Ventilation - Recuperation
Air Handling Units for home, office, and shop applications
Heating solutions for you
Discover Kaisai product range

Heat pumps

Air conditioners with heating function

Air curtains
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.

**Kaisai Air Handling Units**

**ventilation - recuperation**

**Up to 92.5% of recovered heat**

**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 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**
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

ABS inlet/outlet connection ports

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 drawer for condensate collection

A tray for condensate collection

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

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

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

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

**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.

**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
**TECHNICAL SPECIFICATION**

**Qmax**
The maximum flow rate at the
maximum motor speed and an
external static pressure of 100 Pa

**Specific power consumption (SEC)**

**Qref**
Reference flow rate - 70% of Qmax

**LWA**
Sound power level emitted by the unit

**Pel**
Power supply at Qref and an
external static pressure of 50 Pa

**Internal leakage at 100 Pa and
when compared to Qref**

**ηt_rvu**
Thermal efficiency at Qref

**LKI**

**SPI**
Specific power consumption

**CTRL**
Control factor - centralised
automatic control system

**LKE**
External leakage at 250 Pa

**HEP**
Heater power

**Model Qmax [m³/h] Qref [m³/h] Pel [W] ηt_rvu [%] SPI [W/m³/h] CTRL SEC [kWh/m²a] Energy class Filtration class Lmax [dBa] LKv [%] LKu [%] HEP [W]**

KVX-150 RHQ 150 105 56 87% 0.227 0.85 -39.90 A F7 / M5 38.0 1.8% 0.8% -

**Dimensions (mm)**

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>H</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>Weight with packaging</th>
<th>Weight without packaging</th>
</tr>
</thead>
<tbody>
<tr>
<td>KVX-150 RHQ</td>
<td>602</td>
<td>191</td>
<td>125</td>
<td>975</td>
<td>104.6</td>
<td>390</td>
<td>762</td>
<td>25 kg</td>
<td>23 kg</td>
</tr>
</tbody>
</table>

**CHARACTERISTICS OF AIR CONSUMPTION AND COMPRESSION RATIO**
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 galvanized 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;
- 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

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 swirl vanes.

By-pass
Made entirely of ABS and powered by a Belimo rotor

KV-S controller
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

**Modes:**
- Holidays mode
- Party mode
- Automatic mode

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**

<table>
<thead>
<tr>
<th>Model</th>
<th>Q(_\text{max}) [m(^3)/h]</th>
<th>Q(_\text{ref}) [m(^3)/h]</th>
<th>(P_e) [W]</th>
<th>(\eta_{\text{rvu}}) [%]</th>
<th>SPI [W/m(^3)/h]</th>
<th>SEC [kWh/m(^2)/a]</th>
<th>Energy class</th>
<th>Filtration class</th>
<th>L(_\text{va}) [dB(A)]</th>
<th>L(_K) [%]</th>
<th>L(_K) [%]</th>
<th>HEP [W]</th>
</tr>
</thead>
<tbody>
<tr>
<td>KVX-270 RHQ</td>
<td>270</td>
<td>190</td>
<td>35</td>
<td>86.5%</td>
<td>0.184</td>
<td>-39.3</td>
<td>A</td>
<td>F7 / M5</td>
<td>46.6</td>
<td>0.4%</td>
<td>1.4%</td>
<td>900</td>
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<tr>
<td>KVX-360 RHQ</td>
<td>360</td>
<td>250</td>
<td>53</td>
<td>90.1%</td>
<td>0.209</td>
<td>-39.6</td>
<td>A</td>
<td>F7 / M5</td>
<td>49.0</td>
<td>0.7%</td>
<td>2.7%</td>
<td>1250</td>
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<tr>
<td>KVX-460 RHQ</td>
<td>460</td>
<td>320</td>
<td>76</td>
<td>88.6%</td>
<td>0.237</td>
<td>-38.4</td>
<td>A</td>
<td>F7 / M5</td>
<td>47.9</td>
<td>0.3%</td>
<td>0.7%</td>
<td>1600</td>
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</table>
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

- **Cloud**
- **Internet**
- **Router**
- **Ethernet**
- **Serial bus line**
- **Up to 60 units**

**Download the app**

by scanning the QR code

- **Android**
- **iOS**

Monitoring basic information about the operating device

**Changing the operating mode, temperature, and fan speed**
# Product price list

## 2020

<table>
<thead>
<tr>
<th>Model</th>
<th>Net price EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>KVX-150 RHQ</td>
<td>2 380</td>
</tr>
<tr>
<td>KVX-270 RHQ</td>
<td>3 750</td>
</tr>
<tr>
<td>KVX-360 RHQ</td>
<td>3 870</td>
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<tr>
<td>KVX-460 RHQ</td>
<td>4 070</td>
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</table>

### Accessories

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Net price EUR</th>
</tr>
</thead>
<tbody>
<tr>
<td>KV-S RHQ</td>
<td>On-wall controller for model 150</td>
<td>150</td>
</tr>
<tr>
<td>KV-ES-SU</td>
<td>Humidity sensor</td>
<td>80</td>
</tr>
<tr>
<td>KVX WIFI</td>
<td>Wi-Fi module</td>
<td>500</td>
</tr>
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### Base

<table>
<thead>
<tr>
<th>Model</th>
<th>Net price EUR</th>
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<tbody>
<tr>
<td>KV-P 270 RHQ</td>
<td>170</td>
</tr>
<tr>
<td>KV-P 360 RHQ</td>
<td>175</td>
</tr>
<tr>
<td>KV-P 460 RHQ</td>
<td>180</td>
</tr>
</tbody>
</table>

### Filters

<table>
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<tr>
<th>Model</th>
<th>Description</th>
<th>Net price EUR</th>
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<tbody>
<tr>
<td>KV-F 150 RHQ</td>
<td>Air filter F7/M5 - for model 150</td>
<td>130</td>
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<tr>
<td>KV-F-270 RHQ</td>
<td>Air filter F7/M5 - for model 270</td>
<td>137</td>
</tr>
<tr>
<td>KV-F 360 RHQ</td>
<td>Air filter F7/M5 - for model 360</td>
<td>145</td>
</tr>
<tr>
<td>KV-F 460 RHQ</td>
<td>Air filter F7/M5 - for model 460</td>
<td>160</td>
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The purchase prices contained in the price list are all net prices in EUR. The price-list does not constitute an offer within the meaning of art. 66 of the Commercial Code, while all photos of the products are only examples and provided for the purpose of presenting the selected models. The actual products may differ from the ones demonstrated in the pictures. The products are subject to continuous improvement. Therefore, Kaisai reserves the right to change their prices and technical parameters without prior notice. The current price list is no longer valid.

This document is provided for the purpose of giving information about and presenting air handling units for ventilation / heat recovery manufactured by Kaisai. Since the technologically advanced production process necessitates its continuous control and improvement, the information contained in this publication may be subject to change. The net prices provided are catalogue prices for the products and do not include any discounts or installation costs. The technical data and prices included in the folder are subject to change. Up-to-date information is always available on www.kaisai.com.