



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 EPS 19.0025X** Page 1 of 4 Certificate history:
Issue 0 (2019-07-29)

Status: **Current** Issue No: 1

Date of Issue: 2019-11-20

Applicant: **Maico Elektroapparate-Fabrik GmbH**
Steinbeisstraße 20
78056 Villingen-Schwenningen
Germany

Equipment: **AC Rotating Machinery series ERM 18, ERM 22 and ERM 25**

Optional accessory:

Type of Protection: **increased safety "e"; protection by enclosure "t"; non-electrical equipment "h"**

Marking: **ERM 18**
Ex eb IIB+H2 T4 Gb / Ex tb IIIB T135°C Db IP64
Ex h IIB+H2 T4 Gb / Ex h IIIB T135°C Db
ERM 22 and ERM 25
Ex eb IIB+H2 T3 Gb / Ex tb IIIB T200°C Db IP64
Ex h IIB+H2 T3 Gb / Ex h IIIB T200°C Db

Approved for issue on behalf of the IECEX
Certification Body:

Holger Schaffer

Position:

Manager certification

Signature:
(for printed version)

2019-11-20

Date:

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:

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





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Manufacturer: **Maico Elektroapparate-Fabrik GmbH**
Steinbeisstraße 20
78056 Villingen-Schwenningen
Germany

Additional
manufacturing
locations:

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

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

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/ExTR19.0022/01

Quality Assessment Report:

DE/PTZ/QAR18.0003/00



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The motor is used for ventilation of commercially used rooms (dyeing room, battery room, commercial space, production facility, etc.) with a potential explosive atmosphere.

The motor is a two-pole, three-strand asynchronous motor with squirrel cage and capacitor auxiliary line (Steinmetz circuit).

Electrical Data:

See user manual.

Model code:

See annex.

SPECIFIC CONDITIONS OF USE: YES as shown below:

The fan shall be operated only with the rated voltage as indicated on the name plate.

The fan shall only be operated during free intake or blow-out, if the impeller is protected against contact in accordance with ISO 13857. Use the safety guard SGM...Ex.

Speed control is not allowed.

Use ELM-Ex elastic sleeves to avoid vibration transmission to the pipe system.

Use fan only with additional and suitable motor circuit breaker.

Never run several fans in parallel on a single thermistor triggering system.

Make sure there is sufficient air gap between impeller and housing.

Never use the fan to transport explosive liquid particles.

Operate the fan only within the permissible ambient and operating conditions and operating temperature.

Provide a free air inlet or outlet with a protection device according to IEC 60529. A double-sided protection is mandatory. The device and pipelines must be secured against the ingress of foreign objects.

Ensure a sufficient air flow supply. Operate the fan in the permitted air flow range.

Operation with frequency converter is not permitted.

Do not put any objects in the device.

Ensure degree of protection by proper insertion of the cables into the terminal box.

The assembly and installation must meet the requirements of IEC 60079-14.

The no-load operation don't have practical meaning, because of the engine shall be operated only in the fan as intended.

The motor shall be used with the built-in capacitor.

The allowed voltages are according to the manual.

Only motor circuit breaker with a type examination certificate in accordance with IECEx and a marking in accordance with IECEx (Gb/Db) are permitted or comparable requirements according the IECEx Scheme. The motor circuit breaker must be set to the rated motor current (not I_{max}).



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Addition of dust certification ("t"), addition of new components.

Annex:

Attachment to IECEX certificate IECEX EPS 19.0025X_1.pdf



Attachment to certificate

IECEX EPS 19.0025X
Issue 1



Applicant: Maico Elektroapparate-Fabrik GmbH
Steinbeisstraße 20
78056 Villingen-Schwenningen
Germany

Electrical Apparatus: AC Rotating Machinery series
ERM 18, ERM 22 and ERM 25

Type code for ERM-Fans

Designation e.g.: ERM 18 Ex e

E	R	M	18	Ex	e
1	2	3	4	5	6

No	Designation	Meaning
1	E	Single-phase AC
2	R	Duct Sleeve
3	M	Semi-centrifugal fan
4	18	Nominal Diameter of the Nozzle in cm (18, 22, 25)
5	Ex	Explosion proof
6	e	Use in: e = gas atmospheres t = dust atmospheres