



Kavent BA

Decentralised façade ventilation



Reference project: Obsidian Office Building, Zurich

Decentralised façade ventilation systems Kavent BA – invisible but effective

One glance at the façade of modern office buildings is all the proof you need: glass can no longer be overlooked as a contemporary building material with today's demands, in terms of its design and functionality. Contemporary architecture demands an optimum building fit-out, over and above a successful visual appearance and, in doing so, makes exacting demands on the air conditioning.

Taking into account the health aspects, there is the issue of a suitable heating system, as well as the issue of an appropriate cooling system and above all adequate ventilation. With its **Kavent BA** range, Kampmann has an intelligent range of products that meets current demands, both in terms of air conditioning requirements and cost-effectiveness.

The benefits of decentralised ventilation with Kavent:

- The temperature and supply of fresh air can be adjusted to meet the individual needs in every different area and room.
- It is possible to select between either heating or cooling using a 4-pipe system.
- There is great potential for reducing the running time, energy- and cost-savings compared with centralised ventilation, thanks to its individual use.

Ventilate as little but as well as possible.

- By directly drawing in fresh air through the outside wall of the space to be ventilated, there is no need for extensive supply air ductwork:
 - Reduction in the extent of ductwork
 - Low investment cost
 - Lower energy consumption
 - Individual room control

Kavent BA

Compact façade ventilation



Façade ventilation for raised floors

Kavent BA is a compact underfloor ventilation system that can be fitted within the raised floor. It is ideal for providing heating or cooling and, at the same time, provides ventilation through the fresh air filter. The system provides decentralised ventilation and therefore needs no extensive and expensive ductwork systems that are difficult to clean.

Kavent BA is ideal for providing heat along expansive outside glazing and covers the higher cooling requirement in summer. Often windows cannot be opened in office buildings and the ventilation system takes over this function.

Despite its versatility, **Kavent BA** requires very little space and works highly-efficiently “concealed” within a floor duct in the raised floor.

- It is possible to combine it with other Kampmann floor duct models, such as **Katherm HK** (heating/cooling) or **Katherm QK** (heating-only) due to the standardised widths and grid dimensions
- Ideal for installation within raised floors
- Centralised ventilation and air conditioning systems are redundant, as is ductwork
- Unit lengths can be matched to the building grid and any intermediate lengths are possible
- Floor duct height **220 mm**, visible overall frame width **365 mm**
- Inspection flap is required
- Integral electronic **constant volumetric flow control**
- Simple to connect to **building management systems**

Hinged heat exchanger :



The hinged heat exchanger guarantees that the especially low-maintenance system can be simply and easily cleaned. The floor duct underneath the heat exchanger is free of internal bracketry and is thus also very easy-to-clean.

Modular façade ventilation

Modular façade ventilation system for raised and hollow floors

The Kavent BA plus model provides the option of quickly heating up the inside air with an integral secondary air fan in addition to the supply of heated or cooled fresh air.

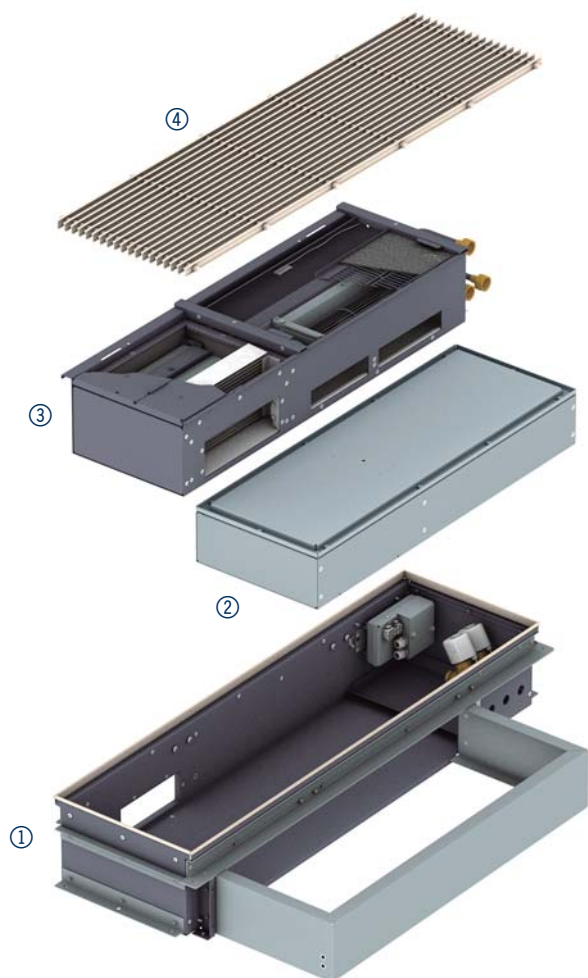
The additional secondary air fan has a very large fan cylinder for low-noise operation and can be conveniently controlled independently of the fresh air fan.

Modular construction:

Conversion of a supply air unit into a secondary air unit can be done in a few simple steps, even at a later stage, thanks to its modular design.

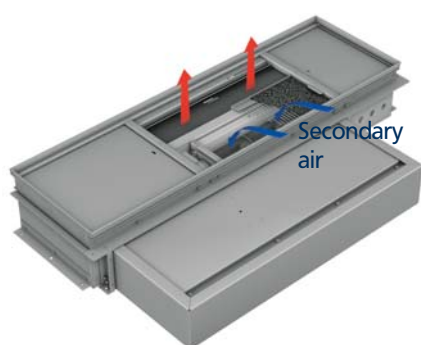
It is possible to install the modules after the first-fit phase, thereby protecting them from site dirt and dust. Once building work has been completed, the modules can be swapped to allow the system to react in a versatile way to changes of use.

- Units can be serviced or replacement parts can be fitted by simply removing the grille; **no inspection opening** needs to be made in the floor
- Floor duct height only **195 mm**, visible overall frame width **340 mm**
- Low-noise EC fresh air fan
- Available with an aluminium roll-up or linear "optiline" grille; other grille options are also available
- Simple to connect to **building management systems**
- Integral electronic **constant volumetric flow control**
- Optionally available as a **secondary air ventilation-only unit**

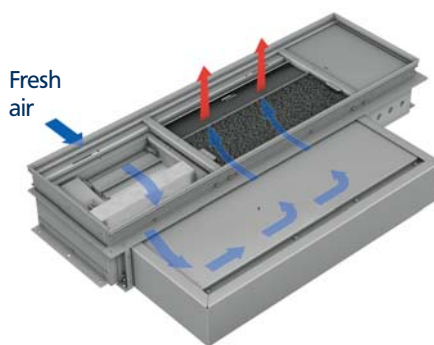


- ① Empty duct
- ② Fresh air module with EC radial fan
- ③ Secondary air module with crossflow fan and flap/filter module
- ④ Linear grille (optionally available as a roll-up grille)

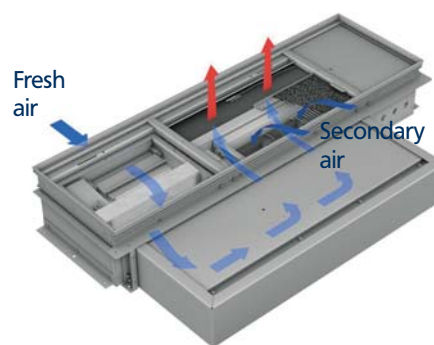
Possible operating modes :



Secondary air mode



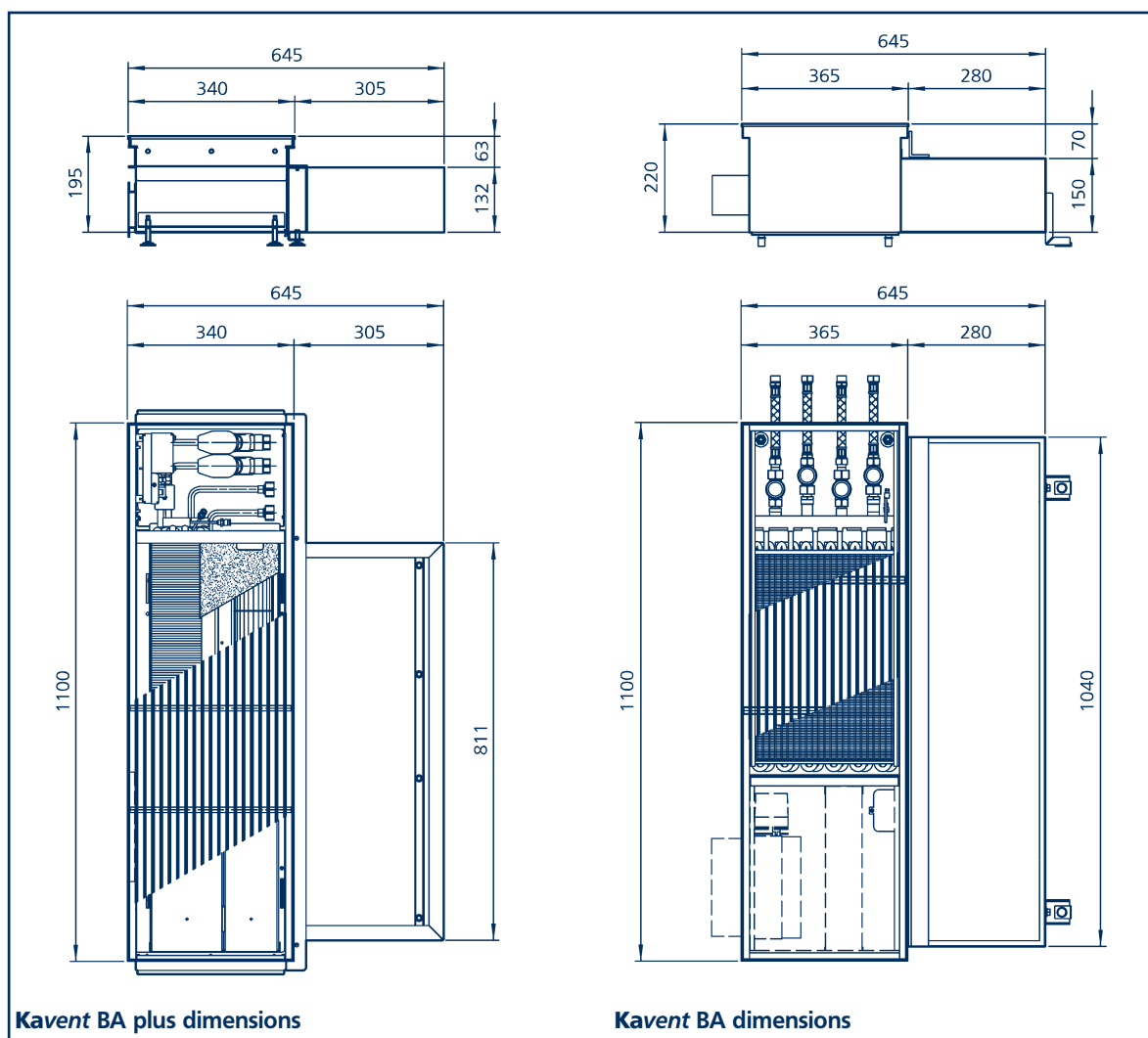
Fresh air mode



Fresh air and secondary air mode

Technical data

Decentralised façade ventilation



Kavent BA plus dimensions

Kavent BA dimensions

All dimensions are given in mm

Heat / cooling outputs - Kavent BA plus								
Switching stage		3		2		1		
Fresh air	Air volume V (m³/h)	120		90		60		
	Sound pressure level dB(A) ¹⁾	32		30		27		
Secondary air	Air volume V (m³/h)	140		110		80		
	Sound pressure level dB(A) ¹⁾	30		27		24		
Heating medium LPHW 75/65 °C	Duct length mm	Air inlet °C	Q W	t _{L2} °C	Q W	t _{L2} °C	Q W	t _{L2} °C
Fresh air mode	1100	t _{external} = -12	2430	41.6	1970	46.0	1450	52.2
Secondary air mode		t _{internal} = 22	1430	52.5	1200	54.7	860	57.5
Fresh air / Secondary air mode (Secondary air volume = 80 m³/h)		t _{external} = -12, t _{internal} = 22	2800	39.4	2370	43.2	1950	47.0
Cooling medium LPCW 17/19 °C	Duct length mm	Air inlet °C	Q W	t _{L2} °C	Q W	t _{L2} °C	Q W	t _{L2} °C
Fresh air mode	1100	t _{external} = 32, 40 % r. F.	500	19.1	390	18.6	270	18.1
Secondary air mode		t _{internal} = 26, 50 % r. F.	329	18.9	270	18.5	210	18.2
Fresh air / Secondary air mode (Secondary air volume = 80 m³/h)		t _{external/internal} = 32/26 40/50 % r. F.	635	19.9	540	19.5	435	19.1

¹⁾ at a distance of 2 m in a room with average absorption, data based on VDMA 24390, with F7 filter

Kavent BA heat outputs can be provided on request

Extent of the Kampmann order:

- Approximately 1500 **Kavent BA** plus 4-pipe heating and cooling units; fresh air supply through the external wall
- Approximately 1300 **Kavent HK** 4-pipe heating and cooling units, operating in recirculating air mode
- Approximately 500 **Kavent BA** empty floor ducts for retrofitting with functional modules

Key facts and figures about the building:

- Height of the building: 99.95 m
- Number of floors: 28
- Total floor area: 78,400 m²
- Office space for 1850 people



SYSTEMS FOR HEATING · COOLING · VENTILATING

KAMPMANN GMBH • Germany

Friedrich-Ebert-Straße 128 - 130 • 49811 Lingen (Ems)

Telefon: +49 591 7108-0 • Telefax +49 591 7108-300

info@kampmann.de • www.kampmann.de