

# USER'S MANUAL

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**TwinFresh Style Wi-Fi**  
**TwinFresh Style Wi-Fi Frost**  
**TwinFresh Style Wi-Fi M**  
**TwinFresh Style Wi-Fi Frost M**

**TwinFresh Style Wi-Fi mini**  
**TwinFresh Style Wi-Fi mini M**



Single-room reversible energy recovery ventilator

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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 TwinFresh Style Wi-Fi (mini) (Frost) (M) 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.

## 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 the 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. The present user's manual should be carefully read before beginning works.**

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 unauthorised modifications are not allowed.

Do not expose the unit to adverse atmospheric agents (rain, sun, etc.).

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.

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 information in this user's manual was 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.

Never touch the unit with wet or damp hands.

Never touch the unit when barefoot.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.

Connection to the mains must be made through a disconnecting device, which is integrated into the fixed wiring system in accordance with the wiring rules for design of electrical units, and has a contact separation in all poles that allows for full disconnection under overvoltage category III conditions.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a safety hazard.

Ensure that the unit is switched off from the supply mains before removing the guard.

Precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.



**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 installation on external walls.

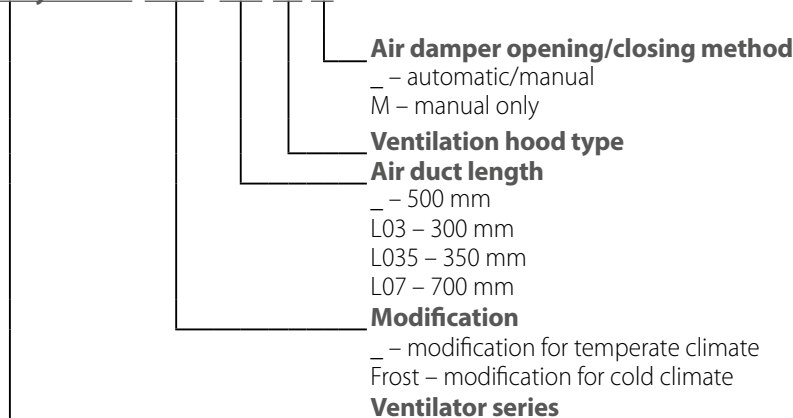
The unit is rated for continuous operation.

## DELIVERY SET

Name	Number	
	TwinFresh Style Wi-Fi mini TwinFresh Style Wi-Fi mini M	TwinFresh Style Wi-Fi TwinFresh Style Wi-Fi Frost TwinFresh Style Wi-Fi M TwinFresh Style Wi-Fi Frost M
Indoor assembly unit of the ventilator	1 pc.	1 pc.
Air duct	1 pc.	1 pc.
Sound-absorbing material	1 pc.	1 pc.
Fan assembly	–	1 pc.
Regenerator assembly	–	1 pc.
Cartridge assembly	1 pc.	–
Outer ventilation hood	1 pc.	1 pc.
Remote control	1 pc.	1 pc.
Cardboard mounting plate	1 pc.	1 pc.
Mounting kit	2 packages	2 packages
Mounting wedges	1 kit	1 kit
User's manual	1 pc.	1 pc.
Mounting hood installation instruction	1 pc.	1 pc.
Packing box	1 pc.	1 pc.

## DESIGNATION KEY

**TwinFresh Style Wi-Fi Frost L07 14 M**



TwinFresh Style Wi-Fi is a series of reversible Wi-Fi controlled ventilators with a duct diameter of 160 mm and rated air flow of 50 m<sup>3</sup>/h.

TwinFresh Style Wi-Fi mini is a series of reversible Wi-Fi controlled ventilators with a duct diameter of 100 mm and rated air flow of 30 m<sup>3</sup>/h.

## TECHNICAL DATA

The temperature in the room where the indoor unit of the ventilator is installed must be in the range from +1 °C to +40 °C with relative air humidity up to 65 % (no condensation buildup).

Transported air temperature must be in the range:

from -15 °C to +40 °C for **TwinFresh Style Wi-Fi mini** and **TwinFresh Style Wi-Fi mini M** models

from -15 °C to +40 °C for **TwinFresh Style Wi-Fi** and **TwinFresh Style Wi-Fi M** models

from -30 °C to +40 °C for **TwinFresh Style Wi-Fi Frost** and **TwinFresh Style Wi-Fi Frost M** models.

If the conditions of use of the ventilator are outside the specified limits, turn off the ventilator. Provide fresh air with open windows.

The unit is rated as a class II electric appliance.

Ingress protection rating against access to hazardous parts and water ingress is IP2X.

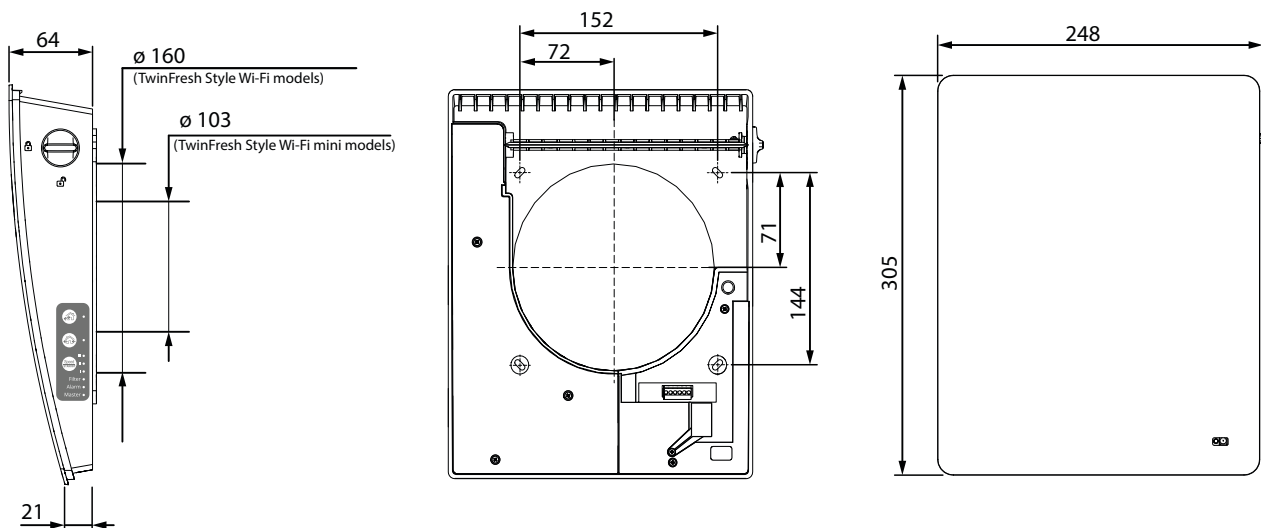
The supplied hood model and the air duct length depend on the ventilator model (see the Designation key section).

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

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



### OVERALL DIMENSIONS OF THE INDOOR UNIT [MM]



### 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 OPERATING PRINCIPLE

The ventilator consists of an indoor unit with a decorative front panel, a fan unit, a regenerator unit located inside the air duct and an outer ventilation hood.

In the **TwinFresh Style Wi-Fi mini** and **TwinFresh Style Wi-Fi mini M**, the fan unit and the regenerator unit are connected in a non-assembled cartridge.

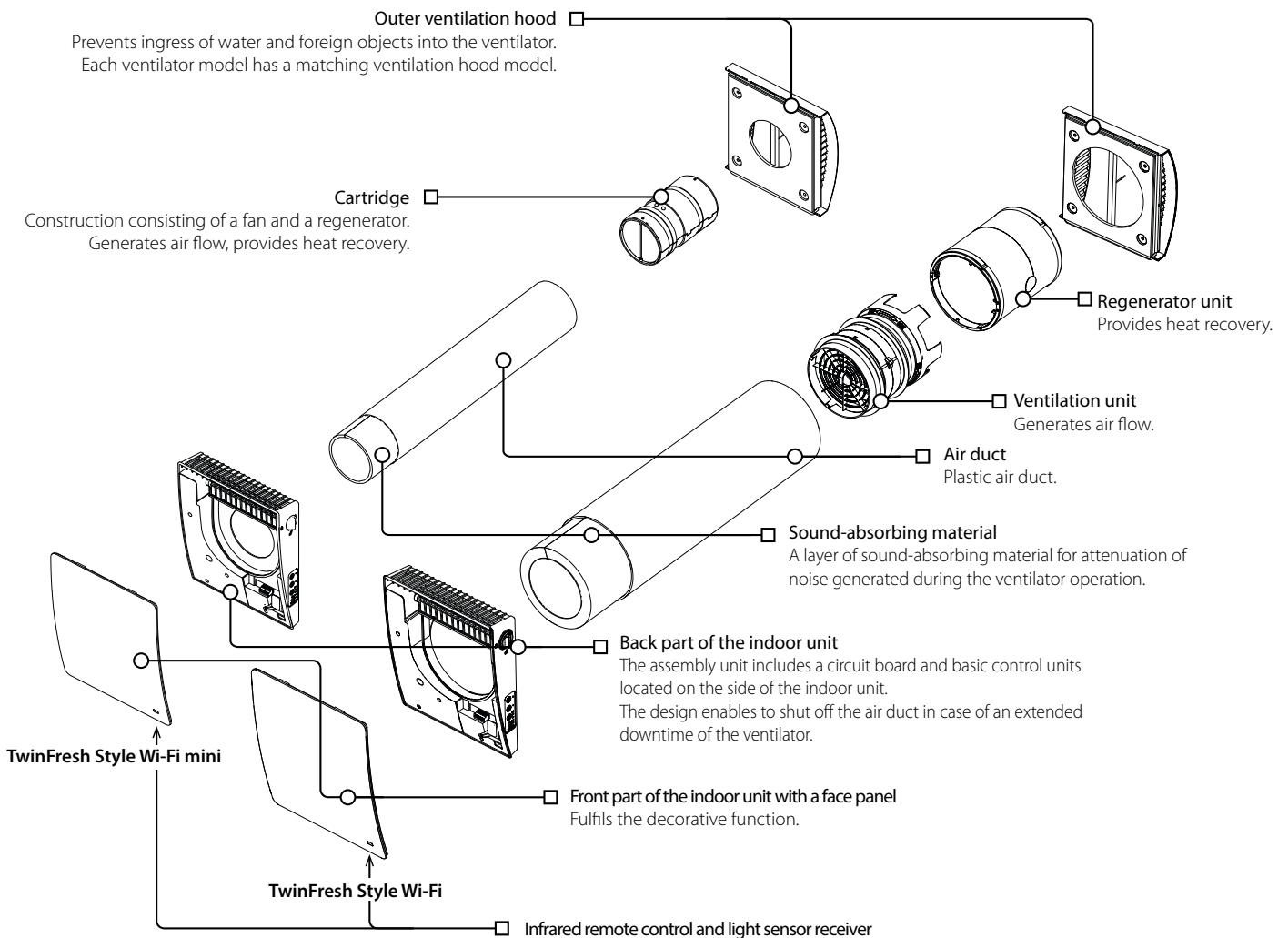
Inside the air duct, on the air flow path, there are two filters that ensure rough air filtration and prevent ingress of dust and foreign objects into the regenerator and the fan.

The **TwinFresh Style Wi-Fi Frost** and **TwinFresh Style Wi-Fi Frost M** models are equipped with an external ventilation hood EH-13 with electric heating, which allows the ventilator use in colder climates.

In the lower right corner of the front panel of the ventilator there is a receiver window for the IR remote control combined with the light sensor. The light sensor controls the brightness of the control panel LEDs.

The LEDs are brighter during daylight hours and dim at night.

### VENTILATOR DESIGN



## AIR DAMPER OPERATING PRINCIPLE

The indoor unit of the ventilators has a swivel damper. The vertical position of the handle corresponds to the position OPEN, the horizontal one – to the position CLOSED.

The indoor unit of the **TwinFresh Style Wi-Fi** ventilators is equipped with an automatic air damper. It opens at the beginning of the ventilator's operation and lets the air flow freely through the ventilator.

After switching off the ventilator, the damper closes automatically.

The air damper opening and closing process can take up to five minutes.

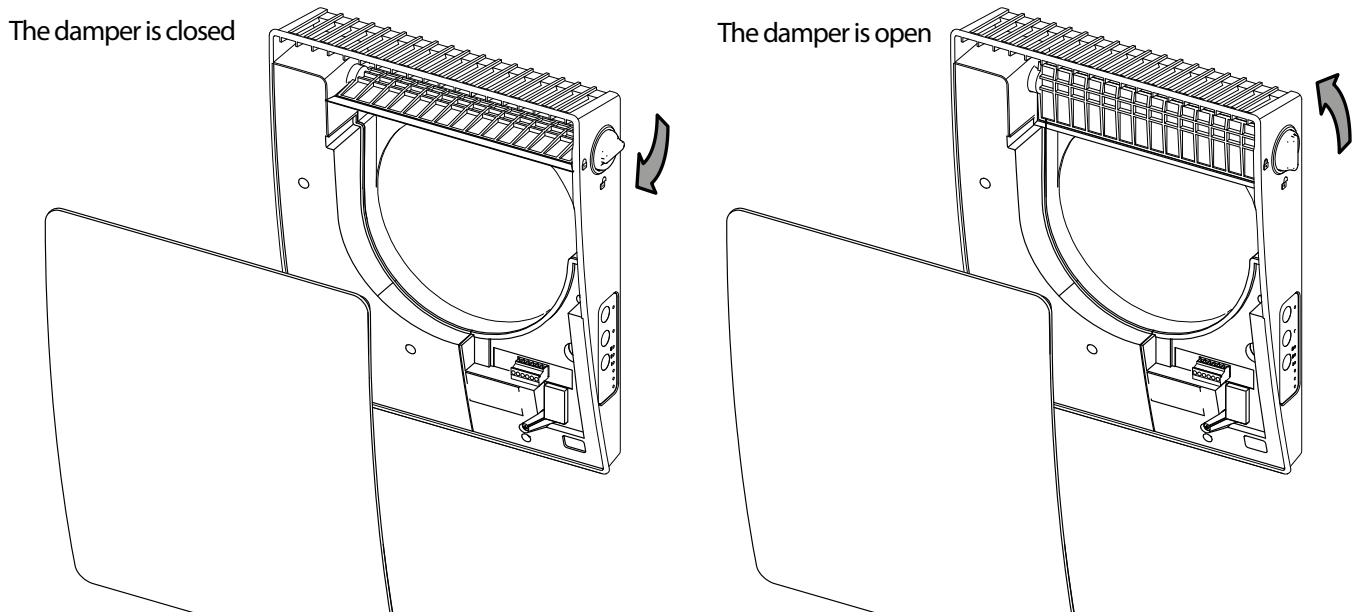
**Caution! If the power supply is cut off during operation of the ventilator, after five minutes, the damper can be manually moved to the CLOSED position using the handle to prevent drafts.**

Later on, when the ventilator is turned on, the damper will automatically open.

Automatic opening/closing of the damper is not provided in the indoor unit of the **TwinFresh Style Wi-Fi M** ventilators. The damper in these models can only be adjusted manually using the handle regardless of the ventilator operating mode.

**Caution! Air damper opening or closing does not turn the ventilator on or off!**

The figure below shows the closed and open positions of the damper and the handle.



## 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 section **Setting the ventilator operation mode using DIP switches**).

**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 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 supply mode irrespective of the position of the DIP switch No. 3 (see section **Setting the ventilator operation mode using DIP switches**).

## MOUNTING AND SET-UP



**READ THE USER'S MANUAL BEFORE INSTALLING THE UNIT.**

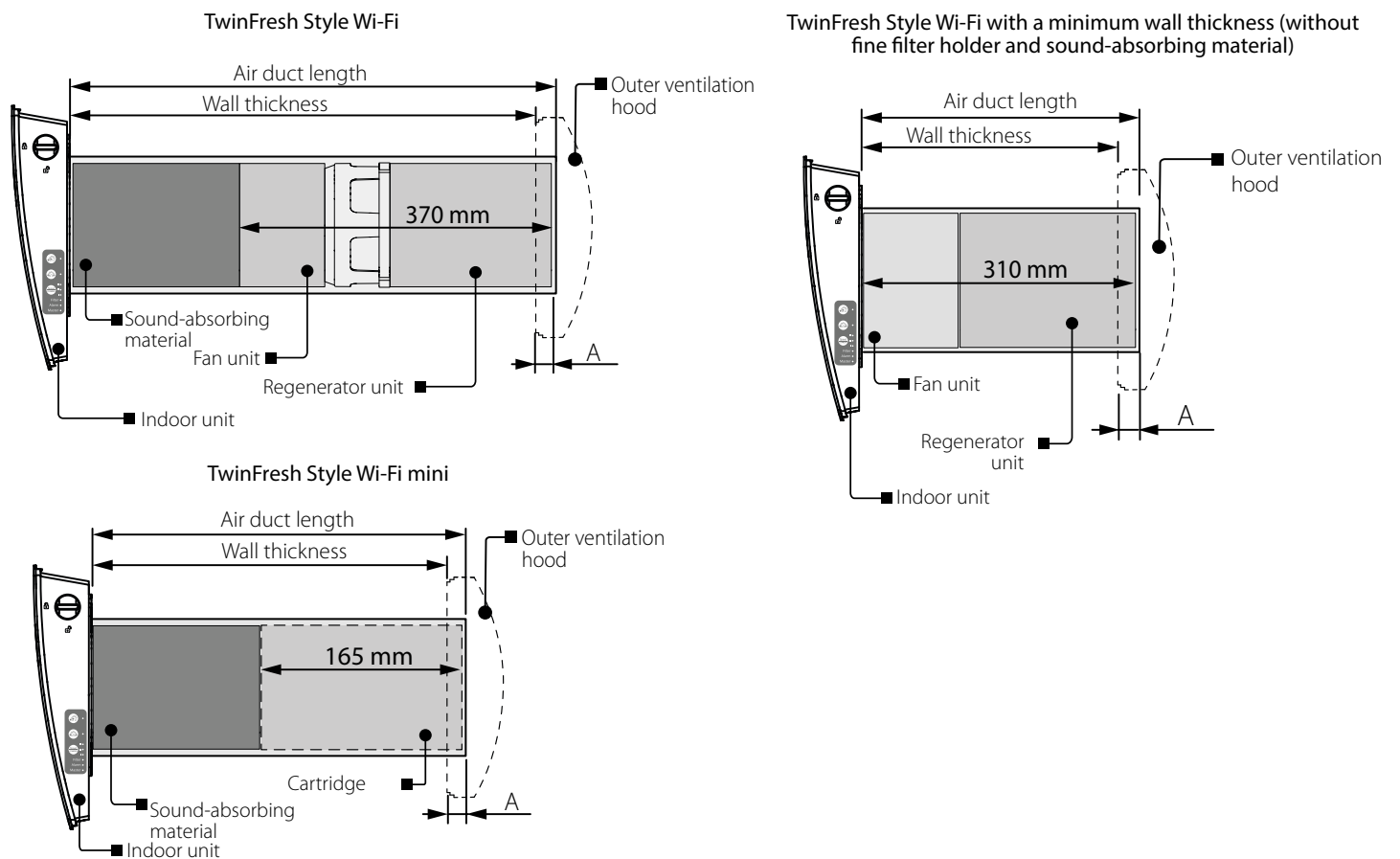


**DO NOT BLOCK THE AIR DUCT OF THE INSTALLED VENTILATOR WITH DUST ACCUMULATING MATERIALS, SUCH AS CURTAINS, CLOTH SHUTTERS, ETC. AS IT PREVENTS AIR CIRCULATION IN THE ROOM.**

The figure below shows a schematic layout of the ventilator's internal elements depending on the wall thickness. The ability to mount the ventilator in the wall depends on the length of the internal elements and the required protrusion A.

The length of the internal elements, the diameter of the required opening and the minimum wall thickness in which the ventilator can be installed when using different external ventilation hoods are shown in the table below.

### Layout of the ventilator units inside the wall



If the wall thickness is less than that in the layout of the blocks inside the wall, you can unfasten the fine filter holder and assemble the ventilator without it and without sound-absorbing material, as shown in the figure above.

With this type of installation, the recovery efficiency may decrease and the immission of street noise into the room may increase. This will also increase the noise level of the ventilator itself.

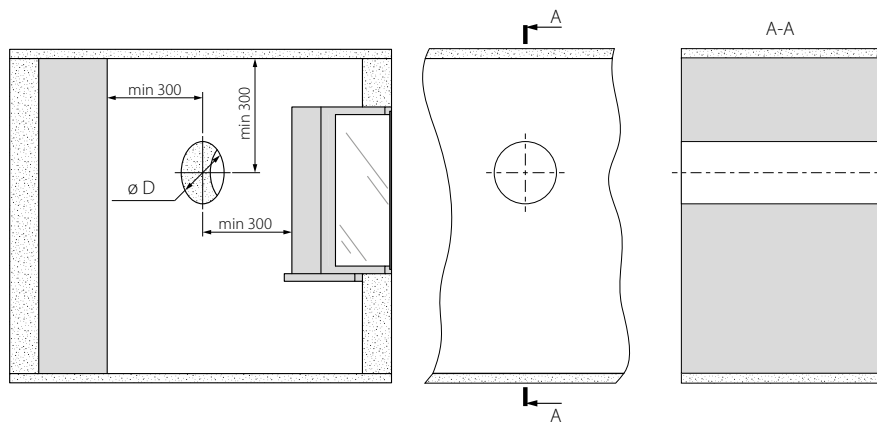


Reference dimensions for installation of ventilators	Ventilator model or installation variant		
	TwinFresh Style Wi-Fi mini	TwinFresh Style Wi-Fi	TwinFresh Style Wi-Fi with minimum wall thickness
Length of cartridge or fan and regenerator units [mm]	165	370	310
Hole diameter D [mm]	120	180	180
Minimum possible wall thickness when using EH, EH-14, EH-13, EH-17, MVVM hoods (mm)	from 155	from 360	300
Minimum possible wall thickness when using an EH-2 hood (mm)	from 55	from 260	200

1. Prepare a round core hole in the outer wall.

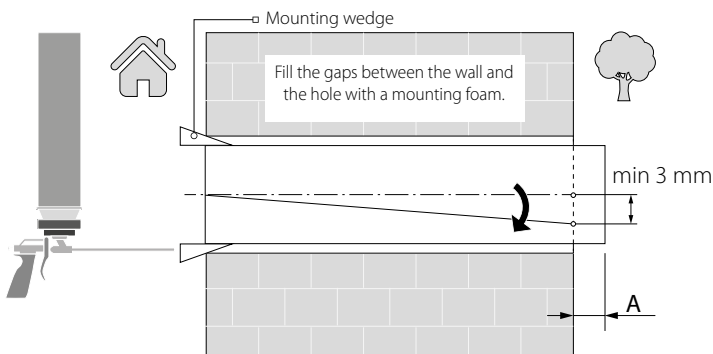
The figure below shows the minimum distance from the hole to the surrounding objects.

The hole diameter depends on the specific ventilator model. The corresponding values are given in the table.



2. Insert the air duct in the wall. For ease of installation use the mounting wedges included in the delivery set.

The air duct end must protrude for the distance A that enables installation of the outer ventilation hood. The overall 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 installation instruction.



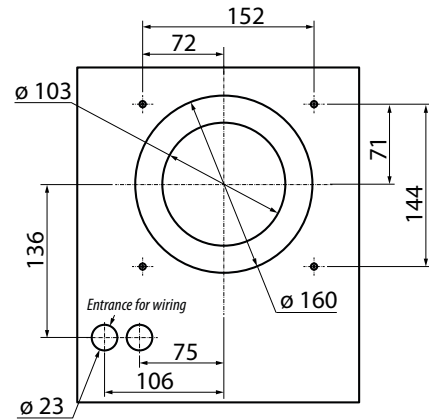
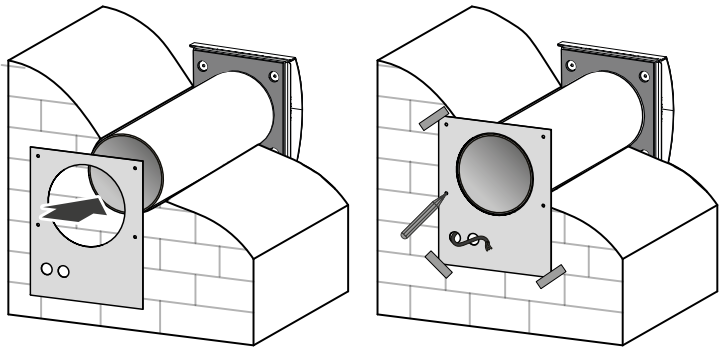
Install the air duct with the minimum slope of 3 mm downwards from the outer wall side.

The air duct can be cut by calculating preliminary 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).

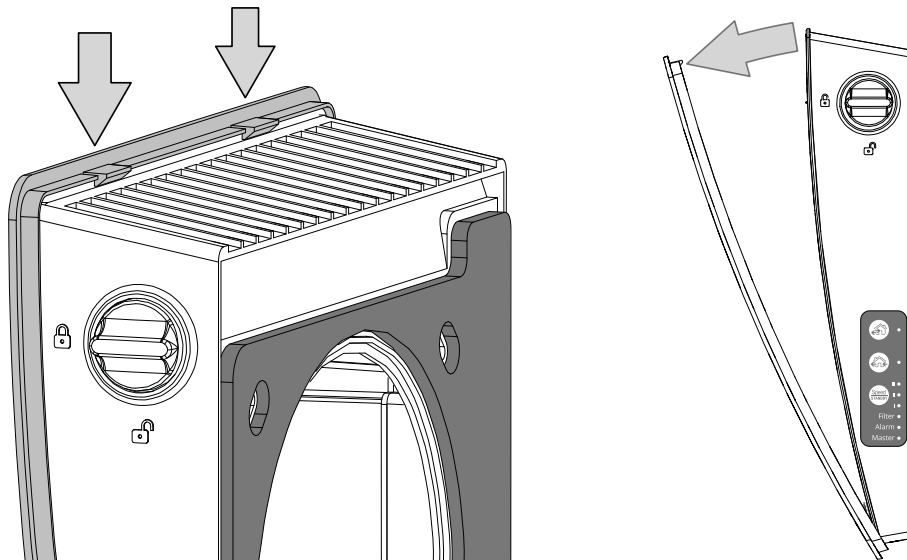
3. Install the outer ventilation hood. The mounting sequence of the outer ventilation hood is described in the installation instruction for the ventilation hood.

4. 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. Align the master plate horizontally with a building level. Then mark the fastening holes for installation of the supplied dowels and drill the holes to a required depth. Route the power cable from the wall through the marked opening on the template.

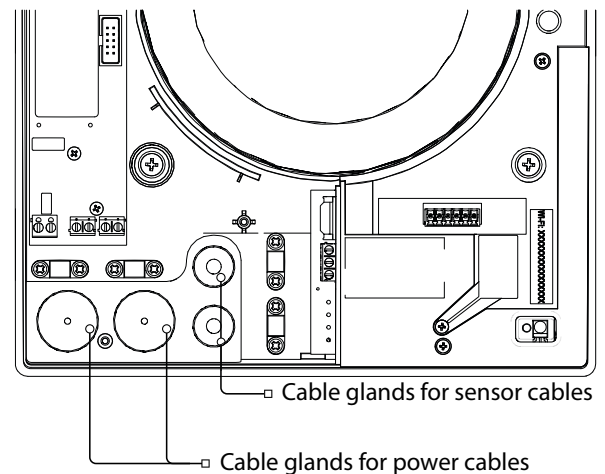
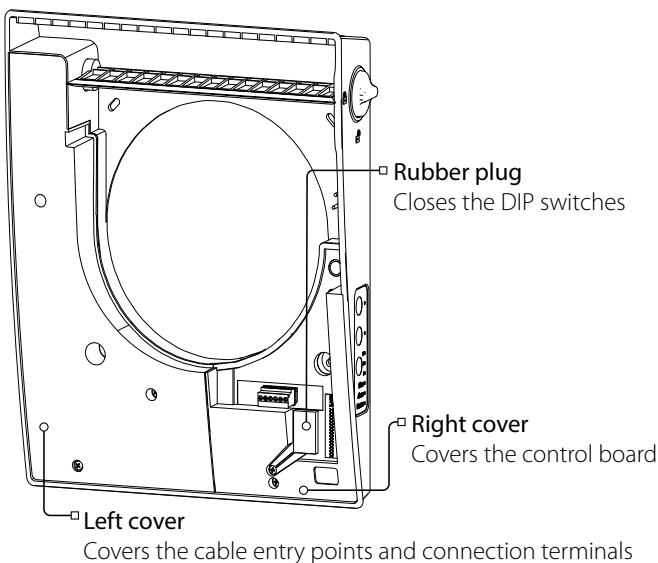
#### Hole marking for unit fastening



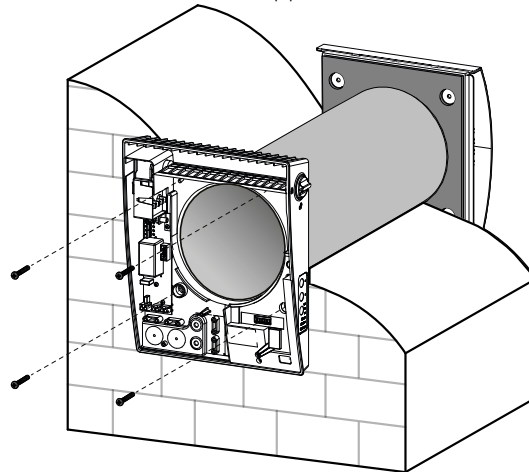
5. Separate the front panel of the indoor unit from its back part. To do this, unhook the latches securing the front panel and open it as shown in the figure below.



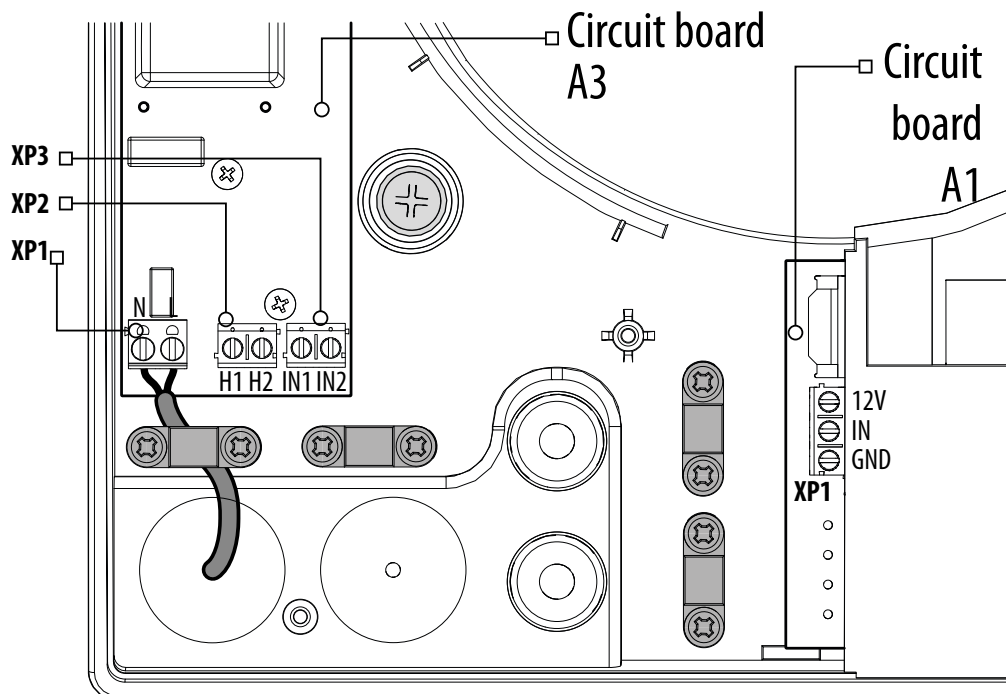
6. Remove the three retaining screws from the left cover to enable access to the terminals. Route the power wires through the appropriate cable glands.



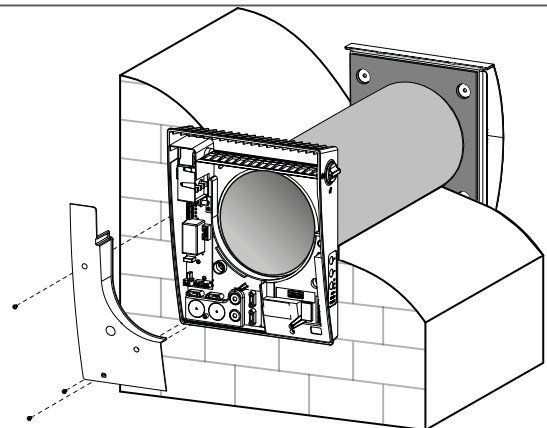
7. Fix the back part of the indoor unit on the wall with the screws supplied with the mounting kit of the ventilator.



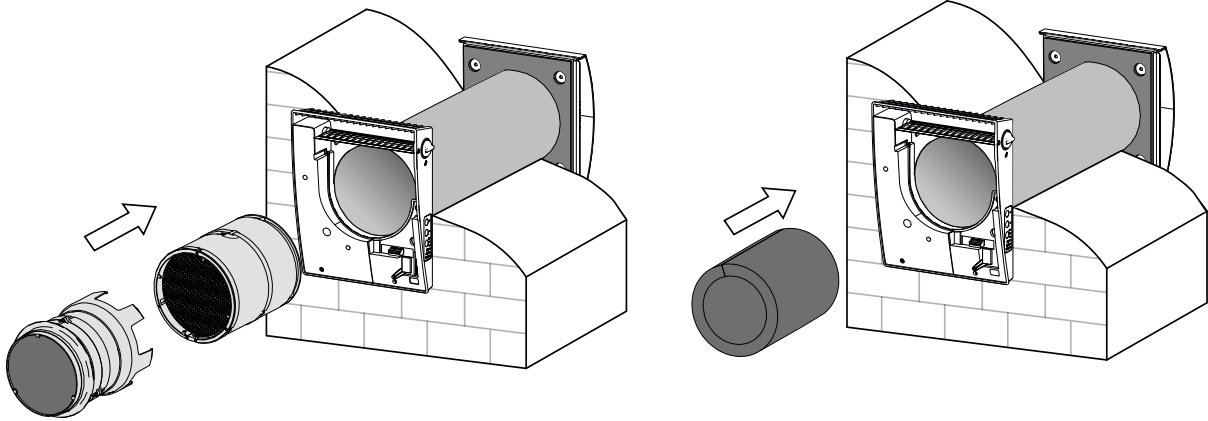
8. Route the power cable as figured below and connect the ventilator to power mains in compliance with the external wiring diagram, see section **Connection to power mains**. Secure the power cable with the clamp.



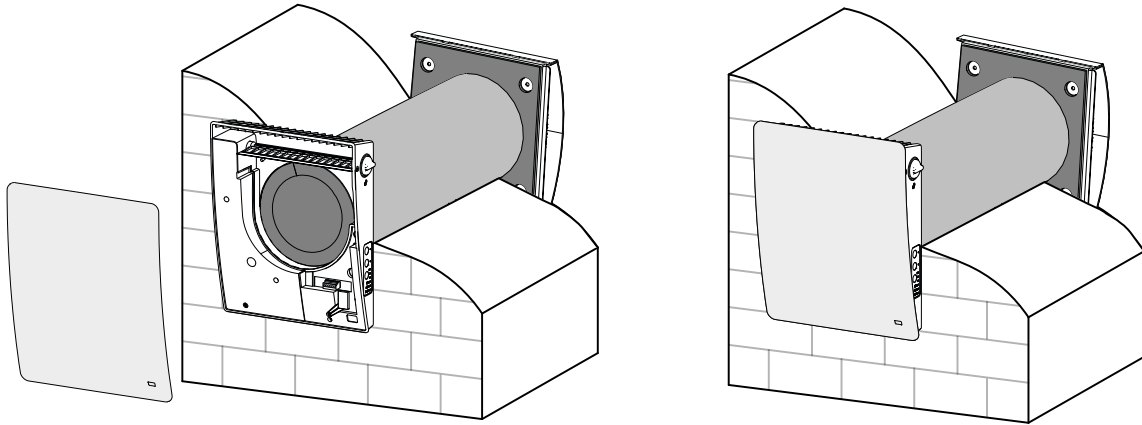
9. After completion of the electrical connection reinstall the left cover in site.



10. Install the cartridge or the regenerator unit and the fan unit into the air duct as figured below and connect the connector to the board. 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.



11. Install the front panel of the indoor unit.



## 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.**

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

For electric installations use insulated, flexible conductors (cables, wires) with the minimum cross section of 0.5 up to 0.75 mm<sup>2</sup> for power cables and 0.25 mm<sup>2</sup> for sensor 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!

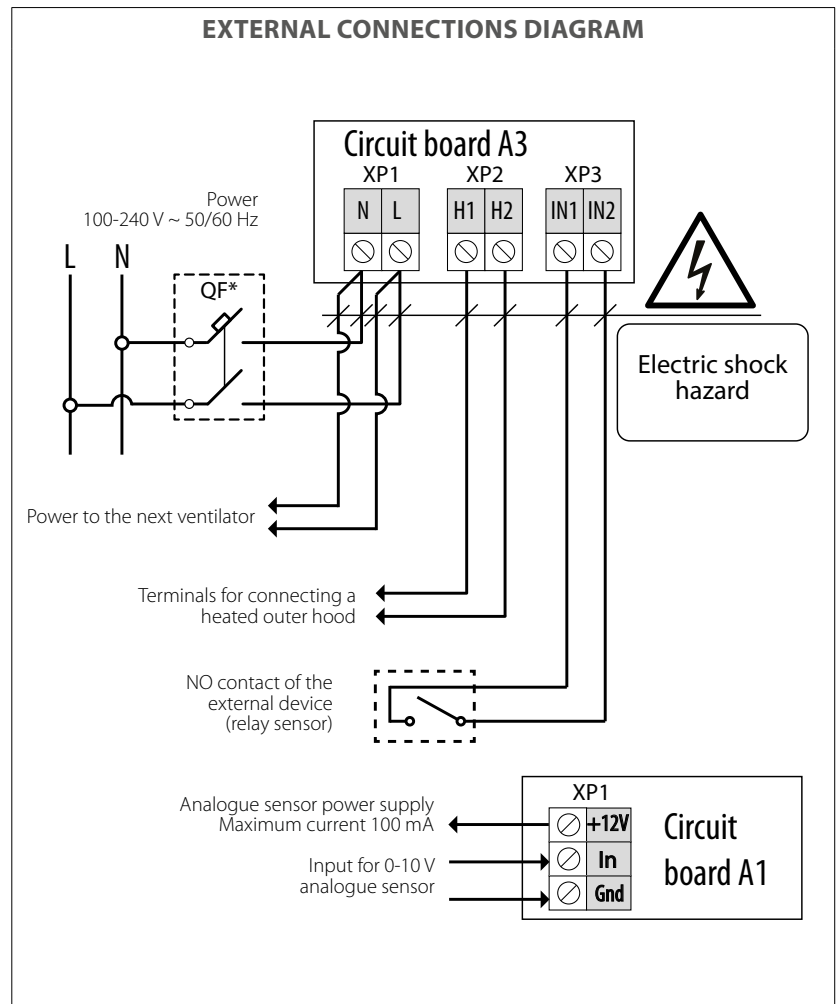
Connect the unit to power mains via the terminal block installed in the power board (A3) in compliance with the wiring diagram and terminal designation.

Connect the unit to power mains through the external circuit breaker with a magnetic trip integrated into the fixed 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 CO<sub>2</sub> sensor, a humidity sensor, a switch, etc.

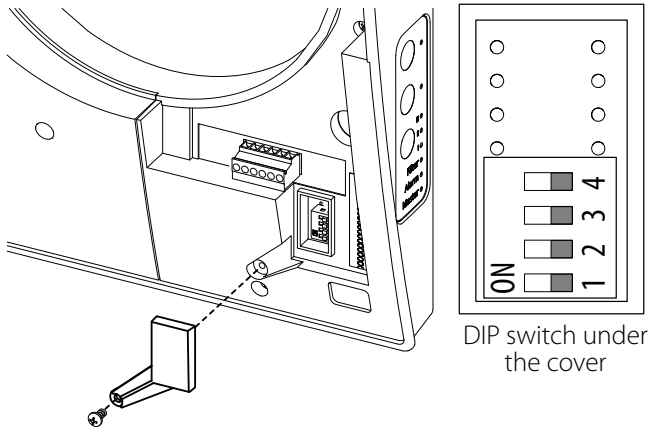
When the NO contact of the external device is closed, the unit changes to the maximum speed.

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



\*The circuit breaker is not included in the delivery set.



### SETTING THE VENTILATOR OPERATION MODE USING DIP SWITCHES





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.



#### Setting the role of the ventilator in the network

	1	ON – slave unit (hereinafter referred to as “Slave unit”)
	1	OFF – master unit (hereinafter referred to as “Master unit”)

#### Standby mode setup

	2	Min – the ventilator operates at Speed I in the <b>Standby</b> mode.
	2	OFF – the ventilator is switched off in the <b>Standby</b> mode.

#### Setting of the fan rotation direction\*

	3	ON – in the <b>Ventilation</b> mode the ventilator supplies the air to the room. in <b>Regeneration</b> mode the ventilator starts operating first in supply mode.
	3	OFF – in the <b>Ventilation</b> mode the ventilator extracts the air from the room. in <b>Regeneration</b> mode the ventilator starts operating first in extract mode.

#### Restore factory default settings

	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.
	4	OFF – standard operation of the unit.

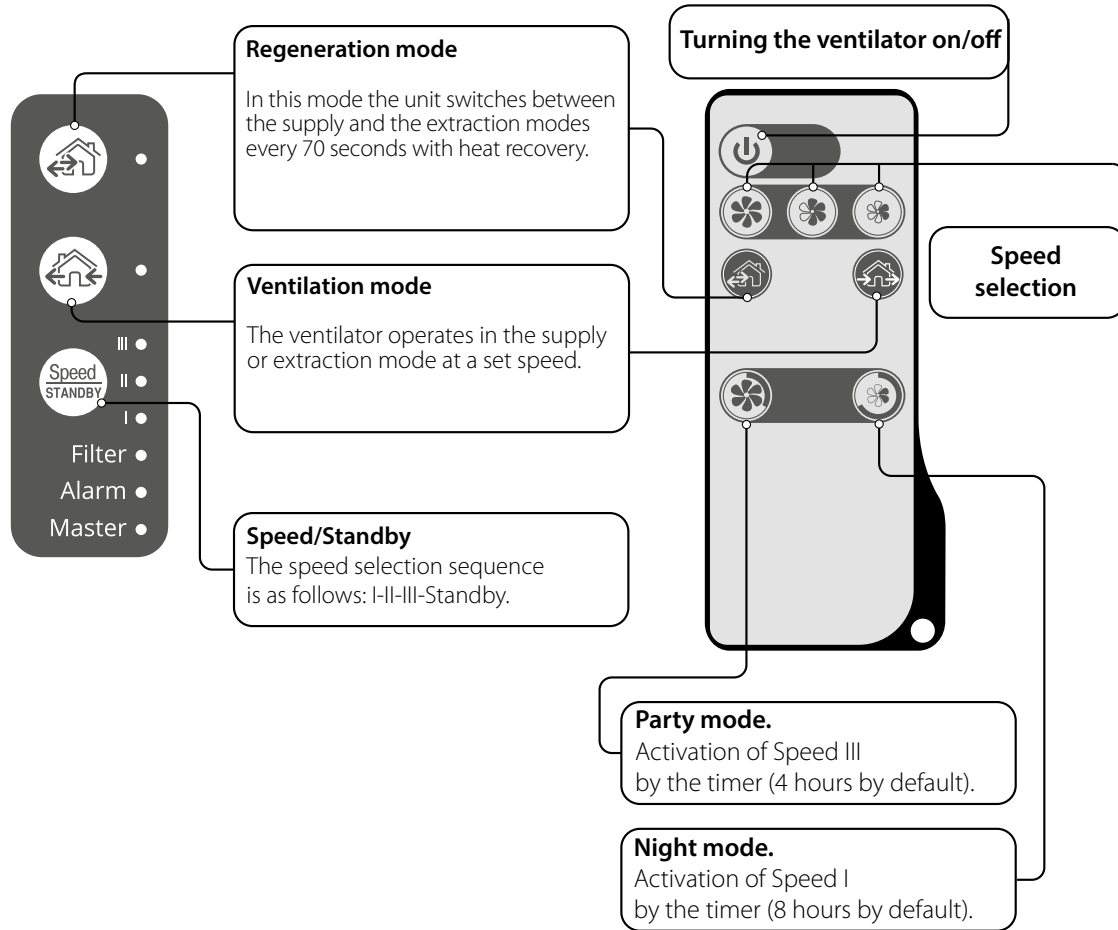
\*To form an optimal ventilation mode in the room, it is recommended to use either one or an even number of networked ventilators. The setting is carried out in such a way that during each operation interval one half of the ventilators supplies air to the room, and the other half extracts air out of the room.

## VENTILATOR CONTROL




The ventilator is operated with:

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

### Description of the buttons on the indoor unit and remote control




### Description of 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.</p> <p>I: permanent indicator glowing indicates operation of the unit at Speed I. Indicator blinking indicates activation of the Night mode timer.</p> <p>I and II: permanent glowing of these indicators indicates operation of the unit at Speed II.</p> <p>I, II and III: permanent glowing of these indicators indicates operation of the ventilation unit at Speed III. Synchronous blinking of the indicators I, II and III indicates activation of the timer in the <b>Party mode</b> or the turn-off delay timer in the <b>Boost mode</b> in case of actuation of the connected external sensors or the integrated humidity sensor.</p> <p>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 <b>Weekly Schedule mode</b> is activated.</p>
	<p><b>Regeneration mode</b> 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 the DIP switch No. 3.</p>
	<p><b>Ventilation mode</b> The ventilator operates in the supply or extraction mode at a set speed. The fan rotation direction depends on the position of the DIP switch No. 3.</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.

### Indicators on the indoor unit

<b>Filter</b>	90 days after installation of the cartridge the filter replacement indicator starts glowing. In this case, clean or replace the filters (see section <b>Technical maintenance</b> ). After replacement or cleaning 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.
<b>Alarm</b>	Alarm indicator. In case of failure, the Alarm indicator on the indoor unit glows or blinks. Reasons of Alarm blinking: <ul style="list-style-type: none"> <li>• Battery charge is below the low level.</li> <li>• No connection between the <b>Master</b> unit and the router.</li> <li>• Alarm shutdown of the ventilator.</li> </ul> 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 <b>Master</b> unit with the router for longer than 20 seconds, the <b>Master</b> unit switches to <b>Standby mode (Alarm</b> indicator blinking) and the <b>Slave</b> units will signal that there is no communication with the <b>Master</b> unit (see the description of the <b>Master</b> indicator). After resuming communication, the <b>Slave</b> units are automatically synchronised with the <b>Master</b> unit.
<b>Master</b>	Permanent glowing of the indicator shows the leading unit in the network ( <b>Master</b> unit). Indicator blinking indicates the driven unit ( <b>Slave</b> unit) and no connection to the <b>Master</b> unit. No glowing of the indicator means that this ventilator is a <b>Slave</b> unit and it is connected to a <b>Master</b> unit.

Synchronous blinking of all the indicators on the casing of the ventilator indicates that the **Setup** mode is enabled.

### Description of the buttons on the remote control

	ON/Standby. The <b>Standby</b> mode depends on the position of the DIP switch 2 (see section <b>Setting the ventilator operation mode using DIP switches</b> ). The same button is used to reset alarms ( <b>Alarm</b> ) and to turn off the timers.
	Ventilator speed selection: Speed III-II-I respectively.
	<b>Regeneration mode</b> 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.
	<b>Ventilation mode</b> The ventilator operates in the supply or extraction mode at a set speed. The fan rotation direction depends on the position of the DIP switch 3.
	Timer control buttons:  <b>Party mode:</b> 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 the mobile device.  <b>Night mode:</b> 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 the 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 Vents TwinFresh V.2 application to your mobile device.

[Vents TwinFresh V.2 – App Store](#)

[Vents TwinFresh V.2 Play Market](#)



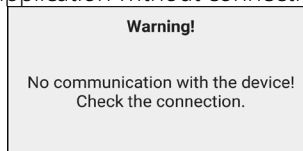
Your mobile device must have an operating system matching the following parameters:

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

### MOBILE APPLICATION CONNECTION TO THE VENTILATOR

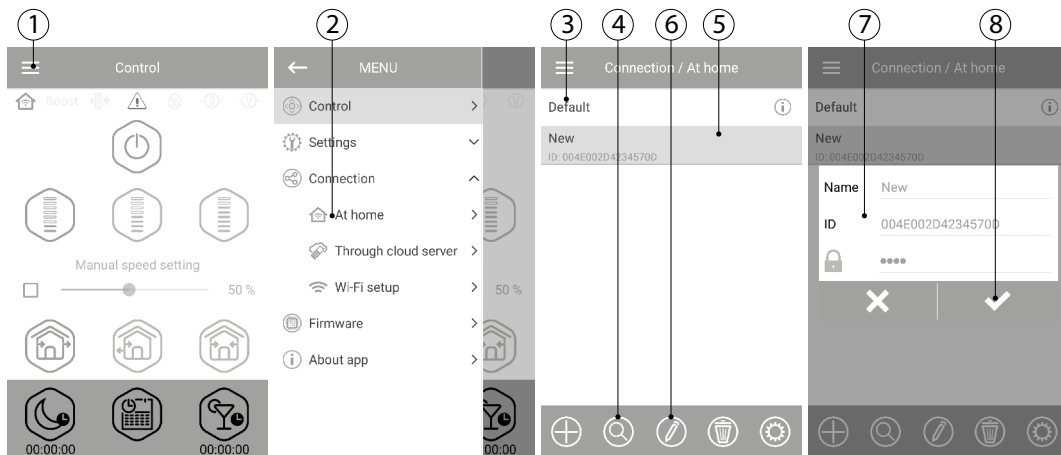
Download the Vents TwinFresh V.2 application and install it on the mobile device.

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 Vents TwinFresh V.2 app and create a new connection by following the steps below:

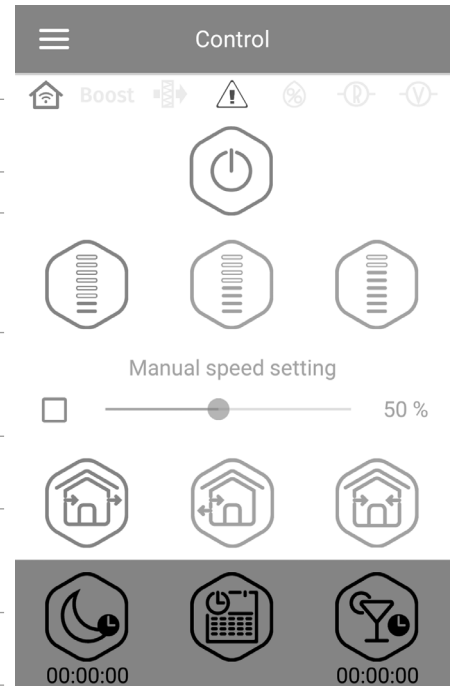
1. Enter the app menu.
2. Select **Connection – At home**.
3. If the mobile device is connected to the Wi-Fi access point of the unit without a router, select the **Default connection**.
4. In case of connection via a router, search for network settings.
5. Find the new connection in the list and highlight its ID.
6. Edit the connection details.
7. If necessary, rename the connection and enter a ventilator password.  
By default the ventilator password is 1111. (automatically inserted in the input line).
8. Confirm the updated details.

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

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

**DESCRIPTION OF MOBILE APPLICATION CONTROL BUTTONS**

	ON/Standby. The <b>Standby</b> mode depends on the position of the DIP switch No. 2 (see section <b>Setting the ventilator operation mode using DIP switches</b> )
	Selection of the preset speed: Speed I, II and III respectively.
	Manual speed setup. To activate the scroll bar, check it.
	<b>Ventilation</b> The ventilator operates in the supply or extraction mode at a set speed. The fan rotation direction depends on the position of the DIP switch 3.
	<b>Regeneration mode</b> The rotation direction of both fans changes to opposite every 70 seconds. Heat recovery is performed in this mode.
	<b>Air supply mode</b> The ventilation unit operates exclusively in air supply mode.
	<b>Night mode</b> Activation of Speed I timer without changing the ventilator operation mode (8 hours by default, adjustable in the <b>Settings – Timers</b> menu).
	<b>Weekly schedule</b> Activation of the ventilator week-scheduled operation.
	<b>Party mode</b> Activation of the Speed III timer without changing the ventilator operation mode (4 hours by default, adjustable in the <b>Settings – Timers</b> menu).


**DESCRIPTION OF MOBILE APPLICATION INDICATORS**

	Current type of connection to the ventilator. Home connection or connection via a cloud server through Internet respectively.
<b>boost</b>	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 <b>Power</b> 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: <b>red</b> – lights up in case of emergency shutdown of the ventilator <b>orange</b> – lights up in case if there is no battery or the battery is low
	Filter replacement indicator. To reset the filter timer, go to <b>Menu-&gt;Settings-&gt;Filter</b> .

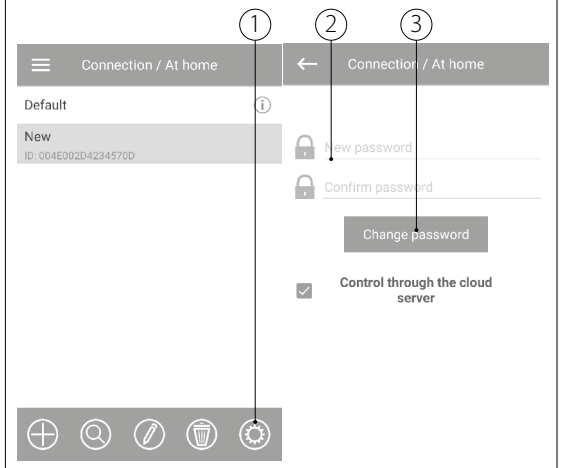
When simultaneously activating several operation modes that exclude each other, the ventilator selects the mode according to the following priority:

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

### VENTILATOR PASSWORD CHANGE

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

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



### AIR FLOW SETTING

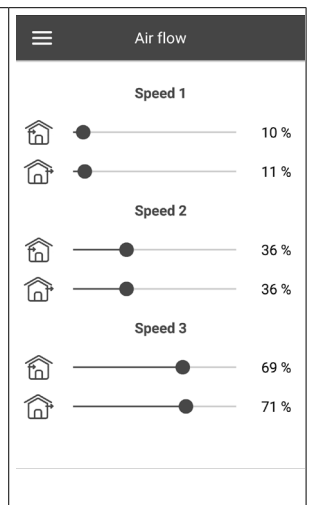
To set the air flow corresponding to each of the three speed modes, go to **Menu - Settings - Air Flow**. Set the fan speed as a percentage for each speed mode.

The **Air Flow** menu displays and allows setting the speed modes only for the ventilator, which is set as the Master in the ventilator network. Therefore, if the ventilator is a Slave unit in the network of ventilators, it must be switched to the Master mode for speed setting.

Then connect to this Master unit via Wi-Fi and adjust the fan speed values via the mobile app.

Revert the unit to the Slave mode by means of DIP switch.

After all Slave ventilators have been set in this way, when the Master ventilator is switched on to one of the three speed modes, the fans of each Slave ventilator will rotate at the speed that was set on it for this speed mode.



### TIMER SETUP

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.

**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 Speed III after the actuation of any of the sensors and their return to the standard state.



### SENSOR SETUP

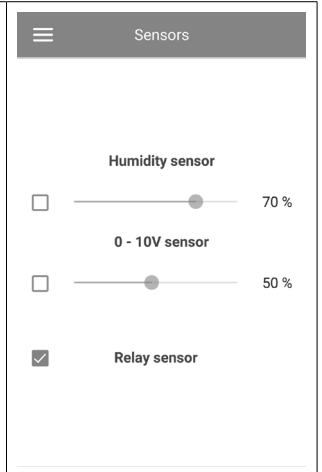
To set up sensor operation via the mobile app, go to **Menu -> Settings -> Sensors**.

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

**0-10V sensor:** activation of the external analogue sensor 0-10 V.

When a 0-10V 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.

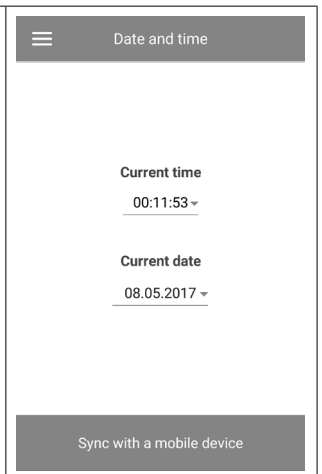


### DATE AND TIME SETUP

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.



### WEEKLY SCHEDULE SETUP

To set up the weekly schedule in the mobile app, go to **Menu -> Settings -> Schedule**.

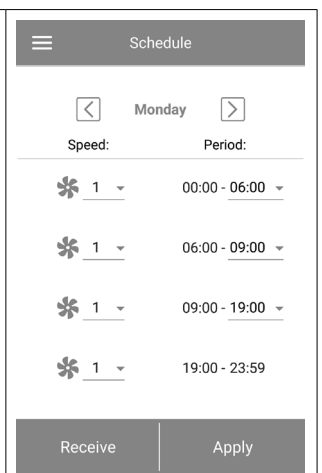
The weekly schedule can be set by means of 4 time intervals available for each day of the week.

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.


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.



### FILTER TIMER SETTING AND RESET

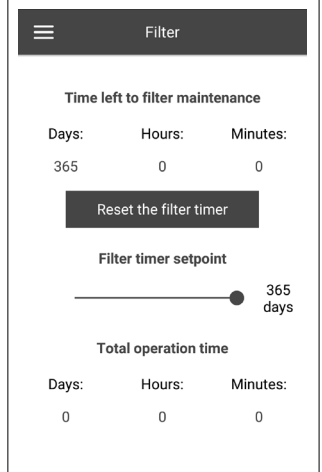
In order to set the filter maintenance periodicity, go to **Menu -> Settings -> Filter**. Then use the **Filter timer setting** slider to set the desired periodicity in the range from 70 to 365 days (the default value recommended by the Manufacturer is 90 days).

The need to replace the filters is signalled by the indicator  in the upper section of the Control menu. Reset the filter timer after replacing or cleaning the filters.

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

The preset number of days is 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 be reset using the button located on the indoor unit (see the **Filter** line of the section **Ventilator control with the buttons on the indoor unit**).

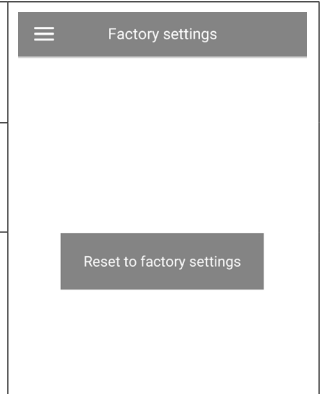


### RESTORE FACTORY DEFAULT SETTINGS

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

**WARNING!**

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



### WIRELESS CONNECTION OF SEVERAL VENTILATION UNITS

Each of the networked ventilators can operate 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 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, as a humidity sensor, an external digital sensor, an external analogue sensor 0-10V 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 units ignore any other signals from the sensors. 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.

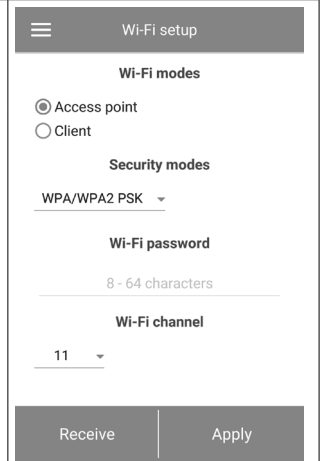
### WI-FI PARAMETER SETUP

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.

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.



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 hint of '8 - 64 characters'. The 'Wi-Fi channel' is set to '11'. 'Receive' and 'Apply' buttons are at the bottom.

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.

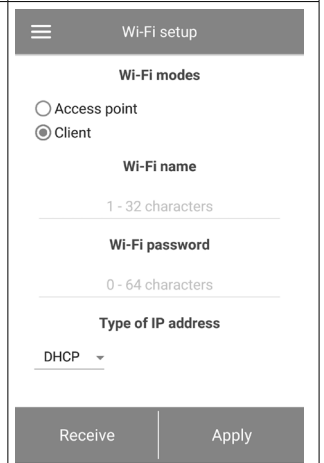
- Enter the name of the Wi-Fi home router access point.
- Enter the password for the Wi-Fi home router access point.

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.



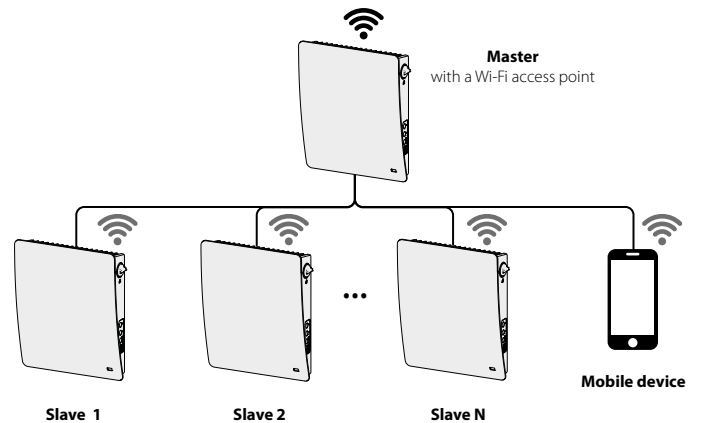
The screenshot shows the 'Wi-Fi setup' screen with 'Client' selected. The 'Wi-Fi name' field is empty with a hint of '1 - 32 characters'. The 'Wi-Fi password' field is empty with a hint of '0 - 64 characters'. The 'Type of IP address' is set to 'DHCP'. 'Receive' and 'Apply' buttons are at the bottom.

## 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.

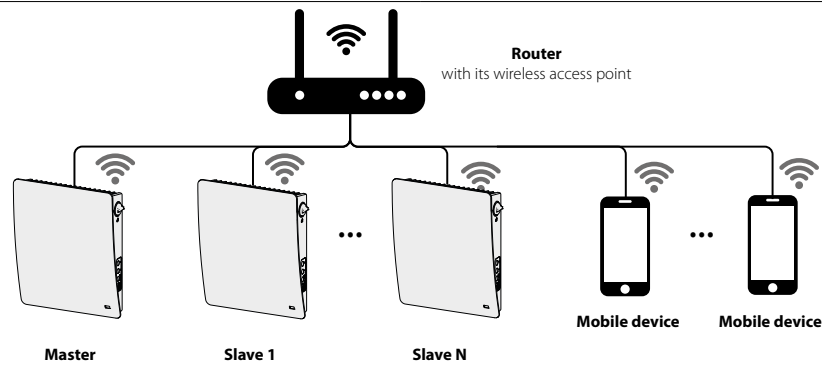
In case of connection of 8 Slave units to the Master unit with its own wireless access point a mobile device may not be connected.



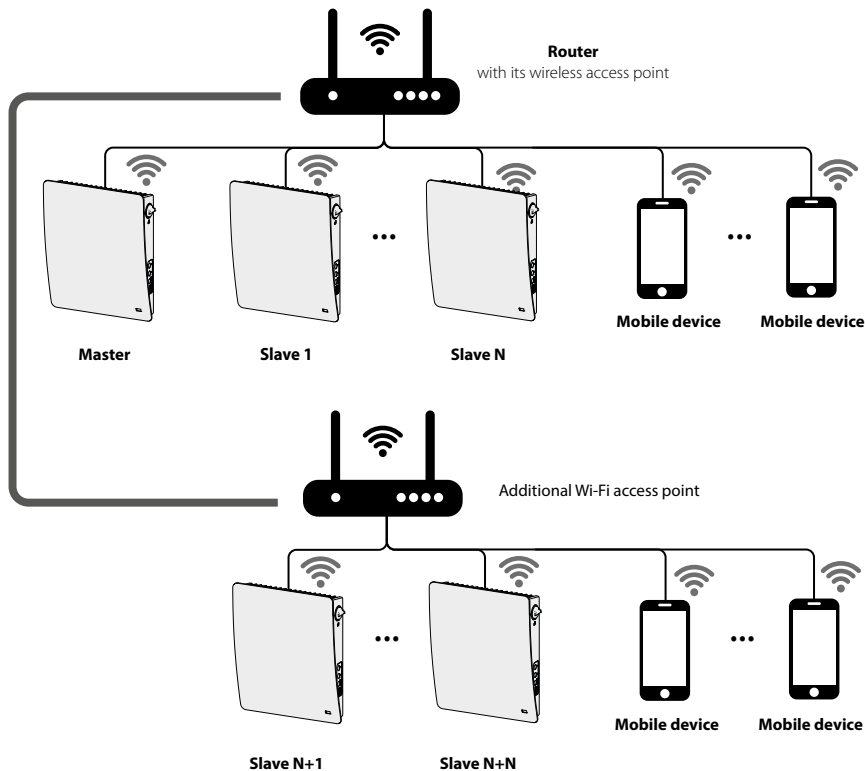
### Wiring diagram 2

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 ventilators, set the DIP switches on the units to the Master and Slave positions, respectively (see section **Setting the ventilator operation mode using DIP switches**).

Then set up the Wi-Fi parameters of the Master ventilator.



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


To configure Wi-Fi parameters of the Master ventilator, do the following:


- 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 VENTILATOR SETTING MODE

In the event of losing the Wi-Fi password or the master ventilator password or in other cases use the recovery 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 will 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.**



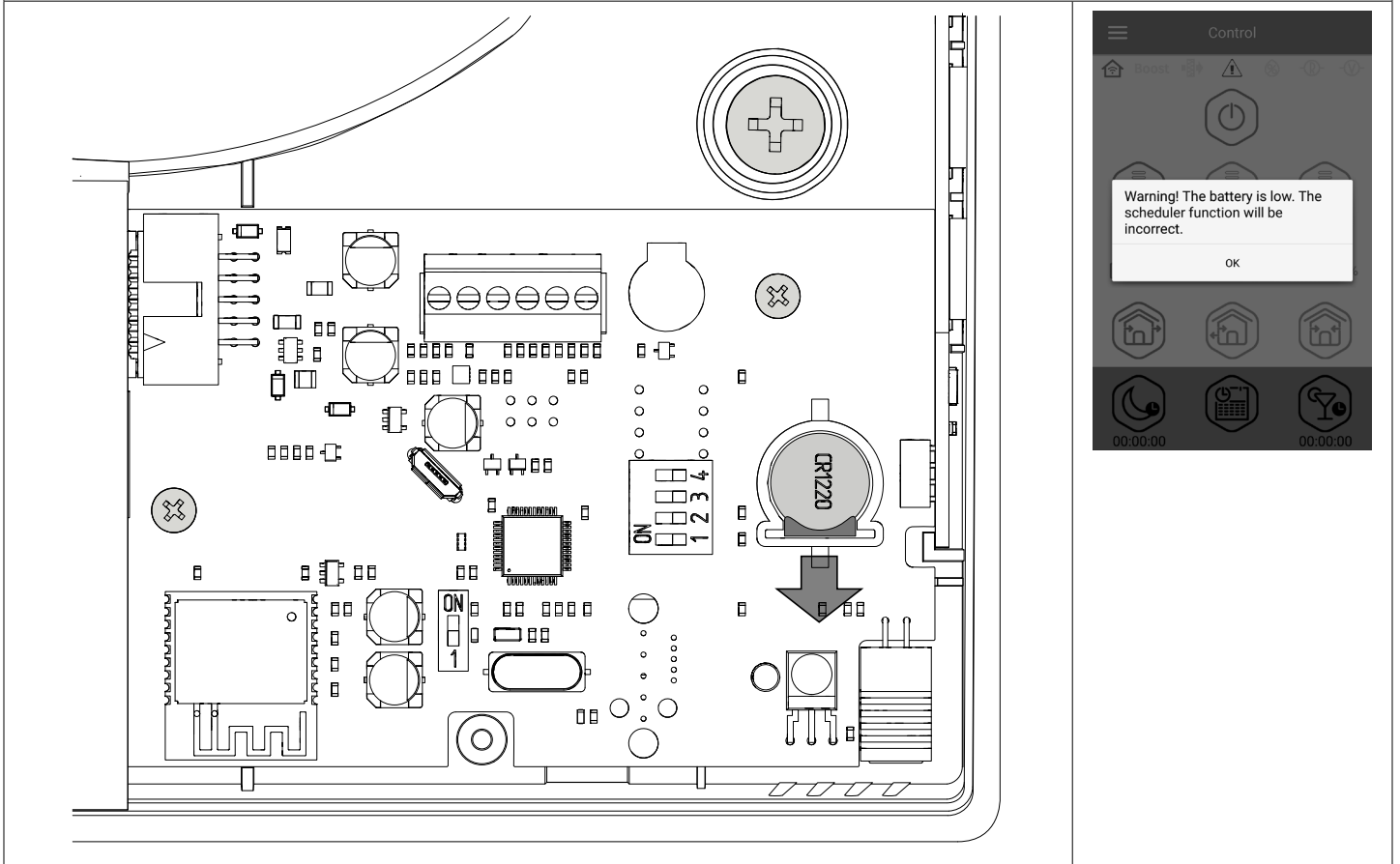
## BATTERY REPLACEMENT

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 A1 control board. To replace the battery, power off the ventilator, remove the front panel and the cover protecting the control circuit board. Then remove the battery and install a new one.

**The battery type is CR1220.**



### CLOUD SERVER CONNECTION

The ventilators can be controlled using the mobile app via a cloud server connection. This function 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:

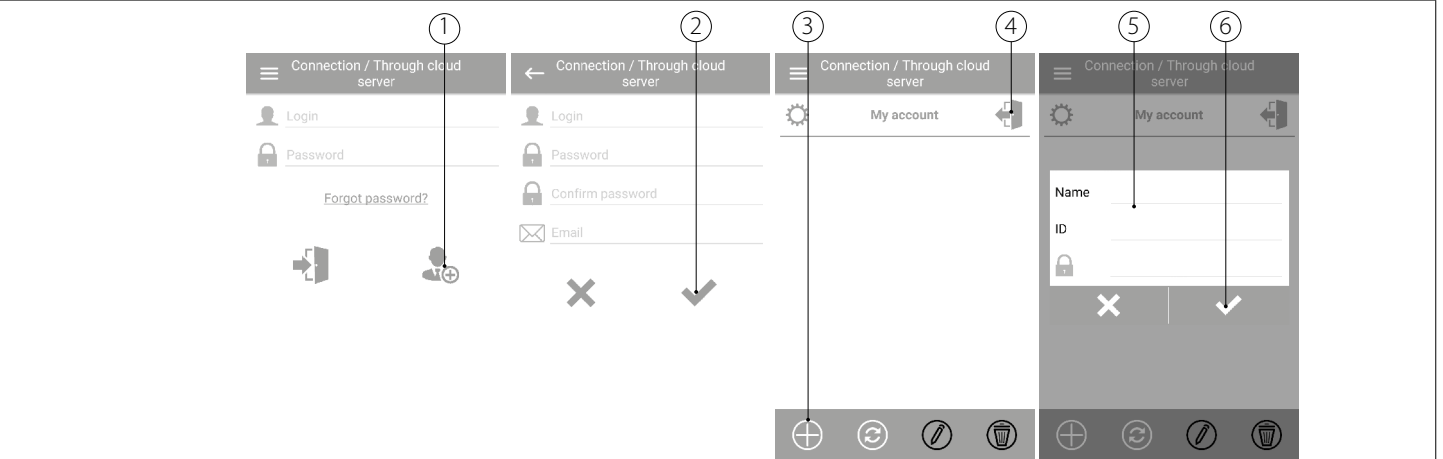
1. Enter the app menu.
2. Select **Connection – At home**.
3. Select the desired ventilator connection.
4. Enter the connection settings menu.
5. Enable **Control via cloud server**.



**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 **New**.
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, press the **Log in** button.

## TECHNICAL MAINTENANCE

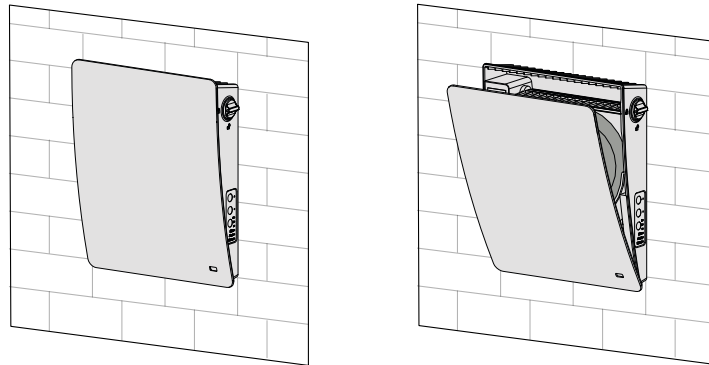


**DISCONNECT THE UNIT FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATIONS!**

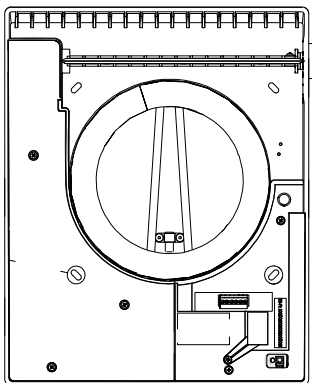
**MAKE SURE THE UNIT IS DISCONNECTED FROM POWER MAINS BEFORE REMOVING THE PROTECTION**

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.

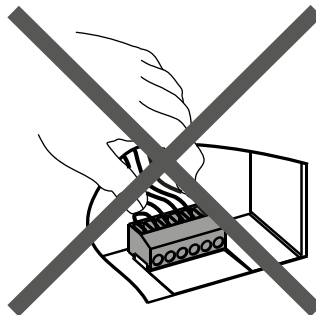
1. Remove the front part of the indoor control unit as shown in step 5 of the **Mounting and Set-up** section. Move the air damper to the horizontal position using the handle.



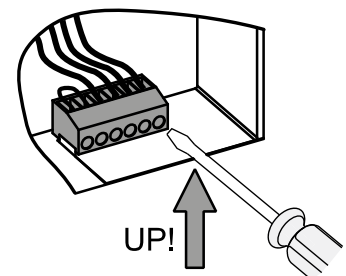
2. Disconnect the connector from the circuit board. Do not remove the connector by pulling the wires. Use a flat screwdriver to uplift it if required.



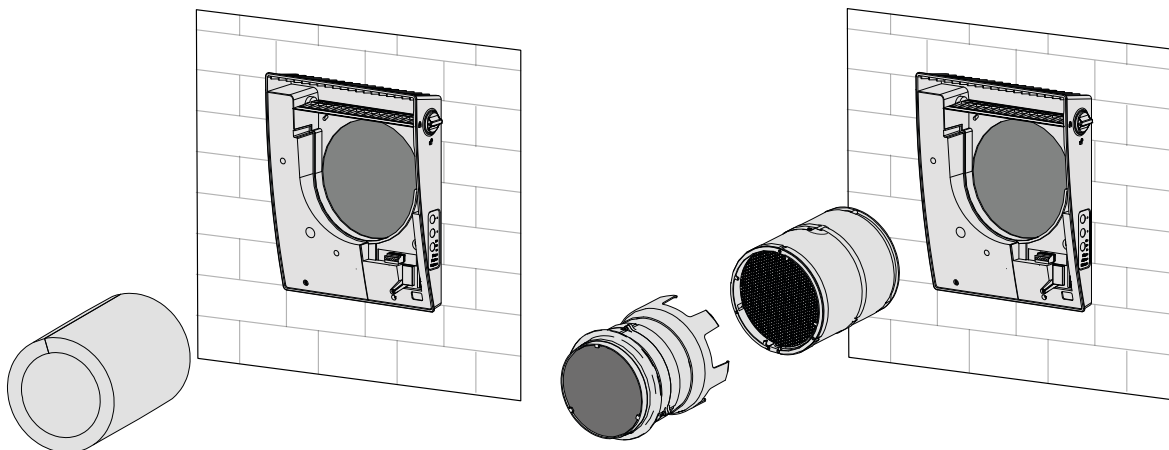
Do not pull on the electric cable.



Use a flat screwdriver to disconnect the socket.

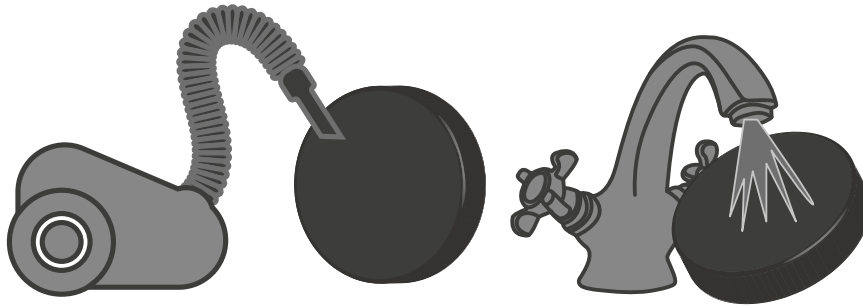


3. Remove the sound-insulation material from the duct, then remove the cartridge or the fan unit and the regenerator unit.



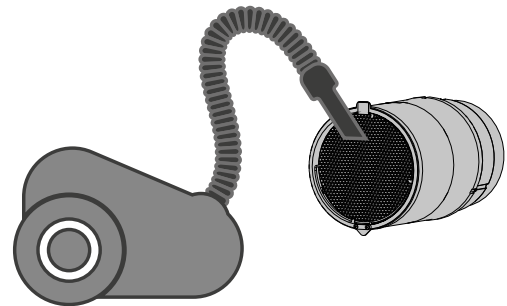
4. Clean filters once they become dirty. Upon elapse of the set number of days the filter replacement indicator (Filter) starts glowing. Depending on the dustiness of the air, the duration of the ventilator operation until the next filter cleaning may be different. The duration of the period when the filter replacement indicator is turned on can be set using the mobile application in the range from 70 to 365 days of continuous operation (by default, the Manufacturer's recommended value is set to 90 days).

- Reset the filter timer using the application on your mobile device or using the button on the indoor unit of the ventilator, as described in the **Filter timer setting and reset** section.
- 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 regenerator and the fan 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.



#### 5. Replacement of the remote control battery (if necessary).

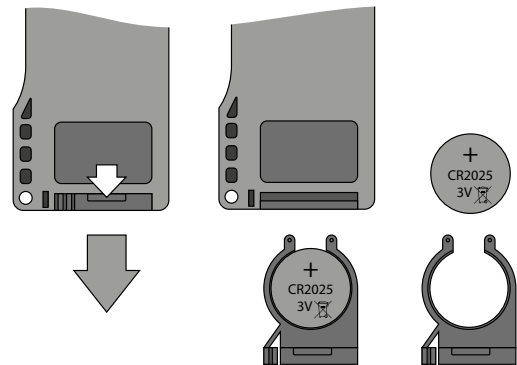
In case of a long operation of the remote control the battery must be replaced.

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

The battery type is CR2025.

Remove the holder with the battery from the lower part of the remote control.

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.**



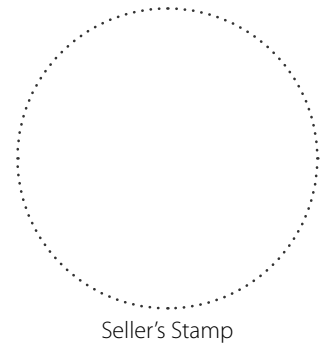
**USER'S WARRANTY CLAIMS SHALL BE SUBJECT TO REVIEW ONLY UPON PRESENTATION OF THE UNIT, THE PAYMENT DOCUMENT AND THE USER'S MANUAL WITH THE PURCHASE DATE STAMP.**

### CERTIFICATE OF ACCEPTANCE

<b>Unit Type</b>	Single-room reversible energy recovery ventilator
<b>Model</b>	
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<b>Quality Inspector's Stamp</b>	

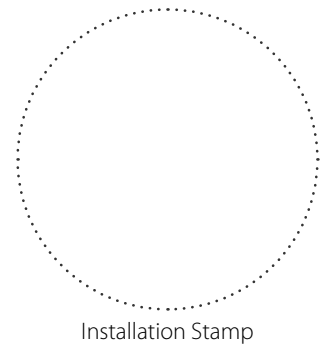
### SELLER INFORMATION

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



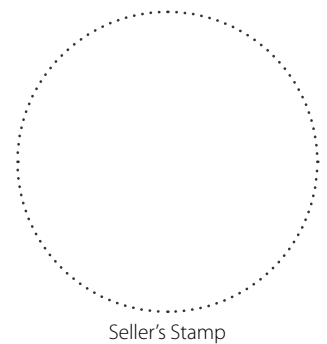
### INSTALLATION CERTIFICATE

The _____ unit is installed pursuant to the requirements stated in the present user's manual.	
<b>Company name</b>	
<b>Address</b>	
<b>Phone Number</b>	
<b>Installation Technician's Full Name</b>	
<b>Installation Date:</b>	<b>Signature:</b>
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.	
<b>Signature:</b>	



### WARRANTY CARD

<b>Unit Type</b>	Single-room reversible energy recovery ventilator
<b>Model</b>	
<b>Serial Number</b>	
<b>Manufacture Date</b>	
<b>Purchase Date</b>	
<b>Warranty Period</b>	
<b>Seller</b>	





**VENTS**

