OZONE GENERATOR

USER MANUALS



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1 Safety Information

Definitions of warning words and symbols

The safety information in the manual is very important to avoid personal injury, damage to the instrument, malfunctions or incorrect results due to failure to comply with them. Read this manual carefully in its entirety and make sure you familiarize yourself with the tool before putting it into operation and starting to work with it.

This manual must be kept in the vicinity of the instrument, so that the operator can consult it if necessary.

Safety provisions are indicated with warning terms or symbols.

1.1 Warning definition:

CAUTION	for a dangerous situation that could lead to minor or moderate injuries, serious injuries or death if not avoided.
NOTICE	for important product information.
WARNING	for product recommendations.

1.2 Warning symbols:



Caution

This symbol indicates a potential risk and warns you to proceed with caution.



Notice

This symbol draws attention to possible damage to the instrument or instrumental parts.



Warning

This symbol recommends avoiding contact with water

2 OZONE Sanitation

Ozone (O3), one of the most powerful bactericides found in nature. More effective than Chlorine, it acts on bacteria, fungi and molds by modifying the permeability of the cell wall, thus causing its death in a few minutes. It is also extremely effective against the viruses to which it disturbs their reproductive cycle.

In its gaseous form it allows to reach even the most inaccessible ravines, allowing meticulous sanitation in any environment.

Ozone sanitation furnishings, all surfaces, eliminates any odor, penetrates fabrics, ventilation channels and in all those places that are difficult to reach by other products. It acts quickly, completely ecologically and turns back into oxygen when it decomposes, leaving no trace or chemical residue.

3 Health and safety risks 

Ozone is a powerful oxidant that is used all over the world to purify and sanitize the air and water in the environment. It is an extremely reactive gas molecule, capable of damaging the molecular walls and breaking the macromolecular components that underlie the life of bacterial cells, viruses, protozoa, fungi. It is a bluish-colored gas with a characteristic sour, pungent smell of freshly cut hay.

The presence of high levels of ozone damages human health, that of animals and plants and produces the deterioration of materials.
The main effects it has on humans are:

- eye, nose, throat and respiratory tract irritation
- sense of pressure on the chest and cough (strong irritating action against the mucous membranes)

The risks depend on the concentration of ozone present and on the duration of the exposure.
The most sensitive individuals, such as asthmatics and the elderly, may be subject to asthma attacks even at low concentrations.



4 Safe use

Before using the ozone generator, please read these instructions carefully as it represents an essential requirement for the proper functioning of the product and guarantees the SAFETY of the personnel responsible for its use.

• this device complies with the safety standards for electrical and / or electronic (CE) appliances;

• the power supply cable must be intact, must not be crushed to avoid short circuits and dangerous electrical discharges;

• keep this booklet carefully. In case of transfer of the device, this booklet must also be delivered;

• if any damage is found during transport, do not put the device into operation;

• no liability is accepted for any damage resulting from improper use not covered by these instructions;

• disconnect the power supply cable of the device from the electrical socket before proceeding with any check and / or cleaning activity;

• do not keep the machine in humid places and / or high temperatures;

• avoid the very frequent use of the device in metal storage warehouses as ozone gas is highly oxidizing.

• keep this electrical device out of the reach of children;

Caution 

• before proceeding with the connection of the device to the power supply, make sure that the voltage corresponds to the required requirements (AC 220-240V / 50Hz);

• high voltage develops inside the device during ozone production.

• do not use the device in environments where flammable or explosive gases / liquids may be present e electrostatic powder;

• do not expose the device to rain or splashes of water, to avoid the risk of fire or electric shock;

• it is forbidden to modify and / or tamper with the device.

5 Package Content

The instrument is supplied complete with the following parts:

1. Ozone generator
2. Power Cable
3. n°2 Rapid test for detection of PRO-Clean protein residues.
4. User Manual

6 First use

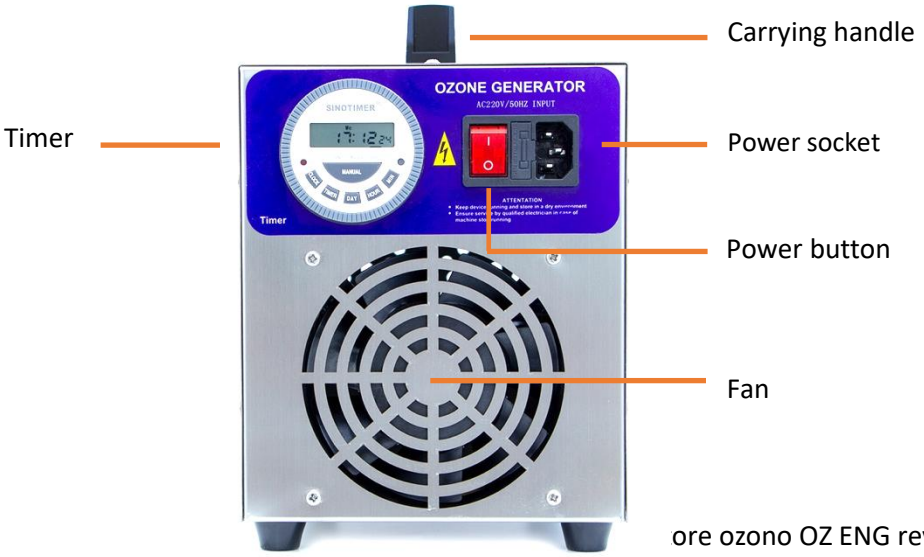
6.1 Preliminary operations

The instrument must be installed in the following conditions:

1. Stable work surface with a flat horizontal surface, dry and clean
2. Minimum spaces of at least 50 cm around the instrument
3. Ambient temperature between 0 ° C and 40 ° C and humidity not higher than 70%
4. Grounded power socket

5. Power supply 220-240 V 50H

6.2 Parts of the equipment



7 Timer



Button	Description
CLOCK	The CLOCK button allows you to set the date.
TIMER	The TIMER button allows you to set the operating programs.
DAY	The DAY button allows you to set the date and set the various operating programs of the instrument.
HOUR	The HOUR button allows you to set the time of the date and set the time of the TIMER operating programming.
MIN	The MIN button allows you to set the time of the date and set the time of the TIMER operating programming.
MANUAL	The MANUAL button allows you to change the operation of the instrument to manual ON, AUTO with programs set and OFF.
Ⓟ	The P button allows you to reset the inserted programs.
Power Button	The ON / OFF button allows you to switch the instrument on and off.

7.1 Set data and time

The correct date must be set before using the tool.

Follow the instructions to correctly set the date:

- **Day setting:** keeping the CLOCK button pressed, press the DAY command repeatedly until the correct day appears on the TIMER display.
- **Time setting:** keeping the CLOCK button pressed, press HOUR repeatedly until the correct time appears on the display.
- **Minute setting:** keep the CLOCK button pressed and press the MIN command repeatedly until the correct minutes appear on the display.

NB: you can choose the time format between PM-AM and from 00:00 to 23:59. To change the format, keep the CLOCK command pressed for 3/4 seconds.

The timer is powered by an internal lithium battery, so there is no need to power the generator to set the time and programs.

8 Functioning

The OZ Ozone generator can operate in two modes

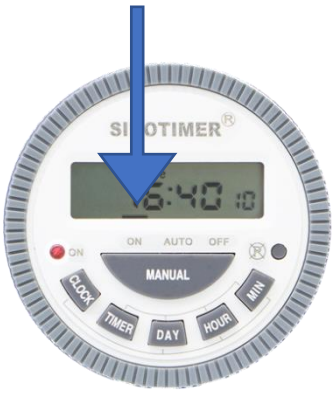
1. Manual (ON)
2. Programmed (AUTO)

8.1 Manual mode

The manual mode allows you to use the OZ Ozone generator continuously.

By pressing the MANUAL button it is possible to select the mode of use of the instrument most suitable for the operator; in fact, a black segment will appear on the display (below the time) above one of the three buttons (ON-AUTO-OFF).

To use the OZ ozone generator in manual mode, select the ON button.



Once set to ON, connect the power cable to the power outlet and press the power button to ON; the red LED next to the ON item will light up on the Timer.

The generator will begin to produce Ozone continuously until the operator changes the mode to OFF by MANUAL command or by pressing the power button on OFF.

8.2 Programs mode (AUTO)

The AUTO function allows you to set the OZ Ozone generator so that it works automatically in one or more periods; in fact, it is possible to select one, some or all days by setting one or more start times (1 ON -: -, 2 ON -: -, 16 ON -: -) and one or more end times (1OFF -: -, 2OFF -: -, 16OFF -: -), up to a maximum of 16 programs.

8.2.1 How to set programs

1. Press TIMER button: will appear on the display 1ON -- : --
2. Press button DAY to select the day / days of the week the instrument is used

MO	MONDAY
TU	TUESDAY
WE	WEDNESDAY
TH	THURSDAY
FR	FRIDAY
SA	SATURDAY
SU	SUNDAY

3. Press the HOUR and MIN buttons to set the instrument's departure time in the 1ON program
4. Once the start time has been set, press TIMER again; 1OFF will appear on the display --:--
5. Repeat steps 2 and 3 to set the end time of the program 1.
6. If you want to set a second timed program, press TIMER again, item 2ON will appear on the display, repeat steps 2, 3 and 4.

   NB: It is possible to set up to 16 programs

7. To confirm and exit, press the CLOCK button
8. Press MANUAL button to select AUTO mode on the display



9. To reset programs and date, press button 
10. To check programs set, press TIMER repeatedly.

Once the programs are set and the AUTO mode is selected, connect the power cable to the power outlet and press the power button to ON. The red LED next to the ON item will light up on the Timer. The instrument will begin to produce Ozone during the period (s) selected in the programming phase.

9 How to use



For efficient use, position the instrument in a strategic point of the room (so that the ozone produced can best disperse in the entire area), close doors and windows. Consider for this purpose, in choosing the location, that the weight of ozone is higher than that of oxygen; it is therefore advisable to position the instrument as close as possible to the ceiling.

If you use manual mode, start the ozonation and exit as quickly as possible from the room undergoing treatment; In automatic mode, make sure that there are no people or animals in the room during the treatment.

Consider as ozonation times between 20 and 40 minutes and, once the treatment is finished, wait 40 minutes before entering the room (time necessary for the ozone present in the room to continue to oxidize and turn back into oxygen); then let the room air out by opening doors and windows.

Table of indicative times for inactivation of bacteria, viruses, molds, insects

Organism	**Exposition time**
Bacteria *(e.coli, legionella, mycobacterium, fecal virus)*	<20 minutes
Virus *(poliovirus type 1, human rotavirus, enteric virus)*	<20 minutes
Molds *(aspergillus, niger, vari ceppi di penicillum, cladosporium)*	60 minutes
Fungus *(candida parapsilosis, candida tropicalis)*	1,67 minutes
Insects *(acarus siro, typrophagus casei, tyrophagus putrescientie)*	30 minutes

10 Technical data

Model	**OZ 10**	**OZ 30**
Power Supply	220-240 50 Hz	
Fuse	F10A250V	
Power consumption	130 W	250 W
Ozone produced	10 g/h	30 g/h
Range of room temp. to work	0 °C + 40°C	
Maximum humidity (RH)	70%	
Dimensions (mm)	380*170*260	440*220*305
Weight	4 Kg	6 Kg
External material	AISI 304	AISI 304
Air Flow	150 m3/h	320 m3/h
IP Grade	IP21	
Working surface suggested (m^3)	100	230
Working surface suggested (m^2)	36 (2.8m height)	82 (2.8mt heigth)

11 Tips and warning




Preparing phase

Caution 

- have individual protection systems based on the type of bacteria or viruses that are believed to be present in the environment that are about to be sanitized;
- the generator cannot be used by people with olfactory disturbances;
- do not check the ozone production, by sniffing the generator exit areas directly;
- the device must be used on stable and horizontal surfaces and away from walls and / or materials that could obstruct the air intake

- it is not recommended to use the instrument in continuous for more than 60 minutes;
- keep the instrument dry;
- it is not recommended to tamper with the instrument by unauthorized personnel;
- it is not recommended to use ozone generators in really dusty environments, with high humidity levels and with an ambient temperature above 40 ° C;
- the timer is powered by a CR2032 battery, if it should discharge, simply remove the external frame and, using the battery support inserted in the timer, replace the discharged battery;
- When an OZ ozone generator is operating, the environment must have closed doors and windows and people and animals MUST NOT BE PRESENT within the environment being treated; also make sure that there are no materials incompatible with ozone. At the end of the treatment wait for the scheduled times for the ozone to turn back into oxygen or air the environment before staying there;
- Keep the instrument away from sources of water.
- For a correct sanitization of a room it is recommended to proceed with a general cleaning before ozonating.
- The generator can be fixed on the wall thanks to the holes on the steel frame of the device.

12 Cleaning and maintenance

OZ ozone generators do not require any maintenance.

We recommend cleaning the external surface with a normal multipurpose detergent sprayed on a soft damp cloth, so as not to use it concentrated.

Notice: 

If the instrument should be sent back to service, it is advisable to return the instrument to its original packaging. Any damage caused by incorrect shipping will not be covered by the warranty.

13 Warranty

Under normal conditions of use, this tool is guaranteed for a period of 24 months from the date of purchase.

The guarantee is valid only if the purchased product remains original. It does not apply to any product or parts of it that have been damaged due to incorrect installation, improper connections, incorrect use, accident or abnormal operating conditions.

No liability is accepted for damage caused by use not in accordance with these instructions, and any unauthorized modification made on it.

14 Disposal of electrical devices



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This equipment is subject to the regulations for electronic devices.

Dispose of in accordance with local regulations.