

TWO REQUIREMENTS MET WITH ONE SOLUTION: CLEVER VOLUME FLOW RATE MEASURING IN SPITE OF LOW AIRFLOW VELOCITIES

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The requirement to save energy often leads to the installation of larger air handling units, which in turn results in lower airflow velocities. So it is necessary to change the measurement principle in order to measure even very small volume flows. Another frequent issue is space at the installation site, or the lack of it. This is why development efforts have to aim at products that are fairly easy and safe to install and provide good measurement results.

With these goals in mind, TROX developed a new measurement method and a new type of damper blade, for which a patent application has already been filed. The new damper blade is part of the new VAV terminal units Type TVE and will first be shown at ISH 2019.

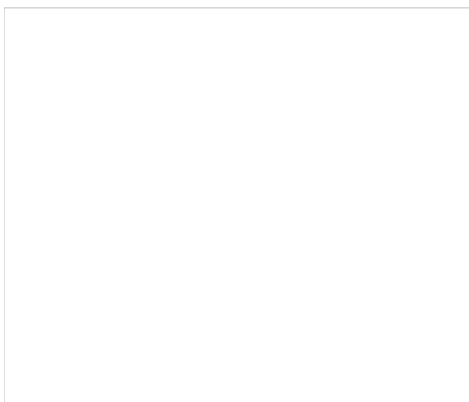
VAV terminal units of Type TVE apply a new measurement principle as the volume flow rate is measured not with a probe or sensor, but by means of the damper blade itself. This innovative design allows for a reduction in length and helps to ensure precise measurement results even in case of unfavourable upstream conditions; with dynamic measurement, this is even independent of the airflow direction.

Advantages at a glance

- Works perfectly even with unfavourable upstream conditions
- The relation between damper blade position and differential pressure is stored as a characteristic relationship in the controller
- Higher measurement accuracy even with low airflow velocities from 0.5 m/s
- Nominal sizes of 100, 125, 160, 200, 250 mm
- Volume flow rates of 14 m³/h – 2300 m³/h (4 l/s – 640 l/s)
- Volume flow rate range of 1:25

- Choice of static or dynamic transducer
- Available with Easy controller, Compact controller or Modbus RTU variant for connection to the central BMS

- Airflow direction is not critical if dynamic measurement is used
- Release button on control component allows for easy replacement of the component



The new VAV terminal unit Type TVE applies a new volume flow rate measurement principle and requires no measuring probe.



A patent application has been filed for the TVE damper blade.

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