RENSON®

Creating healthy spaces

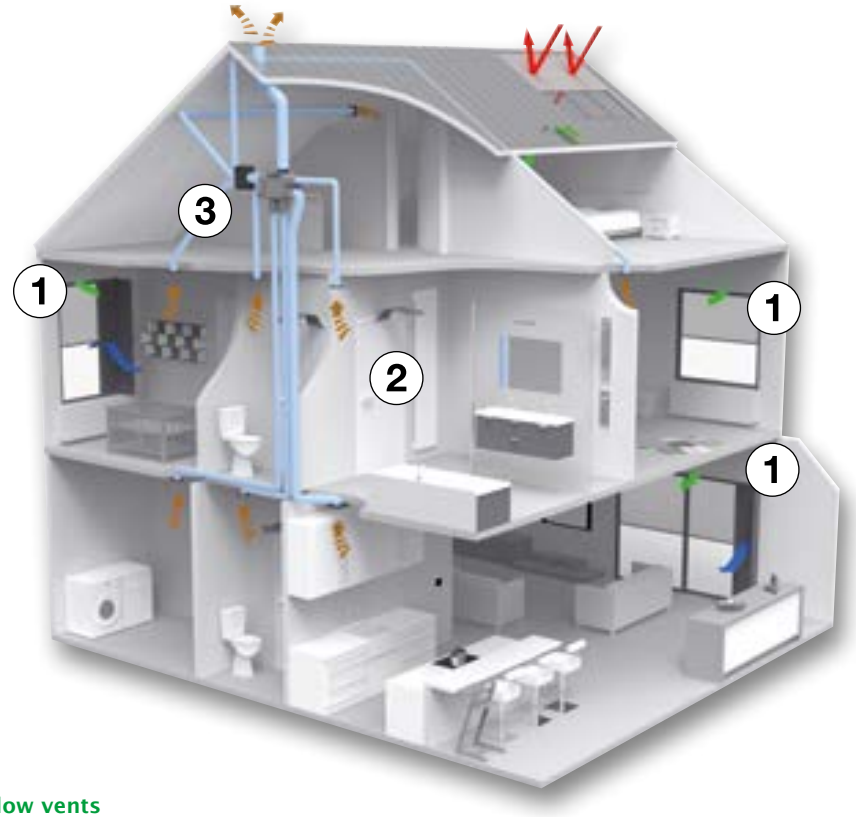
Healthbox® II

SmartZone | TouchDisplay

SYSTEM C+ EVO II

Energy savings through demand-controlled ventilation

For several years now, SYSTEM C+® by RENSON® has been a very successful ventilation system thanks to its simplicity, ease of maintenance and energy efficiency.
Now however, RENSON® succesfully launched the new Healthbox® II which includes new innovative technology. SmartZone technology ensures that the house is optimally ventilated, according to the resident's activities. The new TouchDisplay allows the residents to set their own personalised ventilation program and displays the actual indoor air quality. This ventilation system can help homes reduce their energy consumption while creating a healthy indoor environment. Read on to find out how the new Healthbox® II makes energy saving and a healthy indoor environment possible!



① Self-regulating window vents

The self-regulating flap ensures that there is a constant air flow rate despite changes in wind speeds outside. With this type of regulation RENSON® window ventilation systems can guarantee a comfortable, healthy air supply without the nuisance caused by draughts.

② Transit

The flow of air through doors is allowed by door grilles such as the Silendo® (an acoustically damping door louvre) or the Invisido® (a discreet door lourve above the door).

③ Demand-controlled extraction

The RENSON® software intelligently regulates the control modules so that energy savings can be made and a healthy indoor environment is maintained. Extraction rates are controlled in wet and dry rooms depending on the presence of people, humidity and CO_2/VOC* levels.

- **Moisture:** there is a temperature and humidity sensor in the control module. This electronic sensor responds quickly and dynamically to changes in the relative humidity level in your home.
- **CO_2 control:** there is a CO_2 sensor in the control module. This sensor responds quickly to changes in the CO_2 level inside the house. It detects CO_2 in absolute as well as dynamic terms. Thanks to its dynamic operation, the presence of people can be detected wirelessly.
- **VOC control:** there is a VOC sensor in the control module. This sensor responds quickly to changes in the VOC level in our home. Thanks to the dynamic operation of the sensor, presence may be detected.
- **Central ventilator:** the electronically controlled EC motor is under control of the central processor. This ensures that the motor always runs according to the optimal conditions. The appropriate extraction rate is regulated for each room, with minimal power consumption.

* VOC = Volatile Organic compound / Organic chemicals in our homes such as paints, lacques, cleaning products, comethics, etc...

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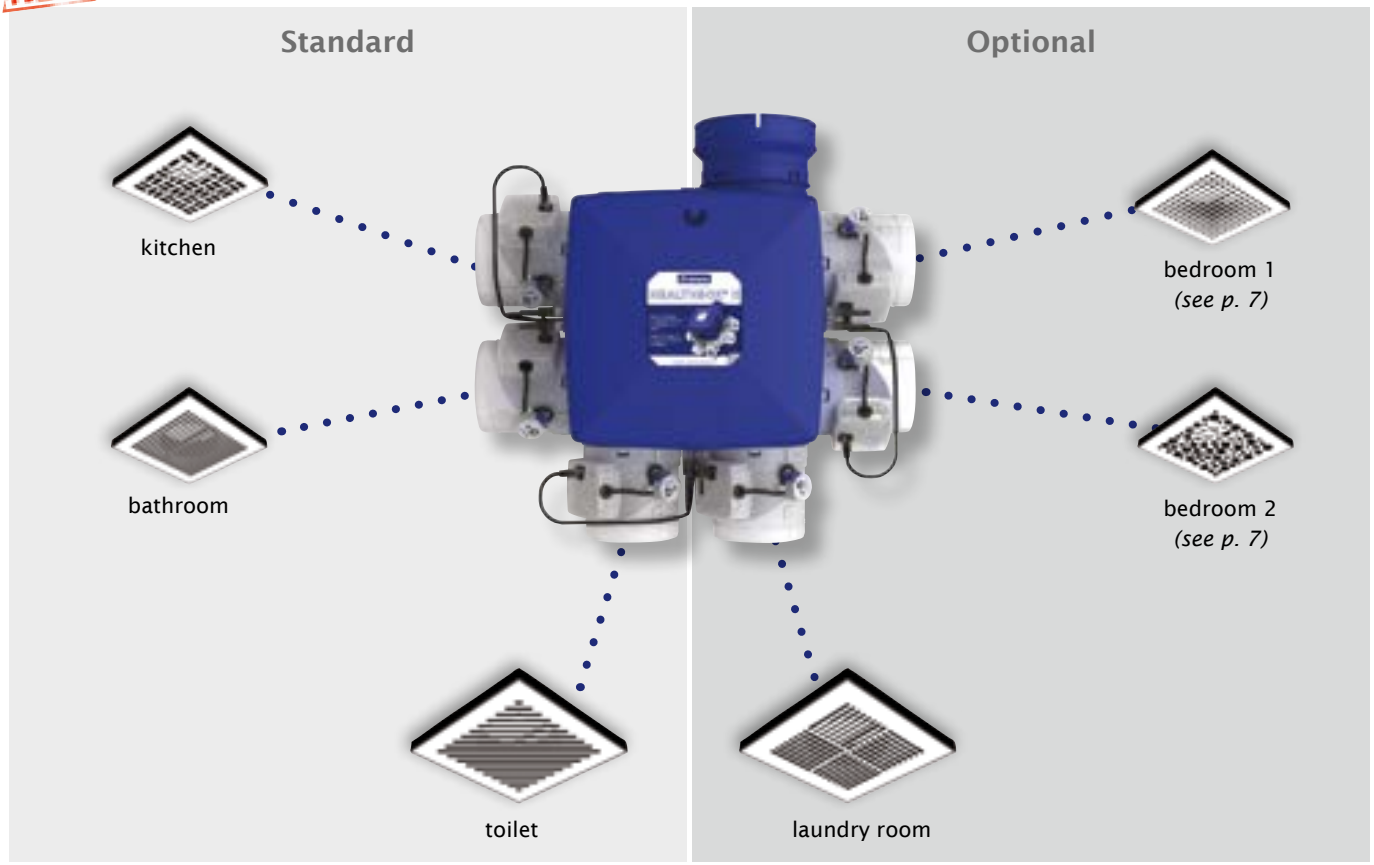
Healthbox® II

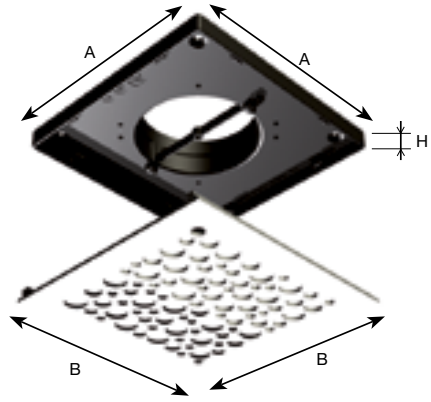
The Healthbox® II monitors the indoor air quality, focussing on: moisture and/or VOC and CO_2 **24 hours a day**, even when the occupants are not at home. The built-in sensor in the control module will regulate the control flap to extract the right amount of air from the room to provide the best air quality with the best energy-efficiency.

The Healthbox® II has up to **6 separate connections** to enable energy-efficient ventilation.
NEW **Now also available with 8 connections** (Healthbox® Smartzone).

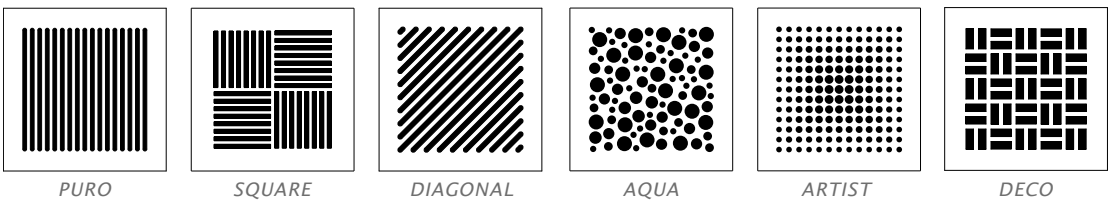


Design extraction grills

In order to enable the integration of the extraction grills into the ceiling, the location of the control system was shifted from the extraction grill to the electronic control modules on the motor unit.
In addition, the plastic extraction valves were replaced by aluminium design grills. These design grills (height 11mm) were developed for integration or mounting into or onto the ceiling (or wall), for a plaster, plasterboard or a MDF base surface. These grills are generally supplied in RAL 9010 matt (white) but can easily be painted over. The occupant can choose between **6 different designs**, so that combinations with all kinds of décors are possible.
The grills included in the Kits *toilet* en *bathroom/laundry room* are equipped with an 80 mm diameter connection. The grills in the Kits *kitchen, cook* and the *bathroom+toilet kit* are equipped with an 125 mm diameter connection. The grills in the Kits *bedroom(s)* exist in both versions ø 80 and ø 125 mm.



mm
XD 25-50: A=134 / B=130 / H=11 / Ø=80
XD 75: A=174 / B=170 / H=11 / Ø=125



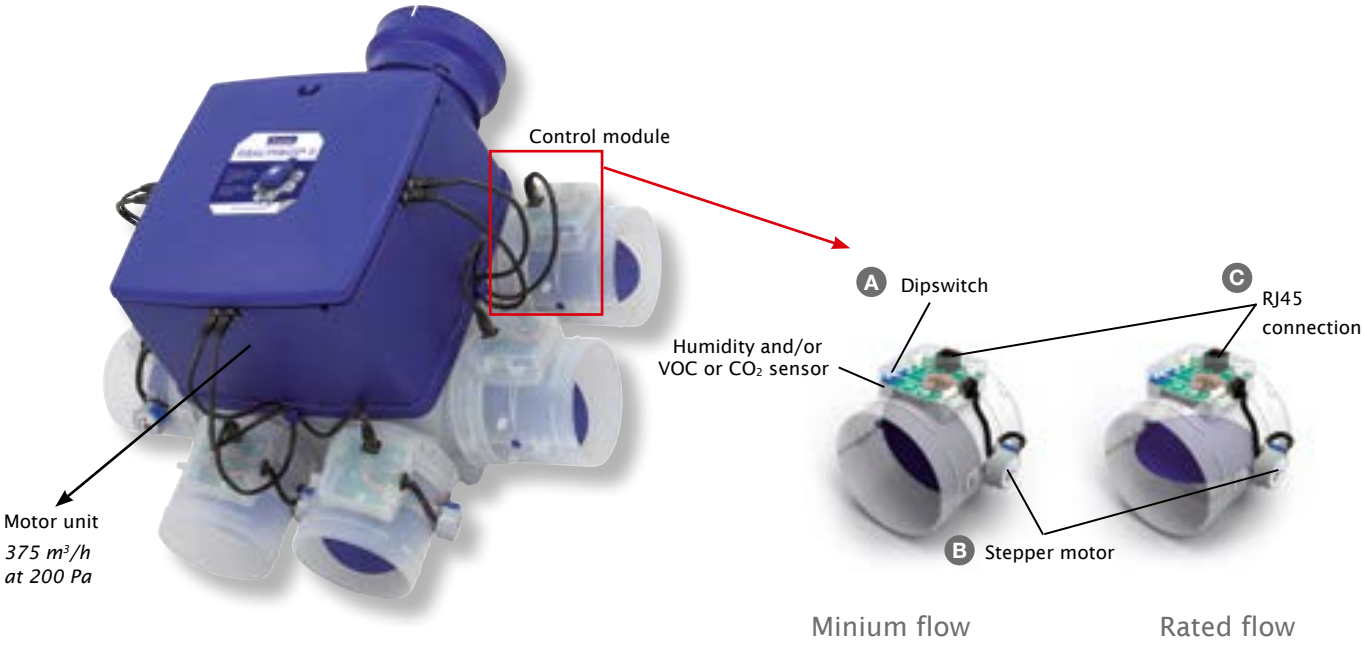
PURO *SQUARE* *DIAGONAL* *AQUA* *ARTIST* *DECO*

Settings

Unique automatic calibration system

The entire system is automatically calibrated, achieving the appropriate flow rate for each control module, regardless of the length and type of the ducting. The control modules can be programmed according to the type of room and/or type of detection (humidity and/or VOC or CO_2). The control modules will then be set to the required maximum flow rate per room and will communicate with the motor unit in order to determine the required total flow rate of all wet and dry rooms, specifically for that house.

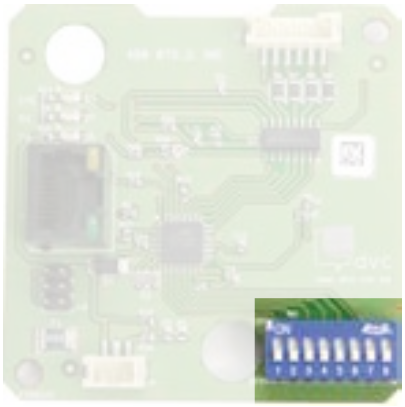
The total calibration time will be limited to an average of 12 minutes.



A **Dipswitch:** this is generally calibrated in production according to the standard, but the installer may adjust it according to the situation.

B **Stepper motor:** special motor that can finely adjust the flap.

C **RJ 45:** simple plug & play connection (Ethernet patch cable)



Dipswitch

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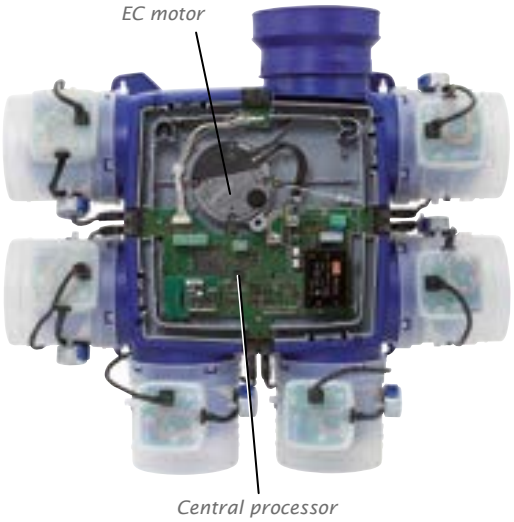
Energy savings through optimised, extraction, on-demand

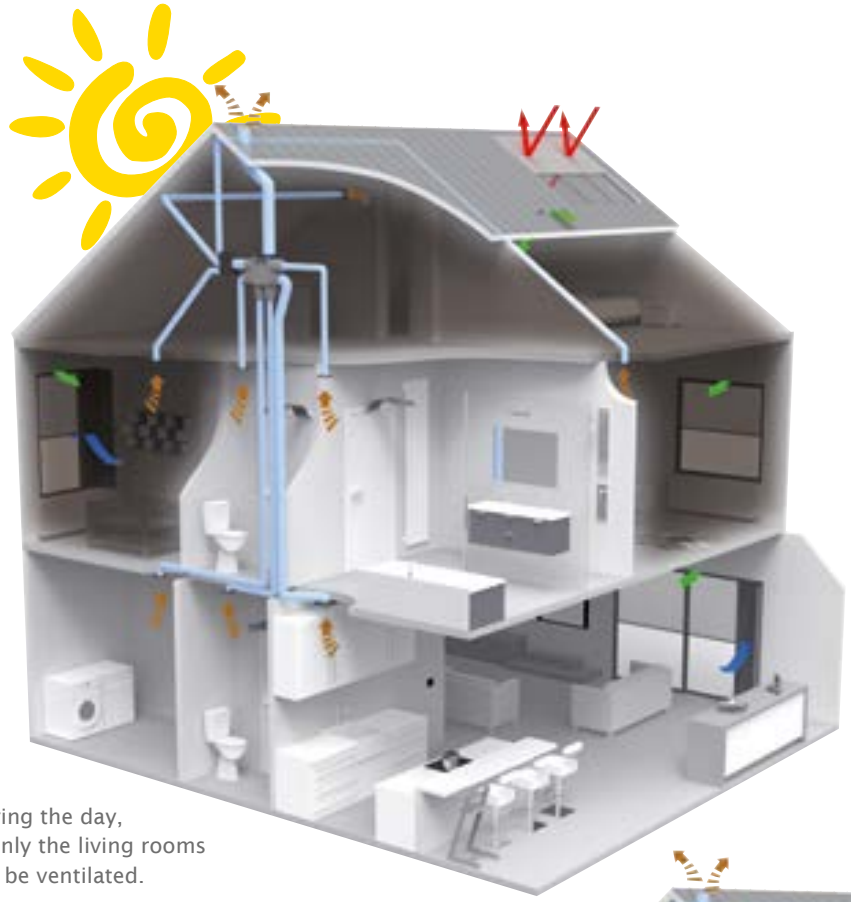
The Healthbox® II has a powerful motor with control modules that can ensure proper ventilation of any connected room at all times. A humidity and/or VOC or CO_2 sensor in each control module measures the extraction air **24 hours a day**, and communicates with the central processor. The control module limits the extraction rate per room if possible and also runs the motor at a lower speed. **The Healthbox® II thereby achieves *heat savings* and *savings in electricity consumption*.**



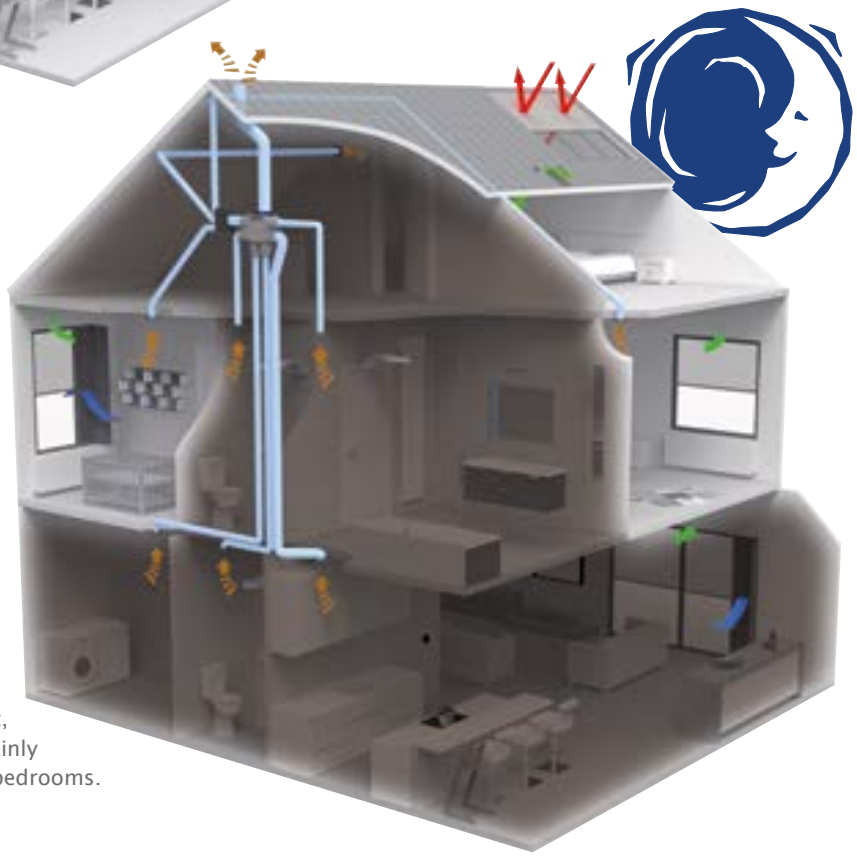
Standard settings for control modules

Intelligent ventilation,
wherever you happen to be !

Thanks to ***SmartZone technology***
Only the rooms you are present in will be ventilated more.



During the day,
mainly the living rooms
will be ventilated.



During the night,
ventilation is mainly
required in the bedrooms.

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Types of configuration

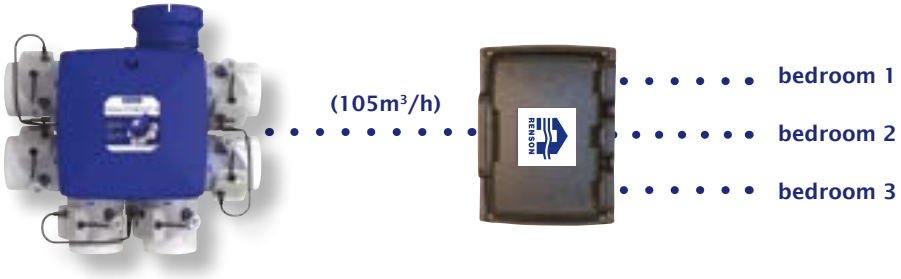
Configuration A

- Extraction on-demand in all wet rooms

SmartZone(s)

Configuration B

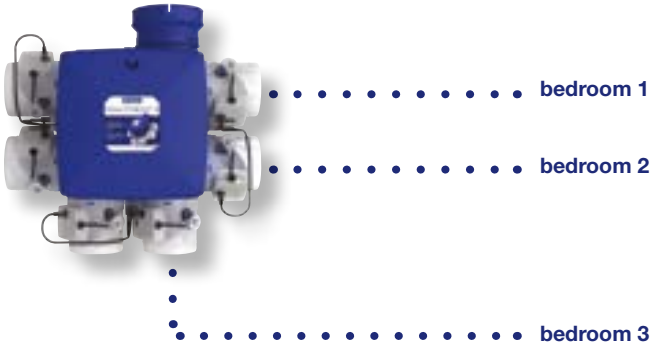
- Extraction on-demand in all wet rooms
- Nocturnal extraction in all bedrooms, where one control module is connected to max. 3 bedrooms via a plenum



Kit for bedrooms
105 m³/h
CO_2 : 800ppm

Configuration C

- Extraction on-demand in all wet rooms
- Nocturnal extraction in all bedrooms with all bedrooms operated by a separate control module



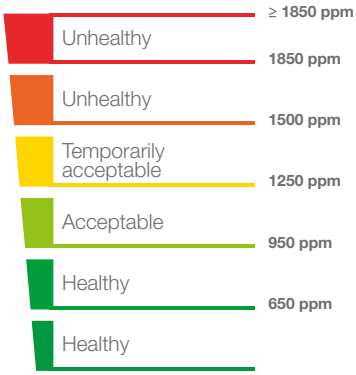
Kit for bedrooms
30 m³/h
CO_2 : 900ppm

Operation

TouchDisplay

A unique control system with a colour screen informs the residents about the climate inside the house at all times of the day, and shows how the ventilation system improves the quality of the indoor air.

Measuring indoor air quality
The presence of people, paints, other devices or pollution from outside leads to indoor air pollution, which can, among other things, be seen in the high ppm (parts per million) of carbon dioxide values. The carbon dioxide level is a recognised parameter for indoor air quality and is often the unexpected cause of many health problems



Customisable program

HDC-Mode
a program that offers you more comfort during periods other than the heating season.

EmptyhouseMode
optimally protects your home in the absence of people (avoids overventilation).

EcoMode
ventilation with minimal energy loss during the heating season.

BoostMode
ensures maximum ventilation when there are more people present than normal (for example, in case of visitors).

NightMode
ensures optimum ventilation during the night.

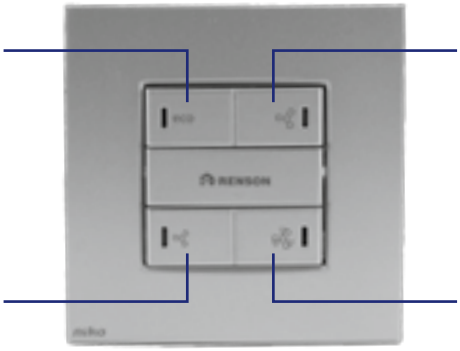
KitchenMode
ensures that the ventilation system can be used to its full capacity to remove the polluted air in the kitchen.

4-position switch (XVK4) (standard)

The four-position switch is a wired button that provides feedback about the status of the ventilation group via blue LEDs.
The switch allows us to make a selection from 4 programs:

EcoMode
ventilation with minimal energy loss during the heating season.

EmptyHouseMode
lowest ventilation position, ex. when leaving the house



HDC-Mode
a program that ventilates in conformity with the requirements of the NBN D50-001 (Ventilation Systems for Residential Buildings) law.

BoostMode
a temporary program that provides maximum ventilation when there are more people present than normal. (for example, visitors)

Connecting a motorless cooker hood to the Healthbox® II

RENSON® enables you to connect a motorless cooker hood to your ventilation system. When activing the cooker hood, the ventilation system will provide for an elevated extraction capacity. If the cooker hood is not activated, then the normal basic ventilation will also be realised through the cooker hood. In other words there is no need for an extra extraction point in the kitchen.

RENSON® Odormatic® cooker hood
RENSON® has designed a range of motorless cooker hoods that garantuee a maximum efficiency when connected to the Healthbox® II. An integrated air curtain allows the ventilation system to use a lower airflow than traditional cooker hoods to extract the cooking fumes efficiently.
The air curtain creates an air bubble around the cooker so that the cooking fumes remain in the close proximity of the cooker. Because of this small area of "contamination", a small extraction airflow (150m³/h) is sufficient to efficiently extract the cooking fumes.
Because the cooker hood is connected to the ventilation system, it results in a quiet extraction in the kitchen, seeing as the ventilation system is normally placed in a technical room or the attic.

EXAMPLE OF A CONFIGURATION:
More information ***WWW.RENSON.EU***

Touchdisplay with ***CO_2 sensor***

Summary

The following table summarises the different configurations available.

	Healthbox® II	Healthbox® II SmartZone	Healthbox® II Touch	Healthbox® II Touch SmartZone
Window vents (P3-P4) Natural air supply with self-regulating valve	✓	✓	✓	✓
Control CO_2-, VOC sensors and/or dynamic humidity sensor	✓	✓	✓	✓
CO_2 in TouchDisplay	-	-	✓	✓
CO_2 in extraction module in bedroom(s)	-	✓	-	✓
Zone distribution in living zone/per bedroom	-	✓	-	✓
Comfort CO_2 display	-	-	✓	✓
Extractor hood mode	-	-	✓	✓
Operation 4-position switch	✓	✓	-	-
TouchDisplay	-	-	✓	✓
KitchenTimer	-	-	✓	✓
Configurations (see page 7)	A	B C	A	B C

Benefits

Automatic calibration in 12 minutes on average
The fan is calibrated fully automatically and regulates itself so as to achieve the exact extraction capacity for each room. This avoids the risk of adjustment errors, thereby ensuring a properly working system with a proper flow rate in each room. This is 5 times faster than a standard System C; and 30 times faster than a System D. This leads to significant time savings during installation.

RENSON® makes the default settings for the control module
The dipswitches can be used to make simple adjustments according to specific situations

Wireless communication
The communication between the Healthbox® II and the TouchDisplay is completely wireless.

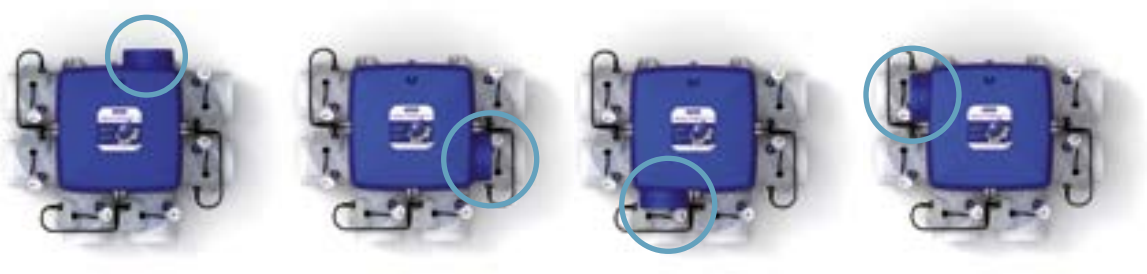
Wireless detection of presence via CO_2 sensor in the control module
CO_2 sensors are used in the bedrooms and the kitchen.

Wireless detection of presence via VOC sensor in the control module
VOC sensors detects other polluters such as paints, lacques, cleaning products, etc.

Quiet operation
The Healthbox® II satisfies the most stringent noise standards. This requires a maximum of 30 dB(A) in the dry rooms (bedroom and living room).

Three installation options
- Wall mounting
- Ceiling mounting (for example, false ceiling, etc.)
- Cord system in an unused corner in the attic (no vibration transfer)

Direction-adjustable extraction
In the design, it was also ensured that it should be possible to easily rotate the motor extraction in four directions, so as to avoid bends in the extraction duct to the outside. The absence of sharp bends in the extraction duct results in lower noise levels, lower pressure loss, easy installation and therefore lower **energy consumption**.



Creating healthy spaces

RENSON®: your partner in ventilation and sun protection

RENSON®, headquartered in Waregem (Belgium), is a trendsetter in Europe in natural ventilation and sun protection.

- ***Creating healthy spaces***
  From 1909, we've been developing energy efficient solutions assuring a healthy and comfortable indoor climate. Our remarkable headquarters - built according to the 'Healthy Building Concept' – is a beautiful example portraying our corporate mission.
- ***No speed limit on innovation***
  A multidisciplinary team of more than 50 R&D employees continually optimize our products and develop new and innovative concepts.
- ***Strong in communication***
  Contact with the customer is of the utmost importance. A group of 70 in-the-field employees worldwide and a powerful international distribution network are ready to advise you on site. EXIT 5 at Waregem gives you the possibility to experience our products on your own and provides necessary training for installers.
- ***A reliable partner in business***
  We can guarantee our customers optimal quality and service thanks to our environmentally friendly and modern production sites (with automated powder coating line, anodisation line, uPVC injection molding machinery and mold making shop) covering an area of 95.000 m².

Dealer

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