



3243 North California Avenue, Chicago, IL 60618

RINGMASTER® LITE COTTON CANDY MACHINE

**120 Volt,
Single Phase, 60 Cycle**

**230 Volt,
Single Phase, 50 Cycle**



READ and UNDERSTAND these operating, servicing, and safety instructions before operating or servicing this machine

I. SAFETY FIRST



The information in this manual is essential for the safe installation and maintenance of your Cretors cotton candy machine. The manual must be read and understood before installing, operating or maintaining this equipment or equivalent training must be provided.



"The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his work environment to control or eliminate any hazards or other exposure to illness or injury".
Ref.: 29 CFR 1926.20 (b)(4)(a)(2)



It is understood that safety rules within individual companies vary. If a conflict exists between the safety procedures contained in this manual and the rules of a using company, the more stringent rule should take precedence.

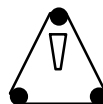
II. INTRODUCTION

This manual is filled with timesaving and money-saving information regarding your Cretors machine. There is nothing, however, more important than the safety aids and warnings that are found throughout this document. The Safety Alert Symbol is used to identify topics of primary safety concern wherever they appear. Furthermore, a separate section has been included which deals exclusively with operation and accident prevention.

If, after reviewing this manual, anything is unclear or technical problems are encountered, contact the dealer from whom you purchased your machine for assistance. If there are any additional questions, feel free to contact our Customer Service Department at the address and /or phone number listed on the back cover of this manual. Always have the model and serial number of your machine available to assist in obtaining the correct information.

III. SAFETY ALERT SYMBOL

The symbol shown below is used to call your attention to instructions concerning your personal safety and the safety of others. Watch this symbol. It points out important safety precautions. It means "ATTENTION! Become Alert! Your personal safety is involved!" Read the message that follows and be alert to the risk of personal injury or death.



IV. PURPOSE OF MANUAL



This instruction manual is intended to familiarize owners with the operation, servicing and safety procedures associated with your Cretors machine.



This manual should be kept available to operating and maintenance personnel.



A person who has not read and understood all operating and safety instructions is not qualified to operate the machine.

V. PRODUCT IDENTIFICATION

CRETORS RINGMASTER LITE COTTON CANDY MACHINE

ELECTRICAL SPECIFICATIONS:

Ringmaster Lite Cotton Candy Machines are available in any of the following Electrical configurations:

120 Volt, Single Phase, 60 Cycle

230 Volt, Single Phase, 50 Cycle

<u>MODEL RML</u>	<u>RINGMASTER LITE</u>
Electrical:	1250 watts
Dimensions for Base	12-1/2"D x 13-1/2"W x 17-1/4" H - - - - 31.75 cm D x 34.29 cm W x 43.81 cm H
Net Weight of Base:	26 lbs.
Dimensions of Bowl:	8-1/2 " H x 26" diameter - - - - 53 cm H x 170 cm diameter
Net Weight of Bowl:	14 lbs. (5 kg.)

VI. THEORY AND OBSERVATIONS OF COTTON CANDY OPERATION



Caution.

The operation of a Cotton Candy Machine requires high temperatures (300°F) and moving parts that may cause injury.

A cotton Candy machine heats sugar in the Spinner Head until it is liquid, about 300°F (150°C). The Spinner head rotates at approximately 3600 RPM. Centrifugal force causes fine strands of liquid sugar to be thrown out of the head. These strands of sugar are cooled in the air and become solid.

The moisture in the air around it affects sugar. For this reason the amount of heat used in the process must be adjusted depending on the humidity and temperature of the air in which the machine is being operated.

The temperature at which sugar melts is very close to the temperature at which sugar burns. For this reason the presence of smoke when the machine is running is an indication that the heat is set too high. Extended operation in this condition will plug the fine holes in the spinner head screen

The Ringmaster is the finest, quietest Cotton Candy Machine on the market. The very best materials and parts including the latest components in heat control have been used in its construction.

All machines are tested, and are mechanically and electrically sound when they leave the factory.

VII. CONTROL PANEL

MOTOR SWITCH	Turns motors heat ON / OFF (I / O)
HEAT SWITCH	Turns heat ON / OFF (I / O)- Interlocked with Motor Switch and cannot operate unless Motor Switch is ON (I)
HEAT CONTROL	Controls heat element output.

VIII. INSTALLATION INSTRUCTIONS

1. Location

Choose a location for your Cretors machine to maximize the ease of operation and maintenance procedures. Check your local building and fire codes for location restrictions.

2. Unpacking

After the Ringmaster is unpacked, place it on a sturdy table or counter at a height to suit the operator. Clean the floss bowl thoroughly with soap and water and then place the bowl on the rubber bumpers on the machine. (Optional) Install stabilizer mesh with clips. Manually rotate the spinner head to see that it turns freely. (We suggest that you keep the heavy-duty corrugated carton in which the Ringmaster was shipped for future transportation of the machine).

3. Power Supply

Check the nameplate to determine the required power supply. The Ringmaster is available in 120V 60Hz or 230V 50Hz. Models.



Connect your Ringmaster only to the correct power source. Failure to do so may result in personal injury or death and may damage your machine.



Make certain the Motor Rocker Switch on the Ringmaster is in the 'OFF' position when plugging into power source. Failure to do so may result in personal injury or death and may damage your machine.

IX. OPERATING INSTRUCTIONS



Do not attempt to operate your Cretors Cotton Candy machine until you have read and understood this manual. Failure to do so may result in serious injury or death.



Do not attempt to operate your Cretors Cotton Candy machine unless the installation instructions have been strictly adhered to. Failure to do so may result in serious injury or death.

1. Machine setup

1. Turn all switches “OFF” and plug the cord into a power outlet with the correct electrical supply as specified on the nameplate.
2. Have an adequate supply of granulated sugar on hand. (Coarse sugar is more desirable, if available.) Color the sugar with the desired color and flavor, according to directions on the package.
3. You are now ready to make cotton candy.

2. Operation

1. With the **MOTOR AND HEAT** switches ‘OFF’ (0). Fill the Spinner Head about 90% full with sugar. **Do Not** overfill. After adding sugar, manually rotate the head back and forth to distribute the sugar evenly in the head. If sugar distribution is uneven the machine will vibrate and be noisy



Never add sugar when Spinner Head is running.

2. Turn the **MOTOR** switch to the ‘ON’ (I) Position



Caution. Don’t attempt to touch the Spinner Head when it is turning. The Spinner head turns at 3600 RPM and contact with the Floaters or spinning head may cause injury.

3. Turn the **HEAT** Switch to the 'ON' position
4. Turn the **HEAT** Control to it's highest position
5. When Floss starts to flow out of the head, lower the **HEAT** setting until the desired consistency of floss is produced.
6. The leather 'floaters' on the top of the spinner head create a draft of air, which controls where the cotton candy floss lies in the bowl. Twisting them up or down causes the candy to lie higher or lower in the bowl. Once adjusted the should not require much attention.

NOTE: Since atmospheric conditions, such as humidity and air temperature affect the production of cotton candy, it will be necessary for you to determine the correct operating heat setting. After working with the machine for a short time, the proper setting is easy to determine.



Caution. Don't attempt to touch the Spinner Head when it is turning and making cotton Candy. The sugar is heated to 300 Deg Fahrenheit to make cotton candy and can cause severe burns. Don't attempt to pick up the sugar with you bare hands, always use a Cotton Candy cone or stick.

7. When Spinner head is empty and needs to be refilled repeat steps 1 through 5

3. Shut Down.

1. It is recommended that the Spinner Head be empty but is not essential.
2. Turn the **HEAT** switch to THE 'OFF' (0) position.
3. Wait thirty seconds for the head to cool down.
4. Turn the **MOTOR** switch to the 'OFF' (0) position.



Always turn heat 'OFF' (0) first, and then turn the motor 'OFF' (0).

X. SANITATION INSTRUCTION



Do not hand clean heated surfaces until they have been given sufficient time to cool. Failure to do so may result in serious burns.

1. Spinner Head

1. Spinner head should be cleaned after daily or whenever operation will be suspended for an extended period of time.
2. Following the operating instructions run the machine until the Spinner Head is empty.
3. With the motor and heat switches "ON" (I). Increase the HEAT control to maximum. Run until Head begins to smoke.
4. Turn motor switch to the "OFF" (0) position, and let spinner head stop spinning. Within 5 to 10 seconds you will see liquid sugar begin to ooze through the holes on the spinner screen. Then turn motor switch to the "ON" (I) position. This will throw the sugar out of the head
5. Repeat steps (2 and 3) two or three times.
6. After last cycle turn heat "OFF" (0), wait 30 seconds and turn motor "OFF" (0).

2. Cabinet and Spinner head



Be certain the machine is turned 'OFF' and power is unplugged before sanitizing this machine. Failure to do so could result in injury or death.

1. The cabinet base can be cleaned with any good grade household cleaner suitable for Stainless Steel or plastic and is acceptable for food contact surfaces.
2. The outside of the spinner head can be cleaned in the same manner as the cabinet.

3. Cotton Candy Bowl

Soap and water or a cleaning agent that is acceptable for food contact surface is recommended for bowl and stabilizer. Sugar will dissolve easily when cleaned with hot water



Operate your cotton candy machine only if it is in sanitary condition (SANITATION INSTRUCTIONS). Failure to do so may result in illness to your customers.

XI. ORDERING PARTS

When ordering parts, refer to the attached parts diagram. Always supply the serial number, model number, and voltage of your cotton candy machine.

XII. TROUBLE SHOOTING AND SERVICE



In the case of improper operation, qualified personnel only should perform the following diagnostic checks, and, if necessary, corresponding adjustments and repairs. Many of the following procedures present an electrical shock hazard and can cause serious injury or death.

1. Problem - Spinner Head Will Not Spin

1. Is machine plugged in?
2. Is the receptacle live?
3. Is machine plugged into the proper voltage? Measure with voltmeter and compare to specification on nameplate of machine.
4. Has the circuit breaker on machine tripped? If so, reset.

Question: - Can the spinner head be turned freely by hand?

NO!

Motor bearings are damaged or filled with spilled sugar. Replace motor

YES!

Problem is in machine.



Do not attempt electrical repairs on the power supply circuit unless you are qualified to do so. The electrical shock associated with line voltages can cause serious injury or death.

1. Unplug machine from power source
2. Remove four screws that hold the switch plate in place.
3. Remove switch plate.
4. Check for loose or broken connections.
5. Using Multi-meter, check the continuity from the top to the bottom of the motor switch. With the switch in the 'ON' position check both sides of the switch:
 - 5.1. If there is no continuity from the top to the bottom on either side of the switch - replace the switch.
 - 5.2. If there is continuity – Check continuity of motor windings. If no continuity, replace the motor.

2. Problem – Head spins but will Not Make Cotton Candy



Unplug machine from power source

1. Remove the carbon brushes by removing the brush holder covers, located on the cabinet just below the spinner head. If the brushes are badly worn, replace.
2. Plug in machine and turn on motor and heat switches. Turn the heat control to high (extreme clockwise direction)
3. Using a Multi-meter check the voltage between the brass lining of the brush holders.
4. The Voltage measured should be equal to name plate. Rotate voltage control slowly while measuring, the voltage should decrease smoothly as the control is turned counter clockwise.

Question: Is voltage present?

YES! Check the heat element.

1. Unplug machine from power source
2. To check the heating element, remove the insulator cover over the wire terminals inside the spinner head.
3. Remove the brass nuts that hold the leads to the heat element
4. With a Multi-meter, check the resistance of the heat element. Place the meter leads on the two element terminals.
5. (120V = 13.1 Ω - 230V = 48.1 Ω) - If your readings are not close to these resistance readings, replace the heating element.

NO! Problem is inside machine

1. Unplug machine from power source
2. Remove switch plate.
3. Check for loose or broken connection
4. Using Multi-meter, check the continuity from the top to the bottom of the heat switch. With the switch in the 'ON' position check both sides of the switch:
5. If there is no continuity from the top to the bottom on either side of the switch - replace the switch.
6. Disconnect the two potentiometer two leads from the voltage control.
7. With a Multi-meter, place the meter leads one on each of the potentiometer leads.
8. Turn the potentiometer slowly and watch your Multi-meter. The resistance should start to go down as you turn the potentiometer counter clockwise. Resistance should vary smoothly from '0' to '1,000' Ω ". If resistance does not change or moves abruptly from '0' to '1,000' Ω the potentiometer needs to be replaced.
9. If resistance does change the voltage control mounted on the bottom of the cabinet has failed and must be replaced.

3. Spinner Head Repair



To disassemble the spinner head to replace worn or damaged parts, first disconnect the machine from its power source.

1. Remove cotton candy bowl
2. Unplug machine from power source.
3. Remove the carbon brushes by removing the brush holder covers, located on the cabinet just below the spinner head. If the brushes are badly worn, replace.

4. Locate the plug to the left of the brush holders and insert a ¼" diameter rod (a medium Phillips head screwdriver will work) into the hole and into the motor shaft. This will keep the spinner head from turning. Or remove the brush holder plate and insert rod.
5. Remove the four cap nuts on the top of the spinner head.
6. Remove the insulator cover and nuts inside spinner head.
7. Remove the brass nuts that hold the leads to the heat element.
8. The heat element can then be removed.
9. Remove the bottom nuts on the brass studs that the leads to the element were attached. Remove the center bolt and cap with a socket or wrench.
10. Remove the spinner head bottom plate
11. Remove the insulator washer.
12. Remove the top brass ring.
13. Remove the insulator ring (with beveled ends on both sides)
14. Remove bottom brass ring.
15. Inspect both brass rings for burns or pits. If badly marked, they must be turned on a lathe to clean the surface or be replaced.
16. Remove bottom (small) insulator ring.

To assemble the spinner head.

1. Slide small insulator ring on to the motor shaft.
2. Put the brass ring (with the long brass stud and bevel edge facing up) on the motor shaft.
3. Slide the insulator ring (with the beveled ends) on to the motor shaft.
4. Put the brass ring (with the short stud and bevel edge facing down) on the motor shaft.
5. Slide on the large insulator.
6. Place the spinner head bottom plate on the motor shaft and then the center bolt and cap. Do not tighten bolt.
7. Slide stud insulators on long and short brass studs, and tighten the center bolt.
8. Screw the brass nuts on studs (do not over tighten if too tight the rings will be pulled out of alignment and the brushes will not make good contact).
9. Put Stainless steel screen with heat element on. Be sure screen seats into groove on bottom head plate.
10. Place element terminals on brass studs and hold in place with brass nuts.
11. Put on insulator cover and hold in place with insulated nylon nuts.
12. Put Spinner Top on and hold in place with the four cap nuts. Floaters are located opposite each other and go on the longer two studs.
13. Replace the carbon brushes and caps
14. Remove the ¼" rod used to keep the motor shaft from turning
15. Replace the hole cover.

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If you have any questions, contact your local dealer and if there are any additional questions, feel free to contact the Customer Service Department at C. Cretors and Company. Additional copies of this manual can be obtained from C. Cretors and Company at the address listed below. Please provide model and serial number when requesting additional copies of this manual. There will be a nominal charge for additional copies.

Cretors guarantees this machine to be free of defects in parts, materials and workmanship for two years. Please take this time to fill out the factory registration card and return it to the factory to activate your warranty. If you have any questions concerning the Cretors' warranty, please contact your local dealer or the Customer Service department at C. Cretors and Company.



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