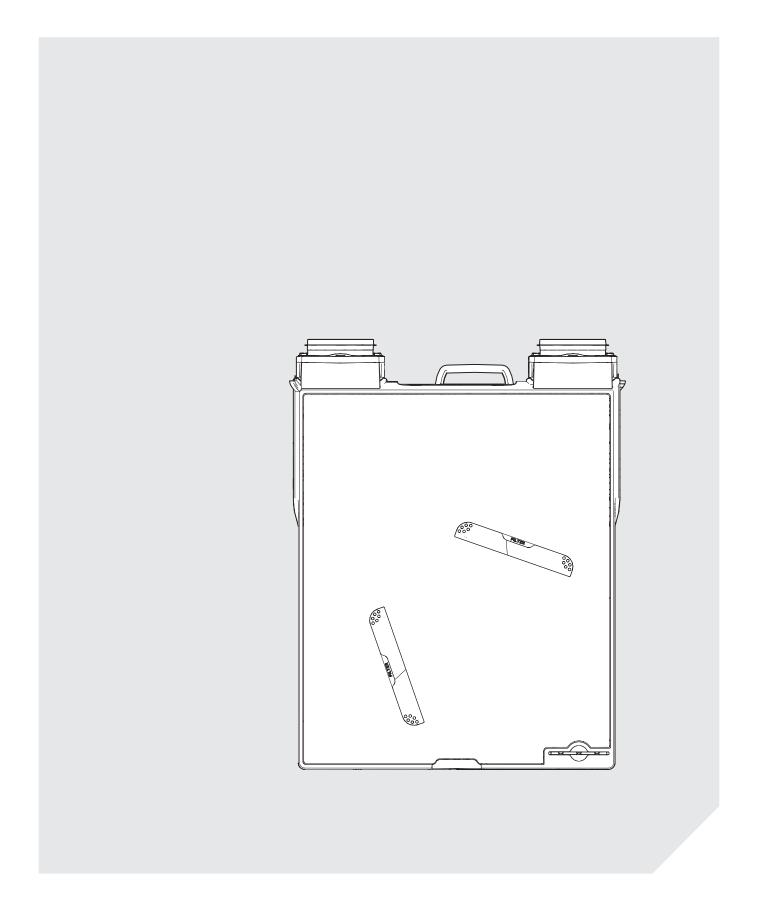


# **Advance Plus**

# Installation Manual





# Introduction

This manual is intended for use by the installer of the ventilation system. It contains important information concerning installation, use, maintenance and troubleshooting for the ventilation system.

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.



## /!\ Caution!

#### 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.

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.

# Contents

1.	Safety and other regulations					
	1.1.	Safety	!			
2.	Product information					
	2.1.	Accessories	-			
	2.2.	Technical Specifications	8			
	2.3.	Capacity	8			
	2.4.	Product fiche information	C			
	2.5.	Dimension drawings	10			
	2.6.	Parts	1			
	2.7.	Controls	1:			
	2.8.	Recycling	1;			
3.	Install	ation	14			
	3.1.	Installation requirements	14			
	3.2.	Installing the ventilation unit	14			
	3.3.	Connecting the condensate drain	2:			
	3.4.	Connecting the ducts	23			
	3.5.	Electrical connection	24			
4.	Opera	ition	2			
	4.1.	Control options	2			
	4.2.	Pairing and unpairing RF remote controls	2			
	4.3.	Pairing and unpairing the RF status indicator control	20			
	4.4.	Pairing and unpairing RF sensors	20			
5.	Use		2			
	5.1.	Preparation	2			
	5.2.	Putting into service	2			
	5.3.	Adjusting the capacity	28			
6.	Inspec	ction and maintenance	29			
	6.1.	Inspection and maintenance schedule	29			
	6.2.	Check for unusual noises	30			
	6.3.	Inspecting and cleaning the fan	30			
	6.4.	Inspecting and cleaning the bypass valve	3			
	6.5.	Inspecting, cleaning and replacing filters	33			
	6.6.	RF status indicator control maintenance	34			
	6.7.	RF remote control maintenance	34			
	6.8.	Inspection of additional RF sensors	34			
	6.9.	Inspecting and cleaning air valves	34			
	6.10.	Inspecting and cleaning ducts	34			
7.	Faults		3			
8.	Service parts					
9.	Warranty					
10.	. Declarations					

# 1. Safety and other regulations

# 1.1. Safety

- Work may only be performed on the ventilation system by qualified installers (1) in accordance with the regulations mentioned in this manual. Only original accessories and parts as specified by the manufacturer may be used for these purposes.
- 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
  - Never touch the appliance when barefoot.
- This product and/or system may be operated safely by children aged 12 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.

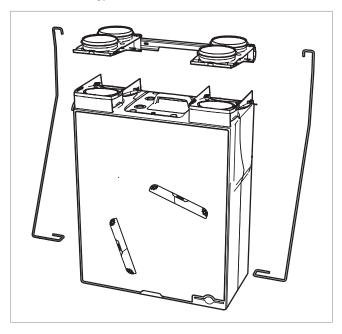
- The safety instructions must be followed in order to prevent physical injury and/or damage to the product.
- The appliance includes moving parts. When the plug is removed from the wall socket, these parts will continue running for a few seconds. You should therefore wait at least 10 seconds before opening the appliance after removing the plug.
- 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, immediately contact your installer or Heatrae Sadia.
- 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.

1) A qualified installer is one who is employed by a central heating or civil engineering installation company registered with the Chamber of Commerce and who is registered in the SEI qualification register, or holds a Sterkin certificate.

# 2. Product information

The Advance Plus consists of a central balanced ventilation unit with heat recovery and a duct connection set. The ventilation unit has an automatic bypass valve. The operation of the bypass valve is described under Bypass control.



# 2.1. Accessories

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

# 2.2. Technical Specifications

Description	Symbol	Unit	Advance Plus
DIMENSIONS AND WEIGHT			
Dimensions [HxWxD]	_	mm	760 x 597 x 290
Weight	_	kg	12
CONNECTIONS			
HRU duct adapters connection	_	mm	2x Ø125 external (2x)
Condensate drain	_	mm	2x Ø14 external
GENERAL			
IP classification	_	_	IP30
_	_	_	- 1x outside air temperature
Temperature sensors			- 1x exhaust air temperature
Eth. I	_	_	G4 or F7 (G3 dust filter for first
Filter class			three months)
RF (built in)	_	_	30 m in free space, 868 MHz
Supply voltage	_	_	230 VAC / 50 Hz
Power connection		_	4-wire power cable
TECHNICAL PARAMETERS			
Thermal efficiency of heat recovery	ηt	%	Up to 91
Electric power input of fan drive at maximum flow rate	_	W	99

# 2.3. Capacity

	Capacity [m <sup>3</sup> /h]	Pressure [Pa]	Power [W]
Level 1 minimum	25	12	4
Level 1 standard	50	17	6
Level 1 maximum	75	38	13
Mode 2 *	100	70	27
Level 3 minimum	75	38	13
Level 3 standard	125	104	44
Level 3 maximum	150	150	72
Level 3 maximum	200	100	99

 $<sup>^{\</sup>star}$  Mode 2 is a calculated value, depending on the set minimum and maximum capacity.

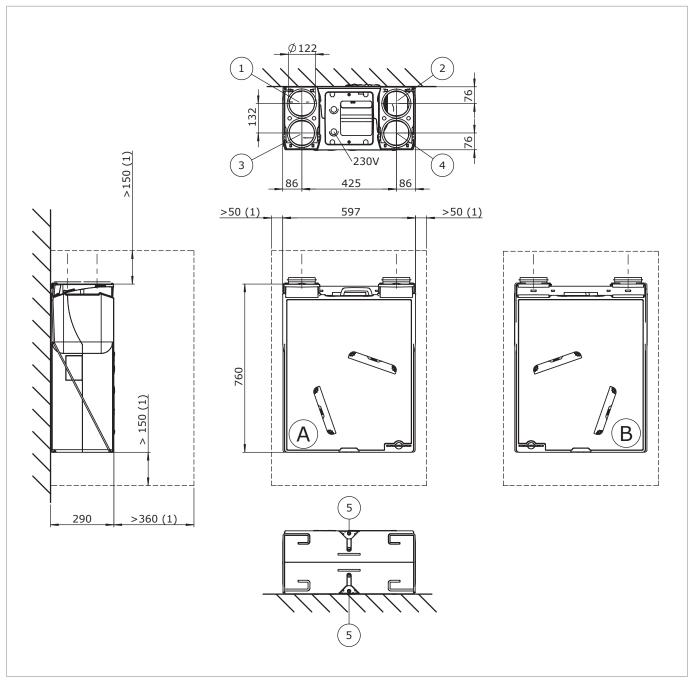
Modes 1 and 3 can be adjusted using the potentiometers on the  $\,$ motor module.

(see Adjusting the capacity on page 28).

# 2.4. Product fiche information

Heatrae Sadia			BVU
Description	Symbol	Unit	Advance Plus
Specific energy consumption class	_	_	А
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	_	<ul> <li>Residential ventilation unit (RVU)</li> <li>Bidirectional ventilation unit (BVU)</li> </ul>
Type of drive	_	_	Variable speed
Type of heat recovery system	HRS		Recuperative
Thermal efficiency of heat recovery	ηt	%	88
Maximum flow rate	q <sub>max</sub>	m <sup>3</sup> /h	200
Electric power input of fan drive at maximum flow rate	P <sub>max</sub>	W	99
Sound power level	L <sub>WA</sub>	dB	53
Reference flow rate	9 <sub>ref</sub>	m <sup>3</sup> /s	0.039
Reference pressure difference	$\Delta P_{ref}$	Pa	50
Specific power input	SPI	W (m <sup>3</sup> /h)	0.264
Ventilation control	_	_	Manual control (no DCV)
Control factor	CTRL	_	1
Declared maximum internal leakage rate for bidirectional ventilation units	_	%	2.1
Declared maximum external leakage rate for bidirectional ventilation units	_	%	5.0
Position of visual filter change warning	_	_	Via RF status indicator control
Pre-/dis-assembly instructions		_	www.heatraesadia.com
Annual electricity consumption	AEC	kWh	3.761
Annual heating saved under average climate conditions	AHS	kWh	45.182
Annual heating saved under warm climate conditions	AHS	kWh	20.431
Annual heating saved under cold climate conditions	AHS	kWh	88.388

# 2.5. Dimension drawings

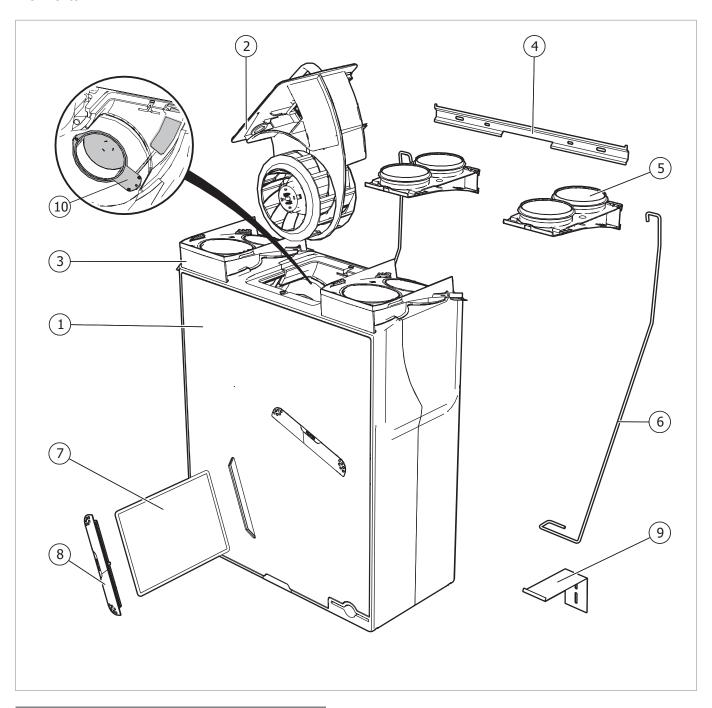


1) Minimum clearance around the ventilation unit.

## Legend

- Exhaust air to outside 1
- 2 Exhaust air from dwelling
- 3 Supply air from outside
- Supply air to dwelling
- Condensate drain (2x)

# 2.6. Parts



# Legend

- Ventilation unit 1
- Motor module 2
- 3 Duct adapter EPP side
- 4 Mounting bracket
- 5 Duct adapter duct side
- Wire bracket 6
- 7 Filter
- 8 Filter cap
- 9 Ceiling mounting bracket
- 10 Bypass valve

#### 2.7. 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.

# 2.7.1. Optional sensors

A number of optional RF sensors are available for the ventilation unit. When the ventilation unit is in Auto mode, the capacity is adjusted continuously and automatically.

# RF-CO<sub>2</sub>-sensor

To ensure a healthy indoor climate and to prevent the air in the dwelling from becoming stale, it is important that the  $CO_2$  (carbon dioxide) concentration does not become 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 sensor measures the  $CO_2$  concentration in the room. It translates this CO<sub>2</sub> concentration into a ventilation demand and communicates this wirelessly to the ventilation unit paired with the sensor. 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.

This sensor can be used for "living area control", which causes the ventilation capacity to be increased gradually in response to a rising CO<sub>2</sub> concentration. A "sleeping area control" is also available. In this mode the ventilation capacity is increased more quickly in the event of rising CO<sub>2</sub> concentration because the extraction points are generally further away from the sleeping area.

In addition, the user can choose between ECO or COMFORT mode on the sensor. In COMFORT mode the system starts increasing the capacity at relatively low CO2 concentration, resulting in more ventilation.

Once the CO<sub>2</sub> concentration has fallen sufficiently, the capacity is automatically decreased.

### RF-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 desired, but preferably in a room where a lot of moisture is produced, such as a bathroom.

This sensor measures the relative humidity in the room. The sensor translates the measured value into a ventilation demand and communicates this wirelessly to the ventilation unit, with which the sensor is paired, or to a DF/QF controller for the room where it is registered. 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.

This sensor can be used for "bathroom control", which causes the ventilation capacity to be increased quickly when there is a sudden rise in relative humidity (for example during showering). Another option is "washroom control", which causes the ventilation capacity to increase gradually in response to rising relative humidity.

As soon as the relative humidity has fallen sufficiently, the capacity is automatically decreased.

### RF-PIR sensor

To ensure a healthy indoor climate and to prevent unpleasant odours in the dwelling, 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 ventilation unit is in Auto mode, the capacity is continuously and automatically adjusted.

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 set period, the capacity will automatically be decreased again.

# 2.7.2. 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.

## 2.7.3. 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°C, the fan is slowed down in stages and ultimately stopped.

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.

To ensure that the ventilation unit continues to operate and provide adequate ventilation when the outside temperature is below -1°C, you can use preheated supply air from one or more sources or mix warm air from the dwelling with cold air from outside.

# 2.7.4. Dirty filter control

The controller of the ventilation unit uses a smart counter to keep track of when the filters need to be cleaned or replaced. This counter takes into account air quality, the service life of the filter and the fan speed. If the system detects that a filter is dirty, the ventilation unit sends a wireless message to this effect. This message can be displayed on specific paired control devices, such as the RF status indicator control.

# 2.8. 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

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. Installation

# 3.1. Installation requirements

# / bracket Caution!

In order to prevent condensation, the duct from outside and the

Take the following into account when positioning the system:

- Install the ventilation unit:
  - in a closed area (where the system can cause as little noise disturbance as possible);
  - in a frost-free area;
  - in the vicinity of a 230 V AC 50 Hz power point; the length of the power cable is 1.5 m;
  - in the vicinity of a trap with a sewer connection (for connecting the condensate drain);
  - by mounting it on a wall/ceiling/floor with sufficient loadbearing capacity (min. 200 kg/m<sup>2</sup>).
- When positioning the ventilation unit, ensure that you also leave enough space for servicing the system.

For this purpose, a minimum of 150 mm clearance should be left at the top and bottom of the unit, and 350 mm at the front (see Dimension drawings).

- The duct system and the outlet and inlet points must be correctly dimensioned.
- The correct fixing materials must be available.

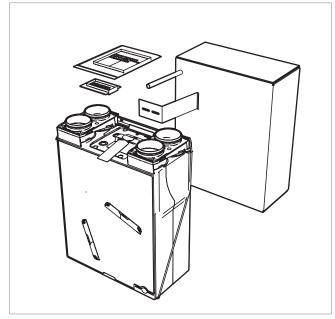
### Tip

In order to avoid noise complaints, Heatrae Sadia advises fitting silencers on the ducts from and to the dwelling rooms.

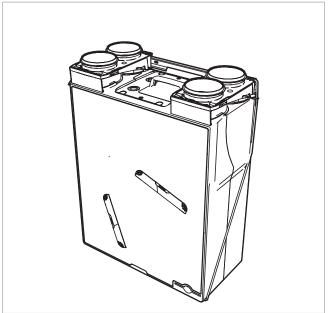
# 3.2. Installing the ventilation unit

# 3.2.1. Unpacking and checking

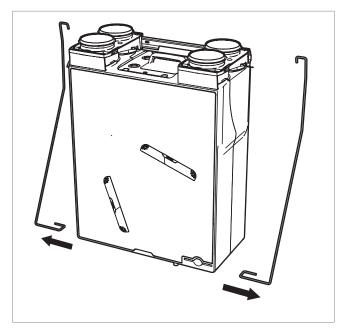
a) Carefully remove the appliance from the box. If necessary, use the handle on top of the motor module to remove the ventilation unit from the box in an upright position.



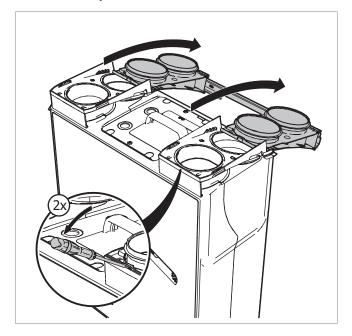
- b) Check that the dataplate information and the type correspond to the sticker on the outside of the box.
- c) Check the appliance for damage and completeness.
- d) Check that a ceiling mounting bracket and a condensate hose are included with the ventilation unit.
- e) Place the ventilation unit upright on the floor, with the duct adapters at the top.



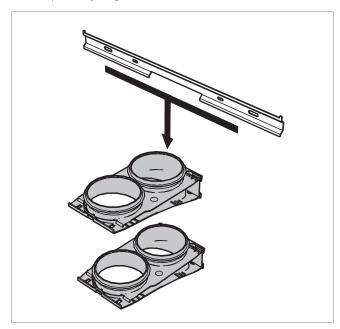
Remove the two wire brackets from the unit and set them aside.



g) Unlock both duct adapters on the front of the unit using a flathead screwdriver. Then remove both adapters, which are connected together by the mounting bracket, from the unit simultaneously.



h) Then remove both duct adapters from the mounting bracket and put everything to one side.



# 3.2.2. Mounting positions



# Caution!



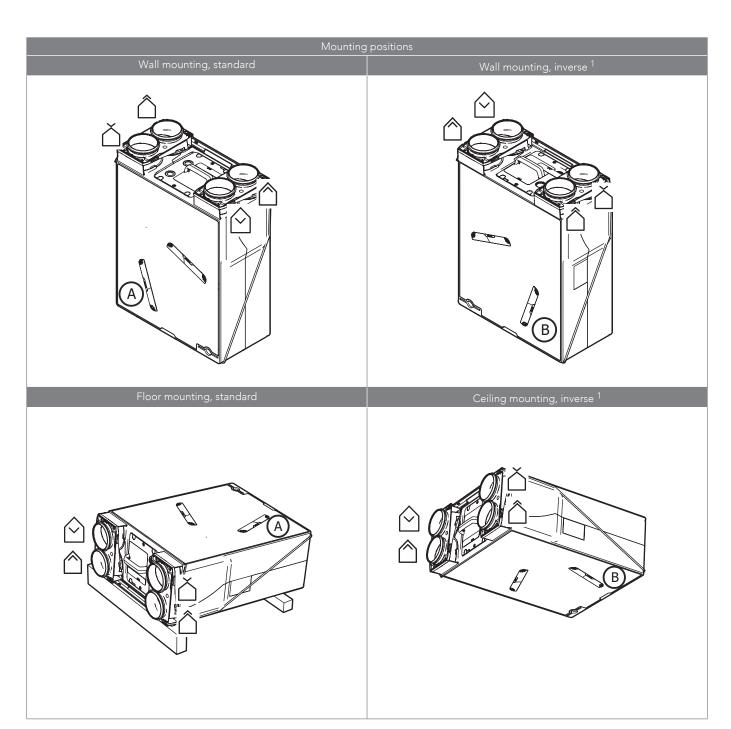


The ventilation unit can be mounted on the wall, floor or ceiling.

Depending on the configuration of the ducts, the ventilation unit can be wall mounted with the standard duct adapter arrangement (as delivered) or the inverse arrangement (see Converting before mounting on page 18).

The standard orientation is always used for floor mounting and the inverse orientation must always be used for ceiling mounting, due to the condensation water path in the heat exchanger.

The symbols on the ventilation unit indicate which ducts should be connected to which openings.



<sup>1)</sup> See Converting before mounting on page 18.



Supply air from outside



Exhaust air to outside



Supply air to dwelling



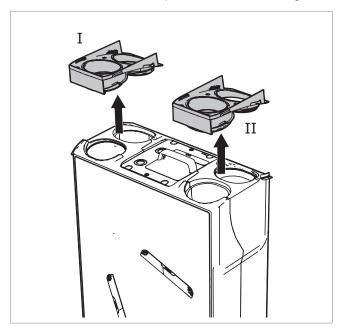
Exhaust air from dwelling

# 3.2.3. Converting before mounting

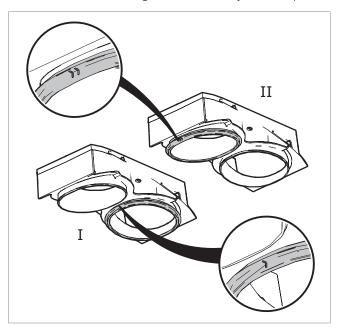
The ventilation unit is delivered as standard with the air supply ducts on the wall side (mounting bracket side). This is the correct position for wall and floor mounting.

For ceiling mounting, or if this is more convenient with wall mounting, the ventilation unit can easily be inverted. If this is not necessary, the following section can be ignored.

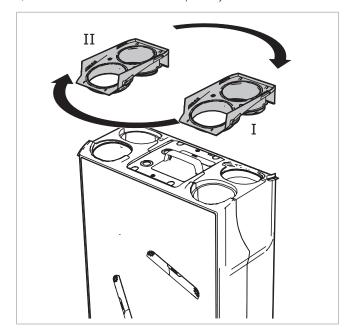
a) Pull both ventilation unit adapters out of the EPP housing.



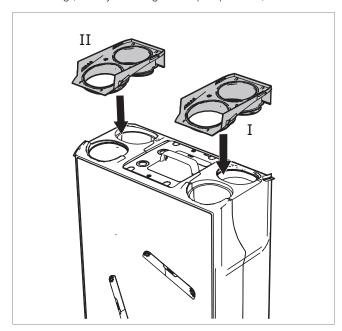
b) There is a blue seal ring on the underside of each adapter. Check whether these rings are fitted correctly to the adapters.



c) Rotate both ventilation unit adapters by 180°.



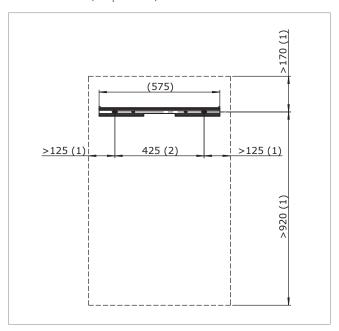
d) Press the ventilation unit adapter that was on the left side into the right side of the EPP housing, and press the ventilation unit adapter that was on the right side into the left side of the EPP housing (thereby switching the adapter positions).



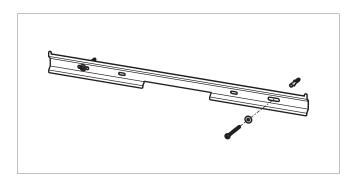
The ventilation unit is now "inverted" and ready to be mounted.

# 3.2.4. Wall mounting

a) Attach the mounting bracket to the wall using anchor plugs and 6 mm screws (not provided).

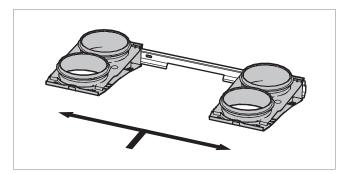


- (1) Minimum clearance around the ventilation unit
- (2) Distance between hole centres

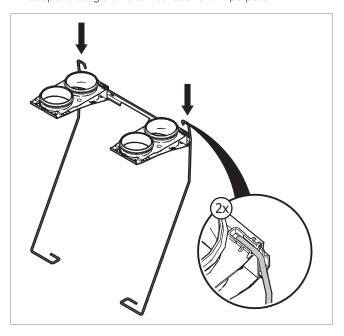


# Caution!

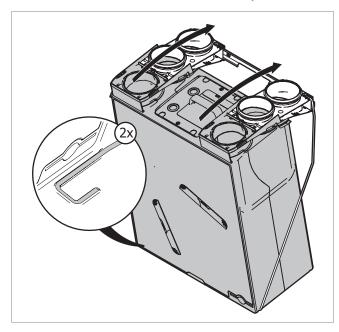
b) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



c) Hook the two wire brackets onto the outside of the duct adapters using the holes intended for this purpose.



d) Place the ventilation unit in the wire brackets, tilted forward slightly. There are recesses on the underside of the EPP housing into which the wire brackets fit exactly. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.



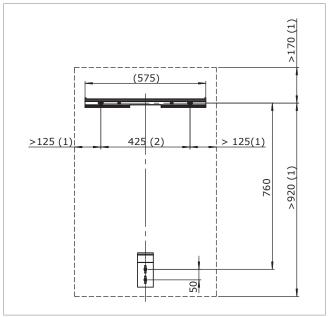
There is only one way to insert the ventilation unit adapters into the duct adapters.

# 3.2.5. Ceiling mounting

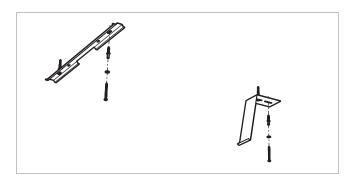


With this mounting option, the ventilation unit needs to be

a) Attach the mounting bracket and the ceiling bracket to the ceiling using anchor plugs and 6 mm screws (not provided).

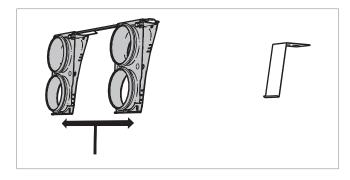


- 1) Minimum clearance around the ventilation unit
- 2) Distance between hole centres

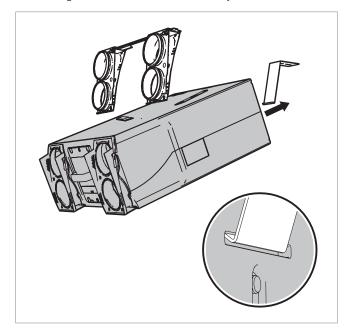




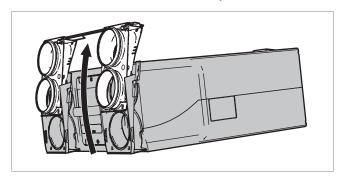
b) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



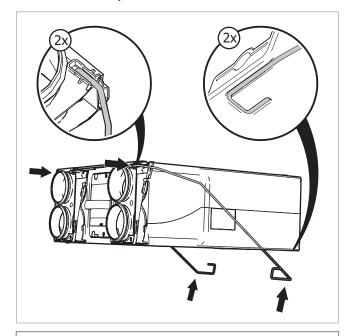
c) Place the ventilation unit in the ceiling mounting bracket, tilted forward slightly. There is a recess on the underside the EPP housing into which the bracket fits exactly.



d) Tilt the ventilation unit backwards so that the ventilation unit adapters slide under the duct adapters. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.

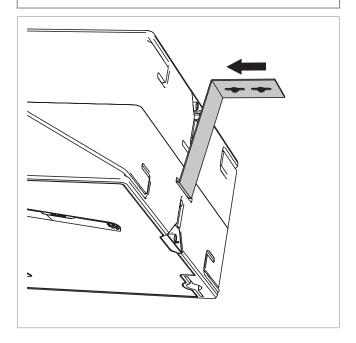


Now secure both wire brackets. First hook each bracket onto the outside of the duct adapter using the holes intended for this purpose, and then clip the underside of the bracket into the underside of the housing of the ventilation unit. There is a recess on the underside of the EPP housing into which the bracket fits exactly.



#### Note

The position of the ceiling bracket may need to be readjusted. To do so, loosen the screws a little and shift the bracket in the oversize holes.

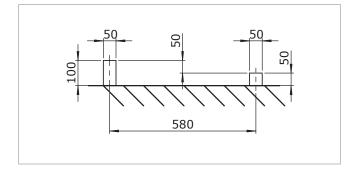


# 3.2.6. Floor mounting

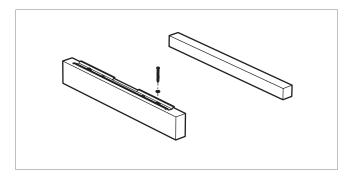
# Caution!

With this mounting option, the ventilation unit needs to be

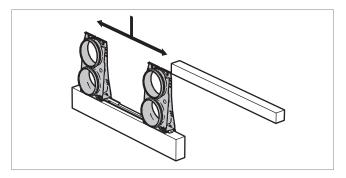
a) Attach two wooden laths (50 x 100 x 600 mm and 50 x 50 x 600 mm, not provided) to the floor as shown in the diagram below.



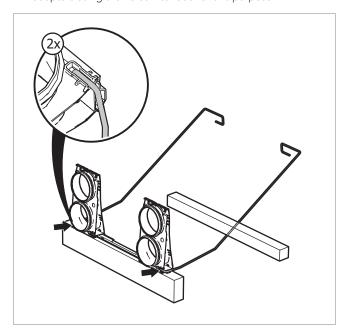
b) Secure the mounting bracket to the higher of the two laths using 6 mm screws (not provided).



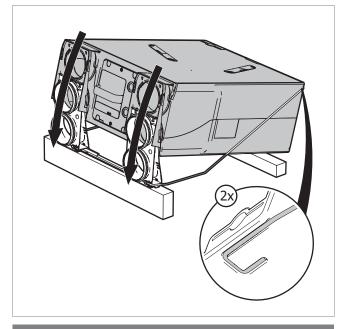
c) Slip the duct adapters back over the mounting bracket and push the two adapters to the left and to the right as far as they will go.



d) Hook the two wire brackets onto the outside of the duct adapters using the holes intended for this purpose.



e) Place the ventilation unit in the wire brackets, tilted forward slightly. There are recesses on the underside of the EPP housing into which the wire brackets fit exactly. When the adapters have been fully inserted into one another, you will hear a distinct click. This means the unit is firmly attached.





# 3.3. Connecting the condensate drain



During winter, moisture in the exhaust air from the dwelling may condense in the heat exchanger. The EPP housing therefore has a built-in drip tray with two condensate drain ports. With ceiling or wall mounting, the lower condensate drain port must be connected. With wall mounting, either condensate drain port can be used.

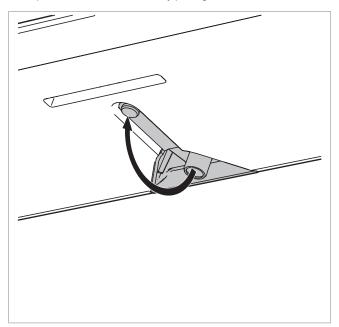


## /!\ Caution!

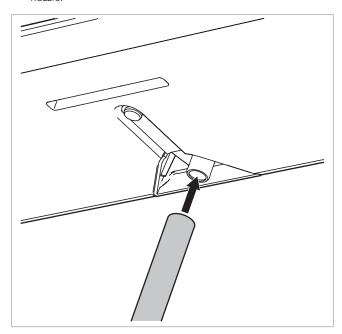


# Caution!

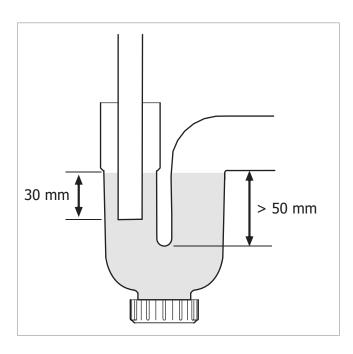
a) Open the condensate drain by pulling on the tab.



b) Slip the provided condensate hose over the condensate drain



c) Route the condensate hose to a trap with a water level of least 50 mm. Ensure that the hose is inserted deep enough into the trap (minimum 30 mm below water surface).



d) Fill the trap with water.

# 3.4. Connecting the ducts



## / Warning!

When using the unit in multi-unit housing, it must be ensured at all times that there is no backflow into the dwelling from the



# Caution!

The Advance Plus has two duct adapters at the top. Each duct adapter has two nozzles for connection to ducts with a diameter of 125 mm. The nozzles are equipped with Leaksafe seals.

# 3.4.1. Supply air from outside



The ventilation unit draws in air from outside through this port. This duct must be thermally insulated and vapour-tight to prevent condensation from forming on the outside of the duct. If the ventilation system must keep running during winter (for frost protection), an external pre-heater with its temperature setpoint at -1°C must be used.

### 3.4.2. Exhaust air to outside



The ventilation unit feeds the exhaust air outside through this port. This duct must be thermally insulated and vapour-tight in order to prevent condensation from forming on the inside and outside of the duct. It is advisable to use a roof feedthrough that does not let in any condensation or rainwater. If it does, the components of the duct system between this outlet nozzle and the roof feedthrough must be watertight. Any condensation water will be discharged through the condensate drain of the unit.

# 3.4.3. Supply air to dwelling



The ventilation unit supplies warmed air to the dwelling through this port. For optimal comfort a silencer should be fitted on this nozzle.

# 3.4.4. Exhaust air from dwelling



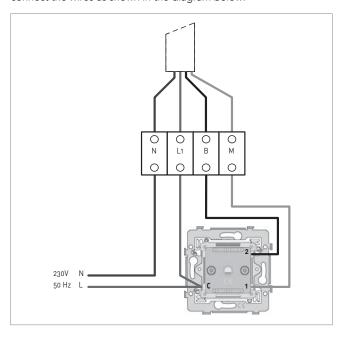
The ventilation unit draws exhaust air out of the dwelling through this port. This duct does not normally need to be thermally insulated. Thermally insulated and vapour-tight ductwork is only necessary if the ventilation unit is located outside the thermal shell of the dwelling (for example in a non-insulated attic). For optimal comfort a silencer should be fitted on this nozzle.

### 3.5. Electrical connection

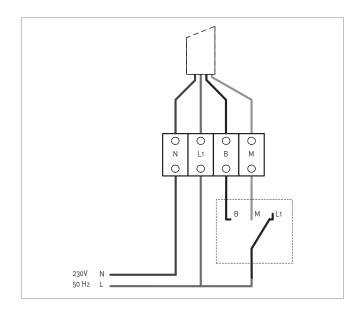


The ventilation unit has a four-wire cable. The ventilation unit is double insulated and therefore does not need to be earthed.

If the HRS-3 wired three-position switch is used for speed control, connect the wires as shown in the diagram below.



If another type of wired switch is used for speed control, connect the wires as shown in the diagram below.



Wire	Colour	Mode	Functio	Connection
			n	
N	Blue	_	Neutral	Mains supply
L1	Brown	Low	Phase	Mains supply/switch
L	Brown	_	Switch	Switch/unit
М	Grey	Medium/	Switch	Switch/unit
		auto		
В	Black	High	Switch	Switch/unit

# 4. Operation

# 4.1. 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 RF control switch with three settings and a timer
- Wireless RF control switch with two settings, an automatic mode and a timer function.
- Conventional wired switch with three settings.
- A combination of the above options.

For pairing or unpairing a wireless RF control switch with/from the unit, consult Pairing and unpairing RF remote controls on page 25

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

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

- 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.

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.

# 4.2. Pairing and unpairing RF remote controls

# 4.2.1. 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.
- Wait for at least 15 seconds.
- 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.

# 4.2.2. Unpairing RF remote controls

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

- 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.

# 4.3. 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.

# 4.4. Pairing and unpairing RF sensors

# 4.4.1. 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.

# 4.4.2. 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 25.

### Note

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

# 5. Use

## 5.1. Preparation

Before commissioning

- The ventilation unit and accessories must be assembled.
- The duct system must be assembled.
- The condensate drain must be installed and the trap must be filled with water.
- All exterior and interior doors and windows must be shut.
- There must be enough space for air flow beneath the interior doors.
- The adjustable valves in all rooms must be fully opened.



# / Caution!

# / Caution!

#### Note

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

#### Note

If you cannot finish pairing RF control switches and/or RF sensors within 2 minutes, then you can put the ventilation unit back into pairing mode by disconnecting power, waiting 15 seconds, and then restoring power. Any control switches or sensors already paired with the ventilation unit remain paired.

# 5.2. Putting into service

Follow the steps below to correctly put the ventilation unit into service:

- a) Disconnect power to the ventilation unit.
- b) Wait for at least 15 seconds.
- Restore power to the ventilation unit.

The bypass valve of the ventilation unit is automatically calibrated after the unit is switched on. This process takes approximately 30 seconds. You may hear a rattling sound because the bypass valve is driven fully open and closed during calibration.

If the ventilation unit is set to level 3 (high) within 2 minutes after it is switched on, it goes into commissioning mode. In this mode the bypass valve is opened so the unit can be adjusted using the same flow resistance in all cases, regardless how clogged the filters are.

The ventilation unit returns to normal operation after 2 hours, or earlier if it is set to a different level. In normal operation the position of the bypass valve is determined by the bypass control.

- d) Pair the available wireless control switches as described under Pairing RF control switches on page 25.
- e) Pair any available optional sensors as described in Pairing RF sensors on page 26.

#### Note

After it is switched on, the ventilation unit remains in pairing mode for 2 minutes. The ventilation unit responds to all pairing requests received during this period, which means that another RF control switch or RF sensor may unintentionally pair with your ventilation unit. As a result, your ventilation unit will respond to your own RF control switch or RF sensor, but it may also respond to a control or sensor of a neighbouring dwelling.



If an RF control switch of a neighbouring dwelling is all the rest, including those of neighbouring dwellings.

# 5.3. Adjusting the capacity

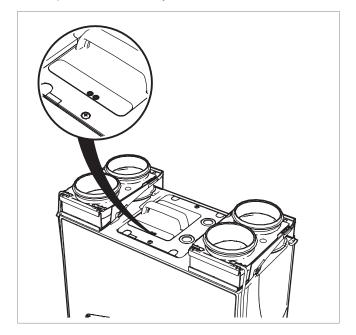


#### Note

If the capacity needs to be increased, first try opening the air valves more to see if this helps achieve the required capacity. Increasing the motor speed results in higher energy consumption and an increased noise level.

The high and low speed settings are the same for supply and exhaust air because both fans in the ventilation unit are driven by the same motor.

On top of the ventilation unit there are two potentiometers for adjusting the minimum and maximum capacity of the unit, which means the flow rate at low and high speed. The design calculations for the system or flow rate measurements will indicate whether these capacities need to be adjusted.



# 5.3.1. High speed setting



If necessary, adjust the high speed setting with the right-hand potentiometer. This potentiometer is set to 125 m<sup>3</sup>/h by default. The adjustment range goes from 75 to 150  $m^3/h$  (at 150 Pa).

# 5.3.2. Low speed setting



If necessary, adjust the low speed setting with the lefthand potentiometer. This potentiometer is set to 50 m<sup>3</sup>/h by default and has a lower limit so that it is not possible to have insufficient ventilation. The adjustment range is 25 to 75 m<sup>3</sup>/h.

The adjustment ranges for low and high speed are chosen so that the maximum capacity at low speed is the same as the minimum capacity at high speed. When the low and high speed settings are the same, there is no difference in capacity between the three modes (low, medium and high).



ventilation unit is loaded (connected to a duct system). If you the current consumption may become too high. Current limiting

# 6. Inspection and maintenance

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



# 6.1. Inspection and maintenance schedule

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

Advance Plus maintena	User	Installer	
	Clean (first 3 months)	1 week	Where
G3 filter	Clean (mst 3 months)	I WEEK	necessary
G5 liitei	Replace (with G4 or F7)	3 months	Where
	Replace (with G+ Of 17)	3 1110111113	necessary
	Clean	9 months	Where
G4 filter	Cicari	7 1110111113	necessary
G4 IIICI	Replace	18 months	Where
	Replace	10 111011113	necessary
	Clean	6 months	Where
F7 filter		o monens	necessary
17 mesi	Replace	12 months	Where
			necessary
Ventilation unit	Clean outside	3 months	1 year
Veridiación dine	Clean condensate hose	_	1 year
Motor module	Clean	_	4 years
Bypass valve	Clean	_	1 year
Air valves	Clean	3 months	1 year
Ducts	Clean	_	8 years
Battery for RF control	Parlace	Where	Where
switch	Replace	necessary	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.

## 6.2. Check for unusual noises

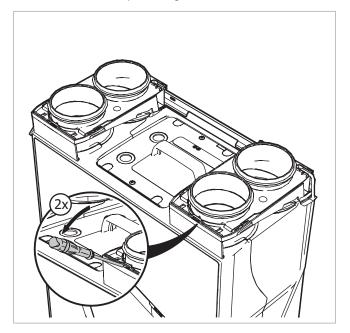
If the ventilation unit produces unusual noises or vibrations, this may indicate that the motor module or bypass valve is faulty. Consult Inspecting and cleaning the fan on page 30 and/or Inspecting and cleaning the bypass valve to determine the cause and resolve the problem.

# 6.3. Inspecting and cleaning the fan

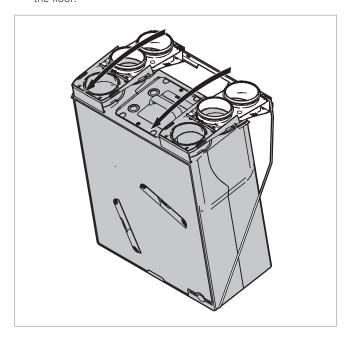


Follow the steps below when inspecting and cleaning the fan:

- a) Disconnect power to the ventilation unit.
- b) Unlock the duct adapters using a screwdriver.

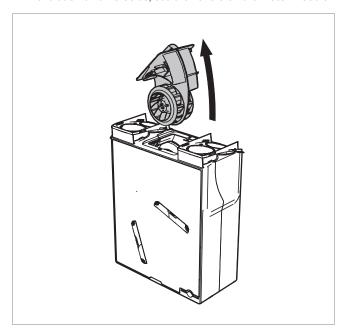


c) Tilt the ventilation unit away from the wall, ceiling or floor. Then carefully remove the unit from the wire brackets and place it on the floor.



d) Unscrew the screws attaching the motor module to the housing and remove the screws.

e) Take the whole motor module including fans out of the ventilation unit. To do so, use the handle on the motor module.



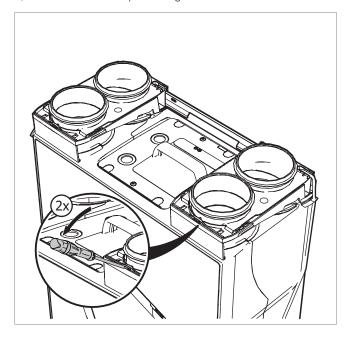
- Inspect the blades of both impellers and clean them if necessary (see next step).
- g) Clean both fan impellers carefully with a vacuum cleaner.

# Caution!

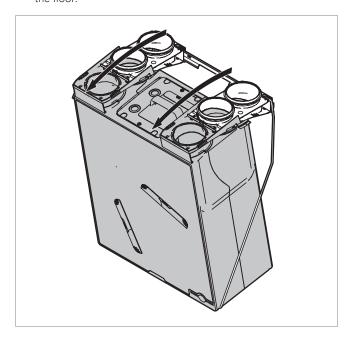
- h) Check whether the fan is still balanced by spinning one of the two impellers. If the impellers wobble significantly (and this is causing noise problems), the entire motor module must be replaced.
- i) Install the motor module and ventilation unit in reverse order, and put the ventilation unit back into operation by switching on the power. If the unit is ceiling mounted, the wire brackets should be refitted last (also see Ceiling mounting on page 20).

# 6.4. Inspecting and cleaning the bypass valve

- a) Disconnect power to the ventilation unit.
- b) Unlock the duct adapters using a screwdriver.



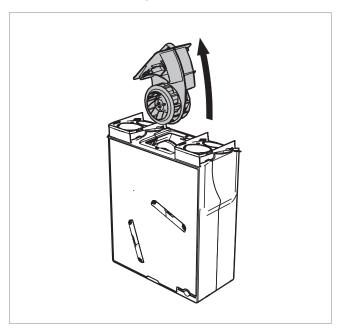
c) Tilt the ventilation unit away from the wall, ceiling or floor. Then carefully remove the unit from the wire brackets and place it on the floor.



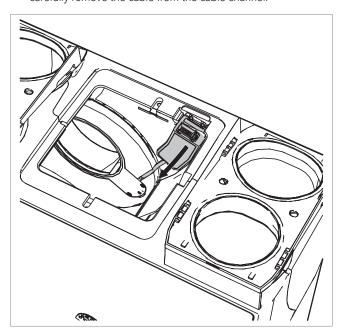


d) Unscrew the screws attaching the motor module to the housing and remove the screws.

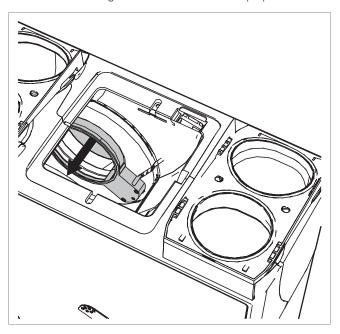
e) Take the whole motor module including fans out of the ventilation unit. To do so, use the handle on the motor module.



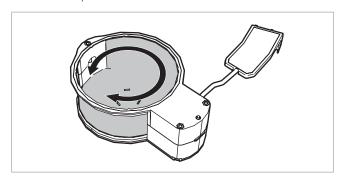
Remove the yellow cable bracket from the EPP housing, and carefully remove the cable from the cable channel.



g) Now, carefully pull the bypass valve out of the EPP housing. There are two finger-holes in the valve for this purpose.



- h) First clean the bypass valve using a vacuum cleaner to remove most of the debris. Then you can clean it with a soft brush or a duster.
- i) Check whether the valve can still turn freely by rotating the valve part. If the valve cannot be moved, the whole bypass valve must be replaced.



j) Mount the bypass valve, motor module and ventilation unit in reverse order, and put the ventilation unit back into service by restoring power. If the unit is ceiling mounted, the wire brackets should be refitted last (also see Ceiling mounting on page 20).



# 6.5. Inspecting, cleaning and replacing filters

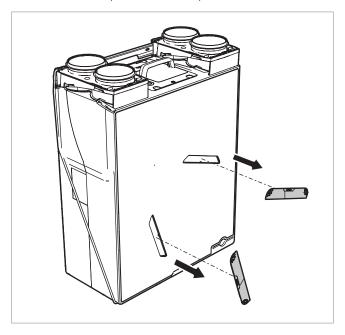
#### Note

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.

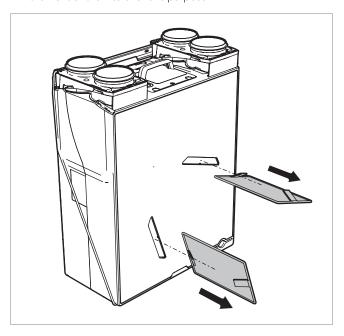


Inspect and clean or replace the filters as follows:

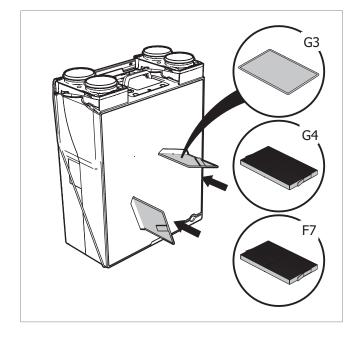
- a) Disconnect power to the ventilation unit.
- b) Pull both filter caps out of the front panel.



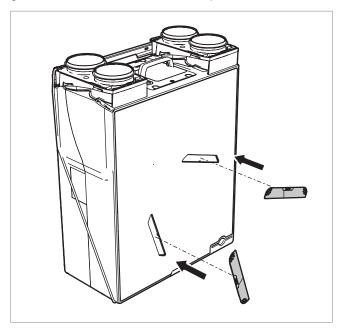
c) Remove the filters from the ventilation unit. There are tabs at the front of the filters for this purpose.



- d) Visually inspect the filters for soiling. If the filters are dirty, they must be cleaned or replaced.
- e) Clean or replace the filters. To clean the filters, gently tap them to remove the dirt or use a vacuum cleaner.
- 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.

### 6.6. 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.

### 6.7. 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.

# 6.8. Inspection of additional RF sensors

For inspection and maintenance of the RF-RH sensor, the RF-PIR sensor or the RF CO<sub>2</sub> sensor, consult the information provided with the relevant sensor.

# 6.9. 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.



protruding duct sections. These can be very sharp.



# 6.10. Inspecting and cleaning ducts

It is advisable to check the ducts in the housing once every four years. The ducts must be cleaned once every eight years.

# 7. Faults

The fan has stopped			
Cause	Solution		
a) Frost control is active.	<ul> <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.	Switch the power back on.		
c) No power.	Restore power.		
d) The fan is blocked or stuck due to heavy soiling.	Clean the fan impeller. Watch out for the balance clips.		
e) The fan is defective.	Replace the entire motor module.		
f) The ventilation unit PCB is faulty.	Replace the PCB and carry out the commissioning procedure again.		

The	The ventilation unit is noisy			
Cause		Solution		
a)	The fan is blocked or stuck due to heavy soiling.	Clean the fan impeller. Watch out for the balance clips.		
b)	The fan is imbalanced.	Replace the entire motor module.		
c)	The unit is mounted on a wall/ceiling/floor with insufficient load-bearing capacity.	If the ventilation unit cannot be relocated, try using vibration dampers to decouple it from the wall, ceiling or floor.		
d)	The ducts are not correctly connected to the unit.	Check the connections and ensure that fixed ducts are clamped to the wall, ceiling or floor.		
e)	The second condensate drain is open and not connected (hissing sound).	Close the second condensate drain by folding back the tab with the plug and clicking it into the condensate drain.		
f)	The bypass valve is blocked (rattling noise).	<ul> <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 $\rm CO_2$ sensor, RV sensor)			
Cause	Solution		
a) The system is not in Auto mode.	If desired, place the system in Auto mode.		
b) Frost control is active.	<ul> <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.	Check whether power has been switched off or interrupted. Restore power.		
d) If using an RF-RH or RF-PIR sensor: the RF sensor battery is empty.	Replace the battery.		
e) The RF sensor is not paired with the ventilation unit.	Restart the commissioning procedure     and pair the RF sensor.		
f) The distance between the ventilation unit and the RF sensor is too large, or there are too many obstacles interfering with the signal.	Try pairing the devices again. If this does not work, move the RF sensor to a location where there are fewer obstacles.		
g) The brand names of the RF sensor and the ventilation unit are different.	<ul> <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</li> </ul>		
	PCB that has the correct OEM code.		
h) The RF sensor is faulty.	Replace the RF sensor and re-pair it with the unit.		
i) The ventilation unit PCB is faulty.	Replace the PCB and carry out the commissioning procedure again.		

The ventilation unit is not responding to the RF remote controls			
Cause	Solution		
a) Frost control is active.	Install a pre-heater in the supply duct for outside air.		
b) The battery of the RF remote control is empty.	Replace the battery.		
c) The RF remote control is not paired with the ventilation unit.	Restart the commissioning procedure     and pair the RF remote control.		
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.	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.		
e) The brand names of the RF control switch and the ventilation unit are different.	Replace the RF control switch by an RF control switch with the same brand name as the ventilation unit.		
f) The ventilation unit PCB is faulty.	Replace the PCB and carry out the commissioning procedure again.		

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.	See table "The ventilation unit is not responding to the RF sensors".	
b)	One of the ventilation unit's internal temperature sensors is faulty.	Replace the faulty temperature sensor.	

The	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.	•	If desired, change the system setting.
b)	The RF remote control from a neighbouring property is paired with <i>this</i> ventilation unit.	•	Disconnect power to the ventilation unit for 15 seconds. Unpair any paired RF remote controls (and any RF sensors) and re-pair the remote controls (and any RF sensors).

The ventilation unit is not responding to the three-position switch		
Cause	Solution	
a) Frost control is active.	<ul> <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.	Switch the power back on.	
c) No power.	Restore power.	
d) The switch wires of the three-position switch are connected incorrectly.	Connect the switch wires correctly (see wiring diagram).	
e) The ventilation unit PCB is faulty.	Replace the PCB and carry out the commissioning procedure again.	

The	The ventilation unit is leaking water		
Cause		Solution	
a)	The condensate drain is not connected.	Connect one of the two condensate	
		drains.	
b)	The condensate drain is blocked.	Unblock the condensate drain and try to	
		identify the cause of the problem.	
c)	The second condensate drain is open and not	Close the second condensate drain by	
	connected (hissing sound).	folding back the tab with the plug and	
		clicking it into the condensate drain.	

The	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.	Ensure that the ducts leading outside are thermally insulated and vapour-tight over their entire length.	
b)	The roof feedthrough is not rainproof or vapour-tight.	Replace the existing roof feedthrough(s)     with rainproof and vapour-tight roof     feedthrough(s).	

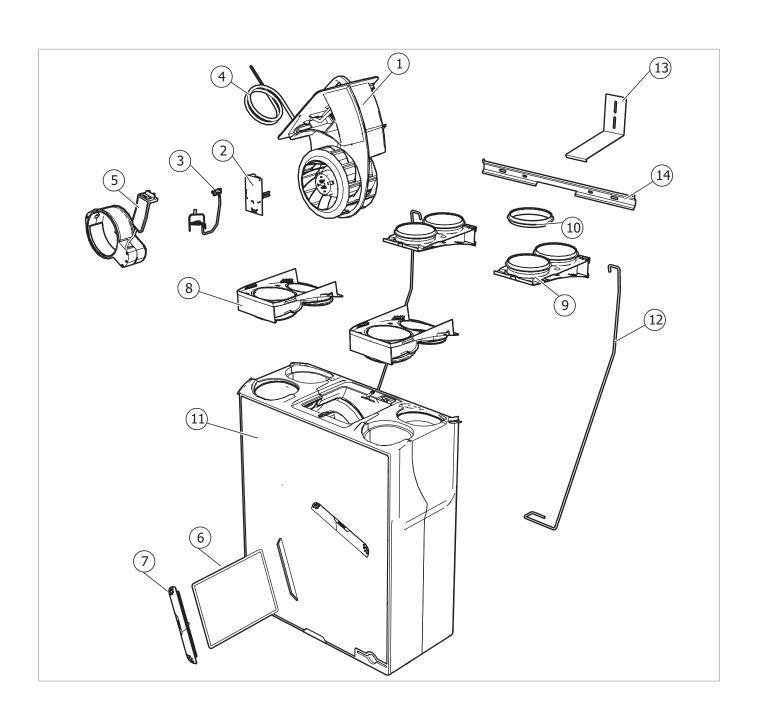
The	The valves are noisy		
Cause		Solution	
a)	No noise dampening hose has been installed	•	Install noise damping hoses on the ducts
	in the ducts leading into the dwelling.		leading into the dwelling.
b)	The air valves are not correctly adjusted.	•	Put the ventilation unit in commissioning
			mode and readjust the system settings.

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.	•	Clean or replace dirty/blocked filters.
b)	The valves are dirty or blocked.	•	Clean the valves.
c)	The air valves are not correctly adjusted.	•	Put the ventilation unit in commissioning
			mode and readjust the system settings.
d)	The fan is not running.	•	See "The ventilator is not running".
e)	The ventilation unit is not responding to the RF	•	See "The ventilation unit is not
	sensors (PIR sensor, $CO_2$ sensor, RV sensor).		responding to the RF sensors".

Cold air is being supplied to the dwelling			
Cause		Solution	
a)	The filter in the extraction outlet is blocked.	• Clean or replace the filter in the air outlet.	
b)	The air valves are not correctly adjusted.	Put the ventilation unit in commissioning	
		mode and readjust the system settings.	
c)	The bypass valve is in bypass mode when it	• Clean the bypass valve if it is dirty.	
	should not be.	Replace the entire bypass valve if it is	
		defective.	
d)	One of the temperature sensors is faulty.	If the supply air temperature sensor is	
		faulty, replace the wiring harness with the	
		temperature sensor in the motor module.	
		If the exhaust air temperature sensor is	
		faulty, replace the entire bypass module.	

# 8. Service parts

No.	ltem number	Description
1	7035035	Entire motor module
2	95615089	Motor module printed circuit board
3	95607725	Cable harness for motor module with outside temperature sensor
4	95607827	Power cable
5	95970205	Bypass valve assembly
6	95970009	G4 filter set
0	95970010	F7 filter set
7	95607728	Filter caps, set of 4
8	95607822	Duct adapter EPP side with seals, set of 2
9	95607823	Duct adapters duct side with seals, set of 2
10	95607824	Seals for duct-side duct adapter, set of 4
11	95607825	EPP housing with heat exchanger
12	95607727	Wire brackets, set of 2
13	95607726	Ceiling mounting bracket
14	95607826	Mounting bracket



# 9. Warranty

The warranty period is 2 years after the installation date.

# 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.

# 10. Declarations

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

Heatrae Sadia Hurricane Wav 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 200 Plus

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:

- 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 l 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 2011/65/EU (RoHS)

Norwich, 1 March 2016.



## **HEATRAE SADIA HEATING**

Hurricane Way, Norwich NR6 6EA www.heatraesadia.com

**SERVICE** 

+44 (0)344 871 1535

**EMAIL** 

customer.support@heatraesadia.com