



AlphaAir Freshbox 100 WiFi

With and without Radon sensor

Manual

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Scope of Contents

1	Introduction.....	5
2	Safety instructions.....	5
2.1	Safety precautions during unit installation	6
2.2	Safety instructions for operating the unit	8
3	Intended use.....	11
4	Scope of delivery	12
5	Technical data.....	12
6	Dimensions	14
7	Design and operating logic	15
8	Assembly and operation.....	17
8.1	Mounting.....	18
8.2	Mains connection	25
8.3	Connecting additional control units	27
8.4	Connecting the humidity sensor or CO2-sensor	28
8.5	Control	29
	Remote control.....	31
9	Emergency stop	52
10	Error codes/warnings	53
11	Troubleshooting	54
12	Maintenance and servicing	55
13	Transport and storage	58
14	Disposal	59
15	Two year warranty	59

16	Support and Contact	63
16.1	Troubleshooting/FAQ.....	63
16.2	Contact Us	63

1 Introduction

The AlphaAir Freshbox 100 WiFi is a ventilation unit with pre-heating coil, enthalpy exchanger and WiFi connection. It is designed for controlled air exchange in detached houses, offices, hotels, cafés, conference rooms and other residential and commercial spaces. It is used for heat recovery from the extract air to heat the supply air.

2 Safety instructions



Read the operating instructions carefully before using and installing the single room heat recovery unit.

Read the operating instructions carefully and keep them for as long as you use the AlphaAir Freshbox 100 WiFi.

When handing over the unit control, the operating instructions must be handed over to the operator taking over the unit.



The installation and operation of the unit must be carried out in accordance with this user manual and with the provisions of all applicable local and national building, electrical and technical regulations and standards.



The warnings contained in this user manual must be taken particularly seriously as they contain important information regarding personal safety.



Failure to follow the safety instructions may result in injury or equipment damage.

2.1 Safety precautions during unit installation



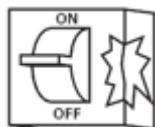
Before any installation or repair procedure, the unit must be disconnected from the power supply.



The unit must be earthed!



Do not operate the unit outside the temperature range specified in the user manual or in aggressive or explosive environments.



Do not use damaged equipment or wiring to connect the unit to the mains.



Observe the specific safety regulations for the use of power tools when installing the appliance.



Unpack the appliance with care.



Unauthorised modifications to the mains cable are not permitted. Do not bend the mains cable. Do not damage the mains cable. Do not place any objects on the mains cable.



Do not place any heaters or other devices in the immediate vicinity of the mains cable of the unit.



All assembly and maintenance work may only be carried out by electricians with a valid electrical work permit for electrical work on the units up to 1000 V after carefully studying these operating instructions.

Make sure that the impeller and the housing are not damaged before connecting the unit to the mains. The casing installations must be free of foreign bodies that could damage the impeller blades.

Take measures to prevent contact with the fan to avoid physical damage during unit testing and commissioning.

Misuse of the product or unauthorised modification is not permitted.

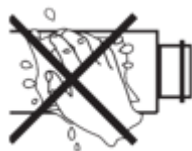
Take measures to prevent smoke, carbon monoxide and other combustion products from entering the room through open chimney flues or other fire protection devices. There must be sufficient air supply for proper combustion and exhaust of gases through the chimney of fuel burning appliances to prevent backflow. The maximum permissible pressure difference per dwelling unit is 4 Pa.

The conveyed air must not be aggressive to steel at the temperature specified in the table in the "Technical data" section.

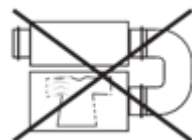
2.2 Safety instructions for operating the unit



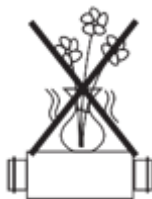
Do not touch the controller or remote control with wet hands. Do not perform maintenance on the unit with wet hands.



Do not wash the unit with water. Protect the electrical parts of the unit from water penetration.



Use the appliance only as intended by the manufacturer. Do not connect tumble dryers or similar appliances to the appliance or to the ventilation system!



Do not place any containers with water, e.g. vases, on the unit.



Do not sit on the unit and do not place any objects on the unit.



All work on the electrical connections of the unit, maintenance and repair work is only permitted when the unit is de-energised.



Do not allow children to operate the unit.



Do not damage the mains cable while the unit is in operation. Do not place any objects on the mains cable.



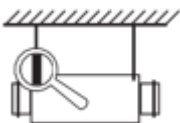
Keep explosive and flammable products away from the unit.



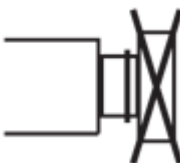
Do not open the control panel.



In case of unusual noises, disconnect the unit from the power supply and contact the Service Centre.



If the unit is in continuous operation, check the mounting safety regularly.



Do not close or block the intake or exhaust air openings of the unit so as not to disturb the normal air flow.



Make sure that the air flow of the unit is not directed towards appliances with an open flame or candles.



The unit is not intended to be used by children, physically or mentally handicapped persons, persons with sensory disorders or persons without appropriate qualifications.



Installation and connection work may only be carried out by suitably qualified personnel after receiving appropriate safety instruction.



The installation site of the appliance must be secured against access by unsupervised children..

3 Intended use

The unit is not suitable for the ventilation of swimming pools, saunas, greenhouses, summer gardens and other humid rooms.

Thanks to heat recovery and its energy-saving properties, the unit is one of the crucial elements for energy-efficient, modern house construction. The unit is a component of a ventilation system and is not designed for stand-alone operation. The unit is designed for continuous operation with a permanent power supply.

The conveyed medium must not contain explosive and flammable substances, chemical vapours, sticky substances, fibrous materials, dust, soot, oil particles and other harmful substances such as poisons, pathogens.

The ventilation system can be used in closed rooms at temperatures from +1 °C to +40 °C and a relative humidity of max. 70 %.

The dew point temperature of the conveyed air must be 2-3 °C below the temperature of the enclosure surface so that no condensate can form inside the enclosure.

The unit belongs to class I electrical installations. Protection class against ingress of foreign bodies and water:

- IP22 for the mounted ventilation unit,
- IP44 for the motor units.

4 Scope of delivery

Please check the completeness of the scope of delivery using the following parts list:

1x ventilation system

1x operating manual

1x Mounting template

1x Fastening set

1x Magnetic sheet

1x Key

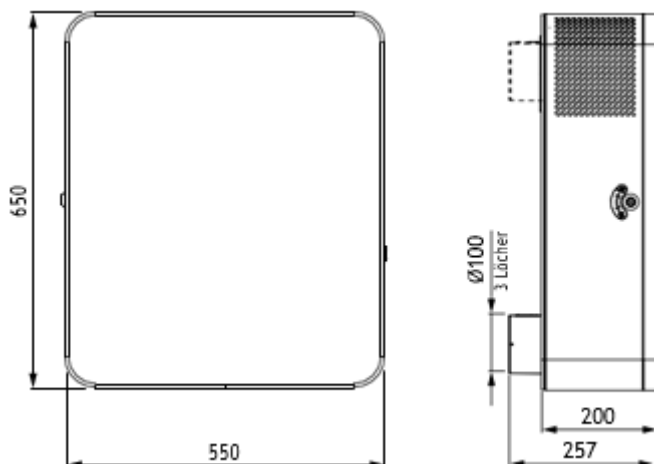
1x spigot

5 Technical data

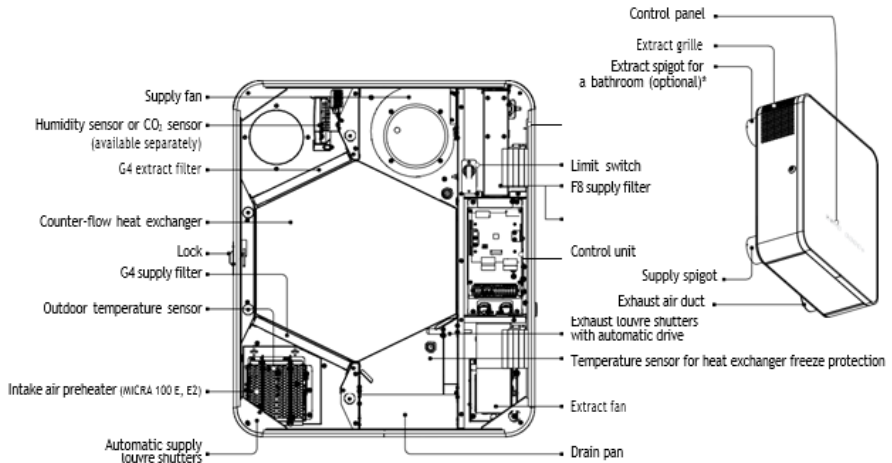
Max. Delivery rate	30 m ³ /h	44 m ³ /h	60 m ³ /h	75 m ³ /h	100 m ³ /h
Supply voltage, V/50 (60)	1~ 230 Hz				
Max. Fan power consumption	20 W	23 W	29 W	37 W	53 W
Sound pressure level at a distance of 3 m	13 dBA	20 dBA	27 dBA	33 dBA	39 dBA

Max. Power consumption of the ventilation system		3,6 A				
Conveying medium temperature		-20 to +40 °C				
Material of the casing		Painted steel				
Insulation		10 mm (foamed rubber)				
Efficiency of heat recovery	96 %	94 %	89 %	85 %	83 %	
Type of heat exchanger		Countercurrent heat exchanger				
Heat exchanger material		Enthalpy membrane				
Supply air filter		G4, F8 (optional: F8 activated carbon, H13)				
Exhaust air filter		G4				
Diameter of the connection spigot		Ø 100 mm				
Weight		31 kg				

6 Dimensions



7 Design and operating logic



The warm, used exhaust air enters the ventilation system from the room, is cleaned in the exhaust air filter and flows through the heat exchanger. It is then led outdoors by the extract air fan via the exhaust air pipe.

The fresh outside air flows into the ventilation system and is cleaned in the supply air filter. The air then continues to flow through the heat exchanger and is led into the room by the supply air fan.

In the heat exchanger, the heat from the warm extract air is transferred to the cold outside air. Here, the two air flows are completely separated from each other. The heat recovery minimises heat loss in the cold season and thus saves heating costs.

The AlphaAir Freshbox 100 WiFi ventilation system is equipped with a pre-heating coil. This ensures automatic protection against overheating of the heating register. The pre-heating coil is located upstream of the heat exchanger and serves to protect the heat exchanger against frost.

If the supply air temperature is below $-3\text{ }^{\circ}\text{C}$, the pre-heating coil automatically ensures that the supply air is heated so that the average temperature of the extract air downstream of the heat exchanger is not below $+5\text{ }^{\circ}\text{C}$.

No condensate forms in the AlphaAir Freshbox 100 WiFi with an enthalpy heat exchanger because the humidity of the extract air is transferred to the supply air via the enthalpy membrane.

The shutters open automatically when the fan motors are switched on and close when they are switched off.

It is possible to connect an additional extract air spigot to remove air from other rooms, for example the bathroom. The exhaust air spigot is included in the scope of delivery.

8 Assembly and operation

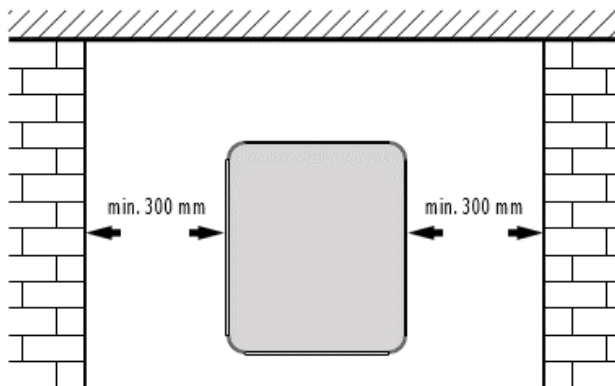


Read these operating instructions carefully before installing the unit!

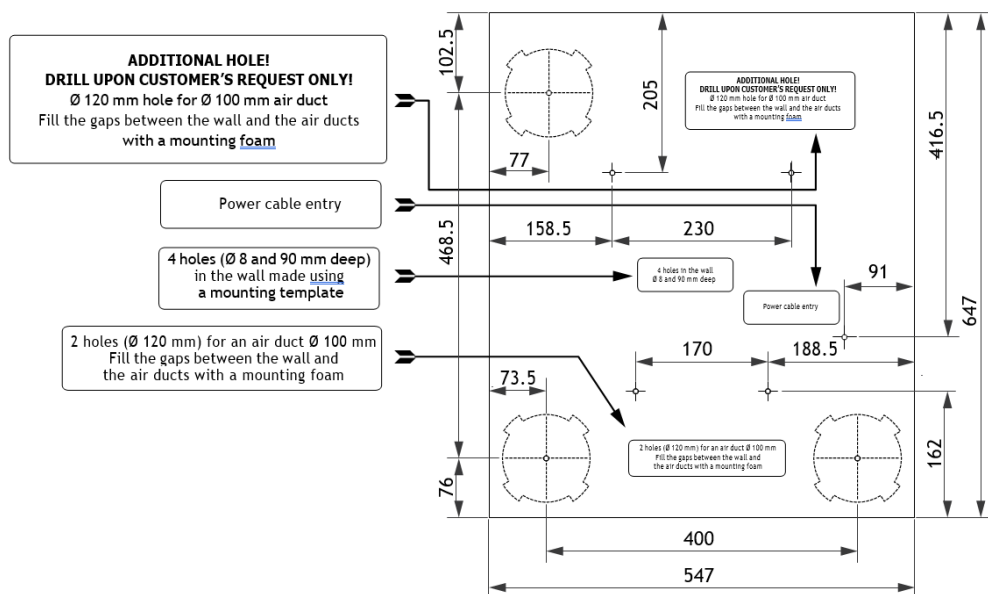


Sufficient maintenance access must be considered when mounting the unit.

The recommended minimum distances between the ventilation unit and the walls are as follows



Hole spacing template



8.1 Mounting



Before mounting, make sure that the fan housing does not contain any foreign parts such as foil or paper.



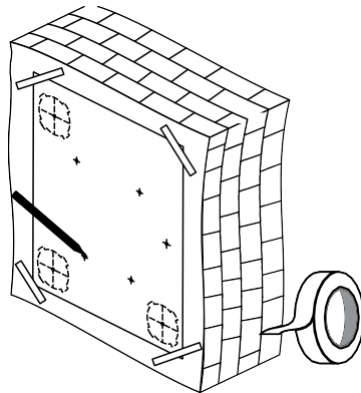
The unit must be mounted on a smooth surface. Mounting the unit on an uneven surface will cause distortion of the casing and malfunction of the unit.

1. Mark the holes using the enclosed drilling template.

Fix the template to the wall at the required height with adhesive tape.

Use the template to mark the holes for the ventilation pipes, the attachment of the unit and the outlet of the power cable.

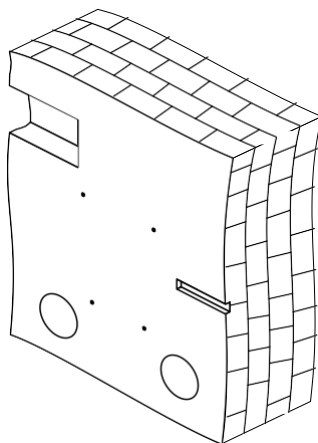
Lay all cables and pipes to the installation site before starting the installation work.



2. Remove the template and drill two core holes for the ventilation pipes with a diameter of 120 mm. When installing the ventilation system with a two-room connection, prepare a hole for the connection bend and the laying of the ventilation pipe in the wall.

The connection bend and the ventilation pipes are available as accessories. Drill the holes with a diameter of 8 mm and a depth of 90 mm. Insert the dowels. Remove the perforated fields for the ventilation pipes from the

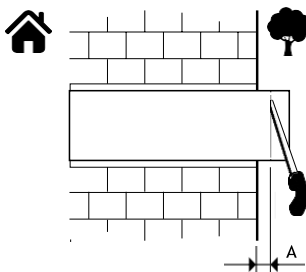
template and reattach the template with the adhesive tape.



3. Cut the ventilation pipes to the required length:

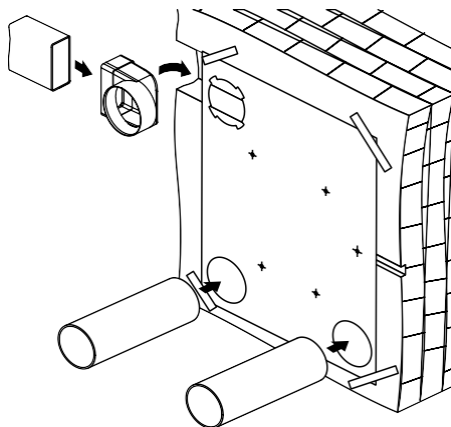
On the outside wall, the ventilation pipe must protrude by the length required for mounting the outside ventilation bonnet. Details can be found in the installation instructions for the ventilation bonnet.

The external bonnet is not included in the scope of delivery of the ventilation system and is available as an optional accessory.

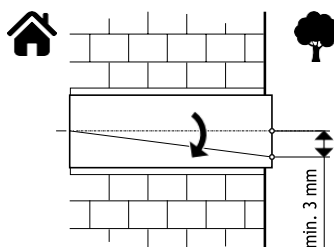


4. Fix the template to the wall.

Insert the ventilation pipes into the wall via the template openings.

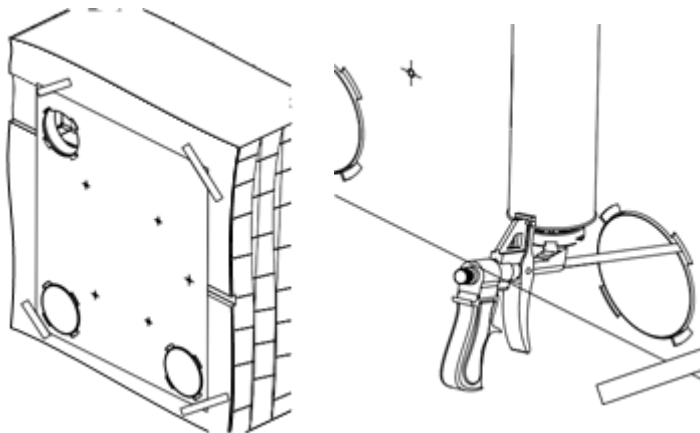


Fix the ventilation pipes at an angle of 3 mm downwards with wedges to allow the condensate to drain off.



To install the ventilation system with a second room connection, place the connection elbow in the hole prepared for it in the wall and fix it with wedges. Connect the connection elbow to the air duct.

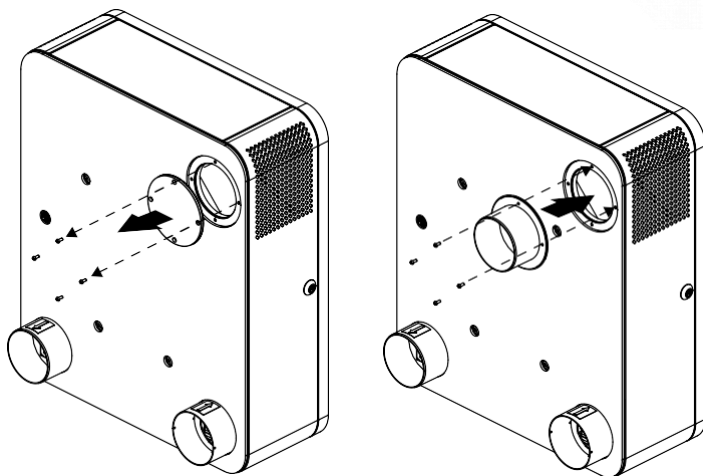
5. Fill the cavities between the air ducts and the wall over the entire length through the openings made for this purpose in the template with installation foam.



After the foam has cured, remove the template and remove the excess foam.

Cut off the protruding parts of the pipes so that they are flush with the inner wall.

6. Inserting an additional exhaust vent: remove the plug at the back of the unit. To do this, unscrew the screws, remove the plug and fix the spigot in its place with the screws.



Install the condensate preheater before fixing the unit to the wall (see the operating instructions of the electric heater).

7. Run the connection cable of the condensate preheater, the external humidity or CO2 sensor and the power cable into the control unit through the corresponding holes on the back of the ventilation unit.

Open the ventilation unit, loosen the screws and remove the heat exchanger.

Lift the unit and insert the spigots into the corresponding ventilation pipes.



Warning! If no additional exhaust air spigot is fitted, remove the magnetic plate from the exhaust air grille.

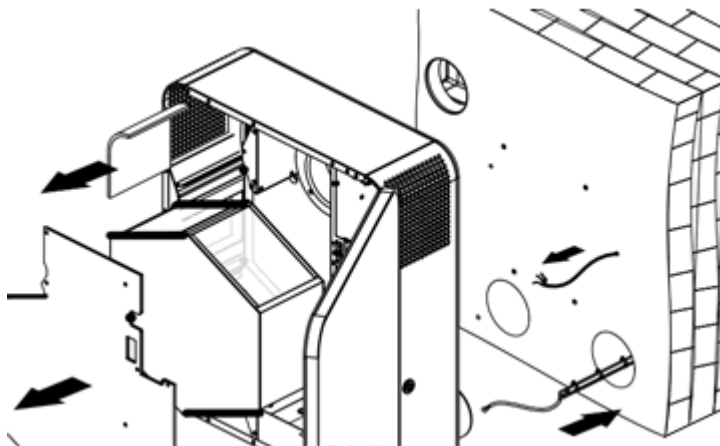
8. Secure the ventilation unit to the wall with the screws and plugs provided.

Replace the heat exchanger.

Insert the humidity or CO2 sensor (purchased separately) on the mounting bracket.

Make the electrical connections, see "Mains connection".

Reassemble the ventilation system in the reverse order.



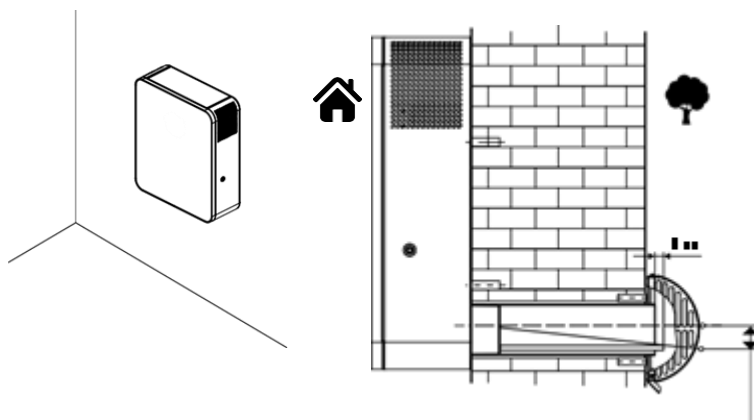
9. Insert the outer bonnet:

Cut off the protruding end of the condensate hose to a length of 10 mm.

Remove the excess foam.

Fill the cavities between the ventilation pipe and the wall with a sealant.

Fix the outer bonnet to the outer wall of the building (see the assembly instructions for the outer bonnet).



8.2 Mains connection



The unit must be disconnected from the mains before any work is carried out!



Electrical connections may only be carried out by an authorised specialist!



The basic electrical data of the unit are given on the manufacturer's label.

The unit is intended for connection to a single-phase AC mains supply of ~110-240 V/50(60) Hz in accordance with the connection diagram.

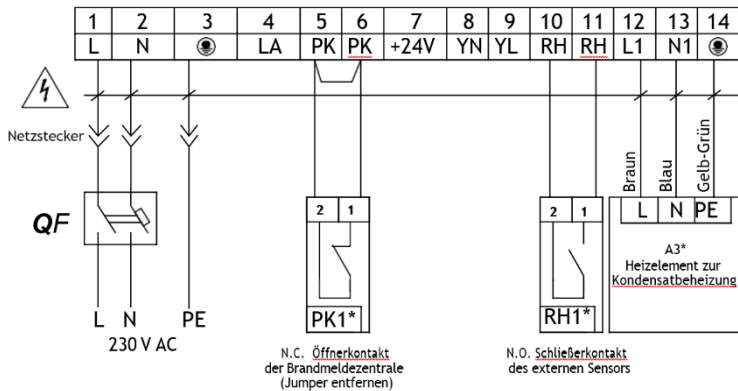
The unit is to be connected to the power supply via insulated, electrical power lines (cables). When selecting the appropriate line circuit breaker, attention must be paid to the maximum load current and the maximum wire temperature, which depends on the conductor type, insulation, length and routing type.

A circuit breaker built into the stationary power supply network must be installed at the external input to interrupt the circuit in the event of a short circuit or overload. The installation location of the line circuit breaker must be quickly accessible in the event of an emergency shutdown of the ventilation system. The rated tripping current of the miniature circuit breaker must match the current consumption of the ventilation system, see technical data. To select the tripping current, take the next value of the miniature circuit breaker in the series after the maximum current consumption of the unit. The miniature circuit breaker is not included in the scope of delivery and can be ordered separately.

8.3 Connecting additional control units

Connecting the contacts of units located in the room is done in the control unit.

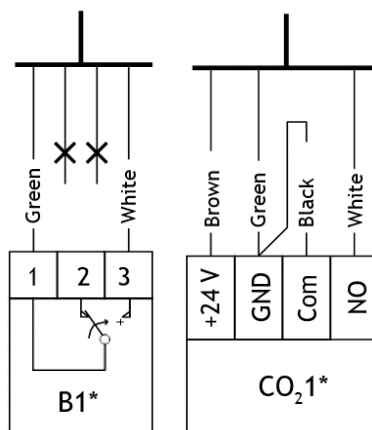
To access the control unit, open the access door of the ventilation unit, loosen the screws fixing the cover and remove the cover.



* not available in the scope of delivery of the unit.

8.4 Connecting the humidity sensor or CO₂-sensor

The sensor is connected to the control unit via a cable located in the sensor's holder.

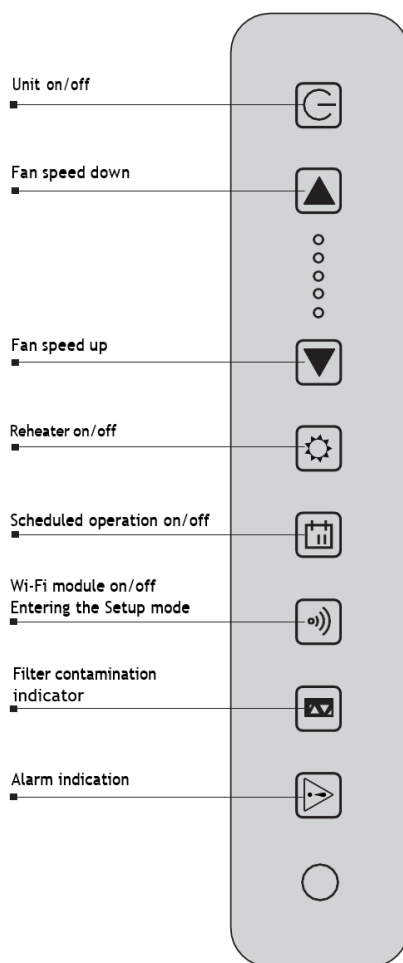



		Type of contact	Conduct or
PK1*	Fire alarm panel	N.C.	2 x 0,25 mm ²
RH1*	External sensor	N.O.	2 x 0,25 mm ²
A3*	Heating element for condensate heating		3 x 0,75 mm ²
B1* CO2*	The humidity sensor or CO ₂ sensor is located inside the ventilation system		



* not available in the scope of delivery of the unit.



8.5 Control



The ventilation system is controlled via the control panel on the housing of the ventilation system, via the remote control and via the app.




The ventilation system is switched on/off by pressing the On/Off button .

The ventilation modes of the system are controlled with the  and  buttons.

The  and  buttons change the ventilation mode in five steps.

Pressing  and  simultaneously for more than 3 seconds switches the timer on/off. The timer time and the ventilation level at which the system is switched during timer operation are set via the app.


Switching the reheating coil on/off is done with the button .


The timed operation is switched on/off with the key .


For this operating mode, the time must be set correctly in the app.

By default, the control unit saves a time-controlled operation with the factory settings.

The switch-on button of the time-controlled operation blocks the buttons for switching the ventilation levels and for switching the reheating on/off.

Switching the WLAN module on/off is done with the key .

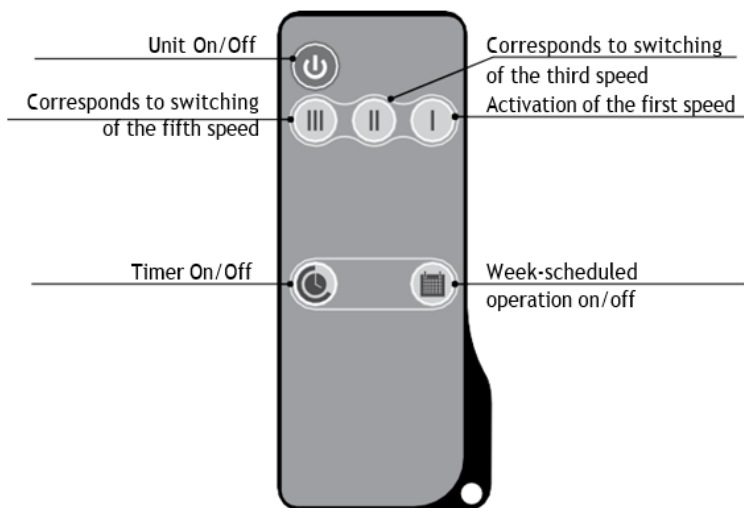
This key  is used to switch the WLAN module on/off. If the key is pressed for longer than 5 seconds, it starts flashing and the control unit switches to "Setup Mode".

At the end of the filter life, the filter change indicator  on the control panel lights up to indicate that the filters need to be replaced.



After the ventilation system is switched off, the fans continue to run to cool down the heating coil. The switch-off time of the fans is 0.5-2 minutes, depending on the model of the ventilation system.

Remote control



Control via app on mobile device

For Android in the Google Play Store:

<https://play.google.com/store/apps/details?id=com.embarca.dero.BlaubergFRESHBOX>



For iOS in the Apple Store:

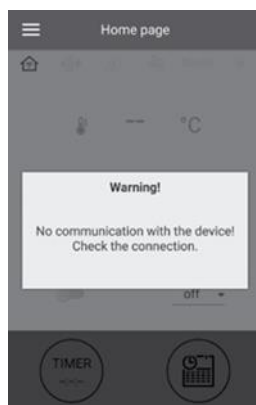
<https://apps.apple.com/us/app/blauberger-freshbox/id1402506523>



WiFi technical data

Standard	IEEE 802,11, /g/n
Frequency band, GHz	2,4
Transmission power, mW (dBm)	100(+20)
Network	DHCP
WLAN security	WPA, WPA2


If the app is started without connecting to the system, the following message is displayed on the screen of the mobile device:

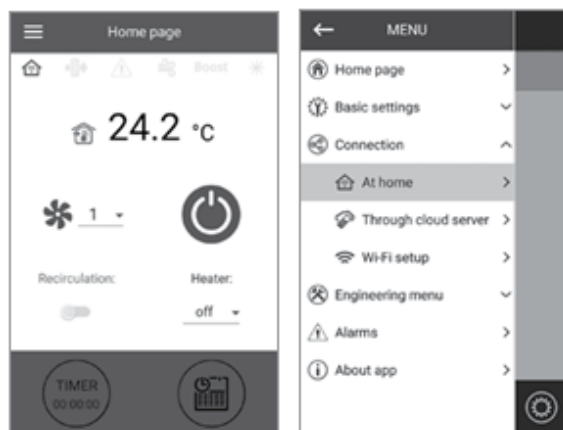


By default, the fan functions as a WLAN access point. After installing the app, connect the mobile device to the fan as a Wi-Fi access point with the name (FAN: + 16 characters of the ID number) as indicated on the control board and the housing of the unit.


The default password of the WLAN access point: 11111111 (eight one).



Call up the installed app on the mobile device that is connected to the fan.

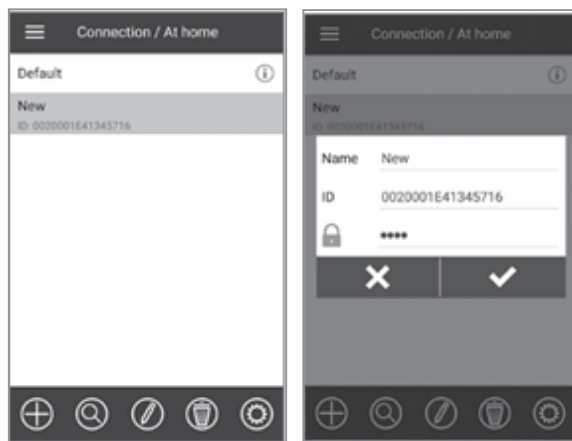
- Select the desired connection type.
- Call up the menu of the app .
- Select the menu item Connection - Home.



If the mobile device is connected to WLAN access point without router, then select the default connection. In case of

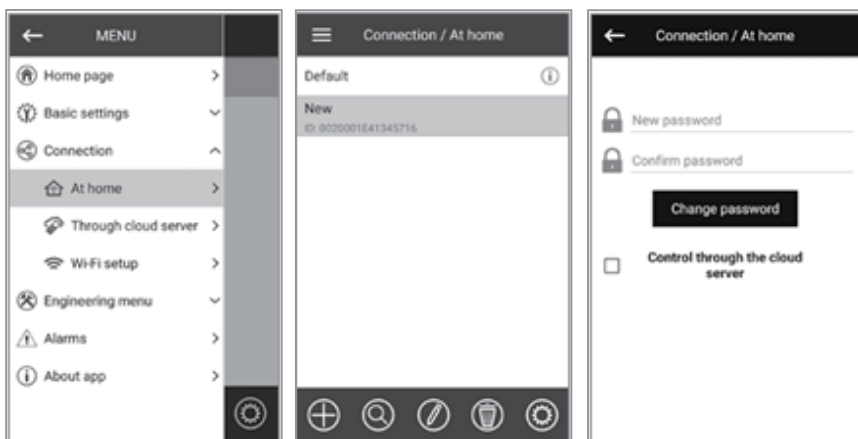
connection via router, search for ventilation equipment in the network .

- Select the connection with the required ID.
- Edit the connection by pressing the button .
- If necessary, change the connection name, enter the password of the system (valid characters: 0 ... 9, a...z, A...Z). The default password of the system is 1111 (four ones).
- Confirm the entered data by pressing the key .



Changing the password of the system

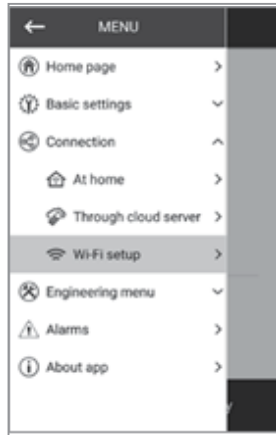
- Go to the menu (☰) - Connection - Home.
- Select the connection and press the key ⚙️.
- Enter and confirm the password. Valid characters: 0...9, a...z, A...Z
- Press the Change Password key.



WLAN settings

Go to the application menu on your mobile device menu (☰)

- Connection - Wi-Fi settings.



Press Receive. The current settings of the WLAN parameters are displayed on the screen. Select one of the WLAN modes Access point or Client.

Access point: Access point without a home router.

In this mode, up to 8 mobile devices can be connected to the fan to control it.

Select the desired security level for the Access point mode:

Open: not password protected.

WPA PSK: password protected.

WPA2 PSK: password protected.

WPA/WPA2 PSK: password protected (recommended).

Enter the password of the WLAN access point. Change the WLAN channel if necessary.

Press the Apply button.



The image shows a mobile application interface for Wi-Fi setup. At the top, there is a hamburger menu icon and the title 'Wi-Fi setup'. Below the title, the section 'Wi-Fi modes' contains two radio buttons: 'Access point' (which is selected) and 'Client'. Underneath, the 'Security modes' section shows a dropdown menu currently set to 'WPA/WPA2 PSK'. The 'Wi-Fi password' section has a text input field with a placeholder '8 - 64 characters'. The 'Wi-Fi channel' section has a dropdown menu currently set to '11'. At the bottom, there are two buttons: 'Receive' on the left and 'Apply' on the right.

Client: the fan runs in the network of the home router. Enter the data of the home router for the client mode and the type of IP address:

- Enter the name of the home router's WLAN access point.
- Enter the password of the WLAN access point of the home router.

Select the type of IP address:

DHCP: automatic assignment of the IP address when connecting to the home router (recommended).

Static: allows the IP address, subnet mask and default gateway to be assigned manually.

These settings are only recommended for experienced users.

It is not recommended to select this type of IP address yourself.
 Press the Apply button.



The image shows a mobile application interface for Wi-Fi setup. At the top, there is a hamburger menu icon and the title 'Wi-Fi setup'. Below the title, the section 'Wi-Fi modes' contains two radio button options: 'Access point' and 'Client', with 'Client' being selected. Underneath, there are three input fields: 'Wi-Fi name' with a character count of '1 - 32 characters', 'Wi-Fi password' with a character count of '0 - 64 characters', and 'Type of IP address' with a dropdown menu currently set to 'DHCP'. At the bottom of the screen, there are two buttons: 'Receive' and 'Apply'.

Special Setting Mode "Setup Mode"

If you lose the Wi-Fi password or password of the unit, connect external devices and for other reasons, the special setup mode is used to edit the settings.

To switch to the special setup mode, press and hold the Wi-Fi button on the control panel of the ventilation unit for 5 seconds until the LED flashes.

The unit is in this mode for 3 minutes, after which it automatically returns to the previous settings. To exit the setting mode immediately, press and hold the button again for 5 seconds until the LED stops flashing. The following parameters are available for connecting to the system in setup mode:

WLAN name: Setup Mode.

WLAN password: 111111.

The password of the system is ignored.

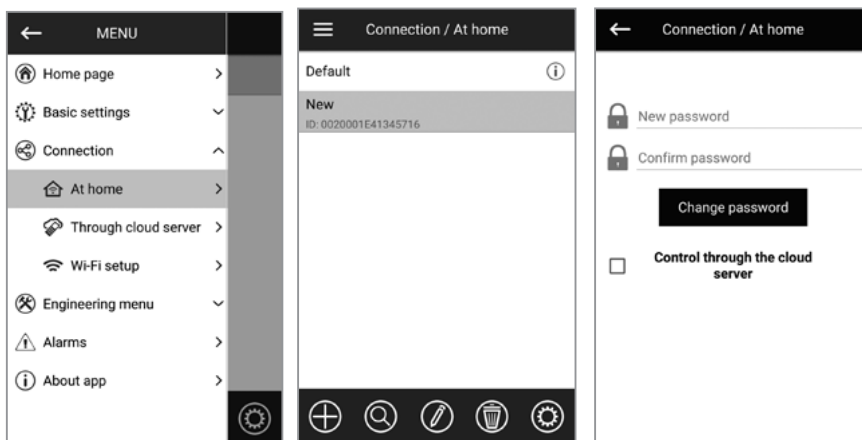
Connection via Cloud Server

It is possible to control the unit via cloud servers using the app. With this function, you can control the system connected to the home router from any distance with an Internet connection. By default, control via Cloud Server is switched off. Activation is as follows:



- Call up the menu item Connection - Home.
- Select the required connection type.
- Call up the connection settings menu.
- Activate the control via cloud server.





Warning. If this function is activated, WLAN connection faults of the home router can lead to temporary communication failures with the ventilation units.



To control the system, create a new account or log in to a previously created one. In the programme menu of the mobile device, open Menu - Connection - Via Cloud Server:

- Press the Add New Account button.
- Enter your login, password and e-mail address to re-enter the password. Confirm the entered data by pressing the key .
- Follow the link that was sent via e-mail.
- Enter your login data and password and log in.
- Add a new connection by pressing the button .
- Enter the name of the ventilation unit and ID. The ID number of the ventilation unit is indicated on the control board.
- The default password is 1111.

- Confirm the entered data by pressing the key .
- Press the key  if necessary to log out.



Menu structure



Startseite



Type of current connection to the ventilation system. House connection or connection via cloud server



Filter change indicator



Rotes Leuchten – Alarmanzeige, oranges Leuchten – Warnanzeige



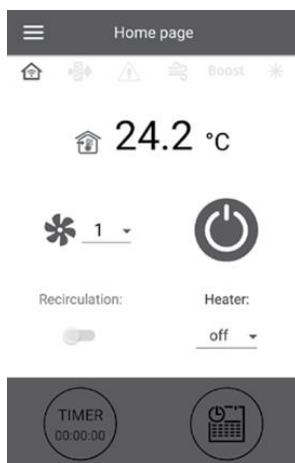
Red light - alarm indicator, orange light - warning indicator
Heat dissipation indicator of the electric heating coil before the system is switched off

Boost

Boost operation indicator



The current temperature of the sensor that controls the air temperature.



Control buttons

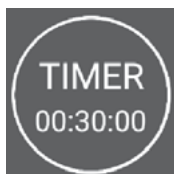


Switching the ventilation system on/standby



1

Selection of the ventilation level



Activation of the timer. The timer settings are made in the menu Basic settings - Timer.



Activation of timer-controlled operation. The settings for this mode are made in the menu Basic settings - Timer menu

Recirculation: Activation of the recirculation mode. If there is no recirculation mode, the key is inactive.

Heating register: Selection of the temperature setpoint for the post-heating register or switching off the heating register.

Basic settings

Timer

Main Timer: Settings for Timer Mode

When the timer is activated in the Home menu, the system goes to the following settings:



Ventilation level selection 1-5 Standby

00:30

Setting the timer time

23 ▼

Selection of the control temperature +15 ° C.. + 30 ° C, off are available. If OFF is selected, temperature control is not executed during timed operation.

Boost follow-up time: determines the follow-up time for boost mode after the signal at the digital input (boost switch) on the control board disappears.

Boost switch-on delay: determines the switch-off delay time for boost mode after the signal at the digital input (boost switch) has been applied.



Schedule

The schedule can be set with 4 time periods per weekday. Setting can be done for each day or immediately for the whole week, weekdays,

weekends. After activating the schedule in the Home menu, the ventilation system runs according to the schedule according to the following parameters:



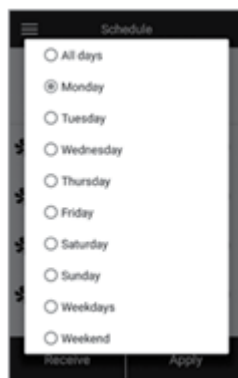
Ventilation level selection 1-5 Standby

06:00 - 09:00 ▾

Time setting for a specific period of time

23 ▾

Selection of the control temperature +15 ° C.. + 30 ° C, off are available. If OFF is selected, temperature control is not executed during timed operation.



Date and time

In this menu, the current time and date are displayed and their settings are also made.

Time display format: HH:MM:SS

Date format: DD.MM.YYYY

Current time
00:15:52 ▾
Current date
18.07.2018 ▾

Manual entry of date and time

Sync with a mobile device

The same time as on the mobile device is set automatically.

☰	Date and time
<div>Current time</div> <div>00:15:52 ▾</div> <div>Current date</div> <div>18.07.2018 ▾</div>	
Sync with a mobile device	

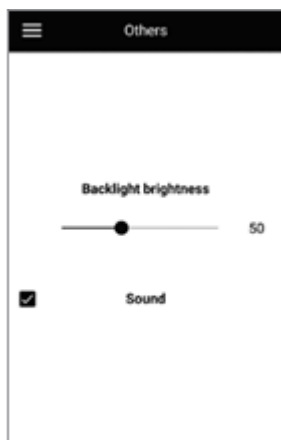
Filter



Filter timer setting: After the set time (70-365 days), the filter change indicator appears and the corresponding filter change information is displayed in the alarm menu.

Total operating time: shows the running time of the unit, which cannot be reset.

Other

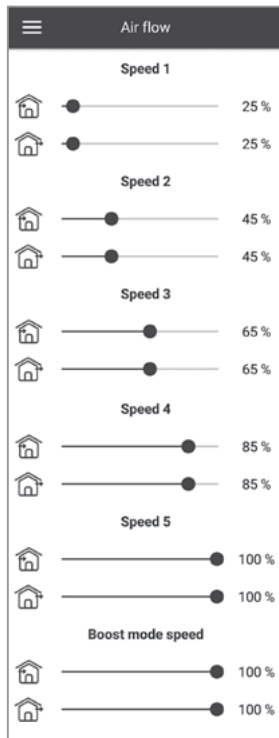


The backlight changes dynamically, after releasing the button the brightness decreases to a preset value.

Sound - switches the loudspeaker on the board on/off.

Engineering menu

Air flow rate



Air flow rate, preset ventilation level 1-5 and boost are set in this section.

Sensors

This section shows the current status of all sensors:



Outdoor air temperature



Supply air temperature



Exhaust air temperature in front of the heat exchanger



Exhaust air temperature behind the heat exchanger

Firmware



This menu shows the current version and date of the control unit and control panel firmware.

Factory settings



In this menu you can reset all settings to the factory settings. After resetting, the connection with the device may be lost. If necessary, set up the WLAN connection again.

Alarms




Alarms and warnings are displayed in this menu. Alarms are marked in red, warnings are marked in black. Alarm - indicates a serious error in operation. The ventilation system is forcibly switched off.

The alarm is reset manually with the Reset alarms button. Warning - the system is not forcibly switched off.

Warnings are automatically reset after the cause has been eliminated.

9 Emergency stop

In emergency situations, the system is switched off and the display  flashes the alarm code:

- – short light signal – – long light signal

Alarm code	Alarm description
— — — — —	Outdoor temperature sensor missing
— — — — •	Short circuit on outdoor air temperature sensor
— — — • —	Sensor behind the heating coil missing
— — — • •	Short-circuit on sensor after the post-heating coil
— — • — —	Exhaust air temperature sensor before the heat exchanger is missing
— — • — •	Short circuit on extract air sensor
— — • • —	Exhaust air temperature sensor after the heat exchanger is missing
— — • • •	Short circuit on the sensor after the heat exchanger in the extract air duct
— • — — —	Reserved
— • — — •	Reserved
— • — • —	Sensor behind the heat exchanger in the supply air duct is missing
— • — • •	Short circuit on the sensor after the heat exchanger in the supply air duct.
— • • — —	Empty battery. The time-controlled operation will not work correctly.
— • • — •	Reserved
— • • • —	Fire alarm activation
— • • • •	Remote control connection error with the control unit (not shown in the app).
• — — — —	Wifi module initialisation error
• • • • •	Unknown error (contact your dealer if this error occurs).

10 Error codes/warnings

Code	Description
2	Alarm! The outdoor air temperature sensor was not found.
3	Alarm! Short circuit of the outdoor air temperature sensor
4	Alarm! The supply air temperature sensor was not found.
5	Alarm! Short circuit of the supply air temperature sensor
6	Alarm! The exhaust air temperature sensor in front of the heat exchanger was not found.
7	Alarm! Short circuit of the extract air temperature sensor in front of the heat exchanger.
8	Alarm! The exhaust air temperature sensor after the heat exchanger was not found.
9	Alarm! Short-circuit of the exhaust air temperature sensor after the heat exchanger.
11	Alarm! Actuation of the protection thermostat of the main heating coil
23	Warning! The battery is empty. The time-controlled operation will not work correctly.
25	Alarm! Fire alarm activation
40	Warning! The filter change timer has expired. Change the filter.
50	Alarm! No connection to the control panel and the control unit
51	Alarm! No additional supply air temperature sensor before the reheating coil.
52	Alarm! Short circuit of the additional supply air temperature sensor in front of the main heating coil.

11 Troubleshooting

Malfunction	Possible reasons	Remedy
The fan(s) do not start when the system is switched on.	No power supply	Check whether the power supply is connected correctly. If not, rectify the connection error.
Cold supply air	Dirty exhaust air filter Icing of the heat exchanger	Clean or replace the exhaust air filter.
	Failure of the heating coil	Check the heat exchanger for icing. If necessary, switch off the ventilation system and allow the ice to melt.
Low flow rate	Dirty filters, fans and heat exchangers Clogged or damaged ventilation system	Contact your dealer.
Loud noise, vibrations	Dirty fan impellers	Clean or replace the filters, clean the fans and the heat exchanger.
Water leakage	Loose screw connection in the fans	Check that the diffusers and shutters are open. Check the condition of the ventilation bonnet and the supply air grille and clean them if necessary. Check the ventilation pipes for dirt or damage.

12 Maintenance and servicing



Disconnect the unit from the power supply before performing maintenance on the unit.

Maintenance work is recommended 3-4 times a year. Maintenance of the ventilation unit includes regular cleaning of the unit surfaces from dust and filter replacement or cleaning.

Maintenance of the ventilation system includes regular cleaning of the unit surfaces and filter replacement or cleaning.

1. Filter maintenance (3-4 times per year)

Dirty filters increase air resistance and reduce the supply air volume flow.

Remove the dirty filters from the unit:

Clean F8 filters with a Hoover.

To remove the G4 filters for cleaning, remove the flexible fixing clips. Rinse the filters with water and let them dry.

After drying, reassemble the filters in the reverse order. Put the filters back into the ventilation unit.

Clean the filters as needed, but at least 3-4 times a year. Contact the dealer for replacement filters.

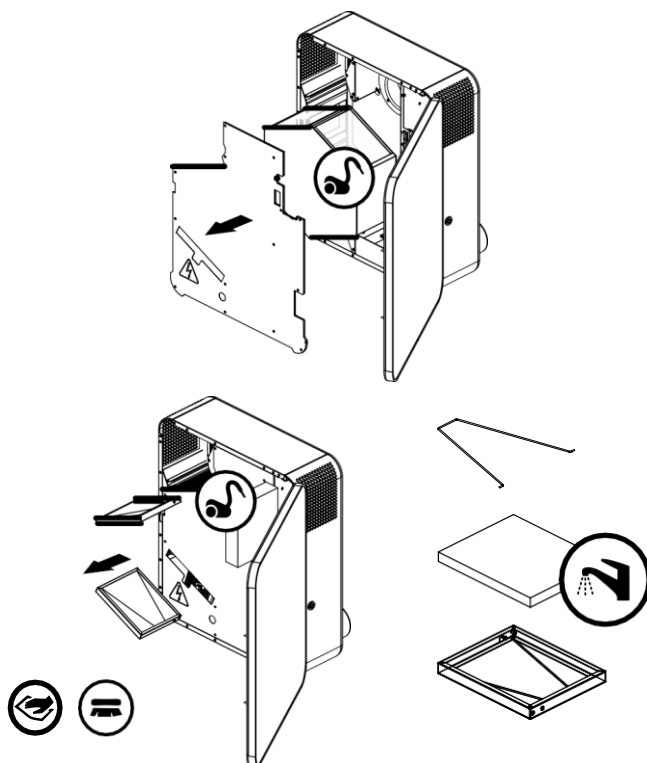
2. Maintenance of the heat exchanger (1 time per year)

Even if the filters are cleaned regularly, some dust may accumulate in the heat exchanger.

Therefore, the heat exchanger must also be cleaned regularly for continued high efficiency.

Regular dry cleaning is recommended. A Hoover with a narrow suction nozzle is best suited for this.

Pull the heat exchanger out of the ventilation system, clean it with a Hoover and put it back into the ventilation system.



3. Fan maintenance (1 time per year)

Even with regular filter maintenance, some dust may build up on the fans, reducing fan performance and supply air flow.

Clean the fans with a soft cloth or brush.

Cleaning with water, abrasives, sharp objects, etc. is not permitted in order not to damage the impeller.

4. Maintenance of the supply air grille (2 times per year)

Leaves and other dirt can clog the supply air grille and reduce the delivery rate. Check the condition of the supply air grille regularly and clean it of foreign objects as necessary.

5. Maintenance of the ventilation pipes (every five years)

Even if you carry out all the recommended maintenance regularly, some dust may get into the ventilation pipes and thus reduce the delivery rate and volume flow.

Maintenance consists of regular cleaning or replacement of the ventilation pipes.

13 Transport and storage

Store the unit in its original packaging in a ventilated room at a temperature of +5 °C to +40 °C and a relative humidity up to a maximum of 70 %.

Vapours and foreign substances in the air that may cause corrosion and damage connection seals are not permitted.

During handling operations, use lifting equipment to prevent possible damage.

The transport requirements for this type of cargo must be met.

Transport with vehicles of any kind must be carried out under constant protection against damaging mechanical and weather-related influences. Transport the unit only in the operating position.

Carry out loading and unloading operations carefully, protect against shocks.

Before first use after transport at low temperatures, the unit must be kept at room temperature for at least 3-4 hours.

14 Disposal



WARNING

Do not dispose of the appliance in household waste.

The appliance contains materials that can be recycled and materials that must not be disposed of with household waste.

At the end of its service life, dispose of the unit in accordance with the regulations in force at your location.

15 Two year warranty

We guarantee this appliance for a period of two years from the date of sale. If a material or manufacturing defect occurs within the 2-year warranty, the appliance will be repaired or replaced at our expense, provided that the consumer complies with the regulations for transport, storage, assembly and operation.

The product complies with the European norms and standards, the directives on low voltage and electromagnetic compatibility. We hereby declare that the product complies with the relevant requirements of Directive 2014/30/EU on electromagnetic compatibility, Low Voltage Directive 2014/35/EU and Directive 93/68/EEC on CE marking.

In the event of malfunctions of the appliance due to defects caused at the factory that occur within the warranty period, the consumer is entitled to have the defects in the appliance remedied free of charge by means of warranty repair by the manufacturer.

The warranty repair includes in particular work to remedy defects in the operation of the appliance in order to ensure that the appliance can be used as intended within the warranty period.

The rectification of defects is carried out by replacing or repairing the defective parts or units of the unit.

The warranty does not cover parts of the unit that are subject to normal wear and tear (e.g. filters) and can therefore be regarded as wearing parts.

The warranty does not apply in the following cases:

- The consumer does not present the fan in its entirety as specified in the operating instructions, including the components of the unit disassembled by the consumer.
- Non-compliance of the model or brand of the unit with the information on the packaging and in the operating instructions.
- Failure by the consumer to carry out timely technical maintenance of the appliance.
- In the event of external damage to the housing and internal units caused by the consumer (except for external modifications to the unit that are necessary for assembly).

- Changes to the construction of the unit or technical modifications to the unit.
- Replacement and use of units or parts not intended by the manufacturer.
- Inappropriate use of the unit.
- Violation of the installation instructions of the appliance by the consumer.
- Violation of the regulations for the control of the appliance by the consumer.
- Connection of the appliance to a mains supply with a voltage other than that specified in the operating instructions.
- Failure of the appliance due to voltage jumps in the mains.
- Independent repair of the appliance by unauthorised persons.
- Repairs to the unit by persons who are not authorised by the manufacturer.
- Expiry of the warranty period of the unit.
- Violation of applicable regulations concerning the transport of the appliance by the consumer.
- Violation of regulations concerning the storage of the appliance by the consumer.
- Illegal actions by third parties in relation to the appliance.
- Failure of the appliance due to force majeure (fire, flood, earthquake, war, military action of any kind, blockades).

- Absence of seals if provided for in the operating instructions.
- Failure to present the operating instructions with the date of purchase indicated.
- Absence of the proof of purchase with the date of purchase shown, which confirms the purchase.

The warranty service requires that sufficient proof, e.g. a proper invoice, is presented and that the warranty claim is made within the warranty period.

For the warranty repair, the consumer must present the appliance, the operating instructions with the note of the date of purchase and a payment receipt as confirmation of the purchase.

The model of the appliance presented must correspond to the model indicated in the operating instructions. Contact the seller of the unit for warranty service.

In the event of a warranty claim, we recommend that you contact us first. To obtain this warranty service, please contact us at: info@radontec.de

16 Support and Contact

16.1 Troubleshooting/FAQ

You will find answers to the most frequently asked questions on our website:

<https://www.radontec.de>

16.2 Contact Us

Should you have any further questions or require further help and technical support, please do not hesitate to contact us.

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