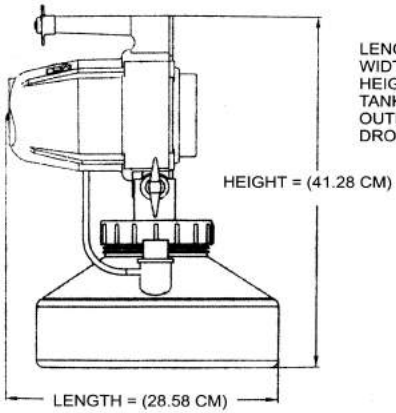
JSR Fogger

Contents

Specifications

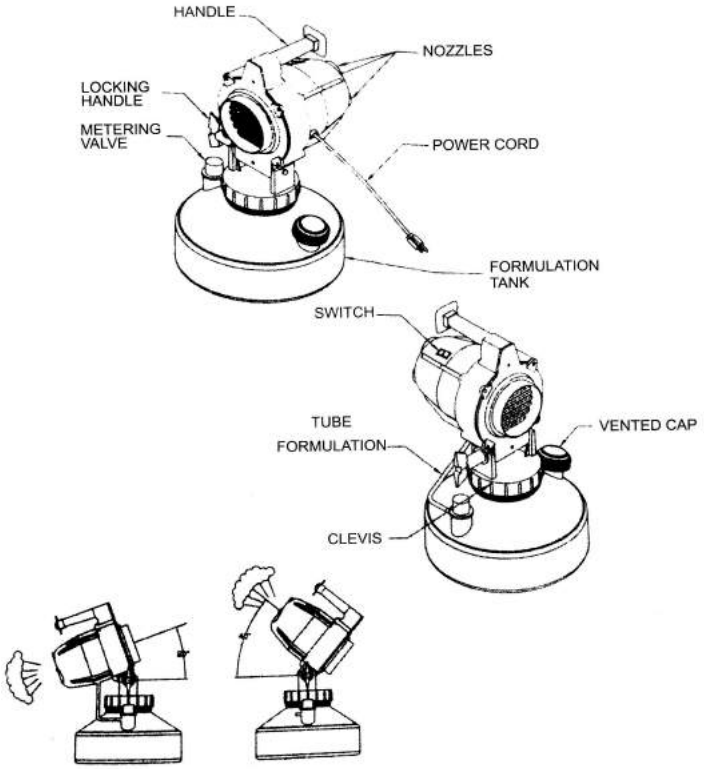
This an electric „Cold Fog“ JSR Fogger with three rugged nylon nozzles. This device is intended for applications of both oil bases (following necessary precautions) and water based chemical treatments including wettable powders and wet flowables. The body and tank are made of high-density chemical resistant polyethylene. The applicator is useful for dispensing most chemicals which are labeled for aerosol or mist applications such as disinfectants, deodorizers, germicides, insecticides, etc, in locations like hospitals, schools, nursing homes, greenhouses, stables, warehouses, home, and farm Buildings. The particle sizes generated range from 7 to 30 microns VMD, depending on the flow rate and viscosity of the materials.

Electric Motor
Continuous Duty
230 Volts AC - 50/60 HZ
1300 W Power



LENGTH	28.58 CM
WIDTH	26.04 CM
HEIGHT	41.28 CM
TANK CAPACITY	4 LITERS
OUTPUT*	0-19 L/H
DROPLET THROW**	15 M

Components



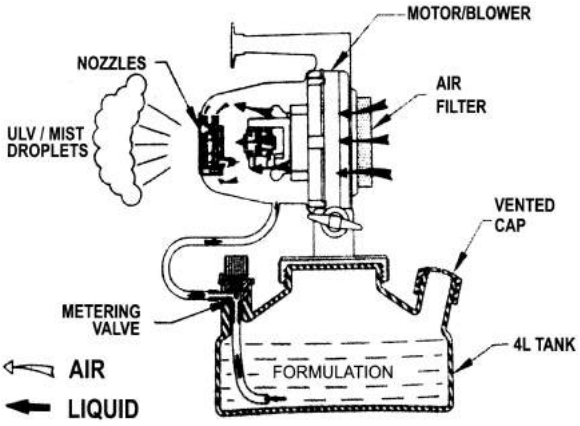
Nozzles Direction

The machine allows adjusting the angle in a 60° range, up to 40° above horizontal, and -20° below horizontal.Use the Locking Handle to adjust the angle.

Working Principles

The Machine consist of a motor/blower assembly, a nozzle system, nozzles housing, a formulation tank and a metering valve.The various components are identified in a digramm below.The blower is a single stage/centrifugal impeller/axial flow driven by a universal motor operating at a speed of about 20.000 rpm.The blower moves a large amount of air through the noozle system consisting of three individual noozles, each of which has two sets of directing vanes. One vane set causes the air to be rotated clockwise and the other causes forces shears the material being dispensed into small particles.Further the air rushing by the specially shaped liquid tubes creates a negative pressure in the liquid tube. This negative pressure causes the liquid to the drawn from the formulation tank through the control valve and into the nozzle system where it is pneumatically sheared into aerosol or mist size droplets.After breack-up, the droplets are driven away from the machine by the air passing through the noozle system.

Generally, the size of the output droplets increases with increasing flow rate and with increasing viscosity.



FLUID SYSTEMS DIAGRAM

Safety Precautions

!! WARNING !!

READ AND UNDERSTAND THESE SAFETY PRECAUTIONS BEFORE OPERATING MACHINE.FAILURE TO PROPERLY FOLLOW THESE PRECAUTIONS MAY LEAD TO A FIRE, EXPOSION OR ELECTRIC SHOCK HAZARD

1. **ELECTRIC POWER**. This machine uses electrical power at common commerciality available voltages.When directly contacted, such voltages are hazardous to human life.All precautions commonly applicable to the use of the electric power general are applicable to the use of this machine.This machine isdesigned to operate from three wire power systems where one of the wires is a saftey ground.Do not disconnected the safety ground or use extensions cords or „Cheater“ plugs to connect this machine to a two-wire system.This defeats the purpose of the safety ground and may results in an hazardous electrical shock condition.

When making repairs on the machine, use anj area or work bench that is dry and not electrically conductive. Dry natural wood and plastics are generally non-conductive at the working voltages of this machine.Metals ara usually conductive.Do not prbe inside the machine.

Extension cords must be properly sized and rated for the voltage, current and length of an individual cord.Consult the nameplate current and voltage rating of your machine and the marked rating of the extension cord.A single extension cord only should be used.When to or more extensionsmcord are placed in series, the rated current carrying capacities of the cords may no longer be vaild if an extension cords gets warm to the touch, discontinue its use and obtain a cord wirt a higher current rate.Improper extensions cords are not only hazardous, but may result in poor machine performance due to excessive voltage drop.Finally, since the machine uses oil-based formulation, the extension cord should be rated as oil resistant.

2. **Formulations.** Many formulations are combustible; that is, they all can be caused to burn. This is true of even high flash point or “no“ flash point formulation (fine particle dust in a grain mill has “no“ flash point).A combustible liquid vapor can more easily be ignited because it more readdily form a uniform mixture with the are which contains the Oxygen needed for combustion.However, fine particles of cumbustible liquids or solid suspended in the air very closely spaced are capable of propagating flame from one to anaother once an ignition starts.A good analogy is the grain mill explosion.Although the fine particle dust in a grain mill has “no“ flash point, the phenomena of the grain mill explosion is an all too comman occurerence.

Where a high flash point or „no“ flash point liquid formulation will ignite far less readily than a low flash point liquid and for this reason is strongly advocated.The higher or “no“ flash point formulation can ignite if the proper conditions exist .These higher or „no“ flash point formulation can ignite if the proper conditions exist.These conditions are basically two: 1, A sufficiently volume of liquid in the form of fine particles suspended in the air; and 2. A sufficently high energy source of ignition.

3. ***AEROSOL CONCENTRATION.*** It has been fully etablished that an acceptable level of liquid in the atmosphere is one gallon per 50,000 cubic feet (2,7 Liter per 1,000 cubic meters).There is a safety margin of least 5 to 1 in this figure

4. **AEROSOL IGNITION.** If a combustible atmosphere is established or a combustible deposit is laid down, a source of ignition may cause a fire. Sources of ignition can be gas or oil pilot lights or sparks from electrical controls. Therfore, it is strogly recommended that all such sourches be eliminated by extinguishing all pilot lights and turning off all unnecessary electric power.To avoid danger of fire or explosion in a enclosed space, the enclosed volume foffing time an required formulation volume should be carefully calculated.

PROPER AND IMPROPER USE .

The following rules apply to the operation of this machine:

DO

Read the entire manual before operating the machine and pay particular attention to all CAUTIONS and WARNINGS.

Store formulation in this original labeled container.

Use an extensions cord which is propedy rated for voltage, current and length ans which is free from nicks, cracks and other signs of prior abuse.For lengths up to 100 feet (30,5 meters) cord NO. 12AWG wire are usually adequate.

Replace damaged ore worn electric cord immediately

Turn the flow valve CLOCKWISE to the OFF position after each spray application while the motor is still operating to allow clearing of the lines.This will also prevent a siphon effect if the unit is ever accidentally knocked overwith the valve remaining open.

Always comply with any requirements for protective clothing, goggles, gloves, facial masks or respirator required by the formulation label.

Ensure that formulations are applied only in strict compliance with the formulation label as well as local State and Federal regulations.

DO NOT

<u>Do not</u> Spray flammable liquids near open flame ore other source of ignition.

<u>Do not</u> Use a machine that is broken oe damage in any way.

<u>Do not</u> Alter the machine by adding or remove parts.

<u>Do not</u> Restrict the motor blower inlet area.

<u>Do not</u> Tamper with the output nozzle.

<u>Do not</u> Allow the machine to operate unattended.

<u>Do not</u> Apply more than one gallon of formulation per 50.000 cubic feet (2,7 Liters per 1,000 cubic meters) enclosed space.Exeeding this concentration is both hazardous and wasteful.

MAINTENANCE

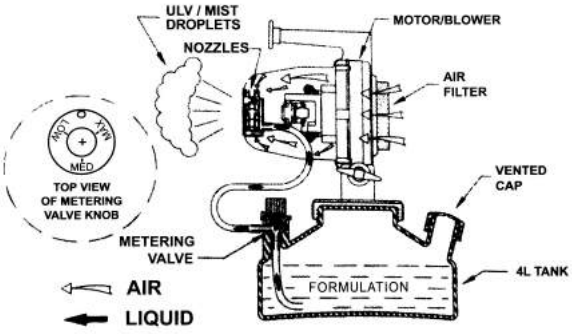
1. Periodically clean the formulation tank using a hot water/detergent solution.Fully open the machine valve and operat the machine for 3 to 5 minutes, flushing the solution through the valve, lines and nozzle,

2. Examine the electrical cord for evidence of damage and replace any damaged cord immediately.

3. If becomes necessary to disassemble the Machine Flow Valve for cleaning, be careful not to enlarge the metering orifice or damage the taper of the valve steam, as this will affect the calabration of the machine.

FLOW RATE

Turning the Knob of the Metering Valve regulates the Flow Rate. If the knob is rotated clockwise, the flow rate will be reduced. If the knob is rotated counterclockwise, the flow rate will be increased.
AS reference, the average flow rate is shown in the bottom table at three different positions of the Metering Valve knob when using water.



METERING VALVE SETTING	FLOW RATE AND DROPLET SIZE			
	FLOW RATE			DROPLET SIZE
	ML/MIN	L/H	GPH	MICRONS - VOLUME MEDIA DIAMETER
LOW (*)	70	4.2	1.1	14 MICRONS
MED (*)	225	13.2	3.6	20 MICRONS
MAX (*)	330	19.8	5.2	25 MICRONS

CAUTION: Read and follow the instructionon the formulation manufactur's label and in the operation manual

Important: This deviceis designed to dispense formulations in an SPRAY (COLD Fof) or MIST.Many of the formulations which may be dispensed with this machine require registration with approval by various goverment agencies.(*) Note: All flow rate information in the table above is based on spraying water.Thicker viscosity liquids will flow at lower rates than what is shown and produce bigger droplet size.Calibrate flow rate before attempting to spray.