



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 DEK 23.0009X	Page 1 of 5	<u>Certificate history:</u> Issue 0 (2023-10-06)
Status:	Current	Issue No: 1	
Date of Issue:	2024-03-21		
Applicant:	R. STAHL Schaltgeräte GmbH Am Bahnhof 30 74638 Waldenburg Germany		
Equipment:	Air-conditioning unit ExSys Cool, series 8701		
Optional accessory:			
Type of Protection:	Ex db eb mb q ib		
Marking:	See Annex 2.		

Approved for issue on behalf of the IECEx
Certification Body:

R. Schuller

Position:

Certification Manager

Signature:
(for printed version)

Date:
(for printed version)

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2. This certificate is not transferable and remains the property of the issuing body.
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Certificate issued by:

DEKRA Certification B.V.
Meander 1051
6825 MJ Arnhem
Netherlands





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Manufacturer: **R. STAHL Schaltgeräte GmbH**
Am Bahnhof 30
74638 Waldenburg
Germany

Manufacturing locations: **Electromach B.V.**
Jan Tinbergenstaat 193, 7559 SP
Hengelo
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 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

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

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-5:2015 Explosive atmospheres -Part 5: Equipment protection by powder filling "q"
Edition:4.0

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

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:

NL/DEK/ExTR20.0070/01

Quality Assessment Report:

DE/BVS/QAR10.0002/19



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Air-conditioning unit ExSys Cool, type 8701 is designed as a wall mount, horizontal discharge, hazardous area Zone 1 outside and Zone 1 or non-hazardous area inside air-conditioning unit for IIB and IIB+H₂ gas environments.

It is used to cool down equipment in control rooms, control panels, analyser houses, containers, etc. It is also suitable to be installed on large control panels in type of protection "e" and "p".

For details see Annex 1 and 2.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The supply voltage of the motors shall be within $\pm 10\%$ of the nominal value.
- The connection compartment of the compressor shall not be opened, maintained or serviced in an area where an explosive atmosphere may be present.
- The flameproof joints of the flameproof enclosures in the assembly are not intended to be repaired.
- The property class of the screws of the Ex d Control box are A4-70 for M10 and A4-80 for M12 and M14.
- The cable gland for the power supply is only suitable for fixed installations. The cable shall be effectively clamped to prevent pulling or twisting.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Change of applicant and manufacturer



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Additional information:

The following parts are certified to IEC 60079-0 Ed. 6.0:

1. Control box, Stahl type 8264/5, IECEx KEM 07.0071X
2. Cable gland, Stahl types 8161/7 and 8161/8, IECEx PTB 14.0011X

Technical Differences are evaluated and found satisfactory. For details see ExTR.

Annexes:

228529900-Annex 1.pdf
228529900-Annex 2.pdf

Description

The Air-conditioning ExSys Cool, type 8701 is designed as a wall mount, horizontal discharge, hazardous area Zone 1 outside and Zone 1 or non-hazardous area inside air-conditioning unit for IIB and IIB+H2 gas environments.

It is used to cool down equipment in control rooms, control panels, analyser houses, containers, etc. It is also suitable to be installed on large control panels in type of protection “e” and “p”.

The electrical equipment used in the units is separately Ex certified and is installed according to the instructions of the manufacturer and the applicable requirements of EN/IEC 60079-14.

Exsys Cool types 8701/01 and 8701/11 are package types and consist of an internal part (evaporator section) and an external part (condenser section). Both sections are situated on a separation wall.

Exsys Cool type 8701/11 is equipped with a potential free contact for controlling an externally mounted electrical heating element. The heating element is not part of this certification.

ExSys Cool type 8701/21 is a split type and consists of an internal part (evaporating unit), an external part (condensing unit) and a control panel. The evaporating unit and control panel are installed in the internal (hazardous) area and the condensing unit in the outside (hazardous) area. They are interconnected through refrigerant lines.

Type designation

	8701	/	X	X	-	X	X	X	X	-	X	X	X	X	-	X
Execution	Package type - Cooling		0													
	Package type - Cooling + Electrical heating		1													
	Split type - condensing unit		2													
Generation	1=first generation			1												
Certification	ATEX / IECEx					1										
Category / EPL	2G / Gb external, 2G / Gb internal							0								
	2G / Gb external, non-Ex internal - purge panel							1								
	2G / Gb external, non-Ex internal - container							2								
Gas Group	IIB							0								
	IIB+H ₂							1								
Ambient temperature	-20 °C...+60 °C								0							
	-40 °C...+60 °C								1							
Power supply	230 VAC 50 Hz; 1-phase									0						
	400 VAC 50 - 60 Hz; 3-phase + N									1						
Housing material	SS316											2				
Surface treatment	without												0			
Coil coating	None													0		
Cooling Capacity	04 to 06 kW (value)															04 to 06

Thermal data

External ambient temperature	-40 °C to +60 °C, maximum ratings, depending on the type
Internal ambient temperature	-20 °C to +35 °C

The standard external ambient temperature range is -20 °C to +60 °C.

The external ambient temperature can be extended to -40 °C. For this temperature, a different condenser fan motor (certified for -40°C) with an internal heating element will be installed. The compressor will not be in operation since cooling will not be active in this situation. To protect the compressor from these temperatures, heat tracing is applied for this application.

The internal evaporator fan and control panel is always located in a temperature-controlled environment in which the temperature will not be lower than -20 °C. Limitation of starting temperature of the air-conditioner (below -20 °C) is laid down in the operating instructions document.

Electrical data

Power supply:	230 Vac, 1-phase, 50 Hz 400 Vac, 3-phase, 50 - 60 Hz
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Cooling capacity	4 kW to 6 kW
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Ex Marking

Type	Remarks	Internal part			External part		Marking	
		Hazardous area	Ambient temp	Internal control box	Hazardous area	Ambient temp		
8701/01-10xx-xxxx-x	Package type airco unit	Zone 1 IIB (+H ₂) T4	-20°C to +35°C IIB (+H ₂)	Zone 1 IIB (+H ₂) T4	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib [ib] q IIB T4 Gb or Ex II 2G Ex db eb ib [ib] q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib [ib] q IIB T4 Gb or Ex db eb ib [ib] q IIB+H ₂ T4 Gb
8701/01-11xx-xxxx-x 8701/01-12xx-xxxx-xx	Package type airco unit	Non-hazardous area	-20°C to +35°C IIB (+H ₂)	Non-Ex	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib q IIB T4 Gb or Ex II 2G Ex db eb ib q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib q IIB T4 Gb or Ex db eb ib q IIB+H ₂ Gb
8701/11-10xx-xxxx-x	Package type airco unit with potential free contact for switching an external heating	Zone 1 IIB (+H ₂) T4	-20°C to +35°C IIB (+H ₂)	Zone 1 IIB (+H ₂) T4	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib [ib] q IIB T4 Gb or Ex II 2G Ex db eb ib [ib] q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib [ib] q IIB T4 Gb or Ex db eb ib [ib] q IIB+H ₂ T4 Gb
8701/11-11xx-xxxx-x 8701/11-12xx-xxxx-x	Package type airco unit with potential free contact for switching an external heating	Non-hazardous area	-20°C to +35°C IIB (+H ₂)	Non-Ex	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib q IIB T4 Gb or Ex II 2G Ex db eb ib q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib q IIB T4 Gb or Ex db eb ib q IIB+H ₂ Gb
8701/21-10xx-xxxx-x	Split type airco unit	Zone 1 IIB (+H ₂) T4	-20°C to +35°C IIB (+H ₂)	Zone 1 IIB (+H ₂) T4	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib [ib] mb q IIB T4 Gb or Ex II 2G Ex db eb ib [ib] mb q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib mb [ib] q IIB T4 Gb or Ex db eb ib mb [ib] q IIB+H ₂ T4 Gb
8701/21-12xx-xxxx-x	Split type airco unit	Non-hazardous area	-20°C to +35°C IIB (+H ₂)	Non-Ex	Zone 1 IIB (+H ₂) T4	-20°C to +60°C -40°C to +60°C	ATEX:	Ex II 2G Ex db eb ib mb q IIB T4 Gb or Ex II 2G Ex db eb ib mb q IIB+H ₂ T4 Gb
							IECEX:	Ex db eb ib mb q IIB T4 Gb or Ex db eb ib mb q IIB+H ₂ Gb