

AIO

OZONE GENERATOR



Instruction of use

Model: CM1-AIO

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Trade name of the device: AIO

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NOTE

DO NOT OPEN! ELECTRIC SHOCK HAZARD!

WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE THE HOUSING. NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

1. Introduction

AIO is a modern device designed to purify air and water. Ozone has disinfecting properties. It kills bacteria, viruses, fungi, allergens, mites and unpleasant odors. One device can provide a whole new dimension of comfort in your interior.

It is a portable device with 3 options:

- Aromatherapy
- Ionization
- Ozonation

What's more, you can also use it as ultrasonic humidifier.

Thanks to this device you can ozonate air and water, ionize the air, use a humidifier or add your favorite oils and enjoy aroma therapy.

1.1. Ozonation- AIR

Ozone treatment, so called ozonation, is a method of disinfection without chemicals where the biocidal factor is ozone, a gas with strong oxidizing properties. Ozone treatment is an ideal way anywhere in the immediate human environment is required for microbiological purity and sterility and to obtain an environment free from undesirable odors and various pathogens.

Ozonation is an excellent and environmentally friendly method that not only sterilize areas where you are but will let you get rid of any unwanted odors from your surroundings. Ozonation is a safe method, and its main advantage is physical removal of all odors rather than masking them.

1.2. Ozonation - WATER

Ozonation is a chemical water treatment technique based on the infusion of ozone into water. Ozone is a gas composed of three oxygen atoms (O₃), which is one of the most powerful oxidants. Ozonation is a type of advanced oxidation process, involving the production of very reactive oxygen species able to attack a wide range of organic compounds and all microorganisms. The treatment of water with ozone has a wide range of applications, because:

- Rapidly reacts with bacteria, viruses and protozoa over a wide pH range
- Stronger germicidal properties than chlorination
- No chemicals are added to water
- Also efficient for organics degradation and inorganics removal
- Removes colour, taste and odour

1.3. Ionization

Ionizer uses an electrostatic charge to remove airborne pollutants, allergens, and other unwanted particles from the atmosphere in your home. It releases negatively charged ions into the air, which attract positively charged ions, such as dust and allergens, and then bind together with them.

Because the ions have bonded together, this makes the troublesome particles much heavier than they were before. As a result, these over-weighted particles are no longer light enough to stay airborne and drop to the ground. Once they have landed on the floor, they are much less likely to be inhaled and can be easily vacuumed up.

1.4 Aromatherapy

Diffusers are a great way to get your home smelling absolutely lovely, with the added benefit of promoting quality air to help you breathe easy on those dry days. That's because diffusers release beneficial essential oils into the air. Essential oils are believed to have antiviral, antifungal, and antioxidant properties. They are released into the air through a diffuser as aromatherapy and can help people relax and feel less stressed and anxious and may aid in strengthening the immune system. By distributing these essential oils into the air, diffusers can even help alleviate sinus and allergy symptoms.

The essential oils which may be used in this device must be water-soluble . Avoid using high concentrations of essential oils, only a few drops of water-soluble oils, hydroalcoholic odours or water-soluble perfumes. After pouring the fragrance, gently stir and activate the humidifier.

1.5 Ultrasonic Humidification

Humidifiers are used to increase moisture in the air. They're useful for helping you breathe better, relieving dry skin, and ameliorating cold symptoms by reducing dryness and irritation of the nose and throat. Humidifiers release humid air into your home, which may also help kill

the flu virus. As an added benefit, humidifiers can even help lessen snoring because the moisture they provide keeps the throat from drying out.

An ultrasonic humidifier is one that uses high-frequency sound vibrations to produce an extra fine water mist that is then expelled to add moisture to the room. The ultrasonic generally has no filter factored into its design. That does save operation costs.

2. Packing List

The package includes	
Name	Pieces
Device	1
Cable with power supply	1
Silicone Hose	1
Air bubble stone	2
Aluminium box	1
Instruction of use	1

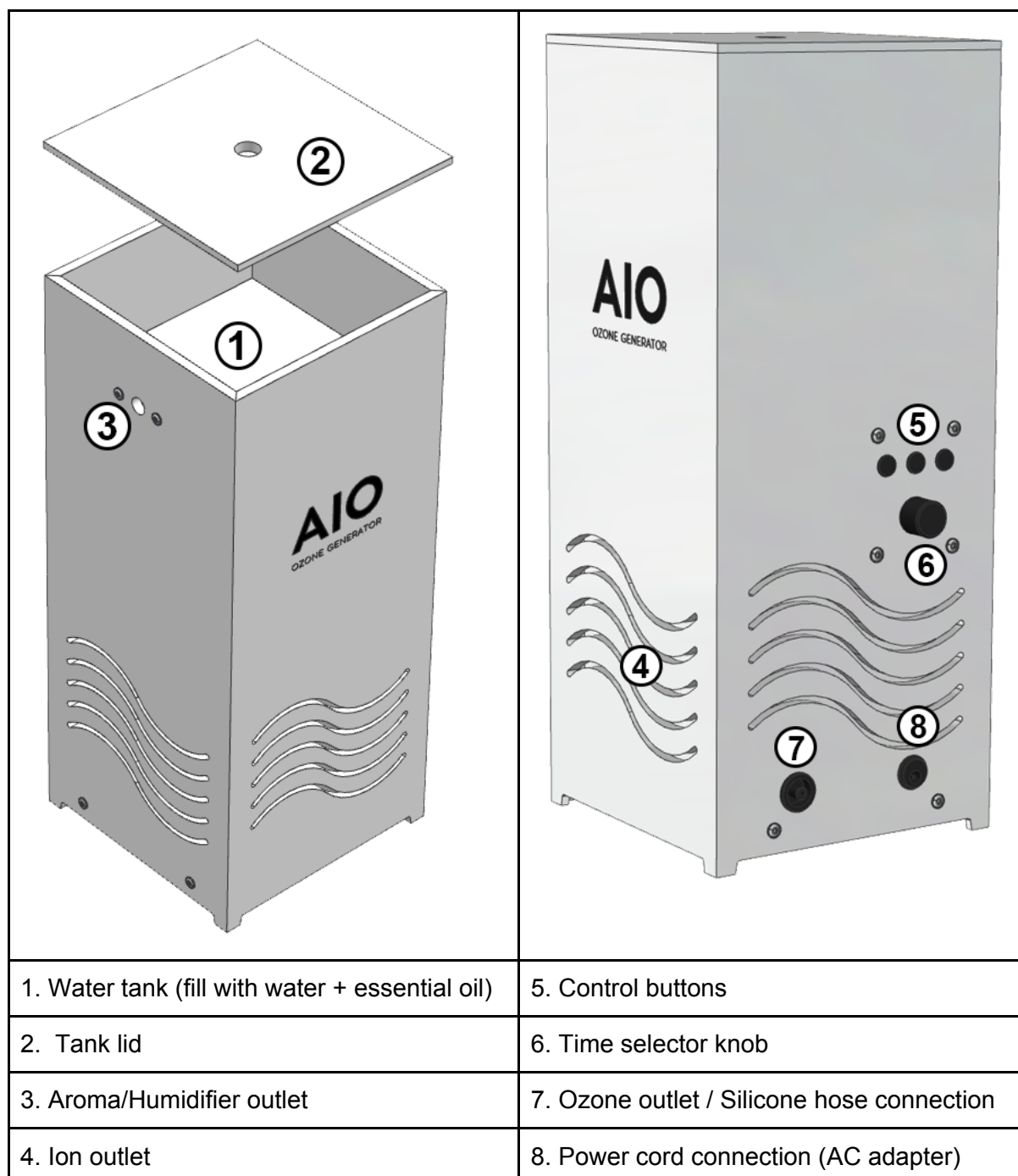
3. Technical Parameters

General Specification	
Model No.	CM1-AIO
Input	12V 30W
Ozone Output	1000 mg/h
Working Time (ozone)	5 min - 2h
Dimensions	15cm x 36cm x 15cm
Weight	3,5 kg
AC Adapter	12V 60W

4. Installation & Settings

4.1 Device Installation

Check pictures below and see how to connect all accessories and prepare a device to work.



4.2 How to set a device?

Plug the cable into the socket. The device will start working.

1. Activating of selected modes:

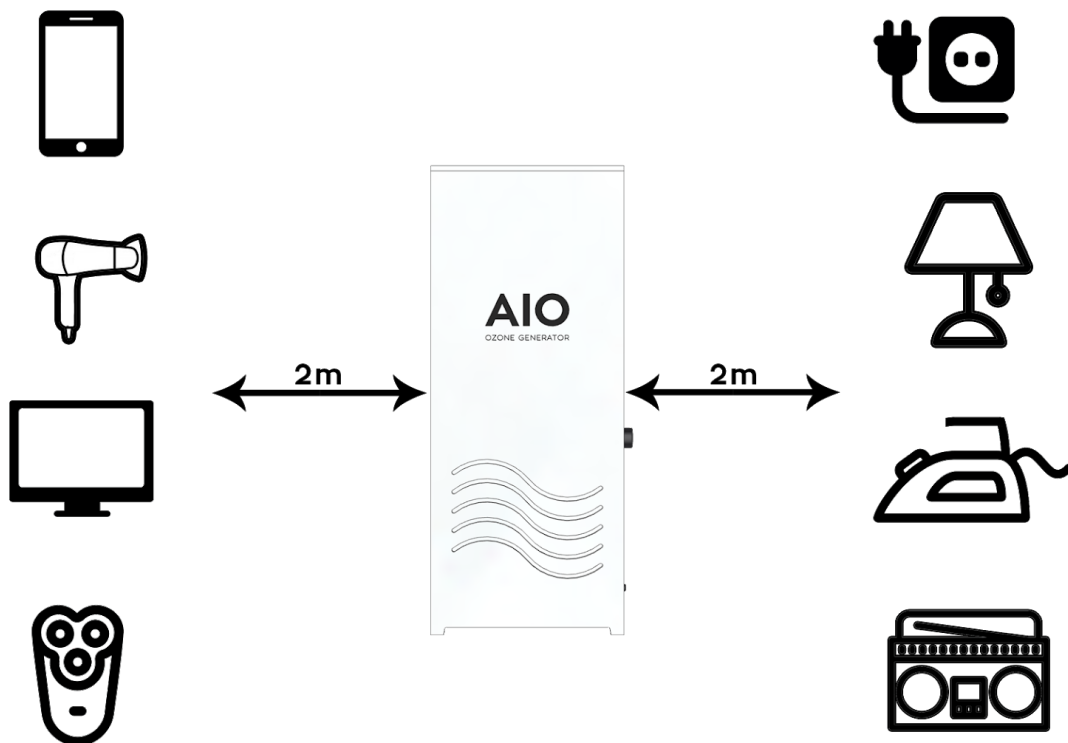
- **Ionization:** Button for activating the negative ion generation mode (ION ON / OFF)
- **Aromatherapy / Humidifier:** Button for activation aromatherapy mode (AROMA ON / OFF)
- **Ozonation:** Button for activation ozone mode (OZONE ON / OFF)

NOTE: If you want to activate Aromatherapy, add few drops of essential oil to the water.

- Ask distributor what essential oils you can use with a device. Some essential substances can cause corrosion of the system.

- Do not exceed the amount of essences recommended by the manufacturer, as the ultrasonic function may not be performed properly.

- Keep the device away from electrical devices. Remember that aromatherapy produces water fog. Place the device at least 2 meters from the other objects which are not waterproof.



Remember: Fill the water tank at the top of the device before start. Turning on Aromatherapy without water in the tank is prohibited.

The warranty does not cover repair of defects resulting from improper use of the device.

NOTE: Ozonation and Aromatherapy modes are mutually exclusive - switching on one turns off the other.

2. Ozonation mode - time settings:
 - Single mode: short press of the button

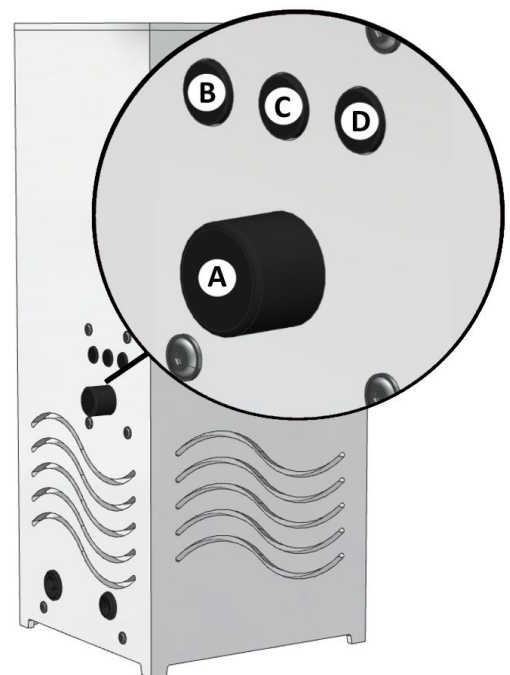
In "Single mode" you can set the time of ozonation from 5 min to 2 hours.

3. Ozonation time controller:
 - The settings are divided into 8 steps:
5min - 10min - 15min - 30min - 45min - 1h - 1,5h - 2h
4. Color signaling modes (LEDs above the buttons):
 - Ionization mode: Green - active
 - Ozonation mode: Red - active
 - Aromatherapy mode: Green - active

4.3 Control buttons

4.3.1 DESCRIPTION OF CONTROL ELEMENTS

- A. Time selector knob (rotary switch)
- B. Negative Ion generator button
- C. Ozone generator button
- D. Aromatherapy button



4.3.2 DESCRIPTION OF FUNCTIONS

1. Standard Ionization

User can enable or disable the negative ion generator by pressing the ION button (B). Single press enables the ion generator, second press disables it. When the generator is working there is a green LED above the button.

NOTE: The ionization system makes a better cleaning of the air, since all the air that passes through the device will be treated directly, but you have to take into account:

- Ionization, produces a small carbon, the result of the destruction of particles that are electrified by high frequency, so clean the area of entry and exit of air.
- Do not place the device near areas that could be highly flammable, since thousands of small micro sparks are produced inside the machine.

- Do not stick the air inlet or outlet to the wall and avoid obstructing them.

2. Standard aromatherapy

User can enable or disable the aromatherapy / vaporizer by pressing the Aromatherapy button (D). Single press enables the aromatherapy module, second press disables it. When the aromatherapy is working there is a green LED above the button.

NOTE: Follow the instructions for starting and using essential oils described in section 4.2

3. Ozonation

Ozone generator has 4 working modes, enabled by buttons.

The time selector knob (A) has 8 positions which can be selected by turning the knob.

Selected position is indicated by a little mark on the knob itself.

Available time settings are: 5 minutes, 10 minutes, 15 minutes, 30 minutes, 1 hour, 1,5 hour, 2 hours and constant.

NOTE: Ozone in high concentrations may be harmful, although it is not considered a carcinogen or highly dangerous element, if it can be irritating to the respiratory tract with misuse.

For this reason, follow the recommended instructions carefully:

- SEE instructions in section 7

- The night mode will be used for intense cleaning of those rooms, halls or instances, without the presence of people or animals.

- Once the configured program has been completed, you will have to wait minimum 30 minutes to be able to access the worked area normally.

- You should not program the continuous mode if you cannot supervise the device.

- If you program continuous mode and you sense ozone outside the room where the device is operating, ventilate the room and turn off the device.

4.3.3 HOW TO SET A TIME OF OZONATION?

For a **fast intense cleaning** we need to generate 1 ppm of ozone so we will make the following calculation:

$(M3 \text{ of our room}) \times 0,321 = \text{Min. working time}$

Example:

For a 30 m² room with a height of 2.5 meters would be:

$(30 \times 2,5) \times 0,321 = 24,0 \text{ min.}$ - so we will program the machine to maximum 30 minutes.

For an **intensive deep cleaning** we need to generate at least 5 ppm of ozone so we will make the following calculation:

$(M3 \text{ of our room}) \times 1,605 = \text{Min. Working time}$

Example:

For a 30 m² room with a height of 2.5 meters would be:

$(30 \times 2,5) \times 1,605 = 120,3$ min. so we will program the device to 2 hours.

NOTE: *this rule is not exact, as it will depend on the temperature, air pressure, room layout, air flow zones, additional air conditioning systems, etc.*

a) Single ozonation of air / water / item

By quickly pressing the Ozone button (C) user enables the single ozonation mode. Generator is working for the selected time and then switches off.

Mode can be used for air, water or item ozonation.

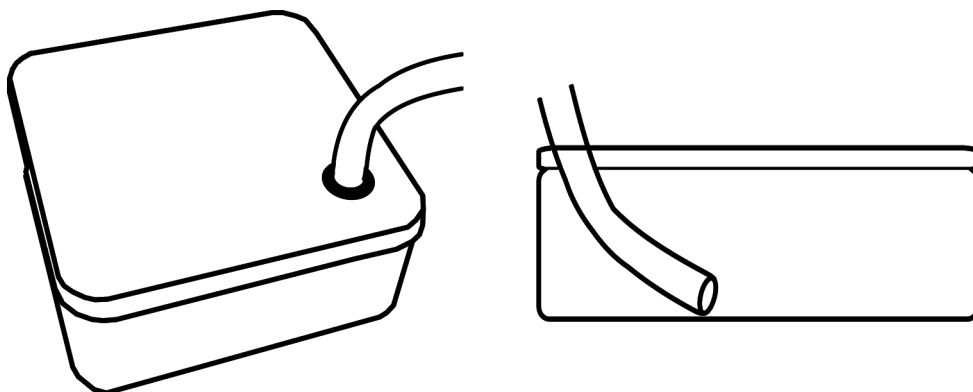
When the generator is working there is a RED led above the button, when it is in standby (selected time has passed) RED led is off, GREEN led is on.

NOTE: *See some of the recommended applications in Section 8.*

- *When using the water ozone function, connect the hose to the air bubble stone.*
- *Put a silicone hose with an air bubble stone into the water container and then activate the "ozone" function on the device.*
- *Silicone is resistant to the destructive effects of the sun, ozone and gases in the atmosphere. If you lose your hose or want to buy a new one, remember to choose a 100% silicone hose without plastic.*

ITEM OZONATION

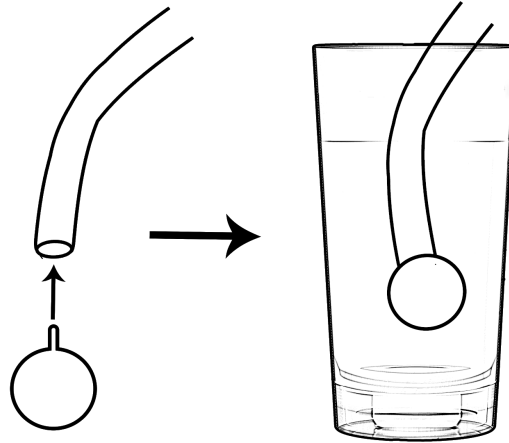
Put the items in the aluminium box. You can ozone scissors, combs, masks or other small items. Then connect one side of silicone hose to the device (see Device Installation 4.1) and place the other side of the hose into aluminium box. See below how the hose should be inserted.



NOTE: *Electrical items like phone or smartwatch etc. should not be ozonated because ozone may affect their condition. The manufacturer is not responsible for items and equipment that have been ozonized despite the recommendations in the instructions.*

WATER OZONATION

Connect Air bubble stone with silicone hose (see picture below). Fill a glass, jug or bowl with water. Fill it with at least 3/4 of the contents. (Make sure that the water does not spill outside when ozonizing). Insert the silicone hose with the air bubble stone into the vessel with water as shown in the picture below.



Up to 10l of water, the ozonation time is 10min.

The half-life of ozone in water is 30 minutes at 20°C to, and a few minutes at 50°C. So, after 2 hours, the ozone almost completely returns to natural oxygen, and until then it acts as a powerful sterilizer and oxidizer.

After 20 minutes from the end of the ozone process the water can be used for drinking, cooking, rinsing or brushing teeth.

5. Safety Regulations

WARNING! BEFORE STARTING THE OZONATOR PLEASE READ ALL INFORMATION BELOW. REMEMBER THAT OZONE IS HARMFUL TO HUMANS, PLANTS OR ANIMALS. DURING THE PROCESS YOU SHOULD NOT REMAIN IN THE VICINITY OF THE DEVICE

5.1. Basic Information

ppm (one part per million)

1% = 10,000 ppm

1 ppm = 2,14 mg O₃/m³

Half-life of approx. 20-30 min

Ozone is almost twice as heavy as air.

NOTE: Ozone is harmful to humans, animals and plants.

Standards:

0.1 ppm - 8 hours

0.3 ppm - 15 minutes

REMEMBER: Use full mask with filter NO (blue)

5.2. Symptoms of ozone poisoning




- Headache
- Caugh
- Eye Irritation

In case of any symptoms, you need immediately step outside for fresh air

5.3. Safety notes

1. Disconnect the power when in maintenance or repairing.
2. When used to sterilize water, unit shall be above water surface to avoid water flow in.
3. Please do not use in high temperature environment (above 42°C) or places with high humidity or high oil content. These environments the ozone function may reduce the effect or shorten the usage life.
4. Never throw or cause any impact on the unit. Never block the air outlet to affect the air ventilation.
5. Do not contact your eyes or respiratory system with the air outlet to avoid uncomfortable feeling.
6. When this unit is used in a non-ventilated room to sterilize the air, please leave the room for 30 to 40 minutes.

5.4 Label description

Pictogram	Standard No.	Symbol meaning
	IEC 60417	Identifies electrical equipment designed for indoor use.
	ISO 15223-1	Indicates the need for the user to consult the instructions for use.
	EN 50419	Indicates a product should not be disposed of in a landfill.

6. Troubleshooting

Dear customer: When you meet any problems, please try to solve them as suggested below

Defect	Analysis	Solution
No air come out from the air bubble stone	Check silicone hose for leakage or folds	Smooth the hose or change a new one
	Check whether air bubble stone is blocked	Change to a new one
Air flows out but no ozone	Ozone generator fails to work	Contact the manufacturer or representative
Strange noises while working	Not enough water	During water ozonation: Ozone can be easier to resolve in water when water depth range is between 20 cm and 40 cm. It can have a better sterilizing effect.
	Resonance with the desk	Place a stable desk

7. Ozonation process

BEFORE STARTING THE OZONATION PLEASE READ ALL INFORMATION BELOW.

7.1 Room preparation before ozonation

- Locate and dispose of source of the problem
- Take any animals or plants out of the room
- Make sure the room is hermetic (e.g. ventilation vents, doors etc.)
- Take out any works of art.
- Any valuable things can be protected with a stretch foil (e. g. RTV equipment)

7.2 Setting up the device

During the ozonation process the device should be placed at a higher level (not on the floor, ozone is heavier than air) To better spread the ozone we can use additional fans. Leave the room and make sure that nobody enters during the ozonation process.

7.3 Process Monitoring

It is recommended to regularly check if the working area stays hermetic, the ozone should not diffuse to any outside places like a staircase.

7.4 Finishing the Ozonation

After the generator turns off, wait 30 minutes in order to utilize the prepared ozone. If the space will be used after the process, ventilate the room for around 15 to 20 minutes until the ozone concentration is safe (0.1ppm).

7.5 General Tips

Any large volume room can be divided into smaller ones using a foil. In this case the smaller spaces can be ozonated one by one. The perceptible smell of ozone does not indicate its presence. The mist which can be noticed after the process is a natural occurrence caused by ozone reaction with volatile organic substances.

7.6 “How long should the process last?”

There is no set rule for how long the ozonator should work. The recommended time is between 15 minutes and 2 hours depending on the type of bad smell in the room. Easy to neutralise smells include: cigarette smoke, burned food or other smells coming through the airflow. Among the harder ones are urine, spilled substances and other smells originating from liquids that sunk into the floor or walls.

7.7 Mold removal

At first remove the source of the problem, ozone doesn't rid of the mold inside the walls, only purifies the surface. The infected area should be drenched with the anti-mold liquid. After the chemical procedure the ozonation can be carried out in order to eliminate the spores from the air and neutralize the bad smell.

7.8 Warnings

- The Ozonation mode should not be used by people with odor disorders
- There should be unoccupied space left around the device during the ozonation.
- Do NOT check the ozone generation by smelling the air directly from the outlet
- Short-term high concentration ozone inhalation as well as long-term ozone intake can cause serious negative physiological effects.
- DO NOT inhale the ozone directly from the device.

8. Other uses

Application	Time	Effects
Vegetables & Fruits	10-20 min	It kills viruses, removes fertilizer residues, prevents chronic poisoning and extends food storage time.
Skin and beauty protection	20-30 min	Ozonated water can remove bacteria inside the pores and promote metabolism. It can also help with removing cosmetics debris
Hands and feet	20-30 min	It kills bacteria and epiphytes. It allows you to keep hands clean, sterile and protect against infection.
Clothes & Uniforms	5-10 min	Ozonated water can effectively deodorize fabrics and

		kill bacteria.
Teeth	10-15 min	Ozonated water kills bacteria in the mouth. It reduces odor (especially in smokers). Effectively reduces pain when brushing your teeth and helps with teeth, mouth and throat healing.
Items	10-15 min	Cleans and sterilizes tools, items etc.

You can ozone oils in the same way as water, but keep in mind that ozone in oils takes longer to be eliminated, if you want to keep the ozone longer active in the product, keep the product in the refrigerator. Depending on the amount of ozone added to the oil, it can last up to 12 hours before it becomes oxygen, and up to 2 hours in water.

Always use a different air bubble stone to ozonate water and to ozonate other types of products such as creams, hygiene products, etc., to avoid cross-contamination of chemical compounds.

Before ozonating creams or other similar topical compounds, make a previous test, because in many cases the density of the product or its chemical structure makes the ozonation incompatible. Some creams when ozonized acquire new properties but may lose others, such as its aroma, molecular structure, etc.

It is suggested to use the cream immediately after finishing the ozonation process. In this way, the ozone will have a disinfectant and primer effect on the skin. But do not let the cream rest after ozonification, because it can change its active principle, depending on its composition.

9. General conditions

9.1 Warranty

The manufacturer provides a 24-month warranty period for Ozone generator AIO. The warranty period is counted from the date of sale.

The warranty consists in repairing the device or replacing parts by an authorised service centre or manufacturer.

The warranty covers production defects of the device that prevent proper use. It covers defects occurring due to causes inherent in the product or hidden manufacturing defects.

The conditions for the use of warranty rights are primarily:

- 1) proper use
- 2) proceeding according to the Instruction of use.
- 3) proper maintenance of the device

The warranty covers only the device used in accordance with its destination, i.e. in accordance with all conditions, i.e. properly installed, used, and maintained in accordance with the instruction manual observing the proper wiring and using according to identified electric values, scope of operation, and environmental conditions.

CM International S.A. is not liable for indirect and incidental damages, including loss of profits, damage to property, and other unspecified items.

Warranty exclusions

The warranty does not cover consumables.

The warranty also does not cover:

- 1) damages resulting from random events (electrical damage, fire, flooding, flood, etc.),
- 2) mechanical damage caused during the use of the device,
- 3) damages resulting from installation and operation of the device in conditions or in a manner inconsistent with the manufacturer's specification, abuse or damage caused by user's fault,
- 4) modification or service by a company that is not an authorised repair service partner of CM International S.A., using spare parts not provided by CM International S.A.
- 5) damage resulting from the use of consumables not recommended by the manufacturer,

The buyer is obliged to deliver the complete product along with the accessories to the official distributor or directly to the manufacturer's premises, stating the reason for the complaint.

After delivery of the device, the product will be carefully verified by the manufacturer in terms of proper use of the ozone generator.

By considering a complaint, we refer to notifying the customer electronically about the decision of CM International S.A. regarding the complaint.

If the device is not considered defective or does not meet the warranty conditions, CM International S.A. may charge the Customer with the cost of spare parts, shipment, diagnostic tests or service.

9.2 Repair services

All repair services should be carried out by qualified repair service personnel authorised by the manufacturer or directly by CM International S.A. once a year.

The authorised repair service is provided by exclusive distributor.

9.3 Contact

Manufacturer:

CM International S.A.
ul. Polna 24i, 51-361 Wilczyce
info@cmisa.eu, www.cmisa.eu
+48 881 337 882

Distributor:

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