

Renovent Excellent P300



INSTALLATION INSTRUCTIONS (English)

Air for Life

BRINK

Air for Life

Installation instructions

Heat recovery appliance
Renovent Excellent P300



STORE NEAR THE APPLIANCE

This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.

Children shall not play with the appliance.

Cleaning and user maintenance shall not be made by children without supervision.

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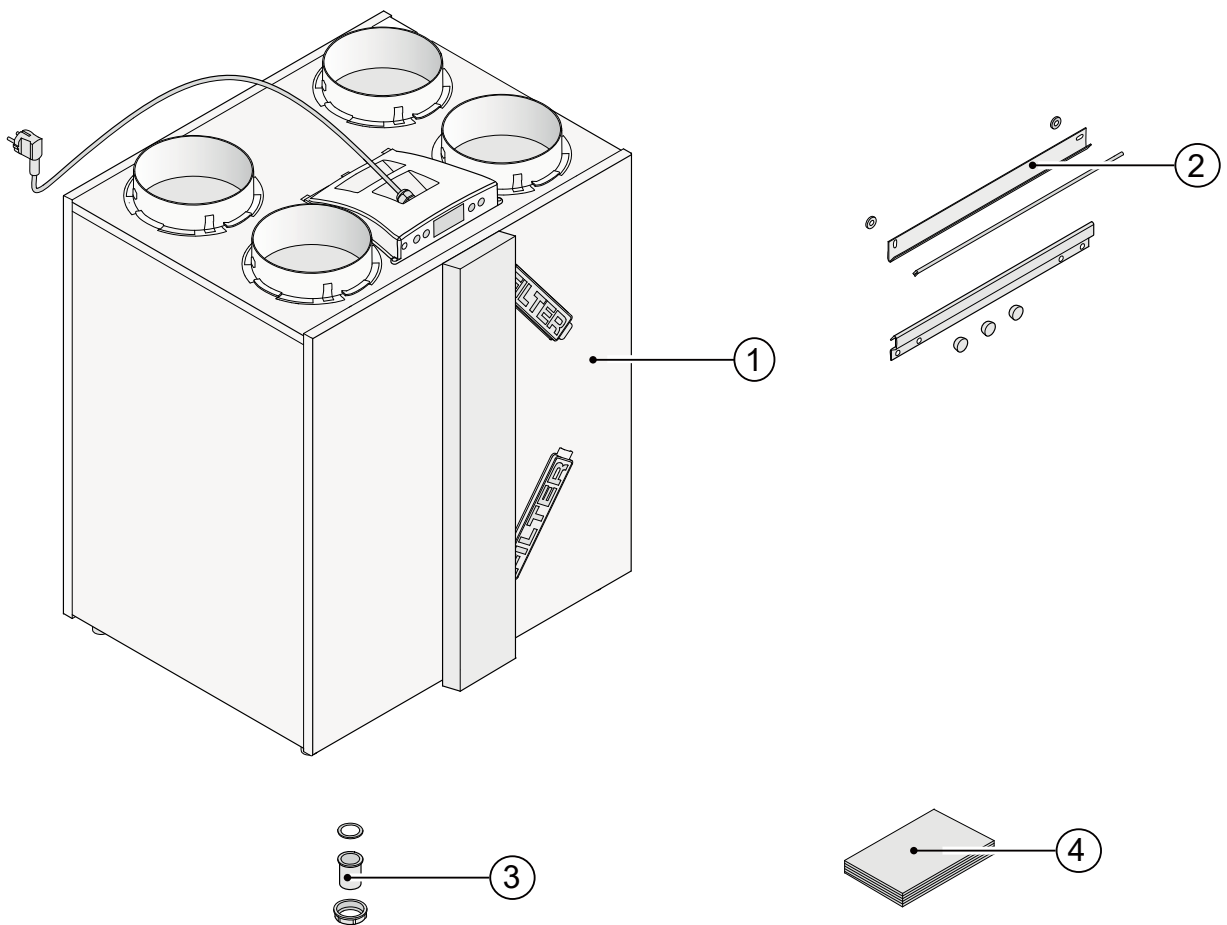
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1.1 Scope of delivery

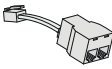


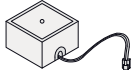

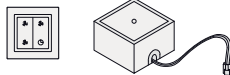



Before starting installation of the heat recovery unit, check that it has been supplied complete and undamaged.

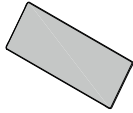
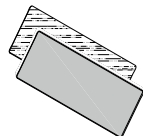

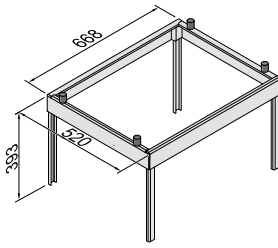
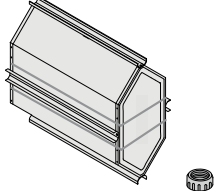
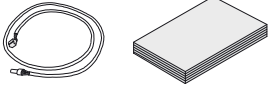
The scope of delivery of the heat recovery unit Renovent Excellent P300 includes the following components:

- ① Heat recovery appliance type Renovent Excellent P300
- ② Wall mounting bracket kit containing:
 - 2 x suspension strips
 - 3x protective caps
 - 1 x rubber strip
 - 2 x rubber rings
 - 1 x mounting instructions
- ③ PVC condensate discharge connection containing:
 - 1 x synthetic screw gland 1.5"
 - 1 x sealing ring
 - 1 x PVC glued coupling 32 mm
- ④ Documentation set consisting:
 - 1 x short manual



1.2 Accessories Renovent Excellent P300

Article description		Article code
Splitter RJ12		510472
Transmitter wireless remote control 2 positions (with. battery)		532170
Transmitter wireless remote control 4 positions (with. battery)		532171
Receiver wireless remote control (for battery version)		532172
Kit wireless remote control 2 positions (1 transmitter & 1 receiver)		532173
Kit wireless remote control 4 positions (1 transmitter & 1 receiver)		532174
3-way switch white flush-mounted (without filter indication) Delivered with insert plate and cover frame		540214
4-way switch with filter indication; flush mounted; modular connection. Delivered with insert plate and cover frame		540262
Electric (extra) preheater Excellent P300 Ø 160mm		310642

Article description		Article code
Filter kit 1 x ISO ePM 1 50% (F7) filter (1 pcs)		531771
Filter kit 1x ISO Coarse 45% (G3) & 1x ISO ePM 1 50% (F7) (1 pcs/ 1 pcs)		531773
RH-sensor		310657
Mounting support Excellent		217035
Enthalpie heat exchanger		532059
Servicetool		531961



The Brink Renovent Excellent P300 is a ventilation unit with heat recovery with an high efficiency and low-energy fans.

Features Renovent Excellent P300:

- steplessly adjustable air flow rates through a control panel;
- filter indication on the appliance and the possibility for filter indication on the multiple switch;
- a completely new intelligent frost protection system which ensures that also at low outdoor temperatures the appliance's performance remains optimal and that, if necessary, it activates the standard preheater.
- low sound level
- comes as standard with automatic bypass valve
- low energy consumption
- high efficiency

Renovent Excellent P300 is only available in one type:

- **Renovent Excellent P300**

The Renovent Excellent P300 is available in the left-handed or right-handed version. The position of the air ducts differs for these two versions!

For the correct position of the connection ducts and dimensions see §3.2.

The Renovent Excellent P300 comes ready to plug in with a 230 V mains plug and a connection for a low-voltage multiple switch on the outside of the appliance.

Note: Carefully check the position of these ducts on the basis of the connection drawings §3.2.

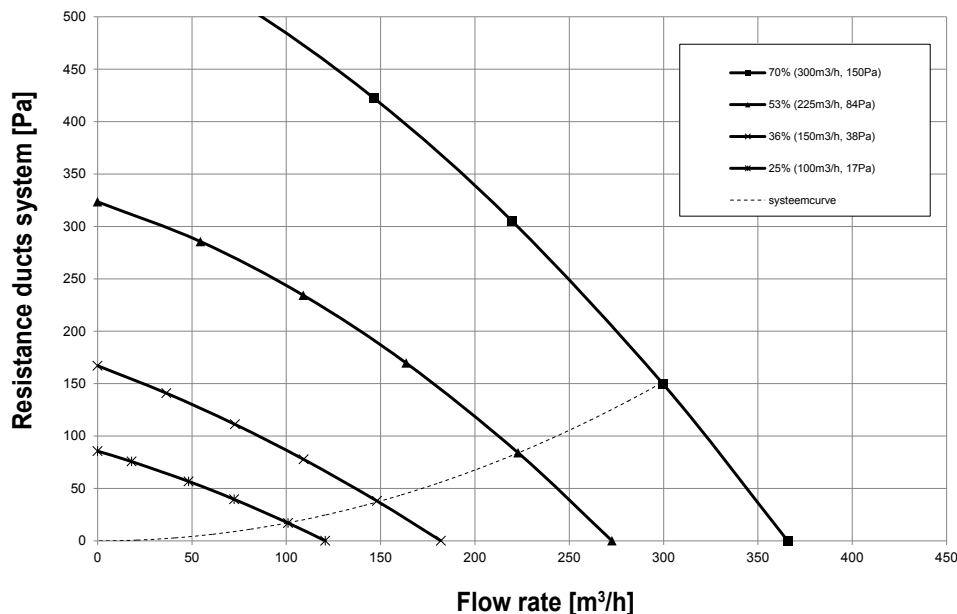
Version types Renovent Excellent P300				
Type	Version L of R	Position air ducts	Power supply	Type code
Renovent Excellent P300	Left-handed version	4 top connections	Power plug	4/0 L
	Right-hand version	4 top connections	Power plug	4/0 R

3.1 Technical information

Renovent Excellent P300				
Supply voltage [V/Hz]	230/50			
Protection degree	IP30			
Dimensions (w x h x d) [mm]	677 x 765 x 564			
Duct diameter [mm]	Ø160			
External diameter condensate discharge [mm]	Ø32			
Weight [kg]	38			
Filter class	ISO Coarse 45% (G3) {ISO ePM 1 50% (F7) optional for supply}			
Fan setting (factory setting)		1	2	3
Ventilation capacity [m³/h]	15%	25%	48%	68%

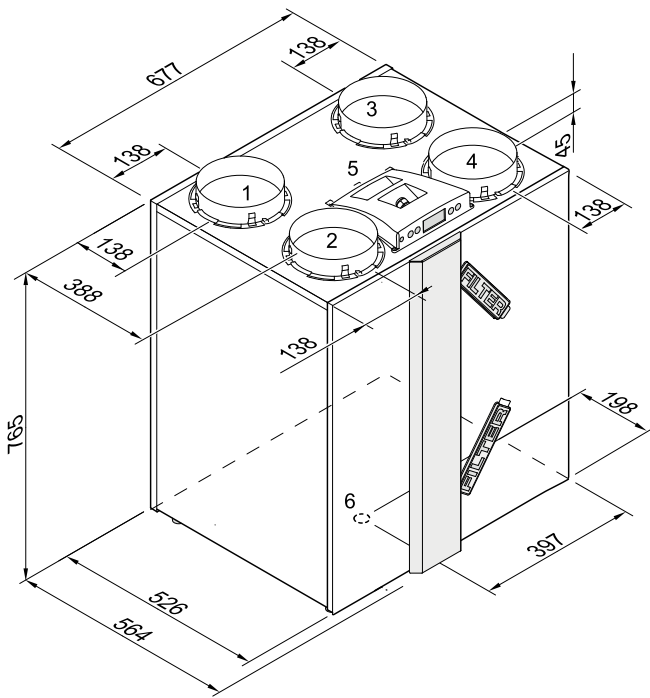
Sound power Excellent P300									
Ventilation capacity [m³/h]		90		150		210		300	
Sound power level Lw (A)	Static pressure [Pa]	50	100	50	100	50	100	50	100
	Housing emission [dB(A)]	30	33	38	38	44	46	50	52
	Duct "from dwelling" [dB(A)]	33	34	39	42	45	46	54	54
	Duct "to dwelling" [dB(A)]	44	47	52	55	60	60	67	67

In practice, the value may deviate 1 dB(A) as a result of measuring tolerances

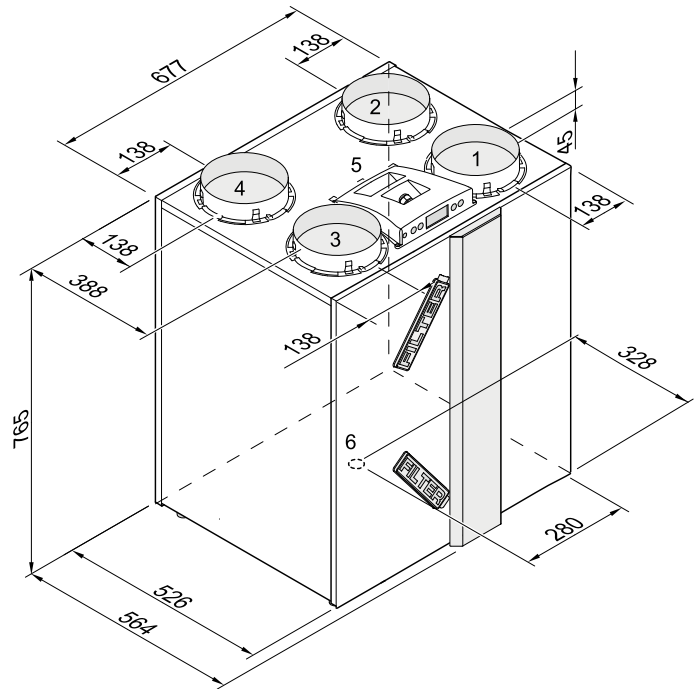


Power input system according to curve (dotted line)						
Inst. [%]	Qv [m³/h]	Pst [Pa]	U[V]	I [A]	Pel [W]	cosφ
70	300	150	230	0,89	107	0,5
53	225	84	230	0,43	52	0,5
36	150	38	230	0,23	24	0,4
25	100	17	230	0,16	14	0,4

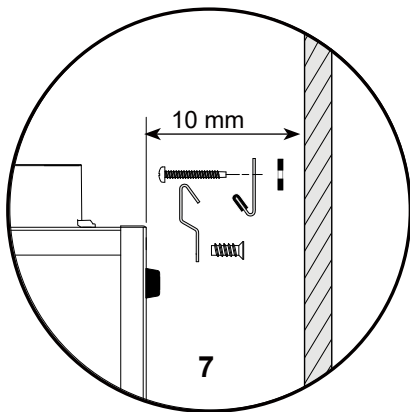
3.2 Connections and dimensions Renovent Excellent P300



Renovent Excellent P300 right-handed 4/0

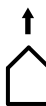



Renovent Excellent P300 left-handed 4/0

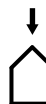


Mounting wall suspension kit

1 = To dwelling 

2 = To atmosphere 

3 = From dwelling 

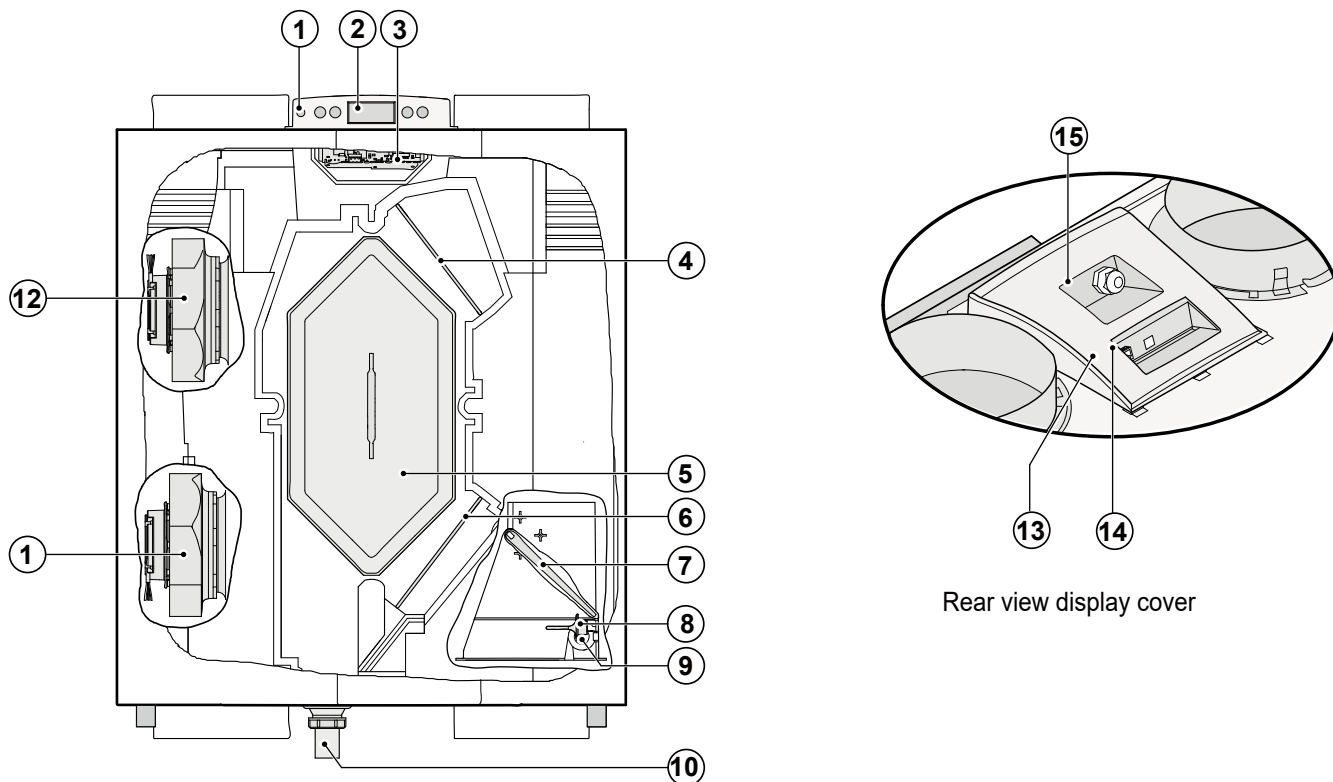
4 = From atmosphere 

5 = Electric connections

6 = Connection condensate discharge

7 = Wall mounting bracket (note the correct position of the rubber strip, washers and caps)

3.3 Exploded view appliance



1	Service connector	Computer connection for service purposes.
2	Display and 4 control buttons	Interface between user and control electronics.
3	Control board	Contains the control electronics for the basic functions.
4	Extract air filter	Filters air flow from dwelling
5	Heat exchanger	Ensures heat transfer between input and output air
6	Supply air filter	Filters outdoor air supplied to the dwelling
7	Bypass valve	Sends the air through or around the heat exchanger (For the 4/0 this valve is in the upper part of the appliance)
8	Outdoor temperature sensor	Measures outside air temperature.
9	Indoor temperature sensor	Measures the dwelling air temperature
10	Condensate discharge	Connection condensate discharge (Kit comes separately with the appliance)
11	Extract fan	Discharges air from the dwelling to the atmosphere.
12	Supply fan	Feeds fresh air into the dwelling.
13	Modular connector multiple switch X2	Connections for cable to multiple switch, if desired with filter indicator.
14	Connector eBus X1	Connection for eBus control
15	Mains cable 230 V	Gland power cable 230 volt

4.1 Description

The appliance comes plug and play and operates fully automatically. The extracted indoor air heats up the fresh, clean outdoor air. That saves energy and fresh air is sent to the required rooms.

The control system has three ventilation modes. The air flow rate can be adjusted per ventilation mode.

4.2 Bypass conditions

The standard bypass valve makes it possible to supply fresh outside air that is not heated by the heat exchanger. Particularly during summer nights it is desirable to supply cooler outside air. Then the hot air in the dwelling is replaced by cooler outside air in so far as possible.

The bypass valve opens and closes automatically when a number of conditions are satisfied (refer to the table below for bypass conditions).

The operation of the bypass valve can be adjusted in step number 9, 10 and step number 11 in the settings menu (see chapter 13).

Bypass valve conditions	
Bypass valve open	<ul style="list-style-type: none"> - The outdoor temperature is higher than 7°C and - the outdoor temperature is lower than the indoor temperature in the dwelling and - the temperature in the dwelling is higher than the temperature set at step no. 9 in the settings menu (set standard at 22°C).
Bypass valve closed	<ul style="list-style-type: none"> - The outdoor temperature is lower than 7°C or - the outdoor temperature is higher than the indoor temperature in the dwelling or - the temperature outside the dwelling is lower than the temperature set at step no. 9 in the settings menu minus the set temperature on the hysteresis (step no 10), this temperature is standard set at 20 °C (22.0 °C minus 2.0 °C).

4.3 Frost protection

To prevent freezing of the heat exchanger at extremely low outdoor temperatures, the Renovent Excellent P300 features intelligent frost control. Temperature sensors measure the temperatures across the heat exchanger and, if necessary, when the changer is threatening to freeze, there is a stepless imbalance in the appliance.

That guarantees a proper ventilation balance, also at very low outdoor temperatures.

When the preheater (option) is switched on and at extremely low outside temperatures the changer is still threatening to freeze, it will cause a stepless unbalance in the appliance.

5.1 Installation general

Installing the appliance

1. Placing the appliance (§5.2)
2. Connecting the condensate discharge (§5.3)
3. Connecting the ducts (§5.4)
4. Electric connection
 - Connecting the mains power, multiple switch and, if necessary, the OpenTherm/eBus coupler (§5.5)

Installation must take place under:

- Quality requirements ventilation systems dwellings.
- Quality requirements balanced ventilation in dwellings.
- The regulations for ventilation of dwellings and residential buildings.
- The safety regulations for low-voltage installations.
- The regulations for connection to interior sewers in dwellings and residential buildings.
- Any additional regulations of the local utilities.
- The installation instructions for the Renovent Excellent.

5.2 Placing the appliance

The Renovent Excellent P300 can directly be mounted to the wall using the suspension brackets supplied for that purpose. For a vibration-free result the appliance must be mounted to a solid wall with a minimum mass of 200 kg/m². A gypsum block or metal stud wall does not suffice! Additional measures such as double panelling or extra studs are required in that case. On request, a mounting support for floor mounting is available. In addition, the following aspects must be taken into account.

- The appliance must be placed level.
- Dwellings with construction moisture must be ventilated naturally during a certain period!
- The installation room must be frost-free.

- The installation room must be such that a good condensate discharge with air trap and pitch for condensate can be made.
- Make sure there is a free space of at least 70 cm at the front of the appliance and a free headroom of 1.8 m for cleaning the filters and carrying out maintenance.
- Make sure there is a free space of at least 20 cm above the display cover so it can always be removed.
- We recommend not to install the heat recovery unit in spaces with an average high RH (for instance bathroom). That will prevent condensation on the outside of the heat recovery unit.

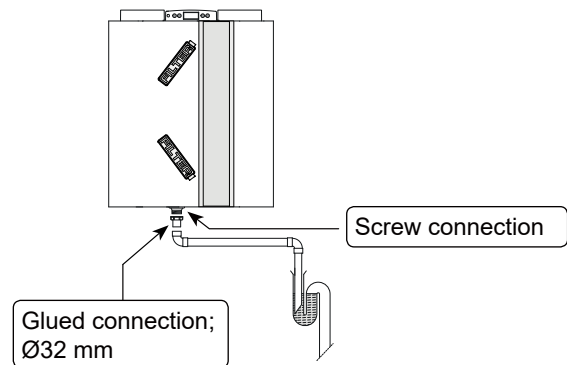
5.3 Connecting the condensate discharge

The condensate discharge line for the Brink Renovent HR is fed through the lower panel. The condensate must be discharged through a drainpipe.

The condensate discharge comes separately 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 32 mm.

The condensate discharge line can be glued to it, if necessary using a square bend. The installer can glue the condensate discharge in the desired position in the lower part of the appliance. The drain must discharge under the water level in the U-trap

Before connecting the condensate discharge to the appliance, pour water into the U-trap to create an air trap.



5.4 Connecting ducts

The air extract duct does not have to be fitted with a control valve. The appliance itself controls the air flow rates.

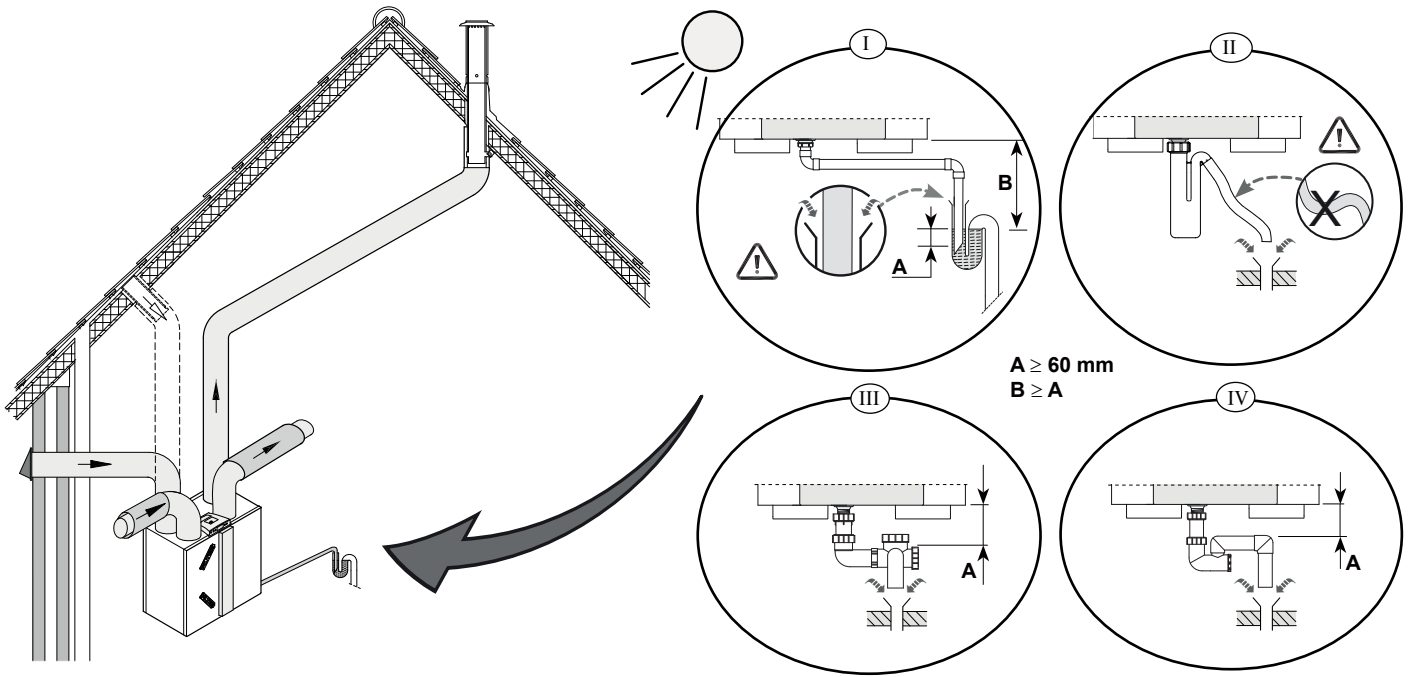
To prevent condensation on the outside of the outdoor air supply duct and the air exhaust duct downstream of the Renovent Excellent P300, these ducts must be provided with an external vapour barrier as far as the appliance. If thermally insulated piping is used here, additional insulation is not necessary.

For compliance with the maximum installation noise level of 30 dB, it will have to be assessed for every installation specifically what measures will be required to limit the noise. At least a muffler with a length of not less than 1.5 m is required, but additional measures may be necessary.

Please contact the Brink Consultancy Department if you have any questions on this subject.

Pay attention to crosstalk and installation noise, also for incorporated ducts. Design the duct with separate branches to the valves to prevent crosstalk. If necessary, the supply ducts must be insulated, for instance when they are installed outside the insulated envelope.

Preferably use Brink incorporated ducts. These ducts have been developed with a view to a low duct resistance. A duct diameter of 160 mm is required for the Renovent Excellent P300.

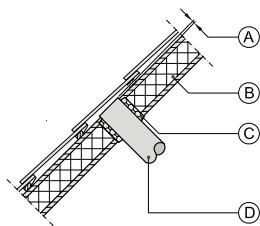


- 1 = Renovent Excellent P300 left-handed 4/0 (place level)
- 2 = Preferred ventilation air supply
- 3 = Ventilation air supply under the tiles
- 4a= Free suction bottom roof area
- 4b= Free suction top roof area
- 5 = Sewer vent

- 6 = Preferred location extract ventilation air; use Brink insulated ventilation roof sleeve.
- 7 = Thermally isolated pipe
- 8 = Condensate discharge
- 9 = Muffler
- 10= Ducts from and to dwelling

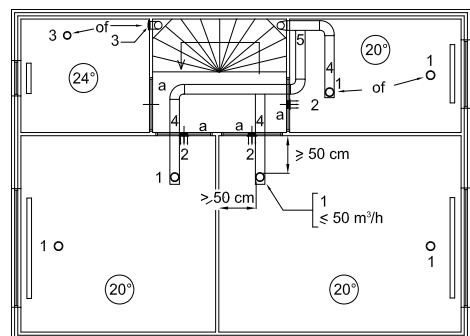
- Arrange the exterior air supply from the shadowed side of the dwelling, preferably from the wall or overhang. If the outdoor air is sucked in from under the tiles, it must be ensured that no condensation develops in the roof boarding and no water can run in. Ventilation air can be sucked in from under the tiles if air can access freely at the top and the bottom of the roof area and the sewage vent stack does not end under the tiles.

- The maximum permissible resistance in the duct system is 150 Pa at the maximum ventilation capacity. If the resistance of the duct system is higher, the maximum ventilation capacity will be lower.
- The location of the mechanical ventilation output and the sewer stack vent relative must be chosen to prevent nuisance.
- Choose the location of the supply valves to prevent fouling and draught. We recommend to use the Brink supply valves.
- When mounting flexible ducts, bear in mind that it must be possible to replace them in due course.



- A = Spacing 10 mm above roof deck
- B = Roof insulation
- C = Seal with foam
- D = Pipe for make-up air to be carefully insulated and provided with vapour barrier

- Feed the extract duct through the roof boarding in such a manner that no condensation develops in the roof boarding.
- Install the extract duct between the Renovent Excellent P300 and the roof sleeve in such a manner that surface condensation is prevented.
- Always use an insulated ventilation roof sleeve.
- Avoid the use of petroleum-based adhesives in air plant systems.



- 1 = Brink supply valves
- 2 = Supply from wall
- 3 = Suction valve in ceiling or high in wall
- 4 = Prevent crosstalk
- 5 = Preferably Brink incorporated ducts

a = Gap under the door 2 cm.

Install sufficient overflow openings, door gap 2 cm.

5.5 Electric connections

5.5.1 Connecting the power plug

The appliance can be connected to an easily accessible, earthed wall socket with the plug that is mounted to the appliance. The electric installation must comply with the requirements of your power company.



Warning

The fans and control board carry a high voltage. Always take the voltage from the appliance by pulling the power plug when working on the appliance.

5.5.2 Connecting the multiple switch

The multiple switch (not supplied with the appliance) is connected to the modular connector type RJ12 (connector X2) that is placed at the rear of the appliance's display cover.

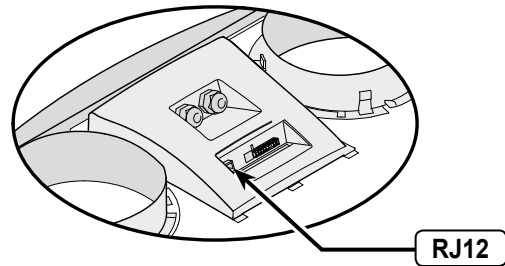
Dependent on the type of multiple switch that is used, a plug RJ11 or RJ12 can be connected to it.

- Application of a 4-way switch with filter indication in all cases requires an RJ12 plug in combination with a 6-core modular cable.
- Application of a 3-way switch without filter indication in all cases requires an RJ11 plug in combination with a 4-core modular cable.

Refer to diagrams §11.2.1 to §11.2.4 for connection examples multiple switch.

Other options include wireless remote control or a combination of multiple switches.

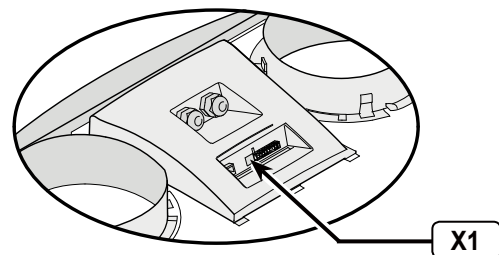
The 4-way switch can also be used to activate a 30-minutes boost mode by putting the switch to setting 3 for less than 2 seconds and directly turning it back to setting 1 or 2. The boost mode can be reset by putting the switch to setting 3 for longer than 2 seconds or by switching it to absence mode (☼).



5.5.3 Connecting eBus

An eBus connection can be made with the 2-pole connector X1 at the rear of the display cover.

The eBus protocol can for instance be used for coupling (cascade control) appliances (see §11.3). Because of polarity sensitivity, always connect contacts X1-1 to X1-1 and contacts X1-2 to X1-2 ; the appliance will not work when these contacts are interchanged!



6.1 General explanation control panel

The LCD display shows what the operating situation of the appliance is. Four control keys can be used to call up and modify settings in the control unit program.

When the mains power to the Renovent Excellent P300 is switched on, all display symbols will appear during 2 seconds; at the same time the blue backlight is switched on for 60 seconds..

When one of the control keys is operated, the display will light up during 30 seconds.

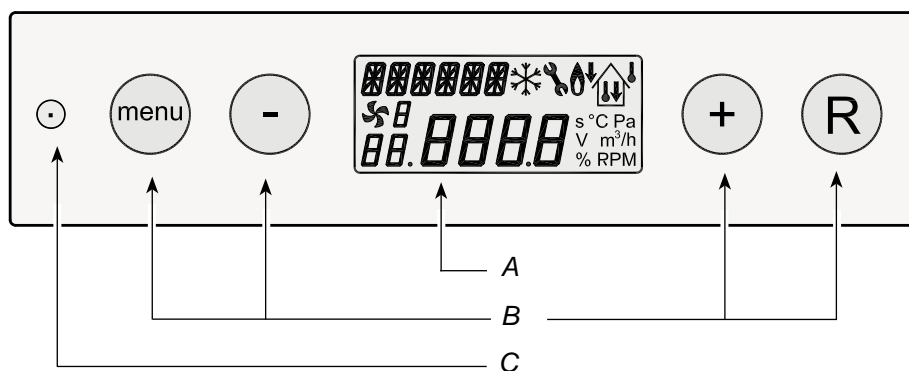
When no keys are operated or when no deviating situation has developed (such as a blocking fault) the display will show the **operating mode** (see § 6.2).

After operating the key 'Menu', the keys "+" or "-" can be used to select from three different menus, including:

- **Settings menu** (SET); see § 6.3
- **Readout menu** (READ), see § 6.4
- **Service menu** (SERV), see § 6.5

Press the R key to leave any menu and return to operating mode.

Briefly press the R key (shorter than 5 seconds) to switch on the display backlight without changing anything in the menu.



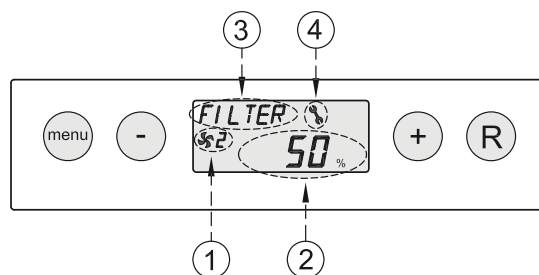
A = LCD
B = 4 control keys
C = service connector

Key	Function key
Menu	Activate the settings menu; to the next step in the submenu; confirm value change
-	Scroll; modify value; Switching on or off the Renovent Excellent P300 from operating mode (the press for 5 seconds)
+	Scroll; modify value
R	One step back in menu; cancel value modification; filter reset (the press for 5 seconds), delete fault history

6.2 Operating mode

In operating mode the display may simultaneously show 4 different situations/values.

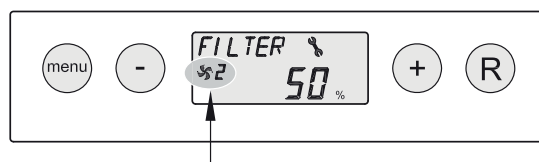
- 1 = **Status fan situation**, image coupled appliances (see § 6.2.1)
- 2 = **Air flow rate** (see § 6.2.2)
- 3 = **Message text** e.g. text filter situation, activation external switch contact etc. (see § 6.2.3)
- 4 = **Fault symbol** (see § 8.1 and § 8.2)



6.2.1 Status system fan

This part of the display shows a fan together with a number. When the supply and extract fans are running, the fan symbol is displayed. When the fans are stopped, the fan symbol is not visible.

The number behind the fan symbol indicates the fan situation. Refer to the table below for an explanation of the numbers.



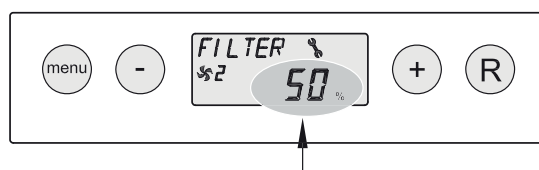
Status fan situation on display	Description
	The supply and extract fans are running at 15% or are inactive. ¹⁾ This situation depends on setting parameter 1 (see Chapter 13)
1	The supply and extract fans are running under mode 1 of the multiple switch. Air flow rate depends on setting parameter 2 (see chapter 13).
2	The supply and extract fans are running under mode 2 of the multiple switch. Air flow rate depends on setting parameter 3 (see chapter 13).
3	The supply and extract fans are running under mode 3 of the multiple switch. Air flow rate depends on setting parameter 4 (see chapter 13).
□	This Renovent Excellent P300 is coupled with the aid of eBus. The supply and extract fans of the Renovent Excellent P300 are running under switched mode of the ventilation mode “master” Renovent; in addition, (only for cascade connection) the display shows the “slave” number of the relevant Renovent. Air flow rate depends on the set parameters “master” Renovent.

¹⁾ When using a 3-way switch, the position can not be used.

6.2.2 Display air flow rate

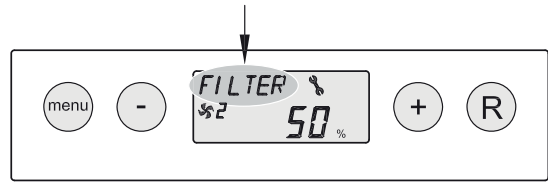
This shows the set air flow rate of the supply of extract fan. When when the air flow rates of the supply and extract fans differ, for instance when using an external switch contact, in all cases the highest air flow rate is shown.

When the appliance is switched off through software, the text “OFF” appears here.



6.2.3 Message text for operating mode

This part of the display may show a message text. The message text “Filter” always takes precedence over the other message texts.



The following message text may appear during operating mode.

Message text on display	Description	
FILTER	When the text “FILTER” appears on the display, the filter must be cleaned or replaced; for detailed information, see § 9.1	
Slave 1, Slave 2 etc.	For coupled appliances the message text shelves which appliances “Slave 1” - “Slave 9”; for detailed information, see §11.3. The “Master” appliance displays the regular image regarding ventilation mode.	<div style="text-align: center;"> <p><i>Master - appliance</i></p> <p><i>Slave - appliance</i></p> </div>

6.3 Settings menu

For optimum performance of the appliance, set values can be modified in the settings menu to adjust the appliance to the installation situation; refer to chapter 13 for a list of the set values. A number of set values, such as the air flow rates, are laid down in the design data.

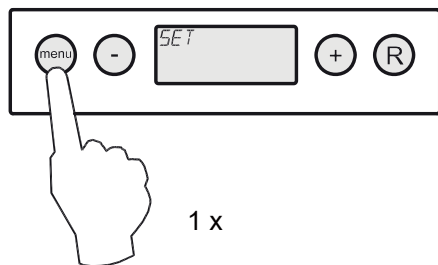
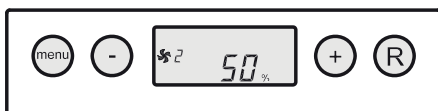
Warning:

Because changes may affect the proper performance of the appliance, changes of settings not described here require consultation with Brink.

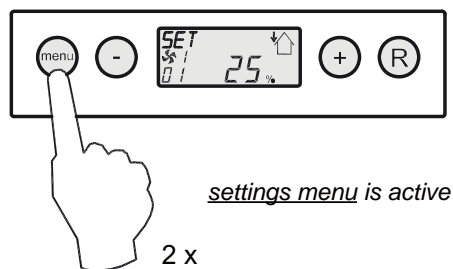
Incorrect settings may seriously affect the proper performance of the appliance!

Modifying the set value in the settings menu:

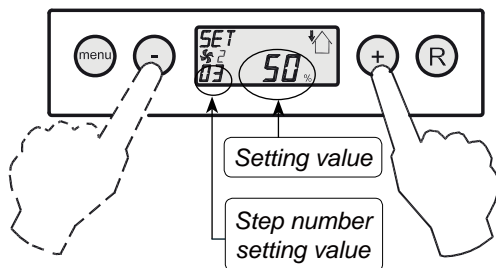
1. In operating mode, press the 'MENU' key.



2. Press the 'Menu' key to activate the "settings menu".

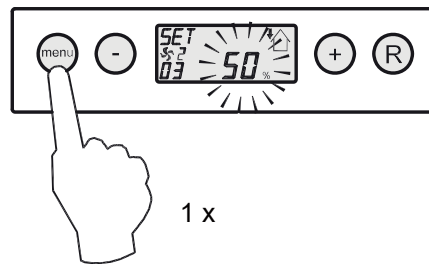


3. Select the set value to be modified with the '+' or '-' key.

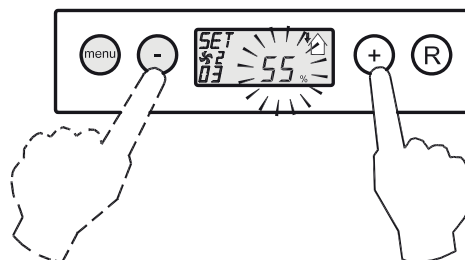


Selection setting value to be modified.

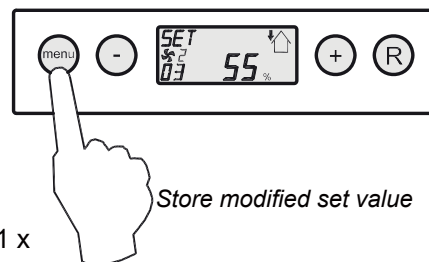
4. Press the 'Menu' key to select the required set value.



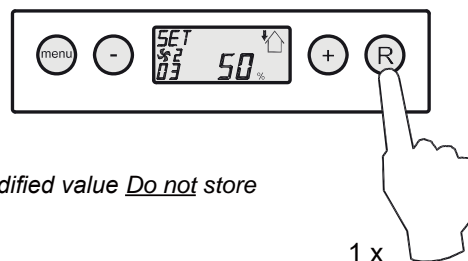
5. Use keys '-' and '+' key to modify selected set value.



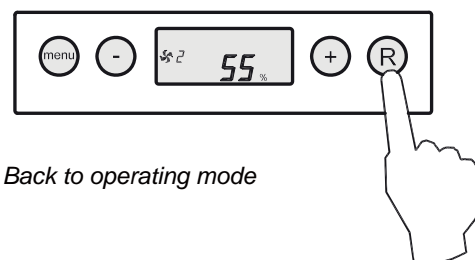
6. **Store modified set value**



Do not store modified set value



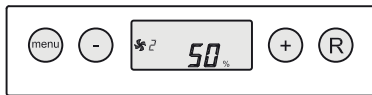
7. To modify other set values, repeat step 3 - 6. When you do not want to modify any more set values and return to operating situation, then press the 'R' key.



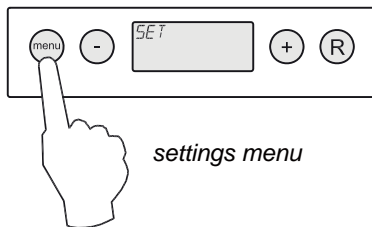
6.4 Readout menu

The readout menu can be used to call up a number of current sensor values to obtain more information on the appliance's performance. Modifying values of settings is **not** possible in the readout menu. The **readout menu** can be displayed as follows.

1. In operating mode, press the 'MENU' key. Now the display shows the **settings menu**.

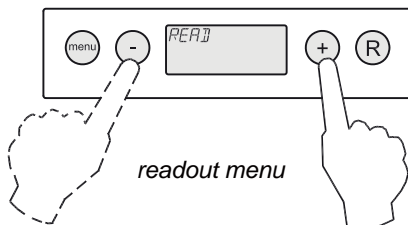


operating mode



settings menu

2. Use the '+' and the '-' key to go to the **readout menu**.



readout menu

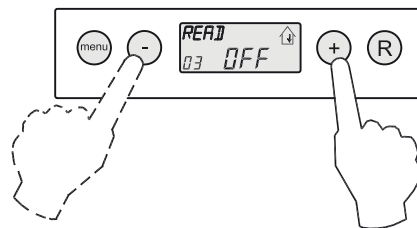
3. Activate the **readout menu**.



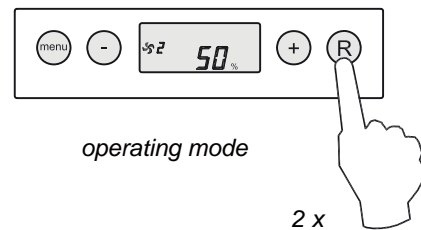
readout value

Step no. readout value; refer to the table below for an explanation

4. Use the '+' and the '-' key to scroll through the rear menu.



5. Press the 'R' key twice to go back to operating mode. If no key is operated during 5 minutes, the appliance automatically returns to operating mode.



operating mode

2 x

Step no. readout value	Description readout value	Unit
01	Current temperature from dwelling	°C
02	Current temperature outdoors sensor	°C
03	Bypass status (ON = bypass valve open, OFF = bypass valve closed)	
04	Status frost protection (ON = frost protection active, OFF = frost protection not active)	
09	Actual relative humidity (option)	%

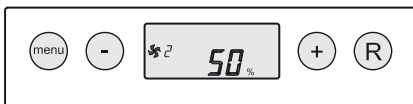
6.5 Service menu

The service menu shows the most recent 10 fault messages.

In the event of a locking fault, the settings menu and the readout menu are blocked and only the service menu can be opened; Pressing the 'menu' key directly opens the service menu.

The **service menu** can be displayed as follows.

1. In operating mode, press the 'MENU'- key. The display now shows the settings menu.

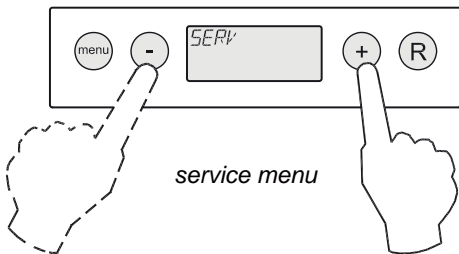


operating mode



settings menu

2. Use the '+' and the '-' key to go to the **service menu**.



service menu

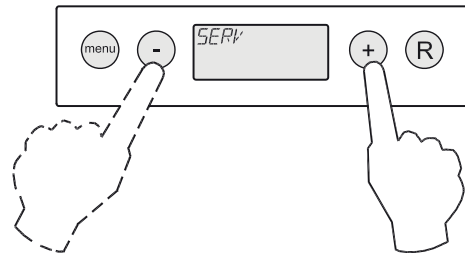
3. Activate the **service menu**.



Fault code; refer to § 8.1 and § 8.2 for explanation fault code

No. fault message

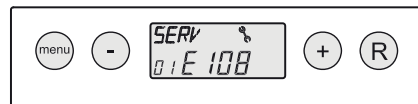
4. Use the '+' and the '-' key to scroll through the messages in the service menu.



- Display not any fault message.



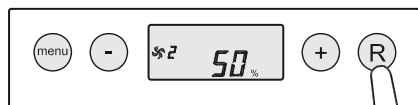
- Current fault message (spanner on display).



- Unsolved fault message (no spanner on display).



5. Press the 'R' key twice to go back to operating mode. If no key is operated during 5 minutes, the appliance automatically returns to operating mode.



operating mode

2 x

All fault messages can be deleted by pressing the "R" key in the service menu during 5 seconds; This is only possible when there is no active fault!

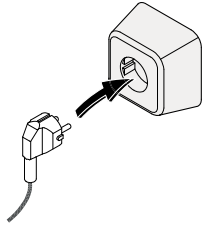
7.1 Switching the appliance on and off

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

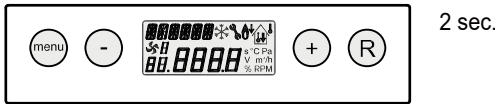
- Switching on and off by inserting or pulling the power plug.
- Switching on and off through software on the appliance display.

Switching on

- Switching on the mains power.
Connect the 230 V power plug to the electric system.

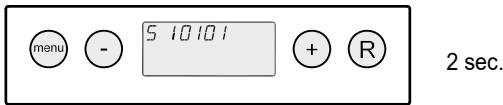


All display symbols appear during 2 seconds.



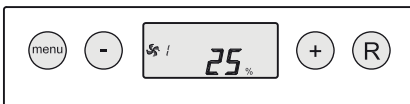
2 sec.

The software version appears during 2 seconds.



2 sec.

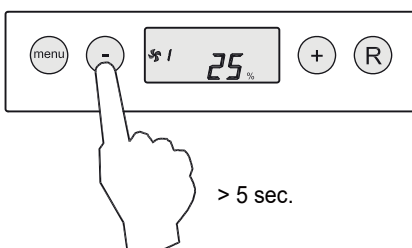
Directly after that the Renovent Excellent P300 will be running in the mode is set on the multiple switch. If no multiple switch is connected, the appliance will always run in mode 1.



- Switching on through software
When the Renovent Excellent P300 switched off through software, the display will show the text "OFF".



The appliance can be switched on by pressing the key '-' during 5 seconds.



> 5 sec.

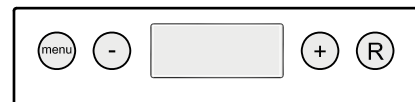
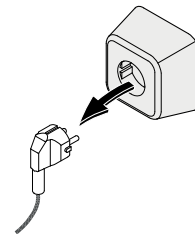
Switching off:

- Switching off through software
Press the "-" key for 5 sec. to switch off the appliance through software. The text 'OFF' appears on the display.



>5 sec.

- Switching off the mains power ;
Pull the 230 V mains plug from the mains to take the voltage from the appliance.
Nothing is shown on the display now.



Warning



When working on the appliance, always take the voltage from the appliance by first switching it off through software and subsequently pulling the power plug.

7.2 Setting the air flow rate

Proper ventilation contributes to healthy air in the home, optimum comfort and flawless performance of the installation. The factory supplies the Renovent Excellent P300 flow rates set to 15%, 25%, 48% en 68%. The performance and the energy consumption of the Renovent Excellent P300 depend on the pressure drop in the duct system as well as on the filter resistance.

Important:

A multiple switch, if applicable, must be used as follows

Mode 5: **Holiday mode**

15 % (not in combination with a 3-way switch).

Mode 1 : **Absence mode**

About 30% of the design flow rate must always be lower than mode 2.

Mode 2 : **Presence mode**

60-70% of the design flow rate must always be lower than mode 3;

Mode 3 : **Cooking/showering mode**

100% of the design flow rate or the maximum unit capacity

If these conditions are not complied with, the air flow rate of the higher mode will automatically be adjusted.

See the settings menu, §6.3, for changing the flow rates.

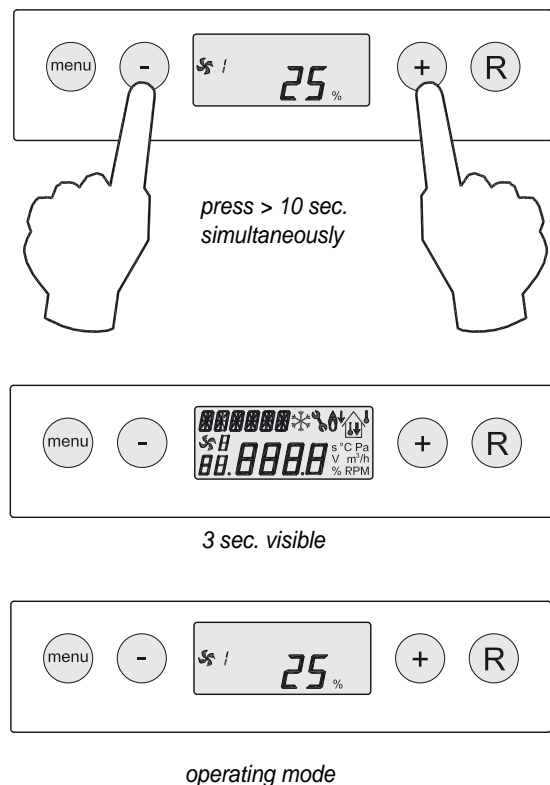
7.3 Other settings installer

Various other settings of the Renovent Excellent P300 can also be modified. How to modify these is explained in §6.3.

7.4 Factory setting

It is possible to reset all modified settings back to factory setting in one go.

All modified settings will be at the values they had when the Renovent Excellent P300 was supplied from the factory; all message codes / fault codes will be erased from the service menu as well. The filter notification process will not reset.



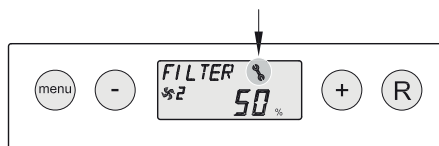
8.1 Trouble shooting

When the appliance control system detects a fault, it is indicated on the display with a spanner symbol, possibly together with a fault code.

The appliance makes a distinction between a fault at which the appliance keeps running (limitedly) and a serious (locking) fault at which both fans are switched off.

In case of locking fault, the settings and readings menu is switched off as well and only the service menu is available.

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 the operational mode.



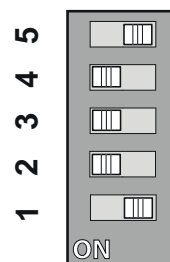
Fault E999

If, when the appliance is powered up directly to message **E999** appears on the display, the mounted control board is not suitable for this appliance or the dip switches on the control board are set incorrectly.

For the location of the dip switches see § 10.1.

In that case, check whether the dip switches on the control board are set as shown in the drawing of the dip switches settings; if they are, and the message E999 still appears, then replace the control board by a board of the correct type.

Renovent
Excellent P300
type 4/0



8.2 Display codes

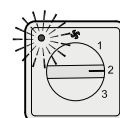
Non-locking fault

When the appliance detects a non-locking fault, it will still keep running (limitedly). The display does show the fault symbol (spanner).



Locking fault

When the appliance detects a locking fault, it will no longer work. The (permanently lighted) display shows the fault symbol (spanner) together with fault code. The red LED on the multiple switch (if applicable) will be blinking. Contact the installer to remedy this fault. A locking fault cannot be remedied by taking the voltage from the appliance; first the fault must be solved.



Warning

When working on the appliance, always take the voltage from the appliance by pulling the power plug.

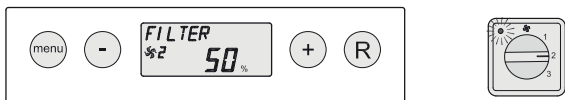
Fault code	Cause	Action appliance	Action installer
E103 (non-locking fault)	Bypass fault .	<ul style="list-style-type: none"> - None. (Current too low → stepper motor not correctly connected or effective; Current too high → short-circuit in wiring or stepper motor). 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Check connection stepper motor; replace wiring or stepper motor.
E104 (locking fault)	Extract fan defective.	<ul style="list-style-type: none"> - Both fans are switched off. - If applicable: Postheater(s) is switched off. - Restart every 5 minutes. 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Replace extract fan. • Put voltage back on appliance; Fault will automatically be reset. • Check cabling.
E105 (locking fault)	Supply fan defective.	<ul style="list-style-type: none"> - Both fans are switched off. - If applicable: Postheater(s) is switched off. - Restart every 5 minutes. 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Replace. • Put voltage back on appliance; Fault will automatically be reset. • Check cabling.
E106 (locking fault)	The temperature sensor that measures the outdoor temperature is defective.	<ul style="list-style-type: none"> - Both fans are switched off. - Bypass closes and is blocked. 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Replace temperature sensor. • Put voltage back on appliance; fault will automatically be reset.
E107 (non-locking fault)	The temperature sensor that measures the temperature of the extract air is defective.	<ul style="list-style-type: none"> - Bypass closes and is blocked. 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Replace indoor temperature sensor.
E111 (non-locking fault)	If present: The RH-sensor that measures the humidity is defective.	<ul style="list-style-type: none"> - Appliance continues to operate 	<ul style="list-style-type: none"> • Take the voltage from the appliance. • Replace RH-sensor.
E999 (locking fault)	Dip switches on control board not set correctly.	<ul style="list-style-type: none"> - Appliance does nothing; red fault LED on multiple switch is not activated either. 	<ul style="list-style-type: none"> • Put dip switches incorrect position. (see § 8.1).

Note!

If mode 2 of a multiple switch does not work, the modular connector of the multiple switch has been connected the wrong way round. Cut off one of the RJ connectors to the multiple switch and mount a new connector the other way round.

9.1 Filter cleaning

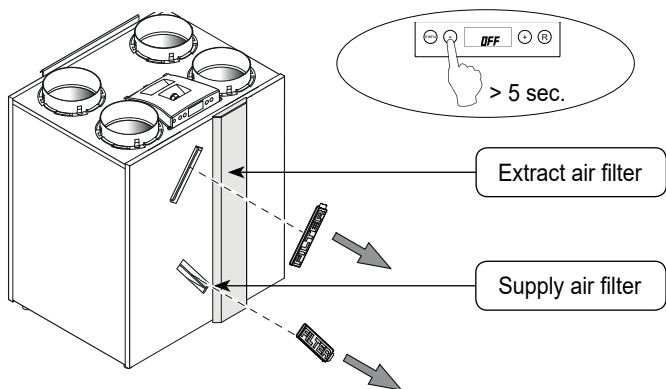
User maintenance is limited to periodically cleaning or replacing the filters. The filter only has to be cleaned when that is indicated on the display (it shows the text "FILTER") or, if a multiple switch with filter indication is mounted, when the red LED at the switch lights up.



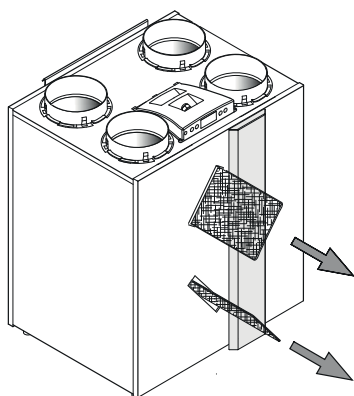
The filters must be replaced every year. It is not permitted to use the appliance without filters.

Cleaning or replacing the filters:

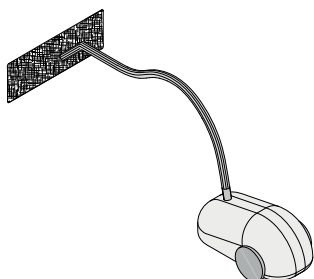
- 1 - Press the '-' key for 5 seconds.
- Remove the two filter plugs



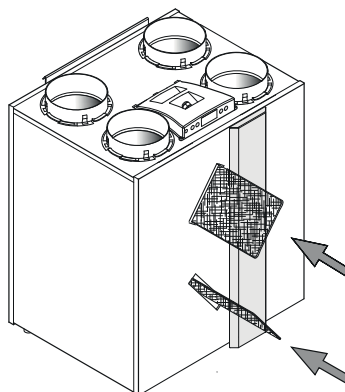
- 2 Remove the filters. Remember in what way the filters are taken out.



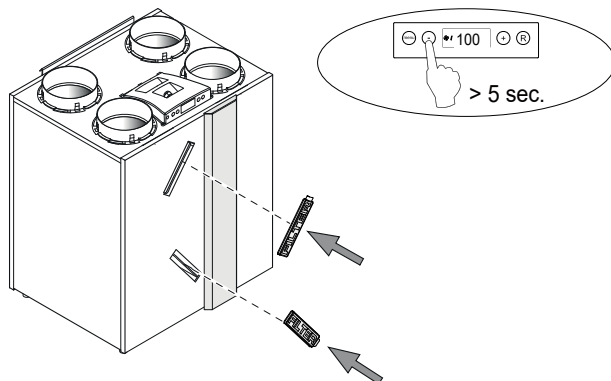
- 3 Clean the filters.



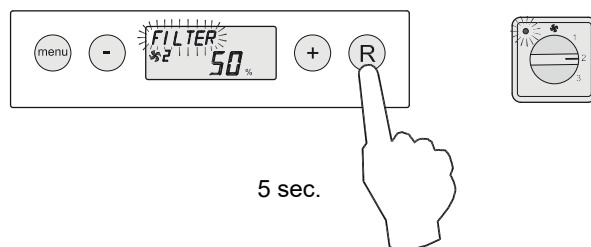
- 4 Place the filters back the same way as they were taken out.



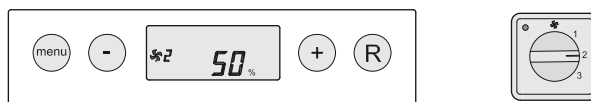
- 5 - Mount the two filter plugs.
- Switch on the appliance by pressing the key '-' during 5 seconds.



- 6 After the filters have been cleaned or replaced, press the "R" key for 5 seconds to reset the filter indication. The text "FILTER" will blink briefly to confirm that the filters have been reset. Also when the message "FILTER" has not yet appeared on the display, a filter reset can be carried out; the "counter" will be reset to zero.



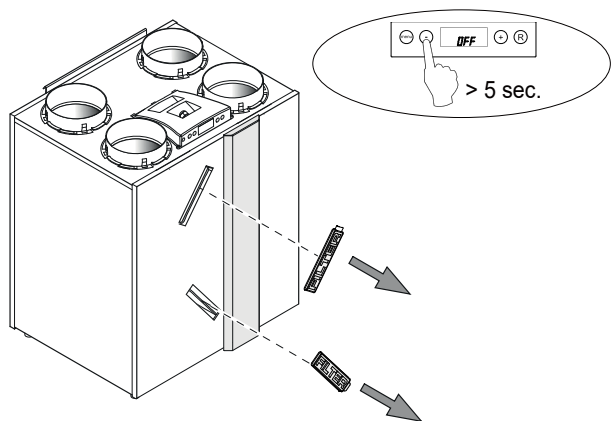
After the filter reset, the text "FILTER"; disappears, the light at the multiple switch is off and the display is back to operating mode.



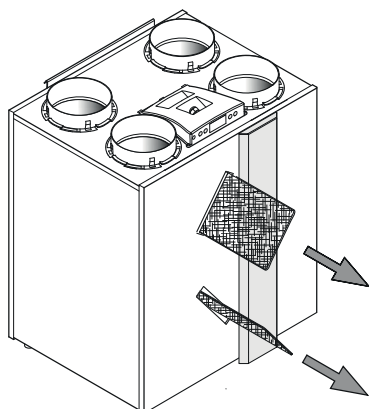
9.2 Maintenance

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

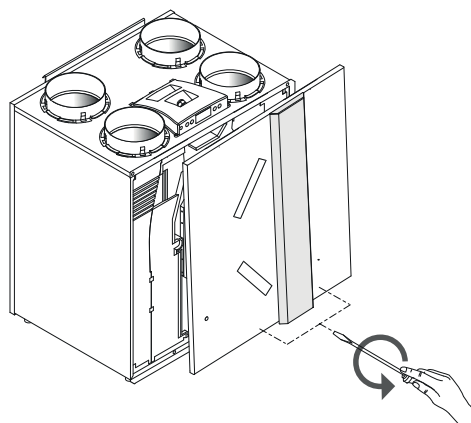
- 1 Switch off the appliance on the control panel (Press the 'OFF' key for 5 seconds; the appliance will be switched off through software) and switch off the power. Remove the two filter plugs.



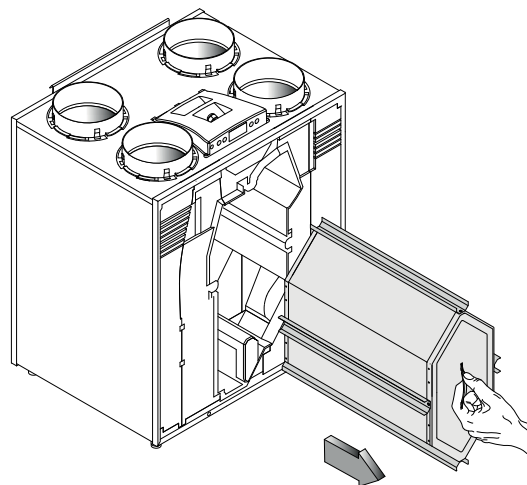
- 2 Remove the filters.



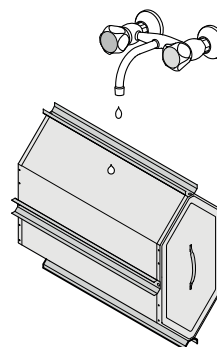
- 3 Remove the move the front cover.



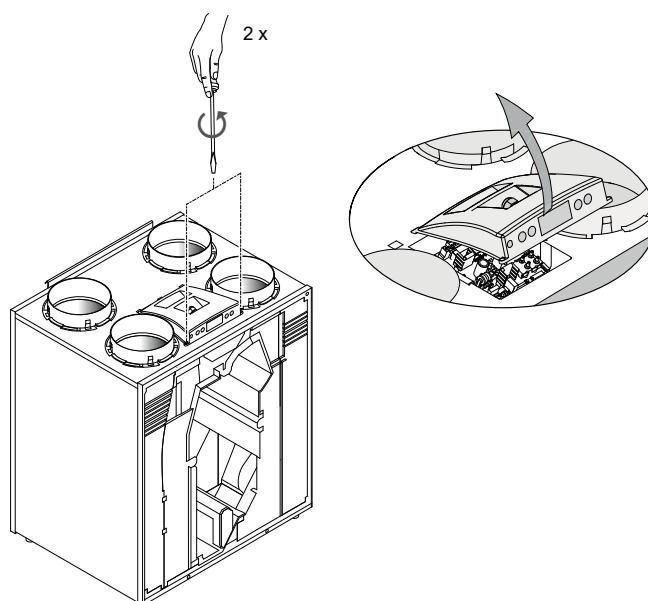
- 4 Remove the heat exchanger. Be careful not to damage the foam parts in the appliance.



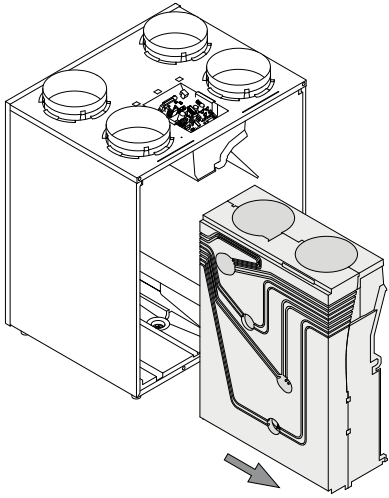
- 5 Rinse the exchanger with hot water (max. 45 °C) and a regular detergent. Rinse the exchanger with hot water.



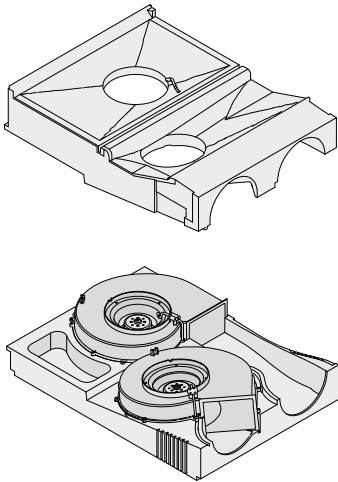
- 6 Take off the display cover. Note! First disconnect the connectors on the rear of the display cover.



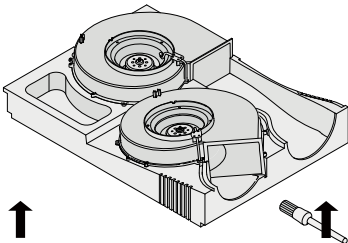
- 7 Remove 3 connectors from the board.
- 8 Slide the fan assembly out of the appliance.



- 9 Now the fan assembly can carefully be split so the two fans are accessible. Make sure the fans remain in the lower fan section!



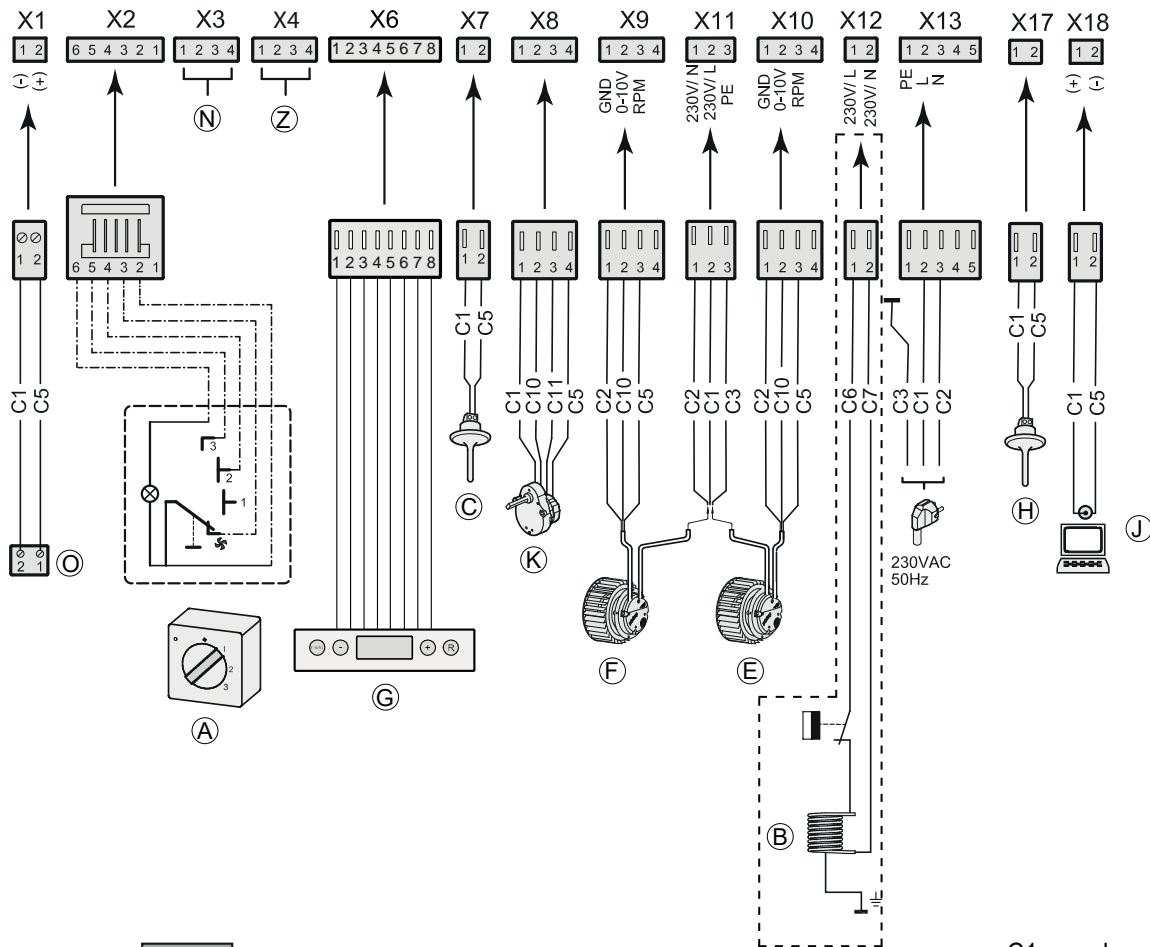
- 11 Clean the fans with a soft brush.
Make sure the balancing weights do not shift!



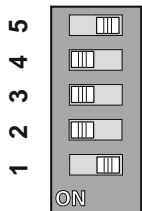
- 12 Replace the separated part of the fan assembly
- 13 Place the complete fan assembly back into the appliance.

- 14 Remount the display cover and reconnect the loose connectors on the rear of the display cover.
- 15 Place the heat exchanger back into the appliance.
- 16 Place the front cover.
- 17 Place the filters back into the appliance with the clean side facing the exchanger.
- 18 Mount the two filter plugs.
- 19 Switch on the power supply.
- 20 Switch on the appliance on the control panel (pres key "-" for 5 seconds).
- 21 After cleaning the filter or placing a new filter, reset the filter indication by pressing the key "R" for 5 seconds.

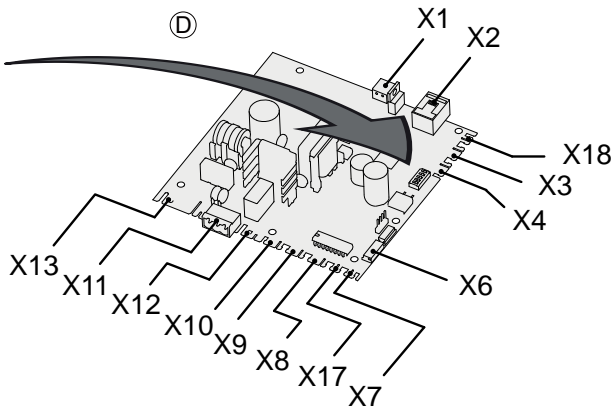
10.1 Basic diagram



Renovent
Excellent P300
type 4/0



- C1 = brown
- C2 = blue
- C3 = green/yellow
- C5 = white
- C6 = wire no.1
- C7 = wire no.2
- C10 = yellow
- C11 = green

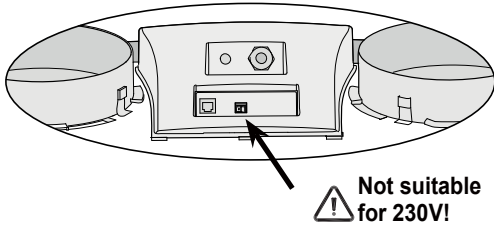


- A = Multiple switch
- B = Preheater
- C = Outdoor temperature sensor
- D = Control board
- E = Supply fan
- F = Extract fan
- G = Control panel
- H = Indoor temperature sensor

- J = Service connector
- K = Valve motor bypass
- N = Not applicable
- O = E bus connector (polarity sensitive) or OpenTherm, application depending on parameter setting 12
- Z = RH-sensor (option)

11.1 Connections connectors

Connector X1

**EBus or. OpenTherm connector X1**

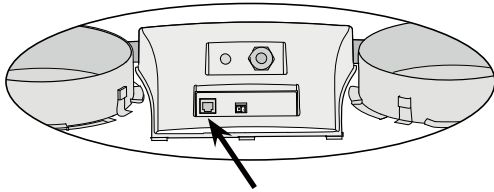
Two-pole screw connector.

Set ex factory as eBus connector; after modifying parameter 12 in the Settings menu, also suitable as OpenTherm connector (see §11.3).

Only suitable for low voltage.

Note: For the eBus Application, this connector is polarity-specific.

Connector X2

**Modular connector X2 for rpm control**

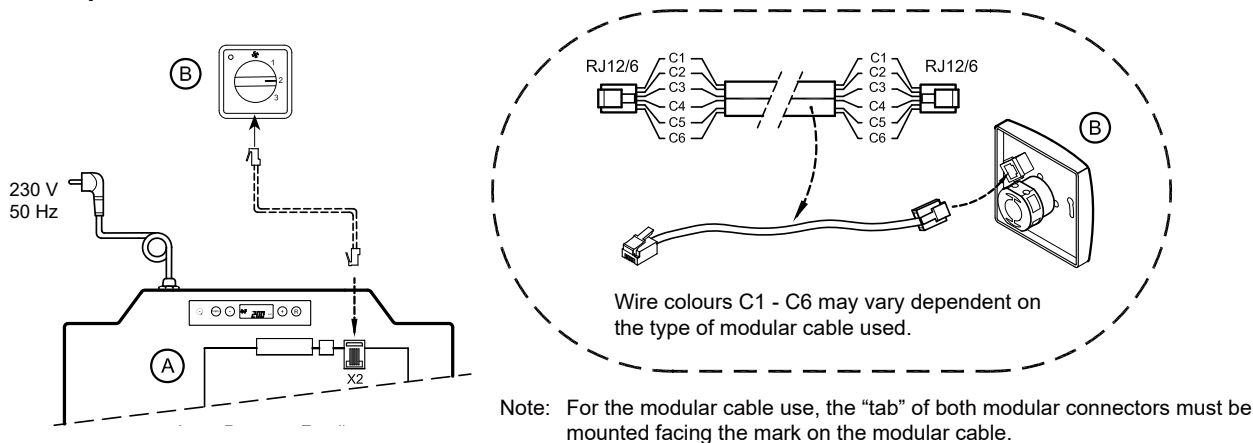
Modular connector type RJ-12.

Only suitable for low voltage.

11.2 Connection examples multiple switch

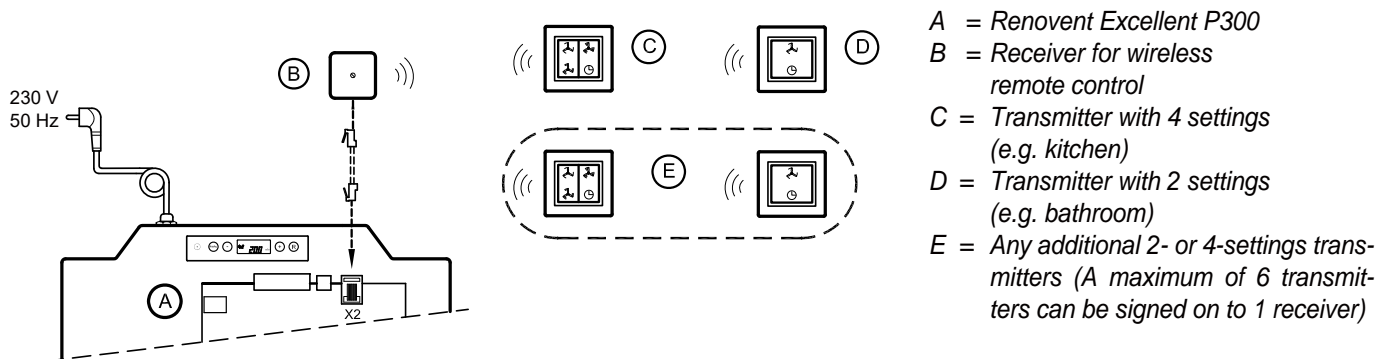
A multiple switch can be connected to the modular connector X2 of the Renovent Excellent P300. This modular connector X2 is directly accessible at the rear of the display cover (see §11.1) without having to take it off.

11.2.1 Multiple switch with filter indication



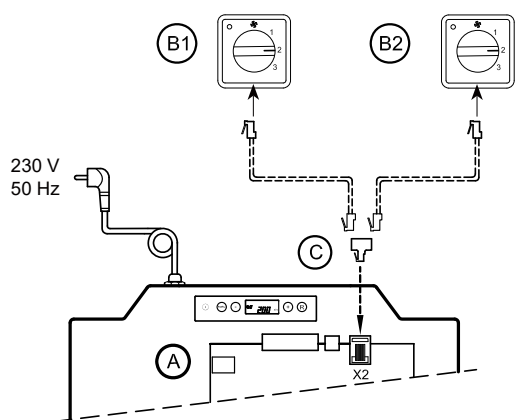
A = Renovent Excellent P300
B = Multiple switch with filter indication

11.2.2 Wireless remote control (without filter indication)



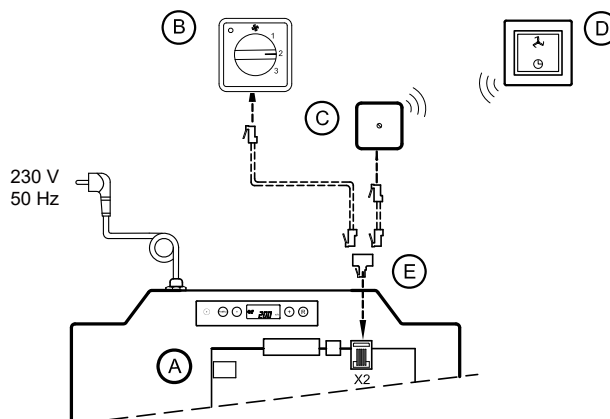
A = Renovent Excellent P300
B = Receiver for wireless remote control
C = Transmitter with 4 settings (e.g. kitchen)
D = Transmitter with 2 settings (e.g. bathroom)
E = Any additional 2- or 4-settings transmitters (A maximum of 6 transmitters can be signed on to 1 receiver)

11.2.3 Additional multiple switch with filter indication



A = Renovent Excellent P300
B1 = Multiple switch with filter indication
B2 = Additional multiple switch with filter indication
C = Splitter

11.2.4 Additional multiple switch with wireless remote control

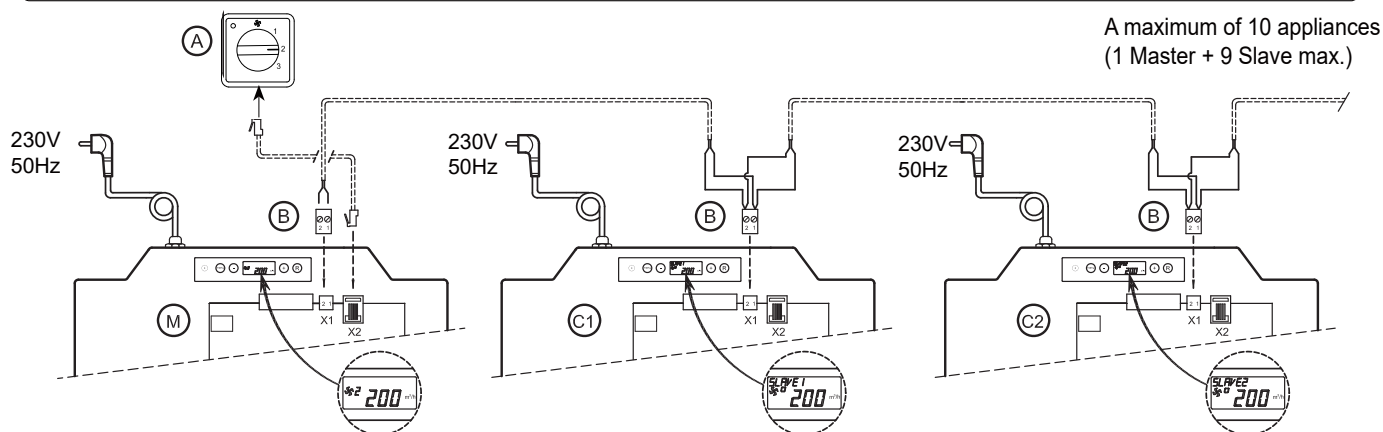


A = Renovent Excellent P300
B = Multiple switch with filter indication
C = Receiver for wireless remote control
D = Transmitter with 2 settings
E = Splitter

11.3 Couple through eBus contact; all appliances equal air flow rate

Important:

Because of polarity sensitivity, always connect contacts X1-1 to X1-1 and contacts X1-2 to X1-2. Never connect X1-1 and X1-2.



A maximum of 10 appliances
(1 Master + 9 Slave max.)

For M (Master):
Set parameter 13 to 0 (= factory setting).
Display shows ventilation mode 1, 2 or 3.

For C1 (Slave1):
set parameter 13 to 1 (= Slave 1).
Display always shows ventilation mode □.

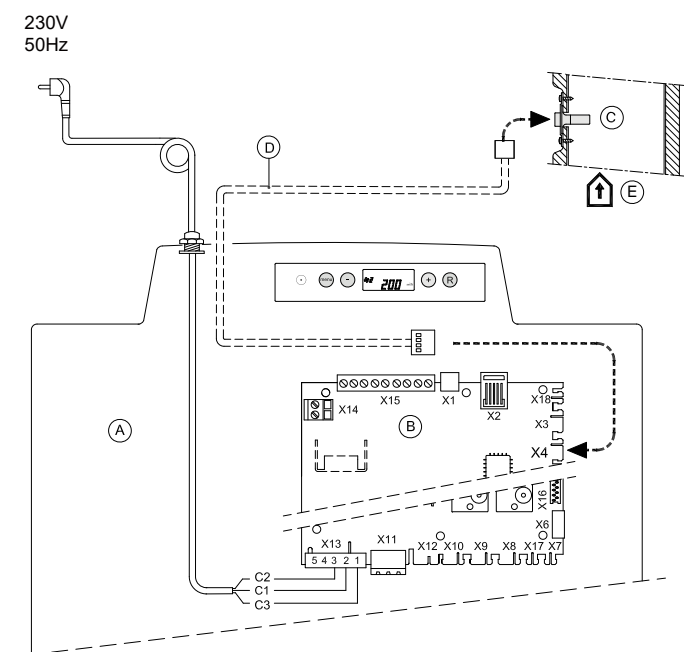
For C2 (Slave2):
Set parameter 13 to 2 (= Slave 2).
Display always shows ventilation mode □.

- A = Multiple switch
- B = 2-pole connector
- M = Renovent Excellent P300 (Master)
- C1 t/m C* = Renovent Excellent P300 (Slave); couple not more than 10 appliances through Ebus

All Renovents have the same air flow rates as the Renovent set as "Master".

Step nr.	Description	Factory setting	Range
12	Communication type	eBus	0t (= Opentherm) eBus
13	eBus address	0	0 = master 1- 9 = slave 1 - 9

11.4 Connection RH (humidity) - sensor



- A = Renovent Excellent P300
- B = Control board
- C = RH (humidity) - sensor
- D = Cable supplied with RH sensor
- E = Duct from dwelling ↑

- C1 = brown
- C2 = blue
- C3 = green/yellow

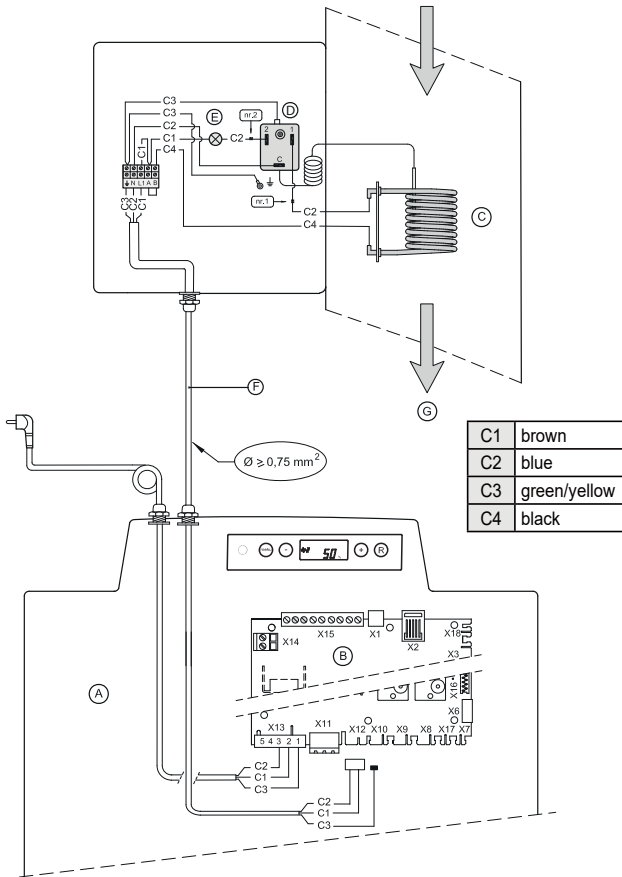
Step nr.	Description	Factory setting	Range
32	Activating RH-sensor	OFF	OFF = not active ON = active
33	Sensitivity	0	+2 most sensitive +1 ↑ 0 default setting RH-sensor -1 ↓ -2 least sensitive

11.5 Wiring diagram preheater connection

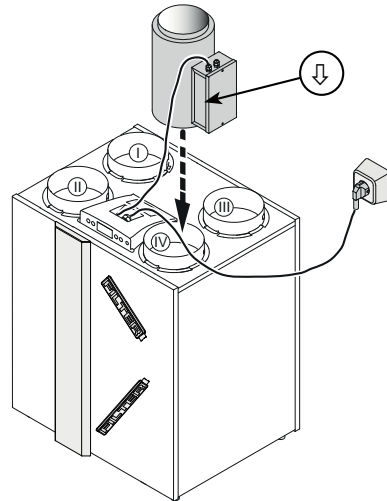
The electrical connections of the preheater are the same.

Please refer to the mounting instructions that came with the preheater for more extensive information regarding installation of the preheater.

Preheater



C1	brown
C2	blue
C3	green/yellow
C4	black



I =		To dwelling
II =		To atmosphere
III =		From dwelling
IV =		From atmosphere

A	Renovent Excellent P300
B	Control board
C	Heating coil max. 1000 W
D	Maximum safety with manual reset
E	LED maximum safety; lights up when activated
F	Cables to be connected by installer
G	Flow direction through the heater

Step nr.	Description	Factory setting	Range
14	Preheater connected	OFF	OFF = no preheater connected ON = preheater connected



12.1 Exploded view

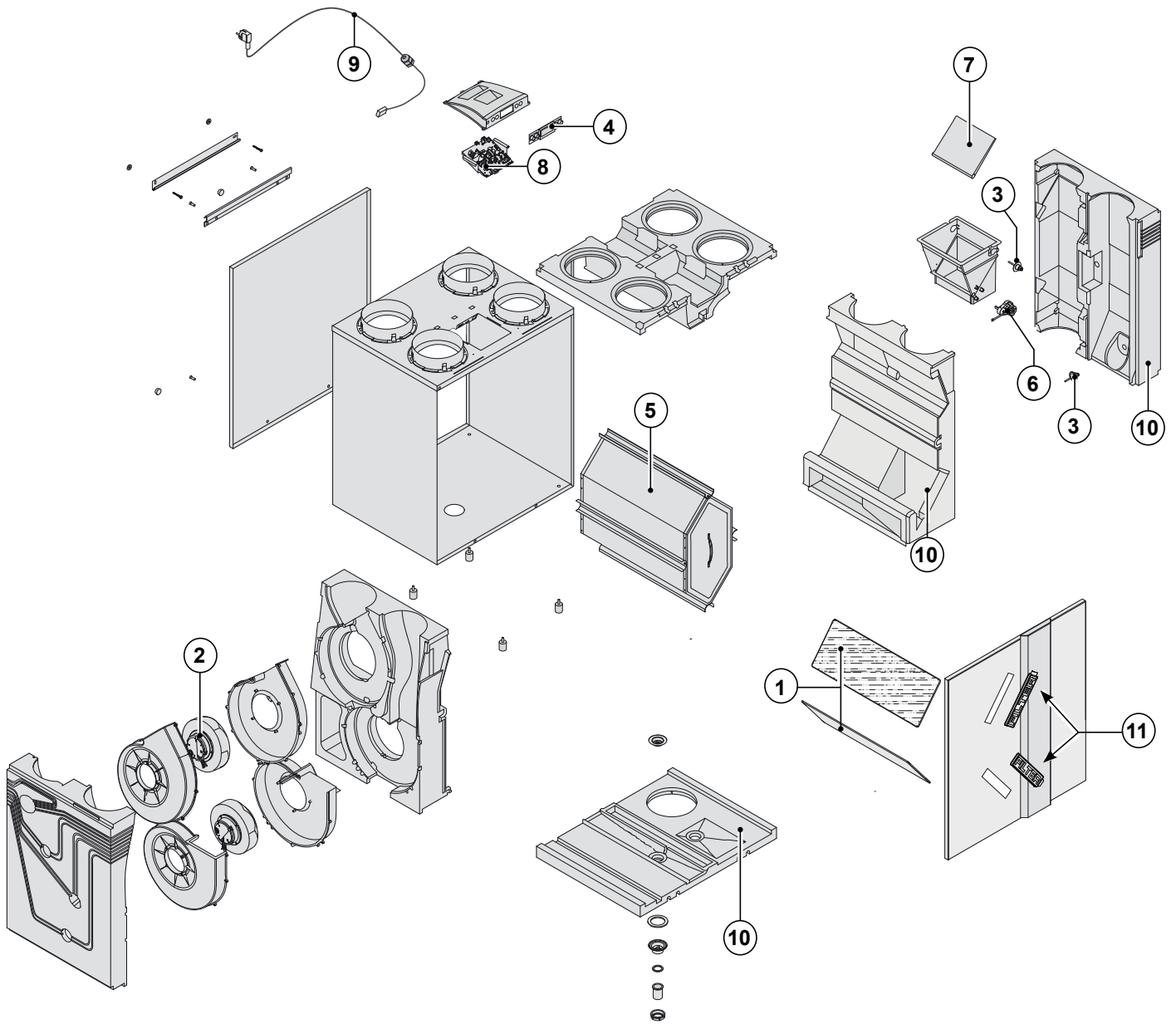
When ordering parts, in addition to the article code number (see exploded view), please state the type of the heat recovery appliance, the serial number, the year of production and the name of the part:

N. B.:

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

Example	
Appliance type	: Renovent Excellent P300 4/0 R
Serial number	: 410100193301
Year of production	: 2019
Part	: Fan
Article code	: 531774
Qty	: 1

12.2 Service parts





















No.	Article description	Article code
1	Filter kit 2x ISO Coarse 45% (G3) filter (standard version)	531770
2	Fan Excellent P300 (1 pcs)	531774
3	Temperature sensor NTC 10K(1 pcs)	531775
4	Control panel UBP-01	531776
5	Heat exchanger Excellent P300	532179
6	Motor bypass valve	531778
7	Bypass valve	531779
8	Control board When replacing, note the correct dip switch settings; see §8.1	531780
9	Cable with power plug 230 volt*	531782
10	EPS set (3 pieces) incl. condensate outlet connection	531798
11	Filter plug (2 pieces)	532177

- * The mains cable has a print connector.
When replacing it, always order a replacement mains cable Brink
To avoid dangerous situations, a damaged mains should only be replaced by a qualified person!

Modifications reserved

Brink Climate Systems B. V. continuously strives after improvement of products and reserves the right to change the specifications without prior notice.

STEP NO.	DESCRIPTION	FACTORY SETTING EXCELLENT P300	ADJUSTING RANGE	STEP	DISPLAY TEXT + SYMBOLS
01	Air flow rate mode Supply fan mode 	15%	15% - 100 %	1%	 
02	Air flow rate mode afvoerventilator mode 	15%	15% - 100 %	1%	 
03	Air flow rate mode Supply fan mode 1	25%	15% - 100 %	1%	 / 
04	Air flow rate mode afvoerventilator mode 1	25%	15% - 100 %	1%	 / 
05	Air flow rate mode Supply fan mode 2	48%	15% - 100 %	1%	 2 
06	Air flow rate mode afvoerventilator mode 2	48%	15% - 100 %	1%	 2 
07	Air flow rate mode Supply fan mode 3	68%	15% - 100 %	1%	 3 
08	Air flow rate mode afvoerventilator mode 3	68%	15% - 100 %	1%	 3 
09	Bypass temperature	22,0 °C	150 °C - 35,0 °C	0,5 °C	BYPASS
10	Bypass hysteresis	2,0 °C	0,0 °C - 5,0 °C	0,5 °C	BYP HYS
11	Operation bypass valve	0	0 (= Automatic) 1 (= Bypassklep closed) 2 (= Bypassklep open)		BYPASS
12	Communication	eBUS	Ot (= Opentherm) eBUS		OT/BUS
13	Bus address	0	0 - 9 (0 = Master)		BUSADR
14	Preheater connected	OFF	OFF (= no preheater connected) ON (= voorverwarmer aangesloten)	-	
32	RH-sensor	OFF	OFF (= RH-sensor not active) ON (= RH-sensor active)		
33	Bus address	0	+2 most sensitive +1 ↑ 0 default setting RH-sensor -1 ↓ -2 least sensitive		
45	Default position switch	1	0 - 1	-	
46	Brink Connect	1	1 Brink Connect function (extern, Brink Connect no RHT sensor) 3 Brink Connect (intern)		

DECLARATION OF CONFORMITY

Manufacturers : Brink Climate Systems B.V.
Address: P.O. Box 11
NL-7950 AA Staphorst, The Netherlands
Product: Heat recovery unit type:
Renovent Excellent P300

The product described above complies with the following directives:

- ◆ 2014/35/EU (low voltage directive)
- ◆ 2014/30/EU (EMC directive)
- ◆ RoHS 2011/65/EU (substances directive)
- ◆ 2009/125/EG (1253/1254 EU (EU ErP-directive))

The product bears the CE label:



Staphorst, 24-02-11

A handwritten signature in black ink, appearing to be 'W. Hijmissen', written over a horizontal line.

*W. Hijmissen,
managing director*

Productdatasheet conform Ecodesign (EU), nr. 1254/2014 (Annex IV)					
Supplier:		Brink Climate Systems B.V.			
Model:		Renovent Excellent P300			
Climate zone	Type of control	SEC-Value in kWh/m ² /a	Energyclass (SEC)	The annual electricity consumption (AEC) in kWh	The annual heating saved (AHS) in kWh
Average	Manual	-37,52	A	308	4403
	Clock	-38,38	A	294	4425
	Central demand control	-40,01	A	269	4469
	Local demand control	-42,88	A+	216	4557
Cold	Manual	-80,12	A+	845	8613
	Clock	-81,19	A+	832	8656
	Central demand control	-83,25	A+	806	8742
	Local demand control	-86,97	A+	753	8915
Warm	Manual	-13,12	E	263	1991
	Clock	-13,86	E	250	2001
	Central demand control	-15,24	E	224	2021
	Local demand control	-17,62	E	171	2061
Type of ventilation unit:		Ventilation unit with heat recovery			
Fan:		Variable speed EC fan			
Type of heat exchanger:		Recuperative plastic cross-counterflow heatexchanger			
Thermal efficiency:		86%			
Maximum flow rate:		300 m ³ /h			
Electric power input:		92 W			
Sound power level Lwa:		44 dB(A)			
Reference flow rate :		210 m ³ /h			
Reference pressure difference:		50Pa			
Specific Power Input (SEL):		0,21 W/m ³ /h			
Control factor:		1,0 in combination with manual switch			
		0,95 in combination with clock			
		0,85 in combination with central demand control with 1 sensor			
		0,65 in combination with local demand control with at least two or more sensors and with at least a two-zone control			
Leakage*:	Internal	0,8%			
	External	2,1%			
Filterwarning:		On the display of the ventilation unit / Manual switch / clock control. Attention! For optimal energy efficiency and a proper operation a regular filter inspection, cleaning or replacement is necessary.			
Internet address for Assembly instructions:		http://www.brinkclimatesystems.nl/installateurs/kenniscentrum/Documentatie.aspx			
Bypass:		Yes; 100% Bypass			

* Measurements executed by TNO according to the EN 13141-7 standard (TNO-report TNO 2013 M10230, Februari 2013)

Classification from 1 January 2016	
SEC Class („Average climate“)	SEC in kWh/m ² /a
A+ (Most efficient)	SEC < -42
A	-42 ≤ SEC < -34
B	-34 ≤ SEC < -26
C	-26 ≤ SEC < -23
D	-23 ≤ SEC < -20
E E (Least efficient)	-20 ≤ SEC < -10

BRINK

Air for Life

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