INSTALLATION AND USER'S MANUAL

Heat regeneration single-room reversible ventilator

FLEXI 50

V3_2023

These instructions are intended for technical, maintenance and operational personnel.
The operating instructions contain information on the purpose, technical details, principle of operation, design and installation of the FLEXI 50 and all its variants.
Technical and maintenance staff must undergo theoretical and practical training in the field of ventilation systems and must be able to operate in accordance with workplace safety regulations and construction norms and standards in force in the country. The information in this user guide is current at the time of writing.
The company reserves the right to change the technical characteristics, shape or configuration of its products at any time in order to take into account the latest technological developments.

Content

1 Safety requirements

- Please read the user's manual carefully prior to installing and operating the unit.
- 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.
- The warnings contained in the user's manual must be considered most seriously since they contain vital personal safety information.
- Failure to follow the rules and safety precautions noted in this user's manual may result in an injury or unit damage.
- After a careful reading of the manual, keep it for the entire service life of the unit.
- While transferring the unit control, the user's manual must be turned over to the receiving operator.
- Before installation, check the unit for damage of the rotor, housing and grille. There must be no foreign objects inside the housing that could damage the rotor blades.

1.1 Unit installation and operation safety precautions

	Unpack the unit with care.		Disconnect the unit from power mains prior to any installation operations.
	The unit must not be grounded!		While installing the unit, follow the safety regulations specific to the use of electric tools..
	Do not change the power cable length at your own discretion. Do not bend the power cable. Avoid damaging the power cable. Do not put any foreign objects on the power cable.		Do not lay the power cable of the unit in close proximity to heating equipment.
	Do not use damaged equipment or cables when connecting the unit to power mains.		Do not operate the unit outside the temperature range stated in the user's manual. Do not operate the unit in aggressive or explosive environments.
	Do not touch the unit controls with wet hands. Do not carry out the installation and maintenance operations with wet hands..		Do not wash the unit with water. Protect the electric parts of the unit against ingress of water.

	Do not store any explosive or highly flammable substances in close proximity to the unit.		When the unit generates unusual sounds, odour, or emits smoke, disconnect it from power supply and contact the Seller.
	Do not open the unit during operation.		Do not direct the air flow produced by the unit towards open flame or ignition sources.
	Do not block the air duct when the unit is switched on.		In case of continuous operation of the unit, periodically check the security of mounting.

	Do not sit on the unit and avoid placing foreign objects on it.		Use the unit only for its intended purpose.
	Do not allow children to operate the unit..		Disconnect the unit from power mains prior to any technical maintenance.

The product must be disposed separately at the end of its service life.
do not dispose the unit as unsorted domestic waste.

2 PURPOSE

The unit is designed to ensure continuous mechanical air exchange in houses, offices, hotels, cafes, conference halls, and other utility and public spaces as well as to recover the heat energy contained in the air extracted from the premises to warm up the filtered stream of intake air. The unit is not intended for organizing ventilation in swimming pools, saunas, greenhouses, summer gardens, and other spaces with high humidity.
Due to the ability to save heating energy by means of energy recovery, the unit is an important element of energy-efficient premises. The unit is a component part and is not designed for stand-alone operation.
It is rated for continuous operation.

The unit should not be operated by children or persons with reduced physical, mental, or sensory capacities, or those without the appropriate training.
The unit must be installed and connected only by properly qualified personnel after the appropriate briefing.
The choice of unit installation location must prevent unauthorized access by unattended children.

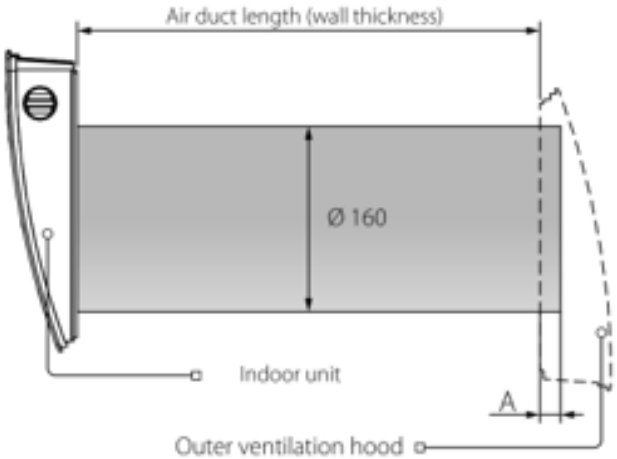
Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, sticky substances, fibrous materials, coarse dust, soot and oil particles or environments favourable for the formation of hazardous substances (toxic substances, dust, pathogenic germs).

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 humidity up to 65 % (no condensation build-up). If the conditions for using the ventilator are beyond the specified limits, turn off the ventilator and provide fresh air supply through windows. The inlet air temperature must be in the range from -20 ˚C to +40 ˚C.
The unit is rated as a class II electric appliance and must not be grounded. Valuated ingress Protection (IP) rating from solid objects and liquids is IPX2.
The unit design is constantly being improved; thus, some models may be slightly different from those described in this manual.

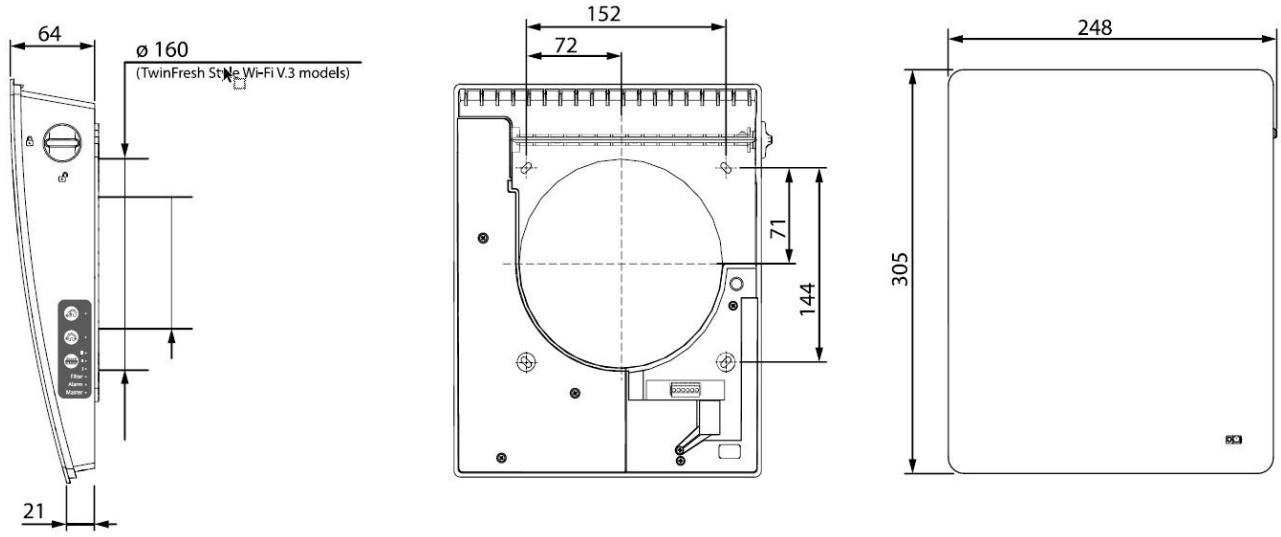
3 Technical DATA

SPEED	FLEXI 50		
	I	II	III
Supply voltage (V)	230		
Power consumption [W]	2.00	3.5	5.5
Total current consumption [A]	0.03	0.03	0.06
RPM [min-1]	519	1555	2330
Air capacity in ventilation mode [m3/h]	15	35	50
Air capacity in regeneration mode [m3/h]	8	18	25
Filters	G3 (option F8)		
Transported air temperature [°C]	-20 do +40		
Sound pressure level @ 1 m [dB(A)]	10	28	35
Sound pressure level @ 3 m [dB(A)]	1	19	26
Heat exchanger material	ceramics		
Heat recovery efficiency [%]	≤ 90		
Pipe diameter [mm]	160		
Ingress protection rating	IP 24		

4 DIMENSIONS



Overall dimensions of the indoor unit [mm]



5 Design and operating principle

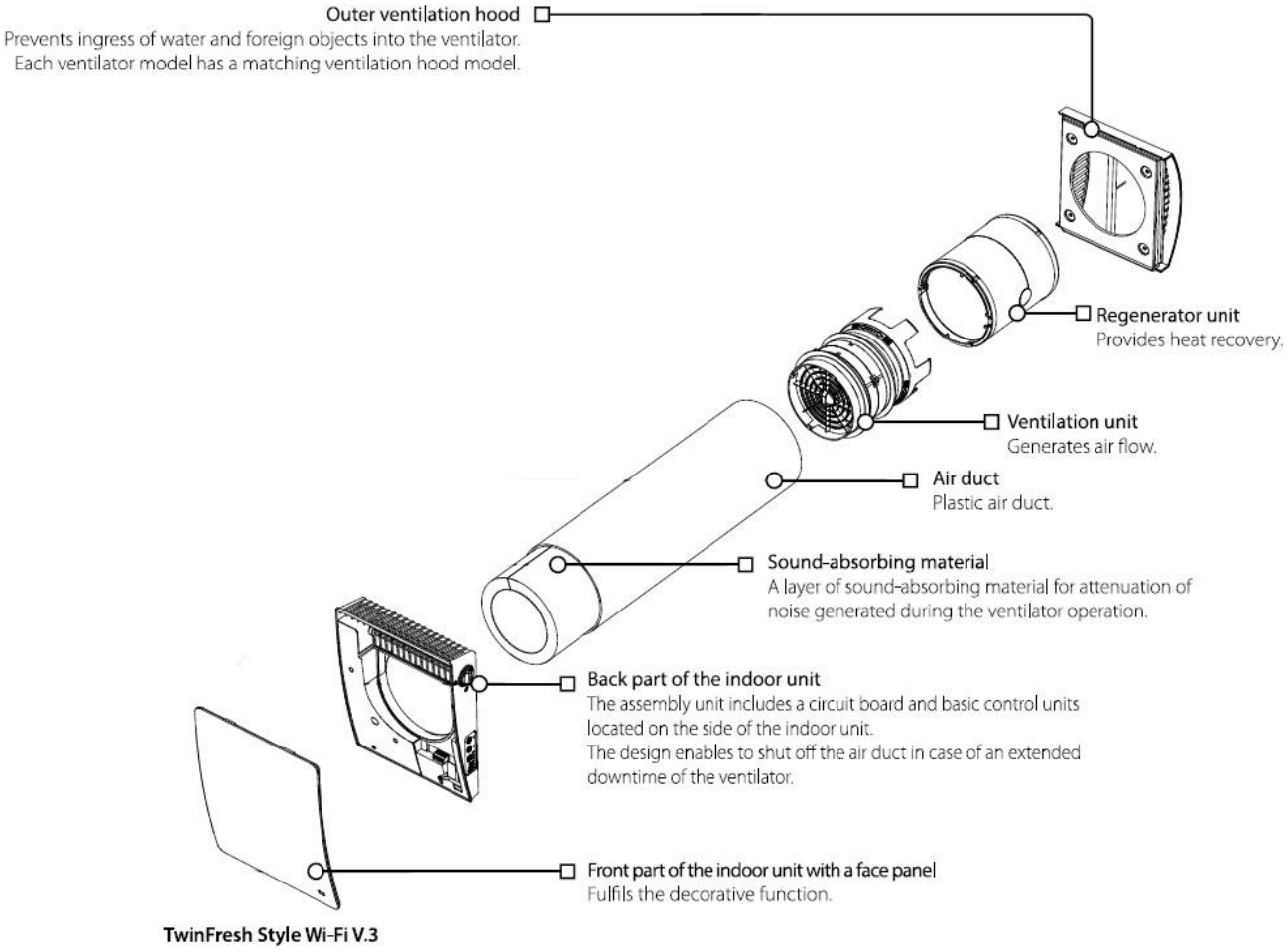
The ventilator consists of an indoor assembly unit with a decorative front panel, a cartridge, an air duct with a sound absorbing mat and an outer ventilation hood.
Cartridge is the basic functioning part of the unit. It consists of a fan, a generator and two filters that ensure primary air filtration and prevent ingress of dust and foreign objects into the regenerator and the fan.
The indoor unit is equipped with a manually operated rotary air damper.

The ventilator can be operated independently or in system of more connected units with synchronized operation.

Attention! During closing of air damper, the ventilator continues to run, but the air flow is closed.

The protecting grille or ventilation hood must be installed on the outer wall to prevent ingress of water and foreign objects into the ventilator.

5.1 Ventilator design



TwinFresh Style Wi-Fi V.3

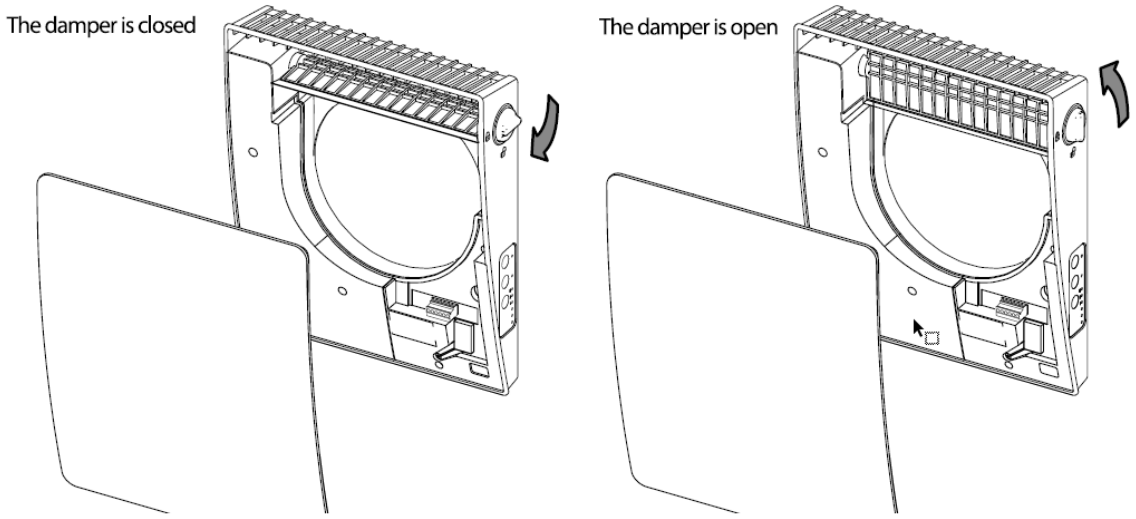
5.2 Air damper operating principle

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 on CLOSED. The indoor unit of the ventilators is equipped with an automatic air damper. It opens at the beginning of the ventilator's operation and lets the air f1ow 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-minute s.

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 y open.
Automatic opening/ closing of t h e damper is not provided in the indoor unit of the 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 posit ions of the damper and the handle.



6 VENTILATOR OPERATION MODES

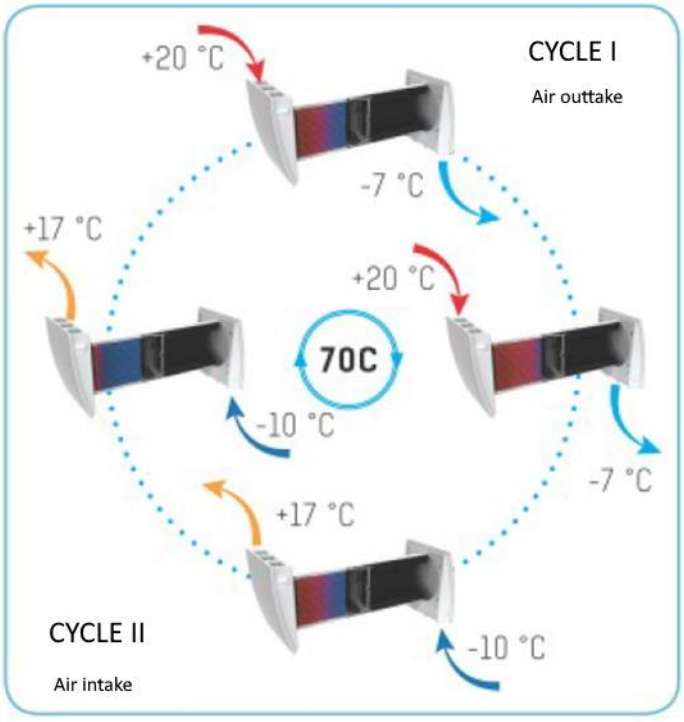
The ventilator has several operation modes:

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

Regeneration mode.
The ventilator operates cyclically in two cycles, each of 70 seconds, with heat and humidity recovery.

- **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.

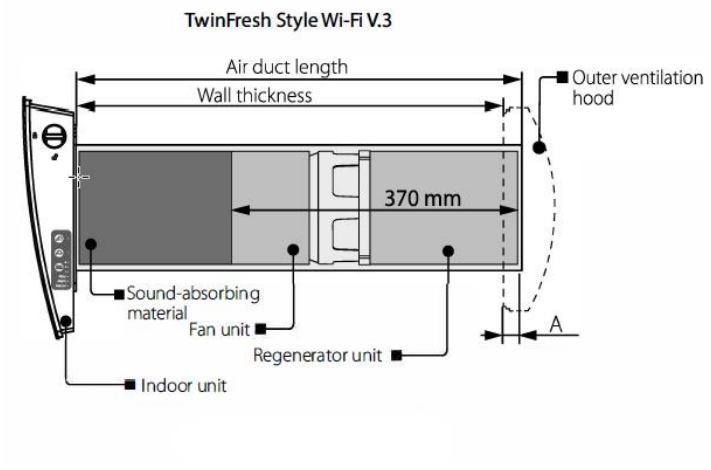


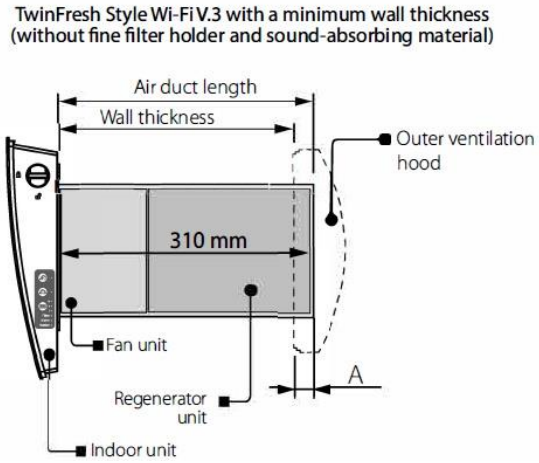
7 Mounting and set-up

Attention!
The appliance should not be installed in a space where curtains and the like objects obstate air flow!

Read the users manual before installing the unit

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.





Reference dimensions for installation of ventilators	*Ventilator model or installation variant*	
	FLEXI 50	***FLEXI 50 with minimum wall thickness***
Length of cartridge or fan and regenerator units [mm]	*370*	*310*
Hole diameter D [mm]	*180*	*180*
Minimum possible wall thickness when using EH, EH-14, EH-13, EH-17, MWM hoods (mm)	*≥360*	*300*
Minimum possible wall thickness when using an EH-2 hood (mm)	*≥260*	*200*

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 emission of street noise into the room may increase. This will also increase the noise level of the ventilator itself.

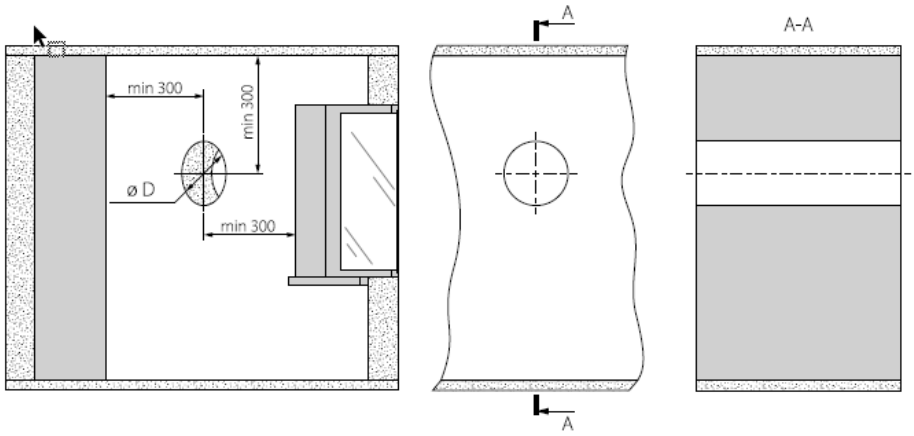
7.1 Ventilator mounting

Read the users manual before installing the unit

Do not block the air duct of the installed unit with dust accumulating materials, such as curtains, cloth shutters, etc. As it prevents air circulation in the room.

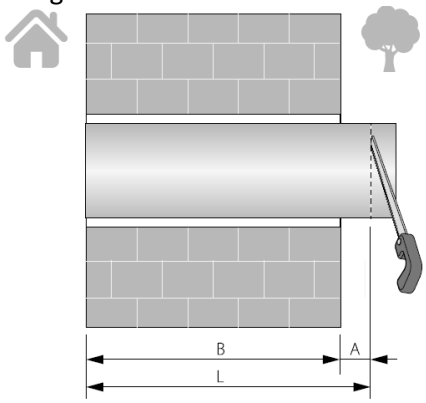
1. **Prepare a round core hole in the outer wall**

Make one or two holes in the exterior wall according to the configuration of the ventilation system. For efficient ventilation, the locations of ventilation systems must be as far apart as possible. When preparing the holes, it is recommended to also prepare places for laying the electrical cable and other necessary cables in the wall. The size of the hole and the minimum distance to the surface (eg wall, ceiling or window) and the minimum distance between the devices are shown below.

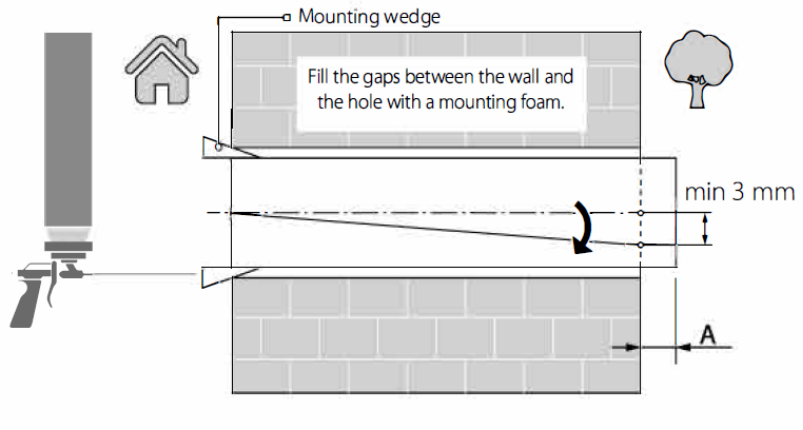


2. **Measure the air ducts of the required length**

Measure the wall thickness B
The required air tube length is calculated as L = B + A.
A (min 10 mm) means the part of the air tube from the outside that is required for installation of an external ventilation cover. Cut the air tube to length L.



Install the air duct with the minimum slope of 3 mm downwards from the outer wall side. Fill the gaps between the wall and the hole with a mounting foam.

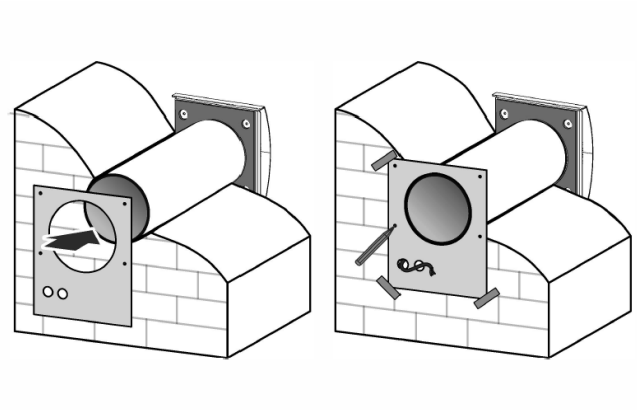


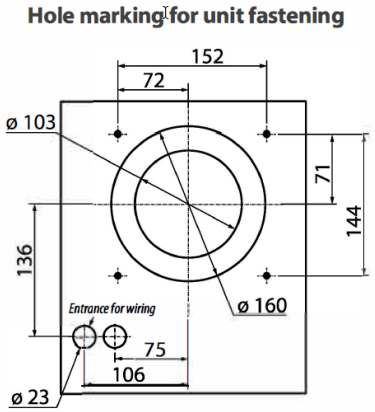
3. Installation of outer ventilation hood

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

4. Positioning and installation of the indoor unit

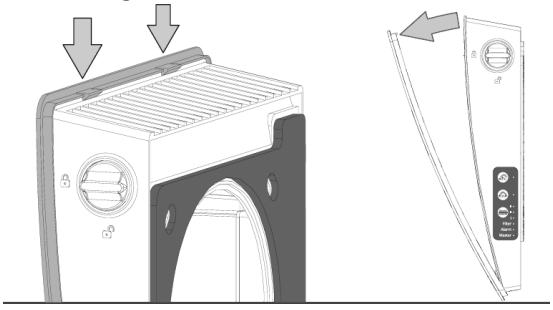
Stick the delivered cardboard master plate on the indoor wall using a mounting tape. The large opening in the master plate must be axially aligned with the air duct. Align the master plate horizontally with a building level. Then mark the fastening holes for installation of the supplied dowels and drill the holes to a required depth. Route the power cable from the wall through the marked opening on the template.





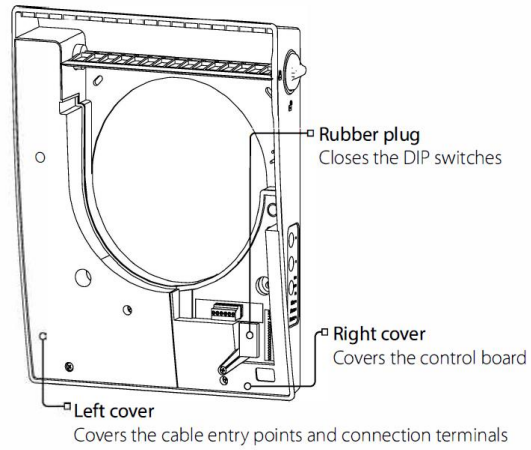
5. Remove the inner front cover

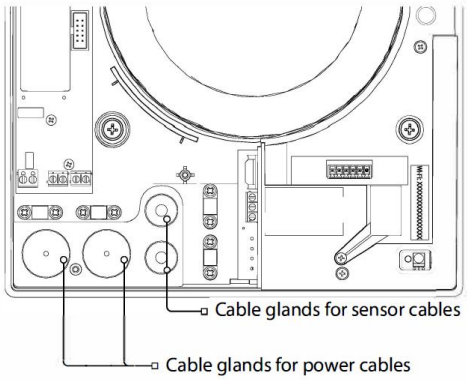
Separate the front panel of the indoor unit from its back part. To do this, unhook the latches securing the front panel and open it as shown in the figure below.



6. Preparation of the indoor unit

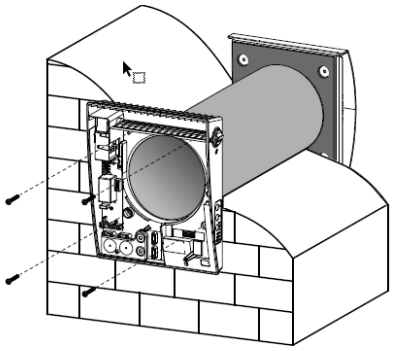
Remove the three retaining screws from the left cover to enable access to the terminals. Route the power wires through the appropriate cable glands.





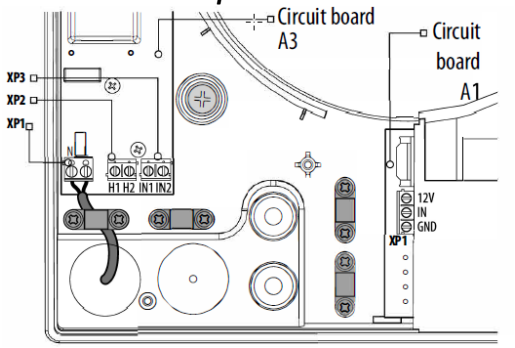
7. Mounitng of the indoor unit

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



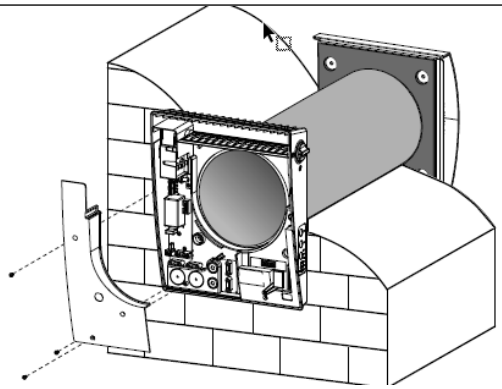
8. Electrical cable fixation

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.



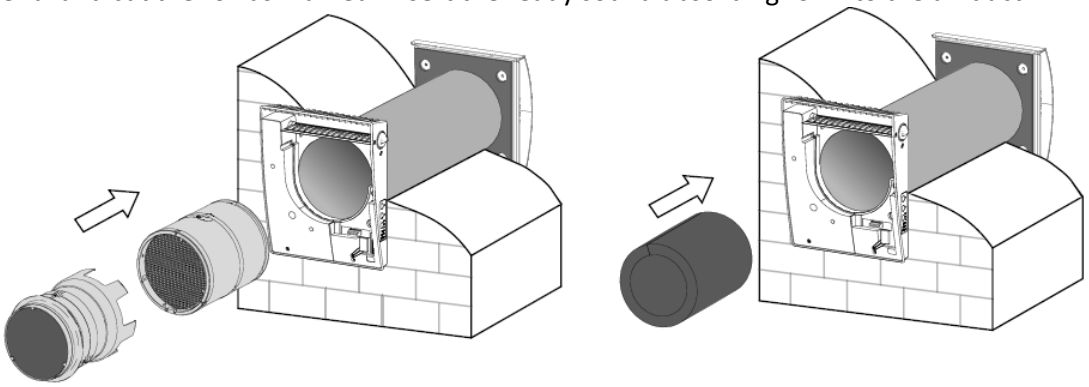
9. Mounting the left cover

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



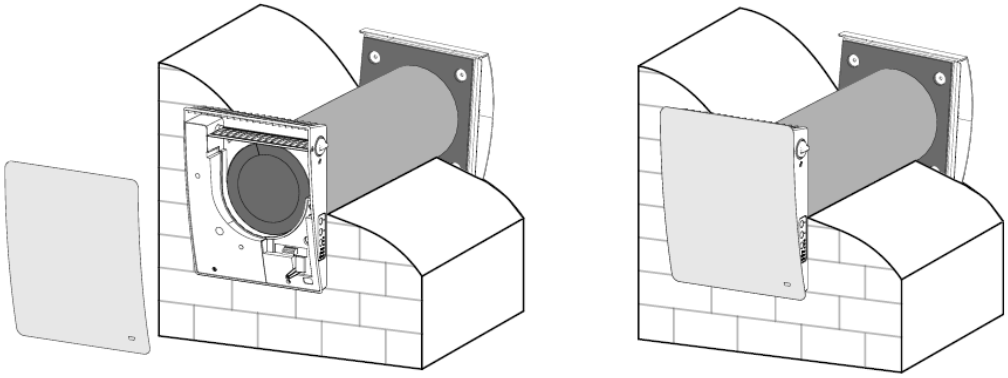
10. Installatio of ventilation and recuperation unit

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. Installation of the front panel of the indoor unit

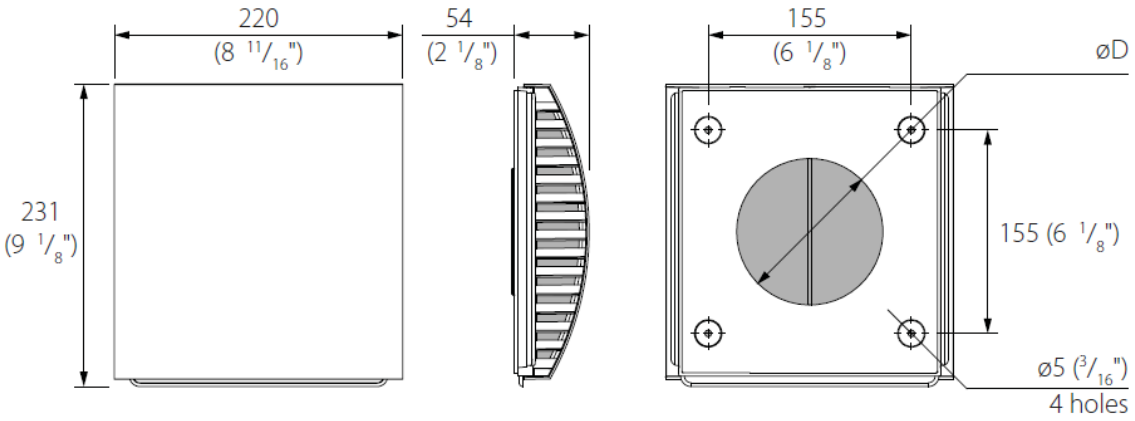
Install the front panel of the indoor unit.



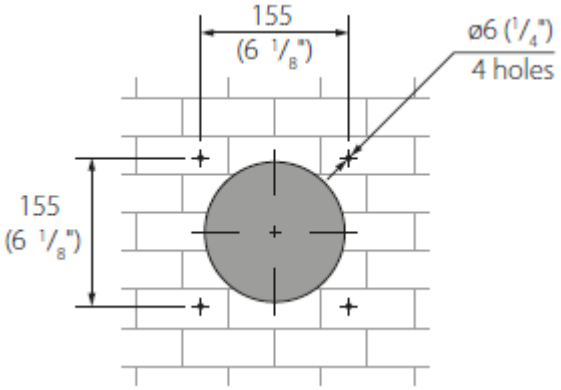
7.2 Outer ventilation hood mounting

The outer ventilation hood is designed to prevent ingress of water and foreign objects into the ventilation equipment from outside.

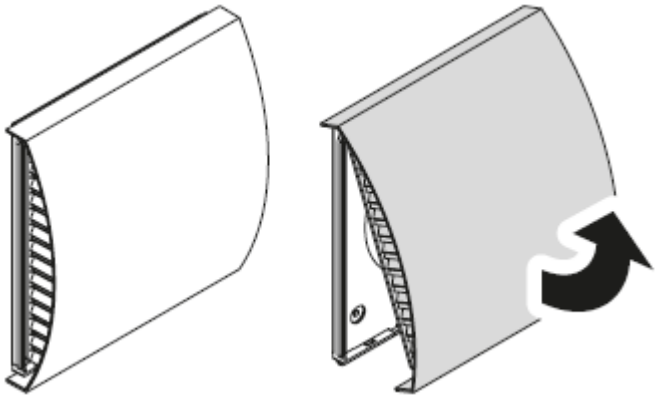
The unit should not be operated by children or persons with reduced physical, mental, or sensory capacities, or those without the appropriate training. the unit must be installed and connected only by properly qualified personnel after the appropriate briefing.
the choice of unit installation location must prevent unauthorized access by unattended children.
WARNING! If the mounting place is located at high altitude please refer to a mounting company possessing an appropriate mounting equipment!

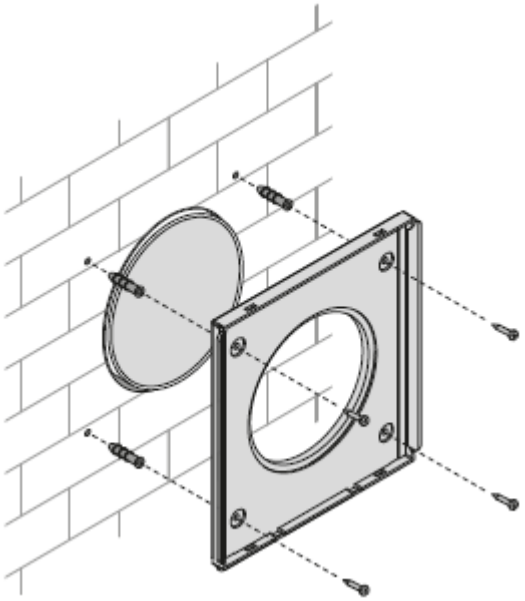


1. Mark the fastening holes for the outer ventilation hood and drill 4 holes, 50 mm deep to suit the expansion anchors (6x40) which you insert them. Use the back wall of the ventilation hood to facilitate the marking.

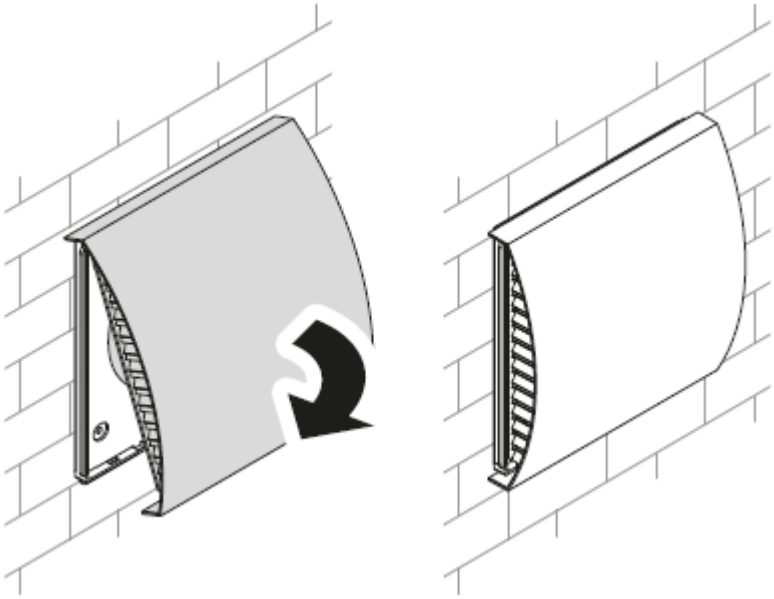


2. Disassemble the outer ventilation hood to enable access to the fastening holes. Pull the front part below toward you. Fix the back wall of the ventilation hood on the wall using the supplied screws 4x40.





3. Cover the ventilation hood with the front part.



7.3 Connection to power mains

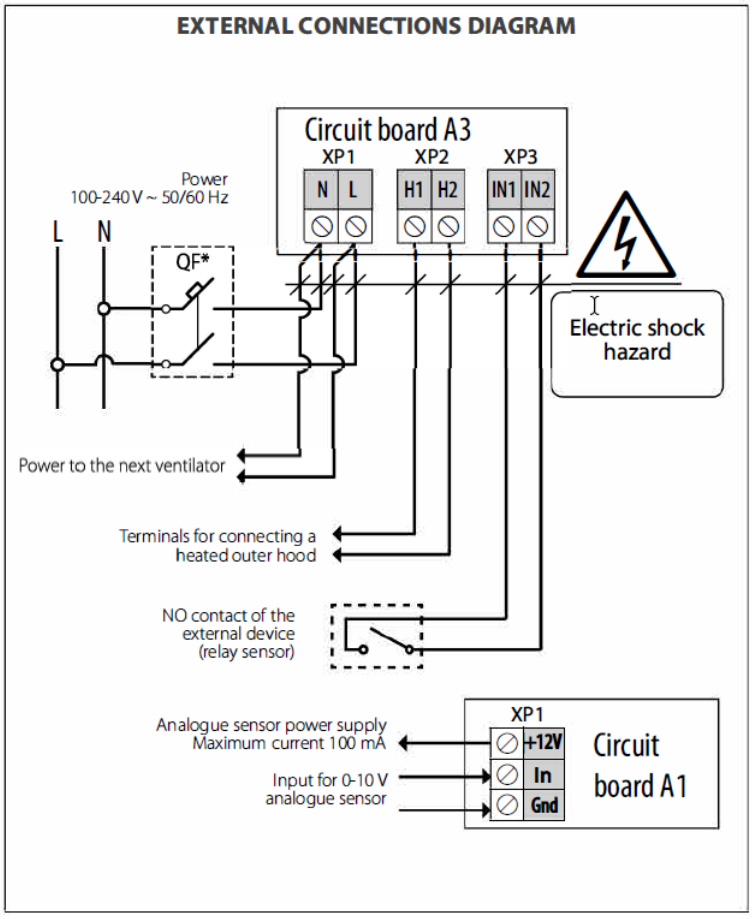
Switch off before any work with the appliance.
The appliance must be connected to the electrical network by a qualified electrician. The electrical parameters of the device can be found at manufacturer's labels.

Any modification of the internal circuit is prohibited it will revoke the warranty.

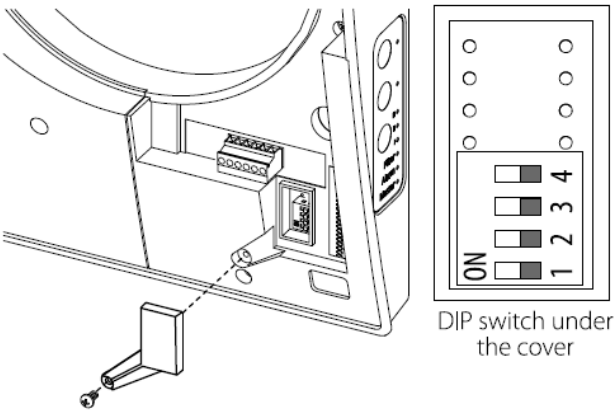
The ventilator is rated for connection to single-phase AC 100-240 V 50/60 Hz power mains.
For electric installations use insulated, flexible conductors (cables, wires) with the minimum cross section of 0.5 up to 0.75 mm2 for power cables and 0.25 mm2 for sensor cables. The cable cross section is given 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 characteris-tics 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_2 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.



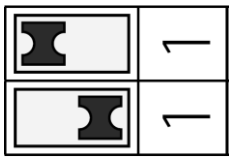
7.4 Setting the ventilator operation mode using DIP switches



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.

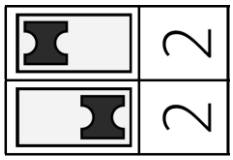
Setting the role of the ventilator in the network



ON - slave unit (hereinafter referred to as "Slave unit")

OFF - master unit (hereinafter referred to as "Master unit")

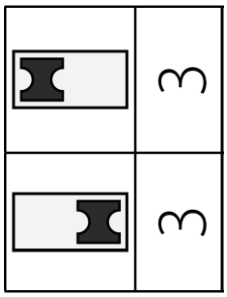
Standby mode setup



Min - the ventilator operates at Speed I in the Standby mode.

OFF - the ventilator is switched off in the Standby mode.

Settino of the fan rotation direction*



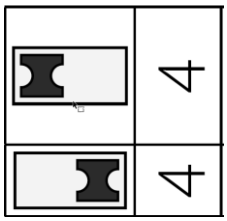
ON –

- in the Ventilation mode the ventilator supplies the air to the room.
- in Regeneration mode the ventilator starts operating first in supply mode.

OFF –

- in the Ventilation mode the ventilator extracts the air from the room.
- in Regeneration mode the ventilator starts operating first in extract mode.

Restore factory default settings



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.

OFF – standard operation of the unit.

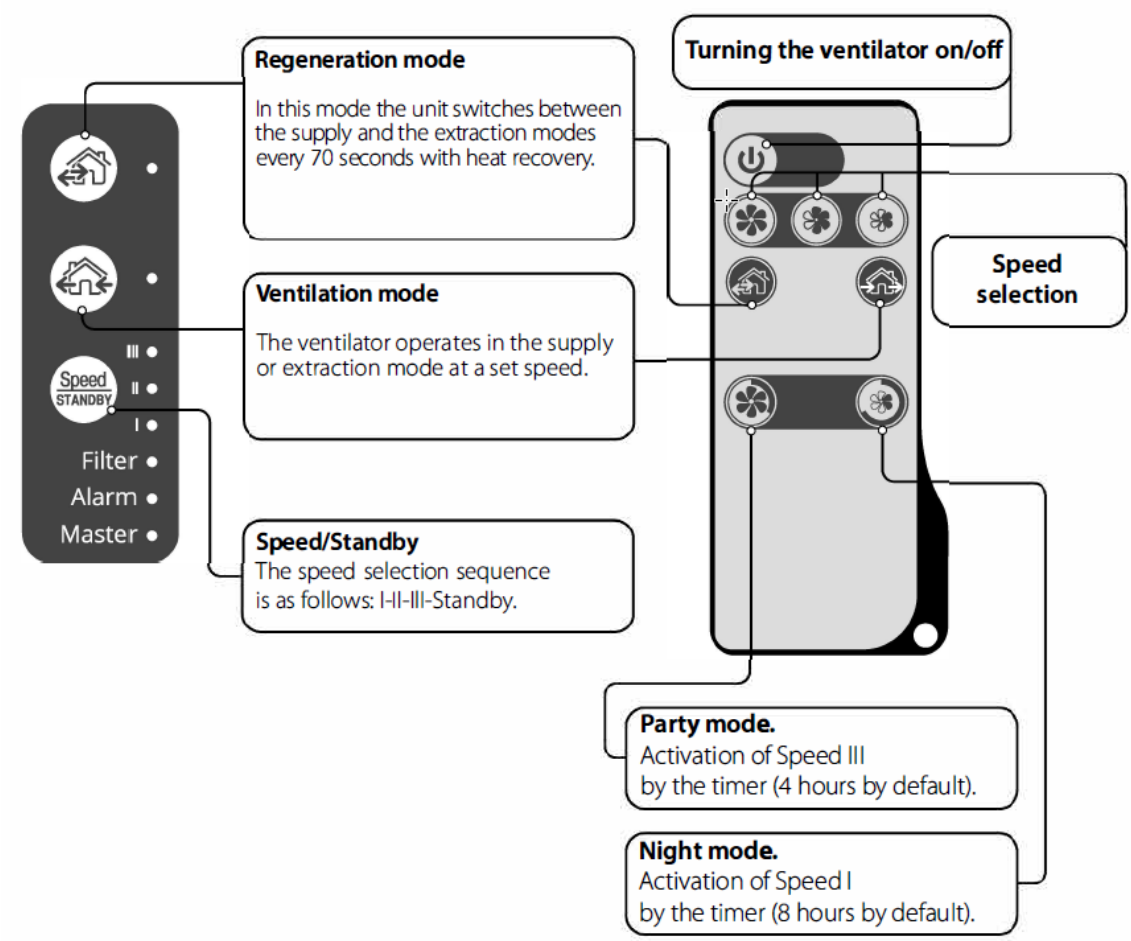
*To form an optimal ventilation mode in the room, it is recommended to use either one or an even number of networked ventilators. The setting is carried out in such a way that during each operation interval one half of the ventilators supplies air to the room, and the other half extracts air out of the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

8 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 Twin Fresh V.2 application from a mobile device (smartphone or tablet)

8.1 Ventilator control with the buttons on the remote control



8.2 Description of the button on the remote control

	ON/Standby. The Standby mode depends on the position of the DIP switch 2 (see section Setting the ventilator operation mode using DIP switches). The same button is used to reset alarms (Alarm) and to 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 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:  *Party mode: the timer activates operation of the unit at Speed Ill for a set time period, 4 hours by default. The timer setting may be changed during setup of the unit on the 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 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.

8.3 Ventilator control with the buttons on the indoor unit

	The speed selection sequence is as follows: I-II-Ill-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 these indicators indicates operation of the unit at Speed II. • 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 ***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.***
	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 the DIP switch No. 3.
	Ventilation mode 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.

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***.

8.4 Description of the indicators on the indoor unit

FILTER	90 days after installation of the cartridge the filter replacement indicator starts glowing. In this case, clean or replace the filters (see section **Napaka! Neveljaven rezultat za tabelo.**). 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.
ALARM	Alarm indicator. In case of failure, the Alarm indicator on the indoor unit glows or blinks. Reasons of Alarm blinking: • *Battery charge is below the low level.* • *No connection between the Master unit and the router.* • *Alarm shutdown of the ventilator.* 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***.
MASTER UNIT	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 indicator means that this ventilator is a Slave unit and it is connected to a Master unit.

9 Ventilator unit operation with the mobile application

There are two apps for controlling the ventilation system, for older and newer mobile devices. New app is recommended.

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***.

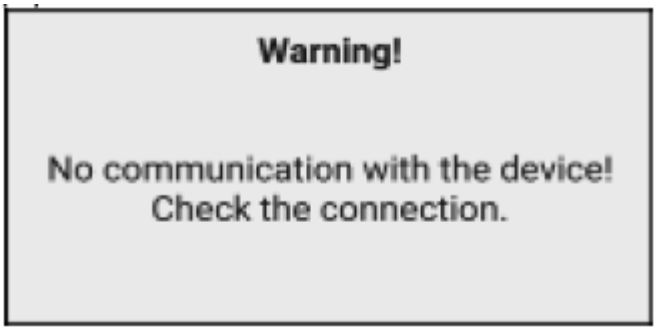
9.1 Old mobile application Vents Twinfresh v.2 connection with FLEXI ventilator

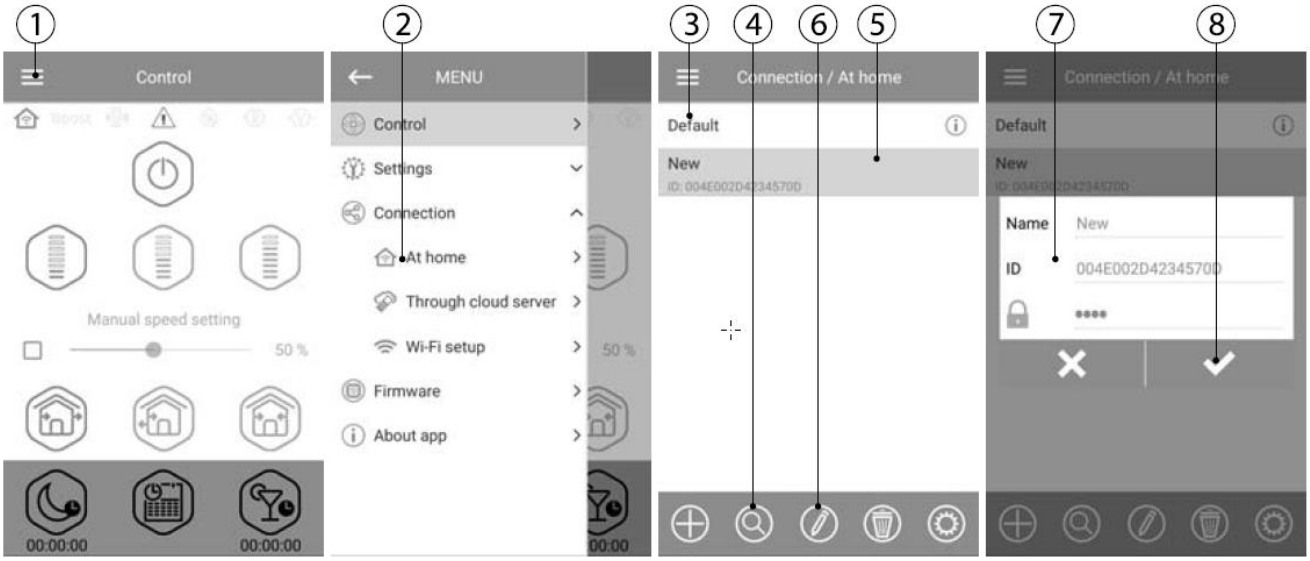
Application available for:

- iOS (App store)
- Android (Google Play)

Minimal device requests: Android – 7 or later; iOS 8 or later

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





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).

   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***.

9.2 NEW mobile application Vents Home connection with FLEXI ventilator.

Application is available for:

- iOS (App store)
- Android (Google Play)

Minimal device requests: Android – 7 or later; iOS 8 or latersdg

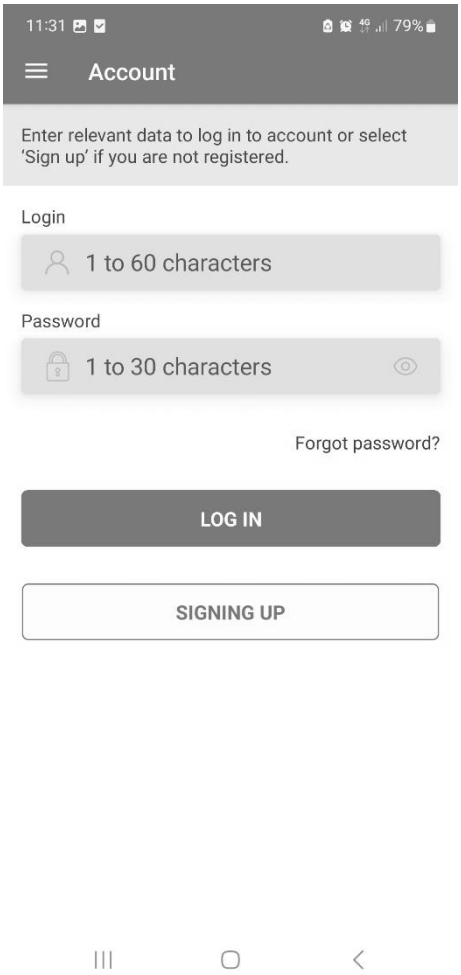
Principle of connecting FLEXI ventilator:

Ventilator or. ventilators can be connected with mobile device into synchronised operation with others ventilator as master-slave model in two ways as Wi-fi wireless , as described in 9.13 – 9.16.

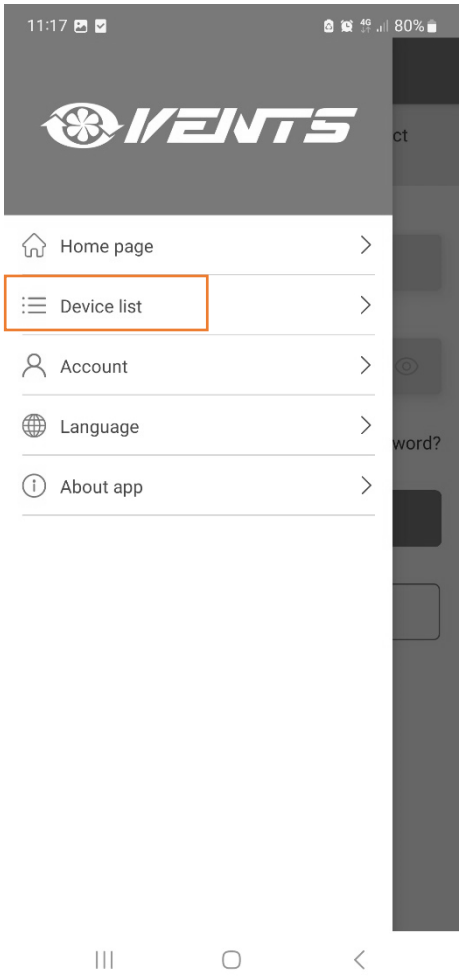
- as first step you need to connect to master unit directly in access point mode. Then you can also
- connect via additional router, what brings more possible devices in coordinated operating, also remotely (this means changing settings on master unit from access point mode to client mode)

description of connecting mobile device directly with ventilator via acces point follows. Instructions for connecting via router are in chapter 9.14.

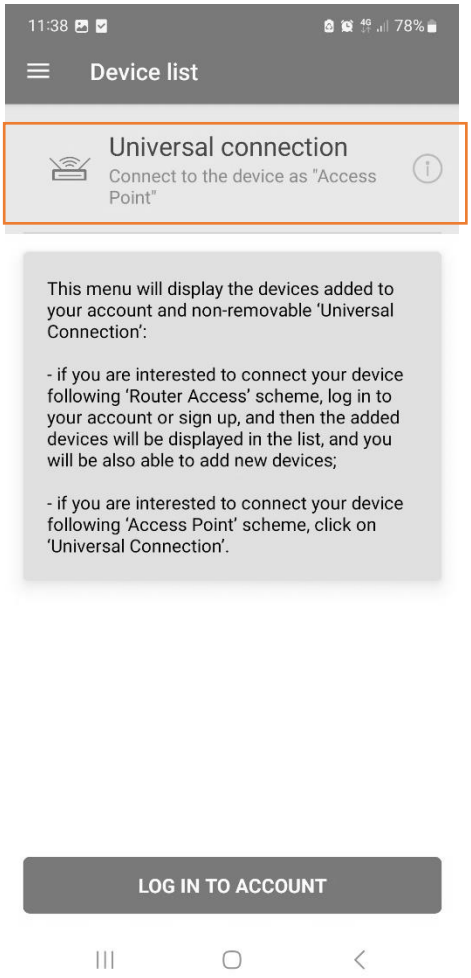
a) Open app on mobile device. First sreen is usually Account. You don't need to register for using ventilator **directly**, unless you want to add more devices or connect them **via router.** Open the menu with selecting  upper left.



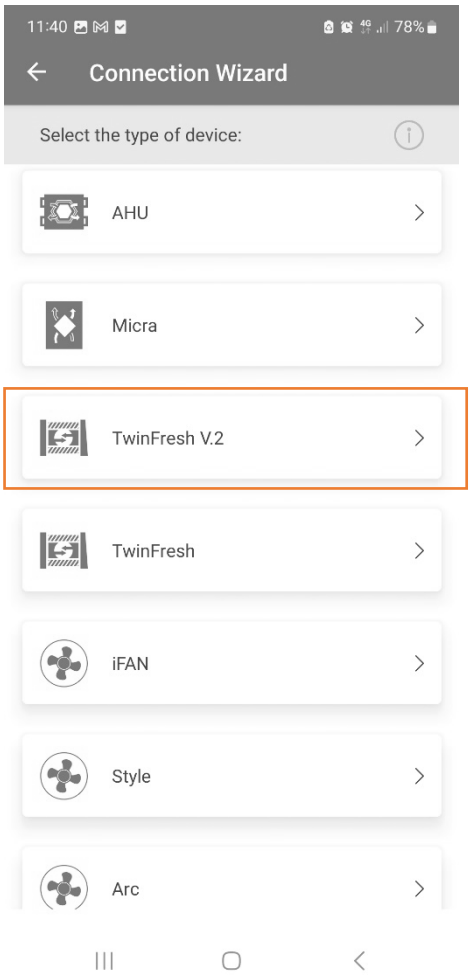
b) On hanging menu select »Device list«. (With »Home page«. With this selection you everytime reach the main controll sreen of device if you are on other setting sreens).



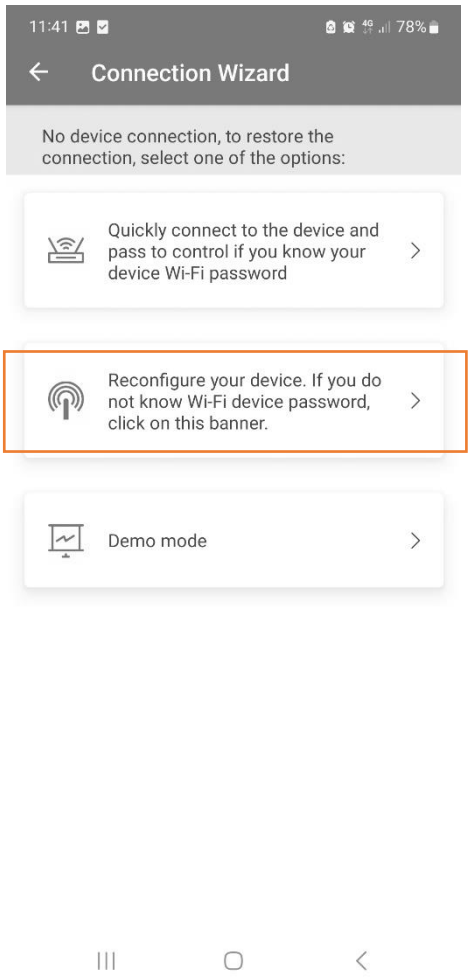
c) Then you reach following sreen, where you select »Universal connection field« to make first connect with ventilator via AP.



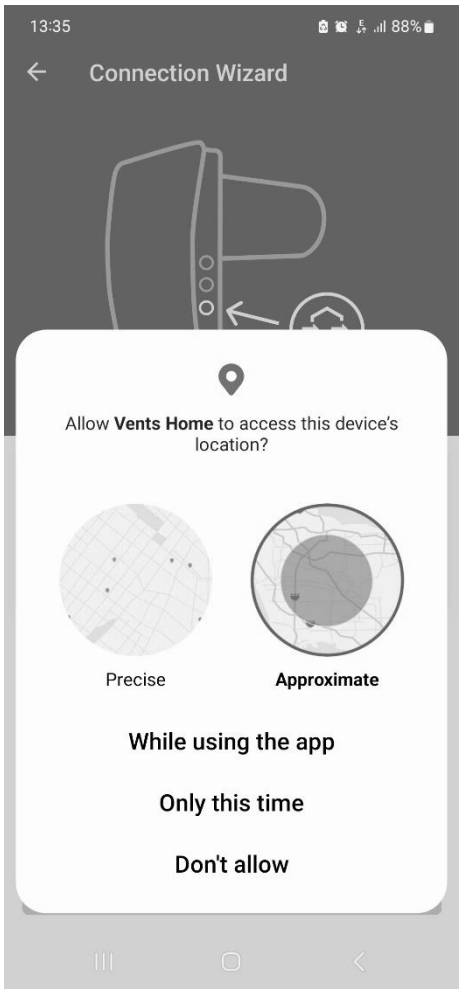
d) On following screen select »TwinFresh V.2«



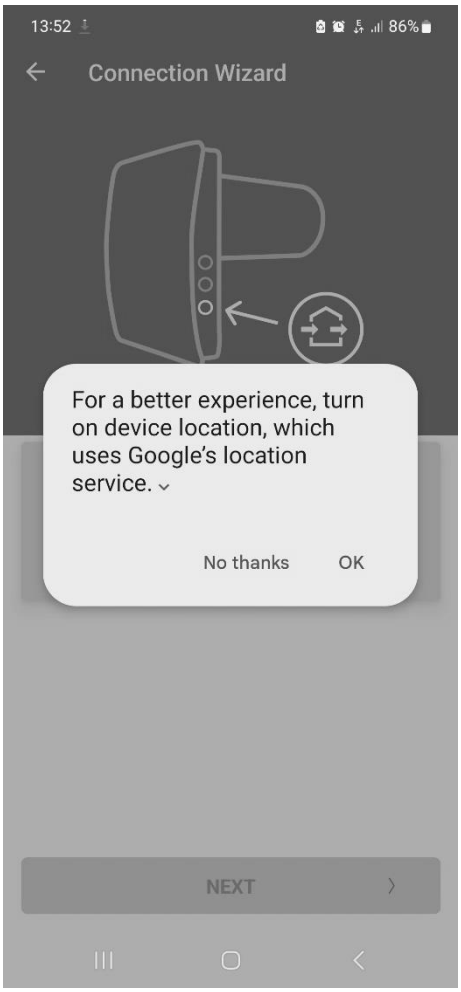
e) Then select »Reconfigure your device…«



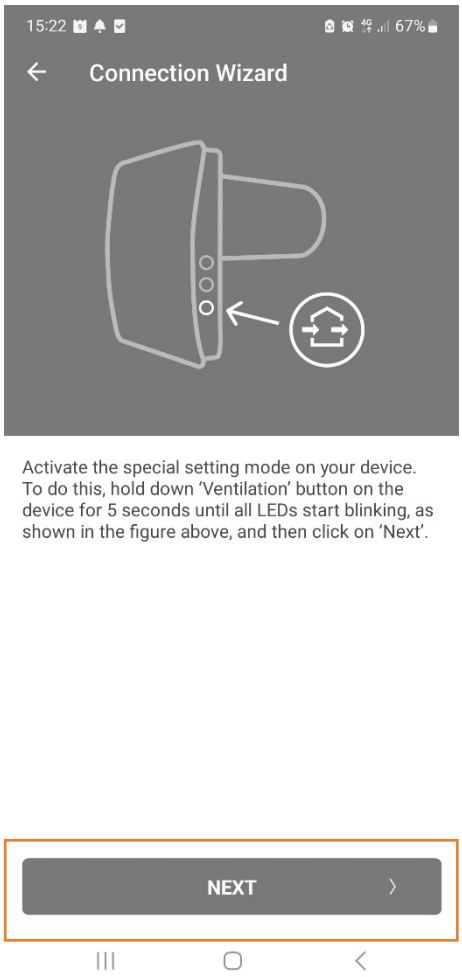
f) If mobile device promts you to allow location service, please confirm.



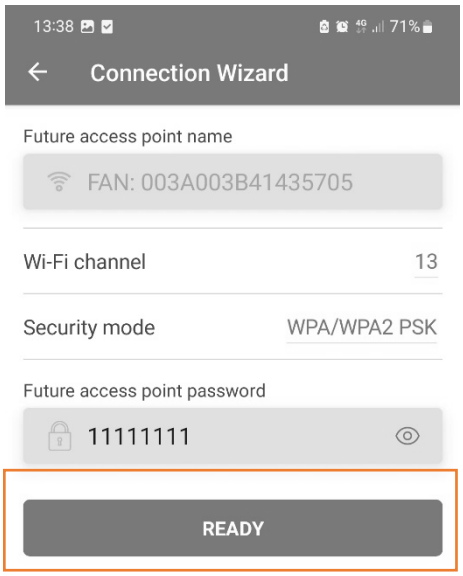
g) Then could promts another permission request for location services. Please allow the service.



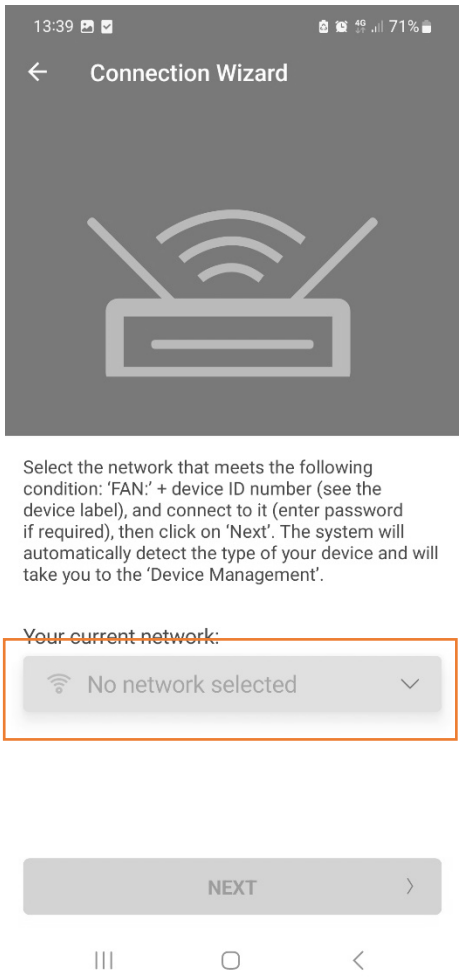
h) Then you follow next instruction on sreen with holding  for 5 seconds on FLEXI so the LEDs starts blinking. In application select »NEXT«.

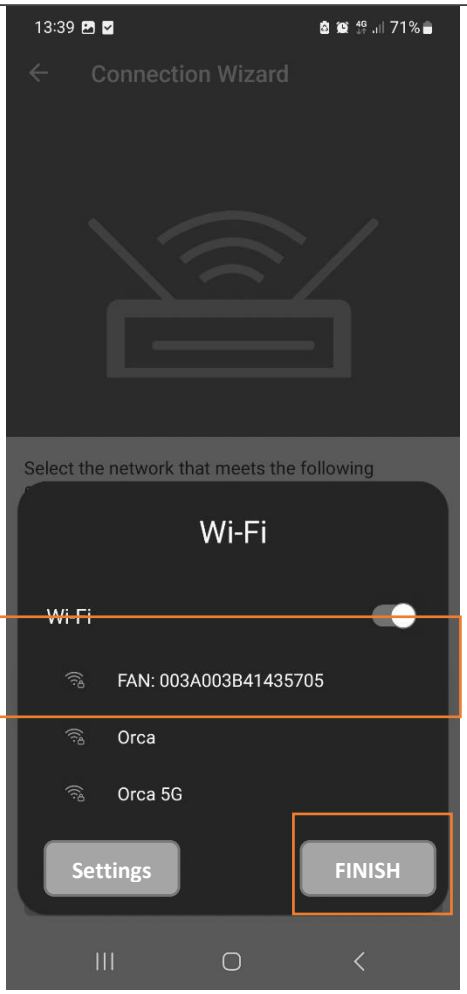


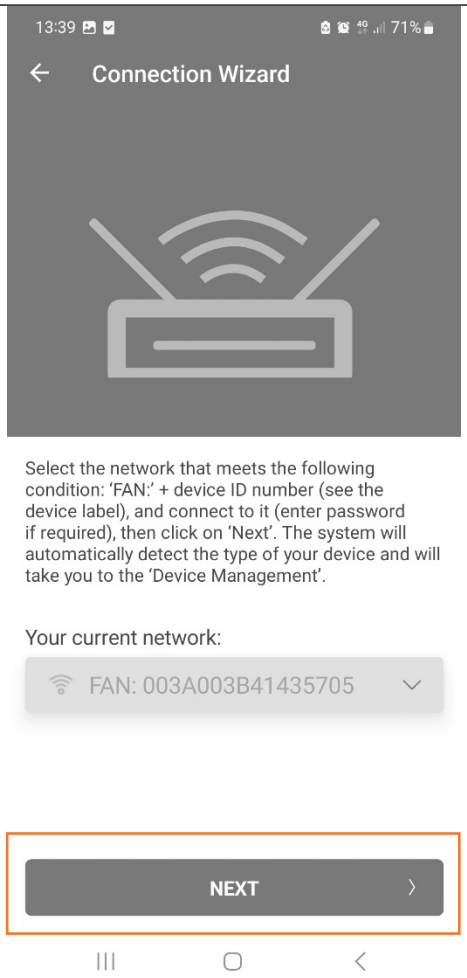
i) On following sreen type password 11111111 (8 x 1) and select »READY«.



j) Then you choose just set up Wi-fi with selectin pull down menu. It pop up next screen on wich you choose proper Wi-fi point, enter a password again if neccessary and when pop up closes press »Finish«. When this is done the access point is available to connect, so you select »NEXT«.

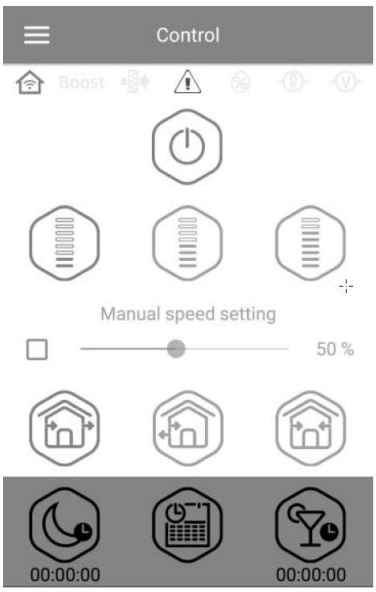






After that shows a main control screen.

9.3 Description of mobile application control buttons

APP: Twinfresh / Home	Description	Control screen
	ON/Standby. The Standby mode depends on the position of the DIP switch No. 2 (see section Setting the ventilator operation mode using DIP switches)	Vent Twinfresh 
	Selection of the preset speed: Speed I, II and III respectively .	
	Manual speed setup. To activate the scroll bar, check it.	
	***Ventilation*** 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.	
	***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.	Vents Home 
	***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).	

9.4 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.

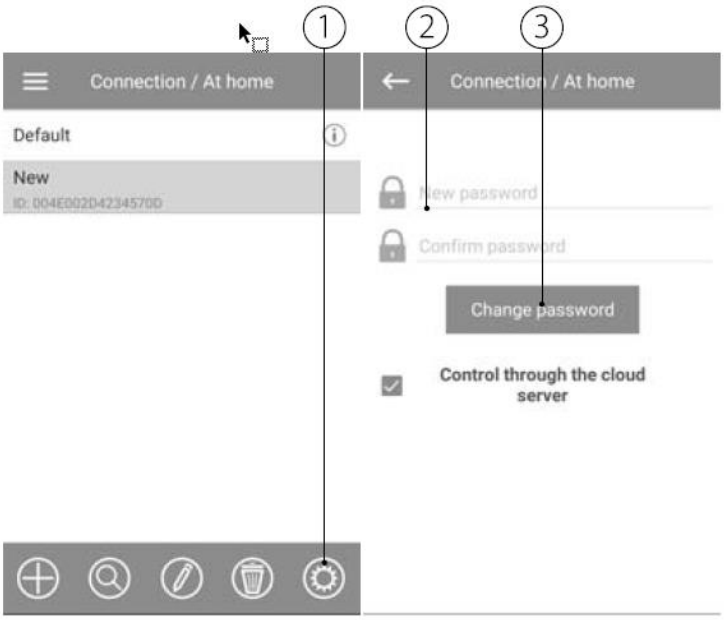
When simultaneously activating several operation modes that exclude each other, the ventilator selects the mode according to the following priority:

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

9.5 Ventilator password change

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

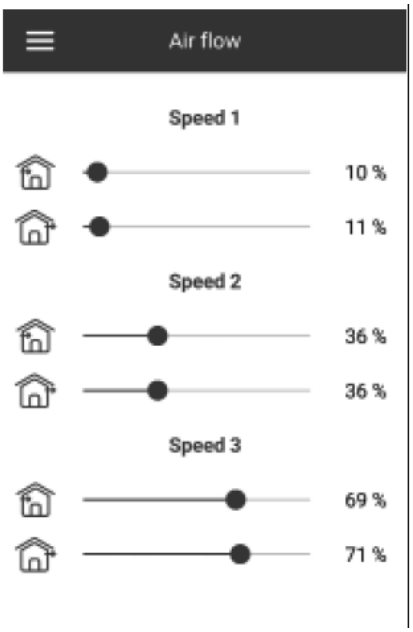
- *Choose the connection and press the Settings button.*
- *Enter and confirm the password.*
- *Press the Change Password button.*



9.6 Airflow setting

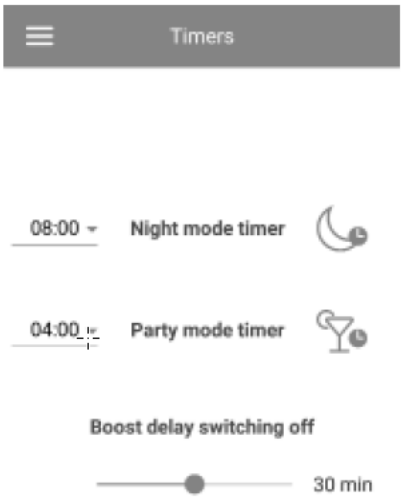
To set the air flow corresponding to each of the three speed modes, go to *Menu -Settings-Air Flow*. Set the fan speed as a percentage for each speed mode.
The Air Flow menu displays and allows setting the speed modes only for the ventilator, which is set as the Master in the ventilator network. Therefore, 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.



9.7 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.



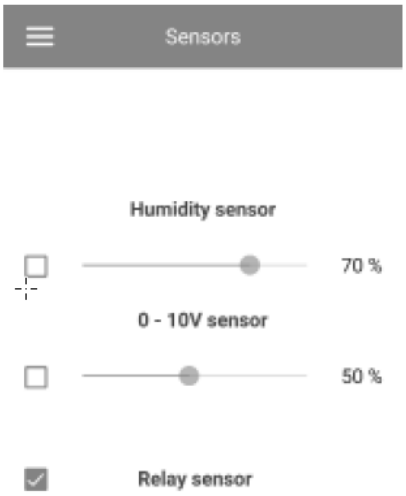
The Night mode timer sets the delay for the ventilator to switch to Speed I after the Night mode activation (8 hours by default).

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.

9.8 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 0-1 OV 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.

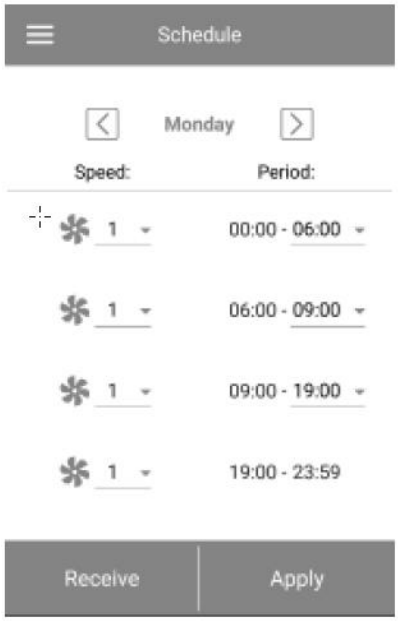
Relay sensor: activation of the external relay sensor. When the no-contact of the external relay sensor is closed, the unit changes to the maximum speed. Upon the opening of the NO-contact the Boost turn-off delay timer is activated. When the timer elapses, the ventilator reverts to the previous speed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

9.9 Date and time setup

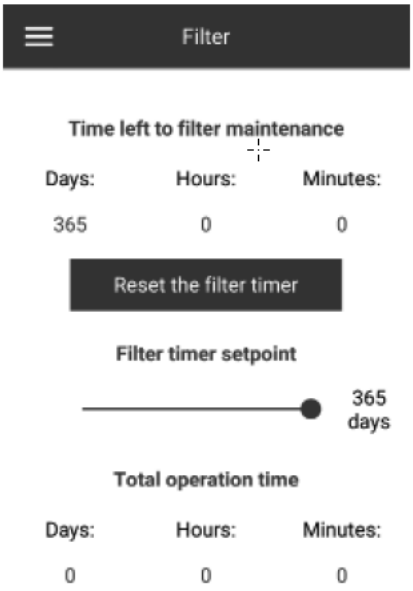
To set up the ventilator date and time, go to *Settings-> Date and time.*
Current time: set the current time.
Current date: set the current date.

9.10 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.



9.11 Filter timer setting reset



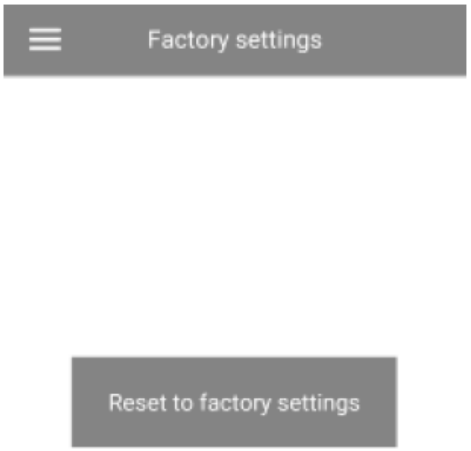
In order to set the filter maintenance periodicity, go to *Menu -> Settings-> Filter.* Then use the Filter timer setting slider to set the desired periodicity in the range from 70 to 365 days (the default value recommended by the Manufacturer is 90 days).

The need to replace the filters is signalled by the indicator n 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 pre-set 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).

9.12 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.

9.13 Wireless connection of several ventilator units

Each of the networked ventilators can operate in two modes:

Master unit.

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 0-1 0V and changes its operation mode respectively.

Slave unit.

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.

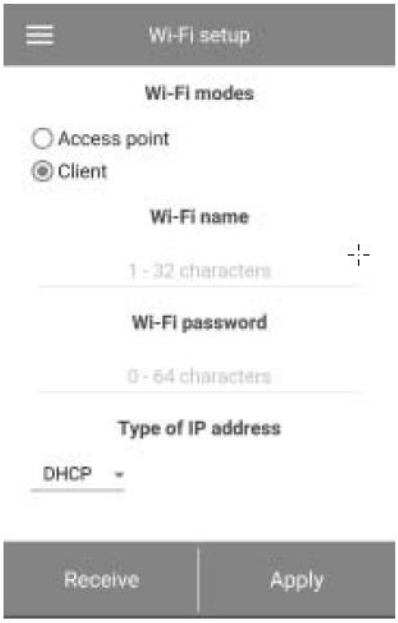
Wi-Fi parameter setup

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 or in new app with symbol*  *and then "Wi-fi setup"*. Press the Receive button to display the current Wi-Fi settings.
Select one of the Wi-Fi operation modes: ***Access Point (on unit) or Client (router).***

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****.*

Warning: After changing settings from Access point mode to Client mode the connection with ventilator breaks, becouse you have redirected the ventilator to the router. To establish Wi-fi connection with the ventilator again, you need to connect mobile device to proper Wi-fi network, which ventilator is on it.

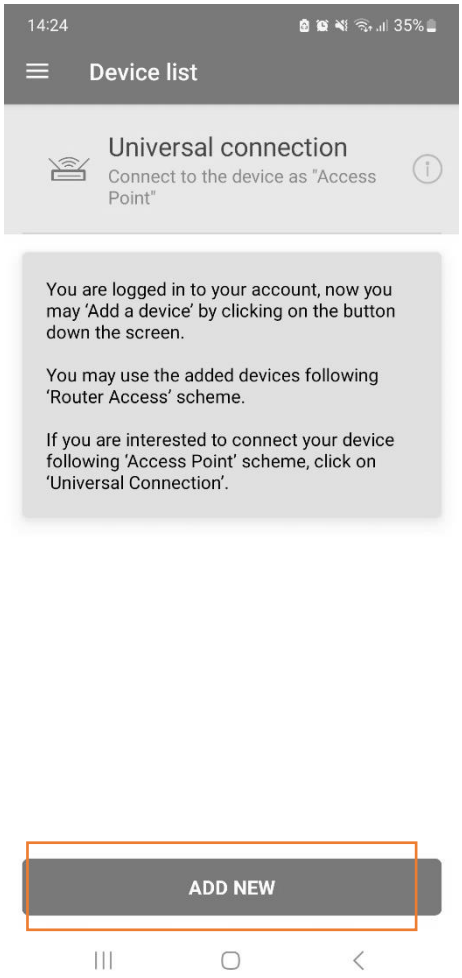
REMOTE CONTROL:

In case of NEW application Vents Home you manage remote control function in one step, on screen for »Wifi setup«. In Client option you allow option »Allow device management via cloud server«. The ventilator can then be controlled via mobile network on mobile device, without Wi-fi.

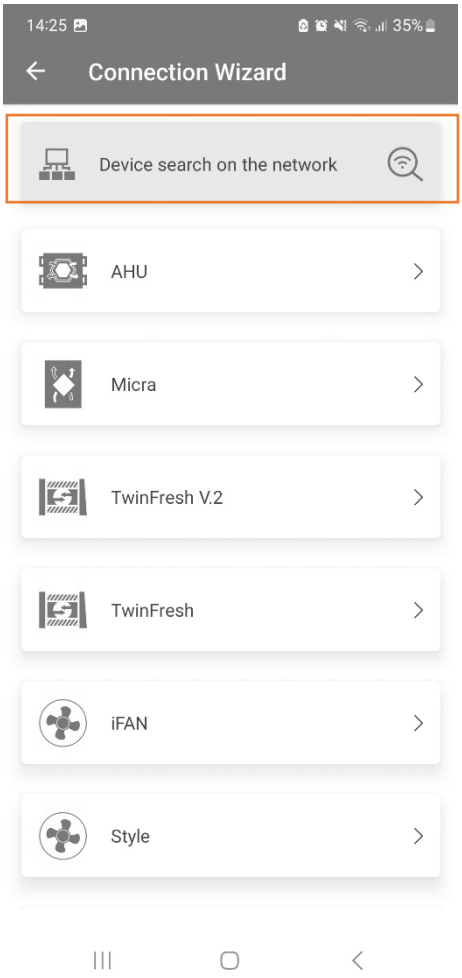
9.14 Controling a ventilator with mobile device via router

After you have redirected Wi-fi connection from Access point mode to Client mode you have to link a ventilator with app. Mobile device must be connected on the same network as we have determined for master ventilator unit. Then open the app and follow next instructions.

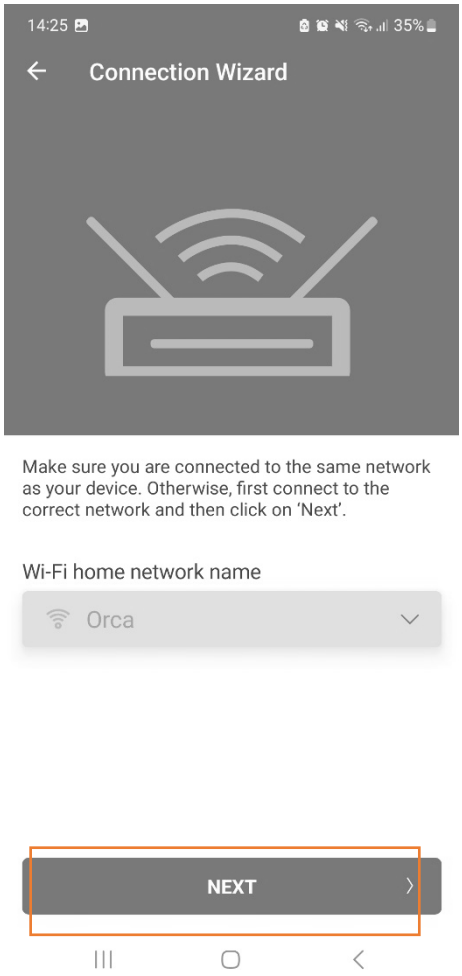
a) When you are logged in to account choose »Add new« on menu »Device list«.



b) On next screen choose »Device search on the network«.



c) On next screen confirm the network on which is master unit connected.



d) On last screen choose your ventilator with ID and confirm it with »Add«.

e) To control a ventilator unit you can choose it now on »Device list«.

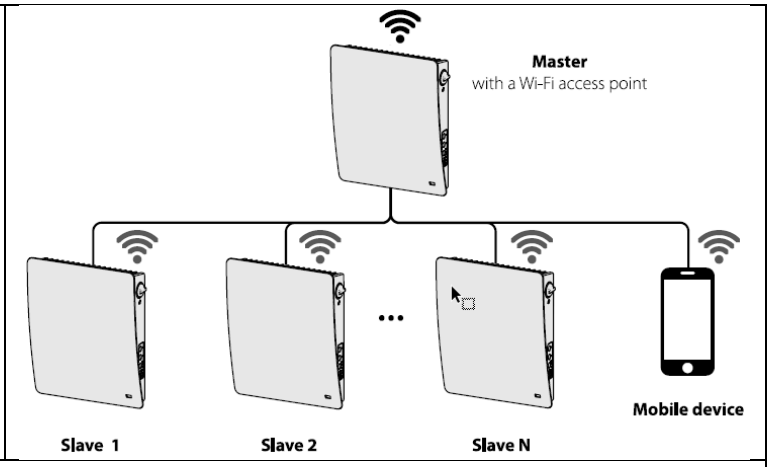
If you want to add more Slave ventilators connect them according to chapter 9.16!

9.15 Diagram for wireless Wi-fi connection type

Wiring diagram 1

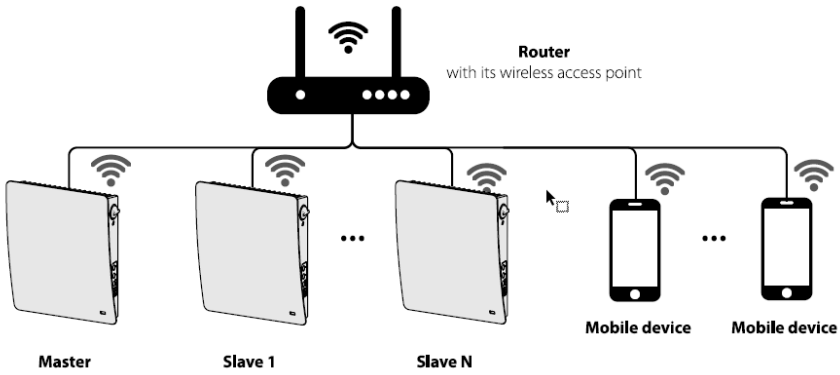
Connection of up to 8 Slave units or mobile devices to the Master unit with its own wireless access point.

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.

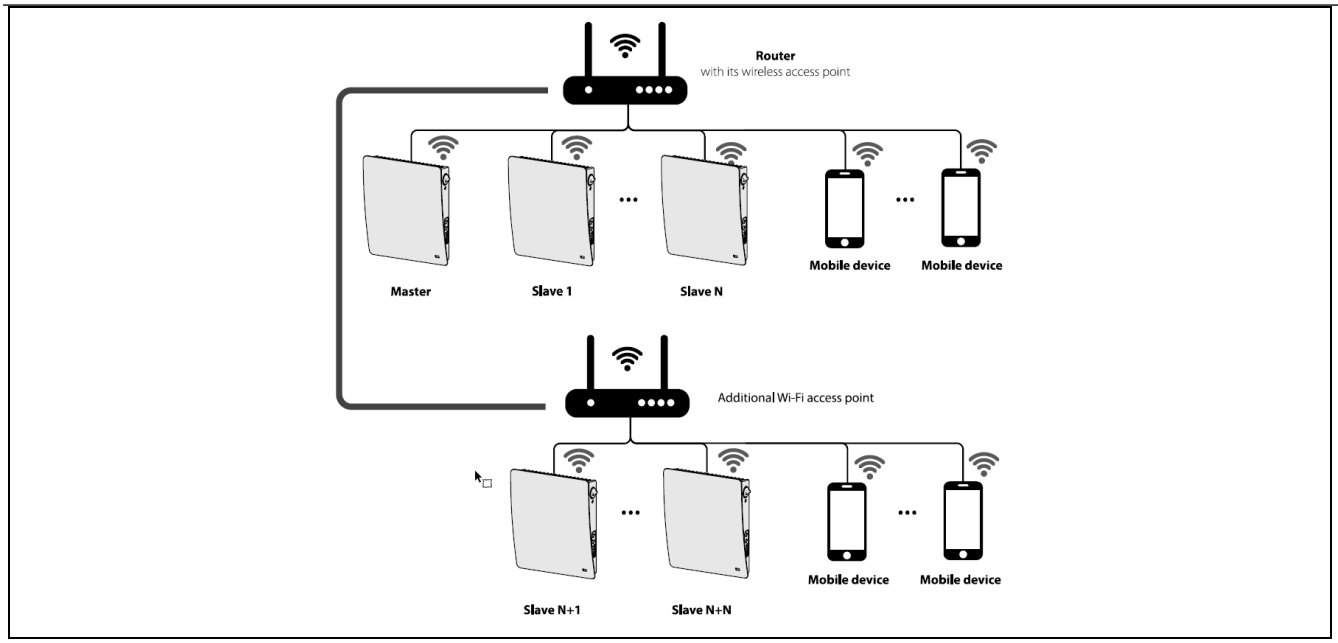


Wiring diagram 2

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.



9.16 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 connect slave units with master unit, 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  Wait for the beep when all the LEDs the Ventilation button 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.

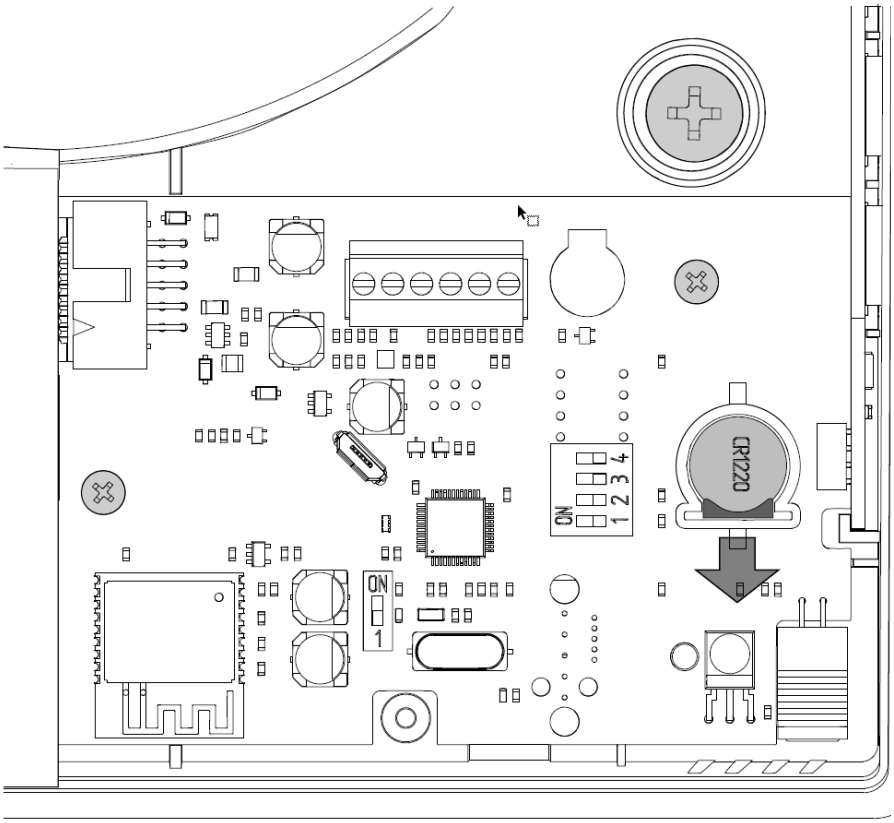
9.17 Special ventilator setting mode

In the event of losing the Wi-Fi password or the master ventilator password or in other cases use the recovery access to the ventilator functions. To enter the special Setup mode, press and hold the Ventilation button  n 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.

9.18 Battery replacement

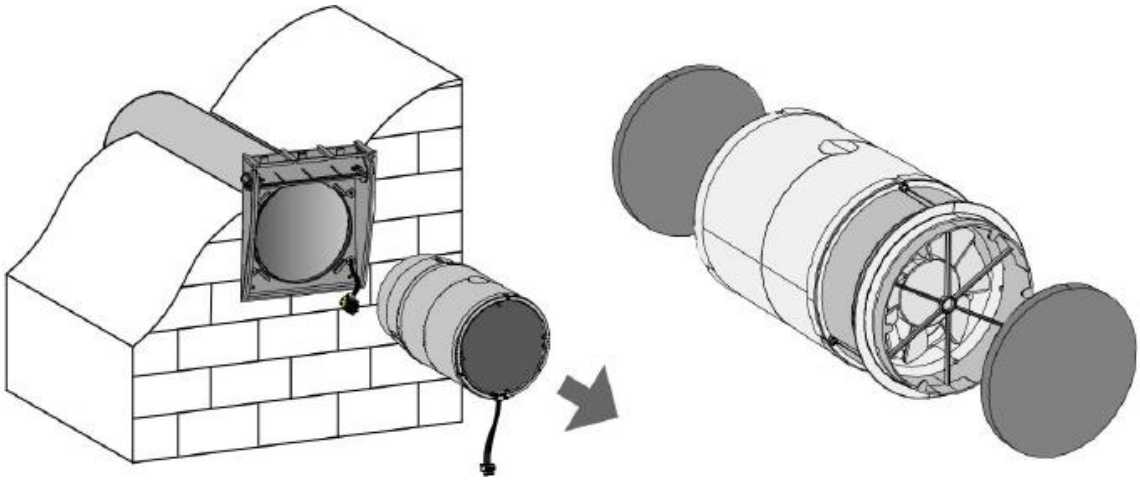
The Alarm indicator on the unit casing will blink when the battery is approaching the end of its life. The mobile app will also display the warning , and show the following message on pressing the indicator icon. Low battery power may cause disruptions in the weekly schedule operation. Power off the unit before replacing the battery. After replacing the battery reset the time and date. The battery is located on the A 1 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.***



10 MAINTENANCE

Disconect the unit from power supply before any maintenance operations!

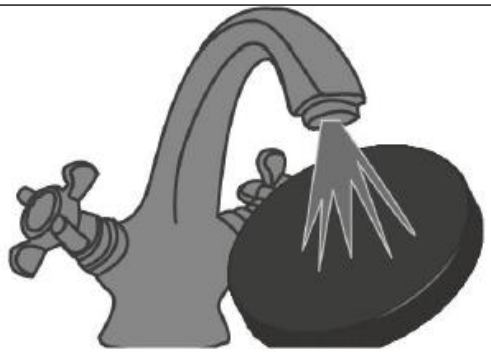
Fan maintenance consists of regular cleaning of dusty surfaces and cleaning or replacement of filters. Follow these steps to access the main service units:
Remove the inner cover front panel, disconnect the connector, and pull the cable to remove the cartridge from the air tube. Remove the filters from the cartridge.



Clean the filters according to the degree of clogging, but at least once every three months.

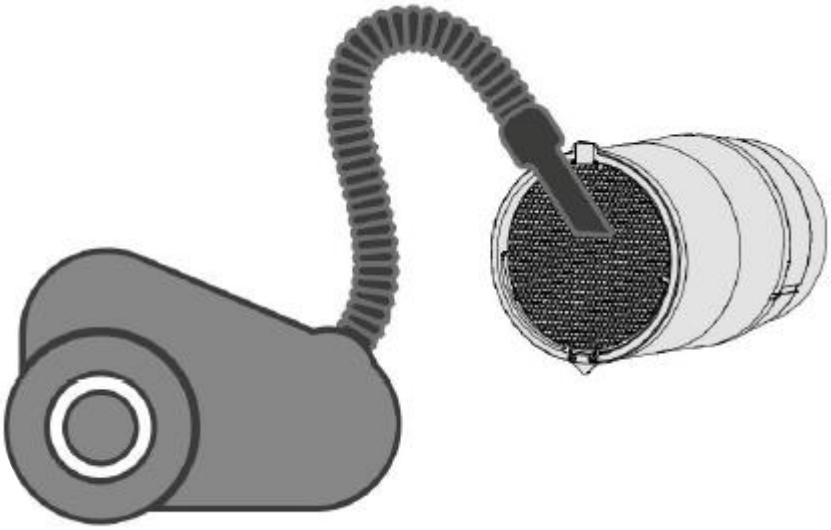
- When the filter timer countdown (90 days) is completed, the filter replacement indicator appears on the control panel.
- Wash the filters and allow them to dry completely. Insert the dry filters back into the air duct.
- Vacuum cleaning is allowed.
- To reset the filter servicing timer, press and hold the button for 4-5 s.
- The rated life of the filter is 3 years.
- Contact the seller for new filters to the ventilator

Replacement indicator



Even regular technical maintenance may not completely prevent dust accumulation on the regenerator and the fan.

- Clean the regenerator regularly to ensure its high heat recovery efficiency
- Clean the regenerator with a vacuum cleaner at least once in a year



11 Troubleshooting

TROUBLE	POSSIBLE REASONS	TROUBLESHOOTING
The fan does not move during starting the unit. The Control Panel does not display any information and does not respond to key presses.	*There is no power supply*	*To check the power supply contact a qualified person electrician and explore or perhaps there is a connection error.*
It appears on the control panel alarm indicator	*Engine downtime due to clogged rotor*	*Switch off the ventilation system. Try to unclog the rotor.*
	Loss of communication in cable connection between the engine fan and control panel	*Restart the device. For more information contact your dealer*
Triggering the fuse during starting the ventilation system	*Short circuit error in electrical circuit.*	*Switch off the ventilation system. For more information contact your dealer.*
Low air flow	*The fan speed is too low*	*Set a higher speed*
	The filter is clogged, fan or conditioner contaminated.	*Clean or replace the filter. Clean the fan or. conditioner.*
High noise, vibration.	*The rotor is dirty*	*Clean the rotor*

12 Storage and transportation requirements

- Store the device in the original packaging of the manufacturer in a dry, closed ventilated room with a temperature range from + 5˚C to + 40˚C and relative humidity up to 70%.
- The storage area must not contain aggressive vapours and mixtures of chemicals that cause corrosion and impair insulation and sealing.
- Use a suitable lifting device for handling and storage to prevent possible damage to the device.
- Observe the requirements that apply to the handling of a particular type of load.
- The device can be transported in its original packaging by any mode of transport that provides adequate protection against precipitation and mechanical damage. The device should only be transported in the working position.
- Avoid sharp shocks, scratches or rough handling during loading and unloading.
- Allow the device to warm up to operating temperature for at least 3-4 hours before the first start-up after transport at low temperatures.

MANUFACTURY WARRANTY

Goods identification:

The Warranty Statement and Warranty Card apply only to the device listed on the Warranty Card.
The warranty does not apply to:

- - Built-in consumables (filters) that wear or consume when the device is used and need to be checked, cleaned and replaced regularly.

Warranty statement:

- We declare that the device will function properly during the warranty period if used in accordance with its purpose and instructions for installation, use and servicing. The warranty takes effect from the time the product is delivered to the customer, regardless of whether the customer started using it later.
- We undertake to take care of the elimination of defects and defects on the device at our own expense at the request of the customer, if it is given within the warranty period, no later than 45 days from the day of reporting the defect. A device that is not repaired within the specified period will be replaced with a new one at your request.
- The guarantee is valid in the territory of the Republic of Slovenia.
- Against payment, we provide service and spare parts for 3 years after the expiration of the warranty. Spare parts are also parts that are not visually identical to the original (color, shape, size, brand, etc.), but are comparable and have the same function as the original.
- The warranty does not exclude the buyer's rights arising from the seller's liability for defects in the goods.

Warranty periods:

- 2 years general statutory warranty on the device

The warranty does not apply if the defect / damage is due to:

- non-compliance with the operating and maintenance instructions and / or careless handling of the device
- damage caused by mechanical shocks to the customer or a third party
- natural disasters, weather conditions and force majeure (explosion, flood, earthquake, fire, storm, lightning strike, etc.)
- installation and / or commissioning of the device not carried out by a professionally qualified person in accordance with the instructions for installation, commissioning and use of the device
- repairs not carried out by a professionally qualified person
- changes made to the original equipment or if the device has been used for purposes other than those prescribed manufacturer
- installed non-original spare parts
- irregularities in electrical connections, electrical wiring, electrical current and inadequacies of fuses

Consumer rights:

- if the goods, for which a mandatory guarantee is issued, do not meet the specifications or do not have the properties stated in the guarantee sheet or advertising message, the consumer can first request that the defects be rectified. if the defects are not corrected within a total of 30 days from the day when the manufacturer or the authorized service received a request from the consumer to correct the defects, the manufacturer must replace the goods with identical, new, and flawless goods free of charge to the consumer,
- the deadline from the previous paragraph can be extended to the shortest time necessary to complete the repair or replacement, but for a maximum of 15 days. The nature and complexity of the goods, the nature and severity of the non-conformity and the effort required to complete the repair or replacement shall be taken into account in determining the extended period. The producer informs the consumer about the number of days for the extension of the deadline and the reasons for its extension before the expiry of the deadline from the previous paragraph,
- if the manufacturer does not repair or replace the goods with a new one within this period, the consumer can request a refund of the entire purchase price from the manufacturer or request a proportional reduction of the purchase price,
- if the consumer requests a proportional reduction of the purchase price, the reduction of the purchase price is proportional to the reduction in the value of the goods received by the consumer, compared to the value that the goods would have had if they were compliant,
- the consumer can request a refund of the amount paid from the manufacturer if the non-conformity occurs within less than 30 days of the delivery of the goods,
- the manufacturer issues a new warranty card for replaced goods or a replaced essential part of the goods with a new one,
- the manufacturer or the authorized service can provide the consumer with the free use of similar goods during the repair of goods for which a mandatory warranty has been issued,
- if the manufacturer does not provide the consumer with replacement goods for temporary use, the consumer has the right to claim the damage he suffered because he could not use the goods from the moment, he requested repair or replacement until their execution,
- the costs for material, spare parts, work, transfer, and transport of products, which arise when repairing defects or replacing goods with new ones, are paid by the manufacturer.

Warranty claims and other consumer rights

- in case of non-conformity of the goods, the consumer who has informed the seller about the non-conformity of the goods, under the conditions and in the order from this section, is entitled to:
    - request the seller to establish the conformity of the goods free of charge,
    - requests a reduction of the purchase price in proportion to the non-compliance or withdraws from the sales contract and requests a refund of the amount paid.
- the consumer can withhold the payment of the remaining part of the purchase price or a part of this remaining part of the purchase price until the seller fulfils his obligation from this section.
- the consumer asserts this right by means of a statement informing the seller of his decision.

Establishing compliance

- the consumer may request the seller to restore the conformity of the goods free of charge within a reasonable period from the moment of notifying the seller of the non-conformity, which is not longer than 30 days, without significant inconvenience to the consumer, taking into account in particular the nature of the goods and the purpose for which the consumer the goods need
- the deadline from the previous paragraph can be extended to the shortest time necessary to complete the repair or replacement, but for a maximum of 15 days. The nature and complexity of the goods, the nature and severity of the non-conformity and the effort required to complete the repair or replacement shall be taken into account in determining the extended period. The seller shall inform the consumer about the number of days for the extension of the deadline and the reasons for its extension before the expiry of the deadline from the previous paragraph.
- Conformity of the goods is considered to be established free of charge if the seller also bears the payment of the necessary costs incurred in establishing the conformity of the goods, in particular the costs of shipping, transport, labour or materials.

SELLER: *STAMP:*

ORCA ENERGIJA D.O.O.
Vodovodna ulica 30c
2000 Maribor, Slovenija

ORCA®

INFORMATION