

# VENTILATION SOLUTIONS FOR HOMES





PRESSURISATION OF **STAIRCASES**, LOBBIES AND EVACUATION ROUTES IN THE EVENT OF FIRE CAR PARK VENTILATION







# Well-being and comfort at home with efficient ventilation from SODECA



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SODECA, specialist in efficient ventilation solutions for healthy and quality indoor air

The environmental management system at SODECA's headquarters is ISO 14001 certified by Bureau Veritas







Adequate ventilation is essential for well-being and comfort at home. SODECA's ventilation solutions for homes are designed to provide a healthy environment efficiently. SODECA's extensive experience in the industrial ventilation field allows it to apply all the knowledge acquired in demanding environments to improve the indoor air of all types of buildings.

Since its beginnings, SODECA has grown by seeking the best path, always innovating and

providing the best customer service, respecting the environment and promoting energy efficiency. This approach, focused on the well-being of people and sustainability, drives SODECA to continue advancing towards a healthier and more comfortable future in enclosed environments. For this reason, ventilation and air treatment solutions meet the highest quality standards and comply with current regulations, ensuring that the air we breathe in our homes is safe and healthy.

#### SUMMARY OF SODECA'S RESIDENTIAL VENTILATION SOLUTIONS



# Ventilation in **SINGLE-FAMILY** residences



Efficient ventilation to comply with regulations and improve quality of life

We offer adapted ventilation solutions for homes, with systems that improve the air quality in living spaces. We also design specific solutions for the pressurisation of staircases in emergency situations and ventilation for car parks, guaranteeing safety and regulatory compliance.



#### Ventilation systems for homes

Código Técnico de la Edificación (CTE) (Technical Building Code) Royal Decree 235/2013 Passivhaus Certification



#### SUMMARY OF SODECA'S RESIDENTIAL VENTILATION SOLUTIONS



# Ventilation in **COLLECTIVE** housing



Ventilation solutions for healthy and sustainable spaces

Our systems for collective housing provide centralised ventilation for multiple homes, optimising energy consumption and ensuring uniform distribution of clean air. These solutions can be complemented with pressurisation systems and ventilation in common areas, such as staircases and car parks, maximising efficiency and safety in buildings.

#### Pressurisation of staircases, lobbies and evacuation routes in the event of fire EN 12101-6 standard

THT/IMP

THT

#### Ventilation systems for homes

Código Técnico de la Edificación (CTE) (Technical Building Code) Royal Decree 235/2013 Passivhaus Certification



CJTHT

CI

7

FOR SMOKE EXTRACTION IN THE EVENT OF FIRE



# VMC

# CONTROLLED MECHANICAL VENTILATION FOR HOMES

Smone

#### POLLUTANTS

Allergens Mites Animals Pollen VOC (Volatile Organic Compounds) CO (Carbon Monoxide) Paint Glues Solvents Bleaches Ammonia Humidity Water vapour Burned gases Hydrocarbons CO<sub>2</sub> (Carbon Dioxide) Fine particles Smoke Tobacco Radon gas



# **30%** of the European population suffers from allergies

and is affected by bad indoor air quality.

## **50%**

# of homes are contaminated, and children are affected the most,

given that, due to their constitution and development, they inhale double the pollutants of an adult.

## **90**%

the time we spend in enclosed spaces where pollutants that we inhale are concentrated.

# Indoor air is 8 times more polluted than outdoor air.

In large population centres, pollution is very high, which is why the air entering the system must be filtered to prevent pollutants from entering the home.



| CONTROLLED MECHANICAL<br>VENTILATION (CMV)   | Systems with controlled mechanical ventilation and purification filter the outside air in order to retain pollen, fine particles and bacteria, while the inside air is extracted to release $CO_{2'}$ humidity and volatile organic compounds (VOCs).   |
|--|---|
| CTE<br>HS3<br>THE CTE (TECHNICAL<br>BUILDING CODE)<br>AND CONTROLLED<br>MECHANICAL VENTILATION | The Technical Building Code (CTE) establishes the standards and rules<br>to be applied to ensure effective ventilation of the home, guaranteeing<br>greater comfort for the occupants and protecting the home against<br>condensation.  |
| <b>RISK OF CONTAGION</b>   | According to some scientists, <b>in poorly ventilated indoor spaces,</b><br><b>the risk of contracting airborne diseases can be up to 20 times higher</b><br><b>than outside</b> .  |
| RISK OF MOISTURE AND<br>CONDENSATION   | Homes in the past suffered from air infiltration due to their poor<br>airtightness, which led to significant energy losses. Currently, however,<br>they tend to have reinforced air-tightness, which is the cause of<br>deficient inside air and can lead to the risk of condensation. Controlled<br>Mechanical Ventilation (CMV) is therefore indispensable.                 |
| RADON GAS  | Radon is a naturally occurring radioactive gas that can be found suspended<br>in indoor spaces, such as homes and workplaces. It is currently estimated<br>that it is the second cause of lung cancer in Spain, only behind tobacco,<br>causing up to 14% of these conditions. Controlled Mechanical Ventilation<br>(CMV) strategies can remove the danger of radon exposure. |

# Ventilation control



The system is based on maintaining a constant, permanent flow rate in each part of the dwelling. It's the simplest form of control. The fans are used in combination with constant flow rate nozzles during the extraction process.



This system is based on ventilating at a variable flow rate, depending on the readings of one or more sensors. It maintains optimum air quality, with minimum energy consumption.





# **Controlled Mechanical** Ventilation System



IDEAL FOR PASSIVE

ENERGY SAVINGS

Controlled Mechanical Ventilation (CMV) systems are an integrated solution designed to optimise their quality in enclosed spaces and provide healthy and comfortable indoor environments.

It is essential to have advanced systems that ensure adequate ventilation, reducing the accumulation of pollutants and maintaining a safe environment at all times. SODECA's Controlled Mechanical

Ventilation solutions are focused on energy efficiency, sustainability and the well-being of those occupying the space.

"Thanks to an efficiency of up to 92%, a CMV system pays for itself in less than two years, recouping the investment made and allowing us to achieve considerable savings year after year."



**FILTRATION** 

Controlled mechanical ventilation and purification systems filter the outside air to retain pollen, fine particles and bacteria.



**AIR TREATMENT** UNITS

CMV solutions improve the quality of indoor spaces by allowing the entry of filtered air and removing exhaust air and humidity.



THERMAL AND ACOUSTIC **INSULATION** 

Reduced noise and vibration, greater energy efficiency and durability. Thermal insulation also reduces heat and cold, losses, resulting in significant energy and economic savings.





GENERAL INFORMATION ABOUT RESIDENTIAL VENTILATION

# SINGLE-FAMILY RESIDENCE AND COLLECTIVE **RESIDENTIAL VENTILATION**







# SINGLE-FAMILY RESIDENCE VENTILATION

This ventilation system is precisely adapted to the particular needs of each home, considering the characteristics and dimensions of the space. Thanks to a detailed analysis of the air inlets and outlets, constant and efficient air renewal is guaranteed, which significantly improves the quality of the indoor environment.

Occupants can fully control the operation of the system, adjusting it to their comfort preferences and optimising energy consumption, by adapting it to the actual demand of each home.

In addition, by not depending on a centralised system, the usual drawbacks associated with shared systems are eliminated.

Each home has its own ventilation system, which facilitates its maintenance and gives residents greater autonomy and control over their environment.





# COLLECTIVE RESIDENTIAL VENTILATION

#### This centralised system is designed to manage air renewal in multiple homes, being ideal for residential buildings, offices or public spaces.

Air management is an essential aspect to maintain a healthy and comfortable environment for occupants. Implementing a single, centralised system helps to more efficiently control the airflow, ensuring adequate circulation throughout the building and helping to improve the indoor air quality.

The main advantages of this system include the reduced initial cost, as unifying the operation from a single point minimises equipment and installation costs. Maintenance is also centralised, which reduces the burden of responsibility for residents and makes the system easier to manage. The simplified design of this system makes it an ideal option for buildings with similar structures, as it facilitates both planning and implementation, reducing the complexity of the project and the space required, by eliminating the installation of individual units in each home.

In both cases, for both single-family residence and collective residential ventilation, single flow and double flow systems can be used.

#### GENERAL INFORMATION ABOUT RESIDENTIAL VENTILATION

# SINGLE FLOW AND **DOUBLE FLOW** SYSTEMS

There are two types of systems available for installing controlled mechanical ventilation in homes



In this system, fresh air enters the home due to pressure differences, through openings in the façade.

Exhaust air inside the home is expelled through an extract fan, thus ensuring continuous renewal of the indoor air.

EXPELLED OUTSIDE **BY-PASS** AIR **NEW AIR** WINTER FILTER ILTER **EXTRACTED AIR INSULATED AIR** throoms. toilets and common areas Roo is and c



#### **DOUBLE FLOW SYSTEM**

This double flow system improves energy efficiency and comfort by crossing the supply and extraction flows to maintain a pleasant temperature inside the home.

In winter, it pre-heats the outside air before introducing it into the home, while in summer it cools it, ensuring constant air renewal with minimum energy loss. This helps maintain a comfortable environment throughout the year with reduced energy consumption. This technology has a heat exchanger that can be of the enthalpy type, ideal for environments with excess or lack of humidity, or heat-sensitive. It also incorporates inlet and outlet filters and fans with EC technology.











GENERAL INFORMATION ABOUT RESIDENTIAL VENTILATION

# DOUBLE FLOW WITH HEAT RECOVERY SYSTEMS





# ENTRY

Cross-flow panels

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

Heat exchangers may be the heat-sensitive or the enthalpy type. The heat-sensitive heat exchanger recovers heat present in the air, while the enthalpy type heat exchanger also recovers humidity, so efficiency may be greater in very humid environments (they still require regular cleaning for safe operation).



ENTHALPY-TYPE OR HEAT SENSITIVE HEAT EXCHANGER

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.

#### **Types** of installation



FALSE CEILING

Low-profile equipment with access to components through the side or base.



Equipment for outdoor operation, with lateral access to components. They may require accessories for protection against the rain or other elements.



Compact equipment with front access.

WALL



## Housing rehabilitation



#### Energy efficiency

Energy efficiency and housing rehabilitation addresses several key aspects, with economic and environmental benefits:

- Reduced energy consumption
- Economic savings
- Reduced polluting emissions



Comfort in housing rehabilitation addresses different dimensions to ensure a pleasant and functional environment. Considering thermal comfort, sound and odour control significantly improves the experience of living in the rehabilitated space:

- Thermal comfort
- Sound control
- Odour control

## $\widehat{\cong}$ Indoor air quality

Indoor air quality is a fundamental aspect in housing rehabilitation, with direct impacts on the health of residents and the preservation of the building:

- Improved health
- Conservation of the existing building

#### Innovative technologies

Integrating innovative technologies in housing rehabilitation provides advanced functionalities, efficiency and comfort:

- Home automation
- Heat recovery

#### SODECA SOLUTIONS



**BUILDING REFERENCE REGULATIONS** 



## ANSI/ASHRAE Standard 62.2. Ventilation and Indoor Air Quality in Residential Buildings



Standard 62.2 is the consensus document developed by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) to address Indoor Air Quality issues in homes.

This standard describes the **minimum ventilation requirements** considered necessary to reduce pollutants in living spaces.



#### Minimum ventilation requirements in dwellings

The standard establishes the guidelines to calculate the minimum ventilation flow rate in dwellings based on the total area, the number of rooms and whether or not mechanical filtration is used.

The double flow with heat recovery units allow this ventilation to be implemented efficiently, enabling savings in annual heating and air conditioning consumption.

Furthermore, the use of units with a minimum filtration of F6 (MERV 11) allows the design flow rate to be reduced by 20%, due to the "Filtration Credit" included in the standard. In this regard, AIRHOME models even exceed this requirement by incorporating F7 filters (MERV 13).

arm, temperate climate

renovated buildings that are designed to maximise energy efficiency and indoor air quality, while reducing greenhouse gas emissions.

The certification is closely linked to the climate of the environment, as thermal insulation requirements vary depending on weather conditions. The certification is therefore subdivided into specific climate sections, differentiated from each other in terms of temperature, from the coldest to the warmest.

ool, temperate climate

\*

Passivhaus certification is a voluntary standard that certifies new or

old climate

Passivhaus Certification

**BUILDING REFERENCE REGULATIONS** 











# SINGLE-FAMILY **RESIDENCE VENTILATION**



#### DOUBLE FLOW WITH HEAT RECOVERY SYSTEM

7



**AIRHOME ONE** 







**EVP** 

EVM





#### AIRHOME-150



**AIRHOME-200/300** 



AIRHOME-350/V



UNIREC



# SINGLE-FAMILY residence ventilation SINGLE FLOW

Single flow ventilation enables **the simple renewal of indoor air**, extracting air from humid areas such as the kitchen and bathrooms in the home through ducts to the outside. The renewed air is introduced through the air inlets in bedrooms and living/ dining rooms (dry rooms). The single-flow system automatically guarantees the extraction flow rates and a daily and permanent renewal of air in the home required by current regulations.



Renews air simply

and efficiently

The perfect solution to meet the minimum requirements of current regulations









Reduces humidity, condensation and dilutes pollutants



#### SINGLE-FAMILY residence ventilation SINGLE FLOW



# **Controlled Mechanical Ventilation** System

This system is based on air sweep ventilation by extracting exhaust air through the wet rooms. Fresh air enters through grilles in the dry rooms.

Maximum flow rate of 298 m<sup>3</sup>/h



#### SODECA SOLUTIONS



**AIRHOME ONE** 



EVP



EVM

#### VENTILATION SOLUTIONS FOR HOMES



SINGLE-FAMILY residence ventilation SINGLE FLOW AIRHOME ONE KIT





This type of home, which includes three dry rooms (living room and two bedrooms) and two wet rooms (bathroom and kitchen) **according to CTE must be ventilated with a minimum flow rate of 86.4 m<sup>3</sup>/h**.

SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h





SINGLE-FAMILY residence ventilation SINGLE FLOW AIRHOME ONE KIT



This type of home, which includes four dry rooms (living room and three bedrooms) and three wet rooms (two bathrooms and kitchen) according to CTE must be ventilated with a minimum flow rate of 118.8 m<sup>3</sup>/h.

SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h





This type of home, which includes five dry rooms (living room and four bedrooms) and three wet rooms (two bathrooms and kitchen) according to CTE must be ventilated with a minimum flow rate of 118.8 m<sup>3</sup>/h.

SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h





SINGLE-FAMILY residence ventilation SINGLE FLOW AIRHOME ONE KIT

#### **BASIC OPTION**

#### COMPONENTS:

| ITEM CODE | PRODUCT NAME           | QUANTITY |
|-----------|------------------------|----------|
| 1508272   | AIRHOME ONE BASIC      | 1        |
| ITEM CODE | PRODUCT NAME           | QUANTITY |
| 1508274   | KIT-AIRHOME ONE BASIC: | 1        |
|           | Contains:              |          |
|           | VMC-PL 2X75            | 3        |
|           | VMC-CSR 75 25m         | 1        |
|           | VMC-EXT DN125          | 3        |
|           | VMC-RC 125             | 3        |
|           | BE-AC 125              | 3        |

#### AIRHOME ONE KIT





#### **PREMIUM OPTION**

Ventilation system with CO<sub>2</sub>, temperature and humidity sensors included.

#### COMPONENTS:

| ITEM CODE | PRODUCT NAME             | QUANTITY |
|-----------|--------------------------|----------|
| 1508273   | AIRHOME ONE PREMIUM      | 1        |
| ITEM CODE | PRODUCT NAME             | QUANTITY |
| 1508275   | KIT-AIRHOME ONE PREMIUM: | 1        |
|           | Contains:                |          |
|           | VMC-PL 2X75              | 3        |
|           | VMC-CSR 75 25m           | 1        |
|           | VMC-EXT DN125            | 3        |
|           | VMC-RC 125               | 3        |
|           | BE-AC 125                | 3        |





# SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY



**Double flow ventilation with heat recovery allows indoor air to be renewed** by extracting exhaust, energy-laden air from wet rooms. Outdoor air enters through the dry rooms. This area is treated inside the heat recovery unit, where the energy of the extracted air is used, and it is also filtered to ensure better air quality. This process and increase in air renewal inside the homes ensures spaces free of pollutants, microbes, viruses and allergens.



AIRHOME solutions recover the existing energy in homes to reduce the carbon footprint



VENTILATION SOLUTIONS FOR HOMES



#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY







#### SINGLE-FAMILY residence ventilation **DOUBLE FLOW WITH HEAT RECOVERY**





**Interchangeable nozzles** according to the position of the unit

**Easy installation** on false ceiling or wall





Removable F7 high-efficiency filters **Condensate exhaust** for enthalpy-type or heat sensitive heat exchanger



#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY



#### Ventilation control Smarthome-Aidoo Pro

It uses MODBUS communications, allowing remote and intuitive control of the equipment. Smooth and reliable connection between the control system and equipment, enabling monitoring and adjustment from anywhere via an app. Modern and easy-to-use solution to control the operation of the ventilation systems both in commercial and residential environments.







**Remote control and IAQ sensors** (T, RH, CO<sub>2</sub>, TCOV) built in Compatible with **Modbus RTU** 



#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY





**Cross-flow panels** 85-90% thermal efficiency. With no leaks between air circuits.

#### SODECA SOLUTIONS



AIRHOME-150



AIRHOME-200/300



AIRHOME-350/V



VENTILATION SOLUTIONS FOR HOMES



#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY



This type of home, which includes three dry rooms (living room and two bedrooms) and two wet rooms (bathroom and kitchen) **according to CTE must be ventilated with a minimum flow rate of 86.4 m<sup>3</sup>/h**.





SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Master bedroom: 30 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Living room: 45 m<sup>3</sup>/h

#### COMPONENTS:

| ITEM CODE | PRODUCT NAME       | QUANTITY |
|-----------|--------------------|----------|
| 1353781   | AIRHOME-150        | 1        |
| ITEM CODE | PRODUCT NAME       | QUANTITY |
| 1501058   | KIT-AIRHOME-2H/1B  | 1        |
|           | Contains:          |          |
|           | AIRHOME-150        | 1        |
|           | BE-AC-125          | 2        |
|           | BI-AC-125          | 3        |
|           | VMC-CLP 125 + 4X75 | 2        |
|           | VMC-PL 2X75        | 5        |
|           | VMC-EXT DN125      | 5        |
|           | VMC-RC 125         | 5        |
|           | VMC-CSR 75 50M     | 1        |
|           | VMC-JG 75 50U      | 1        |

#### KIT-AIRHOME-2H/1B







#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY AIRHOME KIT



This type of home, which includes four dry rooms (living room and three bedrooms) and three wet rooms (two bathrooms and kitchen) according to CTE must be ventilated with a minimum flow rate of 118.8 m<sup>3</sup>/h.





SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Master bedroom: 30 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Living room: 60 m<sup>3</sup>/h

#### COMPONENTS:

| ITEM CODE | PRODUCT NAME       | QUANTITY |
|-----------|--------------------|----------|
| 1353781   | AIRHOME-150        | 1        |
| ITEM CODE | PRODUCT NAME       | QUANTITY |
| 1501059   | KIT-AIRHOME-3H/2B  | 1        |
|           | Contains:          |          |
|           | AIRHOME-150        | 1        |
|           | BE-AC-125          | 3        |
|           | BI-AC-125          | 4        |
|           | VMC-CLP 125 + 4X75 | 2        |
|           | VMC-ME 2X75        | 1        |
|           | VMC-PL 2X75        | 7        |
|           | VMC-EXT DN125      | 7        |
|           | VMC-RC 125         | 7        |
|           | VMC-CSR 75 50M     | 2        |
|           | VMC-JG 75 50U      | 1        |

#### KIT-AIRHOME-3H/2B







#### SINGLE-FAMILY residence ventilation DOUBLE FLOW WITH HEAT RECOVERY AIRHOME KIT



This type of home, which includes five dry rooms (living room and four bedrooms) and three wet rooms (two bathrooms and kitchen) according to CTE must be ventilated with a minimum flow rate of 118.8 m<sup>3</sup>/h.





SODECA recommends the following flows:

**EXTRACTION** Kitchen: 60 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Bathroom: 30 m<sup>3</sup>/h Aster bedroom: 30 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Bedroom: 15 m<sup>3</sup>/h Living room: 45 m<sup>3</sup>/h

#### COMPONENTS:

| ITEM CODE | PRODUCT NAME       | QUANTITY |
|-----------|--------------------|----------|
| 1353781   | AIRHOME-150        | 1        |
| ITEM CODE | PRODUCT NAME       | QUANTITY |
| 1501060   | KIT-AIRHOME-4H/2B  | 1        |
|           | Contains:          |          |
|           | AIRHOME-150        | 1        |
|           | BE-AC-125          | 3        |
|           | BI-AC-125          | 5        |
|           | VMC-CLP 125 + 4X75 | 2        |
|           | VMC-ME 2X75        | 1        |
|           | VMC-PL 2X75        | 8        |
|           | VMC-EXT DN125      | 8        |
|           | VMC-RC 125         | 8        |
|           | VMC-CSR 75 50M     | 3        |
|           | VMC-JG 75 50U      | 1        |

#### KIT-AIRHOME-4H/2B







ACCESSORIES Accessories for ventilation in homes AIRHOME KIT



#### INCLUDED IN THE KIT:

|                 | 1.             | 2.                | 3.               | 4.                       | 5.             | 6.            | 7.           | 8.           |
|-----------------|----------------|-------------------|------------------|--------------------------|----------------|---------------|--------------|--------------|
|                 |                | S                 |                  |                          |                |               | $\bigcirc$   |              |
| ITEM CODE       | 1505609        | 1505618           | 1505612          | 1505607                  | 1505606        | 1505613       | 1023946      | 1023950      |
| PRODUCT<br>NAME | VMC-PL<br>2X75 | VMC-CSR<br>75 50M | VMC-EXT<br>DN125 | VMC-CLP<br>125 +<br>4X75 | VMC-ME<br>2X75 | VMC-RC<br>125 | BE-AC<br>125 | BI-AC<br>125 |

The 1505617 VMC-JG 75 50U code is not represented, but it is included in the kit.



#### ACCESSORIES

Accessories for ventilation in homes AIRHOME KIT

|            | ITEM CODE          | PRODUCT NAME                             |            | ITEM CODE          | PRODUCT NAME               |
|------------|--------------------|--|------------|--------------------|----------------------------|
| $\bigcirc$ | 1023946            | BE-AC-125                                |            | 1353044<br>1353046 | VMC-ADR 125<br>VMC-ADR 160 |
| $\bigcirc$ | 1023950            | BI-AC-125                                |            | 1352997<br>1352999 | VMC-ADK 125<br>VMC-ADK 160 |
|            | 1505613            | VMC-RC 125                               | 0          | 1353008<br>1353010 | VMC-ADL 125<br>VMC-ADL 160 |
|            | 1505609            | VMC-PL 2X75                              |            | 1353040<br>1353042 | VMC-AN 125<br>VMC-AN 160   |
| 0          | 1505612            | VMC-EXT DN125                            |            | 1505616            | VMC-R 75                   |
|            | 1505618<br>1505619 | VMC-CSR 75 50M<br>VMC-CSR 75 25M         | $\bigcirc$ | 1505617            | VMC-JG 75 50U              |
|            | 1505606            | VMC-ME 2X75                              |            | 1505620            | VMC-CUTTER                 |
|            | 1505607<br>1505608 | VMC-CLP 125 + 4X75<br>VMC-CLP 160 + 4X75 | $\searrow$ | 1505621            | VMC-PLNC                   |
| <b>O</b>   | 1505610<br>1505611 | VMC-CCP 125 + 8X75<br>VMC-CCP 160 + 8X75 | <i>I</i>   | 1505622            | VMC-TPN 75                 |
|            | 1505614<br>1505615 | VMC-BL 125 10M<br>VMC-BL 160 10M         |            | 1505623            | VMC-MGT 75                 |



VENTILATION SOLUTIONS FOR HOMES

# **COLLECTIVE** RESIDENTIAL VENTILATION





#### SVE/PLUS/EW



#### **CRF/EW**



CTD





CRF/EW/CPC

#### DOUBLE FLOW WITH HEAT RECOVERY SYSTEM



REB



#### **RECUP/EC BS**



**RECUP/EC H** 



The single flow collective residential ventilation system is an efficient solution to renew air in buildings with multiple homes. It extracts the exhaust air from wet rooms such as kitchens and bathrooms through ducts to the outside, and also introduces fresh air into dry rooms such as bedrooms and living room/dining rooms through the air inlets.

![](_page_33_Picture_3.jpeg)

#### Simpler installation and maintenance

![](_page_33_Figure_5.jpeg)

![](_page_34_Picture_0.jpeg)

# COLLECTIVE residential ventilation SINGLE FLOW

A system that combines natural air entry into dry rooms, and an extraction system via ducts in wet rooms.

It allows flow rate regulation through adjustable nozzles. The main advantage is **its simplicity, as it does not require a dual duct system**.

![](_page_34_Picture_4.jpeg)

#### SODECA SOLUTIONS

![](_page_34_Picture_6.jpeg)

SVE/PLUS/EW

![](_page_34_Picture_8.jpeg)

**CRF/EW** 

![](_page_34_Picture_10.jpeg)

CTD

![](_page_35_Picture_1.jpeg)

# COLLECTIVE residential ventilation SINGLE FLOW WITH CONSTANT PRESSURE CONTROL

The CPC system allows the fan to operate automatically, using a built-in pressure sensor and electronic control to adjust the speed of the ventilation unit to the requirements of each facility. This allows a constant pressure in the duct system regardless of the number of homes and the number of extraction inlets, thereby adapting the airflow to the needs of each home.

air quality

This control system, which acts with our EC TECHNOLOGY fans, provides the best solution for all kinds of facilities, obtaining much higher energy cost savings than any other unit. It also maintains a perfect balance between the ventilation needs of each home, minimal power consumption and low noise level.

![](_page_35_Picture_5.jpeg)

to the EC TECHNOLOGY and

speed control

Ensures constant pressure in duct system

![](_page_36_Picture_0.jpeg)

#### COLLECTIVE residential ventilation SINGLE FLOW WITH CONSTANT PRESSURE CONTROL

![](_page_36_Picture_2.jpeg)

SODECA's fans with CPC have been especially designed for controlled mechanical ventilation systems in multi-family or communal buildings.

![](_page_36_Picture_4.jpeg)

#### **†** EXTRACTION

The following models can be used for extraction, taking into account that the CJV/EW/T model also has the F-400 certification for work at 400 °C/2 h, making it suitable for extracting smoke in the event of a fire in the home: SVE/PLUS/EW/CPC - CJBD/EC/CPC - CJV/EW - CRF/EW/CPC.

#### SODECA SOLUTIONS

![](_page_36_Picture_8.jpeg)

CRF/EW/CPC

![](_page_37_Picture_1.jpeg)

# COLLECTIVE residential ventilation DOUBLE FLOW WITH HEAT RECOVERY

![](_page_37_Picture_3.jpeg)

Collective residential ventilation with heat recovery system is an efficient solution for recovering heat from the air extracted from wet rooms and using it to control the temperature of the air that enters dry rooms. This reduces energy consumption and improves indoor air quality, preventing the growth of mould and mildew. In short, it is a sustainable and beneficial solution for the health and comfort of occupants. A double flow CMV recovers a high percentage of energy in dwellings using a community heat recovery unit.

![](_page_37_Picture_6.jpeg)

Efficient, sustainable and beneficial for people's comfort and economic savings

![](_page_37_Figure_8.jpeg)

![](_page_38_Picture_0.jpeg)

#### COLLECTIVE residential ventilation DOUBLE FLOW WITH HEAT RECOVERY

Systems with controlled mechanical ventilation filter the outside air in order to retain pollen, fine particles and bacteria, while the inside air is extracted to release CO<sub>2</sub>, humidity and volatile organic compounds (VOCs).

![](_page_38_Picture_3.jpeg)

In the past, homes suffered from air infiltration due to their low airtightness, resulting in significant energy losses. However, homes nowadays are characterised by their high level of airtightness causing poor ventilation and increasing

![](_page_38_Picture_5.jpeg)

condensation risk. For this reason it is vital to have Controlled Mechanical Ventilation (CMV) systems. Opting for this type of technology not only improves energy efficiency, but also helps to reduce energy costs. SODECA's heat recovery units play a key role by ventilating, filtering and disinfecting air in indoor spaces. They also help recover a significant part of the energy, resulting in additional benefits to improve the energy efficiency of the home.

#### SODECA SOLUTIONS

![](_page_38_Picture_9.jpeg)

REB

![](_page_38_Picture_11.jpeg)

**RECUP/EC BS** 

![](_page_38_Picture_13.jpeg)

**RECUP/ECH** 

![](_page_39_Picture_0.jpeg)

PRESSURISATION **SOLUTIONS** FOR STAIRCASES, LOBBIES AND EVACUATION ROUTES IN THE EVENT OF FIRE

Pressurisation control systems protect evacuation routes in the event of fire, preventing the entry of smoke through air overpressure. If the doors are opened or in the event of air leaks, the system reacts by increasing the flow rate. This guarantees that the escape routes are always free of smoke in an emergency situation.

#### Functions of the pressurisation system for evacuation routes

**Equipped with all the components required for proper operation in accordance with standard EN 12101-6** (fan, pressure sensor, hatch, speed controller, PLC, etc.)

| 1 |   |   |
|---|---|---|
|   | • | • |

Allows automatically

**controlling** the flow when the door is open (speed criteria) and maintain a minimum differential pressure (50 Pa) in cases where the door is closed **in accordance with the requirements set out in European standard EN 12101-6**.

The system incorporates an activation in safe mode when a fire alarm signal is activated and safe mode of operation when the doors are open due to an overpressure condition.

The **control panel** has status indicator lights and **an automatic or manual system power selector**.

It is connected to the Building Management System (BMS) or SCADA and may get the status of all the equipment via a remote connection depending on the model. Also, a remote communications panel may be added for use by the fire department or other users.

![](_page_39_Picture_14.jpeg)

A motorised hatch and smoke detector may be used to manage air intake.

![](_page_39_Picture_16.jpeg)

They are supplied **integrated and ready for operation** (Plug&Play system).

![](_page_40_Picture_0.jpeg)

![](_page_40_Figure_1.jpeg)

#### SODECA SOLUTIONS

| Full range        |                                | Adva                            | anced             | Ba                                      | Basic            |  |
|-------------------|--------------------------------|---------------------------------|-------------------|---|------------------|--|
|                   |                                |                                 |                   |   |                  |  |
| HATCH PDS         | KIT BOXPDS<br>KIT BOXPDS SMART | KIT BOXSMART<br>KIT BOXSMART II | KIT BOXSMART FLAP | KIT BOXPRES PLUS<br>KIT BOXPRES PLUS II | KIT SOBREPRESIÓN |  |
|                   |                                |                                 |                   |   |                  |  |
| PDS LOBBY CONTROL |                                | KIT BOXSMART EC                 |                   | PRESSKIT                                |                  |  |

![](_page_41_Picture_0.jpeg)

![](_page_41_Picture_1.jpeg)

It is essential for the ventilation system for car parks to be **reliable throughout the years to ensure it is safe for users.** In car parks, ventilation may be natural or forced. In the latter, **fans must be**  **installed to properly move the air** and maintain the required conditions of safety and comfort under normal conditions as well as in the event of a fire.

#### Functions of ventilation for car parks

![](_page_41_Picture_5.jpeg)

Equipped with all the components required for proper operation, in accordance with CTE DB SI and DB HS, and standard UNE 100166 depending on each application.

Car park ventilation systems are installed to carry out three functions:

![](_page_41_Picture_8.jpeg)

**Control smoke in the event of a fire**, to help occupants evacuate as well as help fire fighters extinguish the fire.

![](_page_41_Picture_10.jpeg)

Maintain the **concentration of contaminating gases** emitted by vehicles under control.

![](_page_41_Picture_12.jpeg)

Maintain the **concentration** of explosive gases generated by possible vehicle fuel leaks under control.

These three functions are integrated in a single system that is capable of providing a flow adapted to the needs at any given time with the aim of optimising the system's power consumption.

![](_page_42_Picture_0.jpeg)

Mechanical ventilation through duct systems **Mechanical ventilation** assisted by impulse ventilation

**Natural ventilation** assisted by impulse ventilation

![](_page_42_Picture_4.jpeg)

![](_page_42_Picture_5.jpeg)

![](_page_42_Picture_6.jpeg)

#### SODECA SOLUTIONS

![](_page_42_Picture_8.jpeg)

![](_page_43_Picture_0.jpeg)

# OTHER SOLUTIONS

#### In-line duct fans

**Roof-mounted extract fans** 

#### Bathroom extract fans

![](_page_43_Picture_5.jpeg)

#### SV

Low-noise, in-line duct extract fans mounted inside an acoustic casing.

![](_page_43_Picture_8.jpeg)

**CTD** Centrifugal roof-mounted extract fans for household ventilation.

![](_page_43_Picture_10.jpeg)

**EDMF** Extra-flat bathroom extract fans with a modern appearance and design.

![](_page_43_Picture_12.jpeg)

**SV/FILTER** Low-noise, in-line duct fans with different filtering stages.

![](_page_43_Picture_14.jpeg)

**TIRACANO** Chimney smoke extract fans.

![](_page_43_Picture_16.jpeg)

EDD

Household extract fans with a modern appearance and design.

![](_page_43_Picture_19.jpeg)

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

![](_page_43_Picture_21.jpeg)

**NEOLINEO** In-line duct extract fans with a detachable body and small size and long-life ball bearings.

![](_page_43_Picture_23.jpeg)

**EDQUIET/S** Low-consumption household extract fans with very low noise levels.

![](_page_43_Picture_25.jpeg)

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

## OVERPRESSURE CALCULATION IN STAIRCASES AREAS

![](_page_44_Picture_1.jpeg)

QUICKFAN, THE SOFTWARE USED FOR MAKING CALCULATIONS AND DESIGNING VENTILATION PROJECTS

TOOLS FOR ENGINEERING FIRMS AND TECHNICAL DEPARTMENTS

#### Available in:

Window

# SODECA SELECTOR

# Selecting the most suitable product for your ventilation installation is now easier than ever

Through the projects module for QuickFan and by downloading the designs in CAD 3D or REVIT, you can design ventilation projects, make calculations and obtain full technical reports in just a few minutes

![](_page_44_Picture_8.jpeg)

![](_page_44_Figure_9.jpeg)

![](_page_44_Picture_10.jpeg)

Always

updated

![](_page_44_Picture_11.jpeg)

Easy search

Personalise reports Reports in minutes

![](_page_44_Picture_15.jpeg)

![](_page_45_Picture_0.jpeg)

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## VENTILATION SOLUTIONS FOR HOMES

![](_page_46_Picture_1.jpeg)

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![](_page_46_Picture_7.jpeg)

![](_page_46_Picture_8.jpeg)

![](_page_46_Picture_9.jpeg)

![](_page_46_Picture_10.jpeg)