

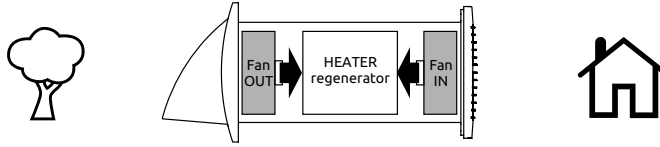
Instructions for use and installation

**Compact Heat Recovery Ventilation
System**

POWER SPRING



ISO 9001:2008



Description

The device is designed to provide constant air exchange in the premises.

The device is equipped with a ceramic air regenerator that absorbs and accumulates the heat of the air leaving the room and heats the incoming fresh water entering the room, thus ensuring minimal heat loss in the winter season. An electric heater at very low outside temperatures, if necessary, warms up the fresh air entering the room to the required temperature and thus reduces energy costs for heating cold outside air and prevents the formation of condensate and humidity in the room and prevents the formation of mold and fungi in the room.

The electric heater works only in the mode when fresh air from the outside enters the room and when the outdoor temperature is lower than that specified in the HEATER mode.

If necessary and if you want to save money, the electric heater can be forcibly turned off as described in "Heater LOCK" - 10, 11, 12

The device is equipped with a ceramic air regenerator that absorbs and stores the cooled energy of the air leaving the room and cools the incoming fresh water entering the room, thus ensuring minimal energy consumption during the hot summer season.

The device is designed for continuous operation - 24 hours.

Only with continuous operation and optimal mode will the maximum effect of the device be achieved.

Power Spring includes:

1. Fan IN FAN - an exhaust fan with a double decorative grille - with ten degrees of smooth adjustment, allows you to adjust the air flow from 15 m³ / h in the night, silent mode of operation of the device, up to 130 m³ / h in the daytime mode;

2. Air flow rectifier 1 - allows you to optimize the movement of the air flow when it is extracted from the room;

3. Ceramic regenerator - recuperator / heat exchanger / - contributes to a significant reduction in temperature losses during room ventilation;

4. Control module;

Thermal fuse - protects the device from overheating;

Thermostat - controls the heater and ensures the temperature of the air entering the room up to 24 ° C;

Humidity sensor - activates ventilation at high humidity in the room;

5. Electric heater 100 W - economical with a pulsed mode of operation with air inflow into the room, for additional heating of cold external air. Maintains the temperature of the air entering the room up to 24°C;

6. Air flow rectifier 2 - allows you to optimize the movement of the air flow when it enters the room;

7. Fan OUT FAN - a supply fan - with ten degrees of smooth adjustment, allows you to adjust the air flow from 15 m³ / h in the night, silent mode of operation of the device, up to 130 m³ / h in the daytime mode;

8. Filters - activated carbon filter and solid and coarse particles filter - contribute to the flow of clean air in polluted and urban and industrial areas. Helps to purify the air from odors, dust, bacteria, soot, exhaust gases from cars, etc.;

9. Telescopic air duct - allows you to adjust the length of the device in accordance with the thickness of the wall;

10. Outer grille with insect net - protects the device from moisture, even in heavy rain and from the penetration of insects into the room;

11. Control panel with display



Attention! Please read the instruction manual carefully before using the device!

Attention! When unpacking the device, make sure there is no visual damage.

Attention! Please keep the purchase receipt together with the stamped warranty card for possible claims. Without this, the warranty will be invalid and unenforceable.

Attention! Before installation, check the voltage (V) and voltage frequency (Hz) for compliance with their parameters.

Attention! When connecting the device, it is important to observe polarity (see Installation and maintenance).

Attention! This device may be used by children from the age of 14, as well as people with physical and mental disabilities, only if they have read and understood the operating instructions and safety regulations for using this device. Children are not allowed to play with this device. Children must not service or clean the device.

Attention! All electrical connection and installation work must be carried out in accordance with applicable national and local laws and regulations.

Attention! All electrical connection and installation work must be carried out by technically trained personnel with suitable qualifications.

Attention! Before installing or connecting this device, you must turn off the main power supply in the network.

Attention! This device is not intended for space heating and cannot replace space heating with heating devices.

Attention! This unit is not intended for space cooling and cannot replace an air conditioner.

The device can be equipped with a display for both wall mounting and in-wall / hidden / mounting!

Attention!

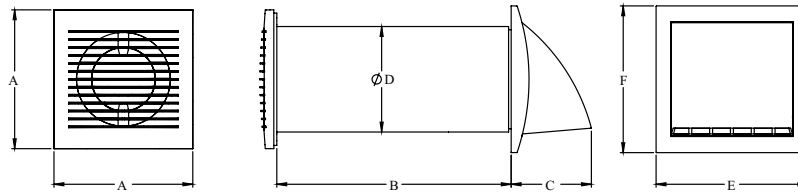
All specified parameters are valid at a distance of three meters from the device, at an altitude of 0 m above sea level and at an air temperature of +25°C to -5°C.

The device can be equipped with a display for both wall mounting and in-wall / hidden / mounting!

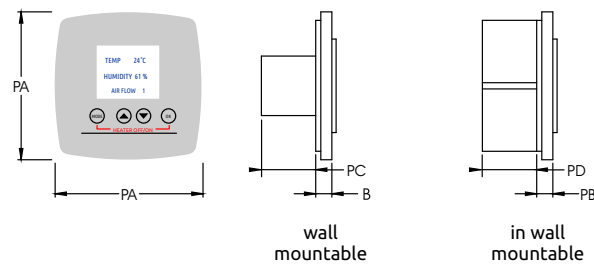
Technical data

The minimum wall thickness is 28-33 cm.

Technical indicators	POWER SPRING 125 / 130
Fan speed IN / OUT	1 - 10
Power net (V)	220 - 240
Frequency (Hz)	50
Fan power IN (Wt)	5 - 16
Fan power OUT (Wt)	5 - 16
Heater power (Br)	0 - 100
Performance (m ³ /h)	15/25/35/60/80/100/130
Noise level at 3 m distance, dB(A)	10/12/15/18/25/28/36
Environmental Protection	IPX4
RPM.	1100 / 2360
Ambient temperature (°C)	-30C ... +50°C
Filters	EU1
Recovery efficiency	≤ 99%
Energy efficiency class	A



Size, mm	PS 125/130
A	165
B	330-555
C	95
D	131
E	190
F	190



Size, mm			
PA	PB	PC	PD
96	6	50	44

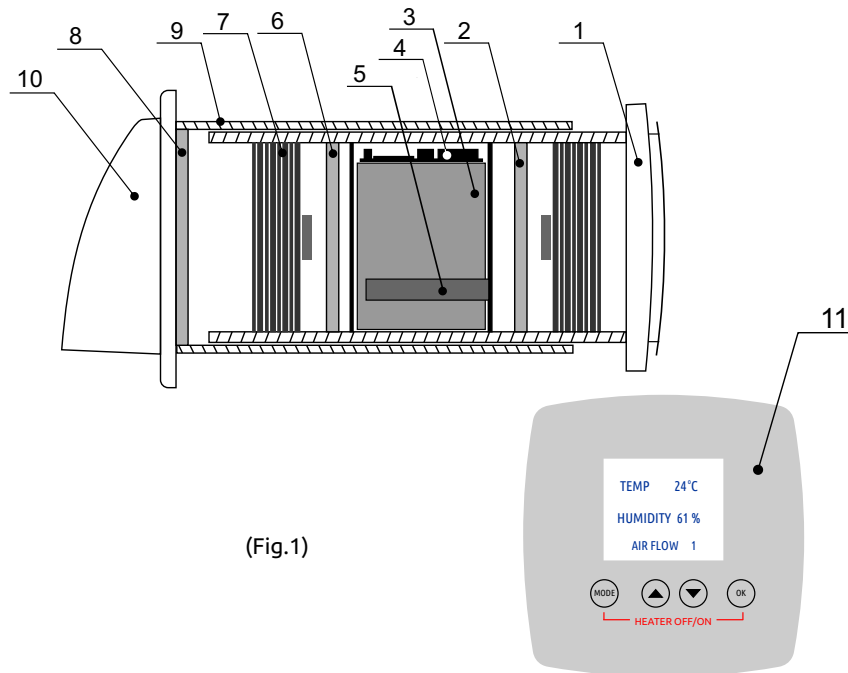


Installation

Attention! Before installing and servicing the device, it is necessary to de-energize the electrical network.

Attention! The device should be installed at a distance of no closer than 3 meters from the bed in the sleeping room. At night, the device must operate in quiet mode. If at night the device somehow interferes and interferes with sleep, then it is better to completely unhook the device at night.

Attention! The device may only be installed by a qualified electrician.



(Fig.1)

Device components (Fig. 1). 1. Fan IN FAN - exhaust fan with double grille; 2. Air flow rectifier 1; 3. Ceramic regenerator; 4. Control module; 5. Electric heater; 6. Air flow rectifier 2; 7. Fan OUT FAN - supply fan; 8. Filters; 9. Telescopic air duct; 10. Outdoor grille with anti-insect mesh; 11. Control panel with display

Before installation, make sure that the system is not connected to the electrical network!

DETERMINING THE CORRECT INSTALLATION LOCATION

For the correct functioning of the device when using the control panel with display (11), it is necessary to correctly determine the installation location of the device and the installation location of the control panel with display (11).

To do this, it is necessary that the device and the control panel with display (11) have access to the 220V power supply and at the same time the device and the control panel with display (11) are installed in the desired places in the room:

- Intended installation of the device in an external wall and near a window prior to installation of the device /as described in this device installation manual/.
- The control panel with display (11) must be installed at the desired location in the room before the control panel with display (11) is installed in the intended location.

First you need to connect the Device to the electrical network, and then the Control Panel with Display (11) /number at the bottom in dB with a minus sign/

(the lower the value, the stronger signal).
At signal indication over – 78 need to find a place closer to the device.



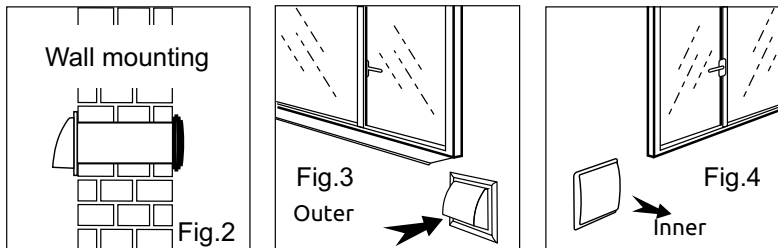
After the suitable places for the intended installation of the Device and the Control panel with display (11) are determined, you can proceed with the installation of the Device and the Control panel with display (11) in the desired places:

- break through the outer wall as described in this device installation manual
- installation of the Control panel with display (11) in the wall

External wall mounting!

Installing the device on an external wall!

In rooms above the first floor and without balconies, it is recommended to install the device on the left or right side of the window. This will facilitate access for mounting and changing the filter.

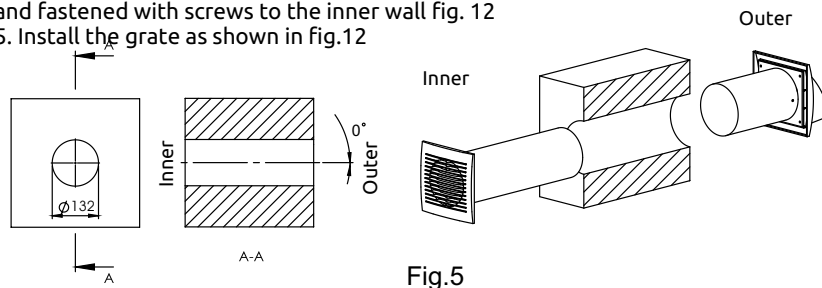


Installation sequence:

Attention!

!!! From the beginning it is necessary to determine a suitable mounting location for the Device and the Control Panel with Display (11) – see “DETERMINING THE CORRECT MOUNTING PLACE”!!!

1. It is necessary to drill a round hole in the wall with a diamond drilling machine with a diameter of at least $\varnothing 132\text{mm}$.
2. The outer part of the wall /outer grille with the cover of the outer housing adjacent to it/ is fixed to the hole in the wall with four fixing screws /by hand/ fig. 5 one
3. The inner grille is removed as shown in fig. 11
4. The device is installed in the opening of the outer casing of the telescopic air duct and fastened with screws to the inner wall fig. 12
5. Install the grate as shown in fig.12



To install the device, a round hole with a diameter of at least $\varnothing 132\text{ mm}$ must be drilled in the outer wall. In this hole, place the outer part of the telescopic duct with an outer grille 10, fix it with screws to the outer wall. Then, in the outer part of the telescopic duct installed in the wall, it is necessary to place the inner part of the telescopic duct together with all the installed components described in fig. 9 without removing the components from the inside of the telescopic duct and then adjust to the required length. The device must be installed horizontally, without tilt..

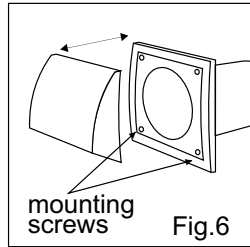


Fig.6

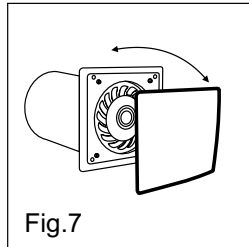


Fig.7

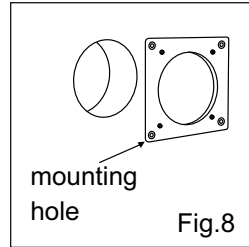


Fig.8

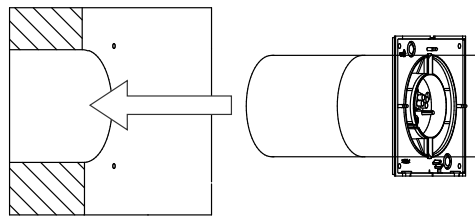


Fig.9

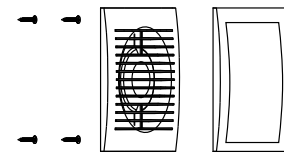
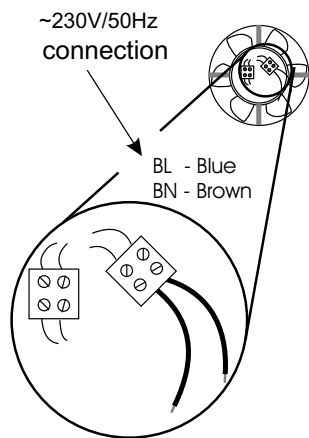


Fig.10

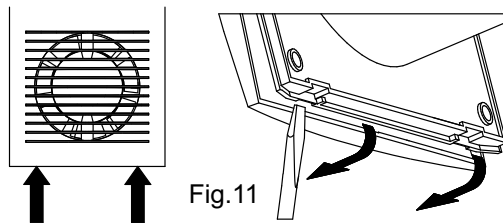


Fig.11

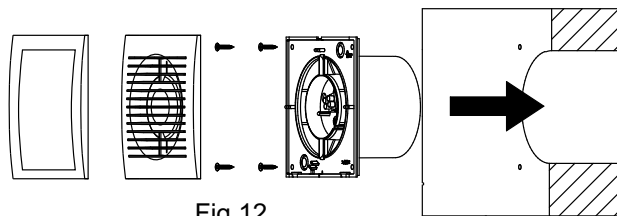
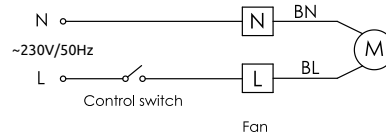
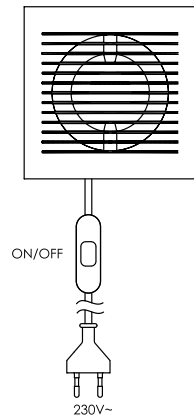


Fig.12



N - 0 BN - Brown
 L - Phase BL - Blue

Note

The power cord of the device must be long enough to allow the inside of the system to be pulled out when changing the filter fig.

Important Safety Notes

- All work on the electrical connection and installation of the device must be carried out in accordance with the current safety regulations.

- All electrical connection and installation of the device must be carried out by a suitably qualified electrician.

Electrical connection

- Before installing or connecting the device, make sure that the main power supply is disconnected.

- Before connecting the device, make sure that the voltage and frequency of the power supply in the network matches those specified in the operating instructions and on the labels of this device.

Connect the device to the electrical network in accordance with the attached wiring diagram.

The device is connected to the mains in accordance with the intended type of connection and installation.

If the exhaust fan IN FAN (1) is connected directly to the mains, then the mains must be equipped with a switch that ensures the safe disconnection of the power cable.

The device is controlled via a control panel with a display (11) or via Android via Wi-Fi connection.

If the device is equipped with a control panel with a display (11), it is necessary to prepare the installation of this panel in advance.

Control panels with display (11) can be of two types: outdoor installation and internal installation in drywall or concrete.

Attention!

The control panel with display (11) must be installed by a qualified electrician.

The installation of the control panel with display (11) must be carried out together with the installation of the device.

The installation of the control panel with display (11) must be carried out with the mains power off.

Mounting the control panel with display (11) for one "POWER SPRING" device

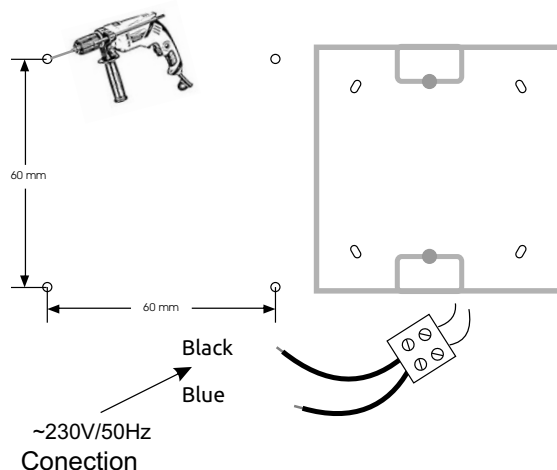
1. Wall mounting

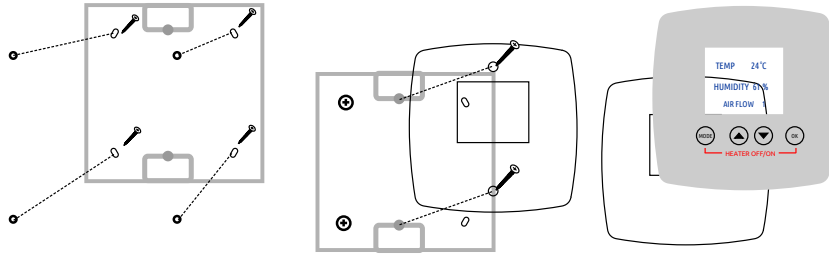
- It is necessary to choose a suitable place for installation where there is a 220V wired network at a distance from the device as described in "DETERMINING THE CORRECT INSTALLATION PLACE"!!!

- wall mounting as shown in the diagram

- connection to the electrical network 220V

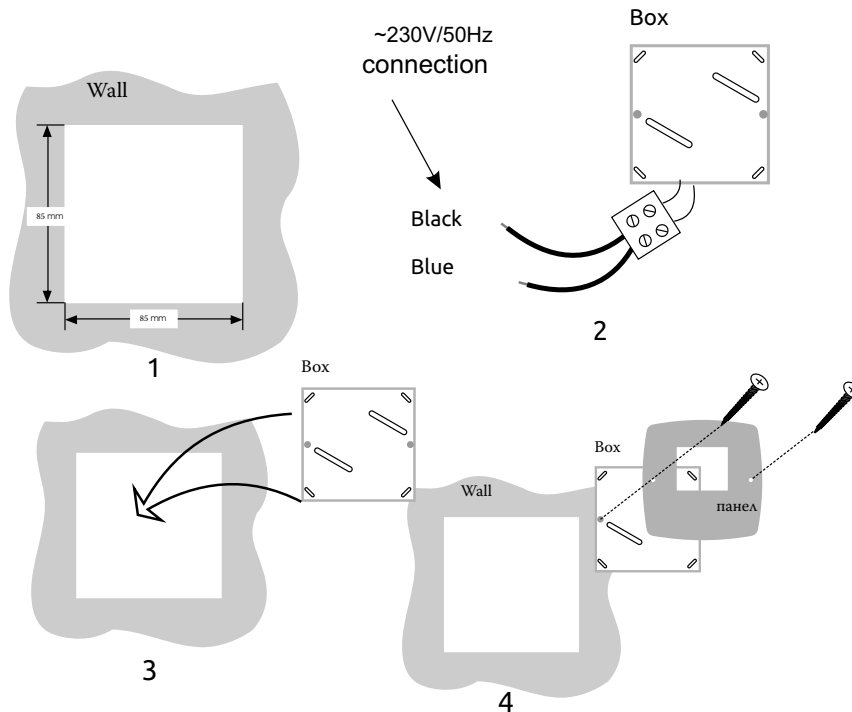
- after the installation is completed, stick the sticker with the designations





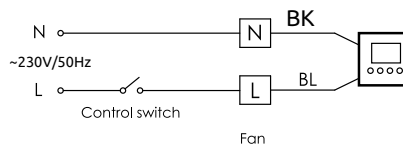
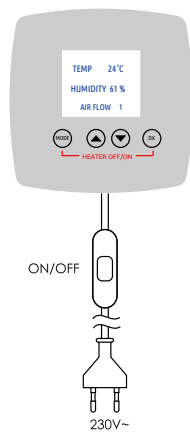
2. In-wall mounting

- It is necessary to choose a suitable place for installation where there is a 220V wired network at a distance from the device as described in "DETERMINING THE CORRECT INSTALLATION PLACE"!!!
- fastening in the wall as shown in the diagram
- connection to the electrical network 220V
- after the installation is completed, stick the sticker with the designations



Attention!

The control panel with display included with the "POWER SPRING" is designed for use only with the "POWER SPRING" and is not suitable for other similar devices manufactured by other manufacturers. Also, the control panel with display cannot be replaced by other control panel with display from other manufacturers.



N - 0 BK - Black
L - Phase BL - Blue

Device duty cycle:

Stage I:

In the extraction mode, the polluted warm air saturated with carbon monoxide and carbon dioxide is removed from the room. Passing through the ceramic regenerator, the air heats it. When heat has accumulated in the regenerator, the IN FAN fan is turned off, which works to extract air from the room, and the OUT FAN fan, which works to supply air to the room, is turned on. The device switches to supply mode.

Stage II:

In supply mode, fresh cold air, passing through the filter system, is cleaned of pollutants and dust, and then passing through the ceramic heat exchanger, it is heated to room temperature. When the ceramic regenerator has transferred heat to the air entering the room, the exhaust mode is activated - the OUT FAN fan is turned off, which works to supply air to the room and the IN FAN fan, which works to extract air from the room, is turned on. The device switches to exhaust mode.

STANDBY – stops the fans, turns off the heater, stops monitoring the humidity level

SLEEP – reduces the fan speed by one level with each press until the desired speed and noise level is reached

IN FAN SPEED – Controls the speed of the fan to exhaust air. Choice of 10 fan speeds - the first speed is 15 m³/h. in silent mode, and the tenth speed is maximum, 130 m³ / h.

OUT FAN SPEED – Управляет скоростью вентилятора на приток воздуха. Выбор из 10 скоростей вентилятора – первая скорость – 15 м³/ч. в бесшумном режиме, а десятая скорость – максимальная, 130 м³/ч.

HEATER – regulates the set temperature for heating the incoming air into the room.

CUSTOM - regulates the set humidity in the room.

PECULIARITIES

- If the speed of one fan is in the “0” degree - then the fan does not work with this indication, and the second fan with a different indication continues to work and the system works either only for air supply or only for air exhaust. If the system is running on air only, the electric heater will be on all the time and this can result in increased power consumption unless the electric heater is turned off as shown in the Heater Off Menu.

- If both fans are not working – then the ceramic heater reaches the set temperature and the whole system shuts down and ceases to function, until the fan speed is changed and until they are started via the Menu.

- If desired, you can additionally enable or disable the heating mode. This ensures the flow of heated air in the cold season and at high humidity.

- You can choose the desired combination of active and inactive functions by yourself using the Control Panel, Androida and iPhone.

It is necessary to contact the FFFansXXXX point where XXXX is your device number and Password: KomE@eC0!aTD_m - according to the connection description.

Optimal operation of the device.

Attention!

In order for the device not to freeze in the winter season at very low temperatures below -10°C , it is necessary that the device works continuously - 24 hours in the specified operating mode in the winter season.

But if you still had to turn off the device in the winter at very low temperatures, you must set the IN FAN Period - 5-10 min before starting the device to heat the device with warm internal air, and then switch the device to the winter operating mode.

Before turning off the device in cold winter time, it is necessary to switch the device to the ventilation mode at a maximum speed of 10 IN FAN and OUT and set the heater temperature to 24°C to remove condensate from the system, if such was formed during the operation of the device due to high humidity in the room. It is necessary to leave the device to work in this mode for at least 30-60 min.

After that, you can turn off the device in the cold winter time at low temperatures. This will protect the device from freezing and damage.

But if you forget to do this, then the device is well protected and its elements are of very high quality, the device is well designed and this will not allow the device to be damaged.

The optimal mode of operation of the device is achieved with the following set parameters:

I. In winter, when the outside air temperature is below: -5°C (-5°C - 30°C)

1. In the AIR FLOW menu
- IN FAN Period - 3 min
- IN FAN SPEED - 3-7
- OUT FAN Period - 1 min
- OUT FAN SPEED - 3-7

2. In the HEATER menu
- Temp: $22-34^{\circ}\text{C}$

3. In the CUSTOM menu
- Humidity: 72-78% - at low humidity, the feeling of cold and chilliness decreases

4. The electric heater is switched on on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

II. In summer, when the outside air temperature is higher: + 30°C

1. In the AIR FLOW menu
 - IN FAN Period - 3 min
 - IN FAN SPEED - 3-7
 - OUT FAN Period - 1 min
 - OUT FAN SPEED - 3-7
2. In the HEATER menu
 - Temp: 18 °C
3. In the CUSTOM menu
 - Humidity: 72-78% - at low humidity, heat is more easily tolerated
4. The electric heater is disabled on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

III. The optimal operating mode of the device for the rest of the year:

1. In the AIR FLOW menu
 - IN FAN Period - 1-3 min
 - IN FAN SPEED - 5-10
 - OUT FAN Period - 1-3 min
 - OUT FAN SPEED - 5-10
2. In the HEATER menu
 - Temp: 18 °C
3. In the CUSTOM menu
 - Humidity: 68 -72%
4. The electric heater is disabled on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

IV. Ventilation mode.

1. In the AIR FLOW menu
 - IN FAN Period - 2-3 min
 - IN FAN SPEED - 8-10
 - OUT FAN Period - 2-3 min
 - OUT FAN SPEED - 8-10
2. In the HEATER menu
 - Temp: 18 °C
3. In the CUSTOM menu
 - Humidity: 72-78% - at low humidity, heat is more easily tolerated
4. The electric heater is disabled on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

When installing 2 devices

in the same room for their asynchronous operation, it is necessary to set both devices to different indicators in the Menu depending on the season, as described above.

Example:

Device1

1. In the AIR FLOW menu

- IN FAN Period - 3 min

- IN FAN SPEED - 10

- OUT FAN Period - 2 min

- OUT FAN SPEED - 8

2. In the HEATER menu

- Temp: 18 °C

3. In the CUSTOM menu

- Humidity: 68 -72%

4. The electric heater is disabled on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

Device2

1. In the AIR FLOW menu

- IN FAN Period - 2 min

- IN FAN SPEED - 8

- OUT FAN Period - 1 min

- OUT FAN SPEED – 6

2. In the HEATER menu

- Temp: 18 °C

3. In the CUSTOM menu

- Humidity: 68 -72%

4. The electric heater is disabled on the Control panel fig. 11 – HEATER OFF/ON or in Menu Block HEATER – Heater Block 10,11,12 – Double CLICK to HEATER OFF/ON

Service



Attention!

Before servicing the device, you must turn off the mains power supply. Make sure that the device is completely disconnected from the mains power supply.

The device should be regularly cleaned of dust and dirt.

For maintenance, it is necessary to remove the decorative part of the IN FAN exhaust fan with a screwdriver, pressing the two latches in the lower part of the case (Fig. 5)???, and unscrew the four screws securing the fan housing to the wall (Fig. 6)???

After removing the decorative part of the IN FAN exhaust fan, it is necessary to disconnect the fan from the power cable and then remove the internal telescopic air duct together with all components by pulling it towards you and put the internal telescopic air duct together with all components on a flat clean surface (table).

After that, it is necessary to remove the dirty filters and wipe the entire inner surface of the outer telescopic air duct from the inside with a dry cloth, carefully without damaging the insect screen. Then it is necessary to install new, clean filters in place and, in the reverse order, return the internal telescopic air duct with components to their places and connect to the power cable and install the decorative grille in place.

Old dirty filters must be washed with warm water and soap and dried well for reuse the next time the device is cleaned.

The device must be cleaned once every three months, but at least once every 6 months or at least 2-4 times a year. More frequent cleaning of the unit will allow longer operation and will not cause dust and dirt to accumulate on the fans and cause them to break due to fan imbalance.

Regular cleaning of the device is necessary to ensure maximum heat exchange efficiency. The device can be cleaned with a vacuum cleaner.

After cleaning the device, it is necessary to wipe the device with a dry cloth.

Guarantee

The entire device is covered by a full 36-month manufacturer's warranty. In the event of a breakdown, contact the place of purchase of the device



Utilization

Disposal Information This symbol means that this electrical and electronic equipment must not be disposed of as household waste, but must be taken to a collection point for the recycling of electrical and electronic equipment.

Technical characteristics and accessories are subject to change without prior notice.

Warranty condition

The manufacturer guarantees trouble-free operation of the product for 36 months from the date of purchase.

The validity of the warranty is confirmed by the provision of a completed and certified by the signature and seal of the Seller warranty card or receipt of purchase of the product.

The warranty does not apply to cases of mechanical damage to the product, violation of the rules of operation and installation, and in case of revealed facts of design changes and/or self-opening of the product.

Repair or replacement of the product is carried out upon presentation of the warranty card with the specified date of sale, place of sale, seal and signature of the seller at the address:

Warranty card

Type of:

Nº:

Date of sale:

Seller.....

Buyer:.....