



[1] **EU-TYPE EXAMINATION CERTIFICATE - Translation**

[2] Equipment and protective systems intended for use
in potentially explosive atmospheres, directive 2014/34/EU

[3] EU-Type Examination Certificate Number **IBExU14ATEX1122 X** | Issue 1

[4] Equipment: **Radial fan**
Type: K3G***-****-9* and K3G***-****-X*

[5] Manufacturer: **ebm-papst Mulfingen GmbH & Co. KG**

[6] Address: **Bachmühle 2
74673 Mulfingen
GERMANY**

[7] The design of the product mentioned in [4] and any acceptable variations thereto are specified in the schedule to this certificate.

[8] IBExU Institut für Sicherheitstechnik GmbH, Notified Body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.


The examination and test results are recorded in the confidential test report IB-16-3-217.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-7:2015 EN 60079-11:2012
and **EN 50495:2010 EN 14986:2017**
Except in respect of those requirements listed at item [18] of the annex.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

 **II 2G Ex db eb ib IIB T3 Gb**
-40 °C or -25 °C ≤ T_a ≤ +50 °C or +55 °C

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Authorised for certifications - Explosion protection

Freiberg, 27 October 2017

By order

Dipl.-Ing. (FH) Henker



- Seal -
(Notified Body number 0637)

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Schedule

[13] **Schedule**

[14] **Certificate number IBExU14ATEX1122 X | Issue 1**

[15] **Description of product**

The Radial fan type K3G***-****-9* and K3G***-****-X* is used for conveying gaseous media and is preferably installed in air-conditioning units (AHU) due to its cube design. It consists of the explosion proof motor type M3G150-FF**-9*, M3G150-IF**-9* or M3G150-NA**-9* and dem Lüfterrad.

The motor as external-rotor motor is designed with direct temperature control and consists of the Ex-e motor compartment, the Ex-d electronics compartment and the Ex-e terminal compartment. The electronics compartment houses the control unit, the electronics for functional safety and the intrinsically safe supply for the sensors. The motor is cooled by the conveying medium.

Technical data:

- Nominal voltage range: 380 V up to 440 V
- Stack length: 55 mm and 120 mm
- Power input: max. 3.2 kW
- Air flow: max. 20000 m³/h
- Back pressure: max. 1500 Pa
- Nominal frequency: 50/60 Hz
- Nominal speed: max. 2850 min⁻¹
- Mode of operation: S1
- Ambient temperature range: -25 °C up to +50 °C
-40 °C up to +55 °C (Sonderausführung)
- Heating device (optional): PTC 24 V
- Property class Ex-d screws: 10.9
- Degree of protection IP: Motor compartment IP44 according to EN 60034-5
Electronics compartment IP54 according to EN 60529
Terminal compartment IP66 according to EN 60529

The rated values of the individual motor and impeller designs are specified in the continuation sheets to this EU-type examination certificate.

[16] **Test report**

The examination and test results are recorded in the confidential test report IB-16-3-217 of 27 October 2017. The test documents are part of the test report and they are listed there.

Summary of the test results

The Radial fan type K3G***-****-9* and K3G***-****-X* fulfils the requirements of explosion protection for equipment of Group II, Category 2G, type of protection flameproof enclosure "db", increased safety "eb" and intrinsic safety "ib" for explosive atmospheres up to explosion group iib and temperature class T3.

Variations compared to issue 0 of this certificate:

- Adaptation to the current standards and corresponding modification/alteration of the marking
- Minor change in the intrinsically safe overtemperature shutdown

[17] **Special conditions for use**

- Repairs of the flameproof joints must be made in compliance with the constructive specifications provided by the manufacturer. Repairs must not be made on the basis of values specified in table 2 of EN 60079-1.
- The screwed cable glands may be used only for fixed installation. During installation, an appropriate strain relief has to be ensured.
- When replacing cable glands, please note that they have to be suitable for continuous operating temperatures from -55 °C to +80 °C.

- For use at ambient temperatures below -20 °C, the connection cables must be suitable for such operating temperature.
- Unused openings for cable entries have to be closed durably with suitable screw plugs, which are confirmed for explosion protection.

[18] Essential Health and Safety Requirements

In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following is considered relevant to this product, and conformity is demonstrated in the test report:

not applicable

[19] Drawings and documents

The documents are listed in the test report.

By order

Freiberg, 27 October 2017



Dipl.-Ing. (FH) Henker

Continuation Sheet 01

to the EC-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1122 X
(Translation)

Radial Fan type K3G400-AQ23-9* and K3G400-AQ23-X*

Rated values and technical data

On the basis of the test report IB-14-3-094/1 of 26 May 2015 the following specifications result:

The details are valid under the prerequisite that the Radial Fans of this type differ only insignificantly from the tested sample concerning the electrical and thermal design.

- Motor type:	M3G150-FF23-9*
- Nominal voltage range:	380 V up to 440 V
- Nominal frequency:	50/60 Hz
- Speed:	2,550 rpm
- Power input:	3.10 kW
- Nominal current:	4.7 A
- Thermal class:	F
- Operation mode:	S1
- Temperature limiter:	3 x PTC 130 °C
- Ambient temperature range:	-25 °C up to +50 °C (standard) -40 °C up to +55 °C (special version)
- Impeller size:	400
- Outlet width of impeller:	125 mm
- Motor stack length:	55 mm
- Air flow at maximum input power:	6,085 m ³ /h at 1,100 Pa
- Air flow at free air:	9,390 m ³ /h at 0 Pa
- Maximum static back pressure:	1,500 Pa

This Continuation Sheet is only valid in combination with the EC-Type Examination Certificate IBExU14ATEX1122 X.

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(Dr. Wagner)



(ID no. 0637)

Freiberg, 26 May 2015

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Continuation Sheet 02

to the EC-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1122 X
(Translation)

Radial Fan type K3G450-AQ24-9* and K3G450-AQ24-X*

Rated values and technical data

On the basis of the test report IB-14-3-094/1 of 26 May 2015 the following specifications result:

The details are valid under the prerequisite that the Radial Fans of this type differ only insignificantly from the tested sample concerning the electrical and thermal design.

- | | |
|------------------------------------|---|
| - Motor type: | M3G150-FF24-9* |
| - Nominal voltage range: | 380 V up to 440 V |
| - Nominal frequency: | 50/60 Hz |
| - Speed: | 2,040 rpm |
| - Power input: | 2.95 kW |
| - Nominal current: | 4.5 A |
| - Thermal class: | F |
| - Operation mode: | S1 |
| - Temperature limiter/s: | 3 x PTC 130 °C |
| - Ambient temperature range: | -25 °C up to +50 °C (standard)
-40 °C up to +55 °C (special version) |
| - Impeller size: | 450 |
| - Outlet width of impeller: | 140 mm |
| - Motor stack length: | 55 mm |
| - Air flow at maximum input power: | 6,755 m ³ /h at 950 Pa |
| - Air flow at free air: | 10,955 m ³ /h at 0 Pa |
| - Maximum static back pressure: | 1,200 Pa |

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Continuation Sheet 03

to the EC-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1122 X
(Translation)

Radial Fan type K3G500-AP25-9* and K3G500-AP25-X*

Rated values and technical data

On the basis of the test report IB-14-3-094/1 of 26 May 2015 the following specifications result:

The details are valid under the prerequisite that the Radial Fans of this type differ only insignificantly from the tested sample concerning the electrical and thermal design.

- Motor type:	M3G150-FF25-9*
- Nominal voltage range:	380 V up to 440 V
- Nominal frequency:	50/60 Hz
- Speed:	1,780 rpm
- Power input:	2.97 kW
- Nominal current:	4.5 A
- Thermal class:	F
- Operation mode:	S1
- Temperature limiter/s:	3 x PTC 130 °C
- Ambient temperature range:	-25 °C up to +50 °C (standard) -40 °C up to +55 °C (special version)
- Impeller size:	500
- Outlet width of impeller:	150 mm
- Motor stack length:	55 mm
- Air flow at maximum input power:	8,155 m ³ /h at 800 Pa
- Air flow at free air:	12,830 m ³ /h at 0 Pa
- Maximum static back pressure:	1,170 Pa

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Continuation Sheet 04

to the EC-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1122 X
(Translation)

Radial Fan type K3G560-AP23-9* and K3G560-AP23-X*

Rated values and technical data

On the basis of the test report IB-14-3-094/1 of 26 May 2015 the following specifications result:

The details are valid under the prerequisite that the Radial Fans of this type differ only insignificantly from the tested sample concerning the electrical and thermal design.

- | | |
|------------------------------------|---|
| - Motor type: | M3G150-IF23-9* |
| - Nominal voltage range: | 380 V up to 440 V |
| - Nominal frequency: | 50/60 Hz |
| - Speed: | 1,500 rpm |
| - Power input: | 2.94 kW |
| - Nominal current: | 4.5 A |
| - Thermal class: | F |
| - Operation mode: | S1 |
| - Temperature limiter/s: | 3 x PTC 130 °C |
| - Ambient temperature range: | -25 °C up to +50 °C (standard)
-40 °C up to +55 °C (special version) |
| - Impeller size: | 560 |
| - Outlet width of impeller: | 160 mm |
| - Motor stack length: | 85 mm |
| - Air flow at maximum input power: | 9,280 m ³ /h at 700 Pa |
| - Air flow at free air: | 14,545 m ³ /h at 0 Pa |
| - Maximum static back pressure: | 1,030 Pa |

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Continuation Sheet 05

to the EC-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1122 X
(Translation)

Radial Fan type K3G630-AP01-9* and K3G630-AP01-X*

Rated values and technical data

On the basis of the test report IB-14-3-094/1 of 26 May 2015 the following specifications result:

The details are valid under the prerequisite that the Radial Fans of this type differ only insignificantly from the tested sample concerning the electrical and thermal design.

- Motor type: M3G150-NA01-9*
- Nominal voltage range: 380 V up to 440 V
- Nominal frequency: 50/60 Hz
- Speed: 1,130 rpm
- Power input: 2.97 kW
- Nominal current: 4.6 A
- Thermal class: F
- Operation mode: S1
- Temperature limiter/s: 3 x PTC 130 °C
- Ambient temperature range: -25 °C up to +50 °C (standard)
-40 °C up to +55 °C (special version)

- Impeller size: 630
- Outlet width of impeller: 224 mm
- Motor stack length: 120 mm
- Air flow at maximum input power: 11,540 m³/h at 600 Pa
- Air flow at free air: 18,240 m³/h at 0 Pa
- Maximum static back pressure: 730 Pa

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