



Fumigation

USER MANUAL



Western Surgical

AN ISO 9001 : 2008 CERTIFIED COMPANY

www.westernsurgical.in Email : westernsurgical@gmail.com

Email : info@westernsurgical.in Ph. : +91-281-2232871 / 2243159

INTRODUCTION

Please Read and Comply strictly with the operating instructions, precautions, maintenance tips of machine to ensure safety, effective performance & trouble free long life of the machine. Failure to comply with operating instructions & precautions may lead to reduced machine life, electric shock hazard, fire, accident.

FOGGER can be used for atomizing light liquids into a heavy density fog/mist of very small droplets (in the form of liquid only).

ULV is defined as the ultra low volume application rate of chemical solution per unit space/surface area in aerosol state.

Droplets in the ULV size range remains airborne for sufficient period of time & also gets carried into recesses & harborage ensuring effective treatment of space & surfaces with relatively very small amount of chemical solution. Low flow rate 70-100ml/minute produces a dry fog & finer droplets(1-10 microns) that float extensively and diffuse widely. Larger flow rates (150-200ml/minute) produce progressively larger droplets(wet fog, heavy mist).

The FOGGER machines can also generate larger droplets (heavy fog) by operating flow regulating valve & increasing liquid flow rate.

The density of the liquid solution used can affect the size of the fog droplets produced. At a given flow lighter liquids (low viscosity) generally make smaller droplets & fine fog than heavier liquid solutions.

DISINFECTANTS TO BE USED: BACILOCID , ECOSHIELD, INCIDUR, ETC.

* Carrying Warranty at Rajkot Office only on site warranty not provided free of cost.

* Due to constant upgradation design, price and features are subject to change any time without prior notice.



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PRECAUTIONS

1. Refer to material safety datasheets of chemical to be fogged & follow dosage instructions, restrictions & safety precautions specified by manufacturer.
2. Always comply with requirement of goggles, gloves, facial masks recommended by chemical label.
3. Do not use to dispense flammable liquids such as acetone, benzene, gasoline, alcohol etc. Never fog near or toward an open flame.
4. Do not use to dispense highly corrosive liquids, paint or lacquer. Do not fog a non-approved product which can damage machine parts & accelerate motor wear.
5. Do not switch ON the machine in absence of intake air filter in its place. Do not allow chemical/disinfectant being fogged, dirt or dust to enter the machine from rear end. It can damage the fan blades, motor parts & accelerate the wear. Fogger sucks the air from rear end through intake air filter. Intake air filter is provided to prevent the entry of such substances. Always use intake filter & replace it when dirty.
6. Never restrict the air intake of the fogger by blocking by hand, holding it quiet near to your body or by any other means.
7. Do not insert any instrument or wire into the machine from front or rear end.
8. Always use 3-wire grounded electrical system. Do not disconnect the safety ground or use extension cords to convert this machine to 2-wire system. This defeats the purpose of safety ground and may result in electrical shock. Extension cords must be properly sized and rated for the voltage, current & length of an individual cord. The current rating of the extension cord if used, must be greater than the amperage shown on the fogger name plate.

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9. Do not operate fogger without strainer at the rear end of the liquid suction tube. Always keep the strainer & tank clean. Always use DM water free of impurities, suspended particles as well as dissolved solids. This is to ensure that internal tubing & more importantly valve orifice does not get clogged with impurities.
10. Do not alter the machine by adding or removing any parts.
11. Do not immerse the machine in water or liquid to clean it
12. Turn the flow regulating valve in CLOCKWISE direction to the fully closed (OFF) position after each fogging application while the motor is still running to allow clearing of the liquid lines. This will also prevent a siphon effect & liquid falling into power head motor casing if unit accidentally knocked over with valve remaining open.
13. When fogging by hand, move the fogger slowly with a gentle motion when changing output direction, as motor rotates at very high speed & repeated a b r u p t motions may cause the fan blade to flex & collide with the blower housing.
14. Do not use damaged or broken, partially opened machine in any way. It could be dangerous.
15. Do not temper with the output nozzle in any way.

VERY IMPORTANT PRECUATION

Incase of used for OT & sterile areas with disinfectants ensure that all electronic, electrical equipments are not exposed to solutions being fogged. It is recommended to cover them with plastic covers or at least linen completely to avoid exposure of moisture & chemical to internal parts of equipments. Identify all the equipments. items, medical devices which needs to be covered & can not be exposed to chemical/moisture & cover it before switching On the machine.

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FLOW CONTROL VALVE OPERATION

The valve ensures the precision regulation of liquid flow by rotating the knob. Turn the valve knob in counterclockwise direction for higher flow (heavy fog) & clockwise direction for very fine droplets.

To generate fine fog recommended for OTs & sterile areas keep valve 1-2 turn or less open from fully closed position i.e fully close the valve and then rotate in counterclockwise direction for 1 -2 turn .

This would give you fine fog, ideal for OT with least possible flooding of surfaces, greater spread & quality fumigation/ disinfection treatment.

Liquid viscosity & surface tension also affect the size of the fog droplets produced. At a given flow, lighter liquids with lower viscosity/lower surface tension generally make smaller droplets and finer fog than heavier liquids.

DOSAGE INSTRUCTION

WATER

SOLUTION

1 litre	:	Bacilocid(20ml)
1 Litre	:	Incidure (20ml)
800ml	:	Ecoshield(200ml)

Consider following factors for proper application of ULV chemical & effective fogging treatment.

1. Volume of the space to be fogged.
2. The quantity of the ULV chemical solution recommended for that space.
3. Output flow rate of the fogger.
4. Total fogging time.

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Step 1: Determine the volume of space to be fogged.

Total space/volume to be fogged = Length x width x Height.
E.g. 20ft x 20ft x 10ft = 4000 cuft.

If the merchandize occupy large volume than deduct the same from total volume.

Step 2: calculate the total quantity of the liquid needed for that space.

Refer dosage directions of the chemical label.

Liquid (ml) = Volume (4000 cuft) x Application rate (400ml/1000cuft)=1600ml.

Application rate recommended is in the range of 300-500ml of disinfectant solution/ 1000 cuft. Disinfectant manufacturer can decide concentration of the solution with regard to above guidelines.

- Deduct equipment volume from the original size of the room.

Step 3: Calibration of the fogger to set appropriate liquid output flow rate.

Adjust valve position for desired droplet size as per the application requirements.

To determine the liquid flow rate

1. Put some fogging liquid into a measuring cup & note the liquid level.
2. Unclamp the tank from fogger & dip the liquid intake tube in cup.
3. Operate the fogger for a minute and measure the volume dispensed i.e your liquid flow out of the fogger per minute.

E.g. liquid flow rate =100ml/minute.

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Step 4: To calculate the total fogging time.

Time required = total liquid to be fogged / flow rate.

=1600 ml / 75ml/min =21 minutes.

OPERATING INSTRUCTIONS OF FOGGER

1. Remove tank filling lid and add fogging liquid solution to tank (up to 5 liter Max.)
2. With switch in OFF position, plug power cord into power outlet of the proper voltage.
3. Calibrate the fogger(i.e adjust the flow regulation valve at desired position) for proper liquid flow rate & droplet size considering the application demand.
4. Place fogger at appropriate place in the room with nozzle direction pointed in desired position.
5. Before switching ON ensure that intake air filter is in its place.
6. Switch ON the machine, fogger will now generate the fog.
7. When fogging treatment is finished add some plain water(approx 1 liter) into the tank, open the valve fully & operate for 5-7 minutes to ensure cleaning of internal parts. Wipe outside with wet cloth to remove chemical layer on external surfaces.
8. Clean strainer & tank as needed. Do not leave fogging solution in the tank for long period of time. Always empty the tank after each use before storage.

ROUTINE MAINTENANCE TIPS

Clean your fogger after each use. Drain the unnecessary chemical from the tank & rinse it with the water after using water based product or kerosene after using oil based product. Always fog for a few minutes with clean water to flush chemical residues from the internal lines, connectors, nozzles & valve

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If the strainer mesh gets clogged brush it off gently to clear it.

Our non-clogging nozzles rarely need any maintenance. If any deposits are formed on to the nozzle do not pry into nozzle opening to clean it. If nozzle assembly is required to be cleaned contact us for appropriate guidance.

Motor Brushes: Graphite motor brushes conduct electricity to the motor commutator. Brushes are a wear part, with a life of about 400-500 operating hours. Contact factory for replacing motor brushes. After approx 400hrs of operation send the machine to factory for brush replacement.

Intake air filter: Grit, air borne particulates, dirt, dust; chemical being fogged can cause internal corrosion & premature wear of the motor parts. Warranty does not cover damages form such causes. Always use intake air filter to prevent entry of these particles. when it gets dirty & clogged wash it with water or replace it. Life of the intake air filter depends upon frequency of the machine used, type of chemical used as well as the environment. If filter is being washed make sure that it is reused only after it is completely dry. Do not place wet filter on the machine for use. While replacing air intake filter ensure that filter gets firm grip with the help of Velcro.

APPLICATIONS

Used in : Food Processing, Dairy, Ice cream, Canning, Meat & Sea Food Processing, Fisheries, Packaged Water, Beverages, Breweries, Cold Storage industries - for treating space (aerosol fogging) & disinfection of food/water contact surface against microbial contamination. Disinfection treatment of accessible & inaccessible surfaces of machines, containers, storage tanks, internal surfaces of food processing.

Poultry, Hatcheries, Animal Houses-Aerial fumigation/isinfection in incubators, eggs washing facilities, disinfection of equipment surfaces & anywhere microbial contamination is a concern.

Green Houses, Sericulture Crops, Seed & Sapling Farms, Floriculture industries – for application of disinfectants, fungicides, biocides, pesticides and humidification.

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TECHNICAL SPECIFICATIONS : (FOGGER)

Input Power	: 220-240 VAC, 3.5 AMP, 50HZ
Nozzle Assembly	: Non Rotating, Vortex Design, Non Clogging MOC : Engg. Plastic
Power Head Housing	: High Grade Material Tough & corrosion resistant. Power Head Bolts, Washer – SS304
Chemical Solution Tank	: MOC : HDPE. Capacity – 7.5 liters
Precision Metering System	: Liquid discharged rate: 0-200 ml/min. (Valve body/Barel/Nut Adjustable by rotating knob
Intake Air Filter	: Primary/ Secondary Filtration
Empty Weight	: 4.6 KG
Timer	: 0-60 Min.

TECHNICAL SPECIFICATION : (AEROSOL)

Control Box	: 0-90MIN.TIMER BOX (optional)
Power	: 0.3 Amps 65 Watts
Output	: 5 Lts/hr
Speed of Motor	: 2960 rpm
Height	: 17 inches
Diameter	: 18 inches
Weight (dry)	: 8 kg.
Surface finish	: Stainless Steel

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OPERATING INSTRUCTIONS OF AEROSOL

1. Keep the "AEROSOL DISINFECTOR" in the room to be Disinfected & connect the plug from the Aerosol Disinfector to the control box.
2. Keep the control box outside OR inside the room to be disinfected which is connected to the Aerosol.
3. Measure the required quantity of Formalin & pour it in the trough. The maximum capacity of the trough is 5 liters. Generally use ratio 1:10 of Formalin & water concentration.
4. Close all the doors & windows & seal them.
5. Switch 'ON' the Aerosol Disinfector from the control box. One liter is automised on 30 min. & 2 Liter in an hour. Depending on the time required, when all the formalin is automised switch off the 'Aerosol Disinfector'. You can operate Aerosol Disinfector by Timer Control Box.
6. Depending on the strength of Formalin used, keep the room closed for six to eight hours.
7. After 8 to 10 hours start airconditioner OR Fan to reduce the effect of formalin, if it is still there, Depending on concentration then (if reqd.) neutralise it by Ammonium Hydroxide.
8. Generally there is no need to neutralise it by Ammonium Hydroxide after keeping room closed for Several hours, but if it is necessary then mixture of Ammonium Hydroxide & water ratio 1:10 is Used for neutralization , & switch 'ON' the Aerosol for the required time & use the room after two hours.
9. Run the Aerosol Disinfector with clean water for 15 minutes every time after the disinfection.
10. Do not keep unit unused for several months.

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7.3 WARRANTY CERTIFICATE

western surgical product is warranted to be free from electrical and mechanical defects in material and workmanship, under normal use. The western surgical product must not have been moved from the site of original installation. A new or remanufactured part to replace the defective part will be provided without charge for the part itself, through an authorized western surgical service dealer. The replacement part assumes the unused portion of the warranty.

WESTERN SURGICAL WILL NOT BE RESPONSIBLE FOR:

1. Damage or repairs required as a consequence of faulty installation or application by others.
2. Damage or repairs needed as a consequence of any misapplication, negligent handling, improper servicing, unauthorized alteration, or improper operations.
3. Failure to start due to voltage conditions, blown fuses, open circuit breakers or other damages due to the inadequacy or interruption of electrical service.
4. Damage as a result of floods, winds, fires, lightning, accidents, corrosive atmosphere, or other conditions beyond the control of western surgical
5. Parts not supplied or designated by western surgical.

Date of Installation	Installed By
Model No.	Serial No.
Warranty Period	
Name of Doctor & Address :	

Customer Sign. With Stamps

Marketed By: Western Surgical
Sign. With Stamps

No Claim Warranty :

- 1) Any Defect Throughout Power Supply
- 2) Any Physical Damage

3) Under Warranty Standby Unit Not Provide

4) Under Warranty When Company Send Parts or Machine we Imidiat send to Buyer.

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Date : 12-4-2016

OUR OTHER PRODUCTS RANGE



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"Happy Home", 1st Floor, 23, Karanpara,
 B/h. S.T. Bus Stand, Kanak Road,
 Rajkot-360 001. Ph. : 0281-2232871/2243159
 Mo. : 98250 69069 - 98250 45997
 Email : westernsurgical@gmail.com
 Email : info@westernsurgical.in

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