





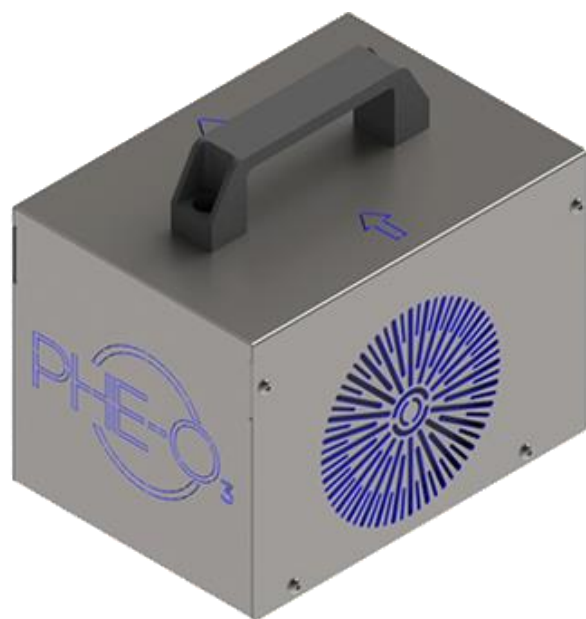


OZONE
GEN.IE
CLEAN AIR - NO CHEMICALS

-  It blocks the action of viruses, bacteria, germs, molds, fungi, mites.
-  It eliminates unpleasant odours.
-  It repels insects.
-  It does not emit toxic residues.
-  It does not damage surfaces and skin.
-  It is non-flammable.



OZONE GENERATOR

storm₃
stormrc

EN Original instructions

Review 6.1
Edition 09-2020



Dear customer,
thank you for choosing our product. Our company is specialized in the design and manufacture of equipment for the disinfection and sterilization of water, air and solid bodies. The products are mainly designed for use in the commercial, industrial, food, agricultural and livestock sectors.
Our experience in high technology development allows to offer high quality and effective products.
All devices are entirely designed and manufactured by our company in Italy.
The ozone is a natural protection and meets the rules on health and safety at work.
Its action is certified and verified.

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1 SAFETY INFORMATION

1.1 KEY RECOMMENDATIONS



CAUTION

before activating the device, you must carefully follow the instructions of this manual in order to achieve a safe and proper use.



WARNING!

any other use is strictly prohibited!

please refer carefully to the safety information contained in this manual.

- **T**he device described in this manual was designed to be used with a voltage of 220/240 Vac. It must be connected only to electrical systems complying with applicable laws and regulations, which provide for devices to safeguard the lives of people and animals.
- **T**he socket to which the device will be connected must be provided with an efficient grounding system according to regulations.
- **N**ever disconnect the power cord during operation.
- **A**ny high frequency equipment, in close vicinity to the device, could lead to any malfunction..
- **K**eep the device always clean and tidy; disconnect the power cord from the socket before cleaning.
- **N**ever use device with wet or damaged power cord or plug; do not place any object on the device and/or on the power cord; lay the power cord so that it cannot be trampled or be subject to tension, traction and pressure.
- **D**o not use the device in very humid places and close to water; the device must be protected from jets of water and other liquids, it must not be used in a dusty environment and in the presence of vaporised liquids; avoid direct exposure to sunlight and heat sources.

- **N**ever open the device, always contact the manufacturer even in case of damage or deterioration; adjustments, repairs and maintenance must be carried out exclusively by staff authorized and recognized by the manufacturer.
- **I**n case the device is malfunctioning, if it emits unusual smells, noises or sounds, turn it off and disconnect the power cord from the socket; contact the manufacturer before restarting.
- **I**f the power cord is damaged, it must be replaced by the manufacturer or by the technical assistance service or by a person with a similar qualification, in order to prevent any risk.
- **T**o clean the equipment use a damp rag, not too wet, soaked in alcohol or window cleaner; do not use too aggressive substances.
- **D**o not restrict, block or cover the ventilation grids.
- **D**o not insert any objects into grids, cracks, fittings and ventilation holes because there is a very high voltage inside the device.
- **T**he device is generally usable only within environments, external use is permitted only if indicated on the container and manual.
- **T**o protect the device against lightning and voltage peaks, or in case it is unattended or unused for a long period, disconnect it from the socket.
- **T**he device can be used by children aged from 8 years and above and people with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the device in a safe way and understand the hazards involved; children shall not play with the device; cleaning and maintenance cannot be carried out by children without supervision.
- **D**o not move the device while it is operating: before any movement, even minimal, turn off the device.
- **D**o not place the device on unstable surfaces or subject to vibrations.
- **T**he manufacturer recommends to submit the device to the necessary maintenance operations and declines all liability for damages or injuries caused by improper use.
- **N**ever try to verify the presence of ozone at the output of the generator through olfactory test (do not smell).

1.2 TECHNICAL SUPPORT

The manufacturer makes available to the customers its own Technical Assistance Service to solve any problem concerning the use and maintenance of the machine.

In case of written requests, please specify in the message the following data:

- Machine model
- Serial number of the product
- Details of the defects found
- Checks carried out
- adjustments made and their effects
- Any other relevant information

Address the requests to the manufacturer at the following email address: info@phe-o.com

1.3 SAFETY INFORMATION ON OZONE

Ozone is a very unstable gas, it cannot be stored for too long and for this reason it is produced when needed. This gas is the strongest natural oxidizer usable, its action is fast and ecological, it turns back into oxygen once decomposed.

The main applications of ozone are related to sanitization and sterilization of air and water.

Ozone is always used in a blend. This gas cannot be 100% pure, it is always used a blend of air/ozone, oxygen/ozone or air/oxygen/ozone, in which ozone is always the smallest portion. The concentration of ozone in the above mentioned blends is usually expressed in grams per cubic meter (g/m³ or g/Nm³) or in parts per million (ppm). The production capacity of an ozone generator is the amount of gas produced in an hour and it is measured in grams per hour (g/h).

In order to sanitize an environment from microorganisms, 1 ppm of ozone is more than enough to reach a good result. It means that it is sufficient one cubic centimeter of ozone (2,14 mg) per cubic meter of air.

Ozone decomposition time in air depends on the temperature and moisture of the environment. Data indicate the halving at 20°C in 72 hours and at 100°C in 2 hours. These data refer to moisture-free pure air. Moisture, organic and inorganic substances, pollutants and natural catalysts included in normal air reduce the above mentioned values at an average time of 40 minutes.

**WARNING!**

Ozone is a very reactive gas and it can cause detonations by coming in contact with certain substances. Please avoid operating simultaneously with the products indicated in the Safety Data Sheet (see page 8).

**WARNING!**

The oxygen/ozone blend is explosive and flammable. Please avoid operating the device in the vicinity of flames, braziers, lamps, heat sources, electrical equipment and anything that may produce sparks by rubbing or electric discharge.

**WARNING!**

The oxygen/ozone blend is explosive and flammable. Please avoid operating the device in the vicinity of flames, braziers, lamps, heat sources, electrical equipment and anything that may produce sparks by rubbing or electric discharge.

**CAUTION**

- Avoid ozone inhalation when near or directly from the gas generator output grid.
- If there is a slight burning sensation in the nose, throat or eyes, it is recommended to aerate the environment and go out until the usual sour and pungent odor vanishes.
- In the case of ozone treatments, before giving free access to persons and animals, please verify the concentration of the gas with appropriate instrumentation. The amount of ozone in the air shall not exceed 0,1 ppm.
- For periodic and constant use of ozone generators, use a mask with filters suitable for gas abatement.
- All the ozone concentration measurements must be carried out wearing the appropriate mask with gas blast chiller. In case you should go in the environment, for dangerous situations, without the appropriate mask, cover mouth and nose with a wet rag and hold your breath as long as possible. You can still breathe for a few minutes through the wet rag. Exit immediately if you feel a slight burning sensation in the nose or throat.
- Ozone is heavier than air, it tends to go in the lower part of the environment and therefore considerable attention should be paid when ozone is used in the presence of children or animals.

1.4 SAFETY STANDARDS FOR THE USE OF OZONE

Toxicological information

Ozone is toxic and irritating mainly to the respiratory tract (> 0,3 ppm), slightly to the eyes and rarely to the skin.

- **Respiratory protection**
Always use the appropriate breathing mask to access areas with high ozone concentration (> 0,3 ppm). In the absence of the mask breathe slowly and briefly through a wet rag.
- **First aid measures**
 - First symptoms of burning nose, throat and eyes.
 - Mild inhalation: nose, throat and eyes irritation > get out in the outdoors
 - Medium inhalation: cough, headache, nausea > breathe medical oxygen
 - Strong inhalation: heavy chest, shortness of breath > call emergency
- **Fire safety measures**
Use any extinguishing agent. Ozone itself is not flammable, but can start and accelerate combustion or cause explosions if in contact with certain elements (see below).
- **Stability and reactivity**
Ozone is highly unstable and reactive. Avoid contact with alkanes, ethylene, benzene, ethyl ether, dinitrogen tetroxide, bromine, hydrogen bromide, hydrobromic acid, nitroglycerine.
- **Handling and storage**
Ozone shall be contained in gas-resistant tubes and channels must branch from the point of generation to the point of application without leaks. In case of leaks, turn off the ozone generator and ventilate the area. Evacuate the area until the ozone levels return to the first tolerated parameters (0,11 ppm).
- **Hazard identification according to European CLP regulation:**



Code	Hazard description
H270	May cause or intensify a fire
H315	Cause skin irritation
H319	Cause severe eye irritation
H330	Lethal if inhaled
H335	May cause respiratory irritation
H373	May damage bronchi and lungs if inhaled at length or repeatedly
H400	Very toxic to aquatic life

1.5 EFFECTS OF OZONE ON THE HUMAN ORGANISM

Thanks to the acrid and pungent smell that characterizes it, ozone is perceived by smell even in the presence of small quantities. The threshold of olfactory perception of this gas, about 0,04 mg/m³ (0,02 ppm), is still much lower than the maximum tolerable concentration in the environment. According to the Ministry of Health, in compliance with H.A.C.C.P. standards and Legislative Decree 626/94, users must not be exposed to more than 0,21 0,21 mg/m³ (0,1 ppm) of ozone in 8 hours or more than 0,64 mg/m³ (0,3 ppm) twice a day for 15 minutes. However, the concentration of 0,1 ppm has to be considered as the alarm threshold.

1.5.1 HEALTH RISKS

Ozone mainly attacks the mucose membranes of the eyes, nose, oral cavity and respiratory tract and it is harmful to health at low concentrations.

Hereafter are the possible effects on health based on ozone concentration:

Ozone concentration	Possible effects
> 0,2mg/m ³ (≈ 0,1 ppm)	Cough, chronic bronchitis
> 1,0mg/m ³ (≈ 0,5 ppm)	Severe eye and respiratory irritation with strong cough, nose bleed and respiratory problems
> 2,0mg/m ³ (≈ 1 ppm)	Chest tightness, dizziness, headaches, circulatory disorders
> 20mg/m ³ (≈ 10 ppm)	Loss of consciousness, hemoptysis, death
> 10000mg/m ³ (≈ 5000 ppm)	Immediate death



CAUTION

Constant exposure to ozone may cause olfactory insensitivity to gas. Any person who periodically uses ozone generators must be provided with a proper monitor or detector.



CAUTION

The concentration of ozone in the environment above 1 ppm is hazardous to health. Particular attention should be paid to children and people who suffer from asthma or other lung diseases.

2 GENERAL INFORMATION

2.1 MANUFACTURER'S IDENTIFICATION DATA

CALZONI S.r.l.



Via G. Saragat 30/32
40062 Molinella (BO) - ITALY

The manufacturer declines all responsibilities in case of damage to property and/or persons resulting from:

- Improper use of the device or use by unauthorised or non-specialised staff to carry out certain operations and/or during training internships;
- Non-conforming use of the device with respect to national regulations and laws on safety and accident prevention;
- Inhibition or dismantling of the protection devices installed;
- Incorrect installation and/or connection to the established power sources (power supply faults);
- Failed or limited preventive maintenance;
- Implementation of unauthorised changes or interventions;
- Use of non-original or unsuitable spare parts;
- Total or partial failure to comply with the instructions provided;
- Exceptional events.

2.2 PURPOSE OF THE MANUAL

To facilitate consultation and re-reading of topics of interest, please refer to the index placed at the beginning. This manual was written by the manufacturer and is an integral part of the product; as such it must be kept with care for the whole life of the machine until its demolition.

The customer must ensure that the operators have read or know the content of this manual in order to comply scrupulously with the instructions here described.

Only the constant observance of the indications provided in this manual allows to obtain the best results in terms of safety, performance, effectiveness and durability of the product now in your possession.

The non-observance of these rules can potentially cause harm to man, to the machine, to the washed surface and to the environment that in no case can be imputed to the manufacturer.

2.3 TERMINOLOGY AND SYMBOL LEGEND

To ensure greater clarity and to adequately highlight the various aspects of the instructions described, the following terms and symbols have been used:

Term	Definition
Machine	It replaces the trade name referred to in this manual.
Operator	Person that normally uses the machine and is aware of the aspects related to the functioning of the machine itself, as well as familiar with the use of various detergents, but is not able to carry out operations on the machine which require specific technical expertise.
Technician	Person with the necessary qualification (experience, technical training, legislative and regulatory knowledge) to perform any kind of operation, with the ability to recognize and avoid possible dangers during the installation, use, handling and maintenance of the machine.

Symbology and warnings



WARNING!

This symbol indicates vital information in order to avoid serious (or extreme) consequences for human health and for the integrity of the product and the environment in which it operates.



CAUTION

This symbol comes with information on procedures and/or instructions that must absolutely be understood and performed to avoid damage to the machine and to the environment in which it operates.



NOTE:

This symbol is used to highlight important information whose non-compliance may cause damage to the machine.

2.4 INTENDED AND UNINTENDED USE

The machine covered by this manual (**STORM / STORM RC**) is an ozonator for environments at high concentration. The **STORM RC** version is available with the dedicated "Smat Life" app in order to plan and control the machine remotely.

The machine produces an amount of ozone equal to 10 g/h, and the ozone concentration obtained in the environment is very effective for the abatement of highly diverse microorganisms. The **STORM / STORM RC** machine can be used in most of residential and working spaces, for 5/10 minutes per room, removes any odor and sanitizes all surfaces including furniture.

2.5 TECHNICAL CHANGES

This machine was designed and built in accordance with the essential requirements for the health and safety of the user laid down by European directives, that is why the CE mark has been put on the label.

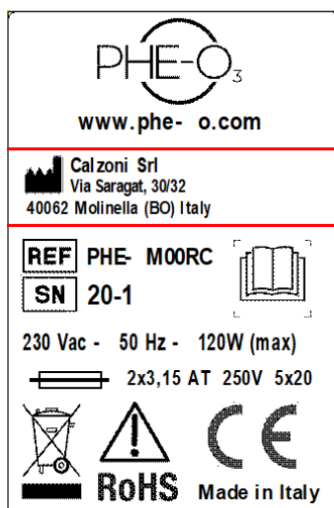
The European directives, for which the machine complies with, are mentioned in the Certificate of Conformity, attached to this manual. This certificate is invalid if the machine undergoes any kind of modification not previously agreed with the manufacturer.

The manufacturer reserves the right to make, without any notice, technical changes to the product to update or improve it technically.

For this reason some details of the machine in your possession may be different than trade catalogue information or than the representations contained in this manual, without compromising the security and information provided.

2.6 PRODUCT IDENTIFICATION

Ensure that the machine is equipped with a plate bearing the serial number and the CE mark. If not, notify the retailer immediately.



The identification plate contains the following information:

- manufacturer's identification data
- CE mark
- model number
- serial number (registration number)
- total rated power
- year of manufacture

2.7 GENERAL CONDITIONS OF WARRANTY

The warranty is valid for **12 months** only if accompanied by an Invoice or Fiscal Receipt, we therefore advise you to attach the Invoice or Fiscal Receipt to this guarantee certificate.

- The manufacturer, in case of production defects, guarantees the product for 3 (three) years from the date of purchase of the final customer, which is proved by a valid tax document containing product model and serial number.
- Warranty means, exclusively, free repair replacement of parts of the machine which are found to be defective at source.
- The guarantee is recognized for products sold and installed in Europe including the Republic of San Marino and Vatican City.
- If the machine is in a Service center, or at the manufacturer's headquarter for maintenance or repair, the manufacturer declines all responsibility for damage due to natural events, theft, break-in, removals, requisitions, fires or other unforeseeable circumstances of force majeure.
- The warranty is cancelled if the equipment has been repaired, modified or even partially disassembled by unauthorised staff.
- The manufacturer declines all responsibility related to problems, damages and disputes arising from the installation of the product.
- The application of the guarantee is at the sole discretion of the manufacturer. Its execution will be, at the pace and in the manner, in accordance with the operational availability of the moment when the manufacturer receives the product.
- The manufacturer will not pay any compensation for any direct and indirect damage caused by failures, anomalies and by the immobilization of the machine during stopping and repair.
- The costs of transport, insurance and anything else related to the shipping and withdrawal of the product for warranty and out-of-warranty interventions are always charged to the customer.
- The warranty clauses on page 21 and 22 of this manual are integral parts of the sale of the product.
- Warranty services may be discontinued in the case of delays or missed payments to the retailer who issued the tax document.

The guarantee expressly excludes:

- Consumable parts, alteration and deterioration of paints, surfaces and components due to normal wear.
- Damage caused by abnormal storage and handling conditions and by extreme environmental and climatic conditions.
- Damage resulting from natural events, surges and electric discharges.
- Shipping costs for sending and returning equipment and for technical intervention. Such expenses are always charged to the Customer.
- Compensation for direct or indirect damage caused by breakdowns, anomalies and immobilization of the equipment during the breakdown.
- Anomalies not attributable to material and manufacturing defects, but which result from incorrect use, negligence, tampering, fire, flooding, sabotage, exposure to chemical and corrosive substances, explosions, natural events and accidents of various kinds.
- Damage caused by non-compliance with the instructions for the operation of the machine, incorrect installation or maintenance by unauthorised staff, transport damage, or circumstances which cannot be traced back to manufacturing defects.
- Damage caused by foreign bodies, water, chemicals, soil, sand, metal shavings, organic substances, etc.
- General operating issues arising from inexperience or wrong impression of the user.
- All external parts are not covered by the guarantee, (knobs, buttons, panels, etc) and accessories in general.
- Failures resulting from heavy and continuous use, beyond the limits given in this manual.

2.8 DECLARATION OF COMPLIANCE

	Storm StormRC	Calzoni s.r.l. Via Saragat, 30/32 40062 Molinella (BO)
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DICHIARAZIONE UE DI CONFORMITA' EU Declaration of conformity

PRODOTTO (oggetto della dichiarazione):
Product (object of the declaration)

Tipo/Type: Ozonizzatore per ambienti / Room ozonator
Modelli/Models: Storm cod. PHE-M00
 StormRC cod.PHE-M00RC

FABBRICANTE:
Manufacturer:

Calzoni s.r.l.
 Via Saragat, 30/32 40062 Molinella (BO)
 Via Gramsci, 15 40062 Molinella (BO)

Il Fabbricante dichiara sotto la propria responsabilità che i Prodotti oggetto della dichiarazione soddisfano tutte le disposizioni applicabili nelle seguenti Direttive:
The Manufacturer declares under its own responsibility that the Products covered by the declaration meet all the provisions applicable in the following Directives:

Directive 2014/35/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of Member States' legislations with regard to making available on the market of electrical equipment for use within certain voltage limits

Directive 2014/30/EU of the European Parliament and of the Council of 26 February 2014 on the harmonization of Member States' legislations with regard to the electromagnetic compatibility (recasting)

e sono conformi alle pertinenti normative di armonizzazione dell'Unione:
and comply with the relevant Union harmonization legislation:

EN 60335-1(2012)/ A11(2014)
 EN 62233(2008)
 EN 55014-1(2017), EN 55014-2(2015)
 EN 61000-3-2(2014), EN 61000-3-3(2013)

Molinella, 10/06/2020



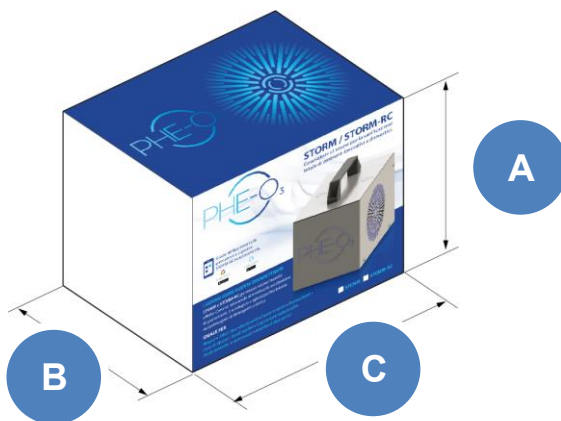
Signed for and on behalf of
 Calzoni S.r.l.

 (Andrea Calzoni, CEO)

La presente Dichiarazione di Conformità è rilasciata sotto la responsabilità esclusiva del Fabbricante.
This Declaration of Conformity is issued under the exclusive responsibility of the Manufacturer.

3 DELIVERY AND HANDLING

3.1 SIZE AND WEIGHT OF THE PACKAGING



Peso:	3,5 kg
A	21/22 cm
B	25/26 cm
C	17/18 cm

3.2 LIFTING AND TRANSPORT OF THE PACKAGING



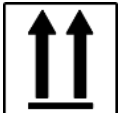


CAUTION

During all lifting or transport operations, make sure to have firmly grabbed the packed product, in order to prevent overturning or accidental falls.

Loading and unloading of vehicles must be performed with adequate lighting.

The device must be handled by appropriate means, paying attention not to damage/bump the packaging anywhere, not to flip it over, and to exercise the necessary care in placing it on the ground.

Packaging symbols	
	Fragile, handle with care. It indicates that the contents of the package are fragile and that it must be handled with extreme care.
	Damaged by humidity. It indicates that the packaging must be stored in a dry area.
	High. The packaging should face upright.

3.3 DELIVERY CHECK

Before accepting the delivery, please check that:

- the machine was not damaged during transportation;
- the material delivered corresponds to what indicated on the transport document by comparing the data with the packaging label.

In case of damage or anomalies:

- write down immediately the damage found on the shipping document and include the wording: "Subject to withdrawal due to evident shortage / shipping damage";
- notify by fax and registered mail with return receipt to both the carrier and the supplier.

3.4 UNPACKING



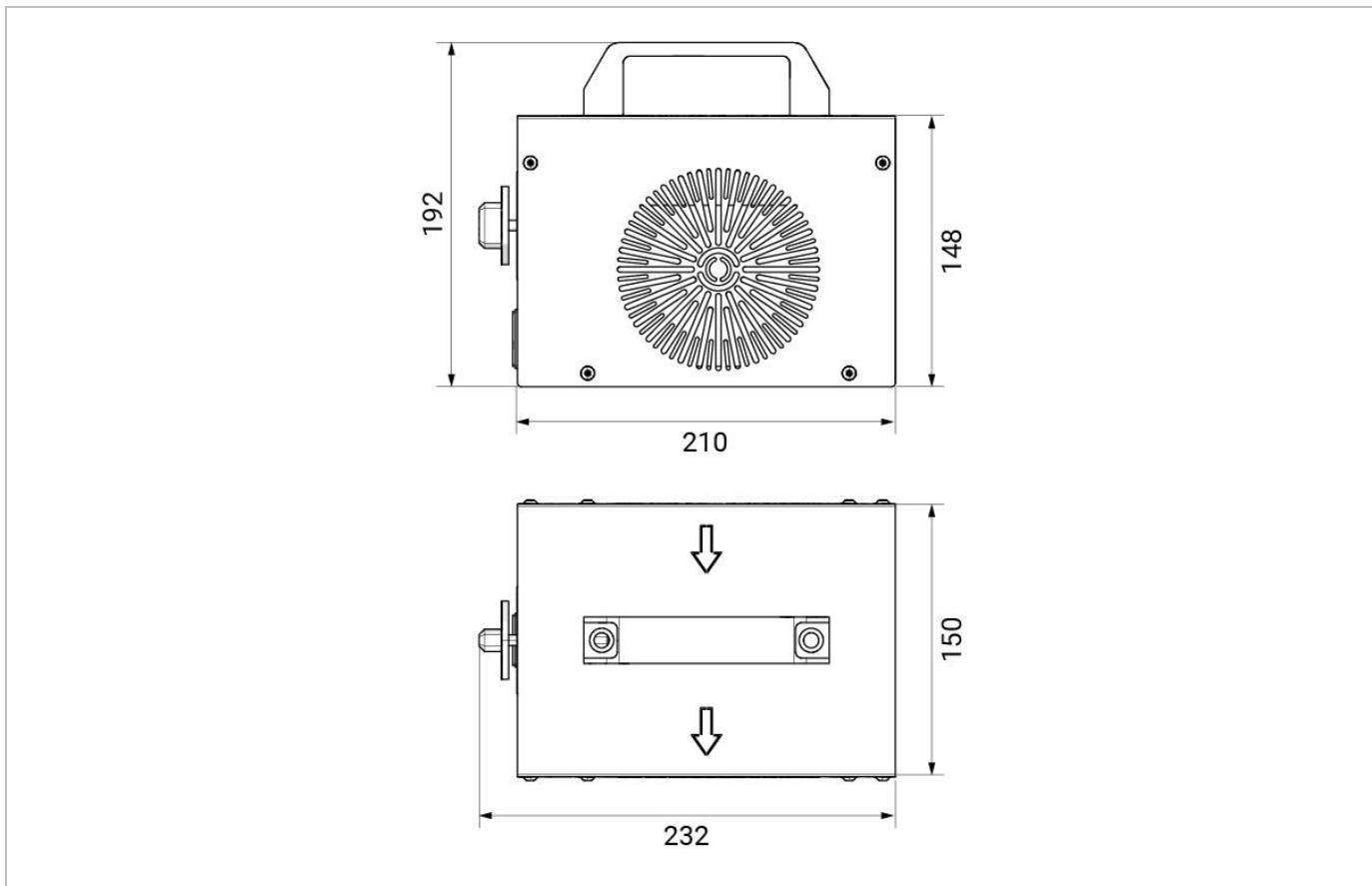
NOTE:

It is recommended to keep all the elements of the packaging as they may be useful to protect the machine and the accessories in a further transport to another place or to authorised service centers.

On the contrary, packaging must be disposed of in compliance with the relevant laws in force.

4 TECHNICAL INFORMATION

4.1 DIMENSIONS

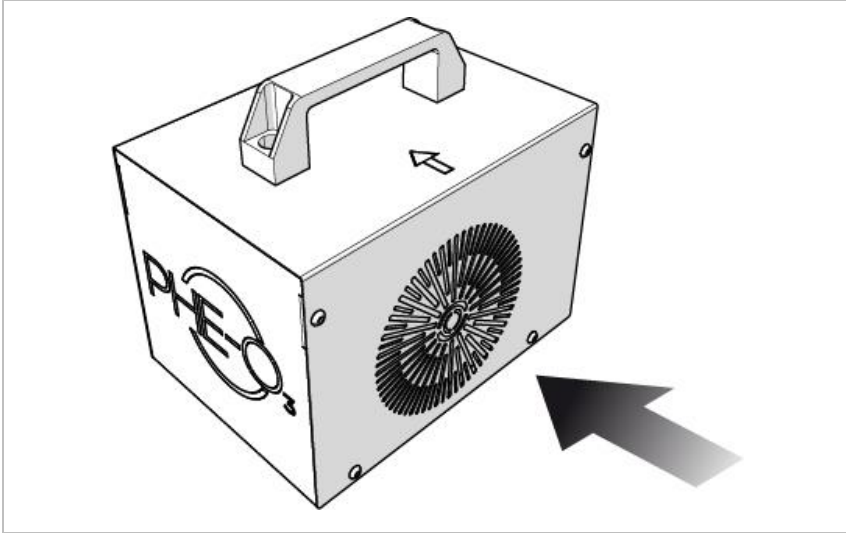


4.2 TECHNICAL SPECIFICATIONS

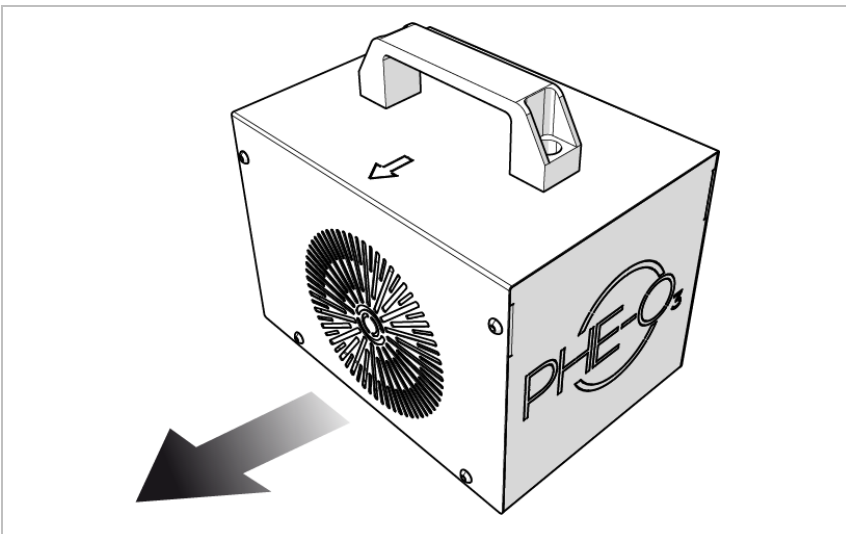
Description	Value
Supply voltage	230 Vac
Frequency	50 Hz
Input power	120 W
Ozone production	10 g/h with ambient air (21°C - 55% RH)
Timer	adjustable from 0 to 60 minutes
Generator voltage	3,1-3,5KV
Approximate dimensions	16 x 23 x h 20 cm
Included	230 Vac power cord

4.3 GENERAL DESCRIPTIONS OF THE COMPONENTS

4.3.1 STORM/STORM RC VENTILATION GRID

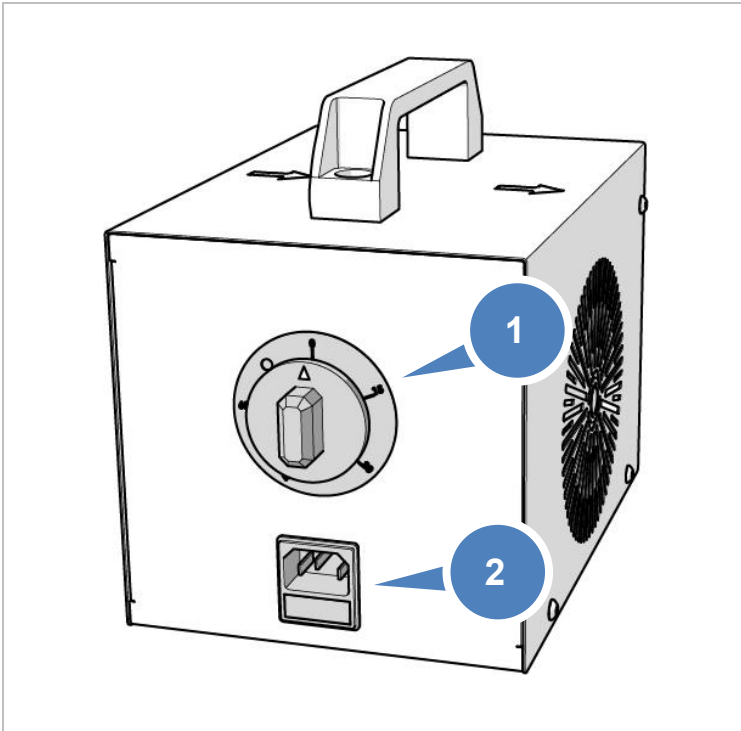


Right grid panel
Air inlet grid

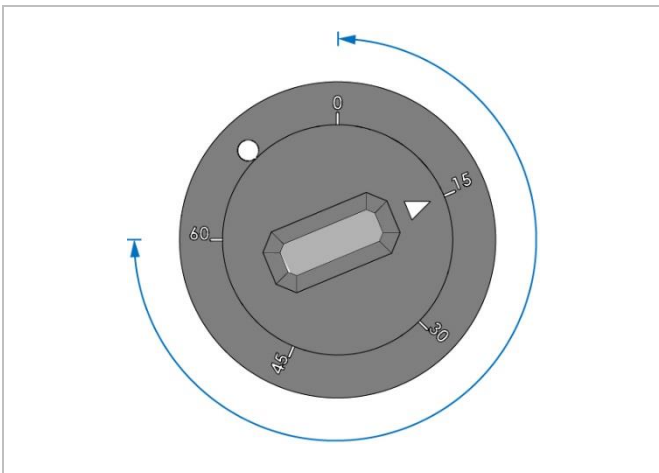


Left panel
Air and ozone outlet grid

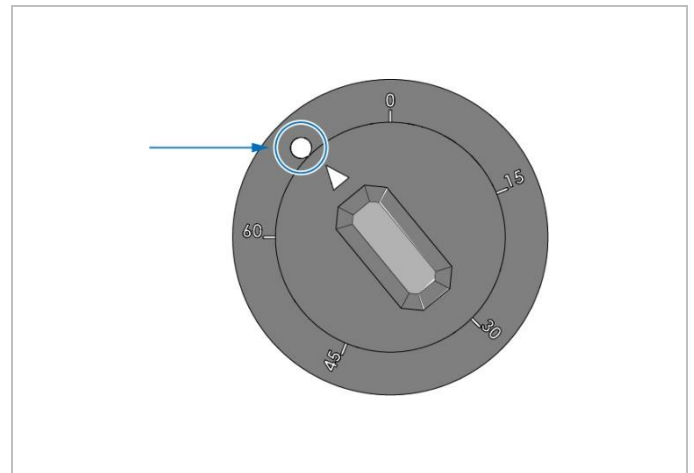
4.3.2 STORM BACK PANEL



1	Timer for selection of working time
2	Socket with fuse holder: 220 Vac power cord connection



TIMER: selection of working time (0÷60 min.)



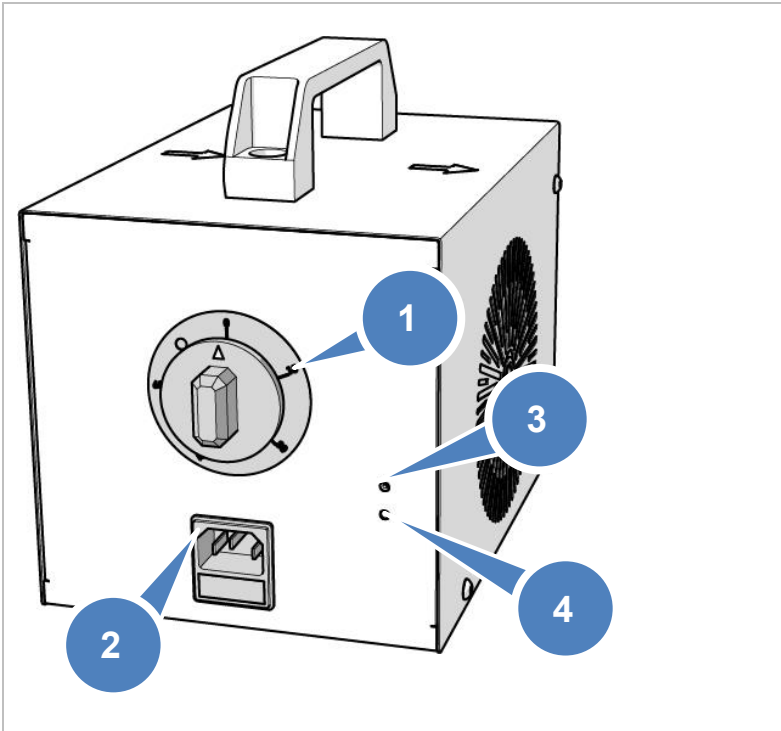
TIMER: selection of continuous time



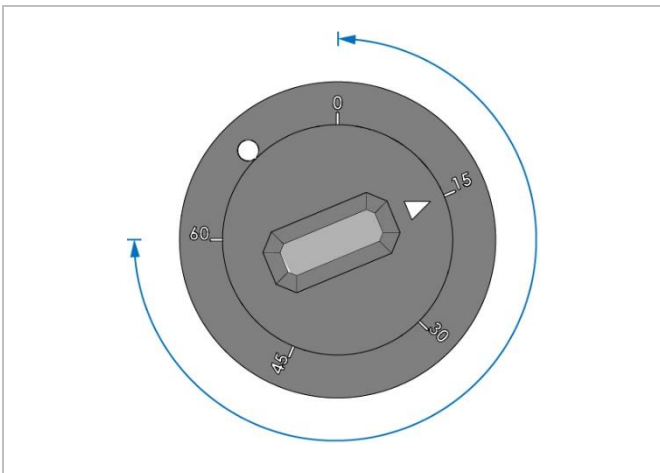
CAUTION

The "continuous time" function has to be used **ONLY** with an external timer and with the utmost care
Example: daily and/or weekly programming.

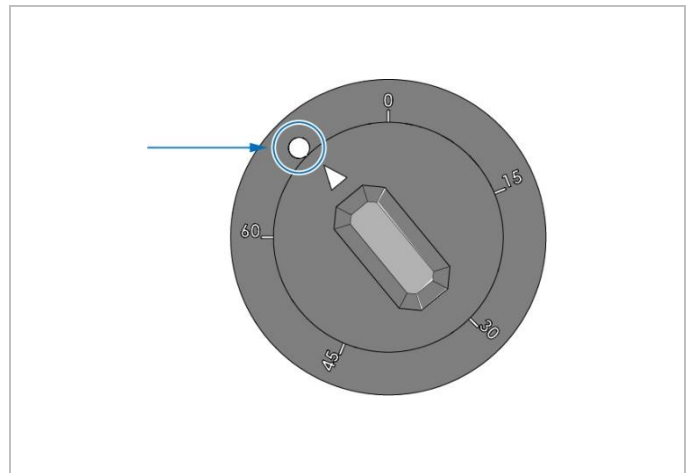
4.3.3 STORM RC BACK PANEL



1	Timer for selection of working time
2	Socket with fuse holder: 220 Vac power cord connection
3	LED connection
4	Synchro button: connection to the Smat Life App



TIMER: selection of working time (0÷60 min.)



TIMER: selection of continuous time



CAUTION

The "continuous time" function has to be used **ONLY** with an external timer and with the utmost care
 Example: daily and/or weekly programming.

5 INSTRUCTIONS FOR USE

5.1 PREPARATION OF THE MACHINE

**WARNING!**

All the maintenance operations and replacement of accessories must be carried out in an adequately lighted environment and only after disconnecting the machine from the power supply.

**CAUTION**

Before using the machine make sure that the inlet/outlet grids are not obstructed.

**NOTE:**

Ozone concentration in the environment depends on many factors: temperature, moisture, pollutants and the amount of furniture. Curtains, carpets, mattresses and fabrics generally absorb rapidly a significant amount of ozone. Empty or fabric-free rooms need less time for treatment.

5.2 INFORMATION ON THE USE

- 1) Once calculated the cubic meters of the environment where you intend to intervene, the generator must be set based on the necessary working time;

**CAUTION**

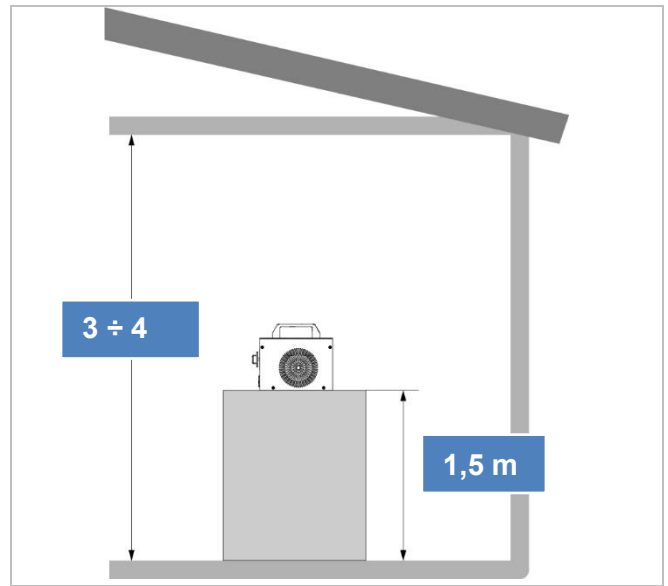
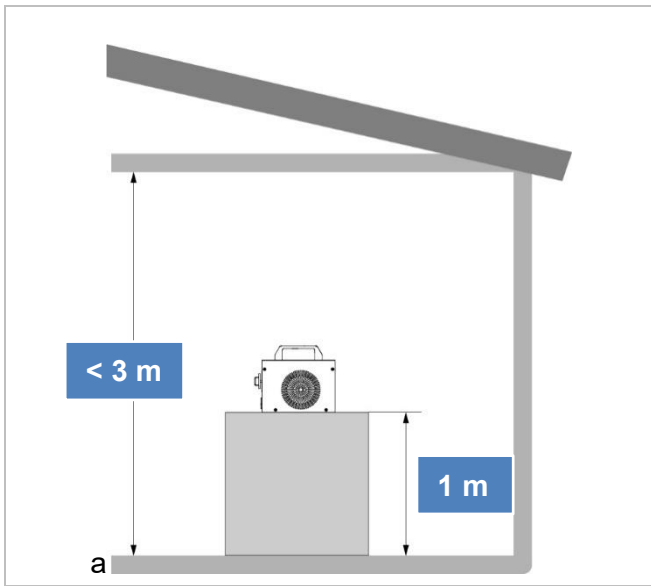
When the treatment starts, make sure that within the environment there are no people and/or animals.

- 2) At the end of the treatment time, generators are in stand-by; wait the necessary exposure time to ozone in order to eliminate pathogens.
- 3) As soon as the exposure time has passed (namely the permanence of ozone), the environment has to be ventilated before it can be accessed again. Ozone has a limited life cycle as within a short period it turns back into oxygen: in a closed environment with a temperature of 20°C, the ozone concentration halves naturally in about 40 minutes.

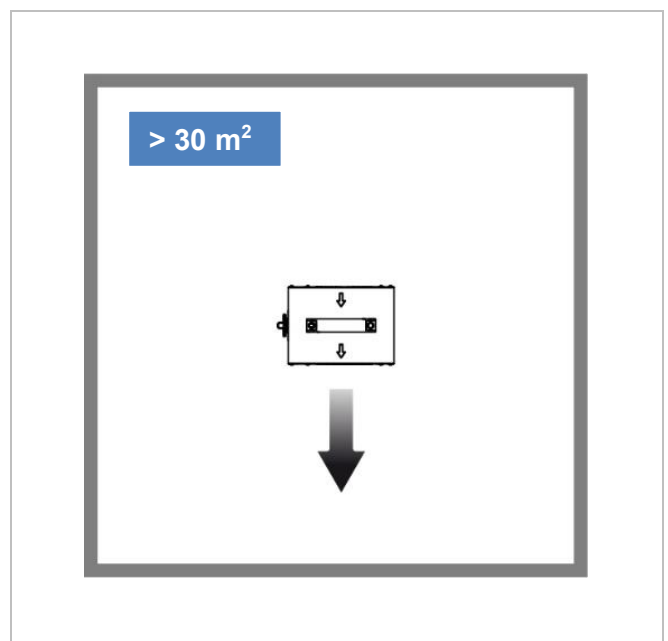
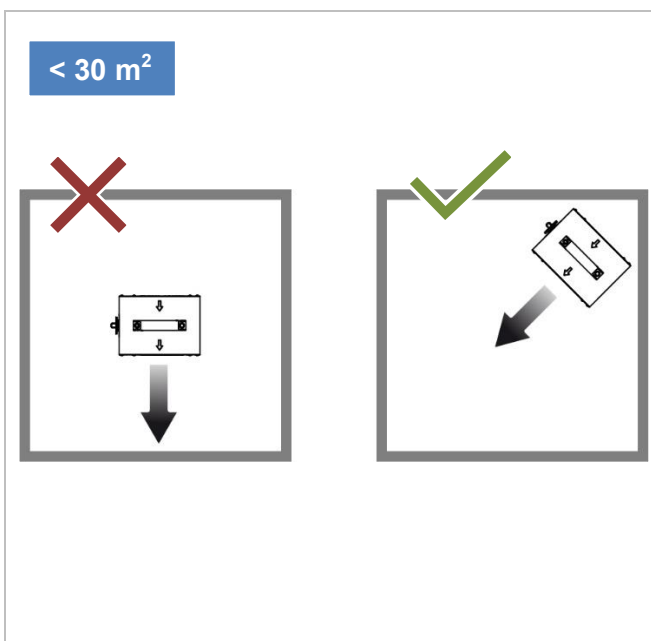
**CAUTION**

After ozonating the environment, wait the decay time at tolerable concentrations or aerate the room.

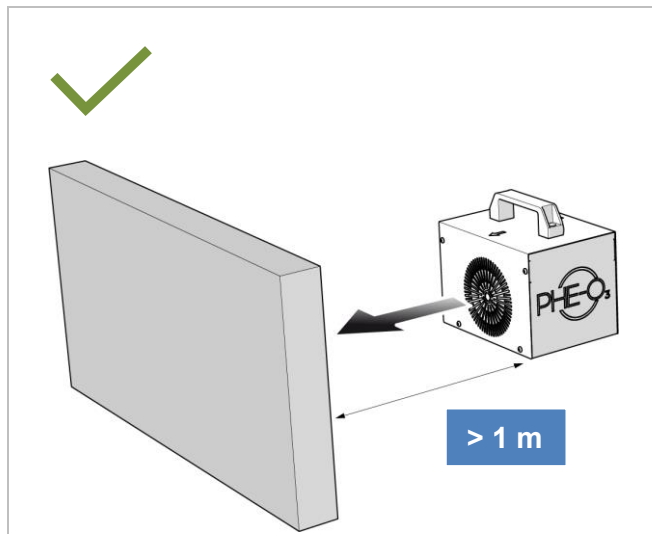
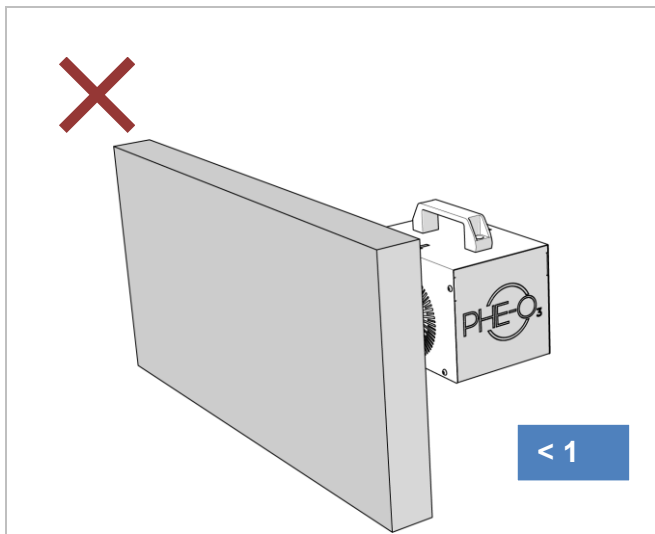
5.3 POSITIONING



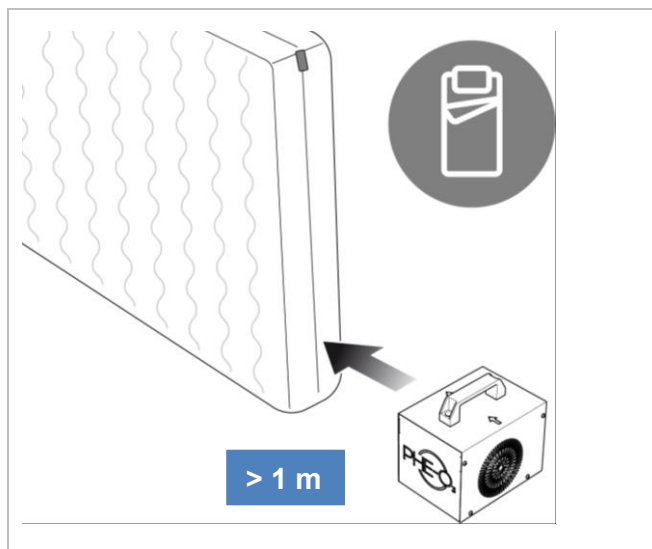
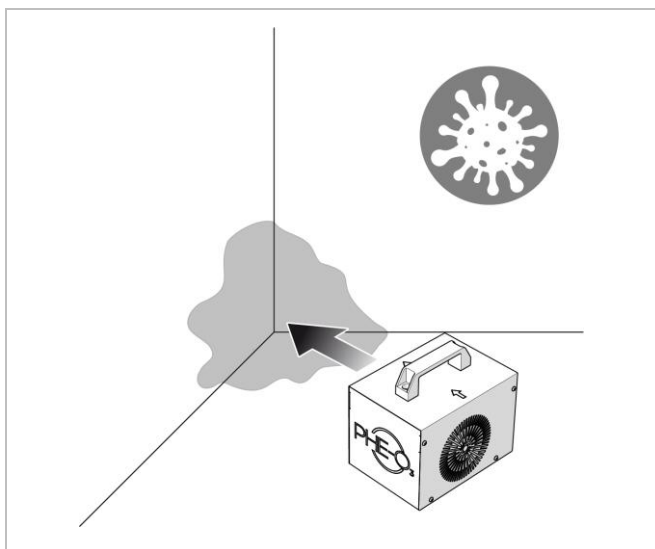
- For environments no higher than 4 meters, position the machine about 1.5 meters above the ground.
- For environments no higher than 3 meters, position the machine about 1 meter above the ground.



- To optimize the ozonation of environments up to 30/40 sqm, position the machine in one corner of the room by directing the front towards the diagonally opposite corner.
- To ozonate very large environments, position the machine in the center of the environment.



CAUTION
 Make sure there are no obstacles to the gas supply, position the left side of the machine more than 1 meter from any object.



- For the treatment of moulds, position the generator at about 1 meter towards the area to be sanitized. The treatment is more effective if performed in 3/4 sqm areas at a time.
- For the treatment of a mattress, place it upright (on the longest and narrowest side), diagonally on the bed, so that both longer sides are exposed to ozone. Activate the generator 1 meter from the mattress, leave and close the room.



CAUTION
 After ozonating the environment, wait the decay time at tolerable concentrations or aerate the room.

5.4 MODE OF OPERATION

5.4.1 MANUAL MODE (STORM AND STORM RC)

- 1) Connect the machine to the grid (220V) via the provided power cord.
- 2) Select via the timer knob the desired ozonation time. The machine starts the treatment and from the grid on the left panel comes out the blend with ozone.
- 3) Once the treatment starts, **leave immediately the room.**
- 4) Once the ozonation time is completed, the machine turns off.
- 5) After ozonating the environment, wait the decay time at tolerable concentrations or aerate the room.

**CAUTION**

Do not change the operating time on the timer knob when the machine is working.

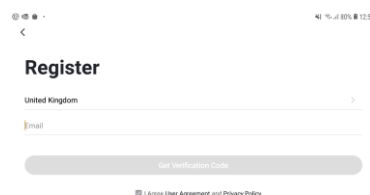
**NOTE:**

To reactivate the machine, reinsert the power cord and reset the timer with the knob.

5.4.2 REMOTE CONTROL MODE (STORM RC)

1) Download and install the application "Smart Life - Smart living"

Scan the QR code or download from Apple Store or Google Play the application "Smart Life - Smart living".



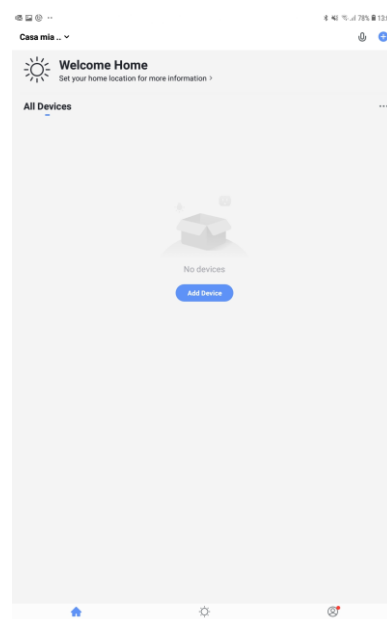
2) Register an account in "Smart Life - Smart living"

Open the app and follow the registration procedure.



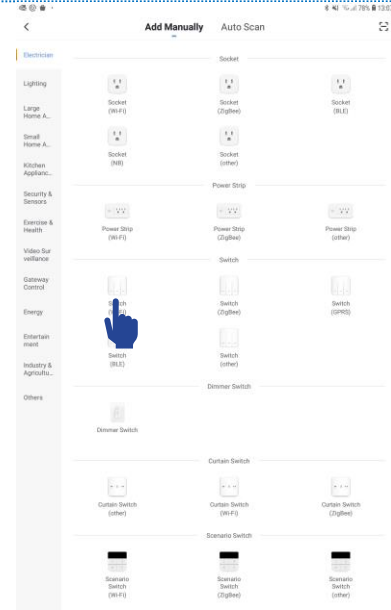
3) Add your device

Select add device



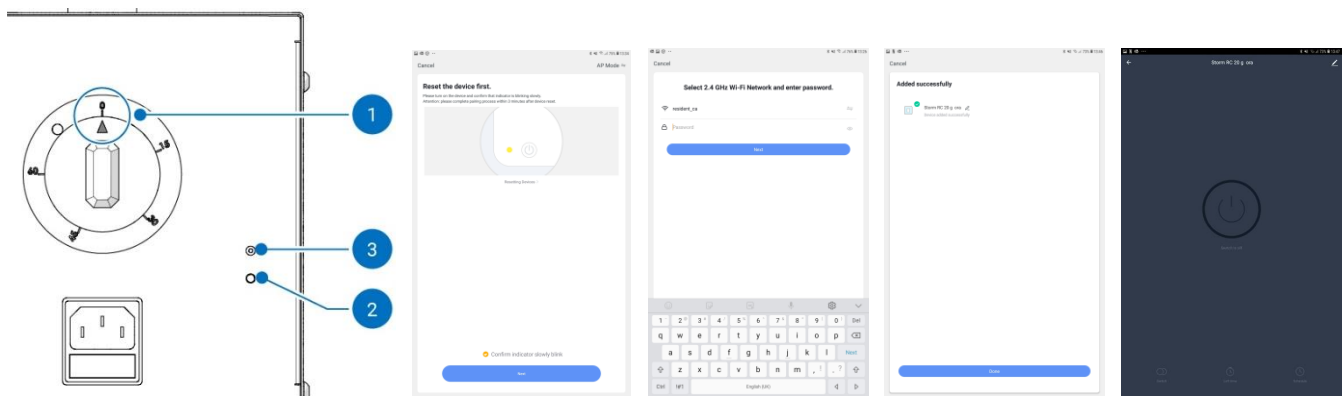
4) Commute (Wi-Fi)

In the page "Electrical Engineer" select: "Commuter (Wi-Fi)".



5) Device connection

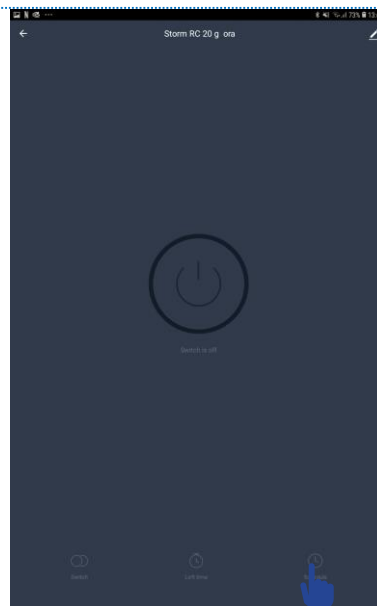
- Set the timer (1) on 0
- Plug in the device into the power grid via the power cord.
- Push the button (2) positioned on the back of the device and hold it for 5 seconds until you see the LED flashing (3).
- Select the confirmation of the intermittent lighting of the LED.
- Enter the Wi-Fi password
- Place the smartphone near the device and wait for the connection.
- Select Finish in the next screen.



5.4.3 SETTING OF WORK-CYCLES

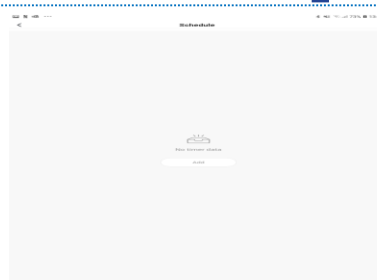
1) Select your device STORM RC

Within the app select your STORM RC device and select "Schedule"



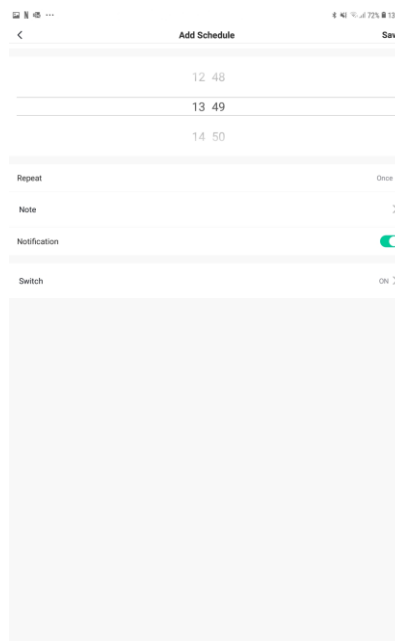
2) Add a Timer

Select Add in the "Schedule" page.



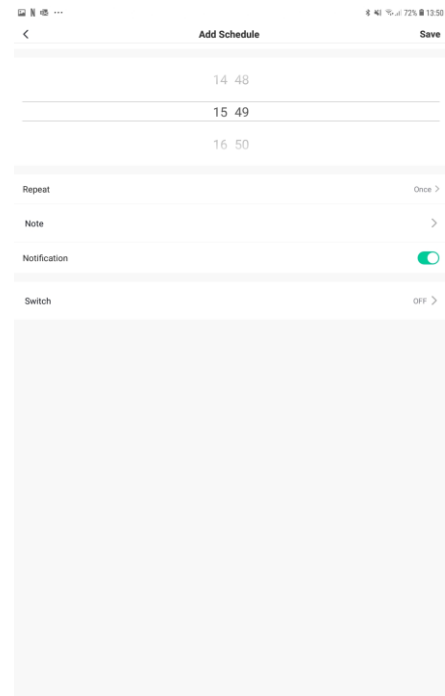
3) Set the cycle start time

- Set ignition timing
- Set the days when the device should be activated
- Turn on notifications (recommended)
- Select Switch "ON"



4) Set the cycle end time

- Set the turn-off time
- Set the same days of the STORM RC activation
- Turn on notifications (recommended)
- Select Switch "OFF"



5.5 MAXIMUM ALLOWABLE OPERATING TIME

The maximum allowable operating time is **60 minutes** with the following environmental parameters:

Parameters	Values
Temperature	Max 35°C
Relative humidity	Max 70%



NOTE:

Within the limits given, the 60-minute cycle can be repeated twice, then leave it to rest for 30 minutes.



CAUTION

Within the limits given, the 60-minute cycle can be repeated twice, then leave it to rest for 30 minutes.

5.6 EXPOSURE TIME TO OZONE

This indicative table provides the exposure time to ozone needed to eliminate various organisms present in the environment after room saturation at the end of the generator work cycle.

Organism	Minimum required ozone concentration	Exposure time before aerating
Molds <i>Aspergillus Niger, vari ceppi di Penicillium, Cladosporium</i>	2 ppm	60 minutes
Fungi <i>Candida Parapsilosis, Candida Tropicalis</i>	0,02 ppm – 0,26 ppm	< 2 minutes
Bacteria <i>E. Coli, Legionella, Mycobacterium, Fecal Streptococcus</i>	0,23 ppm – 2,2 ppm	< 20 minutes
Virus <i>Poliovirus type-1, Human Rotavirus, Enteric virus</i>	0,2 ppm – 4,1 ppm	< 20 minutes

5.8 TABLE OF MACHINE PROGRAMS/PERFORMANCE

This table provides indications on the performance of the STORM and STORM RC ozone generators.



NOTE:

The Ministry of Health recommends an ozone concentration value of at least 4,1 ppm < parts per million to sanitize.

The machine programs enable (with concentration ≈ 4,5 ppm) the saturation of the volumes and surfaces indicated as follows:

Program	Treatment duration	Meters saturated with ozone (≈4,5 ppm)	Equivalent to square meters (room average height: 3 meter)
15'	15 minutes	90	30
30'	30 minutes	180	60
45'	45 minutes	270	90
60'	60 minutes	360	120

5.9 INDICATIONS ON THE USE OF COMMON MATERIALS WITH OZONE

Given the high oxidizing power of ozone, the following table provides information on the compatibility of the materials mostly used with ozone.

Material	Compatibility
ABS	good
Aluminium	good/decent
Bronze	good
CPVC	excellent
EPDM	excellent
Natural latex	no
Hypalon	excellent
Inox 304	good
Inox 316	excellent
Kel-f	excellent
Neoprene	good/decent

Material	Compatibility
Nylon	no
Brass	no
Polycarbonate	excellent
Polypropylene	moderate
Plexiglass	excellent
PVC	moderate
Copper	good
Silicone	excellent
Teflon	excellent
Glass	excellent
Viton	excellent

6 MAINTENANCE

6.1 PRELIMINARY WARNINGS

**WARNING!**

Before proceeding to any intervention on the device, it is recommended to disconnect the power supply.

6.2 ROUTINE MAINTENANCE

Maintenance is fundamental to keep the device in perfect efficiency both functionally and energetically. At the beginning of a work cycle or according to the necessity, use the following steps:

- **Cleaning of the external structures**
Thoroughly dust and clean the external surface of the device with a rag.
- **Cleaning of ventilation grills**
Remove by a jet of compressed air any accumulation of dust from inlet and outlet air grills.

7 DEMOLITION AND DISPOSAL

7.1 OZONE DISPOSAL

Ozone has to be reduced to less than 0,1 ppm before being disposed of in water, soil or atmosphere.

7.2 DEVICE DISPOSAL

The device cannot be disposed of in normal waste but it must be taken to a collection center specialised in the disposal of electrical and electronic equipment, in accordance with the procedures and rules in force.

Unauthorised disposal of the product entails the application of administrative penalties to the owner.



8 APPENDIX A

Ozone (O₃)

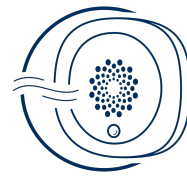
Ozone is a gas made up of three oxygen atoms, it occurs naturally in small amounts in the upper atmosphere and protects life on Earth from the sun's ultraviolet radiation.

This gas is the strongest bactericidal and virustatic, usable, existing in nature. The bactericidal action of ozone is based on its high capacity of direct oxidation, thanks to which microorganisms (bacteria, viruses, moulds, fungi, yeasts, algae, etc.) are quickly and permanently destroyed or inactivated without producing toxic by-products. The gas is also able to reduce the amount of heavy metals (mercury, arsenic, lead, etc.), pesticides (atrazine, propazine, molinate, etc.), pollutants (Hydrocarbons, surfactants, nitrates, sulphites, etc.) and many other toxic substances in water, air and food.

The gas was discovered in 1840 by the German chemist Christian Friedrich Schönbein who called it ozone, which comes from the Greek word ozein meaning pain. Schönbein is also remembered as the first person who studied the reaction mechanisms between ozone and organic matter. In 1857, Werner Von Siemens patents and produces the first corona discharge generator. The first plant for drinking water treatment is settled in Oudshoorn in the Netherlands in 1893. Then, in 1907, the French chemist Marius Paul Otto created the "Compagnie Générale de l'Ozone", the first company for the use of ozone in the sterilization of drinking water. The first official medical applications of ozone date back to 1915, in fact during the First World War the gas is used for the treatment of gangrene.

Ozone has been widely used for more than a century for the water and air treatment, in agriculture, in the livestock sector, and in the food, chemical and health sector

PHE-O₃



OZONE
GEN.IE
CLEAN AIR - NO CHEMICALS



CE



OZONE
GEN.IE
CLEAN AIR - NO CHEMICALS


MADE IN ITALY