TROX® TECHNIK

The art of handling air

Decentralised ventilation

Façade ventilation systems for new and refurbished offices, schools and children's daycare facilities

▶ The art of handling air ▶▶

Façade ventilation systems

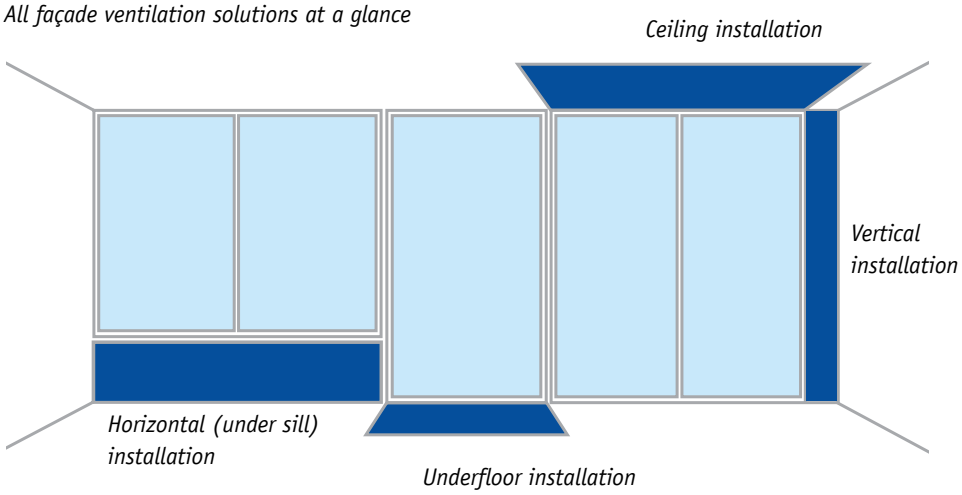
TROX façade ventilation systems are used for the controlled ventilation of internal spaces. Specifically, they control or limit the outdoor air flow rate. A wide spectrum of functions, such as filtration of the outdoor air, heat recovery and thermal treatment, help to provide maximum comfort, while energy requirements are quite reasonable.

Customers can choose between stand-alone units and integration with a central BMS. The units blend in perfectly with the architecture of each room or building, lending themselves to a plethora of applications for both new builds and refurbishments.

Ideal solutions for every façade

Façade ventilation units are available for installation under sills, or above and to the side of windows. Underfloor units are usually installed in a raised floor, ceiling units in false ceilings, but in any case near an external wall. Underfloor units, ceiling units and vertical units for installation next to a window are ideal for rooms with floor to ceiling glazing.

All façade ventilation solutions at a glance



Outstanding comfort, high efficiency, low operating costs

- Acoustically optimised EC fan with low specific fan powers, SFP = 1 according to EN 13779
- Heat exchanger for heating and cooling, as a 2-pipe system, 2-pipe change over system or 4-pipe system
- Reduced fine dust and pollen contamination due to integral filters that conform to VDI 6022; long filter life
- Easy filter change, no tools required
- Motorised shut-off dampers, power off to close
- Self-powered secondary air damper for adding secondary air to increase the thermal output
- Energy efficiency class A to ErP 1254/2014

Optional equipment and accessories

- Modular control system FSL-CONTROL II, specially for decentralised ventilation systems
- Various room control panels in attractive designs
- Various wall and floor fixing systems
- Condensate drip tray with or without condensate drain
- Powder coating in many different colours, e.g. RAL CLASSIC

Save on installation costs:

- Reduced slab to slab height
- Minimal area requirement for technical equipment
- No ducts or shafts required
- Small unit base, hence only small floor area required
- Reduced installation time
- Clear interfaces

Save on operating costs:

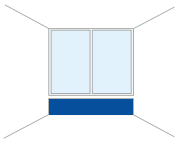
- Low energy requirement for air transport
- Demand-based room air quality control
- Ventilation and air conditioning based on occupancy

HORIZONTAL (UNDER SILL) UNITS

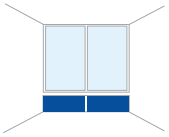
SCHOOLAIR-B

FSL-B-ZAB/SEK

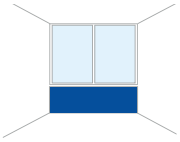
PROJECT SOLUTIONS



Standard concrete or brick façade with casement windows



Curtain wall façade



Multi function façade

Horizontal units are particularly suitable for standard brick or concrete façades with casement windows, but also for non-brick or non-concrete sills

The ready-to-use, decentralised SCHOOLAIR-B and FSL-B units provide comfortable room heating and demand-based ventilation. They create an inducing displacement flow and use pumped hot water and pumped chilled water for heating and cooling.

SCHOOLAIR-B

- Large air volumes as particularly required in schools, children's daycare facilities and meeting rooms
- Additional secondary air operation
- F7 secondary air filter
- Highly efficient heat recovery
- Demand-based ventilation
- Different constructions
- Heating and cooling
- Meets the requirements of ErP directive 1253/2014

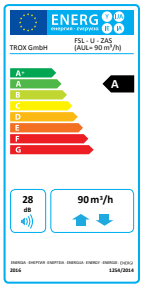
FSL-B-ZAB/SEK

- Ideal for offices
- Additional secondary air operation
- Demand-based ventilation
- Compact size
- Energy efficiency class A to ErP 1254/2014

Project solutions

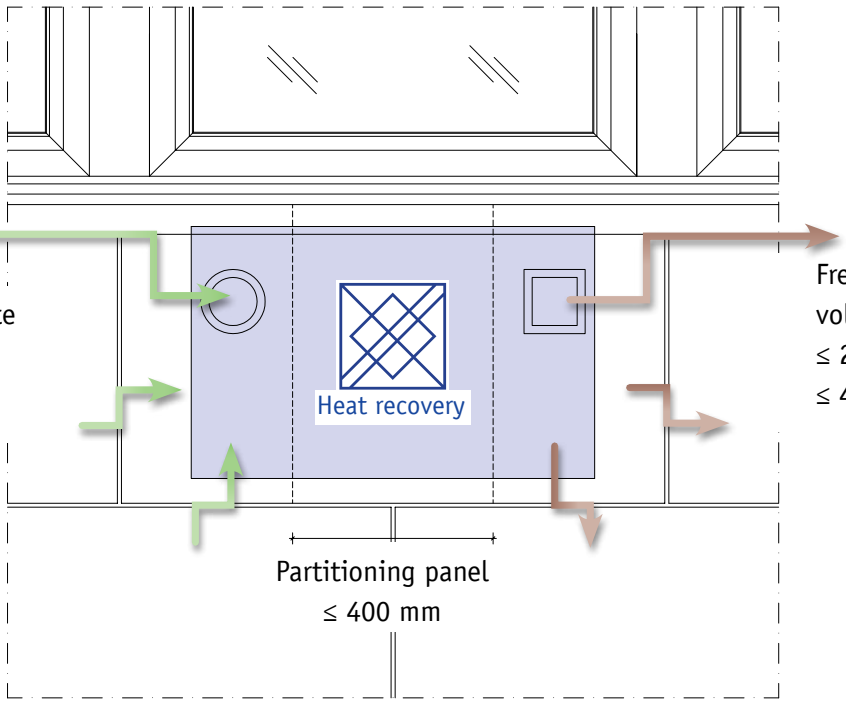
The following variants have already been successfully used for various projects:

- FSL-B-SEK (secondary air only)
- FSL-B-ZUL (supply air only)
- FSL-B-ZUS (supply air + additional secondary air)
- FSL-B-ZAS (supply and extract air + additional secondary air)



		SCHOOLAIR-B	SCHOOLAIR-B-HE	FSL-B-ZAB/SEK
Dimensions B x H x T	[mm]	1590 x 646 x 420	2090 x 750 x 420	1085 x 630 x 320
Volume flow rate range	[m³/h]	150 – 320	150 – 400	60 – 150
Total heating capacity up to	[W]	5800	6500	2400
Heating capacity per room up to	[W]	1700	1400	800
Total cooling capacity up to	[W]	1400	1750	700
Cooling capacity per room up to	[W]	800	1000	330
Outdoor air filter		F7	F7	F7
Extract air filter		G3	G3	G3

Horizontal (under sill) unit as seen from outside the building

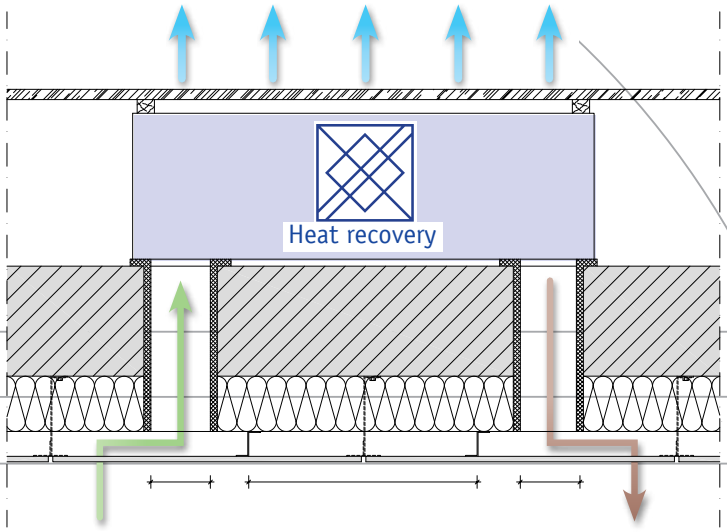


Free area required with nominal volume flow rate
≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

Free area required with nominal volume flow rate
≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

**Special requirements?
Give us a call!
We have solutions!**

Under sill unit, horizontal section



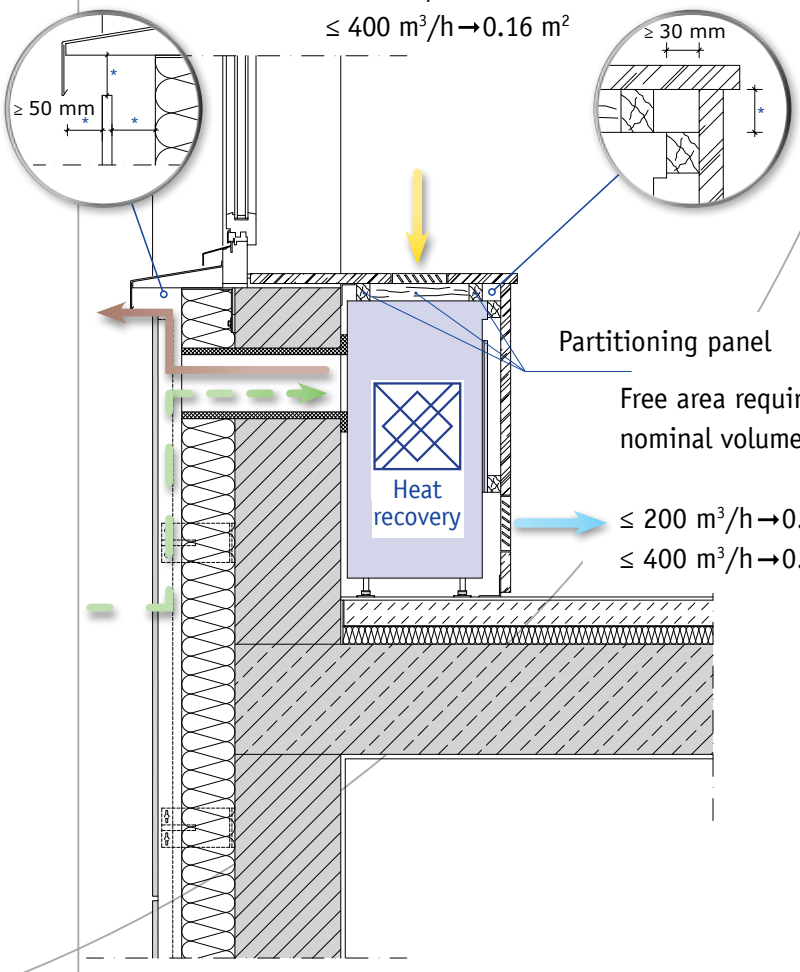
≥ Ø 125 mm or
≥ Ø 200 mm

Partitioning panel
≥ 400 mm

≥ Ø 125 mm or
≥ Ø 200 mm

Under sill unit, vertical section

Free area required with nominal volume flow rate
≤ 200 m³/h → 0.08 m²
≤ 400 m³/h → 0.16 m²



Partitioning panel

Free area required with nominal volume flow rate

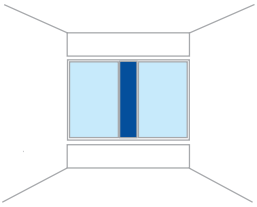
≤ 200 m³/h → 0.08 m²
≤ 400 m³/h → 0.16 m²

VERTICAL UNITS

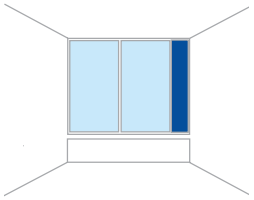
SCHOOLAIR-V

FSL-V-ZAB/SEK

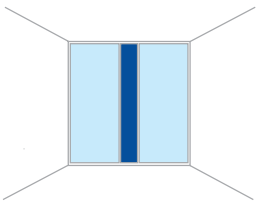
PROJECT SOLUTIONS



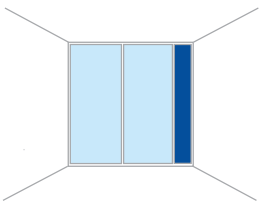
Standard concrete or brick façade with casement windows



Curtain wall façade



Floor to ceiling glazing



Multi function façade

Vertical units are suitable for standard brick or concrete walls with casement windows, for non-brick or non-concrete sills, and for curtain walls with floor to ceiling glazing

The ready-to-use, decentralised SCHOOLAIR-V and FSL-V units provide comfortable room heating and demand-based ventilation. They create an inducing displacement flow and use pumped hot water and pumped chilled water for heating and cooling.

SCHOOLAIR-V

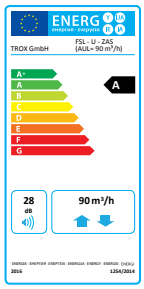
- Large air volumes as particularly required in schools, children's daycare facilities and meeting rooms
- Additional secondary air operation
- Highly efficient heat recovery
- Available in different sizes
- Heating and cooling
- Meets the requirements of ErP directive 1253/2014

FSL-V-ZAB/SEK

- *The* solution for offices
- Additional secondary air operation
- Slim design
- Demand-based ventilation
- Energy efficiency class A to ErP 1254/2014
- Heating and cooling

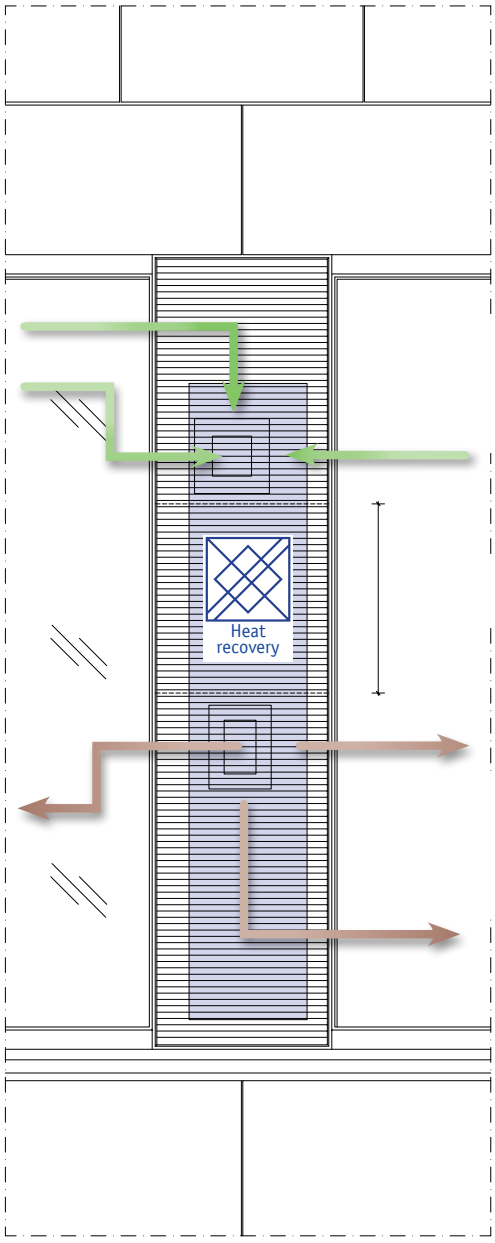
Project solutions

Variant FSL-V-ZUS (supply and secondary air) has already been successfully installed.



	SCHOOLAIR V-2L	SCHOOLAIR V-4L	SCHOOLAIR V-1800	SCHOOLAIR V-HE	SCHOOLAIR V-HV	FSL-V ZAB/SEK
Dimensions [mm] B x H x T	397 x 2160 x 359	397 x 2350 x 359	600 x 1800 x 359	600 x 2000 x 408	600 x 2200 x 408	400 x 1800 x 320
Volume flow rate range [m³/h]	150 – 320	150 – 320	150 – 350	150 – 360	200 – 550	60 – 150
Total heating capacity [W] up to	5800	5760	5630	6020	4780	2860
Room heating capacity [W] up to	1422	1680	1005	900	3300	880
Total cooling capacity [W] up to	-	1440	1590	1685	1750	720
Room cooling capacity [W] up to	-	850	935	965	1470	450
Outdoor air filter	F7	F7	F7	F7	F7	F7
Extract air filter	G3	G3	G3	G3	G3	G3

Vertical unit as seen from outside the building



Free area required with nominal volume flow rate

≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

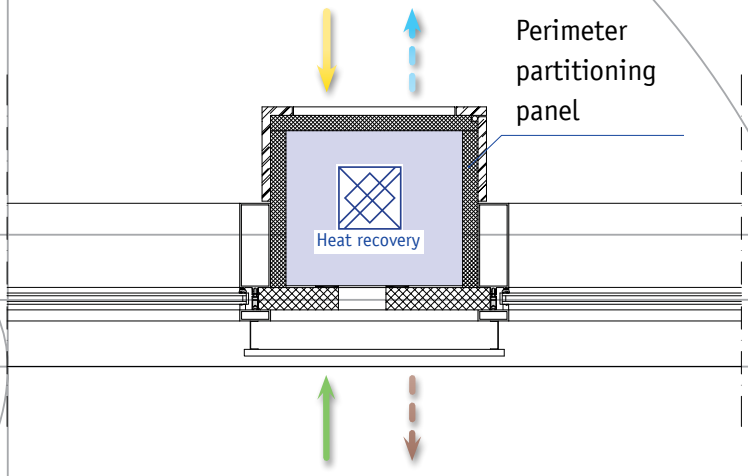
Partitioning panel
≥ 500 mm

Free area required with nominal volume flow rate

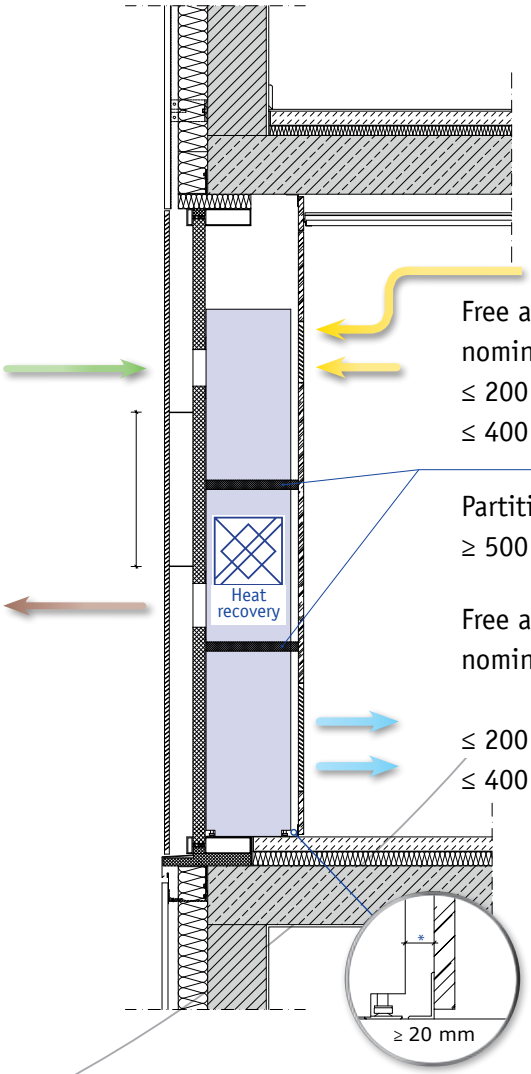
≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

**Special requirements?
Give us a call!
We have solutions!**

Vertical unit, horizontal section

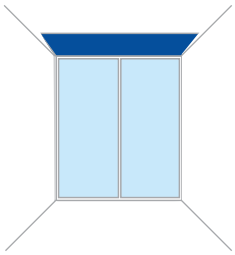


Vertical unit, vertical section

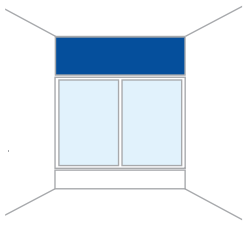


CEILING UNITS

SCHOOLAIR-D



Floor to ceiling glazing



Standard concrete or brick façade with casement windows

Ceiling units are suitable for standard brick or concrete façades with proper sills as well as for curtain wall façades with floor to ceiling glazing

The SCHOOLAIR-D units use water for heating and cooling, which is an energy-efficient solution; they are suitable for new buildings, refurbishment projects and revitalisation projects. Installation is below the ceiling slab and near an external wall. These units are specially recommended for rooms that require many air changes, such as classrooms, playrooms in children's daycare facilities or smaller meeting rooms in office buildings.

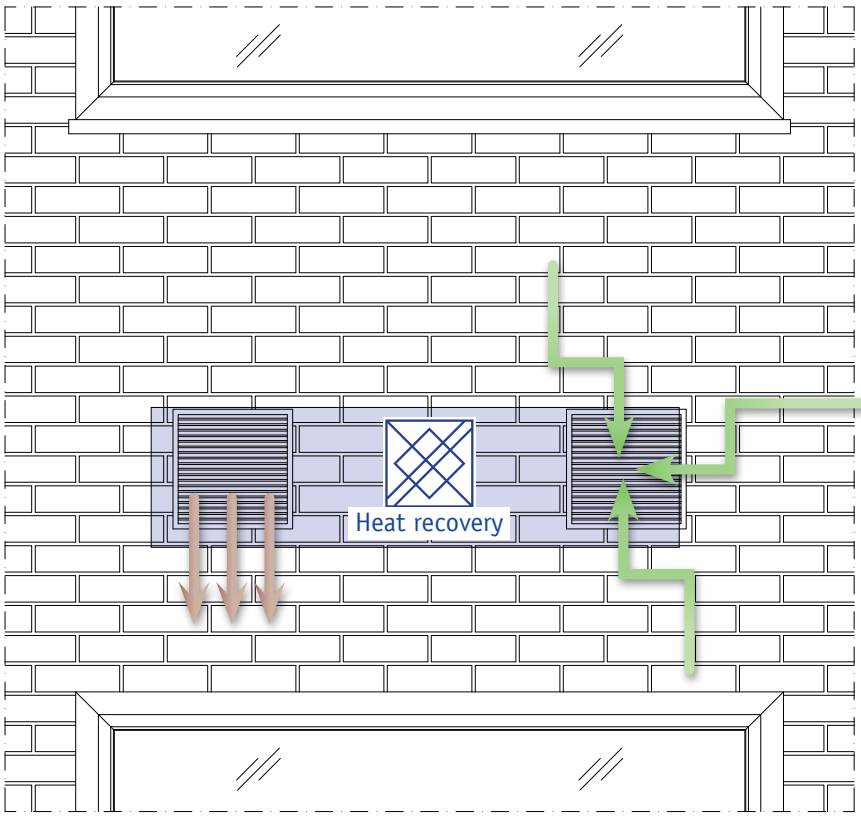
SCHOOLAIR-D

- Large air volumes as particularly required in schools, children's daycare facilities and meeting rooms
- Additional secondary air operation
- F7 secondary air filter
- Demand-based ventilation
- More architectural flexibility with regard to façades
- Heating and cooling
- Meets the requirements of ErP directive 1253/2014

HYGIENE - TESTED
TROX® TECHNIK
VDI 6022

		SCHOOLAIR-D-2L	SCHOOLAIR-D-4L
Dimensions B x H x T	[mm]	1690 x 400 x 800	1690 x 400 x 800
Volume flow rate range	[m³/h]	150 – 300	150 – 300
Total heating capacity up to	[W]	5720	5720
Heating capacity per room up to	[W]	1530	1530
Total cooling capacity up to	[W]	-	1350
Cooling capacity per room up to	[W]	-	800
Outdoor air filter		F7	F7
Extract air filter		✓	✓

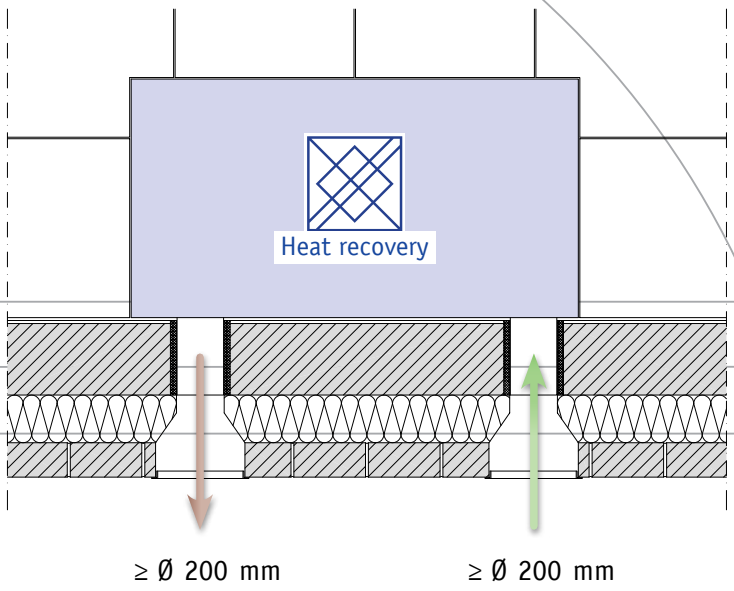
Ceiling unit as seen from outside the building



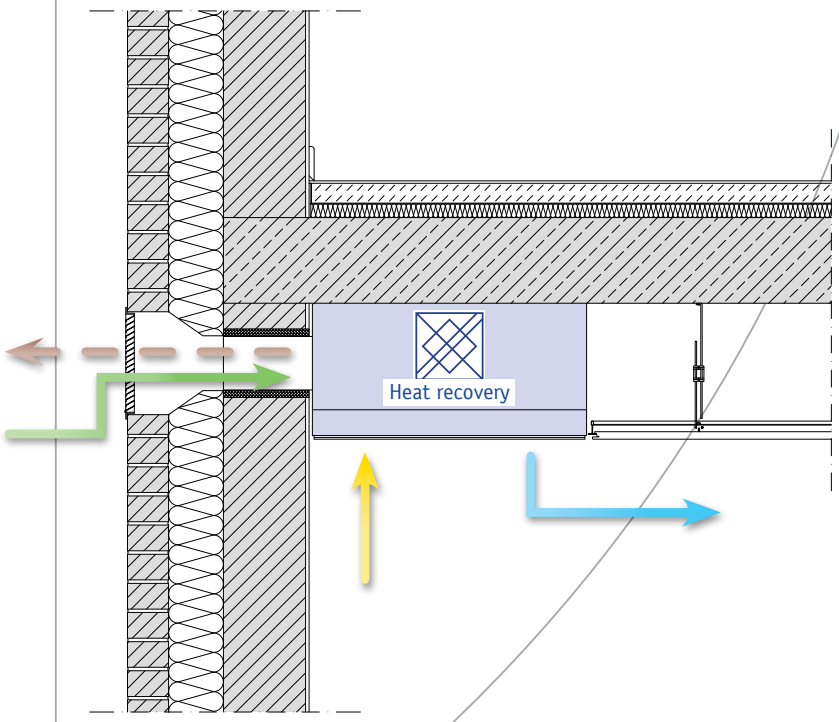
Free area required with nominal volume flow rate
≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

Free area required with nominal volume flow rate
≤ 200 m³/h → 0.025 m²
≤ 400 m³/h → 0.050 m²

Ceiling unit, horizontal section



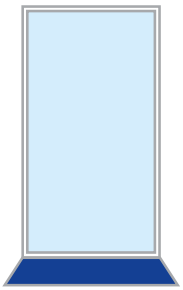
Ceiling unit, vertical section



Special requirements?
Give us a call!
We have solutions!

UNDERFLOOR UNITS

FSL-U-ZAS



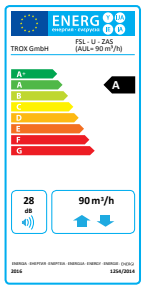
Floor to ceiling glazing

Underfloor units are ideal for rooms with floor to ceiling glazing and for rooms with a low ceiling

Supply air discharge near an external wall prevents a drop in the room air temperature near that wall when outdoor temperatures are low; similarly, it minimises the effect of solar gain in summer. Underfloor units are unobtrusive components. Air is supplied to and extracted from rooms through single grilles or roll down grilles.

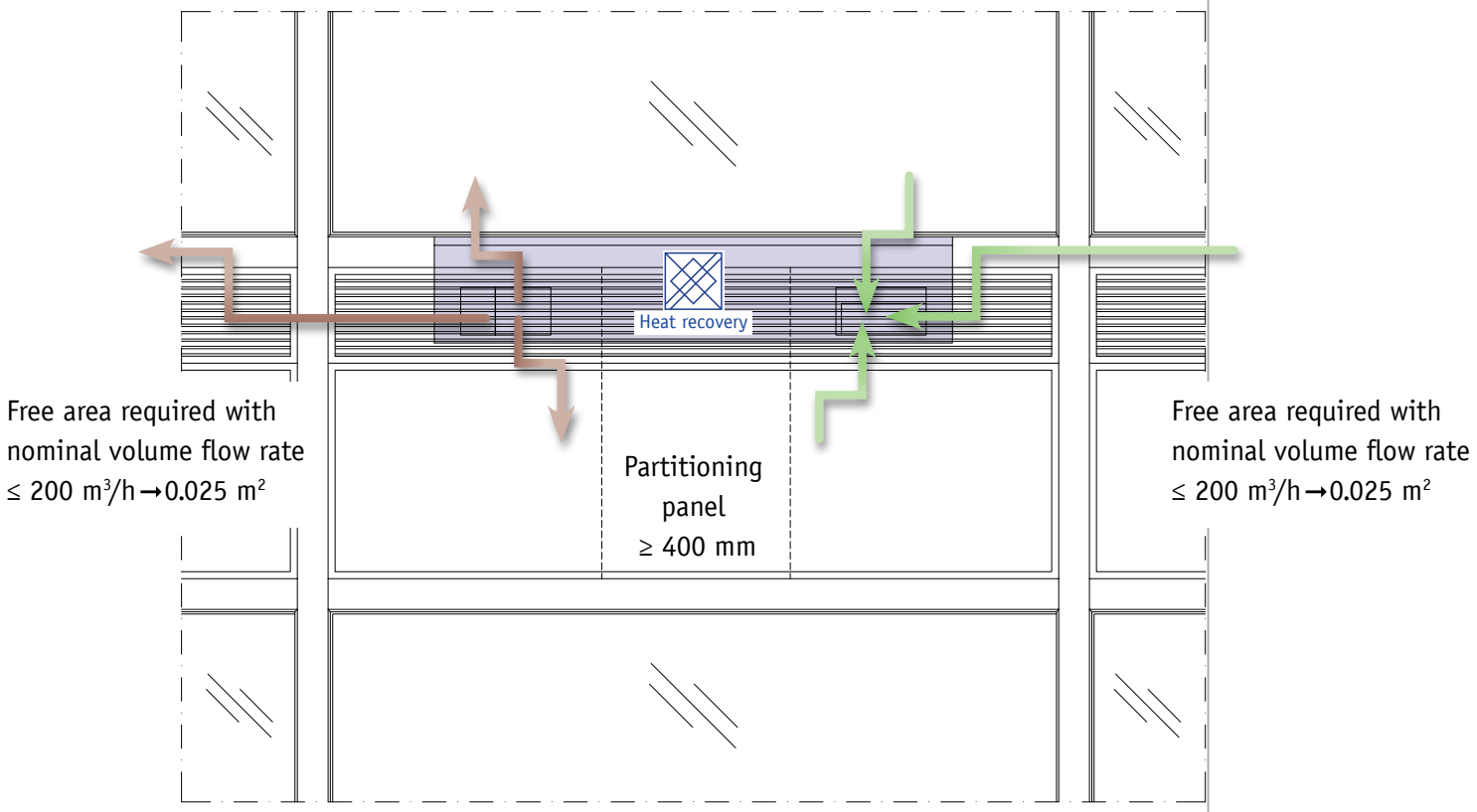
FSL-U-ZAS

- Ideal for offices
- More architectural flexibility with regard to façades
- Heating and cooling
- Additional secondary air operation for the dissipation of increased thermal loads
- Heat recovery all year round
- Condensation-free operation
- Easy and quick inspection and maintenance through the grille (no inspection access panels required)

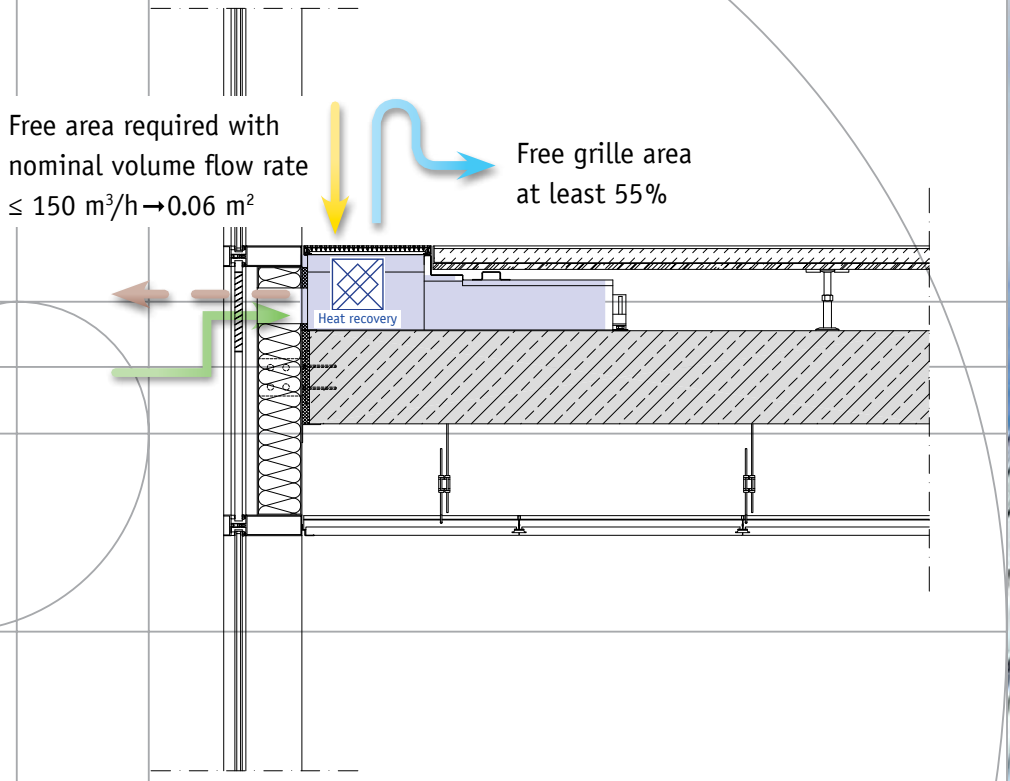


		FSL-U-ZAS
Dimensions	[mm]	B: 1100 – 1500 H: 150 (floor void) H: 196 – 300 (visible part with grille) T: 830
Volume flow rate range	[m³/h]	60 – 120
Total heating capacity up to	[W]	1100
Heating capacity per room up to	[W]	525
Total cooling capacity up to	[W]	377
Cooling capacity per room up to	[W]	280
Outdoor air filter		F7
Extract air filter		G3

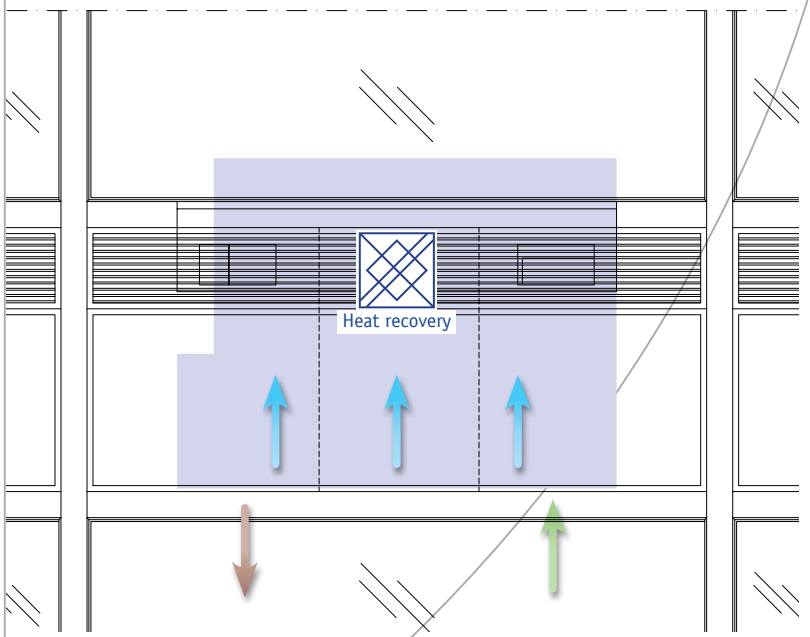
Underfloor unit as seen from outside the building



Underfloor unit, vertical section



Underfloor unit, horizontal section



180/101 mm (B x H)

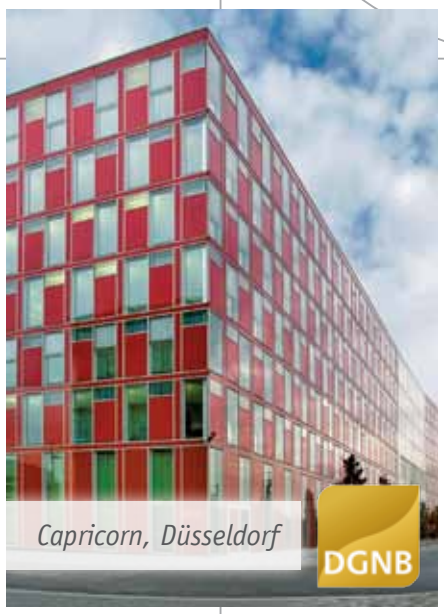
Partitioning panel ≥ 400 mm

180/101 mm (B x H)

**Special requirements?
Give us a call!
We have solutions!**

New Grammar School, Bochum

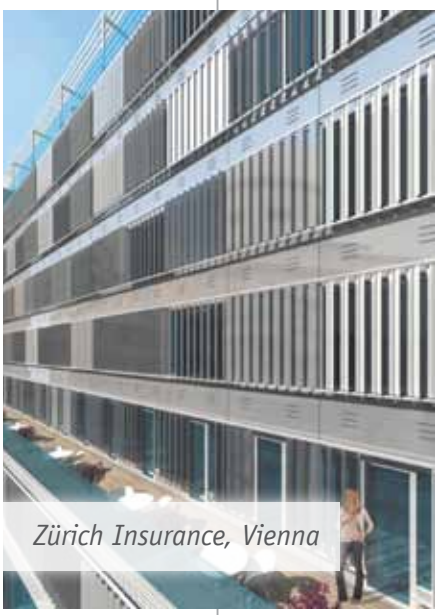
Imtech Building, Hamburg



Capricorn, Düsseldorf

DGNB

Feldbergstraße office building, Frankfurt



Zürich Insurance, Vienna

Franziska Hager School, Prien

ExpoCenter, Berlin

Wildauer Platz office building, Aachen

Bayer, Leverkusen

E.ON Energy Research Centre at RWTH University, Aachen

Thuringia Insurance, Munich

Laimer Würfel building, Munich

DEG head office, Cologne

Post Tower, Bonn

Wendelstein Grammar School, Wendelstein

BSZ, Dresden

Kennedy Tower, Düsseldorf

TROX® TECHNIK

The art of handling air

TROX Austria GmbH
Lichtblaustraße 15
1220 Wien, Österreich
Phone +43 1 250 43-0
Fax +43 1 250 43-34
www.trox.at
trox@trox.at