



OZONE UV STERILIZATION CABINET

BEM2H2

INDEX

1. Performance & Main Features	2
2. Working Conditions	2
3. Product Use Range	3
4. Main Bactericidal Factors & Strength	3
5. Kill Microorganism Category	4
6. Product Structure & Disinfection Principle	4
7. Model & Main Technical Parameters	6
8. Installation Method	7
9. Instructions	7
10. Transportation & Storage Conditions	8
11. Precautions	8
11.1 Safety Precautions	9
12. General Troubleshooting	10
13. Maintenance	11
14. Warranty Commitment	13
Appendix A	13

1. Performance & Main Features

This machine uses high-concentration ozone to disinfect the lamp tube, which has a high ozone concentration. Ozone is a broad-spectrum bactericide that can kill bacterial propagules and spores, viruses, fungi, etc., and can destroy botulinum toxin.

2. Working Conditions

1) Power Supply:

Power: AC220V \pm 22V; Power frequency:50 \pm 1Hz.

2) Environmental Parameters:

a. Ambient Temperature: 5°C~40°C;

b. Relative humidity: \leq 85%;

c. Atmospheric pressure: 70KPa~106KPa.

3. Product Use Range

Can be used as utensils that are not resistant to high temperatures, glass enamel cups, plastics, ceramics, machinery and equipment, production supplies, currency, non-woven fabrics, composite paper, packaging boxes, packaging bags, utensils, cleaning utensils, molds, tableware, containers, towels, Work clothes, clothes, work shoes, packaging materials, raw materials, solid objects and other disinfection devices.

It is suitable for places such as banks, hotels, hotels, restaurants, schools, production workshops with hygiene requirements, public places that need to be disinfected, and family rooms.

4. Main Bactericidal Factors & Strength

The main sterilizing factor of this machine is ozone, and its ozone concentration \geq 60mg/m³.

5. Kill Microorganism Category

The category of killing microorganisms is common bacteria in the air.

6. Product Structure & Disinfection Principle

Ozone molecule is composed of three oxygen atoms. It is a colorless gas at normal temperature and pressure. It is a light blue gas with strong irritating properties. The new ecological oxygen has a strong oxidizing ability, and has a strong lethality to resistant microorganisms such as viruses and spores. Ozone can oxidize and decompose glucose oxidase, which is necessary for oxidizing glucose inside bacteria and viruses, and directly interact with bacteria and viruses, oxidize and penetrate their cell walls, destroy their organelles and ribonucleic acid, and decompose DNA, RNA, proteins, and lipids. And polysaccharides and other macromolecular polymers destroy the metabolism and reproduction process of bacteria and viruses, and take the lives of bacteria and viruses. At the same time, it can penetrate the cell membrane tissue, invade the cell membrane and act on the outer membrane lipoproteins and internal lipopolysaccharides, causing the cells to undergo permeability aberrations, leading to cell lytic death, and the genetic genes, parasitic strains, and parasites in the dead bacteria. Virus particles, bacteriophages, mycoplasma and heat sources (endotoxin) are dissolved and die. Ozone sterilization is a lytic agent, which has obvious inactivation effects on many germs, molds, viruses, fungi, protozoa, and oocysts, and can achieve the purpose of "completely and permanently destroying all microorganisms in the object". And its effect is instantaneous, and its sterilization time is 300-600 times that of chlorine and 3000 times that of ultraviolet light.



Figure 1

Appearance Structure Diagram

The main components of the product:

1. case
2. control panel
3. Ozone disinfection lamp

4. Rubber feet/Universal wheel
5. Glass door
6. Door lock

7. Model & Main Technical Parameters

Product Name	Ozone Disinfection Cabinet
Machine Type	BEM2H2
Volume	80L
Work area size	398mm*498mm*452mm
Outside size	495mm*601mm*760mm
Rated Frequency	50Hz/60Hz
Rated Power/Voltage	20W/220V
Ozone Concentration	$\geq 620\text{mg/m}^3$
Ozone Leakage	$< 0.1\text{mg/m}^3$
Disinfection Time	60min
Disinfection Method	Ozone
Shelf	Adjustable position, can put multiple layers

Table 1

Features:

1. The inner cavity is made of high temperature resistant, oxidation resistant 304 stainless steel casing, the outer casing is high-quality cold plate sprayed, luxurious appearance, stylish and beautiful, and the box structure is compact;
2. Ozone sterilization, complete disinfection, rapid, comprehensive and stable;
3. Simple operation, adjustable disinfection time, simple and flexible use, shut down automatically after disinfection;
4. Humanized design, select high-quality materials for sealing, use movable partitions, which can be made in several layers according to requirements, which is convenient to use;
5. Low noise, stable operation, convenient operation, safe and reliable use, long service life, strong and durable.

Note: It is not recommended to use this product for disinfection and sterilization of medical and health equipment.

8. Installation Method

BEM2H2 series ozone disinfection box unpack, take out the machine, plug in the power supply and use it.

9. Instructions

- a. Put the items to be disinfected into the disinfection cabinet, close the glass door, and turn the key clockwise to pre-tighten to prevent the cabinet door from being opened twice.
- b. Turn on the power, turn on the switch, the display panel will flash once and then go out.
- c. Press the "ON/OFF" button, the "POWER" indicator light is on, double-click the "SET" button (ie the "disinfection status" button), after displaying for 60 minutes, wait 3 seconds, the UV germicidal lamp lights up, then enter the "disinfection status" .
- d. After the time countdown is over, the ozone disinfection lamp goes out and one cycle of disinfection ends.

10. Transportation & Storage Conditions

- a. When the product is moved or transported, the inclination angle should not be greater than 45°, and care should be taken to avoid damage to the instrument;
- b. The disinfection cabinet should not be put down and transported to avoid collisions during transportation. Fix the shelf inside the disinfection cabinet to avoid shaking and bumping inside, damaging the electrical components of the studio, the inner glass, etc.

11. Precautions

11.1 Safety Precautions

- 11.1.1. Please read the instruction manual carefully before using this machine.
- 11.1.2. The use of this machine must be operated in accordance with the rules stipulated in the manual.
- 11.1.3. It is prohibited to use in flammable and explosive places.
- 11.1.4. The transformer of the machine has high voltage, and the power must be cut off during installation and maintenance.
- 11.1.5. Do not spray any disinfectants (alcohol, 84 disinfectant, etc.) into the machine, otherwise it may cause a fire or electric shock. Do not spill any liquid on the disinfection box.
- 11.1.6. The machine should avoid direct contact with water or washing, and the power supply should be cut off before cleaning the machine.
- 11.1.7. The power of the ozone disinfection lamp in the machine is relatively high. When overhauling or cleaning, the power supply should be cut off to prevent ultraviolet rays from hurting the skin and eyes.
- 11.1.8. The power supply used by the wood machine must be a single-phase three-core power supply with good grounding.
- 11.1.9. In order to reduce the risk of electric shock, do not disassemble the machine. When maintenance is required, please send the machine to the designated maintenance center. Opening the machine

without authorization may expose you to dangerous voltage or other dangers. Improper reassembly may cause electric shock in future use.

11.1.10. In the following situations, please unplug the machine from the power socket, call the repair number, and send it to the designated repair point for repair.

- a) When the power cord or plug is damaged or frayed.
- b) If liquid is spilled into the machine.
- c) If the disinfection box is being exposed to rain or water.
- d) If the disinfection box is broken or the body is damaged.
- e) If the disinfection box changes significantly in performance.

11.1.11. If the user does not follow the above instructions to repair or replace parts without authorization, the responsibility for personal safety accidents and machine reliability shall be the responsibility of the operator.

11.1.12. The service life of the whole machine is five years. Please buy a new machine if it exceeds five years. The aging of the components and power cords in the machine may cause personal safety accidents.

11.2 Precautions For Use

11.1.13. Do not touch the disinfection lamp directly, do not look directly at it during disinfection, or irradiate the skin directly to avoid damage. It is recommended to wear protective glasses, protective clothing, gloves, masks, etc. during disinfection to prevent reducing the risk to staff hurt.

11.1.14. During use, the surface of the disinfection lamp should be kept clean. Generally, wipe it with an alcohol cotton ball once every two weeks. If there is dust or oil on the surface of the lamp, wipe it at any time.

11.1.15. To ensure the quality of disinfection, the illuminance of ultraviolet radiation generated by the disinfection lamp should be calibrated at least once a year.

11.1.16. In order to ensure thorough disinfection, it is recommended that the disinfection time is 60min.

11.1.17. High-intensity (ultraviolet) ozone disinfection lamps are recommended to inspect the ultraviolet radiation illuminance every 3 to 6 months.

11.1.18. Ozone is toxic to humans, and the state stipulates that the allowable concentration in the atmosphere is $0.2\text{mg}/\text{m}^3$.

11.1.19. Ozone is a strong oxidant, which can damage many items. The higher the concentration, the heavier the damage will be to the items. It can cause green rust spots on the copper sheet, rubber aging, discoloration, and reduced elasticity, resulting in brittleness, breakage, and bleaching of the fabric. Fading etc. Pay attention when using it.

11.1.20. A variety of factors can affect the bactericidal effect of ozone, including temperature, relative humidity, organic matter, pH, water turbidity, and water color. It should be controlled when used.

12. General Troubleshooting

Before diagnosing the fault, please confirm whether the power supply is well connected, whether the power cord is obviously damaged, and whether the fuse is in good condition.

Failure Phenomenon	Check Parts	Elimination Method
Button touch is not working	Control Panel	Make sure the power supply is connected and the fuse is intact
		Make sure the keys are not damaged
		Make sure the connection line is not in bad contact
		Replace the control board
	Sealing Strip	Check whether the sealing strip is warped or aged
The device is not powered	Power Supply	Power is not connected
	Power Cable	Whether the power cord is obviously damaged
	Fuse	Whether the insurance tube is good
	Transformer	Is the transformer output normal
	Control Panel	Replace the circuit board

Table 2



1) The operation of the above electrical components must be performed by a qualified electrician under safe conditions (cut off the power supply). All other parts are not allowed to be disassembled, otherwise the consequences will be borne by the user;

2) When the equipment has a failure other than the above, and the operator cannot eliminate it immediately, please notify the maintenance department of our company immediately. For your safety, please do not repair the equipment by yourself;

3) The maintenance of this equipment can only be undertaken by trained and approved technicians;

4) If you need to order parts, you can find our technical service department. Please indicate the model and number of the normal temperature ozone disinfection box you purchased.

Note: If the user cannot solve the fault, please contact the agent engineer as soon as possible, do not handle it by yourself, otherwise the warranty will not be given.

13. Maintenance

Frequency	Operating
Every Day	Clean the inner cavity and shelf, see through window glass
Weekly	Cleaning the door seal
Every 1-3 Years	Replace the door seal
Wearing Parts	Ozone disinfection lamp (including lamp holder)
	Fuse
	Glass product

Table 3

Note: The above need to maintain the sealing strip, ozone disinfection lamp and other accessories and wearing parts are consumables and are not covered by the warranty!



Warning

Please use a power outlet with a ground wire to prevent electric shock. If the power socket is not grounded, qualified engineering and technical personnel must install the grounding wire.

Do not ground the equipment through a gas pipe, power supply pipe, telephone line or lightning rod. This type of grounding may cause electric shock due to incomplete loops.

Do not install this equipment in a humid place or a place where water may be splashed, otherwise it may cause electric leakage or electric shock due to reduced insulation.

Label Description



Disinfection lamp warning label



F10AL250V



Grounding Mark

14. Warranty Commitment

- 1) Warranty is 12 months from EX-factory date (excluding UV light, fuse).
- 2) We will take no responsibility for risks caused by improper operation and man-made damages.
- 3) After the expiration of warranty, our company is also responsible for repairs, but the corresponding maintenance cost should be charged.
- 4) The service life of the equipment is 5 years, and the production date is shown on the nameplate.
- 5) Provide equipment drawings and some necessary technical data to maintenance organizations and maintenance personnel trained and approved by the company.

Appendix A

Packing List

Serial number	Name	Category	Quantity	Remarks
1	Ozone disinfection cabinet	Host	1	
2	Shelf	fitting	2	
3	This Machine Manual	file	1	
4	Warranty Card	file	1	
5	Product Certification	file	1	
6	Packing List	file	1	
7	10A Insurance Tube	fitting	2	
8	Power Cable	fitting	1	

The items listed in this list are consistent with the actual items in the box



Biolab Scientific Ltd.

Trillium Executive Center, East Tower, 675 Cochrane Dr, Markham, Ontario L3R 0B8, Canada
Email: info@biolabscientific.com | Website: www.biolabscientific.com