



User Guide

## **HRC-EcoSmart / HRC-SmartComfort**

Balanced ventilation with heat recovery &  
zone control

This manual is intended for the users of the HRC-EcoSmart and HRC-SmartComfort balanced ventilation system. The manual contains important information about the operation and maintenance of the ventilation unit with heat recovery and zone control.

**These instructions belong to the versions:**

HRC-425-EcoSmart

HRC-425-SmartComfort

HRC-570-EcoSmart

HRC-570-SmartComfort



# Table of contents

1. Precautions and safety instructions	4
2. General operation balance ventilation system	5
3. Product informatie	8
4. Controlling the device	9
5. Maintenance	18
6. Faults	22
7. Certification and warranty	27

# Why ventilate?

## **Orcon: exceptional indoor climate**

Our goal is to provide residents with the most comfortable and healthy (extraordinary) indoor climate possible, in which they feel comfortable and can function optimally.

## **The importance of good ventilation**

Houses are increasingly well insulated. This is a good development, because it saves a lot of energy and money. However, good insulation does reduce the exchange of air in your home, because in an airtight home, air cannot flow from the outside to the inside, or vice versa. And that is not a good thing, because you and your home need fresh air.

Simply opening a window is not enough; by the time you close it, the fresh air has already disappeared. You need about 25 m<sup>3</sup> of fresh air per hour, so good ventilation is a necessity. Without good ventilation it becomes damp and musty in the house, resulting in bacteria, mould and health complaints such as headaches, allergies and respiratory irritations. Moreover, heating this moist air costs more energy than heating dry air.

Of course, this is an extreme situation, but a good ventilation system is mandatory in new houses for a reason. This balanced ventilation system can operate fully automatically and saves energy. But more importantly, it also benefits your health!



**Note:** It is not permitted to connect a motorised extractor hood or a tumble dryer to the system.

# 1. Precautions and safety instructions

## 1.1. Safety regulations

- Installation, commissioning and maintenance must be carried out by a recognised installer, unless otherwise indicated. An unauthorised installer may cause personal injury or damage to the functioning of the ventilation system;
- After installation, all parts that could cause personal injury are safely inside the housing. Do not open the housing;
- Always follow the safety regulations, warnings, notes and instructions in this manual. Non-observance of Safety instructions, warnings, notes and instructions may lead to personal injury or damage to the device;
- It is not permitted to modify the unit or its specifications in this document. A modification may cause personal injury or damage to the functioning of the ventilation system;
- Do not unplug the appliance unless instructed to do so in the operating instructions.
- Replace the filters (at least) every six months. This keeps the indoor air healthy and comfortable and protects the unit from dirt;
- Always leave the user manual with the device.

## 1.2. Scope

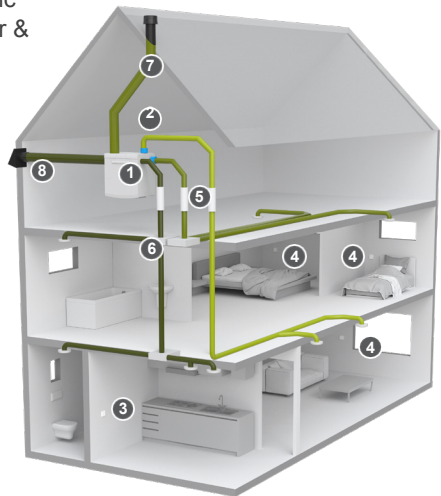
The unit is only suitable for domestic use and not for industrial use, swimming pools and/or saunas. The air flow rate of the unit must match the ventilation requirements of the home.

## 2. General operation of balanced ventilation system with zone control

In order to create a healthy living environment in your home, good ventilation is required. Your house is therefore equipped with an Orcon mechanical supply and exhaust ventilation system. This system consists of a centrally installed balanced ventilation unit

(HRC-EcoSmart/SmartComfort) with zone control, a duct system with supply and exhaust valves in the various rooms and can be combined with a position switch, an RF remote control and/or CO<sub>2</sub> room sensor(s).

1. A centrally located HRC-EcoSmart/SmartComfort domestic ventilation system with humidity sensor & zone control
2. Zone control valves, placed in the inlet.
3. Remote control 15RF or HRC Display built-in 15RF
4. CO<sub>2</sub> sensor 15RF
5. Silencers (minimum 1m) for a very quiet installation
6. Air distribution system for the supply and extraction of contaminated air to and from the unit
7. Roof duct
8. Wall outlet



Overview ventilation system HRC-EcoSmart/SmartComfort

### In balance

The HRC-EcoSmart/SmartComfort is equipped with two fans: an inlet fan. The exhaust fan ensures that warm, moist and contaminated air is removed from the house. The supply fan ensures a sufficient supply of clean outside air.

### Heat exchange

The supply air, which in winter will be rather cold due to the cold outside air, is first heated in the HRC by means of the heat extracted from the warm return air from the house. Conversely, in the summer months, the warm supply air from outside will be cooled by the cooler return air from the house.

The built-in heat exchanger ensures that up to 99% of the heat is transferred, which means that hardly any valuable heat is lost and the inlet temperature is at a comfortable level.

### **Zone control**

With the zone control on the device, ventilation takes place in the room where ventilation is required. Smart sensors, placed in the living & sleeping areas, determine where ventilation is needed. During the night, the ventilation need is reduced in the living room and increased in the bedrooms. In this case, the device will ensure that there is reduced ventilation in the living room. And the air supply in the bedroom is kept optimal.

This makes the HRC-EcoSmart/Comfort very energy-efficient as it only ventilates the room where it is needed. As a result, the ventilation system is also whisper-quiet.

### **Bypass**

In the summer situation, when heat recovery is not desired, the air is not led through, but past the heat exchanger via a bypass valve. This makes it possible to ventilate the house with relatively cool outside air during the night in the summer, so that the house is relatively cool again in the morning. The bypass automatically works at the best moment to achieve maximum comfort.

### **Frost protection**

When the outside temperature in winter is around freezing point, it is possible that ice will form in the exchanger. The result is that cold air is blown into your home. To prevent this, the HRC will heat the exchanger in time using the warm indoor air from your home. To do this, the unit will temporarily turn up the extract air fan at a higher speed than the supply air fan.

The HRC-MaxComfort has a built-in pre-heater that switches on automatically to prevent the heat exchanger from freezing.

### **Moisture sensor**

Your HRC is fitted with a humidity sensor as standard, which measures the moisture content in the extract air from the kitchen, bathroom and toilet. If the built-in humidity sensor

If the humidity rises, for example while cooking or taking a shower, the unit will automatically switch to a higher setting. 15 minutes after showering or cooking, the unit will switch back to the lower setting.



**Attention:** Ensure sufficient air supply. Never tape valves together or close them!

Please contact your installer if you have any questions or if you want to order new filters. Filters can also be ordered directly in the Orcon webshop: [www.orcon.nl/winkel](http://www.orcon.nl/winkel)

### **Filters**

The HRC is equipped with two filters. A filter for filtering the supply air and a filter for filtering the return air. The supply filter ensures that only clean air enters your home and that dust, soot and insects remain outside.

Optionally, you can also use a pollen filter for the supply filter. The exhaust filter ensures that the air from your home is also filtered, so that the contamination of the exchanger remains minimal.

For an optimal indoor climate, we recommend cleaning the filters every 3 months and replacing them once every 6 months. The HRC is equipped with a filter indicator, which indicates when the filters need to be cleaned. For more information about cleaning your filters, see chapter 5.

## 3. Product Information

### 3.1. Device types

The Orcon HRC is equipped with an intelligent electronic control circuit, which ensures optimum operation and protection under all conditions.

The table below lists the different versions.

	HRC-425 EcoSmart (300)	HRC-425 SmartComfo rt (300)	HRC-570 EcoSmart (400)	HRC-570 SmartComfo rt (400)
<b>Article no.</b>	22001090	22001095	22001100	22001105
<b>Air flow rate [m³/h] at max. 200 Pa</b>	300	300	400	400
<b>Capacity in accordance with 70 % rule<sup>1</sup></b>	425	425	570	570
<b>Channel connection [mm]</b>	4 x ø 160 2 x ø 160 Zone valve	4 x ø 160 2 x ø 160 Zone valve	4 x ø 180 2 x ø 160 Zone valve	4 x ø 180 2 x ø 160 Zone valve
<b>For heater</b>	no	yes	no	yes
<b>Filter class (ISO16890)</b>	2x coarse 65%	supply:  ePM1 70%  drain:  coarse 65%	2x coarse 65%	supply:  ePM1 70%  drain:  coarse 65%

<sup>1</sup> In accordance with Article 3.29 Paragraph 5 of the 2012 Building Decree

### 3.2. Optional accessories

The unit can be expanded with the Orcon articles listed in the table below.

Article	Article number
Remote control 15RF	21800000



CO <sub>2</sub> room sensor 15RF	21800040
CO <sub>2</sub> sensor 15RF	21800050
CO <sub>2</sub> control sensor 15RF	21800045
HRC built-in display 15RF	21800060

# 4. Operating the appliance

The HRC can be operated with various accessories. This chapter describes how to use the optional controls. For a detailed description, please refer to the operating instructions of the respective control.





## 4.1.Operation with 3 position switch

If your unit has a perilex connection and a 3 position switch, the ventilation positions from the table below can be set. If several switches or controls have been applied in your home, the most recently selected ventilation setting will always be leading.

Explanation of ventilation modes		
Position 1	Low	For use during long absences
Position 2	Middle	For daily use in normal housekeeping
Position 3	High	For use during cooking, showering or celebrations

## 4.2.Operation with Remote Control 15RF

The balance fan can be operated by wireless remote control (15 RF). The remote control has 6 buttons, the functions of which are explained in the table below.

Remote control buttons explained		
Button	Operation	Function
	1x short	Absence mode
1	1x short	Position 1 (low position)
2	1x short	Position 2 (centre position)
3	1x short	Position 3 (high position)
	1x short	Position 3 (timer position) temporary 15 minutes
	2x short	Mode 3 (timer mode) temporary 30 minutes
	3x short	Mode 3 (timer mode) temporary 60 minutes
car	1x short	Automatic mode



### **Absence mode**

In the absence mode, the unit runs in the minimum ventilation mode.

### **Timer mode**

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

### **Automatic mode**

In auto mode, the unit runs based on the moisture content in your home.

The moisture sensor is integrated as standard in the HRC and measures the moisture content in the extract air from the kitchen, bathroom and toilet. If the humidity sensor detects that the humidity level is rising, the device will automatically switch to a higher setting. 15 minutes after showering or cooking, the device will switch back to its previous setting. If your appliance has been upgraded with a CO<sub>2</sub> room sensor, the automatic mode works on the basis of the CO<sub>2</sub> content. The system can be expanded with additional controls/CO<sub>2</sub> room sensors (up to a maximum of 20 controls per appliance).

### **4.3. Control with the CO<sub>2</sub> room sensor**

This sensor measures the CO<sub>2</sub> concentration (air quality) in the room and automatically increases ventilation when necessary. This prevents unnecessary ventilation, which benefits the energy efficiency of the device.

#### **Indication and operation CO<sub>2</sub> room sensor**

By touching the operating button once, the status is shown by the LEDs. After 30 seconds the LEDs switch off automatically to avoid disturbing a dark room. If the operating button is pressed again, the sensor switches to a different mode. The mode change is indicated by the green or blue LED on the top right of the CO<sub>2</sub> room sensor lighting up.

The CO<sub>2</sub> room sensor has the following two modes:

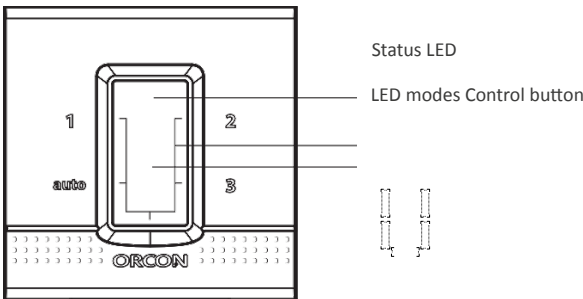
- **Energy-saving mode**  
When the CO<sub>2</sub> room sensor is in this mode, the unit will ventilate according to the standard requirement. This saves on energy costs, as ventilation is only provided when it is actually needed.
- **Extraordinary mode**  
When in this mode, the CO<sub>2</sub> room sensor will keep the air quality at a high level. This will increase ventilation, removing the dirty air particles from the house and bringing in fresh air from outside.

#### 4.4. Control with the CO<sub>2</sub> built-in sensor


This built-in sensor measures the CO<sub>2</sub> concentration (air quality) in the room and automatically increases ventilation when necessary. This prevents unnecessary ventilation, which benefits the energy efficiency of the device.

#### Indication and operation with the CO<sub>2</sub> built-in sensor

By pressing the operating button once, the status is shown by the LEDs. After 30 seconds the LEDs switch off automatically to avoid disturbing a dark room. If the operating button is pressed again, the sensor switches to a different mode. The mode change can be recognised by the LED's lighting up.



CO <sub>2</sub> sensor		
Status	Led	Function
Absence stand	=	Unit runs in lowest possible position until another function is activated (12 hours)
1		Position 1 (temporary low position)
2		Position 2 (temporary intermediate position)
3		Position 3 (temporary high position)

Energy-saving Auto mode		Automatic regulation on the basis of CO <sub>2</sub> <1150 PPM
Outstandingly Good Auto Mode		Automatic control based on CO <sub>2</sub> <950 PPM

## **The CO<sub>2</sub> built-in sensor has the following modes:**

- **Absence and positions 1, 2 and 3**

When the CO<sub>2</sub> recessed sensor is in the off position, the unit will ventilate a minimum amount. Only the Status LED lights up and goes out after 30 seconds. This mode remains active for 12 hours.

Mode 1 (low), 2 (medium) and 3 (high) are temporary modes. If modes 1 (low) and 3 (high) are selected, the system will return to automatic mode after 60 minutes and the LEDs will remain on during this time. For setting

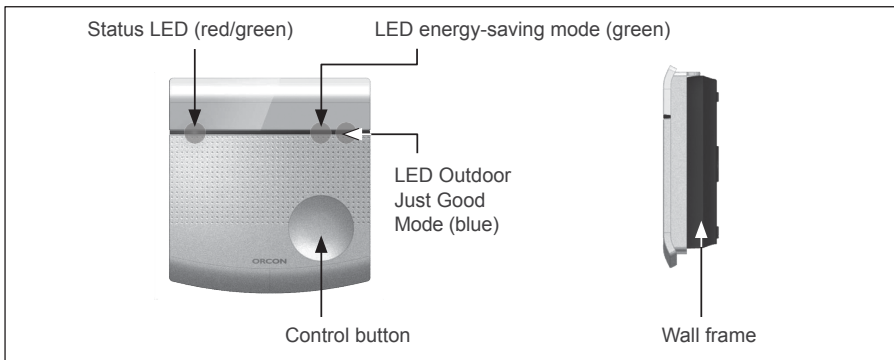
2 (middle) is 13 hours, this setting can be chosen as a night setting in situations where not every bedroom is equipped with a CO<sub>2</sub> sensor.

- **Energy-saving mode**

When the CO<sub>2</sub> built-in control sensor is in this mode, the fan will ventilate according to the standard requirement. This saves on energy costs, as ventilation is only provided when it is really needed.

- **Extraordinary mode**


When it is in this mode, the CO<sub>2</sub> built-in sensor keeps the air quality level at a very good level. As a result, more ventilation takes place, which means that the dirty air particles are removed from the house more quickly. The clean outside air is brought inside.



#### 4.5. Operation with CO<sub>2</sub> control sensor

The HRC can also be operated with the CO<sub>2</sub> control sensor. This is a CO<sub>2</sub> sensor with integrated control. By touching the control button once, the LEDs indicate the status. After 30 seconds the LEDs will automatically switch off again, in order not to disturb a dark living room. If the control button is pressed again after being pressed once, the CO<sub>2</sub> control sensor switches to a different mode.

#### CO<sub>2</sub> control sensor

	Absence mode	Appliance running at lowest possible setting (12 hours)
<b>auto</b>	Automatic position	Automatic control based on humidity and CO <sub>2</sub>
1	Position 1	Temporary low position (60 min)
2	Position 2	Temporary middle position (13 hours)
3	Position 3	Temporary high mode (60 min)

#### CO<sub>2</sub> Plus system

It is possible to place a CO<sub>2</sub> room sensor, flush-mounted sensor and/or flush-mounted display or control sensor in each occupied room. This can be extended to up to 15 CO<sub>2</sub>

Room sensors (and 5 remote controls). These sensors communicate wirelessly with the HRC-EcoSmart/SmartComfort ventilation unit.



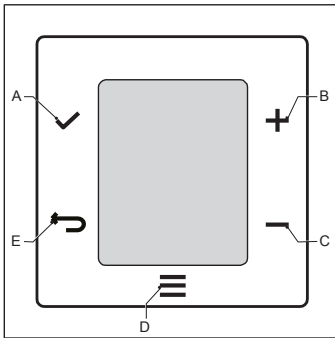
When the remote control is set to automatic mode, the unit responds to the highest CO<sub>2</sub> level (air quality in a residential area) measured by the CO<sub>2</sub> room sensors. This provides fully automatic control, ensuring an exceptional indoor climate for the occupant at all times. You can always choose a different speed with the remote control. The automatic mode will then lapse. After any power outage, the fan will start in the automatic mode.

#### 4.6.HRC Display Built-in 15RF

The HRC can be operated and read with the HRC Display built-in 15RF. The display has control buttons with which the appliance can be operated. It is also possible to use the display to read out the status of the appliance and to change various settings.

#### Indication and operation Built-in display

By briefly touching one of the buttons, the display lights up and shows the current status of the connected HRC. Subsequently, the buttons below can be used to change or read out the HRC settings.



- A. OK button: Select menu
- B. UP button: Increase fan speed or move forward in a menu.
- C. DOWN button: Decrease fan speed or go back in a menu.
- D. MENU button: Scroll through available settings.
- E. BACK button: To return to the standard screen.

#### Built-in display

	Automatic position	Automatic ventilation according to humidity and/or CO <sub>2</sub> demand
	Position 1	Manual Position 1 (low position, active until selection change)
	Position 2	Manual Position 2 (centre position, active until selection mode change)
	Position 3	Manual Position 3 (high position, active until selection mode change)
	Absence stand	Appliance running in lowest possible position
	High mode/ Party mode	Unit ventilates the maximum unit capacity




Temporary stand

Appliance runs temporarily in position 3 (60 min)

## Changing fan settings

In the standard screen, the fan speed can be changed using the UP and DOWN buttons.

## Read out device settings

Settings of the HRC can be read by pressing the Menu button until the following icon  appears in the display. By touching the UP or DOWN button the following settings can be read out. Press the OK button to select the reading menu.



### Built-in display

No.	Description	No.	Description
1	Software version	10	Bypass position
4	RV value in dwelling (%)	11	Exhaust fan speed (%)
5	RH value supply air (%)	12	Supply air fan speed (%)
6	Exhaust air temperature to the outside (°C)	13	Remaining after running time (moisture scenario) (min.)
7	Supply air temperature to the dwelling (°C)	14	Pre-heater control (MaxComfort) (%)
8	Temperature out of dwelling (°C)	16	Current supply flow rate (m <sup>3</sup> /h)
9	Outdoor temperature (°C)	17	Current discharge flow rate (m <sup>3</sup> /h)



## Changing settings

It is also possible to change device settings with the built-in display. To do this, follow the steps below:



1. Press the MENU button for 10 seconds.
2. When flashing  press the OK key to enter the settings menu.
3. Scroll through the settings with the + and - buttons.
4. Touch the OK key to change a selected setting. (see table below)
5. Touch the OK key again to confirm.
6. Touch the back key  to return to the home screen.

The following settings can be changed.

### Built-in display

No.	Description	No.	Description
1	Velocity of absent supply fan (%)	8	High Exhaust fan (%)
2	Velocity Exhaust air fan (%)	9	Boost level (%)
3	Low supply fan (%)	10	Time to change filter (days)
4	Low exhaust fan (%)	11	Moisture scenario position 0=Medium, 1=High
5	Centre Supply fan (%)	12	Sensor sensitivity (%)
6	Middle Exhaust fan (%)	13	Post-running time moisture scenario (Min)
7	High Supply fan (%)	14	Comfort temperature (°C)

## Filter reset

When the icon appears in  the display, the filters need to be cleaned or replaced due to dirt. After replacement or cleaning, the filter message can be reset. To do this, briefly press the MENU button. Now only the filter icon is visible  Touch the OK button to perform the Filter Reset.

# 5. Maintenance

The parts of the HRC listed in the table below should be cleaned regularly.

Cleaning parts Orcon ventilation system		
Action	Interval	Who?
Cleaning filters	1x per 3 months	User
Replacing filters	1x per 6 months	User or installer
Cleaning valves (and grilles)	1x per 6 months	User
Cleaning/maintenance of controls	1x per 6 months	User
Replace Battery Remote Control 15RF	1x per 2 years	User
Cleaning the housing	1x per 6 months	User or installer
Cleaning the humidity sensor	1x per 2 years	Installer
Cleaning fans	1x per 2 years	Installer
Cleaning condensate drain	1x per 2 years	Installer
Check operation & cleaning of zone valves	1x per 2 years	Installer
Cleaning the heat exchanger	1x per 4 years	Installer
Cleaning the inside of the appliance	1x per 4 years	Installer
Cleaning channels	1x per 4 years	Installer

## 5.1. User maintenance

### Cleaning filters

The appliance is equipped with a filter timer. If the filter timer of 6 months has expired, a green LED next to the text 'FILTER' will light up on the display of the unit. If you have a 15RF Remote Control or Built-in Display, a message will be shown on your control. After each operation, the LED of the RF remote control will now blink orange 3 times instead of 1x green.

On the Built-in Display, the icon "filter dirty" appears.

**Attention:** Remove the plug from the socket before cleaning the filters!

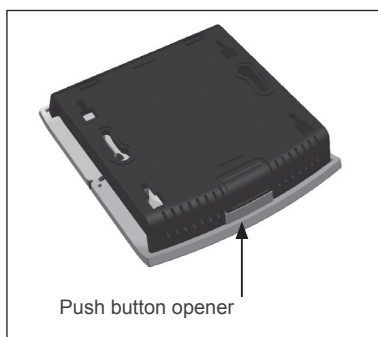
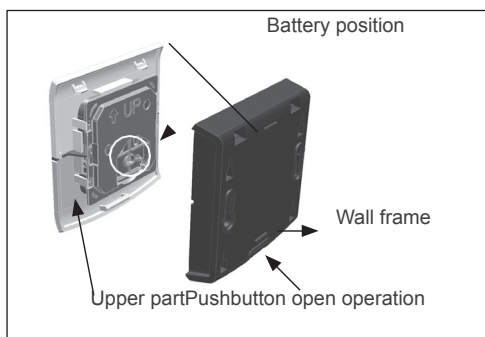
1. Remove the filter handles.
2. Take the dirty filters out of the unit using the pull tab.
3. Vacuum the filters on the outside. If the filters are too heavily soiled, they must be replaced. Order original Orcon filters to ensure a good performance of the unit ([www.orcon.nl/winkel](http://www.orcon.nl/winkel)).
  - Coarse 45% filter: Wire frame filter, filters 45% of all coarse particles such as sand & dust (0.97µm) from the air
  - Coarse 65% filter: Plissé filter: large filter surface, filters 65% of all particles (0.97µm) from the air
  - ePM1 70% filter: pleated filter: large filter surface, filters 70% of all particles (0.31µm) such as pollen and fine dust from the air. To be used as supply filter.
4. Replace the cleaned filters. **Note:** Replace the filters on the same side as they were before cleaning. If you have pleated filters (HRCSmartComfort), an icon indicates the side on which they should be placed.
5. Replace the filter handles in the recess at the front of the unit. On the inside of the caps you will see an 'L' or 'R' marking to indicate which side the caps should be on. Press the filter handles firmly over the entire front surface to ensure that they are fully engaged.
6. Insert the plug back into the socket.
7. To reset the filter timer, press the button next to 'FILTER' on the display for 3 seconds. Or do this on the remote control by pressing <AUTO> and Press <TIMER> simultaneously for **3 seconds**.

Filter sets	
Article	Article no.
Filter set HRC EcoMax 2x coarse 45%	22700002
Filter set HRC EcoMax 2x coarse 65%	22700009
Filter set HRC MaxComfort coarse 65% & ePM1 70%	22700006

### Cleaning of valves

Grasp the valve by its outer edge and remove it from the wall or ceiling. The valves can be cleaned with soapy water. Rinse the valve well and dry it. Place the valve back in the wall or ceiling.

**Note:** Do not change the setting of the valves and do not interchange the valves. If they are exchanged, the system will no longer function optimally!



### Remote control maintenance

Regularly remove dust from the remote control with a dry cloth. When the LED indication on the remote control flashes orange once or does not react any more to the operation, the battery is probably empty. You can easily replace it yourself.

A new battery can be ordered easily at [www.orcon.nl/winkel](http://www.orcon.nl/winkel). To replace the battery, press the button on the bottom of the remote control to release the top part from the wall frame. You can now remove the old battery and insert the new battery (plus side facing you). Replace the top cover by hooking it onto the top edge of the wall frame and clicking it down onto the wall frame with a hinged movement.

**Attention:** Do not throw empty batteries into the household waste; take them to the collection points for small chemical waste.

### Filling the condensate drain

The condensate drain is connected to the indoor sewer. If a standard condensate drain is installed, sewer air can enter your house if there is no water in the water trap. You can prevent this by pouring a cup of water into the water trap. If a flat dry siphon is used, you do not need to do anything as it does not dry out.



## User maintenance log

Date/ Actio	Clean ing	Cleani ng	Cleaning controls	Filling condensate

# 6. Faults

## I. Remote control 15RF

When a button on the remote control is pressed, the LED lights up green and then flashes as confirmation. The following indications are possible:


Indication overview remote control 15RF	
Indication	Message on remote control
Device OK, message followed	1x green
Device OK, timer 15 min. activated	1x green
Device OK, timer 30 min. activated	2x green
Device OK, timer 60 min. activated	3x green
RF Communication problem	3x red
Learning mode starts up	1x red 1x green
Successful connection to device	10x green
Battery low	1x orange
Remote control reset performed	2x orange
Filter indication active	3x orange

## II. Indications on CO<sub>2</sub> sensor

The CO<sub>2</sub> room sensor, CO<sub>2</sub> operation sensor and CO<sub>2</sub> installation sensor are equipped with a status LED which indicates the status of the sensor. The current status is displayed by briefly touching the button once. The following displays are possible:

LED displays CO <sub>2</sub> sensors	
Indication	Message on status LED
Status OK, normal operation	Continuous Green
CO <sub>2</sub> sensor fault	1x Red
Error in device	2x Red
RF communication problem	3x Red
Filter indication active	3x Orange

### III. Built-in display 15RF

An error message is shown in the display with the following icon 

#### Overview of indications on the built-in display 15RF

Indication	Message on display
Temperature emergency stop HRC	02
No connection to the zone valves	13
Error both fans	0D
Fan supply fault	03
Fan outlet fault	08
Modbus error both fans	0E
Drainage failure Modbus	0F
Modbus supply fan fault	10
Error temperature sensor drain from house	04
Error temperature sensor supply from outside	05
Error temperature sensor supply to house	06
Exhaust air temperature sensor fault	07
Exhaust air moisture sensor fault	0A
Filter alarm	09

### IV. Display HRC

The unit is equipped with a display on the front. This display shows the status of the unit by means of a green and a red LED and any error messages (status LED). An overview of possible indications is shown in the table under V. Circuit board.

### V. Circuit board

The red/green LED on the PCB in the HRC shows the status of the HRC. The flashing pattern of the LED indicates the status. The following indications are possible:

<b>Indication</b>	<b>Led display</b>
Binding mode is active	Continuous green
Pre-heater active	3x long green
Frost protection active	2x long green
Bypass active	5x short green
Timer mode active	4x short green
External sensor query active	3x short green
Internal RH mode active	2x short green
Normal mode	1x short green
Exhaust fan fault	1x red 1x orange
Supply air fan fault	1x red 2x orange
Fault with both fans	1x red 3x orange
Emergency stop temperature	2x red 1x orange
Temperature sensor malfunction from the house (X22)	2x red 2x orange
Outside temperature sensor fault (X23)	2x red 3x orange
Temperature sensor malfunction for supply to dwelling	2x red 4x orange
Temperature sensor malfunction for outside air	2x red 5x orange

RH sensor fault	3x red 3x orange
Modbus error Extractor fan	4x red 1x orange
Modbus supply fan fault	4x red 2x orange
General Modbus fault fans	4x red 3xorange
Communication error with zone control	6x red 1x orange
Filter dirty	1x green 1x red

### Learning mode

In learning mode, the green LED will light up continuously for three minutes. In learning mode, it is possible to link up to 20 different RF components to the device. For details, please refer to the manual of the respective RF component or [www.orcon.nl](http://www.orcon.nl)

### In operation

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

### Change filter

The 'dirty filter' warning on the display is an aid to cleaning or changing the filters in time. When the selected interval time in the 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 show green instead of 1x.

Flashing orange 3 times. The green LED next to <FILTER> also lights up on the unit display. After cleaning and/or replacing the filters, the warning can be reset by pressing the button next to <FILTER> on the display for 3 seconds.

With the remote control 15RF, you can reset the filter timer by pressing the <AUTO> and <TIMER> buttons simultaneously.

## Zone control

The HRC EcoSmart and SmartComfort are equipped with a zone valve. Zone valve 1 is equipped with a circuit board with 2 status LEDs.

Description	indication
Normal operating mode (no demand from sensors)	1x Green
Humidity scenario active HRC	2x Green <sup>1</sup>
CO <sub>2</sub> demand from sensor	3x Green
Timer active	4x Green
Engine valve fault	1x Red
Error in HRC	2x Red <sup>1</sup>
CO <sub>2</sub> sensor error	2x Red 1x Orange
No RF link with CO <sub>2</sub> sensor and HRC	3x Red <sup>1</sup>
RF communication fault with CO <sub>2</sub> sensor	3x Red 1x Orange
RF communication fault with HRC	3x Red 2x Orange <sup>1</sup>

<sup>1</sup> Message for both zones.



## 7. Certification and guarantee

Orcon B.V. provides a standard two-year warranty on the unit.

The guarantee period starts on the production date.

The warranty is invalidated if:

- The installation has not been carried out in accordance with the applicable regulations;
- The defects are caused by incorrect connection, improper use or soiling of the device and accessories;
- Changes have been made to the wiring;
- Repairs have been carried out by third parties.

(De)assembly costs on site are not covered by the guarantee. If a defect arises within the guarantee period, it must be reported to the installer.

Please state the type and serial number, which can be found on the type sticker underneath the unit. Orcon bv reserves the right to change the construction and/or configuration of its products at any time without the obligation to modify previously delivered products. The data in this manual refer to the most recent information.

### **Dismantling and removal**

Make sure the appliance is disposed of in an environmentally friendly way at the end of its life. Contact the supplier about the possibilities of returning the appliance.

If the unit cannot be returned, the user is responsible for the safe dismantling of the domestic ventilation unit and for the disposal of the parts in accordance with local regulations.

# ORCON

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