

Installer manual

## **HRC-EcoMax / HRC-MaxComfort**

Balanced ventilation system with heat recovery

This manual is intended for installers of the HRC-EcoMax and HRC-MaxComfort balanced ventilation system. The manual contains important information about the installation and configuration of the ventilation unit with heat recovery. The user manual can be found on the right side of the unit.

**This manual covers the following models:**

HRC-300 EcoMax

HRC-300-MaxComfort

HRC-300 EcoMax

HRC-400-MaxComfort

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# 1. Precautions and safety instructions

- Only a professional installer may install, connect, commission and carry out maintenance to the device unless otherwise specified in this document;
- The installation of the unit must be carried out in accordance with the general and locally applicable construction, safety and installation regulations of the municipality and electricity company;
- Make sure that the voltage is removed during work on the unit and cannot be switched on accidentally. Bear in mind that the motor will continue to run for approx. 20 seconds after switching off;
- The unit is only suitable for a 230V/50 Hz. connection;
- Modification of the unit or specifications stated in this document is not permitted;
- Touching the fans by hand must not be possible, therefore ventilation tubes of at least 900 mm length must be connected.

## 2. Product information

### 2.1 General product description

The HRC is a balanced ventilation system with heat recovery. This means that an equal amount of fresh filtered outside air is supplied to the living room and bedrooms while polluted air is extracted from the kitchen, bathroom and toilet. The heat of the discharged air is then transferred to the fresh filtered outside air supplied. This results in significant energy savings.

The Orcon HRC is equipped with an intelligent electronic control circuit that ensures optimum operation and protection under all circumstances. The unit can be used as a left or right model. The unit is supplied as standard as a left model with a grounded plug and can be converted to a perilex model with a perilex power cord (article number: 29190405). For all models it is possible to use a radio remote control 15RF, CO<sub>2</sub> Room sensor 15RF or a CO<sub>2</sub> Control sensor 15RF; these are available separately.

### 2.2 Unit types

The different models are listed in the table below. Each model is suitable for both left and right mounting.

	HRC-300 EcoMax	HRC-300 MaxComfort	HRC-400 EcoMax	HRC-400 MaxComfort
Item no.	22000080	22000085	22000090	22000095
Air flow rate [m <sup>3</sup> / h] at max. 200 Pa	300	300	400	400
Tube connection [mm]	ø150	ø150	ø180	ø180
Preheater	No	Yes	No	Yes
Filter class (ISO16890)	2x coarse 65%	supply: ePM1 70% extractor: coarse 65%	2x coarse 65%	supply: ePM1 70% extractor: coarse 65%

### 2.3 Scope of delivery

Before installing the HRC, check that it has been delivered complete and undamaged. It is complete if the following parts are included:

- HRC-300/400-EcoMax or HRC-300/400-MaxComfort with 230V earthed power cord
- Wall bracket
- Mounting set with 2x M8 bolts, 2x M8 washers and 2x plugs
- Installation manual
- User manual
- Connector piece 32mm / G1¼ "for condensation extractor
- 2x Orcon Filter (already in unit) (depending on unit model, see Chapter 2.2)
- Optional preheater (depending on unit model, see Chapter 2.2)

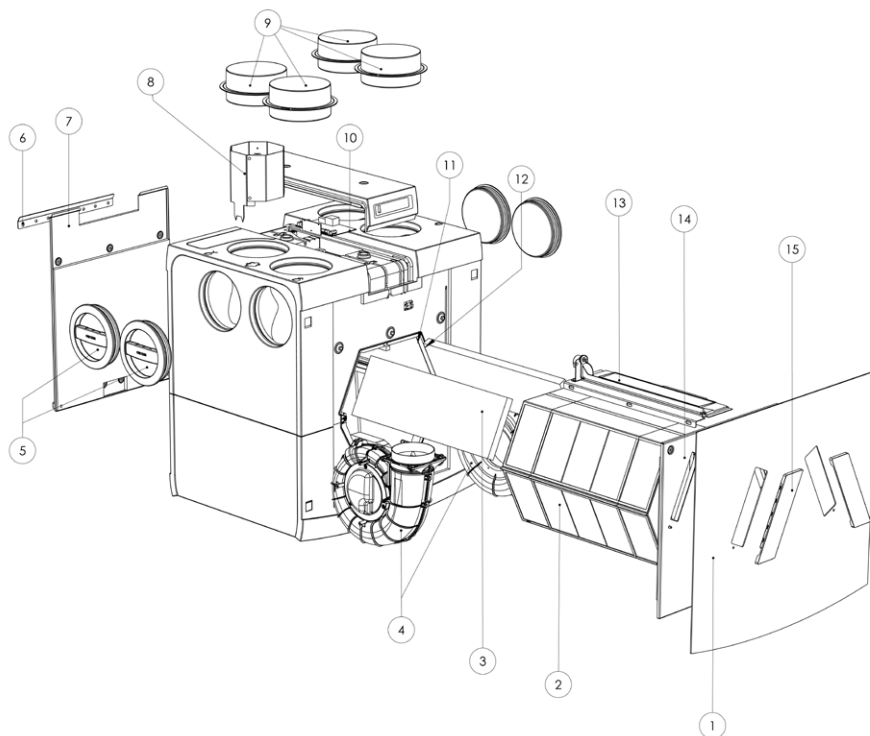
### 2.4 Optional accessories

Item	Article number
HRC chassis	22700080
Preheater	29190550
EFF ø125 Extractor valve	23121002
EFF ø160 Extractor valve	23121003
TFF ø125 Supply valve	23121012
TFF ø160 Supply valve	23121013
Dry condensation extractor set	22700065
Filter set HRC 2x coarse 65%	22700002
Filter set HRC coarse 65% & ePM1 70%	22700006
Perilex power cord	29190405
CV-3 Perilex socket - surface mounted	28000005
CV-3 Perilex power socket - built-in	28000000
Remote control 15RF	21800000
CO <sub>2</sub> Room sensor 15RF	21800040
CO <sub>2</sub> Control sensor 15RF	21800045

### 2.5 Scope of application

The unit is only suitable for residential buildings and not for industrial use, swimming pools or saunas. The air flow rate from the unit must match the ventilation requirements of the home.

### 3. Product overview



#### 3.1 Parts

- |    |   |     |  |
|----|---|-----|--|
| 1. | Plastic grille                          | 9a. | Connector flange 150mm (4x)<br>(HRC-300-EcoMax/MaxComfort) |
| 2. | Heat exchanger                          | 9b. | Connector flange 180mm (4x)<br>(HRC-400-EcoMax/MaxComfort) |
| 3. | Filter (2x)                             | 10. | Main circuit board, RF antenna                             |
| 4. | Ventilator module (2x)                  | 11. | Temperature sensor (2x)                                    |
| 5. | EPP cap (4x)                            | 12. | Humidity sensor  |
| 6. | Wall bracket                            | 13. | Bypass module  |
| 7. | Metal back frame                        | 14. | Metal front frame  |
| 8. | Preheater<br>(only with HRC-MaxComfort) | 15. | Filter handle left & right                                 |

## **3.2 Operation**

### **Bypass**

In summer situations, or when heat recovery is not desirable, the air is not passed through, but past the heat exchanger thanks to a bypass module. This makes it possible to ventilate the home with fresh outside air in the summer situation, during the night, so that the home is relatively cool again in the morning. The bypass opens when the inside temperature exceeds the set comfort temperature of 23°C and the outside temperature exceeds 15°C.

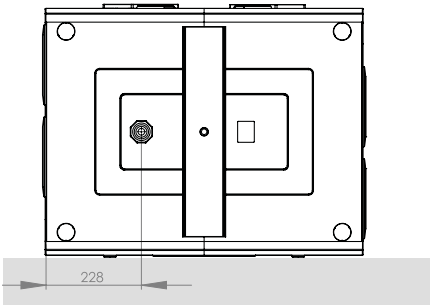
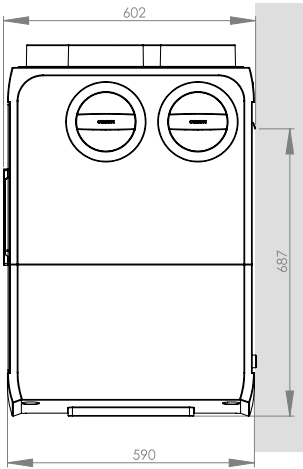
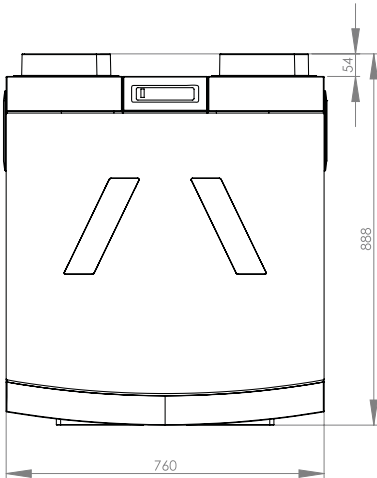
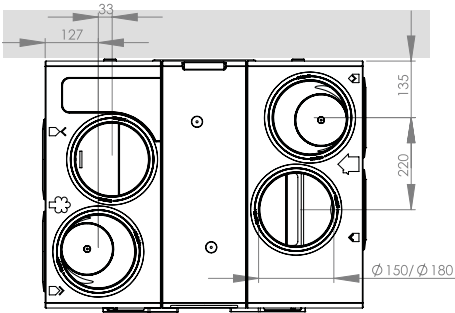
### **Frost protection**

When the outside temperature in winter is around freezing, it is possible for ice to form in the exchanger. Cold air is blown into your house as a result. To prevent this, the HRC will heat the exchanger in time using the warm indoor air from your home. The unit will temporarily create an imbalance to achieve this. For the MaxComfort models, the built-in preheater switches on and warms up the cold incoming outside air.

### **Constant volume**

The unit is equipped with a constant volume control. This ensures that deviations in the air flow rates between the supply and extract air flow rates, for example due to weather conditions or when the filters become contaminated, are corrected automatically. In this way the unit remains constantly balanced and you are assured of sufficient air with maximum efficiency.

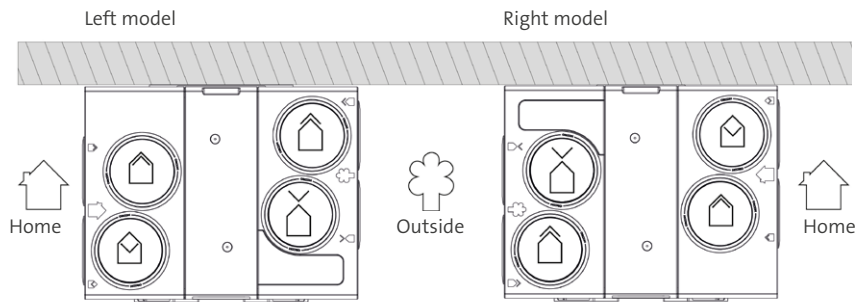
3.3 Dimensional drawing





3.4 Duct indicator

When connecting the ducts it is important to take into consideration which model is being used - left or right mounting. The connections are indicated on the top of the unit with icons. The unit is supplied as a left model as standard.



Air ducts on the outside		Air ducts on the home side	
	Supply air from the unit to the home		Supply air from outside to the unit
	Return air from the home to the unit		Extractor air from the unit to the outside

## 4. Installation

### 4.1 Brief installation instructions

#### Step-by-step assembly:

1. Mount the wall bracket level on a wall with sufficient mass (200 kg/m<sup>2</sup>) with the supplied bolts and plugs, or mount the unit on the optional base in the case of floor mounting
2. Mount the Orcon extractor and supply valves in the various rooms
3. Configure the unit in the desired direction (see Chapter 4.3)
4. If desired, replace the earthed power cord with a perilex power cord
5. Set the required flow rate with the help of the DIP switches on the main circuit board (see Chapter 6)
6. Hang the unit on the wall bracket, or position the unit with the base in the desired location
7. Adjust the levelling feet so that the unit is hanging (wall mounting) or standing (floor mounting) level
8. Install 2 silencers of at least 1 metre (ducts to and from interior spaces)
9. Mount the ventilation ducts and conduits with as little air resistance as possible and free from leaks
10. Mount the condensation extractor (preferably dry siphon) under the unit
11. Mount the desired remote controls, CV-3 switch (for perilex) and/or CO<sub>2</sub> sensors (see Chapter 5)
12. Switch on the voltage of the HRC-EcoMax or HRC-MaxComfort unit
13. Report separately supplied remote controls and/or CO<sub>2</sub> sensors on (see Chapter 5), the supplied remote control is already registered to the unit as standard

### 4.2 Installation instructions

The HRC must be installed in compliance with:

- Quality requirements for residential ventilation systems, ISSO 61 quality requirements for balanced ventilation in homes, ISSO 62
- The capacity calculation in compliance with the Netherlands Building Decree
- Requirements for ventilation of buildings - determination methods for new buildings NEN 1087:2018
- The safety provisions for low-voltage installations, NEN 1010
- The requirements for connection to indoor drainage - design and implementation guidelines, NTR 3216:2012. Any additional requirements from the local energy companies
- The installation instructions for the HRC-EcoMax and/or HRC-MaxComfort

### 4.3 Changing the unit direction

The HRC is available in a left or right model. The HRC is supplied as a left model as standard. The ducts are therefore connected to the home on the left side of the unit, and the ducts on the right side of the unit go outside. If you wish to use the HRC as a right model, it can be configured as follows:

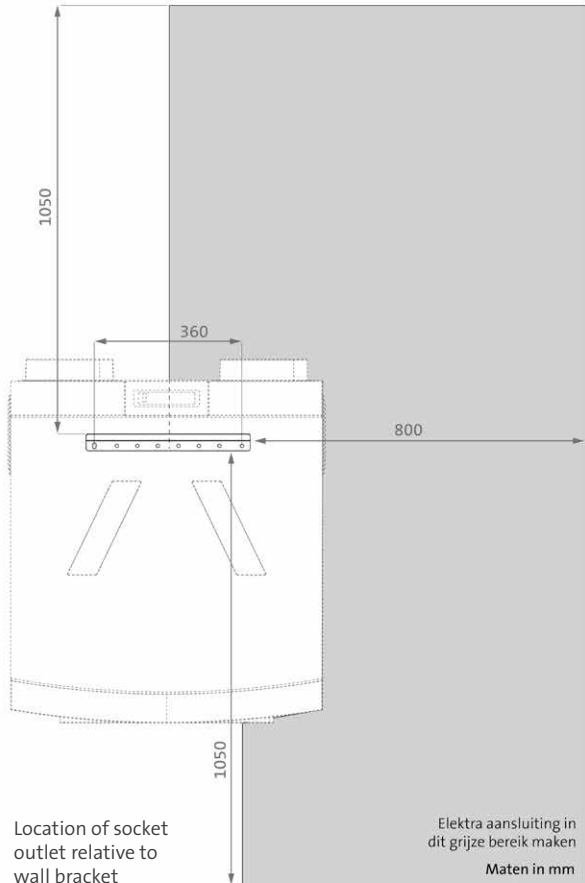
1. Remove the plug from of the socket
  2. Place the unit on a flat surface if the unit is already hanging
  3. Remove both filter handles
  4. Remove the plastic grille
  5. Remove the metal front frame from the unit by loosening the 5 screws using a Torx screwdriver (key size T25)
  6. Remove the 230V cable from the cable clamp on the metal rear frame
  7. Remove the metal rear frame from the unit by loosening the 5 screws using a Torx screwdriver (key size T25)
  8. Move the metal front frame to the front of the unit (previously the back) and re-tighten the 5 screws
  9. Move the metal rear frame to the desired back of the unit (previously the front) and re-tighten the 5 screws
  10. To do this, remove the printed circuit board cover on the top of the unit by unscrewing the 2 screws using a Torx screwdriver (key size T25) Caution: pay attention to the length of the display cable when removing the printed circuit board cover; if necessary remove it temporarily from the connector on the printed circuit board
  11. Move the earthed power cord to the new back of the unit.  
Move the strain relief to the recess on the other side of the printed circuit board
  12. Replace the top cover so that the display is on the front, and tighten the 2 screws
  13. Reinsert the earthed power cord into the cable clamp on the metal back frame
  14. Reinstall the plastic grille in front of the metal front frame by moving the small holes over the pins on the metal front frame. Then attach the grille by pressing the four outer corners
  15. Replace the filter handles by snapping them into place in the metal front frame
- The unit is now suitable for installation as a right model.

#### 4.4 Electric connectors

The HRC is equipped with a mains cord with an earthed plug as standard. Optionally, you can replace the mains cord with a perilex cord (article number: 29190405).

The place where the wall socket needs to be fitted is indicated in the figure below. The electrical installation must comply with NEN1010 and the requirements of the local energy company.

- Only place the plug in the wall socket when the entire installation is ready and no building material is present
- The unit is not suitable for 3-phase current
- Supply voltage:  
230 Volt ~50 Hz



#### Fitting the HRC with a perilex cord



**Caution:** ensure that the unit is always disconnected from the power supply when changing the mains cord.

If you want to replace the mains cord with a perilex power cord, follow these steps:

1. Place the unit on a flat surface.
2. Remove the earthed power cord from the cable clamp on the metal rear frame
3. Remove the printed circuit board cover on the top of the unit by unscrewing the 2 screws using a Torx screwdriver (key size T25)
4. Remove the connector from connection X27
5. Remove the earthed power cord from the cable recess.
6. Using a flat screwdriver, attach the black wire of the perilex cord to position 2 (centre) of screw connector X9.

7. Using a flat screwdriver, attach the black wire of the perilex cord to position 3 (under) of screw connector X9.
8. Place the white connector of the perilex cord on connection X27.
9. Feed the perilex cord through the cable recess. Place the strain relief in the appropriate recess.
10. Screw the strain relief hand tight using a Torx screwdriver (key size T25)
11. Replace the top cover and re-tighten the 2 screws
12. Reinsert the earthed perilex cord into the cable clamp on the metal back frame
13. Place the plug in a perilex wall socket which is connected as shown in the diagram below.

### Speed control for perilex connection

A 230 Volt power supply (terminals L3 and N) must be connected to the perilex wall socket. The speed is controlled by means of a 3-position switch, which receives power (L3) from the perilex socket (wire diameter 1.5 mm<sup>2</sup>). A black and grey wire leads from the switch back to the perilex wall socket (L2 and L1). It is important that terminal L3 is always supplied with voltage. For the correct way to connect the cabling, see the wiring diagram below. Optionally, an RF Remote Control, CO<sub>2</sub> Control sensor or a CO<sub>2</sub> Room sensor can be combined with the CV-3 switch. If several switches or controls are used in the home, the last selected ventilation position always takes precedence.

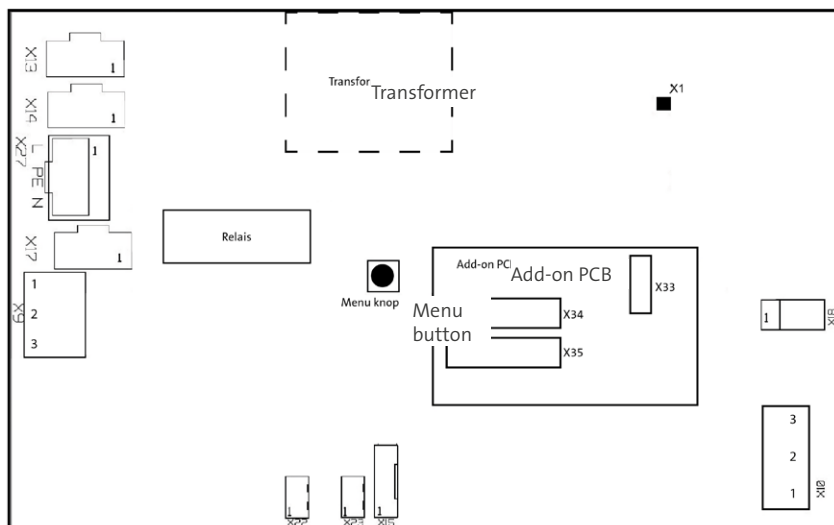
Explanation of 3 ventilation settings			
Setting 1	Low	Absent setting	For use during absence during a long period
Setting 2	Medium	Present setting	For daily use with normal use within the home
Position 3	High	High setting	For use during cooking, showering or parties

## Connections to printed circuit board

No.	Function	Pin function
X1	RF antenna connection	
X9	Perilex input	L – 230V 2 – L2 (black, 230V) Medium setting 3 – L1 (grey, 230V) High setting
X10	Modbus Communication duct to ventilators	1- RSA (2x White) 2- RSB (2x Brown) 3- GND (2x green)
X13	Supply ventilator power supply	1 – L2 – PE3 – N
X14	Extractor ventilator power supply	1 – L2 – PE3 – N
X15	Bypass stepper motor control	1 – coil 14 – coil 4 2 – coil 25 – 24V power supply 3 – coil 36 – 24V power supply
X18	Humidity sensor input	1 – power supply 3.3V3 – SDA 2 – SCL4 – Earth
X22	Temperature sensor 1 input (return air from inside)	1 – Earth 2 – Sensor
X23	Temperature sensor 2 input (supply air from outside)	1 – Earth 2 – Sensor
X27	230V mains	1 – L(3)2 – PE3 – N
X33*	Display connection	Flat cable
X34*	DIP switches extractor	8 dip switches
X35*	DIP switches supply	8 dip switches

\*on top board

## 4.5 Installing the unit



### Wall mounting

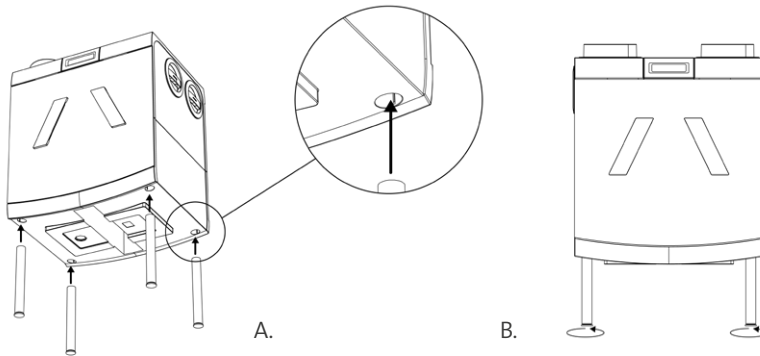
The unit can be hung on the supplied wall bracket if a wall with a minimum mass of 200 kg/m<sup>2</sup> is available for low-noise suspension. for low-noise suspension.

1. Attach the wall bracket to the wall using the bolts and plugs supplied. **Caution:** mount the wall bracket using a spirit level before you connect the ducts! Sufficient space must be left underneath the wall bracket for the condensation extractor (see chapter 4.7).
2. Place the HRC in the left or right configuration over the wall bracket, by hooking the hook on the back of the unit over the wall bracket.
3. Turn the levelling feet on the back of the unit so that it hangs level against the wall. This ensures that the condensation extractor works optimally.

## Floor mounting

If there is no wall that is suitable for wall mounting, the HRC can also be placed on a concrete floor using the optional Orcon base (article number: 22700080) for floor mounting.

1. Place the legs in the recesses on the bottom of the unit (Figure A). This works best when the unit is on its side.
2. If necessary, use a spirit level to adjust the levelling feet so that the unit is level on the floor (Figure B).

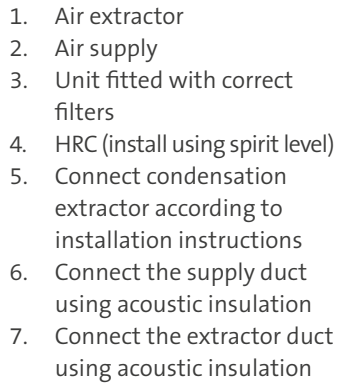


## 4.6 Connecting ducts to the unit

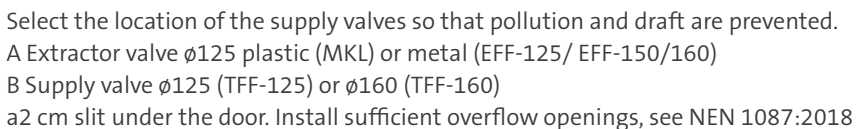
Once the unit is fitted, the ducts can be mounted. The ducts (return) from and to the home (supply) are on one side of the unit, and the ducts from and to the outside are on the other side. In order to prevent condensation on the ducts from and to the outside, these must always be insulated externally to ensure that they are damp-proof. It is preferable to use preinsulated plastic ducts made of PE or PUR. Try to keep these ducts as short as possible.

It is advisable to connect the ducts to and from the home to the unit using sound dampers with a minimum length of 100 cm. When measuring the ducts, bear in mind that not too much energy is lost when transporting the air through ducts that are too narrow. It is preferable not to have the total resistance of both the supply system and the discharge system exceed 100 Pascals. The supply duct system must be fitted in such a way that NEN 1070, table 4 is complied with in the nominal setting. Think of crosstalk and installation noise, also with underfloor ducts. Ensure that the supply ducts are insulated if necessary, e.g. if they are installed outside the insulated skin.





and everything is airtight; also install the extractor duct between the HRC and the roof outlet so that surface condensation is prevented. Select the extractor location for the mechanical ventilation air and sewer ventilation so that no hindrance occurs with regard to the supply.

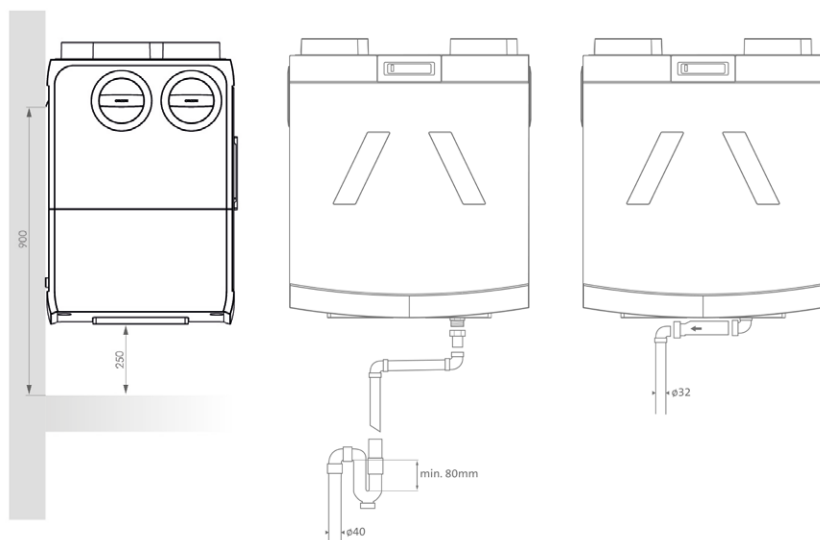


#### 4.7 Condensation extractor

The HRC must always be fitted with a condensation extractor underneath the unit. It is preferable to use a flat dry siphon (article number: 22700065), which can be ordered separately. Because this requires less space underneath the unit, there is less chance of air leaks and it does not dry out on hot days, which prevents odour nuisance.

##### Standard siphon

The unit is supplied with a standard 32 mm connector with threaded end. This can be connected to the bottom of the unit on internal thread (G1 ¼"). The condensed water must be extracted through the inner sewer system free of frost and on a slight incline. A water trap of at least 80 mm must be installed to prevent an air leak and sewer odour from spreading into the ventilation system. A siphon with a diameter of 40 mm must be placed under the water trap. Preferably use a threaded connector and rubber gasket for easy cleaning of the siphon.



Standard siphon

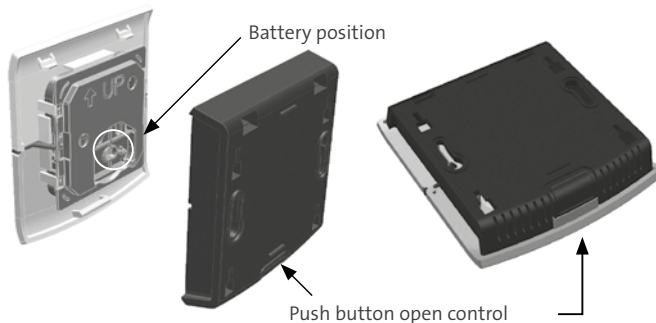
Dry siphon

## 5. Installation components

### 5.1 Remote control 15RF (optional)

#### Mounting

The remote control can be opened using the push button at the bottom (image below). The wall frame can then be mounted with the 2 screws and plugs supplied or glued. **Caution:** the "UP" mark on the wall frame must always be at the top. Keep enough space at the bottom so that the push button can be easily reached from below. It is recommended to place the remote control in an easily accessible place in the living room, kitchen or toilet. Never place the remote control near large metal objects. Large metal objects can disrupt the radio-controlled signal.



#### Registration

The remote control must be registered. In total, up to 20 RF components can be connected to the unit.

- *On 1 unit*  
Unplug the unit from the wall outlet for 10 seconds. Then put the plug back in the socket. The unit will remain in set-up mode for 3 minutes and you can register the remote control. Press the keys <1> and <auto> simultaneously until the LED on the remote control flashes red, green and red alternately. The LED on the remote control will now flash green 10 times, the remote control is ready for use. Registering an extra remote control is done in the same way.
- *On multiple units*  
To register 1 remote control on more than one unit, the above registration procedure is repeated, just press the key <2> and <auto> until the LED on the remote control flashes alternately red, green and red.

- *Resetting remote control 15RF*

To replace a remote control, all components on the unit must be de-registered. All components must then be registered again. A remote control can be reset (and thus de-registered) by simultaneously pressing the 'absent' and 'timer' keys for 3 seconds. The remote control indicates that the reset is complete when it flashes orange twice.

## Remote control

The remote control for the unit has 6 buttons. The functions of these buttons are explained in the table below.

- *Absent setting*

In the absent position, the unit runs in an extra energy-efficient low setting and does not respond to demand from the sensors.





- *Timer setting*

In the timer mode, the unit runs the desired time in the high position, after the time has elapsed, the unit returns to the last selected position. The timer can be cancelled by selecting another setting.

- *Automatic mode*

In car mode, the unit runs based on the moisture content in the home or based on the optional CO<sub>2</sub> sensors. If there is no ventilation demand, the unit runs as standard in position 1. When there is a ventilation demand from the humidity sensor or the optional CO<sub>2</sub>, the unit will modulate the ventilation to the medium setting (setting 2).

### Explanation of remote control buttons

Button	Operation	Function
	1x short	Absent setting (same as low setting)
1	1x short	Setting 1 (low setting)
2	1x short	Setting 2 (medium setting)
3	1x short	Setting 1 (low setting)
	1x short	Setting 3 (timer mode) temporary 15 minutes
	2x short	Setting 3 (timer mode) temporary 30 minutes
	3x short	Setting 3 (timer mode) temporarily 60 minutes
auto	1x short	Automatic mode

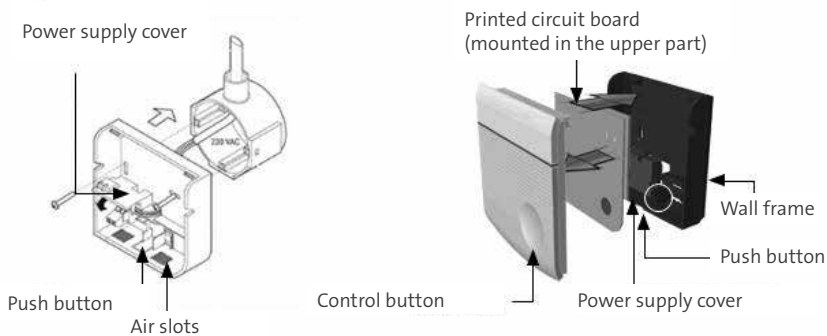
## 5.2 CO<sub>2</sub> room sensor 15RF

### Mounting

The CO<sub>2</sub> Room sensor and CO<sub>2</sub> The control sensor can be opened via the push button on the bottom. The remote control is supplied with 230V mains power. To connect the control to 230V, open the cover for the power supply. This can be clicked loose using a flat head screwdriver. The wiring (max. 1.5 mm<sup>2</sup>) for the 230V supply voltage, it can then be fed into the wall frame and connected to the terminal block behind the cover.



The cover must be on at all times to protect the terminal block. The wall frame can then be mounted with the 2 screws and plugs (not supplied) to a flush-mounting box or wall. Caution: the push button on the wall frame must always be at the bottom. Keep enough space free at the bottom so that the push button can be easily reached from below. It is recommended to place the sensor near the thermostat or light switch at a height of 1.5 metres in the living room or kitchen. Any additional sensors must be placed in the other living spaces. Do not place the sensor near large metal objects and mount it out of the reach of children.



## Register CO<sub>2</sub> room sensor 15RF

- *On 1 unit*

Remove the plug from the HRC for 10 seconds. Then return the plug back to the socket. The unit will remain in set-up mode for 3 minutes. Restart the CO<sub>2</sub> sensor by removing it from the wall frame and then replacing it. Press the control button on the CO<sub>2</sub> sensor once briefly, then hold down for 4 seconds until one LED on the right lights up and the status LED flashes red and green alternately. The CO<sub>2</sub> Room sensor is ready for use. Registering an extra CO<sub>2</sub> sensor is done the same way.

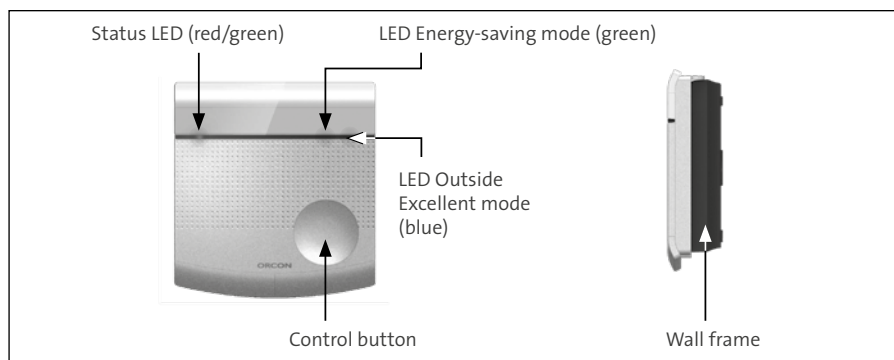
- *Multiple units*

To register one CO<sub>2</sub> sensor on multiple units, the above procedure is repeated, but the control button must now be pressed for 8 seconds until the two LEDs light up.

- *Reset CO<sub>2</sub> room sensor 15RF*

To replace a CO<sub>2</sub> sensor, all components on the unit must be de-registered. All components must then be registered again. A CO<sub>2</sub> sensor can be reset to factory settings by pressing the control button for 15 seconds until the red and green LED lights up simultaneously (orange). Now release the push button.

## Operating the CO<sub>2</sub> room sensor 15RF



By tapping the control button once, the status is displayed by the LEDs. The LEDs will go out automatically after 30 seconds. If the remote control button is touched again after holding down once, the CO<sub>2</sub> room sensor will switch to another mode. Changing this mode can be recognised by the green or blue LED on the top right of the CO<sub>2</sub> Room sensor lighting up.

There are 2 options:

- **Energy-saving mode (green)**  
In this mode the unit will ventilate according to the standard requirement. This saves on energy costs; ventilation is only done when it is really needed.
- **Excellent mode (blue)**  
In this mode, the CO<sub>2</sub> Room sensor keeps the air quality level at a high level. As a result, more is ventilated so that the dirty air particles can be extracted from the home faster and clean outside air is brought in.

### 5.3 CO<sub>2</sub> Control sensor 15RF

#### Mounting


The CO<sub>2</sub> control sensor is mounted in the same way as the CO<sub>2</sub> room sensor.

#### Registration

- *On 1 unit*  
Remove the HRC plug from the socket for 10 seconds. Then return the plug back to the socket. The unit will remain in set-up mode for 3 minutes. Restart the CO<sub>2</sub> sensor by removing it from the wall frame and then replacing it. Briefly press the control button once on the CO<sub>2</sub> control sensor; the red LED on the control will now flash. Then hold down for 3 seconds until one LED on the right lights up and the status LED flashes red and green alternately. Once the CO<sub>2</sub> control sensor has been successfully registered, the green LED will flash 10x.  
The CO<sub>2</sub> Control sensor is ready for use. To register an extra CO<sub>2</sub> Control sensor repeat the above procedure.
- *On multiple units*  
To register one CO<sub>2</sub> on multiple units, the above procedure is repeated, except that the control button must now be pressed for 8 seconds until 2 LEDs on the right-hand side of the CO<sub>2</sub> Control sensor lights up.
- *Reset CO<sub>2</sub> Control sensor*  
A CO<sub>2</sub> Control sensor can be reset to factory settings by pressing the control button for 17 seconds until the red and green LED light up simultaneously (orange). Now release the push button. The CO<sub>2</sub> Control sensor restarts and has been reset.

## Operation

By tapping the control button once, the status is displayed by the LEDs. The LEDs will go out again automatically after 30 seconds. The purpose of this is not to disturb a dark living room. If the remote control button is touched again after holding down once, the CO<sub>2</sub> Control sensor will switch to another setting or mode.

CO <sub>2</sub> Control sensor		
	Absent setting	Unit runs at the lowest possible setting
<b>auto</b>	Automatic setting	Automatic control based on moisture and CO <sub>2</sub>
1	Setting 1	Temporary low setting (60 min)
2	Setting 2	Temporary medium setting (60 min)
3	Setting 3	Temporary high setting (60 min)

- *Absence and setting 1,2 and 3*  
A minimum amount is ventilated in the absent setting. This setting remains active for 12 hours or until it is manually reset to automatic mode. Settings 1 (low), 2 (medium) and 3 (high) are temporary settings. If one of these settings is selected, the system will return to automatic mode after 60 minutes. During this setting the LEDs of the selected setting will remain lit.
- *Automatic mode*  
In automatic mode, the ventilator will ventilate based on the moisture and CO<sub>2</sub> content in the home. This saves on energy costs; ventilation is only carried out when it is really needed.

## 5.4 Resetting the HRC

If you have replaced a component, you must first reset the HRC before registering a new component. To do this, remove the printed circuit board cover on the top of the unit. Hold down the push button on the central printed circuit board in the unit **for 15 seconds** until the red and green LEDs light up simultaneously (orange). Release the push button. The link with the remote control/CO<sub>2</sub> sensors has now been deleted and the factory settings have been loaded. After this, the LED on the printed circuit board will remain in set-up for **3 minutes** and can be linked with components.

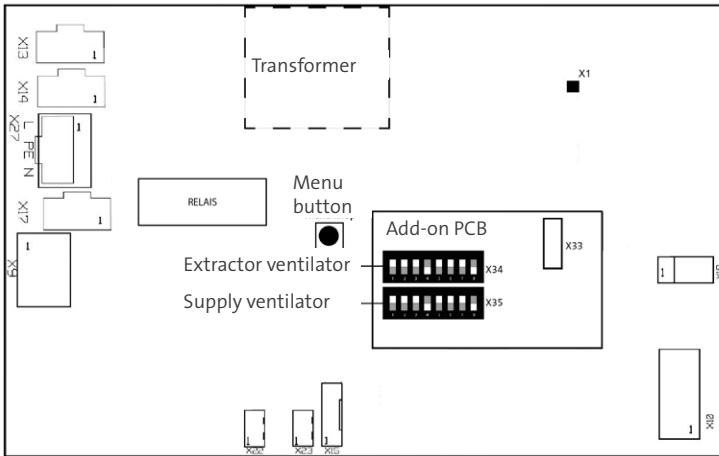
If you need support with the installation of the above components, you can always consult our instructional videos at:  
[www.orcon.nl/service/onderhoud/](http://www.orcon.nl/service/onderhoud/)



## 6. Adjustment

### 6.1 DIP switches

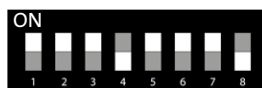
The DIP switches on the printed circuit board are used to adjust the air volume for each ventilator. The upper row of DIP switches controls the extractor ventilator and the lower row controls the supply ventilator. Because both ventilators can be set independently, it is possible to create a difference in the amount of air. This can be used when under-pressure or overpressure is desired.



### Procedure

1. Close the windows and doors
2. Open the extractor valves and supply valves to the maximum
3. Remove the plug of the balance ventilation unit from the wall socket
4. Unclip the filter handles and check whether the filters are clean. Clean or replace if necessary. Replace the filter handles
5. Unscrew the 2 screws on the top of the printed circuit board cover using a Torx screwdriver (T25). The printed circuit board cover can then be detached from the unit housing, the DIP switches on the printed circuit board are now accessible.  
**Caution:** The display cable in the cover is attached to the print. Open the cover carefully to prevent cable breakage
6. Set the desired air volume for both ventilators with the DIP switches. See the table and image below
7. Restart the unit and adjust the unit to setting 2 or 3
8. Measure the total air volume on the Orcon extractor and supply valves and adjust the air volume for each ventilator if necessary
9. Set the valves to the correct flow rate per room
10. Completing the installation report (see Chapter 9)
11. Replace the printed circuit board cover and screw it down tightly

## Adjusting the DIP switches



		HRC-300	HRC-400	DIP switch number:							
	Setting	m <sup>3</sup> /h	m <sup>3</sup> /h	1	2	3	4	5	6	7	8
1	Low	60	80	Off							
2	Low*	90	120	On							
3	Medium	90	120		Off	Off	Off				
4	Medium	108	144		On	Off	Off				
5	Medium	126	168		Off	On	Off				
6	Medium*	144	192		On	On	Off				
7	Medium	162	216		Off	Off	On				
8	Medium	180	240		On	Off	On				
9	Medium	198	264		Off	On	On				
10	Medium	216	288		On	On	On				
11	High	165	220					Off	Off	Off	Off
12	High	174	232					On	Off	Off	Off
13	High	183	244					Off	On	Off	Off
14	High	192	256					On	On	Off	Off
15	High	201	268					Off	Off	On	Off
16	High	210	280					On	Off	On	Off
17	High	219	292					Off	On	On	Off
18	High*	228	304					On	On	On	Off
19	High	237	316					Off	Off	Off	On
20	High	246	328					On	Off	Off	On
21	High	255	340					Off	On	Off	On
22	High	264	352					On	On	Off	On
23	High	273	364					Off	Off	On	On
24	High	282	376					On	Off	On	On
25	High	291	388					Off	On	On	On
26	High	300	400					On	On	On	On

\*Factory setting

## 6.2 Valves

You should preferably use TFF supply valves or EFF extractor valves. When installing the valves, consider the following:

- Make sure the supply and extractor valves are **at least 1.5 m** away from each other so that the airflows cannot come into contact with each other
- It is preferable not to place the valve close to a wall to prevent contamination
- To limit the resistance, we recommend that you use only valves equal to or larger than size  $\varnothing 125$  mm
- Maximum extractor flow rate per valve:  $75 \text{ m}^3/\text{h}$
- Maximum supply flow rate per valve:  $50 \text{ m}^3/\text{h}$

## Choose air ducts

When choosing the right ducts, the flow rate and maximum air speed are decisive in order not to generate additional noise pollution and a pressure drop (see table). Ensure that the total pressure loss is as low as possible (target  $\leq 100 \text{ Pa}$ ) and the air speed in each duct **is lower than 3 m/s**.

Select air ducts	
Desired flow rate ( $\text{m}^3/\text{h}$ )	Recommended minimum duct diameter (mm)
0 – 30	>100
30 – 150	>125
150 – 350	>150
350 - 450	>180

## 6.3 Constant volume control

Due to the built-in anemometer in the ventilator housing, the set air volume is always achieved to an accuracy of 1%. As a result, you are always assured that the set air volume is at the maximum efficiency, despite obstructions in the airflow caused by things such as contaminated filters or channels.

## 7. Maintenance and Service

### 7.1 Maintenance

The following components of the Orcon ventilation system must be cleaned regularly:

- Filters (should be cleaned at least every 3 months, see user manual);
- Humidity sensor (at least every 3 years);
- Remote control and CO<sub>2</sub> sensors (see user manual);
- Valves and grilles (at least every 2 years);
- Ventilators (at least every 3 years);
- Heat exchanger (at least every 5 years);
- Housing (at least every 5 years);
- Ducts (at least every 5 years).

#### Preparation

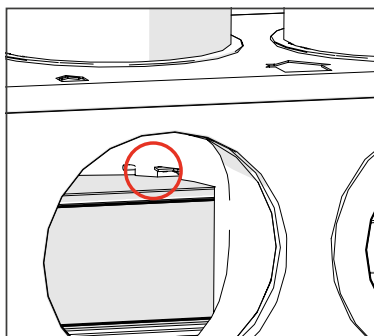
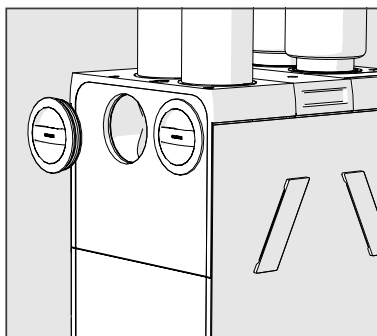


The maintenance must be done with the HRC power switched off.

For major maintenance, the unit can remain on the wall during wall mounting. After switching off the mains voltage, the filter handles and the plastic front grille can be clicked loose, the filters can be removed and the metal front frame can be unscrewed. After removing the heat exchanger, all the other internal components can be reached. After maintenance, the metal front frame can be screwed on again. Replace the filters afterwards. The plastic grille and filter handles can then be clicked on respectively. The plug can then be plugged in again.

#### Cleaning the moisture sensor

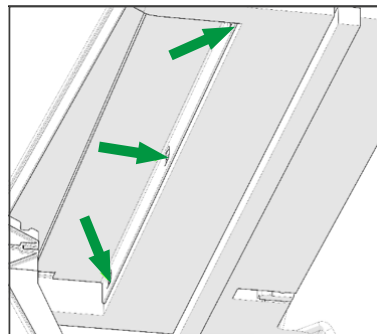
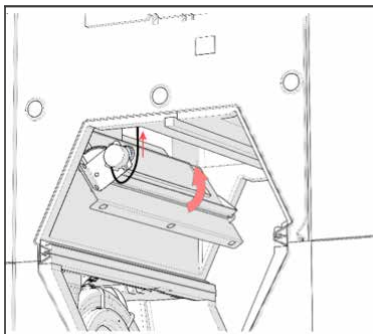
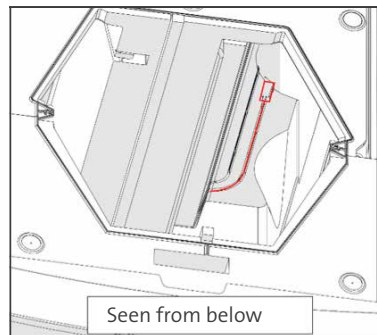
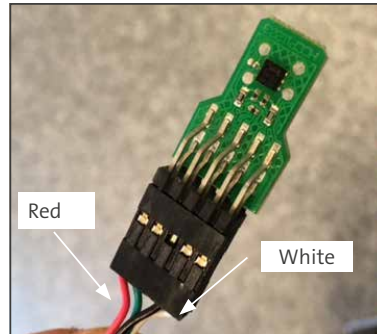
- The moisture sensor is located in the extractor duct from the home. You can reach this via the side connector or the top connector.



- The moisture sensor can remain in place or easily be removed from the connector. It can then be cleaned carefully using a dry brush.
- If the moisture sensor has been removed for cleaning, replace it in the connector after cleaning.

**Caution:** if the black dot on the sensor is facing you, the red wire should be positioned on the left side of the connector (see the image opposite). Then place the moisture sensor with the black dot downwards in the designated recess in the housing as shown in the adjacent image.

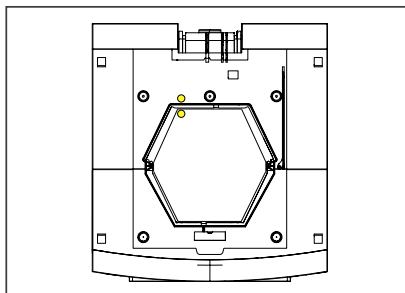
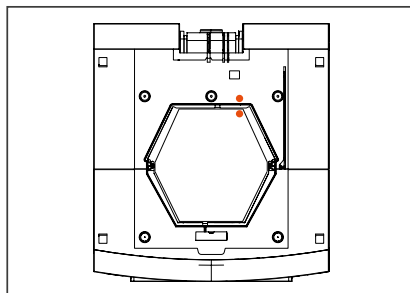
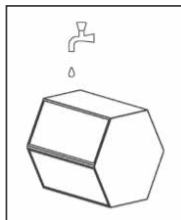
- If the bypass module has been removed to reach the moisture sensor, replace it as shown in the image below. **Caution:** pull the bypass cable up at the same time. Check whether the frame is stuck in the housing at the points indicated in the image below (green).



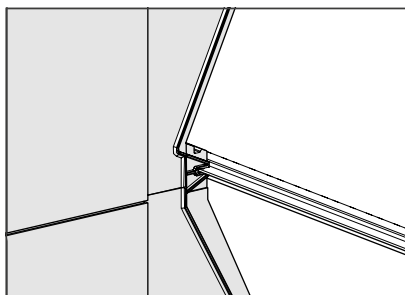
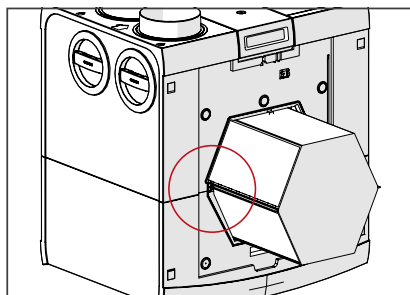
## Cleaning the heat exchanger

The heat exchanger can easily be taken out of the unit with the help of the draw band. The heat exchanger must be cleaned with lukewarm water (max. 40°C). Allow most of the water to drain out and dry the heat exchanger as far as possible before replacing it in the unit.

**Caution:** The exchanger must be replaced facing the same way as when it was taken out of the unit. You can check this by aligning the sticker on the exchanger with the sticker of the same colour on the EPP housing.



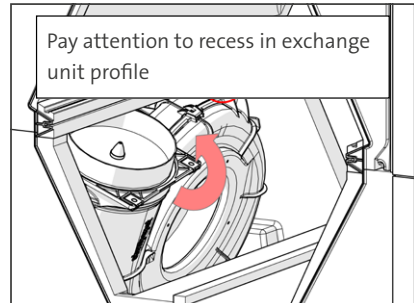
**Caution:** when replacing, the heat exchanger fins should slide through the slots in the EPP housing to prevent leakage between airflows and damage to the housing.



## Cleaning ventilators

The ventilators must be cleaned if they are dirty. The ventilators can be easily reached when the heat exchanger has been removed from the unit.

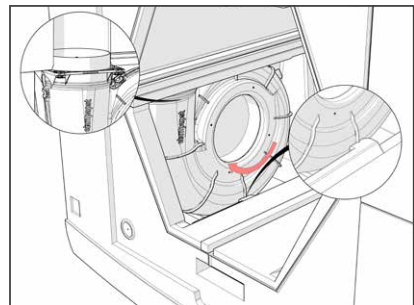
First push down the ventilator module slightly. The module can then be taken out of the unit by turning it anti-clockwise and at the same time shifting it slightly so that the rib on the fan housing no longer clamps into the EPP. If the screw point on top of the fan housing is flush with the recess in the unit housing, the fan can be tilted. Then disconnect both connectors from the ventilator module. This can now be taken out of the unit.



Then clean the fan with compressed air or a brush: do not use water. Ensure that all dirt is removed from the impeller. Do this for both ventilators.

**Caution:** the small ventilator at the top of the housing and the ventilator blades must not be damaged; this creates an imbalance and unnecessary extra noise. This also shortens the lifespan of the fans. After cleaning, make sure that the impeller at the top of the ventilator module is properly tightened by pressing on top of the cone shape. Then place the fan back in the unit. First reconnect the connectors to the ventilator module. The fan can then be replaced in the unit in the same way as it was removed. This is made easier by aligning the screw point on top of the fan housing with the recess in the unit.

**Caution:** The ventilator module is correctly in place when the rib on the fan housing is clamped back in the slot in the EPP and the flange on top of the housing falls into the EPP.



**Caution:** After replacing the ventilators, they need to be reallocated. The correct allocation is very important for the correct operation of the balance ventilation unit!

1. Disconnect the power supply to both fans on the printed circuit board and unplug the earthed plug from the socket
2. Put the earthed plug back in the socket, wait 10 seconds and pull it out again
3. Connect the supply ventilator power supply to the printed circuit board (connector X13)
4. Put the earthing plug back in the socket, the address of the supply ventilator is now assigned.
5. Disconnect the earthed plug from the socket after 10 seconds
6. Connect the extractor ventilator power supply to the printed circuit board (connector X13)
7. Put the earthed plug back in the socket; the address of the extractor ventilator is now also assigned



## 7.2 Indication messages

### I. Remote control 15RF

When a key on the remote control is pressed, the LED lights up green, then it will flash to confirm. The following errors are possible:

Overview indications remote control RF15	
Indication	Remote control message
Unit OK, message followed up	1x green
Unit OK, timer activated for 15 minutes	1x green
Unit OK, timer activated for 30 minutes	2x green
Unit OK, timer activated for 60 minutes	3x green
RF Communication problem	3x red
Configuration mode starting up	1x red 1x green 1x red
Successful connection with unit	10x green
Battery almost empty	1x orange 2x green
Reset remote control carried out	2x orange
Filter indication active	3x orange

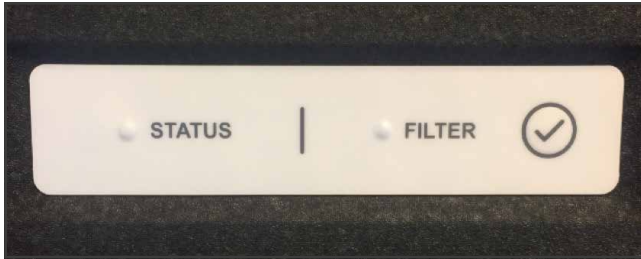
### II. CO<sub>2</sub> Room sensor 15RF

When the status LED on the CO<sub>2</sub> Room sensor is permanently green, the CO<sub>2</sub> Room sensor is functioning correctly and there is a connection to the ventilation unit. Room sensor correct and there is connection to the ventilation unit.

If the status LED flashes red 3 times, there is no radio-controlled communication with the ventilation unit. Check whether the ventilation unit is connected to the mains. Register the CO<sub>2</sub> Room sensor on the ventilation unit according to the instructions. If a malfunction occurs in the CO<sub>2</sub> Room sensor, then the status LED will 1x flash red repeatedly. Please contact the Orcon service department.

### III. Display

The unit has a display on the front (see image below). This display shows the status of the unit by means of a green and a red LED and any error messages are displayed (status LED). An overview of possible indications is shown in the table under 7.2 IV. Printed circuit board



### IV. Printed circuit board

The status of the HRC can be read with the red/green LED on the printed circuit board in the HRC. The status can be read off via the flashing pattern of the LED. The following indications are possible:

Overview indications on display/circuit board	
Indication	Message on display/circuit board
Configuration mode active	continuous green
In operation	1x green
Start up unit/RF communication	1x orange
Replace filter	1x green 1x red + Filter LED
Extractor ventilator error	1x red 1x orange
Supply ventilator error	1x red 2x orange
Error both ventilators	1x red 3x orange
Temperature emergency shutdown	2x red 1x orange
Temperature sensor fault x22	2x red 3x orange
Temperature sensor fault x23	2x red 4x orange
Humidity sensor fault	3x red 1x orange
Modbus extractor ventilator fault	4x red 1x orange
Modbus supply ventilator fault	4x red 2x orange
Fault both Modbus ventilators	4x red 3x orange

### **Set-up mode**

In the set-up mode, the green LED will burn continuously for 3 minutes. In set-up mode, it is possible to connect multiple RF components to the unit, see chapter 8 for this.

### **In operation**

After the learning mode, the unit will automatically switch to 'in operation mode'. The unit is working properly.

### **Replace filter**

The 'dirt filter' warning on the display is a tool to clean or replace the filters on time. When the chosen interval time in the printed circuit board has elapsed, it will send a signal to the display on the unit and to the remote control 15RF. After each operation the remote control will now flash 3x orange instead of 1x green. The green LED next to <FILTER> also lights up on the unit display. After cleaning the filters, the warning can be reset by pressing the button next to <FILTER> on the display for 3 seconds. With the 15RF remote control you can reset the filter timer by pressing the <AUTO> and <TIMER> buttons simultaneously.

### **Extractor ventilator and/or supply ventilator error**

This message indicates an error with the supply and/or extractor ventilator. Check if the wiring is properly connected to the printed circuit board: see the diagram on page 21. Check the ventilator for damage and contamination by dismantling it. See Chapter 7.1 for this. If the ventilator is damaged, you must install a new one.

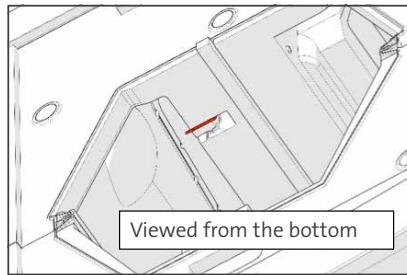
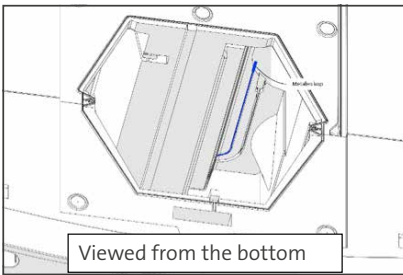
### **Temperature emergency shutdown**

When this message appears on the display, the unit has made an emergency shutdown. This may indicate that the measured inlet temperature is lower than 5°C. In this case, check how the unit is oriented and connected (left or right). To change the direction of the unit, see Chapter 4.3. Also check whether the bypass valve is closed.

### Temperature sensor fault

When a fault occurs with one of the sensors, the display and the printed circuit board indicate which sensor is malfunctioning. See the connection diagram on page 21 for which sensor is connected to which connector. To verify whether the sensor is defective, you can disconnect it from the connector and measure it (10 k $\Omega$  at 20°C). If your meter indicates 0 or infinity, the sensor is defective and a new sensor needs to be installed.

To install a new temperature sensor, see how the current sensor is mounted in the unit. Then remove it from the housing and pull it up through the cable entry from the unit, after disconnecting the connector from the printed circuit board. Take the new temperature sensor and feed it through the cable entry with the metal head. Then place the metal head in the appropriate recess: see the illustrations below. Then clamp the rest of the cable into the recess in the housing and attach the connector to the printed circuit board (see Chapter 4.4). Finally, route the cable through the cable ties around the printed circuit board. The fault has now been corrected.



### Humidity sensor fault

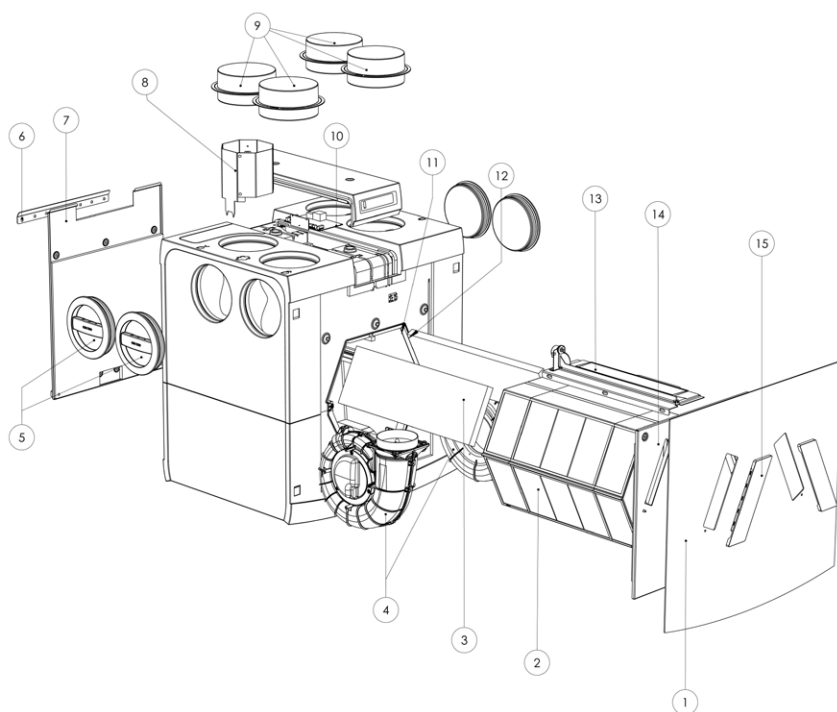
If the moisture sensor is defective, this is shown on the display. The moisture sensor may not be properly connected to the connector. You can check the operation of the humidity sensor by turning the unit on <AUTO> and breathing over the moisture sensor.

### 7.3 Ordering new parts

When ordering parts, in addition to the relevant article code number, also specify the unit type, serial number, year of manufacture and the name of the part, for example:

**Unit type:** HRC-300 EcoMax  
**Serial Number:** 1803570001  
**Construction year:** 2018  
**Part:** Filter set HRC EcoMax  
**Article number:** 22000080

**NB.:** Unit type and serial number are stated on the identification plate on the bottom of the unit.



## Overview article numbers HRC service articles

No.	Item Description	Item no.
1	Plastic grille HRC-EcoMax/MaxComfort	29190912
2	SO Heat exchanger HRC-EcoMax/MaxComfort	22901303
3	Filter set HRC EcoMax (2x Coarse 65% filter)	22700002
3'	Filter set HRC MaxComfort (1x ePM1 70% & 1x Coarse 65% filter)	22700006
4	SO Ventilator module HRC-300-EcoMax/MaxComfort	22900690
4'	SO Ventilator module HRC-400-EcoMax/MaxComfort	22900692
5	EPP cap HRC-EcoMax/MaxComfort	29191522
6	SO wall bracket HRC-EcoMax/MaxComfort	22900980
7	Back plate HRC-EcoMax/MaxComfort	29190910
8	SO Preheater (MaxComfort model)	22900550
9	SO Connector flange ø150mm (HRC-300-EcoMax/MaxComfort)	29190245
9'	SO Connector flange ø180mm (HRC-400-EcoMax/MaxComfort)	29190248
10	SO Main circuit board HRC-EcoMax/MaxComfort	22900704
10'	SO Circuit board EPP cover HRC-EcoMax/MaxComfort	29191520
10''	SO RF antenna	22900707
10'''	SO earthed cord	22915426
10''''	SO perilex cord HRC-EcoMax/MaxComfort	22915405
11	SO Temperature sensor HRC-EcoMax/MaxComfort	22901010
12	SO Humidity sensor	21915078
13	SO Bypass module HRC-EcoMax/MaxComfort	22901040
14	Grille HRC-EcoMax/MaxComfort HRC-EcoMax/MaxComfort	29190912
15	Filter handle Left HRC-EcoMax/MaxComfort	29190240
15'	Filter handle right HRC-EcoMax/MaxComfort	29190241

## 8. Technical specifications

### 8.1 u=Unit data HRC-300-EcoMax/MaxComfort

Ventilation setting	Low	Medium	High	Maximum
Ventilation capacity, factory setting [m³/h]	100	150	225	300
Power input [W] depends on setting	11	18	40	65
Permissible resistance duct system	200 Pa at 300 m³/h			
Dimensions (wxhxd) [mm]	760 x 888 x 592 (height including duct connector pieces)			
Dimensions duct connection [mm]	ø150			
Diameter condensation extractor [mm]	ø32 / G1¼"			
Filter class (ISO16890)	HRC-EcoMax: Coarse 65% HRC-MaxComfort: supply: ePM1 70%, extractor: coarse 65%			
Weight [kg]	34			
Supply voltage [V~/Hz]	230 / 50			
Protection level	IP30			
EPN calculation	Factory setting, medium setting			
Efficiency WTW for calculation NEN7120 (Energy performance of buildings - Determination method)	WTW NEN 5138 [%]: 99.3			

Ventilator graph HRC-300

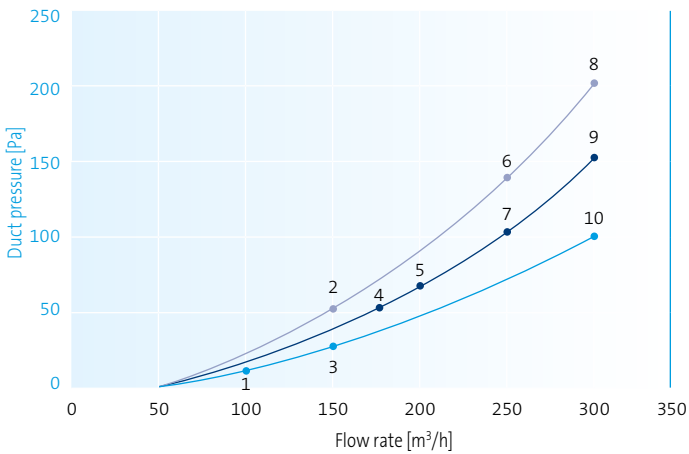


Table associated with HRC-300 ventilator graph

Work point	Reference flow rate [m³/h]	External pressure (Pa)	Power consumption per ventilator (W)	Total power consumption (W)	SPF total (Wh/m³)
1	100	20	4	11	0.11
2	150	50	9	20	0.13
3	150	25	7	16	0.11
4	180	53	11	25	0.14
5	200	65	14	30	0.15
6	250	141	28	59	0.24
7	250	105	24	51	0.20
8	300	200	46	94	0.31
9	300	150	38	79	0.26
10	300	100	31	65	0.22



Ventilation setting	Low	Medium	High	Maximum
Ventilation capacity, factory setting [m <sup>3</sup> /h]	100	200	300	400
Power input [W] depends on setting	13	28	60	126
Permissible resistance duct system	200 Pa at 400 m <sup>3</sup> /h			
Dimensions (W x H x D) [m]	760 x 888 x 592 (height including channel connection pieces)			
Dimension of channel connection [mm]	ø180			
Diameter condensate drain [mm]	ø32 / G1¼ "			
Filter class (ISO16890)	HRC-EcoMax: Coarse 65% HRC-MaxComfort: supply: ePM1 70%, drainage: coarse 65%			
Weight [kg]	35			
Supply voltage [V ~ / Hz]	230/50			
Protection level	IP30			
EPN calculation	Factory setting, middle position			
Efficiency WTW for calculation NEN7120 (Energy performance of buildings - Determination method)	HRD NEN 5138 [%]: 99.7			

## Ventilator graph HRC-400

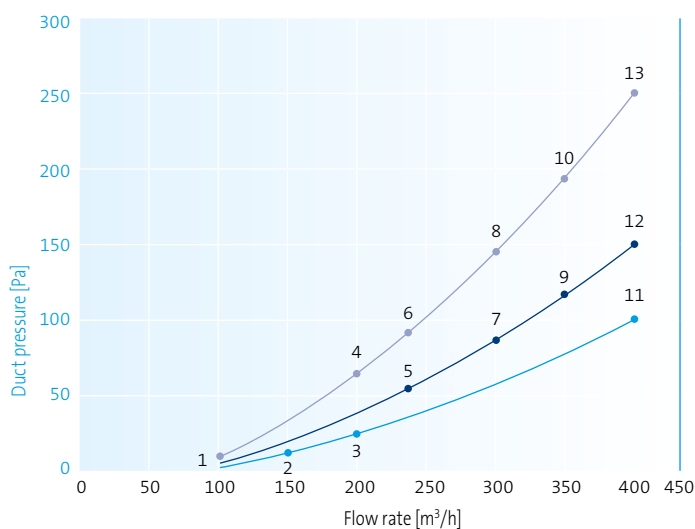


Table corresponding with HRC-400 ventilator graph

Work point	Reference Flow rate (m³/h)	External pressure (Pa)	Power consumption per fan (W)	Total power consumption (W)	SPF total (Wh/m³)
1	100	20	5	13	0.13
2	150	20	7	17	0.11
3	200	25	11	25	0.13
4	200	62.5	15	32	0.16
5	240	53	18	39	0.16
6	240	89	21	44	0.18
7	300	85	29	60	0.20
8	300	140	37	77	0.26
9	350	115	44	90	0.26
10	350	190	55	112	0.32
11	400	100	53	108	0.27
12	400	150	62	126	0.32
13	400	250	79	160	0.40

### 8.3 Technical specifications accessories

<b>CO<sub>2</sub> room sensor 15RF / CO<sub>2</sub> control sensor 15RF</b>	
Power supply	230 Volts
Frequency	50 Hertz
Maximum power consumption	1.2 watts
Temperature class	T40
Dimensions	92 x 92 x 23 mm
Weight	125 grams
RF frequency	868.3 MHz
Min/Max Ambient temperature	0-40°C
RV level	0-90% Non-condensing
Protection class	IP30
Functional measuring range	300 PPM – 2000 PPM
Modbus extractor ventilator fault	4x red 1x orange
Modbus supply ventilator fault	4x red 2x orange
Measurement accuracy	+/- 40 PPM + 5% of measured value

<b>Remote control 15RF</b>	
Power supply	3 Volt battery powered
Temperature class	T40
Dimensions	83 x 80 x 28 mm
Weight	125 grams
RF frequency	868.3 MHz
Min/Max Ambient temperature	0-40°C
RV level	0-90% Non-condensing
Functional measuring range	300 PPM – 2000 PPM
Protection class	IP30

## 9. Installation report

Date	
Address	
Place	
Project type	
Property type	
Client	
Installed by	
Measured by	
Unit type	
Serial number	

Set flow rate:								
Dip switch no. :	1	2	3	4	5	6	7	8
Extractor [X34]	on/off	on/off	on/off	on/off	on/off	on/off	on/off	on/off
Supply [X35]	on/off	on/off	on/off	on/off	on/off	on/off	on/off	on/off

Settings per room				
Space/valve	Setting on unit	Required [m <sup>3</sup> /h]	Measured [m <sup>3</sup> /h]	MKL valve setting (1-6)
Kitchen				
Toilet				
Bathroom				
Living room				
Bedroom 1				
Bedroom 2				
Bedroom 3				
Other				
Other				

**Overview of maintenance services**

Date	Activity	Initials

**Registered RF components**


**Other remarks**


## 10. Productkaart | Product fiche | Fiche produit | Produktdatenblatt

Fabrikant   Supplier   Fabrikant   Lieferant		
Type   Model   Type   Modellkennung		
Specifiek energieverbruik   Specific energy consumption   Consommation d'énergie spécifique   Spezifischer Energieverbrauch		SEC
SEC class		
Typologie   Typology   Typologie   Typ		
Type aandrijving   Type drive   Motorisation   Art des Antriebes		
Type warmteterugwinning   Type heat recovery   Type de recuperation   Art des Wärmerückgewinnungssystems		
Thermisch rendement   Thermal efficiency   Rendement thermique   Temperaturänderungssysteme		η
Maximum debiet   Maximum flow rate   Débit maximal   Höchster Luftvolumenstrom		
Elektrisch ingangsvermogen   Electric power input   Puissance d'entrée maximale   Elektrische eingangsleistung Ventilatorantrieb		
Geluidvermogensniveau   Sound power level   Niveau de puissance acoustique   Schalleistungspegel		L <sub>wa</sub>
Referentiedebiet   Reference flow rate   Débit de reference   Bezug-Luftvolumenstrom		
Reference pressure difference Reference pressure difference   Différence de pression de reference   Bezugsdruckdifferenz		
Specifiek ingangsvermogen   Specific power input   Entrée de puissance spécifique   Spezifische Eingangsleistung		SPI
Regelingsfactor en –typologie   Control factor and typology   Facteur de regulation et typologie   Steuerungsfaktor und typologie		
Lekkage   Leakage   Taux de Fuites   Höchstleckluftrate		
Mengpercentage   Mixing rate   Dosage   Mischrate		
Filterwaarschuwing   Filter warning   Témoin de filter   Optische filterwarnanzeige		
Installatie instructies   Installation instruction   Instructions de montage   Anweisungen für Anbringung		
Internet adres   Internet adress   Adresse Internet   Internetadresse		
Drukschommeling   Airflow sensitivity   Variations de pression   Drukschwankungsempfindlichkeit Luftstrom		
Luchtdichtheid   Air tightness   Étanchéité à l'air   Luftdichtheit		
Jaarlijks stroomverbruik   Annual electricity consumption   Consommation annuelle d'électricité   Jährlicher Stromverbrauch		AEC
Jaarlijkse energiebesparing verwarming   Annual heating saved   Chauffage annuel sauvé   Jährlicher Einsparung an Heizenergie		AHC

	Orcon bv			Orcon bv			
	HRC-300-EcoMax/MaxComfort			HRC-400-EcoMax/MaxComfort			
	-82	-43	-18	-81	-42	-17	
	Koud/ Cold Froid/ Kalt	Gemiddeld/ Average Moyen/Mittel	Warm/Warm Chaud/Warm	Koud/ Cold Froid/ Kalt	Gemiddeld/ Average Moyen/Mittel	Warm/Warm Chaud/Warm	kWh/(m²·A)
	A+			A+			
	Bidirectional		x	Bidirectional		x	
	Unidirectional			Unidirectional			
	Multi-speed		x	Multi-speed		x	
	VSD			VSD			
	None			None			
	99			99			m³/h
	300			400			m³/h
	132			200			W
	40			45			dB[A]
	0.058			0.078			m²/s
	50			50			Pa
	0.15			0.17			W/ (m³/h)
	CTRL	MISC	X	CTRL	MISC	X	
	0.85	1.1	2	0.85	1.1	2	
	Internal		1.5	Internal		1.5	%
	External		2	External		2	
	–			–			%
	Op het display   On display Sur l'écran   Auf dem display			Op het display   On display Sur l'écran   Auf dem display			
	www.orcon.nl			www.orcon.nl			
	www.orcon.nl			www.orcon.nl			
	–			–			%
	–			–			m³/h
	1.3			1.5			kWh/(m²·A)
	91	46.5	21	91	46.5	21	
	Koud/ Cold Froid/ Kalt	Gemiddeld/ Average Moyen/Mittel	Warm/Warm Chaud/Warm	Koud/ Cold Froid/ Kalt	Gemiddeld/ Average Moyen/Mittel	Warm/Warm Chaud/Warm	kWh/(m²·A)

## 11. Warranty

Orcon bv grants a standard two-year warranty on the unit. The warranty period starts on the production date.

The warranty will expire if:

- The installation has not been carried out in accordance with the applicable instructions;
- The defects were caused by incorrect connection, improper use or contamination of the ventilators, heat exchanger and accessories;
- Wiring changes have been made;
- Repairs made by third parties.

(Dis) assembly costs on site are not covered by the warranty. If a defect occurs within the warranty period, this must be reported to the installer. Orcon bv reserves the right to change the construction and/or configuration of its products at any time without the obligation to adjust previously delivered products. The information in this manual relates to the most recent information.

## 12. EC declaration

**EG-Verklaring van overeenstemming** | Déclaration de conformité CE |

EG-Konformitätserklärung | EC Declaration of Conformity



Orcon bv  
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3905 PE Veenendaal  
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Verklaart dat het product | Déclare que le produit | Erklärt dass das Produkt | Declares that the product:

- HRC-300 EcoMax
- HRC-400-EcoMax
- HRC-300-MaxComfort
- HRC-400-MaxComfort



Voldoet aan de bepalingen gesteld in de richtlijnen | Répond aux exigences des directives | Entspricht den Anforderungen in den Richtlinien | Complies with the requirements stated in the directives:

- Machinery Directive 2006/42/EC
- Low Voltage Directive 2014/35/EU.
- Electromagnetic Compatibility Directive EMC 2014/30/EU.
- Directive establishing a framework for setting ecodesign requirements for energy-related products 2009/125/EC.
- Directive on the indication of energy consumption and consumption of other resources on the labeling and in the standard product information of energy-related products 2010/30/EU.
- Regulation (EU) No. 1253/2014 of the Commission dated 7 July 2014 implementing Directive 2009/125/EC of the European Parliament and the Council with regard to ecodesign requirements for ventilation units.
- Delegated regulation (EU) No. 1254/2014 of the Commission dated 11 July 2014 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labeling of residential ventilation units.
- RoHS II directive, 2011/65/EU

Voldoet aan de geharmoniseerde Europese normen | Répond aux normes Européennes harmonisées | Entspricht den harmonisierten europäischen Normen | Complies with the harmonized European standard:

EN 60335-1:2012 EN 55014-1:2007/A1:2009  
EN 60335-2 80:2003/A1:2004 EN55014-1:2007/A2:2010  
EN 60335-2-80:2003/A2:2009 EN 55014-2:1998  
EN 60730-1:2012 EN 55014-2:1998/C1:1998  
EN 55014-1:2007 EN 55014-2:1998/A1:2002

Veenendaal, 01-09-2018,

M. Voorhoeve, Managing Director

## Notes





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