



3243 North California Avenue, Chicago, IL 60618

DIPLOMAT POPCORN MACHINE OPERATION MANUAL

**120/208 - 240 Volt,
Single and Three Phase, 60 Hz**

**230 Volt,
Single Phase, 50 Hz**

**400 Volt, 3N~
Three Phase, 50 Hz**

**100/200 Volt,
Single Phase, 50 & 60 Hz**



**READ and UNDERSTAND these operating and safety
instructions before operating this popcorn machine**

SAFETY FIRST

The information in this manual is essential for the safe installation and of your Cretors popcorn machine. The manual must be read and understood before installing, and operating 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.

I INTRODUCTION

This manual is filled with time-saving and money-saving information regarding your Cretors popcorn 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 and if there are any additional questions, feel free to contact our Customer Service Department at the address and / or phone number listed on the front and back covers of this manual. Always have the model and serial number of your machine available to assist in obtaining the correct information.

II 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.



III PURPOSE OF MANUAL



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



This manual should be kept available to operating personnel.



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

IV PRODUCT IDENTIFICATION

CRETORS POPCORN MACHINE

DIPLOMAT MODELS: DI20CP, DI32CP, DI20FP, DI32FP, DI20S, DI32S, TDI326

V PRINCIPLES OF POPCORN MACHINE OPERATION

Theory and Observations of Popcorn Machine Operation

1. The efficient production of popcorn requires the presence of popcorn kernels, heat, and oil. The purpose of the oil is to distribute the heat throughout kernels evenly and quickly. If the heat is not distributed evenly and quickly, the kernels may burn instead of pop.



2. In order to pop corn in oil, the kettle, oil and parts near the heating elements are necessarily and unavoidably heated to temperatures high enough to pop popcorn. The temperature is controlled using a thermostat located inside the kettle to maintain the kettle at an operating temperature of approximately:

For 120/208-240V and 100/200 420°F (215°C) for salt and 385°F (196°C) for sugar
For 230V and 400V sugar 450°F (232°C) for salt and 385°F (196°C) for sugar

Contact with these surfaces will burn and scald you. Do not touch the kettle, oil or parts in the direct vicinity of the heating elements.

3. The kettle is provided with an agitator to assist in the quick and even distribution of heat throughout the kernels.



4. The oil is heated to high temperatures in a kettle provided with electric heating elements to reach proper popping temperature. An operator is required in the vicinity of the kettle only when handling corn or dumping popped corn from the kettle. Neither of these operations requires direct contact with the kettle. Direct contact with the hot oil, kettle, or heating elements could result in serious burns or scalds. Keep away from the kettle whenever possible. Use the handle when dumping the kettle, and use the provided cups when necessary to measure corn, oil and salt.
5. As the popcorn pops, it will push the lid open and discharge into the cabinet. When the corn finishes popping, the corn remaining in the kettle can be removed by holding the kettle handle in your right hand and rotating down in a clockwise direction to dump the kettle.
6. Your Diplomat model Cretors popcorn popper is equipped for a pump, which, when properly adjusted, automatically delivers the proper amount of oil to the popping kettle.

7. A cornditioner that is provided consists of a blower, heating element and thermostat. The cornditioner circulates hot air through the corn stored in the popcorn case to keep the product hot and crisp.
8. A two stage filter system traps odor and smoke produced by popping corn.

VI CONTROL SWITCHES

KETTLE HEAT	-Turns the kettle heat On / Off
AGITATOR	-Turns the stirrer blade motor On / Off
EXHAUST	-Turns exhaust blower On / Off
CORNDITIONER	-Turns the cornditioner blower and heat On / Off
LIGHTS	-Turns interior lights On / Off
OIL	-Provides power to the oil pump
DELIVERY	-Initiates the pump cycle
CIRCUIT BREAKER	-Push to reset - provides protection to all circuits, except the kettle.
ROTARY SWITCH	Turns power ON / OFF to all circuits.

VII OPERATING INSTRUCTIONS



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



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



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



4. Always turn 'OFF' the KETTLE HEAT switch when not popping corn. Failure to do so will cause oil to stain the kettle, possibly resulting in an unsanitary condition. It may also cause a "flash" fire if oil is added to a kettle left unattended with the heat on, resulting in serious burns or death.

5. To operate your Cretors popcorn popping machine:

- A. Fill the corn drawer with corn. (Models DI20FP, DI32FP, DI205, DI325, TDI326)

- B. Fill the salt box and hang it on the inside edge of the corn drawer.

- C. Connect and adjust the pump as explained in the installation instructions and preheat the popping oil until liquid, if necessary.

- D. Fill the corn measure with corn and the salt measure with the salt, and empty these into the kettle. When making sugar corn, add the correct amount of sugar, rather than salt, with the measure of corn.



WARNING! Always add corn to the kettle before pressing the oil delivery button or adding oil. Failure to do so may result in the oil being heated too rapidly resulting in a fire.



- E. Close the kettle lid by pulling the knob down. Avoid contact with the kettle. Contact with a hot popping kettle may result in serious burns or scalds.

- F. Turn 'ON' the agitator, turn 'ON' the exhaust fan, turn 'ON' the kettle heat.

- G. Press the delivery button to pump the correct amount of oil into the kettle.



NOTE: After the first popping the kettle is hot. Avoid contact with the kettle when adding corn or salt. Failure to do so may result in serious burns or scalds.

Measuring instruments have been provided to accurately measure the proper amounts of popcorn, salt and oil. The correct amount for each popping is:

SALTED CORN

<u>Kettle Size</u>	<u>VOLUMETRIC MEASURE</u>		
	<u>Corn</u>	<u>Oil</u>	<u>Salt</u>
20 oz.	20 oz. 591 ml	6.5 oz. 192 ml	2 tsp.
32 oz.	36.5 oz. 1083 ml	12.25 oz. 360 ml	3 tsp.

SUGAR CORN

<u>Kettle</u>	<u>VOLUMETRIC MEASURE</u>		
	<u>Corn</u>	<u>Oil</u>	<u>Sugar</u>
20 oz.	12 oz. 351 ml	4.25 oz. 122 ml	8.25 oz. 245 ml
32 oz.	19.5 oz. 577 ml	7.5 oz. 225 ml	15.25 oz. 451 ml

- H. As the corn pops, it will push the lid open. When the lid has moved about one and one-half inches, it will open completely, allowing the corn to discharge from the kettle. When the corn finishes popping, dump the kettle by pulling the large black handle down as far as it will go. Then when the pan is empty, return the handle to its upright position.



Avoid contact with the kettle when dumping popped corn. Failure to do so may result in serious burns or scalds.

- I. Repeat steps D - H as desired, adding corn to the corn drawer and salt to the salt box as necessary.
- J. When the oil container is empty, replace with new full container of oil. See appropriate pump instruction manual.

NOTE: The ideal time for maximum volume is between 2-3/4 to 3-1/2 minutes from the time the corn is placed into the kettle until the time it is dumped. Check the popping time after several popping cycles. Reduce the charge of raw corn if the time is more than 3-1/2 minutes and increase the charge if the time is less than 2-1/2 minutes per popping. This almost can be a sign of a failing thermostat or a heating element not heating. See Service Manual.

- K. Follow the recommended sanitation procedures.

VIII SANITATION INSTRUCTIONS



Be certain the machine is turned off and power is unplugged before sanitizing this machine unless a specific cleaning procedure requires power to the machine. Failure to do so could result in injury or death.



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

1. Popping Kettle



A. Do not immerse an assembled pan in water. This will damage the electrical components and may cause short circuits resulting in electrical shock hazard if power is applied.

B. Do not use steel wool or other similar abrasives to clean the kettle as they will ruin the kettle by removing the nickel plating.



C. Do not attempt to clean the kettle with power connected unless you are boiling the "CKC" cleaning compound to clean the inside of the kettle in step F.



D. Do not attempt to clean a hot kettle. Failure to do so may result in serious burns or scalds.

E. The kettle has a polished nickel finish and is very easy to clean if oil is not allowed to burn on it. After the final popping, the best practice is to wait until the oil just begins to solidify, then take a cotton towel or absorbent rag and wipe the kettle. Once the oil is allowed to completely solidified, it can become more difficult to remove. We recommend coconut oil for your Cretors popper; it will not stick or burn as easily as other oils.

F. A thorough cleaning every week with "CKC" cleaning compound is recommended. This will prevent the accumulation of carbon on the bottom and internal sides of the kettle. When boiling the "CKC" cleaning compound in the kettle, do not fill the kettle with more than 3/4" high of water inside the kettle. If the kettle has been overheated or oils that tend to carbonize are used the normal cleaning procedures may not suffice. Increase frequency as needed.

Cretors has developed a cleaning kit for your Diplomat machine. The kit is sold separately under P/N 10831. If you need more information, please feel free to contact your local distributor or call Cretors at 1-800-228-1885.

- G. Cretors Outside Kettle Cleaner "COC" should be used periodically to remove popping oil that may become baked to the outside of the kettle. The kettle agitator assembly should be removed weekly for thorough cleaning.
- H. The stirrer blade is disassembled by removing the spring pin (#1472) going through the top of the stirrer blade (#7552). Lift off the stirrer blade.
- I. Clean all parts thoroughly, making sure to use Cretors Kettle Cleaner. Do not use any harsh abrasives or cleaning material.
- J. Reassemble in reverse order, following the directions above.

2. Cabinet



- A. Remove and empty the waste clean-out drawer (#1839) daily or whenever it is full. Under heavy use this may need to be done more often. Failure to empty the drawer and clean cabinet may result in a fire hazard due to restricted air flow from the conditioner.
- B. The cabinet glass and cabinet base can be cleaned with any good grade glass or household cleaner suitable for glass and plastic surfaces. The inside of the cabinet can be cleaned with the same cleaner as the outside, if it is the type that has a cleaning agent to cut the oil remaining from the popping operation, and it is acceptable for food contact surfaces. Do not soak unit with water. Avoid wetting of inside of electrical enclosure.
- C. The doors can be cleaned with Cretors' Plastic Clean and Shine. This product is specially formulated to clean plastic doors. Do not use cleaners that have ammonia or alcohol. The use of these cleaners will cause the doors to become brittle and crack.
- D. Counter Model Diplomats require the installation of 4" legs which are included with unit.
- E. The popper case bottom of the 36" (DI---) cabinet should be removed at least weekly or more often if needed to thoroughly clean the air chamber beneath of salt and small bits of corn which come through the air holes. The corn and scraps may be swept into the clean-out drawer and then removed.
- F. Remove and empty the clean-out drawer daily. Heavy or continues operation of the machine will require more frequent cleaning.
- G. The popper case bottom of the 60" (DI--5) and 72" (TDI--6) cabinets should be removed at least weekly or more often if needed to thoroughly clean the air chamber beneath of salt and small bits of corn which come through the air holes. The corn and scraps may be swept into the hot air well in the center of the bin.
- H. Empty the scrap in the hot air well by removing the clean-out drawer from under the popper case bottom and sliding it under the hot air well. Pull out the clean-out

slide and the scrap will fall into the scrap drawer. When through, replace the clean-out slide and the clean-out drawer.

- I. This appliance shall not be cleaned with a water jet.

3. Pump



Be certain the machine is turned off and power is unplugged before sanitizing this machine unless a specific cleaning procedure requires power to the machine. Failure to do so could result in injury or death.

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

7700 PUMP

The pump is easily cleaned by using two empty popping oil pails or buckets that have been thoroughly cleaned of oil. The cleaning procedure is:

- A. Fill one pail 1 / 2 full of hot water and mix in 1 / 2 package of CKC (Cretors Kettle Cleaner).
- B. Put the pump on the pail and turn on the heat timer to 20 minutes and leave until the water is hot.
- C. Unplug the pump and hold the pump over the pail. Clean the outside of the pump and heating element. Do not immerse the pump motor or get the top plate and motor wet. Put the pump on the pail again, and reconnect the electrical power supply and oil line.
- D. Put the kettle in the dump position, and place a container under the oil discharge tube to catch the cleaning water.
- E. Cycle the pump several times catching the cleaning water in the empty container.
- F. Disconnect the pump. Take the pump to a sink and thoroughly rinse the pump and heat element.



Do not get the top of the pump wet. Electrical shorts and a shock hazard, which can cause injury may result if the wires inside the top of the pump get wet.

- G. Take a second pail and fill it with clean water. If only one pail is available, empty the soapy water from the pail, rinse it completely and fill it with clean water.
- H. Reconnect the pump, and cycle it several times to thoroughly rinse the inside of the pump and oil lines.
- I. Allow the pump and oil lines to drain.

- J. After system is cleaned, the pump must be filled with oil by cycling the pump until oil is discharged from the oil tube over the kettle. This will prevent any damage to the steel components of the pump. Never leave water in the pump or oil lines.

7900 PUMP

The design of the 7900 pump is a closed system and should remain aseptic.

If you believe your pump system to be contaminated, then you will need to clean the system. The pump is most easily cleaned by following the steps below:

- A. Remove the Bag-in-Box connector.
- B. Place the end of the oil tube into a pail of hot soapy water.
- C. Cycle pump sufficiently to flush system. Be sure to have a container to catch the water at the discharge tube above the kettle.
- D. Change the oil tube to clean hot water and cycle pump to flush soapy water from system.
- E. Reinstall Bag-in-Box connector to the oil tube and reconnect to a bag of oil.
- F. After system is cleaned, the pump must be filled with oil by cycling the pump until oil is discharged from the oil tube over the kettle. This will prevent any damage to the steel components of the pump. Never leave water in the pump or oil lines.

To Clean Bag-in-Box Connector

- A. Remove from tubing.
- B. Remove probe body from clamp by spreading clamp body tabs and sliding probe body out.
- C. Remove probe spout adapter from probe body by unscrewing stem from probe body.
- D. Remove seal body and spring from stem and nut assembly by unsnapping seal body from stem.
- E. Clean all parts in accordance to NSF and local requirements. (Hot, soapy water, rinse and dry). Do not use petroleum based cleaning agents or abrasive cleaners. Damage to sealing surfaces may occur and jeopardize the sanitary integrity of the connector.
- F. Inspect the three "O" rings for damage or imbedded particles. Replace as required.
- G. Reassemble by reversing steps A - D.

SAFETY FIRST



The information in this manual is essential for the safe installation of your Cretors popcorn machine. The manual must be read and understood before installing and operating 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.

This manual is filled with time-saving and money-saving information regarding your Cretors popcorn popper. There is nothing, however, more important than the safety aids and warnings found throughout this document.

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 one year. 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.



C. CRETORS AND COMPANY
3243 N. CALIFORNIA AVENUE
CHICAGO, IL 60618
PHONE (773) 588-1690, (800) 228-1885, FAX (773) 588-2171
WEB SITE: <http://www.cretors.com> Email: postmaster@cretors.com