

Type TVT



FOR NORMAL AND HIGH VOLUME FLOW RATE RANGES AND LOW-LEAKAGE SHUT-OFF

Rectangular VAV terminal units for standard applications regarding the supply air or extract air control in variable air volume systems where low-leakage shut-off is required

- For volume flow rate ranges up to 21,000 m³/h or 5,800 l/s
- Suitable for the control of volume flow rate, room pressure or duct pressure
- Electronic control components for different applications (Easy, Compact, Universal, and LABCONTROL)
- High control accuracy
- Suitable for airflow velocities up to 10 m/s
- Closed blade air leakage to EN 1751, class 3
- Casing air leakage to EN 1751, up to class C

Optional equipment and accessories

- Acoustic cladding for the reduction of case-radiated noise
- Secondary silencer Type TX for the reduction of air-regenerated noise
- Hot water heat exchanger of Type WT for reheating the airflow



Application

- Rectangular VARYCONTROL VAV terminal units of Type TVT for the precise supply air or extract air flow control in variable air volume systems
- Closed-loop volume flow control using an external power supply
- For controlling, restricting, or shutting off the airflow in air conditioning systems
- Shut-off by means of switching (equipment supplied by others)

Special characteristics

- Integral differential pressure sensor with 3 mm measuring holes (resistant to dust and pollution)
- Factory set-up or programming and aerodynamic function testing
- Volume flow rate can be measured and subsequently adjusted on site; additional adjustment tool may be necessary

Nominal sizes

- 36 nominal sizes from 200 × 100 to 1000 × 600
- Up to nominal size 800 × 300 including all attachments, larger units only with actuators with higher torque

Variants

- TVT: VAV terminal unit
- TVT-D: VAV terminal unit with acoustic cladding
- Units with acoustic cladding and/or secondary silencer Type TX for demanding acoustic requirements
- Acoustic cladding cannot be retrofitted

Construction

- Galvanised sheet steel
- P1: Powder-coated, silver grey (RAL 7001)

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 blades
- Factory-assembled control components complete with wiring and tubing
- Aerodynamic function testing on a special test rig prior to shipping of each unit
- Set-up data is given on a label or volume flow rate scale affixed to the unit
- High volume flow rate control accuracy

Attachments

- Easy controller: Compact unit consisting of controller with potentiometers, differential pressure transducer and actuator

- Compact controller: Compact unit consisting of controller, differential pressure transducer and actuator
- Universal controller: Controller, differential pressure transducer and actuators for special applications
- LABCONTROL: Control components for air management systems

Useful additions

- Secondary silencer Type TX for demanding acoustic requirements
- Heat exchanger Type WT

Construction features

- Rectangular casing
- Flanges on both sides, suitable for duct connection
- Opposed blade action, blades connected by internal gears (enclosed) at both ends
- Damper blades with replaceable seals
- Position of the damper blade indicated externally at shaft extension
- Bearings with ring seals

Materials and surfaces

Galvanised sheet steel construction

- Casing made of galvanised sheet steel
- Shaft and linkage made of galvanised steel
- Damper blades and differential pressure sensor made of aluminium
- Gears made of anti-static plastic (ABS), heat resistant to 50 °C
- Plastic bearings

Powder-coated construction (P1)

- Casing made of galvanised sheet steel, powder-coated

Variant with acoustic cladding (-D)

- Acoustic cladding made of galvanised sheet steel
- Rubber profile for the insulation of structure-borne noise
- Lining is mineral wool

Mineral wool

- To EN 13501, fire rating class A1, non-combustible
- RAL quality mark RAL-GZ 388
- Biosoluble and hence hygienically safe according to the German TRGS 905 (Technical Rules for Hazardous Substances) and EU directive 97/69/EG

Standards and guidelines

- Hygiene conforms to VDI 6022
- Closed blade air leakage to EN 1751, class 3

- Meets the general requirements of DIN 1946, part 4, with regard to the acceptable closed blade air leakage
- Casing air leakage to EN 1751, class C (B + H ≤400, class B)

Maintenance

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

TECHNICAL INFORMATION

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

Variants, Attachments, Dimensions and weight, Product details

Installation details, Basic information and nomenclature

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