



# ROSCO MODEL 1750 Operation Manual

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# ROSCO MODEL 1750 Operations Manual

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## INTRODUCTION

This manual offers a detailed explanation of the operation of the ROSCO MODEL 1750 fog machine. To assure efficient and safe operation, please take a few minutes to read this material.

The ROSCO MODEL 1750 fog machine is a thermal aerosol generator designed for variable fog output. It is part of a system, the other basic component being the full line of Rosco fog fluids, and they should always be used together. These unique fluid formulations are safe when used according to instructions. They are water-based and contain no petroleum distillates. The operating temperature, pump pressure, and output nozzle orifice of the machine have been specifically set to maximize aerosolization of the Rosco fluids. When used properly, the system should operate for many years.

## IMPORTANT SAFEGUARDS

READ AND UNDERSTAND THESE SAFETY PRECAUTIONS BEFORE OPERATING THE MACHINE. FAILURE TO PROPERLY FOLLOW THESE PRECAUTIONS MAY LEAD TO A FIRE, EXPLOSION, OR ELECTRICAL SHOCK.

**FOG FLUID HEALTH CAUTION: VAPOR FROM THIS FLUID, LIKE ANY OTHER COMMON MATERIAL IN A VAPORIZED STATE, MAY BE IRRITATING TO OR CAUSE ALLERGIC SYMPTOMS IN SOME PERSONS WITH ALLERGENIC SENSITIVITY. DO NOT EXPOSE AT CLOSE RANGE TO KNOWN ASTHMATICS.**

1. This machine uses electrical power at common commercially available voltages. When directly contacted, such voltages are hazardous to human life. All precautions commonly applicable to the use of electric power generally are applicable to the use of this machine. This machine is designed to operate from three-wire power systems where one of the wires is a safety ground. DO NOT disconnect the safety ground or use extension cords or "cheater" plugs to connect this machine to a two-wire system. Operation without a safety ground may result in a hazardous electrical shock.

2. Check the current and voltage rating of your machine. Extension cords must be properly sized and rated for voltage, current and length. Check your local electrical code for the correct gauge extension cord. If an extension cord shows signs of wear or gets warm to the touch, discontinue its use and obtain a cord with a higher current rating. Improper extension cords are not only hazardous, but may result in poor machine performance due to excessive voltage drop.

3. Never use any machine that shows signs of improper use. Even slight damage may be an indication of a major problem. If the machine looks questionable, use it only under strict observation. If the machine shows any unusual behavior, disconnect machine immediately from power and send machine to a Service Center for repair.

4. Do not operate the machine in a tightly confined space where the ambient temperature might exceed 135° F (57° C). A continuous flow of air is required to maintain temperature within the machine housing. Sensitive electronic components deteriorate rapidly under high heat conditions. Operation of the machine in an enclosure of less than ten cubic feet (one cubic meter) is dangerous, and automatically voids the warranty.

**Enclosing any heating device so it is invisible to the operator creates a potential fire hazard, no matter what the ambient temperature of the enclosure. To do so with any high-amperage device is to assume substantial risk. Rosco strongly recommends against it.**

5. In any facility, the fog concentration should be controlled. The fog should never mask emergency exits, safety signs, staircases or other safety constructions.

6. After long use, or if the machine is not properly set, some liquid droplets or wet area may appear in front of the machine's outlet. This liquid should be wiped up to prevent a condition where someone might slip and fall.

7. Machines are designed for continuous use over an 8-hour day, but to protect components, it is wise to turn off the machine when it is not in use. In permanent installations, it is advisable to equip the circuit with a night cut-off device.

8. During the warm-up phase and during operations, people should not stand within one meter of the front of the machine. Flammable material like paper, fabric, etc., should never be placed directly on or around this equipment, or any other electrical device with a heating element.

9. The fog should be blown into an open space and should not be directed at people or objects. Never blow fog on hot surfaces, into glowing heating elements or into open flames. The normally non-flammable and non-toxic fog could react on very hot surfaces and be burnt or decomposed.

10. Unauthorized repair or alteration of any safety devices can lead to improper operation and accidents. Repairs should be performed only by an authorized Service Center.

**WARNING: USE OF ANY FLUID OTHER THAN ROSCO FOG FLUIDS OR MODIFICATION OR ATTEMPTED UNAUTHORIZED REPAIR OF THE ROSCO MODEL 1750 WILL IMMEDIATELY INVALIDATE THE WARRANTY.**

### **HOW THE MACHINE WORKS**

When the heat exchanger has reached proper operating temperature, the operator switches power to the siphoning pump, which draws the fluid from an external reservoir into the heat exchanger. The fluid is rapidly heated and vaporized. The vaporized fluid is then discharged through the nozzle into the atmosphere where, upon mixing with the cooler air, it turns into an aerosol consisting of millions of fine particles.

**NOTE:** The terms “fog” and “smoke” are used interchangeable. However the ROSCO MODEL 1750 does not produce smoke, but a mist or aerosol.

## OPERATING INSTRUCTIONS

### 1. POWER HOOK-UP

Plug one end of the power cord into the dedicated socket located on the rear of the machine and the other end into a socket rated at the proper voltage and amperage. **The machine requires a dedicated power circuit.**

### 2. REMOTE CONTROL

If it is not already plugged in, plug the remote control into the socket in the cavity on the back of the machine. Push the button marked POWER. This will turn on the machine and the unit will start to heat up. The red HEATING LED on the remote control should light up indicating that the machine is heating.

### 3. WARM UP

Let the machine warm up for about eight minutes until the green READY LED on the remote turns on. The machine is now ready to use as long as the green LED remains on and the fluid reservoir contains fluid.

### 4. FLUID DELIVERY

Place either the 2.5-liter or the 4-liter size bottles of any Rosco fluid in the cavity located at the rear of the machine. Place the end of the tube coming out of the top of the machine into the bottle. A cap is provided that fits on the bottle.

**NOTE:** The machine only works with uncontaminated Rosco fog fluids. Other manufacturers' fluids may cause spitting and serious clogging problems and could result in the production of an unhealthful aerosol. **The use of other fluids voids the warranty of the Rosco Model 1750 Fog Machine.**

### 5. PRODUCING FOG

To produce fog, push the FOG button located on the remote control. Push the switch again to stop producing fog. The volume of the fog can be varied by turning the knob marked FOG LEVEL. **Note:** At higher outputs the machine will give a large burst and then ramp back the volume. This is to allow the machine to run continuously and is normal.

**CAUTION: If the fluid bottle is empty, DO NOT run the pump. Running the machine without fog fluid can seriously damage the pump.**

### 6. TIMERS

The Rosco Model 1750 Remote Control is equipped with timers as standard equipment. To enable the timers, push the TIMER button on the remote. The yellow CYCLE LED will be lit. To set the amount of time that the machine will make fog, adjust the FOG ON knob. To set the delay between bursts, adjust the FOG OFF knob. The range of time for both FOG ON time and FOG OFF time is 2-120 seconds.

**NOTE:** The numbers indicated by the FOG ON and FOG OFF knobs are relative and should be used for reference only.

### 7. DAISY CHAIN (OPTIONAL)

The Rosco Model 1750 has the capability to control up to 4 machines from a single controller. In this “Daisy Chain” process, the machine that controls the others is called the MASTER and the others are called SLAVES. Make sure that a remote control is attached to the MASTER machine as outlined in Step 2 and all remote controls are removed from all the SLAVE machines. Connect a cable with 6-pin XLR connectors to the socket on the rear of the MASTER machine and connect the other end to the remote connection on the first SLAVE machine. Repeat the process from the first SLAVE machine to the next. As many as 4 machines may be operated from a single remote. Operate the remote as outlined in Steps 5 and 6 above.

### **8. DMX REMOTE (OPTIONAL)**

The Rosco Model 1750 has the option to be operated from a lighting control console that uses a DMX signal. Attach the DMX remote as outlined in Step 2 above.

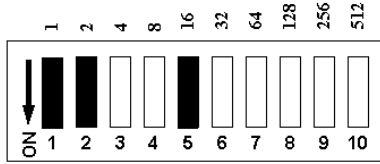
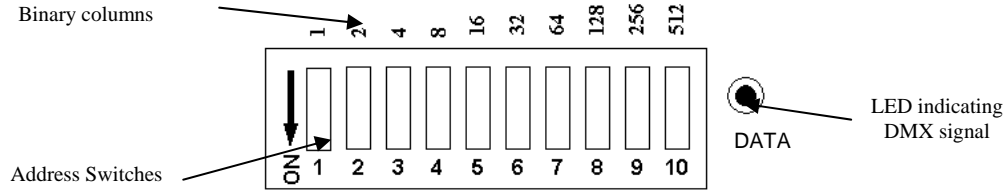
**Attaching DMX cable:** Plug a standard 5-pin DMX cable in the connection marked DMX IN on the remote. Note that the DMX can pass through to another device by plugging another cable into the DMX OUT plug. **Note:** Like any DMX controlled device, if the Model 1750 is the last device in the DMX line then a terminator plug must be plugged into the DMX OUT connection

**Setting the address:** To set the DMX address, use the dip switches located on the DMX interface. The dip switches are based on the binary system, so the channel number must first be converted to a binary number. (See illustration on page 6.). When the dip switch is in the down position, it is “on”. When there is a valid DMX signal, the DATA LED next to the dip switches will light. **NOTE:** The Rosco Model 1750 uses one DMX channel.

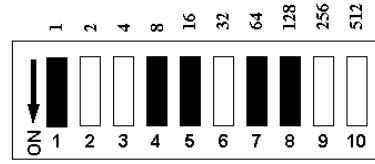
**Operating the unit:** Operate the machine as outlined in Steps 1-4 above. When the proper DMX channel is given a non-zero value, the machine will make fog. The fog volume will be proportional to the value of the channel setting.

**Manual Override:** If desired, the local controls on the remote can be used to override the DMX signal.

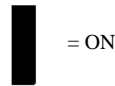
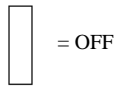
## DMX INTERFACE ADDRESS



Address for Channel 19  
 $1+2+16=19$



Address for Channel 217  
 $1+8+16+64+128=217$



## DO'S & DON'TS

- DO Read the entire manual before operating the machine and pay particular attention to all CAUTIONS AND WARNINGS.
- DO Use ONLY Rosco manufactured fluids.
- DO Use an extension cord which is properly rated for voltage, current and length and which is free from nicks or other signs of wear.
- DO Before each operating period, check to see that the machine is clean and free of foreign objects.
- DO Test first for dry smoke. Turn the FOG switch on. Place a piece of cardboard or paper 18 inches in front of the machine. If the surface is at all wet return the machine to A Rosco Service Center for service..
- DO Ensure that the machine is adequately ventilated.
- DO Use proper caution when handling hot surfaces
- DO Use the **minimum** amount of smoke required to achieve the desired effect.
- DO NOT Use the machine near a person who has asthma or similar inhalation disorder.
- DO NOT Use any foreign substances in the machine.
- DO NOT Use a machine that is damaged or operating improperly in any way.
- DO NOT Use a machine that leaks fluid from the housing.
- DO NOT Leave the machine switched on for prolonged periods without producing fog.
- DO NOT Enclose the machine.
- DO NOT Install the machine in such a fashion that the operator cannot see the whole machine including indicator lights.
- DO NOT Touch the shielded nozzle of the machine. Allow sufficient cooling time after operation before attempting to perform maintenance.
- DO NOT Direct the smoke continuously against the same spot. This may eventually cause fluid to recondense on walls, furniture, sets, etc.

**READ THE COMPLETE MANUAL TO INSURE SAFE OPERATION.**

## MAINTENANCE

1. The main fuse of the ROSCO MODEL 1750 smoke machine is located on the circuit card inside the machine. **NOTE:** Be sure to check the specifications when replacing any fuses.

**WARNING: DISCONNECT THE ROSCO MODEL 1750 FROM POWER BEFORE CHECKING OR REPLACING THE FUSE. FAILURE TO DO SO COULD BE HAZARDOUS AND RESULT IN AN ELECTRICAL SHOCK.**

2. After every operation, **only after the machine has cooled**, it should be wiped with a clean damp cloth or paper towel. This practice prevents the build up of dirt and dust which may enter the machine and damage sensitive internal components. Do not use solvents for cleaning.

3. Before and after the machine is stored for an extended period, the machine should be properly cleaned. The best method for cleaning is using de-ionized water only. To flush the machine, turn it on and, when ready to use, put the fluid pick-up tube into a container of de-ionized water. Run the water through the machine and flush for three minutes. The machine should be **immediately** turned off.

4. During use, operation of all switches and indicator lights should be monitored. Lights that blink or flicker when they should be on or off, for example, are an indication of problems in the machine's circuitry.

## FOG DISTRIBUTION

The fog distribution in an enclosed area depends on air flow and temperature. Natural air movement, air conditioning and other ventilation systems will affect movement of the fog. Test under realistic conditions before using. If a space must be filled very quickly, move the machine up and down and side to side. To conduct fog to particular areas, use a hose adaptor and ducting hose (see OPTIONAL ACCESSORIES). Make sure that there is an air space of 2-3 inches between the nozzle and any ducting hose. Do not use ducting hose smaller than 4 inch diameter. The ROSCO MODEL 1750 works properly only in a horizontal position. Do not tilt the machine during operation.

## ROSCO OFFICES WORLDWIDE

If the machine fails and repairs are required, call or write the nearest Rosco office (listed below) or your local Rosco dealer.

### UNITED STATES

#### World Headquarters

Rosco Laboratories, Inc.  
52 Harbor View Avenue  
Stamford, CT 06902  
(203) 708-8900  
(800) 767-2669  
E-mail: [info@rosco.com](mailto:info@rosco.com)

Rosco Laboratories, Inc.  
1265 Los Angeles Street  
Glendale, CA 91204  
(818) 543-6700  
(800) 767-2652

Rosco Service Center  
1330 30<sup>th</sup> Street.  
Unit G  
San Diego, CA 92154  
(619) 423-1985  
(800) 468-0114

### CANADA

Rosco Laboratories, Ltd.  
1271 Denison Street #66  
Markham, Ontario  
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### UNITED KINGDOM

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SE26 5AQ England  
(81) 659-2300  
E-mail: [marketing@roscolab.co.uk](mailto:marketing@roscolab.co.uk)

### SPAIN & PORTUGAL

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C/Oro, 76 Polígono Industrial Sur  
28770 Colmenar Viejo  
Madrid, Spain  
(34) 918 473 900  
E-mail: [info-spain@rosco-iberica.com](mailto:info-spain@rosco-iberica.com)

### AUSTRALIA

Rosco Australia PTY Ltd.  
42 Sawyer Lane  
Artarmon 2064  
N.S.W. Australia  
(02)9906-6262  
E-mail: [roscoaus@rosco.com.au](mailto:roscoaus@rosco.com.au)

### BRAZIL

Rosco do Brasil Ltda.  
R. Antônio de Barros, 827  
03410-000  
São Paulo - SP, Brasil  
(11) 6198 2865  
E-mail: [info-brazil@rosco.com](mailto:info-brazil@rosco.com)

## LIMITED WARRANTY

ROSCO LABORATORIES, INC. warrants to the original purchaser that the ROSCO MODEL 1750 will be free from original defects in workmanship and material for a period of twelve months from the date of purchase. During the warranty period, machines will be repaired or replaced at the option of ROSCO.

The warranty does not extend to any parts of the ROSCO MODEL 1750 that have been subject to misuse or accident. Neither does the warranty cover any machine that has been opened, modified or repaired other than by ROSCO or its designated repair station.

The warranty will not apply if procedures described in the Operations Manual are not followed. It is the user's obligation to clean and maintain the ROSCO MODEL 1750 according to these instructions, and to follow acceptable practices for handling electrical devices.

**NOTE: USE OF ANY FLUID OTHER THAN A ROSCO BRAND FLUID WILL VOID THE WARRANTY.**

## STORAGE AND SHIPMENT

If you do not anticipate using your machine for an extended period, prepare your machine for storage as follows:

1. Perform maintenance as outlined in "Maintenance" section.
2. Wipe the outside of the machine clean.
3. Store in a sealed cardboard box or carrying case.
4. Whenever the unit is shipped, considerable care should be taken in packing to avoid damage in transit.

**ROSCO MODEL 1750  
TECHNICAL SPECIFICATIONS**

**POWER REQUIREMENTS**

120 volts, 60 Hz., 15 amps  
240 volts, 50 Hz., 7 amps

**PARTICLE SIZE**

0.25-60 microns

**DIMENSIONS**

Height: 9.5 in. (24.2 cm)  
Width: 9 in. (22.9 cm)  
Length: 20 in. (50.8 cm)

**WEIGHT**

22 lb. (10 kg)

**REMOTE CONTROL**

Volume Control  
Sequencers  
    On time: 2-120 seconds  
    Off time: 2-120 seconds

**MAX. FLUID CONSUMPTION**

3.25 liters/hour (60 ml/min.)

**FUSE**

16A/250V

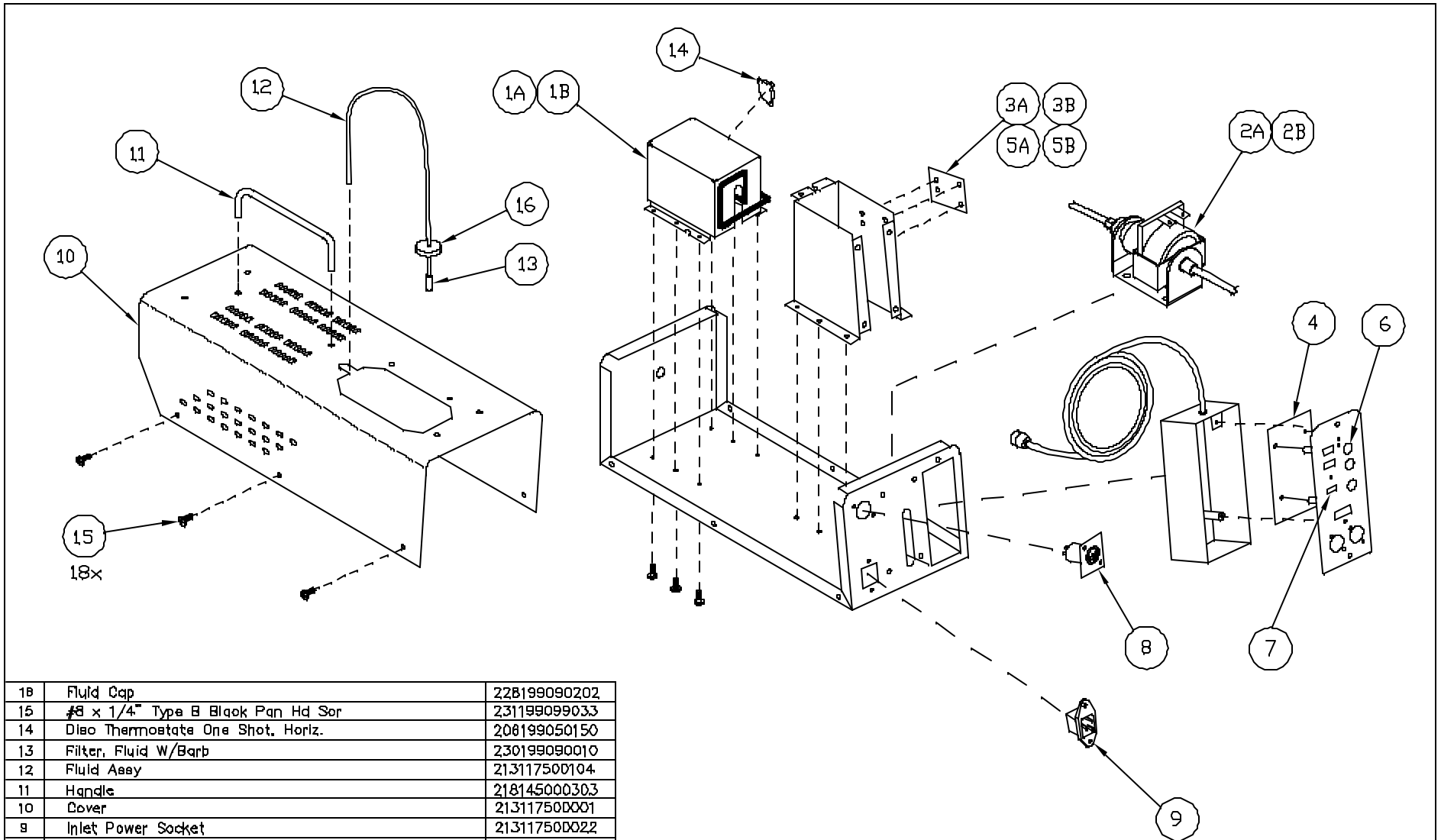
**OPTIONAL ACCESSORIES**

**HOSE ADAPTOR**

Metal frame that connects ducting hose to machine  
Dimensions: 4 in. (10.2 cm) x 6.75 in. (17.14 cm)

**DUCTING HOSE**

Flexible, plastic hose, connects to hose adaptor for ducting of fog  
Dimensions: 4 in. (10.2 cm) x 25 ft. (7.62 m)



1B	Fluid Cap	22B199090202
15	#8 x 1/4" Type B Black Pan Hd Scr	231199099033
14	Disc Thermostat One Shot, Horiz.	20B199050150
13	Filter, Fluid W/Barb	230199090010
12	Fluid Assy	213117500104
11	Handle	218145000303
10	Cover	213117500001
9	Inlet Power Socket	213117500022
8	Defrost Chain Jack Assy	213117500107
7	Push Button, Gray	213117500008
6	Knob, Soft Touch	213117500009
5B	Fuse, 250V/8 amp (240V Unit)	22B199071013
5A	Fuse, 250V/16 amp (120V Unit)	22B199071020
4	Standard Remote PCB, Svc	213117500300
3B	Main PCB 240v,Svc	213117500240
3A	Main PCB 120v,Svc	213117500140
2B	Pump Assy (240v),Svc	213117500230
2A	Pump Assy (120v),Svc	213117500130
1B	Heat Exchanger Assy 240v,Svc	213117500220
1A	Heat Exchanger Assy 120v,Svc	213117500120
ITEM	DESCRIPTION	PART No.

STD. TOLERANCE UNLESS NOTED  
 X= +/- .000  
 XX= +/- .030  
 XXX= +/- .015  
 ANGULAR= +/- 1/2 °

DRN OWB 12/31/05

CHK

APP

NE APPL DATE

USING DEPT APPL DATE

**ROSCO**

Rosco Laboratories, Inc.

1750 FOG MACHINE

A	1 OF 1	SCALE	PARTS LIST	NC
SIZE	SHEET	NONE	DOCUMENT	REV.