

[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 **IBExU14ATEX1123 X** | Issue 2

[4] Equipment: **Axial fan**
Type: W3G***-****-9* and W3G***-****-X*

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

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

[7] This product and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

[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-21-3-0105.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015+A1:2018 EN 60079-11:2012
as well as EN 50495:2010 EN 14986:2017

Except in respect of those requirements listed at item [18] of the schedule.

[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:

Ex II 2G Ex db eb ib IIB T3 Gb
-55 °C or -40 °C ≤ T_a ≤ +60 °C

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Freiberg, 2022-03-03

[13]

Schedule

[14]

Certificate number IBExU14ATEX1123 X | Issue 2

[15] **Description of product**

The Axial fan type W3G***-****-9* and W3G***-****-X* is used for handling gaseous media and it is built in in a wall ring by means of support bracket or guard grille. It consists of the explosion proof motor type M3G150-IF**-9* or M3G150-NA**-9* and the impeller.

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
- Baulänge:	85 mm and 120 mm
- Power input:	max. 3.2 kW
- Impeller diameter:	Ø 630 mm up to Ø 990 mm
- Air flow:	max. 40.000 m³/h
- Back pressure:	max. 400 Pa
- Nominal frequency:	50/60 Hz
- Nominal speed:	max. 1.700 min ⁻¹
- Mode of operation:	S1
- Ambient temperature range:	-55 °C or -40 °C up to +60 °C
- Heating device (optional):	PTC 24 V
- Property class Ex-d screws:	10.9
- Degree of protection:	Motor compartment IP44 according to EN 60034-5 Electronics compartment IP54 according to EN 60529 Terminal compartment IP66 according to EN 60529

Variations compared to Issue 1 of the EU-Type Examination Certificate:

- Adaptation to the current standards EN IEC 60079-0 and EN IEC 60079-7
- Use of an additional touch protection grid
- Use of an alternative adhesive for magnet segments
- Use of alternative insulating and potting compounds

[16] **Test report**

The test results are recorded in the confidential test report IB-21-3-0105 of 2022-03-02.

The test documents are part of the test report and they are listed there.

Summary of the test results

The Axial fan type W3G***-****-9* and W3G***-****-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.

[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 service temperatures from -55 °C to +80 °C.
- For use at ambient temperatures below -20 °C, the connection cables must be suitable for such service temperature.
- The heating element may only be operated at ambient temperatures below +30 °C.
- Unused openings for cable entries have to be closed durably with suitable screw plugs, which are confirmed for explosion protection.
- Only fastening screws (property class 10.9), specified by the manufacturer, shall be used.

[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 are 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.

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Continuation Sheet 01

to the EU-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1123 X | Issue 1
(Translation)

Axial fan type W3G630-□U23-9* and W3G630-□U23-X*

(□ stands for: C, D, F, G, I)

Rated values and technical data

On the basis of the test reports IB-14-3-095/1 and IB-16-3-217 the following specifications result:

The details are valid under the prerequisite that the Axial 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: | 1.510 min ⁻¹ |
| - Power input: | 3.13 kW |
| - Nominal current: | 4.8 A |
| - Thermal class: | F |
| - Mode of operation: | S1 |
| - Ambient temperature range: | -40 °C up to +60 °C without heating device
-55 °C up to +60 °C with heating device |
| - Temperature limiter: | 3 x PTC 130 °C |
| - Impeller diameter: | Ø 630 mm |
| - Stack length motor: | 85 mm |
| - Air flow at max. Back pressure: | 13400 m ³ /h at 290 Pa |
| - Air flow at free air: | 19935 m ³ /h at 0 Pa |
| - Angular position of the blade: | 0° |
| - Heating device (optional): | according to the ambient temperature, as above |

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Continuation Sheet 02

to the EU-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1123 X | Issue 1
(Translation)

Axial fan type W3G710-□U21-9* and W3G710-□U21-X*

(□ stands for: C, D, F, G, I)

Rated values and technical data

On the basis of the test reports IB-14-3-095/1 and IB-16-3-217 the following specifications result:

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

- Motor type: M3G150-IF21-9*
- Nominal voltage range: 380 V up to 440 V
- Nominal frequency: 50/60 Hz
- Speed: 1.250 min⁻¹
- Power input: 2.81 kW
- Nominal current: 4.2 A
- Thermal class: F
- Mode of operation: S1
- Ambient temperature range: -40 °C up to +60 °C without heating device
-55 °C up to +60 °C with heating device
- Temperature limiter: 3 x PTC 130 °C

- Impeller diameter: Ø 710 mm
- Stack length motor: 85 mm
- Air flow at max. Back pressure: 16030 m³/h at 240 Pa
- Air flow at free air: 23505 m³/h at 0 Pa
- Angular position of the blade: 0°
- Heating device (optional): according to the ambient temperature, as above

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Continuation Sheet 03

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(Translation)

Axial fan type W3G800-□V01-9* and W3G800-□V01-X*

(□ stands for: C, D, F, G, I)

Rated values and technical data

On the basis of the test reports IB-14-3-095/1 and IB-16-3-217 the following specifications result:

The details are valid under the prerequisite that the Axial 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: 1.090 min⁻¹
- Power input: 2.75 kW
- Nominal current: 4.2 A
- Thermal class: F
- Mode of operation: S1
- Ambient temperature range: -40 °C up to +60 °C without heating device
-55 °C up to +60 °C with heating device
- Temperature limiter: 3 x PTC 130 °C

- Impeller diameter: Ø 800 mm
- Stack length motor: 120 mm
- Air flow at max. Back pressure: 16140 m³/h at 250 Pa
- Air flow at free air: 26915 m³/h at 0 Pa
- Angular position of the blade: 0°
- Heating device (optional): according to the ambient temperature, as above

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Continuation Sheet 04

to the EU-TYPE EXAMINATION CERTIFICATE IBExU14ATEX1123 X | Issue 1

Axial fan type W3G910-□V02-9* and W3G910-□V02-X*

(□Stands for: C, D, F, G, I)

Rated values and technical data

On the basis of the test reports IB-14-3-095/1 and IB-16-3-217 the following specifications result:

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

- Motor type: M3G150-NA02-9*
- Nominal voltage range: 380 V up to 440 V
- Nominal frequency: 50/60 Hz
- Speed: 1.000 min⁻¹
- Power input: 2.76 kW
- Nominal current: 4.2 A
- Thermal class: F
- Mode of operation: S1
- Ambient temperature range: -40 °C up to +60 °C without heating device
-55 °C up to +60 °C with heating device
- Temperature limiter: 3 x PTC 130 °C

- Impeller diameter: Ø 910 mm
- Stack length motor: 120 mm
- Air flow at max. Back pressure: 23295 m³/h at 190 Pa
- Air flow at free air: 33605 m³/h at 0 Pa
- Angular position of the blade: 0°
- Heating device (optional): according to the ambient temperature, as above

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Continuation Sheet 05

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Axial fan type W3G990-□Z02-9* and W3G990-□Z02-X*

(□ stands for: C, D, F, G, I)

Rated values and technical data

On the basis of the test reports IB-14-3-095/1 and IB-16-3-217 the following specifications result:

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

- Motor type: M3G150-NA02-9*
- Nominal voltage range: 380 V up to 440 V
- Nominal frequency: 50/60 Hz
- Speed: 960 min⁻¹
- Power input: 2.45 kW
- Nominal current: 3.7 A
- Thermal class: F
- Mode of operation: S1
- Ambient temperature range: -40 °C up to +60 °C without heating device
-55 °C up to +60 °C with heating device
- Temperature limiter: 3 x PTC 130 °C

- Impeller diameter: Ø 990 mm
- Stack length motor: 120 mm
- Air flow at max. Back pressure: 23470 m³/h at 180 Pa
- Air flow at free air: 34220 m³/h at 0 Pa
- Angular position of the blade: -5°
- Heating device (optional): according to the ambient temperature, as above

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