

EFFICIENT VENTILATION FOR DWELLINGS WITH HEAT RECOVERY UNITS

MVHR



THE IMPORTANCE OF THE MECHANICAL VENTILATION WITH HEAT RECOVERY IN DWELLINGS



POLLUTANTS

- Allergens
- Mites
- Animals
- Pollen
- VOCs (volatile organic compounds)
- CO (carbon monoxide)
 - Paints
 - Glues
 - Thinners
 - Bleaches
 - Ammonia
 - Moisture
- Water vapour
- Odours
- Burned gases
- Hydrocarbons
- CO₂ (carbon dioxide)
- Fine particles
- Smoke
- Tobacco
- Radon Gas

30%
of the European population has allergies
and is affected by poor air quality indoors.

50%
of houses have pollutants, which mostly affect children
due to their size and development, they inhale twice as much pollutants than an adult.

90%
of our time is spent indoors
which is where the pollutants we inhale concentrate.

Indoor air is 8 times more contaminated than outside air
In large urban areas, pollution is very high and for this reason, the air that is brought into the system must be filtered in order to not introduce pollutants inside the houses.

CONTROLLED MECHANICAL VENTILATION

Controlled mechanical ventilation and purification systems filter outside air to retain pollen, fine particles and bacteria, while indoor air is exhausted to get rid of the CO₂, moisture and volatile organic compounds (VOCs).

RISK OF CONTAGION

According to the scientists, **in poorly ventilated indoor spaces, the risk of transmission of diseases that are transmitted through the air may be up to 20 times greater than outdoors.**

RISK OF MOISTURE AND CONDENSATION

In the past, houses leaked air due to their poor air tightness and therefore were not very energy efficient. In contrast, current homes are characterised for being air-tight, which results in poor indoor air quality and poses a risk of moisture accumulating inside the house. For this reason, dwellings must be equipped with a Mechanical Ventilation with Heat Recovery (MVHR) systems.

RADON GAS

Radon is a natural origin radioactive gas that can be accumulated inside dwellings or workplaces. Currently, it is estimated that it is the second cause of lung cancer in Spain, only behind tobacco, causing up to 14% of cases. Controlled mechanical ventilation strategies can eliminate the danger of exposure to radon.



LOW ENERGY

ENERGY IMPACT

Investing in mechanical ventilation technologies allows us to increase energy efficiency and reduce energy consumption.

SODECA heat recovery units, in addition to ventilating, filtering and disinfecting indoor air, allows us to recover a large part of the energy that is generated inside buildings and use it to improve the air conditioning process.



IDEAL FOR
**PASSIVE
HOUSES**

EFFICIENT SOLUTIONS FOR DWELLINGS

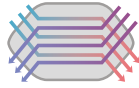
SODECA
airhome

Efficient ventilation equipment for dwellings with heat recovery unit. High efficiency in filtration and compact design, ideal for installation in false ceilings.





**CONTROLLED
MECHANICAL
VENTILATION**



**COUNTERFLOW
PLATE HEAT
EXCHANGER**



**HIGH
EFFICIENCY AND
LOW CONSUMPTION**



**THERMAL
AND NOISE
INSULATION**



**EC TECHNOLOGY
MOTORS**



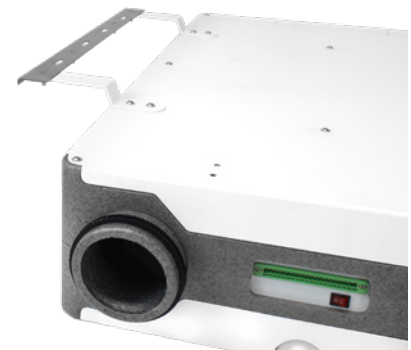
**BY-PASS
BUILT-IN**



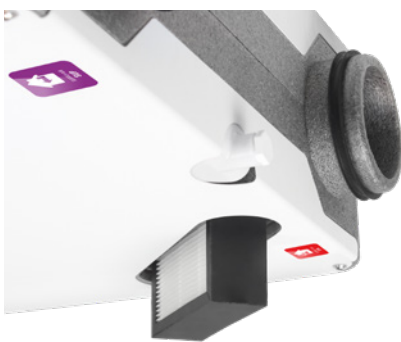
Compact design
with a low profile
(210 mm height AIRHOME 150)



Interchangeable nozzles
depending on the position
of the equipment



Easy installation
false ceiling or wall



**High efficiency filters
F7 removable**



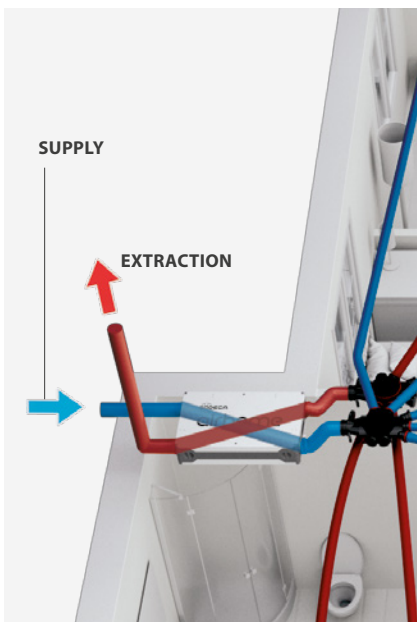
**Remote control and IAQ
probes** (T, RH, CO₂, TVOCs)
built-in



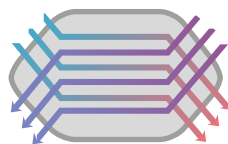
Compatible with
Modbus RTU

HEAT RECOVERY UNIT

← ■ EXTRACTION
→ ■ SUPPLY



The heat exchanger component in the recovery unit transfers heat from the exhaust air extraction circuit to the external clean air supply circuit. The greater the thermal efficiency of the exchanger, the less need there will be to supply additional air conditioning.



Counterflow heat exchanger

85-90% thermal efficiency.
With no leaks between air circuits.

The exchangers can be of the sensible heat or enthalpy type. Sensible heat exchangers only recover the heat present in air, whereas the enthalpy exchanger also recovers moisture, which means that efficiency can be higher in very humid environments (although they require regular cleaning for safe operation).



**IDEAL FOR
PASSIVE HOUSES**



**AIR
TREATMENT**



FILTRATION



HEAT EXCHANGER



**ENERGY
SAVINGS**



**CONTROL OF
AIRFLOW
BY ZONES**



CHARACTERISTICS	AIRHOME-150	AIRHOME-300	AIRHOME-350/V
Flow @ 100Pa	150 m³/h	300 m³/h	270 m³/h
Thermal efficiency EN 308	81.1%	83.1%	87%
UNE 13141-7	80.2%	82.6%	86%
Constant flow regulation	YES	YES	YES
Sound pressure at maximum flow (1.5 m) [dB(A)]	26	36	38
Electric power (W)	60	180	121
Installation	False ceiling/Wall	False ceiling/Wall	Wall
Interchangeable nozzles	YES	YES	No
Nozzle diameter [mm]	125	160	160
Outside air supply filters	F7	F7	F7
Remote control	Included	Included	Included
Compatible with MODBUS RTU	YES	YES	YES
Probes in premises extraction air	T°, RH, VOCs, CO2	T°, RH, VOCs, CO2	T°, RH
Dimensions [mm]	970 x 600 x 210	1170 x 820 x 270	480 x 595 x 905
Weight [kg]	23	36	40

DOUBLE FLOW SYSTEM WITH HEAT RECOVERY UNIT

Double flow ventilation with heat recovery unit allows renewing the indoor air by extracting it from humid areas such as kitchens and baths.

Unlike a simple ventilation system, outdoor air is treated and routed to the dry areas of the houses.

DOUBLE FLOW SYSTEM WITH HEAT RECOVERY UNIT

A double flow system ventilates and filters the air as well as eliminates pollutants, microbes, viruses and allergens. These solutions improve the quality of life and comfort of people living in homes.

AIRHOME solutions recover the existing energy in dwellings to improve the level of comfort

BENEFITS

- Control the airflow by zones and with a low noise level
- Ensure an optimum quality air thanks to its filtering system
- Prevent energy loss
- Energy savings



MODEL DWELLING 01



2 BEDROOMS 1 BATH

Three dry areas (living room and two bedrooms) and two humid areas (bath and kitchen).

MODEL DWELLING 02



3 BEDROOMS 2 BATHS

Four dry areas (living room and three bedrooms) and three humid areas (two baths and kitchen).

MODEL DWELLING 03

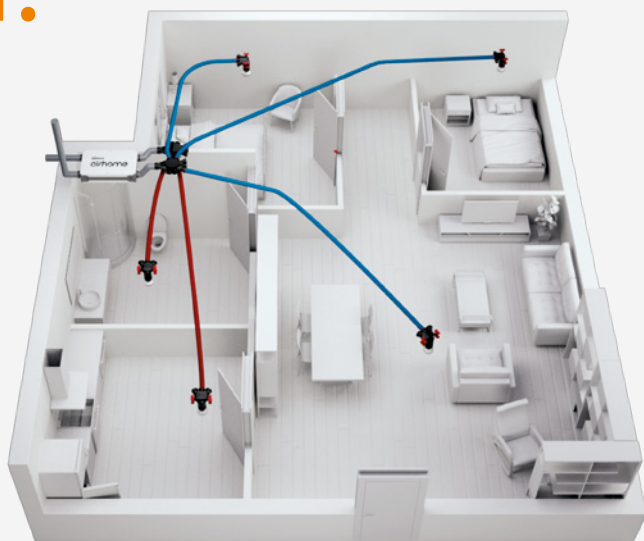


4 BEDROOMS 2 BATHS

Five dry areas (living room and four bedrooms) and three humid areas (two baths and kitchen).

MODEL DWELLING

01.



2H/1B



2 BEDROOMS 1 BATH

This type of dwelling with three dry areas (living room and two bedrooms) and two humid areas (bath and kitchen).

SODECA recommends the following flows:

EXTRACTION:

Kitchen: 60 m³/h
Bath: 30 m³/h

SUPPLY:

Master bedroom: 30 m³/h
Bedroom: 15 m³/h
Living room: 45 m³/h

COMPONENTS:

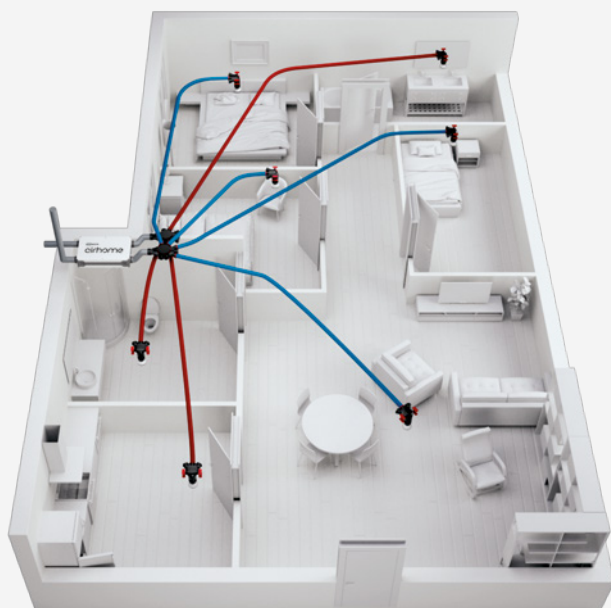
ITEM CODE	PRODUCT NAME	QUANTITY
1353781	AIRHOME-150	1
ITEM CODE	PRODUCT NAME	QUANTITY
1501058	KIT-AIRHOME-2H/1B	1
<i>Includes:</i>		
	AIRHOME-150	1
	VMC-BA/E 125	5
	VMC-CD 10X75	2
	VMC-CSR 75 50M	1
	VMC-CLP 125/160	2
	VMC-PL 3X75	5
	VMC-RC 125	5

KIT-AIRHOME-2H/1B



MODEL DWELLING

02.



3H/2B



3 BEDROOMS 2 BATHS

This type of dwelling with four dry areas (living room and three bedrooms) and three humid areas (two baths and kitchen).



SODECA recommends the following flows:

■ EXTRACTION:

Kitchen: 60 m³/h

Bath: 30 m³/h

Bath: 30 m³/h

■ SUPPLY:

Master bedroom: 30 m³/h

Bedroom: 15 m³/h

Bedroom: 15 m³/h

Living room: 60 m³/h

COMPONENTS:

ITEM CODE	PRODUCT NAME	QUANTITY
1353781	AIRHOME-150	1

ITEM CODE	PRODUCT NAME	QUANTITY
1501059	KIT-AIRHOME-3H/2B	1

Includes:

AIRHOME-150	1
VMC-BA/E 125	7
VMC-CD 10X75	2
VMC-CSR 75 50M	2
VMC-CLP 125/160	2
VMC-PL 3X75	7
VMC-RC 125	7

KIT-AIRHOME-3H/2B



MODEL DWELLING

03.



4H/2B



4 BEDROOMS 2 BATHS

This type of dwelling with five dry areas (living room and four bedrooms) and three humid areas (two baths and kitchen).

SODECA recommends the following flows:

EXTRACTION:

- Kitchen: 60 m³/h
- Bath: 30 m³/h
- Bath: 30 m³/h

SUPPLY:

- Master bedroom: 30 m³/h
- Bedroom: 15 m³/h
- Bedroom: 15 m³/h
- Bedroom: 15 m³/h
- Living room: 45 m³/h

COMPONENTS:

ITEM CODE	PRODUCT NAME	QUANTITY
1353781	AIRHOME-150	1
ITEM CODE	PRODUCT NAME	QUANTITY
1501060	KIT-AIRHOME-4H/2B	1
<i>Includes:</i>		
	AIRHOME-150	1
	VMC-BA/E 125	8
	VMC-CD 10X75	2
	VMC-CSR 75 50M	3
	VMC-CLP 125/160	2
	VMC-PL 3X75	8
	VMC-RC 125	8

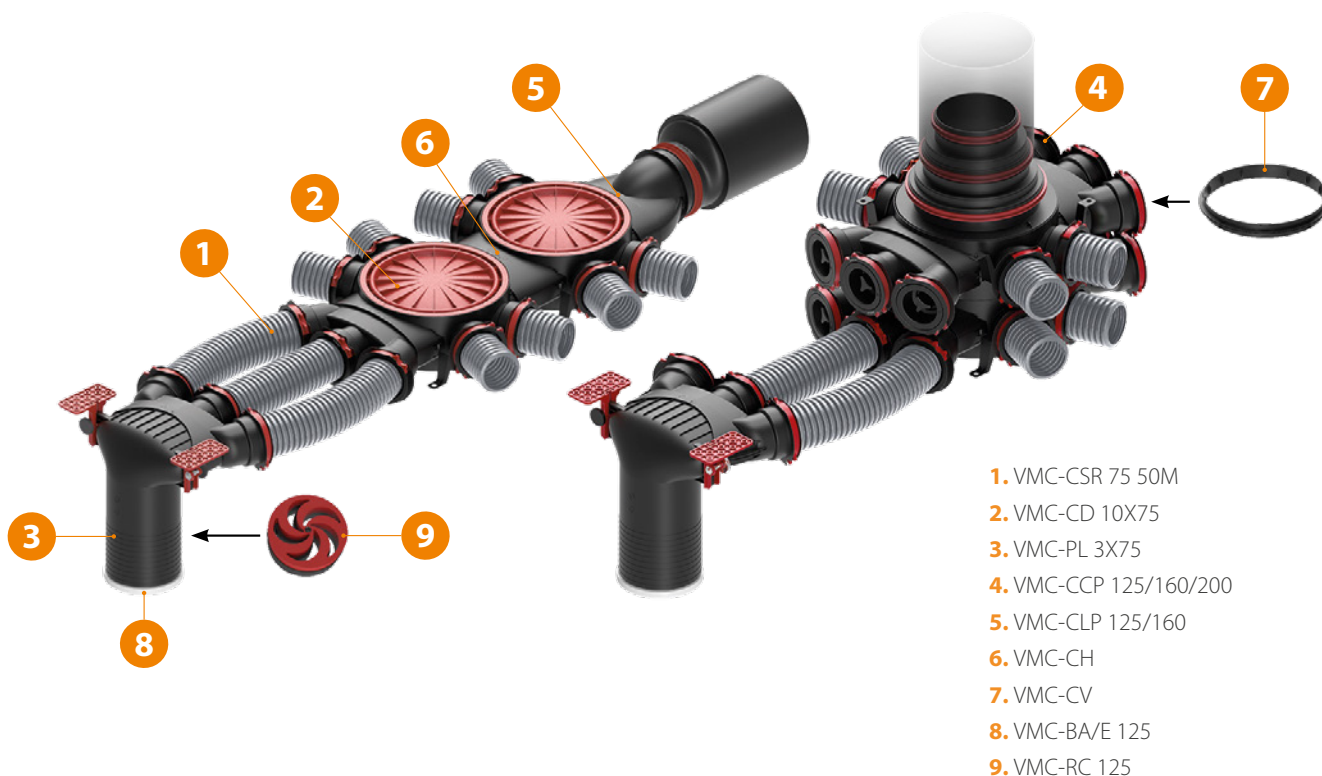
KIT-AIRHOME-4H/2B



COMPATIBLE
ACCESSORIES
WITH THE DOUBLE
FLOW SYSTEM



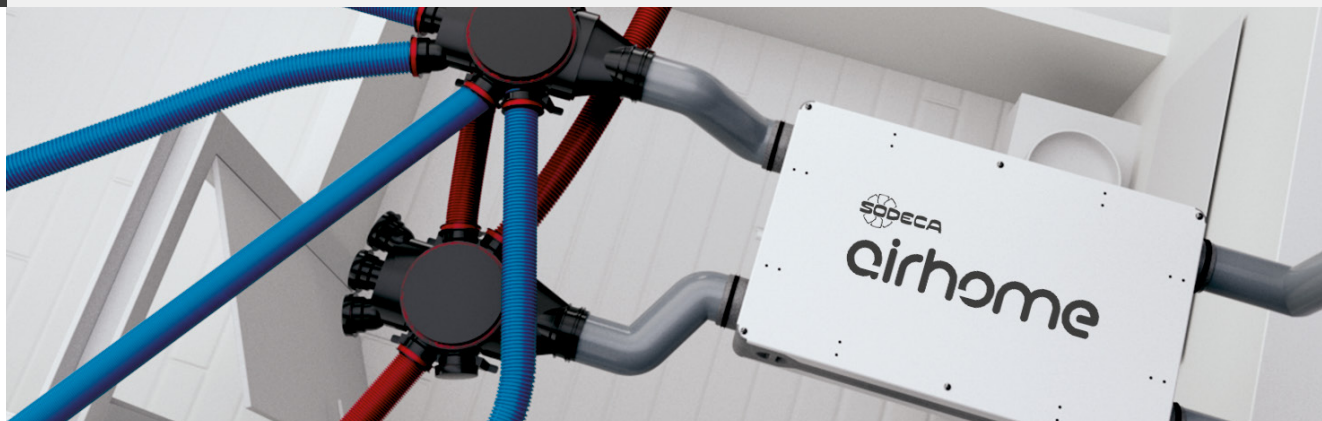
COMPATIBLE ACCESSORIES WITH THE **DOUBLE FLOW SYSTEM** WITH HEAT RECOVERY UNIT

















INCLUDED IN THE KIT:

	1.	2.	3.	5.	8.	9.
ITEM CODE	1353001	1352995	1353028	1353016	1352993	1353034
PRODUCT NAME	VMC-CSR 75 50M	VMC-CD 10X75	VMC-PL 3X75	VMC-CLP 125/160	VMC-BA/E 125	VMC-RC 125

COMPATIBLE ACCESSORIES WITH THE **DOUBLE FLOW SYSTEM** WITH HEAT RECOVERY UNIT



OTHER ACCESSORIES:

	ITEM CODE	PRODUCT NAME		ITEM CODE	PRODUCT NAME
4.		1353012 VMC-CCP 125/160/200		1353038 VMC-TFCD	
6.		1353014 VMC-CH		1352997 1352999 VMC-ADK 125 VMC-ADK 160	
7.		1353048 VMC-CV		1353003 1353005 VMC-BL 125 VMC-BL 160	
		1353018 VMC-CUCD		1353008 1353010 VMC-ADL 125 VMC-ADL 160	
		1353020 VMC-CCD		1353032 VMC-ADD 125/160/200	
		1353026 VMC-M 3X75		1353040 1353042 VMC-AN 125 VMC-AN 160	
		1353030 VMC-R 75		1353044 1353046 VMC-ADR 125 VMC-ADR 160	

OTHER SOLUTIONS



SIMPLE FLOW MULTI-NOZZLE UNITS



EVM

Compact, multi-nozzle extractfan with adjustable outlet and three speeds



EVP

Low profile extract unit, for installation in false ceilings, and extract from 3 different zones, in single-family homes or apartments

HEAT RECOVERY UNITS



REB

Heat recovery units with EC Technology motor and built-in by-pass



UNIREC

High efficiency single zone heat recovery ventilators for domestic installations

IN-LINE DUCT FANS



SV
Low noise, in-line duct extractor fans mounted inside an acoustic casing



SV/FILTER
Low noise in-line duct extractors with different stages of filtration



SVE/PLUS
Low noise in-line duct extractor fans mounted inside a 40 mm phonoabsorbent acoustic insulated casing

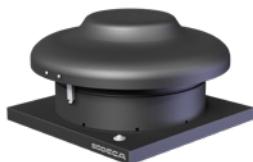


NEOLINEO
In-line fans for small ducts with removable covers and small size with long life ball bearings



CL/PLUS/EC
In-line extract fans for rectangular ducts with a 40 mm thick acoustic casing to reduce noise and EC Technology motor

ROOF-MOUNTED EXTRACT FANS



CTD
Centrifugal roof mounted extract fans for household ventilation



RCH
Chimney extract fan and cap for hybrid extraction in community housing



TIRACANO
Chimney smoke extract fans

BATHROOM EXTRACT FANS



EDMF

Extra flat bathroom extractor fans with a modern appearance and design



EDQUIET/S

Low consumption household extractor fans with very low noise levels



EDD

Household extractor fans with a modern appearance and design

COLLECTIVE EXTRACT FAN UNITS



CJV/EW

Extract fans with automatic operation, vertical air outlet, EC Technology motor and constant pressure control for homes

EFFICIENT VENTILATION FOR DWELLINGS WITH HEAT RECOVERY UNITS



HEADQUARTER

Sodeca, S.L.U.

Pol. Ind. La Barricona
Carrer del Metall, 2
E-17500 Ripoll
Girona, SPAIN

Tel. +34 93 852 91 11

Fax: +34 93 852 90 42

General sales: comercial@sodeca.com

Export sales: ventilation@sodeca.com

PRODUCTION PLANT

Sodeca, S.L.U.

Ctra. de Berga, km 0,7
E-08580 Sant Quirze de Besora
Barcelona, SPAIN

Tel. +34 93 852 91 11

Fax: +34 93 852 90 42

General sales: comercial@sodeca.com

Export sales: ventilation@sodeca.com

www.sodeca.com

