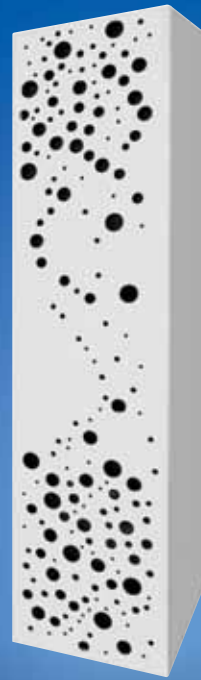


▶ Decentralised ventilation units ▶▶



**More comfort.  
More freedom of design.  
Lower cost.**

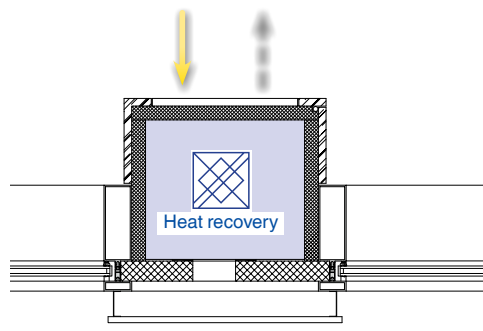
**SCHOOLAIR-V-HV with  
rotary heat exchanger  
for moisture recovery**

**TROX<sup>®</sup> TECHNİK**  
The art of handling air

## ► The art of handling air ►►

### TROX SCHOOLAIR vertical ventilation units

are used for the controlled ventilation of classrooms, large meeting rooms and children's daycare facilities. The units are delivered ready to operate, to be installed on the inside of an external wall or in the façade. They provide the greatest possible freedom of design. Integration with the central BMS is no problem even though SCHOOLAIR-V-HV is a decentralised unit.



*Horizontal cross section*



### Decentralised ventilation units for demand-based ventilation

SCHOOLAIR-V-HV includes all the components required for filtering, heat recovery and thermal treatment of the air. The units work quietly and efficiently since the air is led into the room on the shortest possible way, through a patented fan and sound attenuator combination with low power consumption. An integral VOC sensor detects the level of occupancy and automatically adjusts the required fresh air flow rate.



## ► SCHOOLAIR-V-HV with rotary heat exchanger ►►

### New construction with rotary heat exchanger

A new and special feature of SCHOOLAIR-V-HV is the rotary heat exchanger used for heat recovery. In contrast to recuperative heat exchangers, where the airflows are separate and pass along numerous plates, rotary heat exchangers are regenerative components.

The thermal energy is temporarily stored in the storage mass, a solid, slowly rotating wheel, and then, as the wheel comes into contact with the other airflow, is transferred to this other airflow. This process results in much higher efficiency levels.

As the rotary heat exchanger also recovers the moisture of the air, no condensation forms, which in turn allows for omitting frost protection, i.e. the heat exchanger need not be switched off if the temperature falls below zero.

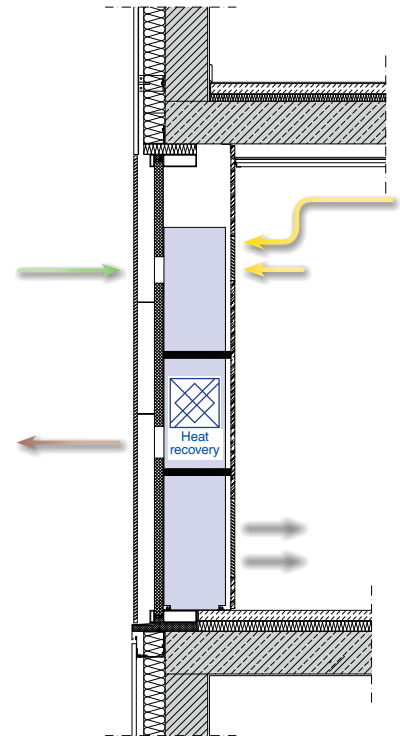
### Increased performance in the smallest of spaces

SCHOOLAIR-V-HV is yet another addition to the SCHOOLAIR range of ventilation units, and suitable for considerably higher volume flow rates. Just two units with a flow rate of 600 m<sup>3</sup>/h each in boost mode are sufficient to provide standard classrooms with the required fresh air in order to achieve and ensure an average CO<sub>2</sub> concentration of less than 1000 ppm.

As heat recovery is available all year round, heating from other sources can be reduced; another advantage is a consistent humidity level such that the room air will never become too dry even with high air change rates.

### Due to its proven high energy efficiency

the unit already fulfils the 2018 requirements of the Ecodesign directive for energy-related products (ErP). Due to these features it is an excellent addition to the SCHOOLAIR range of products and suitable for both new builds and refurbishments.



Vertical cross section



- F7 fresh air filter, ISO ePM1 60% ①
- Patented fan and sound attenuator combination ②
- Inspection access panel ③
- G3 extract air filter, ISO coarse 50% ④
- Rotary heat exchanger ⑤
- Integral controls ⑥
- Control valves ⑦
- Water connections ⑧
- Levelling foot ⑨
- Heat exchanger ⑩



## ► Advantages at a glance ►►

### More comfort

- Moisture recovery in winter ensures a healthy indoor climate and more comfort
- An increased fresh air volume flow rate improves the air quality and hence increases the occupants' well-being
- An integral VOC sensor detects the ventilation requirement
- Automatic changeover between supply air, extract air and secondary air operation

### More freedom of design

- No restrictions with regard to the façade design since fresh air and exhaust air openings are unobtrusive
- Aesthetic appearance as there are numerous options for the outer casing

### Lower cost

- Lower investment due to fewer building adjustments being necessary (shafts, plant rooms etc.)
- Lower cost for installation and piping as no condensation will form
- More than 50% in operation costs saved when compared to a centralised system due to demand-based operation with single room control
- Heat recovery (approx. 75%) all year round reduces loss of ventilation heat and minimises the required heat generator output
- Low service costs since the components are easily accessible, easy to replace and easy to clean (e.g. by facility managers)
- Large filter areas help keep energy consumption down and extend replacement intervals

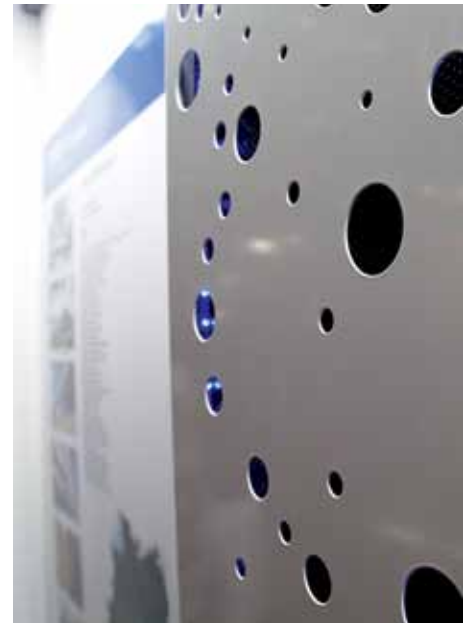


**SCHOOAIR-V-HV**  
High operational reliability  
due to system redundancy

◀ ▶	Dimensions W x H x D [mm]	600 x 2200 x 408
➔	Volume flow rate range [m³/h]	250 – 600
☼	Total heating capacity [W]	4780
	Room heating capacity [W]	3300
	Sizing data: Nominal fresh air temperature, supply air temperature: 40 °C, max. volume flow rate	
❄	Total cooling capacity [W]	1750
	Room cooling capacity [W]	1470
	Sizing data: Nominal fresh air temperature, supply air temperature: 18 °C, max. volume flow rate	
	Heat recovery percentage [%]	75
	Power consumption [W] with nominal airflow	147
	Sound pressure level [dB(A)] Room attenuation: 8 dB(A)	19 – 42

For the well-being of people  
in classrooms, offices,  
children's daycare facilities  
and meeting rooms

► SCH00LAIR reference projects ►►



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