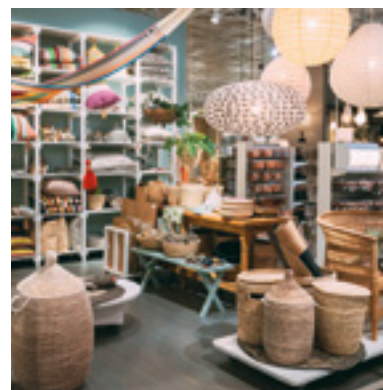


KAISAI



Ventilation - Recuperation

Air Handling Units for home, office, and shop applications

Heating solutions for you

Discover Kaisai product range



Kaisai Air Handling Units

ventilation - recuperation

Up to **92.5%** of recovered heat

The Kaisai recuperation units are highly efficient ventilation systems with a heat recovery function, designed for mechanical ventilation of houses, offices, and shops. When in operation, they exchange the exhaust air from the interior for the air drawn from the outside and purified

by means of a special high-performance filter class F7. The counter-current heat recovery exchanger prevents heat loss during the winter, by recovering up to 92.5% of the energy. The recovered heat is transferred to the purified air supplied into the rooms.

KVX 150 RHQ page 6

KVX 270 RHQ | KVX 360 RHQ | KVX 460 RHQ page 10



Recuperation

Heat recovery for home, office and shop applications

What does heat recovery consist of?

Recuperation is a type of mechanical ventilation supplemented with heat recovery. A recuperator makes it possible to control the movement of the air supplied to the room and to recover heat from the polluted air coming from inside the house. The recuperator is the heart of your house designed to recover the heat and use it to heat up the fresh air. Additionally, the filters installed inside the recuperator clean the air from viruses, pollutants, allergens and smog.



The advantages

offered by our units

The ventilation systems from Kaisai are designed and manufactured, according to the state-of-the-art trends in technology.

Our Air Handling Units are manufactured in compliance with the EcoDesign Directive, which means that they meet the requirements of the Regulation of the European Commission No. 1253/2014 – 1254/2014, being consistent with the Standard WT-2021.

Modern design

High filtration class – **F7/M5 filter**

Universal installation

Energy-efficient

Quiet operation

Intuitive control

Easy to use





Wi-Fi
READY

For home

Air Handling Unit for your home

KVX 150 RHQ



This device is dedicated for apartments, detached-, terraced-, or semi-detached houses with the total area of up to 80 m².

- Universal vertical/horizontal installation
- High-performance filters (F7 – supply, M5 – exhaust)
- Universal top/side connection ports
- Enclosed automatic control system
- Quiet operation
- Low height (size of the unit is only 18 cm)



Built-in control panel with a display performs the calibration and activation of the unit



Wall-mounted remote controller KV-S RHQ (optional)

DESIGN FEATURES

Main power supply board with a built-in display

An EC fan with backward-curved blades to provide constant airflow control

The front panel is galvanised, insulated, and painted in RAL 9003

ABS inlet/outlet connection ports

High efficiency filters compliant with ISO 16890: class F7 for supply air, class M5 for exhaust air

The external structure is based on hot-dip galvanised steel sheets

The internal structure is made of high density polystyrene

ABS plugs for inverting inlet/outlet connections for air distribution

A drain pipe for condensate

The heat exchanger – a counter-current recuperator with efficiency up to 88%

A tray for condensate collection

Intuitive control



The unit features a control panel with a display

The control system is easy to use and provides access to a technical menu and the following functions:

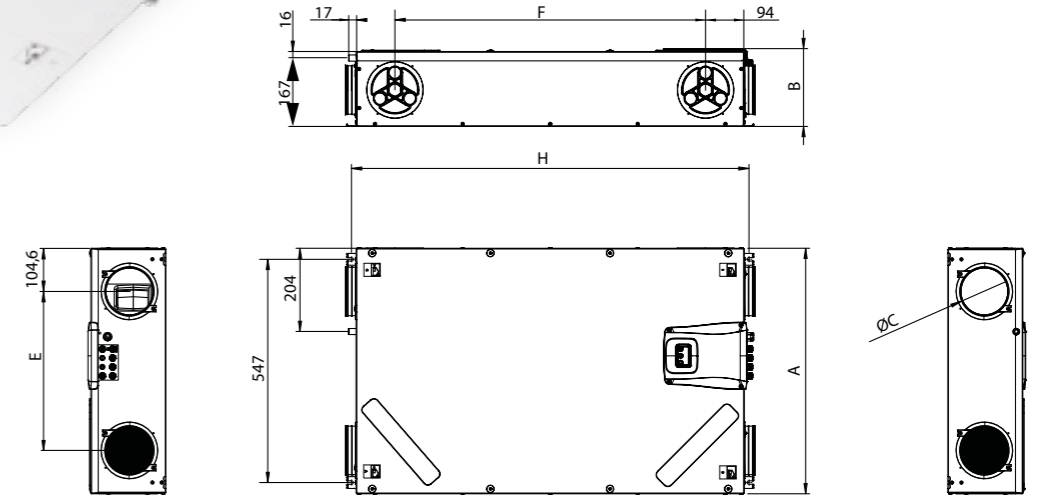
- automatic fan adjustment
- setting the time of filter replacement
- setting the automatic mode of operation by means of a built-in humidity detector
- starting an external electric heater (optional)
- visualisation of working parameters
- visualisation of alarms and messages about filter changes



The optional external KV-S RHQ remote controller activates other ventilation modes.



K VX 150 RHQ TECHNICAL SPECIFICATION



Universal installation

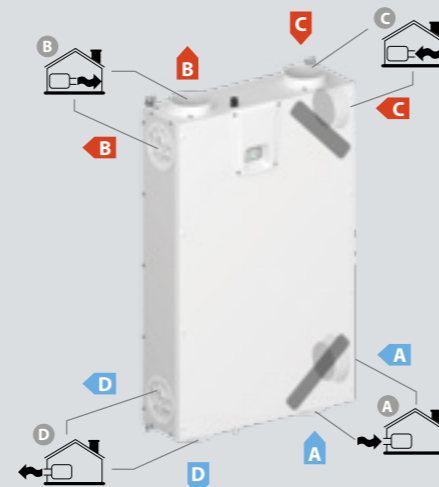
The device can be mounted both vertically or horizontally. Additionally, thanks to the ports located on both sides of the device, it is possible to install the connections both from above and from the side.



Vertical installation



Horizontal installation

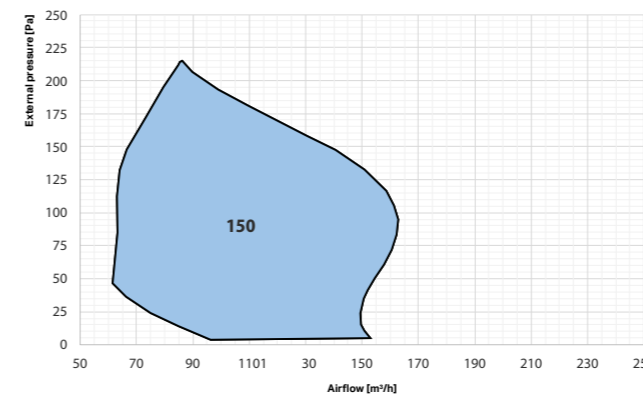


Connection options

Dimensions (mm)

Model	A	B	ø C	H	D	E	F	Weight with packaging	Weight without packaging
K VX-150 RHQ	602	191	125	975	104,6	390	762	25 kg	23 kg

CHARACTERISTICS OF AIR CONSUMPTION AND COMPRESSION RATIO



Q_{max}	The maximum flow rate at the maximum motor speed and an external static pressure of 100 Pa	SEC	Specific power consumption
Q_{ref}	Reference flow rate - 70% of Q _{max}	L_{WA}	Sound power level emitted by the unit
P_{el}	Power supply at Q _{ref} and an external static pressure of 50 Pa	L_{Ki}	Internal leakage at 100 Pa and when compared to Q _{ref}
η_{t_rvu}	Thermal efficiency at Q _{ref}	L_{Ke}	External leakage at 250 Pa and when compared to Q _{ref}
SPI	Specific power consumption	HEP	Heater power
CTRL	Control factor - centralised automatic control system		

Model	Q _{max} [m³/h]	Q _{ref} [m³/h]	P _{el} [W]	η _{t_rvu} [%]	SPI [W/m³/h]	CTRL	SEC [kWh/m²a]	Energy class	Filtration class	L _{WA} [dBa]	L _{Ki} [%]	L _{Ke} [%]	HEP [W]
K VX-150 RHQ	150	105	56	87%	0.227	0.85	-39.90	A	F7 / M5	38,0	1,8%	0,8%	-

Wi Fi
READY

For **home,**
office or **store**

Air Handling Units for your home, office or store

KVX 270 RHQ | KVX 360 RHQ | KVX 460 RHQ

The Kaisai air handling units / recuperation units are high-performance heat recovery units designed for mechanical ventilation of houses, apartments, offices, and showrooms. The units ensure economical and intuitive operation and are made of high quality materials.

- Easy installation on the wall or as a free-standing device
- High-performance filters (F7 - supply, M5 - exhaust)
- A plug and play device with a modern programming device provided on the housing
- Housing made of galvanised steel, powder painted, PS filling
- Low energy EC fans
- Quiet operation of the air handling unit
- 100% air-tight by-pass



KV-S RHQ

A modern programming device with many functions, offering the possibility of controlling and protecting the device in different working modes.



DESIGN FEATURES

High performance filters compliant with EN779: 2012;

- The filters have the following classes:
- F7 class for supply air
 - M5 class for exhaust air

An electric heater for defrosting

Temperature-resistant, with a reinforced insert, controlled by PWM signals (applicable only for the version with an increased resistance)

Filter access seal made of EPDM

Fan access seal made of EPDM

KV - front panel

- made of hot dip galvanized steel sheet painted in RAL 9003
- a satin finish obtained with epoxy paint dried in an oven at 180°C
- side panels insulated with a 25 mm-thick liner
- fully removable and insulated inspection cover with a 30 mm-thick liner

Supply air fan

- A fixed single-phase synchronous EC motor with overheating protection for the motor and its electronic components
- High performance ABS fans with backward-curved blades

Secondary by-pass throttling valve

KV-S controller

ABS ports for inlet/outlet airflow connections

Exhaust air fan

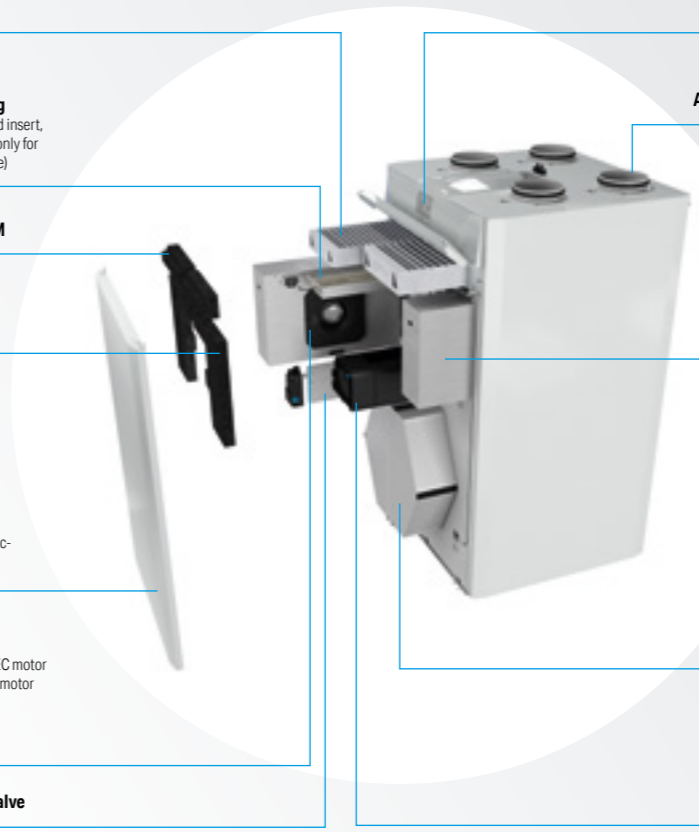
- A fixed single-phase synchronous EC motor with overheating protection for the motor and its electronic components
- High performance ABS fans with backward-curved blades

A highly efficient heat recovery exchanger

with exchangeable PET counter-current plates. The achievable efficiency can be higher than 90%, since it provides a counter-current heat transfer between the two airflows at different inlet temperatures. The static heat recovery units do not contain any moving parts and guarantee highly reliable and safe operation. To increase the efficiency of the heat exchanger, the surfaces of the plates feature special whirl vanes.

By-pass

Made entirely of ABS and powered by a Belimo rotor



Intuitive control



Modern controller **KV-S RHQ**

A programming device with many functions, offering the possibility of controlling and protecting the device in various working modes:

- A weekly mode with individual adjustment
- Fast master modes Party / Holidays
- The possibility to connect humidity, CO₂ concentration, and differential pressure sensors
- The possibility of moving the programming device anywhere within the building
- An intuitive menu based on icons
- Touch pad control



Holidays mode



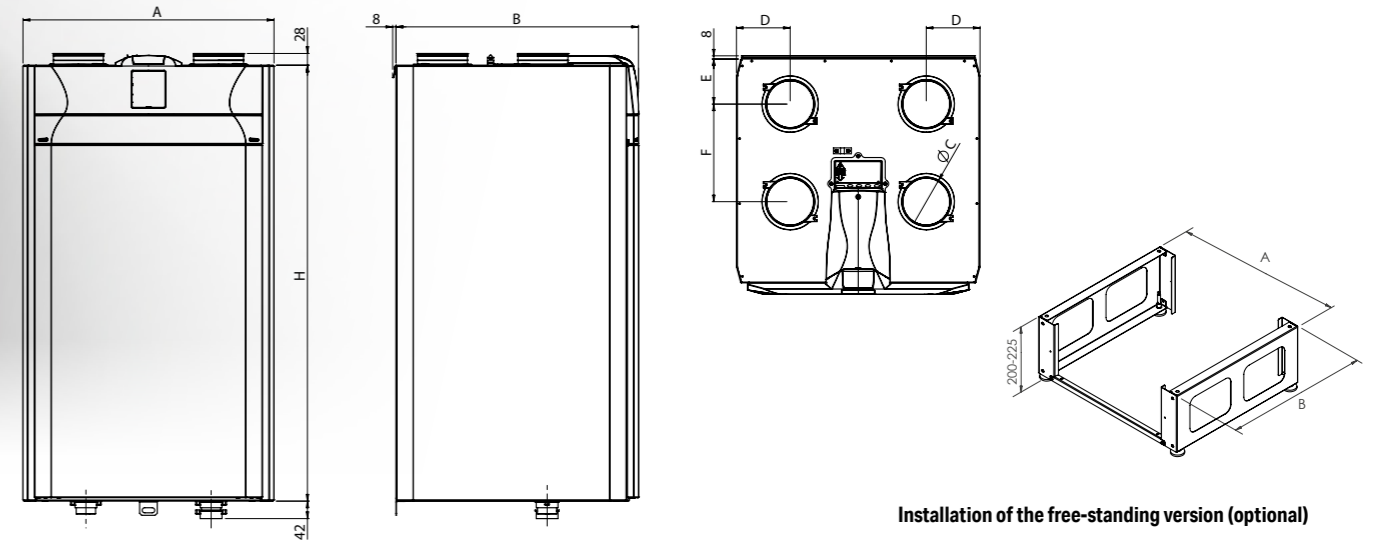
Party mode



Automatic mode

KVX 270 RHQ | KVX 360 RHQ | KVX 460 RHQ

TECHNICAL SPECIFICATION



Installation of the free-standing version (optional)

Screwed-on support feet and a lifting structure. The height of the support feet can be adjusted in the range of 200-225 mm.

Dimensions (mm)

Model	A	B	ø C	H	D	E	F	Weight with packaging	Weight without packaging
KVX-270 RHQ	547	580	160	1041	106	111	240	64 kg	48 kg
KVX-360 RHQ	547	630	160	1041	106	111	290	66 kg	50 kg
KVX-460 RHQ	660	680	180	980	147	126	305	75 kg	59 kg

Frame dimensions (mm)

Model	A	B
KVX-270 RHQ	523	534
KVX-360 RHQ	523	584
KVX-460 RHQ	583	634

Universal installation

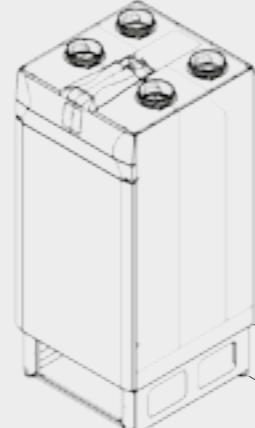
In addition to the standard on-wall installation, it is also possible to mount the device as a free-standing unit, using an optional frame.



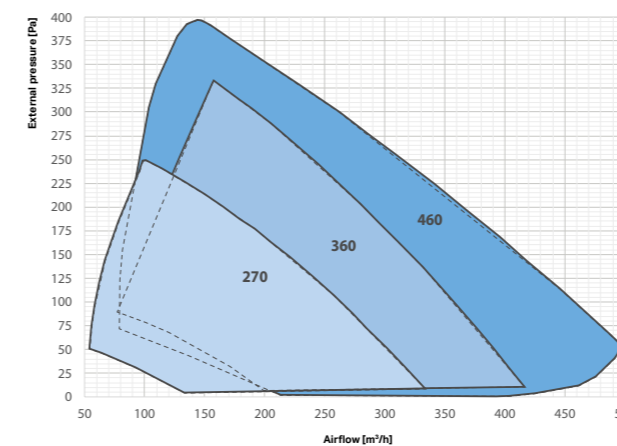
Wall-mounted



Stand-alone



CHARACTERISTICS OF AIR CONSUMPTION AND COMPRESSION RATIO



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Model	Q _{max} [m³/h]	Q _{ref} [m³/h]	P _{el} [W]	η _{t_rvu} [%]	SPI [W/m³/h]	CTRL	SEC [kWh/m³a]	Energy class	Filtration class	L _{wa} [dBa]	L _{Ki} [%]	L _{Ke} [%]	HEP [W]
KVX-270 RHQ	270	190	35	86.5%	0.184	0.95	-39.3	A	F7 / M5	46.6	0.4%	1.4%	900
KVX-360 RHQ	360	250	53	90.1%	0.209	0.95	-39.6	A	F7 / M5	49.0	0.7%	2.7%	1250
KVX-460 RHQ	460	320	76	88.6%	0.237	0.95	-38.4	A	F7 / M5	47.9	0.3%	0.7%	1600

Wi-Fi control

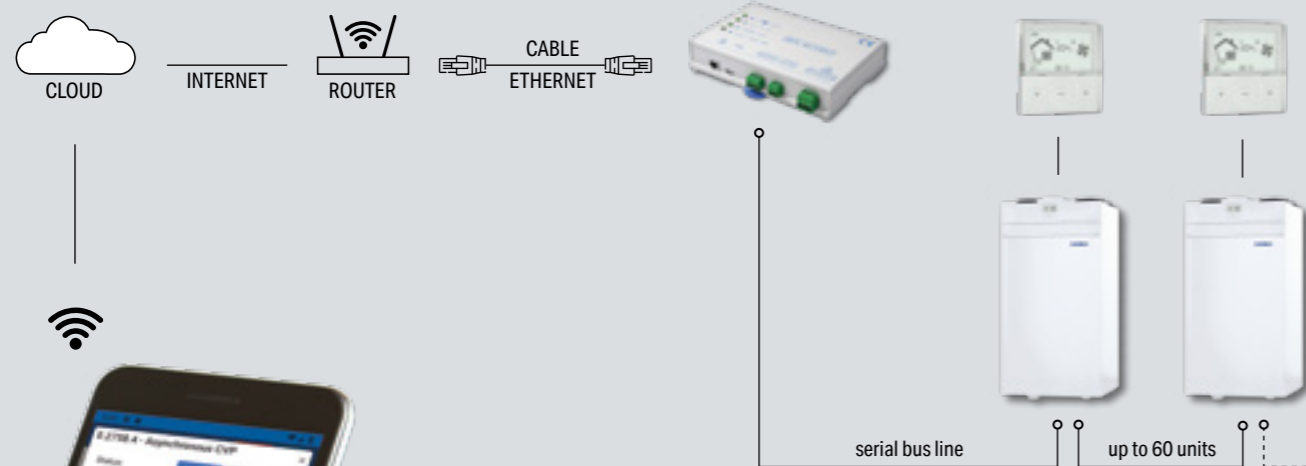
KVX Wi-Fi module (optional)

The KVX Wi-Fi expansion module allows the remote control of the control panel using modern wireless tools (smartphone, tablet).

The user can remotely enter and check the working parameters of the recuperator, after installing the module, connecting it to a router, and downloading the free software.



System configuration



Changing the operating mode, temperature and fan speed

a mobile app for Android and iOS

monitoring basic information about the operating device

Download the app by scanning the QR code





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