

Dry Fog Hydrogen Peroxide Disinfector

UVP801C



1
year
warranty



10 μ m



16ml/min



Hydrogen peroxide
solution



22000rps



Max 1200W



484x270x314mm



7.1kg



Sterilization
speed

80m/s



Sterilization
volume

500m²



Sterilization
effect

Log6

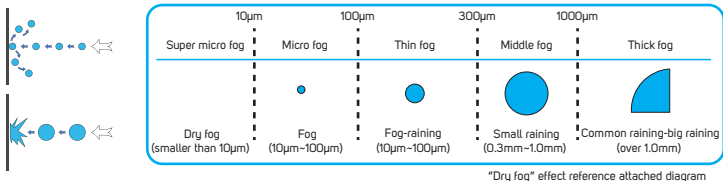
1. Foreword

Thank you for using our product, our company will provide you with the best service, and our Dry fog hydrogen peroxide disinfectant is easy to use, safe and reliable. This manual contains detailed information on how to use the sprayer, equipment management personnel, and operators must fully read this manual prior to use, it provides useful information on the operation, care and maintenance of the equipment.

2. Working principle

The dry fog hydrogen peroxide disinfectant achieves the spray disinfection process by spreading cold dry fog to areas that need sterilization. When the average diameter of the droplet is less than $10\mu\text{m}$, the fog can be considered "dry", the dry fog has the below property:

- Dry fog droplets do not settle and exhibits random movement (Brown Principles);
 - Dry mist droplets do not converge together to produce large droplets;
 - Dry mist droplets bounce on contact with surface, and will not without break nor wet the surface
- Because of these properties, the cold and dry fog has an effective surface contact even in hard-to-reach places.



"Dry fog" effect reference attached diagram

3. Technical parameters

Parameter	Value	Description	Test condition
Power supply	AC 220V / 110V	Choose different voltage types according to user voltage	
Spray particle diameter	10 µm		Laser particle size analyzer
Spray particle volume	16ml/min	Default speed 16, user is not recommended to modify	One hour test
Sterilization effect	Max Log6 kill rate		18 points space disinfection test
Sterilization volume	Reach up to 5-500m ³	Each full bottle can spray 200m ³	
Control system	Touch screen	Delayed start time function, timer function, adjustable sterilization volume, parameters memory function, built in calculation software	
Reagent	Hydrogen peroxide solution		It is recommended to use dedicated disinfectant solutions for best effect

4. Product characteristics

- Can control the sterilization solution output through dry fog, such that the dry fog particle size is accurate and consistent, reducing the risk at condensation and wetting, guaranteeing the best disinfection effect at complex area
- Able to effectively cover all spaces in the cleaning site
- Delayed start time switch function
- Sterilization area parameters memory function
- Built-in calculation software
- Sturdy structure, easy maintenance
- One single equipment can disinfect 20-500m³ space
- The whole process takes 2-4 hours, greatly shortening disinfection duration
- Replaced methanol, and can achieve Log6 sterilization rate
- GMR, FDA and EP recommend sterilization method in cleaning area

5. Equipment structure



1. Disinfectant bottle (Disinfectant is purchased separately)
2. Nozzle
3. Lock buckle
4. Nozzle base
5. Handle
6. Touch screen
7. Housing
8. Filter switch socket

Disinfectant bottle installation

- Unscrew the cap of the disinfectant bottle and fill with necessary disinfectant solution. Then insert the catheter of the nozzle into the bottle (Note: The bottle must be tightened to prevent the disinfectant liquid from spilling out), per figure 1
- Then push the nozzle into the nozzle base, the lock buckle will then automatically lock, try to pull out to confirm the lock is in place, as shown in Figure 2



Figure 1

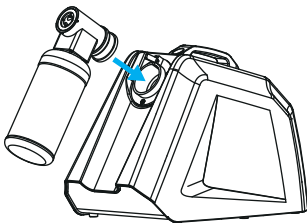


Figure 2

- Then plug the nozzle into the nozzle base, the lock buckle will then automatically lock, try to pull out to confirm the lock is in place, as shown in Figure 3

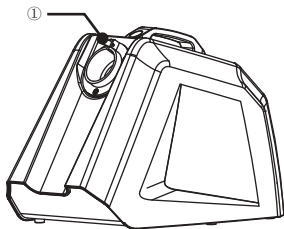


Figure 3

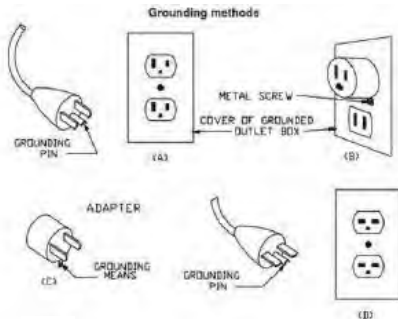
Grounding instructions

This appliance must be grounded. In the event of malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This appliance is equipped with a cord having an equipment grounding conductor and a grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances

DANGER- improper connection if the equipment grounding conduction can result in a risk of electric. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment grounding conductor. If repair or replacement of the cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal, Check with qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether

the appliance is properly grounded. Do not modify the plug provided with the appliance – If it will not fit the outlet, have a proper outlet installed by an electrician

This equipment has a grounding plug that looks like the plug illustrated in sketch A below. A temporary adaptor, which looks like the adaptor illustrated in sketches B and C, may be used to connect this plug to a 2 pole receptacle as shown in sketch B if a properly grounded outlet is not available. The temporary adaptor should be used only until a properly grounded outlet can be installed by a qualified electrician. The green color rigid ear, lug and the like, extending from the adaptor must be connected to a permanent ground such as a properly grounded outlet box cover. Whenever the adaptor is used, it must be held in place by a metal screw.



6. Parameters setting

Turning on the power switch will enter into below user interface:

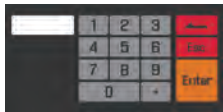


Function logic:

- User is required to set the room size, the residual dose volume of the disinfectant, then click "Start", Start Delay countdown will start and when it ends the equipment will start operation, after the sterilization time duration is over, the equipment stops operation
- The formula of Sterilization Time is: $\text{Room Volume} \times 5\text{mL} \div 16\text{mL}$
- 5mL: Every 1m³ space requires 5mL of disinfectant
- 16mL: equipment is able to spray 16mL of disinfectant per minute
- The parts that can be clicked on the touch screen are Room Volume, Residual Dose, Countdown

(Start Delay) for user to leave the room

- After clicking the option to be set, a numeric input keyboard will pop up:
- According to actual needs, after setting the desired parameters, the total working time (Sterilization Time) and the total amount of disinfectant liquid (Total Dose) will be automatically calculated. According to the total amount of disinfectant liquid, the user needs to pour the corresponding amount into the disinfectant bottle. After adding the disinfectant, and after setting the Start Delay to leave the room, click the Start button, and ensure that all personnel leaves the room quickly, and the disinfection operation will start immediately after the countdown is over.
- When equipment is in delay countdown or already in disinfection operation, the user can press "Stop" ("Start" button becomes "Stop" when equipment has started countdown) to immediately stop the equipment operation and return to pre start status.



7. Disinfect operation process

There are a total of 3 stages in the operating cycle of the equipment.

A: First, spray sterilization (automatically calculated according to room area)

Move the equipment to the sterilizing area, place on selected location, and plug in the power supply. Turn on the equipment power switch, and enter the settings interface, set the room size and delay time settings according to the actual sterilization area size and equipment location. Enter actual volume of the sterilization area into the Room Volume; Delay time can be set according to the user's needs. After each setting is set, the interface will automatically display the estimated dosage, total added amount, sterilization time and running time.

Move the equipment in place, then open any inner doors of each room within the area to be sterilized to ensure clear air flow, and then close the outermost door. Confirm the initial temperature and humidity in the room to ensure that it is within the normal range, the temperature is 18-26 degrees Celsius, and the humidity is 30-60%. Turn off the air conditioning system, and after all personnel have left the sterilization area, click the [start] button to turn on the equipment and enter the sterilization process. Note that one full bottle is 1000ml, so if the user sets the room volume above 200m³ as per below picture A, the sprayer will stop after the bottle is depleted. The UI display will then display per below picture B (total dose reduced since 1 full bottle is already used up and run time shows one spray session has concluded):



A



B

The user has to then refill the bottle with disinfectant, press continue and then vacate the room, the equipment will resume after the countdown is finished. This cycle (conclude spraying, refill bottle, resume spraying) continues until the total dose is 0. Then the equipment will move on to the next phase (dwell period)

B: Second, keep room sealed and closed for 1-1.5 hours

After the running time displayed on the parameter setting interface ends, the equipment automatically stops running and the spraying ends. After spraying, the entire sterilization area is filled with disinfectant, wait for 1.5 hours before opening doors and windows

C: Third, removal of residues 1-2 hours (hydrogen peroxide concentration is less than 1ppm)

Turn on the air-conditioning exhaust system to remove the disinfectant in the space, and personnel can enter the sterilization area after the air-conditioning system has been running for more than 2 hours.

■ Disinfectant use

The dry fog hydrogen peroxide disinfectant is used with 6% ~ 9% hydrogen peroxide disinfectant

Note: This equipment can also be used with other sporicides such as peracetic acid. The effectiveness of sterilization is related to the use of disinfectants. Please choose a suitable disinfectant.

Note: If the hydrogen peroxide solution used is less than 6% (but no lower than 3%), additional dry fog spraying will be necessary to achieve the desired sterilization effect. How much additional time is directly proportional to the reduced solution percentage (ie, if 3% solution is used, the equipment must be set to spray twice the needed amount, which also means twice the amount of time compared to 6% solution.). Dwell time and residue removal duration is not affected

■ User safety

The user use 3M8514 welding protection mask (or equal grade protection masks) when using hydrogen peroxide to disinfect

8. Application

Item	Specifications	Comment
Area	42m ² ×3m	Volume 126m ³
Disinfectant	8% hydrogen peroxide	
Dose	5ml/m ³	
Atomizing value setting	16ml/min	System default value
Total dose of disinfectant	630ml	126m ³ × 5ml/m ³ =630
Total spraying time	39min	630/16=39
Sealing time	60min	
Ventilation with all door and window opening	120min	When forced ventilation is used, the duration of residue removal can be reduced
Total disinfect time	249min	39+60+120=249

9. Daily maintenance

- Ensure that the environment is kept relatively clean and, in as much as possible, a low dust environment
- After each use, the remaining disinfectant liquid should be disposed of, and if conditions permit, use purified water to clean the tubes and nozzles via dry fog spraying
- Wipe the equipment surface clean with purified water after each use
- Avoid using any sharp objects to touch against or rub on the touch screen, to avoid scratching the screen
- If any disinfectant liquid flows onto the surface or into the interior of the equipment during use, clean it promptly.
- Store equipment in a dry and well ventilated place
- In order to ensure the safety of the user, this product has set up a full safety device. Daily spot checks are necessary to ensure the safe use of equipment. Check as required by the specification and stop using the device immediately if the problem is identified. In the use of disinfection, or equipment regular inspection, the use of 3M8514 welded protective mask (or similar grade protective mask). When repairing the equipment, in addition to wearing the above protective mask, the equipment should be kept in a well ventilated environment
- Drop off the residual disinfectant after each time use finished, use the purified water to atomizing trial wash pipeline and spraying head under the allowed condition for maintenance purpose

10. Notice

- Do not stay or enter sterilization room when equipment are running
- Vacate all personnel from the area to be sprayed to avoid causing illness or injury
- Ensure that appropriate personal protective gear is worn/used when operating the sterilizer
- Do not use excessive force against the touch screen, do not touch the screen with sharp objects, and avoid scratching the surface of the screen.



11. After sales service

- One year warranty, lifetime maintenance
- Provide professional supplies, including high-strength composite nozzles and disinfectant bottle
- Each customer is given its own account, and their information
- Regular software updates
- Professional training in hydrogen peroxide disinfection technology



www.uvpluss.com



AEC Lighting Solutions Co., Ltd
Add.: 2548 Bao'an Highway, Jiading District, Shanghai 201801, China
www.aeclight-reel.com