/T4/T3 Gb Ex db eb IIC T5/T4/T3 Gb
3	Electric motor (circulation pump)	Orange1	OE 71 A4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX EUT 14.0001X	Ex db IIC T5/T4/T3 Gb Ex db eb IIC T5/T4/T3 Gb
3	Electric motor (circulation pump)	Orange1	OE 71 B2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX EUT 14.0001X	Ex db IIC T5/T4/T3 Gb Ex db eb IIC T5/T4/T3 Gb
3	Electric motor (circulation pump)	Orange1	OE 71 B4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX EUT 14.0001X	Ex db IIC T5/T4/T3 Gb Ex db eb IIC T5/T4/T3 Gb
3	Electric motor (circulation pump)	Orange1	OE 80 A2	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX EUT 14.0001X	Ex db IIC T5/T4/T3 Gb Ex db eb IIC T5/T4/T3 Gb
4	Electric motor (Condenser)	Bartec-Varnost	4 KTC 71 A4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
4	Electric motor (Condenser)	Bartec-Varnost	4 KTC 71 B4	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX BVS 13.0121X	Ex db IIC T4 Gb Ex db eb IIC T4 Gb
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10	Temperature sensor	Ephy-Mess	PR-SPA-EX-WKF	IEC 60079-0 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX IBE 14.0058U	Ex eb IIC Gb
18	Cable gland	Wiska	ESKE/1-*	IEC 60079-0 (Ed.7.0) IEC 60079-7 (Ed.5.1)	IECEX PTB 13.0034X	Ex eb IIC Gb
19	Junction box	Stahl	8146 / 1051	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1) IEC 60079-11 (Ed.6.0) IEC 60079-18 (Ed.4.1)	IECEX PTB 06.0046	Ex db eb mb ia/ib IIC T6/T5/T4 Gb
19	Junction box	Stahl	8146 / 1061	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1) IEC 60079-11 (Ed.6.0) IEC 60079-18 (Ed.4.1)	IECEX PTB 06.0046	Ex db eb mb ia/ib IIC T6/T5/T4 Gb
19	Junction box	Stahl	8146 / 1071	IEC 60079-0 (Ed.7.0) IEC 60079-1 (Ed.7.0) IEC 60079-7 (Ed.5.1) IEC 60079-11 (Ed.6.0) IEC 60079-18 (Ed.4.1)	IECEX PTB 06.0046	Ex db eb mb ia/ib IIC T6/T5/T4 Gb



## Annex to IECEx Certificate of Conformity

**IECEx EPS 21.0044X**



19	Junction box	Bartec Benke	JB2-P series	IEC 60079-0 (Ed.6.0) IEC 60079-7 (Ed.4.0) IEC 60079-11 (Ed.6.0)	IECEx BVS 16.0037	Ex eb ib IIC T4 Gb
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\*No applicable technical differences to latest edition of standard.

Non-electrical equipment was assessed as part of the assembly.

### Specific Conditions of Use

The following Specific Conditions of Use are stipulated by the certified individual parts that may be part of the equipment assembly. They need to be considered in the final installation and operation:

#### Electric motor – IECEx BVS 13.0121X

The lengths of the flameproof joints are in parts longer and the gaps of the flameproof joints are in parts smaller than the values of table 3 of IEC 60079-1:2014. For information of the dimensions of the flameproof joints contact the manufacturer.

Fasteners with a minimum yield stress of 640 N/mm<sup>2</sup> must be used for the closing of the flameproof enclosure.

#### Electric motor – IECEx EUT 14.0001X

Flameproof joints are not intended to be repaired.