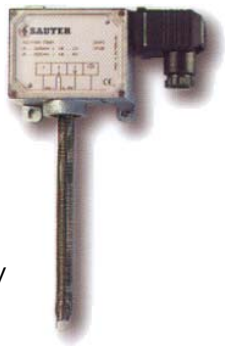
SAUTER

You'll never be caught short of breath.

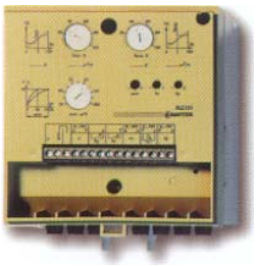
Electronic VAV control for laboratories.

What you ought to know about Electronic VAV Control.

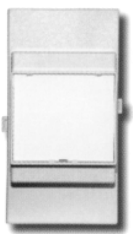


SGU 100 sash sensor for measuring the amount that the sash of a fume cupboard is opened.

NRT 300 room temperature control airconditionig; individual rooms.



RLE 151 continuous VAV controller for regulating the return air in fume cupboards.



SVU 100 Row transducer for measuring the air inlet speed in fume cupboards.

The through flow of air in laboratories particularly in rooms with air-extraction system is continuously affected by various factors. These disturbances are caused by the lab doors and the fume cupboards' sashes being opened and closed. For safety reasons, and because of the risk of contamination by the vapours emitted, fast-acting VAV systems are essential.

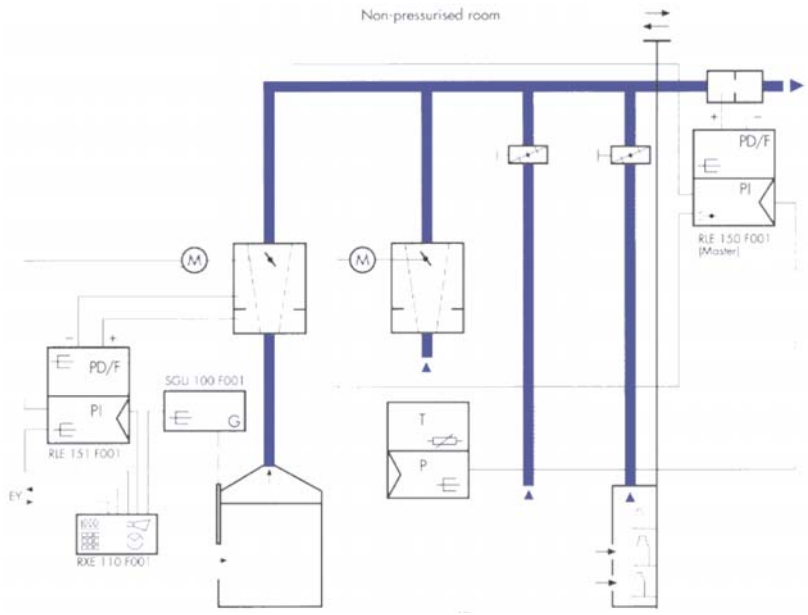
What's needed is a rapid extraction control system, plus a supply-air control system which reacts straight away to the changes in the extraction system.

The demands placed on such a system are high, since any disruptions require an immediate response. Sauter's electronic VAV control systems fulfil all the requirements of DIN 12924. Here are just two of their salient features: (a) the sash sensor does not deteriorate due to wear and tear; and (b) the fully electronic control system reacts within a matter of seconds. The system responds immediately to any movement in the sash. The solutions that we offer are as versatile as the many different requirements and the range of uses in laboratory extraction technology.

RXE 110 monitoring unit for monitoring
the air flow in relation to the sash's position; with optical and acoustic alarms.

RXE 101 VAV adding relay far the accumulation of return-air Rows.

Getting the right VAV control system for open laboratories is a simple matter.



Control system for return air regulated in proportion to the amount that the sash is opened.

The sash position registered by the SGU 100 sash sensor is taken as the setpoint by the RLE 151 YAY controller and compared with the actual value; the actuator is then moved accordingly. Any deviation is indicated both acoustically and optically on the RXE 110 monitoring unit (as per DIN 12924). The acoustic alarm can be suppressed by pressing the Mute button on the monitoring unit.

So that the amount of supply air from the neighbouring zones remains constant, the actual-value signal from the RLE 150 F001 room return-air controller (master) is fed as a command variable to the RLE 150 F011 supply-air controller (slave) .The level of supply air from the corridor zone is set at the RLE 150 F011 supply-air controller (slave) .If the room temperature rises -normally when the sashes are closed - above the ERT 800/NRT 300 room- temperature controller's setpoint, the general volume of room air is increased accordingly. If a sash is then opened, the return air rises above the setpoint, so the room controller reduces the airflow.