

## DF-50 DIFFUSION HAZER

### INTRODUCTION

The DF-50 Diffusion Hazer is the cleanest most cost effective atmospheric fogger available in the market today. Fluid use is less than 2 ounces an hour! The Diffusion Haze produced is totally odorless and can only be detected visually. No more sore throats or burning eyes. This patented machine utilizes a triple filtered system that breaks down the Diffusion Fluid (food grade mineral oil) to a uniform 1-micron sized or less droplet. The unit is self-contained needing only the proper power rating and a sufficient amount of fluid.

### UNPACKING

Each DF-50 is carefully checked and tested to strict factory standards before being shipped. In each carton is the DF-50 and accompanying power cord.

*Warning:* Do not connect the power cord to the unit and switch on until you have thoroughly read the operating instructions section of this manual.

### OPERATING INSTRUCTIONS OVERVIEW

The DF-50 Diffusion Haze should NOT be considered as a standard haze machine. Because of the minute particulate size of the haze produced and its long lasting hang time (3+ hours in an enclosed area) it is not necessary to have the concentration of haze that is normally associated with other machines. The particles produced are so minute that they are hardly visible to the eye. Although you may think the concentration is insufficient, you will find that after a very short period of use the DF-50 will have produced more than a sufficient amount of atmosphere.

Due to the efficiency of the machine it is recommended that the machine be used intermittently, NOT continuously, and in situations where the machine is not monitored by an operator, it is suggested you use a timer to switch the machine ON and OFF. Under normal conditions you may find that a running time of 10 minutes ON each 15-20 minutes should provide the desired atmosphere, however length of running time will vary for each job.

Another important factor in the operation of the DF-50 is that it should NOT be fully enclosed, unless enclosed in a case approved by the manufacturer such as the one shown on Page 9. If the air temperature around the machine rises too high the thermal sensor in the machine will turn it OFF. The machine works on the principle of drawing air from the back of the machine and passing air through the machine, then out the front of the machine mixed with the diffusion particles, which have gone through a triple filtration process. Therefore, a steady flow of cool air is recommended for the machine, hence it is best operated in an unobstructed position.

If the machine is used non-stop (and this is NOT recommended) over a long period you may create a situation whereby the concentration of smoke is too much, which can result in build-up of residue in the environment. You may also experience some residue after a long period of using the machine as recommended and this can be seen on equipment close by, especially those with air filters and fans etc. However, normal periodic cleaning of this equipment will prevent this. If the machine is to be used continuously, then a timer should be used to create a 10-second off period to allow the water trap to automatically drain.

## **OPERATING**

### ***Always***

1. Transport the unit right side up or empty.
2. Before operating, fill with Diffusion Fog Fluid just below the top of the tank window on the side of the unit. **ALWAYS**

**TAKE CARE NOT TO OVERFILL.**

3. Check the machine for correct voltage.
4. Check the female plug for tight connection before plugging the male end into an AC voltage receptacle. New line DC

voltage will result in damage to the machine.

5. If the circuit breaker trips, then turn OFF the machine and reset by depressing the breaker button, then turn back ON. Be

sure to plug directly into a wall outlet or use a 2.5mm<sup>2</sup> extension cord. Note: When starting the voltage must not drop

less than 80% of nameplate voltage. If it continues to trip contact your dealer.

6. The machine must be level to operate properly.
7. The machine holds 2 liter's or 1/2 gallon of fluid. **DO NOT OVERFILL.** If you overfill, then it may be necessary to remove the cover to clean up the excess fluid.

## **FILLING INSTRUCTIONS**

1. Unscrew the cap on the top of the unit and pour fluid into the opening. Be careful not to overfill.
2. Do not use more than 2 liter's or 1/2 gallon of fluid.
3. Check the level by using the sight window on the side of the unit.

4. If overfilled, empty excess by tipping to the side of the spout and pouring back out. If you have spilled fluid inside the machine it may be necessary to remove the cover to clean up the excess fluid. If this is required DISCONNECT the machine from the power supply before opening.

## CAUTION

Only **Diffusion Fog Fluid** may be used in the operation of the DF50. Any other fluid may clog the machine, create a health hazard, cause damage to the machine and will void the manufacturer's warranty coverage.

**DO NOT ATTEMPT TO SERVICE THE DF-50**  
**CALL YOUR DEALER IF YOU HAVE ANY QUESTIONS**

## ROUTINE MAINTENANCE

**FLUID LEVEL:** Using the glass sight level on the side of the machine fill with a sufficient amount of fluid to approximately 1/2" below the top level. If you overfill, then tip the machine on its side to dispose of the excess.

**COMPRESSOR:** No maintenance is required and no attempt should be made to service the compressor. The compressor is rated at MTBF 5000+ hours before any rebuild may be necessary.

**AIR FILTER:** Remove top of the black filter element. By twisting counter clockwise 1/4 turn. Remove wool element and wash in soap and water, then reassemble.

**WATER TRAP:** To maintain maximum filtering efficiency and to avoid excessive pressure drop, the filter must be kept clean. To access the filter you need to remove the cover of the DF-50. Turn the drain valve to remove any bowl accumulation before it reaches level of lower baffle. A visible coating of dirt or condensation on the filter element or excessive pressure drop indicates cleaning is necessary.

To clean, depressurize air line and remove bowl. Wash filter elements with household soap. Elements should be replaced if soiled or creating excessive pressure drop. Blow out body with compressed air. **Clean bowl only with household soap.**

**TANK:** No maintenance is required and no attempt should be made to service.

**If any problems occur, you should contact your dealer**

## USEFUL TIPS

- ❓ The DF-50 Diffusion Hazer provides a fine atmospheric mist. The maximum recommended level for use in an eight-hour day is  $5\text{mg}/\text{M}^3$ . If OSHA levels have to be met, please contact your dealer for information on the Diffusion Fog Meter.
- ❓ Always use Diffusion Fog Fluid. Operation with any other fluid will invalidate the warranty and fail to meet CAL/OSHA tested standards.
- ❓ It is helpful to use an 'RE' Fan or other type of fan to disperse the mist produced, but it is not recommended to mist through the fan as this will result in build-up on the fan blades.
- ❓ It is NOT necessary to place the unit where mist is required, as the DF-50 will provide an even amount of atmospheric ambiance in all enclosed space.
- ❓ Do not leave the machine ON continuously in a small room as this will result in too high a concentration and may leave unwanted residue

**DO NOT block the supply of air to the back of the unit as you will prevent the compressor from performing efficiently and may overheat the compressor.**

## SPECIFICATIONS

**SIZE: 35cmH X 38cmL x 21cmW**

**14"H X 15"L x 8" W**

**WEIGHT: 16kg or 35 lbs. net without fluid**

**POWER: 100v 50-60Hz**

**120v 60Hz**

**200-240v 50Hz**

**FLUID: Diffusion brand haze fluid**

**FLUID CAPACITY: 2 Liters or 1/2 gallon**

**RUNTIME: 35+ Hours**

**HAZE HANG TIME: 3+ Hours in an enclosed space**

**SAFETY TESTING: CAL-OSHA Tested (Test results on request)**

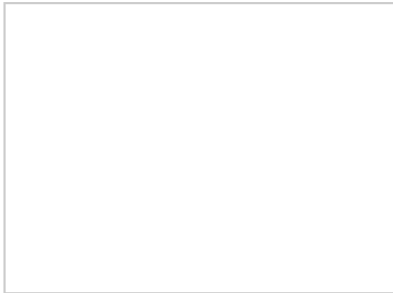
**League of American Theaters**

**Actors Equity**

**WARRANTY: 5 years parts and labor on compressor**

**1 year parts and labor all other components**

**AVAILABLE ACCESSORIES**



**Remote (radio) Road Case**

**(100v~110v only)**



**Automatic Fill System and Interval Timer**

**AutoFill System**

**Interval Timer**

**Timer-AutoFill Combo (110v & 220v)**