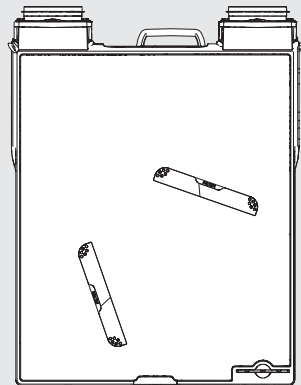


# HEATRAE SADIA

SMARTER | CLEANER | WARMER

## Advance Plus User Manual





# Introduction

This manual is intended for the user of the device and contains important information about safe and correct use, maintenance and troubleshooting of the appliance.

The installer is responsible for installing and commissioning the ventilation unit.

The following definitions are used in this manual to draw attention to hazards, instructions or indications related to people, products, installations and/or the surroundings.

## Warning!

Indicates a hazard that can cause injury and/or severe damage to the product, system or surrounding area.

## Caution!

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor injury and/or severe damage to the product, system or surrounding area.

## Note

Instructions important for the installation, functioning, operation or maintenance of the product. Failure to observe these instructions can result in minor damage to the product, system or surrounding area.

## Tip

Instructions that may be important for the installation, functioning, operation or maintenance of the product, but are not related to injury or material damage.

**Tip**

Do not forget to register the product via the Heatrae Sadia website [www.heatraesadia.com](http://www.heatraesadia.com).

Although this manual has been drawn up with the utmost care, no rights may be derived from this document.

Heatrae Sadia reserves the right to modify products and manuals without prior notice.

Due to our continuous product improvement process, this document may not match the appliance you received. You can download the latest version of the manual from [www.heatraesadia.com](http://www.heatraesadia.com).

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# 1. Safety and other regulations

## 1.1. Safety

- Work may only be performed on the ventilation system by qualified installers in accordance with the regulations mentioned in this manual. Only original accessories and parts as specified by the manufacturer may be used for this purpose.
- Do not use the product for purposes other than those for which it is intended, as described in this manual.
- Be careful when using electrical appliances:
  - Never touch the appliance with wet hands.
  - Never touch the appliance when barefoot.

- This product and/or system may be operated safely by children aged 8 years and older and by people with physical, sensory or mental disabilities or a lack of experience/knowledge if under supervision or after having received instructions regarding safe use, and if they are aware of the product and/or system hazards.
- Cleaning and maintenance by the user may not be done by children or people with physical, sensory or mental disabilities or a lack of experience/knowledge without supervision.
- Do not allow children to play with the product and/or system.
- Do not use the product in the vicinity of flammable or volatile substances such as alcohol, insecticides, petrol etc.



- The safety instructions must be followed in order to prevent physical injury and/or damage to the product.
- The product includes moving parts. Please therefore wait at least 10 seconds after disconnection prior to opening or touching the product as these parts will continue to move for some time.
- Secure the appliance against being switched on accidentally.
- Maintenance instructions must be followed to prevent damage and excessive wear and tear.
- The product may not be modified.
- The product is only suitable for use with a 230 V, 50 Hz AC power supply system.
- Ensure that the electrical system to which the product is connected meets the necessary conditions.
- Do not expose the product to the elements.
- Do not place any objects on top of the device.

- Inspect the product regularly for faults. In the event of faults, switch the product off and contact your installer or Heatrae Sadia Customer Service immediately.
- Switch the product off if:
  - The product is not working properly.
  - You want to clean the outside of the product.
- Ensure that the electrical circuit does not become damaged.
- Do not use the device to extract air from boilers, heating systems etc.
- Ensure that the device drains into a sewer system which leads outside, and is suitable and installed for this purpose.
- Ensure that air valves and grilles are not obstructed, and that they are clean.

# 2. Product information

## 2.1. A comfortable living environment and energy conservation

A comfortable living environment and energy conservation are becoming increasingly important in housing construction. The insulation of modern dwellings is getting better all the time, but unfortunately good insulation often comes at the expense of the indoor climate. Without good ventilation, there is nothing to stop damp, mould and dust mites, and the air in the dwelling can quickly start to feel stale due to the increasing CO<sub>2</sub> concentration (carbon dioxide). Heatrae Sadia installs appliances which manage the indoor climate and take account of requirements for comfort and energy consumption in dwellings.

The **Advance Plus ventilation system from Heatrae Sadia** is an example of these advanced appliances.

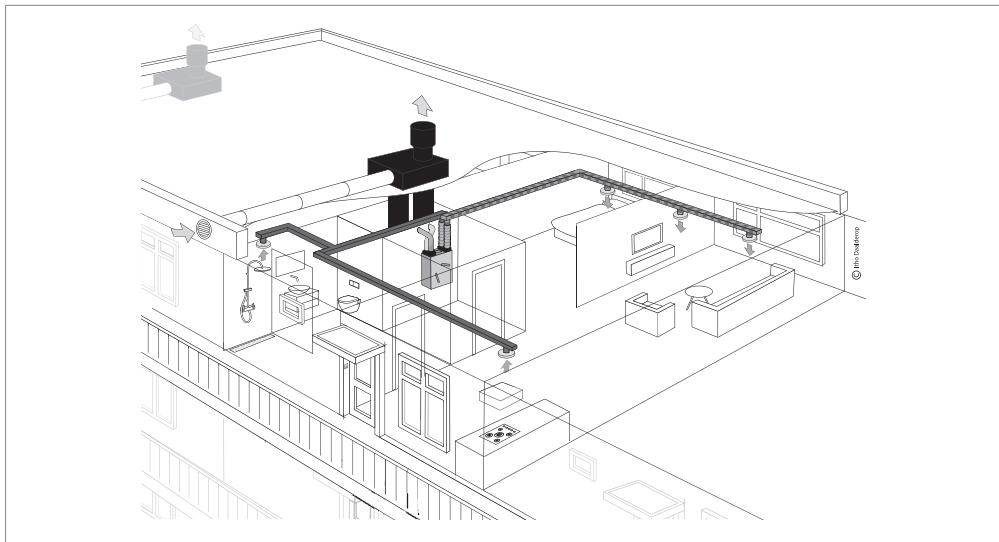
The Advance Plus is a balanced ventilation system with heat recovery. The ventilation unit has separate air streams for supply air and exhaust air.

The unit ventilates several rooms in the dwelling. Stale or humid air is extracted from the kitchen, bathroom, toilet, and any indoor storage spaces or washrooms ("wet rooms") through ducts.

The living room, bedrooms and hallway can also be connected with ductwork, but in these areas there is no air exhausted, just fresh air supplied.

To ensure good air distribution, the extraction and supply points in the ventilated rooms are fitted with extractor valves and supply grilles.

The Advance Plus helps to reduce humidity in your bathroom, keep the toilet smelling fresh and remove cooking odours from the kitchen.



## 2.2. Heat recovery

Before the stale air is discharged outside, it is filtered and passes through the heat exchanger. The fresh outside air is also filtered and passes through the heat exchanger before entering the dwelling. In the heat exchanger, the two air streams pass alongside each other but are not mixed together. This allows heat from the exhaust air to be transferred to the fresh supply air, so this energy is not lost.

This heat recovery process is very efficient. On average, around 90% of the extracted heat is returned to the dwelling. This means that only around 10% of the heat is lost.

### Note

Despite the heat exchange process whereby Supply air from outside is pre-heated, the balanced ventilation system may not be regarded as a heating system. It is a ventilation system that contributes to a comfortable and healthy living environment in a dwelling.

## 2.3. Filters

The Advance Plus has two filters, one for each air stream. Both filters are positioned in the ventilation unit so that they protect the exchanger against soiling. In addition, the filter in the air supply channel protects the user against dust and other impurities found in the air drawn in from outside.

There are various types of filters:

- **G3 filter.**  
This filter is supplied with the appliance as standard and it is very suitable as a 'construction dust filter' in the initial period following completion of the new housing. After around three months, the filter should be replaced with a G4 or F7 filter.
- **G4 filter.**  
This coarse filter is mainly used to filter relatively large dust particles from the air. This protects the heat exchanger in particular against incoming dirt.
- **F7 filter.**  
This fine filter stops fine dust particles as well as coarser dust particles (fine dust, pollen). This is particularly beneficial for people with allergies who are sensitive to this.

During the product's lifetime the filters will become dirty, which reduces the capacity of the ventilation unit. It is

therefore essential that the filters are cleaned as indicated and ultimately replaced.

#### Note

The status LED on the control panel indicates when the filters need to be cleaned or replaced.



A Status LED

#### Warning!

Advance Plus should always be fitted with the appropriate filters. Without filters, the appliance can be irreparably damaged.

## 2.4. Controls

The ventilation unit is normally equipped with a three-level control which allows the flow rates at low and high speed to be adjusted as desired with potentiometers on the unit. It is also possible to pair RF sensors with the ventilation unit for automatic ventilation control. In addition, the ventilation unit has some automatic controls that operate continuously in the background.

Every RF control switch and/or RF sensor must be paired separately. You can pair and use up to 20 RF devices.

### 2.4.1. Optional sensors

A number of optional wireless sensors are available for the Advance Plus.

#### Caution!

Control based on sensors (CO<sub>2</sub>, RH and/or PIR) only works if the ventilation unit is in 2/AUTO mode.

## CO2 sensor

To ensure a healthy indoor climate and to prevent the air in the dwelling from becoming stale, it is important that the the CO2-level is not too high.

The sensor can be placed in any room (except the bathroom), but should preferably be placed in the living room or bedroom.

The CO2-sensor measures the CO2-level in the room. It translates the measured value into a ventilation demand and communicates this via wireless to the ventilation unit with which it is paired. This allows ventilation to be continuously and automatically adjusted, and it ensures that a good indoor climate is achieved in the most effective and energy efficient manner.

When the the CO2-level has fallen sufficiently, the capacity of the ventilation unit is automatically decreased.

## RH sensor

To ensure a healthy indoor climate and to prevent patches of damp and mould in the dwelling, it is important that the relative humidity does not stay high for too long.

The sensor can be placed in any room as desired, but preferably in a room where a lot of moisture is produced, such as a bathroom.

The RV-sensor measures the relative humidity in the room. The sensor translates the measured value into a ventilation demand and communicates this via wireless to the ventilation unit paired with the sensor. This allows ventilation to be continuously and automatically adjusted, and ensures that a good indoor climate is achieved in the most effective, energy-efficient manner.

When the relative humidity has fallen sufficiently, the capacity is automatically decreased.

## PIR sensor

To ensure a healthy indoor climate and to prevent unpleasant odours in the property, it is important that there is enough ventilation when people are present. The sensor can be placed in any room, for example in the toilet or in a bathroom with a toilet.

The sensor detects the presence (or absence) of people in the room and communicates this wirelessly to the ventilation unit with which it is paired.

If the sensor detects movement, the ventilation system runs at increased capacity for a defined period. If the sensor detects continuous occupancy of the room, the capacity will be increased even more. If the motion sensor does not detect any movement within a defined period, the capacity will automatically be decreased again.

### 2.4.2. Bypass control

The ventilation unit is equipped as standard with a bypass valve in the exhaust air line. This makes it possible to control what happens to the (warm) exhaust air from the dwelling.

When the valve is in the normal position (closed), the exhaust air from the dwelling passes through the heat exchanger and exchanges heat with the cold supply air from outside.

If the valve is opened, the exhaust air no longer passes through the heat exchanger, so there is no heat exchange. Although the outside air still passes through the exchanger, the supplied outside air is not warmed. This is desirable when it is warmer inside than outside in the summer.

If in the summer it is cooler inside than outside, it is desirable to cool the incoming air ("cold recovery"). In this case, the valve is closed so that the relatively cool indoor air passes through the exchanger.

The position of the bypass valve is determined automatically based on the measured outdoor air temperature and exhaust air temperature.

### 2.4.3. Frost control

The ventilation unit has an automatic control (frost control) that protects the heat exchanger of the ventilation unit against freezing. If the measured outside air temperature is lower than  $-1^{\circ}\text{C}$ , the fan is slowed down in stages and ultimately stopped.

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*When the ventilation unit has been stopped by the frost control, it only responds to the timer control.*

*The frost control periodically checks whether the temperature has risen enough for the ventilation unit to be switched back on.*

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To ensure that the ventilation unit continues to operate and provide adequate ventilation when the outside temperature is below  $-1^{\circ}\text{C}$ , you can use preheated supply



air from one or more sources or mix warm air from the dwelling with cold air from outside.

## 2.4.4. Filter warning

The controller of the ventilation unit uses a counter to keep track of when the filters need to be cleaned or replaced. If the system detects that a filter is dirty, the ventilation unit sends a wireless message to this effect. The message is issued on the appliance's control panel by the status LED flashing orange. This message can also be displayed on specific linked devices.

## 2.4.5. Status LED

The appliance is equipped with a status LED on the top of the appliance. The status LED can display the following messages:

Pattern		Function
Green	Orange	
Blinks 1x/s	Blinks 1x/s	Identification
Blinks 1x/s		Pairing mode
Lit 6 s	Blinks 1x/s	Frost mode
Lit 5 s	Blinks 2x/s	Bypass mode
Lit		Normal operation
Pattern		Function
Red	Orange	
Blinks 1x/s	Blinks 1x/s	Fan fault
Blinks 2x/s	Blinks 2x/s	Exhaust temperature sensor fault
Blinks 2x/s	Blinks 3x/s	Intake temperature sensor fault
Blinks 3x/s	Blinks 1x/s	Sensor fault
	Blinks 1x/s	Filter dirty

## 2.5. Grilles

The quantity of air that must be extracted is legally regulated, and the quantity of air supplied must stand in proportion to this. This means that the same amount of air must be supplied as is extracted. The minimum air quantity per room is also legally regulated. The quantities have been selected to ensure that no unnecessary energy is wasted whilst still achieving an optimal indoor climate. This is why the air extraction and supply valves differ in size between rooms. Each of the extraction and supply grilles therefore has a specific fixed position and setting.

### Note

It is very important that you do not adjust the grilles in any way, to ensure proper operation of the entire ventilation system. Grilles and air valves should not be swapped around.

## 2.6. Accessories

Item no.	Type	Description
<b>95970200</b>	RF status indicator control	Wireless RF control switch, 230 V supply, with two levels, auto and timer functions, indicators for bypass and frost control.
<b>95970003</b>	RFT W	Wireless control switch with three settings and timer function. (White)
<b>95970204</b>	RFT AUTO	Wireless RF control switch with 2 settings, an automatic mode and a timer function.
<b>95970002</b>	Wired Controller	Wired three-position switch for installation
<b>95970201</b>	RF-Co2 Sensor	230 V RF CO <sub>2</sub> -sensor
<b>95970203</b>	RF RH Sensor	RF-RH battery-powered sensor
<b>95970202</b>	RF-PIR BAT	RF-PIR battery-powered presence sensor

## 2.7. Product data sheet information

Heatrae Sadia			BVU
Description	Symbol	Unit	Advance Plus
Specific energy consumption class	—	—	A
Specific energy consumption under average climate conditions	SEC	kWh/(m <sup>2</sup> .a)	-36
Specific energy consumption under warm climate conditions	SEC	kWh/(m <sup>2</sup> .a)	-12
Specific energy consumption under cold climate conditions	SEC	kWh/(m <sup>2</sup> .a)	-74
Type of ventilation unit	VU	—	- Residential ventilation unit (RVU) - Bidirectional ventilation unit (BVU)
Type of drive	—	—	Variable speed
Type of heat recovery system	HRS		Recuperative
Thermal efficiency of heat recovery	$\eta_t$	%	88
Maximum flow rate	$q_{max}$	m <sup>3</sup> /h	200
Electric power input of fan drive at maximum flow rate	$P_{max}$	W	99

Heatrae Sadia			BVU
Description	Symbol	Unit	Advance Plus
Noise level	$L_{WA}$	dB	53
Reference flow rate	$q_{ref}$	$m^3/s$	0.039
Reference pressure difference	$\Delta P_{ref}$	Pa	50
Specific power input	SPI	W ( $m^3/h$ )	0.264
Ventilation control	—	—	Manual control (no DCV)
Control factor	CTRL	—	1
Declared maximum internal leakage rate for bidirectional ventilation units	—	%	2
Declared maximum external leakage rate for bidirectional ventilation units	—	%	5
Position of visual filter change warning	—	—	Via RF status indicator control
Pre- and disassembly instructions	—	—	<a href="http://www.heatraesadia.com">www.heatraesadia.com</a>
Annual electricity consumption	AEC	kWh	3,761
Annual heating saved under moderate climate conditions	AHS	kWh	45,182
Annual heating saved under warm climate conditions	AHS	kWh	20,431

Heatrae Sadia			BVU
Description	Symbol	Unit	Advance Plus
<b>Annual heating saved under cold climate conditions</b>	AHS	kWh	88,388

## 2.8. Improving the energy label

Improve the energy label of the ventilation system by using one or more sensors or additional components.

## 2.9. Applications with new housing developments

High levels of moisture is found in building materials for new housing – about 4,000 litres per house on average. This moisture originates from wet building materials such as concrete, cement, plaster and adhesives. Materials can also become wet from rain during the construction period. The best way to eliminate this moisture is to ventilate the house properly and keep the temperature as constant as possible.

### **Forced drying: not too fast**

Heating the house to promote the drying process is sometimes called forced drying. Forced drying should not be done too quickly, otherwise significant damage (such as contraction cracks) can occur. It is therefore recommended to give careful attention to forced drying. Bear in mind that the forced drying process may take as long as six months. Set the heating to 15 to 18°C, and raise it to 20°C after moving in. Do not set the heating any higher, as the materials will start drying too quickly and damage to the building structure may occur.

### **Ventilation during forced drying**

Good ventilation and air circulation are essential during the drying process. During the first year, keep furniture approximately 5 cm away from the walls to allow the moisture to escape. Open the windows each day for sustained periods. The ventilation grilles must remain open all the times and the forced air ventilation system should be left to run constantly (don't unplug it), Run the forced air ventilation system at high speed as often as possible during the first few months. This will create the most favourable air circulation in the house.

### **Energy costs**

Good, continuous ventilation is not only important for good health; it is also important to avoid moisture problems in the house. However, ventilation takes heat out of the house. Forced drying new houses also results in higher energy consumption, resulting in a higher energy costs.

## 2.10. Recycling

This product was manufactured using sustainable materials. It should be disposed of in a responsible manner at the end of its life cycle. Your local authorities can provide you with information on how to do so.

The product's packaging can be recycled. These materials should be disposed of in a responsible manner in accordance with government regulations.



As a reminder of the need to dispose of batteries and electrical household appliances separately, the product features a symbol consisting of a crossed-out wheeled bin. This means that the product should not be disposed of with the rest of your domestic waste at the end of its life cycle. It must be taken either to a special separate waste collection centre operated by the local council or to an outlet specified by this service.

Any adverse effects on the environment and human health are minimised by handling batteries and household appliances separately. This ensures that the materials comprising the appliance can be recycled, thereby saving a significant amount of energy and raw materials.



# 3. Operation

## 3.1. Control options

The ventilation unit has several pre-programmed modes. A number of control switches are available for active adjustment to the right mode and ventilation capacity:

- Wireless RF control switch, 230 V supply, with two levels, auto and timer functions, indicators for bypass and frost control.
- Wireless control switch with three settings and timer function.
- Wireless control switch with two levels, automatic mode and timer function
- Wired three-position switch for installation
- A combination of the above options.

For pairing or unpairing a wireless RF control switch and the unit, consult Pairing and unpairing RF remote controls on page 26

You can pair and use up to 20 RF devices (controls or sensors).

The ventilation unit can be set to any of the following speeds:

- Level 1, **low speed**: when just one person is present during the day or night, or nobody is present.
- Level 2, **medium speed**: when more than one person is present during the day or night.  
or  
Auto mode **automatic mode**; control based on connected sensors (CO<sub>2</sub>, RH and/or PIR). The capacity is automatically regulated between low and high.
- Level 3, **high speed**: during cooking, showering or bathing, or when many people are present.

## 3.2. Pairing and unpairing RF remote controls

### 3.2.1. Pairing RF control switches

It is best to pair wireless switches with a ventilation unit in the vicinity of that unit.

- a) Disconnect power to the ventilation unit.
- b) Wait for at least 15 seconds.
- c) Restore power to the ventilation unit.
- d) Within two minutes after powering up the ventilation unit, press two diagonally opposite buttons on the RF control switch at the same time.

The control switch is paired, and the ventilation unit briefly changes the motor speed to confirm the pairing. The ventilation unit is now ready to be operated using the wireless control switch.

For information about pairing and unpairing optional controls, see the documentation included with the controls.

### 3.2.2. Unpairing RF remote controls

It is best to unpair wireless RF remote controls from a ventilation unit in the vicinity of that unit.

- a) Disconnect power to the ventilation unit.
- b) Wait for at least 15 seconds.
- c) Restore power to the ventilation unit.
- d) Within two minutes after powering up the ventilation unit, press the four buttons on the control switch at the same time.

The ventilation unit will now no longer respond to the wireless control switch(es). Unpairing one control switch automatically unpairs *all* control switches, controls and RF sensors.

#### **Note**

If several RF controls and/or RF sensors are paired with the ventilation unit, they must all be paired again after unpairing.

### 3.3. Pairing and unpairing the RF status indicator control

For information about pairing and unpairing the RF status indicator control, see the documentation included with that product.

## 3.4. Pairing and unpairing RF sensors

### 3.4.1. Pairing RF sensors

Pair wireless sensors with the ventilation unit as follows:

- a) Disconnect power to the ventilation unit.
- b) Wait for at least 15 seconds.
- c) Restore power to the ventilation unit.
- d) Ensure that a pairing message is sent from the RF sensor within two minutes after power to the ventilation unit is switched on. For more information, consult the documentation for the relevant sensor.

The RF sensor is paired, and the ventilation unit briefly changes the motor speed to confirm the pairing. The ventilation unit is now ready to respond to the signals of the wireless sensor.

### 3.4.2. Unpairing RF sensors

RF sensors can only be unpaired at the same time as an RF control switch. For more information, see the procedure Unpairing RF remote controls on page 26.

#### **Note**

If several RF controls and/or RF sensors are paired with the ventilation unit, they must all be paired again after unpairing.

# 4. Inspection and maintenance

Proper functioning of the ventilation system, its capacity and its service life can only be assured if the system is inspected and maintained in accordance with the following instructions. These instructions are based on normal operating conditions.

## Caution!

If the ventilation system is being used under harsh operating conditions or in a very dirty environment, extra maintenance may be required.

## 4.1. Inspection and maintenance schedule

Advance Plus inspection schedule		User	Installer
<b>Noise</b>	Check for unusual noises coming from the ventilation unit, air valves and ducts	6 months	1 year
<b>G3 filter</b>	Check for soiling	1 week	—
<b>G4 filter</b>		9 months	1 year
<b>F7 filter</b>		6 months	1 year
<b>Ventilation unit</b>	Check for soiling and condensation water leakage	6 months	1 year
<b>Motor module</b>	Check for soiling/imbalance	—	1 year
<b>Bypass valve</b>	Check functioning and for soiling	—	1 year
<b>Air valves</b>	Check for soiling	3 months	1 year
<b>Ducts</b>	Check for soiling	—	4 years

Advance Plus maintenance schedule		User	Installer
<b>G3 filter</b>	Clean (first 3 months)	1 week	Where necessary
	Replace (with G4 or F7)	3 months	Where necessary
<b>G4 filter</b>	Clean	9 months	Where necessary
	Replace	18 months	Where necessary
<b>F7 filter</b>	Clean	6 months	Where necessary
	Replace	12 months	Where necessary
<b>Ventilation unit</b>	Clean outside	3 months	1 year
	Clean condensate hose	—	1 year
<b>Motor module</b>	Clean	—	4 years
<b>Bypass valve</b>	Clean	—	1 year
<b>Air valves</b>	Clean	3 months	1 year
<b>Ducts</b>	Clean	—	8 years
<b>Battery for RF control switch</b>	Replace	Where necessary	Where necessary

### Note

It is not possible to remove the heat exchanger from the ventilation unit. Cleaning the heat exchanger is not necessary under normal conditions if the correct filters are used and replaced on schedule.

## 4.2. Inspecting, cleaning and replacing filters

### Note

The ventilation unit comes with G3 filters as standard. These filters are very suitable for use as "construction dust filters" after initial completion of the dwelling. After around three months, these filters should be replaced with G4 or F7 filters.



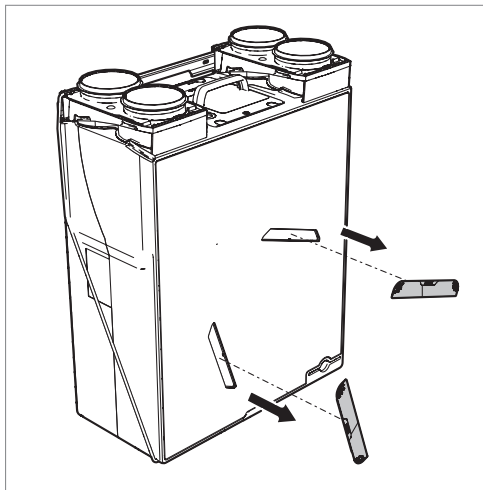
### Caution!

G4 and F7 filters can be cleaned once, after which they must be replaced at the next maintenance interval.

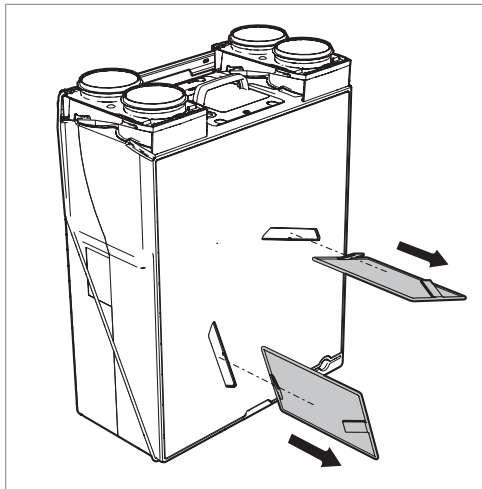
Inspect and clean or replace the filters as follows:

- a) Disconnect power to the ventilation unit.

- b) Pull both filter caps out of the front panel.



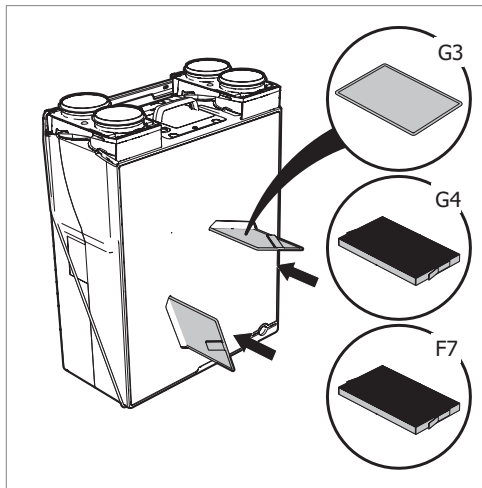
- c) Remove the filters from the ventilation unit. There are tabs at the front of the filters for this purpose.



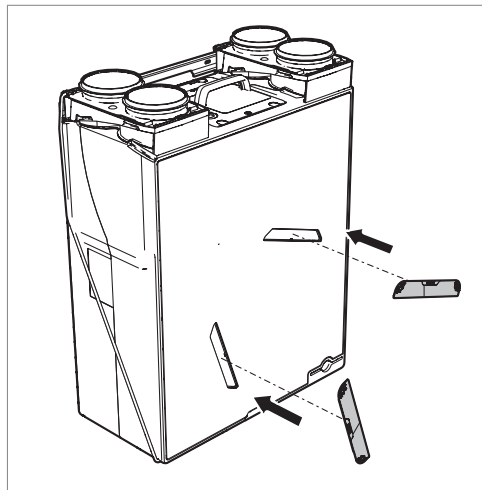
- d) Visually inspect the filters for soiling. If the filters are dirty, they must be cleaned or replaced.



- e) Clean or replace the filters. It is possible to clean the filters by using a vacuum cleaner gently.
- f) Insert the cleaned filters or new filters in the ventilation unit.



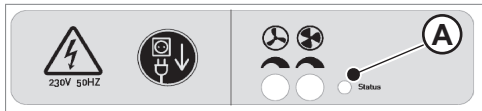
- g) Put both filter covers back in the front panel.



- h) Put the ventilation unit back into operation by switching on the power.

## Note

The status LED on the control panel indicates when the filters need to be cleaned or replaced.



A Status LED

## 4.3. Resetting the filter indication

After cleaning or replacing the filter, you can reset the dirty filter indication:

- To perform the reset, you must *first* switch off power to the ventilation unit, wait 15 seconds, and then restore power to the unit.

You then have 10 minutes to reset the filter indication as described below:

- Wired switch: Turn the wired control switch to a different setting four times, with a pause of at least 6 seconds each time.
- Wireless control switch: Press two adjacent buttons on the control switch at the same time.

## Warning!

Advance Plus should always be fitted with the appropriate filters. Without filters, the appliance can be irreparably damaged.

## Note

The dirty filter indication cannot be reset via the control panel.

#### 4.4. RF status indicator control maintenance

The RF status indicator control is mains powered, so it does not have any batteries that need to be replaced. The only maintenance to be done consists of cleaning the outside of the device with a damp cloth if necessary. Do not use chemical cleaning agents.

#### 4.5. RF remote control maintenance

The wireless control switch is battery powered. Under normal usage conditions, the battery has an estimated service life of around 7 years. Once the battery is fully drained, the control switch will no longer work, and it will no longer be possible to manually operate the ventilation unit. The battery (type CR2032 3V) must then be replaced. Inserting the battery incorrectly may damage the product. The batteries should not be exposed to excessive heat in the form of direct sunlight, fire, etc. It is not necessary to pair the control switch again.

#### 4.6. Inspection of additional RF sensors

For inspection and maintenance consult the information provided with the relevant sensor.

#### 4.7. Inspecting and cleaning air valves

Check the air valves regularly (around once every three months) for soiling. If the air valves are dirty, they must be cleaned.

 **Caution!**

When removing or replacing air valves and grilles, watch out for protruding duct sections. These can be very sharp.

 **Caution!**

When cleaning, do not adjust the air valve settings, and replace the valves in their original ducts.

# 5. Faults

The tables below contain a complete overview of all possible problems and solutions. As a user, you can correct some problems yourself, but some you cannot. For more information, consult the Inspection and

maintenance schedule. For problems you cannot resolve yourself, contact Heatrae Sadia or the installer of the appliance.

The status LED on the ventilation unit blinks orange	
Cause	Solution
a) The ventilation unit detects that the filters need to be cleaned or replaced.	<ul style="list-style-type: none"><li>• Clean or replace the filters. For more information, see Inspecting, cleaning and replacing filters.</li><li>• Reset the dirty filter indication afterwards. For more information, see Resetting dirty filter indication.</li></ul>

The status LED on the ventilation unit blinks once red and once orange

Cause	Solution
a) The ventilation unit has detected a fault with the fan.	<ul style="list-style-type: none"><li>● Check whether the fan is properly connected. Connect the fan properly.</li><li>● Check whether the fan is clean, and clean it if necessary.</li><li>● Check the fan for defects and replace it if necessary.</li></ul>

The status LED on the ventilation unit blinks once red and twice orange

Cause	Solution
a) The ventilation unit detects a fault with the supply fan.	<ul style="list-style-type: none"><li>● Check whether the supply fan is properly connected. Connect the fan properly.</li><li>● Check the fan for soiling and clean it if necessary.</li><li>● Check the fan for defects and replace it if necessary.</li></ul>

The status LED on the ventilation unit blinks twice red and twice orange	
Cause	Solution
a) The ventilation unit detects a fault with the exhaust temperature sensor.	<ul style="list-style-type: none"> <li>• Check whether the sensor is properly connected. Connect the sensor properly.</li> <li>• Check the sensor for defects, and replace it if necessary.</li> </ul>

The status LED on the ventilation unit blinks twice red and three times orange	
Cause	Solution
a) The ventilation unit detects a fault with the supply temperature sensor.	<ul style="list-style-type: none"> <li>• Check whether the sensor is properly connected. Connect the sensor properly.</li> <li>• Check the sensor for defects, and replace it if necessary.</li> </ul>

The status LED on the ventilation unit blinks three times red and once orange	
Cause	Solution
a) The ventilation unit detects a fault with the sensor.	<ul style="list-style-type: none"> <li>• Check whether the sensor is properly connected. Connect the sensor properly.</li> <li>• Check the sensor for defects, and replace it if necessary.</li> </ul>

The status LED on the ventilation unit lights up green for 6 seconds and blinks once orange

Cause	Solution
a) Frost mode is active.	<ul style="list-style-type: none"><li>• This is not a fault. The unit will automatically return to normal operation once the temperature rises above freezing.</li></ul>

The status LED on the ventilation unit lights up green for 5 seconds and blinks twice orange

Cause	Solution
a) Bypass mode is active.	<ul style="list-style-type: none"><li>• This is not a fault. The unit will automatically return to normal operation.</li></ul>

The fan has stopped	
Cause	Solution
a) Frost control is active.	<ul style="list-style-type: none"> <li>• When the outside temperature rises above -1°C, the fan will start running again.</li> <li>• Install a pre-heater in the supply duct for outside air.</li> </ul>
b) The power is switched off.	<ul style="list-style-type: none"> <li>• Switch the power back on.</li> </ul>
c) No power.	<ul style="list-style-type: none"> <li>• Restore power.</li> </ul>
d) The fan is blocked or stuck due to heavy soiling.	<ul style="list-style-type: none"> <li>• Clean the fan impeller. Watch out for the balance clips.</li> </ul>
e) The fan is defective.	<ul style="list-style-type: none"> <li>• Replace the entire motor module.</li> </ul>
f) The ventilation unit PCB is faulty.	<ul style="list-style-type: none"> <li>• Replace the PCB and carry out the commissioning procedure again.</li> </ul>



The ventilation unit is noisy

Cause	Solution
a) The fan is blocked or stuck due to heavy soiling.	<ul style="list-style-type: none"> <li>● Clean the fan impeller. Watch out for the balance clips.</li> </ul>
b) The fan is imbalanced.	<ul style="list-style-type: none"> <li>● Replace the entire motor module.</li> </ul>
c) The unit is mounted on a wall/ceiling/floor with insufficient load-bearing capacity.	<ul style="list-style-type: none"> <li>● If the ventilation unit cannot be relocated, try using vibration dampers to decouple it from the wall, ceiling or floor.</li> </ul>
d) The ducts are not correctly connected to the unit.	<ul style="list-style-type: none"> <li>● Check the connections and ensure that fixed ducts are clamped to the wall, ceiling or floor.</li> </ul>
e) The second condensate drain is open and not connected (hissing sound).	<ul style="list-style-type: none"> <li>● Close the second condensate drain by folding back the tab with the plug and clicking it into the condensate drain.</li> </ul>
f) The bypass valve is blocked (rattling noise).	<ul style="list-style-type: none"> <li>● The bypass valve strikes the stop during the self-test after power is switched on. Wait 30 seconds and check whether the noise has stopped.</li> <li>● Inspect the valve. Clean it if it has become blocked with dirt. Replace the valve if there is a different cause of the fault.</li> </ul>

The ventilation unit is not responding to the RF sensors (PIR sensor, 230 V CO <sub>2</sub> sensor, RV sensor)		
Cause	Solution	
a) The system is not in Auto mode.	<ul style="list-style-type: none"> <li>● If desired, place the system in 2/AUTO mode.</li> </ul>	
b) Frost control is active.	<ul style="list-style-type: none"> <li>● When the outside temperature rises above -1°C, the fan will start running again.</li> <li>● Install a pre-heater in the supply duct for outside air.</li> </ul>	
c) With a 230 V RF-CO <sub>2</sub> sensor: no power to the sensor.	<ul style="list-style-type: none"> <li>● Check whether power has been switched off or interrupted. Restore power.</li> </ul>	
d) If using an RF-RH or RF-PIR sensor: the RF sensor battery is empty.	<ul style="list-style-type: none"> <li>● Replace the battery.</li> </ul>	
e) The RF sensor is not paired with the ventilation unit.	<ul style="list-style-type: none"> <li>● Restart the commissioning procedure and pair the RF sensor.</li> </ul>	
f) The distance between the ventilation unit and the RF sensor is too large, or there are too many obstacles interfering with the signal.	<ul style="list-style-type: none"> <li>● Try pairing the devices again. If this does not work, move the RF sensor to a location where there are fewer obstacles.</li> </ul>	
g) The brand names of the RF sensor and the ventilation unit are different.	<ul style="list-style-type: none"> <li>● Replace the RF sensor by an RF sensor with the same brand name as the ventilation unit.</li> <li>● Replace the motor module PCB with a PCB that has the correct OEM code.</li> </ul>	
h) The RF sensor is faulty.	<ul style="list-style-type: none"> <li>● Replace the RF sensor and re-pair it with the unit.</li> </ul>	
i) The ventilation unit PCB is faulty.	<ul style="list-style-type: none"> <li>● Replace the PCB and carry out the commissioning procedure again.</li> </ul>	

## The ventilation unit is not responding to the RF remote controls

Cause	Solution
a) Frost control is active.	<ul style="list-style-type: none"> <li>● Install a pre-heater in the supply duct for outside air.</li> <li>● Install a frost valve for mixing some warmer air from the building with the air supplied from outside.</li> </ul>
b) The battery of the RF remote control is empty.	<ul style="list-style-type: none"> <li>● Replace the battery.</li> </ul>
c) The RF remote control is not paired with the ventilation unit.	<ul style="list-style-type: none"> <li>● Restart the commissioning procedure and pair the RF remote control.</li> </ul>
d) The distance between the ventilation unit and the RF remote control is too large or there are too many obstacles interfering with the signal.	<ul style="list-style-type: none"> <li>● Try pairing the devices again. If this does not work, move the RF remote control to a location where there are fewer obstacles to interfere with it.</li> </ul>
e) The brand names of the RF control switch and the ventilation unit are different.	<ul style="list-style-type: none"> <li>● Replace the RF device by one with the same brand name as the ventilation unit.</li> </ul>
f) The ventilation unit PCB is faulty.	<ul style="list-style-type: none"> <li>● Replace the PCB and carry out the commissioning procedure again.</li> </ul>

The fan runs at high speed when low speed is selected and at low speed when high speed or timer mode is selected	
Cause	Solution
a) One of the RF sensors has a problem.	<ul style="list-style-type: none"> <li>See table "The ventilation unit is not responding to the RF sensors".</li> </ul>
b) One of the ventilation unit's internal temperature sensors is faulty.	<ul style="list-style-type: none"> <li>Replace the faulty temperature sensor.</li> </ul>

The fan suddenly starts running much faster or slower (for no apparent reason)	
Cause	Solution
a) After using the timer function, the ventilation unit switches back to the last selected speed before the timer was started.	<ul style="list-style-type: none"> <li>If desired, change the system setting.</li> </ul>
b) The RF remote control from a neighbouring property is paired with <i>this</i> ventilation unit.	<ul style="list-style-type: none"> <li>Disconnect power to the ventilation unit for 15 seconds. Unpair any paired RF devices (switches and/or sensors) and then pair them again.</li> </ul>

### The ventilation unit is not responding to the three-position switch

Cause	Solution
a) Frost control is active.	<ul style="list-style-type: none"> <li>• When the outside temperature rises above -1°C, the fan will start running again.</li> <li>• Install a pre-heater in the supply duct for outside air.</li> </ul>
b) The power is switched off.	<ul style="list-style-type: none"> <li>• Switch the power back on.</li> </ul>
c) No power.	<ul style="list-style-type: none"> <li>• Restore power.</li> </ul>
d) The switch wires of the three-position switch are connected incorrectly.	<ul style="list-style-type: none"> <li>• Connect the switch wires correctly (see wiring diagram).</li> </ul>
e) The ventilation unit PCB is faulty.	<ul style="list-style-type: none"> <li>• Replace the PCB and carry out the commissioning procedure again.</li> </ul>

### The ventilation unit is leaking water

Cause	Solution
a) The condensate drain is not connected.	<ul style="list-style-type: none"> <li>• Connect one of the two condensate drains.</li> </ul>
b) The condensate drain is blocked.	<ul style="list-style-type: none"> <li>• Unblock the condensate drain and try to identify the cause of the problem.</li> </ul>
c) The second condensate drain is open and not connected (hissing sound).	<ul style="list-style-type: none"> <li>• Close the second condensate drain by folding back the tab with the plug and clicking it into the condensate drain.</li> </ul>

The ducts leading outside are wet (on the outside) and/or are leaking water	
Cause	Solution
a) The ducts leading outside are not thermally insulated or vapour-tight.	<ul style="list-style-type: none"> <li>• Ensure that the ducts leading outside are thermally insulated and vapour-tight over their entire length.</li> </ul>
b) The roof feedthrough is not rainproof or vapour-tight.	<ul style="list-style-type: none"> <li>• Replace the existing roof feedthrough(s) with rainproof and vapour-tight roof feedthrough(s).</li> </ul>

The valves are noisy	
Cause	Solution
a) No noise dampening hose has been installed in the ducts leading into the dwelling.	<ul style="list-style-type: none"> <li>• Install noise damping hoses on the ducts leading into the dwelling.</li> </ul>
b) The air valves are not correctly adjusted.	<ul style="list-style-type: none"> <li>• Put the ventilation unit in commissioning mode and readjust the system settings.</li> </ul>

The air quality in the dwelling is not good / air supply and extraction in the dwelling are not working properly

Cause	Solution
a) One or both filters are dirty or blocked.	<ul style="list-style-type: none"> <li>● Clean or replace dirty/blocked filters.</li> </ul>
b) The valves are dirty or blocked.	<ul style="list-style-type: none"> <li>● Clean the valves.</li> </ul>
c) The air valves are not correctly adjusted.	<ul style="list-style-type: none"> <li>● Put the ventilation unit in commissioning mode and readjust the system settings.</li> </ul>
d) The fan is not running.	<ul style="list-style-type: none"> <li>● See "The ventilator is not running".</li> </ul>
e) The ventilation unit is not responding (any more) to the RF-sensors (PIR sensor, CO <sub>2</sub> sensor, RH- sensor).	<ul style="list-style-type: none"> <li>● See "The ventilation unit is not responding to the RF sensors".</li> </ul>

Cold air is being supplied to the dwelling

Cause	Solution
a) The filter in the extraction outlet is blocked.	<ul style="list-style-type: none"> <li>● Clean or replace the filter in the air outlet.</li> </ul>
b) The air valves are not correctly adjusted.	<ul style="list-style-type: none"> <li>● Put the ventilation unit in commissioning mode and readjust the system settings.</li> </ul>
c) The bypass valve is in bypass mode when it should not be.	<ul style="list-style-type: none"> <li>● Clean the bypass valve if it is dirty.</li> <li>● Replace the entire bypass valve if it is defective.</li> </ul>
d) One of the temperature sensors is faulty.	<ul style="list-style-type: none"> <li>● If the supply air temperature sensor is faulty, replace the wiring harness with the temperature sensor in the motor module.</li> <li>● If the exhaust air temperature sensor is faulty, replace the entire bypass module.</li> </ul>

# 6. Warranty

Advance Plus is supplied with a two-year parts and labour warranty, protecting the product against faulty manufacture and materials. The warranty period applies from the date of installation.

## Disclaimer

This warranty does not apply to:

- Disassembly and assembly costs.
- Faults which are caused by incorrect treatment.
- Negligence or accident.
- Faults that have been caused by repairs by third parties without authorisation from Heatrae Sadia.

If the appliance does not function correctly or develops a fault please contact Heatrae Sadia immediately.

Ensure that only genuine spares are used for repairs.



# 7. Declarations

EG-Verklaring van overeenstemming | Déclaration de conformité CE |  
EG-Konformitätserklärung | EC Declaration of Conformity

Heatrae Sadia  
Hurricane Way  
Norwich NR6 6EA  
United Kingdom

Verklaart dat het product | Déclare que le produit |  
Erklärt dass das Produkt | Declares that the product:

- **Ventilation unit with heat recovery  
Advance Plus**

Volvoet 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:

- Low Voltage Directive **2014/35/EU**
- Electromagnetic Compatibility (EMC) Directive **2014/30/EU**
- Directive **2009/125/EC** establishing a framework for the setting of ecodesign requirements for energy-related products
- Directive **2010/30/EU** on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products.

- **Commission Regulation (EU) No 1253/2014** of 7 July 2014 implementing Directive 2009/125/EC of the European Parliament and of the Council with regard to ecodesign requirements for ventilation units
- **Commission Delegated Regulation (EU) No 1254/2014** of 11 July 2014 supplementing Directive 2010/30/EU of the European Parliament and of the Council with regard to energy labelling of residential ventilation units

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 60335-2-80:2003/A1:2004  
 EN 60335-2-80:2003/A2:2009
- EN 60730-1:2012

- EN 55014-1:2007 | EN 55014-1:2007/C1:2009  
 EN 55014-1:2007/A1:2009 | EN 55014-1:2007/A2:2010  
 EN 55014-2:1998 | EN 55014-2:1998/C1:1998  
 EN 55014-2:1998/A1:2002 | EN 55014-2:1998/IS1:2007  
 EN 55014-2:1998/A2:2008
- EN 61000-3-2:2006/A1:2009 | EN 61000-3-2:2006/  
 A2:2009  
 EN 61000-3-3:2013 | EN 61000-6-1:2007  
 EN 61000-6-3:2007/A1:2011 | EN 61000-6-3:2007/AC:  
 2012

Voldoet aan de volgende nationale en internationale technische normen en specificaties |  
 Répond aux normes techniques nationales et internationales et aux spécifications nationales et internationales |  
 Entspricht den folgenden nationalen und internationalen technischen Normen und Spezifikationen |  
 Complies with the following national and international technical standards and specifications:

- Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment **2011/65/EU**

Norwich, 1 January 2018.



# HEATRAESADIA

SMARTER | CLEANER | WARMER

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