

"WHHRC180DC"



**Whole House Heat Recovery Unit with Low Energy
DC Motor - for domestic and commercial use**

**Installation, Operating and Maintenance
Instructions**



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An appliance from the updated WHHRC180DC series is a heat recovery unit with an efficiency of up to 95% and energy-saving constant-volume fans. The new generation stands out for its:

- steplessly adjustable air flow rates through a control panel;
- filter indication on the appliance and the possibility for filter indication on the multiple switch;
- completely new frost protection system that ensures optimum performance of the appliance, even at very low atmospheric temperatures;
- noise reduction due to limited pressure fluctuation.

The appliance comes ready for use. All control equipment has been mounted and checked in the factory.

On installation, the appliance must be connected to the air ducts, the condensate discharge, the mains supply and the multiple switch.

The installer can change the desired air flow for every setting with the aid of the control panel on the appliance. See Chapter 6 for a detailed description.

The Vectaire WHHRC180DC is designed for a maximum ventilation capacity of 180 m³/h at 150 Pa resistance in the duct system.

The WHHRC180DC comes ready to be hard wired to the mains and a connection for the low-voltage multiple switch on the outside of the appliance.

2.1 Connecting ducts

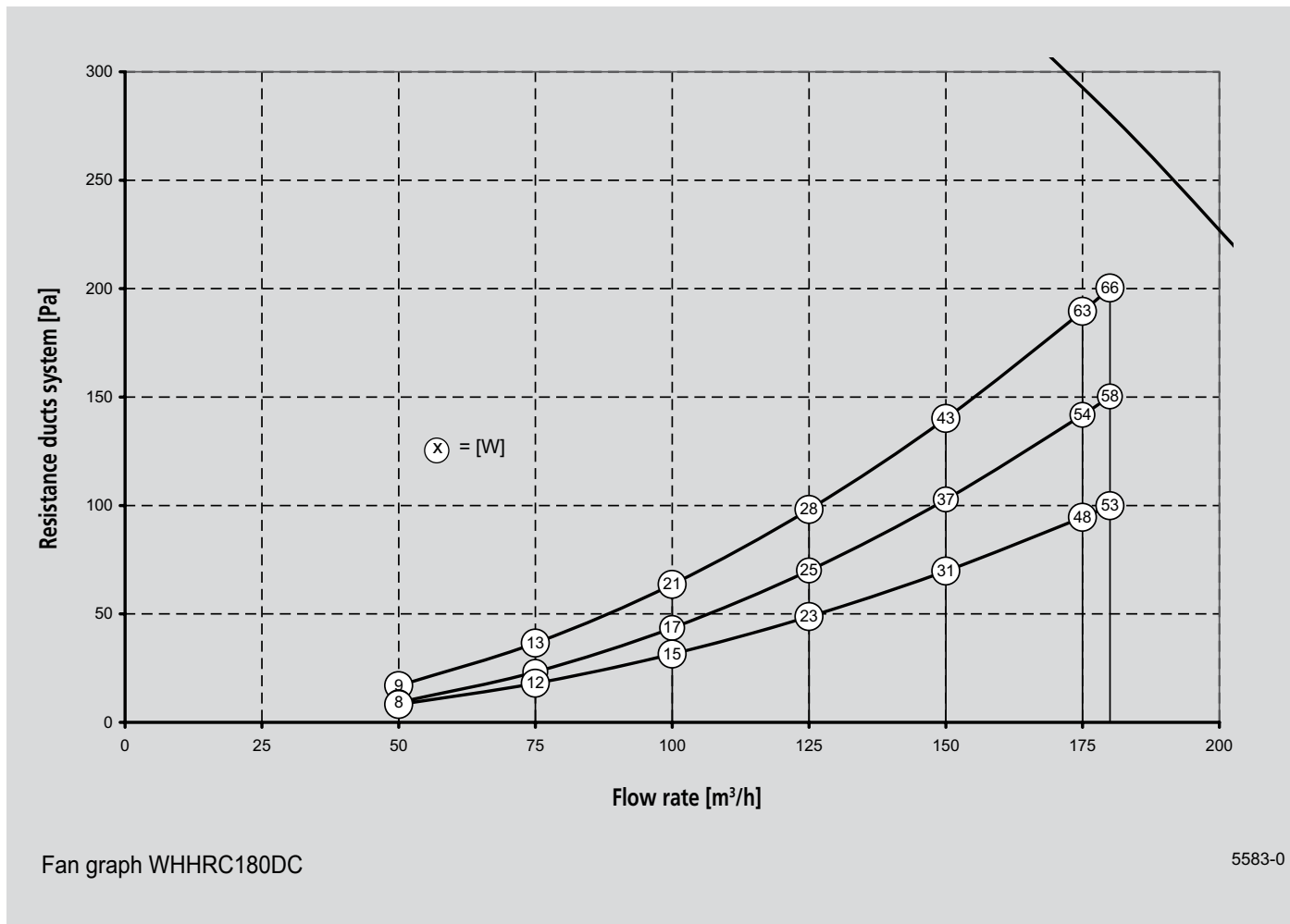
The WHHRC180DC is only available with all connections at the top; type 4/0.

See section 5.6.1 for pictures and dimensions of the appliance.

2.2 Technical information

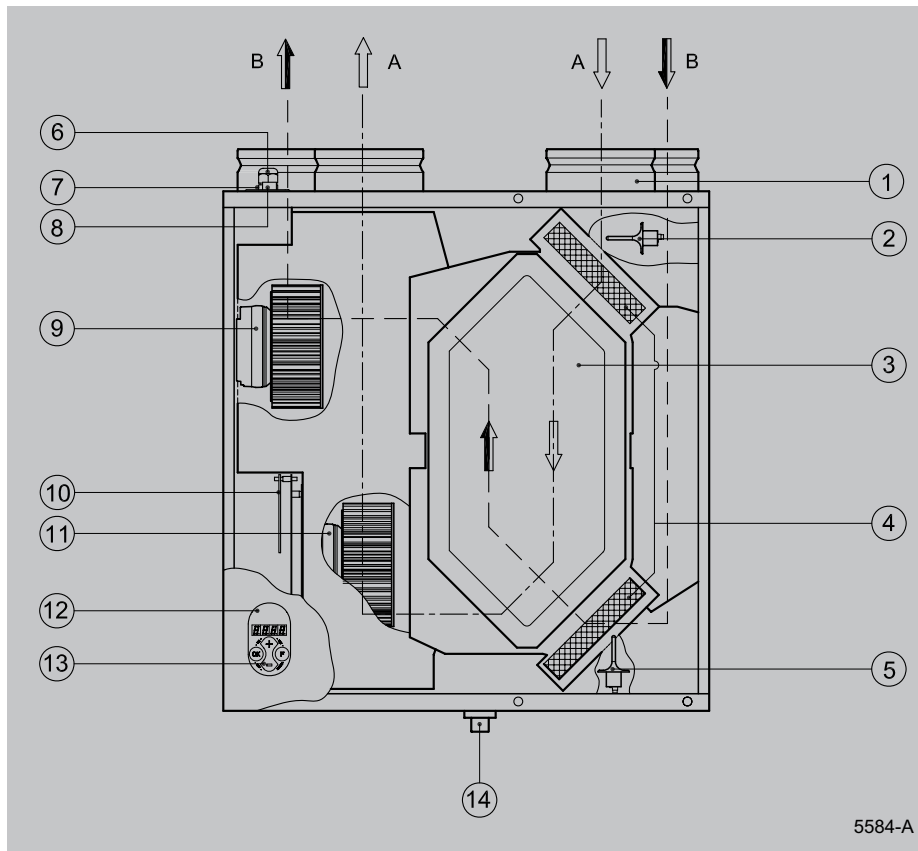
		JYWUJfYK <<F7% \$87		
Supply voltage [V/Hz]		230/50		
Protection degree		IP31		
Dimensions (w x h x d) [mm]		560 x 600 x 315		
Duct diameter [mm]		Ø125		
External diameter condensate discharge [mm]		Ø20		
Weight [kg]		25		
Filter class		G3		
Fan setting		1	2	3
Ventilation capacity [m ³ /h] - Factory settings		75	100	150
Permissible resistance in the ducting [Pa]		18 - 40	30 - 68	60 - 150
Rated power [W]		24 - 26	30 - 42	62 - 86
Rated current [A]		0.17 - 0.18	0.23 - 0.28	0.43 - 0.57
Cos φ		0.58 - 0.59	0.61 - 0.64	0.64 - 0.67
Noise capacity level L _w (A)	Static pressure [Pa]	40	80	160
	Housing emission [dB(A)]	32	39	48
	Duct "from dwelling" [dB(A)]	31	37	45.5
	Duct "to dwelling"	49	56	66

2.3 Fan graph



Note: The value stated in the circle is the capacity per fan (in Watts).

3.1 Exploded view appliance



A = Output air flow
B = Input air flow

3.2 Component Functions

1	Duct spigots	Connections for the input and output ducts.
2	Interior temperature sensor	Measures the temperature of the air from the dwelling.
3	Heat exchanger	Ensures heat transfer between input and output air.
4	Filters	Filter both air flows.
5	Atmospheric temperature sensor	Measures outside air temperature.
6	Communication port	Connections for cable to multiple switch, if desired with filter indicator.
7	Cable grommet	Grommet for feeding through power cable 230 Volt.
8	OpenTherm connection	Two-pole screw connector for OpenTherm control.
9	Input fan	Feeds fresh air into the dwelling.
10	Basic pcb	Contains the control electronics for the basic functions.
11	Output fan	Discharges fouled air from the dwelling to the atmosphere.
12	Computer port	Computer connection for service purposes.
13	Control panel	Interface between user and control electronics.
14	Connection condensate discharge	Connection condensate discharge.



4.1 Outline description

An appliance from the WHHRC180DC series is a highly advanced heat recovery unit, specially designed for minimum energy consumption and maximum comfort. This is achieved with the aid of various electronic control systems. A control unit with microprocessor controls and monitors the safe operation of the appliance and ensures that the air quantities remain constant

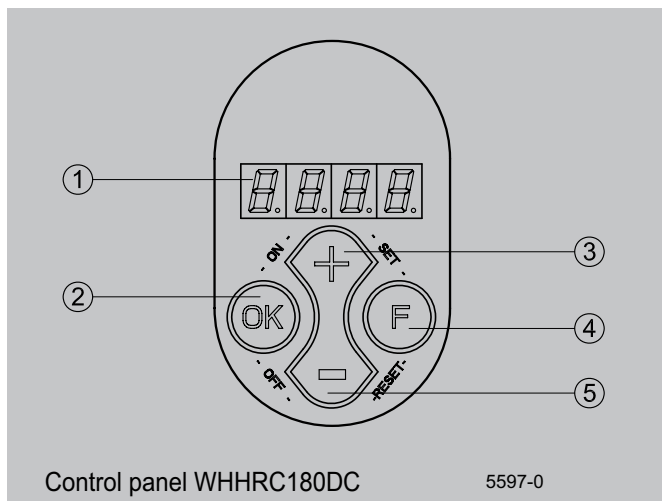
and at the preset values.

The WHHRC180DC comes with a control panel with display, enabling stepless adjustment of the volume without having to open the appliance. Moreover, information regarding the operation can be read out from the outside of the appliance.

4.2 LED display system and operating panel

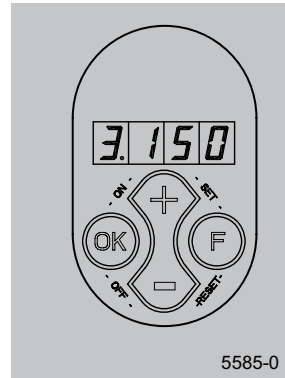
The WHHRC180DC is fitted with a control panel. It can be used to retrieve and modify the settings in the control unit program.

The control panel has four keys and a display.



- 1 = Display
- 2 = Key "OK" (confirm, ready, filter indication reset)
- 3 = Key increase parameter
- 4 = Function key
- 5 = Key decrease parameter

On the left the display indicates the ventilation setting or the parameter type. On the right it shows the readout value, for instance the preset air flow.



Example:
The display now shows that the appliance is running at ventilation setting 3 at a flow rate of 150 m³/h.

The 4 keys have the following functions:

- F Function key / switching on and off parameter menu
- + Next parameter / increase value
- - Previous parameter / decrease value
- OK Switching on and off settings menu / manual fault reset / filter indication reset

Other commands can be entered with key combinations.

- F & + (set), confirm parameter value
- F & - (reset), reset parameter value to factory setting
- OK & + (ON), switch on appliance
- OK & - (OFF), switch off appliance

Everywhere in this booklet it applies that when a key has to be pressed, the key in question is printed in quotation marks and in bold.

Example: - press key **"OK"**

4.3 Frost protection

The frost protection system ensures that the secondary side of the heat exchanger (outlet side) does not freeze up by introducing an imbalance between the inlet and outlet air flows,

dependent on the outside air temperature and the pressure across the heat exchanger.

4.4 Filter indication

The appliance is fitted with a filter indication system. It indicates on the display when the filter is fouled.

For more detailed information refer to sections 7.2 and 8.1

5.1 Installation general

The appliance installation procedure can be summarised as follows:

1. Siting the appliance (§5.2)
2. Connecting the ducts (§5.3)
3. Connecting the condensate discharge (§5.4)
4. Electric connection:
Connecting the multiple switch and, if necessary, the mains power and the OpenTherm connector (§5.5)

- Quality requirements ventilation systems dwellings.
- Quality requirements balanced ventilation in dwellings.
- The regulations for ventilation of dwellings and residential buildings.
- The relevant electrical safety regulations,
- The regulations for connection to interior sewers in dwellings and residential buildings,
- Any additional regulations of the local authorities.
- The installation instructions for the WHHRC180DC.

The WHHRC180DC must be installed in accordance with:

5.2 Siting the appliance

- The appliance can be wall or floor-mounted. A wall hanging bracket is supplied.
- Ensure the appliance is level when fitted.
- It should be in the warm part of the building. If fitted in the roof space above the normal level of insulation the insulation should be interrupted and fitted over and around the appliance forming an insulated compartment.
- It should be sited so that a good condensate discharge with trap can be fitted.
- Ensure there is a free space of at least 700 mm at the front of the appliance to provide room for opening the door and a free headroom of 1,8m for maintenance purpose.
- To avoid noise disturbance do not fit above a bedroom and if in the roof space fit on an acoustic mat. If wall hung on a wall with a mass of less than 200kg/m² additional measures such as double panelling, extra studs or an acoustic mat will be required.
- If required a mounting support for floor mounting is available (product code 217031).

5.3 Connecting ducts

The air outlet does not have to be fitted with a control valve. The appliance itself controls the air volume.

To prevent condensation on the ducts to and from the outside, Ubbink self-insulated ducting should be used. Alternatively use an insulated duct with a vapour barrier.

To limit fan noise use acoustic duct for a length of 1metre immediatly after the appliance on the ducts to and from the dwelling. Where any duct runs outside the insulated envelope they must be insulated.

Design the duct runs so as to avoid noise transmission and "crosstalk" particularly with separate branches to the dampers. Ducts should always have an adequate diameter for the air-

flows. The maximum permissible resistance in the system is 150 Pa at the maximum ventilation capacity. If the resistance in the duct system is higher, the performance of the appliance will be adversely affected.

The exterior air supply should be on the sheltered or leeward side of the building and can be sited on the roof or wall. The exhaust air terminal should be sited on the roof well away from the air supply to avoid recirculation - at least 900 mm if on the same side of the roof.

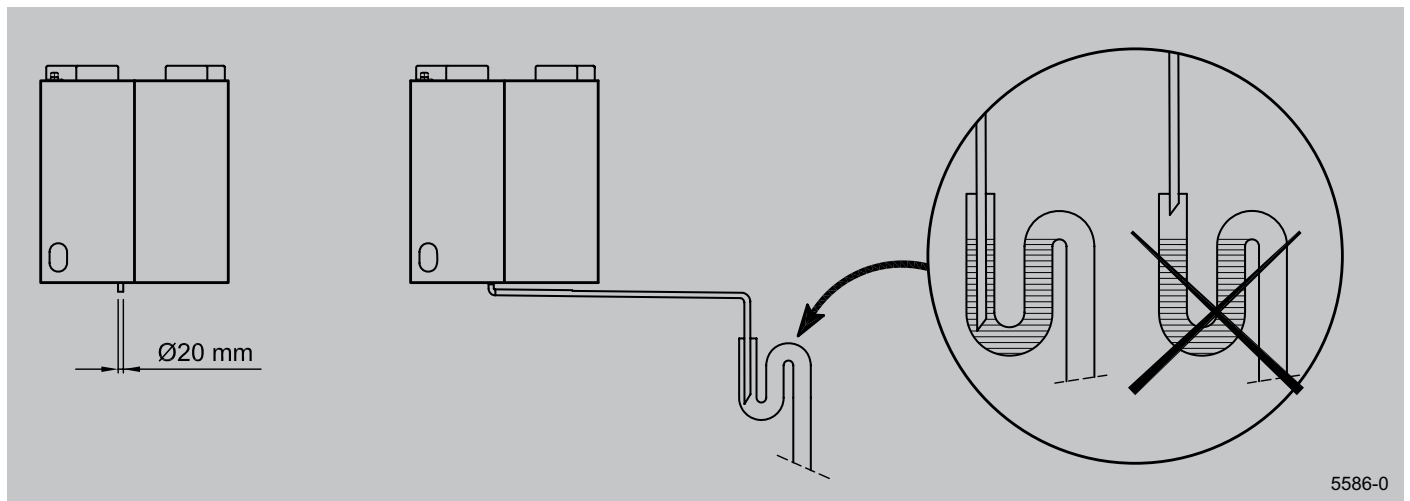
Always use air supply and extract room valves to minimise resistance. Air supply valves should be sited so as to avoid direct draughts which cause discomfort to residents. To ensure air flow throughout there should be gaps under doors of 10 mm.

5.4 Connecting the condensate discharge

The condensate discharge line for the WHHRC180DC is fed through the lower panel. The condensate must be discharged through a drainpipe. The drain must discharge under the water level in the U-trap. The condensate discharge comes separately in the packaging with the appliance and the installer must screw it into the underside of the appliance. This condensate discharge connection has an external connecting diameter of 20 mm.

The condensate discharge line can be glued to it, if necessary using a 90° bend. The installer can glue the condensate discharge in the desired position in the lower part of the appliance.

See the drawing below for an example of a connection to a drainpipe. (Pour water into the bend to create an air trap, if connecting to a soil pipe - refer to local bye-laws).



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5.5 Electric connections

The appliance comes ready to be wired into the mains.

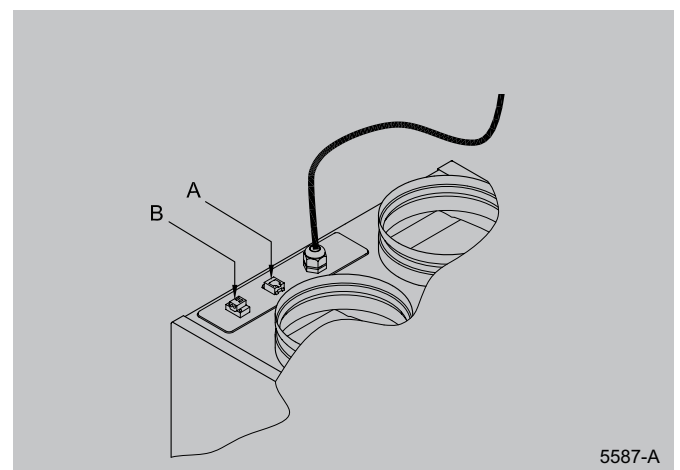
5.5.1 Connecting the multiple switch

The multiple switch (supplied as an extra) is connected to the modular connector type RJ12 that is placed at the top of the appliance. (See figure A opposite)

- Application of a 3-way switch with filter indication in all cases requires an RJ12 plug in combination with a 6-core modular cable.

Refer to the next page for examples of wiring diagrams.

Connector B is a 2-pole screw connector which is used in combination with demand-controlled ventilation.

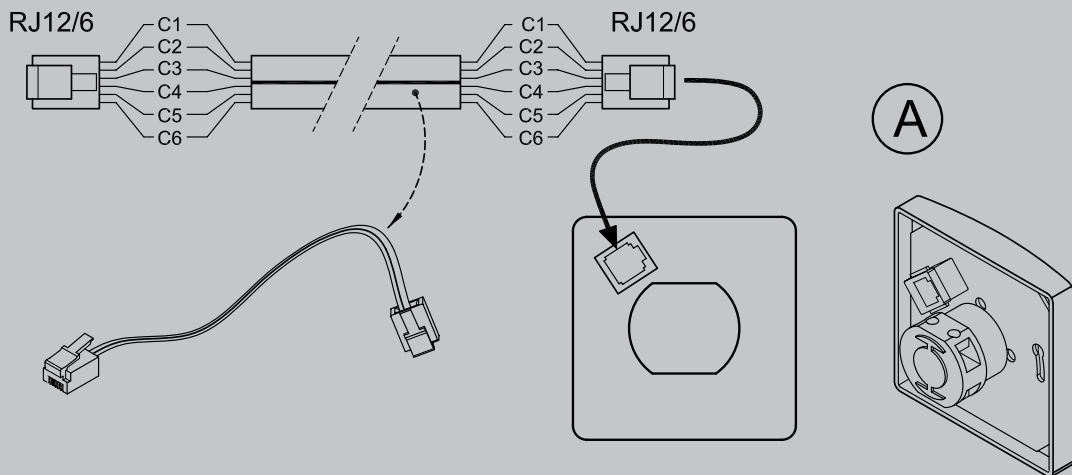


5587-A

A = Modular connector
 B = OpenTherm connector

The figure below shows the method for connecting a 3-way switch,

- A. 3-way switch with filter indication; switch with modular connector (6-core cable, two modular connectors RJ12/6)



Wiring diagram 3-way switch with filter indication with modular connector
(Note that for both modular connectors the “tab” must be mounted on the side of the mark on the modular cable)

The colours of the wires C1 to C6 respectively, indicated in the diagram above may vary, that depends on the type of modular cable used.

5.5.2 Connecting the OpenTherm connector

In combination with demand-controlled ventilation, the appliance can also be controlled with the OpenTherm protocol instead of a low-voltage switch. OpenTherm allows continuous adjustment of the rpm for the flow rate. A 2-core low-voltage

cable with a core diameter of at least 0.8 mm² must be used as connecting cable. Interchanging the cable connection to the 2-pole screw connector does not influence the appliance's performance.

5.5.3 Connecting the power

The appliance should be connected to the mains circuit by a qualified electrician. The electric installation must comply with the regulatory requirements.

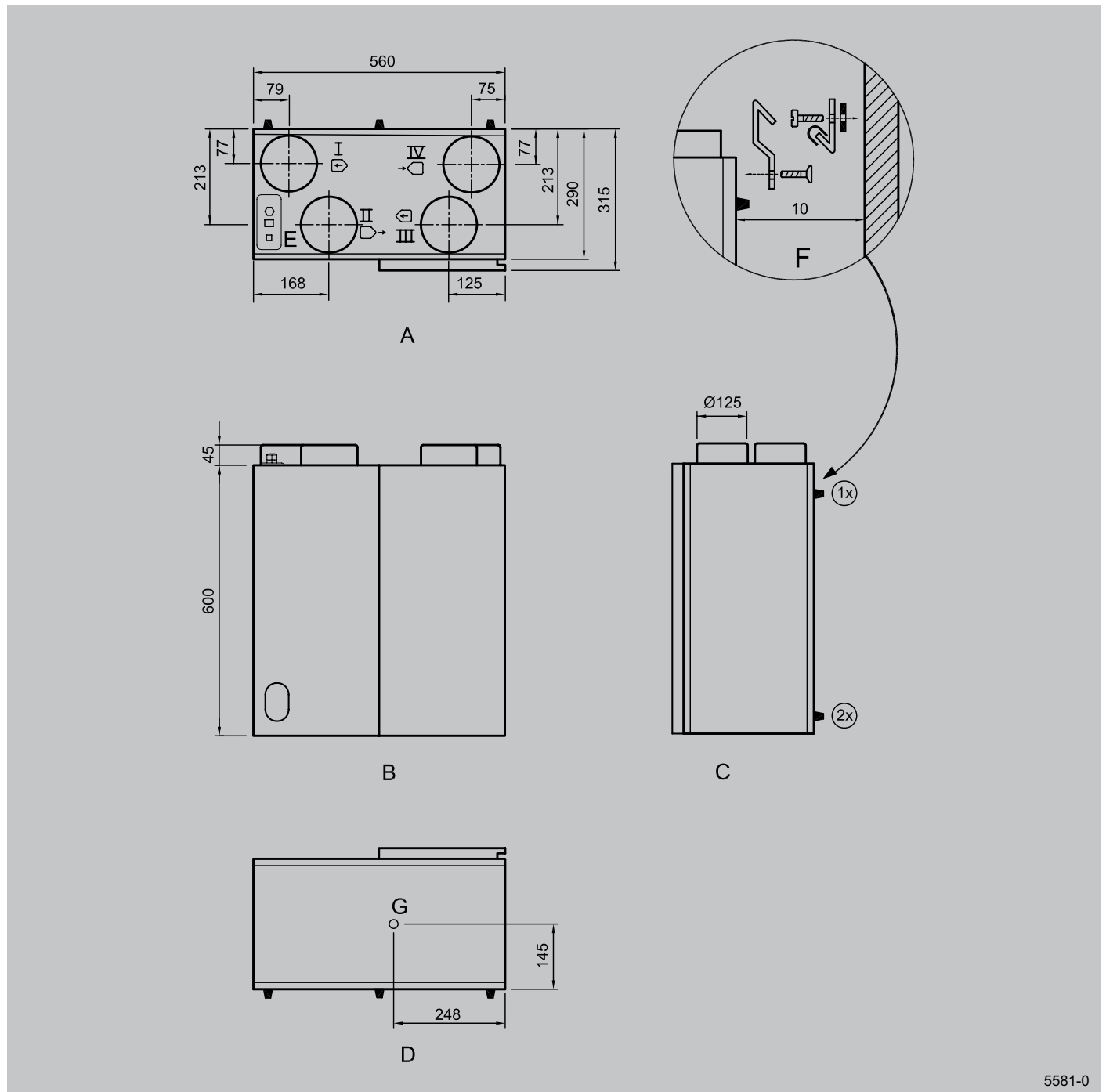


Warning

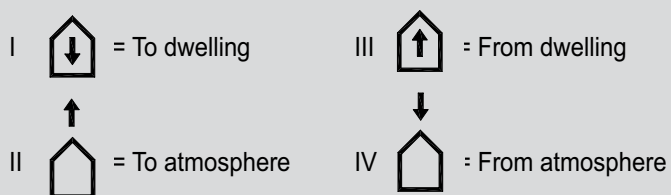
The fans and controls carry a high voltage. Always disconnect from the mains supply when working on the appliance.

5.6 Connections and dimensions 'JYUJfYK <<F7% \$87

5.6.1 Connections JYUJfYK <<F7% \$87



5581-0



- A = Top view
- B = Front view
- C = Side view
- D = Bottom view
- E = Electric connections
- F = Detail wall mounting (make sure to correctly place the rubber strip, washers and caps)
- G = Connection condensate discharge

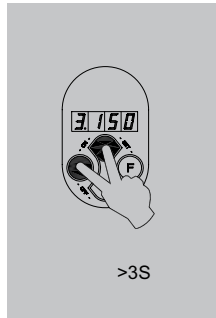
6.1 Switching the appliance on and off

There are two methods to switch the appliance on or off.

1. Through software; the appliance remains connected to the mains, when switching off by software only the fans are stopped.
2. Disconnecting from the mains.

Switching on

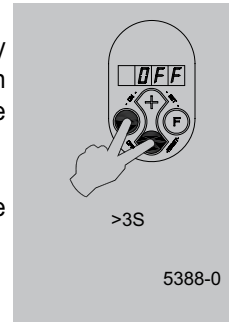
- Mains power: connect to the mains.
- Through software; simultaneously press keys "OK" and "+" to switch on the appliance through software (Only possible after the appliance has been switched off through software.)



The first digit on the display indicates the position of the 3-way switch.

Switching off

- Through software; simultaneously press keys "OK" and "-" to switch on the appliance through software. The text OFF appears on the display.
- Mains power: disconnect from the mains



NOTE!

When working on the appliance, always switch off the appliance by first switching it off through software and subsequently disconnecting from the mains.

6.2 Setting the air quantity

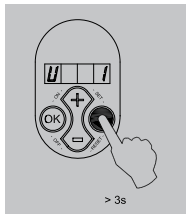
The air quantities of the WHHRC180DC for settings 1, 2 and 3 are factory-set at 75 and 100 and 150 m³/h respectively. The performance of the appliance depends on the quality of the duct system as well as on the filter resistance.

Important:

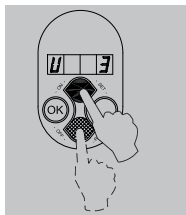
Setting 1: must always be lower than setting 2.
 Setting 2: must always be lower than setting 3;
 Setting 3: adjustable between 50 and 180 m³/h;
 If these conditions are not complied with, the air quantity of the higher setting will automatically be adjusted.

The air quantities can be modified as follows (as an example here the air quantity for setting 3 will be changed from 150 to 180 m³/h):

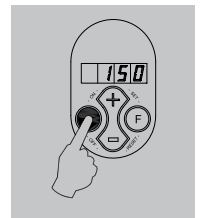
1. Press key "F" for 3 seconds to call up the settings menu.



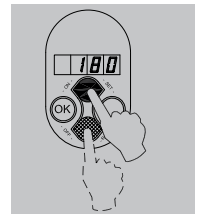
2. Use key "+" to select the desired parameter (U1 = setting 1: 1, U2 = setting 2: 2, U3 = setting 3; U4, U5 and U8 do not apply for a WHHRC180DC).



3. Press key "OK" for 1 second to read the selected parameter value.



4. The keys "+" or "-" can be used to modify the selected parameter value.



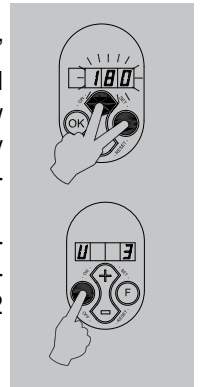
5. The modified setting can now be:

- A saved and stored;**
- B removed;**
- C restored to factory setting.**

A Simultaneously press keys "F" and "+" (first F then +) to save the modified setting; the modified value will now blink 3x as confirmation. The display readout will remain at this modified value.

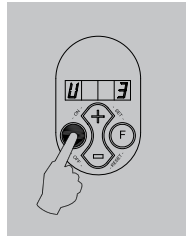
Press key "OK" to go back to the settings menu; if required, several settings can now be modified (see item 2 to 5 inclusive 5).

Now continue with item 6.



B Press key “OK” to go back to the settings menu without saving the modified setting; the previous setting will be maintained.

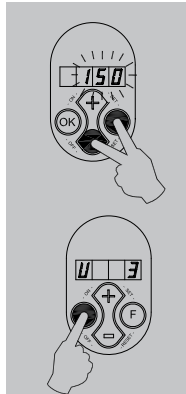
If required, several settings can now be modified (see item 2 to 5 inclusive). Now continue with item 6.



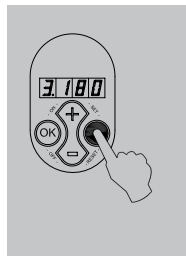
C Simultaneously press keys “F” and “-” to go back to the factory setting. The factory setting will blink 3x as confirmation. The modified setting is removed. The factory setting remains on the display.

Press key “OK” to go back to the settings menu; if required, several settings can now be modified (see item 2 to 5 inclusive).

Now continue with item 6.



6. Press key “F” for 1 second to leave the settings menu.



6.3 Installer settings

Various other settings of the control unit can also be modified. Because some settings have an influence on the correct operation of the appliance, these have been placed in a separate installer parameters set. Consequently, these parameters can only be modified by the installer.

How to modify these is explained in section 6.6.2.

11. Fixed imbalance. This can be used to keep the pressure in the dwelling at a higher (+) or lower (-) level than the atmospheric pressure.

Positive imbalance (+): the output fan ventilates the set value in [m³/h] less than the input fan.

Negative imbalance (-): the input fan ventilates the set value in [m³/h] less than the output fan.

12. No contact step 11

This setting determines the ventilation position when no switch contact is connected to position; the appliance will start running at the ventilation position set here.

13. Not applicable.

14. Switch line 1 step.

Determines what position of the multiple switch matches line 1 on the control unit.

15. Switch line 2 step.

Determines what position of the multiple switch matches line 2 on the control unit.

16. Switch line 3 step.

Determines what position of the multiple switch matches line 3 on the control unit.

17. Imbalance permissible?

This determines whether for instance the frost protection may affect the imbalance.

I8/ I9/ I11/ I12 & I14

These do not apply for WHHRC180DC.

I10. Constant pressure switched off.

Here it can be set whether in all cases the fans are running at constant flow or that they start running at constant pressure when a certain resistance is exceeded.

I13 Filter message.

Sets whether the filter message is shown on the display and the led of the 3-way switch.

I15 Heat recovery configuration.

Option setting when heat recovery is used in combination with central heating; only heat recovery or the combination central heating + heat recovery.

Only heat recovery = 0;

Central heating + heat recovery = 1

I16 Fan setting for central heating + heat recovery

Fan(s) off for central heating + heat recovery (only if I15 = 1).

Setting I16	Situation fan(s)
1	Output fan off
2	Input fan off
3	Both fans off

I17 Repeat time in hours for switching off the fan(s) selected under I16 for central heating + heat recovery.

I18 Maximum switch-off time in seconds for the fan(s) selected under I16 for central heating + heat recovery.

I19 Minimum switch-off time in seconds for the fan(s) selected under I16 after switching on 230V for central heating + heat recovery.

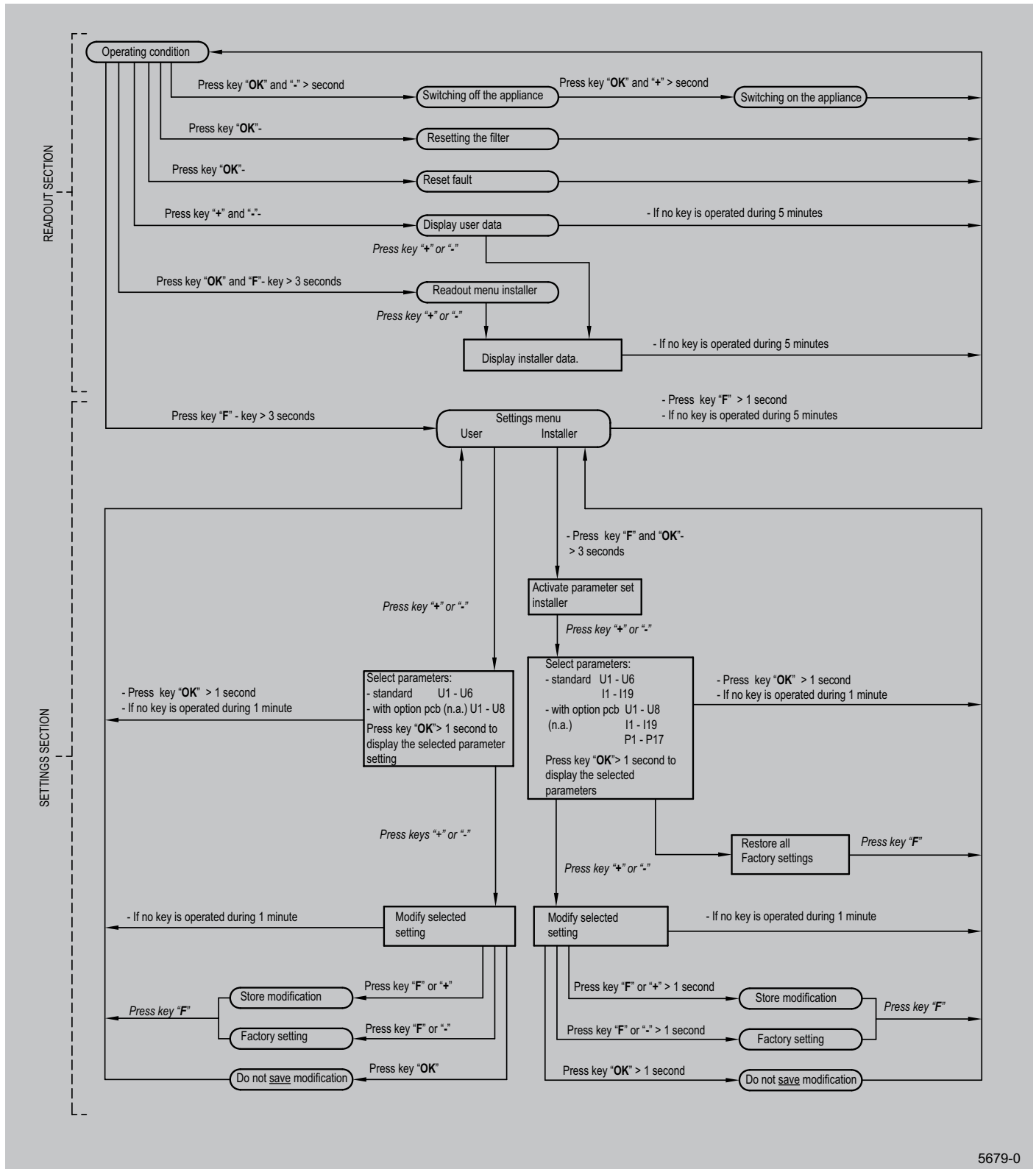
Refer to the table in section 6.6.3 for the factory setting.

6.4 Menu structure display

The menu structure is divided into a readout section and a settings section. The number of visible parameters depends on the parameter set. The user has the parameter set "user"; a more comprehen-

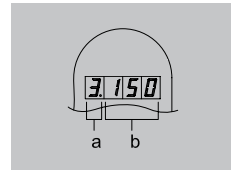
sive readout programme is available for the installer. It can be activated - and deactivated - by simultaneously pressing keys "F" and "OK" for 1 second.

6.4.1 Menu structure diagram



6.5 Readout settings

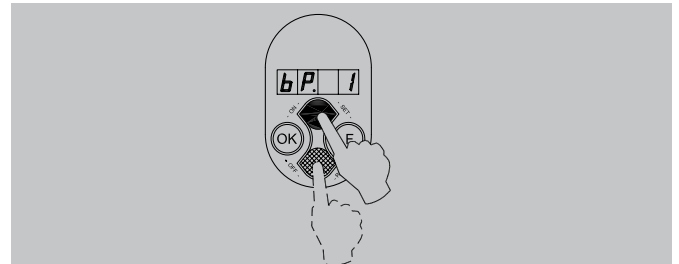
As standard the current position of the multiple switch and the connected output volume are shown (Operational mode). On the left the position of the multiple switch (position 1, 2 or 3) is shown and to the right of the dot the volume of the output fan is shown.



a = Position multiple switch
b = Volume output fan

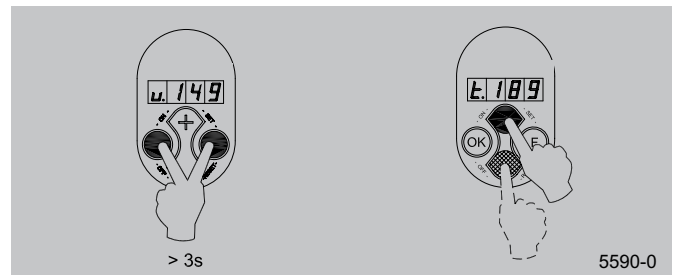
6.5.1 Readout settings by the user

The user can read out other relevant data using keys "+" and "-" (step 0 to step 6). Step numbers are not shown on the display! See the table below for user readout; when no key is operated for 5 minutes, the display automatically returns to operational mode. Key "+" can be used to scroll through the menu; key "-" always takes you back to step 0. Modifying settings is not possible in this situation.



6.5.2 Readout settings by the installer

A more comprehensive readout programme is available for the installer. Pressing keys "F" and "OK" for 3 seconds calls up all installer data. In this menu the values cannot be modified. Activating this menu always calls up step no. 7 (see table below); using key "+" the further installer and user data can be displayed and key "-" takes you back to step no. 1. After 5 minutes this menu automatically disappears and the display will show the operational situation again. In the event of an error, the error code appears on the display; see also chapter 7.



	Step number	Readout (example)	Description	Remark
User	No.1	2,100	Current position/outlet volume [m³/h]	
	No.2	C 0	Message code operating condition	C0 = No message C3 = The input fan runs in constant pressure mode C6 = The output fan runs in constant pressure mode C7 = Correction maximum air flow
	No.3	bP.1	n.a.	
	No.4	tP.9	Temperature from atmosphere [°C]	At negative temperature (below 0°C) then readout tP.9.
	No.5	tS.21	Temperature from indoors [°C]	
	No.6	In.0	n.a.	
installer	No.7	u.156	Current input volume [m³/h]	
	No.8	o.156	Current output volume [m³/h]	
	No.9	t.180	Current pressure input duct [Pa]	
	No.10	A.180	Current pressure output duct [Pa]	
	No.11	u0.0	Status frost protection	0 = none, 1 - 4 = imbalance, 5 = input fan off
	No.12	St.9	Temperature to atmosphere [°C] (Sensor not connected as standard)	If not connected St.75
	No.13	Pt.18	Temperature to indoors [°C] (Sensor not connected as standard)	If not connected Pt.75

6.6 Modifying settings

A number of settings can be modified by both user and installer to adapt the appliance to the specific situation.

6.6.1 Modifying settings by the user

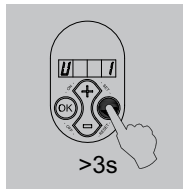
The user can modify 3 settings, that is U1, U2 and U3 (see table section 6.6.3); U4, U5 and U8 do not apply for a Ubbink HRV Compact; how to modify these settings is described in

detail in section 6.2 and is also shown in the diagram menu structure of section 6.4.1

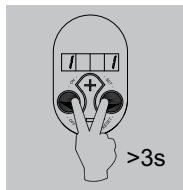
6.6.2 Modifying settings by the installer

The installer can modify more settings. When parameters are set incorrectly, the appliance can no longer perform up to standard, so make sure no parameters are modified incorrectly. Also refer to the diagram menu structure section 6.4.1 and table 6.4.3. The following actions are required to modify the settings from operational mode: (By way of example parameter I7 is changed from 1 to 0.)

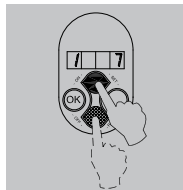
- 1 Press key "F" for 3 seconds to activate the settings menu.



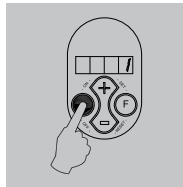
- 2 Press key "F" and "OK" for 3 seconds to activate the comprehensive installer parameters set.



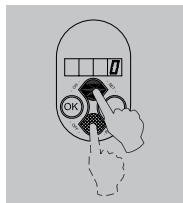
- 3 The desired parameter can be found with the aid of keys "+" and "-" during 3 seconds. "-".



- 4 Pressing key "OK" calls up this setting.



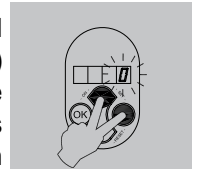
- 5 Use keys "+" and "-" for 3 seconds. "-" to modify the value.



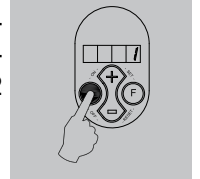
- 6 The modified setting can now be:

- A saved and stored**
- B removed;**
- C restored to factory setting.**

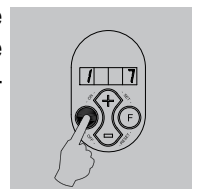
- A Simultaneously press keys "F" and "+" (first press "F" and then "+") save the modified setting; this value now blinks 3x to confirm that it has been stored; the value remains on the display.



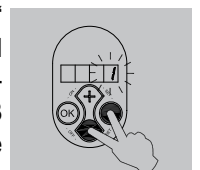
- Press key "OK" to return to the settings menu; if required, other settings can now be modified (step 2 - step 5)
Continue with step 7.



- B Press key "OK" to go back to the settings menu without saving the modified setting; the previous setting will be maintained.
Continue with step 7.



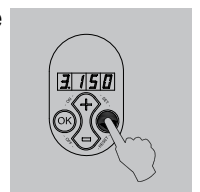
- C Simultaneously press keys "F" and "-" for 3 seconds. "-" (first press "F" and then "-" to go back to the factory setting. The factory setting will blink 3 times and remain at that value. The modified setting has now been removed.



- Press key "OK" to return to the settings menu.
Continue with step 7.



- 7 Press key "F" for 1 second to leave the settings menu



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6.6.3 Adjustable settings table

The user-adjustable parameters are indicated with “U” and the installer-adjustable parameters are indicated with “I” (basic pcb) .

	Adjustable parameter	Description	Setting range	Factory setting
User	U 1	Volume step 1	50..(max-10)	75
	U 2	Volume step 2	50..(max-5)	100
	U 3	Volume step 3	50-180	150
	U 4	n.a.	n.a.	10
	U 5	n.a.	n.a.	22
	U 8	n.a.	n.a.	0
Installer	I 1	Fixed imbalance	-100..+100	0
	I 2	No contact step	0,1,2,3	1
	I 3	Not applicable	2,3	2
	I 4	Switch line 1 step	0,1,2,3	1
	I 5	Switch line 2 step	0,1,2,3	2
	I 6	Switch line 3 step	0,1,2,3	3
	I 7	Imbalance permissible	0.1	1 (Yes)
	I 8	n.a.	n.a.	0
	I 9	n.a.	n.a.	0
	I10	Constant pressure switched off	0.1	0 (no)
	I11	n.a.	0, 1, 2, 3	0
	I12	n.a.	-30 .. + 30	0
	I13	Filter message on/off	1.0	1 (on)
I14	n.a.	1.0	0	
I15	Heat recovery configuration	0.1	0 (heat recovery)	
I16	Fan off	1,2,3	1 (Output fan)	
I17	Repeat time	1 .. 24	24 (hours)	
I18	Minimum switch-off time fan(s)	1 .. 240	60 (seconds)	
I19	Minimum switch-off time fan(s) after switching on 230V.	1 .. 240	1 (second)	

For a description of these settings refer to section 6.2 for U1, U2 and U3 and section 6.3 for I1 - I19



7.1 Trouble shooting

If the control system detects a faults, this is shown on the display by means of a number, preceded by a letter **F** (Failure). If a 3-way switch with filter indication is mounted, the LED on the 3-way switch will also start blinking.

The examples shown here is the fault **F9**; This means something is wrong with the wiring to the atmospheric temperature sensor or with the sensor itself.



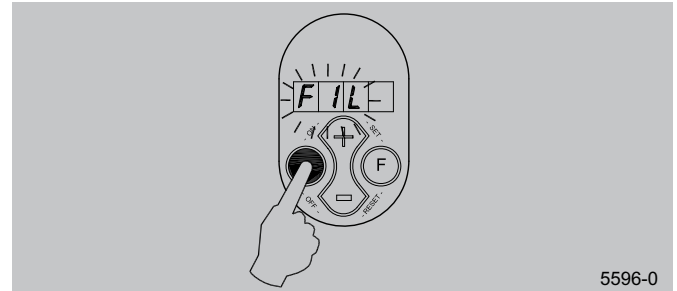
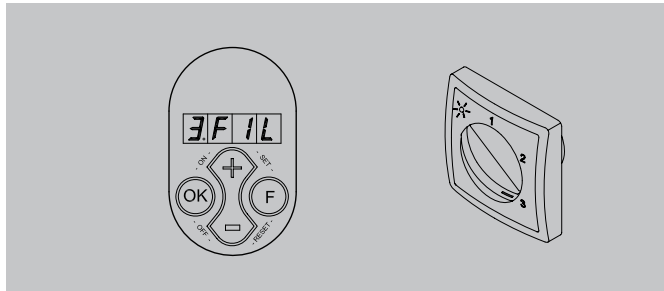
The appliance remains in this fault mode until the problem in question has been solved. Then the appliance will reset itself (auto reset) and the display will once more show operational mode.

The table to section 7.3 gives an overview of the faults, possible causes and the actions to be undertaken.

7.2 Filter indication

If the display shows the message "**FIL**" then this means the filters have to be cleaned. If a multiple switch with filter indication has been installed , then simultaneously with this message on the display, the LED on the switch will light up.

After the filters have been cleaned or replaced, the key "**OK**" must be pressed to reset the filter indication. The text "**FIL**" will blink for a moment and then the display will return to operational mode.



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7.3 Display codes

Table fault codes

Fault code	Cause	Action user	Action installer
F2	The inlet fan has stopped.	• Contact the installer.	• Replace the inlet fan; it is defective
F5	The outlet fan has stopped.	• Contact the installer.	• Replace the outlet fan; it is defective
F9	The temperature sensor that measures the temperature of the input air is defective.	• Contact the installer.	<ul style="list-style-type: none"> • Check the wiring from the sensor to the basic pcb • Check the sensor connection to the wiring. • Replace the sensor.
F10	The temperature sensor that measures the temperature of the output air is defective.	• Contact the installer.	<ul style="list-style-type: none"> • Check the wiring from the sensor to the basic pcb. • Check the sensor connection to the wiring. • Replace the sensor.

Note!

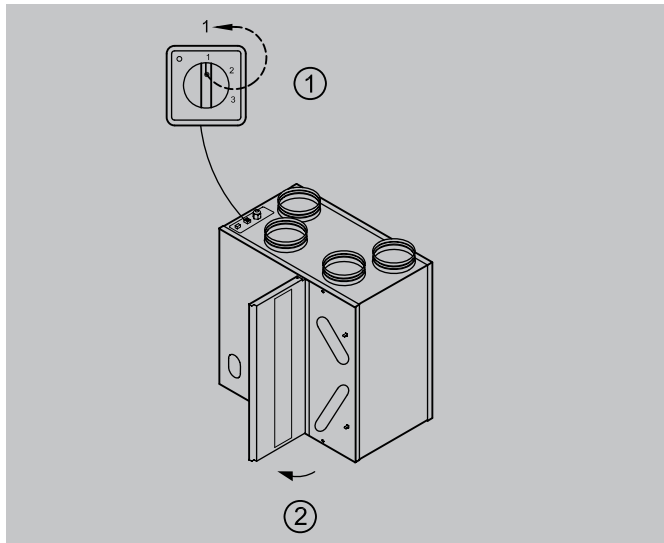
If setting 2 does not work with a mechanical rpm control device such as a multiple switch, the RJ connector has been connected the wrong way round. Cut off one of the RJ connectors

to the rpm control and mount a new connector the other way round.

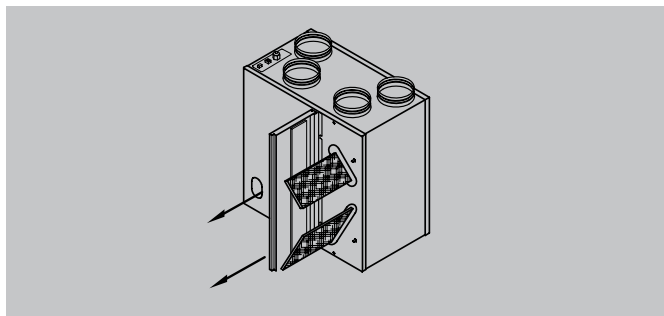
8.1 User maintenance

User maintenance is limited to periodically cleaning or replacing the filters. The filter only has to be cleaned when indicated on the display (it shows the text "FIL") or, if a multiple switch with filter indication is mounted; when the red LED at the switch lights up. The filters should be replaced every year. Do not use the appliance without filters.

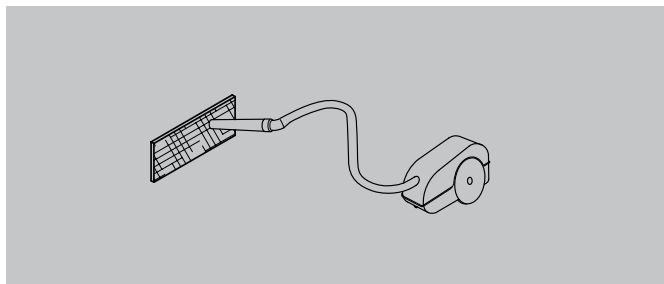
- 1 Put the 3-way switch at setting 1 to let the appliance's fans run at low speed. Open the filter door.



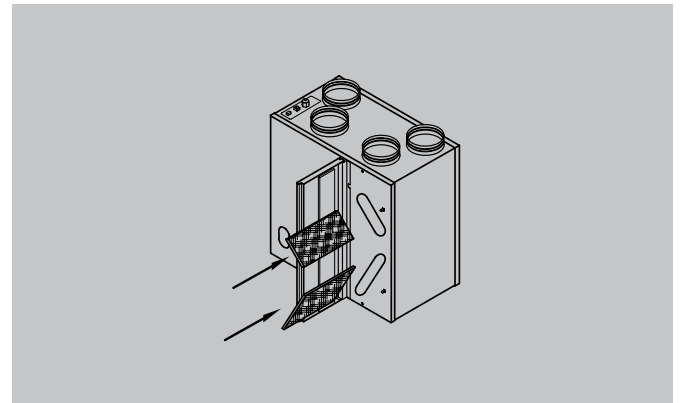
- 2 Remove the filters. Remember in what way the filters are taken out.



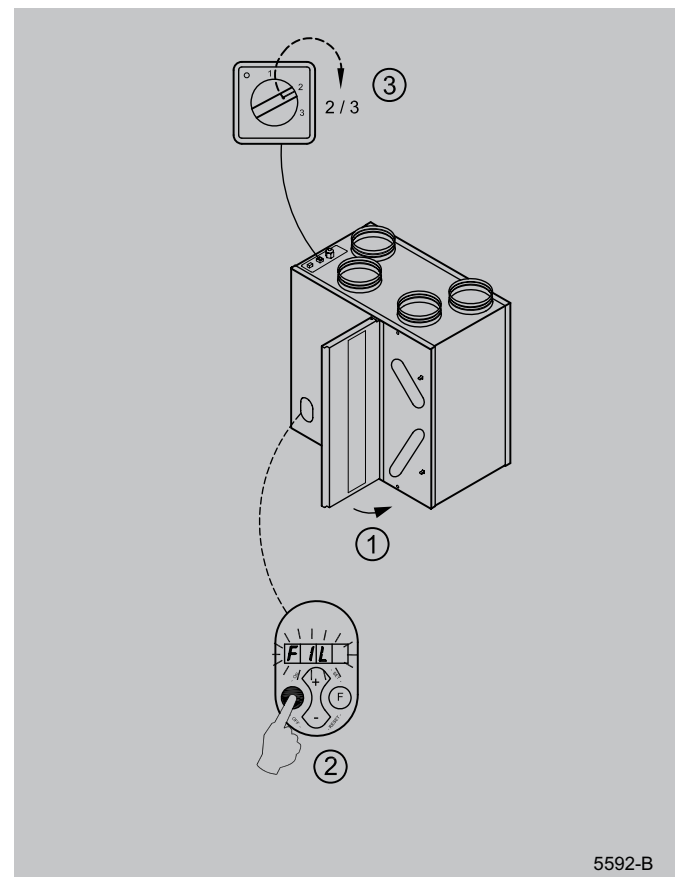
- 3 Use a vacuum cleaner to clean the filters.



- 4 Place the filters back the same way as they were taken out.



- 5 Close the filter door. After cleaning the filter or fitting a new filter, the filter indication must be reset by pressing key "OK" for 1 second. The display will blink for a moment to confirm that the filter has been reset. The appliance will return to operational mode. Put the 3-way switch back to the original setting.

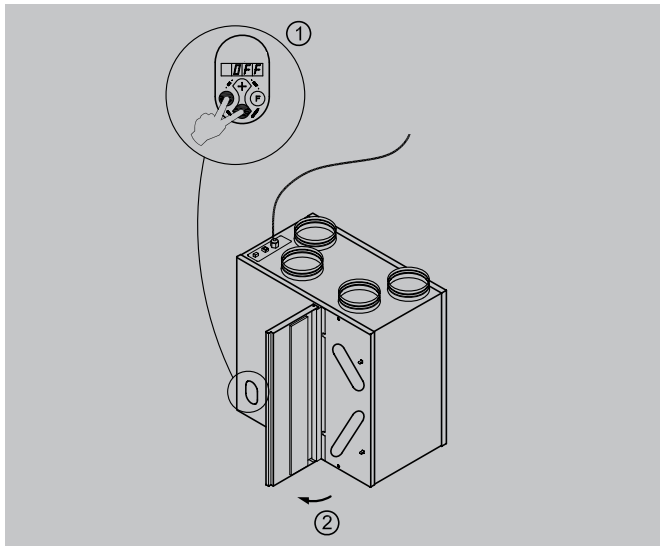


5592-B

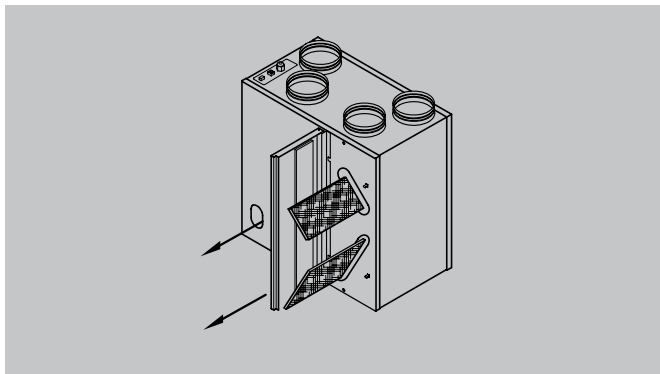
8.2 Installer maintenance

Installer maintenance includes cleaning the heat exchanger and fans. Dependent on the conditions, this must be done about once every three years.

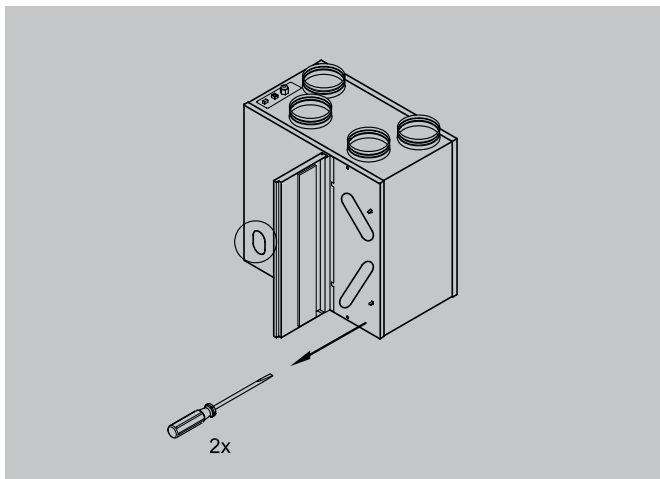
- 1 Switch off the appliance on the control panel (simultaneously press keys "OK" and "-" for 3 seconds) and switch off the power supply.
Open the filter door.



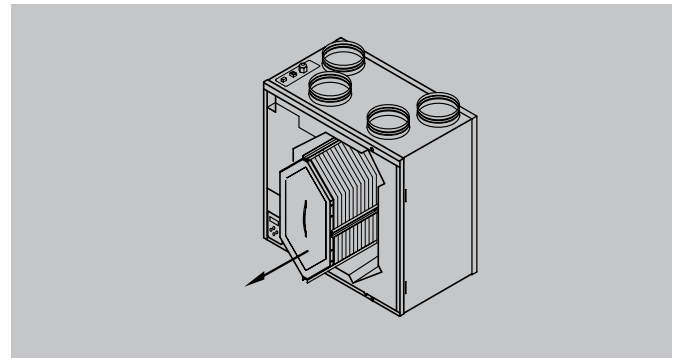
- 2 Remove the filters.



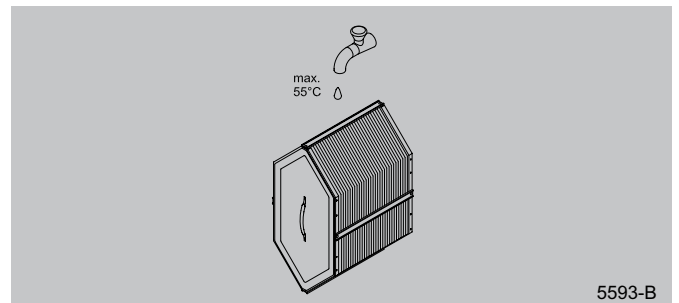
- 3 Remove the front cover.



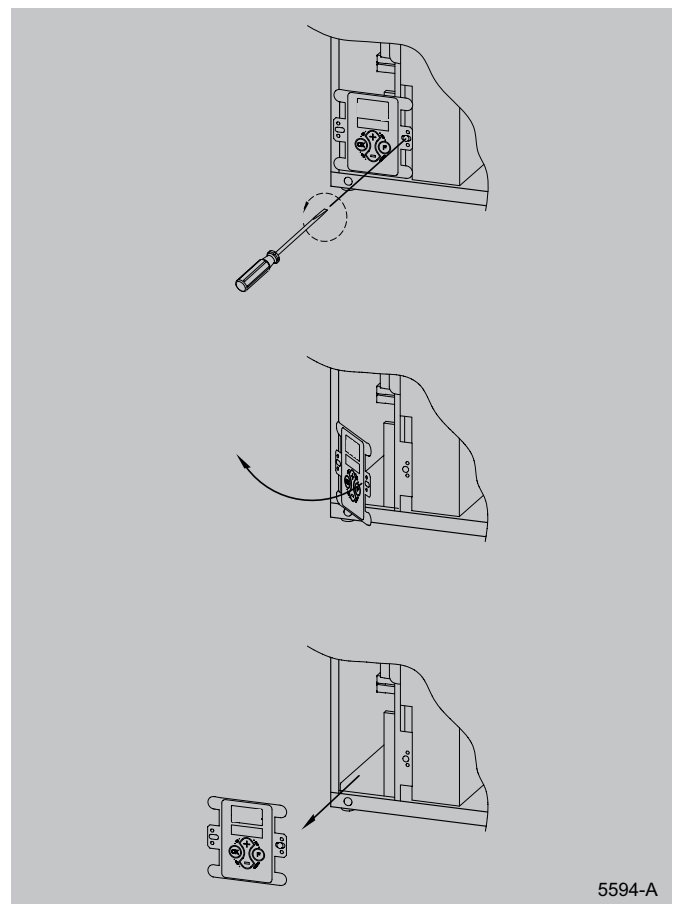
- 4 Remove the heat exchanger. Be careful not to damage the foam parts in the appliance.



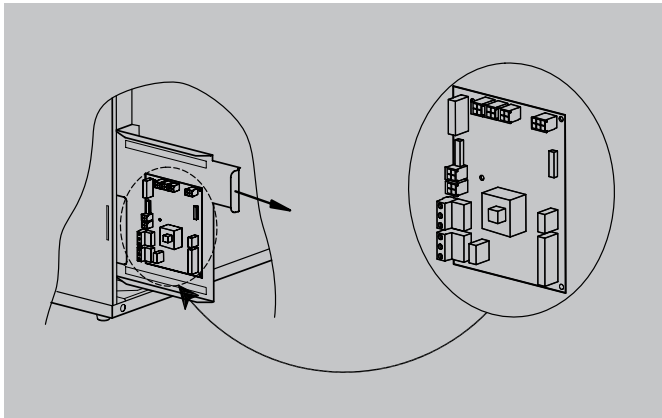
- 5 Clean the heat exchanger using hot water (55°C max.) and a regular detergent. Rinse the exchanger with hot water.



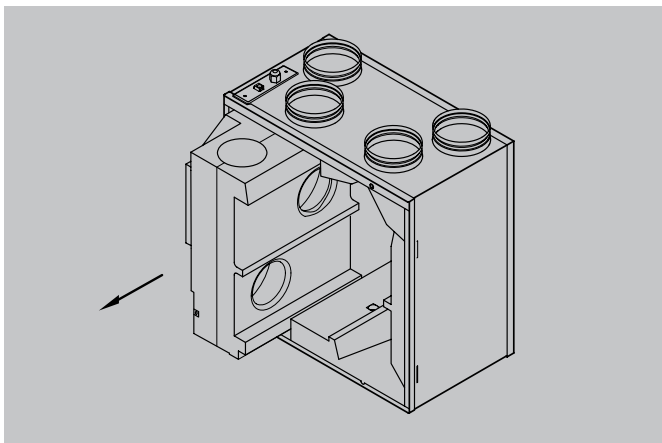
- 6 Remove the control panel.



- 7 Pull out the slide on which the basic pcb is mounted. Pull all connectors from the basic pcb that are connected with the swivel plate. Take the earth wire from the housing.

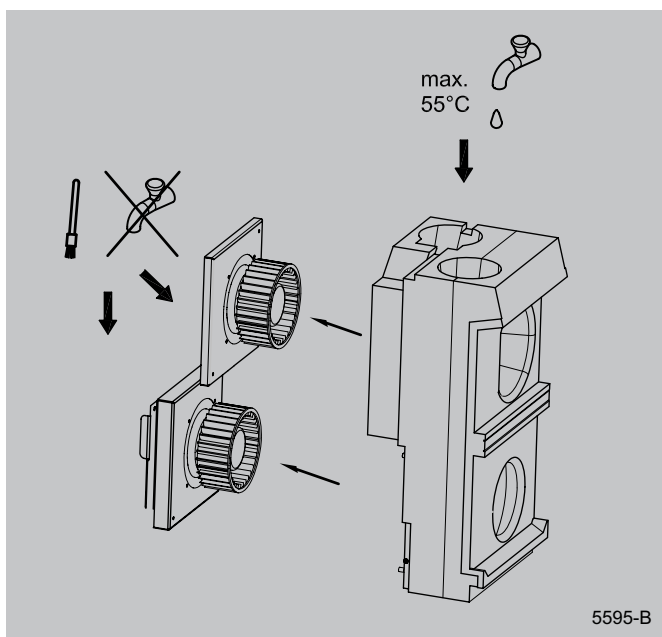


- 8 Remove the fan unit.



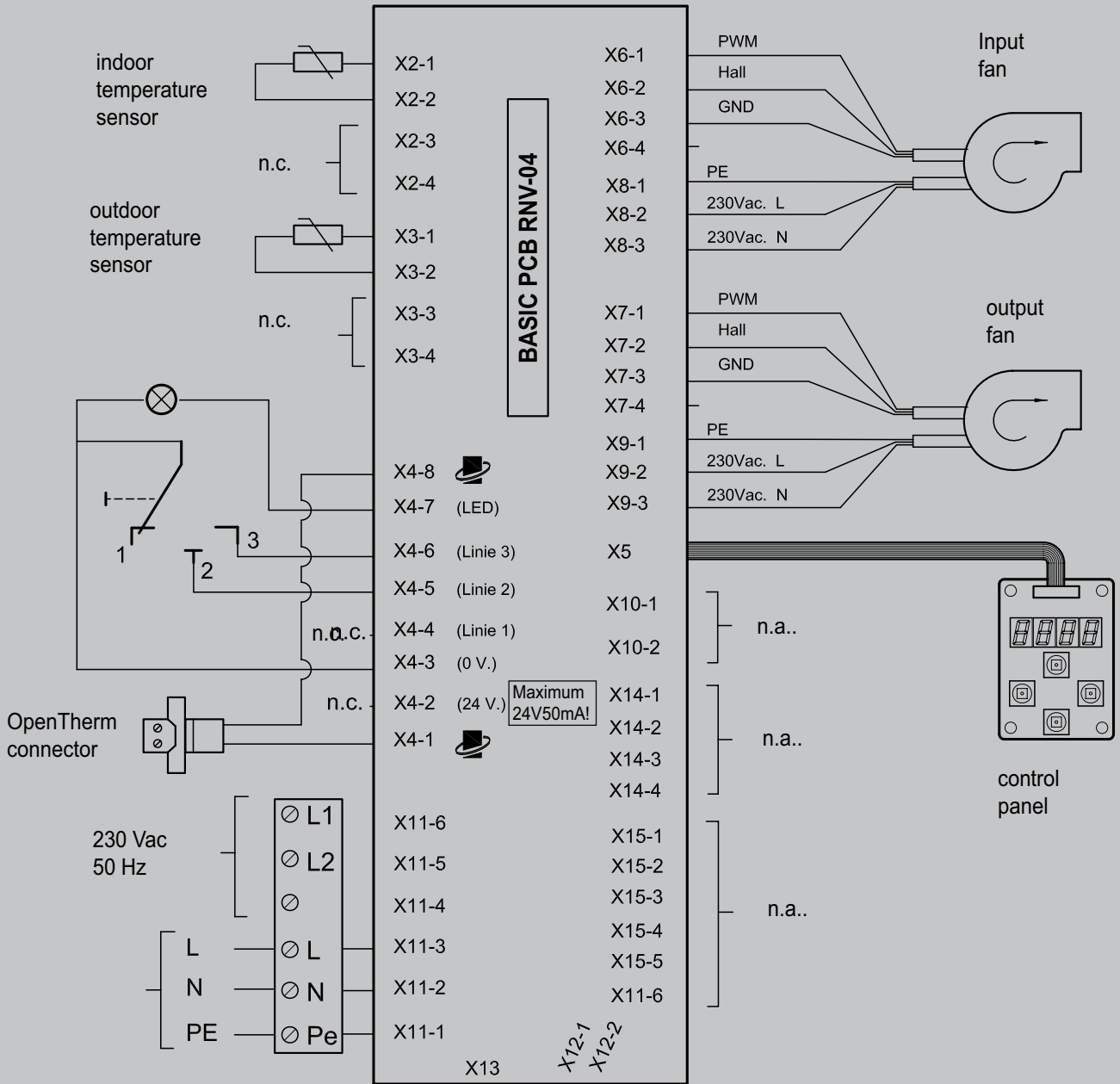
- 9 Remove the spiral casing.

- 10 Clean the fans with a soft brush. Make sure the balancing weights do not shift.

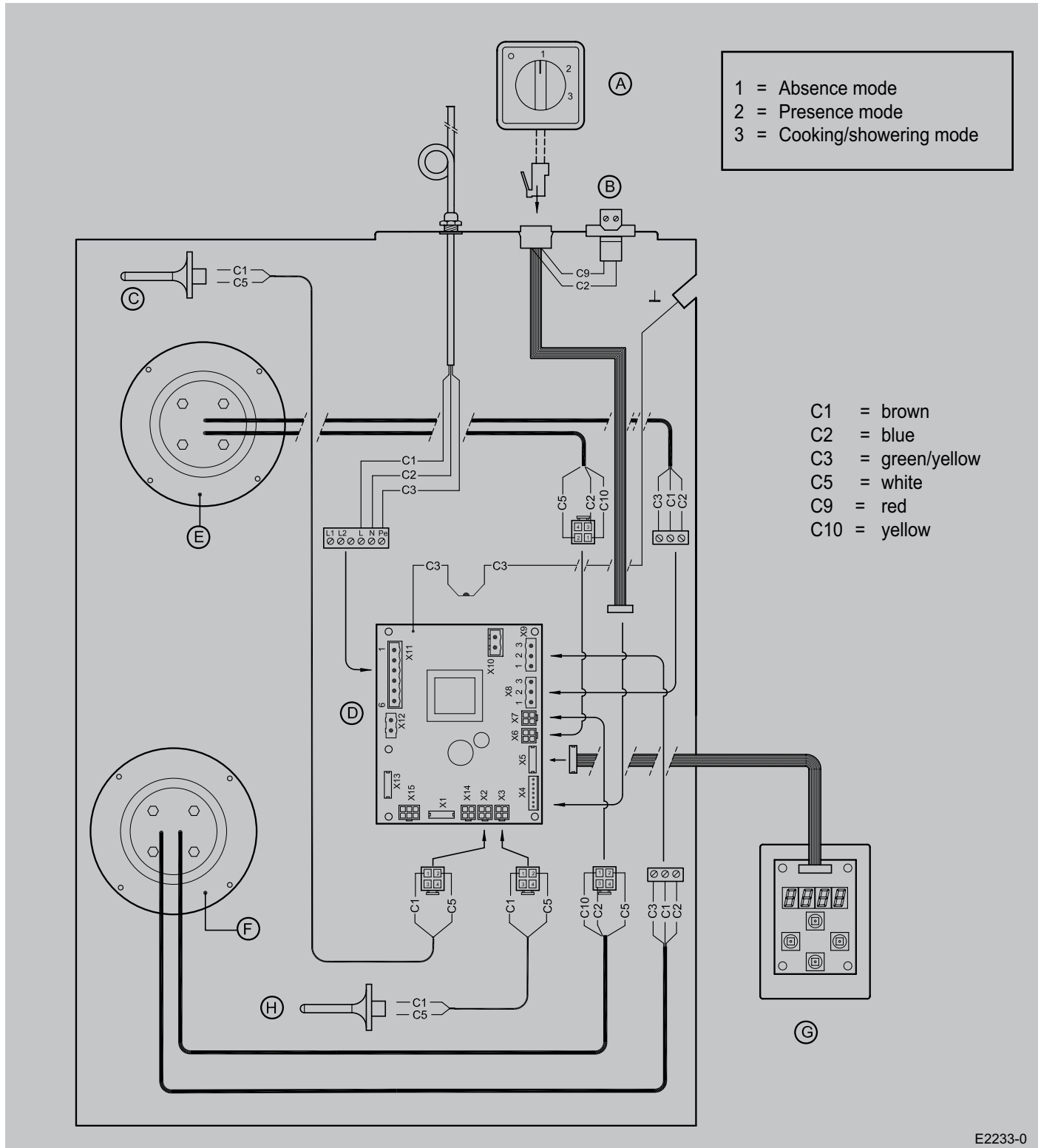


- 11 Place the spiral casing back on the fan unit.
- 12 Place the fan unit back in the appliance.
- 13 Place the earth wire back and replace the connectors that were pulled.
- 14 Replace the control panel.
- 15 Replace the heat exchanger back into the appliance.
- 16 Replace the front cover
- 17 Place the filters back into the appliance with the clean side facing the exchanger.
- 18 Close the filter door.
- 19 Switch on the power supply.
- 20 Switch on the appliance on the control panel (simultaneously press keys "OK" and "+" for 3 seconds).
- 21 After cleaning the filter or placing a new filter, the filter indication must be reset by pressing key "OK" for 1 second.

9.1 Basic diagram Vectaire WHHRC180DC



9.2 Wiring diagram Vectaire WHHRC180DC



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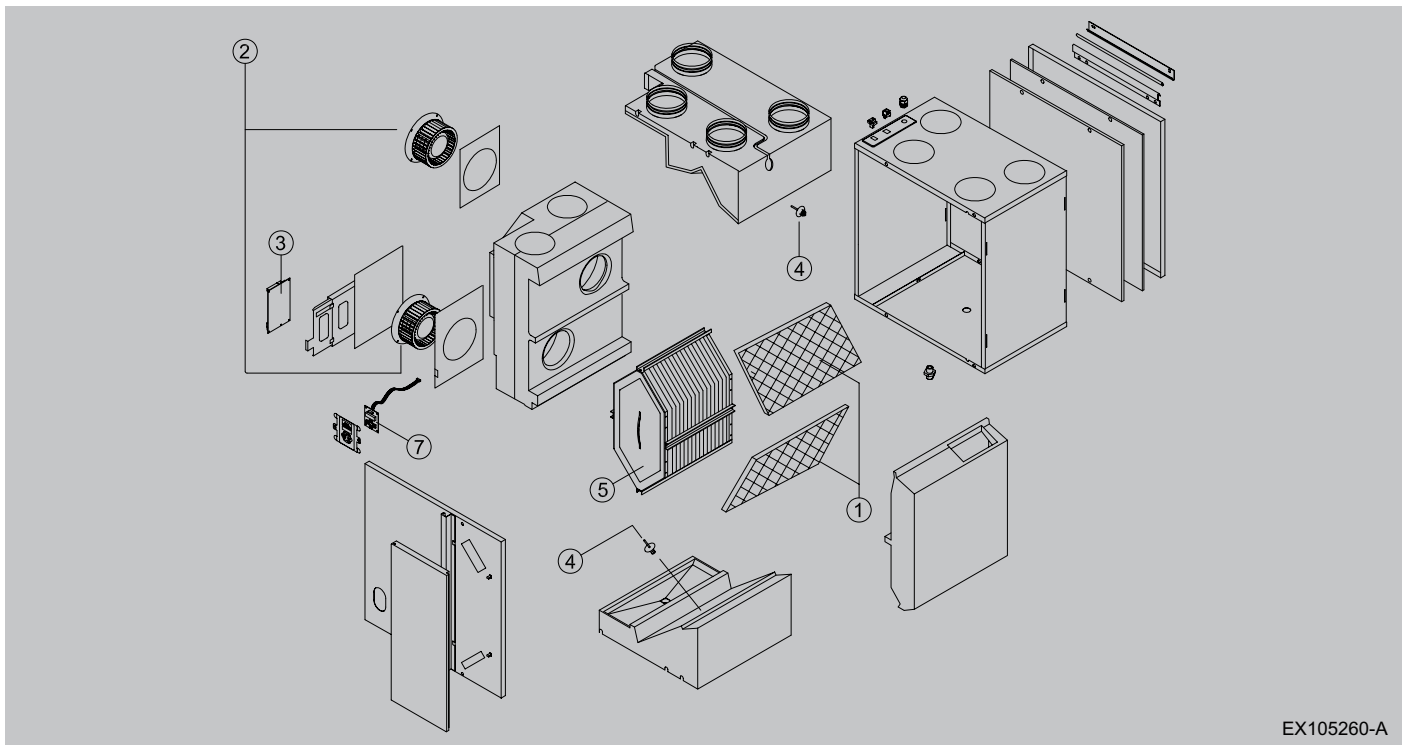
10.1 Exploded view Vectaire WHHRC180DC

When ordering parts, in addition to the article code number (see exploded view), please state the type of the heat recovery appliance, the serial number, the year of production and the name of the part:

NOTE:

Appliance type, serial number and year of production are stated on the identification plate on top of the appliance.

Example:	
Appliance type	Vectaire WHHRC180DC
Serial number	28002002101
Year of construction	2008
Part	Fan
Product code	531496
Quantity	1



EX105260-A

10.2 Spare parts Vectaire WHHRC180DC

No.	Article description	Product code
1	Filter kit	531525
2	Fan	531496
3	Basic pcb	531497
4	Temperature sensor	531451
5	Heat exchanger	531498
6	Installation instructions	611863
7	Control panel with display	531499

The policy of Vectaire Ltd is one of constant improvement and development. Therefore the right is reserved to change specifications without prior notice.




DECLARATION OF CONFORMITY

The heat recovery appliances type **Vectaire WHHRC180DC**

manufactured for Vectaire Ltd

bear the CE label

and satisfy the machine directive 89/392/EC, the low voltage directive 73/23/EC,

the materials directive ROHS 2002/95/EC and the EMC directive 89/336/EC.

Vectaire Ltd. warrants that the Vectaire WHHRC180DC

heat recovery appliances are manufactured from high-quality materials and that

continuous quality control ensures that they comply with the above directives.