

# USER MANUAL

Supply Air Purifier  
Tion Breezer 3S

# CONTENTS

1. GENERAL INFORMATION.....	3
2. PACKAGE CONTENTS .....	5
3. SAFETY PRECAUTIONS.....	7
4. TECHNICAL CHARACTERISTICS.....	9
5. OPERATING PRINCIPLE AND CONTROL .....	10
5.1 DEVICE .....	10
5.2 THE PRINCIPLE OF OPERATION.....	11
5.3 CONTROL .....	13
6. PREPARATION FOR USE.....	30
6.1 UNPACKING, PRELIMINARY INSPECTION AND PREPARATION FOR INSTALLATION.....	30
6.2 INSTALLATION .....	31
6.3 ELECTRICAL CONNECTION.....	39
7. MAINTENANCE .....	42
7.1 GENERAL PROVISIONS .....	42
7.2 PROCEDURE FOR FILTER REMOVAL AND INSTALLATION.....	44
7.3 TROUBLESHOOTING.....	45
8. STORAGE, TRANSPORTATION AND DECOMMISSIONING.....	51
9. WARRANTY .....	52
ACCEPTANCE CERTIFICATE.....	54

## Dear Customer!

**Thank you for purchasing Tion Breezer 3S! This User Manual contains a full scope of information on the device, methods for its adjustment and service regulations.**

## 1. GENERAL INFORMATION

The Tion Breezer 3S compact ventilation device (hereinafter referred to as the device) is intended for fresh air supply into the room.

When using the device for the purpose intended:

- air is supplied through the air duct into the room by means of a fan being an integral part of the device;
- air is purified by means of the filter system.

Additional functions of the device include:

- air purification inside the room (a mode of recirculation);
- supply air heating<sup>1</sup>;
- compatibility with the MagicAir – Smart Microclimate Control System<sup>2</sup> (hereinafter referred to as the MagicAir system);
- control with the use of Tion Remote mobile applications.



Before using the device, please read thoroughly the Operating Manual, warranty provisions, and check completeness and external appearance.



The device is not intended for heating the rooms. Removal of the heater does not affect its principal function.



The device is intended for operation in domestic and similar conditions: in residential, office, warehouse and other premises suitable for the operating conditions stated in the current Operating Manual.

---

1 Except for the devices in the Eco complete set.

2 In the presence of base station



The device is not intended for medical purposes.

The device corresponds to the requirements of the following Technical Regulations of the Customs Union:

- TR TS 004/2011 On Safety of Low-Voltage Equipment;
- TR TS 020/2011 On the Electromagnetic Compatibility of Technical Devices.

Developed by Tion Smart microclimate JSC.

20, Inzhenernaya str., Novosibirsk, 630090, Russia.

Manufactured in PRC.

[tion.global](http://tion.global)

**TION.**



## 2. PACKAGE CONTENTS

The full package contents<sup>3</sup> are listed in Table 2.1.

Table 2.1 – Delivery sets for the device

List of items and accessories	Tion Breezer 3S		
	Standard	Special	Eco
	Quantity, pcs.		
Device	1	1	1
Base filter G4	1	1	1
Efficiency filter EPA E11	1	1	1
Adsorption-catalytic filter AK-XL <sup>4</sup>	1	—	—
Heater	1	1	—
Detachable power cable, (3±0.15) m	1	1	1
Remote control	1	1	1
Remote control bracket	1	1	1
Batteries (AAA)	2	2	2
Tion air intake grid	1	1	1
Quick Start Manual	1	1	1
User Manual	1	1	1
Warranty card	1	1	1
Mounting template	1	1	1
Nylon dowel 10x50	4	4	4
Self-tapping screw 5x55 (for fixing the device)	4	4	4
Nylon dowel 5x27	2	2	2
Self-tapping screw 3x25 (for fixing the console bracket)	2	2	2
Self-tapping screw 4x90 (for fixing the grid)	2	2	2

<sup>3</sup> The complete set of the device is specified on the packing, and when purchasing it shall be specified in the warranty card by an employee of the selling company.

<sup>4</sup> If there is «1» in the complete set column it means that this filter is installed by default. If in the complete set column the «—» sign is used it means that this filter is not installed by default. The change in the complete set of the device shall be separately paid.

To improve the device in the Tion Breezer 3S Eco configuration up to Tion Breezer 3S Standard configuration contact the maintenance service at the place of purchasing the device or the nearest authorized service centre for heater installation and buy the AK-XL filter at the company's website: [tion.global](https://tion.global) or from the authorized dealer.

### 3. SAFETY PRECAUTIONS

The following signs are used in this Operating Manual:



**CAUTION!** Requirements, the non-observance of which can lead to failure of the device or making the conditions dangerous for human health or life.



**ATTENTION!** Requirements, the non-observance of which can lead to dysfunction of the device.



The device is not intended for use by children or by people with physical, sensory or mental impairments, unless supervised by other persons responsible for their safety.



Do not leave the power cord accessible to children or pets, even when the device is switched off.



Do not store packing materials (box, packages, etc.) in a place accessible to children or pets.



Do not attempt any repair of, or make any intervention inside the device structure yourself. If any damage or possible signs of abnormal operation are detected, contact the Vendor's Service Center regarding further device operation.



Do not operate the device if the power cord insulation or any part of the device casing is damaged.



Disconnect the device from the power mains before scheduled maintenance work.



After storage or transportation at low temperature, to avoid device failure, condensate formation or damage to plastic parts, leave the device in a warm room for 2 h before installing it.



The device should not be operated at indoor temperatures below +10°C or above +50°C.



The device should not be operated with relative air humidity above 80% at +30°C.



Operation of the device is not allowed in the rooms with the sources of vapor and another abundant moisture and a possibility of direct water flow on the device. These rooms are swimming-pools, baths and saunas, and sanitary facilities and bathrooms.



Avoid prolonged exposure of the device to direct sunlight.



Do not install or operate the device in violation of the installation rules indicated in this User Manual and on mounting template.



If you want to de-energize the device, disconnect it by means of a control button and wait for a double audio signal, in 10 minutes after the signal make sure that there is no error indication and only after that pull the plug of the power supply cord from the socket. Otherwise the shutter can remain open, and air from the street affected by natural draught will go through the device into the room.



During an electrical storm, turn the device off and disconnect it from the power mains.



Don't activate a new cycle of the day counter before replacing the filters by the new ones. Operation of the device with the filters that have worked out their resource can lead to reduced performance, noisy operation of the fan and a failure of the device.



Don't operate the device without the base filter G4 and efficiency filter EPA E11 installed. It can lead to the ingress of coarse dust into the heater and fan unit that can cause a failure.



## 4. TECHNICAL CHARACTERISTICS

Technical characteristics of the device are given Table 4.1.

Table 4.1 – Technical characteristics of the device

Parameter <sup>5</sup>	Value for the complete set		
	Standard	Special	Eco
Operating power <sup>6</sup> consumption, W	1150	1150	50
Heating element power, W	1100	1100	—
Allowable range of air temperature at the input into the device, °C	-40...+50	-40...+50	0...+50
Airflow throughput of the device <sup>7</sup> , m <sup>3</sup> /h	30/45/60/ 75/90/140	30/50/70/ 90/110/160	30/50/70/ 90/110/160
Equivalent level of sound pressure, not more than dBA	19/23/29/ 35/40/47	19/23/29/ 35/40/47	19/23/29/ 35/40/47
Electrical network parameters, V, (~ 50 Hz)	230±10%	230±10%	230±10%
Weight of the device <sup>8</sup> (net), kg	9.5	9	8,5
Overall dimensions of the case (HxWxD), mm	528×453×203	528×453×203	528×453×203
Power cable length, m	3±0.15	3±0,15	3±0,15
Intended life cycle, years	5	5	5
Warranty life, years	2	2	2
Compatibility with the MagicAir System	Yes	Yes	Yes
Compatibility with the devices having Bluetooth <sup>9</sup> wireless technology	Yes	Yes	Yes

<sup>5</sup> The stated technical characteristics are provided for only at operation of the device with the Tion air intake grid installed outside on the ventilation duct and observation of recommendations for preparation of the air duct and device placement.

<sup>6</sup> The value is determined in accordance with Russian state standard GOST IEC 60335-1-2015, item 10.1.

<sup>7</sup> Efficiency of the device depends on the service conditions.

<sup>8</sup> The value is determined for the device with a set of filters installed by default for each certain complete set.

<sup>9</sup> The device has a protocol version of the Bluetooth wireless technology 4.2 (Low Energy). Compatible versions of the Bluetooth wireless technology: 4.0, 4.1, 4.2 and 5.0.

## 5. OPERATING PRINCIPLE AND CONTROL

### 5.1 Composition of the device

Figure 5.1 shows a composition of the Tion Breezer 3S.

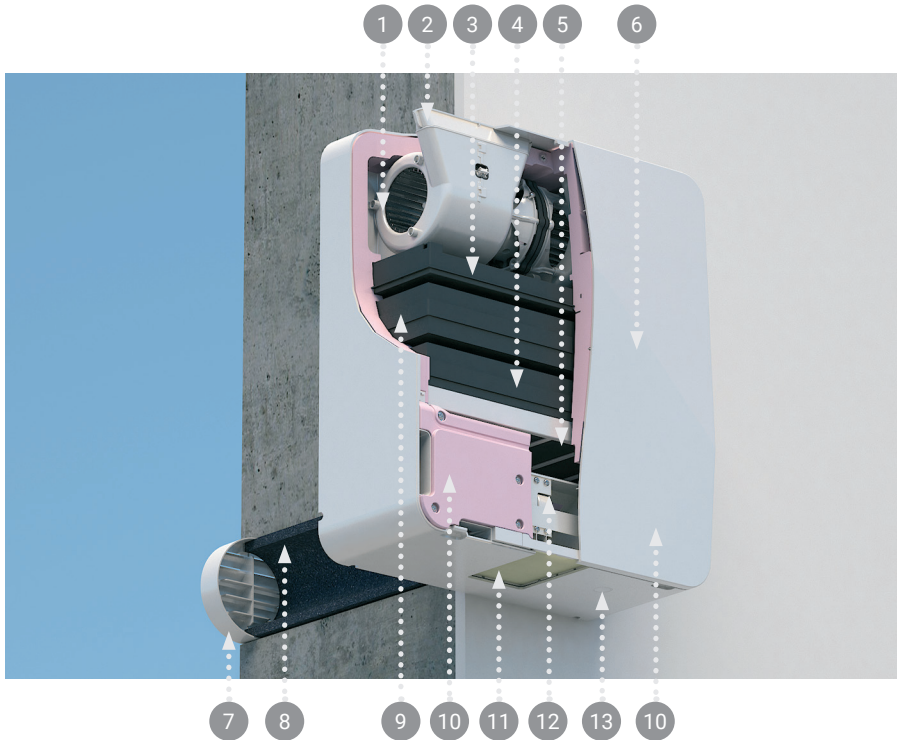


Figure 5.1 – Composition of the device

- 1 – fan unit; 2 – discharge diffuser; 3 – heater unit<sup>10</sup>;
- 4 –efficiency filter EPA E11; 5 – base filter G4; 6 – decorative panel;
- 7 – Tion air intake grid; 8 – air duct heat insulation;
- 9 – adsorption-catalytic filter AK-XL;
- 10 – sites for main electronic units of the device;
- 11 – prefilter with the frame and grid; 12 – shutter unit; 13 – control button.

<sup>10</sup> Unavailable for the devices in the Eco complete set.

## 5.2 The principle of operation

The device is mounted on the wall with the air duct. Air from the street goes through it into the device. The air duct shall be protected by heat insulation (Fig. 5.1, p. 8). It is required that the duct has had a slope providing protection against the ingress of rain moisture into the device.

The air intake grid is installed on the air duct from the outside (Fig. 5.1, p. 7). To ensure maximum airflow throughput, the use of the Tion air intake grid being in the delivery set is recommended.

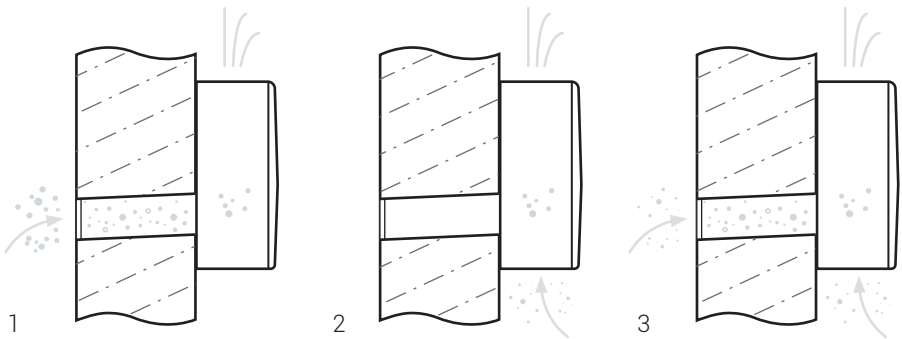


Figure 5.2 – Air intake modes  
1 – Inflow; 2 – Recirculation; 3 – Mixed

The device can operate in such air intake modes as "Inflow", "Recirculation" and "Mixed". The features of operation in these modes are shown in Figure 5.2.

At the inlet of the device there is a shutter unit (Fig. 5.1, p. 12). It prevents from getting air into the room from the outside when the device is deactivated or operates in the "Recirculation" mode, and it is also required for the "Inflow" and "Mixed" air intake modes.

Air is supplied into the room by means of a fan (Fig. 5.1, p. 1), being an integral part of

the device. If required, the supply air can be heated by means of a heater<sup>11</sup> (Fig. 5.1, pos. 3), and a step-by-step air purification takes place inside the device.

The "Inflow" air intake mode is a main mode installed in the device by default. Air in this mode is taken only through the air duct (Fig. 5.1, p. 7, 8).

During operation in the "Recirculation" air intake mode, the shutter of the air pipe closes the air duct leading to the street, and air goes into the device from the room through the prefilter (Fig. 5.1, p. 11). When switching to this mode, the heater is automatically deactivated.

The "Mixed" mode is an air intake mode in which air is taken from both the street and the room in equal proportion. By default, the heater is deactivated in the mixed mode, but it can be activated, and if required, the air will be heated to the temperature set by the user. The mixture of outdoor and indoor air reduces energy consumption for heating in winter (besides the air is purified inside the room).



**ATTENTION!** The "Mixed" mode is unavailable at a temperature of incoming air of lower than 0 °C.

When the device operates in this mode the use of the first and second speeds is not recommended. External factors may direct the airflow into the room through the prefilter bypassing the filtration unit.

## Prefilter

The prefilter (Fig. 5.1, p. 11) keeps large household waste (fluff, hair, etc.) when the device operates in the "Recirculation" mode.

The prefilter is designed to protect the main filtration unit from premature clogging, and to extend the life of the base filter G4 and fan of the device.

## Base filter G4

The base filter G4 (Fig. 5.1, p. 5) has an average dust holding capacity as regards synthetic dust of at least 90% (for particles with a diameter of 0.4 µm according to EN 779:2012).

This filter is designed to trap coarse dust and to extend the life of the efficiency filter EPA E11 (Fig. 5.2, p. 4).

---

<sup>11</sup> Except for the devices in the Eco complete set

### Efficiency filter EPA E11

The efficiency filter EPA E11<sup>12</sup> (Fig. 5.1, p. 4) has an integral filtering efficiency value of at least 95% (for particles with a diameter of 0.1–1 µm, according to EN 1882-1:2009).

This filter is designed to protect from penetration of allergens and pathogens along with street air into the room.

### Adsorption-catalytic filter AK-XL

The adsorption-catalytic filter AK-XL (Fig. 5.1, p. 3) is designed to reduce the concentration of molecular atmospheric pollutants getting into the room along with street air.

The adsorption-catalytic filter AK-XL can be replaced by the user with the adsorption-catalytic filter AK-XXL, if desired, which has an increased service life. Under the same operating conditions, the AK-XXL filter has a greater adsorption efficiency of pollutants and a longer effective life.

Adsorption-catalytic filters are able to reduce the concentration of molecular pollutants up to a level lower than MPCad<sup>13</sup>, provided that their concentration at the inlet of the device does not exceed 5\*MPCad and 10\*MPCad for AK-XL and AK-XXL filters, respectively.



Adsorption-catalytic filters, due to interaction with air at a molecular level, are able to reduce the intensity or even completely eliminate odors that go into the room along with street air. However please note that odor elimination efficiency depends on the nature of its source and the speed of air flow passing through the device (fan speed).

### 5.3.Control

The user interface of the device consists of a control button, a light indication around the control button, and audio signals.

To change the settings and operating mode of the device, the following controls can be used:

---

<sup>12</sup> The E11 filtration class is intended for technological systems and air purification and conditioning systems used for provision of clean rooms, for example, in the pharmaceutical industry

<sup>13</sup> MPCad (average daily maximum permissible concentration) is an average daily level of concentration of certain types of harmful substances that does not pose a threat to human health and life.

- remote control (RC – a part of the delivery set);
- Tion Remote mobile application (for Android- and iOS-based mobile devices);
- MagicAir microclimate control system (due to MagicAir mobile app and in the presence of MagicAir base station BS310).



Tion Breezer 3S can be simultaneously controlled by the MagicAir base station and one of the devices supporting Bluetooth wireless technology (RC or Tion Remote applications).



A device of any configuration can be simultaneously connected to RC and the Tion Remote mobile application, but due to the features of the Bluetooth wireless technology, it can be controlled by only one of the controls at a time.

To transfer control from the Tion Remote application to RC (or another mobile device), use the "Transfer Control" option on the screen of device settings in the application. To transfer control from RC to a mobile device, wait for 30 s (RC will become disconnected and the communication channel will be free to connect).

### 5.3.1. Control button and light indication

The control button (Fig. 5.1, p. 13) is located on the front panel of the device next to the prefilter. The list of actions available for it is given in Table 5.1.










*Table 5.1 – Actions available for the control button*

Type of impact	Result
One quick pressing, not longer than 5 s.	Switching over the device between the "Operation" and "Standby" modes <sup>14</sup>
One long pressing, not less than 5 s.	Running the "Pairing" mode on the device

<sup>14</sup> Section 5.3.8 of this Operating Manual contains detailed information on operating modes of the device.

On the control board of the device there is a light indication around the control button. Possible states of the light indication and their interpretation are given in Table 5.2.

Table 5.2 – States and interpretation of the light indication

Indication <sup>15</sup>	Interpretation
Indication available when working with any control means	
	The device is connected to the electrical network and is in the "Standby" mode
	The device is connected to the electrical network and is in the "Operation" mode
	The device is in the "Pairing" mode
	A critical error has occurred while the device is operating
Indication available only if the device operates in the composition of the MagicAir System	
	The device is connected to the MagicAir System and is in "Operation" mode
	The device is automatically controlled by the MagicAir base station
	The process of software update of the device is in progress
	The firmware update of the device has successfully ended
	The firmware update of the device has ended in error: update has not been installed / a critical error has occurred while the device is operating

15 To describe the states of the indicator the following symbols are used: ○ – lights; ◐ – blinks.

### 5.3.2. Audio signals

Audio signals are designed to inform the user on performance of some of the functions by the device. The interpretation of all possible audio signals is given in Table 5.3.

*Table 5.3 – Audio signal of the device*

Type of audio signal	Interpretation
One short audio signal	Activation of the device / confirmation of button pressing on the remote control / action has been performed
Two short audio signals	The device has switched over to the "Standby" mode / the device is not able to execute the command
Four short audio signals	Counter reset has been performed before replacing the filter
Six short audio signals	Counter reset to factory settings has been performed

Audio signals can be deactivated by means of the remote control or the Tion Remote mobile application.

Audio signals are deactivated when the device operates in the composition of the MagicAir system in the automatic mode.

### 5.3.3 Remote control

The remote control (hereinafter referred to as the remote control, RC) is intended for manual control of the device.

Before the first launch of the device, and also if RC is not activated, install batteries in it. For this purpose:

1. Open the cover of the compartment for batteries
2. Install two AAA 1.5 V batteries (in the composition of the delivery set) observing the polarity
3. Install the cover of the compartment for batteries on its site until you hear a click.





**ATTENTION!** Tion Smart microclimate JSC and selling companies are not responsible for the quality and condition of batteries included in the delivery set. Please purchase replaceable batteries on your own and in advance.

For pairing RC with the device:

1. Take RC to the device at a distance of not more than 1 m.
2. Press and keep pressed the control button of the device for 5 s up to the change of indication into dark-blue blinking.
3. Switch on RC by pressing any button. After this RC will automatically start searching the device for pairing.

If the remote control has never been coupled with breezers before, or the connection with the coupled device has been broken<sup>16</sup>, the notification **PAIR** will be displayed. It shall change to the model name of the device connected within 10 s.

If the remote control has been coupled before, then after being connected the display will demonstrate the model name of the device connected.

If the remote control displays the notification **PAIR** or **NOCON**, the pairing with the device has failed. Perform these operations to eliminate the error:

1. Make sure if there is indication appropriate to the "Pairing" mode (the indicator blinks blue).
2. If the indication is not active, press once the control button of the device and make sure that the indicator shows yellow or green. If there is no indication after pressing the control button, check the connection of the device to the electrical network.
3. Try to connect again (do not move the remote control at a distance of more than 1 m from the device, make sure that there is a light indication of the "Pairing" mode).

If the connection error cannot be eliminated on your own, contact the service center at the place of purchasing the device or the nearest authorized service center (addresses are specified in the warranty card).

The appearance and purpose of RC interface elements are shown in Figure 5.3 and in Tables 5.4 - 5.6.

---

<sup>16</sup> To disconnect the coupled device it is necessary to keep [POWER] + [DISP] pressed for not less than 5 s.

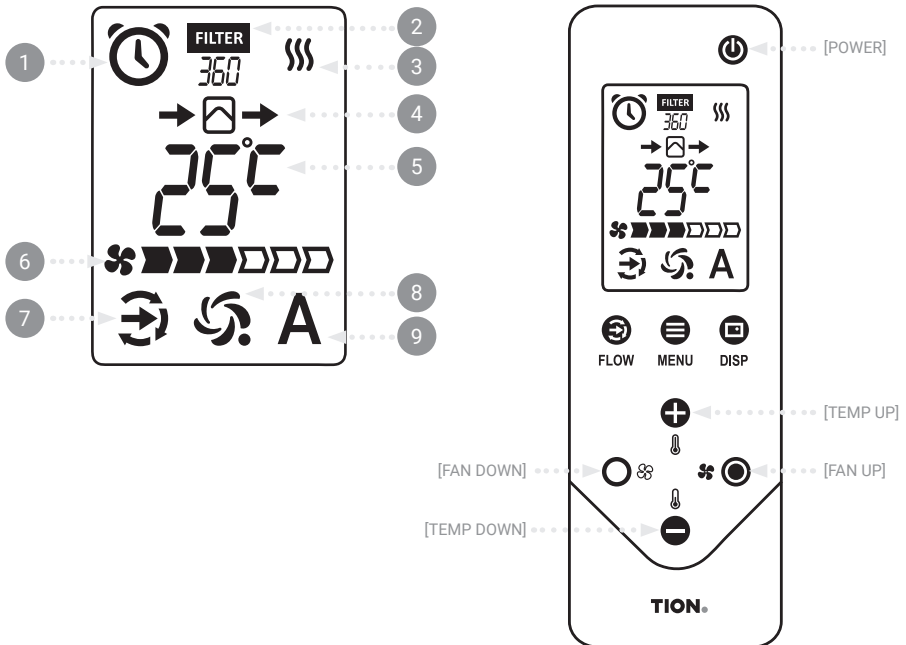




Figure 5.3 – Remote control

Table 5.4 – RC display sections

Position in Figure 5.3	Designation
1	Timer (the section is active when the timer is on)
2	The number of days before replacing the filter / a state of timer - «On»/«Off» (in the setup mode)
3	A state of the heater (  – on;  – off or absent)
4	Airflow indication (inlet/outlet)




Position in Figure 5.3	Designation
5	The range of values of the parameter selected
6	Fan speed (the number of colored cells corresponds to the number of set speed)
7	The indicator of the air intake mode (  – «Inflow» mode,  – «Recirculation» mode,  – «Mixed» mode)
8	The indicator of connection to the MagicAir System
9	The indicator of automatic control of the MagicAir System base station

Table 5.5 – RC buttons









Button	Purpose
 [POWER]	Switching over of the device between the “Operation” and “Standby” modes
 [FLOW]	Shutter position change
 [MENU]	Switching over RC between the “Display” and “Setting” modes
 [DISP]	Switching over screens in the RC “Display” mode
 [TEMP UP]	Increase of the supply air heating temperature / increase of the value or change in a state of the selected parameter
 [TEMP DOWN]	Decrease of the supply air heating temperature / decrease of the value or change in a state of the selected parameter
 [FAN UP]	Increase in fan speed / switching over between the adjustable parameters
 [FAN DOWN]	Decrease of fan speed / switching over between the adjustable parameters

Table 5.6 – Combination of console buttons

Combination	Purpose
[POWER] + [DISP] keep pressed for not less than 5 s.	Removal of the last coupled device
[FLOW] + [MENU] + [DISP] keep pressed for not less than 5 s.	Audio signals on/off
[MENU] + [DISP] + [FAN UP] + [FAN DOWN] keep pressed for not less than 5 s.	Reset of operating parameters of the coupled device to the default settings

The remote control has two operating modes: "Display" and "Setting". To switch between them, press the [MENU] button. The "Display" mode is a default mode of the console. If not to interact with RC for 10 s after pressing the [DISP] button or for 20 s after pressing the [MENU] button, the RC display will automatically switch over to the main screen.

To see a current state of the device, press the [DISP] button in the display mode. The display will show information on the device in circles in the following sequence: Air temperature at the outlet of the device → Air temperature at the inlet of the device → Internal time of the device → Model name of the device → Software version of the device control board.

Later on the screens are recurred starting from the first. RC will automatically switch over to the first screen if not to interact with it for 10 s.

If not to press any of the RC buttons for 30 s, RC will be automatically deactivated to save battery power.

#### 5.3.4. Tion Remote Mobile Application

The Tion Remote mobile application is designed to directly control the Tion Breezer 3S and Tion Breezer Lite devices via Bluetooth wireless technology.

The application can be downloaded on mobile devices based on Android (4.4 and later editions) and iOS (10.0 and later editions) operating systems in official app stores. For this purpose follow the direct link:



<https://play.google.com/store/apps/details?id=com.tion.btremotecontrol>



<https://apps.apple.com/us/app/tion-remote-управляй-бризером/id1244645522>

or read the QR code corresponding to the operating system of your mobile device (Fig. 5.4).



Figure 5.4 – QR codes for downloading the Tion Remote mobile application

### 5.3.5. MagicAir – Smart Microclimate Control System

The MagicAir system consists of the cloud data storage (server), MagicAir mobile application, MagicAir BS310 base station and other devices.

The MagicAir system allows operating climate devices in automated and manual modes (including remote control mode), as well as controlling such indoor air quality parameters as CO<sub>2</sub> level, temperature and air humidity.

Tion Breezer 3S is an executive device. To use it in the MagicAir system, it is necessary to purchase one base station and install the MagicAir application on your mobile device.

The application can be downloaded on mobile devices based on Android (4.4 and later editions) and iOS (10.0 and later editions) operating systems in official app stores. For this purpose follow the direct link:

 <https://play.google.com/store/apps/details?id=com.tion.magicair>

 <https://apps.apple.com/us/app/magicair/id1111104830>

or read the QR code corresponding to the operating system of your mobile device (Fig. 5.5).



Figure 5.5 – QR codes for downloading the MagicAir mobile application

### 5.3.6. Change in the parameters of device operation

The device has the default parameter values shown in Table 5.7.

Table 5.7 – Default operating parameters of the device

No.	Parameter	Default value
1	Fan speed	No.2
2	Air intake mode	Inflow
3	Heater state	On
4	Target air heating temperature	20 °C
5	Internal time of the device	00:00 <sup>17</sup>
6	Timer state	Off
7	Start time by timer	17:00
8	End time by timer	08:00
9	Time till filter replacement	360 days
10	Audio signals	On

Press the [MENU] button on RC to put the remote control in the "Setting" mode. Press the [FAN DOWN] and [FAN UP] buttons to switch over between the screens for setting the operating parameters of the device. Press the [TEMP DOWN] and [TEMP UP] buttons to change the value or switch over a state of the selected parameter. Press the [MENU] button to return to the "Display" mode on the RC display.

#### Fan speed

The device has six operating speeds set manually by means of any of the controls. In addition, the MagicAir system can independently change the speed of the device during the automatic control.

The fan speed directly affects the amount of air passing through the device. In order to change it, use the [FAN UP] and [FAN DOWN] buttons on RC in the "Display" mode to increase and decrease in the operating speed, respectively. On the RC display, the speed of the device is displayed in section No. 6 by means of six cells (the number of active cells corresponds to the set speed).

In any of the prelisted mobile applications, open the screen for device control and select the desired speed on the appropriate scale (application interfaces differ among themselves, hereinafter to specify the description of device control, refer to the User Manual for the selected mobile application or to the integrated help).

<sup>17</sup> If the device is controlled by the MagicAir base station, time is automatically synchronized with the real one. In case of reset of the operating parameters of the device to the default settings, the reset of internal time to the value specified in the table does not take place.



Please note that the device has an algorithm for lowering the fan speed. The fan speed is set depending on the difference between the values of the target temperature set by a user for heating the air and the air temperature at the inlet of the device.



The sixth speed is designed for short-term intensive ventilation.

### **Air intake mode**

The shutter of the device can be in one of three positions corresponding to one of the air intake modes:

- **open:** in this position, the device delivers fresh air from the street into the room ("Inflow" mode);
- **middle:** in this position, the device purifies the air in the room and adds fresh air from the street into it ("Mixed" mode);
- **closed:** in this position, the device purifies indoor air ("Recirculation" mode).

To change the position of the shutter by means of RC, press the [FLOW] button until the required air intake mode is displayed. Select the desired position of the shutter in any of the prelisted mobile applications on the screen for device control.

When operating in the "Recirculation" mode, the heater is automatically deactivated, and it will not be available for control until the shutter changes its position.

### **A state of the heater**

The device (except for the devices in the Eco configuration) contains a heater, which allows heating the air inside the device when operating in the "Inflow" and "Mixed" modes. By default, the heater of the device is on.

To change a state of the heater, press the [MENU] button on RC. If a heater is installed in the device, the current value of the target air heating temperature will appear on the display that corresponds to the "on" state of the heater. If the heater is turned off, "H – OFF" will appear on the display.

Press the [TEMP UP] or [TEMP DOWN] button to change a state of the heater. 20 s later the screen will change to the initial one.

When the heater is absent or faulty, the RC display immediately shows the screen for setting the internal time of the device. If your device is equipped with Eco, there is no heater

in it by default. If your device has another configuration, but the heater is not displayed in the settings menu, contact the service center of the selling company or the nearest authorized service center to diagnose and troubleshoot the malfunction, replace the heater or device of the respective configuration.



**CAUTION!** The device is not intended for heating the rooms! Interfering with the design or changing the method for installation of the device in order to heat the room may lead to failure of the device, fire hazard and damage to property and health of the user.



**ATTENTION!** It is not recommended to turn off the heater when the incoming air temperature is below 0 °C, this can lead to freezing of the device, reduced performance and, as a result, increased noise during its operation. Increased load on the fan and freezing of the electronic compartments can lead to malfunction of the device.

### Target air heating temperature

In order to change the target temperature of the incoming air heating, press the [TEMP UP] or [TEMP DOWN] button to increase or decrease the target temperature, respectively. Hold the button for a long time to multiple value switching.

In any of the prelisted mobile applications, open the screen for device control and select the desired value of the target air temperature on the appropriate scale.



Please note that the readings of air temperature sensors at the inlet and outlet of the device may differ from the actual values by  $\pm 3$  °C, and the air temperature at the inlet of the device is not always equal to the outdoor temperature. The temperature value shown by the sensor may vary due to climatic conditions (humidity, atmospheric pressure), and the air temperature at the inlet of the device may be higher than the actual street temperature due to the presence of ventilation facades, the proximity of heating systems and other external factors.





**ATTENTION!** At certain values of relative air humidity in the room and temperature of the air outgoing from the device, condensation may appear on the case. If it occurs, turn off the device and remove moisture from the surface. When you turn on the device, activation of the heater and increase in the target temperature to heat the air are recommended.

### Internal time of the device

The device has an integrated timer. The internal time value on it is set to 00:00 by default.

In order to set the internal time of the device corresponding to the real time, press the [MENU] button on RC if your device is in the Eco configuration. If your device has another configuration, press the [MENU] button to open the user settings menu, and then press the [FAN UP] button to pass to the screen for setting current time.

The current internal time of the device will appear on the RC display, and the clock values will become available for setting. Set the desired value using the [TEMP UP] or [TEMP DOWN] button. Press the [FAN UP] button to pass to the screen for setting minutes. Use the [TEMP UP] or [TEMP DOWN] button to set the required minutes. Press the [MENU] button on the remote control to return to the initial screen, or the [FAN UP] button to pass to setting of a state of the timer for switching on / switching off of the device.

Current time setting is required if you want to use the on / off function of the device by the timer.



Please note that the device is not an accurate time meter. The internal time of the device may gradually deviate from the real one if it is not connected to the MagicAir system. If you plan to regularly use the switching on / switching off of the device by timer, the check of current time setting is recommended once every three-six months.

### A state of the timer

To change a state of the timer, press the [MENU] button on RC. Press the [FAN UP] button on RC until the timer icon flashes on the display. At the same time, "On" or "Off" will appear in the area of the number of days until the filters are replaced that

corresponds to the "On" or "Off" state of the timer. If you have scrolled through this settings screen, press the [FAN DOWN] button as many times as necessary to return to it. On the screen for timer setting, press the [TEMP UP] or [TEMP DOWN] button to change a state of the timer.

When the timer is off, pressing the [FAN UP] button on RC opens a screen for setting the days until the filters are replaced.

If the timers are on, successively pressing the [FAN UP] button will open the screens for setting the time for switching on and switching off of the device as follows: Switching-on hour → Switching-on minutes → Switching-off hour → Switching-off minutes.

The value of the selected item changes with the use of RC [TEMP UP] and [TEMP DOWN] buttons.

Также включение/выключение устройства по таймеру доступно в мобильном приложении «Rubetek: дом, умный дом».

The timer is not available in the Tion Remote mobile application, but it is still available for setting by means of RC.

When the device operates in the composition of the MagicAir system, the timer is disabled, but it is available for setting by means of RC. Instead, you can use automatic control and scheduled work (read detailed information in the MagicAir application in the "Help" section). To switch on / off the device by timer it is necessary to:

1. Remove the device from the MagicAir mobile application.
2. Switch on the timer by means of RC as described at the beginning of this subsection.

### **Time before filter replacement**

By default, the device has a counter of days before filter replacement equal to 360. In this case, only the time when the device is in the "Operation" mode in any of the ("Inflow" / "Mixed" / "Recirculation") air intake modes is taken into consideration.

The time before replacing the filters is approximate; it does not take into consideration a speed of the device and a state of the environment. 30 days prior to the end of the counter, the device will send a warning to the control connected to it. You can independently decide to replace the filters, being guided by operating time and a state of environment, and to increase / decrease the number of days before the replacement. "FILTER" will light up on the RC display, and on the screen for control of the device in mobile applications a special icon individual for each of the mobile applications will appear.

To change the number of days before replacing the filters, press the [MENU] button on RC. Press the [FAN UP] or [FAN DOWN] button on RC until "FILTER" flashes on the

display. Press the [TEMP UP] / [TEMP DOWN] button to increase / decrease in the number of days till the replacement of filters by 30.

When the counter reaches a zero value, the "FILTER" inscription and the airflow rate icon start flashing on the RC display. Turn off the device and replace the filters.

To start a new cycle of the counter (360 days), pass to the settings menu for setting the number of days before filters replacement, press and hold the [TEMP UP] button on RC until the number of days changes to the upper limit (360 days). The "FILTER" inscription will disappear from the remote control display.

You can also track the filters resource and clear the counter of days before replacement in the Tion Remote mobile app.



**ATTENTION!** Do not run a new cycle of the counter without replacing the filters. Operation of the device with filters that have worked out their resource can lead to reduced performance, increased noise during operation and failure of the device.

### Audio signals

Interpretation of audio signals are described in section 5.3.2.

Audio signals are activated by default. To activate/deactivate audio signals, hold the [FLOW], [MENU] and [DISP] buttons pressed on RC simultaneously for at least 5 s.

You can also activate/deactivate audio signals by changing a position of the respective switch on the screen for controlling the device in the Tion Remote mobile application.

Audio signals are deactivated if the device operates under automatic control of the base station in the composition of the MagicAir system. If the device is coupled with the base station but operates autonomously or by schedule, the sound notifications will be in the last state set by the user.

#### 5.3.7. Operating modes of the device

##### "Standby" mode

When connected to the power supply, the device enters in the "Standby" mode. In this mode, the device does not operate, but it is available for passing to the "Operation" and "Pairing" modes. The shutter of the device is closed (it is in the "Recirculation" air intake mode), the indicator lights yellow, the motor and heater are turned off.

On RC the «Standby» mode is displayed as follows:  .

### **“Pairing” mode**

The “Pairing” mode is used to connect the device to any of the controls. To start this mode, hold the control button on the front panel of the device pressed for at least 5 s until the indicator flashes blue.

The device will be in the “Pairing” mode for 30 seconds. At this time, the control module transmits signals through all available communication channels about a possibility of connecting to it. Regardless of the pairing result (done / failed), the device will return to the mode from which the “Pairing” mode has been activated.

### **“Operation” mode**

If the device has not been coupled with any of the controls, the “Operation” mode is activated only by a short press on the control button. At the same time, the device will start operating with the last stored settings (see section 5.3.7 of this Manual). Repeated short pressing the control button will put the device into the “Standby” mode.

The device coupled with one of the controls switches between the “Operation” and “Standby” modes by short pressing the control button, by pressing the [POWER] button on RC, or by switching over of the respective toggle switch to one of the mobile applications.

In the “Operation” mode, the device performs its basic functions, and any of the controls can change operating parameters of the device or activate additional functions (such as air heating or switching over of the shutter unit to the “Recirculation” air intake mode).

### **“Error” mode**

The “Error” mode is automatically activated by the device in case of emergency while operating. In this mode, the device is turned off and will not perform its functions. The shutter is closed (in the “Recirculation” mode), the indicator flashes red, and the control module sends an error code to all controls connected to it.

The device can be switched over to the “Standby” or “Operation” mode only after eliminating the error (see section 7.3 of this Manual).

The device can be switched over to the “Pairing” mode to connect to one of the controls and view a code of the error that has occurred, but indication of the “Pairing” mode will not be displayed.

#### **5.3.8. Completion of operation, power-on and power-off**

If it is required to turn off the device for a short period of time, put it into the “Standby” mode in any convenient way. Wait for 10 minutes to make sure that the device has not passed to the “Error” mode.



**ATTENTION!** If the device enters in the "Error" mode when switching to the "Standby" mode, turn it on and off again. If the error has not disappeared, follow the instructions in section 7.3.

If it is required to disconnect the device for a long period of time, put the device into the "Standby" mode in any convenient way. Wait for 10 minutes to make sure that the device has not passed to the "Error" mode. After that, the device can be disconnected from the power supply.

If the device has been accidentally de-energized (as a result of actuation of the protective relay of the electrical panel, an accident, or repair works on the power line, etc.), after supplying power make sure that it has passed to the 'Standby' mode. If this has not happened, put the device into the "Standby" mode on your own and turn it on again.



**ATTENTION!** If the device has remained deactivated for a long time with the shutter open at negative air temperatures outside, when activating it, the operating parameters of the device may deviate from the nominal ones and condensation may appear on the external and internal surfaces. To avoid this effect when restoring operation of the device in such conditions, the following actions are recommended:

1. Put the device into the "Standby" mode.
2. Wait for the device to warm up to the room temperature (at least for 1 hour).
3. Wipe the visible surfaces of the device with dry cloth.
4. Remove the filters and make sure that the device is free from moisture.
5. Remove moisture with the dry cloth (do not rub the surface of the heat insulation: you may damage it).
6. Install the filters on the place.
7. Put the device into the "Operation" mode.

## 6. PREPARATION FOR USE

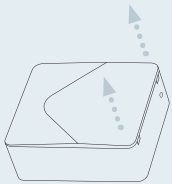
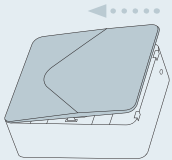
### 6.1. Unpacking, preliminary inspection and preparation for installation

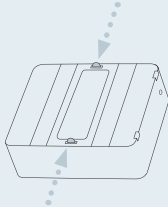
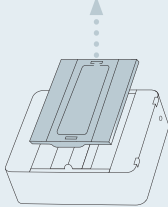
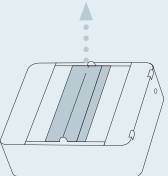
Inspect the device after transportation: take it from the shipping packaging and make sure that there are no damages. If there are damages, ask the supplier for written confirmation of the damage. After that, contact the service center of the selling company to determine a possibility of using or replacing the device.

If the device has been stored or transported at an air temperature below +10 ° C, let it stay in the packaging bag in the room for 2 hours to warm it to the room temperature. It is required for eliminating condensation, damage of plastic parts while installing and malfunction of the device.

Prepare the device for installation. For this purpose make operations described in Table 6.1.

Table 6.1 – Preparation of the device for installation

No.	Action	Image
1	Place the device on the soft, even, horizontal surface with the decorative panel facing up	
2	Disconnect the decorative panel from the device case by pulling the holders in its lower part	
3	Remove the decorative panel	

No.	Action	Image
4	Press the latches on the cover of the filter unit towards each other	
5	While holding the latches, remove the cover of the filter unit	
6	Remove a set of air filters from the device. Store them in the packaging bags up to completion of installation works.	



Please note that the device may have a characteristic plastic smell. This material has its own insignificant smell, but long-term storage of the device in the limited volume of packaging can cause its intensification. Upon completion of installation works turn on the device for 2–4 hours at a speed convenient for you to ventilate the case.

## 6.2. Installation

To use the device for its intended purpose, it is necessary to carry out work on mounting the device on the wall inside the room. To install the device, follow the instructions in this section and on the mounting template.



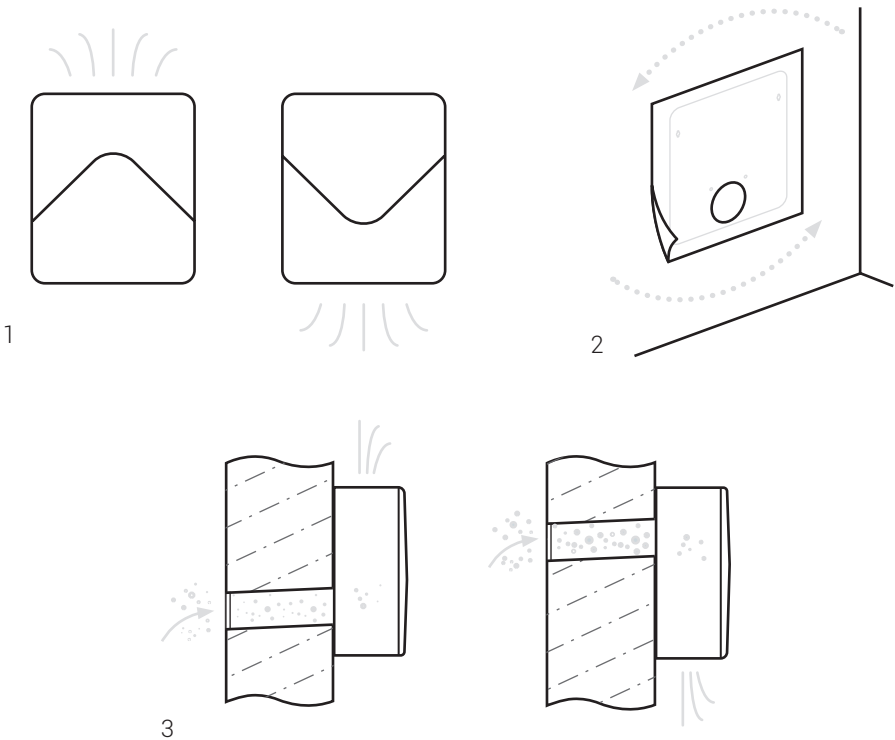
**ATTENTION!** Installation shall be carried out by qualified personnel with the use of appropriate professional equipment. The supplier company is not responsible for malfunctions and damage that could arise due to unqualified installation and / or non-compliance with the provisions of this Operating Manual.



**ATTENTION!** The right installation of the device is required both for its proper operation and for obtaining warranty service. Demand from the installer entry of all necessary installation data in the warranty card.

1. Select the intended place for mounting the device on the wall of the room using the mounting template. Make sure that it meets the following requirements:
  - all safety requirements specified in section 3 of these Operating Manual have been taken into account;
  - heating batteries, curtains, furniture and other objects are placed not closer than 5 cm from the device, will not hinder the installation and normal operation of the device
  - during operation, normal access to the device will be provided for changing in settings, control of operation parameters of the device by indication of the control button and performing maintenance;
  - the wall of the room has no deepening or bulges, and the uniform adjoining to the rear surface of the device will be ensured;
  - a vertical slope of the wall does not exceed 2° (use the builder's level or plumb if required);
  - the wall design allows drilling of the ventilation duct (consult with specialists if required);
  - in the places intended for drilling the holes and ventilation duct there are no engineering communications elements (electric wiring, heating pipes, etc.); if required, use a concealed wiring finder and / or a metal detector;
  - for electric power supply to the device, there is a possibility of connection to the network of  $230 \pm 10\% V$ , 50 Hz, designed for a load of at least 2 kW (additional devices shall not be connected to the same source).
2. Select a type of device placement based on the desired air flow direction (Fig. 6.1).





*Figure 6.1 – Selection of a type of device placement  
1 – orientation of the mounting template; 2 – possible airflow directions, frontal view of the device; 3 – possible airflow directions, side view of the device with the wall section.*

3. Tear the circle marking a ventilation duct along the perforation line. Orient the mounting template according to a selected type of placement (Fig. 6.1). Attach it to the wall and mark a place for drilling an air duct.
4. Put aside the mounting template and drill the duct in accordance with the requirements stated in Figure 6.2. To prevent the decoration from contamination while in the process, use an industrial vacuum cleaner with a water collecting ring.

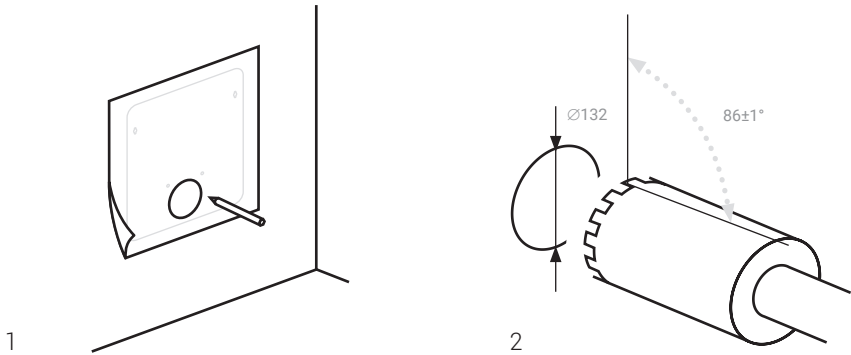


Figure 6.2 – Air duct drilling

1 – mark a place of drilling; 2 – put aside the mounting template and drill the air duct.

- Align the hole of the mounting template with the hole of the air duct (use the building level to ensure a horizontal position (Fig. 6.3, p. 1)). Mark places for four holes for dowels according to a chosen type of placement (Fig. 6.3, p. 2). Drill holes being guided by the marking.

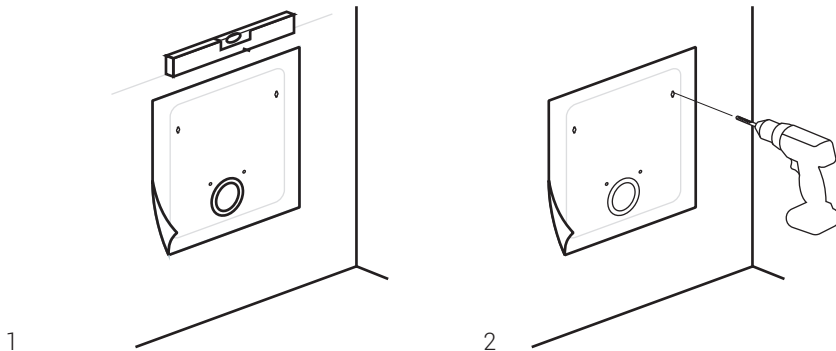


Figure 6.3 – Preparation of the place for mounting the device

1 – orientation of the mounting template; 2 – preparation of mounting holes.



A diameter of dowels making a complete set with the device makes 10 mm.

6. Install the dowels into the holes (Fig. 6.4). Install two self-tapping screws in the holes of position 1 of the mounting template according to a selected type of placement of the device.
7. Prepare insulation pipe 110/13. Cut it along the length of the air duct.
8. Install the air intake grid on the pipe and fasten it with 4 × 90 self-tapping screws (Fig. 6.5). The grid can be additionally fixed with odorless glue resistant to temperature changes.

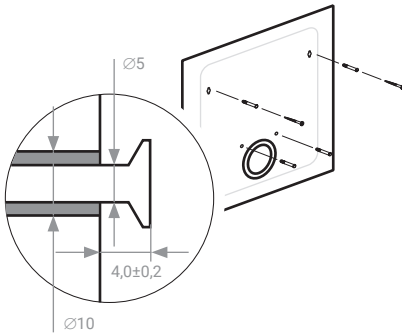


Figure 6.4 – Installation of dowels

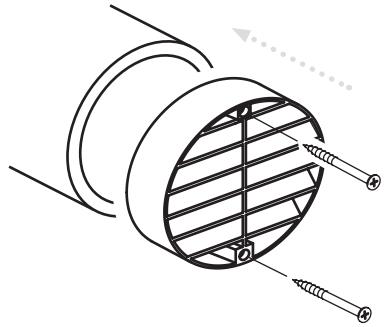


Figure 6.5 – Placement of the grid

9. Install the pipe into the air duct by orienting the grid towards the street (Fig. 6.6, p. 1). The grid lamellas shall be directed downwards. Cut the end of the pipe going into the room at the same level as the wall. Apply a continuous contour of neutral silicone sealant between the pipe and the ventilation duct from the room (Fig. 6.6, p. 2).

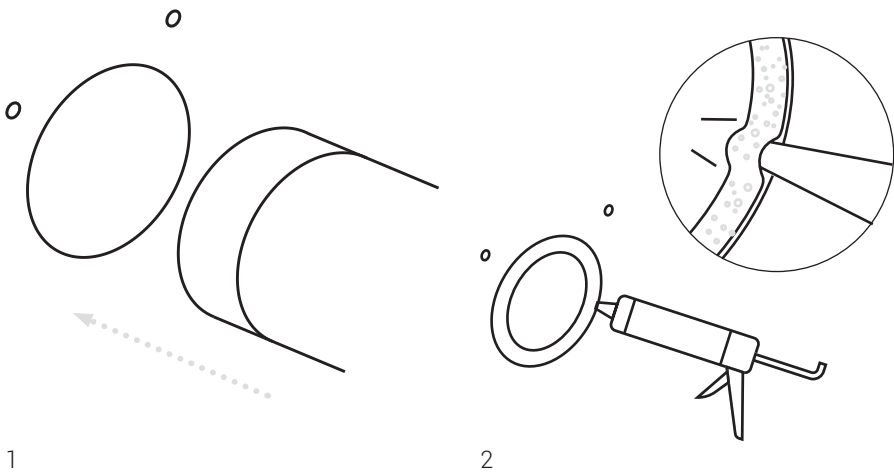
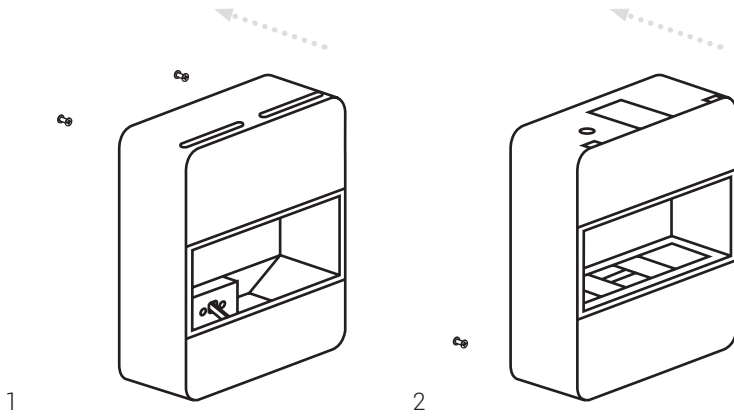


Figure 6.6 – Installation of the insulating pipe  
 1 – install the pipe;  
 2 – apply sealant by a contour.

10. Make sure that the length by which the screw caps go beyond from the wall matches the dimensions shown in Figure 6.4. Connect the power cable to the device (being in the complete set or similar by technical characteristics). Lay it to the side of power outlet location in the deepening located on the back of the device. If required, the excess cable length can be laid in the compartment in which there is a connector for its connection. Hang up the device onto the screws using the eyes in the mounting plate of the device. Push the case of the device against the wall and from top to bottom for secure fixation.



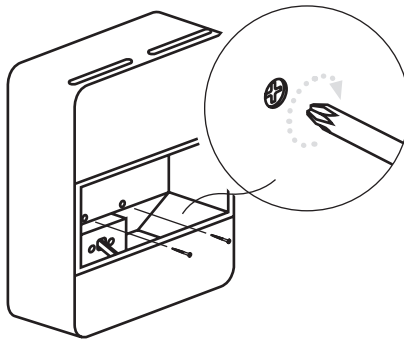
**ATTENTION!** Do not use excessive force when aligning the screws with the eyes. No effort is required when doing properly.



*Figure 6.7 – Hanging up of the device*

- 1 – installation of the device with discharge diffusers upwards;*
- 2 – installation of the device with discharge diffusers downwards*

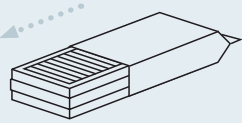
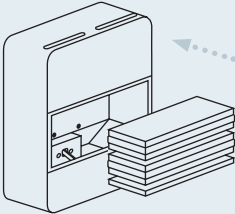
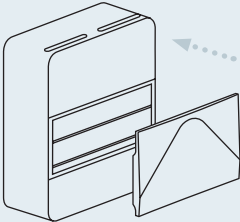
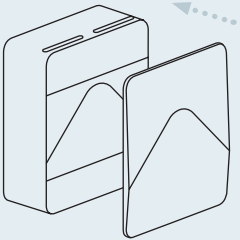
11. Install the fixing screws inside the device (Fig. 6.8). Pull the device against the wall with them, without using excessive force when tightening (material of the case shall not be pressed through)

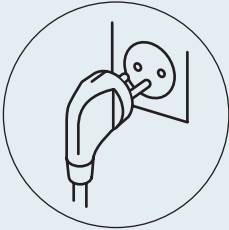



*Figure 6.8 – Fixation of the device*

Installation of the device is completed. To put the device into operation, perform the operations described in Table 6.2

Table 6.2 – Putting the device into operation

No.	Action	Image
1	Remove the filter bags from the filters.	
2	Install filters inside the device	
3	Install filters inside the device	
4	Install the decorative panel	

Nº	Action	Image
5	Connect the device to the power supply network	
6	Make sure that there is an indication on the control button	

If the device is not activated or indicates an error (the button blinks red), contact the service center to identify the cause of malfunction, putting into operation, repair or replace the device

### 6.3. Electrical connection

Before putting the device into operation, it is necessary to connect it to the power supply network. This can be done with the use of the cable with a plug or a concealed connection.

Network parameters: single-phase, 230 V, 50 Hz with protective earth. The permissible power for the selected power line is at least 2 kW, provided that no other devices are used on the same power line at the same time.

After connecting the power, the device will pass to the "Standby" mode (item 5.3.8).

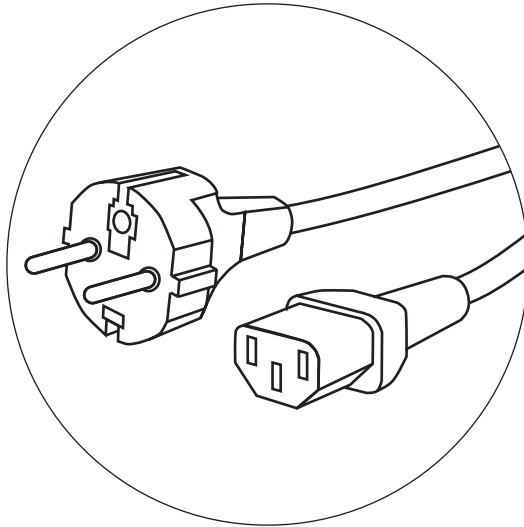
#### 6.3.1. Connection with the cable to the socket

The complete set includes a cable along with the device for connecting to the power supply network. Connect the cable connector to the mating connector on the back of the device. Connect the device to the network.

The cable that comes in the complete set with the device can be replaced with a cable

of a different length or color by observing the following requirements:

- the plug shall comply with C 4 standard according to Russian state standard GOST 7396.1-89 or international standard CEE 7/7 (Fig. 6.8),
- the cable socket shall comply with Russian state standard GOST IEC 60320-2-3-2017 C13 female (Fig. 6.8),
- three-wire cable with a cross section of each wire of at least 1 mm<sup>2</sup>.



*Figure 6.8 – Appearance of the socket and plug of the supply lead*

### **6.3.2. Concealed connection**

Concealed connection is a type of connection in which power lines are laid to the device inside walls and special building structures.

To implement the concealed connection, lay the wiring to the place of supposed installation of the device by observing the requirements of the following regulatory documents:

- all the installation works performed as regards the device shall comply with SP 76.13330.2016 "Electrical Devices",
- the installation of electrical devices shall be preceded by preparation in accordance with SNiP 21-01-97 "Fire Safety of Buildings and Structures",
- when organizing and performing the works on installation and adjusting of electrical devices, it is necessary to comply with SNiP 12-01-2004 "Organization



of Construction", SNiP 12-03-2001 "Occupational Safety in Construction", parts 1, 2.

Upon completion of installation connect the device to the power supply network.



**ATTENTION!** According to electrical safety rules, in case of concealed connection, a possibility of complete disconnection of the power supply circuit shall be provided.



**CAUTION!** In the absence of experience in performance of such works, in order to avoid electric shock and device failure, use the services of electrical engineers.

## 7. MAINTENANCE

### 7.1. General provisions

Service maintenance of the device consists in the periodic cleaning of the prefilter and base filter G4, as well as in replacing the filters as they exhaust their life. The types and frequency of service maintenance are given in Table 7.1.

*Table 7.1 – Types and frequency of service maintenance*

Filter	Cleaning	Replacement
Prefilter	Dry and wet cleaning as soon as it becomes dirty	Mechanical damage
Base filter G4	Dry or wet cleaning once every three months	Not rarer than once a year
Efficiency filter EPA E11	Not intended for cleaning	Not rarer than once a year
Adsorption-catalytic filter AK-XL	Not intended for cleaning	Not rarer than once a six months

#### **Prefilter**

The prefilter is cleaned as it becomes dirty. The prefilter can be vacuumed and rinsed with water. Dry it before installation in the device.

#### **Base filter G4**

The base filter G4 shall be changed at least once a year (depending on the operating conditions). Dispose of the used filter along with household waste.

To ensure the characteristics of the device specified in this document, it is necessary to clean G4 filter once every three months.

The G4 filter shall be cleaned with a vacuum cleaner with the soft nozzle to prevent mechanical damage to the filter material. The G4 filter can be rinsed in warm water without the use of household chemicals. After this procedure, the G4 filter shall not be squeezed out, this may result in damage to the filter material. It is forbidden to accelerate the process of drying for the G4 filter by means of drying and heating, this can lead to shrinkage of the filter material, formation of spaces between the filter and the filter tray and reduce the life of the efficiency filter EPA E11.

Do not install the wet G4 filter in the device as this can lead to the same effects that occur during the accelerated drying.

### Efficiency filter EPA E11

The efficiency filter EPA E11 shall be replaced not rarer than once a year. The filtering material cannot be cleaned. Upon expiration of its useful life, the filter shall be replaced by a new one, and the used filter shall be disposed of with household waste.



**ATTENTION!** Failure to clean or replace the filters will result in performance degradation of the device and increased noise from the fan motor. Increased load on the fan motor can lead to degraded operating characteristics of the device and its failure.

### Adsorption-catalytic filter AK-XL

The adsorption-catalytic filter AK-XL shall be replaced not rarer than once a year (depending on the operating conditions). The sorbent they contain cannot be cleaned. Upon expiration of its useful life, the filter shall be replaced by a new one, and the used filter shall be disposed of with household waste.



**ATTENTION!** Replace adsorption-catalytic filter AK-XL on timely basis if required. The sorbent they contain has a limited volume for absorption of gaseous pollutants. Upon expiration of the service life, the filter may stop absorbing them and, under the influence of the air temperature difference at the inlet of the device, it may start emitting the already absorbed ones.

To clean the visible surfaces of the device from contaminants, use soft cloth and household chemicals which are not able to react with plastic. The use of aggressive cleaners (such as acetone) can damage the structure of the plastic and damage the appearance of the device.

If you detect contamination of the internal volume of the device when replacing the filters, it can be eliminated with a soft brush and a vacuum cleaner with the soft-brushed nozzle. Do not use hard cloth and brushes for this procedure, this can damage the insulation material and cause its gradual destruction. Do not use a vacuum cleaner without a nozzle to clean the internal volume of the device – you may damage material of the case. If you have performed wet cleaning inside the device, do not install filters until it completely dries out.

## 7.2. Procedure for filter removal and installation

Filters shall be removed for their cleaning and replacement within service maintenance of the device.

Before replacing the filters, perform the following operations:

1. Put the device into the "Standby" mode.
2. Remove the decorative panel.

### Prefilter

To clean the prefilter, remove the prefilter frame from the device. Take out the prefilter from the frame by pressing it a bit. Clean the prefilter; if required, you can wash the grid of the prefilter frame. Dry the prefilter and put it back into the frame. Install the frame with the prefilter in the device case.

### G4 primary filter

To clean or replace the G4 filter, remove the filter unit cover. Prepare a surface to put a dirty filter (for example, a few paper towels). Remove the efficiency filter EPA E11 along with the base filter G4 holder. Place them on a prepared surface. Clean or replace the G4 filter.

Installation of the base filter G4 is only possible with the efficiency filter EPA E11.

Dispose of the used G4 filter with household waste.

### Efficiency filter EPA E11

To replace the efficiency filter EPA E11, remove the cover of the filter unit. Prepare a surface to put a dirty filter (for example, a few paper towels). Take out the efficiency filter EPA E11 along with the base filter G4 holder. Place them on the prepared surface.

Dispose of used efficiency filter EPA E11 with household waste.

Installation of the efficiency filter EPA E11 is only possible with the base filter G4.

### AK-XL adsorption-catalytic filter

To replace the adsorption-catalytic filter AK-XL remove the cover of the filter unit. Dispose of the used filter along with household waste. Install a new filter in the device.

After replacing the filters, install the cover of the filter unit and decorative panel. The device is ready for use.

## 7.3. Troubleshooting

In case of emergency, the device will send an error code to all control devices connected to it (Fig. 7.1). The button indicator on the bottom panel of the device will blink red.

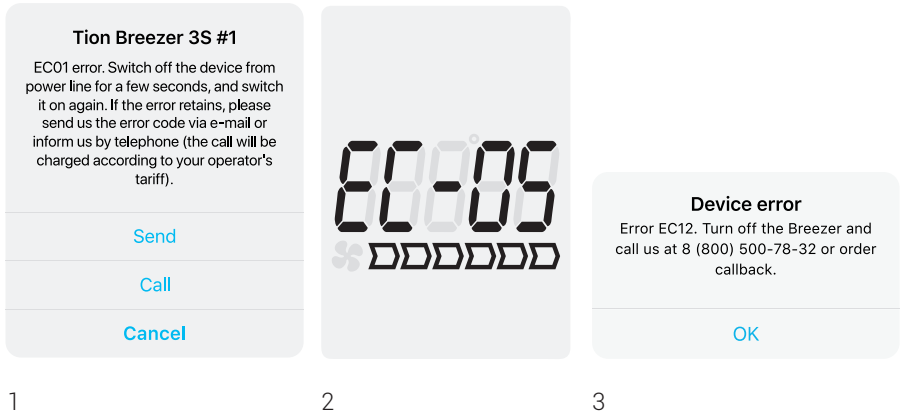


Figure 7.1 – Error indication samples  
1 – in Tion Remote mobile application; 2 – on LCD of the control console;  
3 – in MagicAir mobile application.

Possible error codes, causes and remedies are given in Table 7.2.

Table 7.2 – Possible error codes and remedies

Error code and description	Possible cause	Remedies
<b>EC 01</b> Air temperature at the inlet of the device is higher than the maximum allowable	Actual air temperature at the inlet of the device is higher than the maximum allowable <sup>18</sup>	Wait until air temperature drops to the values that correspond to the operating conditions of the device.
		Change the location or installation method of the device (in case of air intake from under the ventilated facade)
	Error in operation of electronic equipment	If outdoor temperature meets the operating conditions, put the device into "Standby" mode and disconnect from the power supply network for 5 min.
	Defective thermal sensor	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
Defective control board		
<b>EC 02</b> Air temperature at the inlet of the device is below the minimum allowable	Actual inlet air temperature is below the minimum allowable	Wait until air temperature increases to the value meeting the operating conditions of the device
	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Defective thermal sensor	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective control board	

<sup>18</sup> Air temperature under the ventilated facade of the building can be significantly higher than the outdoor temperature. If the building is faced with a ventilated facade and air intake by the device is carried out from under it, it is recommended to take the air duct beyond the ventilated facade or to change the place of installation of the device.

Error code and description	Possible cause	Remedies
<p><b>EC 03</b> Air temperature at the outlet of the device is higher than the maximum allowable</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	One of the thermal sensors is defective	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center
	Defective connection of one of the thermal sensors to the control board	
	Defective control board	
<p><b>EC 04</b> The heater does not provide air heating up to 0 °C</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	One of the thermal sensors is defective	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective connection of one of the thermal sensors to the control board	
	Defective control board	

Error code and description	Possible cause	Remedies
<p><b>EC 05</b> The shutter has passed to neither extreme position</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Foreign objects in the air duct or cavity of the device	Take out filters of the device. Clean the air duct or cavity of the device from foreign objects. Install the filters, a cover of the filter unit and a decorative panel
	One of the limit switches of the shutter	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center
	No connection of limit switches to the control board	
	No power supply of the motor of the shutter unit	
<p><b>EC 06</b> Control board overcooling</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Defective thermal sensor of the control board	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective heat insulation inside the device	
<p><b>EC 07, EC 09</b> Failure in the circuit of one of the temperature sensors</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Failure in the thermal sensor circuit	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.



Error code and description	Possible cause	Remedies
<p><b>EC 08, EC 10</b> Failure in the circuit of the incoming air temperature sensor</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Failure in the thermal sensor circuit	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
<p><b>EC 11</b> No connection between the power board and control board</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	No contact between the connectors of the loop and one of the board	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective control board	
	Defective power board	
<p><b>EC 12</b> The shutter unit has not passed to the "Inflow" mode from the "Recirculation" mode</p> <p>or</p> <p><b>EC 13</b> The shutter unit has not passed to the "Recirculation" mode from the "Inflow" mode</p>	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Foreign objects in the air duct or cavity of the device	Take out filters of the device. Clean the air duct or cavity of the device from foreign objects. Install the filters, a cover of the filter unit and a decorative panel
	One of the limit switches of the shutter is defective	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center
	No connection of limit switches with the control board	
	No power supply of the motor of the shutter unit	

Error code and description	Possible cause	Remedies
<b>EC 14</b> Power board overcooling	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Defective thermal sensor of the power board	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective heat insulation inside the device	
<b>EC 15</b> Power board overheating	Error in operation of electronic equipment	Put the device into the "Standby" mode and disconnect from the power supply network for 5 min.
	Defective thermal sensor of the power board	If you cannot eliminate the error on your own, contact the service center of the selling company or the nearest authorized service center.
	Defective power board	



**ATTENTION!** If power-off of the device and further power-on leads to the reset, contact your service center.

## 8. STORAGE, TRANSPORTATION AND DECOMMISSIONING

Before being decommissioned, the device and all items from the package contents should be stored and transported in the factory packaging. Storage conditions:

- air temperature: -25°C min, +50°C max;
- relative air humidity: 80% max;
- no possibility of packing being exposed to direct sunlight;
- distance away from heaters and other sources of heat: at least 1 m;
- no substances and materials with intense adverse odors present in the premises.

The shelf life of the device is at least 2 years provided the above requirements are met.

During transportation, the device should be protected against sharp shocks, falls and the impact of climatic factors.

Upon expiration of the planned service life, please discontinue using the device and contact the Vendor's Service Center regarding further operation of the device or its disposal.

The device may not be disposed of as common waste, but must be taken to an appropriate disposal site for electric and electronic equipment for subsequent recycling or disposal according to federal or local legislation. Most of the elements used in the device are marked with an appropriate recycling code and are subject to recycling. Proper disposal of this product will help protect the environment and avoid any damage to the surroundings or human health, which may be caused by inappropriate handling. Detailed information about disposal sites for this product can be obtained from local authorities or sanitation enterprises.

## 9. WARRANTY

Tion Smart microclimate JSC expresses gratitude for your choice.

Tion Smart microclimate JSC establishes the fixed 5-year service life for the device, in case of observing the installation and operation conditions set forth in this document.

Tion Smart microclimate JSC establishes a 2-year warranty period<sup>19</sup> for the operation of the device. These periods are valid in case of observance of the installation and operation rules set forth in this document.

Before using the device, read thoroughly the Operating Manual, warranty conditions, as well as completeness and appearance of the device.

All claims as regards appearance and completeness of the device shall be presented to the seller when purchasing.

In case of damage to the packaging during the transportation, unpack immediately the device and check for visual defects. Damage to the device shall be confirmed in writing by the carrier, otherwise compensation claims may not be satisfied.

### Warranty conditions

In order to quickly enable the seller to fulfill his warranty obligations, the buyer shall present either a completed warranty card, or a sales receipt or a cash receipt, or another document certifying the fact and date of purchase of the device.

- If it is impossible to establish the date of transfer of the device to the buyer, the warranty period is calculated from the date of manufacture of the device.
- Warranty maintenance includes performance of works and services by the maintenance service in the service center or at the location of the device with the buyer (at the discretion of the maintenance service). If the Buyer does not agree to carry out warranty service at the location of the device, it is carried out in the service center.
- The warranty does not cover scheduled maintenance related to replacement of filters, as well as to the cases of using the device not in accordance with the requirements given in this Operating Manual.

### Warranty is not provided in the following cases:

- there are traces of self-installation, repair, disinstallation, installation, modification or repair of the device not at the authorized service centers;
- it is impossible to identify the date of manufacture / sale of the device as a result of absence, destruction or damage of identification information;
- the device has been damaged as a result of events or as a result of actions of third parties that the seller (manufacturer) cannot influence, including: natural disasters, actions of utility service providers (including voltage jumps) and others;

<sup>19</sup> Unless otherwise provided by the legislation of the country in which the warranty is performed.

- there are mechanical damages on the device (chips, cracks, etc.) that have appeared as a result of exposure to excessive force, chemically aggressive substances, or temperatures exceeding the permissible values that entailed malfunction of the device;
- malfunction has occurred while connecting the device to the electric network in violation of the rules set forth in this document;
- malfunction and defects have appeared as a result of ingress into the device of foreign objects, liquids, insects and their waste products, etc. ;
- storage and transportation rules of the device set forth in this document have been violated.

**Dear Customers!**

As regards issues related to the fulfillment of warranty obligations, please contact the company in which the device has been purchased.

**Tion maintenance service contacts**

e-mail: [global@tion.ru](mailto:global@tion.ru)



[tion.global](http://tion.global)

## ACCEPTANCE CERTIFICATE

Supply Air Purifier Tion Breezer 3S has been recognized as fitting for operation.

Manufacturing date \_\_\_\_\_

QC stamp



Tion Smart microclimate JSC  
20, Inzhenernaya str., Novosibirsk, 630090, Russia  
e-mail: [global@tion.ru](mailto:global@tion.ru)  
[tion.global](http://tion.global)