

How does it work?

The volumetric flow controllers of type VRAR and VRAQ can be equipped with any common control components. Using the SCHAKO EasyBus bus system, they can be operated and connected to an efficient system. The connection of all devices is as simple as the commissioning and therefore saves costs.

Our suppliers

SCHAKO uses controller components of renowned manufacturers

GRUNER



BELIMO

EasyBus

SIEMENS

SAUTER

SCHAKO stands for competence in the ventilation and air conditioning technology. The quality standard and the reliability of our products are well-known throughout Europe. In our own test laboratories we develop solutions which sustainably optimise the indoor climate in work environments and public spaces. With sites in Germany, Spain, Hungary and Turkey we deliver quickly and flexibly in all of Europe.

We carry a broad standard range and are optimally geared to meet special air demands with individual and intelligent solutions.

Pure competence in air

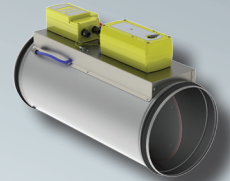
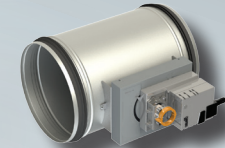
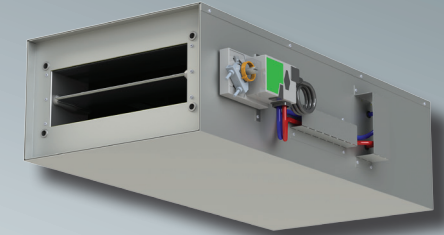
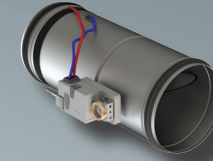
As air specialists, the companies of **SCHAKO Group - NOVENCO Building&Industry, REVEN, SCHAKO, SCHNEIDER Elektronik and SIROCCO** - provide a unique portfolio of ventilation, air conditioning, smoke extraction and fire protection products and system solutions for the commercial construction, public buildings, canteen kitchens, laboratories, the process industry, stairwells, underground car parks and tunnel systems.

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Pure competence in air.

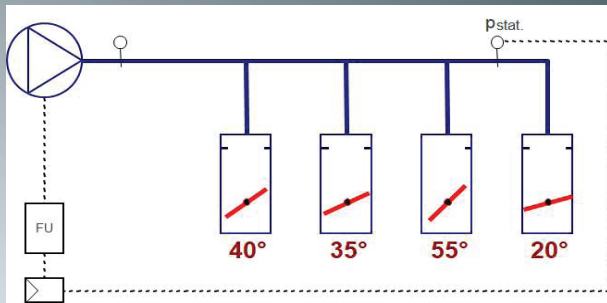


SCHAKO's expert advice

Energy-efficient volumetric flow rate control

SCHAKO volumetric flow controller with EasyBus

Using our SCHAKO EasyBus bus system, all volumetric flow controllers by SCHAKO can be connected and linked to an energy-efficient system. This saves considerable costs of installation, commissioning and operation.



Ventilation setup 1

Ventilation unit with control of constant pressure

This is the most common setup of ventilation systems. A constant static pressure is controlled. The least favourable point measurement is captured by the controller and the ventilation unit is controlled accordingly.

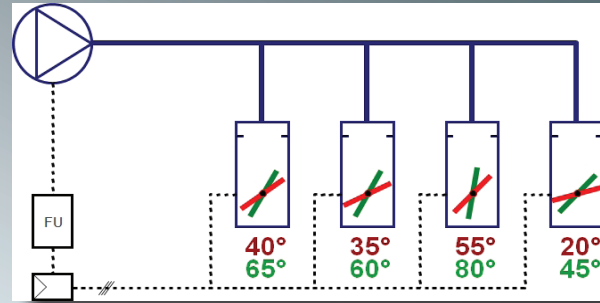
Need-based control is only possible to a limited extent, as only the least favourable point is taken into account.

Advantages

- The system pressure is always sufficiently high.

Disadvantages

- The energy consumption is relatively high, as the ventilation unit constantly controls the static pre-pressure set.
- Thus, by tendency, high pressure loss of the volumetric flow controllers.
- Increased noise level at high pressure loss.



Ventilation setup 2

Ventilation unit with need-based control

The difference to a ventilation system with control of constant pressure mainly consists in the control behaviour and the controlled variables. The static pressure at the least favourable point is not the reference unit for the control, but the volumetric flow rate and the damper position of the volumetric flow controllers. The data of all volumetric flow controllers are gathered. This data is used as a basis for need-oriented control.

Advantages

- A need-based system pressure saves energy and costs.
- No least favourable point measurement required.

Necessary components

- VAV components must be controlled using a bus system, e.g. SCHAKO VRA plus SCHAKO EasyBus signalling and switching bus system.

SCHAKO VRAR



The volumetric flow controller type VRAR in round design for use in supply and return air systems for constant or variable volumetric flow, room or duct pressure regulation. A proven and tested product which our customers have used and appreciated for years.

SCHAKO VRAQ



The volumetric flow controller type VRAQ in square design, air-tight and not air-tight, for use in supply and return air systems for constant or variable volumetric flow, room or duct pressure control.

The measuring principle

For the measurement of the differential pressure, SCHAKO is using its measuring principle by means of a double measuring cross made of extruded aluminium profile, to which a total of 12 measuring points has been attached on the pressure and suction side, respectively, by the median line method, in order to determine average values.