Tube fans

R...Ex

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Contents

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R... Ex – Tube Fans

with plastic casing – Zone2

- easy installation in any position
- motor protection by triplet PTC thermistors
- speed controllable via transformer

Description:

Tube fans represent a technically perfect solution, uniting the advantages of axial fans, straight airflow and easy installation, with high pressure stability, low noise level and high efficiency of the radial fans.

Those fans are designed and manufactored to be operated in vaporous explosive atmosphere. They are marked in accordance with the Atex directive 2014/34/EU: II 3G c IIB T3 X

Application areas:

Casing:

The two-part housing is made of conductive plastic.
In the suction area of the nozzle is an Ex-marking. The housing is not gas-tight.

Materials:

Impeller/Blades	= conductive plastic
Inlet Cone/Flange	= conductive plastic

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Impellers:

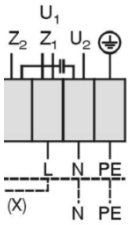
While the backward-curved impellers with wheel body are made of conductive PVC, the support plate is made of galvanized sheet steel. All of the components are mounted directly to the rotors of the external rotor motors.

Motor and motor protection class:

The voltage controllable AC-motors are characterized by a compact, robust design and a good controlling behaviour. They are designed by standard with protection class IP44, thermal class F and ignition protection Ex e or Ex nA.

The winding of the motors feature integrated triple Positive Temperature Coefficient (PTC) thermistor temperature sensors according to DIN 44082, which will have to be connected to a PTC thermistor tripping unit with protective mark Ex II (2)G as a motor protection. This specific thermal motor protection is capable of precisely identifying any abnormal operating condition and external influence and will then disconnect the motor from the mains via a contactor in any conceivable malfunction case. It is permissible to install commercially available motor circuitbreakers only as additional safety devices, since they are not able to ensure complete motor protection under all conceivable operating conditions (e.g. operation with reduced-voltage). Refer to the accessory list for the allocation of motor protection equipment.

Electrical connection:



The fans are supplied as standard with a connection cable approx. 0.8 m long. Wiring diagrams are glued to the cable outlet side of the fan housing. The Ex connection box is available as an accessory.

Installation:

The fans may be installed in any position.

Remarks:

If necessary, the suction and discharge openings should be secured against falling in or sucking in debris through a protective grid in accordance with DIN 31001 or DIN 24167.

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Air volume control:

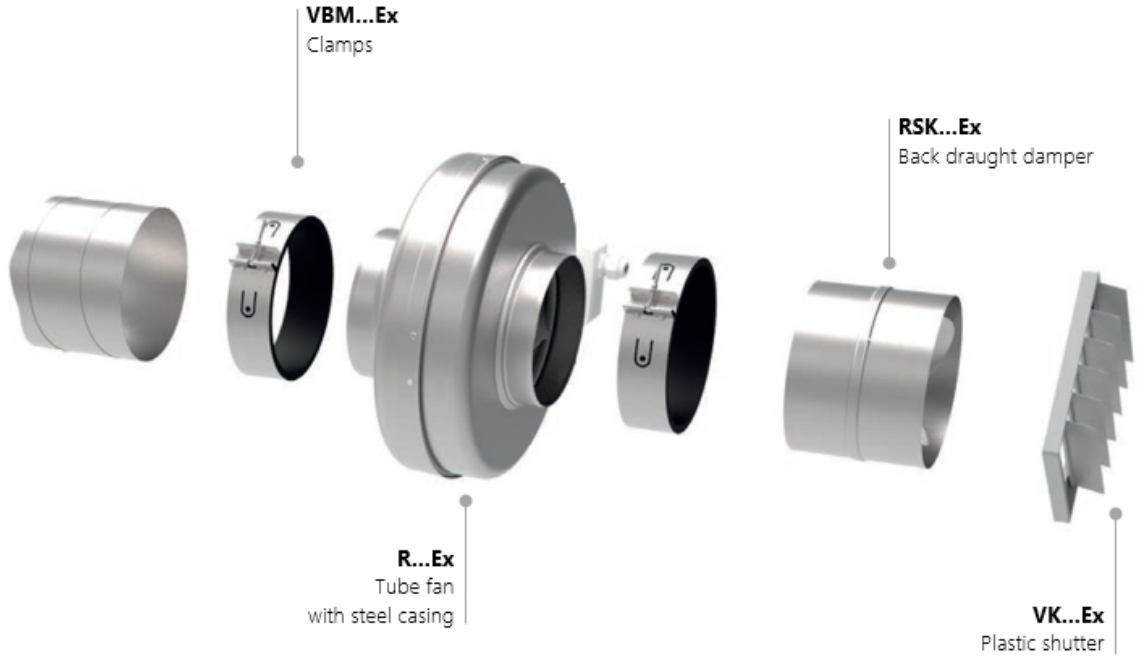
Explosion proof external rotor motors.

The design of the motors allows for a stable modulation of the motor speed via a voltage reduction. Only transformer type open-/closed-loop control units may be used for this purpose. For correct assignment refer to the list of accessories. The permissible voltage modulation range of between 25 and 100 % of the nominal voltage meets the typical requirements of systems with a variable air flow. If the system is operated in the reduced-voltage range, the operating current may exceed the nominal current. The percentage current increase in comparison to the nominal current is listed under technical data as Delta I. Open-/closed-loop control units must be designed to handle the maximum operating current. Regular external rotor motors with type of protection „e" are not allowed to be used with frequency converters.

Scope of delivery:

- Ex-Tube fan (R...Ex)
- Operating manual

Construction scheme:



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