



Instructions and maintenance

ATLANTIDE 80 - 160 - 240 - 500 - 1000

BATTISTELLA B.G. S.r.l.

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INSTRUCTIONS AND MAINTENANCE

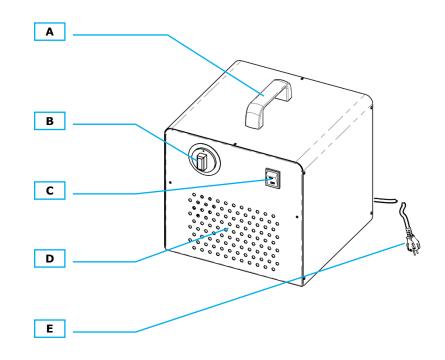
ATLANTIDE

Before starting the machine, carefully read this manual and follow the instructions.

Never use the product in any way other than that indicated in this manual.

1. SPECIFICATIONS

MODEL:	ATLANTIDE 80	ATLANTIDE 160	ATLANTIDE 240
POWER SUPPLY: TOTAL INSTALLED POWER: POWER OZONE LAMP: WEIGHT: OVERALL DIMENSION: MADE IN ITALY	230 V-50Hz 35 W 10 W 3,8 kg 26x25x28 h. cm	230 V-50Hz 45 W 2 x 10 W 3,9 kg 26x25x28 h. cm	230 V-50Hz 55 W 3 x 10 W 4 kg 26x25x28 h. cm



LEGEND			
Α	Handle	D	Ozone outlet grill
В	Timer	Е	Plug
С	Main switch		

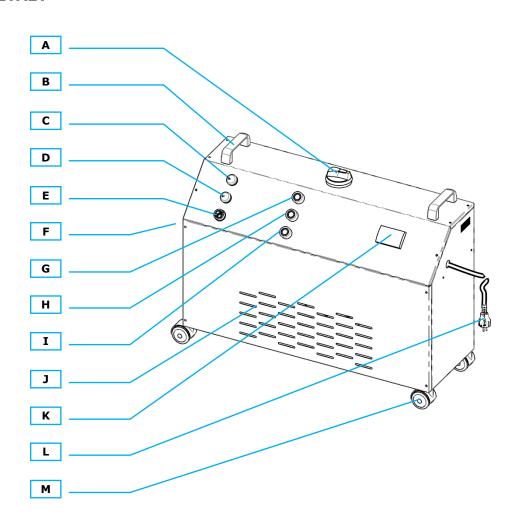
MODEL: POWER SUPPLY: TOTAL INSTALLED POWER: OZONE LAMP POWER: WEIGHT: OVERALL DIMENSIONS: MADE IN ITALY

ATLANTIDE 500

230 V-50 Hz 200 W 70 W 19,5 kg 26x74x55 h. cm

ATLANTIDE 1000

230 V- 50 Hz 270 W 2 x 70 W 20 kg 26x74x55 h. cm



	LEGEND			
Α	Main switch	Н	Program start button 2 (medium cycle)	
В	Handle	Ι	Program start button 3 (strong cycle)	
С	"Sanitizing in progress" indicator	J	Ozone abatement grid	
D	"Sanitizing finished" indicator	Κ	Electronic board display	
Ε	Веер	L	Plug	
F	Ozone output grid	Μ	Wheels	
G	Program start button 1 (basic cycle)			

2. IMPORTANT

It is the operator's responsibility to carefully follow the instructions written in this manual to better use and preserve the machine and avoid injuries to people or damage to things.

This appliance is not suitable for use by people (including children) with reduced, or inexperienced physical, sensory and mental abilities, unless they are supervised and instructed in the use of the appliance by a person responsible for their safety. Children should be checked to make sure they don't play with the appliance.

Labels have been put on some parts of the machine in order to identify the crucial points. The meanings of the labels are as shown below:

<u></u>	Hot surface. Accidental burns may occur. Pay attention.
4	High voltage. Electrocution risk. Pay attention not to touch high voltage parts. Disconnect the machine from the power grid before removing the protection panels.

3. OPENING OF PACKAGE

- 1. Upon receipt of the machine, check that the packaging has not been damaged or tampered with.
- 2. Remove the machine from the box, carefully read the instructions below and strictly follow the specified indications (keep this booklet for any further consultation).

4. ELECTRICAL CONNECTION

Connect the machine to a protected socket with earth protector switch, with observance of the law in force and a voltage suitable to the machine.

In case of incompatibility between the socket and the plug of the appliance, have the socket replaced with another of a suitable type by professionally qualified personnel.

Be sure the voltage and power frequency correspond to what is written on the label placed on the machine.

It is compulsory to connect the equipment to a good ground wire. The manufacturer may not be held responsible for any damage caused by inadequate or missing ground wire.

5. GENERAL WARNINGS

This electrical appliance complies with current safety regulations. However, improper use can cause damage to people and/or things.

- 1. **Atlantide 500 and Atlantide 1000** are intended for professional use only by qualified people. It is important that professional users know how to recognize and understand what dangers can arise from incorrect use of the appliance.
- 2. During long periods of inactivity, turn off the machine by using the main switch or unplug it.

- 3. It is strictly forbidden to breathe / inhale the ozone produced by the equipment, even for short periods.
- 4. Avoid connecting Atlantide to multiple sockets and/or extension cords which are not adequate to its power.
- 5. Avoid exposing materials deemed "non-ozone resistant", such as natural rubber, to high concentrations of ozone.
- 6. The appliance must be used and left to rest on a stable surface, in a closed environment with a temperature between + 10 ° \div + 40 °. Do not place it outdoors or expose it to the effects of atmospheric agents.
- 7. The appliance is not intended for outdoor use but only in confined spaces.
- 8. The use of this equipment is allowed only in closed and isolated environments without the presence of people and/or animals inside.
- 9. Never leave the machine next to gas or heat sources.
- 10. Do not place the ozone generator in limited spaces and without the possibility of ventilation.
- 11. Do not replace the plug of the power supply cable.
- 12. Do not move the machine while it is working.
- 13. Do not pull the power supply cable but remove it carefully by the plug to avoid any damage.
- 14. These products are not suitable for use in potentially explosive atmospheres (ATEX) or in places where easily flammable substances are present.
- 15. These products have UV lamps inside, risk class 3: high risk pursuant to EN 62471 (Photobiological safety of lamps and lamp systems). Direct or indirect UV radiation damages eyes and skin. Never expose the skin and do not stare into the light produced by the UV lamp in operation.



- 16. Contact specialized people to replace lamps or ballasts. Incorrectly installed lamps or non-original lamps compromise the operation of the machine and can create dangerous situations.
- 17. Always disconnect the machine from the power supply if it is not used and before any maintenance and cleaning operations.
- 18. If, once the sanitizing is completed, you smell a garlicky odor (typical smell of ozone) inside the room, ventilate the room to get rid of potentially irritating residues.
- 19. Completely unwind the power supply cable before connecting it to the electricity grid. Always use the machine with unwound power supply cable.
- 20. Keep the room locked during the ozone treatment, so that no one can enter inside.
- 21. Always keep the power supply cable away from hot surfaces and avoid crushing and treading on it.
- 22. Keep children away from the machine, both when it is working and when it is turned off.
- 23. Use Atlantide 500 in a room of at least 150 m3, use Atlantide 1000 in a room of at least 300 m3. The use of these two machines inside smaller rooms could produce a very high concentration of ozone. High concentrations of ozone are difficult to bring back to safety levels in a short time and could damage the materials inside the room.

6. GENERAL DESCRIPTION

ATLANTIDE device consists of a system capable of using the oxygen present in the air and transforming it into O3 ozone, for the disinfection of surfaces, the inactivation of viruses and the elimination of odors. In fact, according to some medical-scientific

studies, the oxidizing action carried out by ozone is effective as a bactericidal, fungicidal and inactivating agent of viruses.

The machine is available in **five versions**:

<u>3 versions are portable and lightweight</u> → Atlantide 80, 160 and 240

ATLANTIDE 80, ATLANTIDE 160, **ATLANTIDE 240** are portable and light, they weigh about 3-4 kg. Through an engine, they vacuum the room air, while the lamps transform oxygen into ozone. The ozone released into the environment sanitizes air and surfaces.

The duration of the ozone cycle can be set via a timer (0-60 minutes). The minimum recommended cycle for a 30 m3 room that is sanitized every day is 10 minutes.

At the end of the cycle, the room must remain closed for 30 minutes - in this way the ozone returns to being oxygen (natural chemical reaction), after which you can enter and ventilate the room.

<u>2 larger versions are equipped with wheels</u> → Atlantide 500 and 1000

ATLANTIDE 500 and **ATLANTIDE 1000** are equipped with wheels to facilitate movement from one room to another. In addition, through an engine, they vacuum the room air while the lamps transform oxygen into ozone. The ozone released into the environment sanitizes air and surfaces. In the final sanitization phase, the ozone catalization cycle automatically starts and, through an activated carbon filter, converts the ozone produced into oxygen.

It is possible to choose between 3 cycles according to the size of the room to sanitize. The cycles are preset by the manufacturer and assure:

1. an adequate ozone level to sanitize the room;

2. an adequate conversion of the ozone into oxygen so that it is not a danger.

The duration of the cycles is 60 minutes, 90 minutes and 120 minutes respectively.

7. WHAT IS OZONE?

Ozone (from the Greek ozein, odor) is a molecule made up of 3 oxygen atoms (O3). Ozone is present in nature as a blue gas with a pungent acrid smell and its concentration in the atmosphere is approximately 0.04 ppm (1 ppm $\sim 2 \text{ mg} / \text{m3}$). This gas naturally forms in the stratosphere and in particular in the ozone layer, concentrating approximately 25 km above sea level. Atomic oxygen quickly combines with another oxygen molecule to form the triatomic ozone molecule (O3). The formation of ozone can also occur industrially through the ozonizers, particular instruments that generate it from a gaseous current rich in oxygen, to which energy is supplied in electrical, electrochemical or photochemical form.

Ozone is a molecule characterized by a high oxidative potential (redox potential of +2.07 V) which allows the gas to oxidize and inactivate numerous organic compounds (phenols, benzene, trihalomethanes, pesticides) and inorganic (cyanides, sulphites, nitrites).

Ozone is recognized by the Ministry of Health as a natural aid for the <u>sterilization of</u> <u>environments contaminated with bacteria, viruses, spores, molds and mites</u>.

8. SAFETY RULES ON OZONE

Given its short half-life, ozone cannot be produced and stored, but it must be generated on site at the time of use through the ozonizers. However, although at low concentrations it is not particularly toxic, at high concentrations it can have serious effects. The main damage is to the respiratory tract due to alteration of the permeability of the epithelia, with consequent reduction of lung function (up to edema); it can also cause worsening in people with bronchitis or asthma. Ozone is also the cause of other ailments such as burning eyes, headaches, weakness.

Therefore, ozone toxicity requires that its employees are continuously monitored and protected. In accordance with HACCP and Legislative Decree 81/08, those who use it must not be exposed to more than 0.1 ppm of ozone in 8 hours or more than 0.3 ppm twice / day for 15 minutes (note that the olfactory perceptibility threshold for humans is at concentrations between 0.02 and 0.05 ppm, equal to about 1/20 of the concentration threshold defined as safe for an exposure time of 15 minutes and at about 1/4 of the defined safe exposure in the workplace).

9. OPERATION

Before using the ozone generator, it is recommended to clean the environment with steam cleaning systems.

The ozone generator is very simple to use. Connect it to the electricity grid and proceed as follows:

- 1. Place the device in the environment or in the passenger compartment, on an elevated surface and stable, at the center of the environment of application.
- 2. The ozone has a molecular weight greater than that of air and thus tends to occupy the lower space environment. For this reason, where possible, it is advisable to place the device on a high position so that ozone can act in a more uniform manner.
- 3. Position the appliance more than 50cm from any other object.
- 4. When the machine is put into operation, EXIT IMMEDIATELY as the concentration of ozone in the air, after a few minutes, can be harmful to humans.
- 5. Avoid turning the machine on and off after short intervals. Repeated and frequent switching on and off reduces the useful lamp life.
- 6. Do not move the machine when it is working
- 7. Do not knock or sharply hit the machine as the lamps may be damaged.

IT IS FORBIDDEN TO STAY WITHIN THE ENVIRONMENT DURING THE TREATMENT.

MAKE SURE THAT THE OZONE VENTILATION AND BREWING GRIDS ARE NOT OBSTRUCTED OR LOCKED

> Operation of ATLANTIDE 80, 160 and 240

After connecting the machine to a power socket, proceed to switch on the machine using the main switch, bringing it to position I. Then set the timer to the desired operating time; leave the room and wait for the cycle to end.

To turn off the machine once it has been started, turn the timer to position 0 and turn off the main switch of the appliance.

The table below indicates the volume of the environment that can be treated, according to the model.

	Time set on the timer: 60 minutes
Atlantide 80	Up to 80 m ³
Atlantide 160	Up to 160 m ³
Atlantide 240	Up to 240 m ³

For rooms with lower volumes, set the timer proportionally according to the size of the environment to be sanitized.

> Operation of ATLANTIDE 500 and 1000

After connecting the machine to a suitable power outlet, turn the main switch to position I. The green light turns on and indicates that the machine is ready. At this point it is possible to select one of the three available programs by pressing the corresponding button.

The three sanitation programs are preset at the factory to obtain an optimal result from the machine.

Once the chosen program has started, leave the room immediately. The red light comes on and indicates that the program is in progress and it is not possible to stay in the room.

By pressing together the buttons "program 1" + "program 2", it is possible to interrupt any program started.

When the cycle is finished, an intermittent acoustic signal is emitted for a few seconds; at the same time the red light turns off and the green light turns on, indicating the end of the cycle.

The table below indicates the volume of the environment, indicatively negotiable, with the pre-set programs.

	Schedule 1 60 minutes	Schedule 2 90 minutes	Schedule 3 120 minutes
Atlantide 500	Up to 150 m ³	Up to 300 m ³	Up to 500 m ³
Atlantide 1000	Up to 300 m ³	Up to 600 m ³	Up to 1000 m ³

10. DISPLAY SIGNALS

In Atlantide 500 and 1000 models, there is a small display that indicates the status of the machine and gives indications on possible faults / errors.

DISPLAY SIGNALING	MEANING
PROGRAM SELECTION	The machine is ready for use. Select the program to start by pressing the corresponding button.

PROGRAM INTERRUPTED!	The operator manually stopped the program, before the end, simultaneously pressing the short program button plus the medium program button. The machine can start working again by selecting the desired program.
PROGRAM COMPLETED √√√	This warning appears for a few seconds, at the end of the sanitization program, combined with the acoustic signal. The red signal lamp (program in progress) turns off and the green light turns on (program ended).
PROGRAM 1 IN PROGRESS	Indicates that the program selected by the operator is in progress. The minutes elapsed since the start of the program and the total cycle time are displayed.
1 of 60 min	In this example: The operator has selected the first (short) program 1 and the cycle has already completed the first minute of total 60 minutes.
LAMP 1 FAILURE!	If this warning appears on the display, no program can be selected. Indicates that during the cycle, the program was interrupted because the ozone production lamp or the power supply did not work properly. Check if the lamp or the power supply is defective.
LAMP 2 FAILURE!	ONLY ON ATLANTIDE 1000: If this warning appears on the display, no program can be selected. Indicates that during the cycle, the program was interrupted because the second ozone production lamp or the power supply did not work properly. Check if the lamp or the power supply is defective.
PROGRAM NOT FINISHED CORRECTLY!	Indicates that the previous selected program did not end the cycle correctly and stopped (for example, there was an interruption in electricity). To restart the sanitizing cycle of the machine again, press one of the three program selection buttons.
CYCLE COUNTER No. 00001 Sw_Ver: 01	 Holding down the arrow indicator to the right in the panel of the electronic board / display, the following are displayed: 1. The total number of cycles performed by the machine; 2. The software version of the program.

11. LANGUAGE SELECTION

In Atlantide 500 and 1000 it is possible to select 2 different languages for viewing the messages on the display:

1. by pressing the arrow indicator upwards, the English language is set;

2. by pressing the arrow indicator downwards, the Italian language is set.

12. MAINTENANCE

Working under voltage can involve the risk of electric shocks; death danger. Disconnect the machine from the mains and make sure it remains disconnected until the end of the intervention.

UV lamps - Remove impurities and traces of dust every time they settle on the lamp. If too much dust occurs, the lamps may not emit all radiation and / or light. We recommend using a clean linen cloth, soaked in alcohol, taking particular care not to damage the glass lamp and risk injury.

To locate the lamps, unscrew the 4 screws shown in the figure below and extract the box containing the lamps, taking care not to excessively pull the connection cables.

<u>CAUTION Hot surface</u> - The lamp may heat up during operation. Allow the UV lamp to cool down for at least 10 minutes before any maintenance. Contact with the hot surface causes burns.

Avoid touching the lamp with bare hands to avoid transferring dirt / grease that could stick to the surface of the lamp, reducing performance.

- Blowing motor remove accumulations of dust that could settle in the fan blades and thus reduce the flow of treated air.
- Activated carbon filter (Atlantide 500/1000 only) It is recommended to replace the activated carbon filter in general after 500 cycles performed or after 2 years at the most. Replace the filter even earlier, if a strong presence of ozone is still felt at the end of the cycle, indicating that the filter is not performing as it should.

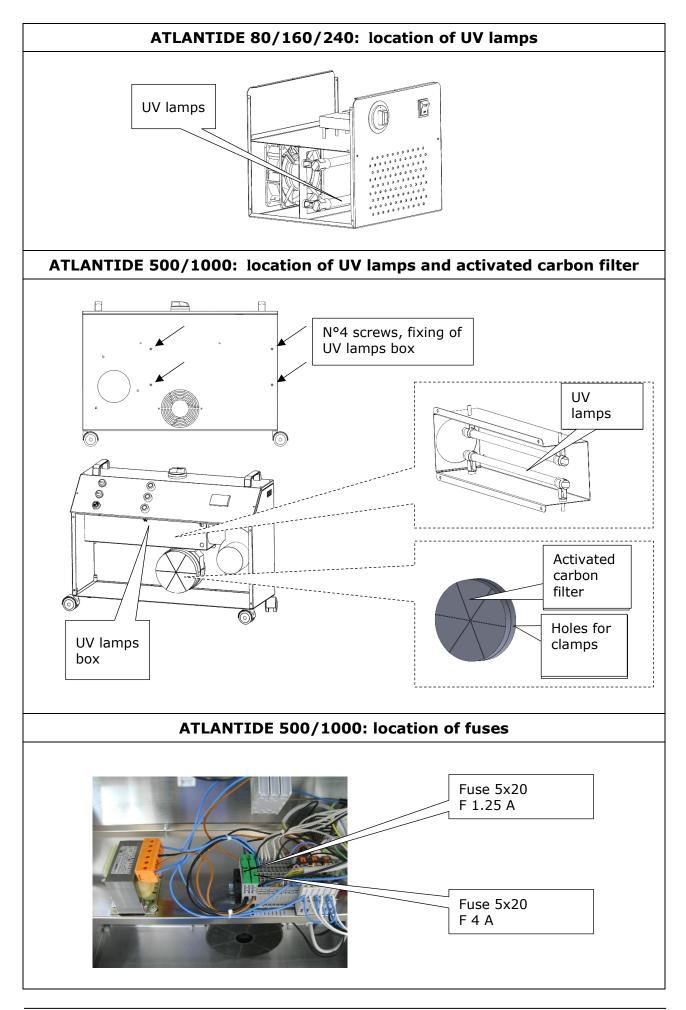
For replacement, cut the two plastic clamps that secure the filter to the motor, put a new filter and secure it with new plastic clamps.

Use the original replacement to guarantee the same ozone abatement power.

Check often that the filter is not clogged with dust, if necessary, remove the accumulated dust with a vacuum cleaner.

Fuses (Atlantide 500/1000 only) - inside the machine there are 2 protection fuses. If the machine does not work, check the fuses. See photo below for check / replacement.

To check the fuses, it is necessary to remove the top cover of the machine.



13. ELECTRICAL RISKS

The operator must pay attention to the following situations defined as dangerous from an electrical point of view:

- 1. when the earth protector switch is activated upon switching on the machine;
- 2. when using the machine during a thunderstorm;
- 3. when the electrical cables are damaged;
- 4. when the machine is not connected to a good earth connection according to the standards in force;
- 5. when replacing lamps and / or ballasts or any material with non-original components.

14. MECHANICAL RISKS

The operator must pay attention to the following situations defined as dangerous from a mechanical point of view:

1. using the machine for different purposes other than ironing;

15. USE AND SPECIFICATIONS OF UV LAMPS

The UV lamp is a mercury irradiator designed for use in industrial processes that require UV radiation in the wavelength range between UVC and UVA. This item cannot be used to perform general lighting functions.



<u>Explosion hazard</u> - UV lamp can act as ignition source. Use in explosive areas is prohibited.

<u>WARNING fire hazard due to heated surfaces</u> - irradiated surfaces and therefore heated by optical radiation are dangerous. Avoid contact with flammable substances.



<u>WARNING fire hazard due to chemical reactions</u> - UV radiation can act as an ignition source and pose a fire risk due to the breakdown of chemical compounds. Take appropriate measures to prevent self-ignition.

16. PACKING

ATLANTIDE device is packed and shipped in a single cardboard package.

As it is not a rigid packaging, it is not very resistant to impact (fragile material), therefore take the utmost care when handling the packed appliance, do not use it as a stool or as a support point.

The packaging elements (plastic bags, boxes, expanded polystyrene etc.) must not be left within the reach of children as they are potential sources of danger.

17. TRANSPORT

Transport the machine still packed to the point closest to the installation and unpack it. It is recommended not to place the machine too close to the walls and other machines, away from electrical, electronic and busbar parts in order to guarantee the operator smooth use and perfect maintenance.

18. STORAGE

If necessary, store the machine still packed in a suitable, protected area which is not subject to bad weather.

19. WARRANTY

The manufacturer's warranty lapses:

- in the event of repairs carried out by unauthorized personnel or service centers;
- for total or partial non-compliance with the instructions contained in this manual;
- for bad conservation, lack of maintenance / cleaning or incorrect assembly;
- when there are damages caused by the customer;
- when there are failures or damages that do not derive from a manufacturing defect;
- when there are damages that derive from an unforeseen event (fire, short circuits) or from an event attributable to third parties (tampering);
- when using the appliance for a use other than that specified in this manual;
- when using spare parts or accessories that are not original, modified or not suitable for the appliance;
- defects or damages have been caused by transportation;
- it refers to parts damaged by consumption and subject to normal wear and tear (i.e. painted or enameled parts, knobs, handles, mobile and removable plastic parts, lamps, glass parts, rubber hoses, external electric cables, accessories, etc.).

20. BIOLOGICAL ANALYSIS

We performed a test at accredited laboratory No. 0157 L, therefore unquestionable from the point of view of procedure.

The machine is certified according to test ISO 18593:2018 (except par 7e 8) + UNI EN ISO 4833-1:2013.

The results are expressed through CFU, it means colony forming unit, it is the unit used to estimate the number of bacteria or fungal cells present in a sample.

ATLANTIDE 80

In a 60 m^3 room we took the tap (one of the parts most susceptible to touching or pollution) as a sample.

Before the treatment with Atlantide 80 (60 min) there were 36 UFC/cm². After the treatment there were less than 1 CFU/cm2. All microorganisms were eliminated.

ATLANTIDE 160

In a 120 m³ room we took the sofa as a sample (here there are many microorganisms, such as mites, bacteria, mould...).

Before the treatment with Atlantide 160 (60 min) there were 3000 CFU/cm² - a very high value. After the treatment the result was of 150 CFU/cm². In an environment as difficult to sanitize as the sofa, our Atlantide 160 still manages to kill 95% of the microorganisms on the surfaces.

ATLANTIDE 500

In a room of 300 m^3 we took the PC board as a sample.

Before the treatment with Atlantide 500 (program 1 - 60 min) there were 6 UFC/cm². After the treatment there were less than 4 UFC/cm².

With this test we obtained less evident results because we started with a very clean surface (6 UFC).

ATLANTIDE 1000

In a 750 m^3 room we took the door handle (which is the part most susceptible to touching or pollution) as a sample.

Before the treatment with Atlantide 1000 (program 2 - 90 min) there were 36 UFC/cm². After the treatment there were less than 1 CFU/cm².

It denotes a total elimination of bacteria and all microorganisms present in the room.

VERY IMPORTANT: This is a test made on surfaces using Atlantide, an air sanitizer. These results, indeed, show that these machines are so effective that they also sanitize surfaces.

Conclusion: the tests have demonstrated the effectiveness of the machines and have proved that the presence of ozone in the room, besides sanitizing the air, also sanitizes surfaces, thus reducing the bacterial load.

21. DISPOSAL



According to the directive 2012/19/UE on waste of electrical and electronic equipment, do not treat this product as urban waste.

This appliance is marked according to the directive 2011/65/UE regarding restriction of use of specific dangerous substances in electrical and electronic equipment.

This symbol on the product or on its packaging indicates that this product must not be treated as urban waste. Instead it shall be handed over to a recycling center for the recycling of electrical and electronic equipment.

Ensuring this product is disposed of correctly will help prevent potential negative consequences for the environment and human health which could otherwise be caused by inappropriate waste handling of this product. The recycling of materials will help preserve natural resources.

The abusive disposal of the product by the user may lead to administrative sanctions.

UV Lamp Disposal:

Dispose of the UV lamp separately, in accordance with the relevant legal regulations for special waste. They cannot be disposed of with normal commercial or industrial waste. The lamps inside them contain a small amount of mercury, dangerous to health, which could escape if the glass container of the lamp is broken.

Every purchase of BATTISTELLA products in Italy is subject to the following limitations:

- Battistella B.G. S.r.I guarantees that the machine, correctly assembled and used, will operate in substantial compliance with the manual. Any implied <u>warranty</u> on the machine is limited to the legal terms from the date of purchase.
- Exclusion of liability for indirect damage: In no case Battistella B.G. S.r.l. will be held liable for damages (including without limitation, indirect damage due to loss or loss of profit, business interruption, or other economic losses) arising from the use of Battistella machine, even if Battistella B.G. S.r.l has been warned regarding the possibility of such damages.

For further questions and specific requests regarding this manual contact **Battistella B.G. S.r.l** or address to the retailer responsible for selling our products.