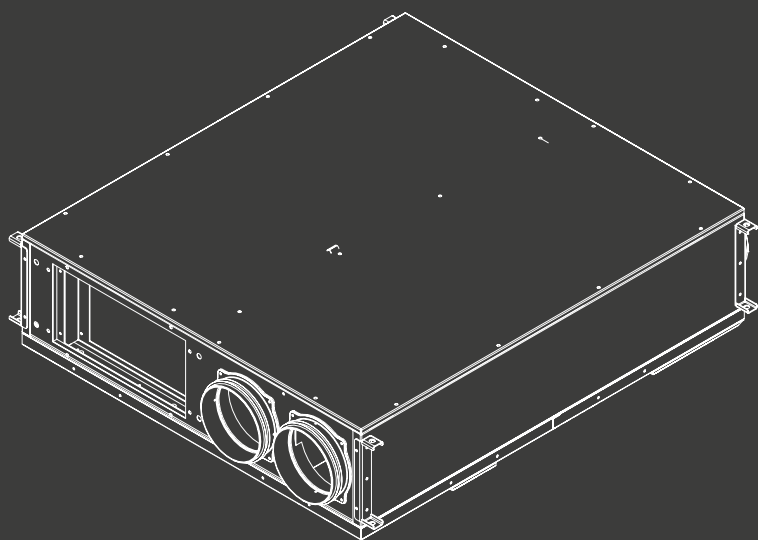




07/2026



KHRD-HP
Heat Recovery Unit
Dehumidification / Thermodynamic integration
Horizontal mounting

First of all, we would like to thank you for having chosen one of our units.

As you will realise, you have made a winning choice by purchasing a product that represents the state of the art in domestic air-conditioning technology.

Thanks to the product you have purchased and by following the suggestions in this manual, you will benefit from optimal environmental conditions with the lowest possible energy investment.

Giacomini SpA

Compliance

This unit complies with European directives:

- Low Voltage Directive 2014/35/EU by transposition of the following technical standards: EN 60335-1:2012 + EN 60335-2-80:2003
- EMC Directive 2014/30/EU, by transposition of technical standards: EN 55014-1:2021 + EN 55014-2:2021
- + EN IEC 61000-3-2:2019+A1:2021 + EN 61000-3-3:2013+A2:2021
- RoHS Directive 2011/65/EU by transposition of the following technical standards: EN IEC 63000:2018
- European regulation ErP Ecodesign No. 1253/2014 and 1254/2014

Markings



INDEX

Compliance	2
Markings.	2

1 General features	4
1.1 Description	4
1.2 Structure.	4
1.3 Construction features	6
1.4 Compatible accessories	6

2 Technical features.	7
2.1 Technical data.	7
2.2 Dimensions	9
2.3 Refrigeration diagrams	11
2.4 Ecodesign classification.	12

1 GENERAL FEATURES

1.1 Description

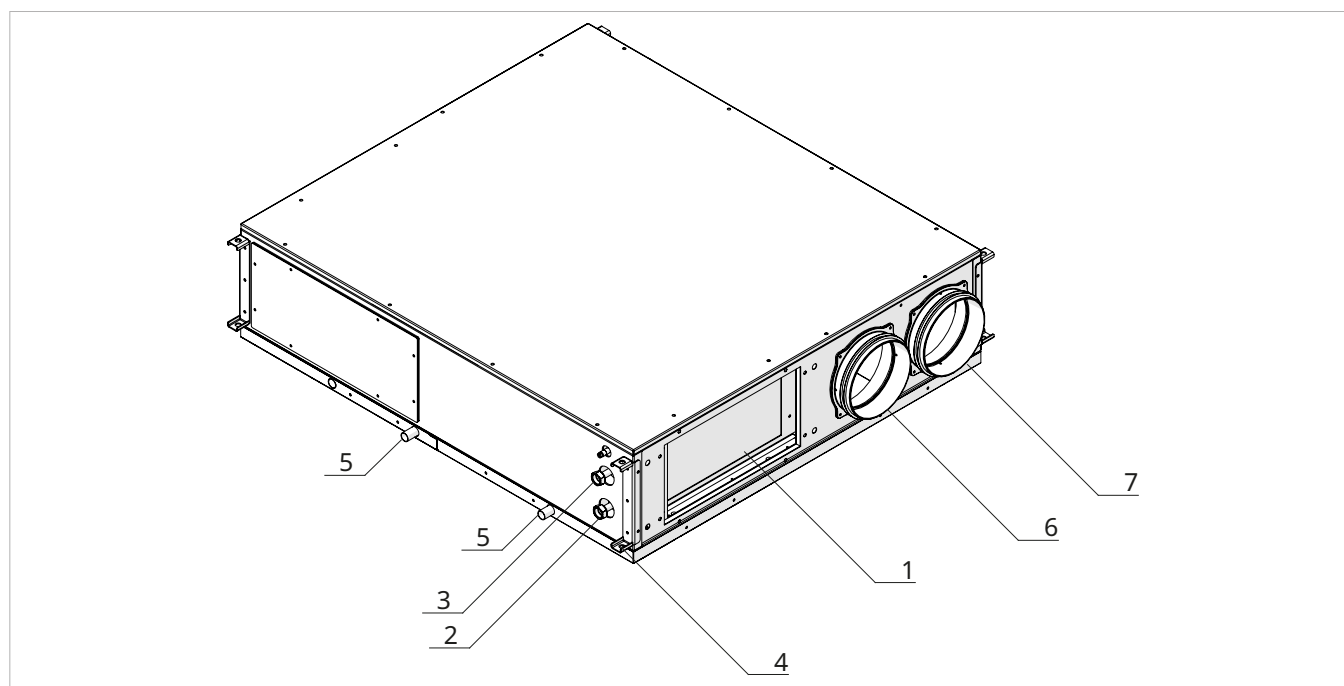
KHRD-HP is a controlled mechanical ventilation unit with high-efficiency heat recovery unit, air treatment section with dehumidification, cooling and heating.

The unit is particularly suitable for residential, commercial or collective residential buildings and is supplied plug-and-play for quick and simplified installation.

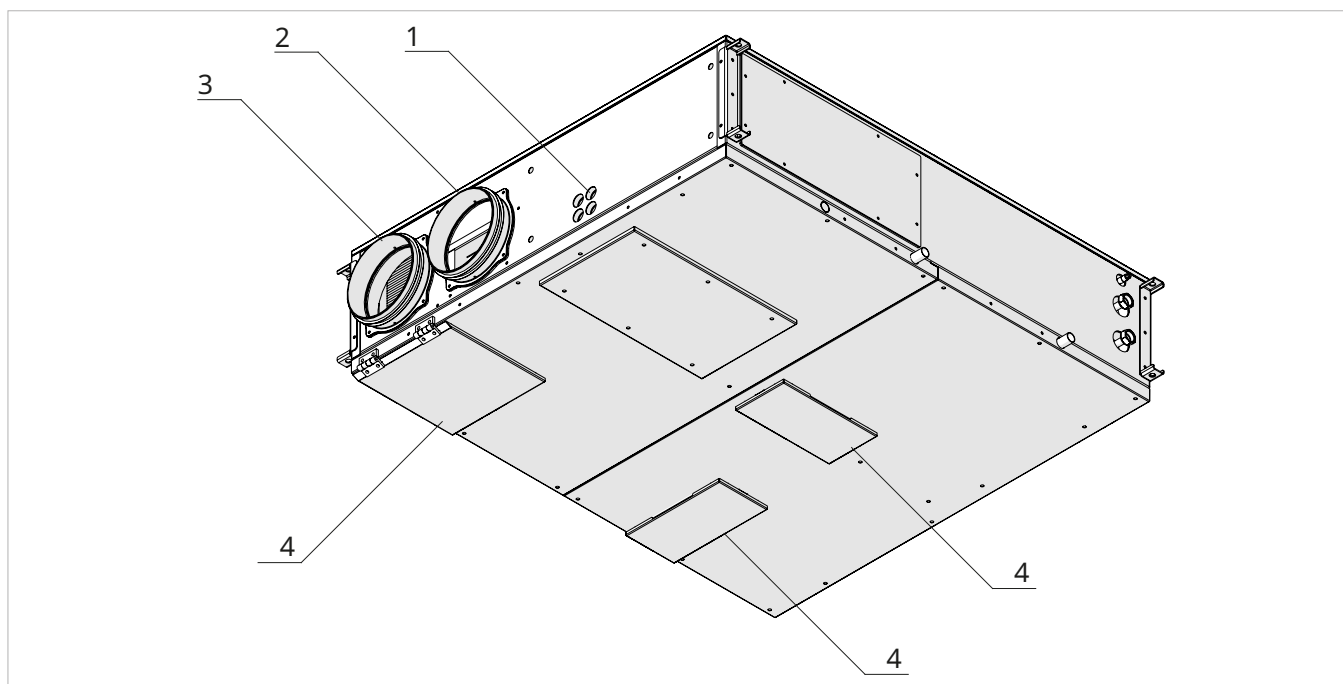
The unit consists of a monoblock including every component required for correct operation and allows operation with wide outdoor temperature ranges.

1.2 Structure

List of external components

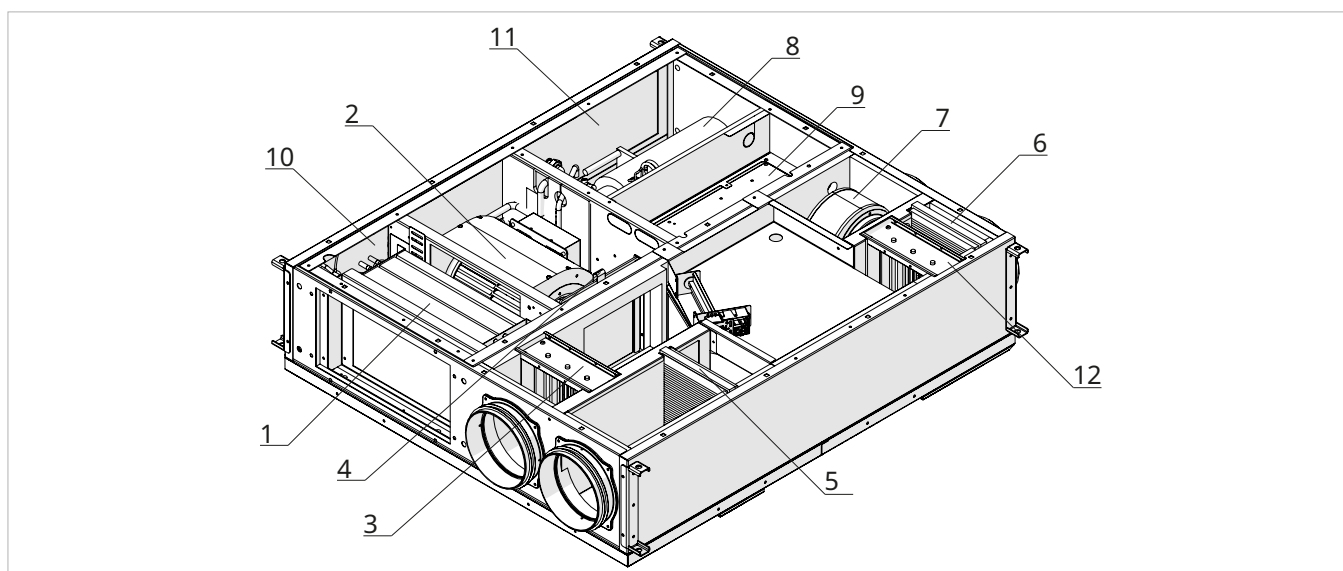


- | | |
|----|---|
| 1. | Supply air |
| 2. | Hydraulic connection water inlet to the unit |
| 3. | Hydraulic connection for water outlet from the unit |
| 4. | Installation bracket |
| 5. | Condensate drain |
| 6. | Air recirculation |
| 7. | Extract air |



- | | |
|----|------------------------|
| 1. | Electrical cable entry |
| 2. | Fresh air inlet |
| 3. | Exhaust air |
| 4. | Filter port |

List of internal components



- | | |
|-----|---------------------------------|
| 1. | Finned coils |
| 2. | Supply air fan |
| 3. | Indoor air recirculation damper |
| 4. | Air recirculation filter |
| 5. | Extract air filter |
| 6. | Fresh air inlet filter |
| 7. | Exhaust fan |
| 8. | Compressor |
| 9. | Electrical panel |
| 10. | 3-way valve |
| 11. | Plate condenser |
| 12. | Fresh air inlet damper |

1.3 Construction features

Structure

Self-supporting galvanized sheet metal structure; the panels are insulated with polyethylene insulation.

Fans

High-efficiency EC centrifugal fans with Brushless motor.

Filters

Flat filters with Coarse filtration class.
Easily removable for routine maintenance.

Refrigeration circuit

Made of brazed copper, complete with high-efficiency compressor, dehydrator filter, finned coils, water heat exchanger, solenoid valves, expansion device, liquid receiver, high pressure switches.

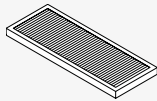
Models

2 sizes with different flow rates are available.

Versions

- KHRDHRIX311: 375 m³/h
- KHRDHRIX511: 605 m³/h

1.4 Compatible accessories

Description		Code
KHR-CD command		
	Electronic remote controller for energy recovery units	KHRCY502
KFR spare filters		
	KHRDHRIX311 replacement Filter Kit (3 pcs)	KFRY026
	KHRDHRIX511 replacement Filter Kit (3 pcs)	KFRY027

2

TECHNICAL FEATURES

2.1 Technical data

Models	u.m.	KHRDHRX311	KHRDHRX511
VMC airflow performance			
Nominal air flow rate	m ³ /h	375	605
Available pressure	Pa	100	100
Nominal air flow for ventilation	m ³ /h	210	299
Nominal air flow recirculation	m ³ /h	165	306
Dehumidification performance (1)			
Dehumidification capacity	L/24h	75,00	99,00
Heat recovery performance (A 7; A 20) (2)			
Sensible recovery efficiency	%	77	73
Heating performance (W 35; A 20) (3)			
Total capacity	kW	3,30	1,25
Water flow rate	L/h	150	200
Pressure drop	kPa	12,00	9,00
Cooling performance (W16; A 25) (4)			
Total capacity	kW	3,30	4,35
Water flow rate	L/h	150	200
Pressure drop	kPa	12,00	9,00
ECODESIGN ErP data (5)			
SEC class		A	B
Supply fan			
Type		Backward-curved radial blades	Backward-curved radial blades
Number	No.	1	1
Maximum absorbed power	W	150	280
Outdoor side fan			
Type		Backward-curved radial blades	Backward-curved radial blades
Number	No.	1	1
Maximum absorbed power	W	70	180
HRV fresh air filter			
Type		Epm1	Epm1
Number	No.	1	1
Efficiency		80%	80%
1. External air temperature 33°; relative humidity 50%. Room temperature 25°C; relative humidity 50%, nominal air flow, nominal water flow, inlet water temperature 16 °C. 2. Efficiency according to UNI EN 13141-7 Outdoor temperature 7 °C - Outdoor humidity 72 % - Indoor temperature 20 °C - Indoor humidity 28 %. 3. Water temperature in finned coil 35 °C; Indoor air temperature 20 °C 4. Finned coil water temperature 16 °C; Room temperature 25 °C / 60 % RH 5. Product fiche for RVU per EU Regulation No. 1254/2014			

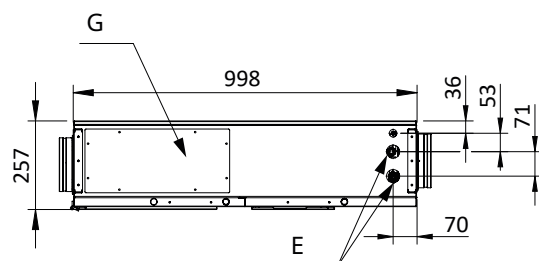
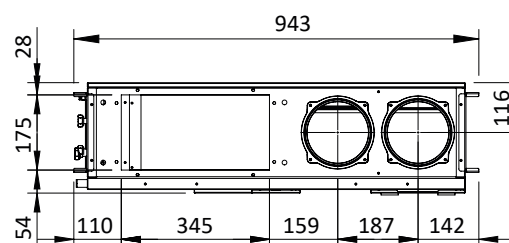
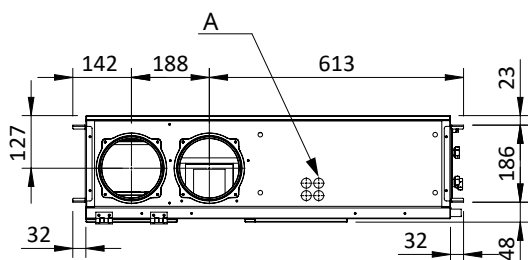
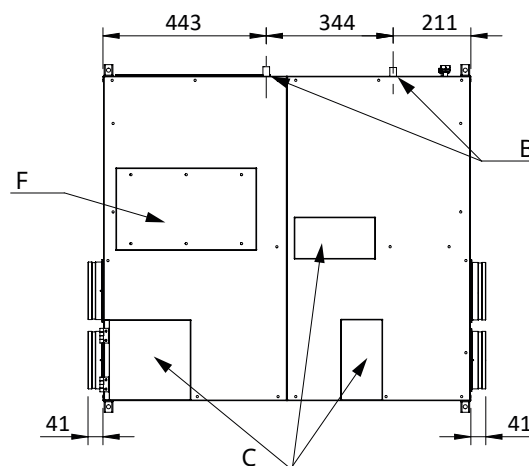
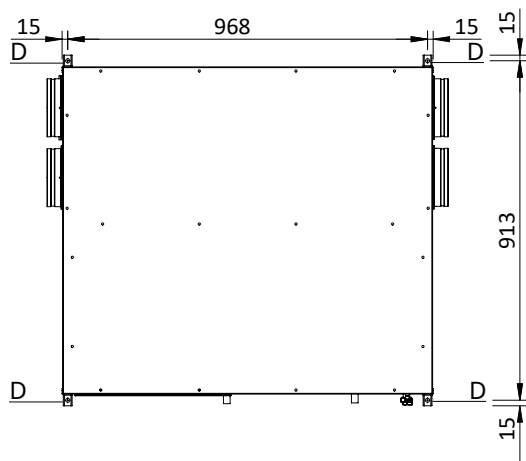
Models	u.m.	KHRDHRIX311	KHRDHRIX511
VMC Extract air filter			
Type		Epm1	Epm1
Number	No.	1	1
Efficiency		80%	80%
Air recirculation filter			
Type		Coarse	Coarse
Number	No.	1	1
Heat exchanger			
Type		Membrane	Membrane
Number	No.	1	1
Compressor			
Type		Horizontal BLDC rotary	Horizontal BLDC rotary
Number	No.	1	1
Refrigerant type		R410A	R410A
Refrigerant quantity	kg	0,48	0,55
Electrical characteristics			
Power supply	V / ph / Hz	230/1/50	230/1/50
Maximum total absorbed power	kW	1.610,00	1.730,00
Maximum total absorbed current	A	7,50	8,10
Protection rating	IP	IPX0	IPX0
Sound levels			
Sound power transmitted to the Lw structure	dB (A)	61,2	64,6
Sound power radiated in the Lw channel	dB (A)	63,0	67,5
Average sound pressure at 1 m Lp	dB(A)	46,7	49,9
Average sound pressure at 3 m Lp	dB(A)	39,7	43,2
Product dimensions			
Width	mm	943	1.243
Height	mm	257	316
Weight	kg	74,0	88,0
1. External air temperature 33°; relative humidity 50%. Room temperature 25°C; relative humidity 50%, nominal air flow, nominal water flow, inlet water temperature 16 °C. 2. Efficiency according to UNI EN 13141-7 Outdoor temperature 7 °C - Outdoor humidity 72 % - Indoor temperature 20 °C - Indoor humidity 28 %. 3. Water temperature in finned coil 35 °C; Indoor air temperature 20 °C 4. Finned coil water temperature 16 °C; Room temperature 25 °C / 60 % RH 5. Product fiche for RVU per EU Regulation No. 1254/2014			

2.2 Dimensions

KHRDHRIX311

A	Power supply
B	Condensate drain
C	Filter port
D	Installation bracket

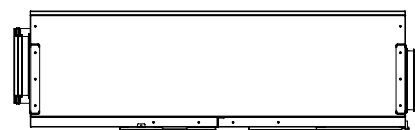
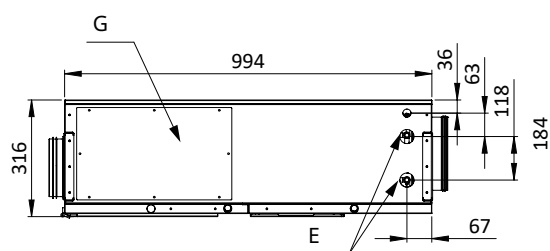
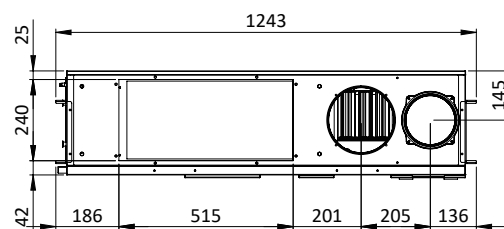
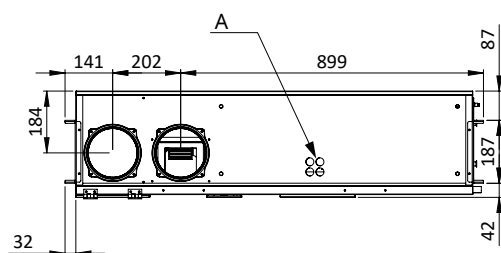
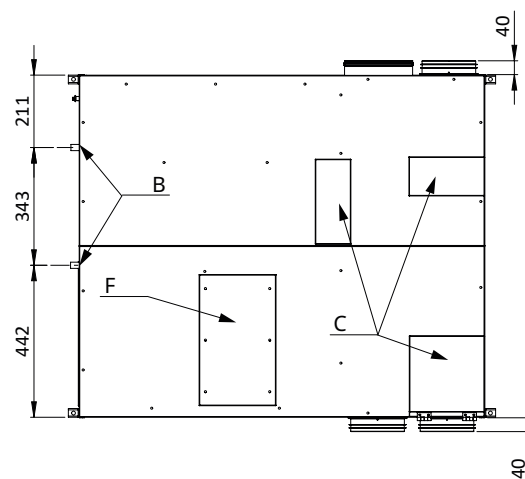
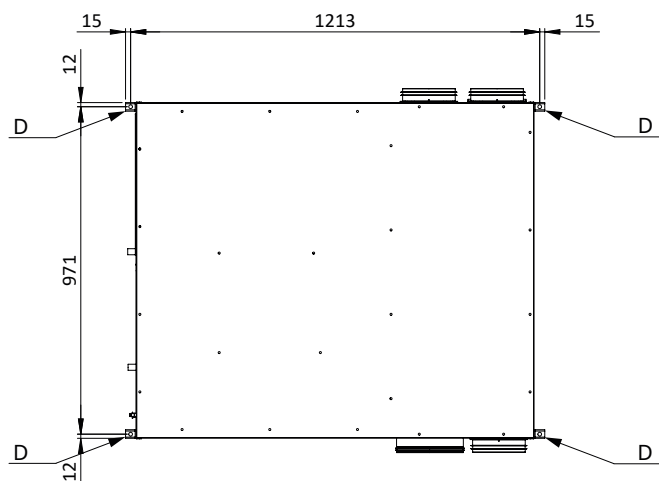
E	Hydraulic connections
F	Electrical panel
G	Compressor compartment door



KHRDHRIX511

- A** Power supply
B Condensate drain
C Filter port
D Installation bracket

- E** Hydraulic connections
F Electrical panel
G Compressor compartment door



2.3 Refrigeration diagrams

CO Compressor

EV Evaporator

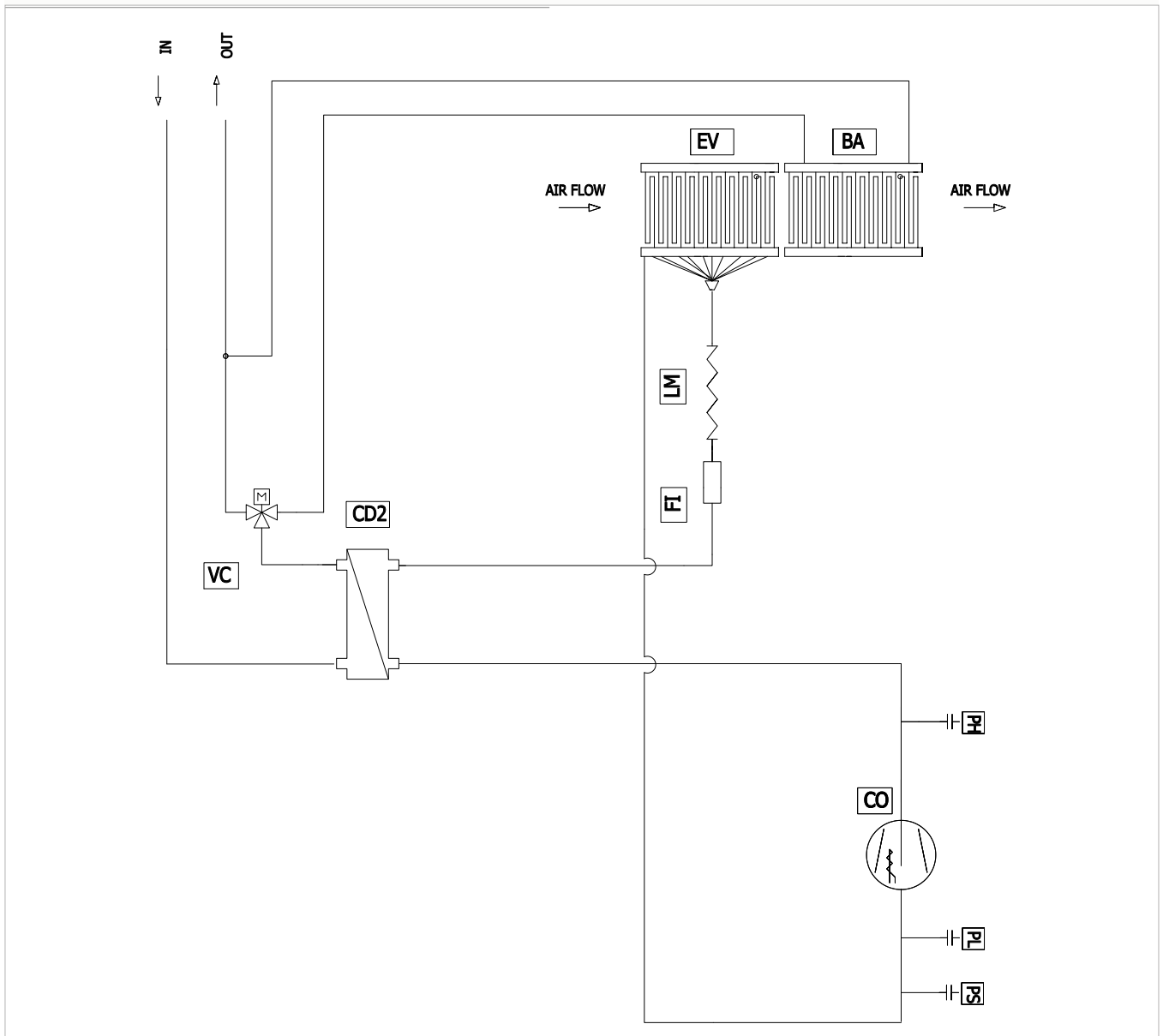
BA Water coil

FI Filter drier

LM Expansion device

CD2 Water condenser

VC Solenoid valve



2.4 Ecodesign classification

KHRDHRIX311

Models	u.m.	KHRDHRIX311
ECODESIGN ErP data (1)		
Cold specific energy consumption SEC	kWh/(m ² ·a)	-72,00
Average specific energy consumption SEC	kWh/(m ² ·a)	-36,50
Warm specific energy consumption SEC	kWh/(m ² ·a)	-13,50
SEC class		A
Declared typology		UVR - Bidirectional
Type of drive		Speed controller
Type of heat recovery		Recuperative
Thermal efficiency	%	77
Maximum flow rate	m ³ /h	0,04
Power input	W	90
LWA sound power level	dB(A)	48
Reference flow rate	m ³ /s	0,0300
Reference pressure	Pa	50
SPI Specific power input	W/m ³ /h	0,260
CTRL control factor		0,85
Internal maximum leakage	%	3,9
External maximum leakage	%	3,5
Position and description of visual filter warning		Display and manual
Internet address for disassembly instructions		giacomini.com
Cold annual electricity consumption AEC	kWh/year	814,00
Average annual electricity consumption AEC	kWh/year	277,00
Warm annual electricity consumption AEC	kWh/year	232,00
Cold annual heating saved AHS	kWh/year	8.371,00
Average annual heating saved AHS	kWh/year	4.279,00
Warm annual heating saved AHS	kWh/year	1.935,00
1. Product fiche for RVU per EU Regulation No. 1254/2014		

KHRDHRIX511

Models	u.m.	KHRDHRIX511
ECODESIGN ErP data (1)		
Cold specific energy consumption SEC	kWh/(m ² ·a)	-66,90
Average specific energy consumption SEC	kWh/(m ² ·a)	-32,20
Warm specific energy consumption SEC	kWh/(m ² ·a)	-10,00
SEC class		B
Declared typology		UVR - Bidirectional
Type of drive		Speed controller
Type of heat recovery		Recuperative
Thermal efficiency	%	73
Maximum flow rate	m ³ /h	0,08
Power input	W	230
LWA sound power level	dB(A)	49
Reference flow rate	m ³ /s	0,0580
Reference pressure	Pa	50
SPI Specific power input	W/m ³ /h	0,390
CTRL control factor		0,85
Internal maximum leakage	%	5,0
External maximum leakage	%	5,0
Position and description of visual filter warning		Display and manual
Internet address for disassembly instructions		giacomini.com
Cold annual electricity consumption AEC	kWh/year	935,00
Average annual electricity consumption AEC	kWh/year	398,00
Warm annual electricity consumption AEC	kWh/year	353,00
Cold annual heating saved AHS	kWh/year	8.161,00
Average annual heating saved AHS	kWh/year	4.172,00
Warm annual heating saved AHS	kWh/year	1.886,00
1. Product fiche for RVU per EU Regulation No. 1254/2014		



IT - AVVERTENZE PER IL CORRETTO SMALTIMENTO DEL PRODOTTO

Questo prodotto rientra nel campo di applicazione della Direttiva 2012/19/UE riguardante la gestione dei rifiuti di apparecchiature elettriche ed elettroniche (RAEE). L'apparecchio non deve essere eliminato con gli scarti domestici in quanto composto da diversi materiali che possono essere riciclati presso le strutture adeguate. Informarsi attraverso l'autorità comunale per quanto riguarda l'ubicazione delle piattaforme ecologiche atte a ricevere il prodotto per lo smaltimento ed il suo successivo corretto riciclaggio. Si ricorda, inoltre, che a fronte di acquisto di apparecchio equivalente, il distributore è tenuto al ritiro gratuito del prodotto da smaltire. Il prodotto non è potenzialmente pericoloso per la salute umana e l'ambiente, ma se abbandonato nell'ambiente impatta negativamente sull'ecosistema. Leggere attentamente le istruzioni prima di utilizzare l'apparecchio per la prima volta. Si raccomanda di non usare assolutamente il prodotto per un uso diverso da quello a cui è stato destinato, essendoci pericolo di shock elettrico se usato impropriamente. Il simbolo del bidone barrato, presente sull'etichetta posta sull'apparecchio, indica la rispondenza di tale prodotto alla normativa relativa ai rifiuti di apparecchiature elettriche ed elettroniche. L'abbandono nell'ambiente dell'apparecchiatura o lo smaltimento abusivo della stessa sono puniti dalla legge.

EN - IMPORTANT INFORMATION FOR CORRECT DISPOSAL OF THE PRODUCT

This product falls into the scope of the Directive 2012/19/EU concerning the management of Waste Electrical and Electronic Equipment (WEEE). This product shall not be disposed in to the domestic waste as it is made of different materials that have to be recycled at the appropriate facilities. Inquire through the municipal authority regarding the location of the ecological platforms to receive the product for disposal and its subsequent correct recycling. Furthermore, upon purchase of an equivalent appliance, the distributor is obliged to collect the product for disposal free of charge. The product is not potentially dangerous for human health and the environment, but if abandoned in the environment can have negative impact on the environment. Read carefully the instructions before using the product for the first time. It is recommended that you do not use the product for any purpose rather than those for which it was intended, there being a danger of electric shock if used improperly. The crossed-out wheeled dustbin symbol, on the label on the product, indicates the compliance of this product with the regulations regarding Waste Electrical and Electronic Equipment. Abandonment in the environment or illegal disposal of the product is punishable by law.



Produced by Sinergia s.r.l.

Via del Commercio 1/A, 23017 Morbegno (SO) ITALY

Distributed by Giacomini S.p.A. under the trademark  **GIACOMINI**

Via per Alzo 39, 28017 San Maurizio d'Opaglio (NO) Italia

consulenza.prodotti@giacomini.com +39 0322 923111 giacomini.com

I dati contenuti nel presente manuale possono essere variati dal costruttore senza obbligo di preavviso.