

*MANUALE
MANUAL
MANUEL DE L'UTILISATEUR
ANWENDERHANDBUCH
MANUAL DEL USUARIO*

STERILAIR PRO

Art. SA210ZSA

ITALIANO

ENGLISH

FRANÇAIS

DEUTSCH

ESPAÑOL

DECLARATION OF CONFORMITY

The undersigned TECNO-GAZ S.p.A.,
located at Strada Cavalli, 4 – CAP 43038 Sala Baganza (Parma) ITALY;
declares under its sole responsibility that the device Sterilair PRO, is manufactured in
accordance with the laws transposing the directives in force.

This appliance fulfils EC conformity.

The original declaration of conformity is enclosed with the manual.

Model: **STERILAIR PRO**

Item code: **SA210ZSA**



WARRANTY TERMS AND CONDITIONS

- 1) **WARRANTY PERIOD:** the product is covered by a 12 (twelve) month warranty.
- 2) **EXCLUSION:** the following are excluded from the warranty:
 - a) failures caused by lack of routine maintenance due to negligence of the User or an improper use of the product;
 - b) periodic checks and maintenance;
 - c) repair or replacement of parts subject to wear, fragile parts or parts whose life-cycle is not predictable, unless they are proved to be defective at the time of their delivery;
 - d) failures relating to workforce, transfer of technical personnel and transportation;
 - e) failures or damage due to improper use and misuse;
 - f) failures or damage due to impurities in the water and air supply systems, exceptional chemical or electrical events;
 - g) failures or damage due to the use of detergents, disinfectants, sterilizing substances or processes not expressly indicated in the user and maintenance manual;
 - h) natural colour change of the plastic parts.
- 3) **INSTALLATION AND COMMISSIONING REPORT:** an essential condition to benefit from the warranty is to return the installation and commissioning report, duly completed in all its parts and countersigned by the User and the Installer. The report must be returned within 15 days from the date of installation. Failure to do so will void the warranty.
- 4) **LIMITATIONS:** the warranty entitles you to free repair or replacement of defective parts. However, this does not include the right to replace the entire unit. As for the components used or integrated components made with the label of the manufacturer or third parties and with their own warranty, the terms and conditions, the limitations and exclusions reported on the certificates apply.

The execution of one or more repairs during the warranty period does not involve changing the expiration date of the warranty.
- 5) **DISPUTES:** in case of dispute by the Purchaser on the application of the warranty, the quality or the conditions of the equipment delivered, the Purchaser shall not in any way suspend and/or delay payments.
- 6) **COMPLAINTS:** in case of complaints regarding the application and interpretation of this Warranty Certificate, these shall be submitted to the Court of Parma (Italy) regardless of where the contract to purchase the equipment was made.
- 7) **EXCEPTIONS:** special exceptions granted on the present terms and conditions of this warranty do not imply acknowledgement of any rights of the Buyer and shall be considered granted only in relation to this specific case.
- 8) **OTHER:** although not expressly stated in this Warranty Certificate, the applicable norms contained in the Civil Code and laws of the Italian Republic apply.

WARRANTY INVALIDATION

The warranty is void if:

- a) the appliance is damaged due to fall, exposure to flames, spilled liquids, lightning, natural disasters, weather-related events or due to causes not attributable to manufacturing defects;
- b) the installation does not comply with the manufacturer's instructions and has been carried out by unauthorised personnel;
- c) the equipment is repaired, modified or otherwise tampered with by Buyer or unauthorised third parties;
- d) when requesting servicing covered by the warranty the serial number of the product has been removed, deleted, forged, etc.;
- e) the installation and commissioning report is not returned, filled in and signed, within 15 days from the date of installation;
- f) the Purchaser suspends and/or delays, for any reason, the payment of any sum due for the purchase and/or maintenance of equipment;
- g) scheduled periodic maintenance or other requirement provided for in the user manual and maintenance has not been carried out.

TERMS OF RETURNS

1. All returns must be made with products packaged in their original packaging; if not made with the original packing; the cost for restoring the packaging will be charged;
2. All returns must be made with CARRIAGE PAID;
3. The customer must anticipate the return by requesting written authorisation from the manufacturer's sales office to carry out the "Customer returns management form" in accordance with the manufacturer's Quality Management System.
4. The returns document must state:
 - The item's reference code;
 - The number of the purchase invoices or delivery notes;
 - Serial number and batch of the product;
 - Reason for returning the item;
 - The identification number of the "Customer returns management form" or enclose a copy of the form;
5. Returns are accepted only after the material has been viewed. In case of non-compliance, they can be returned to the sender, at the sole discretion of the manufacturer;
6. The costs to repair and test the product will be charged for each product returned.
7. The parts replaced under warranty must be returned with carriage paid.

8. Failure to return them means that the cost of the item will be charged to the party requesting the return.
9. The manufacturer does not accept returns from end users.
10. The same provisions of returns applies to retur

GENERAL PRECAUTIONS AND SAFETY

 Read the precautions in this booklet carefully as they supply important indications concerning installation, use and maintenance safety. Preserve this booklet with care for future consultation

After having removed packaging, make sure that the product is intact.

 If in doubt, do not use it and seek professionally qualified advice. The packaging elements (plastic, expanded polystyrene, screws etc.) must be kept out of the reach of children as they are potential sources danger.

 Before connecting the devices, make sure that the plate data corresponds with that of the electrical mains. (The identification plate is located at the rear of the structure)

 Do not remove the label

 Use original parts only

Failure to comply with the points mentioned above removes any liability from the manufacturer.

CONTACTS AND ADDRESSES

In case of failure, review, validation, contact the service centers
TECNO-GAZ S.p.A.

**See annex for Authorized Service Centers
Cod. 0Z00H0002**



SYMBOLS



Tecno-Gaz S.p.A. – Strada Cavalli, 4, 43038, Sala Baganza, Parma



In compliance with DIRECTIVE 2002/96/EC, this symbol indicates that at the end of its useful life, the product must not be disposed of as municipal waste.



General instructions and information for the recipient.



Pay attention to the indications on the side of this symbol.



Attention UVC: DANGER Artificial Optical Radiation (ROA)



Conformity CE

PE

External protection.



Protective GROUND



GROUND (operating)



Alternating current.



Attention high voltage danger of electrocution!



Read this instruction manual carefully

Fg.

Figure.

s

Seconds (unit of measurement of time).

W

Watt (unit of measurement of Power).

Hz

Hertz (unit of measurement of frequency).

mm

Millimetres (unit of measurement of Length).

A

Amperes (unit of measurement of electric current).

V

Volt (unit of measurement of the electric voltage).

Pa

Pascal (unit of measurement of pressure).

°C

Centigrade degrees (unit of measurement of temperature).

kg

Kilograms (unit of measurement of Mass).



Fuse

PRODUCT DESCRIPTION



Fg.1

The device is a UVGI (ultraviolet germicidal irradiation) recirculation unit for air sterilisation.

The germicidal action is implemented through the elimination of the microbial load in the air in safe conditions by exploiting short wavelength UV radiation (in UV-C spectrum).

These radiations kill microorganisms thus reducing the bacterial load in the air.

The operation is based on a closed cycle forced ventilation system. The air suctioned into the module first passes through a filter where larger pollutants are blocked. It then enters inside and comes into direct contact with the UV-C radiations which perform the maximum germicidal action. Finally air is exhausted by the outlet vent thus determining environmental microbiological elimination. Its greatest advantage consists in being perfectly safe for people since there is no UV-C radiation leakage otherwise harmful.

The appliance is capable of processing a flow rate of 120 m3/h. Approximately 3 hours after installation, it reaches 90% airborne bacterial load elimination.

MANUFACTURING FEATURES

Dimensions wall-mounted /with stand	82 x 27 x 11 cm / 107 x 33 x 28 cm (H,L,P)
Weight wall-mounted /with stand	12,5 Kg / 15 kg
Packaging dimensions wall-mounted device	97 x 36 x 19cm (H,L,P)
Packaging dimensions stand	105 x 34 x 29 cm (H,L,P)
Power supply voltage	230 V ~±10%
N° of phases	1
Power supply frequency	50 Hz
Max absorbed power	150 W
Fuse	N. 2 F 2A (5X20) Position over the electrical socket

Operation mode	continuous
Flow rate	120 m ³ /h
Noise level	32 dB
Lamps	n. 4 UV-C tubes 25W G13T8 (7 W UVGI)
Wavelength	253,7 nm
Ultraviolet energy	69 μW/cm ² at 1 m (per lamp)
UV-C radiation external emission	none
Equipment	Dustproof filter; Electronic programmer
Reflectors	Aluminium
Lamp duration	9000 hours (1 year: 24 hours x 365 dd)
Germicidal lamp control	Anti UV-C light guide

Technical Data of programmer

Daily and weekly programming of 16 switches (8 x ON, 8 x OFF).

With day block programming, there are 56 switch possibilities.

Minimum time resolution between switching points: 1 minute.

Power supply: Lithium battery (3Vdc) lasting up to 5 years without power supply.

STORAGE AND OPERATING CONDITIONS

- Temperature - 10 ÷ 45 °C
- Humidity 10 ÷ 90 %
- Pressure 500 ÷ 1060 hPa



Before performing installation, make sure the device is intact. Should signs of damage caused by transportation be detected, **do not activate the appliance** and inform the dealer.

USING THE DEVICE



This appliance is intended solely as an air disinfection device. Any other use must be considered improper and therefore dangerous.

The manufacturer will not be held liable for damage deriving from improper, incorrect or unreasonable use.

Number of devices necessary for air handling in relation to volume of the room in in m³ :

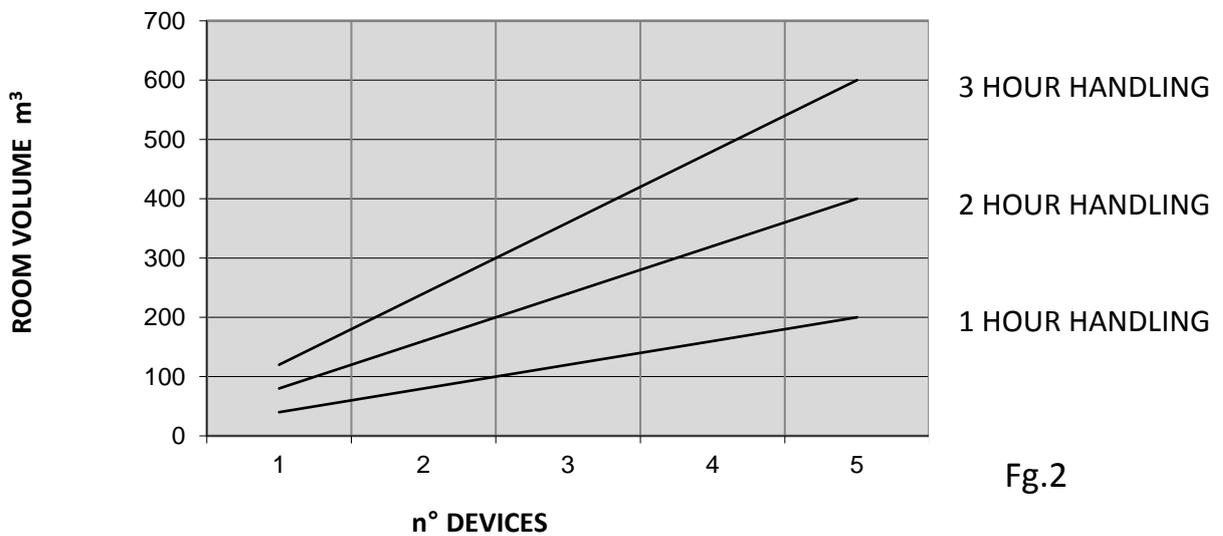


Fig.2

Typical environments and degree of protection to be reached. This can help to establish the number of devices required.

Offices	Low
Locker rooms	Low
Kitchens and cooking sites	Medium
Food processing	Medium
Medical service	Medium
Laundromats	Medium
Entertainment sites	Medium
Gyms and fitness centres	Medium
Analysis laboratories	High
Medical offices	High
Clinics	High
Surgical rooms	High

INSTALLATION

The device is supplied packed in the cardboard box with recyclable impact-proof material.



Before performing installation, make sure the device is intact. Should signs of damage caused by transportation be detected, inform the dealer.



ATTENTION UV radiations!

Do not activate the device if there are luminous filtrations towards the outside. **EYES AND SKIN COULD BE HARMED**

Keep the packaging at least as long as the warranty is in effect.

The product is intended exclusively for INTERNAL use. It is not suitable for HUMID environments.

The device must not be used where it can come to contact with water to avoid the risk of fires or electrical shocks.



The device must not be used in potentially explosive atmospheres.

The device can be hung on a wall or “free standing” mounted on a stand.

Before installing it, make sure there is an electric socket nearby and that it can be reached to unplug the device before cleaning or maintenance.

The device can be installed at a height close to that indicated in Fig.3, keeping in mind recognised sources of contamination or areas requiring special protection.

Steril Air PRO standard model (mounted on the wall) is supplied with a bracket at the back of the device to allow it to be fastened to the wall by means of the two dowels with the L-shaped hooks 9 cm one from another and approximately 1.8 m above the ground.

- Minimum Diameter of hole 6 mm
- Minimum depth of hole 40 mm

Technical data on type of dowel:

- Min Screw (diam. x length) 4.2x38 mm

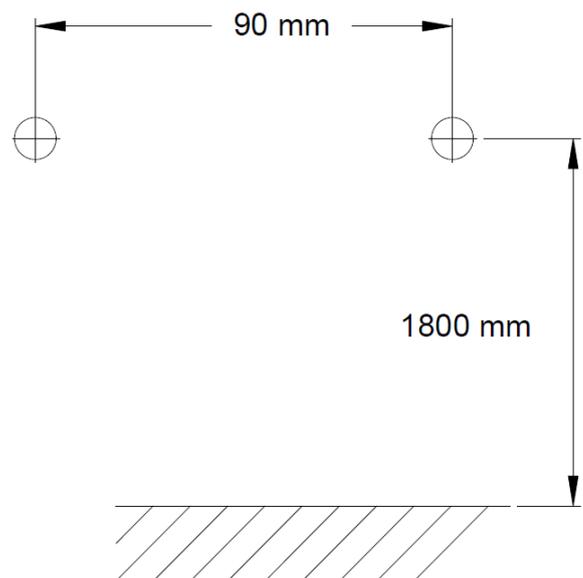


Fig.3

Steril Air PRO free standing (installation on stand) is supplied with a bracket on the stand which must correspond to that on the back of the device (the same for wall mounting);

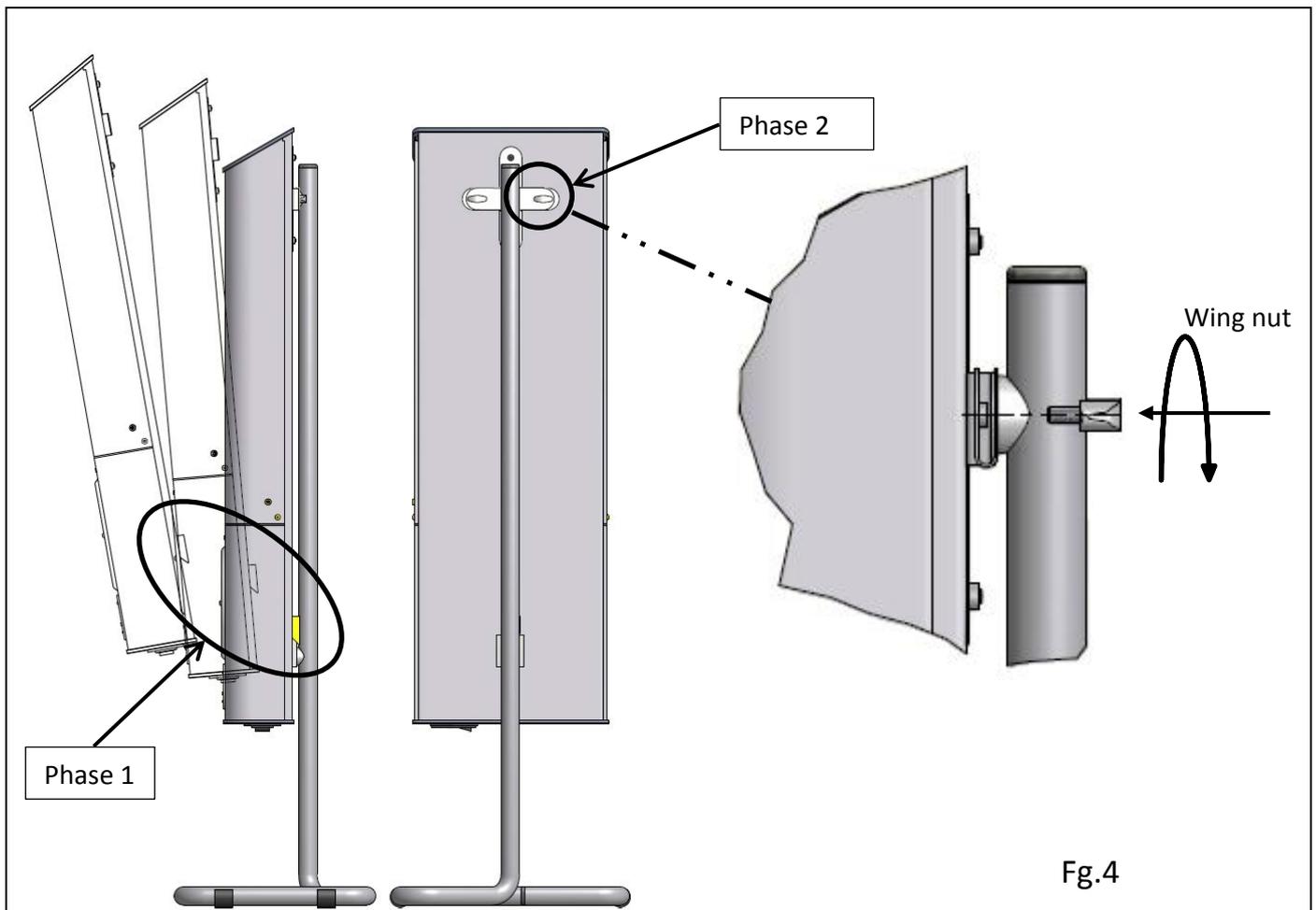
Phase 1:

Place the device in the fitting and have the holes match;

Phase 2:

Have the holes of the brackets match and screw the wing nut and washer;

Refer to the figure below: Fg.4

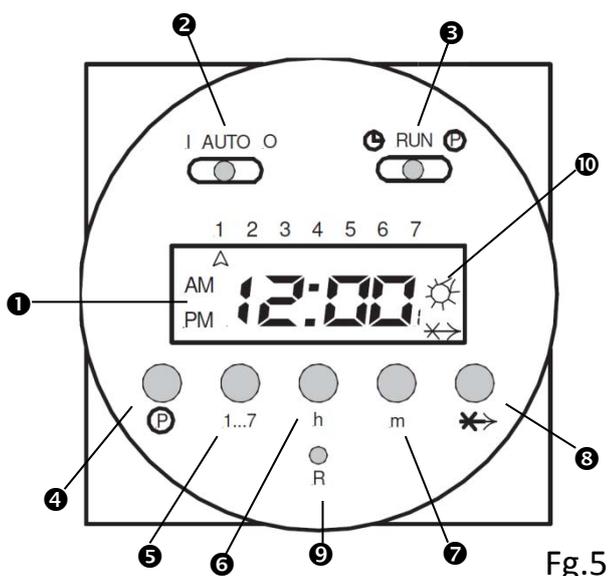


OPERATION DESCRIPTION

To switch the device on, move the switch at the bottom of the device on the plug side to I; Four indicator lights indicate when each lamp is on and running.

The device is equipped with a programmer which controls automatic daily and/or weekly switch on/off. Programming is fast and easy by means of buttons and instructions on the display.

Controllo e simbologie sul display



- ❶ 1. Display with time indication and moment of intervention.
- ❷ 2. Sliding switch to set function mode:
 AUTO: Switches on and off according to set programming
 I : Permanently ON
 O: Permanently OFF
- ❸ 3. Sliding switch to set time and program:
 To program:
 RUN : Activates programming
 ⌚ : Sets current time
 P : Sets the program

General information concerning keys:

By pressing key briefly, it will: increase by 1 digit.

By pressing for more than 3 seconds, it will achieve: quicker and continuous increase

- ❹ P : Key for programming 16 switches;
- ❺ 1...7: Key for setting day of the week (current day and daily switching). When setting switching times, one can program by day or according to the following blocks:
 1..5 (Monday to Friday) 1..6 (Monday to Saturday)
 6..7 (Saturday to Sunday) 1..7 (Monday to Sunday)
- ❻ h : Time setting key (for current time and setting time)
- ❼ m : Minute setting key (for current time and setting time)
- ❽ -X->: Skip function: Pressing the Skip '-X->' function key inverts the set operating mode. For example: if the programmer is "on", it will switch off immediately and vice versa.
- ❾ R: Reset key cancels all settings and the time of the current day
- ❿ *: When selections 1, 3, 5, 7, 9, 11, 13, 15 are indicated (switch-on points), the symbol appears on the right side of the display.
 If selections 2, 4, 6, 8, 10, 12, 14, 16 are indicated (switch-off points), no symbol appears.

Reset

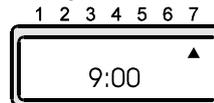
Before setting the first program, you must Reset:

1. Make sure the sliding switch ③ is at RUN.
2. Press the key R (⑨) with a pointed object.

The display will start to flash 0:00.

Setting time and day

1. Move the sliding switch ③ to 
2. Press the key 1...7 (⑤) to enter the day of the week (1 = Monday, 7 = Sunday).
An arrow will appear on the display indicating the day of the week.
3. Use the keys h (⑥) and m (⑦) to set the time.



4. Move the switch ③ to RUN. The time of the day is activated.

Permanently ON, permanently OFF, AUTO

To set these functions, make sure the sliding switch ③ is at RUN.

Permanently ON: The device is permanently on.

The sliding switch ② is at I. The symbol  appears on the Display.

Permanently OFF: The device is permanently off

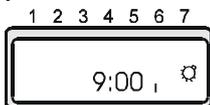
The sliding switch ② is at 0. The symbol  disappears from the Display.

AUTO: The device switches according to the set program. The sliding switch ② is at AUTO.

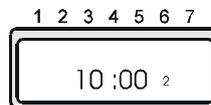
- ON mode: the symbol  appears.
- OFF mode: the symbol  does not appear.

Programming switching times

The switching in execution or selected will be indicated by a number at the bottom right of the display with the relative symbol .



On



Off

Advice for programming: every switch-on point is closely linked to the subsequent switch-off point. They should always be programmed in pairs to prevent mistakes.

Attention: the shortest switching interval which can be set is 1 minute.

Procedure:

1. Move the sliding switch ③ to (P).

2. Press the key 1...7 (5) to enter the day of the week (1=Monday, 7=Sunday) or day blocks. The following day blocks can be selected by continuing to press the same key:
 1 to 5 1 to 7 1 to 6 6 to 7
 The arrows on the display indicate the days of the week.
3. Press the keys h (6) and m (7) to set the time.
4. Press the key P (4): The subsequent switching point (which will be even, therefore switch-ff) is viewed.
5. Repeat steps 2 to 4 for the times requested.
6. After having set the required switching: move the sliding switch 2 to AUTO and the switch 3 to RUN.

The programmer now works according to the set program.

Control, modification and cancellation of switching times

Move the sliding switch 3 to P.

1. Control: Press the key P as much as necessary to check the switching point on the Display.
2. Modification:
 - Use the key P to position yourself at the switching point to be modified.
Press the keys 1...7 (5) to change the day of the week.
 - Press the keys h (6) and m (7) to change the switching time as instructed previously.
3. Cancellation:
 - Use the key P to position yourself at the switching point to be modified.
Then press the keys "-X->" (8) and P (4) simultaneously for 3–4 seconds. A flashing 0:00 appears on the display and the switching point is cancelled.
If control, modification or cancellation is finished, move the sliding switch 3 to RUN.

-X-> Skip Function (soft-override)

The Skip Function changes the switching setting of the connected device until it reaches the following program.

For example: if the device is ON, pressing the key Skip '-X->' immediately switches it OFF and vice versa.

1. Move the sliding switch 3 to RUN.
2. Press the key Skip '-X->'. The device will change switching respect to the set mode.
The symbol Skip (-X->) appears on the Display (wait 3-4 seconds).
3. Then pressing the key Skip '-X->' restores the Skip Function.

Precautions for Skip Function:

- The number and symbol appear on the Display after an interval of 3 seconds.

- The Skip Function only intervenes until it reaches the subsequent programmed switching point. At this point the Skip Function is cancelled and the programmed switching cycles are activated once again.

Programming Errors

If "EEE" appears, there is a setting error. The number of the switching cycle with the error is displayed.

Move the setting switch to P.

Press the button until it displays the cycle with the error. Correct it and then move the setting switch to "RUN" to exit the programming mode.

Every switch-on point is linked to the subsequent switch-off point. Therefore the following ON/OFF combinations can, for example, lead to errors.

Possible causes of errors:

Activation ON	Deactivation OFF
a) Programmed switch-on	No setting
b) No setting	Programmed deactivation
c) Day block (e.g. 1, 2, 3, 4, 5)	Different day block (e.g. 1, 2, 3, 4, 5,6)
d) Day block	Day of the week
e) Programmed time activation (e.g. Wednesday, 09:00)	Deactivation of the set time is prior to the activation time on the same day (e.g. Wednesday, 08:59)
f) Switch on and off set at same times (e.g. Wednesday, 09:00)	

Technical Data of programmer

- Daily and weekly programming of 16 switches per channel (8 x ON, 8 x OFF). With day block programming, there are 56 switch possibilities.
- The minimum time interval between switching points is 1 minute.
- Lithium battery (3Vdc) lasting up to 5 years without power supply.
- Ambient temperature: -10°C to +55°C (T-10; T55).

ROUTINE CLEANING AND MAINTENANCE

In order to maintain the performance and efficiency of the lamp germicide, it is important to strictly comply with the maintenance program attached to the device.

Do not use water jets or sprays for cleaning,

Use a brush to remove dust build-up on the air inlet and outlet vent at least every month. Use a soft moist cloth to remove dust build-up from the structure.



BEFORE EVERY INTERNAL MAINTENANCE OPERATION UNPLUG THE DEVICE!



Every 3 months (approximately 2,000 hours) replace the filter inside the air inlet vent (Spare filter: Art. SSAA015).

Follow these instructions step-by-step to replace the filter:

1. Take the supplied L-shaped key (3MECL0001) specific for TORX safety screws (Fig.6) and unscrew the front part;
2. Remove the front of the vent where the filter is housed. (Fig.7)
3. Replace the filter (SSAA015).
4. Put the front of the vent back on in the order shown in Fig.7.

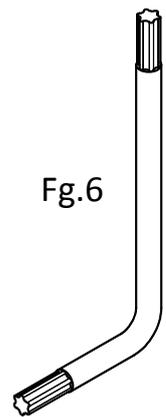


Fig.6

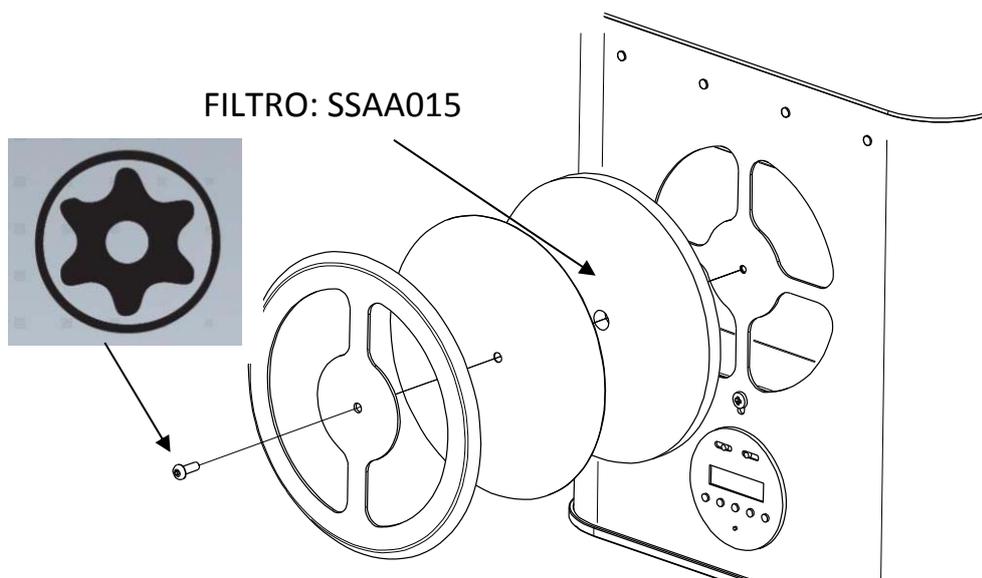


Fig.7



Approximately every year (9,000 hours) the 4 germicide tubes must also be replaced.

Yearly spare filter and lamp kit: Art. SA001ZSA

ATTENTION:

To replace the germicide tubes (3ELEK0001) proceed as follows:



BEFORE EVERY INTERNAL MAINTENANCE OPERATION UNPLUG THE DEVICE!

1. Take the supplied L-shaped key (3MECL0001) for TORX screws (Fig.6) and unscrew the sides of the casing as shown in Fig.8.

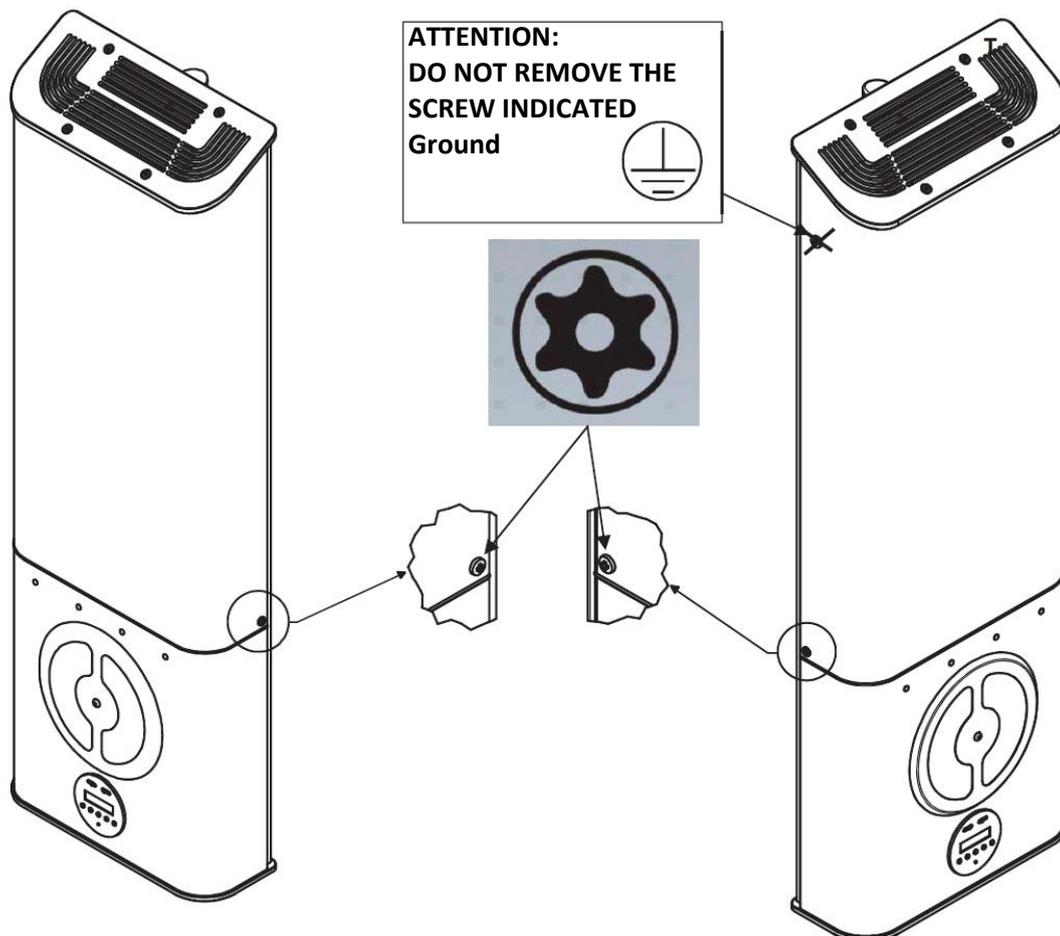


Fig.8

Remove the 4 screws

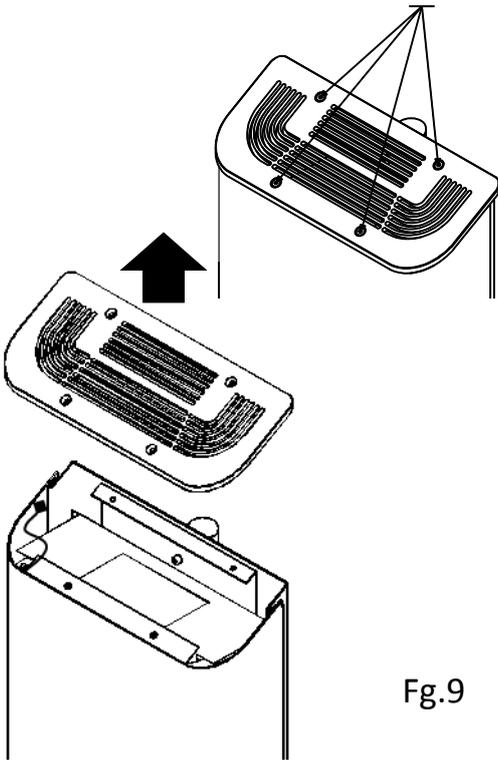


Fig.9

2. Then remove the screws on the top cover of the device. Take the cover off.

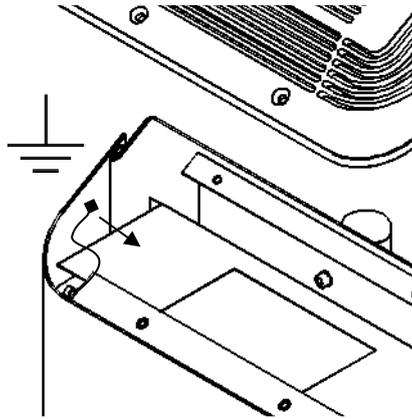


Fig.10

3. Disconnect the earth connection

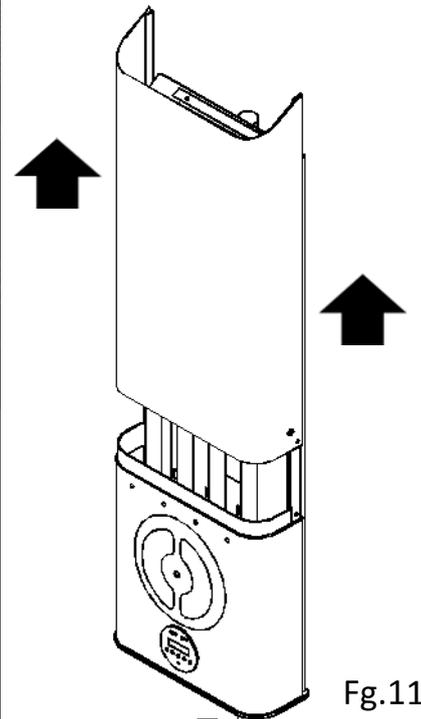
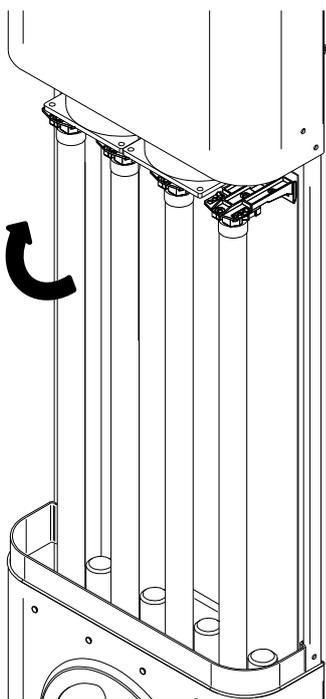


Fig.11

4. Remove the upper casing and continue pulling the casing off until you see the lamps completely.



5. The lamps can now be replaced. Grip the lamp delicately and **turn it 90°**, until you hear a **double "CLICK"**. At this point it can be removed. Repeat the operation for all 4 lamps.

6. Take the 4 new lamps and perform the same operation as for removal. Insert the lamp into its seat and **turn it 90° until you hear two "CLICKS"** meaning it has snapped in.

The device can now be closed. Begin by reinserting the upper casing previously removed in phase 4 (Fig.11)

7. Close the upper casing reconnecting the earth connection Fig.11

8. Insert the 2 screws on the sides of the casing removed in phase 1. Finally insert the 4 screws of the cover as in phase 2.

MAKE SURE THE FOUR LAMPS SWITCH ON PROPERLY BY CHECKING THE CORRESPONDING INDICATOR LIGHTS.

At the end of each maintenance operation, both when replacing the filter and the lamps, you must report the date and name of the assistance centre which performed the operation on the label affixed at the side of the device (spare part: code SSAA013).



YEARLY ROUTINE MAINTENANCE			
Trimester N°:	Description of intervention	Date	C.A.R.
START	Installation / changing lamps and filter		
1°	Filter change →		
2°	Filter change →		
3°	Filter change →		
Serial number S/N:			

Fig.13

At the end of the lifecycle of the lamps, together with replacement of worn components (filter and lamps), a new yearly plate will be affixed. ENTER THE DATA ON THE START AND S/N LINE. If the maintenance intervention is not respected or reported, it will be necessary to reset the routine maintenance program by replacing the lamps which could have reached the end of their lifecycle and the filter which could dirty the lamps reducing their performance.

N.B. Whenever it is necessary to replace the lamps, it is not possible to change only one.

DEMOLITION AND DISPOSAL



*Refer to annex
Cod. 0Z00H0004*





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