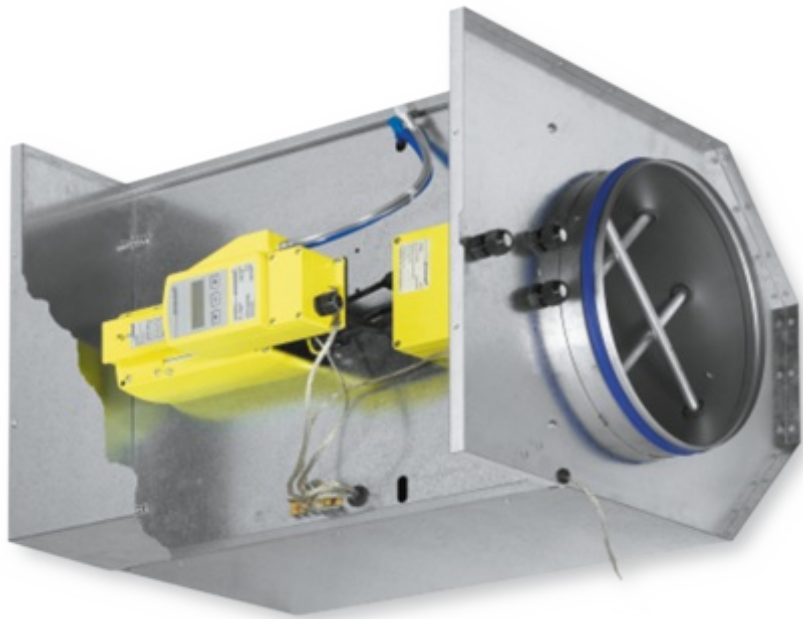


Type TVR-Ex



FOR THE CONTROL OF VARIABLE AIR VOLUME FLOWS IN POTENTIALLY EXPLOSIVE ATMOSPHERES (ATEX)

Circular VAV terminal units for variable air volume systems, approved and certified for potentially explosive atmospheres (ATEX)

- ATEX-compliant construction and parts
- Approved for all gases, mists and vapours in zones 1 and 2, with electronic control additionally for dusts in zones 21 and 22
- Suitable for the control of supply or extract air as well as for differential pressure control
- Electronic or pneumatic control components
- Closed blade air leakage to EN 1751, up to class 4
- Casing air leakage to EN 1751, class C

Optional equipment and accessories

- Spring return actuator
- Auxiliary switch with adjustable switching points for capturing the end positions



Application

- Circular EXCONTROL VAV terminal units of Type TVR-Ex for the precise supply air or extract air flow control in variable air volume systems
- For use in potentially explosive atmospheres (ATEX)
- Closed-loop volume flow control using an external power supply
- Electronic or pneumatic volume flow control
- Shut-off by means of switching (equipment supplied by others)

Special features

- ATEX mark and certification
- ATEX equipment group II, approved for use in zones 1 and 2; electronic control also for zones 21 and 22
- Volume flow rate can later be measured and adjusted on site; configuration is possible using personal computer software

Classification

Electronic control: Equipment group II

- Zones 1 and 2 (atmosphere: gases): II 2 G c II T5/T6
- Zones 21 and 22 (atmosphere: dusts): II 2 D c II 80 °C

Pneumatic control: Equipment group II

- Zones 1 and 2 (atmosphere: gases): II 2 G c II T5/T6

Nominal sizes

- 125, 160, 200, 250, 315, 400

Construction

- Galvanised sheet steel
- P1: Inner duct powder-coated, silver grey (RAL 7001)
- A2: Inner duct in stainless steel

Parts and characteristics

- Ready-to-commission unit which consists of mechanical parts and control components.
- Averaging differential pressure sensor for volume flow rate measurement
- Damper blade
- Connection for equipotential bonding
- Cable bushings suitable for use in potentially explosive atmospheres
- ATEX-compliant control components, factory assembled and complete with wiring and tubing
- Aerodynamic functional testing on a special test rig prior to shipping of each unit
- Unit carries test label with relevant data

- High control accuracy (even with upstream bend $R = 1D$)

Attachments

- Electronic control
- Pneumatic control

Accessories

- Actuator with auxiliary switch for capturing the end positions
- Spring return actuator

Useful additions

- Secondary silencer Type CA for demanding acoustic requirements

Construction features

- Construction and materials comply with the EU directive and guidelines for use in potentially explosive atmospheres (ATEX)
- Spigot with lip seal, for circular connecting ducts to EN 1506 or EN 13180

Materials and surfaces

- Casing and inner duct made of galvanised sheet steel
- Control components made of die cast aluminium (pneumatic control: plastic)
- Plastic bearings
- Damper blade of stainless steel and with TPE seal (thermoplastic elastomer)
- Differential pressure sensor made of aluminium
- P1: Inner duct powder-coated
- A2: Inner duct in stainless steel

Standards and guidelines

- Directive 94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres
- Closed blade air leakage to EN 1751, class 4 (nominal sizes 125 and 160, class 3).
- Nominal sizes 125 and 160 meet the general requirements, nominal sizes 200 – 400 meet the increased requirements of DIN 1946, part 4, with regard to the acceptable closed blade air leakage
- Casing air leakage to EN 1751, class C

Maintenance

- Maintenance-free as construction and materials are not subject to wear

Electronic control

- Zero point correction of the static differential pressure transducer should be carried out once per year (recommendation)

TECHNICAL INFORMATION

Function, Technical data, Quick sizing, Specification text, Order code, Related Products

Variants, Attachments, Dimensions and weight

Installation details, Basic information and nomenclature

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