

Residential Ventilation with **Heat Recovery**

THE INDOOR AIR POLLUTION

When talking about pollution, we use to think exclusively to the atmospheric pollution...

...but the air we breathe at home, in the office or at school - where we spend around 90% of our time - is much more polluted than the outdoor one!

HOW TO KEEP YOURSELF SAFE

In its Indoor Air Quality Guidelines of 2009, The World Health Organization recommends that a **correct air exchange** is made in order to maintain a minimum comfort and to prevent pathologies caused by an excessive exposure to indoor air pollutants.

FACTS & FIGURES

The problem known and recognized by the scientific community is called the **Sick Building Syndrome (SBS)**
Definition given by the WHO in 1986

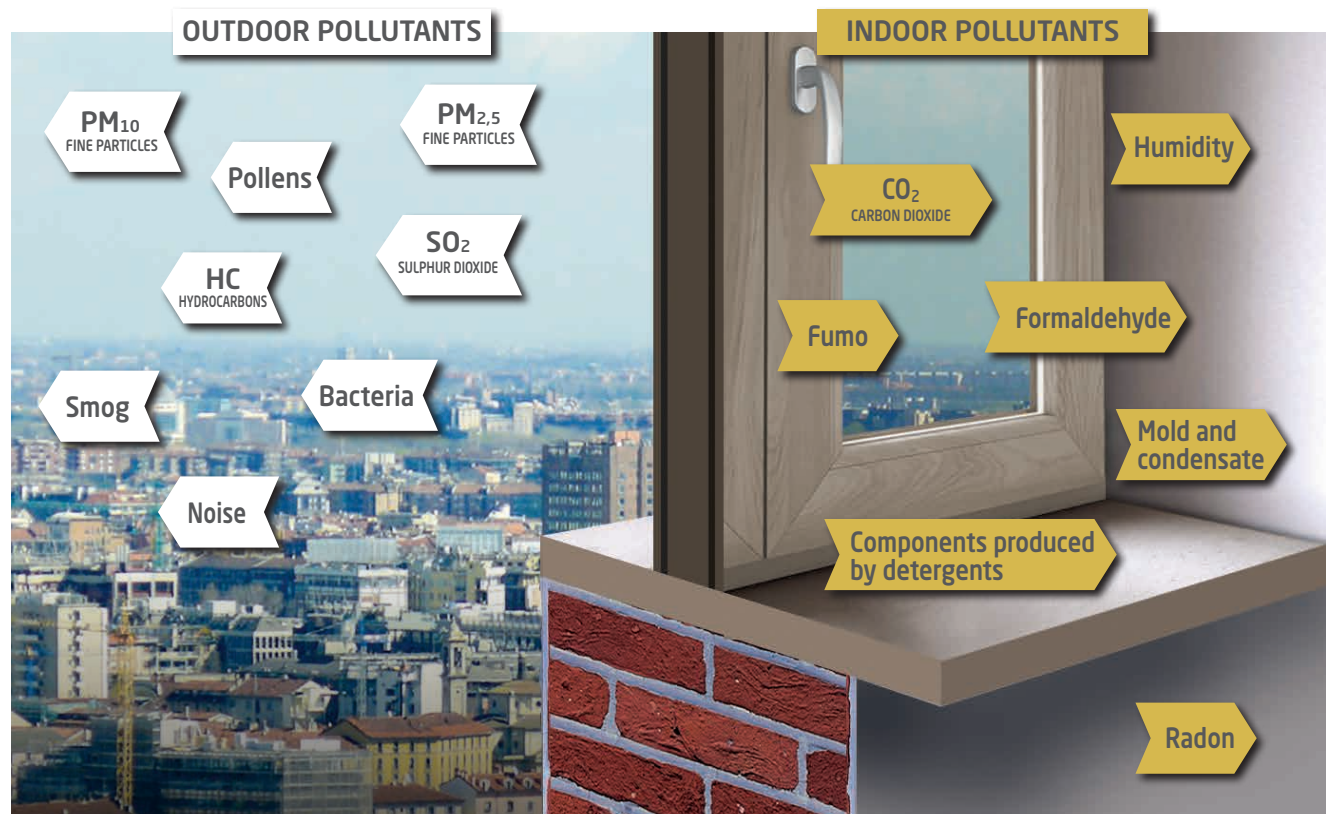
20% of the buildings suffer from problems of humidity which are the cause of many **allergic and respiratory pathologies**
WHO - Guidelines for indoor air quality 2009

The indoor air pollutants cause the death of 4 million persons each year
WHO

The exposure to the indoor radon gas is the second cause of lung cancer
WHO - Handbook of indoor radon 2009

WHICH SOLUTION

Opening the windows to change the indoor air is a natural and spontaneous behaviour which is anyway very onerous in terms of thermal energy loss (heated or cooled air). Besides, it even worsens the indoor air quality. Today, ventilating means to renew the indoor air in a controlled and measurable way with optimized energy costs.



HEAT RECOVERY VENTILATION

Ventilation with heat recovery is a clean and simple technology which provides great comfort and savings: it enables to create an hygienic microclimate throughout the home, combining comfortable living, protection of the building and energy efficiency.

It is particularly recommended for:



SAVINGS

- Lower heating and air conditioning bills.
- Low energy consumption.
- Optimising insulation investments (window frames, wall and loft insulation, roof) which would be wiped out with a natural ventilation system: on average, in fact, open windows lead to a loss of 50% of heat from the home.



WELLBEING

- Fresh, clean air at a comfortable temperature improves your quality of life and sleep.
- A clean and filtered air prevents allergens from multiplying and promotes the removal of pollutants.
- Low noise level: quiet equipment operation and protection from external noises.



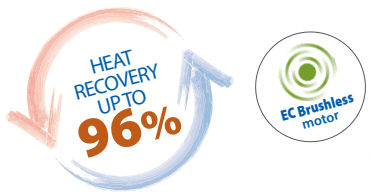
PROTECTING YOUR PROPERTY

- Preventing damage caused by dampness and condensation.
- Preventing mould.
- Protecting the value of your property.



COMFORT

- Practical, versatile and customisable modular operation.
- A reliable system which ensures the correct ventilation in every season.
- The ideal solution for energy requalification of buildings.



Centralized Heat Recovery Units

Integrated solutions for indoor comfort and energy saving

RESIDENTIAL VENTILATION UNITS HORIZONTAL INSTALLATION

2 - 8 rooms



REC in linea 140

Thermal efficiency **91%**
EC Brushless Motor
Free cooling / Integrated By-pass
Energy Class **A**

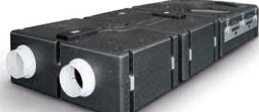
- Ideal up to 4 rooms
- Airflow up to **140 m³/h**
- Low consumption (**min. 10W**)



REC in linea 180

Thermal efficiency **91%**
AC or EC Brushless Motors
Free cooling / Integrated By-pass
Energy Class **A (EC)**

- Ideal up to 6 rooms
- Airflow up to **180 m³/h**
- Low consumption (**min. 15W EC - min. 60W AC**)



REC in linea 220

Thermal efficiency **91%**
AC or EC Brushless Motors
Free cooling / Integrated By-pass
Energy Class **A (EC)**

- Ideal up to 8 rooms
- Airflow up to **220 m³/h**
- Low consumption (**min. 35W EC - min. 60W AC**)



EC models are available with Touch Panel included (TC versions)

CONTROLLERS



RLS 3V

- Remote 3 speed control and On/Off switch
- New design with cover
- Suitable for surface or built-in installation
- Ease of connection by the means of removable terminals
- Protection IP42
- Weight 0,40 Kg
- Supply voltage 230V - 50/60 Hz
- Dimensions 110 x 80 x 42 mm

Suitable and available as accessory with:

- REC in Linea 180 AC
- REC in Linea 220 AC
- REC 280 AC



RLS 1 WR

- Remote control
- Manual selection of three modality of continuous running:
 - I - Low ventilation modality
 - II - Intermediate ventilation modality
 - III - Intensive ventilation modality
- Supply voltage 230V - 50/60 Hz
- Weight 0,50 Kg
- Dimensions 75 x 75 x 30 mm

Included with:

- REC in Linea 140 EC
- REC in Linea 180 EC
- REC in Linea 220 EC
- REC 320 EC



TOUCH PANEL

The remote Touch Panel with coloured screen allows to manually or automatically manage (through the weekly programming) the following functions:

- The speed/ventilation level regulation
- The ventilation modality (by-pass function, free-cooling, only extraction, only immission)
- The threshold humidity level over which the unit increases its speed
- The post-ventilation function (Timer function, adjustable from 0 to 30 minutes) to delay the switching of the unit at the minimum speed)
- The Sleep modality that allow to have the unit running silently at low speed during the night

Suitable and available as accessory with:

- REC in Linea 140 EC
- REC in Linea 180 EC
- REC in Linea 220 EC
- REC 320 EC

Included with:

- REC in Linea 140 EC TC PLUS
- REC in Linea 180 EC TC PLUS
- REC in Linea 220 EC TC PLUS
- REC 320 EC TC PLUS

VERTICAL INSTALLATION

up to 10 rooms



REC 280

Thermal efficiency **93%**
AC motor
Free cooling / Integrated By-pass

- Ideal up to **10 rooms**
- Airflow up to **280 m³/h**
- Low consumption (**min. 80W**)



REC 320

Thermal efficiency **93%**
EC brushless motor
Free cooling / Integrated By-pass
Energy class **A**

- Ideal up to **10 rooms**
- Airflow up to **320 m³/h**
- Low consumption (**min. 40W**)
- Available with Touch Panel included (TC version)



EXAMPLE OF INSTALLATION OF A HEAT RECOVERY SYSTEM WITH MAICO FLEX ACCESSORIES

Maico Flex is a system of accessories for air distribution

REC 280 / 320 Vertical installation



REC in linea Horizontal installation (in false ceilings)



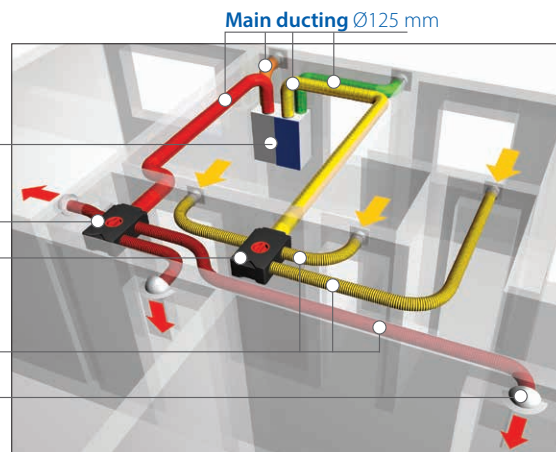
MF-V
Air distribution box



MA
Flexible duct Ø 63 - 75 - 90 mm



MF-A / BEIP
adaptors and exhaust/intake grilles



Decentralized heat recovery units

Breathe a healthier air at home

RECsmart



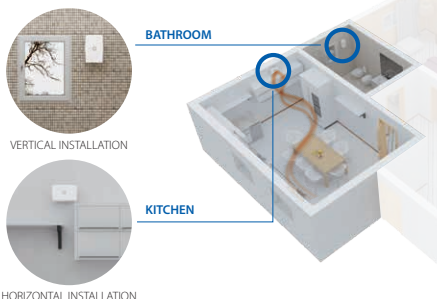
RECsmart+

RC Version with
REMOTE CONTROL

TC Version with
TOUCH CONTROL

- Thermal efficiency **75%**
- Filtering system in intake and exhaust, washable
- 3 models for wall thickness **400/500/600 mm**
- Easy installation: it is sufficient a hole of **Ø100mm**
- Silent running and energy saving (**min 8 W**)
- Airflow up to **53 m³/h**
- Provided with smart functions:
Free cooling, Humidity control and Antifreeze

IDEAL
IN HUMID ROOMS
LIKE BATHROOMS
AND KITCHENS



RECduo 100



RC FULL OPTIONAL WITH
REMOTE CONTROLLER

- Thermal efficiency **90%**
- HRU with alternate flow (push-pull type)
- High efficiency filtering system placed on the heat exchanger
- Telescopic pipe placed adaptable to the wall thickness (**220 ÷ 1000 mm**)
- Airflow up to **40 m³/h**
- Silent running and energy saving (**min. 1 W**)
- Easy installation: it is sufficient a hole of **Ø 100mm**
- Free cooling function to prevent heat exchange if not needed
- Smart functions: speed boost mode through humidity control or sensors, delay timer, sleep mode, flow direction control.

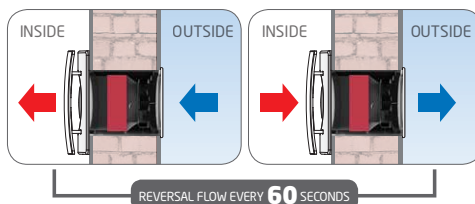


IDEAL IN BEDROOMS AND LIVING ROOMS

Install 2 units to obtain an optimized efficiency and a better airflow balancing.



CERAMIC HEAT EXCHANGER

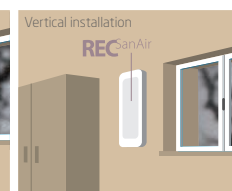
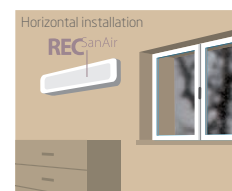


RECsanAir

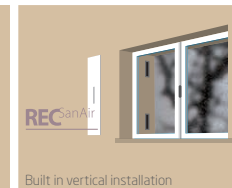
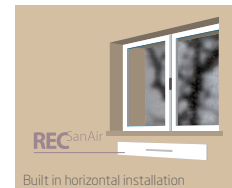
- Thermal efficiency **90%**
- High efficiency filtering system F8+G4 in intake that allows the retention of 100% of pollens and fine particles (**98% of PM_{2,5} and 99,5% of PM₁₀**)
- 3 models for installation on wall (built-in or surface installation, horizontal or vertical) and on any type of window frame
- Silent running and very low consumption (**min 4 W**)
- Airflow up to **41 m³/h**
- Integrated functions: Free cooling, Energy saving and Antifreeze.



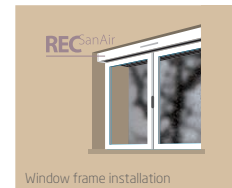
Supplied with
remote controller



WALL model



IN WALL model

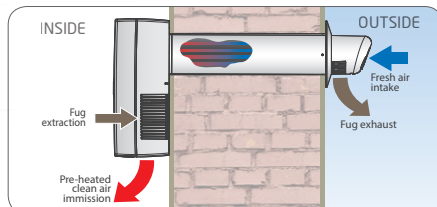


WINDOW model



TUBULAR HEAT EXCHANGER

FUG EXTRACTION



DOUBLE FLOW ENTHALPIC HEAT EXCHANGER

