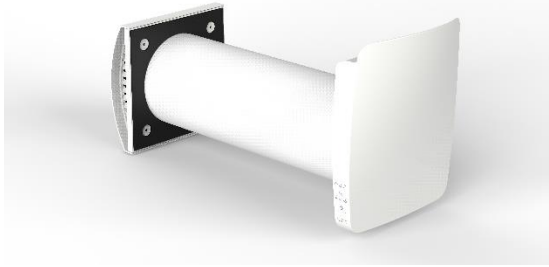


Data Sheet: Kers+ Single-room Heat recovery units

Card Code: XTVRKSrev05 – Date 05/30/2023

Family: Heat recovery units

Description



The KERS+ series consists of dual-flow mechanical ventilation appliances featuring heat recovery, to be installed in a special hole in the perimeter wall.

The appliances are designed to supply the single room with the required air renewal flow rate, to recover the heat from the expelled exhaust air, and transfer it to the air introduced into the room.

Kers+ comes fitted with a windproof damper as required by the CE 13141-8 standard

Each unit is equipped with:

- Energy saving EC fans with speed control.
- Transparent on-board display featuring touch keys
- Ceramic heat exchanger with hexagonal cells, with up to 97% efficiency, featuring anti-bacterial treatment.
- G3 class filters installed on both sides of the exchanger, to clean the intake air and protect the exchanger.
- Included remote that allows you to control the appliance without wiring ducts.
- Sound insulation from external noise of 42 dB in accordance with building regulation 5/12/97
- Sectionable plastic duct with sound-absorbing material.
- Inlet and extraction grids.
- Automatically opening wind damper
- Dusk sensor for automatic night dimming function
- Humidity sensor for automatic activation of ventilation based on ambient humidity.

All units being compliant with European directives are CE-marked and provided with the relative conformity certificate.

Field of use

KERS+ units are designed to perform the following functions in each individual room:

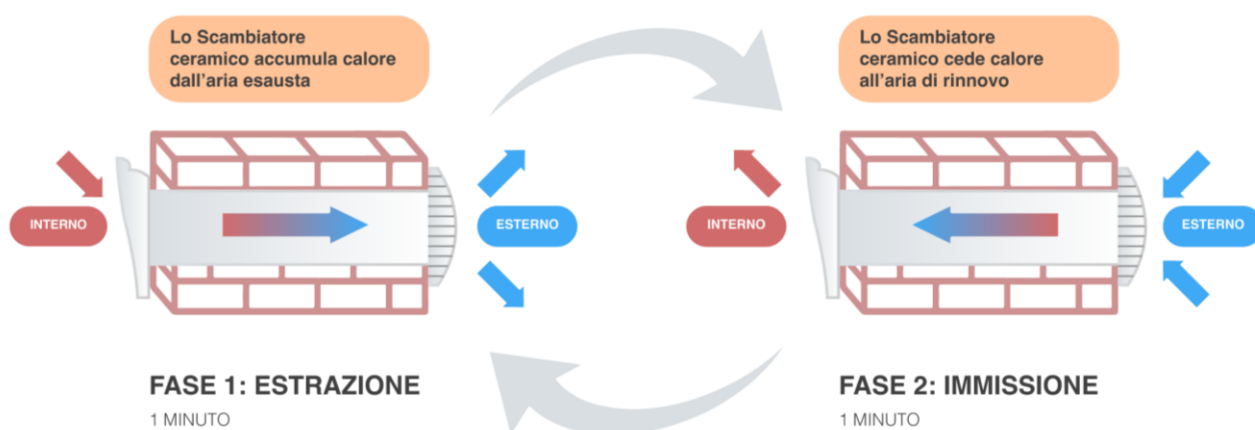
- Supplying fresh air, taken from outside the building, with a flow rate of up to 50 m³/h of fresh air.
- Recovering up to 97% of the heat from the stale air extracted from the rooms to heat (in winter) and cool (in summer) the new air, before introducing it into the room, ensuring considerable energy savings.
- Filter air coming from outside and air extracted from the locals.

The units are designed for use in residential construction, and in particular to ventilate rooms for which it is not considered useful to install centralized systems.

They can be installed through walls and are therefore particularly suitable for the recovery and partial renovation of rooms in which mold forms due to insufficient ventilation.

The maximum air flow of each unit is 50 m³/h. Thanks to their alternating-mode operation (50% of the time in extraction and 50% in introduction), the effective exchange rate is 25 m³/h. The Kers 50 recuperators provide air exchange in rooms with an up to 18 m² floor area (calculated considering an air renewal rate of 0.5 vol/h and a 2.7 m internal height of the room).

Operation modes



The appliance is equipped with a fan with low consumption EC motor, capable of reversing the flow of air inside the recuperator, operating in two phases:

Step 1:

The fan extracts the hot air from the room and sends it outside, through the recuperator. This cools the air and retains the heat in it.

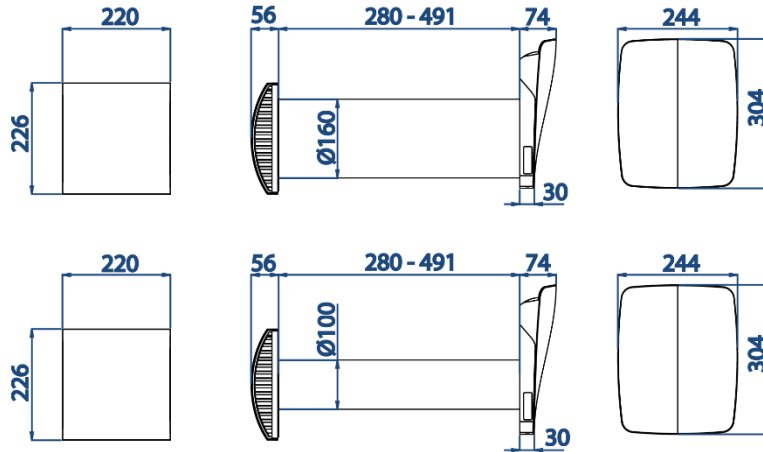
Step 2:

The fan reverses the flow and draws in cool air from outside. This, in contact with the recuperator, heats up before entering the room.

The standard remote control enables the user to:

- Select one of the four fan speeds according to the required parts.
- Activate automatic humidity control.
- Activate the automatic night dimming function via the on-board dusk sensor. In the dark, the device operates at super-silence speed, while in the light it returns to normal speed.
- Set an extraction-only boost at maximum speed for 30 minutes, for rapid odor removal.
- Use only the single-room recuperator in the extraction function or in the input function only.

Technical drawing



Technical data.

Description		KERS+ 50	KERS+ 25
Code		VRKS52	VRKS27
Air flow rate at maximum speed	mc/h	50	25
Air exchange	mc/h	25	12,5
Efficiency of ceramic recuperator	%	Up to 97%	Up to 97%
Operating air temperature	°C	-20 / + 40	-20 / + 40
Electric power consumption speed. Max*	W	4.97	3.35
Electric current absorbed speed. Max*	A	0.024	0.016
On-board filters	-	2	2
Filtration class EN 779		G3	G3
Power	V/ph/Hz	220-240 Vac/1/50	220-240 Vac/1/50
Hole in the wall (inclined 2° outwards)	mm	162	102
Minimum wall thickness	mm	280	280
Protection	-	IP X4	IP X4

Data according to European Directive 1253/2014 – Ecodesign ventilation units

Flow rates and noise levels.

SPEED.		u.m.	KERS+ 50	KERS+ 25
			VRKS52	VRKS27
Maximum	Air flowrate	m ³ /h	50	25
	Effective exchange rate	m ³ /h	25	12,5
	Sound pressure at 3 m	dB(A)	26.4	28.5
Media	Air flowrate	m ³ /h	30	15
	Effective exchange rate	m ³ /h	15	7.5
	Sound pressure at 3 m	dB(A)	16.4	18.6
Minimum	Air flowrate	m ³ /h	19	9
	Effective exchange rate	m ³ /h	9.5	4.5
	Sound pressure at 3 m	dB(A)	7.6	7.8
Super minimum	Air flowrate	m ³ /h	12	7
	Effective exchange rate	dB(A)	6	3.5
	Sound pressure at 3 m	dB(A)	5	4
Acoustic attenuation of outside noise when the fan is stopped		dB(A)	42	42

Noise calculated as a point source in free field (Q=1)

Specification items

VRKS52 – KERS+ 50 single-room heat recovery unit with remote control

Single-room heat recovery unit, to be inserted in perimeter walls, featuring highly efficient hexagonal cell ceramic heat exchanger, capable of treating a maximum flow rate of 50 mc/h of air alternately in intake and extraction, for an internal usable volume of up to 50 m³. Equipped with automatic windtight closure as required by the CE13141-8 standard, night function (nighttime noise attenuation) and humidity function. Sound pressure at 3 m less than 29 dB according to UNI EN ISO 3746:1997, acoustic attenuation of external noise of 42 dB, energy saving EC motor, power consumption less than 4.97 W. Supplied with remote control.

VRFS27 – KERS+ 25 single-room heat recovery unit with remote control

Single-room heat recovery unit, to be inserted in perimeter walls, featuring highly efficient hexagonal cell ceramic heat exchanger, capable of treating a maximum flow rate of 25 mc/h of air alternately in intake and extraction, for a usable internal volume up to 25 m³. Equipped with automatic windtight closure as required by the CE13141-8 standard, night function (nighttime noise attenuation) and humidity function. Sound pressure at 3 m less than 29 dB according to UNI EN ISO 3746:1997, acoustic attenuation of external noise of 42 dB, energy saving EC motor, power consumption less than 3.35 W. Supplied with remote control.

Installation Diagram and Charts

To install the recovery unit, a through hole with a minimum diameter of 162 mm for KERS+ 50 and 102 mm for KERS+ 25 must be drilled in a perimeter wall, inclined outwards by 2° or 3°.

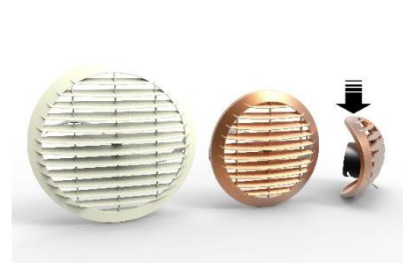
The duct can be adapted to the actual wall thickness. Only the 220-240 Vac power supply is required via a 2x1.5 mm² section cable.

The adjustment takes place with the retractable buttons on the device, with the remote control included in the package or with a free remote contact.

Installation from inside using flexible grids

For the installation of grilles on inaccessible external walls, special flexible grilles are available as an accessory, allowing to installing the device from the inside. The grids are as follows:

CODE	DESCRIPTION
VTGF03	EXTERNAL FLEXIBLE GRILLE DN 160 WHITE
VTGF04	FLEXIBLE EXTERNAL GRID DN 160 COPPERY
VTGF01	EXTERNAL FLEXIBLE GRILLE DN 100 WHITE
VTGF02	EXTERNAL FLEXIBLE GRID DN 100 COPPERY



Warnings

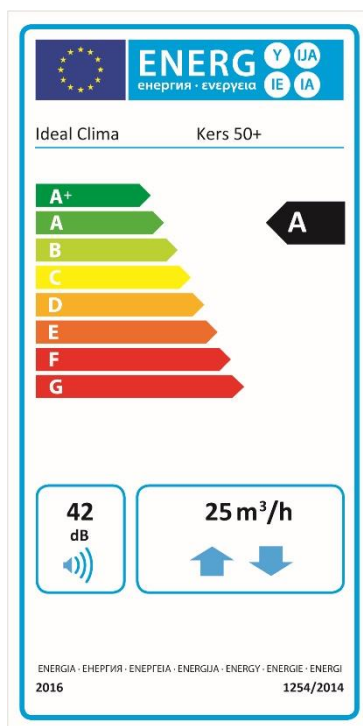


There is a risk during installation that the grille will fall to the outside. Make sure that this eventuality does not cause damage to people or property by fencing off the area outdoor if necessary.

The grill supplied with the appliance must not be used if you opt for the flexible grills.

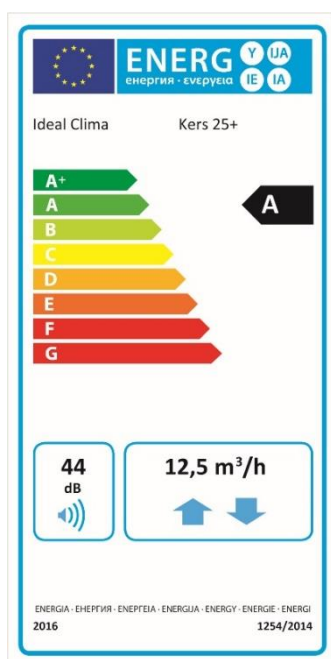
Data for ENERGY LABEL purposes

Brand		Ideal Clima		
Model		VRKS52 – Kers+ 50		
Specific Energy Consumption (SEC) ,	kWh/(m ² .a)	Cold	Tempered	Hot
		-84.9	-41.4	-16.5
Type of ventilation unit	-----	Bidirectional		
Installed drive type	-----	Multiple Speeds		
Type of heat recovery ventilation	-----	Regeneration		
Efficiency Δt 13°C [ηt]	%	83%		
Maximum flow rate	m ³ /h	25		
Electrical power consumption,	W	5		
Sound Power Level,	dB(A)	42		
Reference flow rate,	m ³ /s	0.0048		
Reference pressure difference,	Pa	0		
Specific power input (SPI),	W/(m ³ /h)	0.2		
Type of control	-----	Local Environment Control		
Maximum internal leakage	%	1,5 %		
Maximum external leakage	%	0 %		
Mixing rate of bidirectional units, %	%	1%		
Airflow sensitivity variations of +20 Pa and -20 Pa	m ³ /h	0.55		
Indoor/outdoor air tightness,	m ³ /h	0.6		
Internet address		www.idealclima.eu		
Annual electricity consumption (AEC), per 100 sqm	kWh electricity/a	1.6		
Annual heating saved (AHS).	kWh primary energy/sq.a	Cold	Tempered	Hot
		89.0	45.5	20.6



Data for ENERGY LABEL purposes

Brand		Ideal Clima			
Model		VRKS27 – Kers+ 25			
Specific Energy Consumption (SEC) ,	kWh/(m ² .a)	Cold -82.2	Tempered -39.3	Hot -14.7	
Type of ventilation unit	-----	Bidirectional			
Installed drive type	-----	Multiple Speeds			
Type of heat recovery ventilation	-----	Regeneration			
Efficiency Δt 13°C [η]	%	80%			
Maximum flow rate	m ³ /h	12,5			
Electrical power consumption,	W	3.4			
Sound Power Level,	dB(A)	44			
Reference flow rate,	m ³ /s	0.0027			
Reference pressure difference,	Pa	0			
Specific power input (SPI),	W/(m ³ /h)	0.27			
Type of control	-----	Local Environment Control			
Maximum internal leakage	%	1,5 %			
Maximum external leakage	%	0 %			
Mixing rate of bidirectional units, %	%	1%			
Airflow sensitivity variations of +20 Pa and -20 Pa	m ³ /h	0.41			
Indoor/outdoor air tightness,	m ³ /h	0.49			
Internet address		www.idealclima.eu			
Annual electricity consumption (AEC), per 100 sqm	kWh electricity/a	2.2			
Annual heating saved (AHS).	kWh primary energy/sq.a	Cold 87.8	Tempered 44.9	Hot 20.3	





Heat recovery ventilation

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