

SINGLE-ROOM REVERSIBLE ENERGY RECOVERY VENTILATOR



VENTO Expert A50C3-1 S8 W V.2

EN USER'S MANUAL

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This user's manual is a main operating document intended for technical, maintenance, and operating staff.

The manual contains information about purpose, technical details, operating principle, design, and installation of the VENTO Expert A50C3-1 S8 W V.2 unit and all its modifications.

Technical and maintenance staff must have theoretical and practical training in the field of ventilation systems and should be able to work in accordance with workplace safety rules as well as construction norms and standards applicable in the territory of the country.

The information in this user's manual is correct at the time of the document's preparation.

The Company reserves the right to modify the technical characteristics, design, or configuration of its products at any time in order to incorporate the latest technological developments.

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SAFETY REQUIREMENTS

All user's manual requirements as well as the provisions of all the applicable local and national construction, electrical, and technical norms and standards must be observed when installing and operating the unit.

Disconnect the unit from power supply prior to any connection, servicing, maintenance, and repair operations.

Only qualified electricians with a work permit for electrical units up to 1000 V are allowed for installation and maintenance. The present user's manual should be carefully read before beginning works.

- Single-phase power mains must comply with the acting local electrical norms and standards.
- Fixed electrical wiring must be equipped with an automatic circuit breaker.
- The unit must be connected to power mains through a double pole circuit breaker of suitable rating integrated into the fixed wiring system with opening of contacts at all poles. The gap between the circuit breaker contacts at all poles must be not less than 3 mm.
- Check the unit for any visible damage of the impeller, the casing, and the grille before starting installation. The casing internals must be free of any foreign objects that can damage the impeller blades.
- While mounting the unit, avoid compression of the casing! Deformation of the casing may result in motor jam and excessive noise.

- Misuse of the unit and any unauthorized modifications are not allowed.
- Do not expose the device to adverse atmospheric agents (rain, sun, etc.).
- Take steps to prevent ingress of smoke, carbon monoxide, and other combustion products into the room through open chimney flues or other fire-protection devices. Sufficient air supply must be provided for proper combustion and exhaust of gases through the chimney of fuel burning equipment to prevent back drafting.
- Transported air must not contain any dust or other solid impurities, sticky substances, or fibrous materials.
- Do not use the unit in a hazardous or explosive environment containing spirits, gasoline, insecticides, etc.
- For effective functioning of the unit, it is necessary to ensure an appropriate fresh air supply into the room. Do not close or block the intake or extract vents in order to ensure the efficient air flow.
- Do not sit on the unit and do not put objects on it.
- The unit is allowed to be used by children aged from 8 years old and above and persons with reduced physical, sensory, or mental capabilities or no experience and knowledge provided that they have been given supervision or instruction regarding safe use of the unit and understand the risks involved.
- Do not allow children to play with the unit.
- Cleaning and user maintenance shall not be made by children without supervision.
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WARNING! Similar to the use of any other household electrical appliances when operating this fan, the following basic rules must be followed:

- Never touch the fan with wet or damp hands.
- Never touch the fan when barefoot.



**THE PRODUCT MUST BE DISPOSED SEPARATELY AT THE END OF ITS SERVICE LIFE.
DO NOT DISPOSE THE UNIT AS UNSORTED DOMESTIC WASTE.**

PURPOSE

The ventilator is designed to ensure continuous mechanical air exchange in flats, cottages, hotels, cafés and other domestic and public premises. The ventilator is equipped with a regenerator that enables supply of fresh filtered air heated by means of extract air heat energy recovery. The ventilator is designed for wall flush mounting.

The unit is rated for continuous operation without disconnection from power mains.

DELIVERY SET

Name	Number
Indoor unit of the ventilator	1 pc.
Air duct	1 pc.
Sound-absorbing material	1 pc.
Assembled cartridge	1 pc.
Outer ventilation hood	1 pc.
Remote control	1 pc.
Cardboard template	1 pc.
Fastening set	2 packs
Foam wedges	1 set
User's manual	1 pc.
Mounting hood installation instruction	1 pc.
Packing box	1 pc.

DESIGNATION KEY

VENTO Expert A -50 C3 -1 S8 W V.2

	Unit version
	V.2: Wi-Fi controllable, connection to PC is not required
	Automation type
	W: connection of ventilators via Wi-Fi
	Ventilation hood model
	S8: ventilation hood for a cold climate
	Front panel modification
	1: flat front panel
	Cartridge modification
	C3: cartridge for cold climate
	Rated air flow [m³/h]
	Air duct cross section
	A: round
	Ventilator series
	Expert – series of reversible ventilators with unidirectional air flow

TECHNICAL DATA

The ventilator is rated for indoor application with the ambient temperature ranging from -30 °C up to +40 °C and relative humidity up to 65 %.

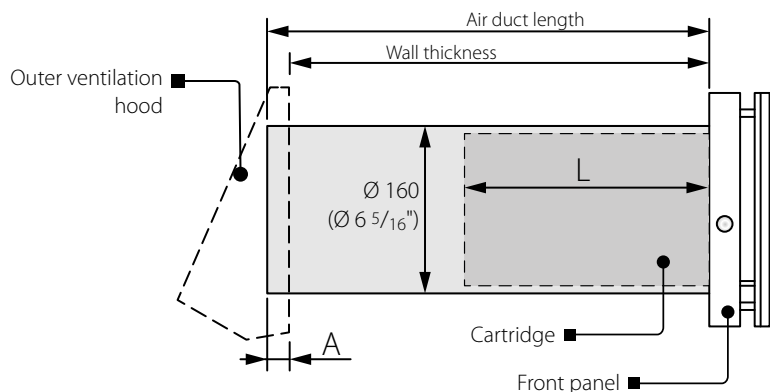
The unit is rated as a class II electric appliance.

Ingress protection rating against access to hazardous parts and water ingress is IP24.

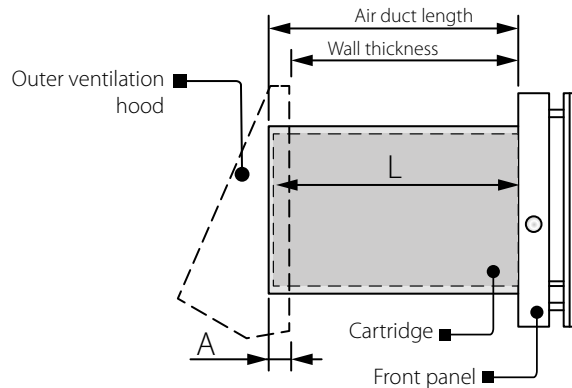
The ventilator design is regularly improved, so some models may slightly differ from those ones described herein.

Technical specifications of the particular model are indicated on the unit casing.

Wall thickness is above the minimum



Wall thickness is minimal



A: protruding part of the air duct on the outer wall. Depends on the selected ventilation hood type.

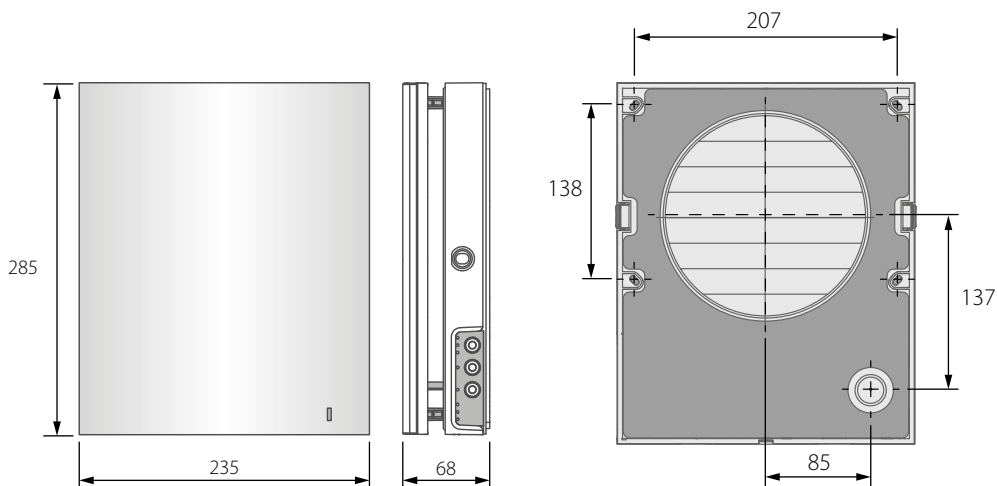
L: cartridge length. Depends on the cartridge modification.

Ventilator model	L, mm
VENTO Expert A50C3-1 S8 W V.2	270

The supplied air duct length and the supplied ventilation hood model depends on the ventilator model, refer to the Designation Key section, page 4.

The overall and connecting dimensions of the outer ventilation hood, the outside protrusion length of the air duct A and the mounting sequence of the hood are stated in its mounting instruction.

The overall dimensions of the front panel are stated below.



Wi-Fi technical data

Standard	IEEE 802,11, b/g/n
Frequency band [GHz]	2.4
Transmission power [mW] (dBm)	100(+20)
Network	DHCP
WLAN safety	WPA, WPA2

DESIGN AND FUNCTIONING

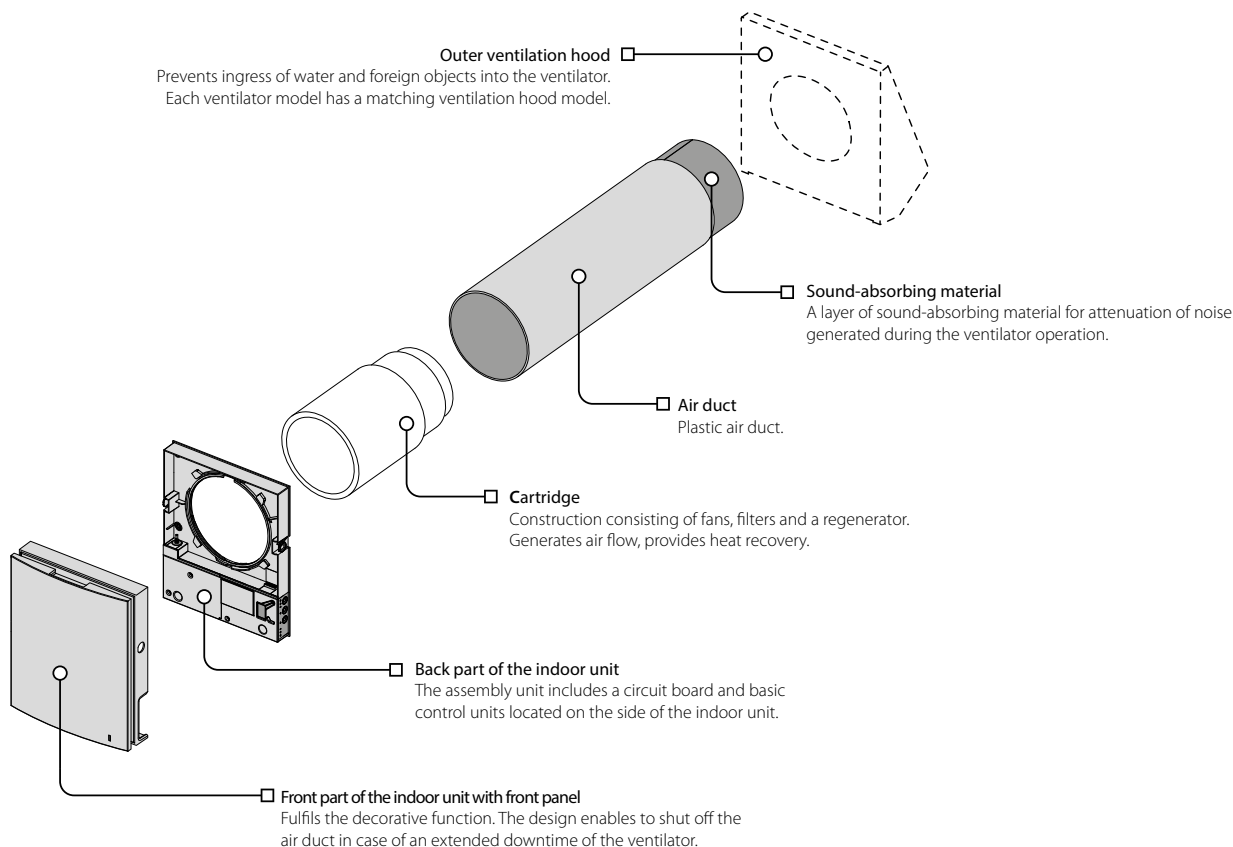
The ventilator consists of an indoor unit with a decorative front panel, a cartridge, an air duct with a sound absorbing layer and an outer ventilation hood.

The cartridge is a basic functioning part of the ventilator. The cartridge consists of the fans, the regenerator and two filters that ensure rough air filtration and prevent ingress of dust and foreign objects into the heat exchanger and the fan.

The indoor assembly unit is equipped with automatic shutters that close during the ventilator standstill and prevent air backdraft.

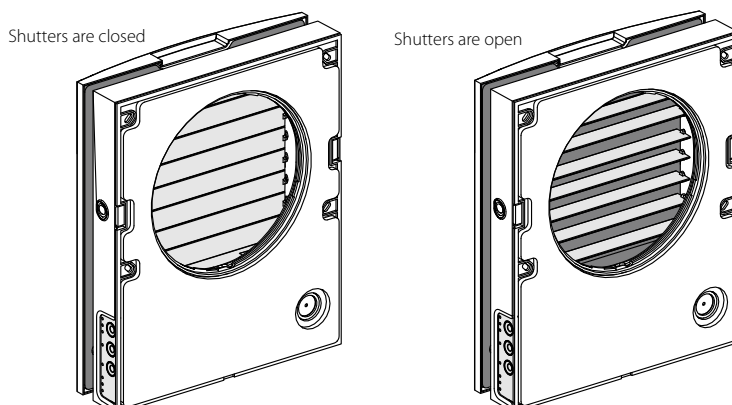
The outer ventilation hood is used to prevent direct ingress of water and other objects to the ventilator.

VENTILATOR DESIGN



OPERATING LOGIC OF THE AUTOMATIC SHUTTERS FOR VENTO Expert

The indoor unit is equipped with automatic shutters. During the ventilator operation the automatic shutters are opened and let the air flow freely through the ventilator. The automatic shutters are closed for 2 minutes at the ventilator shut down.



VENTILATOR OPERATION MODES

Ventilation: the ventilator runs either in air extraction or air supply mode at a set speed.

In this mode some of the ventilators in the network run in air supply mode and the other ones in air extraction mode, depending on the position of the DIP switch No. 3 (see page 12).

Boost : the ventilator goes to the maximum speed without changing the operation mode.

Regeneration: the ventilator runs in two cycles, 70 seconds each, with heat and humidity regeneration.

- **Cycle I.** Warm stale air is extracted from the room and flows through the ceramic regenerator, which gradually absorbs heat and humidity. In 70 seconds, as the ceramic regenerator gets warmed, the ventilator is switched to air supply mode.
- **Cycle II.** Fresh intake air from outside flows through the ceramic regenerator, absorbs accumulated moisture and is heated up to the room temperature. In 70 seconds, as the ceramic regenerator gets cooled down, the ventilator is switched to air extraction mode and the cycle is renewed. If two ventilators are installed, they operate with opposite rotation directions in this mode. While one ventilator supplies air, the other one extracts it.

Air supply: the ventilator operates in air supply mode irrespective of the position of the DIP switch No. 3 (see page 12).

MOUNTING AND SET-UP



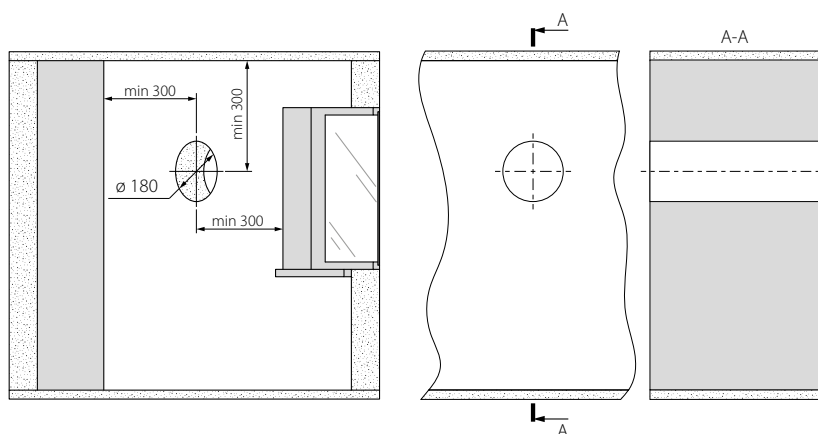
READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT.



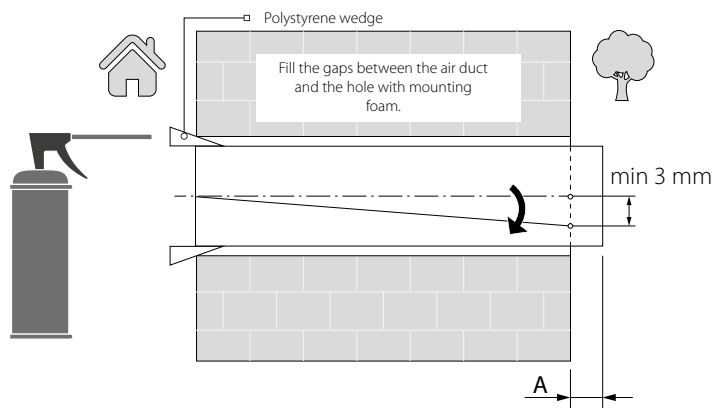
DO NOT BLOCK THE AIR DUCT OF THE INSTALLED VENTILATOR WITH DUST ACCUMULATING MATERIALS, SUCH AS CURTAINS, CLOTH SHUTTERS, ETC.

AS IT PREVENTS AIR CIRCULATION IN THE ROOM.

1. Prepare a round core hole in the outer wall. The hole size is shown in the figure below.



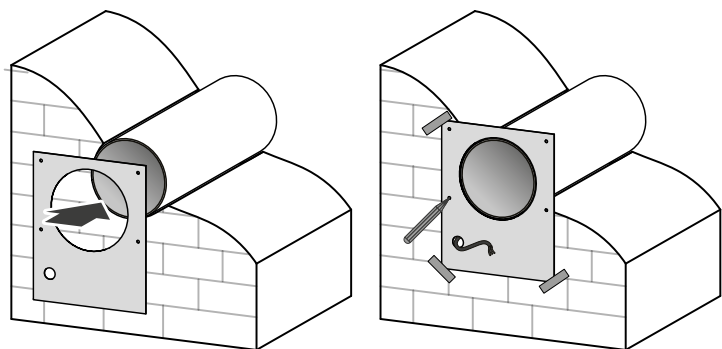
2. Insert the air duct in the wall. For ease of installation use the foam wedges included in the delivery set. The air duct end must protrude for the distance A that enables installation of an outer ventilation hood. Distance A is stated in the installation instruction for the ventilation hood.



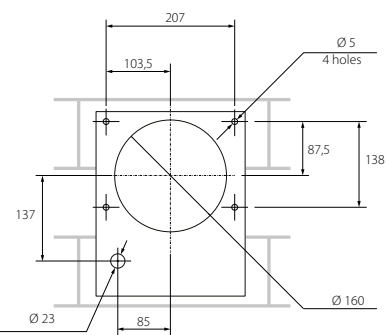
Install the air duct with the minimum slope of 3 mm downwards from the outer wall side.

The air duct can be cut by calculating preliminarily the required length or after fixing the air duct on the wall (in this case, it is necessary to have access to the outside part of the wall).

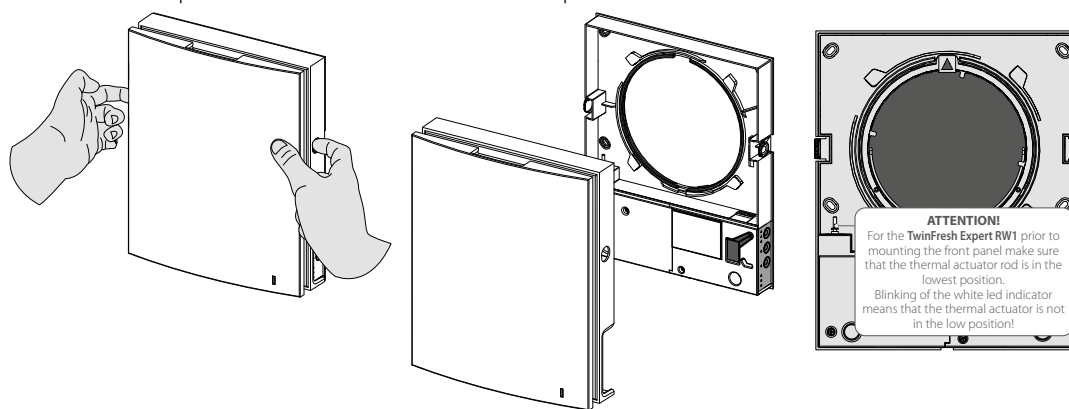
3. Stick the delivered cardboard master plate on the indoor wall using a mounting tape. The large opening in the master plate must be axially aligned with the air duct. For aligning the master plate with respect to the horizon line it is recommended to use a builder's level. Then mark the fastening holes for installation of the supplied dowels and drill the holes to a required depth. Route the power cable of the ventilator from the wall through the marked opening on the template.



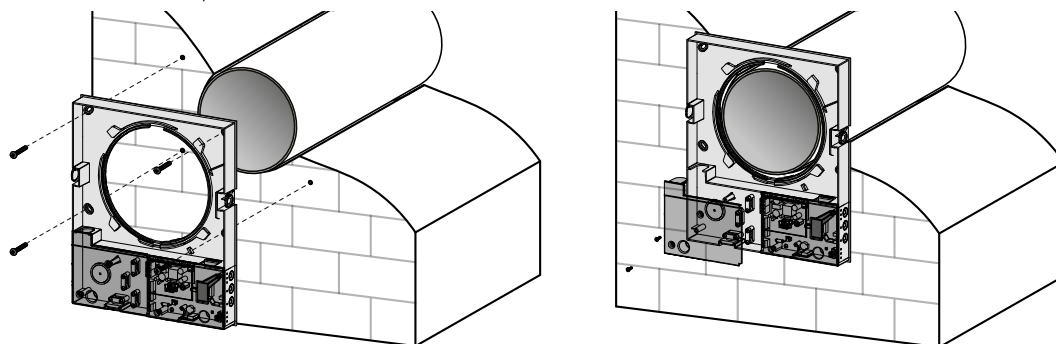
Hole marking for fasteners



4. Unlatch and detach the front part of the indoor unit from its back part.

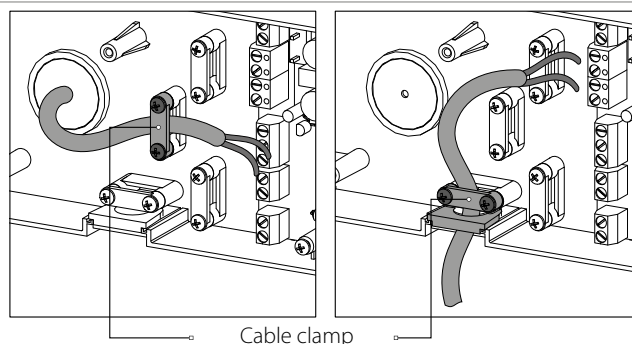


5. Fix the back part of the indoor unit on the wall with the screws supplied with the mounting kit of the ventilator. Remove the two retaining screws from the left transparent cover to enable access to the terminals.

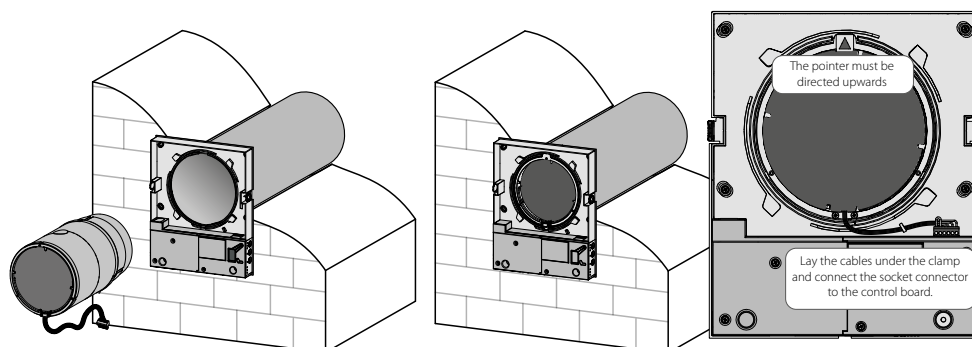


6. Route the power cable as figured below and connect the ventilator to power mains in compliance with the external wiring diagram, see page 11.

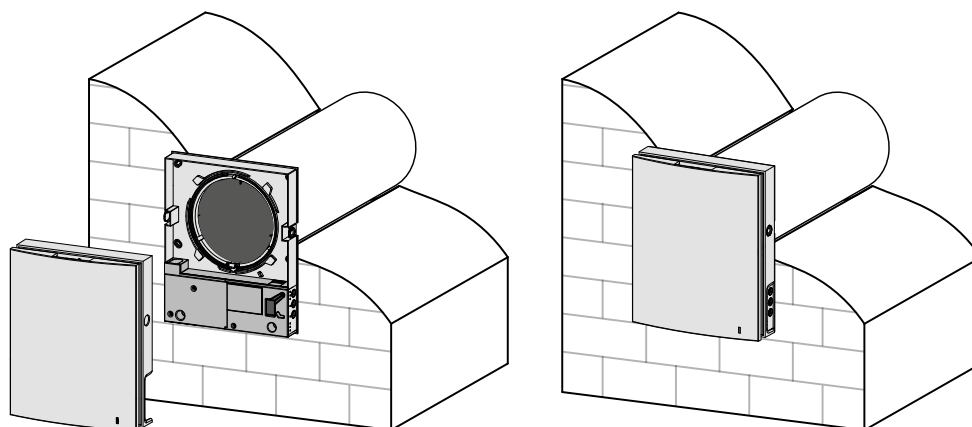
Fix the power cable and the signal cables with a cable clamp. After completion of the electrical connection re-install the transparent cover in site.



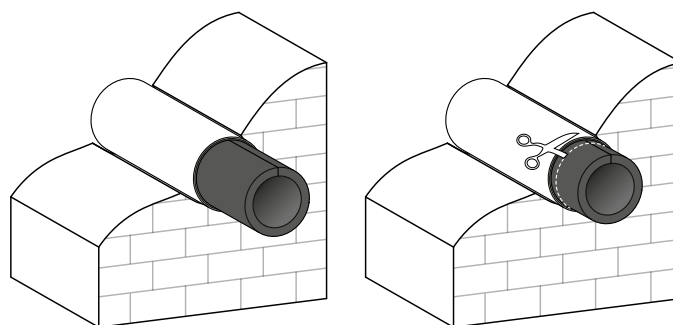
7. Install the cartridge into the air duct as figured below. Be sure the pointer is directed upwards. Then fix the wire with the retaining clip and connect the connector to the circuit board.



8. Install the front part of the indoor unit.



9. Insert the sound-absorbing layer in the air duct. Roll the layer of the sound absorbing material to match the air duct diameter. The protecting paper layer must be outside. Insert the sound absorbing roll into the cartridge against stop. Make a mark at the end of the air duct, remove the material and cut the roll as marked. Insert the ready sound absorbing roll into the air duct.



10. Install the outer ventilation hood. The mounting sequence of the outer ventilation hood is described in the installation instruction for the ventilation hood.

CONNECTION TO POWER MAINS

**POWER OFF THE POWER SUPPLY PRIOR TO ANY OPERATIONS WITH THE UNIT.
THE UNIT MUST BE CONNECTED TO POWER SUPPLY BY A QUALIFIED ELECTRICIAN.
THE RATED ELECTRICAL PARAMETERS OF THE UNIT ARE GIVEN ON THE
MANUFACTURER'S LABEL.**

**ANY TAMPERING WITH THE INTERNAL CONNECTIONS IS PROHIBITED
AND WILL VOID THE WARRANTY.**

The ventilator is rated for connection to single-phase AC 100-240V 50/60 Hz power mains.

The routing of the power and signalling cables is shown in the "Mounting and set-up" section.

For electric installations use insulated, durable and heat-resistant conductors (cables, wires) with the minimum cross section of 0.5 up to 0.75 mm² for a power cable and 0.25 mm² for signal cables. The cable cross-section is given for reference only. The actual conductor cross-section selection must be based on its type, maximum permissible heating, insulation, length and installation method.

Use copper wires for all the electric connections!

Connect the unit to power mains via the terminal block installed in the control board in compliance with the wiring diagram and terminal designation.

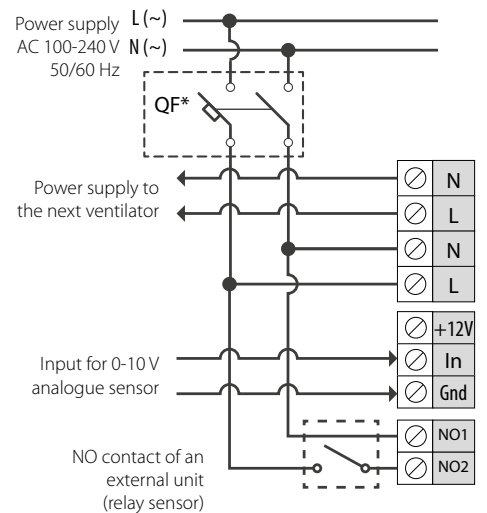
Connect the ventilator to power mains through an automatic circuit breaker with magnetic trip integrated into the home wiring system. The tripping current of the circuit breaker is selected based on the electrical characteristics shown on the label of the fan casing.

The ventilator design enables connecting any external controls with a normally opened contact (NO contact), such as an external CO₂ sensor, a humidity sensor, a switch, etc.

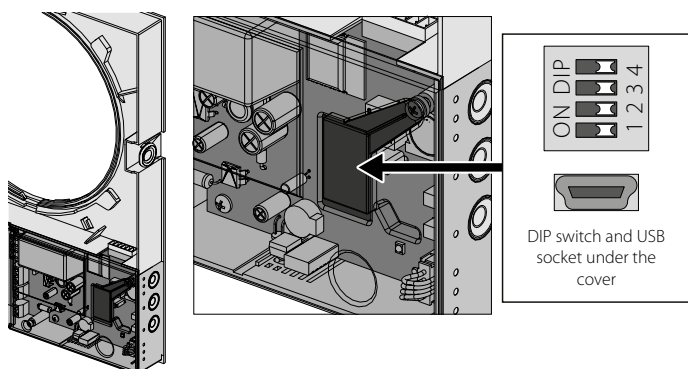
When the NO contact of the external device is closed, the unit changes to the maximum speed.

An analogue sensor with output voltage 0-10 V is also compatible with the unit.

EXTERNAL CONNECTIONS DIAGRAM











VENTILATOR SETUP



Prior to operating the ventilator set it up using the DIP switch. It is located on the controller circuit board.

To access the DIP switch, take off the front panel of the indoor unit and uplift the rubber plug that covers the switch.

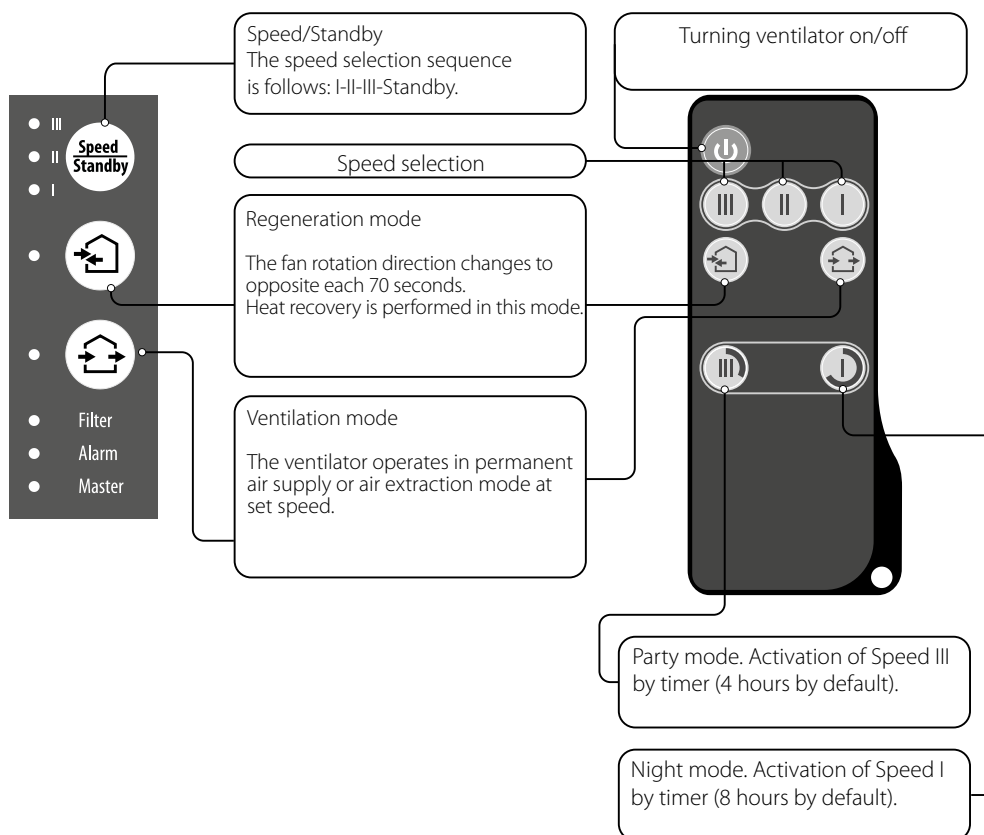
POSITIONING OF THE DIP SWITCH

Ventilator network setup		
 1	OFF – master unit (hereinafter referred to as “Master unit”)	
 1	ON – slave unit (hereinafter referred to as “Slave unit”)	
Standby mode setup		
 2	OFF – the ventilator is switched off in the Standby mode.	
 2	ON – the ventilator operates at Speed I in the Standby mode.	
Setup of air flow direction in Ventilation mode with running ventilators for VENTO Expert		
 3	OFF – operation in air extraction mode.	
 3	ON – operation in air supply mode.	
Restore factory default settings		
 4	OFF – standard operation of the unit.	
 4	ON – restore factory default settings. For this purpose, move the switch on the operating ventilator to the ON position, after the sound signal turn the switch to the OFF position.	





VENTILATOR CONTROL

The ventilation unit may be operated with the following controls:








- infra-red remote control
- control buttons located on the side of the indoor unit (see the figure below)
- Blauberg Vento V.2 application from a mobile device (smartphone or tablet)



VENTILATOR CONTROL WITH THE BUTTONS ON THE INDOOR UNIT

	<p>The speed selection sequence is as follows: I-II-III-Standby. All the units integrated in a single network operate according to the speed settings of the Master unit. I: permanent indicator glowing indicates operation of the unit at Speed I. Indicator blinking indicates activation of the Night mode timer. I and II: permanent glowing of the indicators I and II indicates operation of the unit at Speed II. I, II and III: permanent glowing of the indicators I, II and III indicates operation of the ventilation unit at Speed III. Synchronous blinking of the indicators I, II and III indicates activation of the timer in Party mode or the turn-off delay timer in the Boost mode in case of actuation of the connected external sensors or the integrated humidity sensor. Alternate blinking of the indicators I, II and III indicates that the ventilator runs at the speed set with the mobile application using the slider selector for manual speed setting or that the Weekly Schedule mode is activated.</p>
	<p>Regeneration mode The rotation direction of both fans changes to opposite every 70 seconds. Heat recovery is performed in this mode. To enable reverse phase operation of the ventilators, change the position of DIP switch No. 3.</p>
	<p>Ventilation mode The ventilator operates in permanent air supply or air extraction mode at set speed. The fan rotation direction depends on the position of the DIP switch 3.</p>
<p>No glowing of the indicators “Regeneration” and “Ventilation” indicates forced operation of the ventilation unit in the air supply mode. This mode may be activated only via the mobile application.</p>	
<p>Filter</p>	<p>90 days after installation of the cartridge the filter replacement indicator starts glowing. In this case, clean or replace the filters (see the “Technical maintenance” section). After replacement of the filters reset the timer using the mobile application or by pressing and holding the  button on the Master ventilator indoor unit for 5 seconds until a signal sounds.</p>
<p>Alarm</p>	<p>Alarm indicator In case of failure, the Alarm indicator on the indoor unit glows or blinks. Reasons of Alarm blinking:</p> <ul style="list-style-type: none"> • Battery charge is below the low level. • No connection between the Master unit and the router. • Alarm shutdown of the ventilator. <p>If several interconnected ventilators are running in the same network, in case of alarm shutdown of the ventilator, all of the ventilators of this network also stop. The Alarm indicator blinks on the defective ventilator and glows on the other connected ventilators. In case of communication loss of the Master unit with the router for longer than 20 seconds, the Master unit switches to Standby mode (Alarm indicator blinking) and the Slave units will signal that there is no communication with the Master unit (see the description of the Master indicator). After resuming communication, the Slave units are automatically synchronised with the Master unit.</p>
<p>Master</p>	<p>Permanent glowing of the indicator shows the leading unit in the network (Master unit). Indicator blinking indicates the driven unit (Slave unit) and no connection to the Master unit. No glowing of the lamp indicator means that this ventilation unit is a Slave ventilation unit and it is connected to a Master unit.</p>
<p>Synchronous blinking of all the lamp indicators on the casing of the ventilator indicates that the Setup mode is enabled.</p>	

REMOTE CONTROL OF THE VENTILATION UNIT

	ON/Standby. The Standby mode depends on the position of the DIP switch 2 (see page 12). The same button is used to reset alarms (Alarm) and turn off the timers.
	Ventilator speed selection: Speed III-II-I respectively.
	Regeneration mode The rotation direction of both fans changes to opposite every 70 seconds. Heat recovery is performed in this mode. The fan rotation direction depends on the position of the DIP switch 3.
	Ventilation mode The ventilator operates in permanent air supply or air extraction mode at set speed. The fan rotation direction depends on the position of the DIP switch 3.
	Timer control buttons:  Party mode: the timer activates operation of the unit at Speed III for a set time period, 4 hours by default. The timer setting may be changed during setup of the unit on mobile device.  Night mode: the timer activates operation of the ventilation unit at Speed I for a set time period, 8 hours by default. The timer setting may be changed during setup of the unit on mobile device. The ventilation unit reverts to operation with a previous speed setting upon elapse of the set time period. Press any speed setting key to deactivate the timer or press the timer control button once again.

VENTILATION UNIT OPERATION WITH THE MOBILE APPLICATION

To enable operation of the unit with a mobile device, install a Blauberg Vento V.2 application to your mobile device.

[Blauberg Vento V.2 - App Store](#)

[Blauberg Vento V.2 Play Market](#)



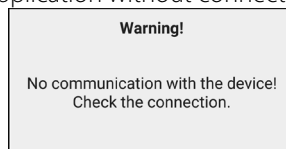
Your mobile device must have an operating system matching the following parameters:

- iOS - 8 or later. Compatible with iPhone, iPad, iPod.
- Android - 4 or later.

MOBILE APPLICATION CONNECTION TO THE VENTILATOR

Download the Blauberg Vento V.2 application and install it on the mobile device.

Following message is displayed when launching an application without connection to the ventilator:



By default, the ventilator operates as a Wi-Fi access point. Connect the mobile device to a Wi-Fi access point (FAN: + 16 characters of the ID number) indicated on the control board of the ventilator.

Wi-Fi access point password: 11111111.



Enter the Blauberg Vento V.2 app and create a new connection by following the steps below:

1. Enter the app menu.
2. Select **Connection - At home**.
3. If the mobile device is connected to the Wi-Fi access point of the unit without a router, select the **Default connection**.
4. In case of connection via a router, search for network settings.
5. Find the new connection in the list and highlight its ID.
6. Edit the connection details.
7. If necessary, re-name the connection and enter a ventilator password.

By default the ventilator password is 1111 (automatically inserted in the input line).

CAUTION!!! At this stage the password for the ventilator cannot be changed.

8. Confirm the updated details.

Once the connection has been established, go to the app menu and choose **Control**.

DESCRIPTION OF MOBILE APPLICATION CONTROL BUTTONS

 ON/Standby. The **Standby** mode depends on the position of the DIP switch 2 (see page 12).



Selection of the preset speed: Speed I, II and III respectively.

 9% Manual speed setup. To activate the scroll bar, check it.

Ventilation



The ventilator operates in permanent air supply or air extraction mode at set speed. The fan rotation direction depends on the position of the DIP switch 3.



Regeneration mode

The rotation direction of both fans changes to opposite every 70 seconds. Heat recovery is performed in this mode.



Air supply mode

The ventilation unit operates exclusively in air supply mode.



Night mode

Activation of Speed I timer without changing the ventilator operation mode (8 hours by default, adjustable in the **Settings - Timers menu**).



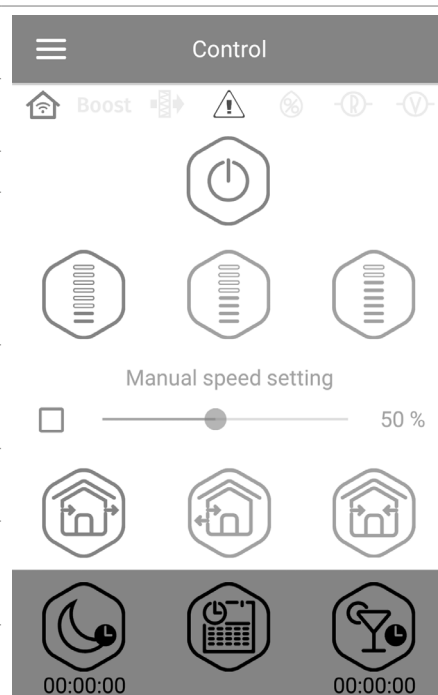
Weekly schedule

Activation of the ventilator week-scheduled operation.



Party mode

Activation of the Speed III timer without changing the ventilator operation mode (4 hours by default, adjustable in the **Settings - Timers menu**).



DESCRIPTION OF MOBILE APPLICATION INDICATORS



Current type of connection to the ventilator.

Home connection or connection via a cloud server through Internet respectively.

boost

Speed III activation indicator. It goes on after activation of any sensor.

When this mode is activated, all the other modes are deactivated. Upon elapse of the turn-off delay timer countdown (30 minutes by default) the ventilation unit reverts to the previous mode. Press **Power** to deactivate this operation mode.



Humidity indicator. It glows if the indoor humidity is above the set point.



Indicator of external relay sensor. It glows if the external relay sensor is activated.



Indicator of the external analogue sensor 0-10 V. It indicates exceeding the setpoint on the external sensor.



Alarm indicator. It glows in emergency case and can be of two colours:

Red – lights up in case of emergency shutdown of the ventilator.

Orange – lights up in case if there is no battery or the battery is low.



Filter replacement indicator. To reset the filter timer, go to **Menu->Settings->Filter**.

When simultaneously activating several operation modes that exclude each other, the ventilator selects the mode according to the following priority:

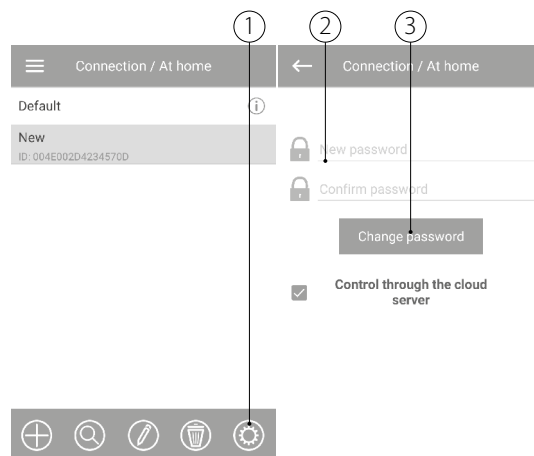
1. Night mode timer or Party mode timer.
2. Standby.
3. Boost-mode.
4. Weekly Schedule.
5. Regular mode.

To change the ventilator password in the mobile device application, go to **Menu->Connection->At home**.

VENTILATOR PASSWORD CHANGE

1. Choose the connection and press the Settings button.
2. Enter and confirm the password.
3. Press the **Change Password** button

To set the **Night mode**, **Party mode** timer and the turn-off delay timer for the **Boost** mode, go to **Menu - Settings - Timers** in the mobile application.



TIMER SETUP

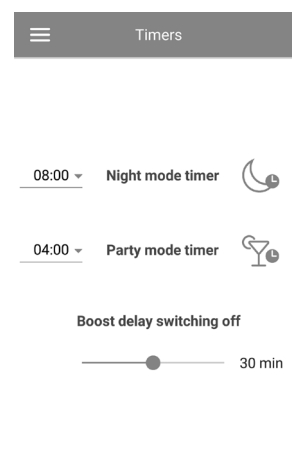
The **Night mode** timer sets the delay for the ventilator to switch to Speed I after the Night mode activation (8 hours by default).

The **Party timer** defines the delay for the ventilator to switch to Speed III after the Party mode activation (4 hours by default).

The **turn-off delay timer for the Boost mode** defines the delay time for operation at the third speed after the actuation of any of the sensors and their return to the standard state.

To set up sensor operation via the mobile app, go to **Menu -> Settings -> Sensors**.

Humidity sensor: activation of the humidity sensor. When the indoor humidity exceeds the set point, the unit switches to Speed III. When the humidity level drops below the threshold value, the Boost turn-



SENSOR SETUP

off delay timer is activated. When the timer elapses, the ventilator reverts to the previous speed setting.

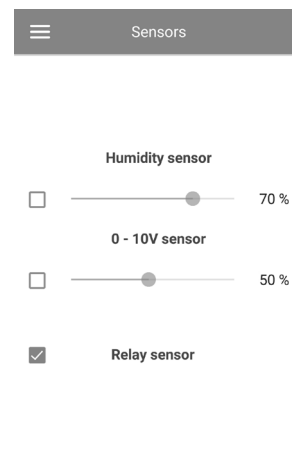
0-10 V sensor: activation of the external analogue sensor 0-10 V. When a 0-10 V control signal value exceeds the set point, the ventilation unit changes to the maximum speed. When the signal drops below the threshold value, the Boost turn-off delay timer is activated. When the timer elapses, the ventilator reverts to the previous speed setting.

Relay sensor: activation of the external relay sensor. When the no-contact of the external relay sensor is closed, the unit changes to the maximum speed. Upon the opening of the NO-contact the Boost turn-off delay timer is activated. When the timer elapses, the ventilator reverts to the previous speed setting.

To set up the ventilator date and time go to **Settings -> Date and time**.

Current time: set the current time.

Current date: set the current date.




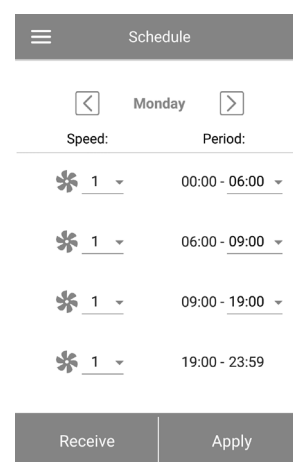
DATE AND TIME SETUP

To set up the weekly schedule in the mobile app, go to **Menu -> Settings -> Schedule**. The weekly schedule can be set by means of 4 time intervals available for each day of the week. You can select one of the three fan speeds or **Standby** mode for each time interval. To get the current settings for the selected day of the week, press the **Receive** button.



WEEKLY SCHEDULE SETUP

To apply the selected settings for the selected day of the week, press the **Apply** button. For weekly schedule proper operation make sure to set the correct date and time. The ventilator filters must be serviced after every 90 hours of continuous operation. The need to replace the filters is signalled by the indicator  in the upper section of the **Control** menu. Replace the filter and reset the filter timer.



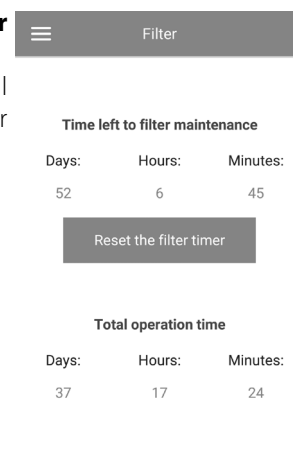
FILTER TIMER RESET

To reset the filter timer via the mobile app, go to **Menu -> Settings -> Filter**. Then press the **Reset filter timer** button.

The 90 days are counted on the master ventilator only. The filter replacement indication is replicated on all the Slave units. If so, replace the filters on all the ventilators on the network. Upon filter timer reset the filter replacement warning is disabled on all the connected ventilators.

The filter timer can also be reset by means of the button on the indoor unit (see page 14).

To restore the factory settings via the mobile app, go to **Menu -> Settings -> Factory settings**. Then press the **Reset to factory settings** button.



RESTORE FACTORY DEFAULT SETTINGS

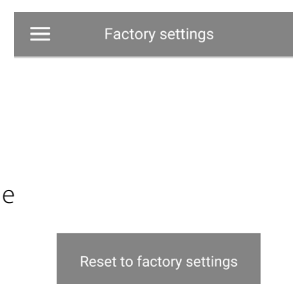
WARNING!

Resetting the factory settings may result in losing Wi-Fi connection with the device.

The unit operates in two modes:

Master

The unit acts as a leading unit in the network. All the Slave units and mobile devices are connected to the



WIRELESS CONNECTION OF SEVERAL VENTILATION UNITS

Master unit via Wi-Fi. The Master unit is operated by means of a mobile device, the remote control or the touch buttons on the unit casing. The control signal is automatically transferred to the connected Slave units. In this mode the unit responds to a signal from sensors (humidity sensor, external digital sensor, external analogue sensor 0-10 V) and changes its operation mode respectively.

Slave

The unit acts as a driven unit in the network. The Slave unit responds to a signal from the master ventilator only. Any other signals from other controls are ignored. In this mode the ventilators also ignore the sensor signals. In case of communication loss with the Master unit above 20 seconds, the unit switches to Standby mode.

Timer operation

The ventilators respond to sensor feedback only in the Master mode.

In case of actuation of any sensors, all the connected ventilators go to maximum speed.

Wi-Fi parameters are only set on Master units. To set up ventilator Wi-Fi parameters via the mobile app, go to **Menu -> Connection ->**

Wi-Fi setup.

Press the **Receive** button to display the current Wi-Fi settings.

WI-FI PARAMETER SETUP

Select one of the Wi-Fi operation modes:

Access Point: access point mode without a home router.

Select the desired security level for the **Access point** mode:

- **Open** – open Wi-Fi network without a password.
- **WPA PSK:** password-protected. Encryption technology, using the WPA protocol, which does not guarantee complete security.
- **WPA2 PSK:** password-protected. The type of data encryption for modern network devices.
- **WPA/WPA2 PSK:** password-protected (recommended). Combined technology that activates WPA and WPA2 and at the same time provides maximum compatibility with any of your devices.

Enter your access point password and press the **Apply** button.

Client – the unit operates on the home router network.

Enter the home router details and the IP address type for the client mode.

- Enter the name of the Wi-Fi home router access point.
- Enter the password for the Wi-Fi home router access point.

Select IP address type:

DHCP: the IP address is set up automatically upon connection to the home router (recommended).

Static: enables manual entry of the desired IP address, subnet mask and default gateway.

These settings are recommended for expert users only.

Select this IP address type at your own risk.

Then press the **Apply** button.

The screenshot shows the 'Wi-Fi setup' screen with 'Access point' selected. Under 'Security modes', 'WPA/WPA2 PSK' is chosen. The 'Wi-Fi password' field is empty with a placeholder '8 - 64 characters'. The 'Wi-Fi channel' is set to '11'. At the bottom, there are 'Receive' and 'Apply' buttons.

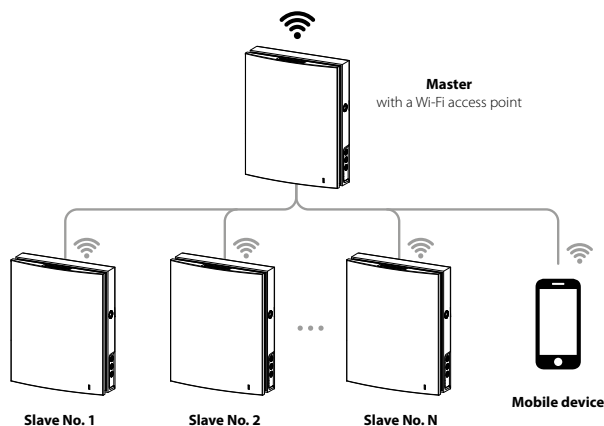
The screenshot shows the 'Wi-Fi setup' screen with 'Client' selected. Under 'Wi-Fi name', the field is empty with a placeholder '1 - 32 characters'. The 'Wi-Fi password' field is empty with a placeholder '0 - 64 characters'. Under 'Type of IP address', 'DHCP' is selected. At the bottom, there are 'Receive' and 'Apply' buttons.

VENTILATOR WIRELESS CONNECTION DIAGRAMS

Wiring diagram 1

Connection of up to 8 Slave units or mobile devices to the Master unit with its own wireless access point.

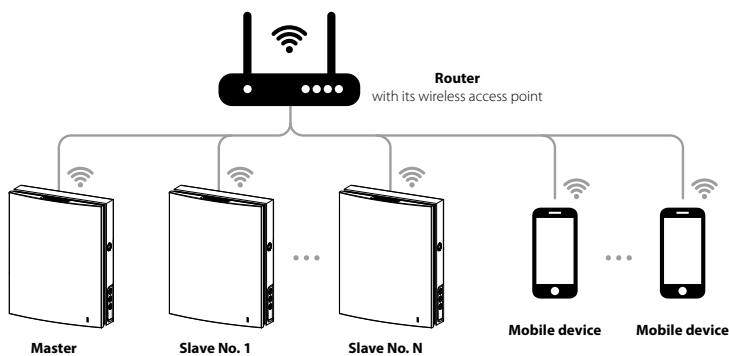
In case of connection of 8 Slave units to the Master unit with its own wireless access point, a mobile device may not be connected.



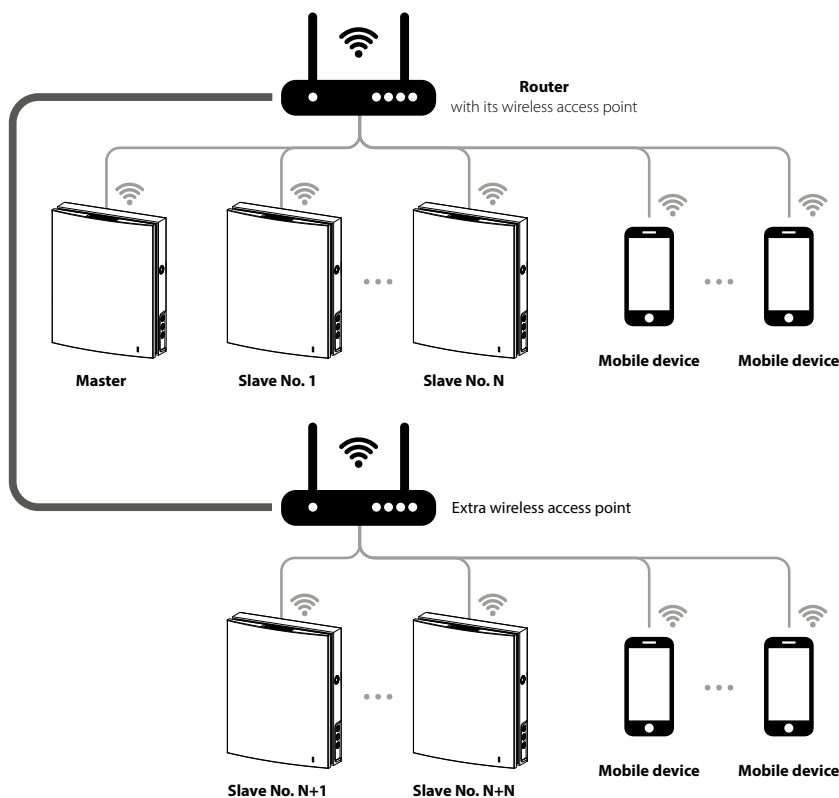
Wiring diagram 2

The Master units, the Slave units and the mobile devices are connected to a wireless access point of the Wi-Fi router.

In this case, the Master unit can operate with the number (N) of Slave units, limited by the technical characteristics of the router.



If the Wi-Fi router capacity is not enough to connect a required number of the units, you may use an extra wireless access point to connect the other the unit. Several Master units can optionally be connected to the network for arranging a zone control.



CONNECTING MASTER AND SLAVE VENTILATORS




WHILE COMPLETING THE CONNECTION MAKE SURE THAT THE SLAVED VENTILATORS ARE WITHIN WI-FI COVERAGE OF THE MASTER VENTILATOR

To connect a master and a slave ventilator, set the DIP switches on the units accordingly (see page 12). Then set up the Wi-Fi parameters of the master ventilator (see page 19).



AFTER CHANGING THE WI-FI PARAMETERS OF THE MASTER VENTILATOR REPEAT THE CONNECTION STEPS!


Press and hold the **Ventilation**  button on the master ventilator casing. Wait for the beep and the blinking of all the LEDs on the unit casing. Repeat the steps with all the slave ventilators and wait for the beep when all the LEDs stop blinking on each Slave unit. Set

the Master unit to the standard operation mode. Press and hold the **Ventilation**  button. Wait for the beep when all the LEDs stop blinking.


Note: if the home router works in conjunction with several Wi-Fi access points requiring connection of ventilators to different access points:

- Connect the Master unit to the first Wi-Fi access point.
- Complete the connection with the first group of Slave units.
- Connect the Master unit to the second Wi-Fi access point.
- Complete the connection with the second group of Slave units.

SPECIAL SETUP MODE

In the event of losing the Wi-Fi password or the master ventilator password or in other cases, use the special Setup mode to restore access to the ventilator functions. To enter the special Setup mode, press and hold the **Ventilation**  button on the ventilator casing for 5 seconds until the beep and blinking of all the LED lights.


The ventilator will continue in this mode for 3 minutes and then automatically revert to the previous settings. To exit the Setup mode

immediately, press and hold the **Ventilation**  button on the ventilator casing once again for 5 seconds until the beep and shutdown of all the LED lights.

In this mode the following settings are available:

- **Wi-Fi network name:** Setup mode.
- **Wi-Fi password:** 11111111.
- **The unit password is ignored.**

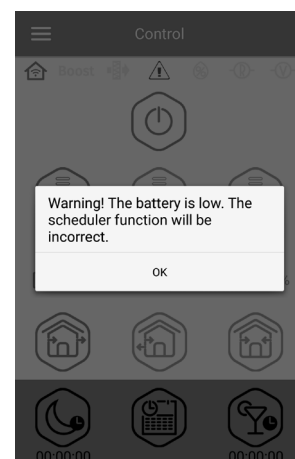
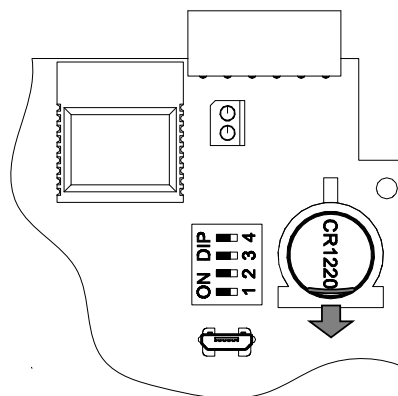
BATTERY REPLACEMENT

The **Alarm** indicator on the unit casing will blink when the battery is approaching the end of its life. The mobile app will also display the  warning and show the following message on pressing the indicator icon.

Low battery power may cause disruptions in the weekly schedule operation. Power off the unit before replacing the battery. After replacing the battery reset the time and date.

The battery is located on the control circuit board. To replace the battery, power off the ventilator, remove the front panel and the cover protecting the control circuit board. Remove the battery and install the new one.

Battery type: CR1220.

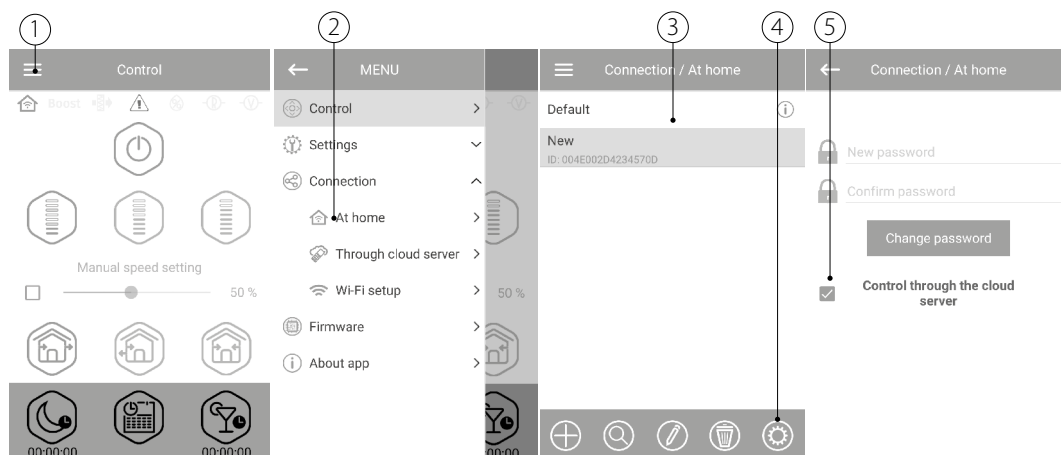


CLOUD SERVER CONNECTION

The ventilators can be controlled using the mobile app via a cloud server connection. This functions enables control of a single or multiple ventilators connected according to Diagram 2 over any distance using the mobile app connected to the Internet.

By default, the function of control via cloud server is disabled. To enable the function:

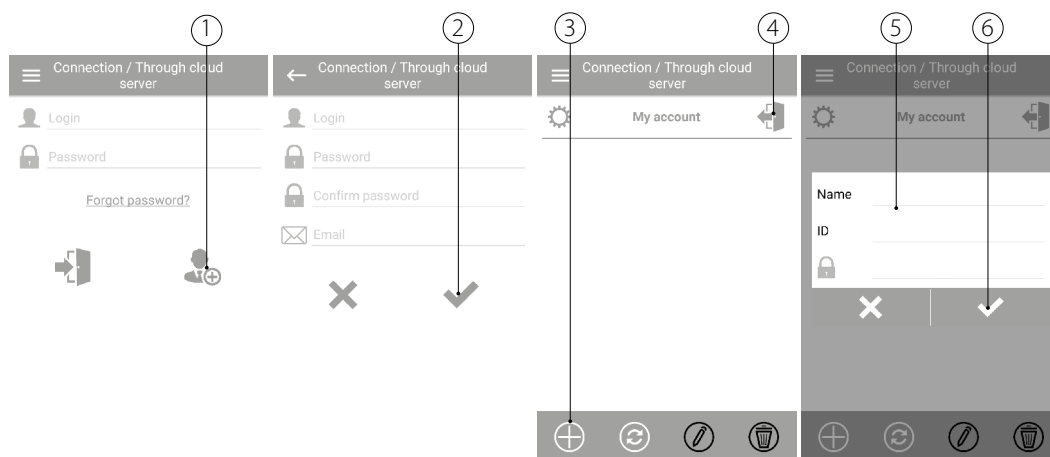
1. Enter the app menu.
2. Select **Connection -> At home**.
3. Select the desired ventilator connection.
4. Enter the connection settings menu.
5. Enable **Connection through cloud server**.



Note: with this function enabled any loss of Internet connection provided by the home server may result in temporary loss of communication with the ventilator.

To manage the master ventilator, create a new account. Open the mobile app and go to **Menu -> Connection -> Through cloud server**:

1. Press the **Add new account** button.
2. Enter a login, a password and an e-mail address for password recovery. Then press the Apply button.
3. The app will log into the newly created account automatically. Add a new master ventilator.
4. To exit the account, press the respective button (if necessary).
5. Enter a ventilator name of choice, the ventilator ID as stated on the control circuit board and the unit password (1111 by default).



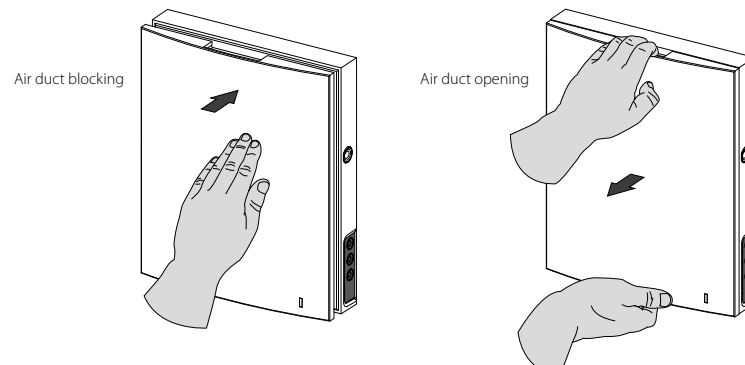
6. Confirm the updated details.

To log into the account via the mobile app, go to **Menu -> Connection -> Through cloud server**. Then enter the login and password and press the Log in button.

AIR FLOW CUT-OFF

Press the front panel to close the air duct. The fan turns off automatically. The unit functionality is not changed.

To open the air duct, pull the front panel while holding the special recesses. The fan starts operating according to the actual speed setting.



The front panel incorporates an operating LED indicator. During the dark time the indicator light intensity drops down.

TECHNICAL MAINTENANCE

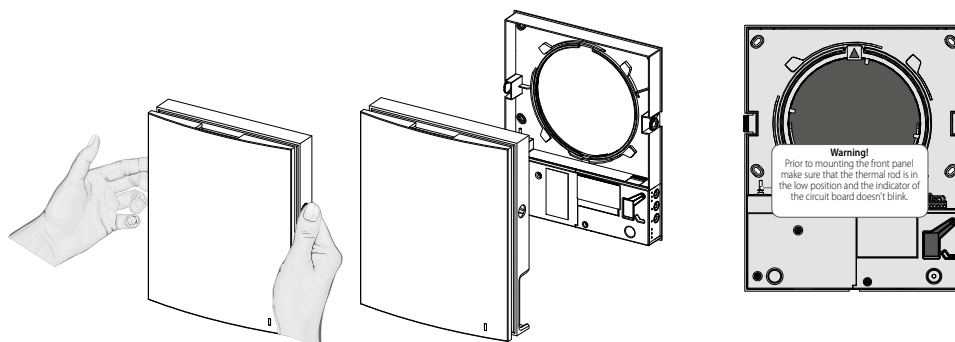


DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!

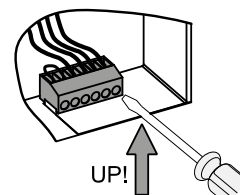
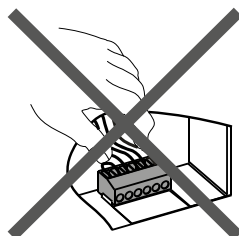
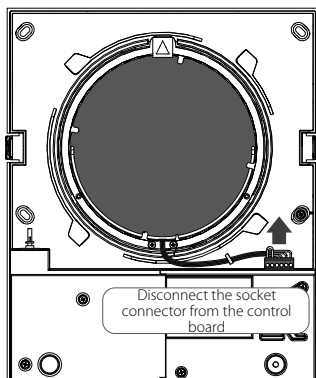
Maintenance of the ventilator means regular cleaning of the ventilator surfaces of dust and cleaning and replacement of the filters. To enable access to the main units, follow the procedure described below. The ventilator must be previously turned off using the remote control or the buttons on the indoor unit. Then turn off power supply completely.

1. Press the latches on the side of the indoor control unit to take off the front part.

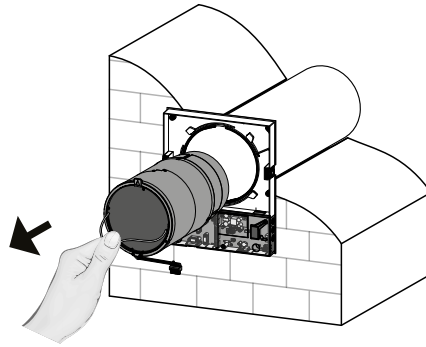
Please make sure the thermal actuator rod is in lower position during re-installation of the front panel. If the thermal actuator rod is up, please wait for about 2 minutes until it goes down.



2. Disconnect the connector from the circuit board. Do not remove the connector by pulling the wires. Use a flat screwdriver to uplift it, if required.

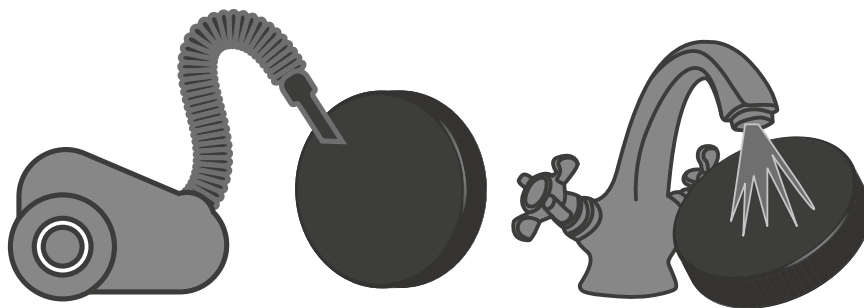


3. Pull the cord to remove the cartridge from the air duct.



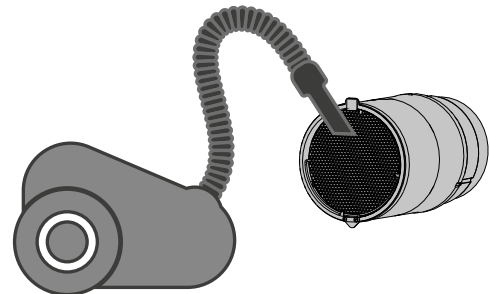
Clean the filters as they get clogged, but not less than once in three months.

- Upon elapse of the set time period (factory setting 90 days) the filter replacement indicator (Filter) starts glowing. The filter timer is reset using the program on the mobile device.
- Wash the filters and let those dry out completely. Install the dry filters in their place and assemble the unit in the reverse order.
- Vacuum cleaning is allowed.
- The filter rated service life is 3 years.



Some dust may accumulate on the heat exchanger block even in case of regular maintenance of the filters.

- Clean the regenerator regularly to ensure its high heat recovery efficiency.
- Vacuum clean the regenerator not less than once a year.



4. Replacement of the remote control battery (if necessary).

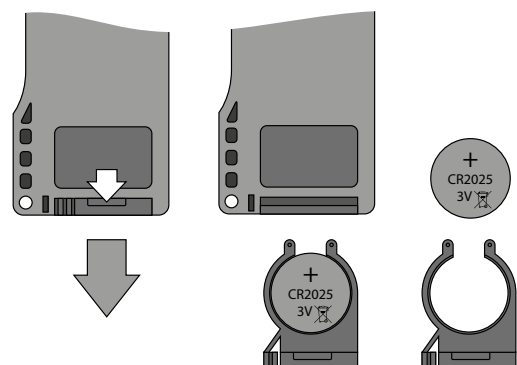
In case of a long operation of the remote control the battery must be replaced.

No response of the unit for pressing the remote control buttons indicates the need to replace the battery.

The battery type is CR2025.

To replace the battery of the remote control, remove the battery holder with a battery.

Replace the battery and install the holder with a new battery back to the remote control.



POSSIBLE REASONS AND TROUBLESHOOTING

Problem	Possible reasons	Troubleshooting
When switching on the ventilator, the fan does not start.	No power supply.	Make sure the power supply line is connected correctly, otherwise troubleshoot the connection error.
	The motor is jammed, the impeller blades are soiled.	Turn the ventilator off. Troubleshoot the motor jam and impeller clogging. Clean the blades. Turn the ventilator on.
Circuit breaker tripping during the ventilation unit start-up.	Overcurrent as a result of short circuit in the electric line.	Turn the ventilator off. Contact the Seller for further information.
Low air flow.	Low set fan speed.	Set higher speed.
	The filters, the fan or the regenerator are clogged.	Clean or replace the filter. Clean the fan and the heat exchanger.
Noise, vibration.	The impeller is clogged.	Clean the impeller.
	Loose screw connection of the unit casing or the outer ventilation hood.	Tighten the screws of the ventilator or the outer ventilation hood.

STORAGE AND TRANSPORTATION REGULATIONS

- Store the unit in the manufacturer's original packaging box in a dry closed ventilated premise with temperature range from +5 °C to + 40 °C and relative humidity up to 70 %.
- Storage environment must not contain aggressive vapors and chemical mixtures provoking corrosion, insulation, and sealing deformation.
- Use suitable hoist machinery for handling and storage operations to prevent possible damage to the unit.
- Follow the handling requirements applicable for the particular type of cargo.
- The unit can be carried in the original packaging by any mode of transport provided proper protection against precipitation and mechanical damage. The unit must be transported only in the working position.
- Avoid sharp blows, scratches, or rough handling during loading and unloading.
- Prior to the initial power-up after transportation at low temperatures, allow the unit to warm up at operating temperature for at least 3-4 hours.

MANUFACTURER'S WARRANTY

The product is in compliance with EU norms and standards on low voltage guidelines and electromagnetic compatibility. We hereby declare that the product complies with the provisions of Electromagnetic Compatibility (EMC) Directive 2014/30/EU of the European Parliament and of the Council, Low Voltage Directive (LVD) 2014/35/EU of the European Parliament and of the Council and CE-marking Council Directive 93/68/EEC. This certificate is issued following test carried out on samples of the product referred to above.

The manufacturer hereby warrants normal operation of the unit for 24 months after the retail sale date provided the user's observance of the transportation, storage, installation, and operation regulations. Should any malfunctions occur in the course of the unit operation through the Manufacturer's fault during the guaranteed period of operation, the user is entitled to get all the faults eliminated by the manufacturer by means of warranty repair at the factory free of charge. The warranty repair includes work specific to elimination of faults in the unit operation to ensure its intended use by the user within the guaranteed period of operation. The faults are eliminated by means of replacement or repair of the unit components or a specific part of such unit component.

The warranty repair does not include:

- routine technical maintenance
- unit installation/dismantling
- unit setup

To benefit from warranty repair, the user must provide the unit, the user's manual with the purchase date stamp, and the payment paperwork certifying the purchase. The unit model must comply with the one stated in the user's manual. Contact the Seller for warranty service.

The manufacturer's warranty does not apply to the following cases:

- User's failure to submit the unit with the entire delivery package as stated in the user's manual including submission with missing component parts previously dismantled by the user.
- Mismatch of the unit model and the brand name with the information stated on the unit packaging and in the user's manual.
- User's failure to ensure timely technical maintenance of the unit.
- External damage to the unit casing (excluding external modifications as required for installation) and internal components caused by the user.
- Redesign or engineering changes to the unit.
- Replacement and use of any assemblies, parts and components not approved by the manufacturer.
- Unit misuse.
- Violation of the unit installation regulations by the user.
- Violation of the unit control regulations by the user.
- Unit connection to power mains with a voltage different from the one stated in the user's manual.
- Unit breakdown due to voltage surges in power mains.
- Discretionary repair of the unit by the user.
- Unit repair by any persons without the manufacturer's authorization.
- Expiration of the unit warranty period.
- Violation of the unit transportation regulations by the user.
- Violation of the unit storage regulations by the user.
- Wrongful actions against the unit committed by third parties.
- Unit breakdown due to circumstances of insuperable force (fire, flood, earthquake, war, hostilities of any kind, blockades).
- Missing seals if provided by the user's manual.
- Failure to submit the user's manual with the unit purchase date stamp.
- Missing payment paperwork certifying the unit purchase.



FOLLOWING THE REGULATIONS STIPULATED HEREIN WILL ENSURE A LONG AND TROUBLE-FREE OPERATION OF THE UNIT.



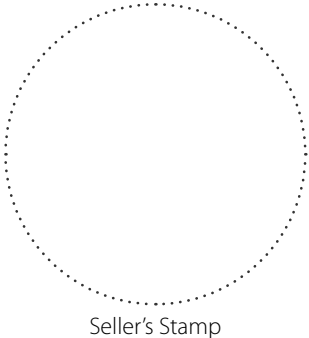
USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.

CERTIFICATE OF ACCEPTANCE

Unit Type	Single-room reversible energy recovery ventilator
Model	VENTO Expert _____
Serial Number	
Manufacture Date	
Quality Inspector's Stamp	

SELLER INFORMATION

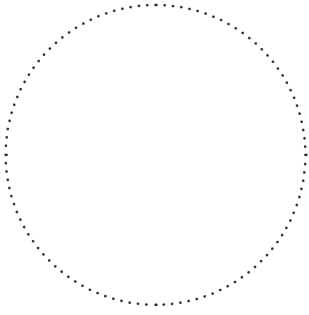
Seller	
Address	
Phone Number	
E-mail	
Purchase Date	
This is to certify acceptance of the complete unit delivery with the user's manual. The warranty terms are acknowledged and accepted.	
Customer's Signature	



Seller's Stamp

INSTALLATION CERTIFICATE

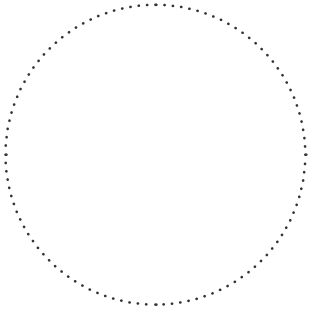
The VENTO Expert _____ unit is installed pursuant to the requirements stated in the present user's manual.	
Company name	
Address	
Phone Number	
Installation Technician's Full Name	
Installation Date:	Signature:
The unit has been installed in accordance with the provisions of all the applicable local and national construction, electrical and technical codes and standards. The unit operates normally as intended by the manufacturer.	
Signature:	



Installation Stamp

WARRANTY CARD

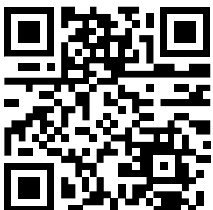
Unit Type	Single-room reversible energy recovery ventilator
Model	VENTO Expert _____
Serial Number	
Manufacture Date	
Purchase Date	
Warranty Period	
Seller	



Seller's Stamp



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B133-6EN-01

